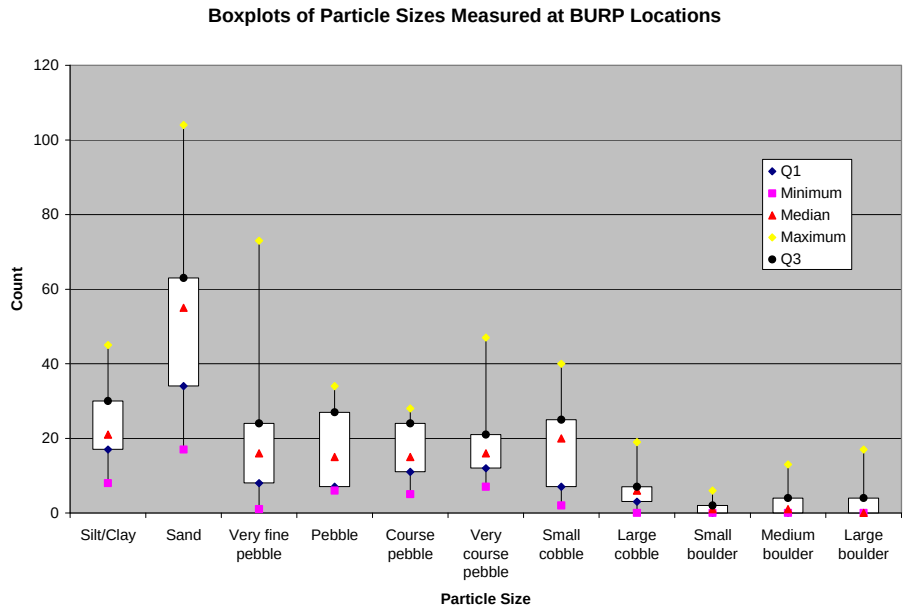
Sediment TMDL

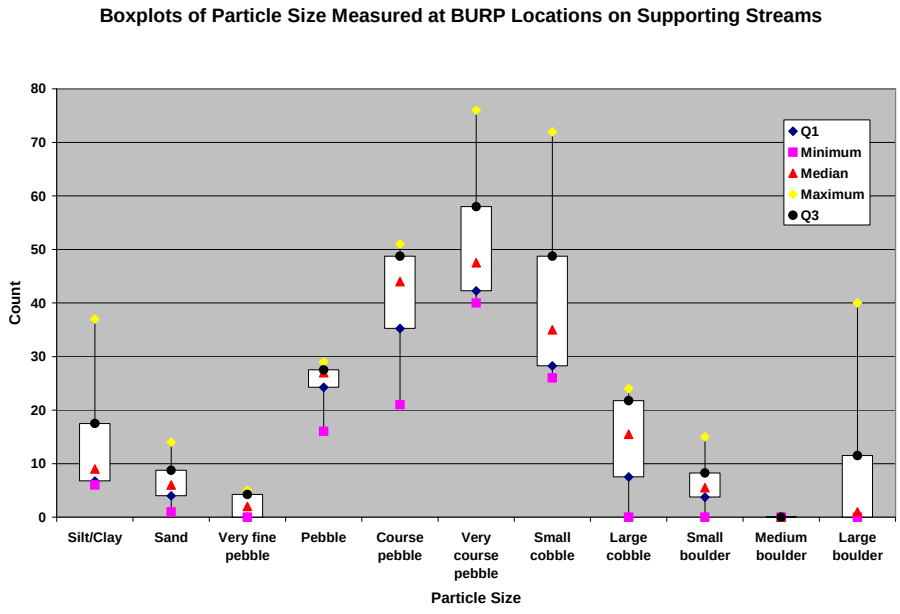
- State standard is a narrative standard
  - Streams shall be free from excess sediment…
- Used a paired watershed approach
  - Hayden Creek watershed – reference
  - Fish Creek watershed – TMDL watershed

