

Introduction to Wildlife Conservation & Management Principals



Key Topics

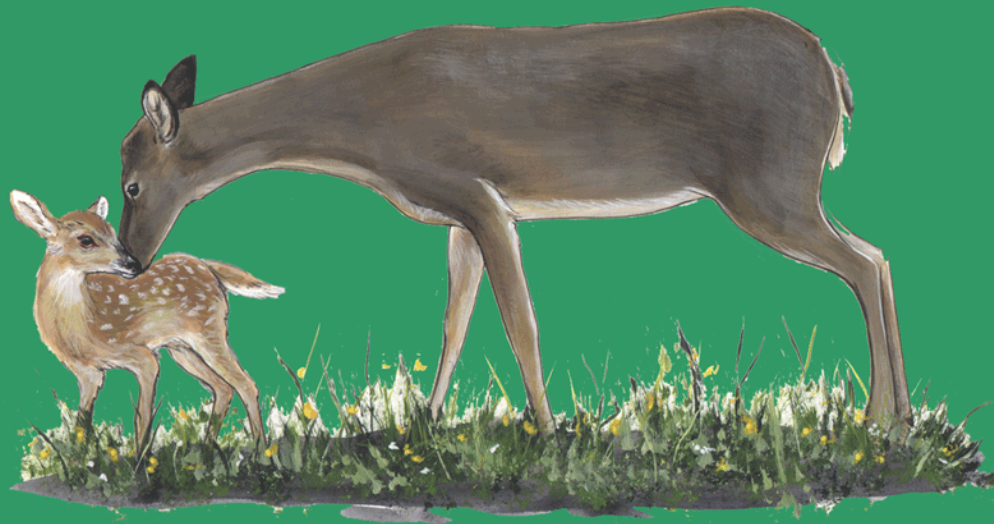
- Wildlife Conservation



- Management & Conservation Principles

Wildlife Conservation

Concept of wildlife conservation has been around since ancient times. Restrictions on taking game are mentioned in the Bible, first official hunting season may have been established in the 13th century by Kubla Kahn.



Wildlife Conservation (cont.)

Today, wildlife conservation has evolved into a science, but its goal remains essentially the same: to ensure the wise use and management of renewable resources. Given the right circumstances, living organisms that we call renewable resources can replenish themselves indefinitely.

- **Conservation:** *Is the wise use of natural resources, without wasting them.*

Preservation

- **Preservation:** (Saving natural resources, but with no consumption of them), is another means of protecting or saving a resource, such as outlawing hunting of endangered species. Both preservation and conservation are necessary to sustain resources for future generations.

Lessons in Wildlife Management

- Early attempts at wildlife management in the United States were skewed toward protection and preservation.
 - A reaction to widespread declines due to unregulated subsistence and market hunting.

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Lessons in Wildlife Management

(cont.)

- In the early 1900s, wildlife managers attempted to preserve a mule deer herd in the remote Kaibab Plateau of Arizona. Hunting was banned, and predators were destroyed. The result was severe overpopulation, habitat destruction and mass starvation

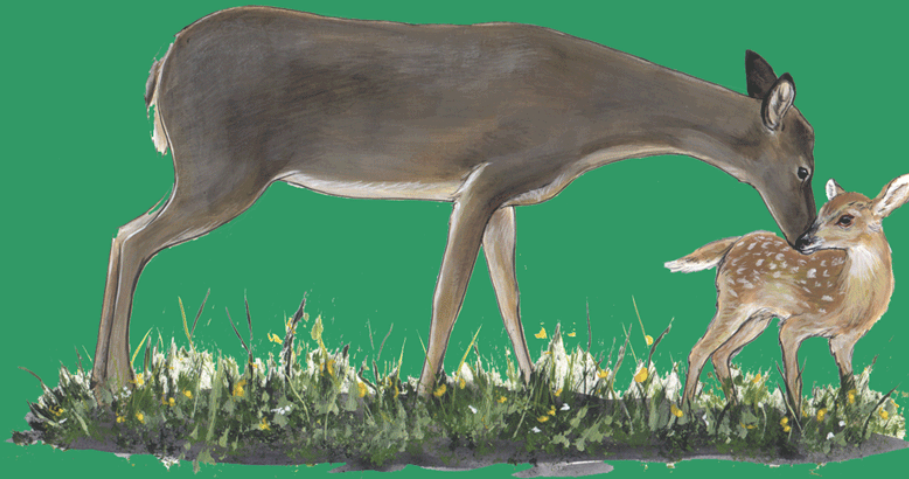
Lessons in Wildlife Management (cont.)

