

**Coeur d'Alene Lake Tributaries
Watershed Advisory Group
Friday May 6, 2011
U.S. Forest Service
Coeur d'Alene River Ranger District Office
10:00 – 12:00**

Agenda

Introductions

WAG Operating Procedures

Mica Creek Restoration Project

Coeur d'Alene Lake and River Sub-basin Assessment
and Proposed TMDL 5-year review

Coeur d'Alene Lake and River TMDL 5-Year Review (cont'd)

presented to
Coeur d'Alene Tributaries
Watershed Advisory Group
May 6, 2011

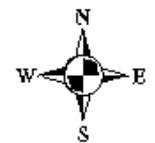
Kristin Keith



Coeur d'Alene Lake
HUC 17010303



- ★ Town
- Coeur d'Alene Tribal Reservation
- County
- Lake
- Streams



Subbasin Assessment Addendum (Continued)



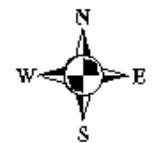
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Mica
Creek

Latour
Creek

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Mica Creek Watershed

Subwatershed	Stream Names	Miles	Assessment Unit	Beneficial use	Use Support Status	Impairment (2010 Draft Integrated Report)
Mica Creek	Mica Creek at Mouth Unnamed Tributary Cabin Creek Rock Creek North Fork Mica Creek South Fork Mica Creek	24.18	ID17010303PN004_02 ID17010303PN004_03	COLD SS PCR SCR	Not Supporting Not Assessed Not Supporting Not Supporting	Habitat Alteration Fecal Coliform Sediment

- ◆ The *CDA Lake and River Subbasin Assessment* identified the sediment interfering with the beneficial use within the Mica Creek watershed is fine sediment.

Mica Creek Implementation



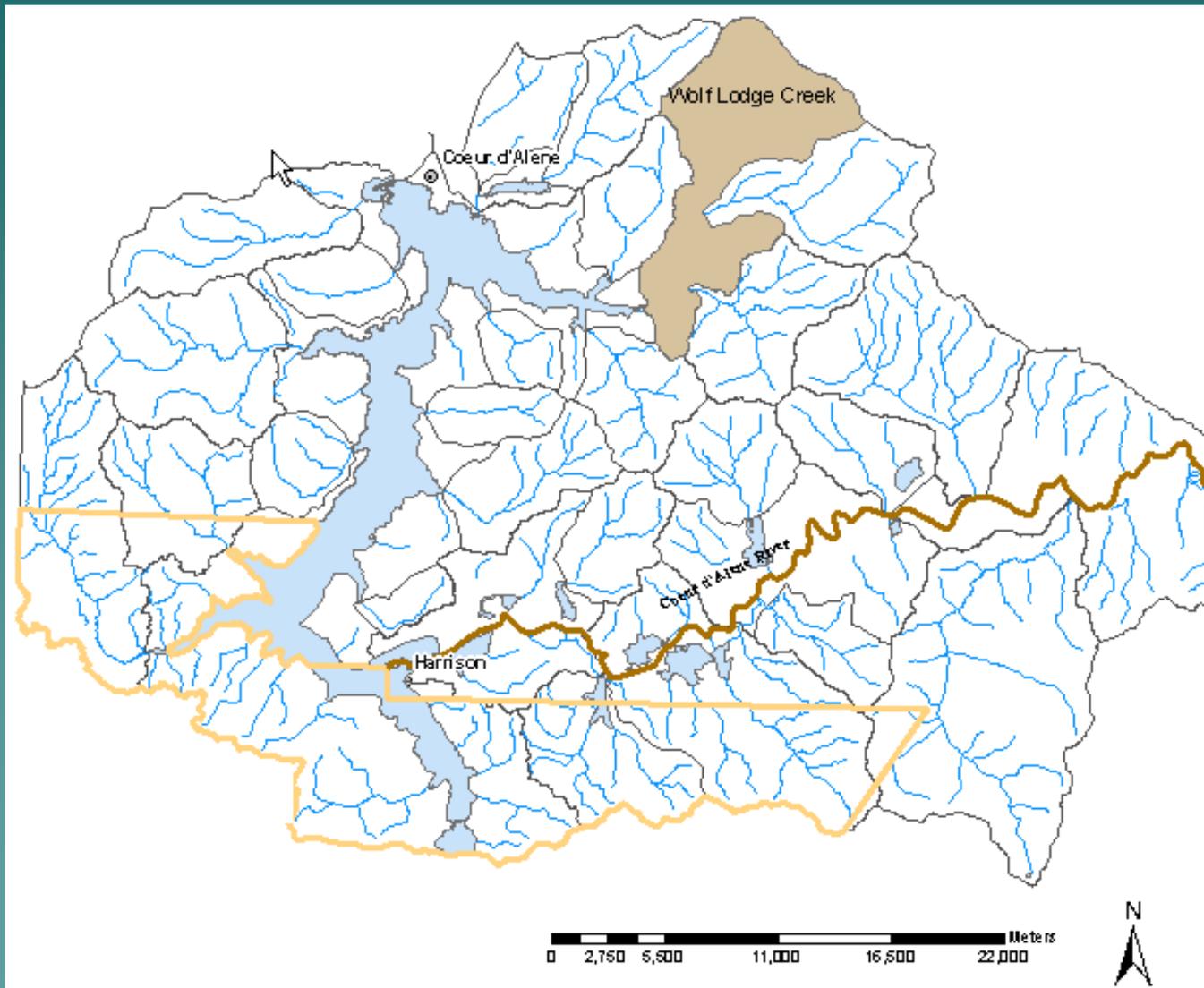
Mica Creek Watershed Monitoring Data

- ◆ 2006 BURP
- ◆ 2009 IDL CWE Scores
- ◆ Cutthroat data (May 2009).

Mica Creek SBA Conclusions

- ◆ Since 1999:
 - 72 percent increase in road miles
 - Order of magnitude increase in acres under timber harvest
 - Adverse impacts to stream channel stability – high risk (2009 IDL CWE)
 - Culvert and road problems (2009 IDL CWE)
 - Implementation activity has/will have a positive impact
 - Mica Creek is still functioning at sediment transport/deposition rate not supportive of BU
- ◆ It is recommended the Mica Creek Watershed remain subject to load reductions defined in the *Coeur d'Alene Lake and River TMDL*.

