

# TEANAWAY COMMUNITY FOREST RESTORATION & MANAGEMENT



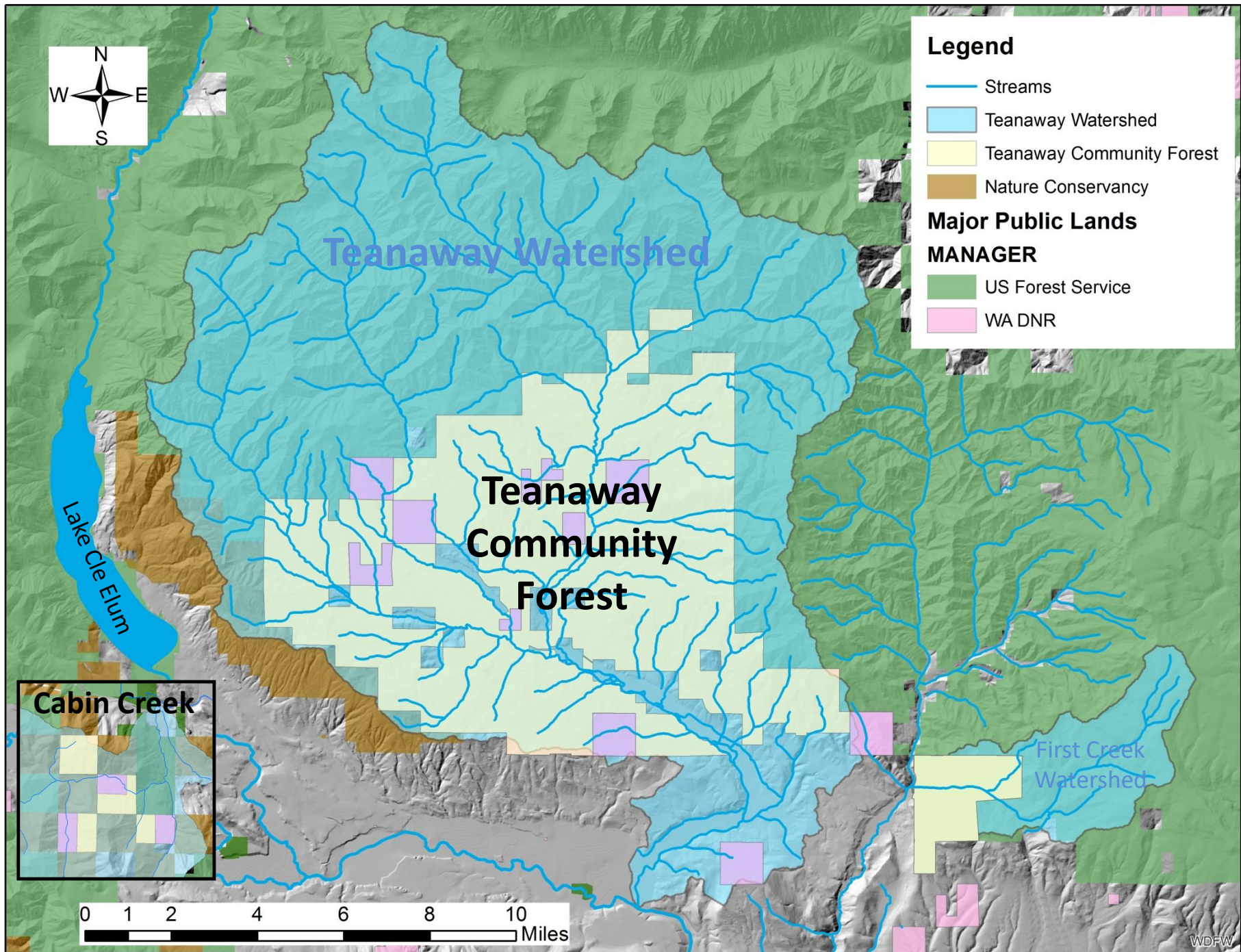
Yakima Basin Science and  
Management Conference  
June 13th, 2018



Scott Nicolai  
Ryan DeKnicker



William Meyer, WDFW YBIP



# Partnerships



Public & Teenaway Advisory Committee

# Teanaway Accomplishments

June 2018 update:

## Goal 1: Water

- Treated 80 acres of floodplain with large wood
- Monitoring groundwater response
- Reduced 135 tons/year of fine sediment entrainment



## Goal 2: Working Lands

- Constructed ~10+ miles of livestock fencing (2017/2018)
- 152 acres shaded fuel break
- 280 acres pre-commercial thinning



## Goal 3: Recreation

- Recreation Planning complete September 2018
- DNR Funding for Campground improvements



## Goal 4: Fish & Wildlife

- Removed 9 fish passage barriers, opening ~5.4 miles habitat
- Restored ~5.7 stream miles in 5 Tributary streams
- NFT Geomorphic Assessment 50% complete



## Goal 5: Community Partnerships

# Goal 1: Water



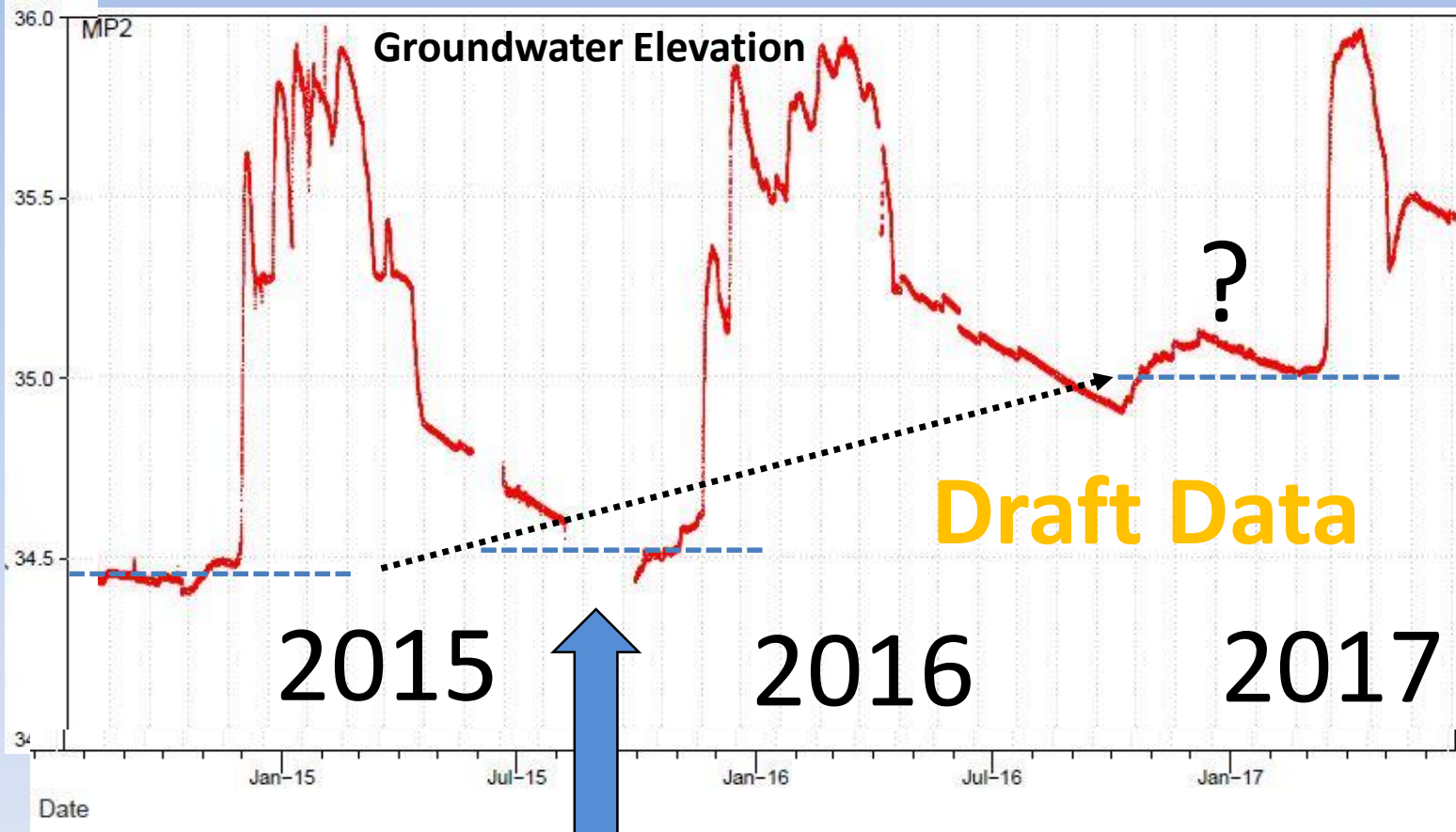


2015-2017  
Treated ~80 acres

2018  
Treat ~70 acres

# Indian Creek Groundwater Monitoring

*\*Preliminary Results:*



Large Wood Replenishment begins

# Fine Sediment Treatment



Reduced 135 tons/year  
of fine sediment  
(55% of total)



