

# **Review of Water Quality/TMDL Basics**



**presented to North Fork  
Coeur d'Alene River  
Watershed Advisory Group  
August 30, 2007**

**Robert Steed**

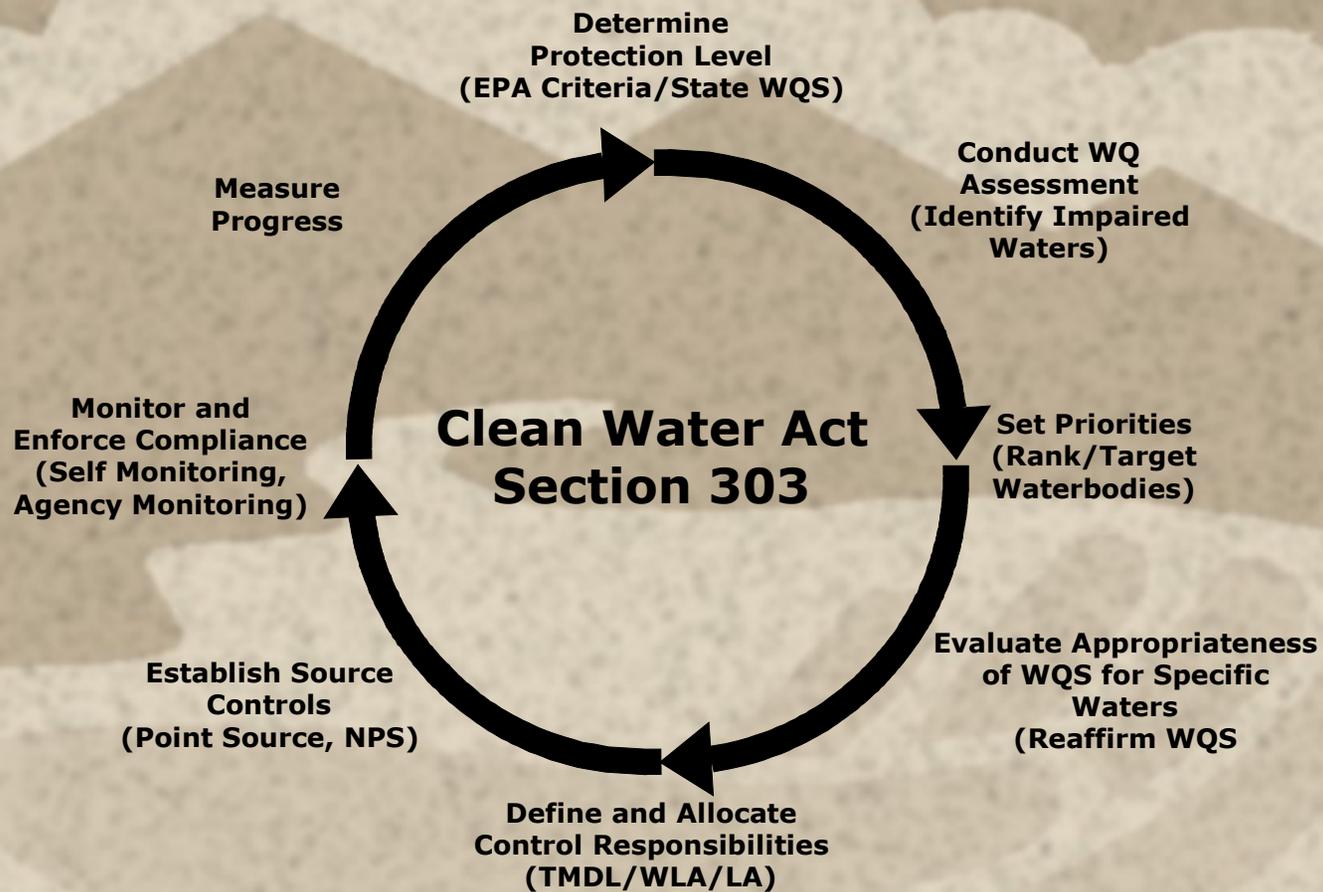
# TMDLs

- **Clean Water Act**
- **Water Quality Standards**
- **Integrated Report**
- **WAG participation**
- **TMDL Development**
- **Schedule**

