

WILDLIFE CONSERVATION

Goal: Recognize that hunters play an important role in wildlife conservation.

Lesson 1: Key Wildlife Principles

Objective

In this lesson you will:

- Describe the key wildlife principles and explain their importance to wildlife management and conservation.

What Is Wildlife?

“Wildlife” is a term that refers to every kind of animal that is not normally domesticated or raised by humans. Wildlife includes all mammals, birds, insects, amphibians, reptiles, fish and all other creatures that live in fresh water and salt water. For hunting purposes, wildlife is either a game animal or a nongame animal. Nongame animals such as song birds, key deer and Florida panthers, are protected by law. Game animals—including ducks and geese, quail, doves, wild turkeys, deer, elk, antelope, black bears, grizzly bears, foxes, coyotes, rabbits and squirrels and many others—may be hunted during specific seasons in most states and provinces.



Dogs and cats are examples of domestic animals. They are raised by humans.



Pronghorn are an example of wildlife and are considered a game animal in states where it's legal to hunt them.



Songbirds such as this cedar waxwing are considered nongame wildlife. Nongame species are not hunted.

Wildlife is a “living resource” made up of all the different game and nongame animals. These animals begin their life in the wild, live there; and they will die and be replaced by others. Some of these animals have long life spans. For example, black bear may live 25 to 30 years in the wild. Other wildlife species have short life spans. For example, bobwhite quail may live less than one year in the wild. However, a bobwhite quail nest may have 12 eggs each year, whereas the black

bear litter may have 2 to 3 cubs every two years.



This bear can live 25 to 30 years in the wild. However, black bears only produce 2 or 3 cubs every two years.



Bobwhite quail may live less than a year but make up for this short lifespan by producing around 12 eggs each year.

Wildlife Conservation

“Wildlife Conservation” is the wise use of wildlife resources via scientific management, which allows for human use and includes activities such as

hunting, trapping and fishing. Hunting season regulations provide limits on the number of game animals that hunters can harvest, and these annual limits allow wildlife populations to remain healthy for people to enjoy and harvest in the future.

Through wildlife conservation, game and nongame animals can thrive in wild places practically forever. Hunters help with wildlife conservation because they make use

of individual animals for food and clothing while working to secure the wellbeing of all wildlife populations now and in the future.

The definition of wildlife conservation is the wise use of wildlife resources. Populations are kept healthy via scientific management, which allows people to use this resource through activities such as hunting.

Habitat

Wildlife habitat is an animal's home—the place where the animal finds everything it needs to stay alive—not in a zoo or museum, but in the outdoors. The basic habitat needs for wildlife are:

- Food
- Water
- Cover or shelter
- Space

Good habitat leads to healthy wildlife populations. It allows adults of the species to breed, raise young and find shelter from predators. In good habitat, nature produces a surplus of wildlife, making it a renewable resource. The numbers of animals that are born and survive each year is greater than the numbers that die. Hunters harvest and make use of the excess numbers of game animals. Those animals that survive become the breeding stock for the next generation.



In good habitat, nature produces a surplus of wildlife, making it a renewable resource.



Wildlife populations will not increase where habitat lacks food, water, cover or space.

Poor habitat is an area where one or more of the basic habitat needs are lacking. Wildlife populations will not increase where habitat lacks, food, water, cover or space in sufficient amounts or it's not available close enough to the animals. The situation may grow worse if there are no improvements, causing some species to suffer from disease, starvation and untimely death.

Carrying Capacity

The habitat in an area can only support so many animals. This is known as "carrying capacity."

As an example, think of a small island in a very large lake. Many different kinds of animals live on this island, and they are all healthy.



Naturally, day after day they compete for food, water, shelter and space. Then, one year because of an extremely cold winter and spring, the food supply is too low for all the animals to live on the island.

Wild animals can't be stockpiled in excess of the habitat's carrying capacity. The only way to increase wildlife numbers is to improve the habitat or create new habitat.

When habitat that supports wildlife is damaged, the carrying capacity of the area decreases. The excess animals must leave or must be removed to prevent starvation and early death of many animals.

Wild animals can never be stockpiled in excess of the habitat's carrying capacity. This is why temporary measures such as winter feeding of starving deer, elk or



moose only make the real problem worse. The population is not in balance with its habitat.

The only way to increase wildlife numbers is to increase an area's carrying capacity by improving the habitat or by creating new habitat.

Limiting Factors

Limiting factors are things that prevent a population from growing larger. For example, 10 rabbits may live in a habitat that has enough water, cover and space to support 20 rabbits, but if there is only enough food for 10 rabbits, the

A lack of food may limit a rabbit population's ability to grow. In this case, food is the limiting factor.



population will not grow. In this example, food is the limiting factor.

Food is not the only factor that may limit population growth. For

Food isn't the only limiting factor. Even if there's enough food to support a thousand birds, a lack of nest sites may mean the habitat can only support a 100 birds. Limiting factors include food, water, cover and space.



example, there may be enough food to support a thousand birds in a certain area, but only suitable nesting sites for one hundred. Or perhaps there is plenty of food, water, cover and space to support a larger population of pheasants in an area, but predators such as foxes, hawks and owls limit the population's ability to grow.

Limiting factors are closely tied to carrying capacity. Many kinds of animals can increase in numbers very quickly, and may temporarily exceed the carrying capacity of their habitat. This can result in:

- Stress
- Starvation
- Disease
- Predation and parasites
- Poor reproductive success
- Damage to the habitat

For example, a rapidly multiplying population of muskrats can quickly eat all the vegetation in a marsh. With the vegetation gone, food becomes the limiting factor and the muskrats may starve or move to another area. The marsh now has a reduced carrying capacity for muskrats until the vegetation grows back.

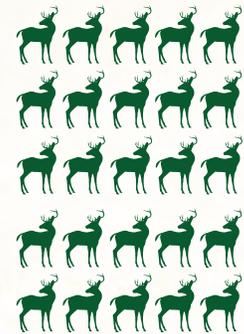
Biological Surplus



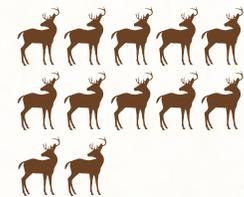
"Biological Surplus" is a scientific name for the number of animals in a given population that are "above" the carrying capacity.

A biological surplus means there are more animals in an area than the habitat can support.

For example, if there are 25 deer in a habitat that has a carrying capacity of 25, and 12 fawns are born and 2 adults die of natural causes, then the new population is $25 + 12 - 2 = 35$.



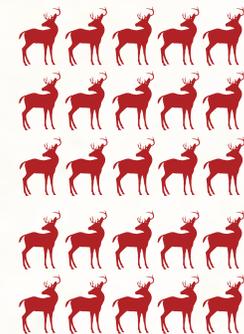
25
Carrying Capacity



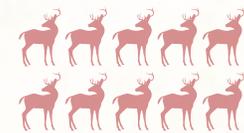
+12
New



-2
Die of natural causes



=35
Total



10
Biological Surplus

However, since the carrying capacity of the habitat has not changed, there will be 10 deer that will not be able to survive in this habitat. They will either move to other areas or will die of starvation, disease, predators or hunting. These 10 deer are the biological surplus – the "extra" animals that can be removed without changing the overall population.

