

Upper Jordan Creek

Sediment TMDL Review & Delistings

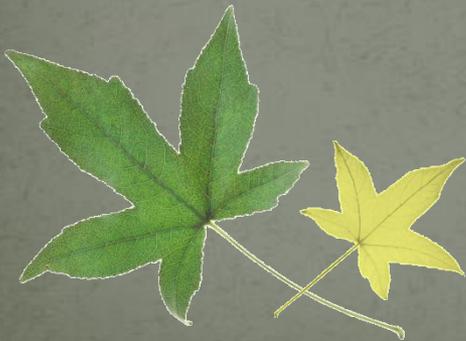
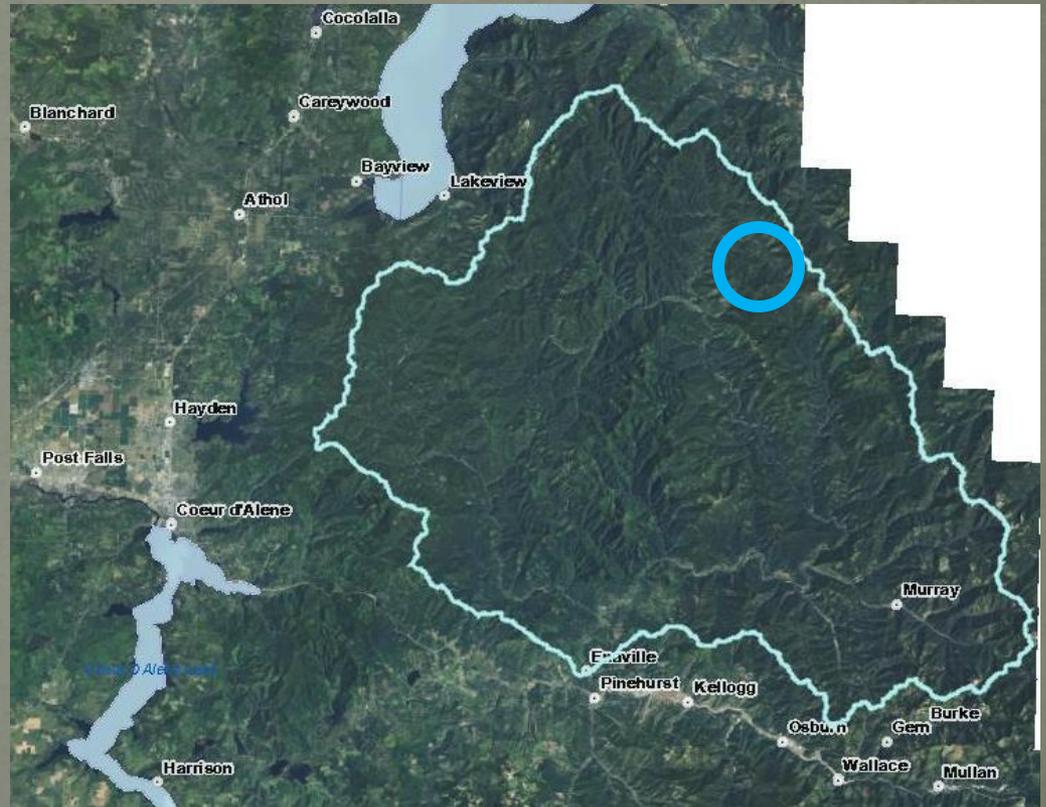
North Fork Coeur d'Alene River Subbasin
Watershed Advisory Group (WAG)

