

Ed Tulloch



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:

<u>Waterbody</u>	<u>Segment</u>	<u>TMDL Parameters</u>
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.

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,



*fr* 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  
June Bergquist, 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		

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

<p>Identification of Waters</p>	<p>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.</p> <p>This is consistent with listing of these waters in the 1996 and 1998 Idaho 303(d) list.</p>												
<p>Targets</p>	<p>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).</p> <p>The Cocolalla Lake TMDL interprets excessive nutrients by using a target total phosphorus concentration of 0.08 mg/l (<i>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.</i>) 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.</p>												
<p>Load Capacity</p>	<p>The load capacity (target sediment load) for each sub-watershed is the natural background sediment load shown below.</p> <table data-bbox="427 1234 1081 1456"> <thead> <tr> <th data-bbox="427 1234 711 1265">Watershed</th> <th data-bbox="719 1234 1081 1265">Load Capacity (tons/yr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="427 1270 711 1301">Caribou Creek</td> <td data-bbox="719 1270 1081 1301">664</td> </tr> <tr> <td data-bbox="427 1305 711 1336">Grouse Creek</td> <td data-bbox="719 1305 1081 1336">935</td> </tr> <tr> <td data-bbox="427 1340 711 1371">Fish Creek</td> <td data-bbox="719 1340 1081 1371">244</td> </tr> <tr> <td data-bbox="427 1375 711 1406">Gold Creek</td> <td data-bbox="719 1375 1081 1406">250</td> </tr> <tr> <td data-bbox="427 1411 711 1442">Pack River Watershed</td> <td data-bbox="719 1411 1081 1442">15,635</td> </tr> </tbody> </table> <p>The loading capacity for Cocolalla Lake is 2693 kg/yr based on the 0.08 mg/l of total phosphorus target.</p>	Watershed	Load Capacity (tons/yr)	Caribou Creek	664	Grouse Creek	935	Fish Creek	244	Gold Creek	250	Pack River Watershed	15,635
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<p>Load Allocation</p>	<p>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) .</p> <table border="1" data-bbox="424 430 1299 692"> <thead> <tr> <th>Watershed</th> <th>Load Capacity (tons/yr)</th> <th>Load Reductions</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>Our review has concluded that these sediment load reductions are adequate. Load reductions for total phosphorus were also established for sources to Cocolalla Lake.</p> <table border="1" data-bbox="424 876 1086 1245"> <thead> <tr> <th>Waterbody</th> <th>Existing Load (kg.yr)</th> <th>% Reduction</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>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.</p>	Watershed	Load Capacity (tons/yr)	Load Reductions	Caribou Creek	2186.6	76.7%	Grouse Creek	2491.3	62.5%	Fish Creek	562.0	69.7%	Gold Creek	2255.3	90.0%	Pack River Watershed	60043.8	74.0%	Waterbody	Existing Load (kg.yr)	% Reduction	Cocolalla Creek	883	82.33%	Fish Creek	334	80.54%	Westmond Creek	353	83.85%	Butler Creek	114	94.74%	Johnson Creek	100	81.00%	Septic Systems	118	91.53%	Atmospheric	242	77.69%	Internal Loading	1100	83.27%
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<p>Wasteload Allocations</p>	<p>No point sources exist in the above listed watersheds, therefore a wasteload allocations is zero..</p>																																													
<p>Margin of Safety</p>	<p>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.</p> <p>Our review has concluded that the TMDL adequately incorporates a margin of safety.</p>																																													



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

RECEIVED  
SEP 18 2000  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE WATER QUALITY PROGRAMS

SEP 14 2000

Reply To  
Attn Of: DW-134

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

Re: Approval of Total Maximum Daily Loads (TMDLs) within the  
Clark Fork/Pend Oreille Subbasin

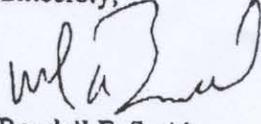
Dear Mr Mabe:

The U.S. Environmental Protection Agency (EPA) is pleased to approve the following  
TMDLs within the Clark Fork/Pend Oreille Subbasin TMDL submitted to us on April 17, 1999,  
for the following parameters:

<u>Waterbody</u>	<u>Segment</u>	<u>TMDL Parameters</u>
North Fork Grouse Creek	Hydrologic Unit Code 17010213	sediment
Lower Pack River	Hydrologic Unit Code 17010213	sediment
Upper Cololla Creek	Hydrologic Unit Code 17010213	sediment
Lower Cololla Creek	Hydrologic Unit Code 17010213	sediment
Hoodoo Creek	Hydrologic Unit Code 17010213	sediment

We appreciate the effort of the Idaho Department of Environmental Quality in developing  
this TMDL. We look forward to implementation of the TMDL, and continuing to work  
collaboratively on water quality issues in the Clark Fork/Pend Oreille Subbasin.

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,  
  
for Randall F. Smith  
Director  
Office of Water

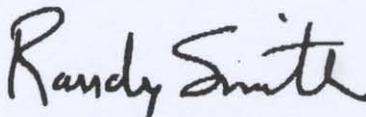
2

This TMDL afforded a unique opportunity for EPA to work closely with the Tri-State Water Quality Council, IDEQ and Tetra Tech, Inc. to develop this TMDL. We especially commend Ruth Watkins for contributing her exceptional facilitation and management skills to assure the timeliness and success of this TMDL. In addition, Dave Stasney from your office was very helpful in assisting with technical expertise and ground truthing, making this a very defensible document.

We appreciate the opportunity to work with your staff and the Tri-State Water Quality Council. It is evident by the high quality work and exceptional outreach that has occurred in this watershed that improvements to water quality will continue.

By EPA's approval, this TMDL is incorporated into the State's Water Quality Management Plan under Section 303(e) of the Clean Water Act. If you have any questions, please feel free to contact me at (206) 553-1261 or Martha Turvey at (206) 553-1354.

Sincerely,



Randall F. Smith  
Director  
Office of Water

Enclosure

cc: Steve Allred, IDEQ Administrator  
Michael McIntyre, IDEQ, Surface Water Program Manager  
Marti Bridges, IDEQ TMDL Program Manager  
Gwen Fransen, IDEQ CDA Regional Administrator  
Ruth Watkins, Tri-State Water Quality Council