

# Temperature TMDLs - Implementation



North Fork Coeur d'Alene River Subbasin

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# Temperature TMDLs – Implementation

1. How are standards being applied?
2. How will the TMDLs be implemented?

# Disclaimer



I'll do my best to present the legal framework and the IDEQ perspective, but many of these issues are up to the WAG or don't have prescriptive answers. We're in this together and are shaping answers to these questions as we go along!

# 1. How are standards being applied?

- Idaho has numeric temperature standards to protect aquatic life and salmonid spawning.
- There are watersheds without human disturbance that exceed numeric temperature standards.
- We can deal with this conflict using a provision for natural background conditions.



# Natural Background Conditions

- The conditions existing in a water body without human disturbance, diseased vegetation, or flow extremes that affect the physical, chemical, and biological integrity of the water.
- Natural background conditions have inherent variability with time and place.
- *(IDAPA 58.01.02.010)*



# Natural Background Conditions

- If water temperatures in a stream are naturally warmer than Idaho numeric criteria, there is no impairment until water temperatures exceed the natural background temperature.
- DEQ will not be requiring water temperatures cooler than natural background conditions.



# Natural Background Conditions

- Potential Natural Vegetation (PNV) is the method DEQ is currently using for temperature TMDLs.
- PNV is based on natural background provisions in Idaho laws.
- Designed to reach natural background temperature conditions rather than a specific numeric criteria.



# Natural Background Conditions

- We don't know the exact natural background temperatures...
- PNV estimates natural background riparian conditions and solar inputs.
- SO we approximate natural background temperature by restoring, as much as possible, natural background riparian conditions (channel and shade).



# Evaluation of standards and achievement

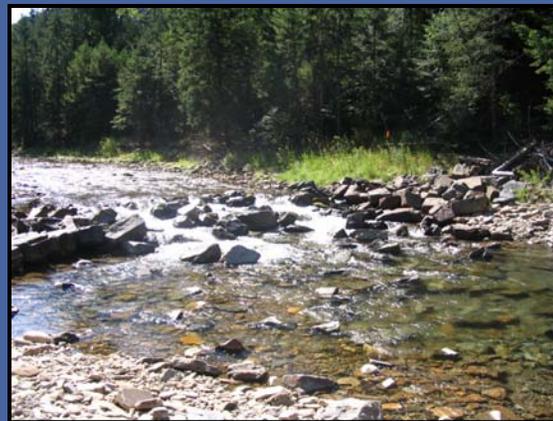
- Adaptive management
- Implementation Plan, WAG members identify and prioritize actions
- WAG participation and review during process
- Five-year reviews of TMDLs
  - Use Attainability Analysis
  - Site-specific Criteria

The important thing is to be moving forward towards compliance with Clean Water Act and attainment of beneficial uses!



# Impaired Streams - Temperature

- Approximately 570 stream miles in the subbasin considered impaired by high water temperatures.
- Based on temperature data-loggers and biological data incorporating fish and invertebrates.