Wolf Lodge Creek



Wolf Lodge Creek

Subwatershed	Stream Names	Stream Miles	Assessment Unit	Beneficial Use	Support Status	Impairment (2010 IR)
Wolf Lodge Creek	Blue Grouse Creek Halladay Creek Lonesome Creek Onawa Creek Phantom Creek Stella Creek Unnamed Tributaries Wolf Lodge Creek	29.52	ID17010303PN029_02 ID17010303PN029_03	COLD (d) SS (d) PCR (d)	Not supporting Not supporting Full Support	Temperature Sediment Habitat Alteration (29_03)

Wolf Lodge Creek TMDL Implementation

- ◆ The U.S. Forest Service did a significant amount of restoration work in 2002-2003.
- ◆ Road decommissioning, road storage and culvert removals has resulted in a 12 percent decrease in sediment in Stella Creek and a 8 percent decrease in sediment each in Wolf Lodge, and Marie Creeks (Blue Alder EA).
- ◆ No known implementation projects in the Lower Wolf Lodge watershed.

Wolf Lodge Creek Watershed Monitoring Data

- ◆ 2006 - 2008 BURP
- ◆ 2009 IDL CWE Scores (upper Wolf Lodge)
- ◆ Cutthroat data (May 2009).
- ◆ 2009 IDEQ Erosion Survey
- ◆ USFS
 - Blue Alder EA









January 2009



February 2011



This point bar appears to be getting larger. This will ultimately put more stress on the opposite stream bank and cause more erosion.

Black arrows – electrical box
Yellow arrow – dike
Blue arrow – newly deposited mid-channel bar.
bar material from rotational failure of dike.



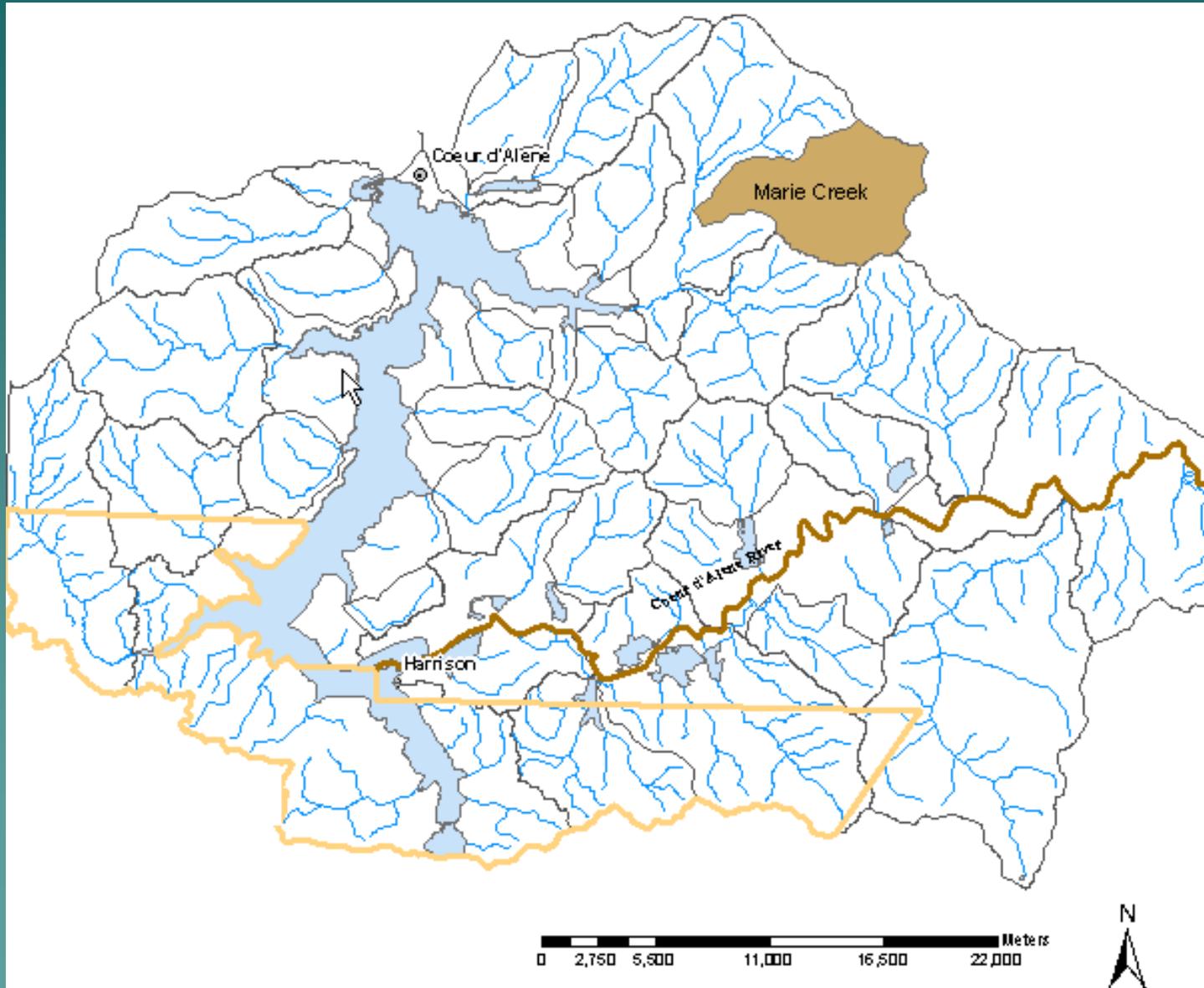




Wolf Lodge Creek SBA Conclusions

- ◆ A large amount of implementation by USFS has occurred in this watershed to diminish the sediment sources to the stream channels.
- ◆ There still exists a high bedload influence on channel instability on upper Stella Creek.
- ◆ It is reasonable to assume Stella Creek is still functioning at a sediment transport/deposition rate above its sediment load capacity.
- ◆ There are significant problems on private property.
- ◆ Excess sedimentation is contributing to the impairment of cold water aquatic life and salmonid spawning beneficial uses.
- ◆ It is recommended the Wolf Lodge Creek Watershed remain subject to load reductions defined in the *Coeur d'Alene Lake and River TMDL*.

Marie Creek



Marie Creek

Subwatershed	Stream Names	Stream Miles	Assessment Unit	Beneficial Use	Support Status	Impairment (2010 IR)
Marie Creek	Burton Creek Marie Creek Searchlight Creek Skitwish Creek	29.52	ID17010303PN029_02 ID17010303PN029_03	COLD (d) SS (d) PCR (d)	Not supporting Not supporting Full Support	Temperature Sediment Habitat Alteration (29_03)

Marie Creek Implementation

- ◆ Road decommissioning, road storage and culvert removals has resulted in an 8 percent decrease in sediment in Marie Creek (Blue Alder EA).





