

## 25. WATERFOWL

Wetlands are the critical habitat required for waterfowl because they provide areas to rest, strengthen pair bonds, feed, and establish nesting territories.

### SUMMARY

Waterfowl are intimately connected with wetland habitat; they perish or thrive based on the availability of wetlands. Landowners can best promote waterfowl by maintaining and protecting wetlands and by maintaining a forested or grassy buffer around open water. Maintain wetlands with a mixture of plants and open water, and avoid the use of herbicides or pesticides near wetlands or other water systems. Monitor wetlands annually for invasive plant species, particularly knapweed and purple loosestrife, and pull those plants up to help promote the growth of native plants. Leave dead snags or large live trees up near wetlands as nesting sites for cavity nesting ducks, or consider erecting a wooden nest box.

### NATURAL HISTORY

Due to the diversity of waterfowl species and their migratory nature, management of our waterfowl resource must be shared among various countries, states, provinces, private organizations, and individuals. Vermont hosts 30 species of waterfowl during various seasons. As with all wildlife, food, water, and cover are essential seasonal needs of waterfowl. Although the protection and management of essential habitats

such as Lake Champlain, riverine systems, and large wetlands are primarily within state and federal responsibility, much of the habitat needed by waterfowl in Vermont involves small privately owned wetlands. You can assist in waterfowl management efforts by supporting state and federal programs to restore quality habitat, or by directly implementing proven waterfowl management practices on wetlands in your ownership. With an increasing human population and on-going loss of habitat, wetland protection and enhancement on private land is one of the most critical wildlife habitat conservation actions.



### HABITAT REQUIREMENTS

Waterfowl usually breed and rear their young in northerly latitudes and spend the winter months in more southern climates. During these semi-annual migrations, birds utilize a variety of habitat types to feed, rest, preen, and escape from predators. Waterfowl may nest on the ground,

in cavities, on stumps, or in tree crotches, and lay clutches of 9 to 16 eggs. Predation pressure on nests and the flightless young is generally proportional to the quantity and quality of the habitat. Larger clutch size and the ability to re-nest help waterfowl to offset losses from predators.

Waterfowl feed on everything from insects and small invertebrates found in shallow wetlands, to snails, mussels, and small fish in deeper water. Aquatic vegetation and seeds in shallow- and deep-water wetlands comprise a major portion of the diet for many species. Agricultural field crops and grain have become important food sources, especially for geese, during migration.

Black ducks, mallards, wood ducks, blue-winged teal, hooded mergansers, common goldeneyes, and Canada geese are Vermont's principal breeding waterfowl, and benefit most from habitat management. Improvements in habitat aimed at these species will generally also benefit other migrating waterfowl species.

Canada geese are short distant migrants that arrive back in Vermont in mid-March and remain into late fall; they are present as long as open water and a food source is available. The resident population of Canada geese generally only migrates as far south as New Jersey and they can sometimes become a nuisance problem in urban and agricultural landscapes. True migratory Canada geese (Atlantic population), migrate from the northern Québec tundra nesting grounds to the Chesapeake Bay region and are managed as a separate population.

Wetlands are the critical habitat required for waterfowl because they provide areas to rest, strengthen pair bonds, feed, and establish nesting territories. The Champlain Valley and Connecticut River Valley are the main flight corridors for waterfowl migrating through Vermont.

Wetland productivity is a measure of how well the needs of wetland species are met. For waterfowl, this translates into the quality and quantity of available water, food, cover, and nesting sites. Pollutants and disturbance are important factors when assessing wetland productivity. Most Vermont wetlands have excellent productivity and are worthy of continued protection and enhancement. A variety of wetlands and adjacent uplands are needed to fulfill seasonal requirements of waterfowl. A complex of different wetland types is desirable to provide a diversity of foods and cover for a variety of waterfowl species.

Small wetland units are best managed in their natural condition. Improving specific deficiencies in open water to cover ratios, nesting and brood-rearing habitat, or enhancement of wetland soil productivity may be beneficial in certain situations as explained in the next section.

## MANAGEMENT PRACTICES

The rich and diversified system of wetlands present in Vermont was left in place by the last glacier. Waterfowl have used these wetlands for thousands of years. Most natural wetlands need little, if any, human manipulation. Rather, wetlands need protection from human manipulation such as draining, filling, livestock grazing, shoreline development, excessive sedimentation, and harmful chemicals.

The most important management practice you can implement to benefit wetland habitat is to buffer them with at least 100 feet of grassland or forested cover. Minimize disturbances from natural predators, pets,



and people, especially during nesting and brood rearing from April to July. Disturbances can cause waterfowl to abandon breeding attempts or established nests. When you observe waterfowl, do so quietly from a distance with binoculars or spotting scopes.



