The Columbia River
Improving Water Quality

Idaho DEQ, Oregon DEQ, Washington Dept. of Ecology, and US EPA Region 10
in coordination with the Columbia Basin Tribes
Revised Fall 2002

Public Involvement Overview for the Columbia/Snake River Mainstem TMDLs

Introduction

The objective of the TMDL program is to protect the chemical, physical, and biologic integrity of the nations waters. Authority for developing and establishing TMDLs is found under the 1972 Clean Water Act. The Act requires states, territories, and authorized tribes to develop standards to protect all beneficial uses which a waterbody supports. Impaired waters that do not meet beneficial uses are identified and listed under section 303(d) of the Clean Water Act. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop TMDLs for these waters.

A TMDL specifies the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and allocates pollutant loadings among point and nonpoint sources. By law, EPA must approve or disapprove lists and TMDLs established by states, territories, and authorized tribes. If a state, territory, or authorized tribe submission is inadequate, EPA must establish the list or the TMDL. EPA issued regulations in 1985 and 1992 that implement section 303(d) of the Clean Water Act - the TMDL provisions.

Purpose of this Overview

This strategy has been developed to ensure that the public is well informed about the development of the Columbia/Snake River Mainstem Total Maximum Daily Loads (TMDLs) and the public involvement requirements for the TMDLs are carried out. In addition, the strategy ensures that the states, tribes, and U.S. Environmental Protection Agency (EPA) meet public involvement goals in a consistent, well coordinated manner.

The development of an effective TMDL brings together many local efforts and will require careful coordination. We want to support local, state and federal efforts to improve water quality with this effort and through this strategy. It is our intention not only meet but go well beyond the public involvement requirements.

TMDLs are developed for impaired waters to identify pollutants and reductions necessary to protect all beneficial uses. Beneficial uses require the protection of the chemical, physical, and biological parameters and these requirements can vary depending on annual, seasonal or daily variations. The overview will assist in providing a framework to ensure that all interested parties can participate and provide input in this TMDL process.

This is a living document. We expect to modify some of our approaches as we come to better understand how various groups and individuals would like to be involved. Changes will be based on feedback from the public and the experience we gain as the process moves ahead.

Fundamental Public Involvement Objectives:

1. To create an open and visible decision-making process to which the public has numerous opportunities for access and input.

2. To provide a mechanism by which the public is informed and has an understanding of the process, issues, and shares possible solutions from perspectives of various interests.

3. To incorporate public comments throughout the decision-making process.

4. To respond to submitted during the formal comment period.

Columbia/Snake River Mainstem Temperature and Total Dissolved Gas TMDLs: Desired Outcomes

The TMDLs on the Columbia/Snake River Mainstem will contribute to the overall goal of achieving water quality standards and beneficial uses for temperature and total dissolved gas (TDG) on the rivers. The overarching goal is to ensure that all beneficial uses of the Columbia/Snake River Mainstem are protected by implementing actions that will result in the attainment of water quality standards. Meeting water quality standards that will enhance the recreational uses of the Columbia, lead to substantial recovery of endangered salmon and steel head stocks, and result in sustainable fisheries within the basin for generations to come.

Background

The Columbia River watershed covers a huge geographic region, reaching over 1500 miles from Pacific Ocean on the Washington/Oregon coast to the mountains of British Columbia, Idaho,

Montana, Wyoming, Nevada and Oregon. Amazing regional diversity is present not only in landforms but also in culture, politics and economy. The Columbia/Snake River system harbors threatened and endangered fish populations and also hosts the most extensive system of hydroelectric power generation in the nation.

The Columbia/Snake River mainstem has been identified as water quality limited for numerous water quality parameters by Oregon, Washington, and Idaho. This TMDL effort addresses Columbia/Snake River Mainstem located in Oregon, Washington and Idaho. Water quality data collected by numerous groups and agencies have found that levels of Total Dissolved Gas and water Temperature (as well as other parameters) in the Columbia River that exceed Washington, Oregon and tribal water quality standards. The Columbia River also exceeds the WQS of the Colville Confederated Tribes for Temperature and TDG. The Spokane Tribe of Indians has WQS for the Columbia River that have been adopted by the Tribe. These standards are also exceeded in the Columbia River.

