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The Fault Line Threatening Dams - Comprehension Questions

Name:	Date:
1. A new replacement dam for the Calaveras	Reservoir is being built. Where is the
Calaveras Reservoir located?	

- A. It is located in Fremont, California, next to an active volcano.
- B. It is located in Fremont, California, next to an iceberg.
- C. It is located in Fremont, California, next to an active earthquake fault.
- D. It is located in Fremont, California, next to a popular beach.
- 2. The text describes a major problem affecting a significant number of dams throughout the United States. What is this problem?
  - A. Manydams are built with a thicker core of impermeable clay.
  - B. Many dams need to be upgraded but funding and inspection staffing is limited.
  - C. Many dams are strengthened by zones of compacted material.
  - D. Many dams are built in areas with lots of storms, and are likely to overflow.

## 3. Read the following sentences:

One problem, experts say, is that many [dams] were built decades ago, when less was known about what a strong earthquake could do.

Engineers didn't realize then that the loose rock and soil they used to form the base of some dams could liquefy in a strong earthquake, potentially causing the top of the structure to deform and spill.

State officials have determined the 220-foot- high Calaveras Dam poses a flooding threat because the base of the 92-year- old structure was built atop loose earth on the site of a previous failed dam. About 300,000 people live in a flood zone along Alameda Creek below.

Based on this information, what might an earthquake cause to happen if it takes place near a dam that is poorly constructed?

- A. The earthquake may end up causing the base of the dam to become more compact and stronger.
- B. The earthquake may end up causing the dam to be able to hold more water.
- C. The earthquake may end up causing the dam and the water inside it to heat up.
- D. The earthquake may end up causing the dam to break and the water to flood nearby areas.

- **4.** Based on the text, why might the California's Division of Safety of Dams have ordered in 2001 that the Calaveras Reservoir be kept at no more than 40% full?
  - A. to limit the potential flooding damage that could be caused if an earthquake happens and the dam spills over
  - B. to increase the potential flooding damage that could be caused if an earthquake happens and the dam spills over
  - C. to limit the amount of water being used during a time when the state was experiencing a drought
  - D. to decrease the chances of an earthquake taking place and causing the dam to spill over
- 5. What is the main idea of this text?
  - A. Many dams in California are at a greater risk of breaking and flooding areas because they are located near active earthquake faults. For this reason, the Calaveras dam in Fremont, CA is being replaced with a new one that is better built.
  - B. Thirty percent of the dams in the United States are rated as posing a high or significant hazard. Many of these dams have bases formed from loose rock and soil, which could liquefy in a strong earthquake.
  - C. Billions of dollars and inspection staffing is needed to repair and replace many damaged dams across the United States. Many states do not have the funding or the resources for these big construction projects.
  - D. When many of the country's dams were built, engineers didn't understand the extent of the damage earthquakes can cause them. Since then, we have more information about how earthquakes can impact dams.
- **6.** Throughout the text, the author provides quotes from different people. Why might the author have included these quotes?
  - A. to allow the reader to feel a personal connection with the people in the text they probably do not know
  - B. to present to readers information that contradicts the facts and ideas shared in the text
  - C. to help readers understand how quotes can be used correctly in news articles
  - D. to add the perspectives and insights of people who are involved with or understand the issues discussed in the text

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

The new Calaveras Dam has been engineered to prevent it from breaking during an earthquake. \_\_\_\_\_, it is being strengthened, in part, by having zones of compacted material, including a thicker core of impermeable clay.

- A. On the other hand
- B. However
- C. For example
- D. In conclusion
- 8. Why did the owner of the Calaveras Reservoir decide to build a replacement dam?
- **9.** Why is it especially dangerous that close to 1,100 dams rated as having high or significant risk of failure are located in California? Use evidence from the text to support your answer.
- **10.** Imagine you've been placed in charge of a large project to repair or replace over 2,170 dams in the United States that are considered deficient.

Explain what you would consider in your decision about which dams to repair or replace first.

Use information from the text to support your answer.