Sediment TMDL

- Substrate size comparison



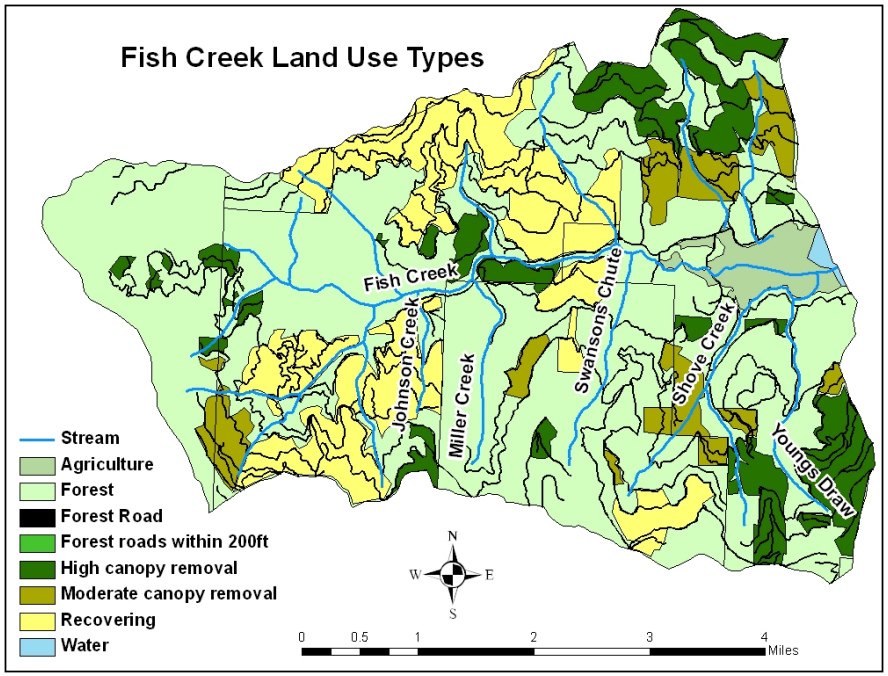
Fish Creek



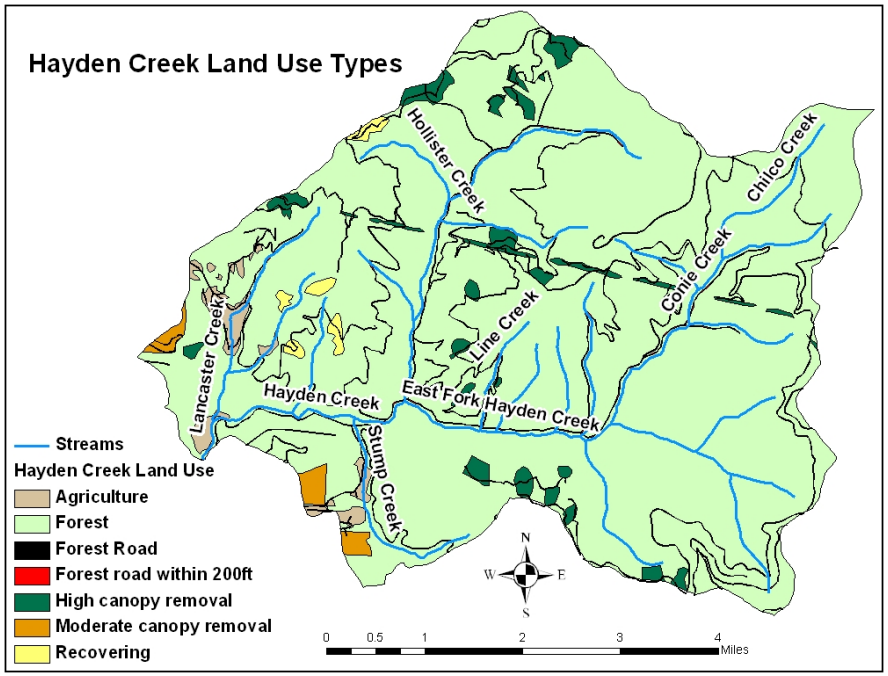
Hayden Creek

Sediment TMDL

- Map existing land uses



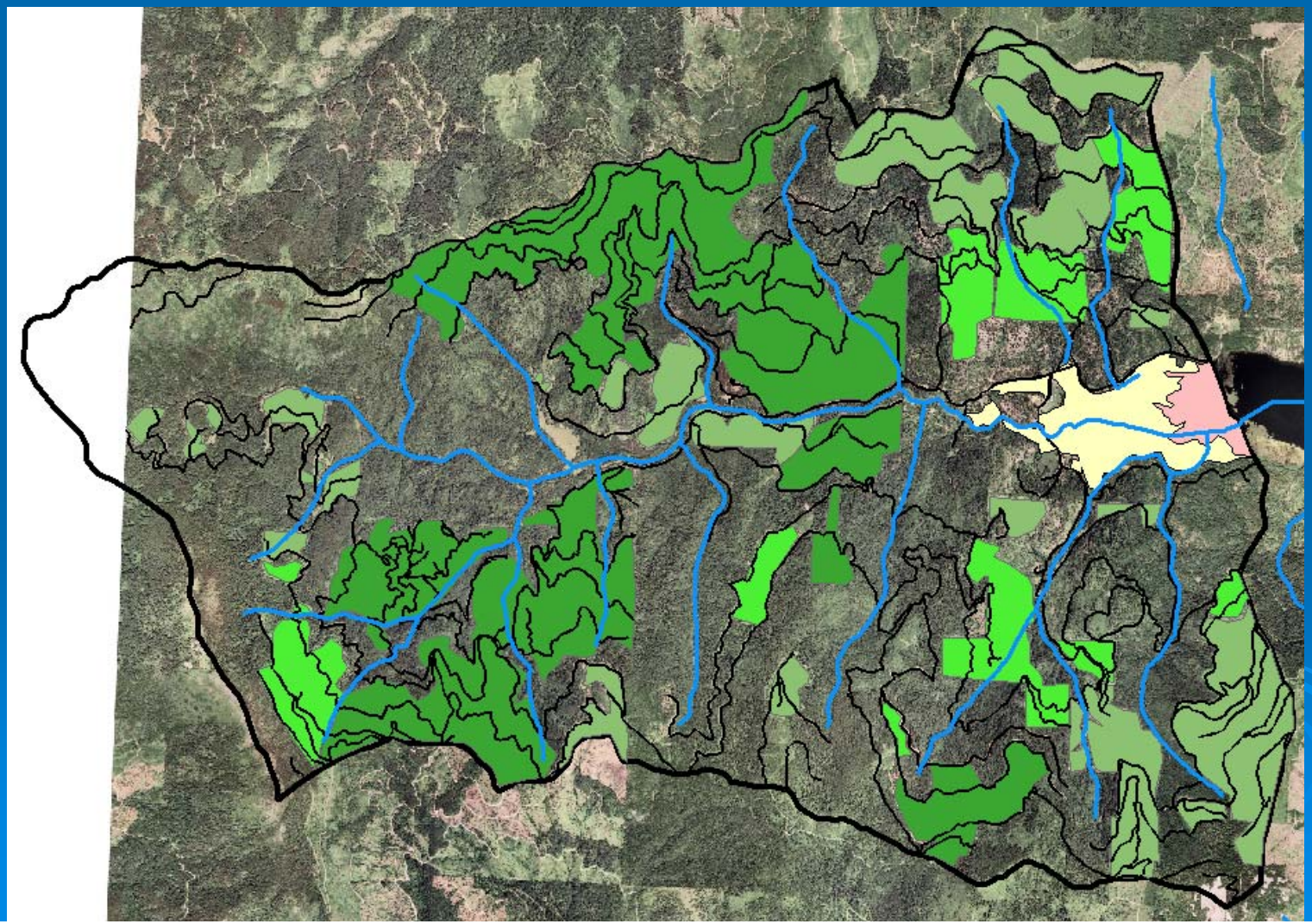
Fish Creek



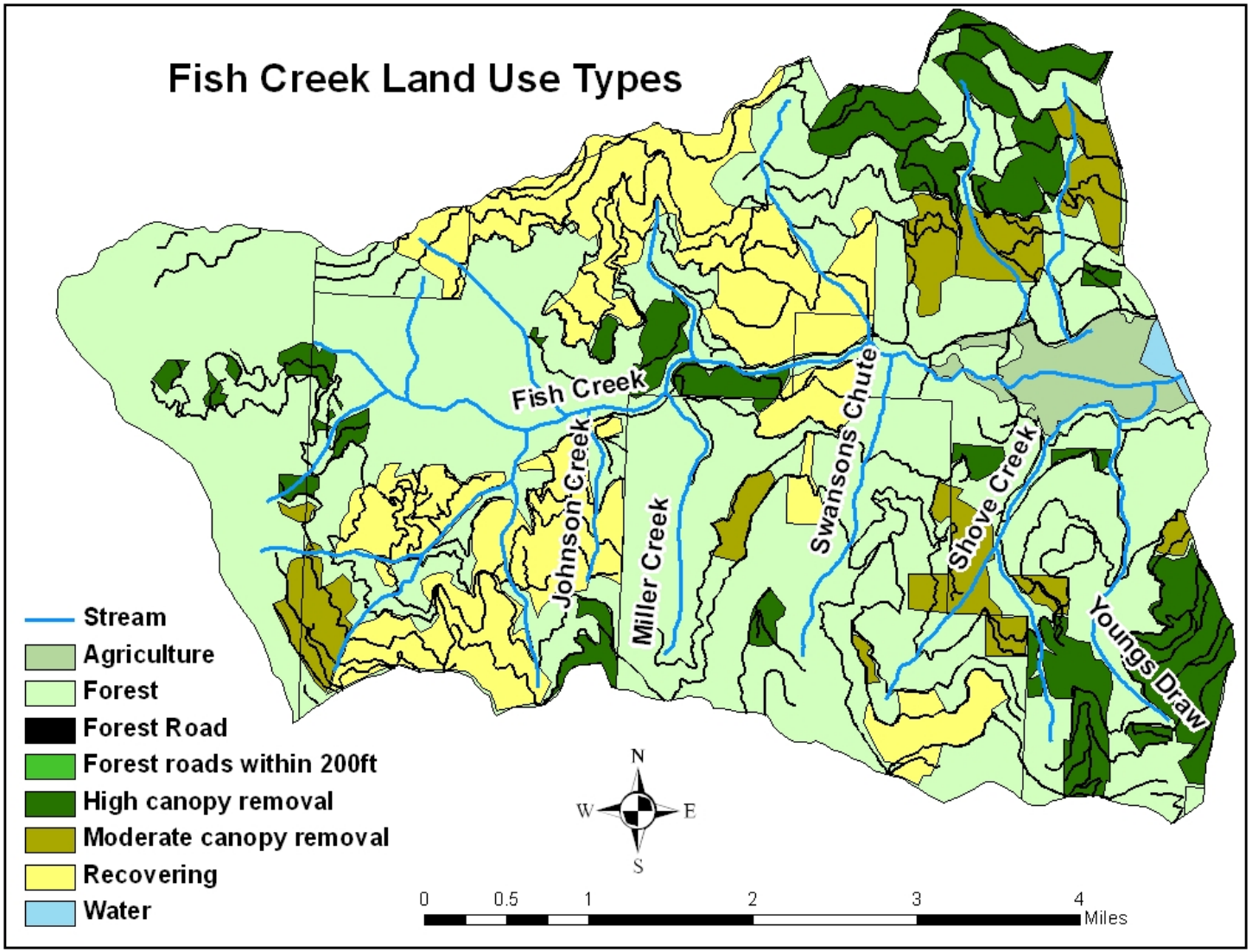
Hayden Creek

Sediment TMDL

- Mapping land uses



Sediment TMDL



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Sediment TMDL

- Once land uses have been map land use coefficients are applied

Table D-1. Sediment yield coefficients used in Lower Clark Fork River Subbasin sediment TMDL.

Land use	Coefficient (tons/acre/year)	Reference
High Canopy Alteration	0.21 t/a/y	Within ranges recorded for harvest activities.
Medium Canopy Alteration	0.07 t/a/y	Within ranges recorded for harvest activities.
