



United States Department of Agriculture
Forest Service
Pacific Northwest Region

Accomplishment Report

SAFETEA-LU Restoration of Fish Passage at Road-Stream Crossings FY 2007

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Summary

In FY 2007, work was funded on 88 road-stream crossings, which will improve access to more than 414 miles of valuable fish habitat. Work activities included planning, site survey, design, contracting, and/or construction. This work was implemented cooperatively by USDA Forest Service (FS), States, Counties, and the Federal Highway Administration (FHWA). A variety of other partnerships provided support and funding for the program, thus leveraging federal funds and increasing overall program accomplishment.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed On August 10, 2005. This act, which is in effect through FY 2009, included \$10,000,000 of funding per year to assist the USDA Forest Service in restoring fish passage at road-stream crossings on Forest Highways. SAFETEA-LU funding has become an important component of a broader Forest Service program of work to improve fish and aquatic organism passage with direct benefits to National Forest System lands.

In addition to on-site fish passage restoration, a variety of other projects that support the program have been implemented. In FY 2007, these include:

- identification and evaluation of 1,237 road-stream crossings on fish-bearing streams in 2 Regions.*
- development of an interactive, training CD based on the successful “Aquatic Organism Passage” (AOP) training offered by the Forest Service’s San Dimas Technology and Development Center (SDTDC). The link to information about the upcoming CD is <http://fsweb.sdtc.wo.fs.fed.us/programs/eng/AOP%20training%20CD/sample-project/>.*
- a session of the SDTDC AOP training in the Rocky Mountain Region (R2), which was attended by 25 people from several Regions. This training has been presented by SDTDC to more than 300 participants throughout the country since 2004.*
- monitoring of the effectiveness of the Stream Simulation design method, that is used by the FS, which is being conducted by SDTDC and the Pacific Northwest Region (R6).*



Introduction

National Forest System (NFS) lands provide habitat for a diverse array of fish and wildlife that depend on riparian and aquatic habitat. Increasingly, many are Threatened, Endangered, or At Risk species relying on this valuable habitat. More than 2,000,000 acres of lakes and reservoirs and 200,000 miles of fish-bearing streams are found on NFS lands nationwide. Over 380,000 miles of Forest System roads and about 29,000 miles of Forest Highways provide access to NFS lands. Where roads and streams intersect, there can be changes to stream flow and channel character, which often obstruct the upstream movement of fish, wildlife, and other aquatic organisms.

Maintenance and improvement of fish passage is a critical part of the Forest Service watershed and aquatic resource restoration program. Re-establishing fish passage is often a first step in the comprehensive restoration of watersheds.

It is particularly critical because it serves to connect populations of fish and aquatic organisms and provide access to important habitat. In addition to projects implemented with SAFETEA-LU funding, fish passage improvement work is also supported by a variety of FS funding sources including road maintenance, capital investment, Knutson-Vanderberg (KV), stewardship contracts, etc. These funds are also often leveraged with partners to increase overall program accomplishment.

Nationwide, it is estimated that there are more than 20,000 road-stream crossings on NFS lands that do not provide full passage for all species and life stages of fish. Currently, there is no national, comprehensive inventory of fish passage barriers on Forest Highways. Although there have been significant improvements over the last 20 years to correct upstream passage for adult game fish, the ecological importance of providing passage for a much wider variety of adult and juvenile fish species and other aquatic organisms has only more recently been realized. As a result, Forest Service emphasis and investments to restore fish passage have increased over the last several years. Improvement of passage is an important part of a broader program of work to restore watershed conditions to benefit fish and other aquatic and riparian species.



More than 200,000 miles of fish-bearing streams occur on 192,000,000 acres of NFS lands nationwide. National Forest System lands shown in gold (Grasslands) and green (National Forests).

Transportation Bill (SAFETEA-LU) Funding

Fiscal Year 2007 is the second year that the Forest Service has received funds through SAFETEA-LU for correcting fish passage on Forest Highways. Funding has been limited to designated Forest Highways, which are a specific group of roads defined under 23 USC, which access FS Lands and are owned by a cooperating agency. Projects have been selected by a Forest Service team following a national call for proposals. The eligibility for SAFETEA-LU funding in FY09 has been expanded to include Forest System roads on National Forests that are open to passenger car use. This will greatly enhance the effectiveness of this program.

