UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

Reply To
Attn Of: OW-134

APR 2 2001

David Mabe, Administrator
State Water Quality Programs
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706-1255

RECEIVED
APR - 4 2001
IDHW-DEQ
Coeur d'Alene Field Office

Re: Approval of TMDLs within the Clark Fork/Pend Oreille Subbasin

Dear Mr. Mabe:

The U.S. Environmental Protection Agency (EPA) is pleased to approve the following TMDLs within the Clark Fork/Pend Oreille Subbasin Total Maximum Daily Load (TMDL) submitted on April 17, 1999. The segment information on the TMDLs being approved is given below:

Waterbody	Segment	TMDL Parameters
Gold Creek	**Hydrologic Unit Code 17010214**	**sediment**
Caribou Creek	**Hydrologic Unit Code 17010214**	**sediment**
Fish Creek	**Hydrologic Unit Code 17010214**	**sediment**
Grouse Creek	**Hydrologic Unit Code 17010214**	**sediment**
Pack River Watershed	**Hydrologic Unit Code 17010214**	**sediment**
Cocolalla Lake	**Hydrologic Unit Code 17010214**	**nutrients**
Cocolalla Lake	**Hydrologic Unit Code 17010214**	**dissolved oxygen**

We also acknowledge that the Idaho Department of Environmental Quality (IDEQ) plans to complete problem assessments for Johnson Creek, Lightning Creek, Rattle Creek, Wellington Creek, Porcupine Creek, East Fork Lightning Creek, Quartz Creek, Spring Creek, and Twin Creek. These problem assessments will be included in the Clark Fork River TMDL which is planned for submission in 2003.

We appreciate the effort of IDEQ in developing this TMDL, in particular the excellent work of June Bergquist. We look forward to implementation of the TMDL, and continuing to work collaboratively on water quality issues in the Clark Fork/Pend Oreille Subbasin.

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By EPA's approval, this TMDL is now incorporated into the state's Water Quality Management Plan under Section 303(e) of the Clean Water Act. If you have any comments or questions, please feel free to call me at (206) 553-1261, or you may call Curry Jones of my staff at (206) 553-6912.

Sincerely,

Randall F. Smith
Director
Office of Water

Enclosure

cc: Michael McIntyre, IDEQ
Doug Conde, IDEQ
Don Essig, IDEQ
Gwen Fransen , IDEQ - Coeur d' Alene
Ed Tulloch, IDEQ - Coeur d' Alene
JuneBergquist, IDEQ - Coeur d' Alene

TMDL Review

TMDL:	Pend Oreille/Clark Fork Subbasin		
Pollutant:	Sediment, Nutrient, Dissolved Oxygen		
Waters Addressed:	**Gold Creek**	**Hydrologic Unit Code 17010214**	**sediment**
	Caribou Creek	**Hydrologic Unit Code 17010214**	**sediment**
	Fish Creek	**Hydrologic Unit Code 17010214**	**sediment**
	Grouse Creek	**Hydrologic Unit Code 17010214**	**sediment**
	Pack River Watershed	**Hydrologic Unit Code 17010214**	**sediment**
	Cocolalla Lake	**Hydrologic Unit Code 17010214**	**nutrients**
	Cocolalla Lake	**Hydrologic Unit Code 17010214**	**dissolved oxygen**
Review Completed:	March 29, 2001		
Reviewer:	Curry Jones		

Required TMDL Elements			
1. Are waters addressed by the TMDL identified and consistent with the §303(d) list:	Yes X	No ☐	
2. Loading Capacity:	Yes X	No ☐	
3. Load Allocations:	Yes X	No ☐	
4. Wasteload Allocations:	Yes ☐	No ☐	not required
5. MOS:	Yes X	No ☐	
6. Seasonal Variation:	Yes X	No ☐	
7. Evaluation of critical conditions:	Yes X	No ☐	
8. Reasonable Assurance	Yes ☐	No ☐	not required
9. Public Participation	Yes X	No ☐	
Documents Reviewed: See Administrative Record			
	Reviewers Comments		

Identification of Waters	Waters addressed by the sediment TMDL are identified in the TMDL: Gold Creek, Caribou Creek, Fish Creek, Grouse Creek, Pack River, Cocolalla Lake. Waters addressed by the nutrient and dissolved oxygen TMDL is Cocolalla Lake. This is consistent with listing of these waters in the 1996 and 1998 Idaho 303(d) list.
Targets	Relevant beneficial uses for these tributaries of Pend Oreille Lake include coldwater biota and salmonid spawning. The sediment target to protect these uses are described in the TMDL sections. The sediment target is the natural background sediment yield which was modeled (WATBAL) and measured using accepted methodologies. These targets represent a numeric interpretation of the narrative sediment standard, and an empirical linkage between the sediment targets and beneficial use support is used to develop the TMDL (see Decision Memo for the narrative sediment standard). The Cocolalla Lake TMDL interprets excessive nutrients by using a target total phosphorus concentration of 0.08 mg/l *(the initial target was 0.1 mg/l, but a 20% margin of safety was included to derive a final target of 0.08 mg/l.)* At a total phosphorus concentration of 0.08 mg/l, Cocolalla Lake will achieve the State of Idaho dissolved oxygen criteria of 6.0 mg/l. Therefore the TMDL also sets the dissolved oxygen goal for the lake at current state standard of 6 mg/l.
Load Capacity	The load capacity (target sediment load) for each sub-watershed is the natural background sediment load shown below. **Watershed** — **Load Capacity (tons/yr)** Caribou Creek — 664 Grouse Creek — 935 Fish Creek — 244 Gold Creek — 250 Pack River Watershed — 15,635 The loading capacity for Cocolalla Lake is 2693 kg/yr based on the 0.08 mg/l of total phosphorus target.

