

FY 2010 RESEARCH PROBLEM STATEMENT

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TITLE ([more info](#))

Effect of implementation of the fluvial performance standard on maintenance of bridges and culverts

PROBLEM (Description of need) ([more info](#))

The "fluvial performance standard", developed for the OTIA III Bridge Program Programmatic Biological Opinion and incorporated into SLOPES IV, sets a minimum opening width for bridges and culverts that is intended to protect channel processes and in-stream habitat. A concern with the imposition of this standard on all ODOT projects is the additional cost arising from having to build longer bridges and place abutment protection away from the actual channel. While these costs are being tracked, no analysis has been done of the potential benefits of longer bridges/wider culverts. For example, the frequency of sediment cleanout at inlets to culverts, removal of drift accumulation on bridge piers, and repair of scour at both culverts and bridges may, in some cases, be substantially reduced compared to bridges and culverts that do not meet the standards. Without this information any analysis of the true cost of implementing the fluvial performance standard will be incomplete and flawed.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY ([more info](#))

This project would include a comparative study of types of maintenance issues, frequency of maintenance actions and costs of those actions between bridges and culverts that meet the fluvial performance standard and those that do not. This will entail examination of plans to determine conformance with the fluvial performance standard, site visits to identify similar stream conditions, and analysis of the relevant maintenance records. Analysis would focus on determining if there is a substantial difference in maintenance requirements and costs given similar stream conditions.

BENEFITS ([more info](#))

Future discussions on the requirements and use of the fluvial performance standard would be informed by actual performance data. A complete cost benefit evaluation is important in evaluating the impact of environmental performance standards on transportation projects.

CONTACT INFORMATION:

Name¹:

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Problem Statement Number: