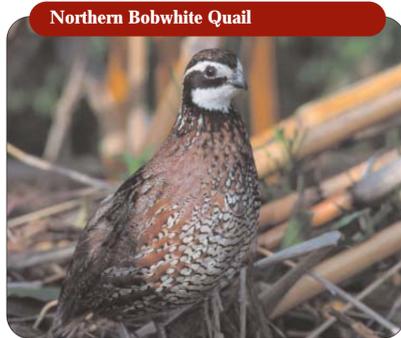


# Favored Food & Cover

## A guide to basic habitat needs of popular wildlife species in the Midwest



Northern Bobwhite Quail

### Favorite Food

Seeds, including annual ragweed, foxtail, lespedeza, partridge pea and waste grain. Seeds should be available on bare ground with overhead protection. Insects are essential for young chicks.

### Favorite Cover

Bare ground interspersed with upright plants, including native "bunch" grass and forb mixtures. Also, annual forbs, shrubs and trees. Nesting, brooding and winter cover needs are different.

### Management Tips

Periodic ground disturbance (disking, plowing, grazing, burning, spraying) is critical to produce the bare ground, new seeds, and insects young chicks need.

### More Information

Quail Unlimited  
On the web at [www.qu.org](http://www.qu.org)  
Southeast Quail Study Group  
On the web at [www.qu.org/seqg](http://www.qu.org/seqg)



Wild Turkey

### Favorite Food

Poult eat insects, berries and seeds, while adults will eat anything from acorns and berries to insects and small reptiles. Shrubs including wild grape, dogwood, and wild cherry are favorites.

### Favorite Cover

Wild turkeys like open areas of grass/forb/legume mixtures for feeding and mating, but use forested areas as cover from predators and for roosting in trees at night.

### Management Tips

Strive for habitat diversity—mixtures of grasses, shrubs and trees at varying ages. Create openings of cleared land in forests, and plant them to grasses, forbs and legumes.

### More Information

National Wild Turkey Federation  
On the web at [www.nwtf.org](http://www.nwtf.org)



Ring-necked Pheasant

### Favorite Food

Waste grain, especially corn, but also oats, wheat, barley and soybeans. Young chicks eat insects such as grasshoppers and beetles. Also, annual weed seeds or legumes such as red or ladino clover.

### Favorite Cover

Dense, erect cool and warm-season grasses at least 8" high at nesting is the most critical habitat. Wetlands are heavily used as roosting, escape and loafing cover in the winter, as are tree and shrub shelter-belts.

### Management Tips

Wait until chicks are hatched (mid-July) to mow. Establish food plots next to existing winter cover. Pheasants do best in landscapes that are two-thirds cropland mixed with one third grass and woodlands.

### More Information

Pheasants Forever  
On the web at [www.pheasantsforever.org](http://www.pheasantsforever.org)



Grassland Birds

### Favorite Food

Foods are diverse, but insects such as grasshoppers, beetles, ants and crickets are the most common food sources. Raptors eat mice, voles, rabbits and other small animals. Many grassland birds eat fruits, cultivated crop seeds, and grass seeds, especially those from native grasses.

### Favorite Cover

All grassland birds need herbaceous cover for nesting and foraging, but some need woody habitat. Wetlands are a detriment to others. Large blocks of undisturbed grassland generally allow most species to feed, court, nest, rear young, and avoid predators. They also give winter cover.

### Management Tips

Small, isolated grassland parcels give only limited help to grassland birds. Greater variety of grasses and growth forms supports a greater variety of birds. Rotational and deferred grazing, particularly limited grazing, in sensitive nesting areas, is helpful.

### More Information

NRCS Wildlife Habitat Management Institute leaflet on the web at [ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/GRASS1.pdf](http://ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/GRASS1.pdf)



Bluegill, other warm water fish

### Favorite Food

As generalized feeders, bluegills eat aquatic insects, crustaceans and minnows. They also eat aquatic plants. The bluegill feeds only in the daytime and throughout the water column.

### Favorite Cover

Bluegills are found in lakes, farm ponds, and slower moving waters of streams and rivers. Aquatic weeds are used for hiding and feeding. Small bluegills may be close to shore; larger bluegills prefer deeper water during the day and shallows to feed.

### Management Tips

Structure—submerged logs, stumps and rocks—in farm ponds or streams gives cover to bluegills. Generally, bluegill like habitats similar to those preferred by largemouth bass. Clean water is a plus. Bluegills may overpopulate, causing smaller and slower growing fish.