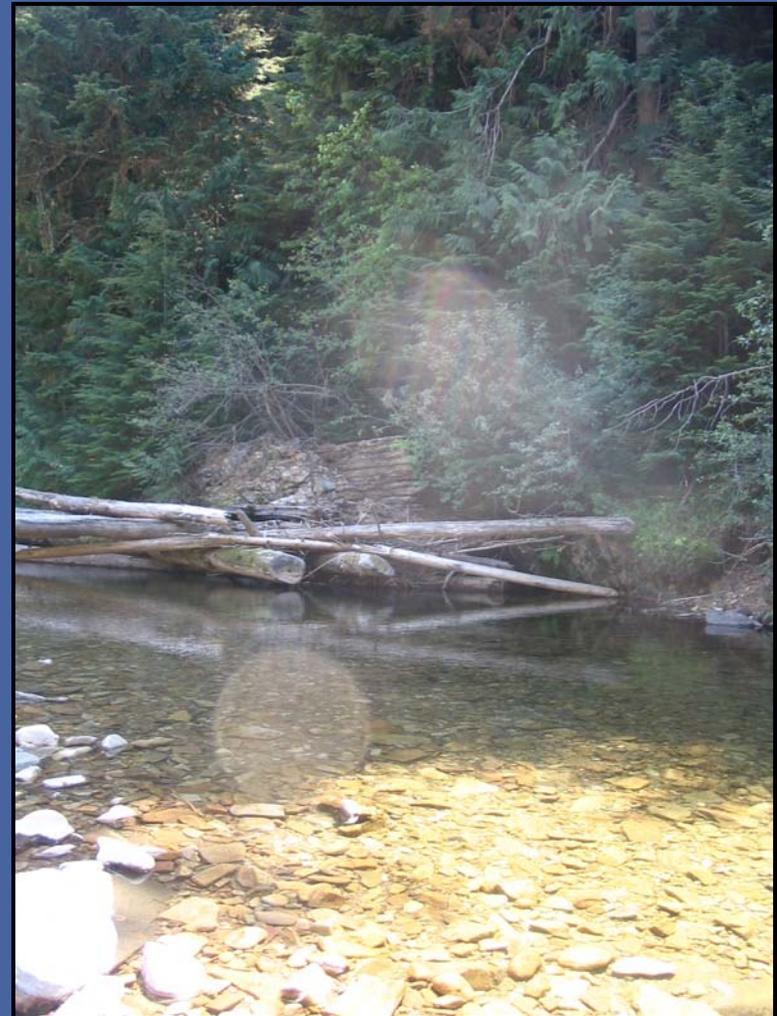


# Temperature TMDLs

- The Clean Water Act requires DEQ develop TMDLs for all water-quality impaired streams.
- Potential Natural Vegetation (PNV) is the method DEQ is currently using for temperature TMDLs.

# PNV and Shade Targets

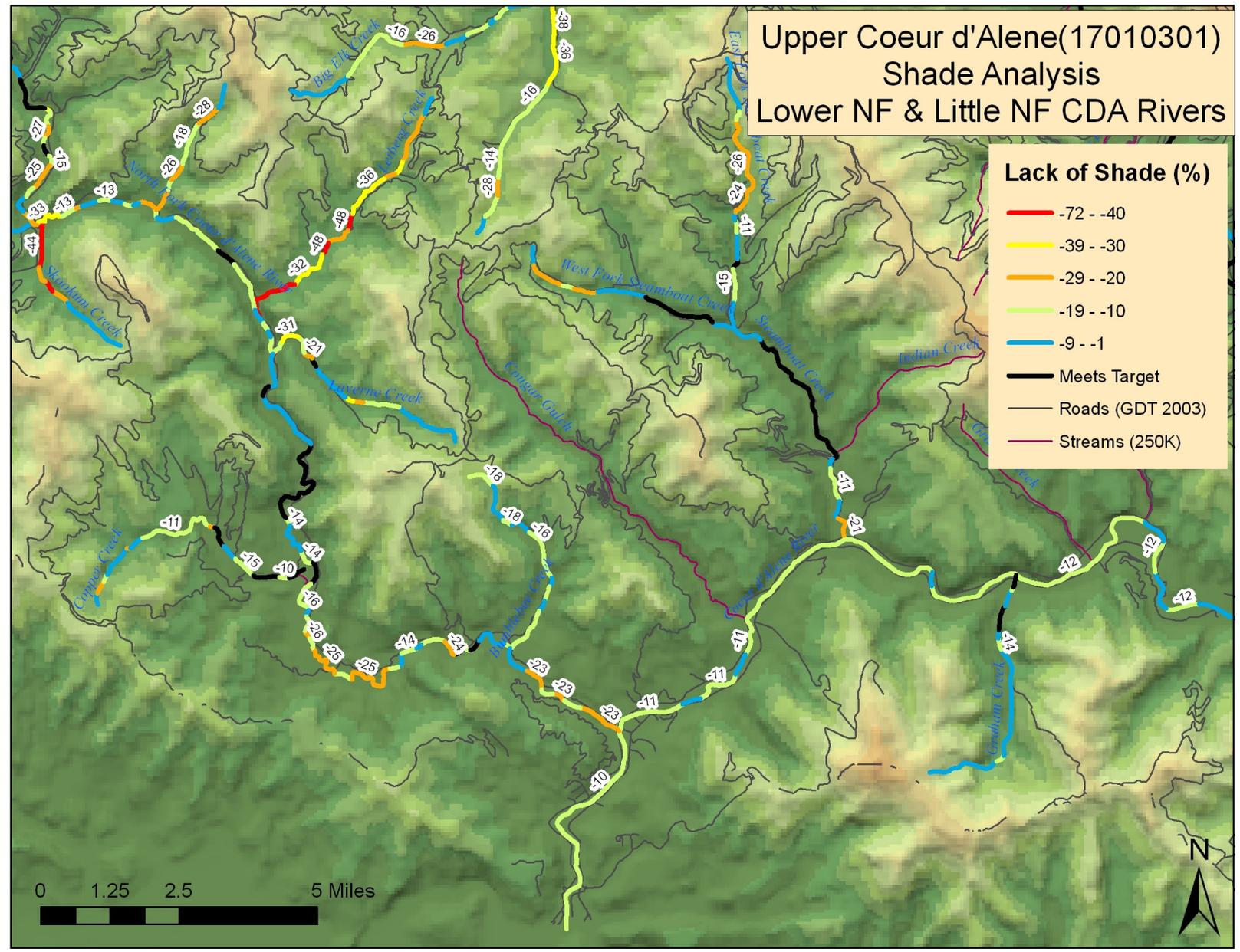
- Shade reduces solar inputs and cools streams

