Upper Hangman Creek
Total Maximum Daily Load (TMDL)

August 2, 2006

Tensed City Hall

Tensed, Idaho

So why are we all here?

Goals of a Watershed Advisory Group (WAG)

- To work cooperatively to achieve a realistic and usable water quality restoration plan for the Upper Hangman Creek Watershed.

  This will be accomplished by:

  – Sharing of knowledge
  – Group discussion
  – Review of draft documents

- Once TMDL is complete, WAG will work with Idaho DEQ to complete and implement an Implementation Plan.
  – Watershed improvement projects aimed at restoring beneficial uses

DRAFT AGENDA

Upper Hangman Creek Watershed Advisory Group
Wednesday August 2, 2006
9:00 am – 12:00 pm
Tensed City Hall
311 C Street, Tensed ID

9:00 - 9:15

1. **Introductions and Meeting Agenda**

9:15 – 10:00

2. **Background on the Total Maximum Daily Load (TMDL) process**

    A. Upper Hangman Creek overview
    B. Upper Hangman Creek Draft TMDL results
    C. Data used for listing
    D. Coeur d'Alene Tribe and Washington Dept. of Ecology TMDL status

Break 10:00 – 10:15

10:15 – 11:00

3. **Watershed Advisory Group (WAG) role**

    A. Idaho Statute 39-3615 – 39-3616 requirements of Idaho DEQ and WAG in TMDL development
    B. WAG operating procedures

11:00 – 11:45

4. **Beneficial uses and support status of the waters of the Upper Hangman Creek Watershed**

    A. Upper Hangman Creek use designations and status
    B. Beneficial Uses

11:45 - 11:55

5. **Upper Hangman Creek TMDL Draft Timelines and Milestones**

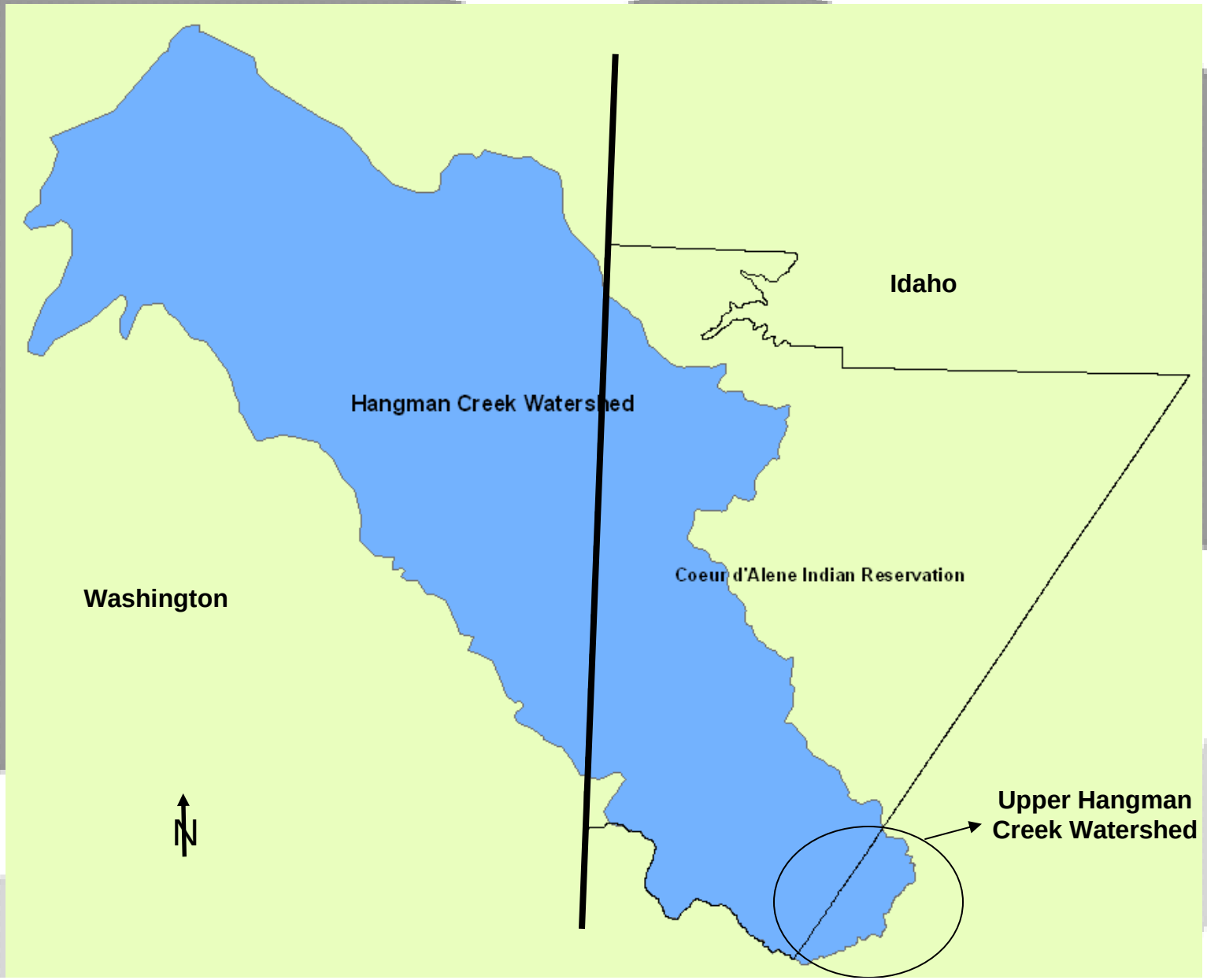
    A. Navigating the Upper Hangman Creek TMDL Website

11:55 - 12:00

6. **Future WAG meetings**

    A. Future meetings

Upper Hangman Creek Watershed in Perspective



Clean Water Act

- The federal Clean Water Act requires states to develop water quality standards.
- Idaho's standards have been developed and approved by the EPA.
- Standards are intended to protect, restore and preserve water quality so waters are available for their intended (beneficial) use.