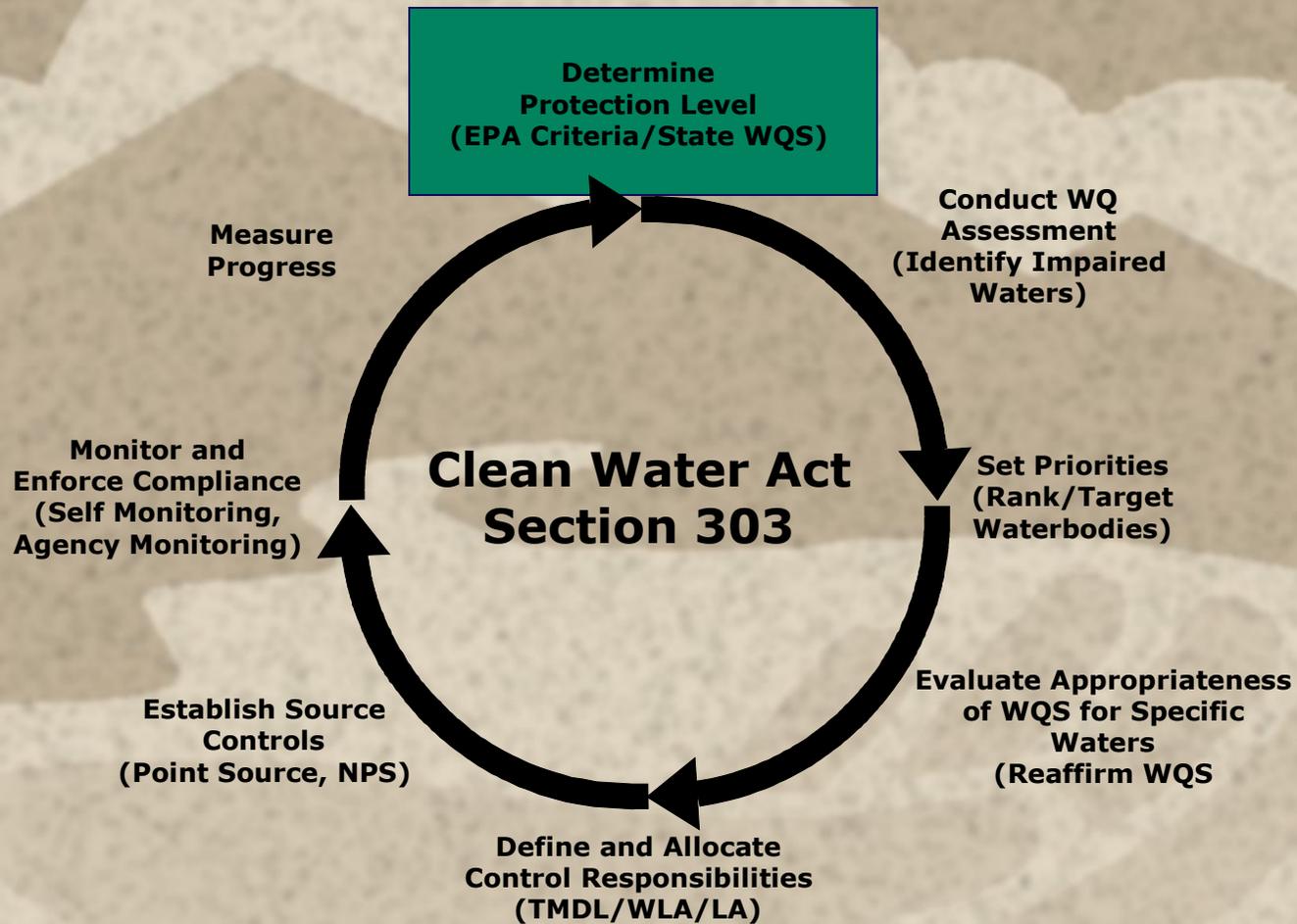
# Clean Water Act

- Nation wide goals for Water Quality
- Administered by EPA
- Authorizes States/Tribes to set Water Quality Standards
- Subdivided by sections. e.g.. sections 319, 305(b), 303(d)