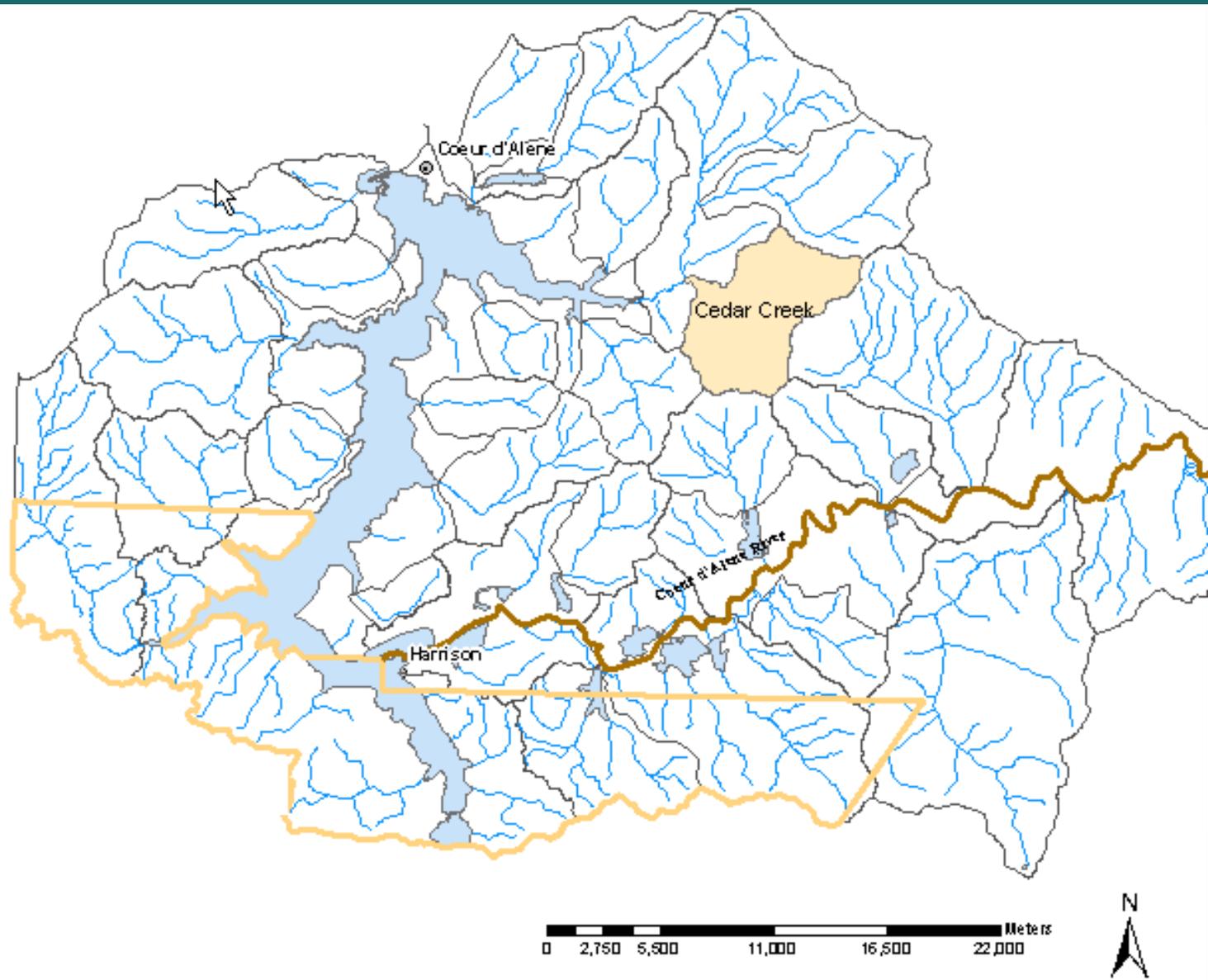


Marie Creek

SBA Conclusions

- ◆ A large amount of implementation by USFS has occurred in this watershed to diminish the sediment sources to the stream channels.
- ◆ There still exists an excess bedload influence on channel instability on Marie Creek.
- ◆ Marie Creek is on the trajectory to functioning at its sediment load capacity
- ◆ Excess sedimentation is contributing to the impairment cold water aquatic life and salmonid spawning beneficial uses.
- ◆ It is recommended the Marie Creek Watershed be subject to load reductions defined in the *Coeur d'Alene Lake and River TMDL*.

Cedar Creek



Cedar Creek Implementation

Recent road restoration work by the USFS has reduced the sediment load by 25 percent on their property.

Cedar Creek

Blue Alder EA

- ◆ High road density in the upper watershed,
- ◆ Geomorphic restrictions on Cedar Creek caused by the highway.
- ◆ Recent field investigations by the USFS observed aggradation and large amounts of sand near the mouth of Cedar Creek.