October 24, 2013



Location and Description

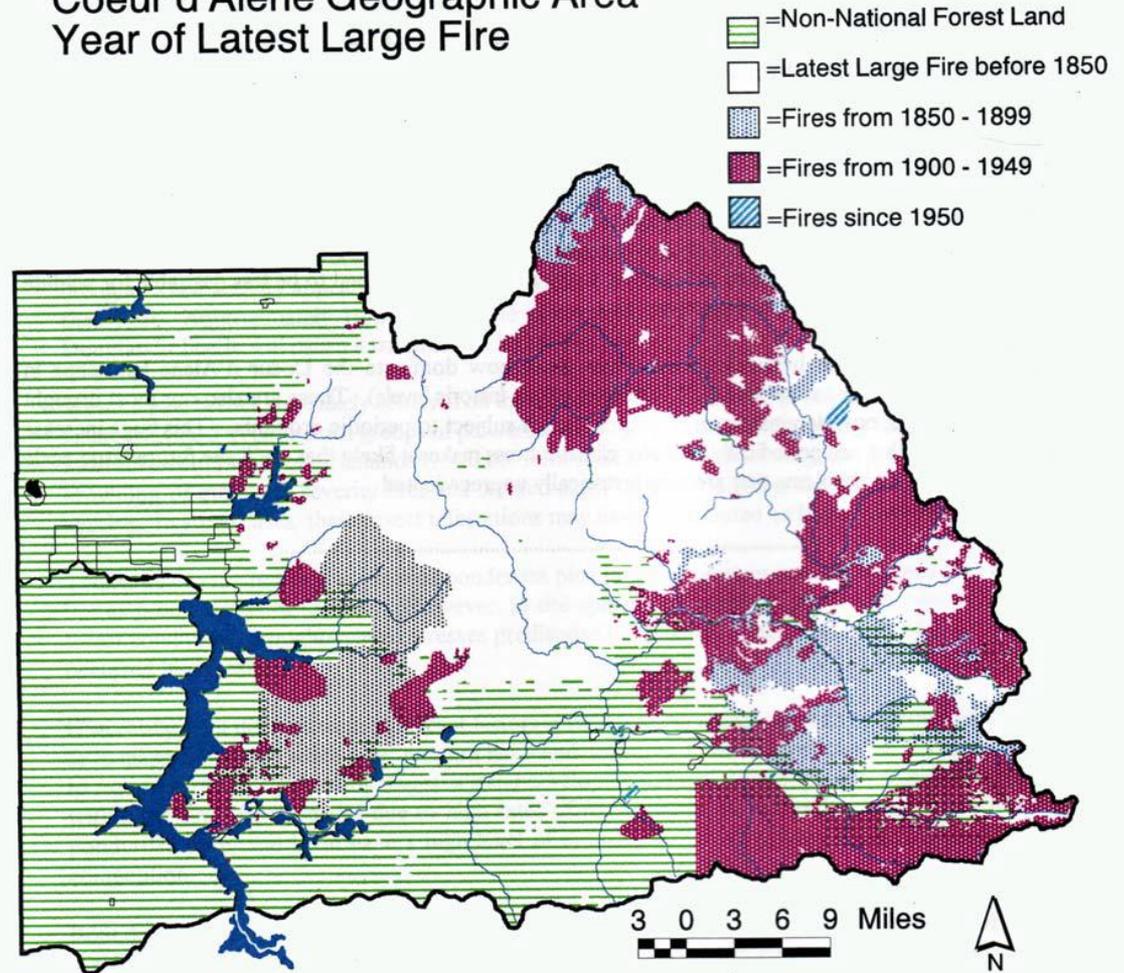
- Upper Jordan Creek Watershed
- 100% Forest Service
- 20.6 stream miles
- 3 assessment units (AUs)



