MONITORING REPORT
Contract # 210-2042
Tenmile Lakes Fish Passage

Produced by:
TLBP May 2012

INTRODUCTION

In spring of 2010, the Tenmile Lakes Basin Partnership (TLBP) passed a motion initiating the development of the South Lake Bridges, a five bridge component of the Tenmile Lakes Fish Passage and Sediment Abatement Plan as well as part of implementing the Watershed Council's Action Plan and recommended activities that the Nutrient Budget Study identified.
With this direction, funding was obtained from the Oregon Watershed Enhancement Board and the Department of Environmental Quality. A large donation of cement bride slabs from Coos County was also received for two projects. Planning and scheduling began for Project Partners who included the Elliott State Forest, DSL, and three individual project site landowners. Projects completed within this contract include five fish passage fixes. Fish passage projects included: Shutters Creek Bridges #6 and #7, Fritz Bridges #2 and #3, and Hankins #3. Combined this projects removed barriers to approximately 15 miles of high priority Coho spawning and rearing habitat. In addition, approximately 407 cubic yards of perched sediment have been permanently removed and not impacting the important lake habitat.

This report is to fulfill the Partnership's final monitoring requirements of this management project, grant 210-2042. All of these activities were specifically designed to address the apparent decline of water quality and native fish habitat within the basin.

PROJECT EVALUATION

Overall, the Tenmile Lakes' Watershed South Lake Bridges successfully integrated on-the-ground enhancement projects on private agricultural lands. Most of the specific component implementation objectives were met. Continued monitoring of these projects for several years will reveal if our long-term goals will be achieved. Overall, the implementation of project followed successfully the Council's motto: Assess – Plan – Implement.

ACKNOWLEDGEMENTS

The Tenmile Lakes Basin Partnership would like to thank the many contributors that assisted in designing and conducting the monitoring plan of this project, without whose cooperation, getting a better understanding of the results of these fish passage and sediment abatement projects would not have been possible.

Funding
Oregon Watershed Enhancement Board
Oregon Department of Environmental Quality - 319 program
Coos County Highway Department

Technical Assistance
Pam Blake (ODEQ)
Harvey Wilcox
City of Lakeside Public Works
Division of State Lands

Landowner
Jim Larsen
Dennis Fritz
Bob Hankins

Project Site Map for 210-2042

MONITORING PROTOCOLS

Watershed Council staff with the assistance of the site Landowner(s) conducted our bi-annual surveys of the project components of these fish passage and sediment abatement projects. The "Monitoring Team" evaluated project sites and associated areas twice a year, during high and low flows. These surveys involved visiting a photo point to record current status of the project with a camera and completing Monitoring data form. Effectiveness Monitoring follows the guidelines established in the approved Tenmile Lakes Water Quality Assurance Plan 2004.

MONITORING SITES SUMMARY

PROJECT	PROJECT LOCATION UTM	PROJECT GOALS	2010 STATUS	2011 STATUS	2012 STATUS
Shutters Bridge #6	10T406742.56 4821948.77	Remove barrier to fish passage, Reduce erosion and sediment delivery.	Successful.	Successful.	Successful
Shutters Bridge #7	10T407057.08 4821957.41	Remove barrier to fish passage, Reduce erosion and sediment delivery.	Successful	Successful	Successful
Fritz Bridge #2	10T410502.96 4822317.58	Remove barrier to fish passage, Reduce erosion and sediment delivery.	Successful	Successful	Successful
Fritz Bridge #3	10T411099.11 4822402.29	Remove barrier to fish passage, Reduce erosion and sediment delivery.	Successful	Successful	Successful
Hankins Bridge #3	10T414100.55 4820411.44	Remove barrier to fish passage, Reduce erosion and sediment delivery.	Successful	Successful	Successful

More specific observations are available in the monitoring summaries and monitoring photographs.

MONITORING COSTS

Monitoring costs were higher than usual due to the fact that TLBP's long standing Monitoring Coordinator training his replacement. This required two staff visiting sites. The Watershed Council's Monitoring Coordinator, Monitoring assistant, and the Project Site landowners conducted two monitoring site visits, summer and winter, to each site. For each site is estimated that approximately 3 hours are necessary to complete data collection and recording.

Project Site	Monitoring Hrs @ $32/hr	Landowner Hrs @ $10/hr	Total Cost per site
Shutter #6	3	1	$106.00
Shutter #7	3	1	$106.00
Fritz #2	3	1	$106.00
Fritz #3	3	1	$106.00
Hankins #3	3	1	$106.00
Total	15	5	$530.00

PUBLIC AWARENESS

Public awareness of these project activities is promoted through the media, project tours, public meetings, word of mouth, and Council members reporting to other groups such as City Council, Lions Club, and Chamber of Commerce. In addition, a Project Funded signs have been placed at each project site for easy identification of project partners.

LESSON LEARNED

1. Ensure open communication between WSC, Coordinator, and Monitoring staff. Open and honest communication will assist when staff changes are in the future. It is very helpful to new staff to have at least a month with experienced staff to learn the "ropes" of a new position.

2. Coordinator needs to make time to ensure landowner introductions with new staff go well.

3. In coastal flashing systems, review engineering of slabs to possibly be constructed 2ft- 3ft above bank height, instead of a foot and half to avoid log jams.

4. Review other Monitoring reports from other Watershed Councils or contractors. Everyone can learn methods and/or techniques and even report formats for others which can make life easier.

