TMDL Implementation Plans

North Fork Coeur d’Alene River WAG
November 20, 2014
*Water quality road map*
* Sediment TMDLs, 2002
* Metals TMDLs (East Fork Eagle Cr), 2002
* Temperature TMDLs, 2014
* TMDL implementation successful so far
* Decades of restoration, especially by USFS
* Nearly all mine and mill sites cleaned up
* Success stories and delistings, but more to do
* Limited resources and funding
* TMDLs are the budget or prescription, how much sediment or temperature needs to be reduced.

* Don’t include many specifics for who, what, where, when.

* Water quality road map
* Provides a framework for local stakeholders to use to reach the goals established in the TMDL.
* Document guided by an approved TMDL
* Details actions needed to achieve load reductions
* Follows TMDL development (~18 months)
* WAG responsibilities
* Some states require implementation plans by law
* Idaho includes implementation plans in guidance
* List of needed actions
* Timeline for implementing the plan
* List of who will be responsible
* Explanation for how progress on actions will be tracked
* Monitoring or modeling plan
* Milestones for measuring progress
* Description of how data will be evaluated and used to recommend revisions to the TMDL

* Includes
* Plans are developed by a variety of stakeholders including government agencies, local citizens, and the **watershed advisory group (WAG)** for the area.

* Designated government agencies and the WAG are generally the driving force behind the plan and are responsible for identifying appropriate implementation measures.

* DEQ serves as the repository for implementation plans and often coordinates, or assists in, developing the plan, writing the document, and prioritizing projects for implementation.

*Who*
* Idaho Department of Lands
  * Timber harvest, oil and gas exploration and development, and mining issues
* Idaho Soil and Water Conservation Commission
  * Grazing and agriculture issues
* Idaho Transportation Department
  * Public road issues
* Idaho State Department of Agriculture
  * Aquaculture issues
* DEQ - all other issues
* Federal agencies through MOUs

* Designated Management Agencies
* Somewhat dependent on the landowner.
* Projects on federal lands are typically funded through the management agency.
* Projects on private or state lands may be funded through a variety of mechanisms, including §319 subgrants administered by DEQ.
* These are grants established under Section 319 of the Clean Water Act to support nonpoint source pollution management activities.
* Coeur d’Alene Lake Subbasin

* Clark Fork
  * **Clark Fork/Pend Oreille (2007)**

* Kootenai - Moyie River
  * **Boundary, Deep, Cow (draft 2005)**

* Panhandle Region
* St. Joe/St. Maries
  * St. Maries Ag (2003)

* Priest River
  * Lower West Brach Priest River (draft 2004)

* Pend Oreille Lake
  * Pack River (2006)
  * Pend Oreille Lake Nearshore (2004)