An inter-agency steering committee consisting of staff from the Idaho Department of Environmental Quality, the Oregon Department of Environmental Quality, the Washington Department of Ecology and the Environmental Protection Agency (EPA) has been formed to develop the Temperature and TDG TMDLs. Columbia Basin Tribes are also invited to participate on the steering committee. The states will issue the final TMDL for TDG on the parts of the rivers for which they have jurisdiction. Idaho will issue the temperature TMDL within Idaho, and EPA will issue the temperature TMDLs within Oregon and Washington as requested by the respective states. EPA will issue TMDL's for tribal waters consistent with applicable Clean Water Act water quality standards. In addition, EPA will honor trust responsibilities to all Columbia basin tribes. The TMDL process for this interagency group has been identified in a Memorandum of Agreement.

Involving the public

Public involvement is critical to the development of a water quality improvement plan that successfully reach the water quality goals for the Columbia/Snake River Mainstem. The public can participate in many phases of the process such as identification of pollution sources, developing, assessing and choosing water quality improvement strategies, reviewing and commenting on documents and education on the process for water quality improvement.

Some of the communication techniques we plan to use to engage the public in the process of developing TMDLs for the Columbia/Snake River Mainstem:

1) A web page has been established by EPA to provide timely information on work efforts. The web page includes links to related documents, maps, etc. as well as to tribes, states, agencies, etc.

ww.epa.gov/r10earth/columbiamainstemtmdl.htm

2) Formal and Informal Public Meetings (Described Below)- variety of meetings to engage the public in the process and decision making.

3) Fact Sheets that will serve two primary purposes: 1) to inform and educate the public and keep the public updated on TMDL progress and 2) provide the schedule of public involvement opportunities.

4) News releases, articles and display ads in key local newspapers announcing public involvement opportunities.

5) Mailings/notification to tribes and key stakeholders including interest groups; general public; local, state and federal agencies; watershed groups; trade organizations, etc.

6) State sponsored watershed coordination groups (See Appendix H)

7) Presentations and discussion with individuals and groups as requested.

Public meetings

Public meetings will follow the key steps in the TMDL development process. These meetings are intended to share with, and receive information from participants. The TMDL team will have the flexibility to conduct public meetings during the process as needed. To the extent possible, meetings on TDG and temperature will be coordinated.

Types of public meetings:

Public Informational Meetings: Periodic presentation of proposals, updates on progress, providing requested information, taking informal comments.

Listening posts, poster sessions, open house: Informal sharing information on proposals, no presentation, set up for public interaction and discussion with agency staff and other participants, take informal comments.

Workshops: Informal sharing proposals with a presentation, Q & A, taking informal comments.

Presentations at other organizations meetings: Informal presentation of proposals, updates on progress, providing requested information, taking informal comments, at established meetings of interested groups.

Informational Meetings: by request from public and interest groups

Formal Public Hearings: Formal, with a brief information presentation and Q & A, followed by a formal hearing to receive oral and written comments on the draft TMDL.

Formal Comments

A formal public review and comment period will be provided for the TDG and Temperature TMDLs. This comment period will extend at least 30 days and may be longer. Written and oral comments received at formal public hearings will be reviewed. The draft TMDL may be modified in response to public comments. A responsiveness summary to formal public comments will be developed with the final TMDL

Identifying the Interested Public

The interested public need to be identified for each TMDL. This may include any of the following:

- Anyone who expresses an interest in the TMDL
- Anyone who represents an interest that might be affected
- Anyone who could be affected
- Anyone who thinks they might be affected
- Designated Management Agencies

EPA will maintain a centralized mailing list for the temperature and TDG TMDLs. Key contacts from the states, tribes and EPA will be on the mailing list and will be included and informed about public involvement activities. The states and tribes may wish to supplement the mailing list at their discretion.

As additional individuals and groups are identified (through public meeting sign-up sheets, requests, etc.) they will be added to the mailing list and they will be provided with information on an on-going basis.

Roles and Responsibilities

Under the Clean Water Act, the states are responsible for developing TMDLs for water which do not meet water quality standards. In the study area, the states of Idaho, Oregon, and Washington have responsibility to develop TMDLs. None of the tribes in the study area have currently sought authorization for developing TMDLs. Thus, EPA will issue the portions of the TMDLs applicable to tribal waters.

The Environmental Protection Agency (EPA) Region 10 has authority to approve or disapprove TMDLs. If EPA disapproves a TMDL the agency will develop the TMDL.