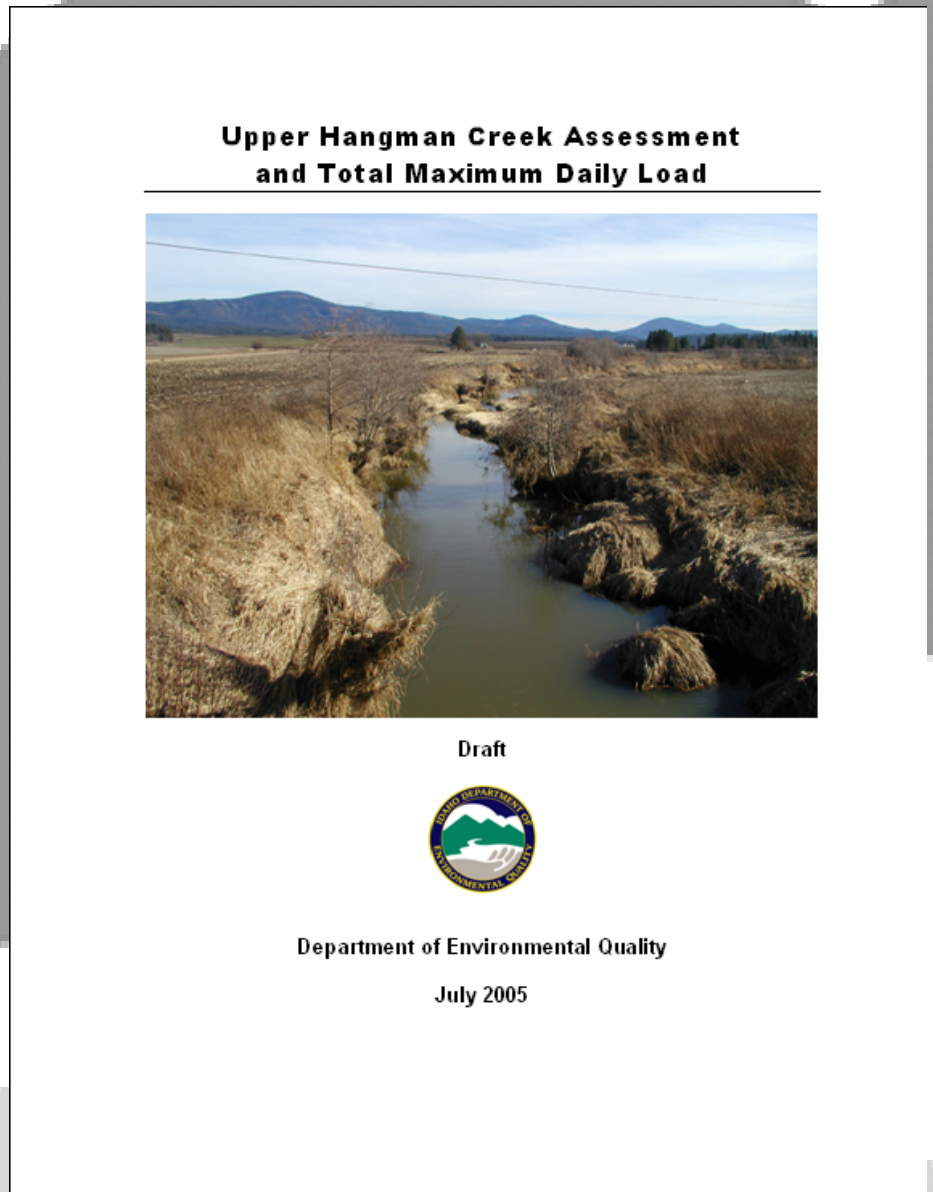
Identifying Impaired Waters

- DEQ collects information on water bodies to determine if they meet water quality standards and support their beneficial uses.
- The Clean Water Act Section 303(d) requires that Idaho report on the status of assessed water bodies every two years. The report formally known as the §303 (d) list, is know known as the Integrated Report.
- The current EPA approved version of Idaho's impaired water body list is the 2002 Integrated Report.
- TMDLs are required for all water bodies not meeting Idaho water quality standards.

Listing History of the Upper Hangman Creek Watershed

- 1998 §303 (d) list
  - Hangman Creek ID17010306PN001_02 and ID17010306PN001_03
    - Habitat alteration, Bacteria, Nutrients, Sediment and Temperature
- 2002 Integrated Report Section 5
  - Hangman Creek ID17010306PN001_02 and ID17010306PN001_03
    - Bacteria, Nutrients, Sediment and Temperature
- Draft TMDL developed using the 1998 §303 (d) list

Draft Upper Hangman Creek Assessment and TMDL



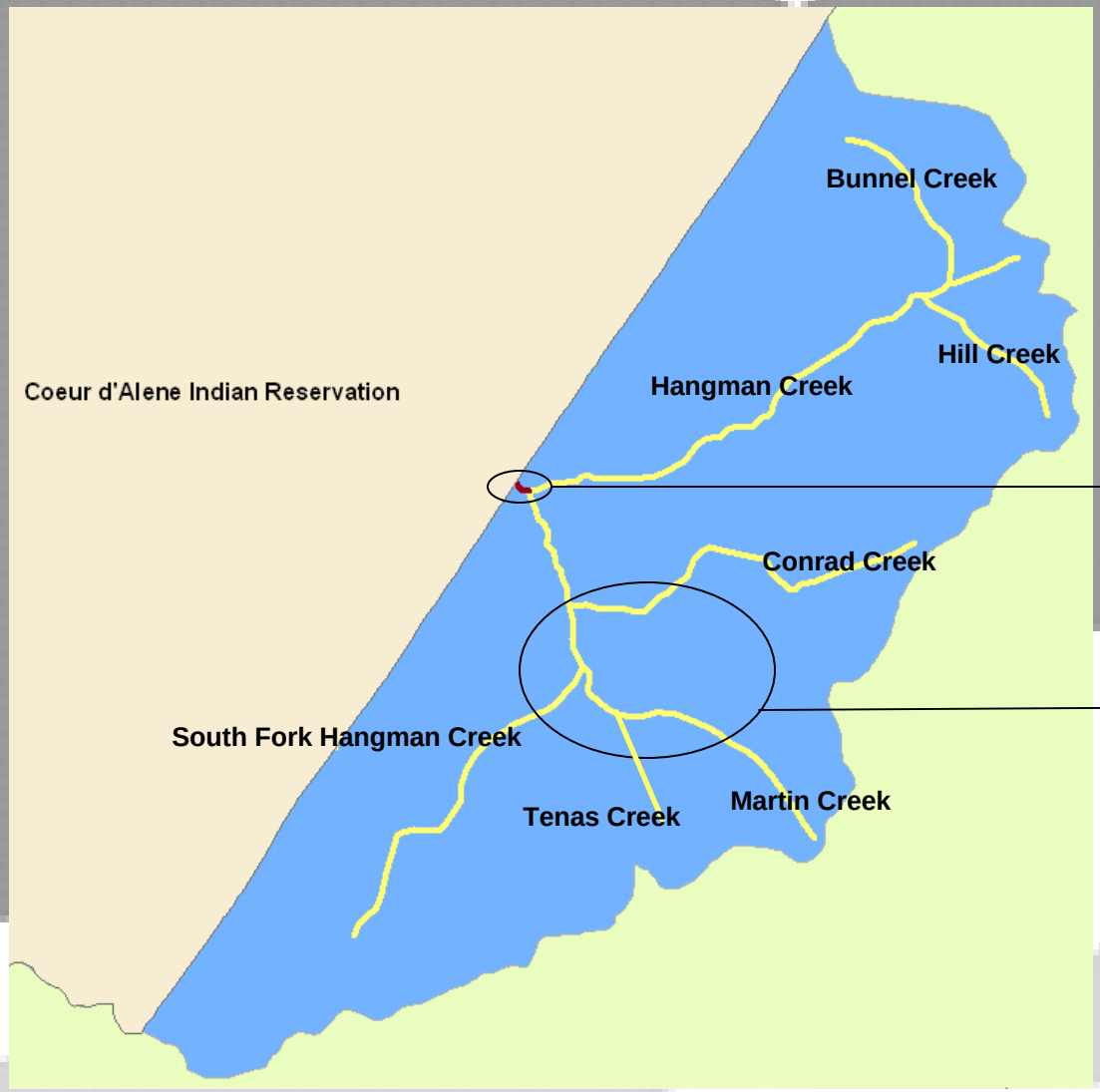
- Written by DEQ Technical Services
  - Mark Shumar
  - Don Zaroban
- 151 pages
- Addresses
  - Sediment
  - Temperature
  - Bacteria
  - Nutrients
- Completed July 2005