Most game animals have a high biological surplus. These surplus

animals can be removed without affecting the core population. In fact, if they are not removed by hunting, most will die anyway due to other causes (disease, starvation, road kill, etc.).



If animals are being harvested or dying faster than they can be replaced, the number of breeding animals will be reduced, and the herd or flock will not be able to sustain its numbers.

It's important to have enough mature animals to produce young each year. It's also important to have enough young animals to replace the mature animals as they die off. Breeding stock is the correct mixture of adult and young animals needed to sustain a healthy population.

Wildlife managers must ensure that enough breeding stock survives to produce a new crop of wildlife. To accomplish that, wildlife managers must find out how many animals are "surplus" to each game population and protect the remainder. Hunting seasons, bag limits and license quotas are tools that wildlife managers use to protect breeding stock.

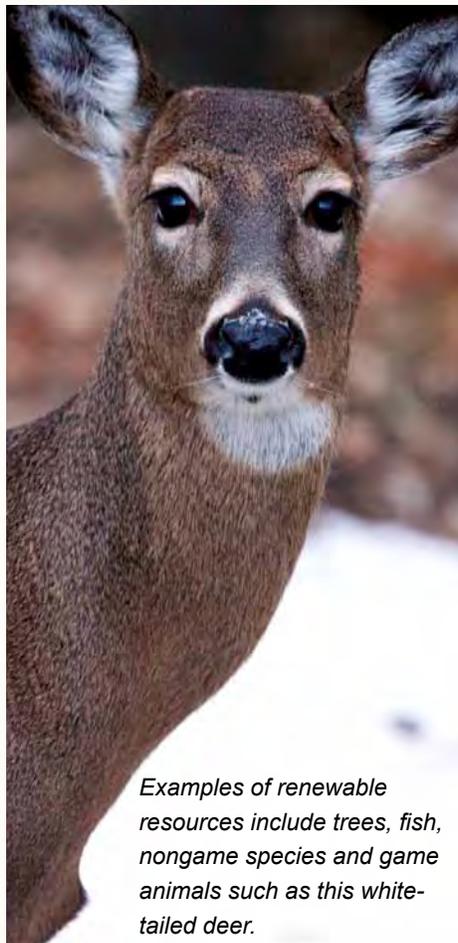
Most game animals, including this fox squirrel, have a high biological surplus. Excess animals can be removed without reducing the core population.



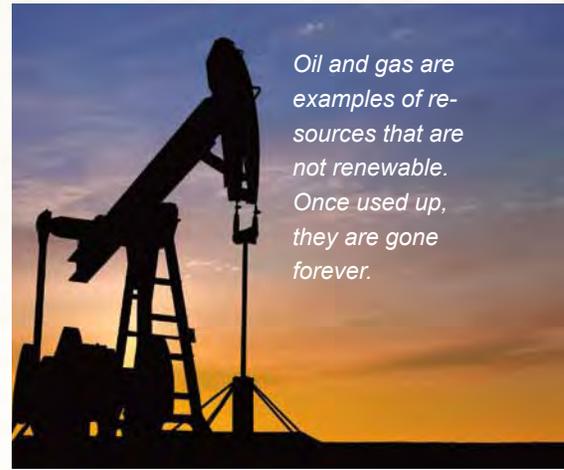
Wildlife managers must ensure that enough mature animals survive to produce a new crop of wildlife.

Renewable Resource

A renewable resource is one that can replenish itself if it is not used up completely. For example, if there is good habitat for wild turkeys, hunters can harvest the biological surplus every year without damaging the population.



Examples of renewable resources include trees, fish, nongame species and game animals such as this white-tailed deer.

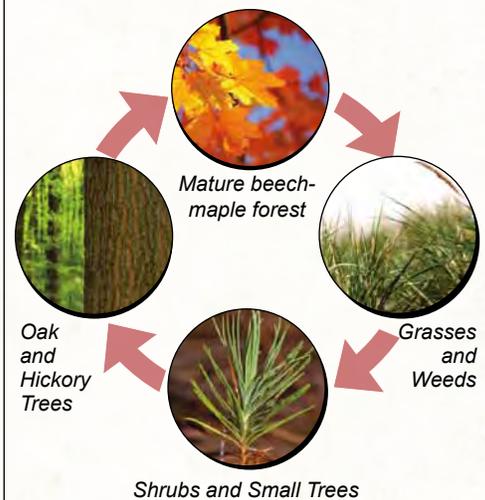


Oil and gas are examples of resources that are not renewable. Once used up, they are gone forever.

Succession

Habitat is always changing through natural events, such as forest fires, ice storms, floods and extreme temperatures of hot or cold.

"Succession" is the gradual change of one kind of plant and animal community into another.



Consider a mature beech-maple forest in the Midwest that a landowner clears for farming.

- When the forest is removed, it changes the kinds of plants and animals that can live there.
- If the farmer decides not to plant crops, weeds and annual plants will immediately invade the open field along with mice and sparrows.
- Over time, shrubs and small trees will invade the field and shade out the grasses and weeds. These shrubs and trees provide habitat for rabbits and foxes.
- Eventually, large trees such as

oaks and hickories will grow and shade out the shrubs. These will dominate the forest for a while, but beech and maple trees (which do well in the shade) will begin slowly growing on the forest floor.

- After many years, the large oaks and hickories will fall, and the maples and beech trees will take their place as the dominant species.

Different kinds of wildlife do well in different periods of habitat succession. Rabbits and grouse do well in early succession habitats such



Ruffed grouse do well in young forest habitats.

as old fields and thick young aspen forest. Many forest songbirds require late succession

stages such as a mature forest.

When a natural event occurs in an area, the habitat is not gone, but it changes into a different habitat that supports other plants and animals. As an example, a forest fire might totally burn out a large area of old, tall trees. The trees will return, but it will take many decades before the area is once again a mature forest. However, with the first rainfall numerous plants will spring to life and the area will turn into grassland. Wildlife that thrived in the mature forest would move to a nearby forest. Wildlife that thrives in a grassland will move into the area that was burned. Over succeeding years shrubs, then taller woody



When a natural event such as a forest fire occurs the habitat isn't gone but changes into a different type of habitat that supports other plants and animals.

plants, and then trees will begin growing there—making the place a forest once again.

Permanent Change

Human use of land can damage wildlife habitat permanently so that it no longer supports the diversity of plants and animals that once lived there. Examples of permanent change include building a highway, housing project, parking lot or shopping mall. Permanent large scale changes to the landscape

prevent wildlife from living in the area. Depending on the size and location, these changes may destroy nesting areas or cut off important migration routes for animals in summer and winter.



Building a highway, housing project, parking lot or shopping mall causes permanent large scale changes to the landscape that prevent wildlife from living there.

Game and nongame animals depend on habitat to live and changes to that habitat can help them or hurt them. If there is

To ensure we have healthy and diverse wildlife populations, we must balance making permanent changes to the landscape with meeting the habitat needs of wildlife.



suddenly not enough food, these animals will have to go to another area or they will starve. Too little water or shelter will cause them to suffer, become diseased and possibly die.

It's possible to have healthy and diverse wildlife populations and to enjoy and make wise use of this renewable resource. The key is to balance our interest in making permanent changes to the landscape with meeting the habitat needs of wildlife.