Cedar Creek

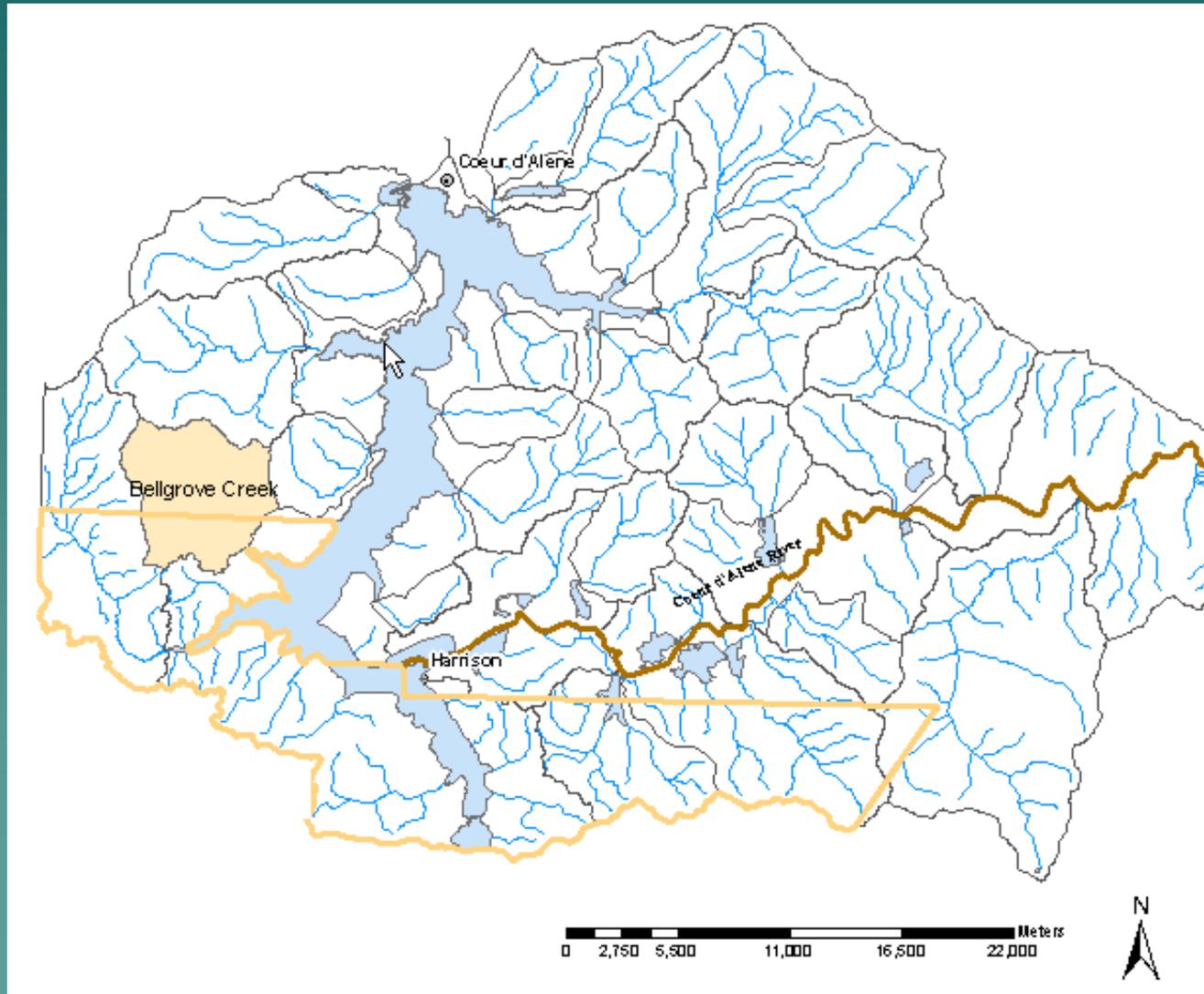
Subbasin Assessment Conclusions

- ◆ Cedar Creek is still functioning above its sediment load capacity.
- ◆ It is recommended Cedar Creek be subject to the load reductions of the *2000 Coeur d'Alene Lake Tributaries TMDL*.

Non-TMDL Stream Assessments



Bellgrove Creek



Bellgrove Creek

- ◆ Listed as Fighting Creek in Idaho's Integrated Report)

Subwatershed	Stream Names	Stream Miles	Assessment Unit	Beneficial Use	Support Status	Impairment (2010 IR)
Bellgrove Creek	Bellgrove Creek Fighting Creek	3.45 5.02	ID17010303PN005_02	COLD SCR	Not supporting Not supporting	Sediment Fecal Coliform

Bellgrove Creek Monitoring Data

◆ BURP 2008

Stream	BURP ID	Date	SMI	SMI	SFI	SFI	SHI	SHI	¹ Ave
Bellgrove Creek	2008SCDAA025	2008	22.3	0	73.8	2	55.0	1	0.0

- ◆ Bacteria Sampling
- ◆ Visual Surveys
- ◆ Turbidity

Bellgrove Creek Bacteria Sampling

*Location	Date	Geomean
1/3 mile downstream elk facility	6/15/2005	5204
1/3 mile downstream elk facility	7/12/2005	999
Above elk facility (but below 95 bridge)	5/10/2007	53
Fighting Creek 0.2 miles below conf. with Bellgrove Creek	5/10/2007	80
Below elk facility	5/10/2007	1108
¾ mile below elk facility	5/10/2007	923

* Idaho Water Quality Standard (primary contact recreation)
= geomean of 126/100 ml







Coeur d'Alene River



Coeur d'Alene River Recommendations (Sediment)

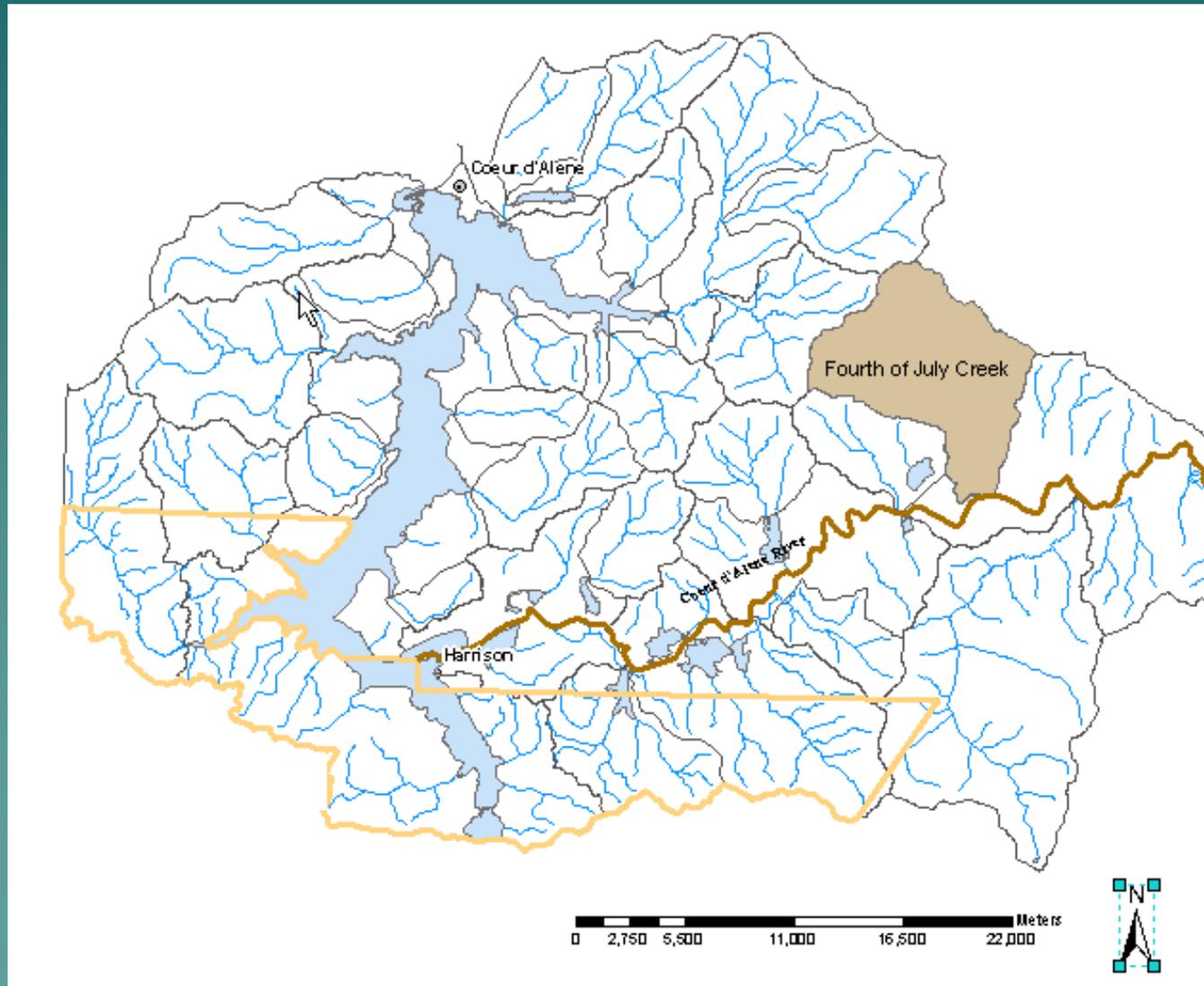
- ◆ It is recommended the Coeur d'Alene River be placed under section 4b of Idaho's Integrated Report and the ROD would be the water quality plan, under which water quality standards would be met.