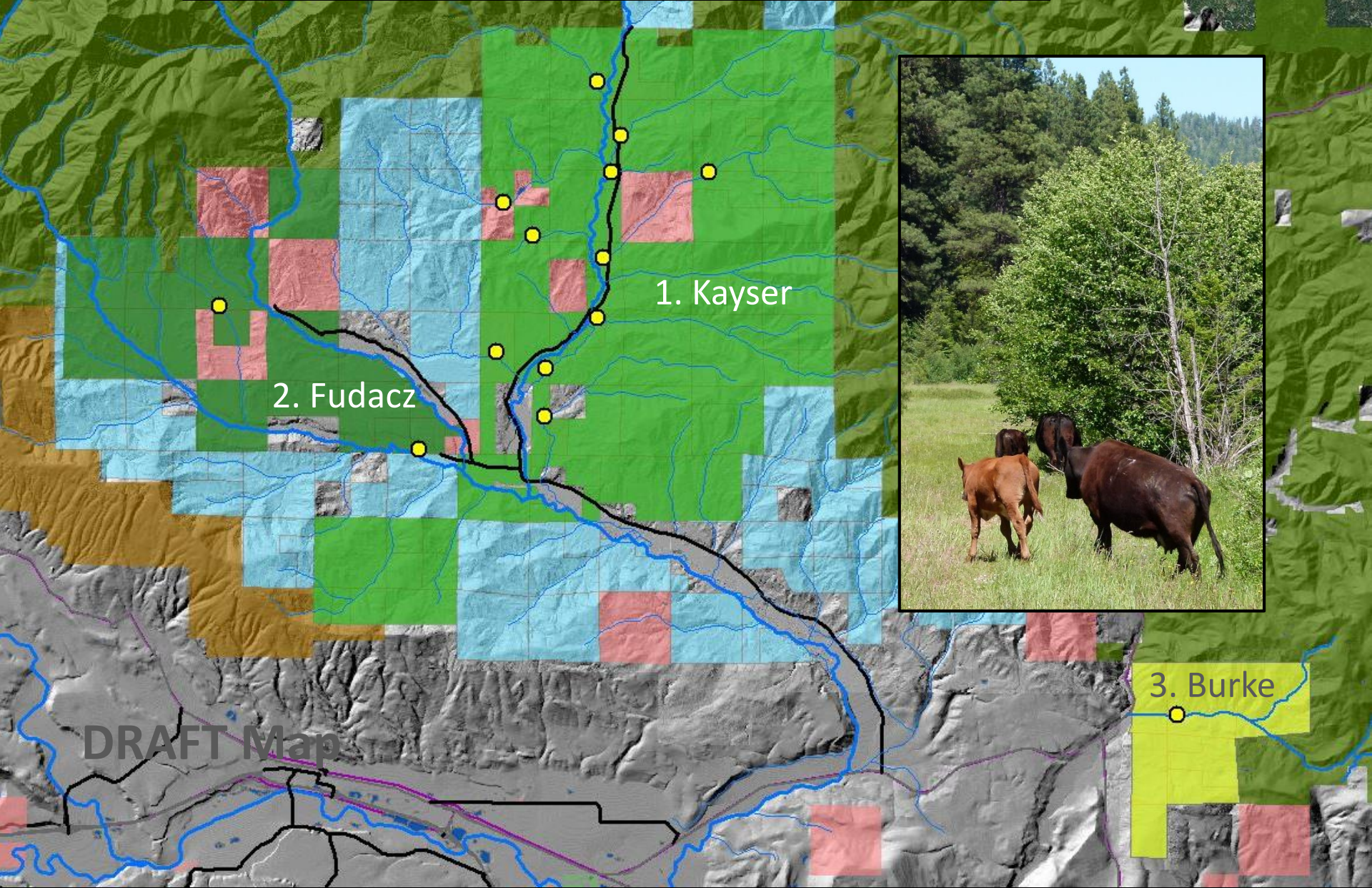


# Goal 2: Working Lands



NF Teanaway

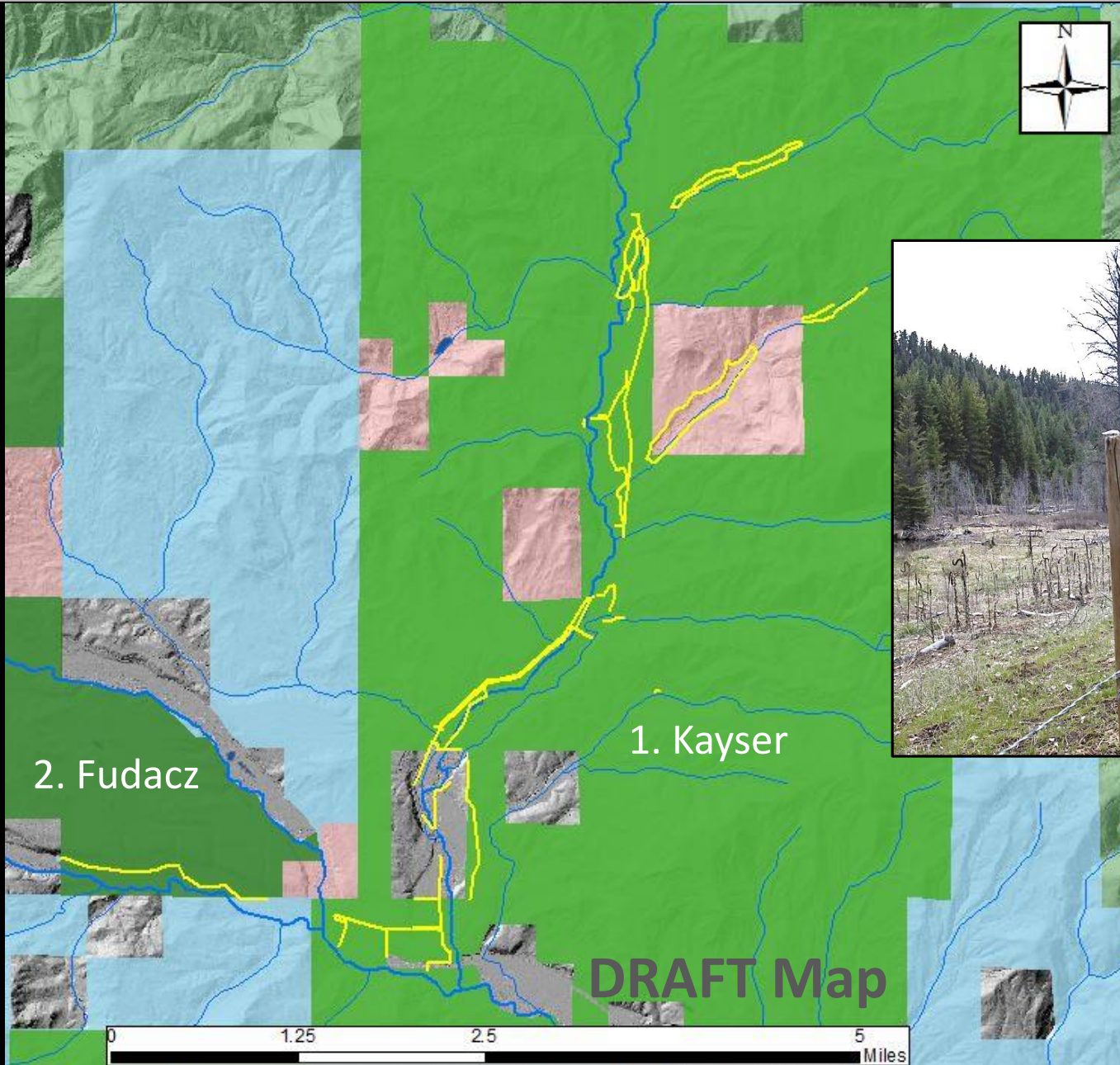
# Working Lands: Grazing - 3 Leases



3. Burke

DRAFT Map

# Floodplain fencing: ~7+ miles of fence constructed



Note: all phases of fencing shown



# TCF Monitoring Results 2017

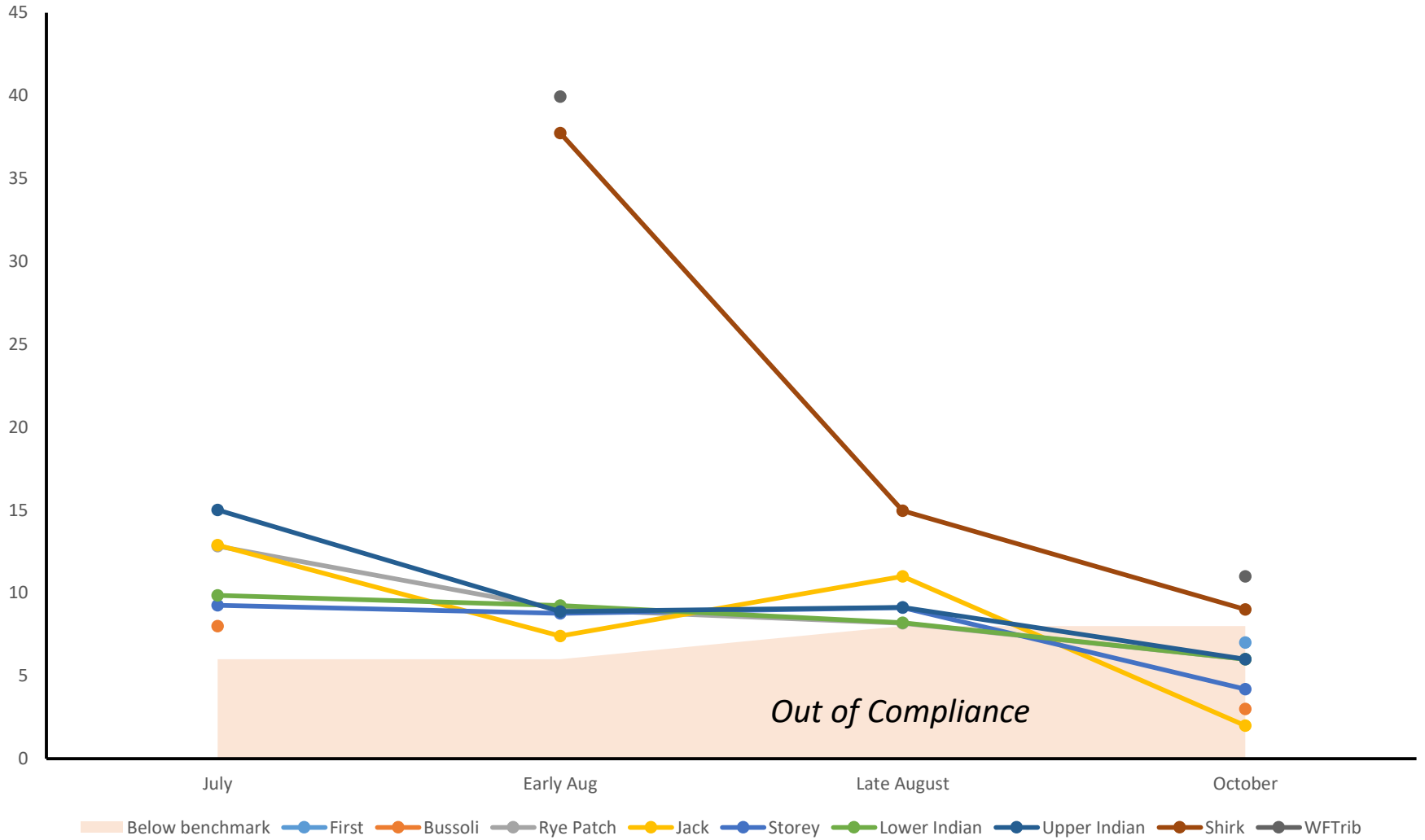
Riparian monitoring point – Shirk Cr.



Upland monitoring point – Storey Cr.



