

## Viewing Questions

NOTE: Timing listed below is approximate and is based on the PBS broadcast; home video versions may differ slightly.

### PART 1

#### Introduction (Beginning-4:40)

1. What fraction of America's borders is water?
2. In what year did Congress create the first National Marine Sanctuary?
3. "I think it's time for us to explore and discover America's Underwater \_\_\_\_\_."
4. To whom does Jean-Michel delegate certain expeditions?
5. Where does the adventure begin?

#### Florida Keys NMS/Goliath Grouper (4:40-10:20)

1. How many pounds do goliath groupers usually weigh, and how old are some of them?
2. Why are they vulnerable to overfishing?
3. Why can smaller fish use groupers as a habitat?
4. What kept the groupers from being exterminated?
5. What do we know about this species?
6. What did the researchers find that was the bottleneck for the grouper?
7. What is a "no-take" area?

#### Channel Islands NMS (10:20-15:20)

1. What makes this a multiuse sanctuary?
2. Why are these islands a unique sanctuary?
3. What is the "best piece of equipment in all of marine ecology"?
4. How many times a year do the scientists survey this sanctuary?
5. Why do the researchers count each individual stipe in a kelp plant?
6. What impairs the natural cycle of the kelp's recovery?
7. How many feet do the kelp grow in a day?

#### Channel Islands NMS/Tagging (17:00-19:08)

1. What do the researchers do to track certain fish coming in and out of the "no-take" zone?
2. What is placed on the ocean floor that can collect data on the fish with acoustic tags?
3. How many fish have been tagged?
4. What have the researchers found out about the sheephead fish?
5. What do the researchers expect to see in the fish that are in the "no-take" zone versus the fish that are outside the "no-take" zone?

#### Channel Islands NMS/Squid Fishery (19:08-21:08)

1. What are the squid doing under the light boats?
2. How many metric tons of squid were caught in one recent season?
3. What made the squid catch go down to nearly zero for another season?
4. How has the squid survived overfishing and natural Earth cycles?
5. What happens to the females when they lay their eggs?
6. How have the fishermen figured out when to fish the squid?

## Viewing Questions

### Flower Garden Banks MNS/Coral (21:09-26:12)

1. What have the researchers found out about the coral reef through their long-term monitoring of the health of the reef?
2. How is a balance created between the coral reef and the oil-drilling platform?
3. How long has the oil rig been at the MNS?
4. Oil rigs are like shipwrecks, offering new habitat for sea life, which is always competing for \_\_\_\_\_.
5. What do certain coral reef species do at the exact same time every year?
6. When does this happen at the Flower Garden Banks NMS?
7. Why do these species release their eggs and sperm into the water?

### Florida Keys NMS/Coral and Sea Turtles (26:12-32:40)

1. What happens nearby at another coral reef in parts of the Florida Keys where this release of sperm and eggs has failed?
2. What does Dr. Miller do to help increase the population of coral reef species?
3. What is causing a lot of the coral reefs to disappear?
4. Why is it hard to teach people the importance of the oceans?
5. "People protect what they \_\_\_\_\_."
6. What virus is causing the green turtles to be infected?
7. What actually causes the turtle to die?

### Gray's Reef (32:41-40:40)

1. Why is this area called a "crossroads"?
2. What is a "turtle garage"?
3. Why do the turtles want to go toward the green vegetation?
4. Why do the researchers use only red light?
5. What does the loggerhead turtle do after it has laid its eggs?
6. What do the loggerheads face outside the sanctuary?
7. What do commercial fishermen use to avoid catching turtles in their nets?
8. What does the small net of fish help to tell fishermen?

### Olympic Coast NMS (40:32-45:58)

1. What is it called when lost fishing gear continues to trap and kill animals?
2. How many coastal tribes does this sanctuary support?
3. What program did the Makah and the Olympic Coast NMS develop?
4. What are modern nets made of?
5. "Because it's underwater and nobody sees it, it's out of sight out of \_\_\_\_\_."
6. What do wolf eels eat?
7. Who are the ocean's "soft intelligence"?