The Western Governors' Association (WGA) will be playing an active role in facilitating the public outreach process. WGA will be leading the outreach efforts and assisting in the outreach coordination between the parties.

The Temperature TMDL: At the request of the states of Oregon and Washington, EPA will be developing temperature TMDL's for the Columbia/Snake River Mainstem in Oregon and Washington. Idaho will issue the temperature TMDL with the technical assistance of EPA for waters within the state of Idaho. EPA will be issuing the temperature TMDL's on behalf of the tribes where tribal CWA water quality standards are applicable.

The Total Dissolved Gas (TDG) TMDLs: Oregon and Washington will develop cooperatively the interstate portion of the Columbia Mainstem TDG TMDL. Washington will develop the TDG TMDL on the Mid Columbia/Snake River Mainstem in concert with the adjacent states and tribes. EPA will be issuing TDG TMDLs on behalf of the tribes where tribal CWA water quality standards are applicable. Detailed roles and responsibilities for the Columbia/Snake River Mainstem TMDLs are outlined in Appendix B and Appendix C.

Implementation of TMDLs:

A TMDL is the critical first step for achieving water quality standards and provides an analytic underpinning for future watershed decisions. Implementation is key for actual water quality improvement, and the states carry the responsibility for planning and directing implementation. In conjunction with the Columbia basin TMDLs the states will develop implementation plans. These detailed plans will identify management techniques for each source category, identify responsible agencies and programs, and identify funding resources to provide a reasonable assurance that temperature and total dissolved gas TMDLs will be implemented.

Geographic Scope

The Snake River has a significant impact on water quality for the Columbia River and has been included on the 303(d) list of impaired waters for Temperature in Idaho, Oregon, and Washington from the confluence with the Salmon River (south of Lewiston Idaho) to the confluence with the Columbia River in Washington. The river exceeds WQS tor TDG in Washington and Oregon.

The Columbia River has been included on the 303(d) list of impaired waters for temperature in most of Idaho, Oregon and Washington and for TDG in Washington and Oregon. The Columbia River also exceeds the WQS of the Colville Confederated Tribes on their reservation for Temperature and TDG. The Spokane Tribe has WQS for the Spokane reservation that (pending EPA approval) also show accedences of temperature and TGD standards for the Columbia River.

The Timeline

- The temperature TMDLs for the Columbia/Snake River Mainstem are scheduled for completion by the end of 2002.
- The TDG TMDL for the Columbia River **below** the confluence with the lower Snake is scheduled for completion by Oregon and Washington by early 2002.
- The TDG TMDL for the Columbia and Lower Snake **above** the confluence with the Snake is scheduled to be completed by Washington by late 2002.

This public involvement overview covers the general public involvement process and procedures for all of the temperature and TDG TMDLs on the Columbia/Snake River Mainstem. The states, EPA, or the tribes may develop more detailed public involvement plans which will address outreach activities and timelines specific to each TMDL and state. These plans will be made available to the public.

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Attachments:

Appendix A - What is a TMDL and why are they Required?
Appendix B - Detailed Roles and Responsibilities
Appendix C - Memorandum of Agreement
Appendix D - Workplan Columbia/Snake River Temperature TMDL for Oregon, Washington, and Tribal Lands
Appendix E - Workplan Columbia/Snake River Total Dissolved Gas TMDL for Idaho, Oregon, and Washington
Appendix F - Key Contacts
Appendix G - State Sponsored Watershed Coordination Groups

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For more information, please contact:

Ann Butler, Washington Department of Ecology, (360) 407-6480
Don Essig, Idaho Department of Environmental Quality (208) 373-0119
Russell Harding, Oregon Department of Environmental Quality (503) 229-5284

Appendix A
What is a TMDL and why are they Required?

A TMDL is a technical analysis resulting in a document that quantifies the amount of a given pollutant (load) that can be released into a given waterbody while still maintaining Water Quality Standards (WQS). A TMDL allocates loads to sources to achieve the pollutant load necessary to achieve WQS.

TMDLs are required when waterbodies are identified as impaired waters not meeting state or tribal Water Quality Standards (often referred to as Clean Water Act Section 303(d) listed waters). The TMDLs being done for the Columbia/Snake Mainstem will identify the sources of temperature and total dissolved gas (TDG) causing or contributing to water quality impairment, and determine allocations for TDG and temperature reductions needed to achieve WQS.