Principles of Wildlife Management

Wildlife management is the science and art of managing wildlife and its habitat for the benefit of the soil, vegetation, and animals, including people. The goal of wildlife management is to allow the wise use of wildlife resources, while ensuring that wildlife populations

Wildlife managers' goal is to allow the wise use of wildlife resources while ensuring wildlife populations don't become threatened, endangered or extinct.



do not become threatened, endangered or extinct.

To be successful, wildlife managers need to know two important things:

- The amount and quality of habitat available.
- The number of animals that live there.

Wildlife managers follow these principles:

- Base decisions on solid biological science.

- Manage people, because human activity affects wildlife.
- Work to benefit many plants and animals, not just one game or nongame species.
- Increase numbers of animals to a level people can live with or tolerate—not too many and not too few.
- Balance the number of game and nongame animals with the habitat.
- Balance conservation and wise use of natural resources with preservation or nonuse of natural resources for people’s needs and enjoyment.



Wildlife managers use various inventory methods to determine the number of animals that live in a particular area.

The science of wildlife management is based on understanding how animals, their environment and people interact. Some of the tools used by wildlife managers include habitat protection and improvement, harvest regulations (hunting seasons and bag limits) and wildlife protection (harvest restrictions, refuge areas, etc.).

Wildlife Management Tools

Habitat Inventory

Habitat mapping is an important tool for wildlife managers. Habitat maps indicate land ownership and how much habitat remains for different species in a given area. By looking at past trends and present land-use practices, wildlife managers can plan programs to protect and/or enhance wildlife habitat for the future.

Wildlife managers study aerial photos and get information from landowners and forest managers to develop habitat inventories. They also can go into the field to study habitat.



Wildlife Inventory

It can be difficult and expensive to determine how many animals live in an area. To make things even more complicated, wildlife managers also like to know the age and sex of the animals in the population. This helps them determine how healthy the population is.

Wildlife managers sometimes use aerial surveys. They fly over

Maps help biologists learn how much wildlife habitat remains in a given area. They use this information to plan programs to protect or enhance wildlife habitat.

Telemetry is a technology used to study wildlife. Animals being studied are fitted with radio collars or I.D. tags so their movements can be tracked.



areas and count animals in a given area. They use that information to estimate how many animals might exist in a larger area with similar habitat. Another method of learning more about wildlife is tagging animals with radio collars or I.D. tags to monitor their movements.

Hunters Can Help Wildlife Managers

Wildlife managers also get information about wildlife numbers from hunters and other people.

In some areas, biologists ask hunters to report the kinds and numbers of animals they see while hunting or to provide samples from a harvested animal such as teeth, lower jawbones, wings and/or tail feathers. These parts are often used to accurately age the animal, determine its sex and health. Many states and provinces require hunters to check in the game they harvest. Sometimes wildlife managers ask hunters questions about their hunting activities when they buy a license, or they may send hunters a survey asking about their hunting activities and harvest.

All hunters should help wildlife managers by providing this information when asked. Hunters play an important role in this part of wildlife management.



Many states and provinces require hunters to check in the game they harvest. They use information provided by hunters to better understand the health of game populations and number of animals.

Controlling the Wildlife Harvest

Why are restrictions placed on certain hunting seasons or species? Why was an antlerless deer season introduced? Why do some wildlife management zones have a “bucks only” season for white-tailed deer?

Wildlife managers use these restrictions to manage wildlife populations. If they want the population to increase, regulations will restrict hunters to harvest adult males only. This allows all the females to produce young animals. The population should increase.

Wildlife managers may set a buck-only season if they want the population to increase.



If the population is too high, hunters might be able to harvest one or more “antlerless” deer. This type of season reduces the number of females and the number of young born. The population should decrease.



If the population is too high, wildlife managers may allow hunters to harvest one or more antlerless deer. This type of season reduces the number of females and the number of young born.

Wildlife managers design different seasons and hunting restrictions to keep populations in balance with the available habitat.

When you realize why seasons or bag limits are set, you can see the important role you play as a hunter in managing wildlife populations.

Important Terms in Wildlife Management

A “population” is a group of individual organisms (such as mule deer or fir trees or bobwhite quail) of the same kind (species). A population may be local or global, depending on the size of the area under study.

“Population dynamics” refers to the changes in structure and composition that occur in populations. Density, age and productivity are the three main considerations of population dynamics.

A “community” is the populations of plants and animals living and interacting with one another in a given location.

An “ecosystem” is a community of living things interacting with one another and with their physical environment (air, water, soil, wind, etc.). An ecosystem can be a whole planet—the earth, for example, or a forest, lake or fallen log.

“Edge Effect” is a term that refers to the high diversity of plants and animals that occur in areas where

When two habitat types overlap, the transition zone between them offers the greatest diversity of plants, which in turn is used by many different species.



edges or borders of different habitat types overlap each other. The zone of transition between one habitat type (such as a forest) and another (such as a field) offers the greatest mixture of habitat, which in turn is used by many different species. For many animals, the best habitat has an abundance of edge arranged so that food, cover, water and space are close to each other.

Wildlife and People

People impact wildlife in good and bad ways. Following are brief descriptions of a few groups of people who work together to improve wildlife and wildlife habitat.

Wildlife Agencies

Government agencies at the state, provincial and federal levels have the interests of wildlife as their goal. They often must work with conflicting interests and different political viewpoints.



Wildlife agencies are responsible for managing wildlife but must work with conflicting interests and different political viewpoints.

Land Managers

Government agencies that own and manage land usually include wildlife as part of their programs, but must consider the many other uses of public lands.

Planning and Zoning Commissions

Most local cities and towns have commissions that determine how

the land in their area can be used. They must consider economic, community, public service and municipal factors in planning and zoning. They do not always consider wildlife in their decisions, but with good planning these uses can be compatible with wildlife interests.

Park Managers and Commissioners

Wildlife often is an important part of state, national and local parks. However, some park managers may prioritize the desires of people who visit their parks over the needs of wildlife.



Many park managers make wildlife an important part of their visitors' outdoor experience.

Private Landowners

Since private landowners own most of the land in North America, this group has the biggest impact on wildlife. Most landowners have an economic interest in the use of their land and if wildlife is not a part of that interest, it often suffers. But if wildlife is a part of that interest, it will benefit. "If wildlife stays, it stays."

Wildlife can't speak for itself... we must be the ones to speak up

Hunters are wildlife conservationists, and they must speak up for wildlife interests.

Hunters should stay informed about what is going on in their area and around the country by reading websites, blogs, forums, newspapers and magazines. They should attend meetings and talk to people who know about the issues. Hunters should ask what happens to wildlife as a result of wildlife management decisions. They should congratulate decision-makers when their actions benefit wildlife. If bad decisions are made, hunters should remind decision-makers to consider how their choices affect wildlife. Even when hunters disagree with the direction decision-makers go, they need to share their concerns in a way that is positive and respectful.