# Seasonal riparian grass stubble heights



# Compliance

## Targets

- Year 1: 75% compliance
- Year 2: 90% compliance
- Year 3: 100% compliance

# Jolly Mountain Fire 2017

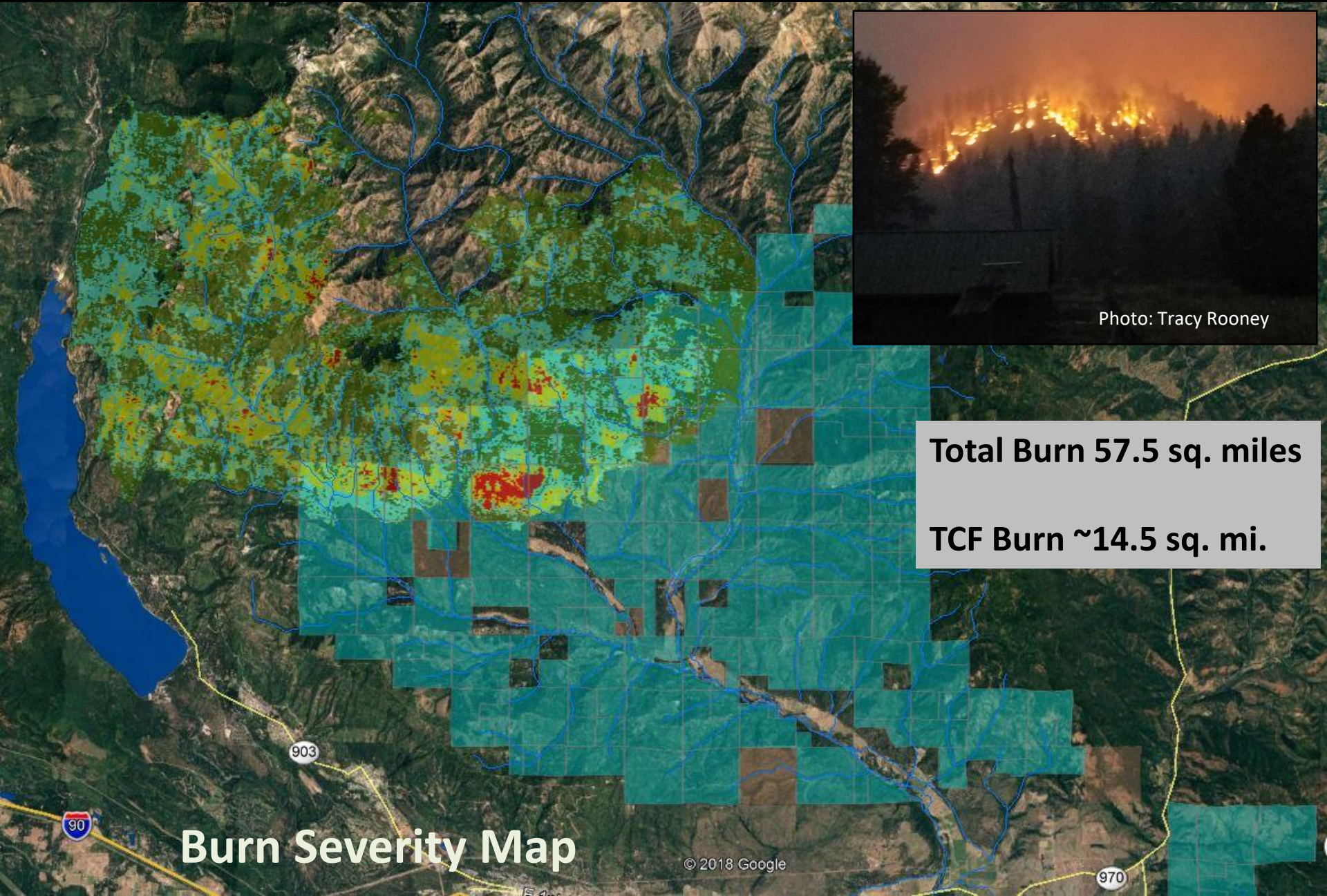


Photo: Tracy Rooney

**Total Burn 57.5 sq. miles**  
**TCF Burn ~14.5 sq. mi.**

**Burn Severity Map**



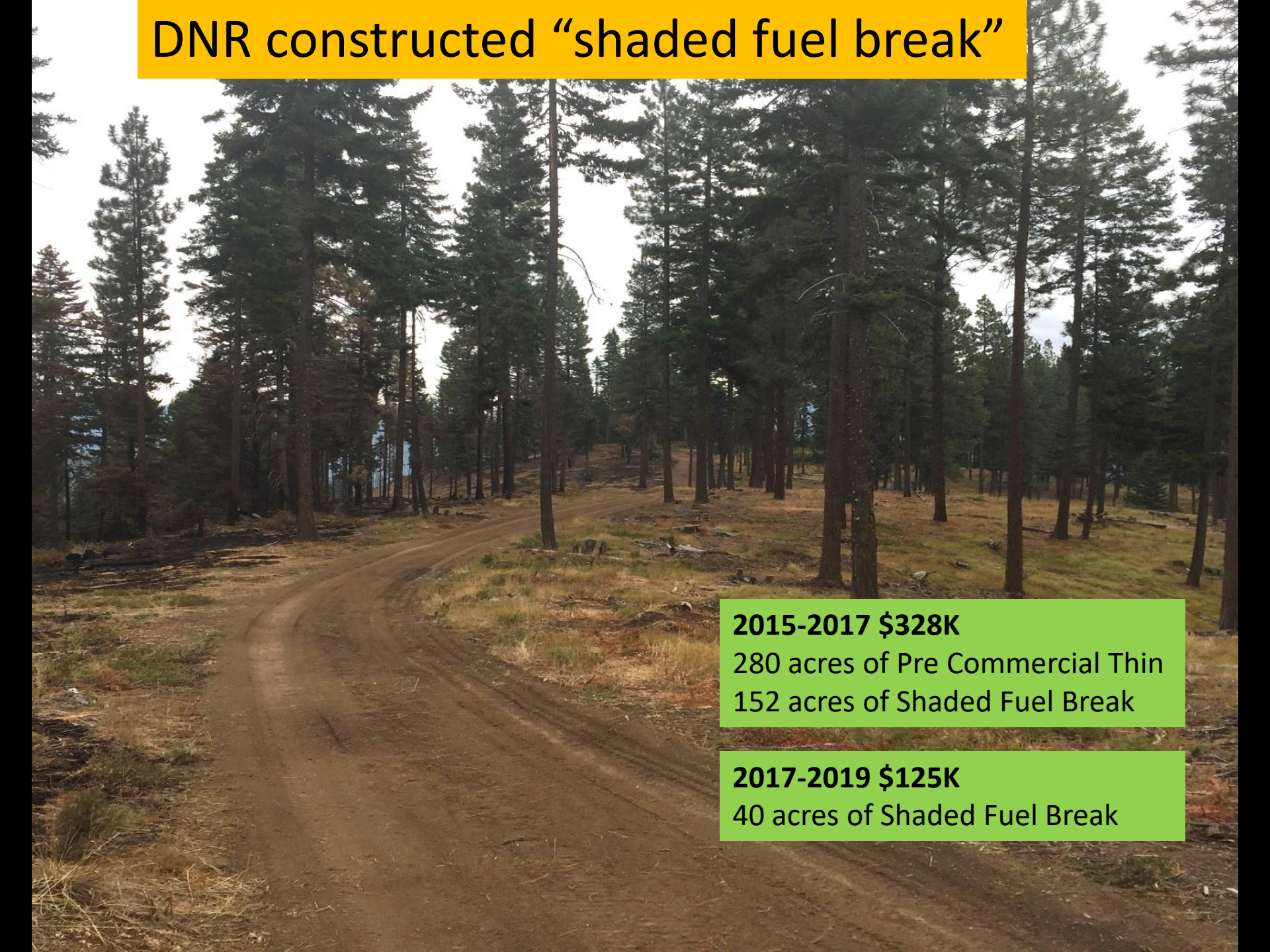




DNR constructed a Fire Break upper Lick Creek



# DNR constructed “shaded fuel break”



**2015-2017 \$328K**

280 acres of Pre Commercial Thin  
152 acres of Shaded Fuel Break

**2017-2019 \$125K**

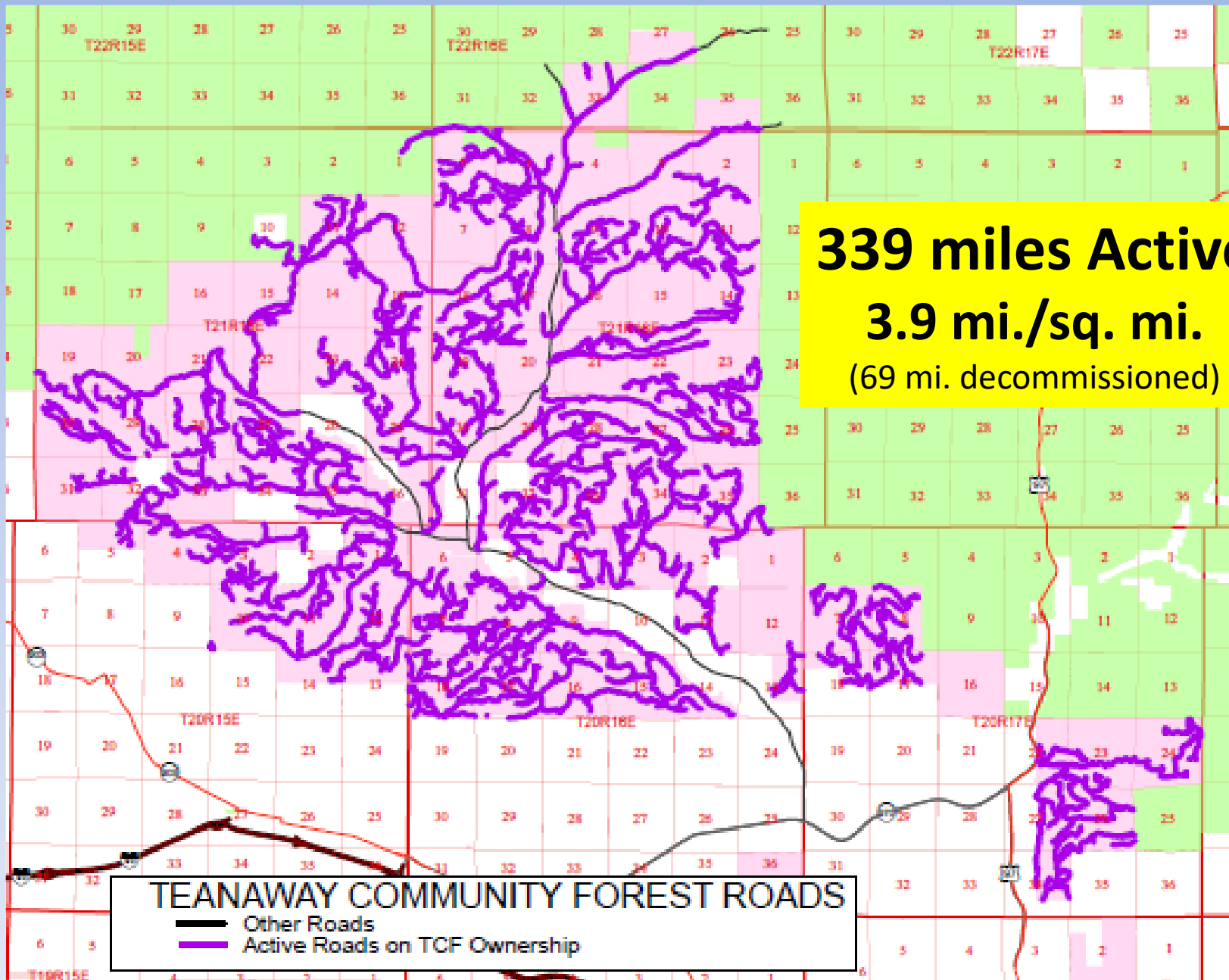