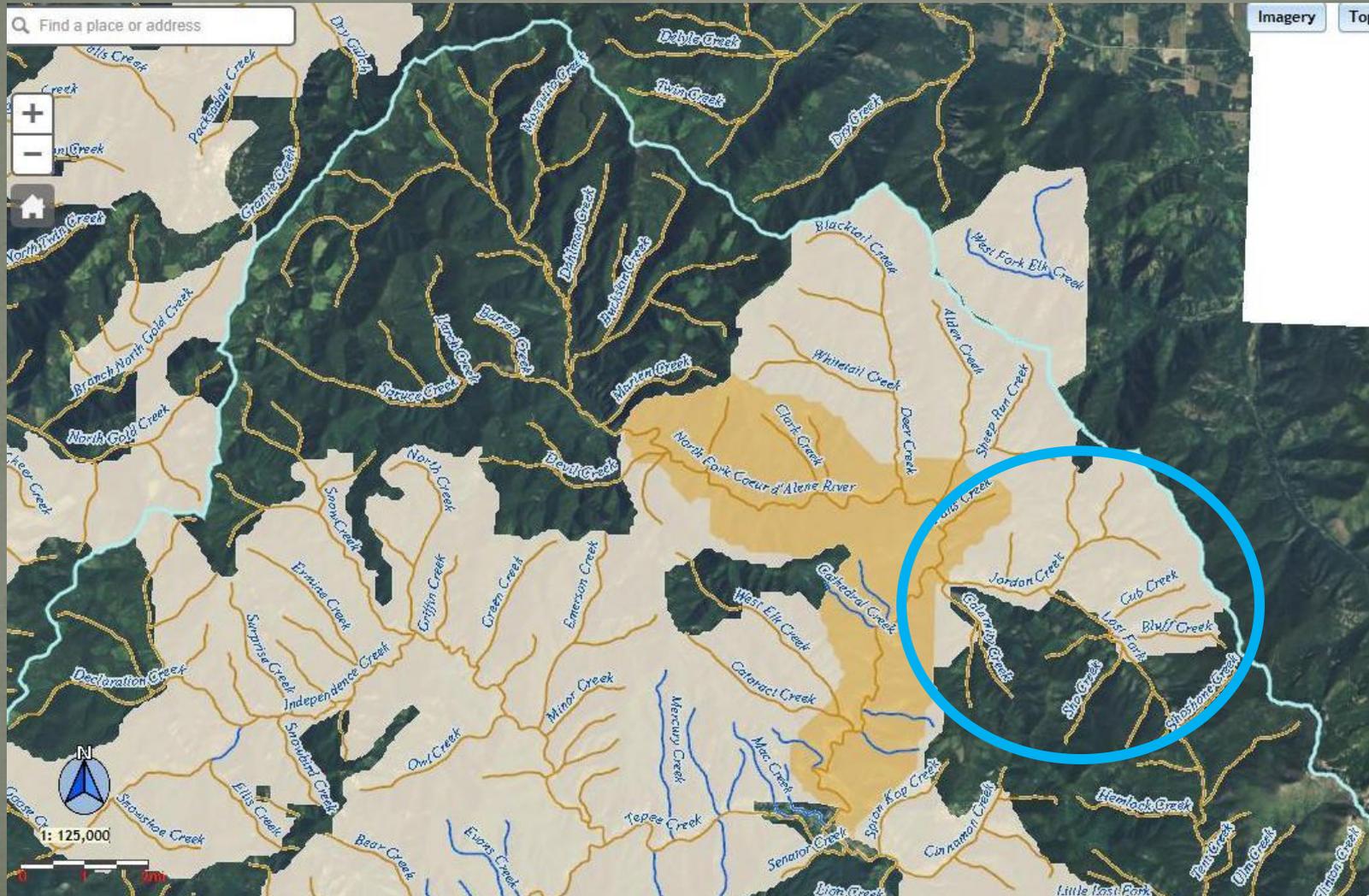
History

- Much of watershed burned in 1910 fire
- Low human disturbance
- Some road-building and timber harvest in Jordan Creek headwaters subwatersheds.