Coeur d'Alene River Recommendations (Temperature)

- ◆ One primary cause for the temperature impairment on the Coeur d'Alene River is flow alteration as a result of Post Falls dam.
- ◆ It is therefore recommended that both assessment units be placed in section 4c of Idaho's Integrated Report for "other flow regime alterations".

Fourth of July Creek



Fourth of July Creek

Subwatershed	Stream Names	Stream Miles	Assessment Unit	Beneficial Use	Support Status	Impairment (2010 IR)
Fourth of July Creek	Bentley Creek Curran Creek Fern Creek Fourth of July Creek Mason Creek Mill Creek Rantenan Creek Service Creek Unnamed Tributary	34.96	ID17010303PN020_02 ID17010303PN020_03	COLD SS SCR	Not supporting Not supporting Not Assessed	Habitat Alteration Temperature

Fourth of July Creek Implementation

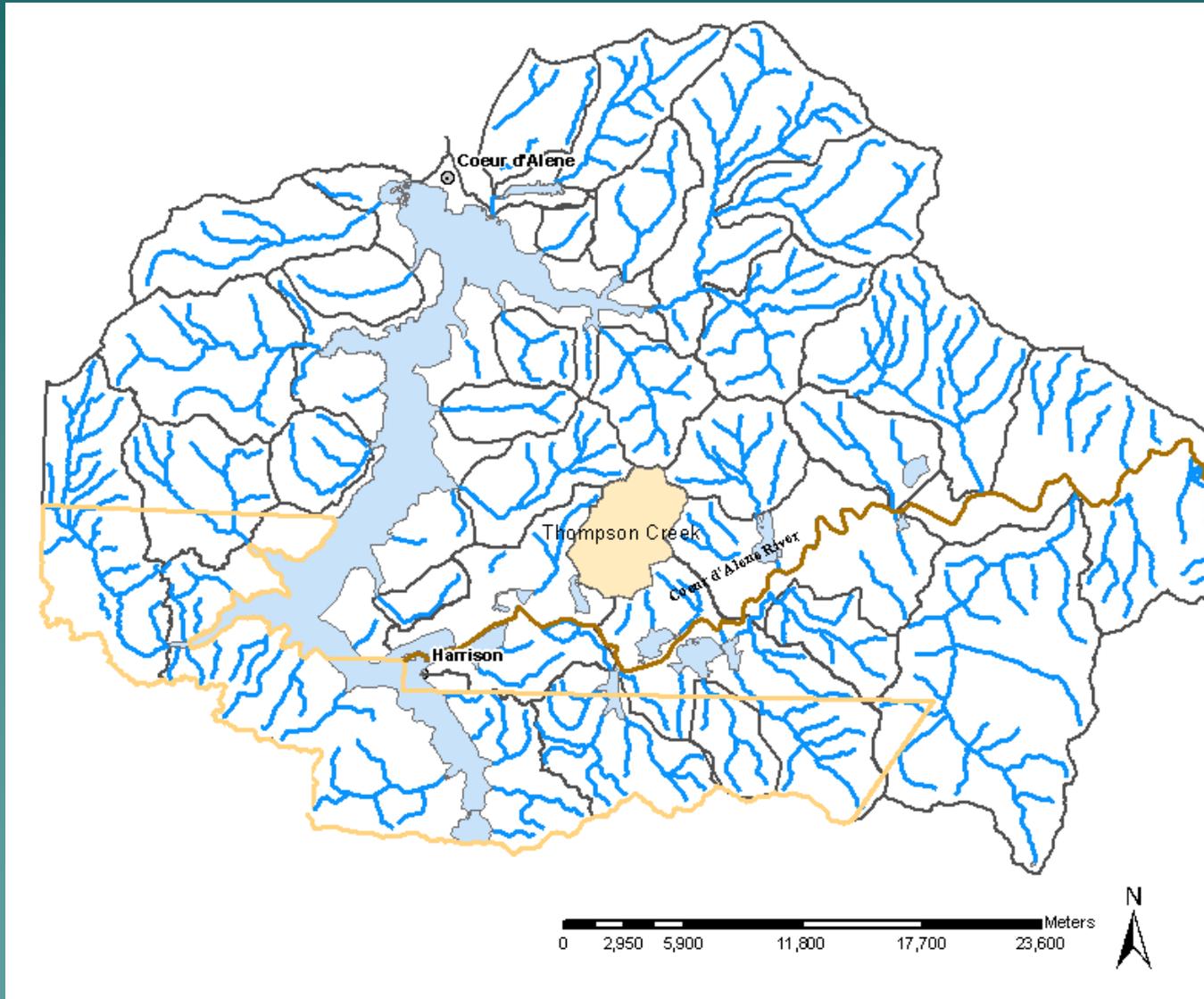
- ◆ Projects? Need info

Fourth of July Creek 2010 Sediment Delist

- ◆ There is no BURP data for this AU
- ◆ The 2000 Coeur d'Alene Lake Tributary SBA determined there was no sediment impairment on this AU.
- ◆ Field visits
- ◆ BURP data on downstream AU

Stream	BURP ID	Date	SMI	SMI	SFI	SFI	SHI	SHI	¹ Ave
Fourth of July Creek	2006SCDAA001	2006	68.4	3	97.2	3	56.0	1	2.3

Thompson Creek



Thompson Creek

Subwatershed	Stream Names	Stream Miles	Assessment Unit	Beneficial Use	Support Status	Impairment (2010 IR)
Thompson Lake Tributaries	Thompson Creek Unnamed Tributary	6.13	ID17010303PN025_02	COLD	Full Support	