40 acres of Shaded Fuel Break

# TCF ROADS CURRENTLY ACTIVE

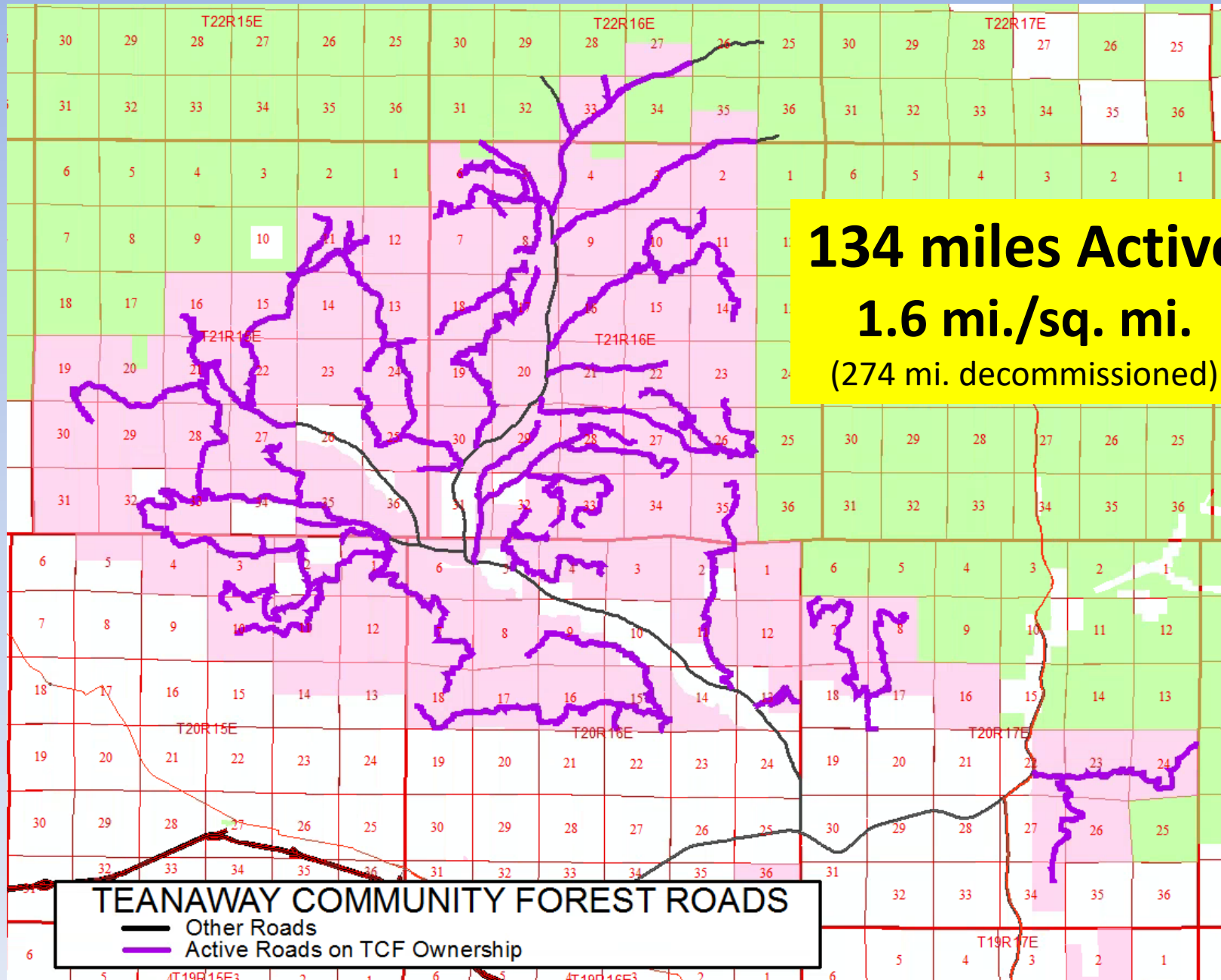
**339 miles Active**  
**3.9 mi./sq. mi.**  
(69 mi. decommissioned)

## TEANAWAY COMMUNITY FOREST ROADS

- Other Roads
- Active Roads on TCF Ownership



# TCF ROADS PROPOSED TO BE ACTIVE



# Goal 3: Recreation



**Recreation Planning complete September 2018**  
**Campground improvements**

# Goal 4: Fish & Wildlife



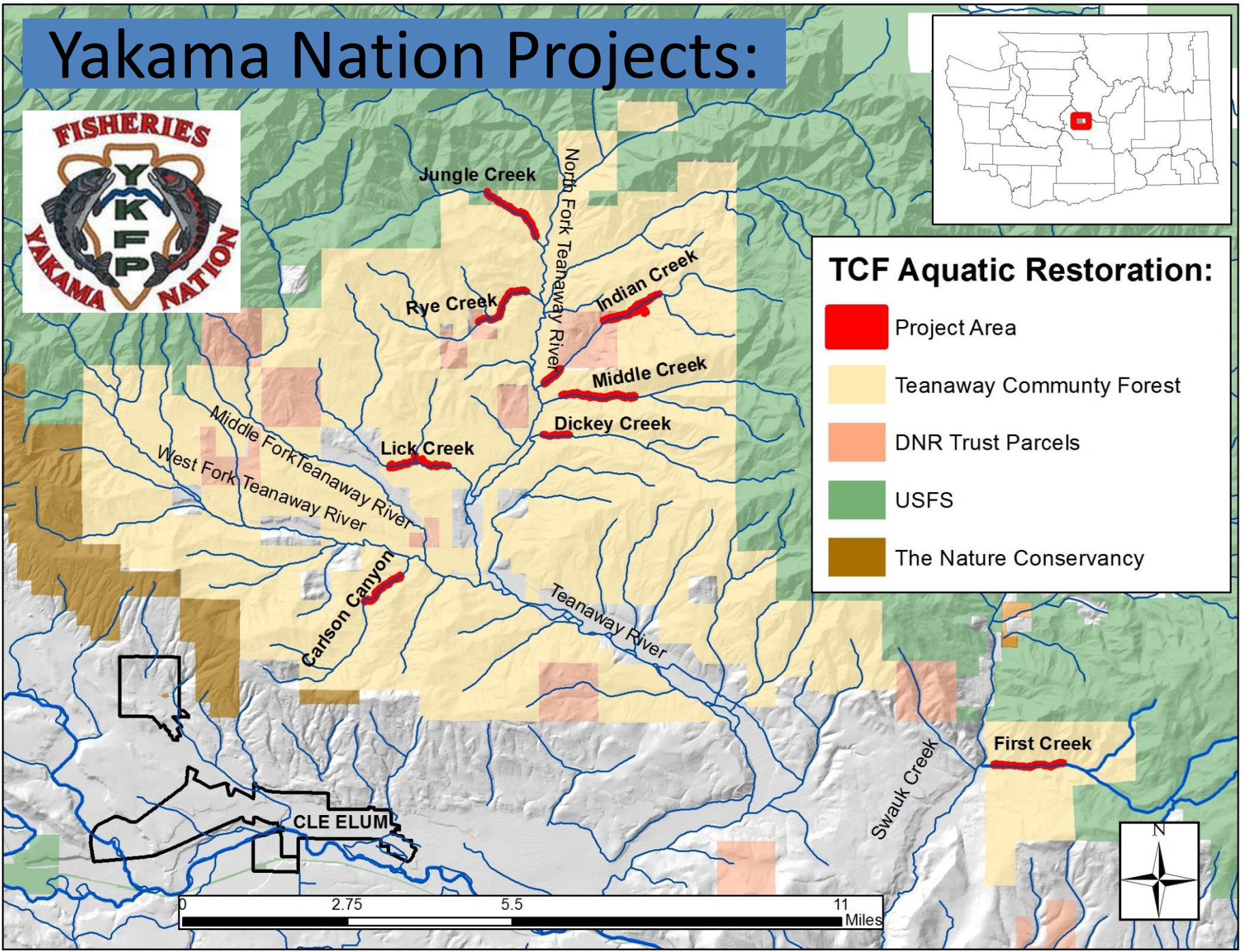


# Yakama Nation Projects:



## TCF Aquatic Restoration:

-  Project Area
-  Teanaway Community Forest
-  DNR Trust Parcels
-  USFS
-  The Nature Conservancy