### More Information

State fish and game agency websites, including Virginia, [http://www.dgif.state.va.us/fishing/Pond\\_Management/habitat.html](http://www.dgif.state.va.us/fishing/Pond_Management/habitat.html)



Hummingbirds

### Favorite Food

Nectar and insects make up most of the diet of hummingbirds. Wildflower blossoms and flowers of shrubs and vines are favorites, as are mosquitoes, gnats, fruit flies and small bees. Spiders, caterpillars, aphids and insect eggs are also on the diet.

### Favorite Cover

A mixture of woodlands and open areas, orchards, and deciduous forests provide nesting cover. They build nests five to 20 feet above ground on branches in yellow birch and red spruce forests. Winter food is not an issue—hummingbirds migrate to more tropical climates.

### Management Tips

A diversity of meadows, gardens, wetlands, riparian areas, and shrub communities within a mature hardwood forest are ideal habitat. The insect abundance that wetlands, ponds and streams provide are helpful to hummingbirds.

### More Information

NRCS Wildlife Habitat Management Institute and Wildlife Habitat Council joint leaflet on the web at [ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/RUBYthroated1.pdf](http://ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/RUBYthroated1.pdf)



Ruffed Grouse

### Favorite Food

Young broods need protein from insects including grasshoppers and ants, then switch to succulent leaves or fruits. Insects are a small part of the adult diet. Late summer and fall food includes fruit trees and shrubs including black cherry, viburnums, apples, and dogwoods.

### Favorite Cover

Ruffed grouse make nests on the forest floor, fairly open hardwood stands make choice nesting sites. Ideal winter cover is dense brushy vegetation, hardwood saplings, or conifers including red cedar that provide insulation. Snow loving, hearty grouse can thrive in some severe winters.

### Management Tips

Timber management that promotes an interspersed abundance of plants of different ages and species that provide fruit and bud food and brushy cover, helps grouse. Young males claim a drumming log and spend the rest of their lives within 300 yards of it.

### More Information

The Ruffed Grouse Society on the web at [http://www.ruffedgrousesociety.org/ruffed\\_facts.asp](http://www.ruffedgrousesociety.org/ruffed_facts.asp)



Whitetail Deer

### Favorite Food

Waste grain from agricultural crops, especially corn, make up half the whitetail's diet. Native foods include woody vegetation, particularly buckbrush and rose, along with forbs, grasses and sedges.

### Favorite Cover

Heavily vegetated stream bottoms, forest edges, tall grasslands, and grasses surrounding wetlands are excellent cover for deer. They look for protected areas with cattails, tall weeds and brush.

### Management Tips

Manage timber to increase woody understory of brush and shrubs, as well as small open areas; plant diverse native grasses; plant corn or clover food plots near timber; and "feather back" timber edges.

### More Information

Whitetails Unlimited  
On the web at [whitetailsunlimited.org](http://whitetailsunlimited.org)



Painted Turtle

### Favorite Food

Painted turtles are opportunistic predators, eating small insects, aquatic invertebrates, fish, frogs, snakes, birds, and mammals. Younger painteds are carnivorous; older painteds become more herbivorous as they mature.

### Favorite Cover

Painted turtles prefer slow-moving shallow waters of ponds, marshes, creeks and lakes with soft, muddy bottoms, with suitable basking sites and ample aquatic vegetation. Hatchlings need shores with gentle gradients and water less than 12 inches deep to survive.

### Management Tips

Habitat quality increases as the number of basking sites, especially those with underwater cover, increase. Logs, rocks, vegetation, and stream banks can provide good basking habitat. A combination of good basking habitat and underwater hiding cover improves habitat quality.

### More Information

Center for Reptile and Amphibian Conservation and Management on the web at <http://herpcenter.ipfw.edu>  
Partners in Amphibian and Reptile Conservation on the web at <http://www.parc-place.org/publications/index.htm>



Brook Trout, other cold water fish

### Favorite Food

Trout and other coldwater fish rely on a wide variety of foods, including small insects and small fish and fish eggs. In streams with a good amount of riparian or stream-side vegetation, trout feed heavily on insects such as grasshoppers and ants that have fallen into the stream.

### Favorite Cover

Prime trout waters are clear, clean and cold. A combination of riffles and pools, submerged wood, boulders, undercut streambanks, and aquatic plants are ideal habitat and cover. Stream riffles downstream from a pool are often chosen for spawning.

### Management Tips

Sound grazing practices, erosion control, addition of wood to stream channels, and improved streamside vegetative management help trout. Limiting livestock access to a stream is helpful, as is establishing buffer strips of trees and grasses between streams and crop fields.