The Columbia River Mainstem and the Lower Snake River Mainstem exceed state and/or tribal Water Quality Standards for critical periods of time (mainly in the spring and summer months) for both water temperature and total dissolved gas (TDG).

Elevated levels of dissolved gas (in this case oxygen and nitrogen) and elevated water temperatures both have negative effects on the health and survival of juvenile and adult migratory fish, resident fish and other aquatic life. Fish populations in the Columbia Basin have declined significantly, due in part to unmet habitat requirements. If salmon and steel head populations are to recover, the health of the lakes and rivers they depend on needs to be restored.

Appendix B
Detailed Roles and Responsibilities

Considerations:

- Who is doing the work?
- What is the value added?
- Are the right people doing the right things?
- Is our work consistent with the TMDL process?
- Are we coordinating our work?
- Are we adhering to the time lines?
- What are the potential impacts?
- How will we ensure accountability?
- Are we keeping the team in the loop?

The Outreach Team

The Outreach Team:
Ann Butler, Washington Department of Ecology, (360) 407-6480
Don Essig, Idaho Department of Environmental Quality (208) 373-0119
Russell Harding, Oregon Department of Environmental Quality (503) 229-5284

Tribal Contacts:
Adriane Borgias, Kootenai Tribe of Idaho (208) 267-3519
Carl Merkle, Umatilla Tribe (541) 276-3449
Chad Colter, Shoshone-Bannock Tribe (208) 238-3700
James Thomas, Yakama Indian Nation (509) 865-5121 ext. 4669
John Gross, Kalispell Tribe (509) 445-1147
Patti Stone, Confederated Tribes of the Colville (509) 634-2415
Paul Lumley, Columbia River Inter-Tribal Fish Commission (503) 238-0667
Rick Eichstaedt, Nez Perce Tribe (208) 843-7355
Rudy Peone/Brian Crossley, Spokane Tribe (509) 258-9217

The Outreach team is responsible for:

- Ensuring that all parties are in agreement with the type and quality of material produced for the public
- Reviewing and approving all outreach materials
- Developing Fact Sheets on
    - Improving Water Quality
    - The TMDL Process and Timeline
    - Water Quality Standards,
    - The Temperature Model

Total Dissolved Gas,

- Responding to and articulating public need for information
- Ensuring maintenance and utilization of the Web Page
- E-mailings
- Organizing and planning public meetings and workshops.
- Mailings to distribute fact sheets and announce public meetings, etc.
- Issuing joint press releases at critical junctures
- Message verification with the stakeholders.

Each of the Columbia basin tribes have the opportunity to participate in the following ways:

- Consultation and Coordination
- Assist in the Development of Temperature TMDL
- Assist in the Development of TDG TMDL
- Participate in Outreach
- Develop Fact Sheet on Tribal Water Quality Standards for Temperature and TDG

Appendix C
Memorandum of Agreement
Columbia/Snake Rivers Total Maximum Daily Load for Total Dissolved Gas and Temperature

October 16, 2000

Memorandum of Agreement
Columbia/Snake Rivers Total Maximum Daily Load for
Total Dissolved Gas and Temperature
October 16, 2000

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Memorandum of Agreement
Columbia/Snake Total Maximum Daily Load for
Total Dissolved Gas and Temperature
October 16, 2000

Introduction and Purpose:

The purpose of this Memorandum (MOA) is to document a mutual understanding on the approach and roles among Idaho DEQ, Washington DOE, Oregon DEQ, EPA Region X, and the Columbia Basin Tribes to complete a total dissolved gas and temperature Total Maximum Daily Load (TMDL)[1] for the mainstem Columbia and Snake Rivers to RM 188. Expected roles of non-signatory agencies are also included.

The environmental purpose of this effort is to understand the sources of total dissolved gas and temperature loadings and to allocate those loadings based on numeric water quality criteria (see Appendix 1) in order to meet water quality standards. This is a task that will require careful coordination, cooperation, and management by all parties involved in this effort.

The complexity of the governance system is profound, involving Federal agencies, state agencies, Tribes, private entities, and Public Utility Districts (PUDs). No single agency or Tribe can assert its jurisdiction and achieve a successful outcome. For example, total dissolved gas travels across international borders, through tribal and state jurisdictions, and is increased by passage over Federal, PUD, and private dams. Its one commonality is that it is harmful to fish and aquatic life at certain percentages of saturation. Temperature exceedances are perhaps even more complex with respect to assessing causes and solutions.