INDIAN CREEK



07/02/2003

PHOTO BY: JIM MATHEWS

INDIAN CREEK



04/30/2008

PHOTO BY: JIM MATHEWS

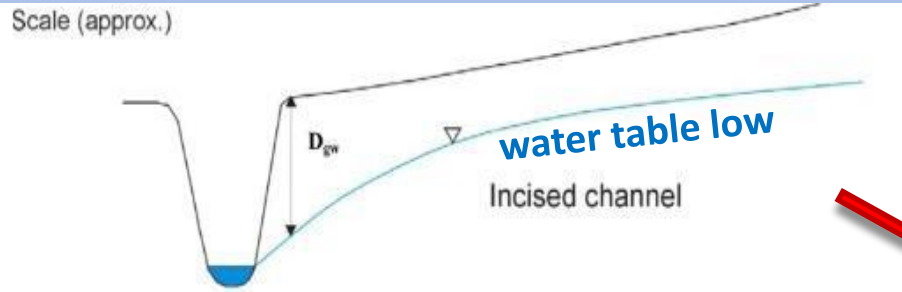
INDIAN CREEK



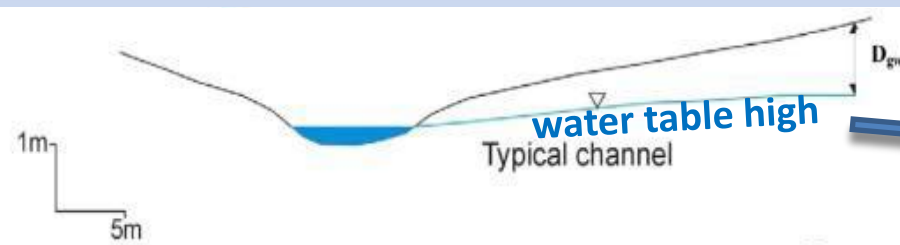
04/11/2013

PHOTO BY: JIM MATHEWS

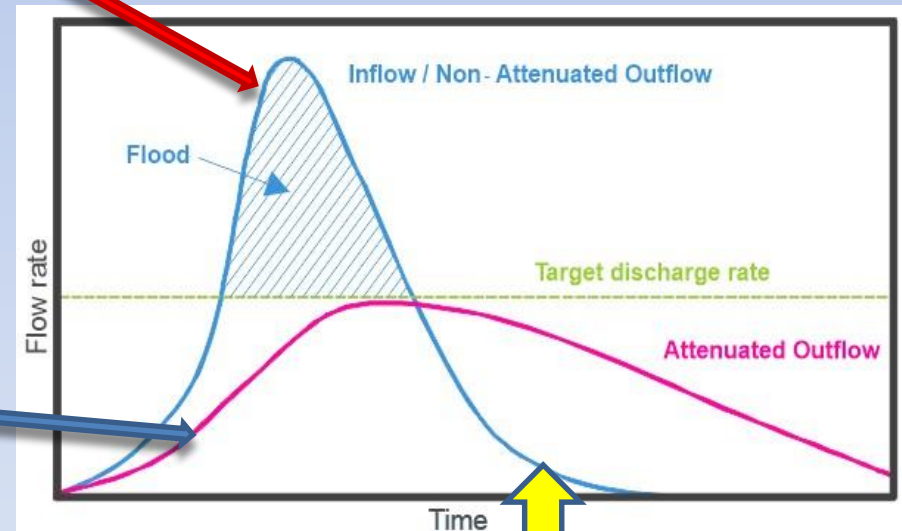
# Incised Streams & Hydrograph



Incised Stream



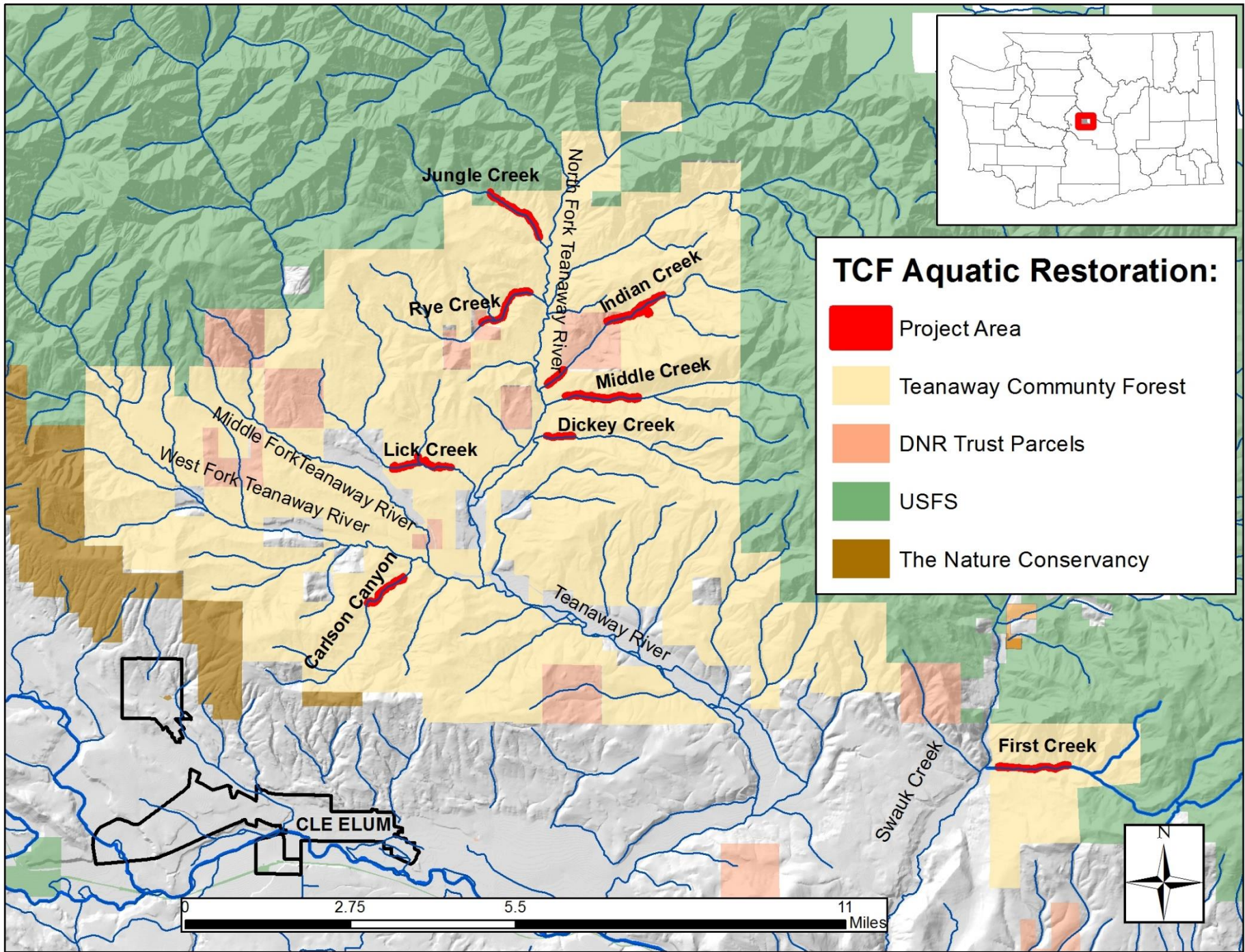
Un-Incised Stream

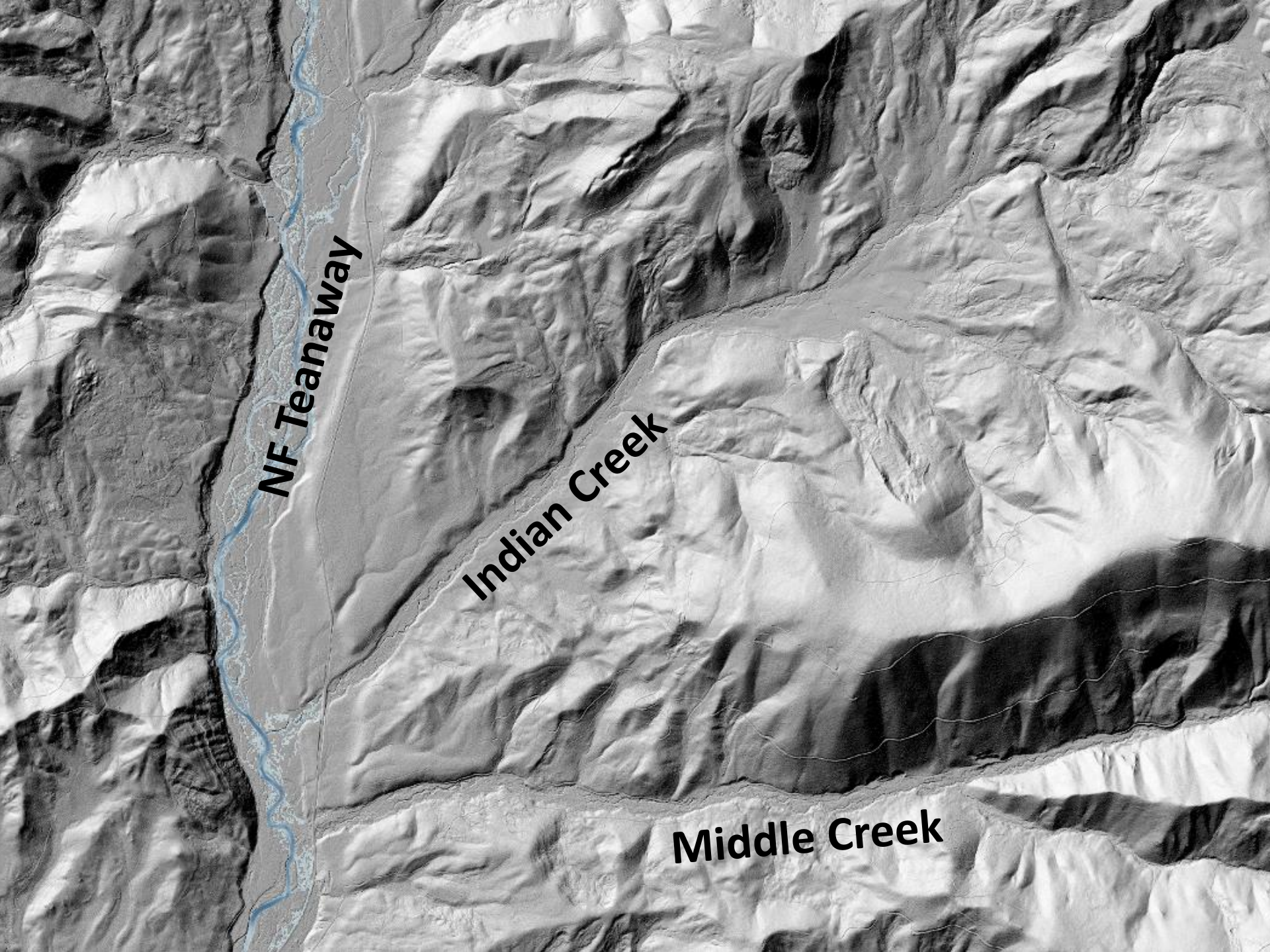


Summer

2015 Work:  
Indian Creek







**NF Teanaway**

**Indian Creek**

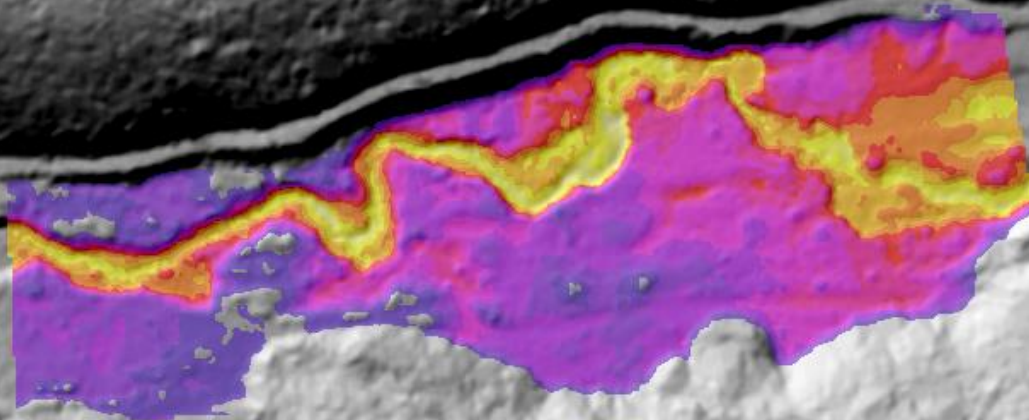
**Middle Creek**



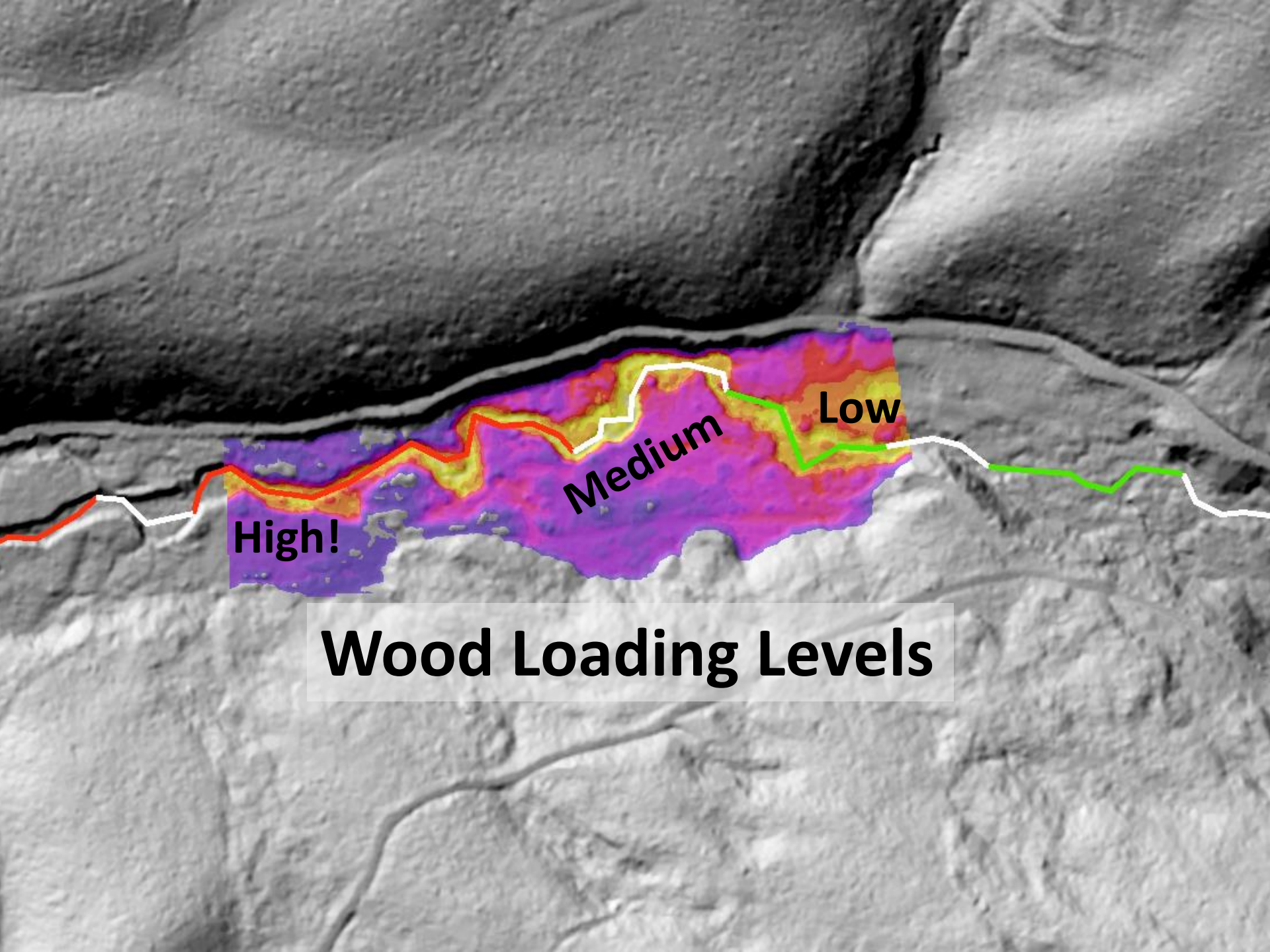


**LiDAR hillshade**

2617.899902



**Relative Elevation Model**



**High!**

**Medium**

**Low**

**Wood Loading Levels**

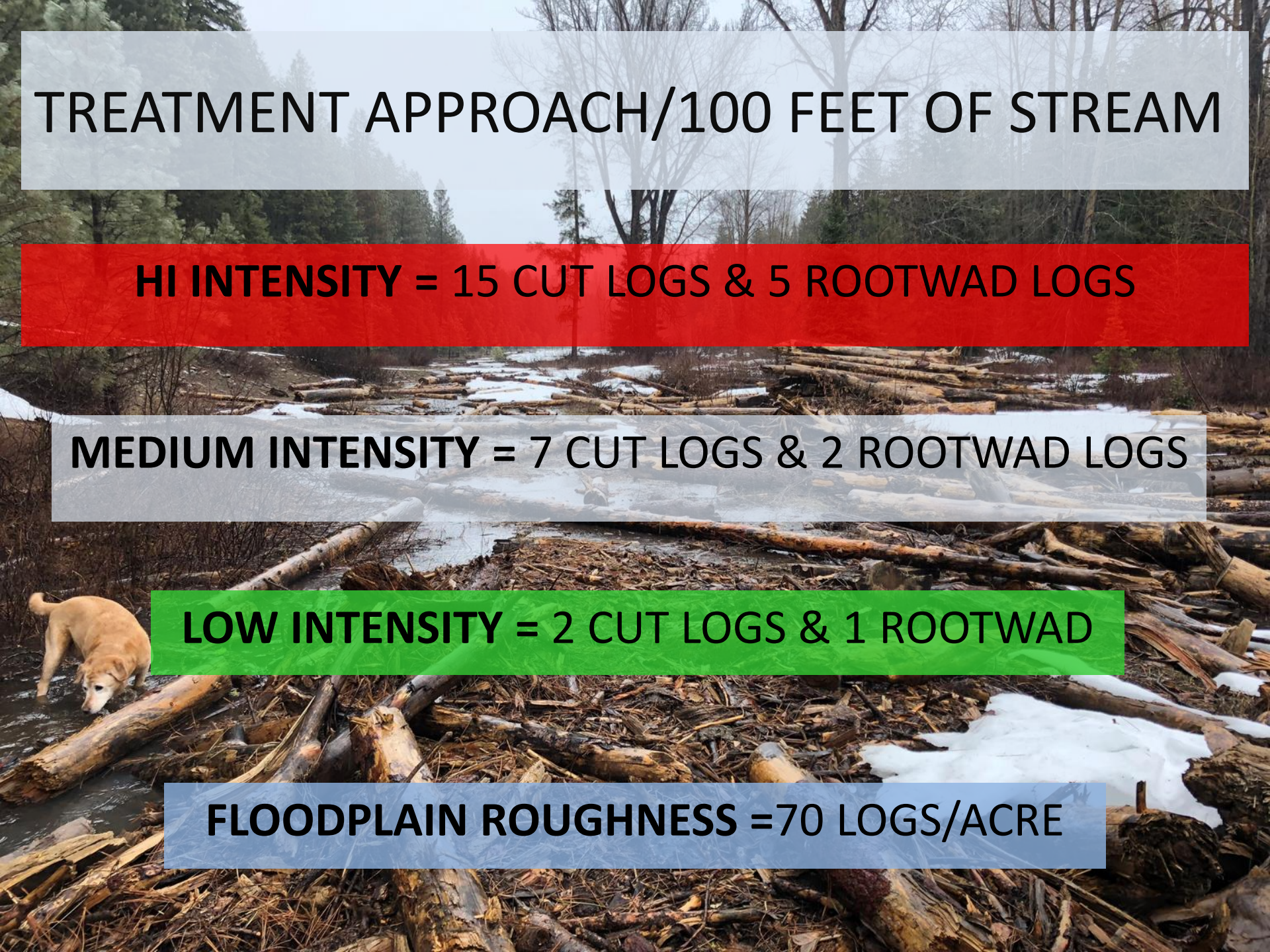
# TREATMENT APPROACH/100 FEET OF STREAM

**HI INTENSITY = 15 CUT LOGS & 5 ROOTWAD LOGS**

**MEDIUM INTENSITY = 7 CUT LOGS & 2 ROOTWAD LOGS**

**LOW INTENSITY = 2 CUT LOGS & 1 ROOTWAD**

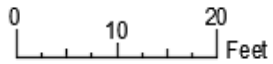