### More Information

NRCS Wildlife Habitat Management Institute leaflet on the web at [ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/RAINBOW1.pdf](http://ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/RAINBOW1.pdf)



Wood Duck

### Favorite Food

Ducklings eat insects, small fish, and other high protein animals. Adults feed on nuts including acorns and hickory; wild rice, bulrush, sedge and other aquatic plants and seeds; and aquatic insects.

### Favorite Cover

Forested wetlands, including bottomland hardwood wetlands, river oxbows, meanders and backwaters. Natural tree cavities and nest boxes for nesting; shallow water with cover for young to forage.

### Management Tips

Install artificial nesting boxes over and near wetlands; preserve old growth timber; restore hydrology and vegetation on previously drained forested wetlands; establish woody vegetation along streams.

### More Information

Ducks Unlimited  
On the web at [www.ducks.org](http://www.ducks.org)  
Wildlife Habitat Council  
On the web at [ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/woodduck\(1\).pdf](http://ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/woodduck(1).pdf)



Butterflies

### Favorite Food

Most butterflies rely almost entirely on plants, eating hundreds of different plant foods. Caterpillars feed on the leaves of trees and shrubs, garden perennials, vegetables, forbs, weeds and grasses, but adults rely almost solely on nectar from flowering plants and wildflowers.

### Favorite Cover

Ranges from sunny, dry open meadows to shaded, damp woods. Cover needs are met by host food plants; leaves provide sunning, feeding, and loafing cover. Crevices in tree bark, log piles, and butterfly boxes offer hibernation habitat for overwintering butterflies.

### Management Tips

Preserve woodlands, open grassy areas, wetlands, brushy areas and wildflower meadows where possible, and offer new habitat in the form of tree, shrub, grass and wildflower plantings. Rock piles, log piles, and open buildings give protective cover as well.

### More Information

NRCS Wildlife Habitat Management Institute leaflet on the web at [ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/BUTTERFLIES1.pdf](http://ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/BUTTERFLIES1.pdf)



Bats

### Favorite Food

Of the 45 species of bats in the U.S., many eat night-flying insects such as moths, beetles, fruit flies and mosquitoes. Others eat fruit, pollen or nectar from plants and flowers. In both cases, for pollination and insect control purposes, they are beneficial.

### Favorite Cover

Common bat foraging habitat includes woodlots, over streams and other water bodies, open fields and croplands, and in lighted residential areas with high insect populations. Caves, mines, bridges, tree branches and cavities and rock crevices are among roosting habitat.

### Management Tips

Bats need foraging habitat relatively close to roosting habitat, with open water nearby they can skim to drink as they fly. Preserving roosting trees and managing open areas to offer diverse vegetation help bat populations, as do properly constructed and placed wooden bat houses.

### More Information

NRCS Wildlife Habitat Management Institute leaflet on the web at [ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/bats\(1\).pdf](http://ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/bats(1).pdf)  
Bat Conservation International on the web at [www.batcon.org](http://www.batcon.org)



Shorebirds

### Favorite Food

Shorebirds' migratory routes are driven by food availability. Aquatic insects including water bugs, beetles and flies; invertebrates including ants, grasshoppers, and worms; and some amphibians and small fishes are commonly eaten. Sedges are among plants that are a minor part of the diet.

### Favorite Cover

Most shorebirds forage in water less than 4 inches deep in interior grasslands, beaches, wetlands and flooded agricultural fields. They prefer open, sparsely vegetated nesting cover near shallow water. Shorebirds occupy a wide range of habitats.

### Management Tips

Managing wetlands and nearby uplands to maintain insect and invertebrate populations during nesting may be the most important thing a landowner can do for local migrant species. Restricting human activity in nesting habitat during nesting season is also important.

### More Information

NRCS Wildlife Habitat Management Institute leaflet on the web at [ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/SHOREbirds1.pdf](http://ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/SHOREbirds1.pdf)



Bluebirds, others for the back yard

### Favorite Food

About two-thirds of the adult's diet is insects and other invertebrates. The rest is wild fruits. Favored insects include grasshoppers, crickets, and beetles; they also eat earthworms and spiders. When insects are scarce in winter, foods include seeds of dogwood, sumac and hawthorn.

### Favorite Cover

Ideal mixed habitat includes open grassy fields with low growth, scattered trees, berry-producing shrubs and vines, snags, and tree, shrub, wire or fence post perches. Bluebirds are cavity-nesters, but cannot make their own. They find abandoned woodpecker cavities or rotted fence posts.