Coeur d'Alene Geographic Area
Year of Latest Large Fire



Roadless Areas

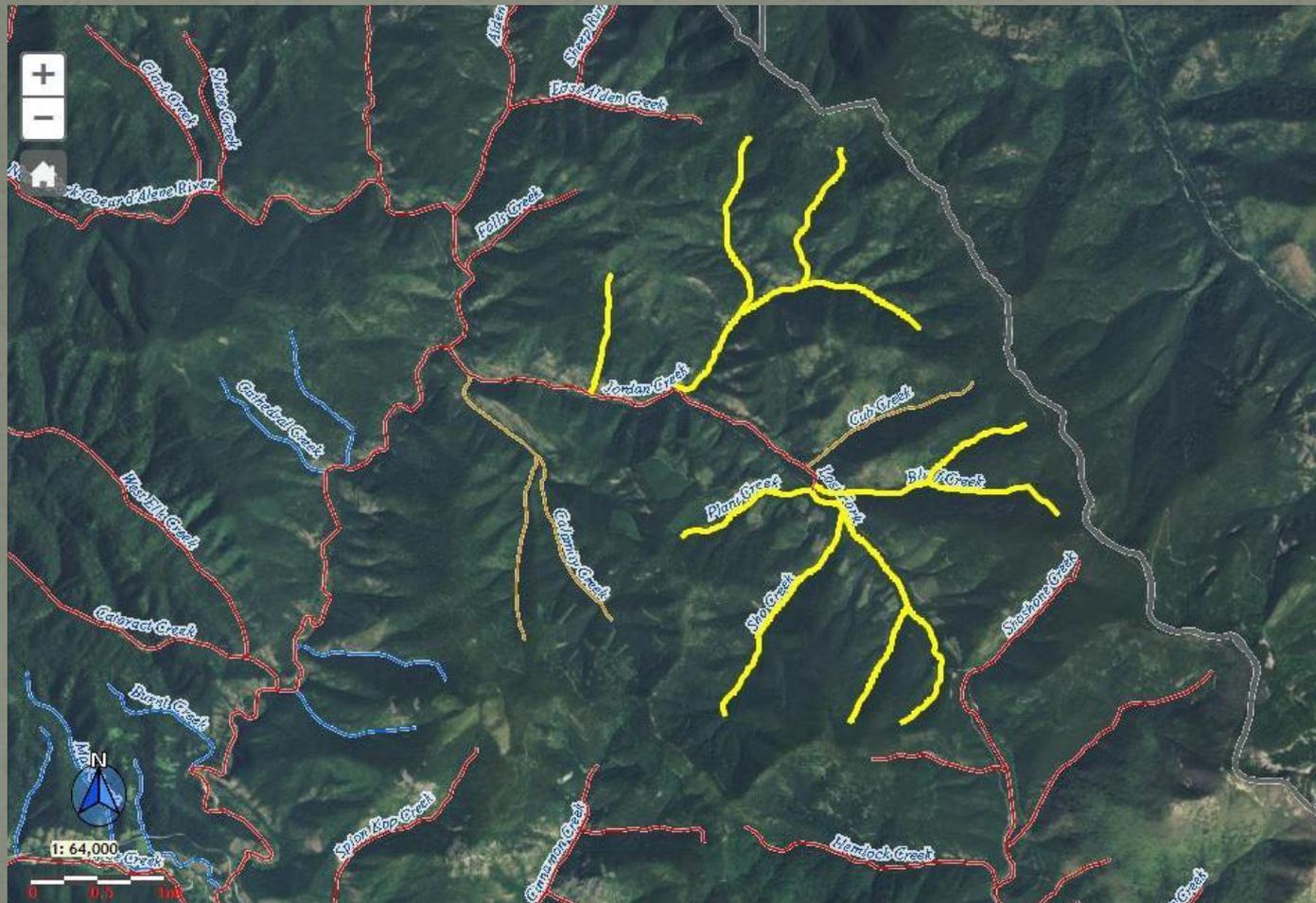


Location and Description

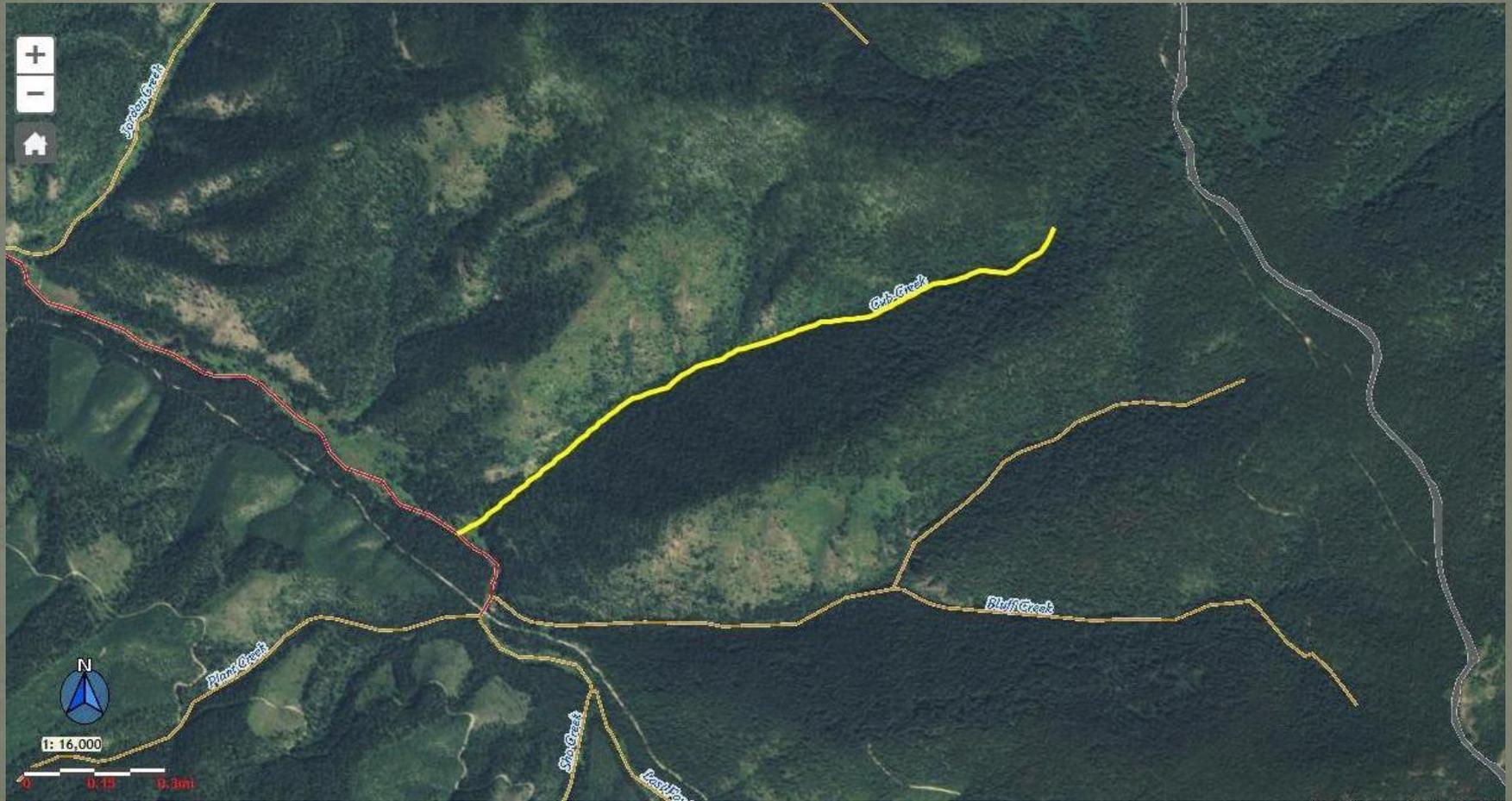
- Jordan Creek headwaters and tributaries
 - ID17010301PN014_02
 - 15.33 mi
- Cub Creek
 - ID17010301PN014_02a
 - 1.48 mi
- Calamity Creek
 - ID17010301PN014_02b
 - 3.79 mi



