

SUMMARY OF EXISTING RESEARCH ON LOW-HEAD DAM REMOVALS

Clients: ICF Consulting and AASHTO

Woodlot assisted ICF Consulting with the research and development of “A Summary of Existing Research on Low-Head Dam Removal Projects.” This study was requested by the American Association of State Highway and Transportation Officials (AASHTO), and conducted as part of the National Cooperative Highway Research Program (NCHRP) Project 25-25 on behalf of the AASHTO Standing Committee on the Environment. The objective of this study was to develop a tool for determining the costs and benefits of low-head dam removal projects as a stream restoration technique and as a stream impact mitigation technique.

The study considered the potential of both beneficial and detrimental effects of low-head dam removal as a mitigation technique for transportation-based projects. Specific tasks performed by Woodlot included literature and case study reviews, agency discussions, compilation of dam removal examples nationwide, and a review and assessment of potential impacts resulting from dam removal, including physical and chemical, ecological, and social impacts. Potential physical and chemical impacts considered in the study included impacts to river hydrology and morphology, flooding, sediment transport, erosion, wetlands, and water quality. Potential ecological impacts considered aquatic habitats and riparian vegetation. Social and socio-economic factors associated with dam removal were also considered.

Woodlot also prepared document sections addressing legal and regulatory requirements of dam removal projects, as well as discussions of monitoring techniques to measure project performance following removal. The reviews of legal and regulatory requirements considered local, state and federal issues, including Clean Water Act Section 404 Permits and 401 Certifications, and the development of appropriate mitigation credits. The section on project monitoring addresses the importance of monitoring and the scope of monitoring efforts.

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Requested by:

American Association of State Highway
and Transportation Officials (AASHTO)
Standing Committee on the Environment

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