



Manatees – Eye in the Sky

By Tom J. McConnell



How many manatees are in the waters of Florida? It is possible to know?

This is the kind of questions wildlife researcher ask when study many different species! In this activity, you will practice collecting data using the same kinds of tools as professional scientists who study manatees – aerial photographs!

Driving Question: How can we count the number of manatees in Florida’s waterways?

Objectives:

- I can ask questions that can be answered with data.
- I can count samples of animals in aerial photographs.
- I can explain factors that make data collection from photographs more difficult.
- I can suggest other species that could be counted using aerial photography.

Manatees are considered a threatened species! They used to be listed as “endangered,” but careful management has helped their populations grow. One important step in that management process is to understand how many manatees there are, and where they can be found. Counting them can be difficult because they are very mobile, and because they live in waters that are sometimes cloudy or murky. Getting an accurate count from boats and shorelines would be almost impossible!

So scientists use a different method to count manatees. They use small airplanes to fly over the places where manatees gather in late fall and early spring, taking photographs from above. Then researchers count the number of animals found all along Florida’s coast and warm springs on one day. By doing the same thing over several days, it is possible to get a reliable estimate of the manatee’s population size.

This happens when the weather is cold. Manatees cannot survive in cold ocean water, so when temperatures drop below 63°F, manatees move to warm waters in Florida’s freshwater springs and near power plants that release warm water into bays and rivers. If scientists can collect photos of all of these places in one day, they will have pictures of nearly every manatee in the region.

Counting the manatees is not as easy as it sounds, though! Try it yourself! This activity lets you use some of the same images as the researchers.



Eye in the Sky – Counting manatees in aerial photos

For this activity, look closely at the photos on the pages that follow. You can either print the photos, or you can view them on the computer screen. As you count, record the data you collect from the six pictures in the data table below, and add up the totals. You can also make notes about each photo in case there are questions or challenges that you notice.

Then compare your totals to the counts by other classmates or friends. Are they the same?? When you are finished, answer the Reflection Questions at the bottom of the page.

Manatee Census Data

Your name:		Date:	
Photo ID #	Count	Comments	
# 001			
# 002			
# 003			
# 004			
# 005			
# 006			