- The Kaibab Plateau was opened to managed hunting in 1929, which brought the population into balance with the habitat. Today, a large, healthy herd of mule deer inhabits the area.



Lessons in Wildlife Management (cont.)

- Wildlife managers learned there is more to conservation than just protecting wildlife. They discovered that nature overproduces its game resources, and that good wildlife management yields a surplus that can be harvested by hunters, trappers, and anglers.



Habitat Management

Most critical aspect of wildlife conservation is habitat management.



Habitat loss presents the greatest threat to wildlife.

Habitat Management (cont.)

These five essential elements must be present:

- The need for food and water is obvious.*
- Cover is needed for shelter as well as to protect animals while feeding, breeding, roosting, nesting, traveling.*



Habitat Management (cont.)

- *Space is necessary to avoid over-competition for food. Some animals also need a certain amount of territorial space for mating and nesting.*
- *Arrangement refers to the placement of food, water, cover and space in a habitat.*



Habitat Management (cont.)

- For example, quail will spend much of their time where shrub and grassland areas converge. This is called *edge effect*. Most animals can be found where food and cover meet, particularly near a water source. River bottoms are ideal, offering many animals all their habitat needs along one corridor.

Balancing Act

Habitats must be in balance in order to support wildlife. Remove a certain population of plants or animals from a community, and the community may not survive. This typically happens when urban development pushes into wildlife areas.



Carrying Capacity

Resources in any given habitat can support only a certain quantity of wildlife. As seasons change, food, water, or cover may be in short supply. Carrying capacity is number of animals habitat can support all year long. Carrying capacity of a certain tract of land can vary from year to year. It can be changed by nature or humans.

Limiting Factors

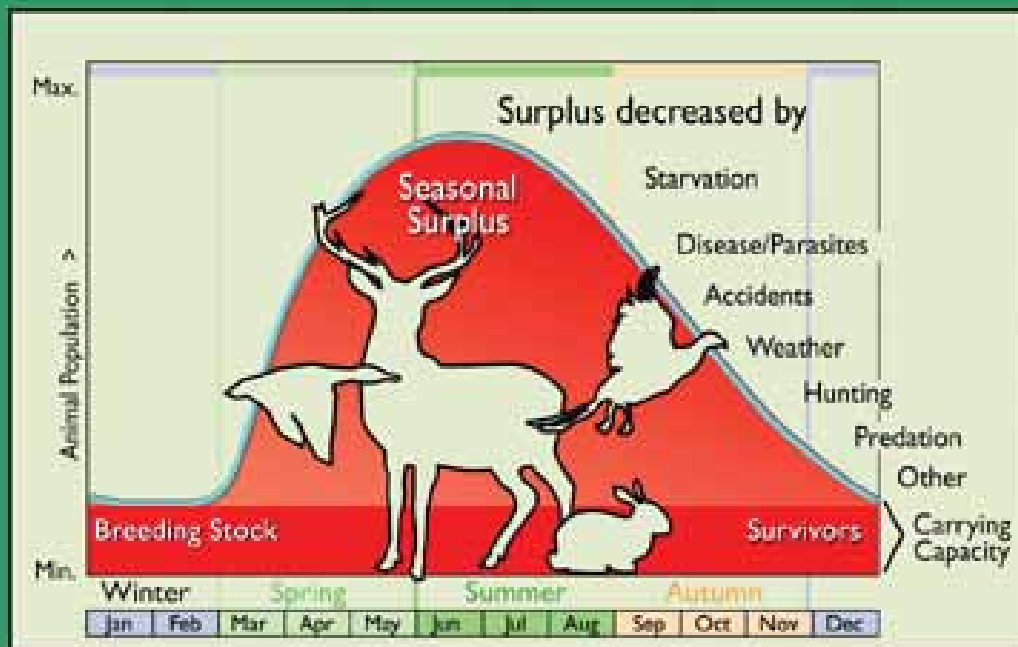
Factors that limit potential production of wildlife include:

- Disease and starvation
- Predators and hunting
- Pollution
- Accidents
- Old Age



Limiting Factors (cont.)

If the conditions are balanced, game animals will produce a surplus, which can be harvested.