### Management Tips

Use of wooden, man-made artificial nesting boxes has made a significant difference in the survival of bluebirds. Many designs have been used with success. The entrance hole should be 1.5 inches across. See the websites at right for more details.

### More Information

NRCS Wildlife Habitat Management Institute leaflet on the web at [ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/e\\_bluebird\(1\).pdf](http://ftp-fc.sc.egov.usda.gov/WHMI/WEB/pdf/e_bluebird(1).pdf)  
North American Bluebird Society at [www.nabluebirdsociety.org/](http://www.nabluebirdsociety.org/)



## For more information:

A good way to go about establishing wildlife habitat is to visit the local NRCS office or talk with a trained wildlife biologist to develop a plan to maximize habitat.

The NRCS, state fish and game agencies, the U.S. Fish and Wildlife Service, and a number of wildlife organizations have biologists who can help. Look for both financial and technical help to establish and maintain habitat over the long term. See websites listed by species for more information.

For more ideas on wildlife habitat, visit the NRCS Wildlife Habitat Management Institute's website at [www.whmi.nrcs.usda.gov](http://www.whmi.nrcs.usda.gov) or the NRCS website at [www.nrcs.usda.gov](http://www.nrcs.usda.gov) USDA is an equal opportunity employer and provider.



Natural Resources Conservation Service

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# Incorporate Top Habitats for Fish and Wildlife in Conservation Plans

Whether it's in your back yard, on a small acreage, or on a large farm, most soil and water conservation practices you put on your land have some benefit to fish and wildlife. But if you really want to see more wildlife as a result of your conservation work, you need to think about the impact you have on wildlife with every step you take to manage your land. You also need to be sure the conservationist and others you work with know one of your goals is to increase habitat.

To maximize your conservation practices for wildlife:

- 1) Use native grasses and forbs.
- 2) Place wildlife plantings near water.
- 3) Use plants that offer food and important cover for wildlife.
- 4) Use a variety of grasses, trees and shrubs.
- 5) Use farming practices that maintain existing habitat.
- 6) Use maximums rather than minimums for sizes of conservation plantings.

Other ideas:

Use grasses, trees and shrubs in conservation buffers; use no-till planting for residue cover for small birds in the winter; take advantage of the water source in a farm pond to add fenced off grasses, trees and shrubs; use more rows, wider and longer, in windbreaks; and plant blocks of native grasses and forbs between wetlands and crop fields to give grassland birds nesting and cold weather cover.

For more information, visit the NRCS Wildlife Habitat Management Institute's website at [www.whmi.nrcs.usda.gov](http://www.whmi.nrcs.usda.gov) or the NRCS web site at [www.nrcs.usda.gov](http://www.nrcs.usda.gov)

## Food



The kinds and amounts of food available in an area will weigh heavily on the kinds of wildlife that are attracted and can survive.

## Cover



Cover and nesting needs of wildlife varies by species. When you plan to develop habitat on your land, first decide which species you want to attract, and then establish plants that offer the cover and food they need throughout their life cycle.

## Water



If you expect to attract wildlife to a certain parcel of land, you need to have water available within the acceptable travel distance of the species you want to attract. This varies greatly by species, but is a consideration in planning.

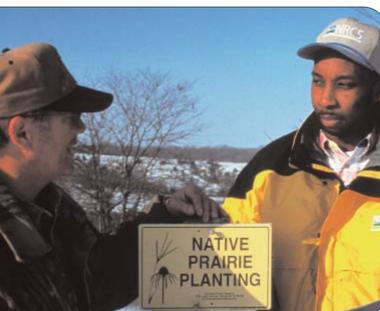
## Space



Wildlife species have space needs, the area they need to roam to assure their food and cover needs are met. Some species need hundreds of acres, while others may live their entire lives on just an acre or two.

A guide to basic habitat needs of 15 popular wildlife species in the Midwest

## Favored Food & Cover



### For more information:

The USDA Natural Resources Conservation Service (NRCS), state fish and game agencies, the U.S. Fish and Wildlife Service, and wildlife organizations have biologists and other conservationists who can help you develop a plan for wildlife habitat. Look for both financial and technical help to establish and maintain habitat over the long term. See websites listed by species on this brochure for more information, or the NRCS Wildlife Habitat Management Institute's website at [www.whmi.nrcs.usda.gov](http://www.whmi.nrcs.usda.gov) or the NRCS website at [www.nrcs.usda.gov](http://www.nrcs.usda.gov)



Natural Resources Conservation Service  
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April, 2004

### Riparian buffer



Riparian buffers-- strips of trees, shrubs and grasses along streams-- have multiple benefits. They filter contaminants out of runoff water before they reach the stream, but also offer the vegetation that many species of wildlife need for food and cover. Trees along a stream also help fish, as they offer shade and improve food sources.