Nine construction projects, comprising 16 road-stream crossings, were completed in FY2007 (this included projects funded in FY2006 and completed in FY2007). As a result, fish passage was re-established to over 38 miles of stream habitat (Table 1). There were 41 projects funded for preconstruction work (ex. planning, design, contract preparation) and 17 projects funded for contract award and construction (completion in 2008 or 2009). There was also significant investment in implementing projects that would help build program capacity and support future-year construction. Two Regions were funded for inventory and assessment of fish passage at 1,237 road-stream crossings and 1 Region sponsored an AOP technical training session that was attended by 25 people. In many cases, SAFETEA-LU funds were leveraged with other Forest Service and partner funds to increase available resources for project completion. A listing of all FY 2007 projects funded through this program is located in the Appendix (Table A).

Bull trout spawning on the Willamette NF in western Oregon. Many Threatened, Endangered, and/or At Risk fish and other aquatic species rely on habitat found on NFS lands.



Table 1: FY 2006 & 2007 SAFETEA-LU Passage Improvement Projects Completed in 2007

STATE	FOREST	PROJECT NAME	MILES OF HABITAT NO. CROSSINGS	SPECIES
AK	Tongass	Howling Dog Creek	1.0	Coho salmon, Steelhead, cutthroat trout
LA	Kisatchie	FH04 Culvert	2.5	Various
MI	Hiawatha	Johnson Creek at Co. Rd 442 (2 crossings)	2.0	Brook trout
MI	Hiawatha	Murphy Creek at Co. Rd 437	8.0	Brook trout
MI	Hiawatha	Pine River Crossing	4.0	Brook trout
MI	Huron-Manistee	Eight Mile Rd & unnamed tributary	5.0	Pugnose shiner, creek heelsplitter
OH	Wayne	Gallia County Rd 68 (3 crossings)	5.7	Darters, mussels
OK	Ouachita	Frizzel Branch	6.0	Kiamichi shiner
WI	Chequamegon-Nicolet	County Hwy C (5 crossings)	4.1	Brook trout
CO	all	Training (AOP design)	25 participants	NA
ID	Clearwater, Nez Perce, Idaho Panhandle	Fish Passage Survey	220 crossings	Salmonids
MT	Bitterroot, Beaverhead-Deerlodge, Custer, Flathead, Gallatin, Helena, Kootenai, Lewis & Clark, Lolo	Fish Passage Survey	422 crossings	Salmonids
MN	Superior	Fish Passage Survey	174 crossings	Brook trout, northern brook lamprey
NH	White Mountain	Fish Passage Survey	30 crossings	Brook trout
OH	Wayne	Fish Passage Survey	391 crossings	Freshwater mussels
Total Miles of Habitat Accessed 38.3 miles Total Crossings Assessed 1,237 crossings Total Participants Trained 25 participants				

Program Benefits

The objective of the SAFETEA-LU fish passage funding is to correct impediments to fish and aquatic organism passage at road-stream crossings. The funding has been restricted to Forest Highways during 2006 and 2007. This has resulted in a focus on passage barriers on State and local roads that are typically off National Forest System (NFS) lands and low in the stream systems. It has created the means to improve access to stream reaches on NFS lands by providing funding for replacement of downstream barriers. This is very important to Forest aquatic restoration programs. In addition to rectifying numerous barriers, there have been other, related benefits to this program, including:

Fish Passage Surveys find a wide range of conditions affecting passage.

An Improved Understanding of Fish Passage Conditions on Forest Highways

Without an inventory and assessment of stream crossing infrastructure, it is impossible to describe the existing situation, i.e. which and how many crossings are barriers to fish passage. Multiple National Forests (NF) in various Regions have utilized SAFETEA-LU funding to identify and evaluate road-stream crossings for their ability to provide fish passage. These assessments are helping to provide a sound basis for project prioritization for 2007 and beyond. A complete inventory/assessment will provide the foundation for strategic planning and correction of passage problems, as well as enhance the opportunities to work with partners.