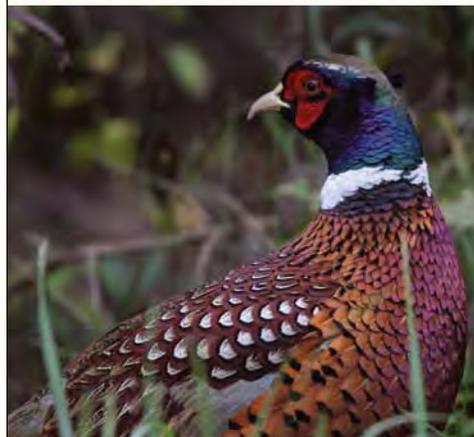
Hunters should be a positive, persistent force for conservation.

Exotic or Nonnative Wildlife

Wild animals that were not originally found in North America or in certain parts of the continent are called exotics or nonnative wildlife. Some animals such as starlings, European sparrows and Norway rats, were accidentally introduced by people traveling to North America.

Other exotics such as axis deer, black buck antelope, fallow deer, carp, brown trout and ring-necked pheasants were

introduced on purpose. They quickly adapted to their new home and now often outcompete native wild animals.



Species such as ring-necked pheasant and black buck antelope are considered exotics. These wild animals were not originally found in North America.

Many introduced exotics don't do well in new habitat. Yet, sometimes they do and may provide food, recreation or research for humans. Exotics also can cause problems for

native wildlife.

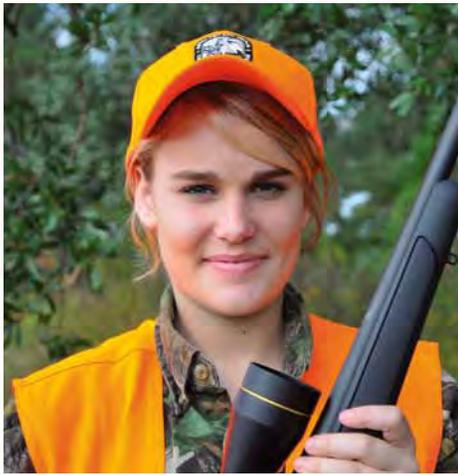
Exotics can:

- Spread disease
- Outcompete native wildlife
- Overrun habitat
- Interbreed with native wildlife

As a result, most states and provinces have strict laws for importing, exporting and possessing wildlife.

Hunters as Conservationists

Hunters need to recognize they have done more to help wildlife populations than any other segment of society. They need to tell people that regulated hunting does not cause wildlife to become endangered or extinct. In fact, it has been the money and efforts of hunters that saved many kinds of wildlife from almost certain extinction.



As a hunter, you should let your friends and family know regulated hunting does not cause wildlife to become endangered or extinct. In fact, it has been the money and efforts of hunters that saved many kinds of wildlife from extinction.

Lesson 2: Role of Hunting in Wildlife Conservation

Objective

In this lesson you will:

- Explain how hunting supports wildlife management and conservation.

Hunters and Wildlife Conservation

Hunters pay for the vast majority of the wildlife conservation work done throughout North America.

How do hunters pay for wildlife conservation?

- In the United States every time a hunter buys a new firearm, ammunition or archery equipment, an excise tax paid

by the manufacturer is factored into the cost. These dollars are deposited into the Federal Aid in Wildlife Restoration Account. Funds from the account are available to states in the form of grants, which support wildlife restoration projects, hunter education and shooting range development.



This law, which is known as the Pittman-Robertson Act or the Federal Aid in Wildlife Restoration Act, was passed in 1937 with strong hunter support and cooperation from state

and federal government, conservation groups and the firearms industry. Hunters provide more than \$300 million a year for conservation through this excise tax—they have contributed more than \$6.4 BILLION since 1937!

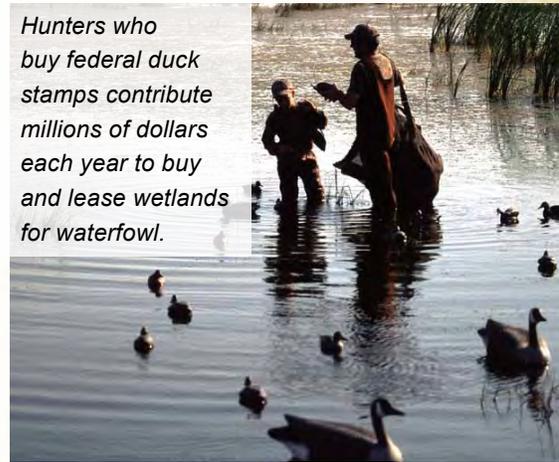
- Every time a hunter buys a license or tag to hunt or trap, the natural resource agency uses that money to pay for wildlife management. In the United States, hunting license sales totaled approximately \$725 million nationwide in 2006, and is a

An excise tax on firearms, ammunition and archery equipment helps fund wildlife restoration projects, hunter education and shooting range development.

primary funding source for most state fish and wildlife agencies.

- Hunters have sponsored laws that have created conservation stamps and funds to protect and enhance wildlife habitat. Hunters who buy federal duck stamps contribute about \$11 million a year to buy and lease wetlands for waterfowl refuges and waterfowl production.

Hunters who buy federal duck stamps contribute millions of dollars each year to buy and lease wetlands for waterfowl.



- Hunters also pay for wildlife conservation through their memberships in organizations such as National Wild Turkey Federation, Whitetails Unlimited, Pheasants Forever, Rocky Mountain Elk Foundation, Ruffed Grouse Society, Ducks Unlimited, Mule Deer Foundation and other conservation groups. Through these organizations, hunters have raised millions of dollars and contributed thousands of hours to benefit wildlife.

Hunters do more to help wildlife than any other group in America.

- Hunters' private donations to conservation efforts total \$300 million annually to conservation efforts,
- Hunters invest nearly \$1.3 billion dollars each year in conservation through hunting license sales, special federal excise taxes and import duties on hunting gear, and private donations.



Many people would support hunting more if they knew who was picking up the bills for conservation—hunters.

History of Hunters Helping Wildlife

During the early 1900s, many North American wildlife species were in serious trouble. Destruction of habitat and commercial exploitation through unregulated market hunting had reduced some populations to critical levels.

But contrary to popular opinion, hunters were not the cause of this decline.

In the early 1900s, farsighted people, including President Theodore Roosevelt and Gifford Pinchot, the first Chief of the United States Forest Service, joined by hunters and sportsmen, identified the real causes of the problem with disappearing



Unregulated market hunting reduced bison populations to critical levels.

wildlife. They worked together with the United States Congress to pass laws that would provide for long-term wise use of natural resources. The wildlife conservation movement in North America had begun.

Their efforts are the backbone of the North American Wildlife Conservation Model, the only one of its kind in the world.

The model's two basic principles—that our fish and wildlife belong to all North American citizens, and are to be managed in such a way that their populations will be sustained forever—are explained through a set of guidelines known as the "Seven Sisters for Conservation."

Seven Sisters

The "Seven Sisters" hold the key to wildlife conservation, as we know it today.

Sister #1: The Public Trust

In North America, fish and wildlife are managed by government agencies to ensure that we always have wildlife and wild places to enjoy.

In the United States and Canada, individuals do not own wildlife. Instead, federal, state and provincial governments are responsible for managing all wildlife, as well as their habitat on public lands. This public trust gives you and all citizens the opportunity to view, hunt, and fish and otherwise enjoy these natural resources.



President Theodore Roosevelt and other hunters helped launch the conservation movement in North America.



Wildlife belongs to everyone, to be used wisely and conserved for future generations.