<table>
<tr><td>Load Allocation</td><td>To achieve instream targets in tributaries of the Pend Oreille Lake, nonpoint sediment source load allocations (i.e. load reductions) are established using modeled and measured rates of sedimentation. Load allocations are set relative to natural background sediment load rates (i.e., load capacity) for each of the listed waterbodies. They are not source specific (see individual sediment TMDLs for specifics) .

<table>
<tr><th>Watershed</th><th>Load Capacity (tons/yr)</th><th>Load Reductions</th></tr>
<tr><td>Caribou Creek</td><td>2186.6</td><td>76.7%</td></tr>
<tr><td>Grouse Creek</td><td>2491.3</td><td>62.5%</td></tr>
<tr><td>Fish Creek</td><td>562.0</td><td>69.7%</td></tr>
<tr><td>Gold Creek</td><td>2255.3</td><td>90.0%</td></tr>
<tr><td>Pack River Watershed</td><td>60043.8</td><td>74.0%</td></tr>
</table>

Our review has concluded that these sediment load reductions are adequate. Load reductions for total phosphorus were also established for sources to Cocolalla Lake.

<table>
<tr><th>Waterbody</th><th>Existing Load (kg.yr)</th><th>% Reduction</th></tr>
<tr><td>Cocolalla Creek</td><td>883</td><td>82.33%</td></tr>
<tr><td>Fish Creek</td><td>334</td><td>80.54%</td></tr>
<tr><td>Westmond Creek</td><td>353</td><td>83.85%</td></tr>
<tr><td>Butler Creek</td><td>114</td><td>94.74%</td></tr>
<tr><td>Johnson Creek</td><td>100</td><td>81.00%</td></tr>
<tr><td>Septic Systems</td><td>118</td><td>91.53%</td></tr>
<tr><td>Atmospheric</td><td>242</td><td>77.69%</td></tr>
<tr><td>Internal Loading</td><td>1100</td><td>83.27%</td></tr>
</table>

As stated earlier, because the TMDL reduction targets are based on the target total phosphorus concentration of 0.08 mg/l, Cocolalla Lake will attain the State of Idaho dissolved oxygen criteria of 6.0 mg/l. Therefore, our review concludes that the total phosphorus reduction are adequate.</td></tr>
<tr><td>Wasteload Allocations</td><td>No point sources exist in the above listed watersheds, therefore a wasteload allocations is zero..</td></tr>
<tr><td>Margin of Safety</td><td>An implicit margin of safety is incorporated into the TMDL by the use of conservative assumptions in the loading analyses (see individual sediment TMDLs for specifics). An explicit margin of safety was used for total phosphorus. An explicit margin of safety of 20% was applied to the total phosphorus target.

Our review has concluded that the TMDL adequately incorporates a margin of safety.</td></tr>
</table>

Seasonal Variation	The official Pend Oreille/Clark Fork Subbasin TMDL submittal letter (April 28, 2000)indicates that seasonality, with regards to sediment, was considered, but judged not to be a problem. Rather, annual loading rates were determined to be the main concern. For nutrients, annual loading rates were most appropriate due to the delayed release of nutrients in Cocolalla Lake. Our review has concluded that the TMDL adequately considers seasonal variation.
Reasonable Assurance	No reasonable assurance is required since there are no point sources.
Public Participation	The Clark Fork/Pend Oreille Watershed Advisory Group was formed to provide input to the TMDL development process. The input and support of this group was extensive and highly valuable. In addition, IDEQ provided an opportunity for public comment on the draft TMDL during a 30 day public comment period. IDEQ summarized these comments and provided responses to issues raised (IDEQ, 1999a). Our review has concluded that public participation and documentation requirements (40 CFR Part 25) have been satisfied.

Reviewers Recommendation/Additional Comments

The required elements and assumptions of this TMDL are adequately identified and explained. The TMDL provides a basis to conclude that the allocations will achieve water quality standards, and that information gathered in follow-up monitoring and studies will be used to further refine the TMDL.

It is recommended that the sediment, nutrient and dissolved oxygen TMDL be approved.