Successful fish-passage structure

Fish-passage barrier with road eroding into stream



Development of a Strategic, Multi-Year Program of Work

SAFETEA-LU funding for fish passage is consistent throughout the life of the 6-year Highway Bill. This allows Forests and Regions to plan their work more strategically and to ensure coordination with partners. It also facilitates scheduling and completion of projects over multiple years. This allows more efficient use of the workforce throughout the year and facilitates completion of larger scale, more complex projects.

Improved Partnerships and Cost Sharing

Because the SAFETEA-LU program has involved multiple agencies in correcting passage barriers on Forest Highways, it has enhanced the opportunities for collaboration and sharing of information and resources. Forest Service technical design knowledge and technical and operational skills have been valuable in working with other agencies. Wayne NF, for example,

helped increase local County awareness of fish passage issues and provided engineering design assistance for several passage projects.

In several instances, the local Forest has taken the lead on County projects. Generally the FS provided design and administration skills not available to the county or local agency. In these instances, there is close collaboration to ensure that county design standards are met. In the Pacific Northwest Region (R6) there are 6 National Forests conducting site investigation, designing, contracting, and/or inspecting fish passage structures for various County and State governments.



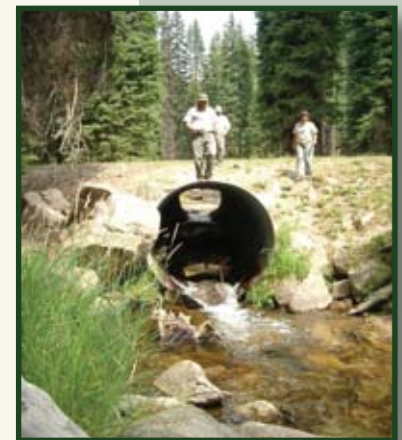
Forest Service and Oregon Department of Transportation specialists consult on placement of planned bridge and an adjacent archeological site at Williams Creek Bridge site

Increased Development of Forest Service Skills in Fish Passage Design

Since 2003, the Forest Service-developed Aquatic Organism Passage (AOP) training course has been successfully given numerous times to Forest Service and partner groups. A total of more than 300 engineers, geologists, fish biologists, and hydrologists have completed this training. Students learn to design road-stream crossing structures that minimize interference with stream processes and aquatic species movement. In class, student teams conduct an extensive exercise in which they evaluate site data and develop design parameters for a replacement structure using the Stream Simulation design methodology. Common construction problems and solutions are also discussed. In 2007, the Rocky Mountain Region (R2) sponsored a session of the San Dimas Technology and Development Center (SDTDC) AOP training. Twenty-five individuals – engineers, fisheries biologists, and hydrologists – from 4 Regions attended this training. The need for Aquatic Organism Passage (AOP) design training continues.

Field exercises include evaluating culverts for fish passage.

SDTDC is developing a training Compact Disc (CD) on AOP design based on their AOP-design course and their recently published design guide, “Stream Simulation: an Ecological Approach to Road-Stream Crossings”. Because of the format and packaging (e-learning) of the upcoming CD, information on aquatic organism passage at road-stream crossings and stream simulation will be available to more people, both in and out of the agency.



The overall objective of the training CD is to describe the Stream Simulation design methodology, and provide guidance about where its use is appropriate. The CD will describe in detail how to design stream simulation structures and offer suggestions on how to construct and monitor installations. The application will also include a searchable version of “Stream Simulation: an Ecological Approach to Road-Stream Crossings”. The training CD will be designed to support interdisciplinary teams rather than individual designers.

SAFETEA-LU Restoration of Fish Passage at Road-Stream Crossings

SAFETEA-LU funding has benefited the Forest Service's fish passage and watershed restoration program in several ways. The most obvious is the improved access for fish and other aquatic species to hundreds of miles of streams. Related program benefits include the ability to develop and deliver a strategic, multi-year program of work; improved partnerships and working relationships with County, State, and Federal agencies; increased development of Forest Service skills in fish passage design; and opportunities to develop an improved understanding of fish passage needs. In addition, a program, which includes fish passage improvements, benefits a wide range of recreational users. These issues include hikers, campers, fishers, and a growing number of people who enjoy fish and wildlife viewing.