MONITORING RESULTS

SHUTTER CR BRIDGE #6

This fish passage and sediment abatement project, Fish Passage Plan site #206, removed a perched 36" x 20'corrugated metal pipe and replaced it with a 16'w x 19' concrete stringer bridge. Fish access to approximately 1.5 miles of stream habitat was improved. In addition approximately 78 cubic yards of perched filled was permanently removed to reduce chronic sediment inputs into this system.

Summary: Fish Passage and Sediment Abatement Site Conditions			
	2010	2011	2012
Current sediment delivery: High-Med-Low	Low	Low	Low
Current bridge condition.	Excellent	Excellent	Excellent
Current/approach condition.	Excellent	Excellent	Excellent
Armoring and fill condition.	Excellent	Excellent	Good
Erosion/scouring above project site?	None	None	None
Maintenance records/dates. Bridge observations. Goal Observations.	Cracks in bridge caused during installation…Repaired	No Maintenance Needed. Site is meeting project goals	This project is currently meeting our goals.

SHUTTER CR BRIDGE #7

This fish passage and sediment abatement project, Fish Passage Plan site #207, removed a perched 36" x 20'corrugated metal pipe and replaced it with a 16' x 19' concrete stringer bridge. Fish access to approximately 1 mile of stream habitat was improved. In addition approximately 108 cubic yards of perched filled was permanently removed to reduce chronic sediment inputs into this system.

Fish Passage and Sediment Abatement Site Conditions			
	2010	2011	2012
Current sediment delivery: High-Med-Low	Low	Low	Low
Current bridge condition.	Excellent	Excellent	Excellent
Current/approach condition.	Excellent	Excellent	Excellent
Armoring and fill condition.	Excellent	Fair/Poor	Fair/Poor
Erosion/scouring above project site?	None	None	None
Maintenance records/dates. Bridge observations. Goal Observations.	Cracks in bridge caused during installation…Repaired	Armoring has eroded from downstream side of bridge. Project is meeting our goals	Armoring has eroded from downstream side of bridge. Project is meeting our goals

FRITZ BRIDGE #2

This sediment abatement project, Fish Passage Plan site #284, replaced a 36" x 20' cmp pipe on Johnson Creek that was identified as a fish passage barrier and chronic sediment source into the Johnson Creek subbasin with a 16' x 30' concrete bridge. Fish access to approximately 7 miles of stream habitat was improved. In addition, approximately 28 cubic yards of perched fill was permanently removed.

Fish Passage and Sediment Abatement Site Conditions			
	2010	2011	2012
Current sediment delivery: High-Med-Low	Low	Low	Low
Current bridge condition.	Excellent	Excellent	Excellent
Current/approach condition.	Good	Excellent	Excellent
Armoring and fill condition.	Excellent	Excellent	Good
Erosion/scouring above project site?	None	None	No data – bridge surrounded by flood waters
Maintenance records/dates. Bridge observations. Goal Observations.	No maintenance is needed at this time. Project is currently meeting our goals.	No maintenance is needed at this time. Project is currently meeting our goals.	Some armoring missing from downstream side. Is meeting goals.

Fritz #2 Surrounded by flood waters 4-9-2012

Armoring damage

FRITZ BRIDGE #3

This sediment abatement project, Stream Crossing site #285, removed a two perched 20" x 20' steel pipes and replaced it with a concrete slab bridge 16'w x 30'. Fish access to approximately 5 miles stream habitat was improved. In addition, 15 cubic yards of perched fill was permanently removed.

Fish Passage and Sediment Abatement Site Conditions			
	2010	2011	2012
Current sediment delivery	Low	Low	Low
Current bridge condition.	Excellent	Excellent	Excellent
Current/approach condition.	Good	Good/Excellent	Excellent
Armoring and fill condition.	Excellent	Excellent	Fair/Good
Erosion/scouring above project site?	None	none	None - Corner bank where extra fill was added is in Excellent condition.
Maintenance records/dates. Bridge observations. Goal Observations.	No maintenance is needed at this time. Project is currently meeting our goals.	Site is currently meeting project goals	South side armoring could be reinforced. Site is currently meeting project goals.

Fritz #3 Armoring Damage. Looking South.

Fritz Bridge #3 is on the far side of this field. (Jan 19, 2012)
Severe flooding stresses bridges in this area, but the bridge held up well.

HANKINS BRIDGE #3

This fish passage and sediment abatement project, stream crossing site #283, removed a perched 24" x 20'corrugated metal pipe and replaced it with a 16'w x 30' concrete stringer bridge. Fish access to approximately 1 mile of stream habitat was improved. In addition approximately 178 cubic yards of perched filled was permanently removed to reduce chronic sediment inputs into this system.

Fish Passage and Sediment Abatement Site Conditions			
	2010	2011	2012
Current sediment delivery: High-Med-Low	Low	Low	Low
Current bridge condition.	Excellent	Excellent	Excellent
Current/approach condition.	Good	Excellent	Good
Armoring and fill condition.	Excellent	Excellent	Good – Some armoring missing
Erosion/scouring above project site?	Threat of erosion. Used erosion grass.	None	None
Maintenance records/dates. Bridge observations. Goal Observations.	Approach is a little rough. Project is meeting fish passage goals.	Gravel was added to improve approaches, and erosion control measures worked well. Project is meeting goals.	Excellent spawning gravel around the bridge. Project is meeting fish passage goals.

Hankins Bridge #3 2/23/2012