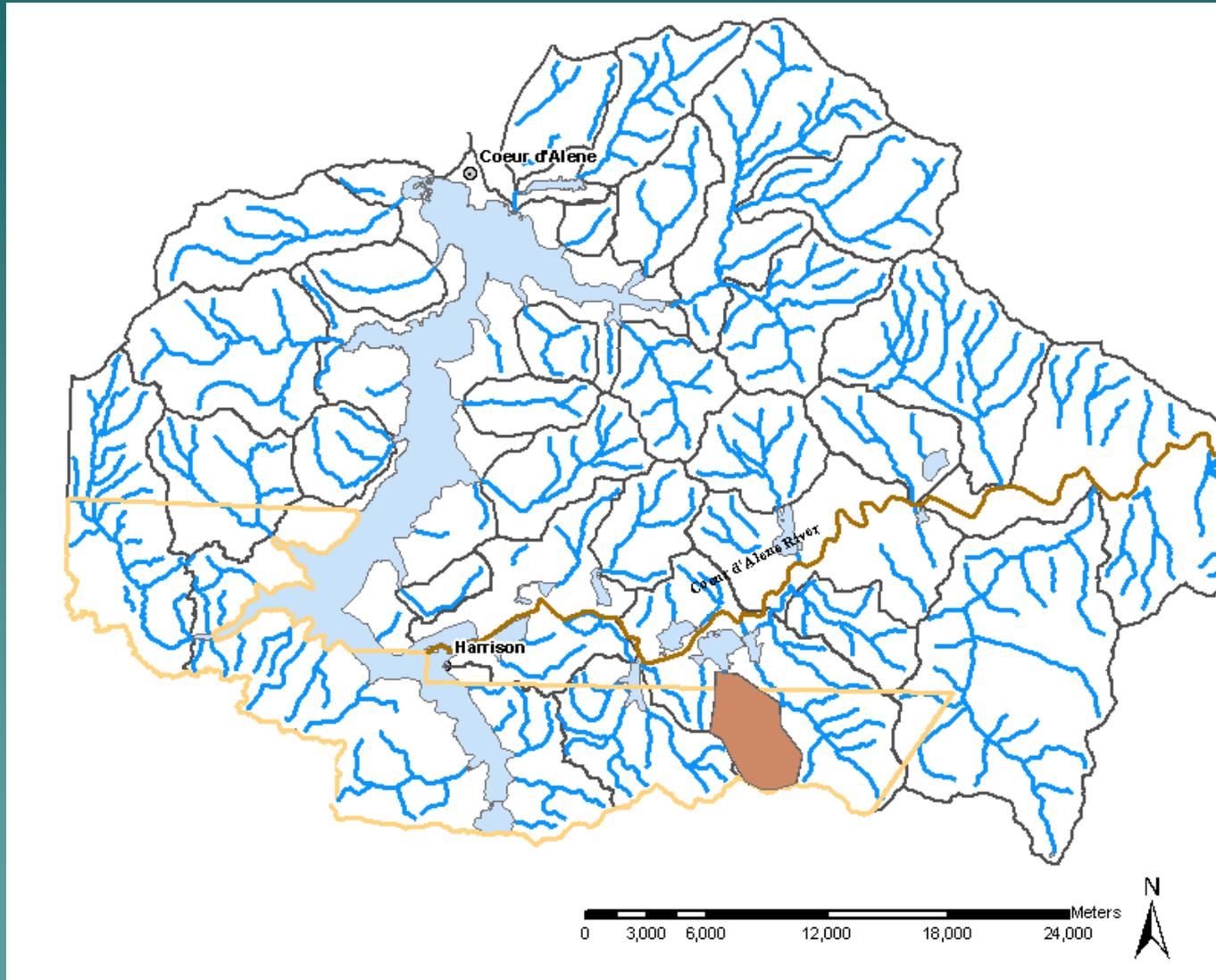
Thompson Creek 2010 Sediment Delist

- ◆ There is no recent BURP data for this AU
 - ◆ The 2000 Coeur d'Alene Lake Tributary SBA determined there was no sediment impairment on this AU.
 - ◆ Field visits
 - ◆ Modeling
- 

Thompson Creek



Willow Creek



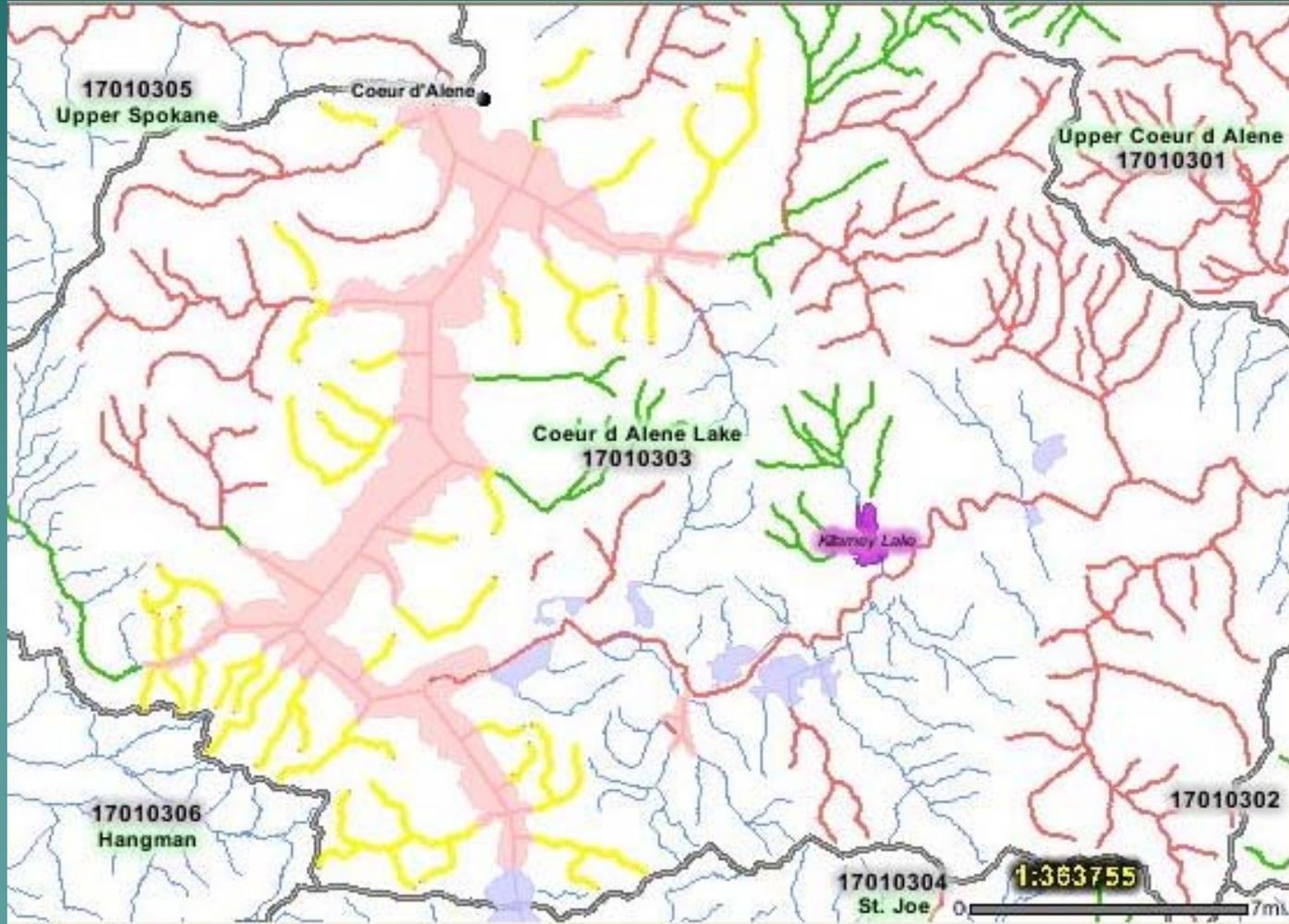
Willow Creek

2010 Sediment Delist

- ◆ There is no recent BURP data for this AU
- ◆ The 2000 Coeur d'Alene Lake Tributary SBA determined there was no sediment impairment on this AU.
- ◆ Field visits
- ◆ Coeur d'Alene Tribe information on upstream water