The Total Maximum Daily Load (TMDL) Process

- A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive from human-caused sources and still meet Idaho water quality standards.

- LC = MOS + LA + WLA + NB = TMDL
  - LC = Load Capacity
  - MOS = Margin of Safety
  - LA = Load Allocation
  - WLA = Waste Load Allocation (Point Sources)
  - NB = Natural Background
  - TMDL = Total Maximum Daily Load

Assessment Units (AUs) in the Upper Hangman Creek Watershed



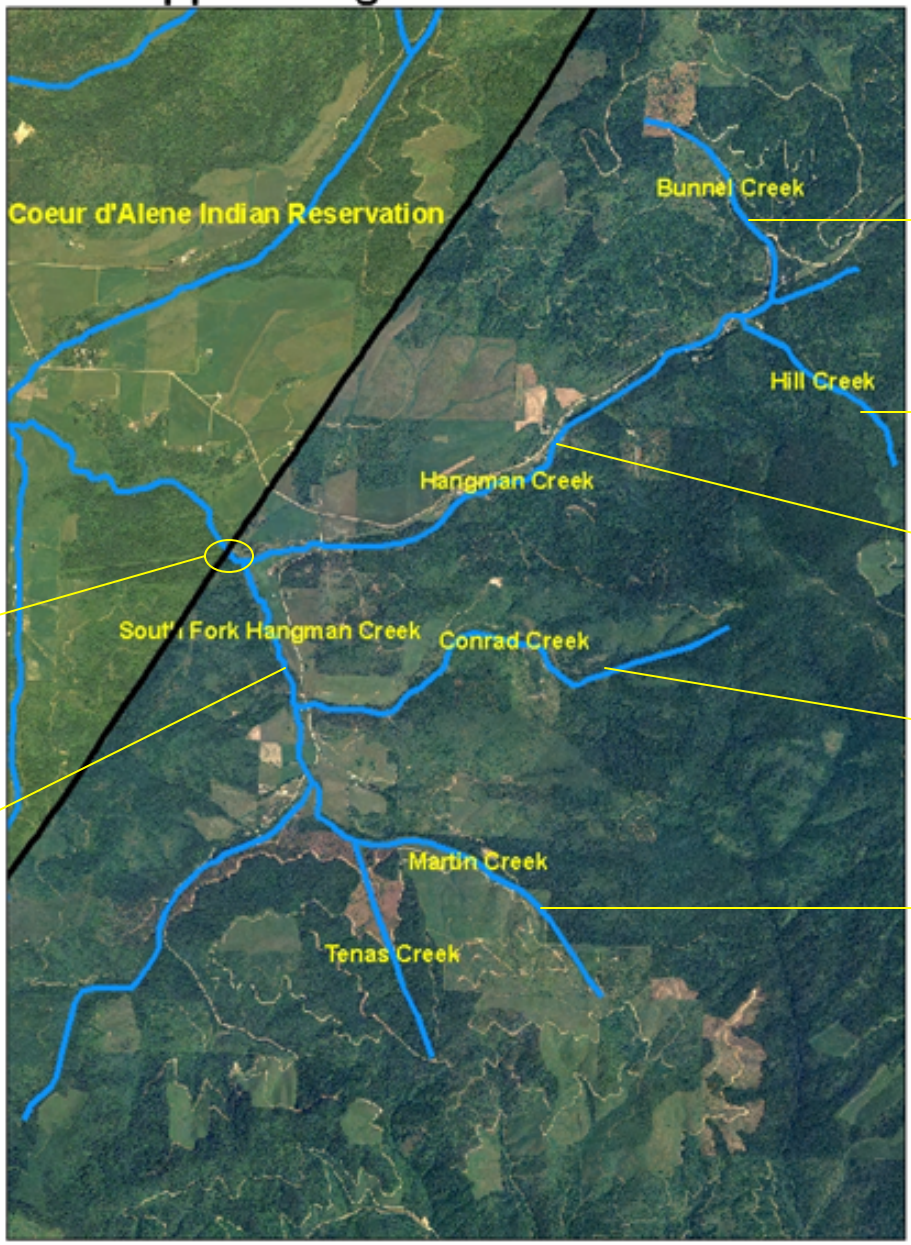
ID17010306PN001_03

-Hangman Creek below confluence with South Fork Hangman Creek

ID17010306PN001_02

-All tributaries to Hangman Creek and South Fork Hangman Creek including Hangman Creek above confluence with South Fork Hangman Creek and South Fork Hangman Creek