Two hundred years ago, American colonists appreciated this unfettered access to the continent's abundant wildlife. Back in Europe in many cases, only nobility and the very wealthy were allowed to hunt. In 1842, the U.S. Supreme Court set a legal precedent by supporting the American ideal that wildlife belongs to everyone.

Sister #2: Prohibition on Commerce of Dead Wildlife

Conservation laws and their strong enforcement in the United States and Canada saved wildlife from slaughter.

Because we all own wildlife, it is illegal in North America to sell the meat of any wild animal. In some cases the hides, teeth, antlers and horns of game animals and the hides of a select few furbearers may be sold.



Because we all own wildlife, it is illegal in North America to sell the meat of any wild animal.

However, buying and selling meat, hides, feathers and other wild animal parts was a huge business in the latter half of the 1800s. Unregulated hunting and habitat destruction severely depleted bison, egrets and elk, and led to the extinction of the passenger pigeon. Strong laws written at the turn of the 20th century restricted hunting and the buying and selling of most wild animals, which allowed many threatened wildlife species to rebound and thrive.



Sister #3: Democratic Rule of Law

You can help make laws to regulate hunting and fishing and conserve wildlife.

Every citizen of the United States and Canada has the right to help create laws to conserve and manage wild animals and their habitats. Government agencies that manage our natural resources provide citizens with public forums to share ideas and opinions about wildlife and habitat. Citizens can influence regulations and legislation that impacts wildlife.

Although early 20th-century conservationists wanted to protect wildlife, many still wanted to hunt, fish, and enjoy wild places. They established laws that regulated those activities. Today, federal, state and provincial game wardens check hunting licenses and tags to make sure people are hunting in permitted areas and only taking the quarry allowed by law.

Sister #4: Hunting Opportunity for All

Every citizen has an opportunity, under the law, to hunt and fish in the United States and Canada.

Regardless of your social status, race, creed, religion or gender, you have the right to legally hunt and fish on most public lands in North America.

Hunters and anglers led the crusade for wildlife protection a century ago. For instance, before Theodore Roosevelt became

Every citizen has an opportunity, under the law, to hunt and fish in the United States and Canada.

In North America, we can legally kill certain wild animals under strict guidelines for food and fur, self-defense and property protection.

Laws restrict us from casually killing wildlife. We cannot kill wildlife merely for antlers, horns, feathers or to use only a small portion of the meat. Laws also help ensure that we show respect for and avoid mistreating wildlife and the land, and when hunting, make maximum use of every animal for food and other purposes.

Besides feasting on the meat, hunters often keep the antlers as a memento of the hunt.

Hides also make sturdy buckskin coats, chaps and gloves. Many hunters also enjoy

president, he helped to found the Boone and Crockett Club. The club's Fair Chase Statement was the first document outlining a code of conduct and ethics for hunters. It became the cornerstone of our game laws. **Sister #5: Non-frivolous Use**



In North America, we can legally kill certain wild animals under strict guidelines for food and fur, self-defense and property protection.

sharing wild meat with family and friends. In this way, the rewards of hunting benefit everyone—not just the hunters themselves.

Sister #6: International Resources

Wildlife and fish migrate freely across boundaries between states, provinces and countries.

Working together, the United States and Canada jointly manage land and wildlife to make sure that wildlife can safely cross borders and that no country, state or province will take more than its share of a common resource.

The Migratory Bird Treaty Act of 1918 demonstrates this cooperation between countries to protect wildlife. The Act made it illegal to capture or kill migratory birds, except as allowed by specific hunting regulations. Treaties now exist between the United States, Canada, Mexico and Russia to protect



The Migratory Bird Treaty Act has restored ducks, geese, cranes and other waterfowl that travel great distances and cross several countries between their wintering and nesting areas.

birds migrating between these countries. The Act has restored our waterfowl, including ducks, geese and cranes, which travel great distances and cross several countries between their wintering and nesting areas.

Sister #7: Scientific Management

The right information helps us make good decisions and become better stewards of wildlife.

Scientific research—and applying that research—is essential to managing and sustaining North America's wildlife and habitats.

For example, researchers put radio collars on elk to track the animals' movements. They use the data to answer questions such as: Where do elk cows calve? How will bulls react to motor vehicles driving on forest roads?

Hunters and anglers were among the first to crusade for wildlife protection and today remain some of the most important conservation leaders. The excise taxes and license fees imposed on this country's



sportsmen largely paid for programs that helped rescue many species from extinction. The following shows just how successful sportsmen have been at helping wildlife.

Scientific research is essential to managing and sustaining North America's wildlife.

Canada Goose (resident)

Then - 1.1 million

Now - over 3 million!

Habitat destruction reduced Canada goose populations to a low of some 1.1 million birds in the late 1940s. Today, there is

Canada Goose



twice that number as a result of wildlife management measures implemented by the nation's conservation agencies.

Trumpeter Swan

Then - only 73 birds

Now - 25,000!*

In 1935, only 73 trumpeter swans were known to exist in the United States.**

Trumpeter Swan



Today, there are 25,000 in several national parks and wildlife refuges.

Wild Turkey

Then - 100,000

Now - 7 million!

While records of turkey populations during the early 1900s are vague, estimates are that landscape development for

Wild Turkey



human use and the resulting habitat loss may have reduced populations to 100,000 birds or less. Today, conservation programs have restored turkeys to sustainable levels in 49 states with a total population of more than 7 million birds.

Source: National Wild Turkey Federation (NWTFF)

White-tailed Deer

Then - 500,000

Now - 20 million!

In 1900, an official U.S. Survey estimated less than 500,000 white-tailed deer remaining in the nation. Today, there are more than 20 million.

White-tailed deer



Source: Quality Deer Management Association (QDMA)

Elk

Then - 41,000

Now - 1 million!

In 1907, only 41,000 elk could be counted throughout the United States. Today, there are one million. Most western states

Elk



and some eastern states now have surplus populations and provide opportunities for hunters to harvest elk during regulated hunting seasons.

Source: Rocky Mountain Elk Foundation (RMEF)

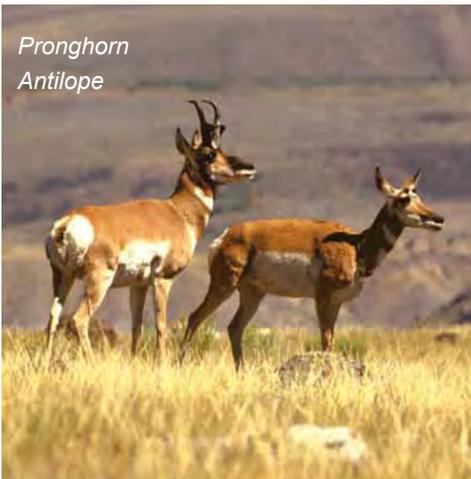
Pronghorn Antelope

Then - 12,000

Now - 1 million!*

About 50 years ago, the total

Pronghorn Antelope



United States population of pronghorn antelope was only about 12,000. Today, habitat restoration and restocking programs have helped increase pronghorn populations to more than 1 million.

* Source: National Shooting Sports Foundation

**In the lower 48 states

Hunters need to recognize that they have done more to help wildlife populations than any other segment of society. Hunters need to tell nonhunters that regulated hunting does not cause wildlife to become endangered or extinct. In fact, the money and efforts of hunters have saved many kinds of wildlife from almost certain extinction.