Finally, successful delivery of the SAFETEA-LU program depends on coordination and a growing number of partnerships. In the past year, this was reflected in improved collaboration between the FS and County and State transportation departments. Additionally, continued strong support from the Federal Highway Administration in project delivery and especially in completion of environmental analyses (NEPA), was important to the successful implementation of FY07 projects.



Improved fish passage benefits a variety of forest users, including recreationists. Here, Free Fishing Day attracts children and families to the Forest.

Case Histories Of Selected Projects

Bridge Creek Project (8 crossings), Malheur NF, Oregon FY2006 Project completed in FY07

Project Status: 3 bridges completed, 5 designed and ready for construction

This project is in the Middle Fork sub-basin of the John Day River, one of the Pacific Northwest Region's top priority basins for watershed restoration work. Bridge Creek parallels US Highway 26 through a narrow valley, with the highway repeatedly crossing the stream. The Oregon Department of Transportation has taken the lead on this project and funded the first 3 crossings, with SAFETEA-LU funding the remaining 5. In addition to the Bridge Creek crossings, the Forest has recently re-established fish passage at 5 other crossings in this drainage. Upon completion of all projects in this watershed, access will have been provided to over 15 miles of Steelhead and potential Bull trout habitat.

Before



Work Performed:

The completed portion of the first part of this project consisted of the removal of 3 under-sized box culverts and replacing them with 3 bridges and re-construction of the stream channels through the structures. All of the crossings were barriers to fish passage and ponded water during high flows.

After



Expected Benefits:

This photo shows 1 of the 3 completed projects. Project benefits include improved fish passage and a widened and more durable crossing better able to pass sediment and debris at high flows. Completion of all 8 crossings is expected by 2010. The completed project will open access to over 9.2 miles of Steelhead and Bull trout habitat.

County Highway C (5 crossings), Chequamegon-Nicolet NF, Wisconsin FY2007 Project Project Status: completed

Project objectives included restoration of fish passage, restoration of stream channel morphology, protection of public safety, and reduction of maintenance at the five stream crossings on Forest County's Highway C. All culverts impeded fish passage and impounded water upstream, causing the channel to accumulate sand and silt. In addition 4 of the 5 culverts were in poor condition and in danger of failing. The Forest Service partnered with Forest County in implementing this project; the latter providing traffic control and completing the paving.

Before



Work Performed:

The 5 culverts were replaced with 3 larger, circular culverts and 2 pipe arch culverts. The culverts were designed to pass 100-year flows and were set at various elevations below the existing culverts. Some culverts had rock placed inside for fish resting areas.

After



Expected Benefits:

Passage of fish and other aquatic organisms have been provided for all species and life states at all sites. Several hundred feet of stream channel have been restored above the sites. Potential failure of the deteriorated culverts was avoided by their replacement. The larger culverts will also require less maintenance.

Murphy Creek, Hiawatha NF, Michigan FY2006 Project Project Status: completed

The project objectives were to improve the crossing for aquatic organism passage, reduce sediment input from the road, and improve public safety. This work was done in partnership with Alger County Road Commission on County Road 437. This project restored access to over 8 miles of stream habitat to Brook trout and other aquatic species.

Before



Work Performed:

The existing culvert was removed, the streambed re-constructed to bring it up to pre-culvert grade, and a Conspan structure built over the stream.

After



Expected Benefits:

In addition to improved aquatic passage, the new crossing will reduce the road's impact on the river by establishing a natural stream bottom and using a structure set to a better alignment. There will also be reduced sedimentation from the road and improved safety for the road's users. Brook trout and other aquatic species will have renewed access to over 8 miles of stream habitat.

John Day River (2 crossings), Malheur NF, Oregon FY2007 Project Project Status: under construction

This is a cooperative project with Grant County, OR. The project replaces 2 culverts on a county road along the upper main stem of the John Day River. The Forest is designing, contracting, and administering the project at the request of Grant County. In the past 3 years, 8 crossings downstream of these sites have been corrected by Grant County Soil & Water Conservation District in conjunction with the Confederated Tribes of Warm Springs and private landowners.