Streams for TMDL Development in the Upper Hangman Creek Watershed



Sediment and Temperature

Sediment and Temperature

Bacteria, Sediment and Temperature

Sediment and Temperature

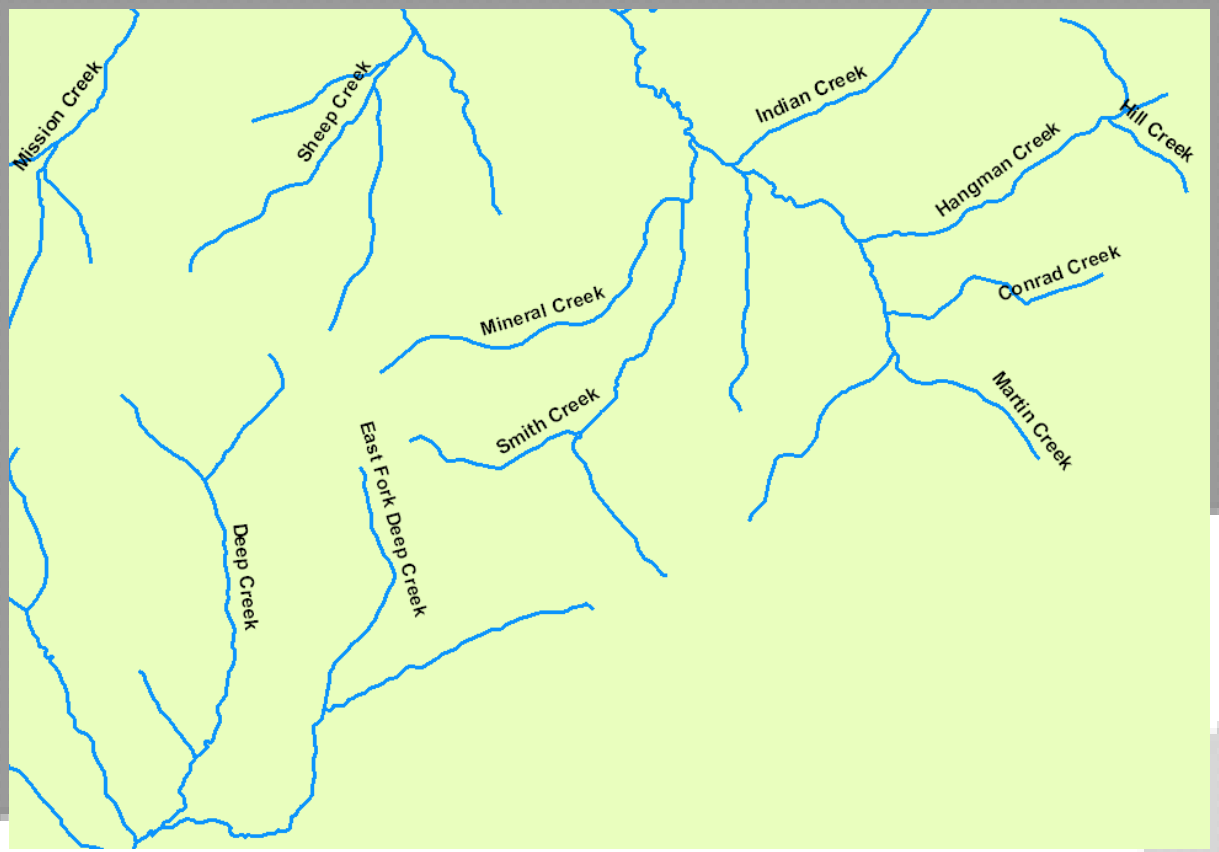
Bacteria, Sediment and Temperature

Sediment and Temperature

Draft Upper Hangman Creek TMDL Overview

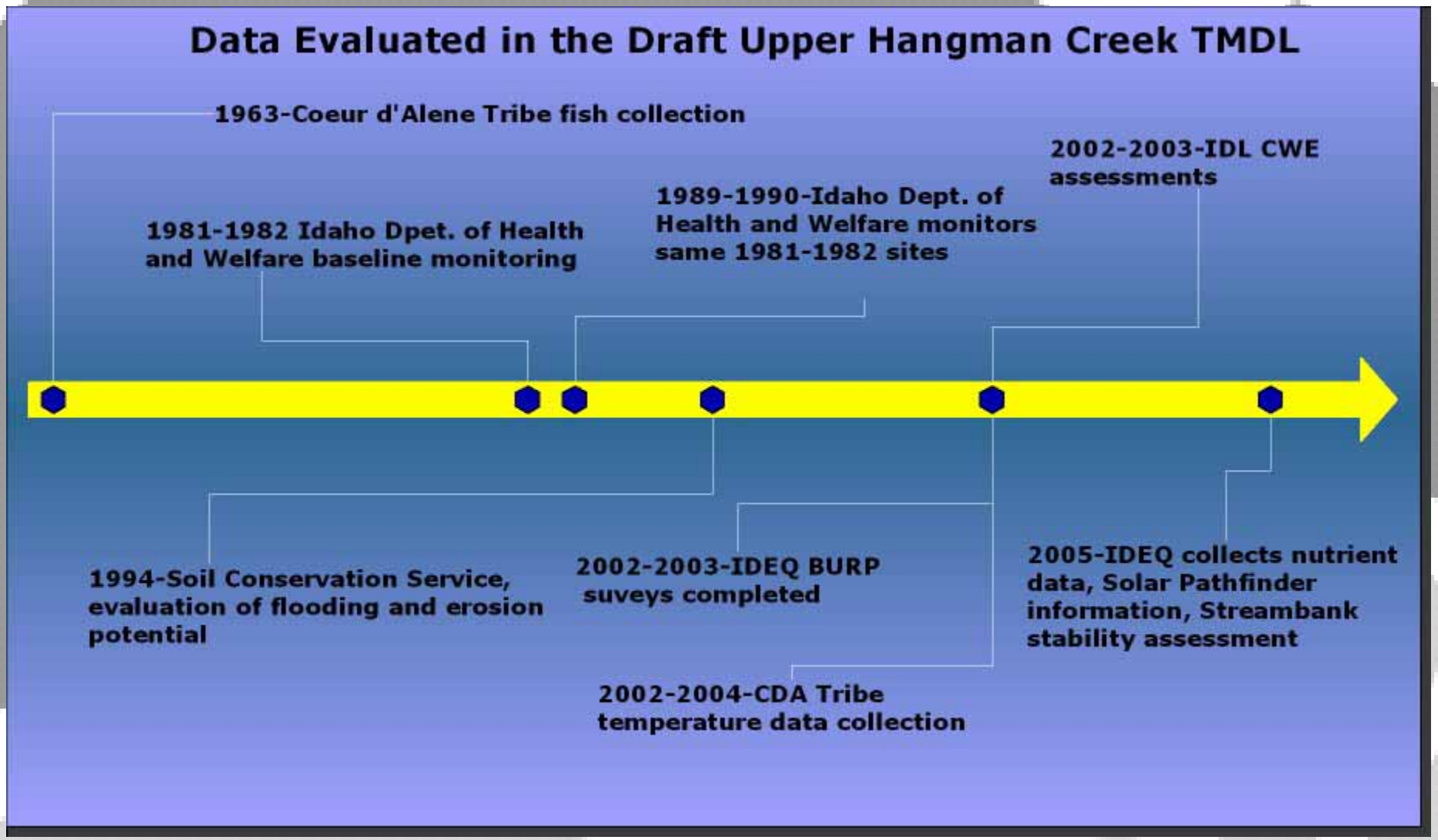
- **Temperature**
  - All streams assessed were determined to be exceeding temperature standards
  - All streams assessed given 90% shade target
  - Solar loading reductions ranged from 50% - 0%
- **Sediment**
  - Bank stability, mass failures and road erosion used to determine appropriate sediment load
  - 80% bank stability set as target, 50% over natural background set as target for roads
  - Sediment loading reductions ranged from 73% - 0%
- **Bacteria**
  - Water quality standard is target, 126 cfu/100 ml of *E. coli.*
  - Reductions ranged from 85% - 0%
- **Nutrients**
  - No TMDL developed, recommended nutrient de-listing
  - Nutrients found to be in concentrations near reference conditions