Lesson 3: Wildlife Identification

Objective

In this lesson you will:

- Explain the importance of wildlife identification for hunting.

Hunter Responsibility and Wildlife Identification

Hunters have an ethical and legal responsibility to know what game they are hunting, and they must be able to properly identify the animal before taking it. Once the bullet has left the barrel, it is too late to think about identifying the target.

Each year, a few hunters embarrass themselves—and all hunters—by shooting the wrong animals. They try to offer excuses such as “I thought that moose was a really big deer” or “How are you supposed to tell one duck from another?” These mistakes have caused nonhunters to question the ethics of hunters and anti-hunting groups to demand that hunting be abolished.

Fortunately, most hunters work to accurately identify wildlife. EVERY hunter needs to know how to identify native game species and even nonnative wildlife that might have escaped from personal collections or museums.

Wildlife identification takes practice to become good at it. Consider these challenges:

Without antlers, what is the difference between elk and moose?



Cow Elk



Cow Moose

Without antlers, what is the difference between mule deer and white-tailed deer?



White-tailed Deer



Mule Deer

How can the hunter distinguish between duck species when they are flying, to ensure they are abiding by the different bag limits?



Mallards



Northern Pintails

The hunter must know these differences to hunt legally and follow game laws.

Learn to Identify Wildlife

Everybody has their personal reason to learn wildlife identification. Common reasons include:

- Personal enjoyment
- Wildlife viewing
- Hunting
- Personal protection
- Career interests, such as wildlife artist

Wildlife identification takes time and

Hunters must be able to accurately identify wildlife for safe, ethical and legal hunting practices—before pulling the trigger.



practice. All hunters must take time to study game and nongame species in the state or province where they plan to hunt.

Opportunities to study wildlife are everywhere, including local parks and neighborhoods that are home to deer, wild turkeys, ducks, geese, raccoons, squirrel and opossums. Because a variety of wildlife species are found in suburbs and even cities, it's more common for people to see wildlife. Some encounters can pose a safety risk. For example, deer/car collisions can be dangerous, bears may destroy property or attack people, and wild turkeys may behave aggressively toward people.



Opportunities to study wildlife are everywhere, including local parks and neighborhoods that are home to animals such as gray squirrels.

The majority of wildlife species in North America are not hunted. Animals not hunted may fall into several categories such as nongame, domestic, threatened/endangered, etc. Hunters are responsible for being able to recognize game species from those animals that cannot be hunted. State and provincial hunting laws and regulations outline what is legal. Anyone who plans to hunt must get a copy of the state or provincial hunting laws and regulations where the hunt will take place to know which species are classified as game animals.

Tips for Wildlife Identification

When trying to identify wildlife, consider the following details:

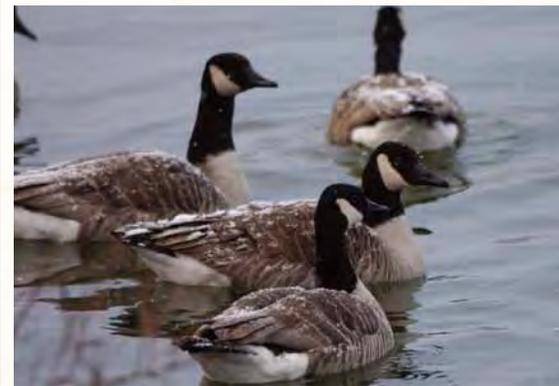
- Age and sex of the animal
- Animal sign, sightings and sounds
- Geographic distribution and habitat used by the species

When you first learn how to identify wildlife, you'll realize age and sex of animals can affect how they look. Some animals change their color depending on the time of year, age and sex. Learn how to identify male and female animals at different times of the year and in different age classes.

The males and females of some species are noticeably different. For example, the male mallard is quite colorful while the female is more camouflaged. On the other hand, mature male and female Canada geese look alike. In some species, such as white-tailed deer, males have antlers in the fall while the females do not.



It's easy to tell the colorful male mallard from the drab looking female.



On the other hand, male and female geese look alike.

Animal Sign, Sights and Sounds

How do hunters find game even when it seems like there are no animals around? Like detectives putting together clues, hunters look for animal sign to find good places to hunt. By reviewing books and websites about wildlife, a beginning hunter can practice reading animal sign anywhere animals live. This is the kind of skill that will help you become an expert.

What kinds of sign does a hunter look for?

Hunters look for:

- Feeding evidence
- Fur or feathers
- Tracks and trails
- Droppings
- Scrapes, dens, wallows, rubbings, etc.
- Sounds
- Actual sighting of wildlife



Droppings and tracks are two clues that will help find and identify wildlife.

Knowing how to read sign and confirming a properly identified animal takes skill and knowledge. For example, a beginning hunter might hear a howling sound and

later see at a distance a group of dog-like animals running in a pack. There were reports in the media that wolves are in the area. Wolves run in packs. Coyotes are more solitary. Do you think there is sufficient information to conclude that these animals are wolves?

Or, a beginning hunter might find fresh droppings filled with berry seeds. The dropping piles are about 4 inches in diameter. These droppings might be from a black bear, but they are a little small. Nearby the hunter finds a footprint that resembles a human hand. Would this information support the conclusion that the animal is a raccoon and not a bear?

A hunter must correctly identify the animal before shooting—and this conclusion must be based on having enough information.



Geographic Distribution and Habitat

A hunter who tries to find a mule deer in New England will not be successful. Mule deer live in the western states and provinces.

Learning where a species lives makes it easier to find and identify

You won't find a mule deer in New England. Mule deer live in the western states and provinces. Being a skilled hunter requires knowing where species live.



them. It's important to know some birds are migratory, meaning they spend the spring and summer in northern areas and travel south in the fall and winter. To know both winter and summer ranges for migratory species, hunters should study migratory bird identification guides.

You also should learn the habitat type where each species lives. A moose does not live in a desert. Moose like willow and conifer habitats found in northern forests. Yet, habitat preferences of animals may change seasonally. Some

Be aware that some animals such as elk change their habitat preferences depending on the season. animals, such as elk, spend winters at lower elevations and move to higher elevations in the summer.



Caution for Hunters

Hunters must be sure they are taking legal game animals, which means they have to identify animals by sex, age and species. Hunting regulations also may require you to identify the size of an animal's horns to within inches. Or you may have to identify an animal by its antlers, to a specific number and size of points or tines.

Remember - NEVER shoot in the direction of a sound, color or movement. A hunter must be sure of the target, what lies between the hunter and the target, and what lies beyond the target—before

Tips for Animal Identification

- A good pair of binoculars will help you correctly identify animals. At a distance, binoculars clarify details such as color, antlers, horns, etc.
- NEVER use a scope mounted on a gun or bow to identify animals.
- Use a spotting scope to identify animals at longer ranges.

pulling the trigger, because the shot can never be taken back.

Learning how to identify wildlife takes study and practice. Reading and studying pictures, visiting zoos and game farms, and watching television shows or videos can help. But nothing can replace practicing wildlife identification in the field. So make sure you get out and identify animals and tracks at different times of the year, in different habitats and different weather conditions. Practice with someone who has more experience in identifying wildlife.



