

Large Wood Stream Restoration Using Hand Methods

Katherine (K.K.) Prussian, USFS

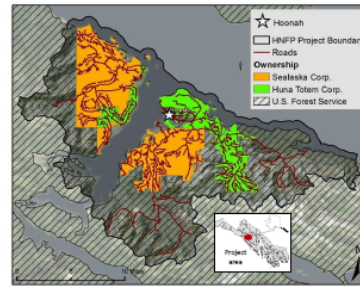
Neil Stichert, USFS (formerly USFWS)

Ian Johnson, Hoonah Indian Association

Why Spasski?

- Hoonah Native Forest Partnership
 - High Value
 - High Risk
- Tongass Priority Watershed
- USFWS Tribal Wildlife Grant
- NFHP Waters to Watch

Land ○ Jobs ○ Wildlife ○ Forests ○ Community ○ Partnerships ○ Economy ○ Fish ○ Deer ○ Culture ○ Water



All Lands



Objectives

- Assess natural resource conditions.
- Create a land management plan guided by community values and agreed to by primary landowners.
- Develop a local workforce that is skilled in assessment and project implementation.
- Support local economic development through sustainable management.

Hoonah Native Forest Partnership

The HNFP began in 2015 as a science-based, landscape scale, community forest approach to watershed planning and project implementation. Major landowners and stakeholders entered into an agreement outlining the commitments, roles, and responsibilities of each party. With support from the USDA Natural Resources Conservation Service, HNFP secured startup funding from the Regional Conservation Partnership Program. Matching financial and in-kind contributions from the partners, and technical support from HNFP members and collaborators make this project southeast Alaska's premier all-lands, all-hands initiative.

Field work began in 2015 will continue through 2018. Data were collected to assess fisheries, road condition, timber stands, hydrology, deer, berries, and road access.

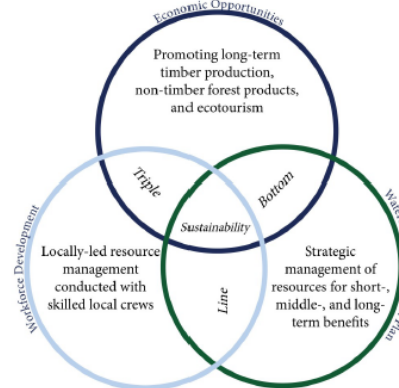


All Hands



Accomplishments

- 145 forest and 300 understory vegetation plots
 - 4 community meetings
- 65 household subsistence use surveys
 - 8 blueberry enhancement plots
- 350 stream crossings inspected for fish passage
 - 5 miles stream condition surveys
 - 60 stream morphology surveys
 - 1/2 mile stream habitat restoration

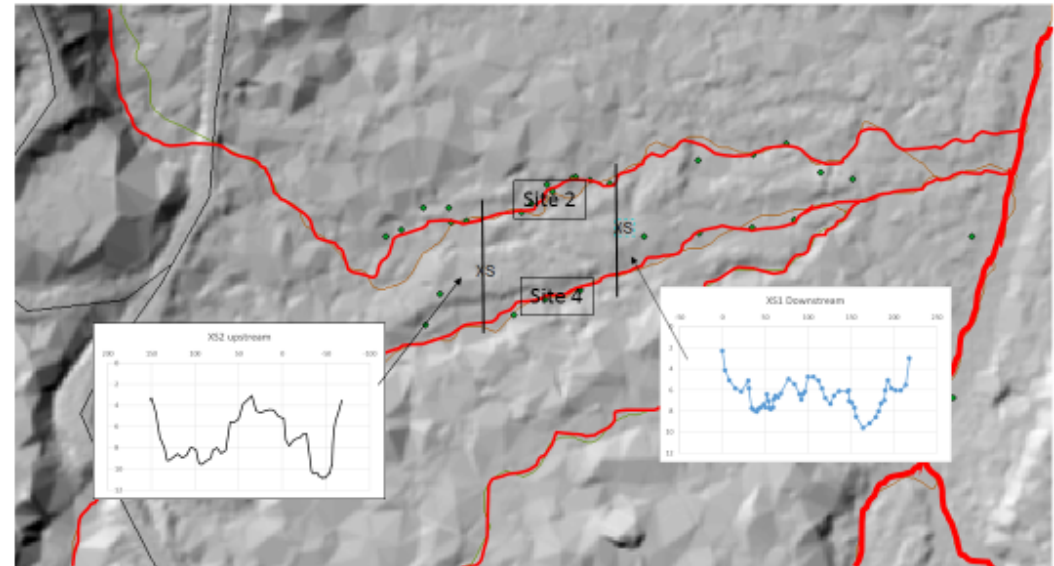
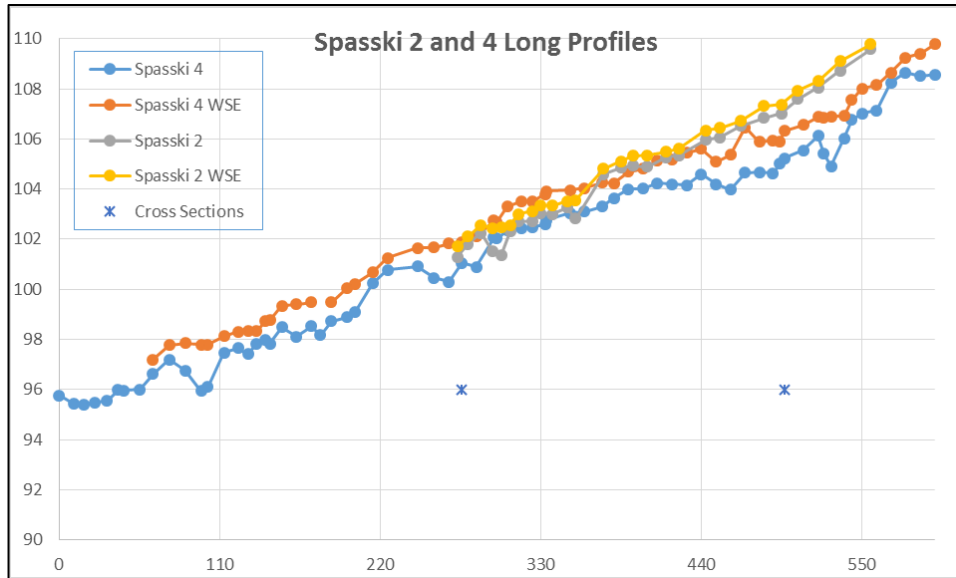