* Panhandle Region
<table>
<thead>
<tr>
<th>Agency</th>
<th>Stream</th>
<th>Project Description</th>
<th>Location</th>
<th>Pollutant</th>
<th>% complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Seed &amp; mulch road fill and cut at stream crossing</td>
<td>Bunn road &amp; Kindred trail</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Seed &amp; mulch road fill and cut on switchback</td>
<td>log road U of I property</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Seed &amp; mulch road cut</td>
<td>log road on State at Miller Ck. Road</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Investigate 4 culverts and mitigate as needed</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Armor 3 drainage ditch gullies with rock/seed&amp;mulch</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Field investigation of 2 road problem combinations</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Field investigation of 3 general problems</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Seed &amp; mulch to stabilize 2 cut &amp; fill slope problems</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Restrict or redirect use of off road vehicles</td>
<td>2 ORV erosion damage areas</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Re-establish canopy by planting to provide shade</td>
<td>11-12 miles (IDL to provide)</td>
<td>S,T</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Stabilize 2 miles of road with greater than 10% grade</td>
<td>2 miles (IDL to provide)</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Cougar Creek</td>
<td>Inventory additional road miles</td>
<td>Watershed</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Mica Creek</td>
<td>Investigate 3 culverts and mitigate as needed</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Mica Creek</td>
<td>Seed &amp; mulch / re-direct water flow of 3 washouts</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Mica Creek</td>
<td>Seed &amp; mulch / rock armor 2 ditch/gully problems</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Mica Creek</td>
<td>Field investigation of “perched” landing</td>
<td>IDL to provide</td>
<td>S,Unknown</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Mica Creek</td>
<td>Field investigation of 2 general problems</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Mica Creek</td>
<td>Re-establish canopy by planting to provide shade</td>
<td>10-11 miles (IDL to provide)</td>
<td>S,T</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Mica Creek</td>
<td>Stabilize road through surfacing/drainage/seed &amp; mulch</td>
<td>2 miles (IDL to provide)</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Mica Creek</td>
<td>Inventory additional road miles</td>
<td>Watershed</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Kidd Creek</td>
<td>Re-establish canopy by planting to provide shade</td>
<td>1.5-2 miles (IDL to provide)</td>
<td>S,T</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Kidd Creek</td>
<td>Inventory additional road miles</td>
<td>Watershed</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Wolf Lodge Creek</td>
<td>Field investigation of yarding on steep slopes</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Wolf Lodge Creek</td>
<td>Field investigation of 2 management problems</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Wolf Lodge Creek</td>
<td>Seed &amp; mulch to stabilize 1 mass failure</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Wolf Lodge Creek</td>
<td>Surface/seed &amp; mulch/ fix drainage or abandon road</td>
<td>20 miles (IDL to provide)</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Wolf Lodge Creek</td>
<td>Remove 53 stream crossings and upgrade 2 crossings</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Wolf Lodge Creek</td>
<td>Re-establish canopy by planting to provide shade</td>
<td>5-7 miles (IDL to provide)</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Latour Creek</td>
<td>Investigate 4 culvert problems and mitigate as needed</td>
<td>IDL to provide</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Latour Creek</td>
<td>Re-establish canopy by planting to provide shade</td>
<td>4 miles (IDL to provide)</td>
<td>S,T</td>
<td></td>
</tr>
<tr>
<td>IDL</td>
<td>Latour Creek</td>
<td>Inventory additional road miles</td>
<td>Watershed</td>
<td>S</td>
<td></td>
</tr>
</tbody>
</table>

**POLLUTANTS:** S = SEDIMENT, T = TEMPERATURE
# Pack River Watershed Management Plan and TMDL Implementation Plan

## Table of Contents

1.0 EXECUTIVE SUMMARY .................................................. 2

2.0 INTRODUCTION .......................................................... 4  
   2.1 Purpose of Effort .................................................... 4  
   2.2 Overview of the Pack River TMDL ................................ 5

3.0 OVERVIEW OF THE PACK RIVER WATERSHED ASSESSMENT ......... 9  
   3.1 Watershed Description .............................................. 9  
   3.2 Current Conditions and Reference Reaches ....................... 12  
   3.3 Synthesis and Interpretation ...................................... 13

4.0 RESPONSIBLE PARTIES ................................................ 21  
   4.1 Idaho Department of Lands ....................................... 21  
   4.2 Idaho Transportation Department ............................... 21  
   4.3 Idaho Soil Conservation Commission ............................ 21  
   4.4 Idaho Department of Environmental Quality .................... 22  
   4.5 Other Participants .................................................. 22

5.0 RECOMMENDATIONS FOR IMPROVING AND PROTECTING THE PACK RIVER ........................................ 24  
   5.1 General Management Strategies .................................. 24  
      5.1.1 Management Units ............................................ 24  
      5.1.2 Streambank, Riparian and In-stream Improvements ....... 25  
      5.1.3 Wetlands ..................................................... 26  
      5.1.4 Development .................................................. 28  
      5.1.5 Forestry ..................................................... 29  
      5.1.6 Agriculture .................................................. 29  
      5.1.7 Other .......................................................... 31

   5.2 Priority Actions ..................................................... 32  
      Table I: Education Projects ....................................... 33  
      Table II: Coordination and Implementation Projects ............ 35

ATTACHMENTS  
   Figure 1. Pack River Watershed Map with Reach Delineations .......... 44  
   Literature Cited ...................................................... 45
Table II. Pack River Watershed Coordination and Implementation Projects

