

Wetlands and Habitat Loss

By Elaine Mao



What image comes to mind when you think of a swamp? How about a marsh or a bog? Chances are you had a similar image in your mind for all of these. That's because these are, in fact, very similar environments. In everyday use, it is common to use these terms interchangeably, and while there are minute differences among the three land areas, they all belong to the same general category: wetlands.

A wetland is an area of land that is filled or covered with water for at least part of the year. Wetlands are neither completely dry nor completely underwater. They are known as "transition zones" because they are the link between water and land, and they have a unique combination of the characteristics of both. The special characteristics of these "transition zones" enable them to support plant and animal life not found anywhere else. A common nickname for wetlands is "nurseries of life."

Chances are, however, when you envisioned a swamp (or a marsh or a bog), you conjured up an image of a rather unpleasant place: creepy and shadowy, muddy, overrun with snakes and insects. Would it ever occur to you that this could be the kind of place we would want to save and preserve? Probably not.

Wetlands have historically been regarded as wastelands and centers of disease and insect infestation, and humans have sought to avoid or eliminate them when possible. Since the 18th century, more than half of the original wetlands in the United States have been degraded or destroyed. In the 19th century, there was a massive push to drain the wetlands, which harbored malaria-bearing mosquitoes, after a series of yellow fever epidemics. Since then, further destruction has occurred as a result of human activities, such as agriculture, industrialization and development. Wetlands have been drained and converted to farmland,

filled in to provide more opportunities for residential and industrial development, or used as dumping grounds for waste. Other human activities, such as pollution, while not directly targeted at eliminating wetlands, have also played a role in the process.

However, in recent decades, attitudes about wetlands have changed. People have begun to realize that wetlands are valuable and productive ecosystems that fulfill an essential function for both humans and wildlife. Due to their unique characteristics, wetlands can support a wide diversity of plants, mammals, reptiles, birds and fish. They also control floodwaters and protect us from storms and hurricanes. Wetlands also improve water quality by filtering, cleaning and storing water. Lastly, many people rely on wetlands for their livelihood, as they are important centers for hunting, fishing and recreation.

The state of Louisiana, in the United States, relies heavily on wetlands, and is one of the regions of the country that has been most adversely affected by wetlands destruction. Southern Louisiana has some of the most extensive wetlands in the United States, containing approximately 40 percent of the country's total wetlands area. This is because Louisiana is located at the drainage gateway where the Mississippi River meets the Gulf of Mexico. Much of the region's economy and culture is built around the wetlands. However, Louisiana's wetlands are quickly disappearing. Although the state has only 40 percent of the country's wetlands, it also bears 80 percent of the country's wetland losses. Every 38 minutes, the equivalent of a football field is lost. This has serious implications for the region's wildlife and economy, as well as the ability of the region to withstand natural disasters.

The Louisiana wetlands are home to a variety of animals, including alligators, snakes, turtles, coyotes, muskrats, armadillos, pelicans and egrets, among others. The wetlands are a crucial resource for many endangered species. In fact, more than one-third of the United States' threatened and endangered species live only in wetlands, and more than one-half use the wetlands at some point in their lives for breeding, nesting or raising their young. Many species of migratory birds depend on the wetlands and would go extinct if the wetlands were destroyed.

The wetlands are also essential to the state's fishing industry, providing a habitat for fish, shrimp, oysters and crabs. As of 2013, Louisiana's commercial fishing industry is responsible for 25 percent of all seafood produced in the United States, with the highest production of shrimp, oysters and freshwater fish in the nation. Approximately one in every 70 jobs in the state is related to the fishing industry. The destruction of the wetlands would have disastrous consequences for the economy of the area and the livelihoods of many of Louisiana's residents.

In addition to endangering the wildlife and economic prosperity of an area, the loss of wetlands also puts humans at risk. Wetlands serve as a natural buffer zone against storms and hurricanes, slowing down the storms and reducing their force before they move inland. However, as the wetlands disappear, some cities are becoming more exposed.