Low Canopy Alteration	0.025 t/a/y	Within ranges recorded for harvest activities.
Recovering	0.024 t/a/y	Within ranges recorded for harvest activities.
Forest Roads	McGreer equation used to determine sediment export from forest roads based on CWE scores, given 10% delivery.	Road scores obtained from CWE reports.
Forest Roads within 200 feet of stream	McGreer equation used to determine sediment export from forest roads based on CWE scores, given 100% delivery.	Road scores obtained from CWE reports.
Forest (Natural background)	0.023 t/a/y	Developed based on geology of the watershed and used in previously approved TMDL in northern Idaho.
Agriculture	0.04 t/a/y	Developed with RUSEL2, data supplied by IASCD

Sediment TMDL

- Target Selection
  - Hayden Creek modeled to be 68% above background
  - Fish Creek modeled to be 153% above background
- Sediment in Fish Creek needs to be reduced by 85%

Sediment TMDL

- Land use Area and Current Loads

Table 22. Current loads from non-point sources in the Fish Creek watershed.

Land Use Type	Acres of land use type	Load (tons/year)	Estimation Method
Agriculture	345	14	Modeled
High Canopy Removal	1,447	304	Modeled
Medium Canopy Removal	826	58	Modeled
Recovering Harvest	2,431	61	Modeled
Forest (natural background)[1]	8,504	196	Modeled
Forest road	583	38	Modeled
Forest road within 200 feet of stream	67	157	Modeled
Water	34	0	Modeled
Total Acres	**14,237**	**828**	-

[1]Naturally occurring land use type, contributing load was not allocated for reduction.

Sediment TMDL

- Sediment loads in Fish Creek

Table 21. Current sediment load, background load and load capacity for Fish Creek.