The MOA signatories also recognize a high degree of uncertainty in the Basin. The MOA signatories do not know the outcome of decisions regarding breaching of dams, outcomes of litigation or adjudications; flows that may be required to be adjusted, future appropriations, and other uncertainties. Yet the MOA signatories must make decisions while acknowledging incomplete information and uncertainty.

Scope:

[1] Section 303(d) of the Clean Water Act and its implementing regulations define a TMDL as a quantitative assessment of pollutants that cause water quality impairments. A TMDL specifies the amount of a particular pollutant that may be present in a waterbody, allocates allowable pollutant loads among sources, and provides the basis for attaining or maintaining water quality standards. TMDLs are established for waterbody and pollutant combinations for waterbodies impaired by point sources, non-point sources, or a combination of point and non-point sources.

The geographic scope of the TMDL addressed by this agreement includes the Mainstem Snake River from RM 188 to its confluence with the Columbia River. Joint Oregon-Idaho TMDLs for Snake River-Hells Canyon extending from RM 409 at about Adrian, Oregon to RM 188 immediately above the Salmon River inflow, will be a stand-alone effort, but will be coordinated with and complementary of the downstream effort. For the Mainstem Columbia River, the TMDL will reach from the Canadian Border to the Astoria Bridge.

The pollutants to be addressed by these TMDLs are total dissolved gas and temperature. The MOA signatories recognize the importance of other pollutants that are 303(d) listed, but these are beyond the scope of this MOA. TMDLs for pollutants other than total dissolved gas and temperature should proceed on a parallel track, and be coordinated with this effort under the direction of the state(s).

The MOA signatories further recognize that the relative contribution of pollutants from the tributaries, particularly temperature, is uncertain. For the purpose of this MOA, tributaries include river segments upstream of the identified boundaries. The MOA signatories fully recognize the value and importance of the tributaries in terms of habitat and water quality, and the effort that will be required to produce TMDLs on those waters.

However, the Columbia-Snake Rivers TMDL will not reach into the tributaries. The Clearwater TMDL to be prepared by the State of Idaho, Nez Perce Tribe, and the Environmental Protection Agency will be a stand-alone effort, but will be coordinated with the TMDL work in the Columbia Basin because of the importance of Dworshak Dam for temperature and total dissolved gas issues. The MOA signatories will make various assumptions and scenarios about the contributions of the tributaries in order to focus their efforts on the mainstem issues and recognize that the MOA signatories may need to adjust the mainstem goals over time based on their ability to achieve tributary targets. The purpose is to understand and remediate the contribution of dams and other in-river factors to total dissolved gas and temperature, and to ensure that there is equity in loading reductions between tributaries and the mainstem. In other words, problems and loading reductions necessary in the mainstem will not be passed on to the tributaries and vice-versa.

In developing a TMDL, the target must be the existing water quality standards. To perform a TMDL analysis, the river must be modeled with existing dams in place and the natural river scenario. The MOA signatories envision that there will be solutions to water quality problems, both operational and structural. This analysis does not presume to drive decisions on dam breaching or leaving dams in place. If the analysis demonstrates that water quality standards cannot be met with dams in place after all reasonable measures have been implemented, a decision on a final proposed plan of action will be made with affected states and Tribes as part of the TMDL implementation plan, as applicable.

EPA would only issue a TMDL unilaterally if required to do so by the Settlement Agreement(s) particular to each state signing this TMDL. The goal is to have consensus on both the analysis and the implementation plan.

Vision and Final Products:

- An equitable allocation of pollutant reductions that accurately reflects relative contribution, and favors no one state, Tribe, or dam operator
- A TMDL that informs decision-makers as to the real causes of the water quality standards violations and the resultant loadings and feasible reductions and that has public participation
- A TMDL that recognizes and complements the other work in habitat and hydropower
- A TMDL that is approvable, withstands appeal, and meets the requirements of the Clean Water Act and state TMDL legal settlements and decisions
- A TMDL that includes an implementation plan. (See below)
- A TMDL that has the support of the participants (i.e., no surprises)
- A TMDL that promotes real improvements in water quality and fish habitat and meets water quality standards
- A cooperative venture which recognizes the expertise, jurisdiction, authorities, and efforts of all participants