Draft TMDL Results in Comparison to Deep Creek

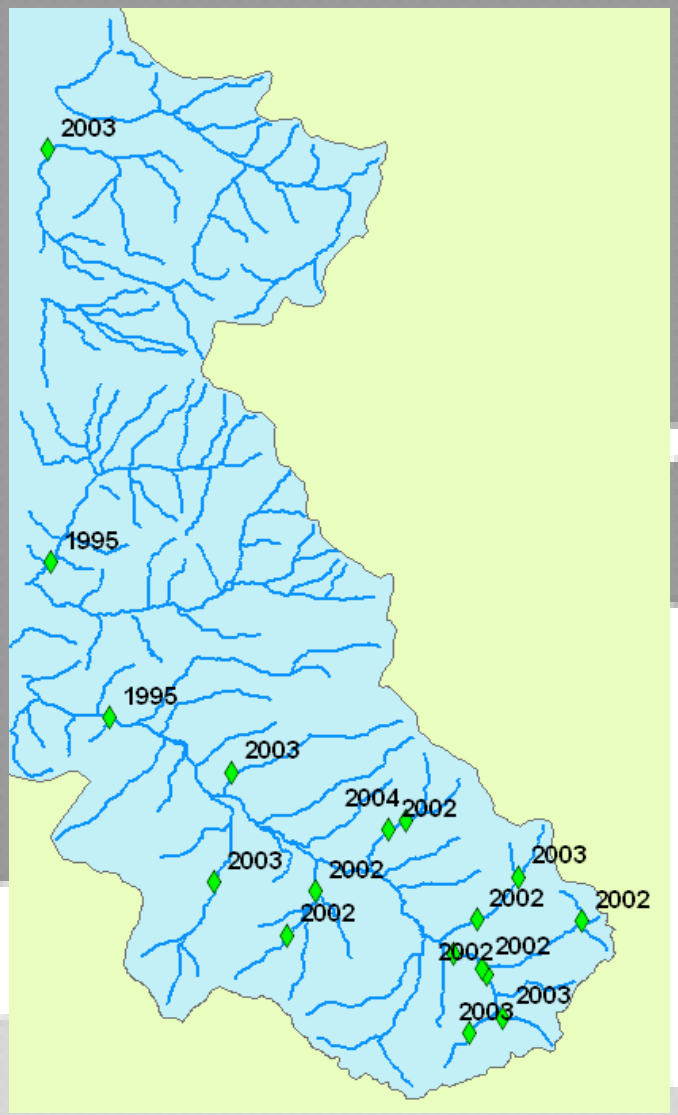


- Deep Creek
  - Sediment reduction of 96%
  - Solar loading reduction of 70-50%
- Hangman Creek
  - Sediment reduction of 73%
  - Solar loading reduction of 50-0%
- Nutrient de-listing also suggested for Deep Creek

Data Evaluated in TMDL

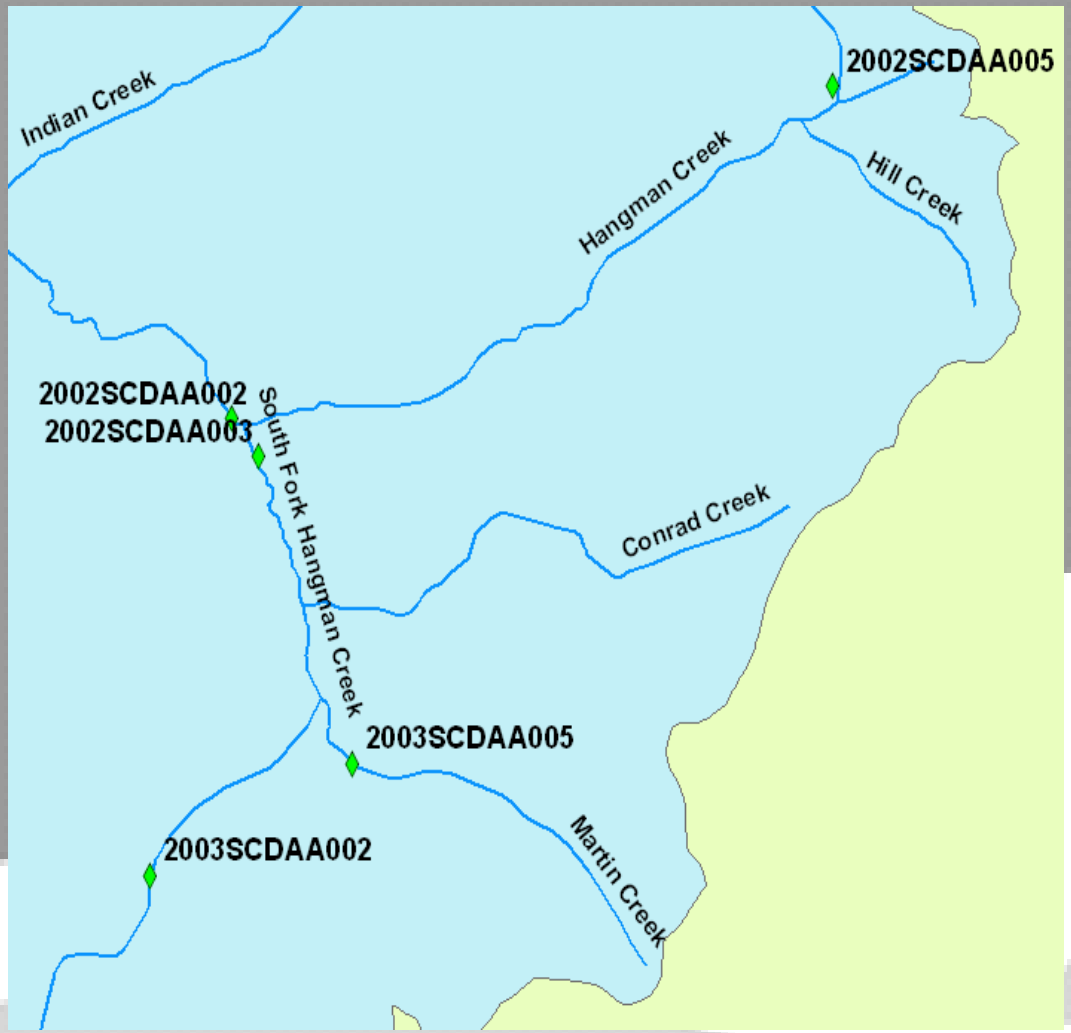


DEQ BURP Sites in the Hangman Creek Watershed



- Beneficial Use Reconnaissance Program (BURP) collects biological, physical and chemical data to aid in the assessment of water quality support status.
- BURP data has been collected during July through September since 1995.
- 17 BURP sites are located within the Hangman watershed.