# 1972 Clean Water Act, Water Quality Cycle

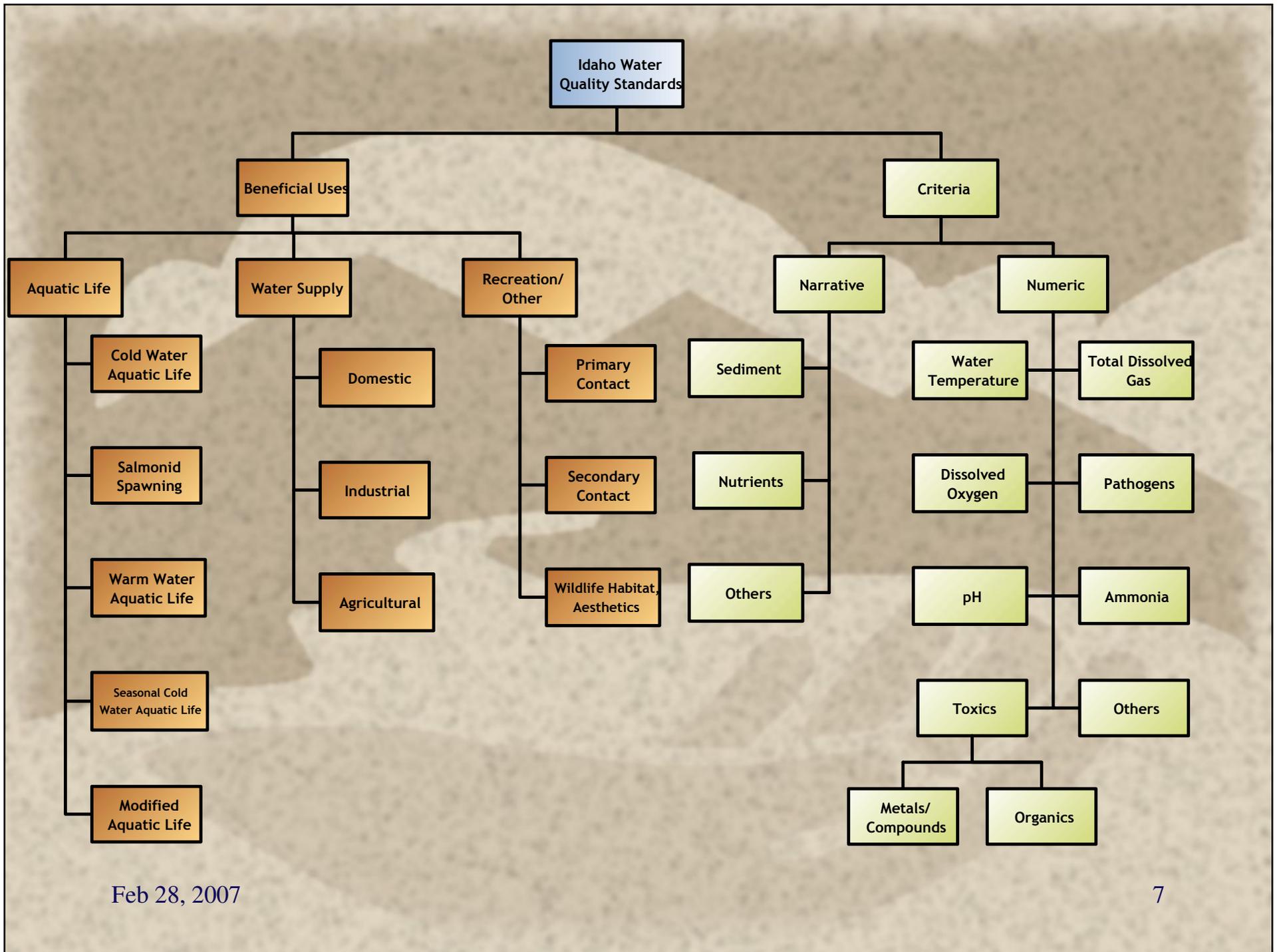


# 1972 Clean Water Act, Water Quality Cycle

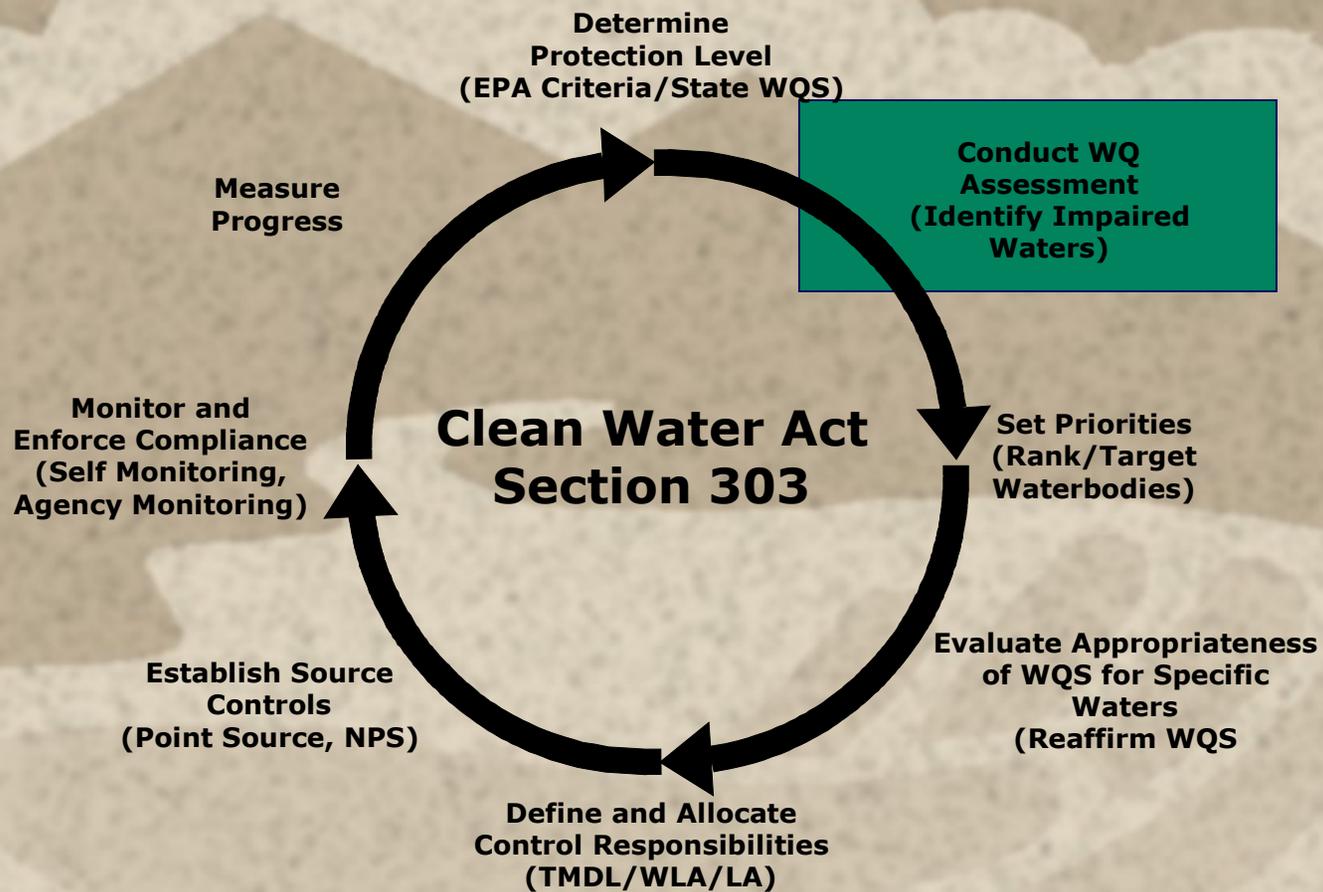


# Idaho Water Quality Standards

- Accepted by EPA in 1972
- Must, at least, be as restrictive as federal standards.