MOA Signatories:

- US Environmental Protection Agency, Region X
- Washington DOE
- Oregon DEQ
- Idaho DEQ

Requested to Participate in Implementation:

- Columbia Basin Tribes (see Appendix for list of Tribes)
- PUDs:
  - Grant County PUD
  - Douglas County PUD
  - Chelan County PUD
  - Seattle City Light
  - Avista
  - Pend Orielle PUD
- Columbia Power
- BC Hydro
- Idaho Power
- Bonneville Power Administration (BPA)
- US Army Corps of Engineers (USACE)

- US Bureau of Reclamation (USBOR)
- US Fish and Wildlife Service (FWS)
- US National Marine Fisheries Service (NMFS)

Coordinate with:

- FERC
- Department of Justice
- Others agencies as necessary

Conceptual Approach:

EPA will produce:

- A TMDL for temperature for the Snake/Columbia Mainstem using the model developed by Dr. John Yearsley. The Snake River- Hells Canyon TMDL being done by Oregon and Idaho using a variety of mechanisms, including CE-Qual-W2 and Mike 11 models, will be coordinated with EPA's work. This will be done in cooperation with states, Tribes and Federal agencies. The Yearsley model will also be useful for total dissolved gas in coordination with other modeling efforts.

- A separate model for Lake Roosevelt.

Each State will produce:

- The TMDL for total dissolved gas for their waters in cooperation with the dam operators within their boundaries. Idaho DEQ and Oregon DEQ will jointly address total dissolved gas in the Snake River – Hells Canyon TMDL for interstate Snake River waters. Idaho DEQ, EPA, and the Nez Perce Tribe will jointly produce a TMDL for the Clearwater River. Washington DOE will produce the total dissolved gas TMDL from the Grand Coulee Dam to Astoria, Washington, and from the confluence of the Clearwater River to the confluence with the Columbia River. EPA will work with the Colville Tribe, the Spokane Tribes, and Washington DOE for the portion of the dissolved gas TMDL within Reservation boundaries. Oregon DEQ and Washington DOE will collaborate on the total dissolved gas TMDL for the interstate portions of the Columbia River.
- Each state will help EPA produce significant portions of the implementation plans for the temperature TMDL, particularly those sections relating to actions needed to reduce non-point sources.

EPA will participate in the states' total dissolved gas TMDLs for consistency of approach, assistance in coordinating a system-wide approach, and assisting in assuring an approach to realize water quality benefits. EPA will also assist with Federal project implementation, approvability of the final product, and securing the cooperation of applicable Federal agencies.

Regarding the Canadian water use planning and hydropower licensing process, EPA will work with Washington DOE to seek a mechanism to incorporate United Sates and Tribal water quality standards in Canadian licenses so that those standards are met at the United States/Canadian border. The States and Tribes are encouraged to engage Federal, private, and PUD dam operators in their TMDL development process as essential partners.

The Federal Action Agencies (USBOR, USACE, and BPA) will be asked to provide data, technical/financial assistance and general support for the state and EPA efforts. The Federal Action Agencies have resources and expertise essential to the success of this effort. The USACE total dissolved gas model is an essential piece to be shared with the states and Tribes. The parties to this MOA acknowledge that spill over dams is both voluntary (for fish passage and flood control) and involuntary (volume of water exceeds capacity).

Interested and affected Tribes are invited to participate and lend their expertise to the effort. The MOA process will be flexible in its implementation to acknowledge and incorporate information and guidance resulting from the Tribe's promulgation of water quality standards and receipt of standing as "Treatment as a State." EPA will coordinate tribal involvement. EPA will provide the leadership with the states and Tribes to collaborate and cooperate on mainstem TMDL public involvement including the production of the Clearwater River TMDL and the Columbia River TMDL within the Reservation boundaries.

Each dam operator will be expected to implement the TMDL through construction or operational changes consistent with needs for fish passage. The implementation mechanisms will vary, but may include FERC licenses, Biological Opinions, consent decrees, water quality standards, waivers/variances, habitat conservation plans, or other agreements. Where Congressional appropriations are required, Action agencies will be expected to seek funding in good faith.