Before: looking downstream at the culvert inlet – note constriction of the stream as it enters the culvert in this 2-sec. time-exposure photo.

Work Performed:

Two culverts will be removed and replaced with 3-sided, concrete box culverts. In order to maintain traffic through the site during construction, temporary bridges were built adjacent to each crossing. Stream Simulation channel design will be constructed through the structures.



Looking upstream at partially completed structure during Construction – note temporary bypass bridge in background.

Expected Benefits:

Completion of these crossings will open access to an additional 7.8 miles of spawning and rearing habitat for mid-Columbia Steelhead, Chinook salmon, Bull trout, westslope cutthroat trout, and redband trout.

Pine River, Hiawatha NF, Michigan FY2007 Project

Project Status: Project awarded in FY2007; work to be completed in FY2008

This project, on Forest Highway 92, was undertaken to improve aquatic organism passage, improve the road to reduce sediment delivery into the stream, and improve public safety. Four miles of stream habitat will become accessible to Brook trout and other aquatic species.

Before

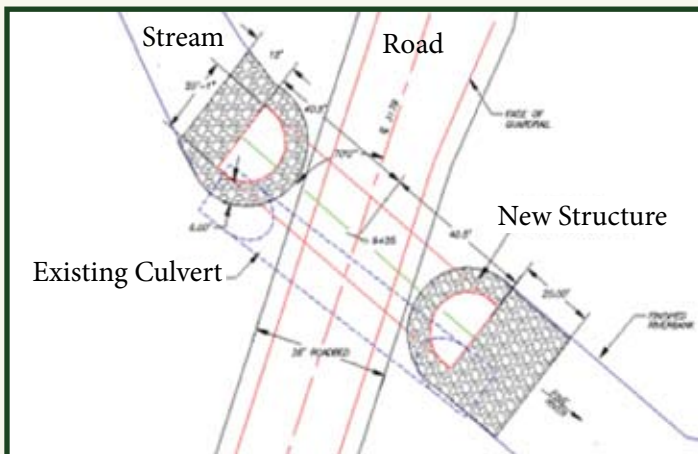


Work Performed:

This project will replace the existing pipe arch with a larger, aluminum structural-plate pipe arch; reconstruct the road slopes, ditches, and surface; pave roadway with asphalt; and place guardrail.

The contract was awarded in FY 2007; work will be completed in FY 2008

Contract Drawing of Project



Expected Benefits:

Improved aquatic passage, reduced impact on the river by using a larger structure set to a better alignment using a natural stream bottom, and reduced sedimentation from the road. Four miles of stream habitat will become accessible to Brook trout and other aquatic species.

Aquatic Organism Passage Inventory and Assessment, various Forests, Eastern Region

FY 2007 Project

Project Status: completed

Three National Forests, the Wayne in Ohio, Superior in Minnesota, and White Mountain in New Hampshire and Maine, conducted passage inventories and assessments.

White Mountain NF



Work Performed:

The Wayne NF developed a coarse-level assessment directed toward darter passage, because certain darters are host fish to T&E mussels. A total of 391 road-stream crossings were assessed.

The Superior NF assessed 174 road-stream crossings using the USDA Forest Service protocol developed by SDTDC.

The White Mountain NF inventoried 30 road-stream crossings in watersheds containing Forest Highways. The inventory evolved into a 3-level assessment protocol, which will be used by the Forest in future years.

Expected Benefits:

On the Wayne NF, culverts comprised 59% of the crossings inventoried, of which 75% had a passage concern. These results will be shared with the Ohio Department of Transportation and County Engineers' offices. The findings will be incorporated into future culvert replacement work by these agencies whenever possible.

The Superior NF will be using the results of the survey to assist with identifying, prioritizing, and implementing future road-stream crossing improvement and habitat restoration projects. The primary aquatic species that will benefit include brook trout, northern brook lamprey, and creek heelsplitter mussel.

