14. Controlling in-Channel Excavation (PRACTICE: 2-14)

a. Objective: To minimize waterway disturbance and sediment production when constructing, reconstructing, maintaining or decommissioning temporary and permanent structures.

b. Explanation: Forest activities often occur in areas with waterways that put water quality at risk. Most activities are usually short-lived, such as temporary stream crossings during timber harvest and haul, and channel diversion during construction of permanent crossing structures (bridges, culverts, fords, boat ramps for launching), but have the potential for longer term negative impacts than intended. Design of permanent structures is not a BMP, as the structures themselves are intended to reduce or eliminate water quality impacts at the waterway.

Construction, reconstruction, maintenance and decommissioning of structures in and near waterways, usually requiring heavy equipment, can significantly contribute to sedimentation, and has potential for introduction of contaminants.

c. Implementation: Channel excavation associated with roads follows FP-03 Edition of Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-03), Section 208 – Structure Excavation and Backfill for Selected Major Structures, and Section 209 – Structure Excavation and Backfill. Specifications address preparation for excavation, preservation of channel, cofferdams, foundation seals, dewatering, foundation preparation, backfill and compaction. These specifications address minimum requirements for water quality protection, and are general as written. Projects may require supplemental specifications, depending on site characteristics.

Project drawings, and specifications if required, clearly display limits of allowed disturbance. Limits of disturbance weigh consideration of operational characteristics of construction equipment and economic feasibility with the scale of potential for impacts to water quality. Compromised worker safety due to restrictive disturbance limits is not an option.

Disturbance of channel or waterway bottom, if determined to be necessary and approved by COR or ER, is closely monitored. Water from foundation excavation is diverted to settling areas, and not directly discharged into waterways.

Design also includes treatment of exposed surfaces as a result of excavation. Soil characteristics, slope, and project activities dictate particular methods of treatment. Treatment methods may include surface treatments, revegetation, biotechnical practices, retaining structures, or mechanical stabilization materials.

Exposed finished cut and fill slopes, and excavated materials not incorporated into the project, follow Practice 2-4: Stabilization of Road Slope Surfaces and Spoil Disposal Areas. Allowable disposal areas are identified on maps. Material is not allowed to be deposited into waterways, nor in areas where it could reach waterways.

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Comment [WW1]: The meaning of this statement is not clear.

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Comment [WW2]: Fine, but we also need to have the specs for maintenance and for decommissioning. The listed references do not appear to identify specifications for those practices. If they are found elsewhere it should be specifically stated.

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Comment [WW3]: Who is authorized and qualified to produce these supplemental specifications and drawings? Are contractors responsible for this on a contracted work project? I assume they would need to be both licensed and experienced.

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Comment [WW4]: Do waterways include lakes, ponds and wetlands? If not, they should be specified and protected.

Erosion Control Plan is developed jointly with engineers, hydrologists, geologists, and fish biologists for non-contract work. It is included in all work and activities, and implementation of the plan is ensured by COR, ER, Permit or Sale Administrator, crew supervisor, and project manager, depending on type of project. Hydrologists and/or geologists are encouraged to observe in-channel excavation activities, and work constructively on the ground with Forest Service personnel (construction project supervisor, COR, ER, Permit or Sale Administrator) to confirm compliance.

For road construction, reconstruction, maintenance and decommissioning contracts, Contractors prepare and submit Erosion Control Plan in compliance with FP-03 – Soil Erosion Control.

BMP Implementation is considered as a pay item in contracts, rather than incidental to construction and maintenance. For all projects, contract and otherwise, BMP implementation is evaluated with multi-disciplinary team, and with Line Officer, to understand practices that were successful as well as to learn from those that were less than successful and to make improvements for future implementation.

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Comment [WW5]: I thought it was Practice #02 and it was called Erosion Control Plan, not "Erosion Control."

Comment [WW6]: How is BMP effectiveness monitored, and by whom?