# Why Wildlife Matters: Our Wonderful Waterbirds

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It's a fabulous world of waterbirds around us - gulls, ducks, geese, herons, loons, seabirds and more. Healthy waterbirds are indicators of a healthy environment. They tell us what is impactful. For example, we know that changes in weather patterns impact waterbirds, especially in the fall and winter months - when intensified storm systems blow weakened birds like gannets, Alcids, and sea ducks to shore. Fragmentation and loss of habitat directly impacts waterbirds showing us the tremendous need to restore our watersheds. Climate change, warming waters and other environmental pressures impact waterbirds, often leading to a loss of their breeding habitat and lack of appropriate food sources. Waterbirds like loons are the "canaries in the coal mine", alerting us to the prevalence of lead and fishing debris in aquatic environments and their detrimental effects on wildlife.







## What is the value of waterbirds?

#### **Ecosystem Services:**

As wildlife rehabilitators' most of us love waterbirds simply because they exist. On a measurable level, waterbirds provide "ecosystem services". These are processes that directly or indirectly benefit human well-being. Waterbirds play important roles in aquatic ecosystems as predators, herbivores, and as vectors of seeds, invertebrates and nutrients. They help to maintain the diversity of other organisms, control pests, are effective bioindicators of ecological conditions, and act as sentinels of potential disease outbreaks. A recent example is the first detection of Highly Pathogenic Avian Influenza in Massachusetts in wild birds, detected in two Canada Geese.



#### **Cultural Services: Recreational**

Waterbirds also provide us with "cultural services". They bring recreational and spiritual value. People from all over the world annually flock to locations such as Bosque del Apache in New Mexico in the winter to see congregations of tens of thousands of Snow Geese, ducks (and Sandhill Cranes). California's Sacramento Valley is the wintering ground for millions of waterfowl including numerous duck and goose species, and Tundra Swans, attracting visitors worldwide to witness the spectacle. Fortunately, human interest in seeing concentrations of waterfowl on their migration or wintering sites, has facilitated protection of many of these sites, and has led to conservation organizations such as Wetlands International. Ducks, geese, and swans are used as flagships of conservation in general. Wide public interest has led to greater awareness of conservation issues.

## Cultural Services: Spiritual

Humans feel a special reverence for waterbirds such as ducks, swans, flamingos and ibis as reflected through their artistic and religious importance throughout history.

### Regulating Services:

Waterbirds provide "regulating services". The presence and activity of waterbirds has a profound positive effect on aquatic biodiversity. Waterbirds help to spread animal and plant propagules (bud, spores, seeds). Not just locally, but even at continental scales due to birds' ability to fly and their migratory nature. Seeds, spores, invertebrates and sometimes animals are transported to new locations on the feathers, beaks and in feces (seeds, spores) of waterbirds. Geese help to maintain grasslands in a natural state of high diversity. The grazing of geese helps to regulate interspecific competition between plants – allowing plant coexistence.

## Nutrient Cycling:

Waterbirds are also important to nutrient cycling. Birds like gulls and cormorants have been found to be effective vectors for the transport of marine nutrients (feces) from sea to land, helping plants thrive in other locations. Research has also shown that gull poop plays an important role in soil respiration, adding nitrogen to the soil aiding plant succession. Gulls play important roles as scavengers and omnivores, cleaning up the environment of organic litter. They also have historically played a role as natural "pest control". Of particular note was the "Miracle of Gulls". Folklore states that in 1844 in Salt Lake City, Utah, gulls saved the settlers' lives by consuming the crickets that were ravenously eating crops. Had the gulls not swooped in to the rescue, the settlers would not have had enough food to survive the winter.

### Aquatic Heroes:

As you can see, waterbirds are fabulous and are truly heroes of maintaining healthy aquatic environments. Not only are they critically important to ecosystem balance, they are unique and fill different niches. Additionally, many are strikingly beautiful and long-lived. When rehabilitating waterbirds, not only are you giving individual animals a second chance, you are restoring a delicate balance to aquatic ecosystems.