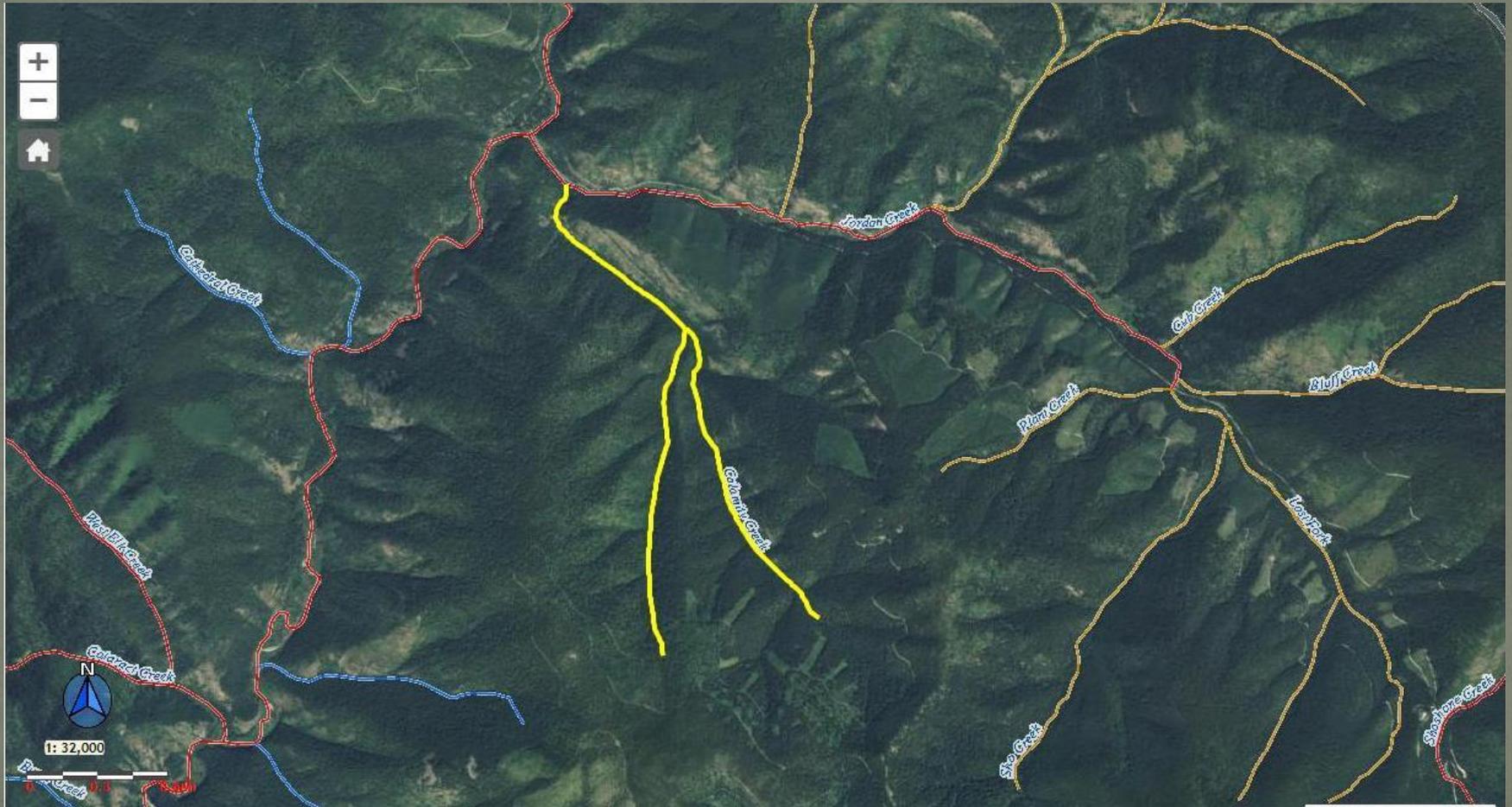
Jordan Creek headwaters (14_02)



Cub Creek (14_02a)



Calamity Creek (14_02b)



History

- 1994: Cub Creek and Calamity Creek first listed as impaired by sediment based on Riffle Armor Stability Index values from USFS 1992 study.
- 2001: Subbasin Assessment and TMDL concluded Cub Creek and Calamity Creek sediment impaired (WQLS #s 5054 and 5034).
- 2002: Jordan Creek (AU ID17010301PNo14_02) included both Cub Creek and Calamity Creek with other tributaries and upper Jordan Creek. Listed as impaired by sediment.