DEQ BURP Sites in Upper Hangman Creek



- Five BURP surveys completed in Upper Hangman Creek Watershed
  - SF Hangman Creek
  - Bunnel Creek
  - Hangman Creek
  - Martin Creek
- One BURP survey per 2,000 acres
  - St. Joe/St. Maries = one BURP survey per 5,500 acres

Break

Watershed Advisory Group Consultation Role Idaho Code §39-3611 (HB145)

Watershed advisory groups will generally advise DEQ on the:

- appropriateness, attainability and status of existing and designated beneficial uses and water quality criteria within the watershed, and
- on the development and implementation of TMDLs and other state water quality plans, including those specific actions needed to control point and nonpoint sources of pollution within the watersheds of those water bodies where designated beneficial uses are not fully supported.

DEQ Responsibilities

- Consult with WAGs while developing the Subbasin Assessment and TMDL and present all requested information in a timely fashion
- Provide opportunity for the WAG to assist in writing the SBA, TMDL and Implementation Plans for the watershed
- Produce a Subbasin Assessment and TMDL in accordance with state and federal water quality laws
- Record any WAG disagreement with SBA/TMDL at the time of public comment and in all drafts of the document

Stakeholder Representation

- Agriculture
- Mining
- Point Source Dischargers
- Forest Products
- Local government
- Livestock
- Indian tribes
- Water-based recreation
- Environmental interests
- Land management and regulatory agencies with an interest
- Other members representative of the industries and interests affected by the management of the watershed

WAG Operating Procedures

Beneficial Uses

- Beneficial Uses are any of the various uses of water.
  - Beneficial Uses of Upper Hangman Creek include cold water aquatic life, salmonid spawning and secondary contact recreation
- Beneficial uses are broken out into three categories
  - Existing – uses actually attained in the water body on or after November 28, 1975
  - Designated – uses specified in water quality standards
  - Presumed – all waters without existing or designated beneficial uses assigned, DEQ will apply the numeric cold water criteria and primary or secondary contact recreation criteria

Upper Hangman Creek Use Designation

Water Body	Uses	Type of Use
Hangman Creek	Cold water aquatic life Secondary contact recreation	Designated
Hangman Creek	Salmonid spawning	Existing
Tributaries to Hangman Creek	Cold water aquatic life Secondary contact recreation	Presumed
Tributaries to Hangman Creek	Salmonid spawning	Existing

Applicable Water Quality Criteria

- Bacteria
  - *E. coli* concentrations are not to exceed 126 *E. coli* organisms/100ml.
- Nutrients
  - Narrative standard - surface water shall be free from excess nutrients that cause visible slime growth.
- Sediment
  - Narrative standard - sediment shall not be in quantities which impair designated beneficial uses.
- Temperature
  - Numeric standard - cold water aquatic life daily max 22°C
    salmonid spawning daily max 13°C

From Idaho water quality standards (IDAPA 58.01.02.200.09), if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered a violation of water quality standards.

Upper Hangman Creek Homepage

Find information about:

- Schedule & location of upcoming meetings
- Agendas
- Operating protocols
- Review and background documents such as maps, definitions, draft TMDLs, etc.
- Documents, minutes and other content from previous meetings

DEQ Web Resources for WAGs

DEQ website address:

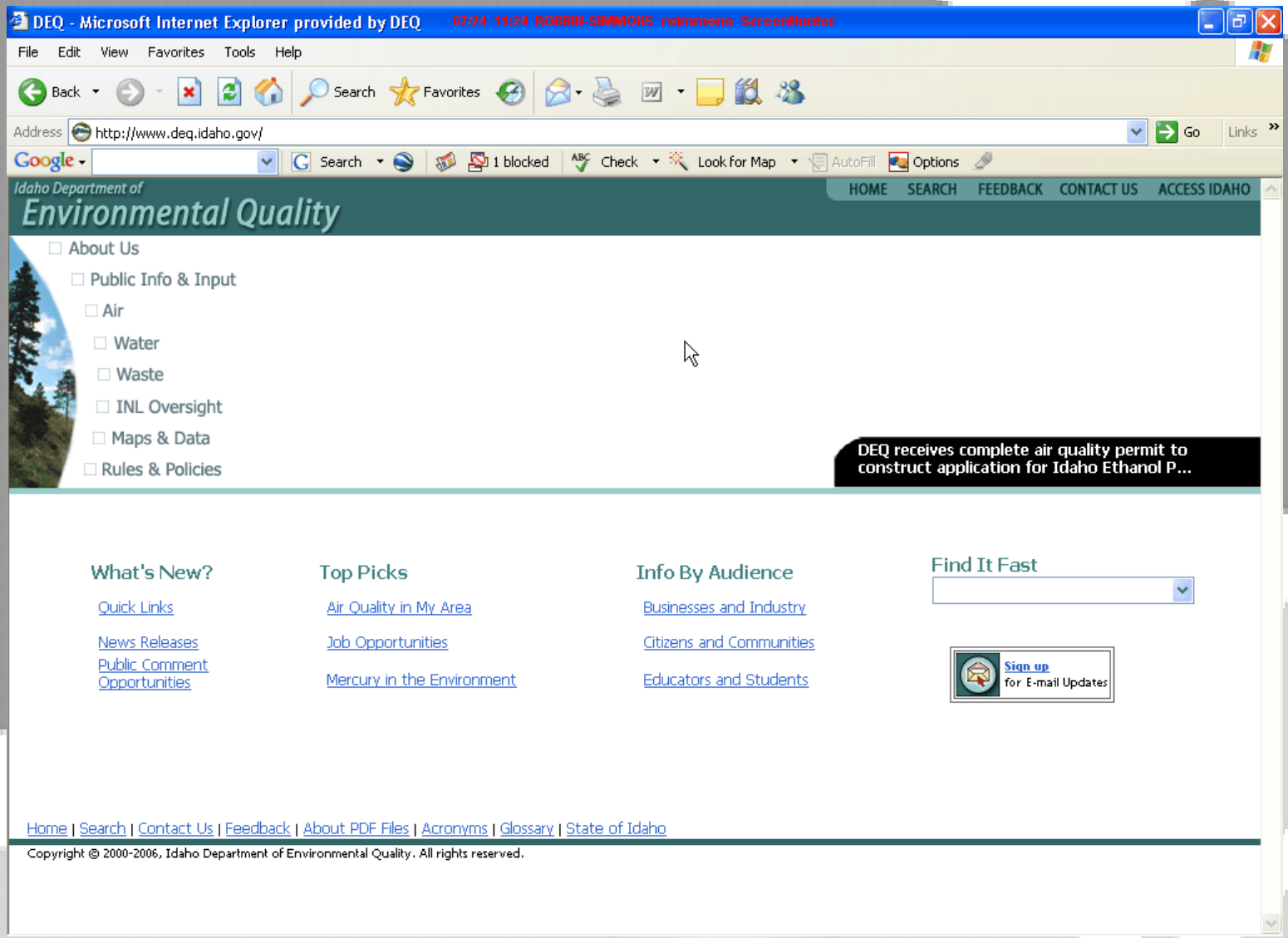
http://www.deq.idaho.gov

Upper Hangman Creek website address:

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

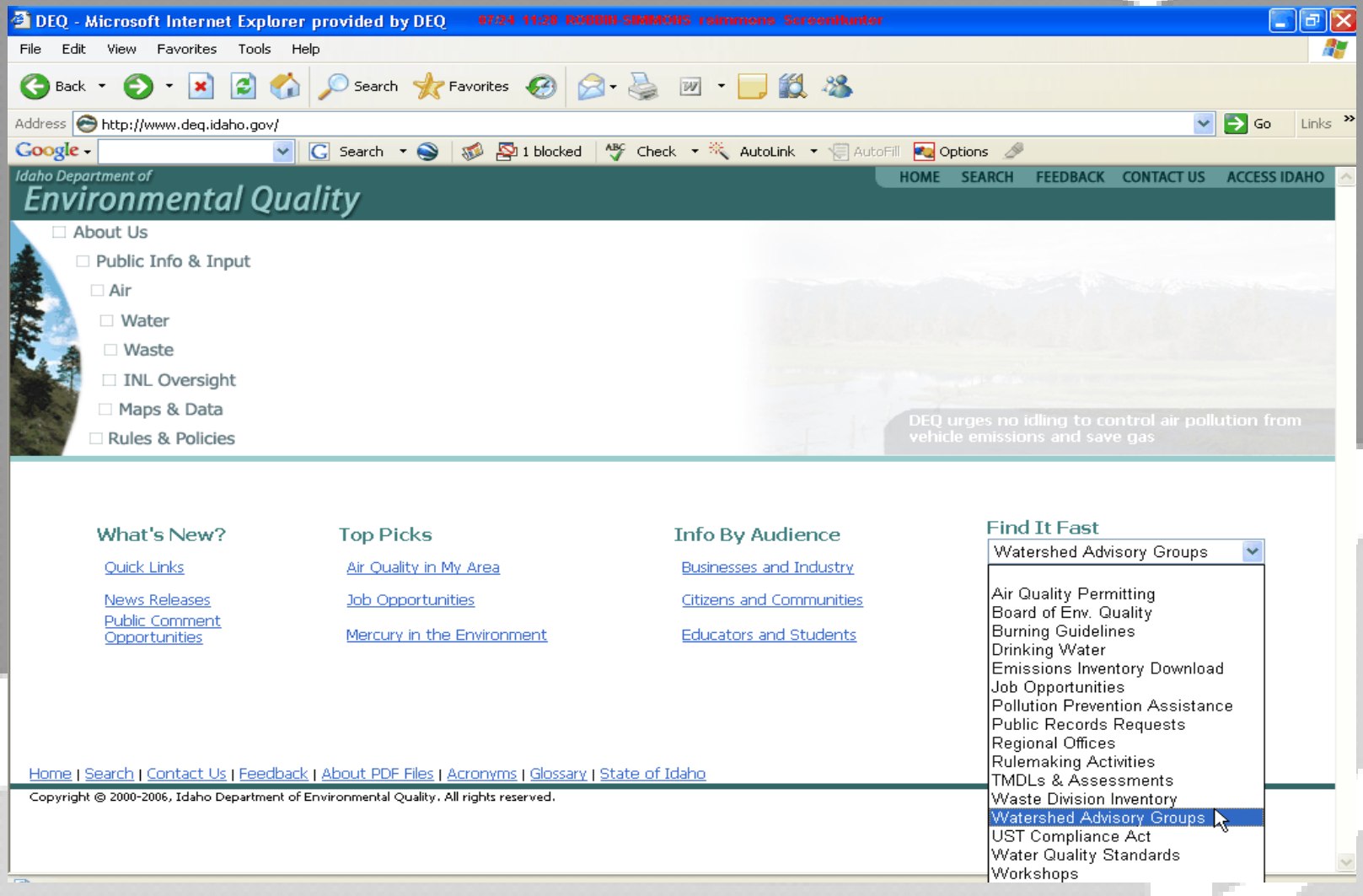
DEQ Website Homepage

Find It Fast drop-down menu



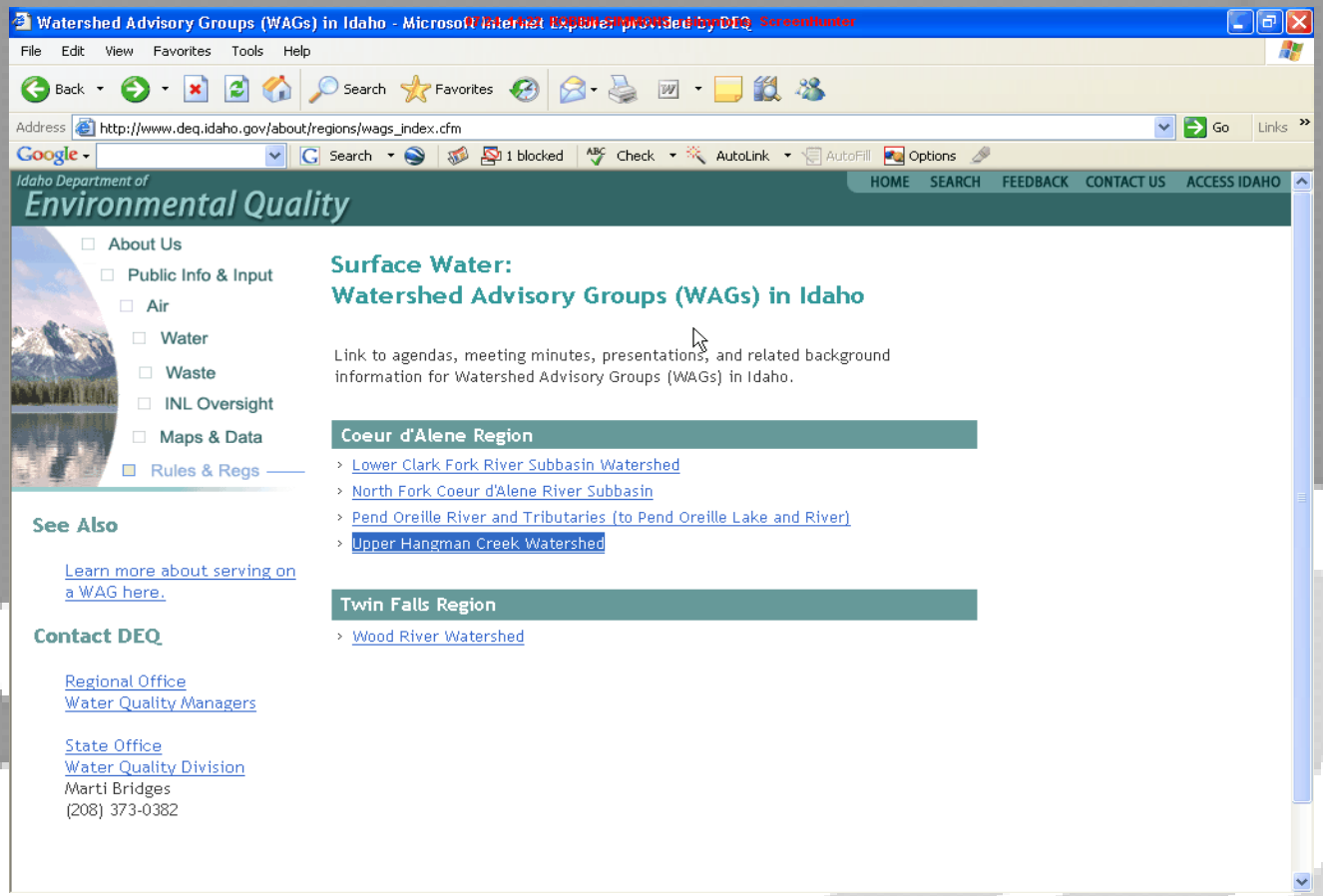
From DEQ Website Homepage to WAG Homepage