Roles of MOA Signatories:

EPA:

- Lead for temperature TMDL (except Snake River-Hells Canyon TMDL)
- Connect work to the Snake River-Hells Canyon TMDL and coordinate with total dissolved gas TMDL
- Coordinate Tribal participation
- Coordinate Federal participation per Biological Opinion
- Exercise Trust responsibility to the Columbia River Tribes by inviting their participation, seeking their advice and expertise, and keeping them informed on critical issues related to TMDL development
- Coordinate development of the total dissolved gas TMDL for the Clearwater River within the boundaries of the Nez Perce reservation
- Coordinate development of the total dissolved gas TMDL for the Upper Columbia River within the boundaries of the Colville and Spokane reservations
- Connect work to the Clearwater River TMDL
- Lead on a single public involvement effort
- Coordinate with Provincial and Federal governments of Canada, Washington DOE, and the Tribes on addressing total dissolved gas standards at the US/Canadian border

A critical role of EPA will be to ensure coordination of the entire TMDL development effort between all involved parties.

Oregon DEQ:

- Co-lead for Snake interstate waters with Idaho DEQ
- Co-lead on Mainstem Columbia total dissolved gas TMDL with Washington DOE
- Participate in EPA's temperature TMDL
- Participate in public involvement efforts

Idaho DEQ:

- Co-lead for Snake interstate waters with Oregon DEQ
- Engage Idaho Power Company
- Participate in EPA's temperature TMDL
- Participate in public involvement efforts
- Coordinate the development of the total dissolved gas TMDL, working with the Nez Perce Tribe and EPA

Washington DOE:

- Lead for total dissolved gas TMDL from Grand Coulee to Astoria, Washington
- Co-lead on Mainstem Columbia total dissolved gas TMDL with Oregon DEQ
- Participate in EPA's temperature TMDL
- Engage PUDs in the TMDL development process
- Participate in public involvement efforts

Columbia Basin Tribes:

- Work with EPA and the states to prepare TMDLs and consult on decisions

Expected Roles of Cooperating Agencies and Tribal Governments:

- Federal Action Agencies (USACE, BOR, BPA): Provide data and information, financial/technical assistance, models, modeling, and general support

- PUDs/Private Dams: Provide data and information, technical/financial assistance; assist in TMDL development and implementation

- FERC: Condition future licenses with TMDL implementation plans as part of 401 certification by states and Tribes

- NMFS: Assist in resolution of fish passage, temperature, and total dissolved gas issues

- FWS: Assist in resolution of fish passage, temperature, and total dissolved gas issues

- Columbia Basin Tribes: Consult on a government-to-government basis. The Tribes will be invited to participate to provide their views and perspectives and lend their expertise to the effort

Resources:

EPA:

- $80,000 for application of temperature model
- 0.4 FTE Yearsley
- 0.1 FTE from TMDL unit
- 0.5 FTE Soscia
- 0.5 FTE Tortorici
- 0.1 FTE Woodruff
- 0.3 FTE Olson
- 0.4 FTE Martin
- 0.1 FTE Cole

Oregon:

- 0.75 FTE Columbia Total Dissolved Gas TMDL
- 1.0 FTE Snake River-Hells Canyon TMDL
- 0.5 FTE ESA coordination, comment, and review

Idaho:

- 2 FTE for Snake River-Hells Canyon TMDL
- 1 FTE for Clearwater TMDL
- 0.25 FTE for Snake (Salmon to Clearwater TMDL)
- 0.5-1.0 FTE on ESA on the river segments and to coordinate, review and comment on the lower Snake and Columbia TMDLs
- $200,000 in contract support of the above listed projects

Washington:

- 1 FTE

Schedule:

The TMDL for the Lower Columbia and Snake Rivers will be completed by December 2001 (Phase I). The TMDL for the Upper Columbia River will be completed by December 2002 (Phase II). The states will be responsible for issuing the final TMDL, in close coordination with EPA. In order to meet the schedule, the agencies are committed to acquiring the resources necessary to implement this MOA. It is recognized that the ability to meet the commitments in this MOA are dependent on adequate resources. Upon signature of the MOA, the first step will be to develop a more detailed role paper laying out more specific responsibilities of the signatory agencies.

MOA Modifications:

Parties to this MOA are encouraged to review and periodically update this MOA to ensure its relevance to changing situations for the life of the project. Any party may withdraw from the MOA with 90 days notice to the other parties while stating the reasons. The other parties may attempt to accommodate the concerns expressed by the withdrawing state in order to maintain the MOA.