A zoo is a great place to study wildlife and learn how to identify the different species.

A wildlife identification handbook, especially with color pictures, can be very useful when hunting or viewing wildlife. The information in the handbook can clear up doubts about the sighting of a particular animal and improve the hunter's wildlife identification skills over time. Included may be both the biological name and the common name of the species. The biological classification system works in this pattern: order, family, genus, species and sub-species. For example the Vancouver Island marmot (*Rodentia sciuridae Marmota vancouverensis*) is in the rodent order, squirrel family, marmot genus and Vancouver species.

Wildlife Identification Resources

Wildlife ID Websites

- www.enature.com/fieldguides/
- Colorado Division of Wildlife: <http://wildlife.state.co.us/WildlifeSpecies/Profiles/>
- Texas Parks and Wildlife: www.wildtexas.com/wildguides
- Ohio Division of Wildlife: www.ohiodnr.com/tabid/20293/Default.aspx
- U.S. Fish and Wildlife Service: www.fws.gov/digitalmedia

Waterfowl ID Websites

- www.npwrc.usgs.gov/resource/birds/duckdist/index.htm
- www.ducks.org/hunting/waterfowl-id

Books:

- Peterson Field Guides www.houghtonmifflinbooks.com/peterson/birds.cfm
- National Geographic Field Guide to the Birds of North America, Fifth Edition
- Birds of North America: Eastern Region (Smithsonian Handbook Series)
- Scats and Tracks of North America: A Field Guide to the

Signs of Nearly 150 Wildlife Species (Scats and Tracks Series)

Lesson 4: Hunting Opportunities

Objective

In this lesson you will:

- Identify activities and organizations of interest to hunters and wildlife conservation.

Dig Deeper!

Hunting can provide a lifetime of enjoyment and fascination, and there are many activities and organizations that hunters can participate in that can make their experiences even more enjoyable. Following is a list of organizations to contact for more information about a particular hunting interest.

HUNTING AND CONSERVATION



Becoming An Outdoors-Woman

1-877-BOWOMAN

www.uwsp.edu/cnr/bow

Outdoor skills workshops for women throughout North America.



Fair Chase and Conservation
SINCE 1887

Boone and Crockett Club

Boone and Crockett Headquarters
250 Station Drive
Missoula, MT 59801
406-542-1888
www.boone-crockett.org

The Boone and Crockett Club promotes the guardianship and provident management of big game and associated wildlife in North America and maintain the highest standards of fair chase and sportsmanship in all aspects of big game hunting, in order that this resource of all the people may survive and prosper in its natural habitats.

Buckmasters

P.O. Box 244022
Montgomery, AL 36124-4022
www.buckmasters.com

Magazine and hunting-related products and services for members.



Delta Waterfowl

P.O. Box 3128
Bismarck, ND 58502
USA 888-987-3695
Canada 877-667-5656
information@deltawaterfowl.org
www.deltawaterfowl.org

Delta provides knowledge, leaders and science-based solutions that efficiently conserve waterfowl and secure the future for waterfowl hunting.



Ducks Unlimited

One Waterfowl Way
Memphis, TN 38120

901-758-3825
www.ducks.org

Dedicated to protect, enhance, restore and manage North America's wetland and upland habitats. Junior Greenwings memberships available.

Wild Sheep Foundation

720 Allen Avenue
Cody, WY 82414
307-527-6261
www.fnaws.org
Seeks to improve habitat and populations of wild sheep in Canada, United States and Mexico.

HandgunHunt.com

An Internet site dedicated solely to handgun hunters around the world.
www.handgunhunt.com

International Hunter Education Association

P.O. Box 490
Wellington, CO 80549
970-568-7954
www.ihea.com
Provides information about hunting safety and services for hunter education instructors.



Mule Deer Foundation

1939 South 4130 West, Ste. H
Salt Lake City, UT 84104
1-888-375-DEER (3337)
www.muledeer.org

The Mule Deer Foundation's goals center on restoring, improving and protecting mule deer habitat, which result in self-sustaining, healthy, free-ranging, and huntable mule deer populations.

National Anti-Poaching Foundation

Non-profit organization dedicated to reducing the theft of wildlife.
800-636-6297
<http://colorado.on-line.com/ogt/naws.htm>

NRA

National Rifle Association of America
HuntersRights.org
11250 Waples Mill Road
Fairfax, VA 22030
1-800-672-3888
huntersrights@nrahq.org
www.nrahuntersrights.org
Defending your freedom to hunt.



National Wild Turkey Federation (NWTf)

P.O. Box 530
Edgefield, SC 29824
803-637-3106
www.nwtf.org

Dedicated to the conservation and hunting of all species of wild turkeys. JAKES memberships available for youth.

North American Bear Foundation (NABF)

9960 390th Street
Pillager, MN 56473
218-746-3774
nabf@nabf.org

The North American Bear Foundation is dedicated to the native bears and other wildlife populations of North America by promoting public awareness, education and sound management of our natural

resources through habitat conservation, restoration and enhancement.

North American Hunting Club

12301 Whitewater Drive
Minnetonka, MN 55343

Member Services: 1-800-922-4868,
7:30 a.m. to 6 p.m. Central Time
<http://visitors.huntingclub.com/home.asp>

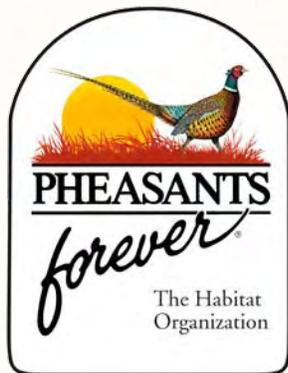
A private hunting club that provides a magazine and associated products and services to its 800,000 members.

Orion – The Hunters' Institute

657 Maple Hill Rd
Johnson, VT 05656
802-730-8111

www.huntright.org

To protect the future of hunting, Orion-The Hunters' Institute provides moral and intellectual leadership on the issues of responsible hunting, democratic hunting, and the public trust of wildlife.



Pheasants Forever/Quail Forever

1783 Buerkle Circle
St. Paul, MN 55110
612-773-2000

www.pheasantsforever.org
www.quailforver.org

Involved in habitat improvement projects and acquisitions that benefit upland birds.

Pope and Young

Box 548, Chatfield,
MN 55923

Tel (507) 867-4144
admin@pope-young.org
<http://pope-young.org/>

Ensuring bowhunting for future generations by preserving and promoting its heritage and values.

Quality Deer Management (QDMA)

PO Box 160
Bogart, GA 30622
1-800-209-DEER (3337)
www.qdma.com

The Quality Deer Management Association is a non-profit wildlife conservation organization dedicated to ensuring a high-quality and sustainable future for white-tailed deer and white-tailed deer hunting.



Remington Outdoor Foundation

870 Remington Drive
Madison, NC 27025
www.OutdoorRoadmap.com

The Remington Outdoor Foundation is a non-profit organization that supports hunting, shooting and outdoor sports through land conservation, access, recruitment and retention, education, training, safety, awareness, research and wildlife enhancement.



Rocky Mountain Elk Foundation

P.O. Box 8249

Missoula, MT 59807
800-225-5355
www.rmef.org

Dedicated to ensuring the future of elk and other wildlife by conserving, restoring and enhancing natural habitats.