The Hunter's Role in Wildlife Conservation

Since wildlife is a renewable resource with surplus, hunters can help maintain wildlife populations at a healthy balance for the habitat. *Regulated hunting should never lead to threatened or endangered wildlife populations.*

Hunting is effective wildlife management tool. Hunters play important role by providing information from the field that wildlife managers need.

The Hunter's Role in Wildlife Conservation (cont.)

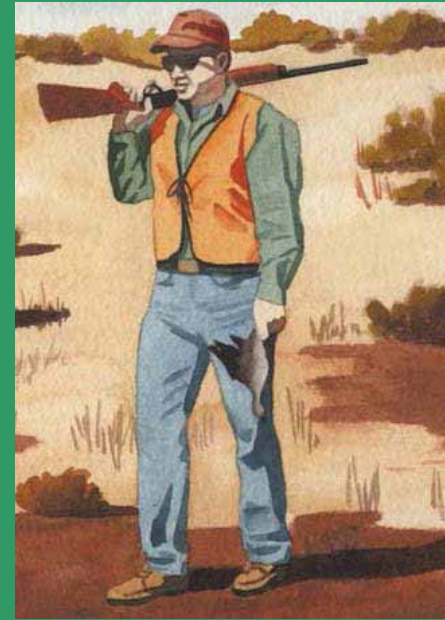
Funding from hunting licenses has helped many game and non-game species recover from dwindling populations



In addition to participating in the harvest of surplus animals, hunters help sustain game populations by:

The Hunter's Role in Wildlife Conservation (cont.)

- Filling out questionnaires
- Participating in surveys
- Stopping at hunter check stations
- Providing samples from harvested animals
- Funding for wildlife management through license fees.



Management/Conservation Principles

Wildlife manager's job is to maintain number of animals in a habitat at or below habitat's carrying capacity, so no damage is done to the animals or to their habitat.

In addition to looking at the total number of a species in a habitat, wildlife managers also monitor breeding stock — correct mix of adult and young animals needed to sustain a population.

Management/Conservation Principles

(cont.)

To manage a habitat, wildlife managers must consider historical trends, current habitat conditions, breeding population levels, long-term projections and breeding success.

Wildlife Management Practices

- **Monitoring Wildlife Populations:**
Wildlife managers continuously monitor birth and death rate of various species and condition of their habitat. This provides data needed to set hunting regulations and determine if other wildlife management practices are needed to conserve wildlife species.

Wildlife Management Practices (cont.)

- **Habitat Improvement:** As succession occurs, change in habitat affects type and number of wildlife habitat can support. Wildlife managers may cut down or burn forested areas to promote new growth and slow down the process of succession. This practice enables them to increase the production of certain wildlife species.

Wildlife Management Practices (cont.)

- **Hunting Regulations:** Hunting regulations protect habitat and preserve animal populations. Regulations include setting daily and seasonal time limits, bag limits and legal methods for taking wildlife.

Beneficial Habitat Management Practices

- Food plots and planting
- Controlled burning
- Brush pile creation
- Timber cutting
- Ditching
- Diking
- Nuisance plant or animal control
- Mechanical brush or grass control
- Water holdings

Birth Rate

Number of young born to a wildlife species in one year.

Death Rate

Number of individuals that die in one year.

Succession

Natural progression of vegetation and wildlife populations of an area; for example, as trees grow and form a canopy, shrubs and grasses will disappear along with the wildlife that use them for food and cover.

Predator

An animal that kills other animals for food

Wildlife Management Tools

- **Laws:** Wildlife laws must be flexible, based on biological facts, and used in combination with other management tools. These game laws are necessary to protect the safety of people, to protect the game, and to insure a fair share for future generations.

Wildlife Management Tools (cont.)

- **Habitat Management:** Ideal goal is manipulate vegetation so necessities for life for variety of wildlife are provided. Generally this is done by controlled burning, selective forestry, food planting where feasible and appropriate, and other practices to maintain proper mix of habitat requirements.
- **Stocking:** Purpose of stocking is release wildlife species in areas that have suitable habitat but no animal population.

Wildlife Management Tools (cont.)

- **Hunting and Trapping:** Valuable tools for maintaining wildlife populations at or below carrying capacity for the habitat. Goal is regulate hunting so only excess animals in a population are removed.
- **Public Education:** Necessary for public understanding of wildlife management programs. The more people know and understand wildlife and its needs, the more likely they will support management programs.

Questions?