- Tri-annual Review
- Beneficial Uses, Criteria
- Designated Streams



# 1972 Clean Water Act, Water Quality Cycle



# CWA section 305(b)

- “305(b) report”
- Biannual
- Water Quality Report to Congress
- Status of all streams

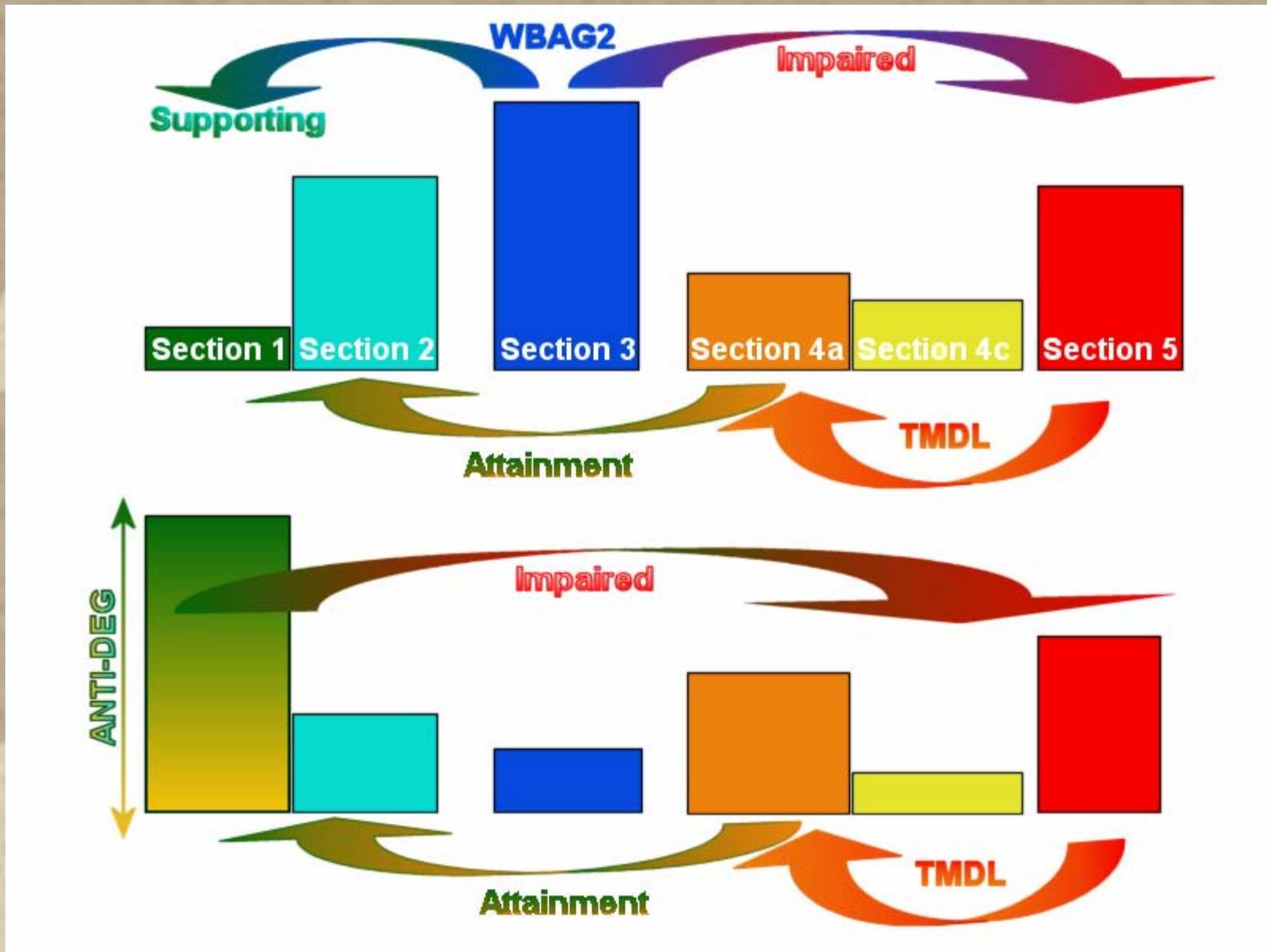
# CWA section 303(d)