The White Mountain NF considers their inventory the first step in an effort that will continue in future years. The assessment will help in designing new crossing structures and allow proposals to be developed for stewardship projects and cost-share partnerships with Federal and State agencies as well as other grant opportunities, such as the Eastern Brook Trout Joint Venture.

FH04 Culvert Replacement, Kisatchie NF, Louisiana FY2007 Project Project Status: completed

Project objectives were to replace the existing culvert to allow for increased flow capacity, eliminate scour at the outlet of structure, and provide for aquatic passage through the crossing. The Forest leveraged SAFETEA-LU funds with Forest, their allocated funding and partnered with Natchitoches Parish Police Jury to complete this project.

Before



Work Performed:

The existing culvert was removed and replaced with an aluminum multi-plate culvert. Work included armoring the creek bank to prevent erosion and seeding and mulching the disturbed area.

After



Expected Benefits:

The new structure will reduce road maintenance costs, allow passage for fish and other aquatic species, and reduce sediment into the stream. Passage will be restored to 2.5 miles of stream habitat to various fish and aquatic species.

Drews Creek (2 crossings), Fremont-Winema NF, Oregon FY2007 Project

Project Status: under construction

The project objectives are to restore connectivity for 8 native and endemic Goose Lake drainage fish species from Drews reservoir to the headwaters and to improve the inadequate hydraulic capacity of the crossing. The project will replace the impassable culvert on State Highway 140 with a stream-simulated crossing structure and remove the barrier culvert upstream and restore the stream channel under the old State Highway 140.

First crossing under current Oregon State Hwy 140 (FH 30)



Work Performed:

Oregon Department of Transportation is leading the effort to restore fish passage on Drews Creek. In 2006 and 2007, they have coordinated survey, design, and NEPA for the project with the Forest. Implementation will occur in the summer of 2008.

Second crossing under old highway grade



Expected Benefits:

The Drews Creek Highway 140 crossings are high priorities for improving fish passage. The Project will enable redband trout, Goose Lake sucker, Goose Lake lamprey, Goose Lake tui chub, and speckled dace to move unimpeded from the reservoir to the headwaters of Drews Creek (22 miles of high quality spawning and rearing habitat). This work is complimented by a major downstream riparian and channel improvement effort on nearly 10 miles of private ranch land.

Table A-FY 2007 SAFETEA-LU Projects

Region	State	Congressional District	Forest	Forest Highway Number	Project Title	Project Status	Species	Miles of Habitat
1	ID, MT	various	various	various	Regional Fish Passage Assessments	completed	Salmonid & other	642 crossings
1	ID	1	Clearwater	16	Apgar Creek	pre-construction	Bull trout	1.0
1	ID	1	Clearwater	16	Bimerick Creek	pre-construction	Steelhead/Bull trout/Chinook	0.8
1	ID	1	Clearwater	16	Glade Creek	pre-construction	Steelhead & Bull trout	2.5
1	ID	1	Clearwater	55	Jim Brown Creek	pre-construction	Steelhead & Chinook	4.2
1	MT	1	Beaverhead-Deerlodge	91	Crystal Creek	pre-construction	Bull trout & westslope cutthroat trout	1.5
1	MT	1	Helena	63	Lower Poorman Creek	pre-construction	Bull trout & westslope cutthroat trout	16.5
1	MT	1	Lolo	56	Big Rock Creek	pre-construction	Bull trout	0.1
1	MT	1	Lolo	7	Clear Creek	pre-construction	Bull trout	15.0
1	MT	1	Lolo	56	Deerhorn Creek	pre-construction	Bull trout	2.8
1	MT	1	Lolo	7	Glidden Creek	pre-construction	Bull trout	3.0
1	MT	1	Lolo	56	Goat Creek (old Elk Creek)	pre-construction	Bull trout, Steelhead, chinook salmon	4.8
1	MT	1	Lolo	12	Howard Creek	pre-construction	Bull trout	15.0
1	MT	1	Lolo	84	Little Joe Creek (2 crossings)	pre-construction	Bull trout & westslope cutthroat trout	9.0
2	CO	3	White River	8	Ripple Creek Basin (3 crossings)	pre-construction	Colorado River Cutthroat trout, brook trout, brown trout, rainbow trout	3.9
2	WY	1	Shoshone	23	Rock Creek	pre-construction	Mountain sucker	3.0
2	all	all	all	NA	AOP Design Training Course	completed	NA	25 trainees
3	NM	3	Santa Fe	4	East Fork Jemez River	pre-construction	Rio Grande Cutthroat trout, RG chub, RG sucker	10.0
4	ID	1	Boise	24	Big Pine Creek	pre-construction	Bull Trout	12.5
4	ID	2	Boise	135	Feather River	pre-construction	Bull Trout	54.9
4	ID	1	Boise	25	Fivemile Creek	pre-construction	Bull Trout	7.3
4	ID	2	Caribou-Targhee	85	Georgetown Creek	pre-construction	Bonneville cutthroat trout	10.0
4	ID	2	Caribou-Targhee	84	Mink Creek	construction	Yellowsbne cutthroat trout	25.0
4	ID	2	Sawbooth	25	Elk Creek FH25-123.1	pre-construction	Bull trout, Steelhead Trout, Chinook Salmon, cutthroat trout	12.8
4	ID	2	Sawbooth	25	Iron Creek FH25-130.8	pre-construction	Bull trout, Steelhead, Chinook	0.9
4	WY	1	Bridger-Teton	22	Higby Culvert	pre-construction	Salmon, westslope cutthroat trout	1.0
4	WY	1	Bridger-Teton	22	Labarge Culvert	pre-construction	Snake River cutthroat trout	5.0