**Figure 25.1**  
Wood duck in nesting box.



**Figure 25.2**  
A common type of nest box for wood ducks.

Wetlands are dynamic systems and continually undergo changes in appearance, productivity, and wildlife value. The sequence of wetland succession occurs as shallow water areas fill in and become vegetated marshes, then shrub swamps, and finally forested areas. Although all phases are important to individual species of wildlife, waterfowl derive optimal habitat value from intermediate wetland stages.

Areas of emergent plant cover, shrub vegetation, or fallen timber should be interspersed with swimmable water to provide optimal habitat. Cut or pull undesirable cover species but do not use herbicides to kill native aquatic plants because this is generally prohibited by the Vermont Department of Environmental Conservation and Agency of Agriculture.

Waterfowl generally prefer shallow depths of 1 to 2 feet of water, although periodic cycles of high and low water increase productivity over time because soil nutrients are renewed and the soil and organic material is exposed to the air. Seasonal water cycles or beaver activity regulate this naturally, however, you may construct artificial water level control structures where you need more intensive water level management.

Waterfowl food and cover plants are usually well established on older wetlands and will appear in a reasonably short time on new impoundments without a helping hand. Seeds from aquatic plants adapted for this climate are dispersed naturally so it is usually unnecessary to supplement native food and cover species with artificial plantings. However you should monitor annually for noxious weeds (exotics) such as phragmites, water chestnut, and purple loosestrife and eradicate them because they have little value for waterfowl and quickly crowd out desirable native aquatic plants. Exotic wildlife such as mute swans and carp can also damage wetland systems. Swans should be reported immediately to your local Vermont Fish and Wildlife Department office.

Although adequate nesting cover should be near a wetland, waterfowl may nest up to a half-mile from brood-rearing habitat. Ducks may nest on the ground near wetlands in areas with dense vegetative cover, near beaver ponds in over-water tree stumps or tree crotches, or on small islands with good cover. You can help by delaying when you mow hayfields in close proximity to wetlands until after July 15 or preferably August 1 to decrease nest destruction by mowing equipment. Avoid grazing on lands adjoining wetlands prior to July 15 and stop grazing in late August to allow for adequate regrowth of nesting cover for the next spring. Rotate grazing areas to ensure adequate nesting cover, and use perimeter fencing to avoid livestock damage to wetlands. For technical and financial assistance with the design of a rotational grazing system, see your local Natural Resources Conservation Service office. Contact information follows in **Resources**.

Wood ducks, hooded and common mergansers, and common goldeneyes are cavity nesters; they prefer live trees such as maple and oaks, although they may use dead snags. These species also benefit from nest boxes on trees or sturdy poles near the wetland. These nest boxes must be built to specific dimensions, filled with wood shavings, and cleaned and maintained annually, and they must have a predator guard to protect the hen and nest. Specifications and technical advice on nest box construction and placement are available through the Vermont Fish and Wildlife Department.

The increase in beaver populations in Vermont has led to the creation and maintenance of excellent natural waterfowl habitat. Management of beaver colonies provides a great opportunity to assist waterfowl (see **Chapter 24, “Beavers”**). Consider the use of a beaver baffle to control water levels before eradicating beaver. Vermont’s regulated trapping season for beaver provides a good opportunity to combine the sustainable use of a renewable natural resource (beaver) with effective wetland management.

Canada geese are grazers and will readily clip grasses and legumes planted in buffer strips and agricultural fields. If you wish to discourage geese from feeding on your lawn or agricultural field, allow shrubs and trees to grow along the wetland border. Shrubs and brush obscure the grass areas and trigger the geese’s predator avoidance behavior.

To attract waterfowl to your cropland areas you can leave standing grains to provide food plots. Grains must be left standing or harvested under normal agricultural practices to avoid the practice of baiting waterfowl during the hunting seasons. Never mow standing grains during the hunting seasons. Contact the Vermont Fish and Wildlife Department for clarification of acceptable practices. Avoid fall tillage whenever possible to allow utilization of waste grain during both the fall and spring but do not place piles of supplemental feed out because of the potential to spread disease and problems with concentrated droppings on lawns and waters.

If you are interested in wetland restoration, consult the Partners for Wildlife Program. Sponsored by the U. S. Fish and Wildlife Service, this program is tailored to restoring previously converted wetlands into functioning wetlands with financial support to qualified landowners. The Natural Resources Conservation Service and Vermont’s Clean and Clear programs have technical and financial assistance available to landowners interested in wetlands restoration and or protective easements on wetland parcels.



## RESOURCES

U. S. Department of Agriculture. Natural Resources Conservation Service.  
<http://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>

Vermont Fish and Wildlife Department. “Factsheet on wood duck nest boxes and predator shields.”

U. S. Fish and Wildlife Service Northeast Region. Partners for Wildlife Program.  
<http://www.fws.gov/northeast/EcologicalServices/partners.html>

To attract waterfowl to your cropland areas you can leave standing grains to provide food plots.