Historic Assessment Unit ID17010303PN001_02

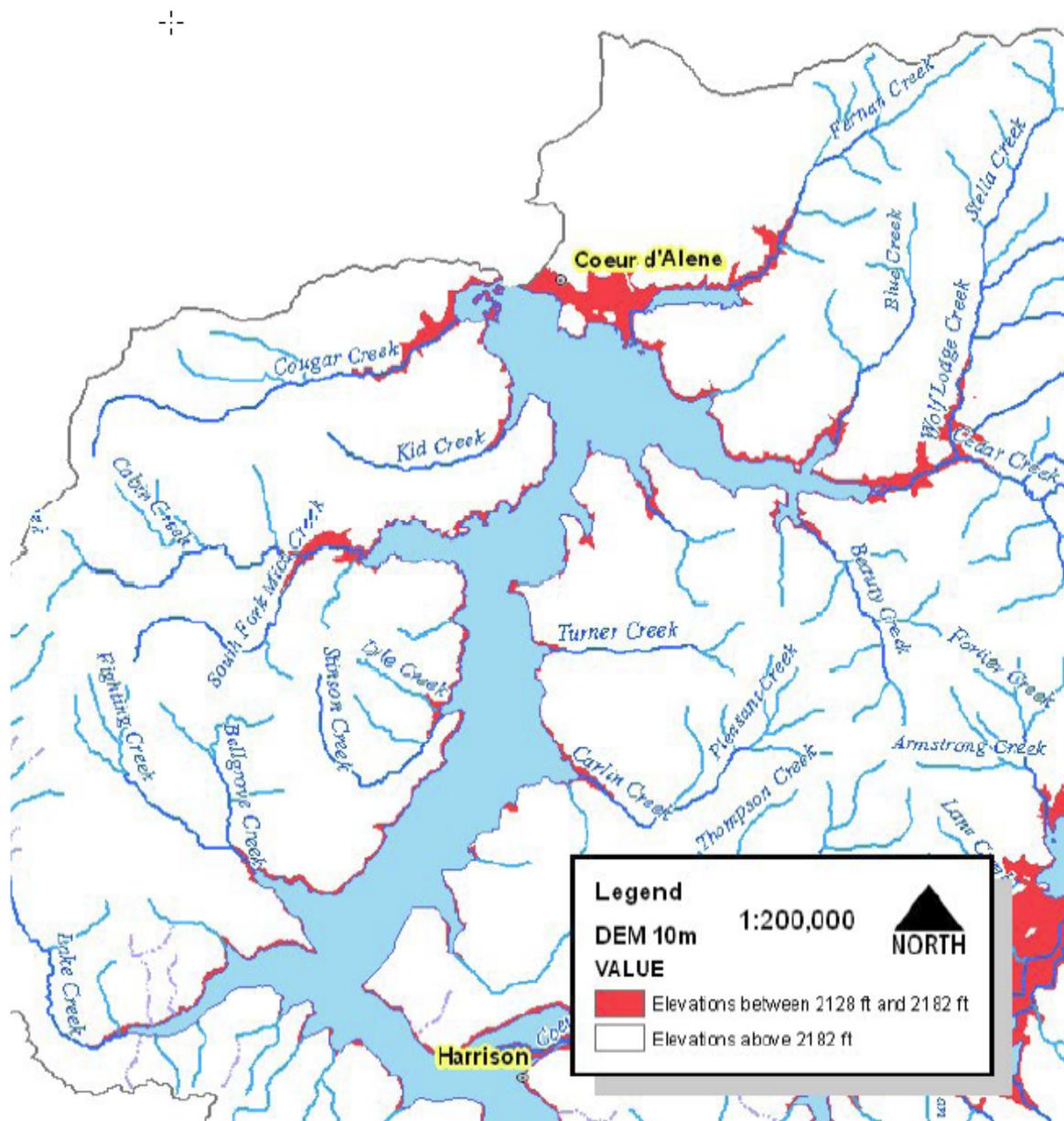


What's Next?

- ◆ 5-Year Review Process:
 - WAG comments on 5-year review and SBA documents – would like to discuss them June 1
 - DEQ integrates comments as appropriate
 - Submit final document to DEQ State Office (no EPA approval needed)

- ◆ Temperature TMDL (Presented June 1)
- ◆ Fernan Lake Nutrient TMDL
- ◆ Bellgrove Creek Sediment and Bacteria TMDL
- ◆ ~~Blue Creek nutrient TMDL~~

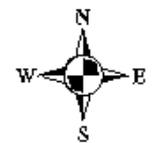
Figure 29: Map of deltaic sediments between 2128 and 2182 on tributaries to Coeur d'Alene Lake.



Coeur d'Alene Lake HUC 17010303



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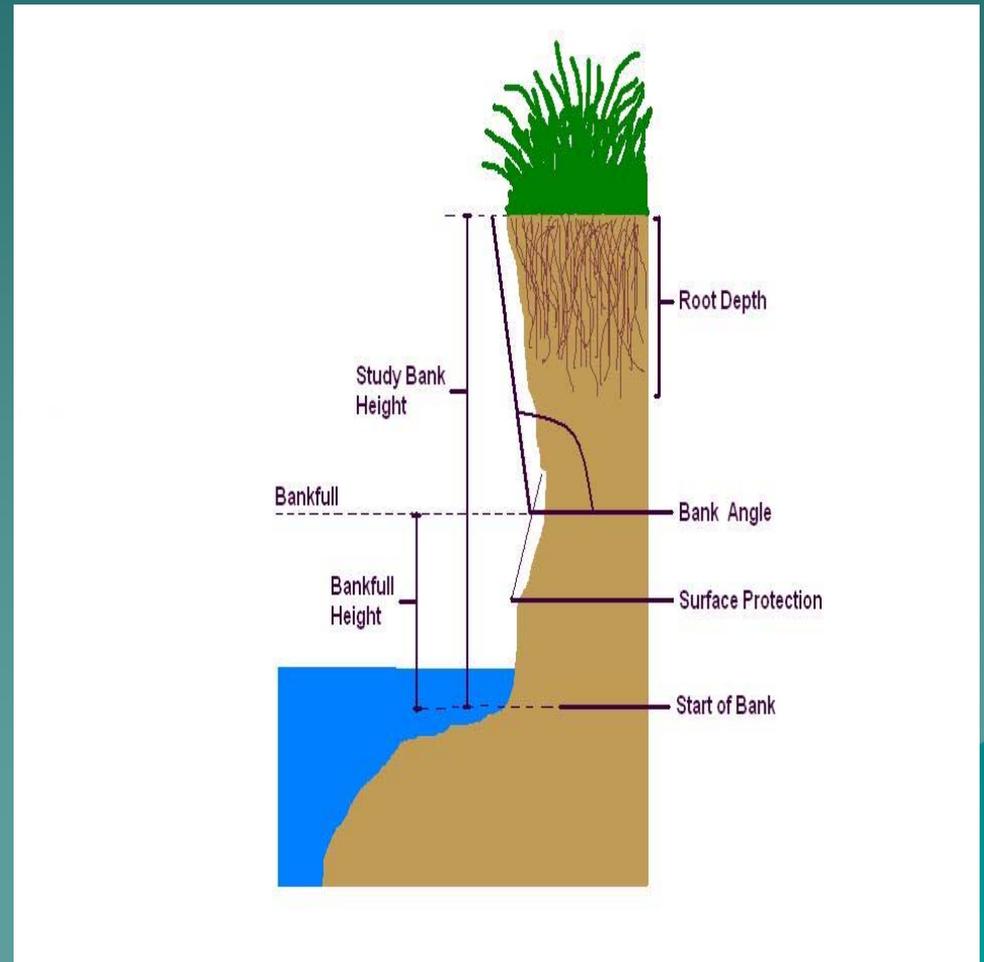