Preconstruction: planning, site survey, design, contract preparation
 Construction: contract is awarded, construction is scheduled or in progress

Table A – FY 2007 SAFETEA-LU Projects – continued

**Preconstruction: planning, site survey, design, contract preparation
Construction: contract is awarded, construction is scheduled or in progress**

Region	State	Congressional District	Forest	Forest Highway Number	Project Title	Project Status	Species	Miles of Habitat
5	CA	2	Klamath	113	West Branch Indian Creek	construction	Coho Salmon, Steelhead, rainbow trout	0.7
5	CA	4	Tahoe	124	Wabena 6001	construction	Rainbow trout	0.5
6	OR	2	Fremont-Winema	30	Drews Creek (2 crossings)	construction	Redband trout, Goose Lake sucker, Goose Lake Lamprey, Goose Lake tui chub, speckled dace	22.5
6	OR	2	Malheur	118	John Day River Culverts (2 crossings)	construction	Steelhead, Bull trout, Chinook salmon, westslope cutthroat trout	7.8
6	OR	4	Siuslaw	203	Big Creek & tribs (3 crossings)	construction	Coho salmon, Steelhead, & cutthroat trout	3.6
6	OR	2	Umatilla	33	WF Meadowbrook (7 crossings))	pre-construction	steelhead, redband trout and Malheur mottled sculpin	7.0
6	OR	4	Umpqua	47	Williams Ck	pre-construction	Oregon Coastal Coho, Steelhead, coastal cutthroat trout	4.4
6	OR	2	Wallowa-Whitman	135	Mill Creek	pre-construction	Snake River Steelhead, trout	2.0
6	Or & WA	various	various	various	Fish Passage Monitoring	in progress	NA	NA
6	WA	2	Mt. Baker-Snoqualmie	7	Big Four Creek	pre-construction	Bull Trout, Steelhead, Coho salmon, and rainbow trout	1.3
6	WA	8	Mt. Baker-Snoqualmie	33	Crystal Mountain Boulevard	pre-construction	Bull Trout, Steelhead, Coho salmon, rainbow trout	0.8
6	WA	4	Okanogan-Wenatchee	84	Dry Creek (#482)	pre-construction	Mid-Columbia Steelhead, rainbow trout	5.0
6	WA	4	Okanogan-Wenatchee	98	Jack Creek	construction	Bull Trout, Steelhead, Chinook, Coho salmon, rainbow trout	5.3
6	WA	5	Okanogan-Wenatchee	183	Lower Little Bridge Creek	construction	Steelhead, Bull trout, Chinook, rainbow trout	8.0
6	WA	4	Okanogan-Wenatchee	84	Nile Creek Bridge (#0483)	pre-construction	Bull Trout, Mid-Columbia Steelhead, rainbow trout	8.4
6	WA	6	Olympic	209	O'Brien Creek	pre-construction	Coho salmon, Steelhead, sea run cutthroat trout.	4.7
6	WA	6	Olympic	5	So. Shore Rd. Gaitton Creek	pre-construction	Bull Trout, Sockeye, Chinook, Steelhead, Coho, Chum salmon, cutthroat trout	3.0

