

USGS-National Wildlife Health Center

Diagnostic Case Submission Guidelines

The National Wildlife Health Center (NWHC) conducts diagnostic investigations to determine causes of wildlife morbidity and mortality events. The following guidelines outline the framework used by the NWHC to determine acceptance for diagnostic evaluation. All submissions must be submitted through, or in consultation with, an appropriate Federal, State, or Tribal agency and the NWHC point of contact. The general public, rehabilitation facilities, universities, or other laboratories will be directed to coordinate submissions through the Federal, State, or Tribal agency prior to acceptance of submissions.

Species Accepted by NWHC

Free-living wildlife species (birds, mammals, reptiles, and amphibians, some marine invertebrates [corals, sea urchins, and sea stars], and fish [Honolulu Field Station only]) including but not limited to:

- Species under Federal authority
 - Migratory birds under Migratory Bird Treaty Act or Eagle Protection Act
 - Federal endangered/threatened species (including candidates for listing)
 - Marine mammals under USFWS jurisdiction (walrus, manatee, sea otter, polar bear)
- Species under State authority at the request of the State wildlife agency or by a Federal/Tribal agency when the species is found on Federal/Tribal managed lands.
- Marine mammals under NOAA authority (whales, dolphins, seals, or sea lions) at the request of NOAA

Submissions from Morbidity and Mortality Events

NWHC focuses on wildlife population and ecosystem health. The following criteria are used to define a wildlife health “event”:

- Mortality events involving ≥ 5 individuals of free-living wildlife species.
- Mortality involving < 5 individuals of free-living wildlife if the case includes:
 - Federal or State endangered/threatened species, candidate species, species of special management concern
 - Potential concern for zoonotic or domestic animal diseases
 - Emerging disease currently being investigated by NWHC (including, but not limited to avian influenza, white-nose syndrome, snake fungal disease)

Type of Specimens (other than Carcasses) Generally Accepted by NWHC

Intact fresh or frozen carcasses that meet one or more of the above criteria are preferred to maximize diagnostic potential and to allow for the variety of testing that may be required for cause of death determination. If whole carcass submission is not possible, other tissues may be accepted for cause of death determination when diagnostic yield is expected to be high. Prior to necropsy or sample collection, consult with NWHC on recommendations for tissue collection and storage. The two most common examples of when whole carcass submission is not possible are:

- Animals are larger than a wolf (and therefore difficult to ship); NWHC can provide protocols on tissue collection, preservation, and shipping methods

- Access to shipping is limited (e.g. samples collected from a remote location); NWHC can provide recommendations on best diagnostic preservation method(s) for harvesting, freezing, and/or fixing of tissues

Types of Cases Not Generally Accepted by NWHC

- Individual animals for which the cause of death or disease is evident. NWHC may recommend freezing carcasses and monitoring for additional mortality; if additional mortality occurs, submission of specimens may be warranted.
- Carcasses that have been scavenged or their body cavities are already opened
- Animals that die in rehabilitation. Exceptions may include:
 - Federally protected species
 - Animals that died within 72 hours of admission and no drug therapies were administered (supportive care only)
 - An unusual increase in morbidity/mortality in the source wild population has been reported
 - Emerging disease currently being investigated by NWHC is suspected (e.g., turtle Ranavirus and snake fungal disease)
- Captive animals (originating from zoos, private collections). Exceptions may include:
 - Federally protected species
 - Animals from State, Federal, or Tribal species reintroduction efforts or captive propagation programs for species recovery
 - Animals recently captured from the wild for captive propagation
 - Instances where there is potential for pathogen spill-over into free-ranging wildlife
- Routine diagnostic services for live animal health screens, unless NWHC is a project collaborator (see below)

Diagnostic Services for Research Activities

Partner requests for research-oriented diagnostic services must be communicated to NWHC early in the study planning process as these projects may require additional resources. Inclusion of NWHC in the study planning process will ensure that partner and project objectives can be met.

NWHC's Involvement in Legal Wildlife Issues

Federal (USFWS) Law Enforcement Cases:

- Mortality events where USFWS Special Agents suspect unlawful human involvement in the death of animal(s) are referred to the USFWS Forensic Laboratory (USFL)
- On an individually determined basis, NWHC accepts law enforcement cases from USFWS Special Agents under chain of custody and with a federal investigation case number (INV#). This may occur if a cause of death determination is needed and the USFL is unable to accept animal(s) or make this determination, or if the Special Agent specifically requests NWHC assistance with the investigation

State Law Enforcement Cases:

NWHC does not accept legal cases from State wildlife law enforcement agencies. State officers are referred to their State wildlife agency (health program/veterinarian if applicable). Mortality events can be reported to USFWS Special Agents who can submit animals to USFL or NWHC in accordance with the above criteria.