- “303(d) list”
- list of all streams “not fully supporting” at least one beneficial use
- Streams to get TMDL

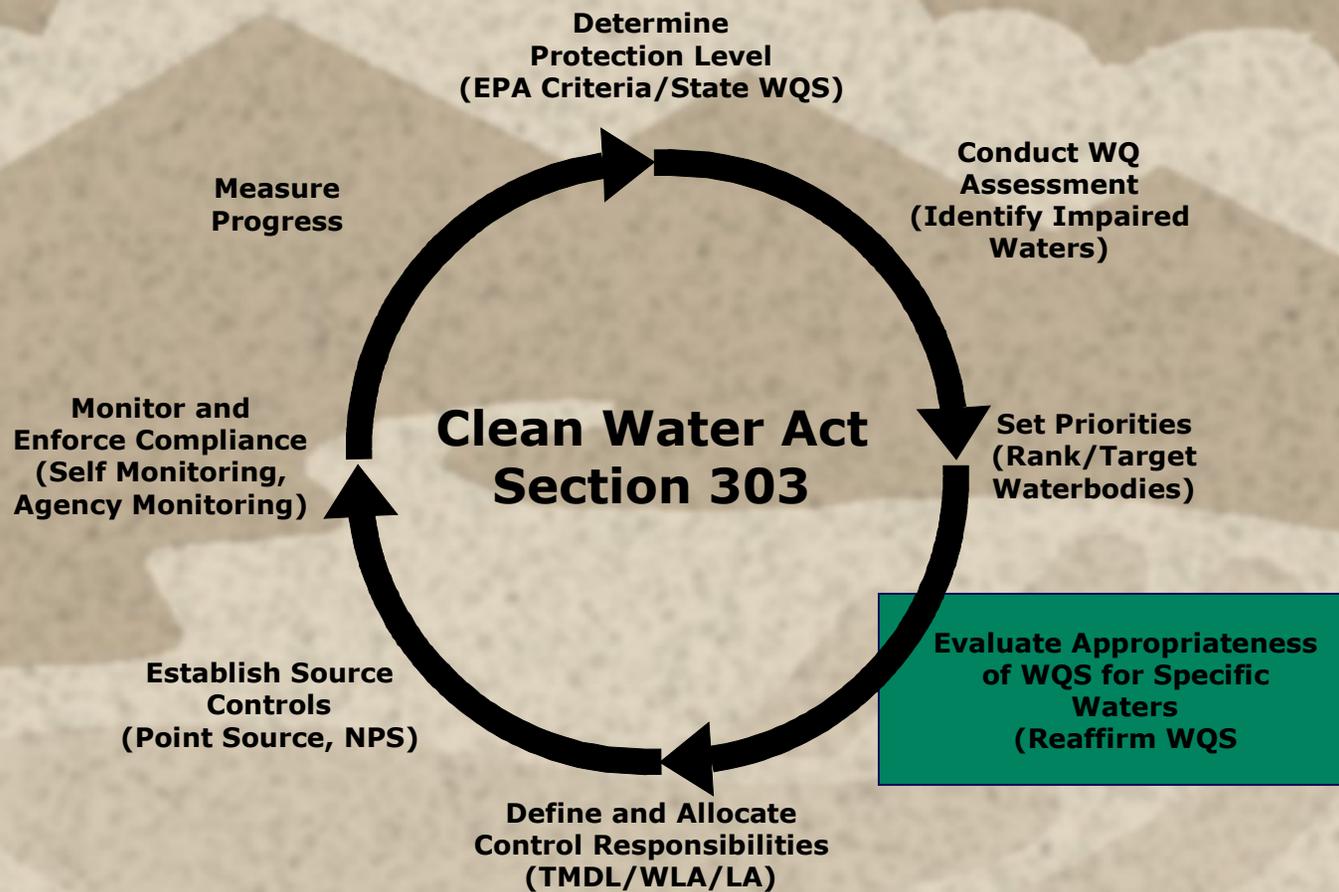
# Integrated Report Categories

Integrated Report Categories		
Category	DEQ	Description
1	FS	Attaining WQ Standards
2	FS	Attaining some designated uses
3	NA	Insufficient data
4a	NFS	TMDL complete
4c	NFS	Not impaired by pollutant
5	NFS	TMDL needed

4b Other pollution control requirements are reasonably expected to result in the attainment of the water quality standard in the near future.