Choose Watershed Advisory Groups



From WAGs Homepage to Upper Hangman Creek WAG Homepage

Choose your WAG

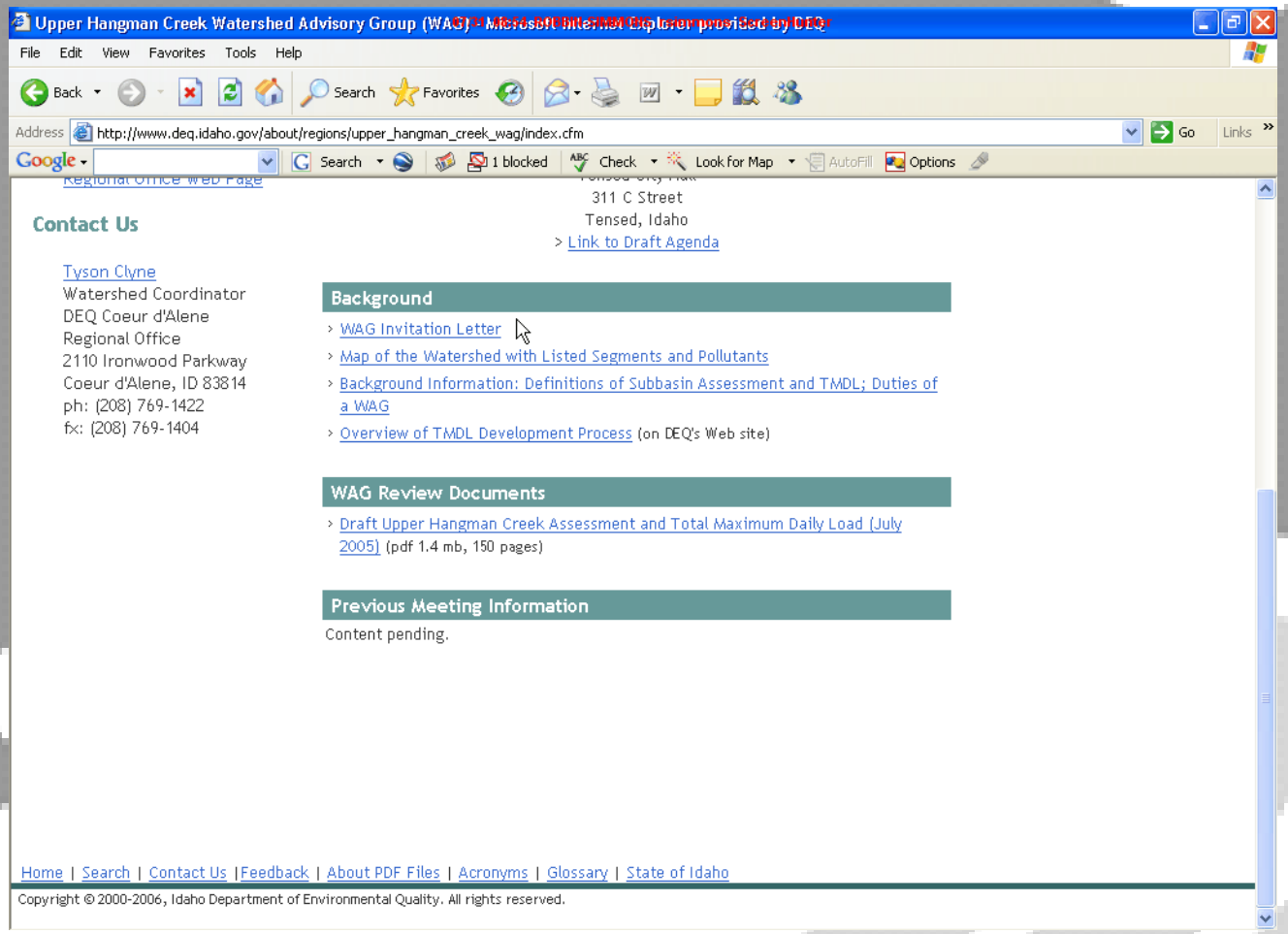


Upper Hangman Creek WAG Page

Note e-mail update option

Upper Hangman Creek WAG Page

Note links to other documents



Further Assistance

- If you have any problems accessing DEQ web resources, please contact the DEQ TMDL team:

Tyson Clyne at 666-4610 or by email at tyson.clyne@deq.idaho.gov; or

Robbin Simmons at 666-4633 or by email at robbin.simmons@deq.idaho.gov.

If we are not available, any DEQ TMDL team member will be happy to assist you at 769-1422.

Proposed WAG Meeting Schedule

September

- September Basin Advisory Group (BAG) meeting present potential WAG member information to BAG for approval.
- DEQ presents to WAG methods used to develop pollutant loads.
- WAG review of Draft Subbasin Assessment (SBA) and TMDL.

October

- WAG comments on draft Upper Hangman Creek TMDL

November

- DEQ reports TMDL changes to WAG
- WAG approval to move with public review process