History

- 2010: Cub Creek (ID17010301PNo14_02a), Calamity Creek (ID17010301PNo14_02b), and Jordan Creek (ID17010301PNo14_02) all listed as sediment impaired.
- Draft 2012: same



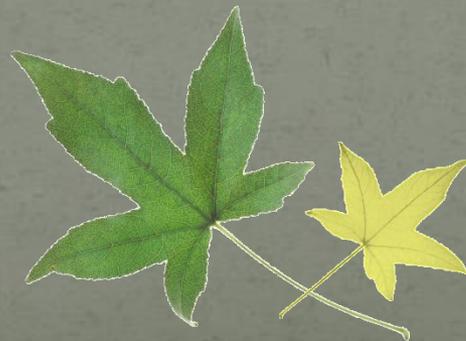
Sediment TMDL

- No specific load allocations for Cub and Calamity.
- These waterbodies included in Jordan Creek Watershed allocation at 1.5 times modeled natural background (390 t/y).

Jordan Cr Watershed	Tons per Year
Natural Background	260
Target Load	390
2001 Load	380
Load Reduction Needed	None

Restoration & Management

- Low human impact
- Little restoration needed or completed
- Segments of road decommissioned
- Some crossings treated/culverts replaced
- Few changes in management since 1990s
- Roadless areas



Previous Monitoring

- Cub 1996
 - SMI = 0
 - SFI = nd
 - SHI = 1
 - Avg = 0
- Calamity 1996
 - SMI = 2
 - SFI = 3
 - SHI = 3
 - Avg = 2.7
- Cub 1998
 - SMI = 3
 - SFI = nd
 - SHI = 2
 - Avg = 2.5
- Jordan 1999
 - SMI = 2
 - SFI = 3
 - SHI = 3
 - Avg = 2.7

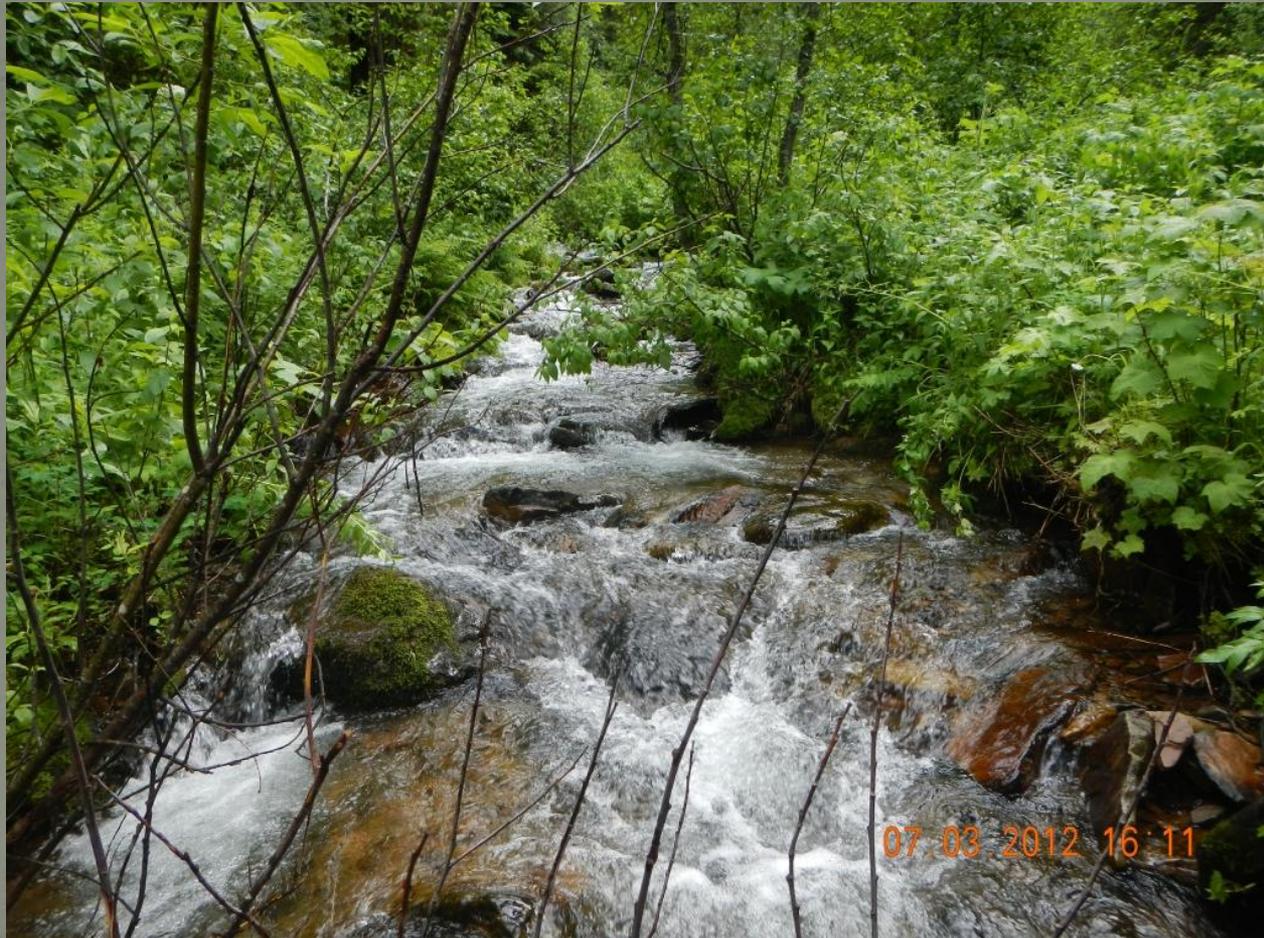
2012 BURP Monitoring (prelim.)