## Viewing Questions

### Hawai'ian Islands Humpback Whale NMS (45:59-53:04)

1. Humpback whales are \_\_\_\_\_.
2. What is the population worldwide?
3. What are the males competing for?
4. What are the major threats to the whales?
5. In what areas of the world are the whales not protected?
6. "The Health of the humpback whale population is at least an \_\_\_\_\_ of what the health of the ocean is."
7. Why is it important to learn about each piece of the ecosystem?

### PART 2

### Monitor NMS/Shipwrecks (53:32-59:10)

1. What is one of America's underwater cultural treasures?
2. How many feet below the surface is this ship?
3. How many crewmen died when the USS Monitor sank?
4. What kind of samples did the team collect when they reached the USS Monitor and why?
5. Where will the piece that was taken from the ocean be on display?
6. How many shipwrecks can be found in the North American waters?

### Thunder Bay NMS/Shipwrecks (59:11- 1:04:49)

1. How many shipwrecks are found at the bottom of this sanctuary?
2. What is another major use for this NMS?
3. What do the U.S. Naval Sea Cadets study?
4. The capsizing of the Audubon is only a \_\_\_\_\_.
5. What is threatening the shipwreck research that is going on in the Great Lakes?
6. How did the invasive mussels get to Thunder Bay?

### Stellwagen Bank NMS/Lobster (1:04:50-1:10:13)

1. What happened when cod was overfished in the mid-1990s?
2. What is the key factor in careful management of the lobster?
3. What kind of equipment do the researchers use to track the lobster during their breeding cycle?
4. Why is it important to have large, older lobsters in the population?

### Monterey Bay NMS (1:10:14-1:17:56)

1. The Monterey Bay NMS is the \_\_\_\_\_ of all sanctuaries.
2. With whom does the ecosystem of Monterey Bay have to be in delicate balance?
3. What type of fish was over-harvested in Monterey?
4. What is the difference between a protected area like Point Lobos and an unprotected area like Macabee Reef?
5. What do fishermen need to understand?
6. What do the species that are tagged by the TOPPs project provide researchers?

## Viewing Questions

### **Gulf of the Farallones NMS (1:17:59-1:27:18)**

1. What species of seal is studied at this NMS?
2. What must the male elephant seal do before he can get a harem?
3. Why is life also difficult for the female seals?
4. How many breeding sea birds mate in the Farallone Islands?
5. "The oceans provide the \_\_\_\_\_, and the islands provide the safe haven."
6. What kind of shark congregates on the Farallones each fall?
7. Why is the water at the Farallone Islands green?
8. What was dumped off the coast of San Francisco Bay that is cause for concern?
9. Why is the radioactive material dangerous?
10. "The ocean is the life of the \_\_\_\_\_."

### **Monterey NMS/Water Quality and Canyon (1:27:19-1:30:45)**

1. What have the farmers introduced to improve the way they do things?
2. What do volunteers do after a major storm?
3. What are the samples of urban runoff helping us to do for sea otters?
4. How many weeks at a time can the Western Flyer be at sea?
5. After 16 years of research, about how much of the Monterey Bay Canyon has been covered?

### **Cordell Bank NMS (1:30:45-1:35:49)**

1. What was found when Cordell Bank was first explored?
2. What makes Cordell Bank so rich with life?
3. How long does it take to get the team back in the boat?
4. "Competition for \_\_\_\_\_ is what Cordell Bank is all about."

### **Fagatele Bay NMS (1:35:50-1:42:35)**

1. "There is probably no place else in America with a higher \_\_\_\_\_ of marine life than here."
2. Of all the ecosystems on Earth, coral reefs are the most \_\_\_\_\_ and most \_\_\_\_\_.
3. Corals are animals; what lives in their tissues and gives them their color?
4. What happened when outsiders came into Samoa?
5. What causes coral bleaching?
6. What job does a coral have in a reef ecosystem?
7. What is the job of a sponge?
8. What is the Samoan culture based on?

### **Northwest Hawaiian Islands National Monument and Closing (1:42:36-end)**

1. Will fishing be allowed in this area?
2. What is carried to these remote islands by the currents?
3. "What we can do is to continue to learn and take \_\_\_\_\_."