# 1972 Clean Water Act, Water Quality Cycle

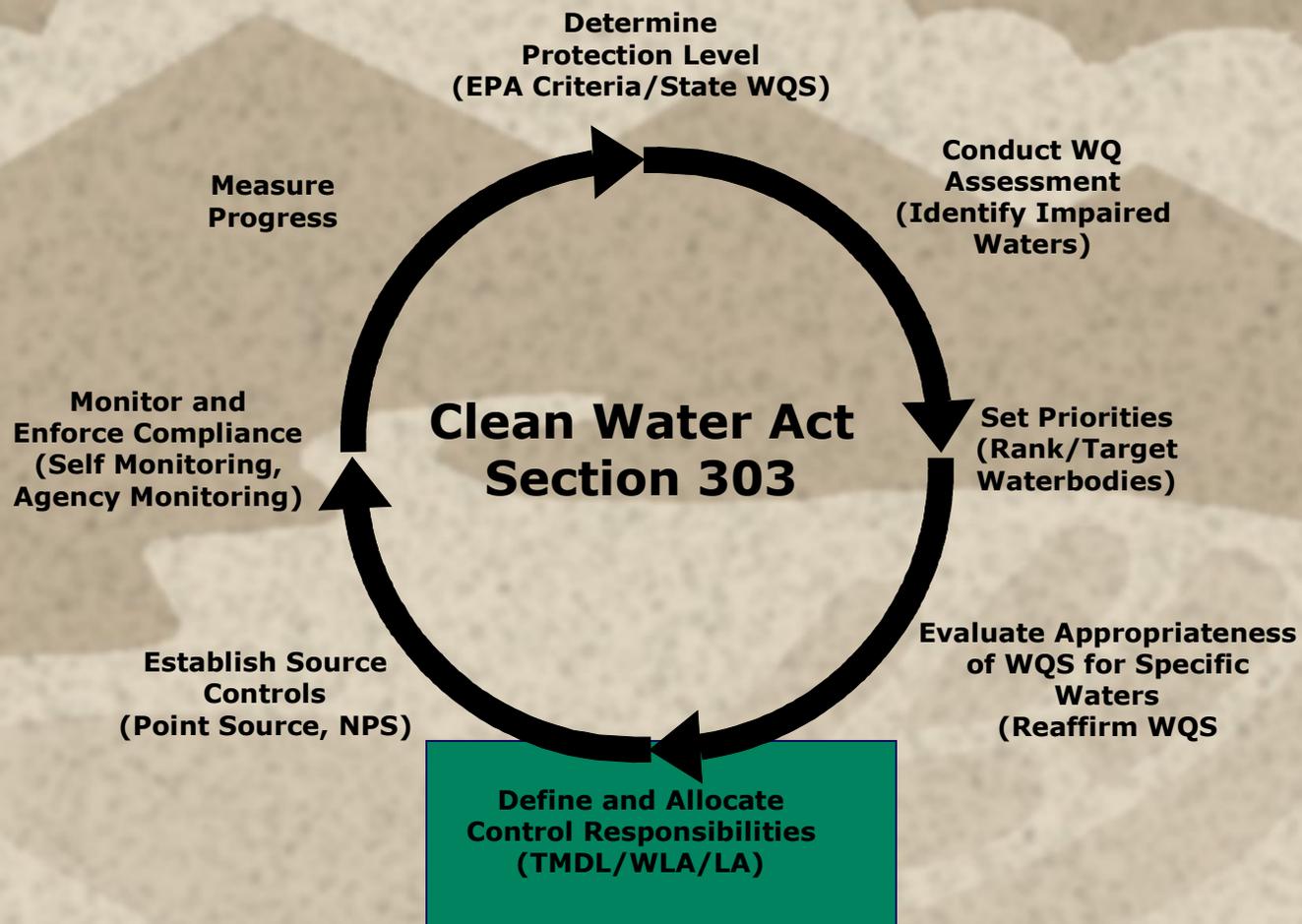


# Subbasin Assessment

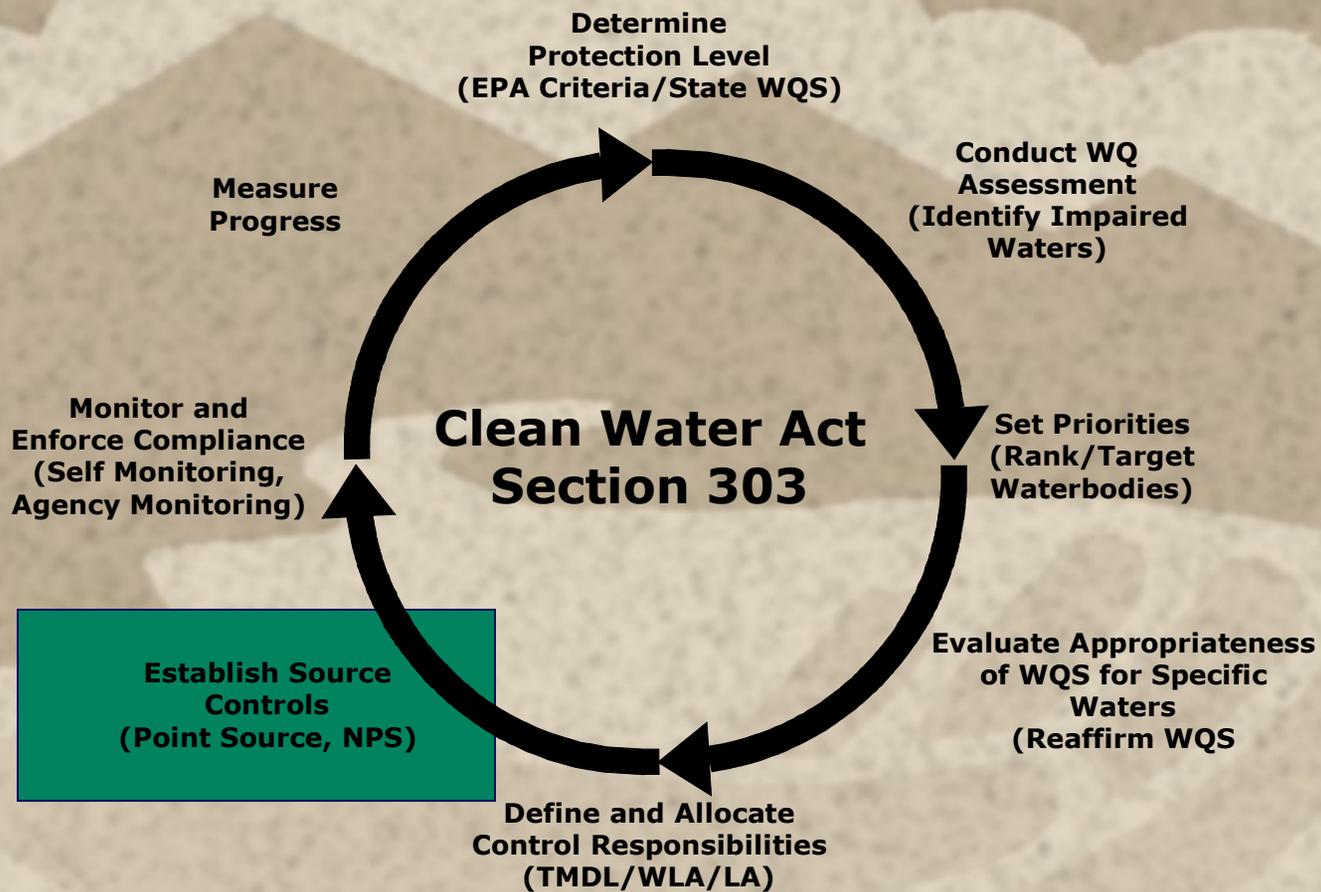
(for the most part see 2001 TMDL)

- Watershed Characterization
  - Physical/Biological/Cultural Characteristics
- Water Quality Concerns and Status
  - Impaired Waters, WQ Standards...
- Pollutant Source Inventory
  - Existing Conditions
- Past and Present Pollution Control Efforts

# 1972 Clean Water Act, Water Quality Cycle



# 1972 Clean Water Act, Water Quality Cycle



# TMDL Equation

$$TMDL \leq WLA + LA + MOS$$

# TMDL Temperature

$$TMDL \leq WLA + LA + MOS$$

- TMDL (Target) = Natural Conditions Provision in WQ standards.
  - Based on vegetation, and channel width
- WLA (point source NPDES discharge) = 0
- MOS = conservative assumptions

# TMDL Cadmium (Cd)

$$TMDL \leq WLA + LA + MOS$$

- TMDL (Target) = Idaho Water Quality Standards Criterion.
  - 0.6 ug/L, as a function of hardness (min 25 mg/L CaCO<sub>3</sub>). Hardness is related to bioavailability
- WLA (point source NPDES discharge) = 0
- MOS = conservative assumptions or 10%

# North Fork CDA TMDL Status

- **Temperature**

- Potential Natural Vegetation
- In Progress
- Technical Services Division
- CDA Regional Office Facilitation

- **Metals**

- Concentration Based
- Not initiated yet
- Technical Services Division
- CDA Regional Office Facilitation

