

# Shorebird Decision Dilemmas

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**Grade Level:** upper elementary/middle school, upper middle school/high school

**Duration:** one 45 to 60-minute class period

**Skills:** critical thinking, application, discussion, evaluation, problem solving, team building, and communication

**Subjects:** science, social studies, and language arts

## Concepts:

- Taking an active role in shorebird conservation requires that we apply knowledge
- Environmental stewardship is vital for the long-term conservation of our shared natural resources

## Vocabulary

- dilemma
- compromise
- stewardship
- mitigation
- Army Corps of Engineers
- Environmental Protection Agency

## Overview

In this activity, students draw cards that describe a shorebird or habitat issue and decide how they would work to resolve the problem. Through discussion, students examine their own values and beliefs, as well as those of their classmates.

## Objectives

After this activity, students will be able to:

- Clarify their own values and beliefs related to the shorebird and habitat issues presented.
- Learn to identify different points of view related to the shorebird and habitat issue presented.

## Introduction

The following activity is designed to help students identify different types of human concerns related to decisions affecting wildlife and wetlands and to practice making responsible and appropriate decisions. It is not intended to designate “right” and “wrong” answers for students. In fact, students are encouraged to understand that the real world is a place of many needs, views, and compromises based on the best and most complete information. The objective of this activity is to give students the experience of presenting and explaining their views, taking responsibility for their own reasoning, and teaching them how to question and learn about other points of view. The activity is not meant for the students to reach a consensus.

It would be beneficial for students to do additional research about each *dilemma* so that decisions are based on the best facts available. Habitat protection laws change. Students might discuss potential changes and research legislative action.

For example, knowing more about the agencies involved in wetlands management, the *United States Environmental Protection Agency (EPA)* and the *Army Corps of Engineers*, will help students understand how and why decisions are made. In reality, the decisions to preserve or sometimes destroy wetlands come after careful consideration and consultation with

the public and state and federal agencies. These agencies must weigh and balance the concerns as well as the benefits, often reaching a *compromise* among interest groups. Legally, they are required to consider:

- Environmental Concerns: conservation, economics, aesthetics, environmental fish and wildlife values, flood damage prevention, welfare of the general public, historic values, recreation land use, water supply, water quality, navigation, energy needs, safety, and food production
- Human Concerns: religious, cultural, political, social, educational, survival/physical health, scientific, personal history, and personal use

## Materials

- A classroom set of the Shorebird Dilemma Cards

## Activity Preparation

1. Copy and cut out a set of the *Shorebird Dilemma Cards* so that each group will have one copy of each dilemma.
2. Consider writing your own shorebird dilemma scenarios specific to problems in your area. Ask each student to research a local shorebird or habitat dilemma and then create a dilemma card. Select the best cards to include in this activity.

## Procedure

1. Divide the class into groups of four and give each group a stack of *Shorebird Dilemma Cards*. Place the cards face down in the center of the group.
2. Instruct the first player in each group to draw a card from the top of the deck. Next, she or he reads the situation out loud to the group; he or she should not read the “options” yet. Give

the first player two minutes to consider her or his situation, decide what to do, and formulate reasons for her or his decision. At the same time the other students in the group should contemplate the issue silently.

3. When the time is up, ask the first player to read the situation and options aloud to the rest of the group and then explain his or her decision to the group and the reasoning behind it.
4. This first player now leads the group in a discussion. Each of the other members of the group takes turns commenting on the dilemma and what he or she would do in the situation. The discussion of the dilemma by the group should be limited to five minutes. The group leader has the opportunity to ask questions of other members of the group and to offer clarification about their original decision to the dilemma. Have each group discuss the following questions:
  - What will the results of their decisions and related actions be in ten or twenty years?
  - If the dilemma involved a plot of land they owned, how will their decision affect neighboring land?
5. After the dilemma has been discussed, return the card to the bottom of the stack and the next player selects a card from the top of the deck. Continue this process until all students have had a chance to draw a card, express their decisions and rationales, and lead the group discussions.

### **Additional Activities**

#### *Wetland and Grassland Protection Agencies*

Ask students to brainstorm a list of the types of information that would have helped them make their decisions. Urge them to consider gathering a wide array of information. When a group tries to make a decision together, everyone makes his or her decision based on an individual set of concerns and beliefs. How could they solve a problem if the players do, in fact, have conflicting concerns? How might they develop a common set of beliefs about the situation? Is consensus always a reasonable expectation? Discuss the process used by the Army Corps of Engineers and Environmental Protection Agency to decide whether or not to allow an activity to occur on wetlands. Which of the reasons given by students would the Army Corps of Engineers or EPA use to make their decision?