Assessment

- Proper function condition assessments
 - Qualitative
- Tier II Surveys compared to R10 Habitat Variables
 - Quantitative



Survey and Design

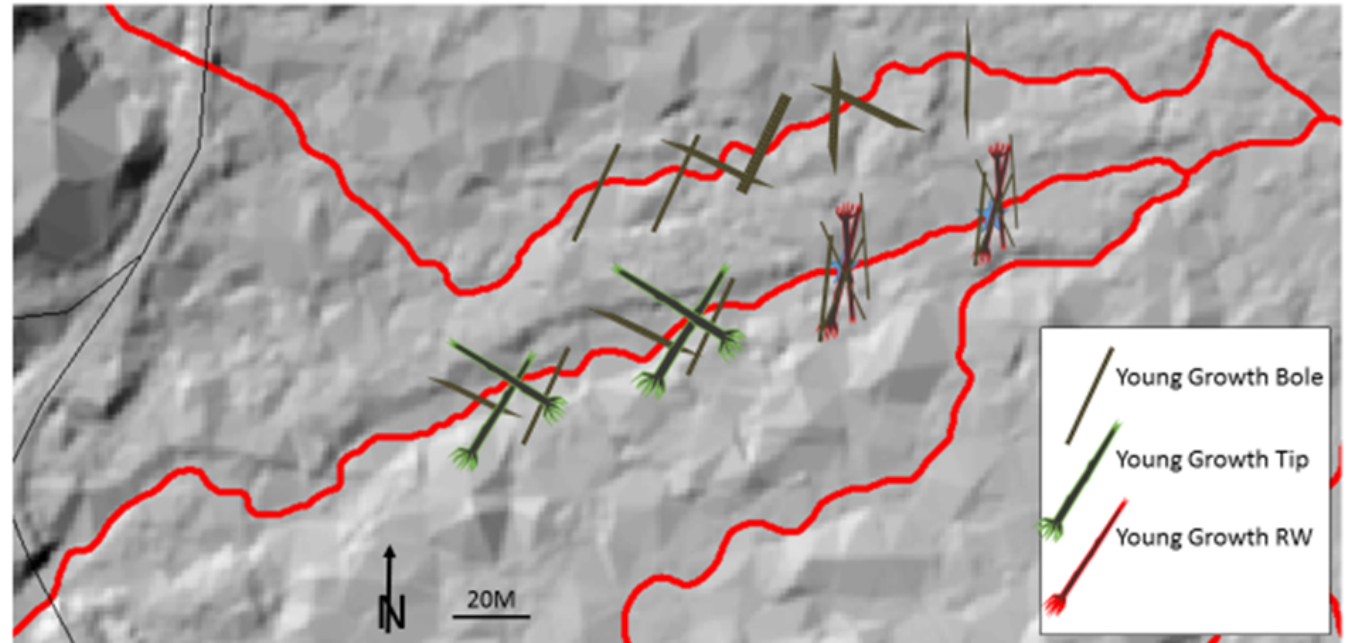


Survey and Design

| Reach | Basin Area (km ²) | Jam Spacing (m) | | Jam Size | |
|-------|-------------------------------|-----------------|-------|----------|---------|
| | | mean | CI | mean | CI |
| 2 | 1 | 3 | 2-4 | 0.8 | 0.7-1.0 |
| 4 | 10 | 33 | 21-44 | 8 | 7-10 |