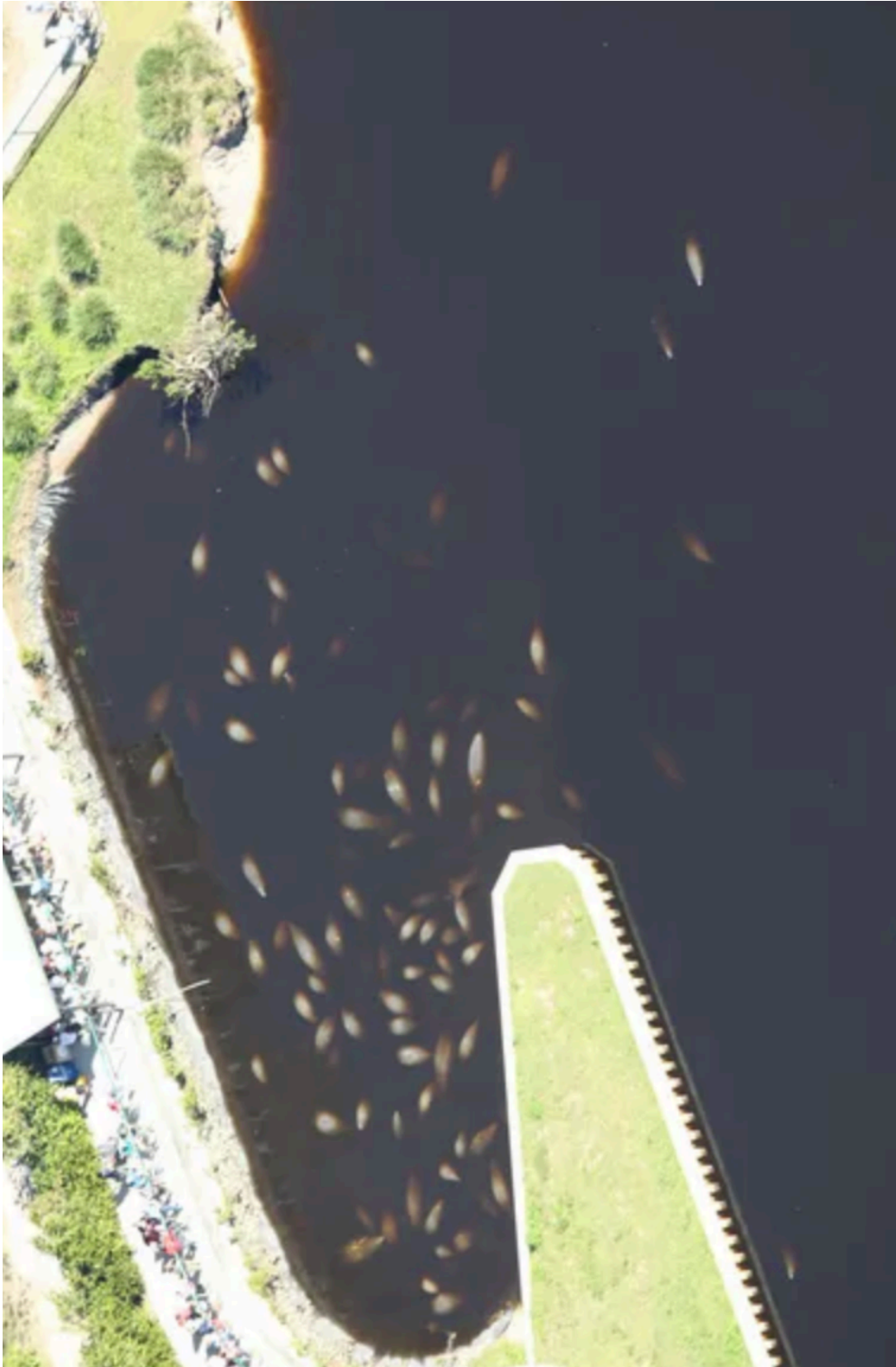
Reflection Questions

1. Were there any photos that were more difficult to count? What made them more difficult?
2. Were there objects that you were not sure were manatees? How did you decide which were manatees?
3. Are there any similarities you see in the locations where manatees are seen?
4. What other animals do you think you could count using aerial photos?
5. Are there other questions you would like to investigate about manatees?