The city of New Orleans, Louisiana, has already suffered the consequences of this gradual depletion of wetland buffer zones. In 2005, Hurricane Katrina, one of the deadliest and most destructive hurricanes in the entire history of the United States, hit the Gulf Coast. There were more than 1,800 casualties, with the greatest number of them concentrated in New Orleans. Eighty percent of the city was flooded, and there were more than 700 dead. Many blamed the destruction of New Orleans on the failure of the levees, which are manmade barriers that prevent water from flooding into a city. However, scientists and researchers believe that the hurricane would have done far less damage to the city if the surrounding wetlands had been intact. Since the storm, there has been a greater national focus on preserving and restoring the wetlands on the Gulf Coast. Preserving our wetlands and maintaining a buffer zone against storms will only become more crucial in the future, as climate change may increase both the frequency and the severity of extreme weather events such as hurricanes.

In recent decades, since the importance of wetlands became apparent, there has been a push toward better education and regulation. The U.S. Environmental Protection Agency (E.P.A.) has declared the month of May to be American Wetlands Month, which is dedicated to celebrating the ways in which wetlands enrich our lives and the environment.

Regulation has also been an important tool in the fight against wetlands loss. Since 1998, the United States has maintained a “no net loss” wetlands policy. This means that the total area of wetlands in the country must either remain constant or increase. If wetlands are destroyed for agriculture, development, or any other reason, the effect must be balanced out by restoring or reclaiming wetlands elsewhere. The policy has had a dramatic effect in slowing the rate of wetlands loss.

Name: _____ Date: _____

1. What is a wetland?

- A** a business that makes its money from hunting or fishing
- B** a city on a coast where floods occur, often resulting in the loss of human life
- C** a “no net loss” policy requiring the amount of something to remain constant or increase
- D** an area of land that is filled or covered with water for at least part of the year

2. The destruction of wetlands is an effect. What is one of its causes?

- A** Regulation has been an important tool in protecting wetlands.
- B** Wetlands have been drained and converted to farmland.
- C** Many species of migratory birds depend on the wetlands.
- D** Louisiana has some of the most extensive wetlands in the United States.

3. Wetlands serve important purposes for humans.

What information from the passage supports this statement?

- A** Wetlands have historically been regarded as centers of disease and insect infestation.
- B** Wetlands can protect people from storms and help them earn a living through fishing.
- C** Louisiana is located at the drainage gateway where the Mississippi River meets the Gulf of Mexico.
- D** Hurricane Katrina caused more than 1,800 casualties, including over 700 in New Orleans.

4. How have attitudes about wetlands changed in recent decades?

- A** People have become less willing to regulate the destruction of wetlands than they used to be.
- B** People have become more concerned about the threat of disease from wetlands than they used to be.
- C** People have become more interested in protecting wetlands than they used to be.
- D** People have become less interested in protecting wetlands than they used to be.

5. What is this passage mainly about?

- A** Louisiana
- B** Hurricane Katrina
- C** malaria
- D** wetlands

6. Read the following sentence: "Chances are, however, when you envisioned a **swamp** (or a marsh or a bog), you conjured up an image of a rather unpleasant place: creepy and shadowy, muddy, overrun with snakes and insects."

What does the word "**swamp**" mean in the sentence above?

- A a piece of land that is partly covered by water
- B a state that is on the Gulf of Mexico
- C a job related to the hunting or fishing industry
- D an animal species that is in danger of dying out

7. Choose the answer that best completes the sentence below.

For years people wanted to avoid or destroy wetlands; _____, many people want to save wetlands.

- A previously
- B currently
- C in closing
- D as an illustration

8. What is happening to Louisiana's wetlands?

9. If Louisiana's wetlands were destroyed, what would happen? Support your answer with evidence from the passage.

10. Should wetlands be protected? Explain why or why not, using evidence from the passage.

Teacher Guide & Answers

Passage Reading Level: Lexile 1220

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8. What is happening to Louisiana's wetlands?

Suggested answer: Louisiana's wetlands are disappearing.

9. If Louisiana's wetlands were destroyed, what would happen? Support your answer with evidence from the passage.

Suggested answer: Students may respond that many species of migratory birds dependent on the wetlands would go extinct. They may respond that the Louisiana economy, heavily reliant on wetlands, would take a hit. Any answer supported by the passage is acceptable.

10. Should wetlands be protected? Explain why or why not, using evidence from the passage.

Suggested answer: Answers may vary, as long as they are supported by the passage. Students favoring wetlands protection may point out that wetlands supply many people with jobs and are vital to a variety of wildlife. Students against wetlands protection may argue that building homes for people or buildings for businesses is more important than letting land that no one is using just sit there.