Safari Club International (SCI)

4800 West Gates Pass Road
Tucson, Arizona 85745-9490
520-620-1220

www.scifirstforhunters.org

Safari Club International is the leader in protecting the freedom to hunt and in promoting wildlife conservation worldwide.

The Ruffed Grouse Society

451 McCormick Road
Coraopolis, PA 15108
412-262-4044 or 888-564-6747
rgshq@aol.com

www.ruffedgrousesociety.org

This organization uses education and leadership to enhance ruffed grouse and woodcock habitat.

U.S. Sportsmen's Alliance

801 Kingsmill Parkway
Columbus, OH 43229
614-888-4868

www.ussportsmen.org

Provides direct lobbying and grassroots coalition support to protect and advance the rights of hunters, fishermen, trappers and scientific wildlife management professionals.

Waterfowl USA

P.O. Box 50
Edgefield, SC 29824
803-637-5767

www.waterfowlusa.org

Uses locally raised funds for conservation and waterfowl habitat projects.

Whitetails Unlimited

P.O. Box 720
2100 Michigan Street
Sturgeon Bay, Wisconsin 54235
920-743-6777
www.whitetailsunlimited.com

Founded in 1982, Whitetails Unlimited is a national non-profit conservation organization that is dedicating its resources to the betterment of the white-tailed deer and its environment.

Their purpose is to raise funds in support of: (1) educational programs; (2) habitat conservation, and (3) preservation of the hunting tradition for the direct benefit of the white-tailed deer and other wildlife.

Wildlife Forever

P.O. Box 3404
Minnetonka, MN 55343
612-936-0605
www.wildlife-forever.org

Non-profit, multi-species conservation organization.

IN CANADA



CANADIAN FÉDÉRATION
WILDLIFE CANADIENNE
FEDERATION DE LA FAUNE

Canadian Wildlife Federation

2740 Queensview Drive
Ottawa, Ontario K2B 1A2
613-721-2286
www.cwf-fcf.org

National Firearms Alliance

Box 1779
Edmonton, Alberta T5J 2P1
403-439-1394

Shooting Federation of Canada
203 Colonnade Road, S., Unit 12B
Nepean
Ottawa, Ontario K2E 7K3
613-727-7483
www.ncf.ca/sfc/

THE SHOOTING SPORTS 4-H Shooting Sports Program

Contact your county extension 4-H agent or the 4-H office at your state agriculture university.

Offers local shooting activities to members. Programs include rifle, pistol, shotgun, muzzleloader and archery.

http://fyd.clemson.edu/ssports.htm



Amateur Trapshooting Association (ATA)

601 W. National Road
Vandalia, OH 45377
937-898-4638
www.shootata.com

Trapshooting is a way to learn the basics of shotgun shooting and is also a challenging sport that will help you develop your wingshooting skills.

National Muzzle Loading Rifle Association (NMLRA)

P.O. Box 67
State Rte. 62
Friendship, IN 47021
812-667-5131 or 800-745-1493
www.nmlra.org

Governs muzzleloading competition in the U.S. There are opportunities to participate in rifle, pistol and shotgun events at locations across the country.

**National Reloading
Manufacturers Association**
Suite 300, 1 Centerpointe Drive
Lake Oswego, OR 97035
503-639-9190
www.reload-nrma.com

Information about reloading and a free booklet with basics to begin reloading.

National Rifle Association (NRA)

Competition & Training Division
11250 Waples Mill Road
Fairfax, VA 22030
703-267-1500
www.nra.org

A variety of shooting programs and competitive events for shooters of all ages and experience, including the popular Youth Hunter Education Challenge, at the local, state and national level.



The National Shooting Sports Foundation

Flintlock Ridge Office Center
11 Mile High Road
Newtown, CT 06470-2395
203-426-1320
www.nssf.org
www.wheretoshoot.org

Wide variety of information and publications on sport shooting and shooting ranges.

National Skeet Shooting Association (NSSA)

5931 Rofth Road
San Antonio, TX 78253
800-877-5338
www.nssa-nasca.com

Skeet shooting is a fast-moving and exciting shotgun sport that is ideal for sharpening your skills for bird hunting. Programs range from

beginning shooters to national and international events for competitors.

National Sporting Clays Association

5931 Rofft Road
San Antonio, TX 78253
800-877-5338 or 210-688-3371
www.nssa-nsca.com

Provides information about one of the fastest growing sports in the country. Dedicated to the development of the sport at all levels of participation and the creation of an atmosphere of healthy competition and meaningful fellowship within its membership.

United States Biathlon Association (USBA)

29 Ethan Allen Avenue
Colchester, VT 05446
802-654-7833
www.usbiathlon.org

The national governing body for the Olympic sport of Biathlon, a combination of cross-country skiing and rifle marksmanship. Provides opportunities to compete at all levels across the country. The USBA is responsible for National Team selection and training. It also incorporates Summer Biathlon, a combination of running and rifle marksmanship.



USA Shooting (USAS)

1 Olympic Plaza
Colorado Springs, CO 80909
719-578-4890
www.usashooting.com

The national governing body for the sport of Olympic Shooting. Responsible for selecting and training shooting sports teams to represent the

United States.

Remington Outdoor Foundation

870 Remington Drive
Madison, NC 27025
www.OutdoorRoadmap.com

The Remington Outdoor Foundation is a non-profit organization that supports hunting, shooting and outdoor sports through land conservation, access, recruitment and retention, education, training, safety, awareness, research and wildlife enhancement.

Scholastic Shooting Sports Program

National Headquarters
56670 Jewell Road
Shelby Township, MI 48315
586-781-8229
info@sssfonline.org
www.sssfonline.org

The Scholastic Shooting Sports Foundation is an educational-athletic organization that exists to introduce school-age youths to the clay target sports and to facilitate their continued involvement by providing, promoting, and perpetuating opportunities to safely and enjoyably participate and compete in a high-quality, team-based sport led by trained adult coaches focused on enhancing the personal growth and development of their athletes.



Scholastic Steel Challenge

SSC National Headquarters
826 Metcalf Street, PMB # 73
Sedro-Woolley, WA 98284
360-855-2245
dave@steelchallenge.com

www.scholasticsteelchallenge.com

The SSC provides the opportunity for young adults aged 12 thru 20 to participate in the exciting and challenging family sport of "speed steel" in a supportive environment taught by trained and supportive adult coaches focusing on the safe handling and use of handguns. The SSC competitive format is based on the Steel Challenge, the nation's most successful handgun competition. We have adapted the format to provide a safe yet action packed competition, one that both neophyte and experienced shooters will enjoy.

National Archery in the Schools Program

2035 Riley Road
Sparta, WI. 54656
608-269-1779

www.archeryintheschools.org

The National Archery in the Schools Program (NASP) is a joint venture between state departments of Education and Wildlife. Several archery equipment manufacturers and organizations are also partners (listed below). The program promotes student education, physical education and participation in the lifelong sport of Archery. The program's focus is to provide International Style Target Archery training in physical education classes grades 4 - 12

Archery Trade Association

Archery Trade Association
101 North German, Suite 3
New Ulm, Minnesota 56073
Toll Free: 866-266-2776
Direct: 507-233-8130
www.archerytrade.org