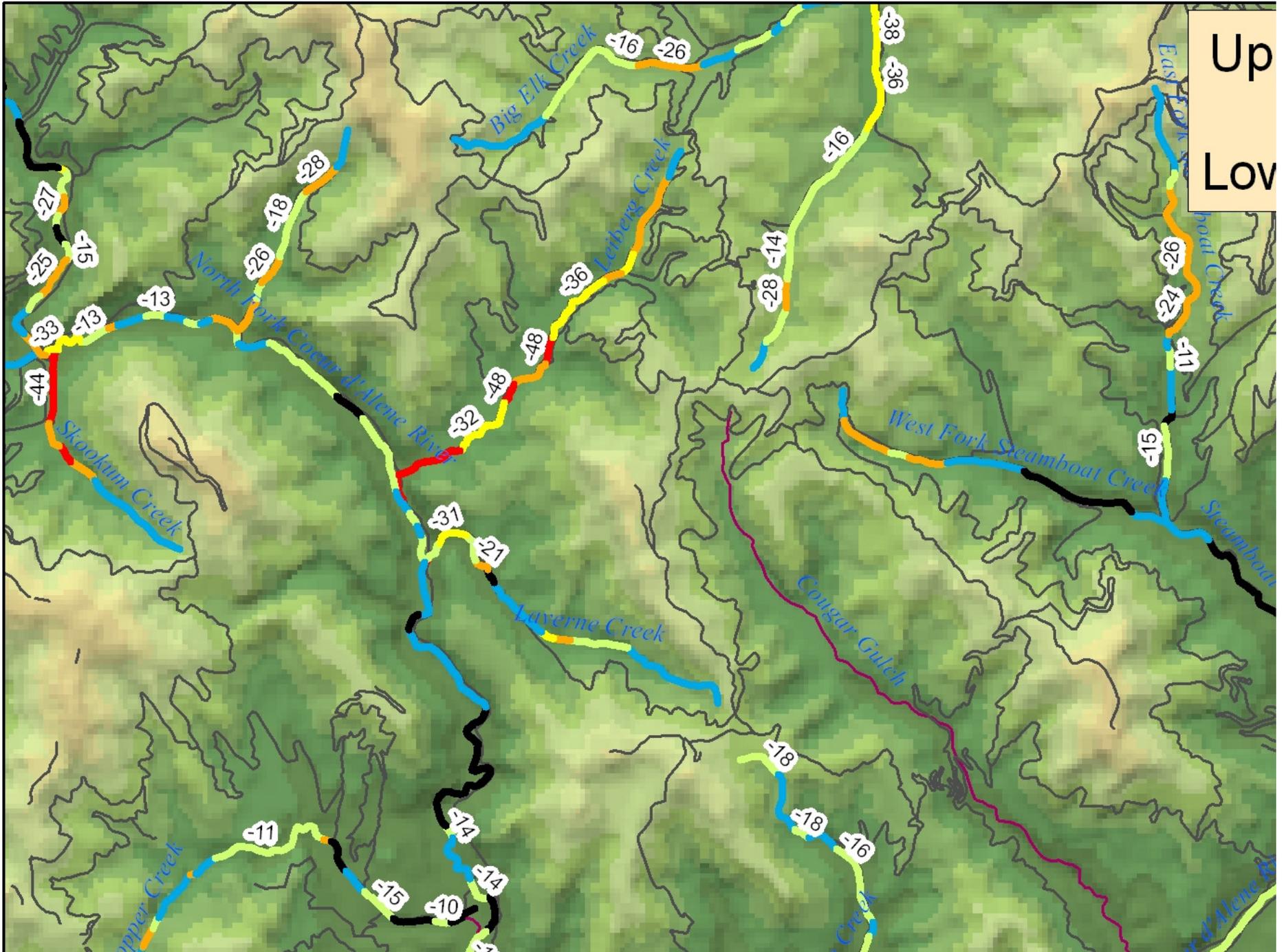


# Upper Coeur d'Alene(17010301) Shade Analysis Lower NF & Little NF CDA Rivers

**Lack of Shade (%)**