Signatures:

For the US Environmental Protection Agency, Region X

_____

For the State of Oregon _____

For the State of Idaho _____

For the State of Washington_____

Appendices:

1. Water Quality Standards for Columbia River Total Dissolved Gas and Temperature

Total Dissolved Gas - For Total Dissolved Gas, the goal is to reach the Total Dissolved Gas standard, which is currently 110% in the Columbia and Snake River mainstems.

Temperature - For water temperature, the long-term goal is standard attainment in the Columbia and Snake River mainstems. For the Columbia River, the temperature criteria to be attained from the Canadian border to Grand Coulee Dam is 16°C /60.8°F. For Grand Coulee Dam to Priest Rapids Dam, the temperature criteria is 18°C/64.4°F (instantaneous maximum). For Priest Rapids Dam to Pacific Ocean, the temperature criteria is 20°C/68.0°F (instantaneous maximum). For the Snake River, from the Salmon River to Washington/Oregon border the temperature criteria is 17.8°C/64°F, with a 7-day average of daily maximum temperatures [12.8°C/55°F 7-day average of daily maximum temperatures from October 1 through June 30]. At the Washington/Oregon border to confluence with Columbia River, the temperature criteria is 20°C/68°F (instantaneous maximum).

2. Clean Water Act section 303(d) listed waters on the Columbia/Snake Mainstems
Clean Water Act section 303(d) listed waters on the Columbia/Snake Mainstems can be found on the following websites:

State of Oregon - http://waterquality.deq.state.or.us/wq/303dlist/303dpage.htm

State of Washington - http://www.ecy.wa.gov/programs/wq/303d/index.html

State of Idaho - http://www2.state.id.us/deq/water/water1.htm

3. TMDL development consent decrees and/or settlement agreements

(See attached)

4. FCRPS Biological Opinion issued by NMFS on the FCRPS

A CD-ROM of the Biological Opinion is available from NMFS which can be obtained by calling their Hydropower Division Office located in Portland, Oregon (503/230-5414).

5. Federal Agency Water Quality Plan for Mainstem Columbia System

The Federal Agency Water Quality Plan for Mainstem Columbia System is located in the NMFS FCRPS Biological Opinion, Appendix D.

6. List of Columbia Basin Tribes

Burns Paiute Tribe of the Burns Paiute Indian Colony of Oregon
Coeur d'Alene Tribe of the Coeur D'Alene Reservation, Idaho
Confederated Salish and Kootenai Tribes of the Flathead Reservation, Montana
Confederated Tribes of the Colville Reservation, Washington
Confederated Tribes of the Umatilla Indian Reservation, Oregon
Confederated Tribes of the Warm Springs Reservation of Oregon
Confederated Tribes and Bands of the Yakama Nation, Washington
Kalispel Indian Community of the Kalispel Reservation, Washington
Kootenai Tribe of Idaho
Nez Perce Tribe, Idaho
Shoshone-Bannock Tribes of the Fort Hall Reservation of Idaho
Shoshone-Paiute Tribes of the Duck Valley Reservation, Nevada
Spokane Tribe of the Spokane Reservation, Washington

Appendix D
Workplan
Columbia/Snake River Temperature Mainstem TDML
Oregon, Washington, and Tribal Lands

Appendix E
Workplan
Columbia/Snake River Mainstem Total Dissolved Gas TMDL
Idaho, Oregon, and Washington

Appendix F
Key Contacts

Technical Contacts/Phone Numbers:

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Appendix G

State Sponsored Watershed Coordination Groups

The state issued Total Dissolved Gas TMDL's, at the discretion of the TMDL project manager, may require the creation of a watershed coordination group(s). The watershed coordination group will consist of policy and technical members. Representation on the watershed coordination group will consist of representatives of major stakeholders in the basin, Tribes, action agencies, and the states (including hydro power, agriculture, environmental, local government, municipal, recreation, timber/forestry, industrial interests, the public at large, and Canadian Government). Individual states have specific requirements for stakeholder participation and outreach and will work on developing a basin-wide approach that meets their requirements. The purpose of the coordination team is to assist during the process on identifying sources, providing guidance on pollution allocation and reductions, developing local solutions, building local partnerships, disseminating information to their respective interest groups, implementation activities, and follow-up monitoring.