Table A – FY 2007 SAFETEA-LU Projects – continued

8	AL	3	NFs in Alabama	38	Choctawhatchee Creek trib tunfr54-1.0	pre-construction	no TE species	1.0
8	AL	6	NFs in Alabama	37	Little Creek on 2935-1.5	construction	no TE species	1.0
8	AR	4	Ouachita	159	Sugar Creek low water crossing	pre-construction	no TE species	2.0
8	AR	1	Ozark	11	North Sylamore Creek (Barkshed)	construction	no TE species	20.0
8	AR	3	Ozark	150	Unnamed Trib Little Mulberry River (Accord Hollow) - Pleasant Hill	pre-construction	no TE species	2.5
8	GA	10	Chattahoochee	13	Holly Creek	construction	Blue Shiner	4.0
8	LA	4	Kisatchie	4	FH 04 Culvert Replacement	completed	no TE species	1.0
8	LA	4	Kisatchie	10	FH 10 Culvert Replacement	pre-construction	no TE species	1.7
8	OK	2	Ouachita	506	LE208, Frizell Br. Rd	completed	Kiamichi Shiner	6.0
9	various	various	various	various	Regionwide Inventory and Assessment	completed	various	595 crossings
9	MI	4	Huron Manistee	7	Au Sable Rd & Barfield Ck (2 crossings)	construction	Greater red horse sucker, channel darter	6.0
9	MI	4	Huron Manistee	5	Curtisville Rd and Smith Creek - Smith Creek Trib. (3 crossings)	pre-construction	Greater Red Horse Sucker and Channel Darter	13.0
9	MI	2	Huron Manistee	26	Eight Mile Rd & unnamed trib	completed	Greater Red Horse Sucker, pugnose shiner, creek heelsplitter	5.0
9	MI	1	Hiawatha	76	County Rd 442 (2 crossings) (Johnson Ck & Fish Dam River)	construction	Brook trout	5.5
9	MI	1	Hiawatha	43	County Road 437 at Murphy Creek	completed	Brook trout	8.0
9	MI	1	Hiawatha	92	Dick Rd at Pine River	construction	Brook trout	4.0
9	OH	6	Wayne	11	FH 11 (4 crossings)	pre-construction	Eastern sand darter, Ohio lamprey	6.9
9	WI	8	Chequamegon-Nicolet	46	County Highway C Stream Crossing Replacements (5 crossings)	completed	Native brook trout	4.1
10	AK	1	Tongass	AK-13	Fubar Creek	pre-construction	Salmon, Steelhead, cutthroat trout	12.5
10	AK	1	Tongass	AK-51	Sandy Beach Road Blocked Crossing	construction	Salmon, Steelhead, cutthroat trout	0.8
10	AK	1	Tongass	AK-10	Yakutat Hwy between the Situk River & Dangerous River (35 miles)	pre-construction	Coho Salmon	unknown
10	AK	1	Tongass	AK-7	South Mitkof Highway, MP 25.4	construction	Coho Salmon, Pink Salmon	1.1
10	AK	1	Tongass	AK-7	South Mitkof Highway, MP 28.0	construction	Coho Salmon, Pink Salmon, Dolly Varden	1.3
San Dimas Technology & Development Center								
WO		NA	NA	NA	Aquatic Organism Passage training CD Monitoring	in progress	NA	NA
						in progress	various	NA

Preconstruction: planning, site survey, design, contract preparation
Construction: contract is awarded, construction is scheduled or in progress



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