#### *Plan a Public Information or Education Campaign*

Have your students identify a shorebird or wetland issue within your community. Ask students to research the facts surrounding the issue and the points of view of those involved in the decision-making process. What are the benefits and costs involved? From here, develop a plan that will help the people in their community make an informed decision on this issue. Students may choose to write articles or editorials, make presentations, design information booths or kiosks, or put up posters about the issue. How will they know if their efforts made a difference? Discuss ways they can evaluate their plan.

### *You Be the Scientist*

This activity, also found in this section, gives more ideas for formulating a study plan.

#### *A Scientist's Perspective*

Invite a representative from the Army Corps of Engineers, the Environmental Protection Agency, or your state's pollution control or natural resources agency into your classroom to explain how they make their decisions on wetland and wildlife issues.

# Shorebird Decision Dilemma Cards

## Shorebird Decision Dilemma One

You own land and would like to build a home on it. You will need to place a pad of gravel on the land to provide a stable foundation for the house. You find out that the land is legally classified as a wetland.

### Possible Solutions

- Find out which part of your land is used by fish or wildlife or has other wetland functions and plan your home for the area that has lower use or fewer functions.
- Find out whether placing gravel on the wetland requires a permit.
- Apply for a permit.
- Build your house without getting any permits.
- Sell your land to someone else and buy another piece of land for your home.
- Learn as much as you can about this land that you are a *steward* of:
  1. Ask a local biologist (from the university, the government, private industry, etc.) for information and advice about the need to protect organisms or habitats on your land.
  2. Ask the same of local land-users or native elders.
  3. Inquire about low-impact land development options or ways to enhance wildlife habitat.

## Shorebird Decision Dilemma Two

You are the owner of an oil company that has leased part of the North Slope of Alaska. You plan to construct a gravel pad and drill an oil well on tundra wetlands. When you apply for a wetland permit, you learn that the place you want to fill with gravel is very important to nesting shorebirds and waterfowl, and feeding caribou in the summer. The gravel will destroy the habitat.

### Possible Solutions

- Study the area to find out if there is an area close by which is not as important to the birds and caribou and where drilling the well would cause less harm to wildlife.
- Find out whether it is possible to drill the well in a different location and how much more that would cost.
- Follow your original plan and apply for permits.
- Redesign the gravel pad to make it as small as possible.
- Follow your original plan but offer to improve the wetland habitat somewhere else (research the concept of *mitigation*).

## Decision Dilemma Three

A plover, endangered in your state, is found to nest only on beaches that are open to recreational use of off-road vehicles (ORVs or ATVs). The few nests that shorebirds build are frequently destroyed by off-road vehicles. You own a four-wheeler and like to ride on that beach.

### Possible Solutions

- Decide that many of the small, inconspicuous plovers would be protected by re-routing traffic if the public was *informed* about their nests and habitat needs. Take the initiative to begin a public information campaign, perhaps via the placement of signs on the beach, letters to the editor of local papers, or the Internet.
- Get involved with a committee made up of the public, users of ORVs, and wildlife protection agencies and groups to come up with a solution that protects the plover and allows for some recreational use, perhaps by building an alternative trail.
- Find other places to ride your four-wheeler.
- Retire your four-wheeler from recreational use and resolve to use it only for work or subsistence.
- Disregard the issue and continue to ride on the beach with an ORV/ATV.

## Decision Dilemma Four

The state where you live has recently decided to open up a large tract of grassland to grazing and farming. Right now, several species of shorebirds are nesting in this area in fairly high concentrations. Many people in your community are concerned about the impact grazing and farming will have on the shorebirds. You have heard that grazing cattle often trample nests and young chicks and that haying equipment is often responsible for killing many young birds hiding in the tall grass. Those that avoid the machines are now easy targets for predators because the grass they hide in is gone. You are the son of a cattle rancher and understand that opening this land to grazing is critical to your family's business.

### Possible Solutions

- Identify what areas of the grassland shorebirds are using for nesting and propose that those areas be considered "off-limits" to cattle and farming from the mid-April through mid-July breeding season.
- Establish a committee to look for other land options where grazing or haying would not impact nesting shorebirds--such as using rotational grazing methods or providing water troughs and fences to keep cattle out of wetlands and streams.
- Convince your family that it is time to go into a different business.
- Ignore the concerns about nesting shorebirds and move your cattle onto the new "open" area.