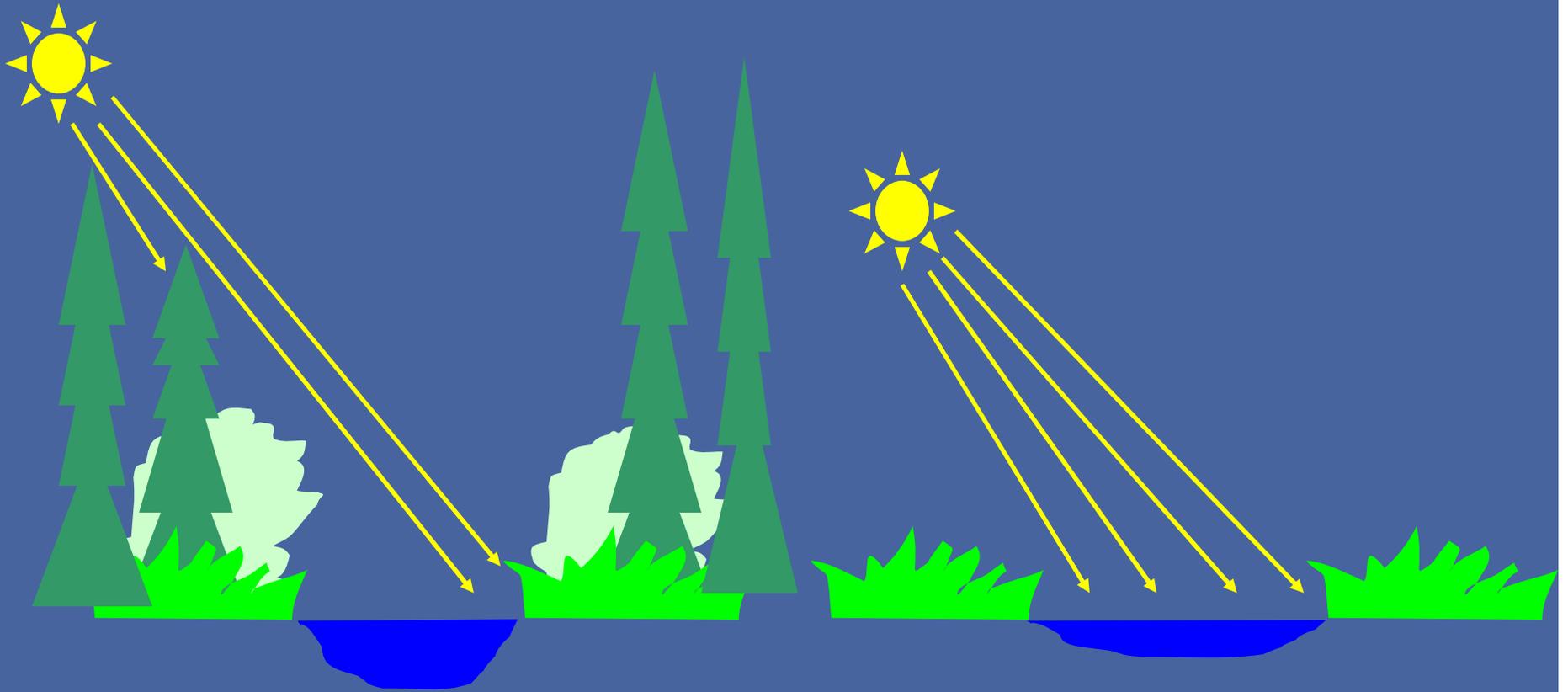
- -72 - -40
- -39 - -30
- -29 - -20
- -19 - -10
- -9 - -1
- Meets Target
- Roads (GDT 2003)
- Streams (250K)