Bank Erosion Hazard Index (BEHI)

(Rosgen, 2006)

The BEHI assessment classified the riverbanks according to their susceptibility to erosion.

The Bank Erosion Hazard Index (BEHI) rated High in two reaches and Very High on one reach. Nearbank Stress rated Moderate in one reach and High in the other two.



Latour Creek

- ◆ The Latour Creek assessment unit (ID17010303PN015_02) is listed in Idaho's draft 2010 Integrated Report as *not supporting* cold water aquatic life and salmonid spawning beneficial uses.
- ◆ The causes of impairment are sediment and temperature.
- ◆ The *CDA Lake and River Subbasin Assessment* identified the sediment interfering with the beneficial use within the Latour Creek watersheds is most likely large bedload particles that is mobilized during large discharge events (return period of 10-15 years)

Latour Creek Implementation

- ◆ The Idaho Department of Lands improved 5.7 miles of road :
 - Bridge replacement over Lost Girl Creek and Butler Creek.
 - Work was also done on the support structures and decking on the Latour Creek Bridge.
 - Reconstruction of the 5.7 mile road.
 - 4 relief culverts, replaced 5 undersized stream crossing culverts, pulled ditches and outside shoulders, rocked ditch lines, aligned, crowned, and installed rolling dips.



Latour Creek Monitoring Data

- ◆ No BURP data since TMDL was published.
- ◆ 2009 IDL CWE Scores (Headwaters)
- ◆ 2009 IDL CWE Scores (Mouth)
- ◆ 2009 IDEQ stream erosion survey
- ◆ Cutthroat data (May 2009)

Latour Creek

Quantitative Stream Erosion Survey

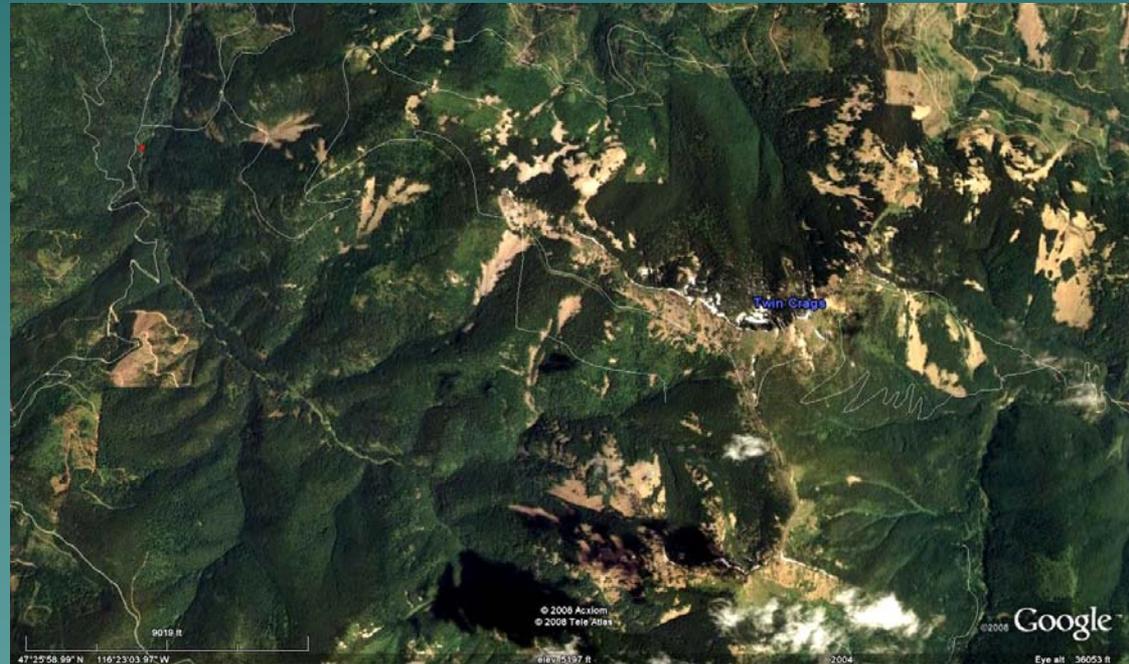
IDEQ (2008)

- ◆ Three separate reaches, with intermediate erosive conditions of streambanks along Latour Creek, to conduct a stream stability survey as described in *Rosgen (2006)*.
 - 18 percent of banks unstable
 - The estimated erosion rate for the 785 ft of study reach was 0.4-0.6 ft/yr or 217 ft³/yr (10 tons/year).

Latour Creek

2008 Qualitative Stream Erosion Survey

- ◆ Mass wasting evident at the headwaters
- ◆ From the confluence with Butler Creek to the Mouth. Observations:
 - Road encroachment
 - Excessively high bedload.
 - Going downstream to the mouth, it became more and more evident that Latour Creek did not have enough stream energy to competently move this excessive bedload material downstream.



Latour Creek

SBA Conclusion

- ◆ Latour Creek is functioning at a sediment transport/deposition rate well above its load capacity;
- ◆ There are still significant sources of excess sediment to the system; and
- ◆ Significant land management changes need to occur before Latour Creek before it is functioning at its sediment load capacity.
- ◆ Too soon for IDL implementation reductions to have affected the stream
- ◆ It is recommended Latour Creek be subject to load reductions defined in the *Coeur d'Alene Lake and River TMDL*.