

USDA Forest Service Update

March 2014

SUBJECT: Aquatic Organism Passage



Issue: Unless properly designed and constructed, road-stream crossings can hinder or obstruct the upstream movement of fish and other aquatic and riparian-dependent organisms, while they may also be inadequate to pass high flows, flood events and debris and therefore sustain damage and failure.

Key Points:

- Re-establishing aquatic organism passage (AOP) and providing adequate high flow passage is a key component of restoring ecological conditions by connecting fragmented habitats and protecting infrastructure investments. Passage is often a first step in restoring watershed condition, which benefits fish and other aquatic and riparian species.
- Stream Simulation Design is the preferred approach to ensuring unimpeded access for all life stages of aquatic organisms beneath road and trail infrastructure.
- Regional assessments indicate that over 40,000 road-stream crossings potentially block access for aquatic organisms and use of upstream habitat. Many forests are currently involved in comprehensive road-stream crossing and trail-stream crossing assessments for prioritization.
- National interest drives partnerships across other Federal, State and local agencies, Tribes and non-profit groups. Partners include U.S. Fish and Wildlife Service, NOAA Fisheries, State Departments of Environmental Quality or Departments of Conservation, State and County Departments of Transportation, U.S. Army Corps of Engineers and Trout Unlimited.
- Research and analyses following large-scale flood events across the country have verified the flood resiliency of the Stream Simulation Design approach and its cost-effectiveness in protecting infrastructure, community access and maintaining ecological connectivity.
- Forest Service (FS) is recognized as a national leader in road crossing techniques that ensure AOP, and the FS's Stream Simulation Design approach is recognized as the standard for stream crossing designs.

Background: Efforts over the past 20 years have focused on adult sport fish. Assessments from the past decade confirm the ecological importance of providing passage to all native aquatic and riparian species dependent on movement through road-stream crossings and for all life stages of those species, particularly to provide for robust communities and for resilience to climate change stresses. AOP at road-stream crossings represents one of FS' best examples of internal integration and quantifiable, on-the-ground restoration with strong partner support.

Funding & Accomplishments¹:

SAFETEA-LU funding²

Legacy Roads and Trails funding³

Number of structures replaced for AOP

Miles of aquatic habitat accessed-HTAP

Miles of aquatic habitat accessed-CMLG

Total miles of aquatic habitat restored⁴

	FY 2011	FY 2012	FY 2013
SAFETEA-LU funding ²	\$10,000	\$10,000 est.	\$0
Legacy Roads and Trails funding ³	\$90,000	\$45,000	\$45,000
Number of structures replaced for AOP	300	275	TBD
Miles of aquatic habitat accessed-HTAP	142	242	0
Miles of aquatic habitat accessed-CMLG	215	179	119
Total miles of aquatic habitat restored ⁴	710	650	251

¹Funding \$ displayed in thousands.

²Safe, Accountable, Flexible, and Efficient Transportation Equity Act Legacy for Users (SAFETEA-LU) with HTAP (Highway Trust Funds for Aquatic Passage) funding

⁴Total miles of aquatic habitat restored for AOP is accomplished through HTAP, CMLG and other budget line items not necessarily shown above

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