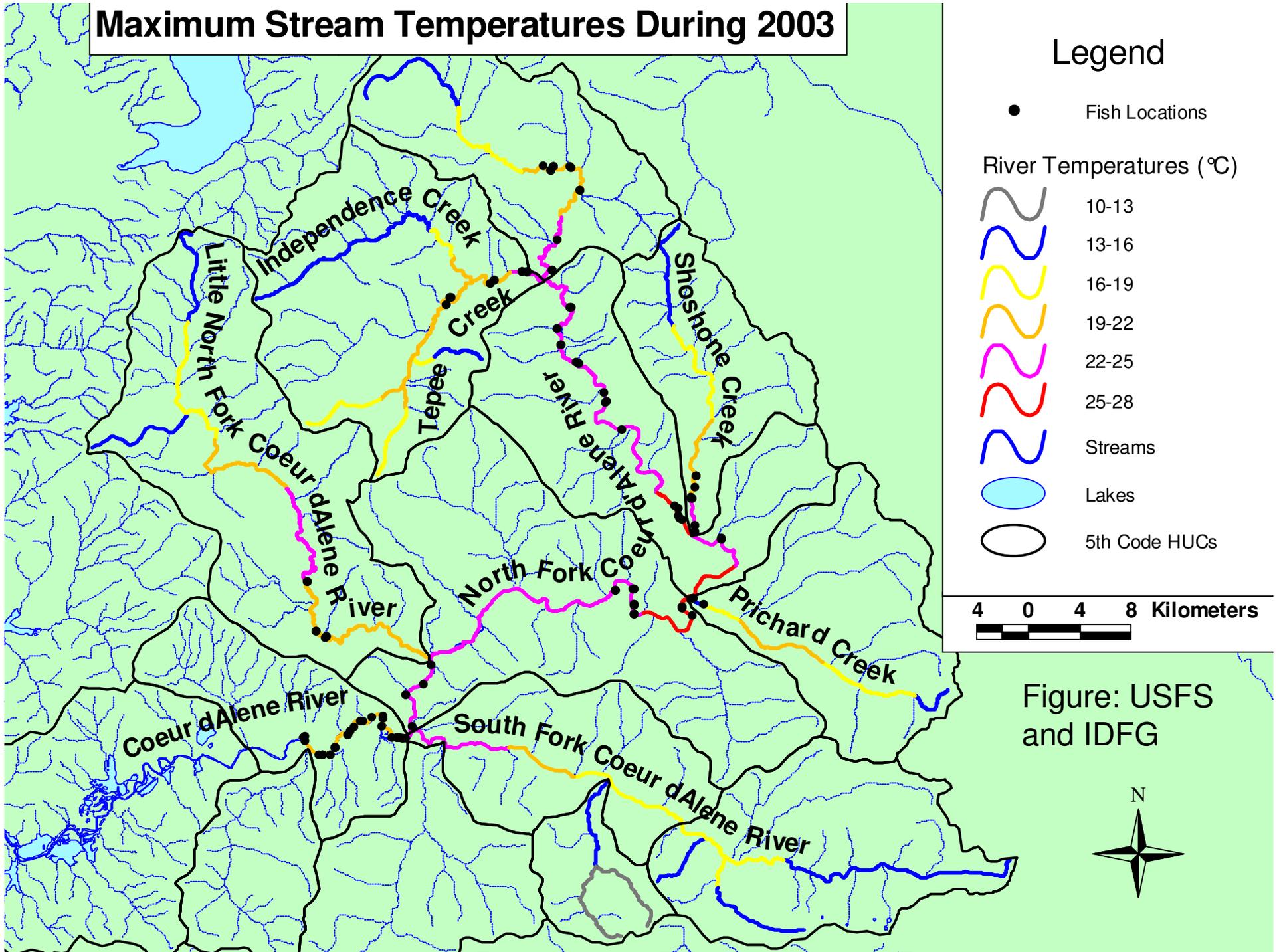


# Shade and Channel Widths

- Shade and channel width affect solar loads.