**FLOODPLAIN ROUGHNESS = 70 LOGS/ACRE**



# TREATMENT APPROACH











15.28 FEET



PLAN TYPE 2 "CATCHER'S MITT" LOG JAM CONCEPT  
TEANAWAY COMMUNITY FOREST  
AQUATIC RESTORATION

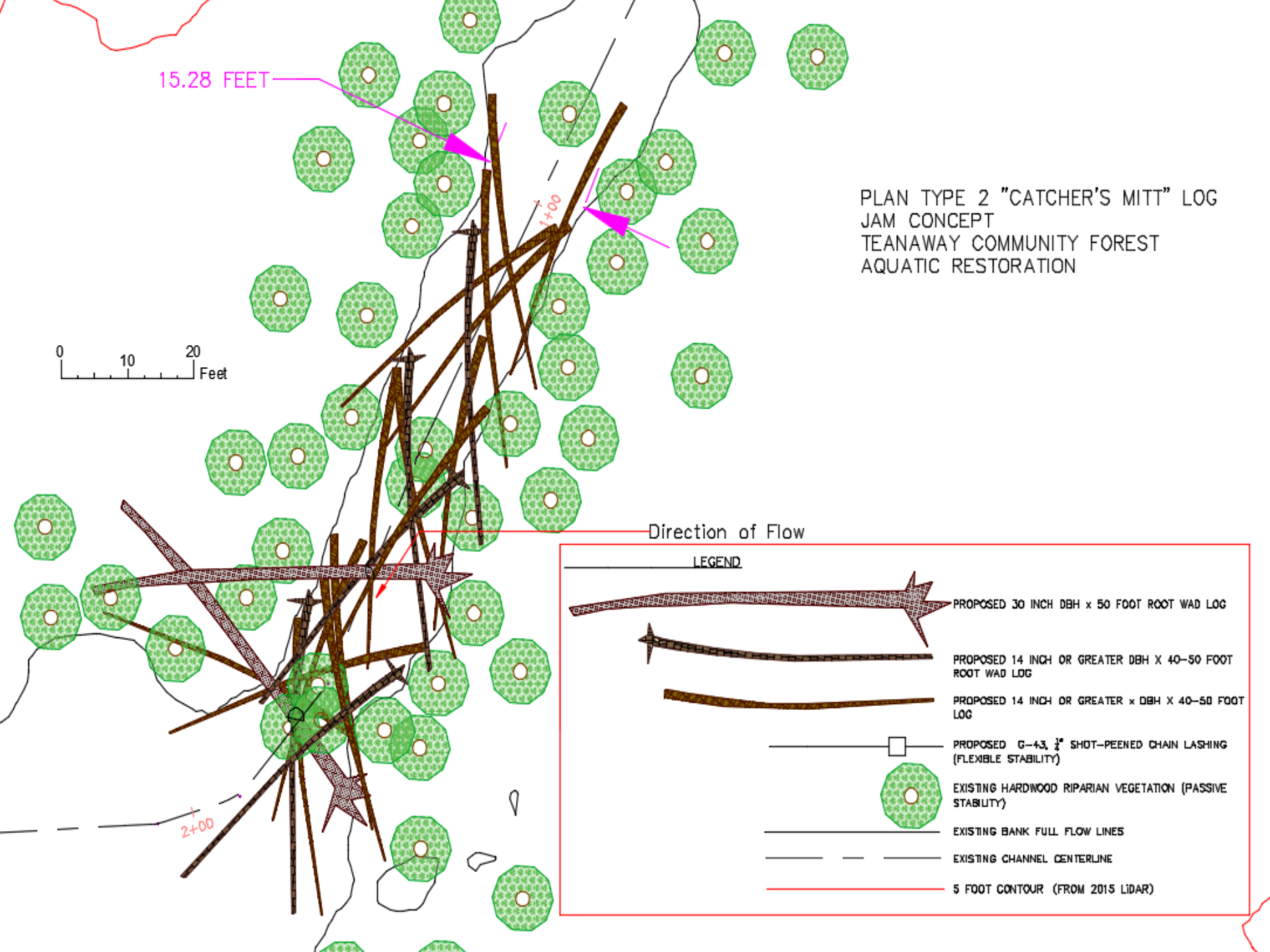
Direction of Flow

**LEGEND**

-  PROPOSED 30 INCH DBH x 50 FOOT ROOT WAD LOG
-  PROPOSED 14 INCH OR GREATER DBH x 40-50 FOOT ROOT WAD LOG
-  PROPOSED 14 INCH OR GREATER x DBH x 40-50 FOOT LOG
-  PROPOSED G-43, 3/8" SHOT-PEENED CHAIN LASHING (FLEXIBLE STABILITY)
-  EXISTING HARDWOOD RIPARIAN VEGETATION (PASSIVE STABILITY)
-  EXISTING BANK FULL FLOW LINES
-  EXISTING CHANNEL CENTERLINE
-  5 FOOT CONTOUR (FROM 2015 LIDAR)

2+00

1+00

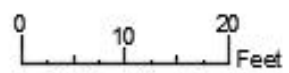


15.28 FEET

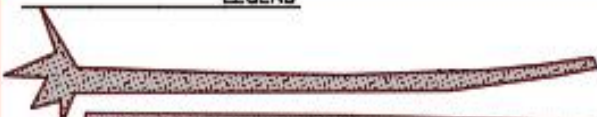


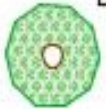



### PLAN TYPE 1 "CATCHER'S MITT" LOG JAM CONCEPT TEANAWAY COMMUNITY FOREST AQUATIC RESTORATION

ROOT WAD LOG  
BALLAST  
(PASSIVE STABILITY)

