

## Oil Spill's Other Victims

Beyond oil-coated pelicans, the spill imperils many lesser-known species.

Recall the Ecology Disrupted curriculum learning goals:

1. Human daily life can disrupt ecological function leading to environmental issues.
2. Scientists can collect data to investigate human impact local ecology.

Students watch additional Science Bulletins videos to learn about how human daily life can affect ecological function, and to pull out the ecological principles. An introduction to the video and background information are provided below.

While watching the Bulletins they will complete a graphic organizer with the following questions:

1. How have people changed the habitat in this example?
2. Why do people change the habitat? How does it help us?
3. How do the habitat changes impact populations in this area?
4. How do you know that the habitat is being changed and that local populations are affected? Describe the evidence or data.
5. Suggest how to solve this problem.

### Introduction

"Did you hear about the enormous BP Oil Spill in the Gulf of Mexico? It started when people drilled in an area in the ocean so deep that if you tried to swim down there, you would be crushed from all the pressure on top of you. Methane leaked from the drill site and exploded causing oil to gush day and night from the ocean floor for three full months. It is estimated that 185 million gallons of oil emptied into the Gulf in that time, enough to fill the fuel tanks of over 11 million cars. As the thick oil spread from off the Louisiana coast, people began to worry about how this might impact the Gulf ecosystem. This *Bulletin* discusses how. Get ready to fill out your graphic organizers."

### Background Information

What scientists know about how oil spills can affect the environment – and for how long – is drawn from a range of past oil spills, no two of which have been alike.

**Impact on Plant and Animal Species:** Oil causes harm to wildlife through physical contact, ingestion, inhalation and absorption. Floating oil can contaminate plankton, which includes algae, fish eggs, and the larvae of various invertebrates. Fish that feed on these organisms can subsequently become contaminated. Larger animals in the food chain, including bigger fish, birds, terrestrial mammals, and even humans may then consume contaminated organisms.

**Impact on the future of humans:** The health of countless people can be at risk as oil spreads. Oil can turn into a heavy vapor that can then be inhaled by humans in the surrounding areas. The volatile chemicals in oil can cause minor immediate health problems, but have been linked to cancer over longer periods of time. In addition, these

chemicals have been associated with miscarriage and can damage airways, so pregnant women and people with respiratory diseases are especially at risk. Oil also damages skin, and toxic chemicals can also be absorbed from contact, meaning that the local fisherman hired by BP to aid in clean-up efforts are at risk from inhalation.

**Cleanup & Recovery:** Cleanup and recovery from an oil spill is difficult and depends upon many factors, including the type of oil spilled, the temperature of the water, and the types of shorelines and beaches involved. Methods for cleaning up include: using microorganisms to break down or remove the oil, vacuuming and centrifuging, and watching and waiting.