- Cub 2012
 - SMI = ?
 - SFI = 1
 - SHI = 3
 - Avg = 2
- Calamity 2012
 - SMI = ?
 - SFI = 1
 - SHI = 3
 - Avg = 2
- Jordan 2012
 - SMI = ?
 - SFI = ?
 - SHI = 3
 - Avg = ?
- Macroinvertebrates data pending
- Jordan Creek headwaters fish data pending
- Final data pending

Cub Creek 2012



Calamity Creek 2012



Jordan Creek headwaters 2012



Sediment TMDL Review Model

- Reproduced sediment model to evaluate changes in sediment load pre- and post- sediment TMDL.
- No change in sediment loads for Cub and Calamity creeks.
- Both under sediment target of 1.5 x natural background (NB).



Preliminary Findings

- Jordan Creek headwaters and tributaries (14_02)
 - Original listing was an error? Listed when WQLS converted to AUs, should have been delisted when Cub and Calamity split.
 - No biological, chemical, or physical data demonstrates impairment.
 - TMDL load allocation exceeded the existing load.
 - 1999 BURP data indicate full support.
 - 2012 BURP bioassessment data still pending, but may indicate full support.



Preliminary Findings



- Cub Creek (14_02a)
 - Early 90s RASI values showed some instability.
 - 1996 BURP data borderline, showed possible impairment.
 - 1998 BURP data indicated full support.
 - TMDL load allocation exceeded the existing load.
 - No known sources of excess sediment .
 - Sediment TMDL model review showed no change in sediment loads. Estimated load at 1.05 x NB.
 - 2012 BURP bioassessment data may indicate full support for cold water aquatic life.

Preliminary Findings



- Calamity Creek (14_02b)
 - Early 90s RASI values showed some instability.
 - 1996 BURP data indicated full support. Discrepancy about multiple salmonid age classes.
 - TMDL load allocation exceeded the existing load.
 - Few potential sediment sources.
 - Sediment TMDL model review showed no change in sediment loads. Estimated load at 1.43 x NB.
 - 2012 BURP bioassessment data may indicate full support for cold water aquatic life.

Next Steps

- Complete analysis of 2012 BURP samples
- Document restoration activities of USFS in these watersheds
- Compile any additional data
- WAG feedback
 - Sediment TMDL and assessment status for Jordan Creek headwaters and tributaries (14_02), Cub Creek (14_02a) and Calamity Creek (14_02b).
- Develop delisting proposals for 2014 draft Integrated Report?





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