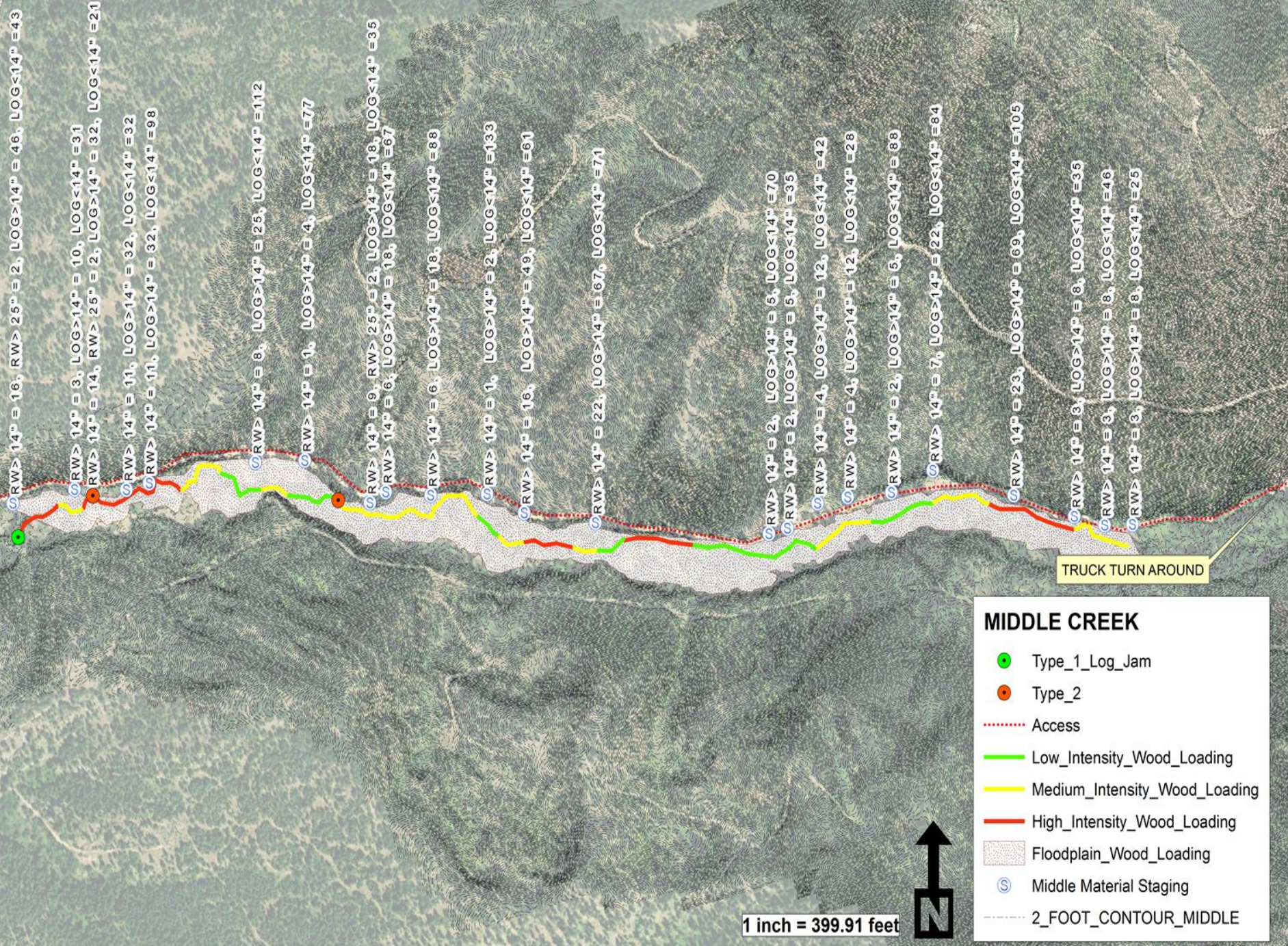
Direction of Flow



**LEGEND**

-  PROPOSED 30 INCH DBH x 50 FOOT ROOT WAD LOG
-  PROPOSED 24 INCH DBH x 80 FOOT LOG
-  PROPOSED G-43, 1/2" SHOT-PEENED CHAIN LASHING (FLEXIBLE STABILITY)
-  EXISTING HARDWOOD RIPARIAN VEGETATION (PASSIVE STABILITY)
-  EXISTING BANK FULL FLOW LINES
-  EXISTING CHANNEL CENTERLINE
-  6 FOOT CONTOUR (FROM 2015 LIDAR)

2+00



ØRW> 14" = 16, RW> 25" = 2, LOG>14" = 46, LOG<14" = 43

ØRW> 14" = 3, LOG>14" = 10, LOG<14" = 31

ØRW> 14" = 14, RW> 25" = 2, LOG>14" = 32, LOG<14" = 21

ØRW> 14" = 11, LOG>14" = 32, LOG<14" = 32

ØRW> 14" = 11, LOG>14" = 32, LOG<14" = 98

ØRW> 14" = 8, LOG>14" = 25, LOG<14" = 112

ØRW> 14" = 1, LOG>14" = 4, LOG<14" = 77

ØRW> 14" = 9, RW> 25" = 2, LOG>14" = 18, LOG<14" = 35

ØRW> 14" = 6, LOG>14" = 18, LOG<14" = 67

ØRW> 14" = 6, LOG>14" = 18, LOG<14" = 88

ØRW> 14" = 1, LOG>14" = 2, LOG<14" = 133

ØRW> 14" = 16, LOG>14" = 49, LOG<14" = 61

ØRW> 14" = 22, LOG>14" = 67, LOG<14" = 71

ØRW> 14" = 2, LOG>14" = 5, LOG<14" = 70

ØRW> 14" = 2, LOG>14" = 5, LOG<14" = 35

ØRW> 14" = 4, LOG>14" = 12, LOG<14" = 42

ØRW> 14" = 4, LOG>14" = 12, LOG<14" = 28

ØRW> 14" = 2, LOG>14" = 5, LOG<14" = 88

ØRW> 14" = 7, LOG>14" = 22, LOG<14" = 84

ØRW> 14" = 23, LOG>14" = 69, LOG<14" = 105

ØRW> 14" = 3, LOG>14" = 8, LOG<14" = 35

ØRW> 14" = 3, LOG>14" = 8, LOG<14" = 46

ØRW> 14" = 3, LOG>14" = 8, LOG<14" = 25

TRUCK TURN AROUND

### MIDDLE CREEK

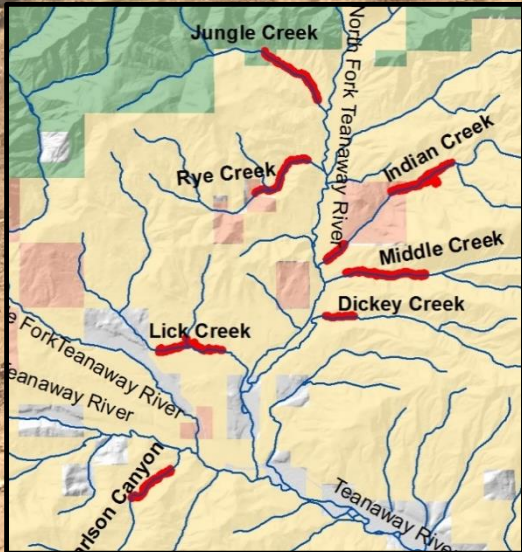
- Type\_1\_Log\_Jam
- Type\_2
- ..... Access
- Low\_Intensity\_Wood\_Loading
- Medium\_Intensity\_Wood\_Loading
- High\_Intensity\_Wood\_Loading
- ▨ Floodplain\_Wood\_Loading
- ⊙ Middle\_Material\_Staging
- - - - 2\_FOOT\_CONTOUR\_MIDDLE

1 inch = 399.91 feet



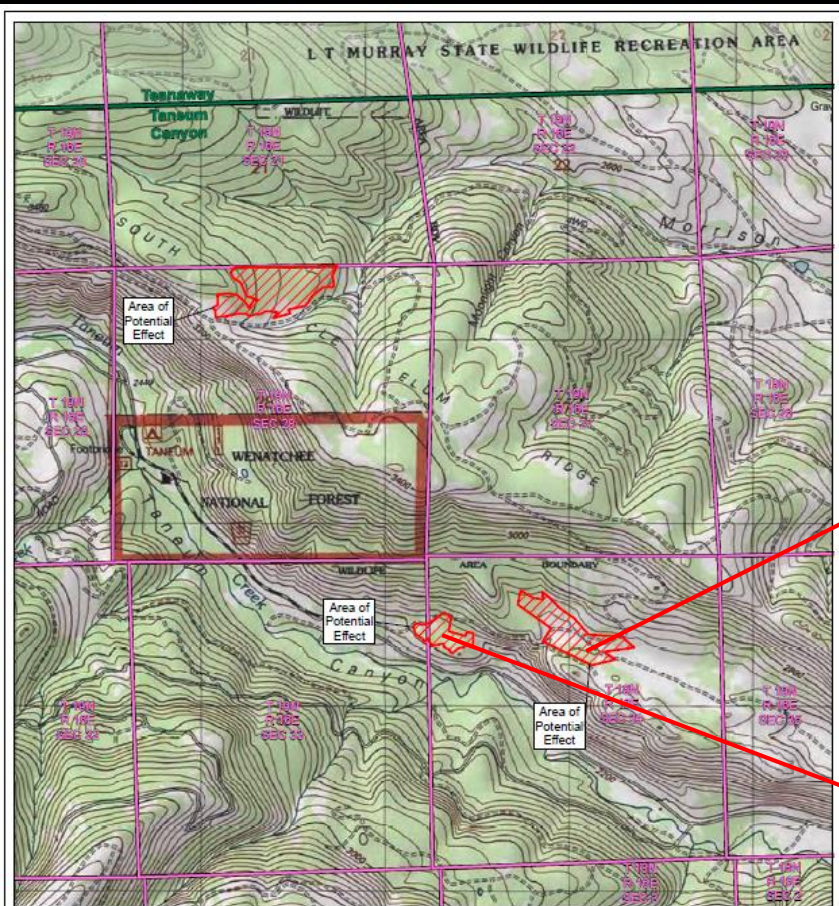


# That's a lot of wood!



**9,870 Floodplain Logs**  
**3,838 Instream Logs**  
**1,279 Rootwad Logs**  
**14,987 Total**

# FOREST HEALTH THINNING UNITS

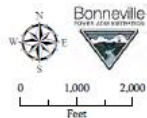


## Harvest Units for Large Wood Placement Projects

### Area of Potential Effect Map

Kittitas County, WA - Taneum Canyon USGS 7.5 Minute Quadrangle

- Area of Potential Effect
- PLSS Section
- USGS 7.5 Minute Quadrangle



May 02, 2016

# Other Material Sources

- PURCHASED WITH BPA FUNDING
  - SUNCADIA ROAD CLEARING JOB
  - BELSAAS YARD IN ELLENSBURG
- CLE ELUM RANGER DISTRICT:
  - BLOW DOWN FROM KACHESS CAMPGROUND
  - ILLEGALLY CUT WOOD FROM MINE SITE ON SWAUK CREEK

