

# Tongass National Forest - Fishpasses

Many stream systems in Southeast Alaska offer excellent and extensive salmon habitat upstream of barrier falls. Some completely halt upstream migration, while others are passable to only to one or two species (notably sockeye and coho, the better jumpers), and often only under optimum flow conditions.

The Tongass has pursued opening this habitat to increase salmon production and currently employs the only full-time, fishpass structure specialist (certified blaster/fisheries biologist) in the Agency.

- There are 70 total modifications on 51 individual stream systems on the Tongass NF
- 490 stream miles have been made available for salmon production (nearly a 4% increase)
- 5,770 acres of lake habitat have been opened to salmon (a 3% increase)
- 49 of the 70 modifications occurred in the 1980's through the 1990's
- Hatchery Creek (2010) and Kanalku Creek (2013) are the most recent and were driven by Subsistence Issues



Lower Meter Bight Concrete Weirs, Wrangell RD



Kwatahein Aluminum Fishpass, Petersburg RD

## Production

- Coho and Sockeye counts and escapements indicate that the modifications annually produce nearly 87,000 fish, for a current commercial harvest value of over \$500,000 per year.
- Pink and Chum commercial harvests indicate an average annual production of at least 228,000 fish, a current average harvest value of nearly \$1 million.
- The total average annual harvest value figure of \$1.5 million of salmon produced from Tongass fishpasses comprises 3% of the 20-year average SE Alaska harvest value (\$59.9 million).



Troll caught coho salmon

## Costs - Past, Current, Future

- To date, about \$6 million in original construction costs are accountable to the fishpass modifications.
- Annual inspections and maintenance (spring cleanouts) cost about \$150,000 per year.
- Nearly all the structures are past their project life (normally 25 years).
- Upgrades and retrofits are a program priority if benefits are to be sustained into the future.



White Rock Creek blasted step-pools and weirs, Sitka RD

Tongass National Forest			Phases for Project Development:					
Fishpass construction/repair schedule - 2014-2019			P1 - Identification, Initial Scoping and Feasibility					
Last update: November 2014			P2 - Inventory and Field Reconnaissance					
			P3 - NEPA Documentation					
			P4 - Final Design (if needed)					
			P5 - Project Construction/Reconstruction					
			P6 - Monitoring and Maintenance					
Structure	District	Comments	FY14	FY15	FY16	FY17	FY18	FY19
Plcnic Creek (Lena Cove)	ANM/JRD	Road crossing to be removed; structure to be pulled as soon as FY15. Impeded passage plan	P4	P5	P6			
Greens Creek	ANM/JRD	Non-functional as of 2005; concrete and wood weir walls failed during winter flows and mining company looking to blast step-pools.		P5				
Davidson Creek	ANM/JRD	NEPA and collection agreement with DIPAC for new blasted step-pools on both sides of the channel proposed		P5	P6			
Kanalku	ANM/JRD	1st year post-blasting monitoring and assessment	P6					
N.F. Freshwater Creek	HRD	Field recon of full barrier	P1	P2	P3			
Bakewell	KRD/MFNM	Short term fix; fishpass is functioning. Need thorough 2015 cleanout and prep for repairs.		P5	P6			
Salt Creek	KRD/MFNM	Partial Barrier modification of falls approximately 1/4 mile upstream from salt water. NEPA underway associated with Saddle Lakes.	P2	P3	P4	P5	P6	
Sunny Creek	CRD	2nd year post-diversion wall construction monitoring and assessment	P6					
Lower Portage	PRD	Upper section of stem-wall is broken. Will repair loose concrete pillar located in first section near inlet of fishpass	P5					
Slippery Creek	PRD	Sediment fills exit and can render facility useless, unless thoroughly cleaned every spring. Move or extend exit.		P5				
Duncan	PRD	Crack in concrete diversion wall, three cross braces missing; will replace all including one 12-15 hole aluminum plate			P5	P6		
Mitchell	PRD	Multiple cracks; will repair broken concrete ear between weirs, crack in concrete, and replace all yellow cedar boards			P5	P6		
Irish (Lower Keku)	PRD	Debris plugs structure annually; Modify debris fence to increase effectiveness and reduce maintenance			P5	P6		
Corner Creek (2 passes)	SRD	Maintenance items				P3/P4	P5	P6
Lava Falls Creek	SRD	Minor additional work needed - turning pool consistently full of sediment				P3/P4	P5	P6
North Meter Bight	WRD	August 2014 - Steeppass section needs cross tie replacements and fasteners in section gussets; consider round-head bolts with head on inside to attempt reducing shearing of bolt heads; need more cross-ties on downstream section to attempt to reduce deformation (bowing) from broadside pounding.			P4	P5	P6	
Snowpass Creek	WRD	A second phase to modify a second partial barrier downstream still needs to be implemented to realize full unimpeded access to river					P4	P5
Slow Flow Lake	YRD	Blasted moraine needs further evaluation		P2	P3/4		P5	
Itallo	YRD	Jump pools blasted in 1985 and further work are not effectively passing sockeye at low flows; new pools or route needed. Additional assessment necessary.			P3/P4	P5	P6	

