

INLAND STRANDED OIL SPECIES FACT SHEET FOR RESPONSE: Waterfowl



Key Mississippi Flyway Species



Wood Duck
Aix spp.



Canvasback
Aythya spp.



Greater Scaup
Aythya spp.



Ring-necked Duck
Aythya spp.

I. Description

Waterfowl are medium to large birds (1 to 6 ft; 8 oz to 50 lbs.). The birds' necks are relatively long and the heads are small. Wings are short and tails may be short and rounded or longer and narrow. Legs are set far back on the body and the front three toes are webbed. Bills are generally broad. The birds spend much of their time in the water and spend a great deal of time on preening and feather maintenance. They use their bills to condition and waterproof their feathers with oil secreted from a gland in the skin at the base of the tail.

Most waterfowl are omnivorous, but some are primarily herbivorous and others are mostly carnivorous. They eat the seeds, roots, stems, leaves and flowers of aquatic vegetation. Some feed on plankton or algae. Other food items taken include mollusks, aquatic insects, crustaceans and small fish. Some waterfowl feed by diving under water.

Waterfowl tend to form flocks ranging from a few to several hundred thousand individuals. Flocks form for protection from predation, during migration, and while locating abundant food sources.

II. Sensitivity to Oil

Waterfowl are some of the most sensitive and vulnerable species to oil spills. Direct exposure to oil causes feathers to separate, impairs waterproofing, buoyancy, and exposes skin to hyper or hypothermia and lesions. Oil ingested while preening may result in ulcers, pneumonia, and liver damage, among other life-threatening conditions. Oiled waterfowl will focus all attention on preening, and will forgo feeding and predator avoidance. This can lead to other severe conditions such as dehydration, anemia, and extreme weight-loss. **State and Federal wildlife officials must be notified for response to oiled birds. Oiled waterfowl require proper collection, cleaning, and treatment by certified, state-licensed wildlife rehabilitators at an off-site facility, though temporary processing centers may be necessary.**

References/Additional Information:

Howard, L. 2003. "Anatidae" (On-line), Animal Diversity Web. Accessed February 23, 2006 at <http://animaldiversity.ummz.umich.edu/site/accounts/information/Anatidae.html>.

International Bird Rescue. "How Oil Affects Birds" (On-line). Accessed February 25, 2015 at <http://bird-rescue.org/our-work/research-and-education/how-oil-affects-birds.aspx>

National Wildlife Federation. "Oil Spill Impacts on Birds" (On-line) Accessed February 25, 2015 at <https://www.nwf.org/What-We-Do/Protect-Habitat/Gulf-Restoration/Oil-Spill/Effects-on-Wildlife/Birds.aspx>

Wildlife Resources Webinar Training: oil spill response modules. Hosted by: USEPA, USFWS, USDA APHIS. 9/11/2014.



Oiled Canada goose



Mallards take flight



Oiled mallards



Mississippi River Flyway

Thousands of waterfowl congregate in some of the pools on the Upper Mississippi River during the peak migration times, generally occurring around March/April and October/November. Waterfowl typically stage for longer periods during the fall migration period.



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Waterfowl

III. Sensitivity to Response Methods

The following text describes potential adverse impacts to waterfowl resulting from various oil spill response methods and/or provides recommendations to reduce impact when these methods are implemented. This is not intended to preclude the use of any particular methods, but rather to aid responders in balancing the need to remove oil with the possible adverse effects of removal with respect to waterfowl. More detail about the response methods themselves can be found in the [Inland Response Tactics Manual](#).

Least Adverse Impacts on Waterfowl

Boom Deployment

- Control the movement of floating oil to prevent or reduce contamination of waterfowl.

Skimming

- Recover floating oil from water surface to prevent or reduce the contamination of waterfowl.

Physical Herding

- Free oil trapped in vegetation or debris and away from sensitive waterfowl habitat like feeding, nesting, and staging areas.

Vacuum

- Minimal effects to waterfowl if foot and vehicular traffic is controlled and minimal substrate is removed.

Manual Cleaning/Removal

- Oiled debris should be removed to prevent scavenging and the ingestion of oil.

Some Adverse Habitat Impact

Dispersants

- Dispersant/detergent contact with waterfowl can reduce insulating value of plumage.

Hazing

- Increased stressing of waterfowl may lead to shock and fatalities.
- Can be used to keep waterfowl from *in-situ* burn areas.

Most Adverse Habitat Impact

In-Situ Burning

- Haze waterfowl away from burn areas and/or the capture of oiled birds.
- Will destroy waterfowl habitat.

Natural Attenuation

- This method may not be suitable for waterfowl nesting, foraging, and staging areas.

Vegetation Removal

- Will destroy waterfowl habitat. Clearing of upland areas will reduce waterfowl nesting habitat. Trampled vegetation will recover slowly.

IV. Sensitivity to Hazing and Recovery Methods

The following text describes potential adverse impacts to this habitat resulting from wildlife hazing and recovery methods and provides recommendations to reduce impact when these methods are implemented. Wildlife hazing and recovery must be done under the direction of the wildlife branch director and a hazing plan that includes safety considerations must be in place. This is not intended to preclude the use of any particular methods, but rather to aid responders with determining suitable techniques.

Least Adverse Hazing/Recovery Impacts on Waterfowl

Visual Deterrent(s)- reflective materials, lights/lasers, kites/balloons, scarecrows/effigies

- Mylar tape can be used to startle birds, but will habituate quickly to reflective hazing techniques.
- Brightly colored balloons, kites and effigies designed to imitate predators may startle birds. Need to regularly monitor and maintain to ensure effectiveness.
- Lasers/lights most effective in dim light and areas where pyrotechnics cannot be used.
- Need to ensure effigies/scarecrows do not offend public.

Acoustic Deterrent(s)- natural calls, artificial sounds

- Predators calls/species distress calls may be effective for hazing in areas where pyrotechnics are not appropriate to use.
- Artificial sounds like air horns, whistles, bells are a short-term hazing technique.
- Not effective for hazing diving birds.

Recovery- traps/cages

- Should be placed in areas not susceptible to further oiling and away from spill cleanup zones.

Some Adverse Capture/Hazing Impacts on Waterfowl

Acoustic/Visual Deterrent(s)- pyrotechnics

- Users must be trained to use pyrotechnics, wear proper protective equipment, follow Class C explosive guidelines, and notify responders in vicinity of use.
- Do not use when there is a risk of fire.

Recovery- manual capture/nets

- Trained wildlife handler with proper PPE should capture most heavily oiled individual birds.

Most Adverse Capture/Hazing Impacts on Waterfowl

Acoustic Deterrent(s)- propane cannon

- Upon Incident Command approval, can be set up to fire automatically in areas not susceptible to fire.
- Locations should be mapped and made known to all responders.
- May be vulnerable to sabotage by locals/public.

Recovery- cannon nets

- Technique should only be implemented by a trained wildlife professional.
- Responsible party is not liable for injured/killed wildlife resulting from poorly chosen/implemented recovery techniques.