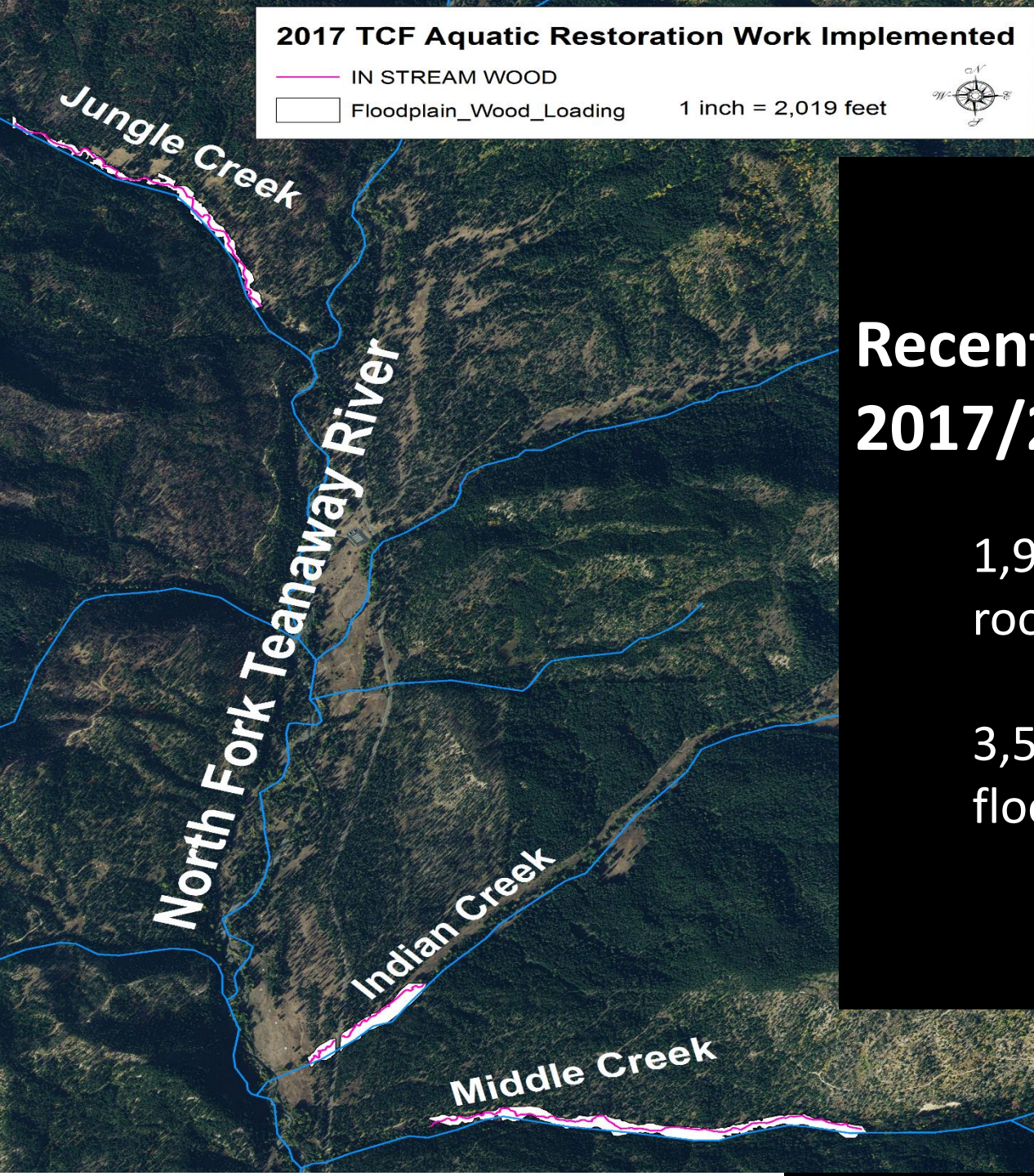


## 2017 TCF Aquatic Restoration Work Implemented

— IN STREAM WOOD

□ Floodplain\_Wood>Loading

1 inch = 2,019 feet



## Recent Progress, 2017/2018

1,987 logs and logs with  
root wads Instream

3,550 logs placed on  
floodplain surfaces



BEFORE



AFTER

# Indian Creek



# Progress - Indian Creek

- 2.2 miles of instream wood
- 40 acres of floodplain enhancement





Photo By: Zack Mayes, Yakama Nation



# Middle Creek



Photo: Colin  
DeKnicker

# Progress - Middle Creek

- **Middle Creek- 100% complete**
  - 1.1 miles of instream wood placed
  - 27 acres of floodplain enhancement



# Jungle Creek





**BEFORE**

AFTER



# Progress - Jungle Creek

- **Jungle Creek- 90% complete**
  - 1.25 miles of instream wood
  - 16 acres of floodplain enhancement



# Major Time Constraints

A photograph of a large fire burning in a forest at night. The fire is bright orange and yellow, with thick smoke rising into the dark sky. The trees are silhouetted against the fire, and the overall scene is dark and dramatic.

Photo: Tracy Rooney



# Major Time Constraints

A photograph of a large fire burning in a forest at night. The fire is bright orange and yellow, with thick smoke rising into the dark sky. The trees in the foreground are silhouetted against the fire's glow.

Jolly Mountain Fire – 1 month work lost

Photo: Tracy Rooney

# Major Time Constraints

A photograph of a large fire burning on a mountain ridge at dusk or dawn. The fire is bright orange and yellow, contrasting with the dark, silhouetted trees in the foreground and the dark sky. The fire appears to be spreading across the ridge, with some smoke or mist visible.

Jolly Mountain Fire – 1 month work lost

Inadvertent Cultural Resources Discovery- 4 months work lost

Photo: Tracy Rooney

# Next steps



An aerial photograph showing a river restoration project. The river flows from the top left towards the right, then turns downwards. A large grassy field is in the foreground, with a narrow channel of water cutting through it. A large pile of logs is visible in the lower center. The background shows a forested hillside.

Next steps

Mainstem Teanaway  
Forks Restoration

# Fish Passage Barrier Assessment

## Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual



WASHINGTON DEPARTMENT OF  
FISH & WILDLIFE

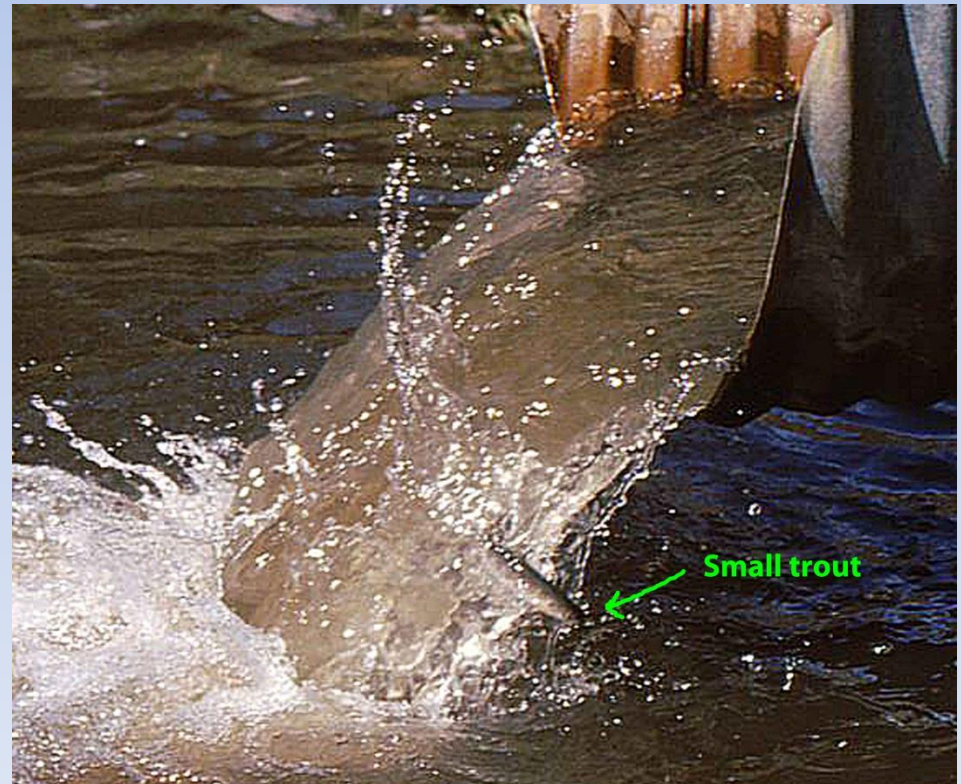
HABITAT PROGRAM

Technical Applications (TAPPS) Division



## TCF Fish Passage:

- Removed 9 Barriers to date
- Opened ~5.4 miles of habitat



# Teanaway Community Forest Fish Passage Barriers

Before



Lick Creek Culvert 33% Passable

After

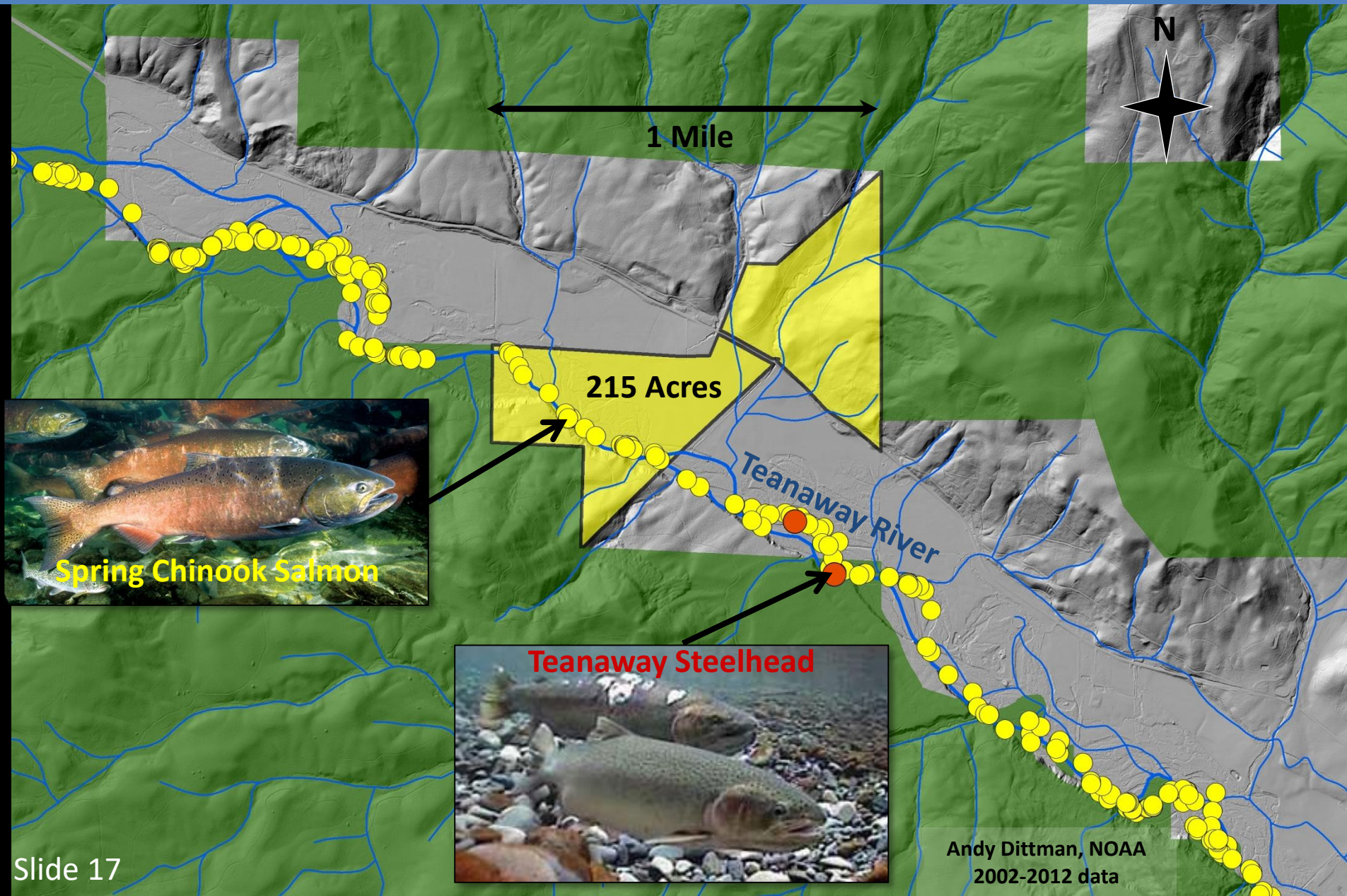


**Road Abandonment:**  
32.9 miles road abandoned





# Teaway Property – WDFW Acquisition



# Matching Funds:



# Questions ?