| | Reach 2 | Reach 4 | MartinBenda | TuckerCaouete |
|-------|---------|---------|-------------|---------------|
| LWD | 66 | 80 | 30 | 66 |
| KWD | 14 | 13 | | 30 |
| Pools | 4 | 4 | | 8 |
| Jams | | 2 | 3.6 | |

| Type | Diameter (range) | Length (min) | Number |
|--------|------------------|--------------|--------|
| Bole | 10" | 25' | 19 |
| Tipped | 12" | 25' | 8 |
| | | | |



Plan and Materials

| Task | Timeframe | Lead |
|---|-----------------|-------------|
| Complete design and project plan | Winter 2019 | Ian/KK |
| Complete ADFG and COE permitting | Spring 2019 | Ian/Neil |
| Develop outreach plan (construction cams, go-pros, etc) | May 2019 | Ian |
| Pre-project walkthrough with stakeholders and crew | Early June | Ian/KK/Neil |
| Trail clearing/ wood sourcing and staging | Mid-June | Conor |
| Confirm vehicles and bunkhouse space | Mid-June | Ian/Marlene |
| Instream work Sites 2 and 4 | June 24-28 2019 | Ian/KK/Neil |
| Instream work Site 1 | July 1-5 2019 | Ian/Neil |
| Survey as-built, establish photo monitoring points | August 2019 | Ian/Marlene |

Hand Placed LW Equipment List

| Item | Number | Cost | Total |
|---|--------------|----------|------------------|
| Chainsaw* | 2 | tbd | |
| Chainsaw PPE | 2 | tbd | |
| Chainsaw parts and accessories | | tbd | |
| Ear Protection, gloves, hardhats | Everyone | tbd | |
| Lewis Chainsaw Winch (LCW) | 1 | 900.00 | 900.00 |
| LCW extra cable (150') | 2 | 70.00 | 140.00 |
| Saw Powerhead for LCW (we use Stihl 441) | 1 | 900.00 | 900.00 |
| Retainer Pin (Drum Shaft) New Style for LCW | 2 | 5.00 | 10.00 |
| hardened Dowel Pin for LCW Clutch | 2 | 7.00 | 14.00 |
| BIO Bar Oil for LCW | 2 | tbd | |
| come along hand puller/winch | 1 | 40.00 | 40.00 |
| Chokers w/ eye | 5 | 20.00 | 100.00 |
| Large Shackles (to fit Swing Side Snatch Block and LCW) | 3 | 20.00 | 60.00 |
| Swing Side 4" Snatch Block | 2 | 65.00 | 130.00 |
| 4.5 Ton Snatch Block | 1 | 100.00 | 100.00 |
| Peavey | 2 | 109.99 | 219.98 |
| Gas / Bar oil | enough | tbd | |
| First Aid Kit - Crew size | 1 | tbd | |
| Griphoist TU-28 w/100' wire rope | 1 | 1,995.00 | 1,995.00 |
| Shear Pins for Griphoist TU-28 | 1 | 41.60 | 41.60 |
| Griphoist Replacement Handle | 1 | 147.00 | 147.00 |
| Campbell Drop Side Snatch Block | 3 | 245.55 | 736.65 |
| Tractel - 30 FT 7/16" WIRE ROPE WITH HOOK | 1 | 272.62 | 272.62 |
| Griphoist Wire Rope Reel | 1 | 31.50 | 31.50 |
| Griphoist Wire Rope Reel | 1 | 37.31 | 37.31 |
| Lubriplate | 5 | 6.63 | 33.15 |
| Eye & Eye Nylon Web Sling (Webmaster 1600) | 1 | 28.36 | 28.36 |
| Eye & Eye Nylon Web Sling (Webmaster 1600) | 2 | 28.74 | 57.48 |
| Eye & Eye Nylon Web Sling (Webmaster 1600) | 1 | 32.93 | 32.93 |
| Eye & Eye Nylon Web Sling (Webmaster 1600) | 2 | 18.00 | 36.00 |
| Snow & Nealley "Our Best" Pulaski | 4 | 89.00 | 356.00 |
| Round Point Shovel | 2 | 40.65 | 81.30 |
| Round Point Shovel | 2 | 61.86 | 123.72 |
| | TOTAL | | \$6,624.6 |

Implementation



Implementation









Video by Ian Johnson
Hoonah Indian Association