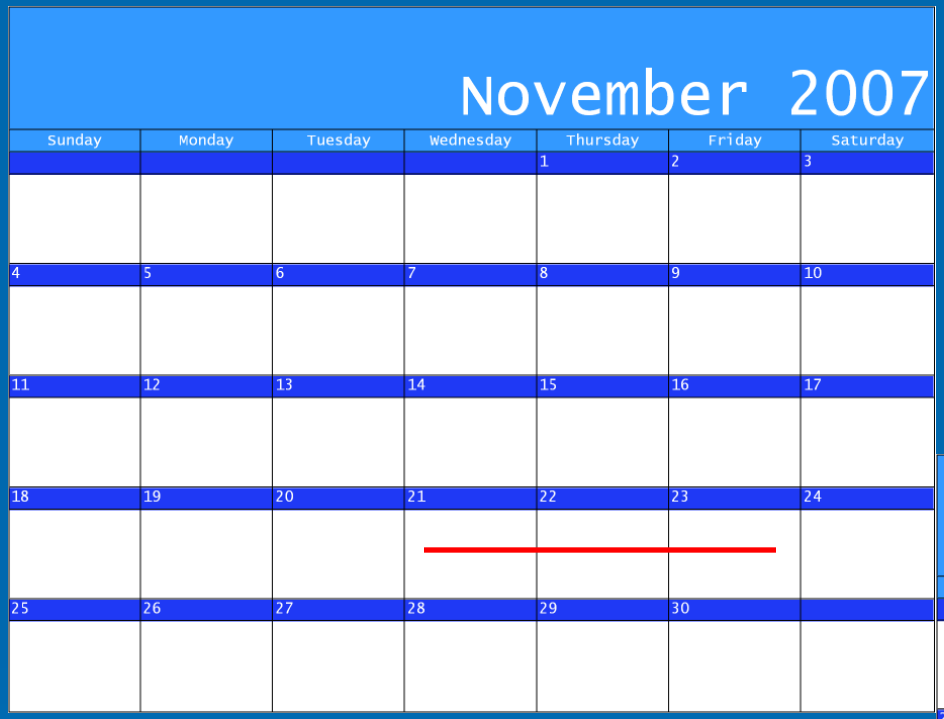
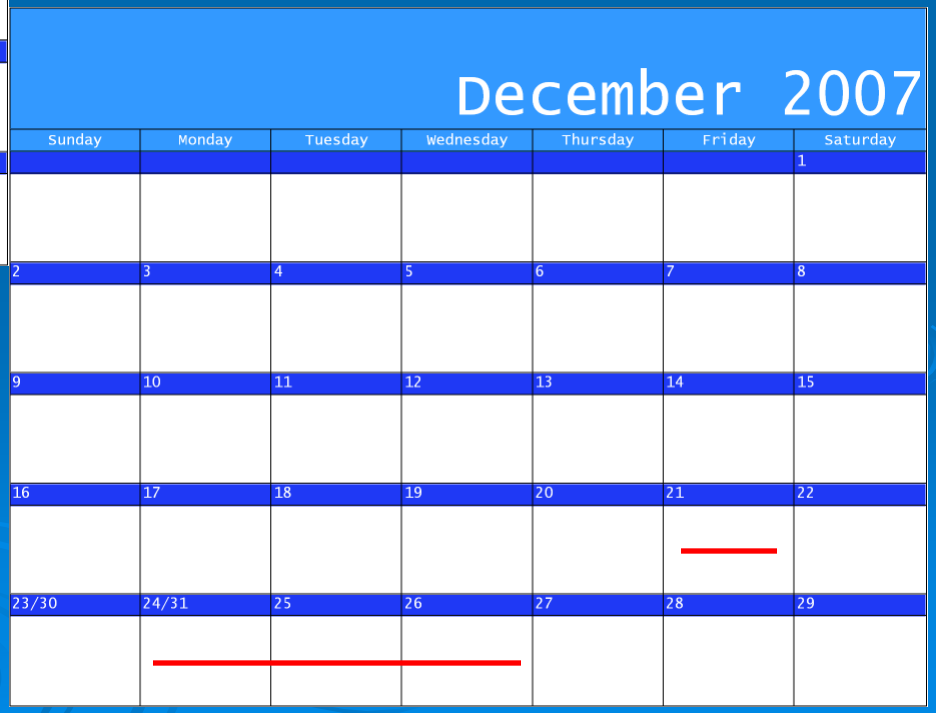
Assessment Units	Watershed acreage	Modeled % above background	Estimated existing load (tons/year)	Natural background (tons/year)	Load capacity at 68% above natural background (tons/year)	Load Reduction Required (tons/year)	% Load Reduction Required
ID17010306PN014_03 ID17010306PN014_02	14,237	153%	827	327	549	278	85%

Document Status and WAG Review

- All draft documents will be posted to WAG web-page for review

http://www.deq.idaho.gov/about/regions/fish_creek_wag/index.cfm

Next Steps

- Addition of WAG comments and technical editor review
- Schedule future WAG meetings

Future WAG meeting