# Maximum Stream Temperatures During 2003



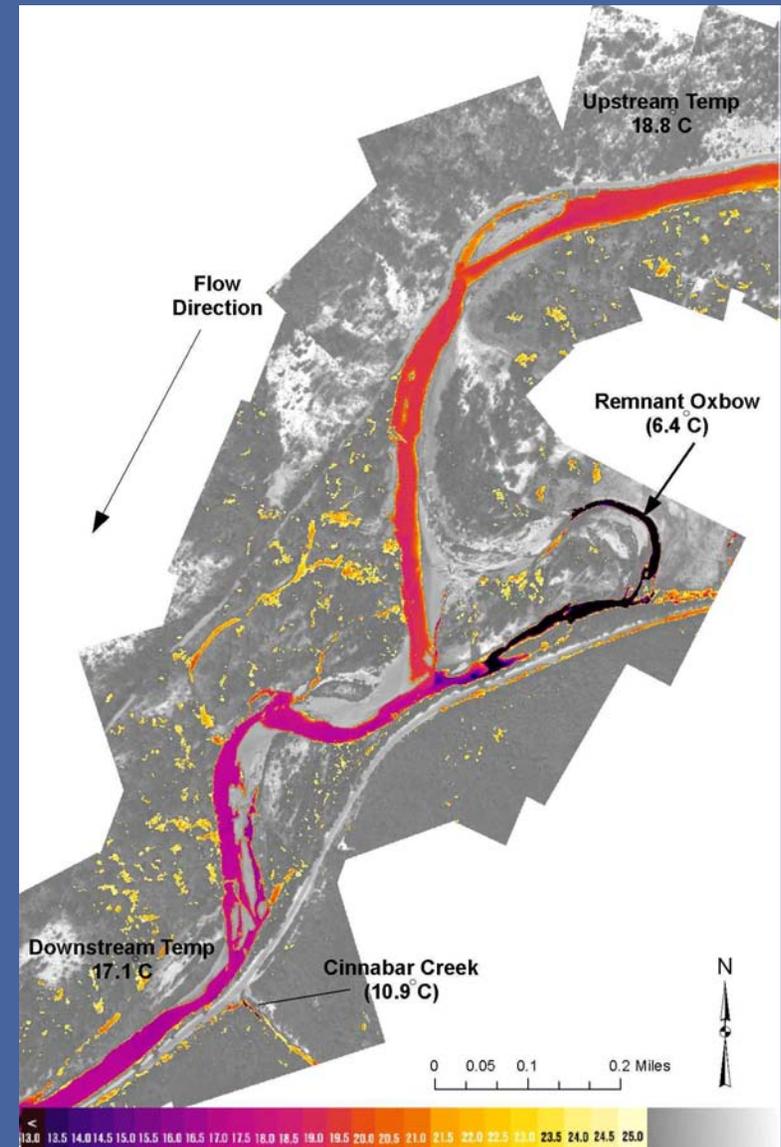
# TMDL Implementation

- Activities that promote natural background riparian conditions will help us achieve natural background temperatures – as much as possible.
- Targets – Shade and channel shape
- Other activities...



# TMDL Implementation

- Preserve stream features like side channels, wetlands and oxbows that contribute cool water to the river
- Remove fish passage barriers that block access to thermal refugia
- Other fish habitat work
- Relate to other WQ issues like sediment



# Voluntary Implementation Activities

- Any practice that promotes effective riparian shade
- Riparian planting
- Watershed restoration
- Best Management Practices for timber, mining, agriculture, etc.
- May take decades for full effect

Most TMDL implementation is voluntary and depends on active participation of individuals like you.

# Existing Guidance and Regulations

Riparian protections are included in:

- Forest Practices Act
- INFISH
- Shoshone County Floodplain Ordinance
- Permits



# TMDL Implementation Plan

- DEQ will facilitate development of TMDL Implementation Plan.
- Makes sense to combine sediment, temperature and metals into comprehensive strategy.
- WAG provides input, identifies opportunities and hurdles, prioritizes activities, and management agencies develop their approaches.
- Produced ~ 18 months after TMDL approved.

# How will TMDLs be implemented?



It's up to all of us to decide!