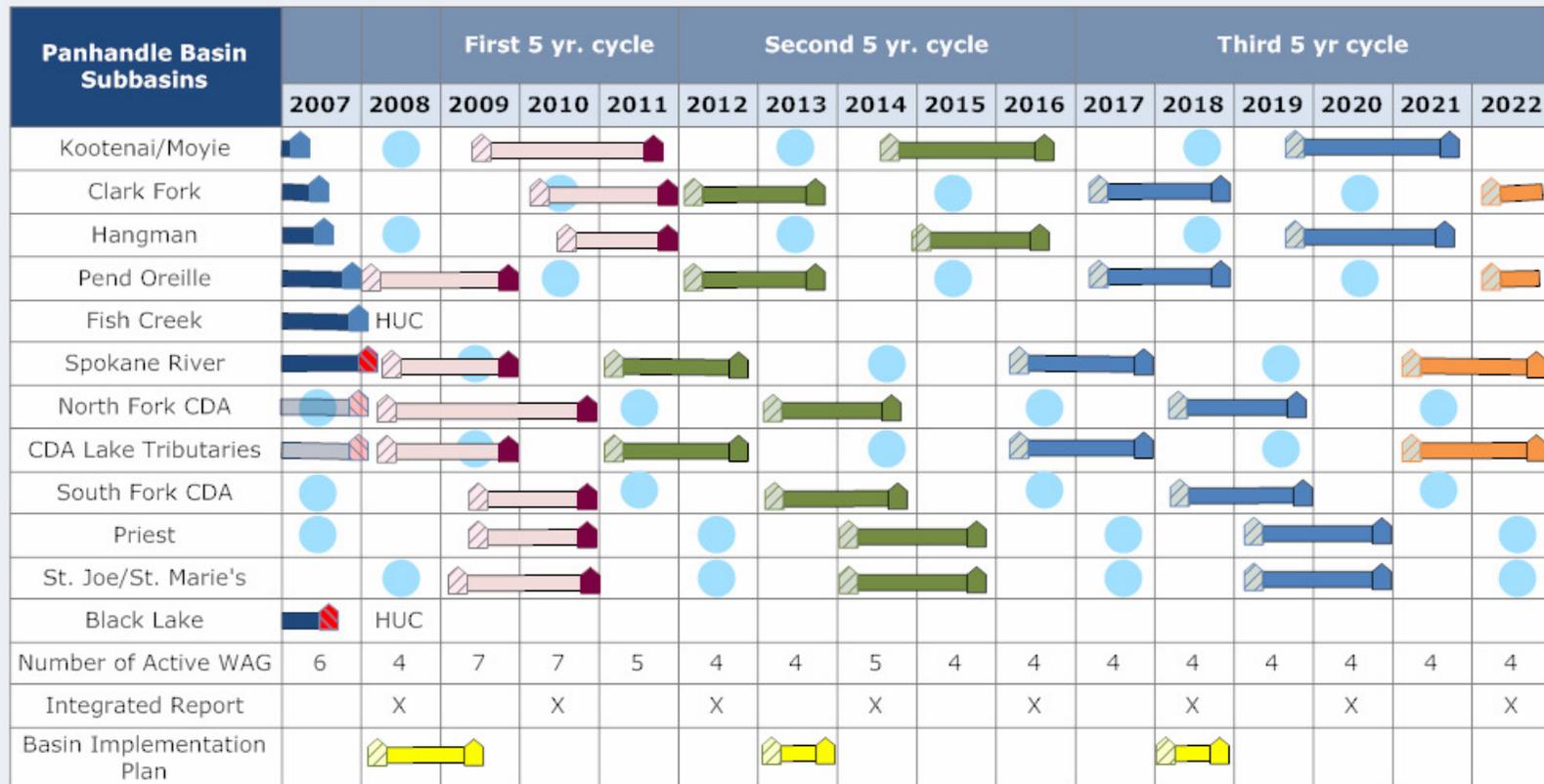
# IDEQ Approach

- BAG and WAG Process
- Settlement Agreement Schedule
- 58 Subbasins Statewide, 14 (10) in North Idaho Region
- 5 year review cycle

**CDA Regional Office proposed TMDL Review Schedule**

<b>CU Name</b>	<b>HUC</b>	<b>Initial TMDL completed</b>	<b>5 yr. review 1<sup>st</sup> round</b>	<b>5 yr. review 2<sup>nd</sup> round</b>	<b>5 yr. review 3<sup>rd</sup> round</b>
Coeur d'Alene Lake	170 10 303	2000	2009	2012	2017
Upper Spokane	170 10 305	2001 2007	2009	2012	2017
Lower Clark Fork	170 10 213	2006	2011	2013	2018
Pend Oreille	170 10 214	2001 2007	2009	2013	2018
North Fork Coeur d'Alene River	170 10 301	2002	2010	2014	2019
South Fork Coeur d'Alene	170 10 302	2003	2010	2014	2019
Priest	170 10 215	2003	2010	2015	2020
St Joe	170 10 304	2003	2010	2015	2020

## Gantt Chart - CDA Regional Office TMDL Forecast



Legend	
	Milestone marker - start
	Milestone marker - end. Red indicates draft but no WAG
	Gantt bar

Key Dates		
	BURP Monitoring	
	5 yr Review, 1st cycle	
	5 yr Review, 2nd cycle	
	5 yr Review, 3rd cycle	
	5 yr Review, 4th cycle	

# WAG Basics

- Advisory Group to Idaho DEQ and Designated Management Agencies
- DEQ prescribed by law to consult with WAG on data, listing issues, TMDL development process
- Community objectives
- Subcommittee to BAG, local control
- Public also has opportunity to provide comments

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Robert Steed

## About DEQ's Coeur d'Alene Region: North Fork Coeur d'Alene River Subbasin Watershed Advisory Group (WAG)

Content on this page is provided for informational purposes while the North Fork Coeur d'Alene River Watershed Advisory Group (WAG) and DEQ work to plan implementation projects related to the existing North Fork sediment "Total Maximum Daily Load" (TMDL); develop a temperature TMDL for Prichard Creek; and develop metals TMDLs for Beaver Creek and Prichard Creek, waterbodies found to be not fully supporting beneficial uses.

*Note:* All of these documents are considered draft and are subject to change. The goal of providing these documents at WAG meetings and on this web page is to ensure citizens have the opportunity to provide input as the documents are developed.

[WAG Introduction Letter](#)

[WAG Survey](#)

### Upcoming Meeting Dates

Wednesday, February 28, 2007, 2 - 4 p.m.

U.S. Forest Service Office  
173 Commerce Drive  
Smelterville, ID  
> Link to [Agenda](#).

### Background

- > [Map of the Subwatershed with listed segments](#)
- > [Overview of TMDL Development Process](#) (on DEQ's Web site)