### Edge plantings



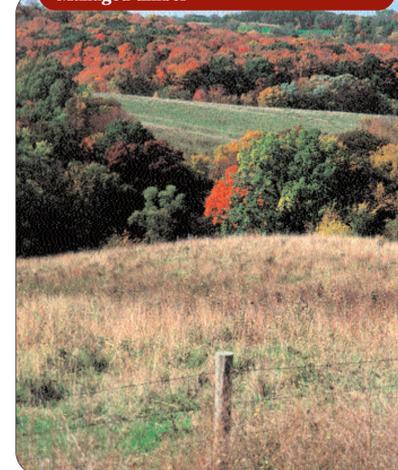
"Edge" cover, a strip of transitional vegetation between a crop field and forest, for example, is a must habitat for a number of species. These species, which include the bobwhite quail and a number of songbirds, are known as edge species.

### Diverse grass planting



Blocks of native grasses and forbs intermingled with forage land and crop fields can offer grassland birds nesting and cold weather cover, and protection from predators.

### Managed timber



You'll get better response from wildlife in forested land by planting lower densities, thinning or burning, and leaving open spaces or borders of grasses and legumes. Leave dead trees standing for foraging and nesting woodpeckers, and allow trees along streams for fish habitat.

### Habitat connection corridors



Large blocks of grasslands, wetlands or woodlands are most useful when connected by corridors of grasses and trees that protect wildlife on the move.

### Restored wetland



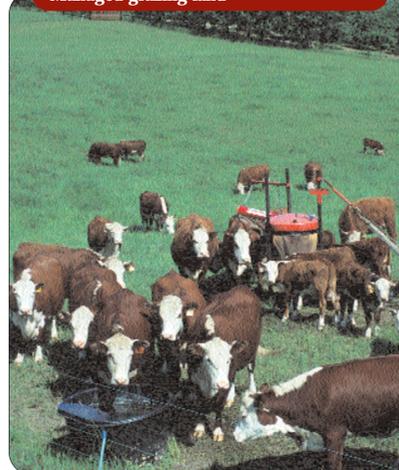
If you had to choose a single habitat or practice, this is probably the one used by more species than any other habitat. More than 300 species call wetlands home.

### Clean water



Conservation practices that protect upland soils and streamsides also produce cleaner water for wildlife, fish, livestock and people.

### Managed grazing land



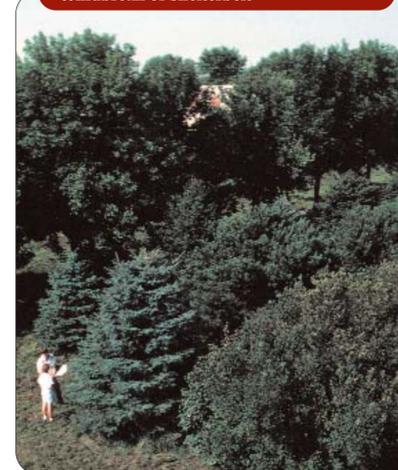
Planned rotational grazing can protect streamsides for fish, create diverse habitat for wildlife, open up dense vegetation canopies, and provide nesting habitat and cover.

### Farm pond



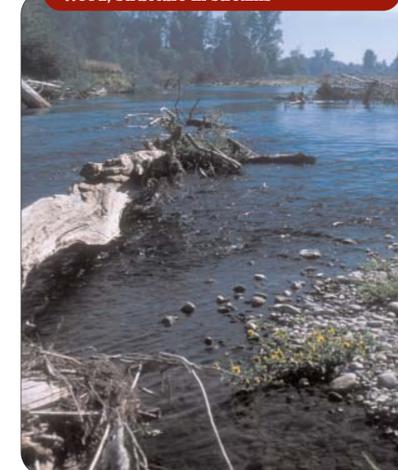
A farm pond offers water for wildlife and habitat for fish, waterfowl, frogs and other species. Encourage growth of native trees, shrubs and grasses in the surrounding area.

### Windbreak or shelterbelt



Rows of trees and shrubs offer prime shelter and food in the winter.

### Wood, structure in streams



Just as all wildlife need cover on the land to shelter them from predators, fish need structure in the water for cover. Fallen logs and tree limbs can serve that purpose well.