Manatee Survey Aerial Photo

Photo ID #: 001





Manatee Survey Aerial Photo

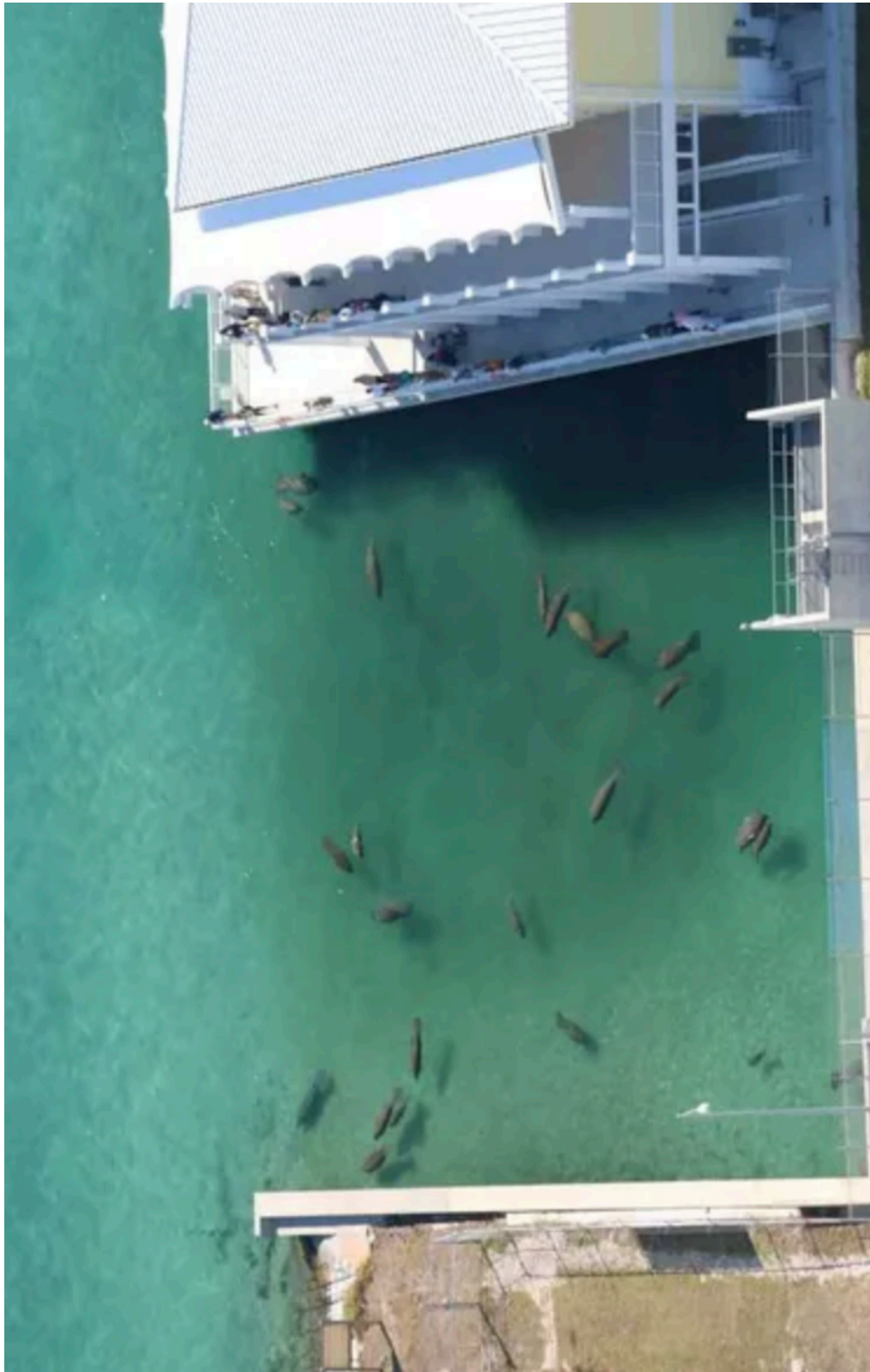
Photo ID #: 002





Manatee Survey Aerial Photo

Photo ID #: 003





Manatee Survey Aerial Photo

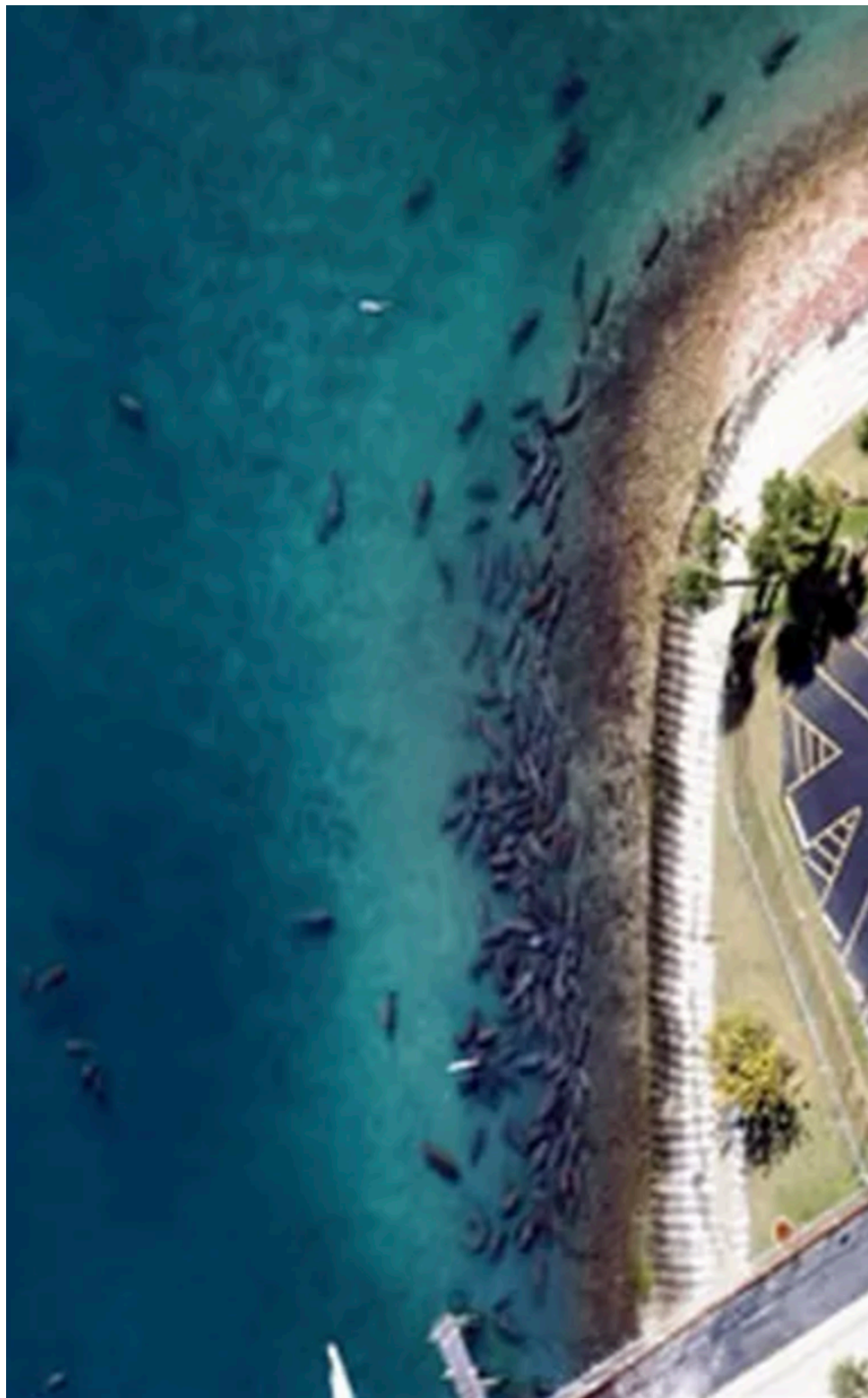
Photo ID #: 004





Manatee Survey Aerial Photo

Photo ID #: 005





Manatee Survey Aerial Photo

Photo ID #: 006