<table>
<thead>
<tr>
<th>Agency/Organization</th>
<th>Project Description</th>
<th>Anticipated Start-up Date</th>
<th>Estimated Start-up or Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COORDINATION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDEQ</td>
<td>Recruit and coordinate with Pack River representatives to the Pend Oreille Watershed Advisory Group to ensure completion of the temperature TMDL for the upper Pack River tributaries.</td>
<td>2006-07</td>
<td>In-kind</td>
</tr>
<tr>
<td>IDEQ</td>
<td>If 2006 monitoring identifies nutrients or other pollutants in addition to sediment, complete TMDLs.</td>
<td>2007</td>
<td>In-kind</td>
</tr>
<tr>
<td>IDEQ</td>
<td>Review implementation projects on a 5-year cycle to determine progress toward TMDL targets and need for additional TMDLs.</td>
<td>2009, 2014, &amp; every 5 years</td>
<td>In-kind</td>
</tr>
<tr>
<td>IDEQ</td>
<td>Work with federal and state agencies, county and cities to maintain or improve enforcement of existing regulations, especially IDWR and COE regarding in-stream work permits.</td>
<td>On-going</td>
<td>In-kind</td>
</tr>
<tr>
<td>DMA partners, PRWC, BSWCD, USFS, USFWS, TSWQC</td>
<td>Seek funding for project implementation, monitoring and education projects.</td>
<td>On-going</td>
<td>In-kind</td>
</tr>
<tr>
<td>IDEQ, TSWQC, Bonner County</td>
<td>Coordinate with agencies regarding consistency of existing setback standards.</td>
<td>On-going</td>
<td>In-kind</td>
</tr>
<tr>
<td>IDL</td>
<td>Establish a committee of county, state &amp; federal agencies, forest industries and private landowners to meet semi-annually to coordinate harvesting and logging transportation on a sub-watershed basis, share data for watershed-wide GIS database, research and recommend appropriate percentage for maximum open/young forest in sub-watersheds, and discuss opportunities for improving forest resource base. (Through implementation of CWE.)</td>
<td>2006</td>
<td>In-kind</td>
</tr>
<tr>
<td>IDFG +PRWC</td>
<td>Encourage coordination between county road department and land managers on issue of beaver dam removal and removal techniques.</td>
<td>On-going</td>
<td>$500</td>
</tr>
<tr>
<td><strong>MONITORING/DATA MANAGEMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDEQ, EPA</td>
<td>Evaluate existing BURP monitoring data and secure resources for additional nutrient monitoring to investigate nutrient contributions of tributaries. Determine if nutrient or other TMDLs are necessary for Pack R watershed.</td>
<td>2006</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

3 First entity shown is lead agency for project; other agencies/groups to assist.
* Agriculture
  
  * North Fork of the Coeur d’Alene River Agricultural TMDL Implementation Plan - draft 2005 (ISWCC and Kootenai-Shoshone SWCD)

* NFCDA Components
*Recreation

* North Fork Coeur d’Alene River Cooperative Recreation Plan, 2011 (WAG)
* River Corridor Management Plan, 2012 (USFS)
* Respect the River!

* NFCDA Components
* Beaver Creek Watershed Assessment
* USFS Moose Drool Project
* USFS Beaver Creek Project
* USFS Bottom Canyon Project
* 2007 WPN Reports
* Many smaller scale projects implemented and proposed

**NFCDA Components**
*Beaver Creek Watershed Assessment
*USFS Moose Drool Project
*USFS Beaver Creek Project
*USFS Bottom Canyon Project
*2007 WPN Reports
*Many smaller scale projects implemented and proposed

* NFCDA Components
Water Quality Improvement Project
Concept Form & Application for Assistance

Project Sponsor/Landowner:

Contact Information
Name:
Address:
Phone:
Email:

Project Location:

Nearest Water Body:

Date:

Brief Description of Problem (*Including pollutants of concern if possible*):

- Concept form WAG previously developed
* Idaho Nonpoint Source Management Plan
* Best Management Practices (BMP) for Mining in Idaho Manual, 1992
* Catalog of Stormwater BMPs for Idaho Cities and Counties
* ITD BMP Manual
* Interagency MOUs

* Components
*USFS Forest Plan (1987 / Revision Pending)
*Coeur d’Alene Lake Management Plan, 2009
*Spokane River Watershed Phosphorus Nonpoint Source Reduction Plan
  *Chapter 16, Upper Coeur d’Alene River Subbasin

*Components
* Local Wellhead and Drinking Water Protection Plan for the Central Shoshone County Water District
* Management Plan for the Westslope Cutthroat Trout in Idaho
* Bull Trout draft Recovery Plan
* Should we prepare a TMDL Implementation Plan?
* When? How?
* Who is willing to participate?
* What will you bring to the table?
* What should it look like?

*The Question*
REINVENT

ALL THE WHEELS

OR

NOT
WAG has authority and flexibility

So...