

Direct and Indirect Effects – Watershed

The paragraphs below contain the watershed effects for the proposed action. Review this analysis and answer the questions below.

Watershed Effects of the Proposed Action

Affected Environment

The proposed schoolhouse complex is located in a valley bottom in close to Briar Creek in the Briar Creek sub-watershed. Slopes are gentle (< 5%), but vegetative cover averages approximately 60%. The soil type is Dickerson loam. Summer precipitation, in the form of thunderstorms, can easily transport exposed soil off site under these conditions. The amount of sediment routed to, or eroded within, a stream channel could affect the beneficial uses of water, and is frequently used as a measure of overall water quality.

Effects

Schoolhouse and parking lot construction would involve excavation and grading, essentially exposing all soil within the construction site. Using normal best management practices (BMPs) such as straw wattles will minimize soil loss from the construction site. The Agricultural Research Service's Revised Universal Soil Loss Equation (RUSLE) predicts 1 ton/acre soil loss from the bunkhouse site over the expected construction period. With its 3-acre footprint, the proposed bunkhouse complex stands to lose 3 tons of soil during construction. Therefore, an acre of exposed soil is a reliable surrogate measure for measuring the amount of sediment delivered to the stream. Exposing more than 6 acres of soil would likely result in exceeding water quality standards.

Water quality standards would be met because the construction would result in less than 6 acres of exposed soil. The stream would be able to transport the load and sediment deposition is unlikely to occur.

Questions

1. What actions would affect water quality?
2. What are the direct or indirect effects?
3. What measures did they use?
4. What would be the extent or boundary of the effects analysis area for the watershed?
5. What is the conclusion or why does this matter?
6. How would the effects from Alternative X differ from the Proposed Action?
7. What might be some other indirect effects of sediment?

Slide 6.2 and Slide 9.2