

**Objectives and Test Questions for the Presentation by Shawn C. on
“Anticipating the Unexpected in the Context of Dam Removal”**

Objective #1 – Understand ways in which the design process can reduce risk.

Objective #2 – Learn about some proactive strategies to use for adaptive management.

Objective #3 – Understand the differences between routine maintenance, adaptive management and remediation.

Five test questions

1. What are the critical components of a transparent design process? (select all that apply)
 - A. Context (goals and objectives).
 - B. Feasibility (field-based site characterization).
 - C. Alternatives (concept alternatives).
 - D. Analysis (design alternatives).
 - E. Refinement (design package).

Answer: All of the above.

2. Which of the following statements is true? (select all that apply)
 - A. Routine maintenance is anticipated and planned post-construction work.
 - B. Routine maintenance is anticipated but not planned post-construction work.
 - C. Routine maintenance is not anticipated and not planned post-construction work.
 - D. Routine maintenance is not anticipated but planned for anyway.
 - E. Routine maintenance should not be part of a mitigation plan.

Answer: A

3. Which of the following statements about adaptive management are true? (select all that apply)
 - A. Actions are the result of adjusting the constructed site condition to adapt to on the ground changes that diverge from expectation.
 - B. Actions are not typically covered by an Operations and Maintenance Manual (OMM) developed within the design and permitting phase.
 - C. On the ground adaptive management actions are often radically different from expectation.
 - D. Adaptive management is an iterative exercise that typically occurs within a planned management cycle to allow for necessary adjustments in order to reach project goals.
 - E. Adaptive management is only necessary post-construction.

Answer: A, B, C and D

4. Which of the following circumstances could result in the need for remediation? (select all that apply)
 - A. The design is not approved by the regulator.

- B. Inadequate planning.
- C. Inadequate construction.
- D. Natural disaster.
- E. Lack of land available for mitigation.

Answer: *B, C, and D*

5. Which of the following statements about remediation are false? (select all that apply)
- A. Remediation does not always mean new direct actions - unanticipated change can offer a path to achieve project goals and objectives.
 - B. Remediation only occurs when contaminants are found on the site.
 - C. Remediation actions [or inaction] are the result of evolving site conditions that were not anticipated or expected by the design documentation or the regulatory permits.
 - D. Remediation must result in the mitigation site meeting all proposed original design criteria.
 - E. Remediation only occurs if the site is a total failure.

Answer: *B, D and E*