

## **MONTANA AND IDAHO BORDER NUTRIENT LOAD MEMORANDUM OF AGREEMENT**

WHEREAS, the State of Montana and the State of Idaho recognize a responsibility and an opportunity to work collaboratively to protect Pend Oreille Lake from accelerated cultural eutrophication; and

WHEREAS, the State of Montana and the State of Idaho have agreed to pursue a process that would establish respective responsibilities for managing and controlling nutrient loading to Pend Oreille Lake; and

WHEREAS, the State of Montana and the State of Idaho designated the Tri-State Water Quality Council (Council) as facilitator of such a process; and

WHEREAS, the Council established a committee in 1999 to: (a) assess current and historical rates of nutrient loading to Pend Oreille Lake from all sources, including the Clark Fork watershed in Montana and localized sources in Idaho; (b) set a numeric water quality target for Pend Oreille Lake expressed in terms of nutrient concentrations; (c) establish nutrient loading targets deemed capable of protecting the water quality of Pend Oreille Lake and apportion the load between the two states; (d) recommend action levels designed to ensure that the targets are achieved; and (e) recommend a water quality monitoring plan capable of evaluating progress in attaining and maintaining the loading targets and evaluating the ability of the targets to protect lake water quality; and

WHEREAS, the product of this process was a Technical Guidance document that sets forth recommendations for maintaining lake water quality through an in-lake concentration target, a lake nutrient loading target, and load allocation targets for Montana and Idaho, and a monitoring plan; and

WHEREAS, the parties desire to describe their responsibilities and roles in setting and meeting water quality goals and nutrient loading targets for Pend Oreille Lake based on the recommendations in the Technical Guidance document; and

WHEREAS, the States have consulted with the public in the affected watershed area and have attained public support for the recommendations in the Technical Guidance document and for the responsibilities and roles being agreed to by the parties;

NOW THEREFORE, the parties enter into this Memorandum of Agreement (MOA.)

### **I. Parties.**

The parties to this MOA are the signatories as set forth on Page 8.

## **II. Purpose of MOA**

The purpose of this MOA is to document the parties' commitments and intent to protect and maintain water quality in Pend Oreille Lake by establishing and attaining nutrient loading goals and targets for the Clark Fork watershed in Montana and local sources in Idaho. The parties agree that a collaborative approach is the most workable solution to addressing nutrient loading in Pend Oreille Lake, and that the nutrient loading targets are intended to protect Pend Oreille Lake water quality. Other purposes of this MOA are to:

- (a) adopt a regionally coordinated and cooperative approach to controlling nutrient loading in the Clark Fork-Pend Oreille watershed;
- (b) promote cooperation between the Montana Department of Environmental Quality (MDEQ) and Idaho Department of Environmental Quality (IDEQ) in the management of the Clark Fork-Pend Oreille watershed; and
- (c) help to delineate management responsibilities between the two states for water quality planning and implementation activities in the Clark Fork-Pend Oreille watershed.

## **III. Findings of Fact**

The parties agree to the following Findings of Fact, as described fully in the Technical Guidance:

- (a) Management objectives have been established for Pend Oreille Lake. The Clean Water Act § 525 (Public Law 100-4, 1987) Clark Fork-Pend Oreille Basin Water Quality Study and Management Plan established two management objectives for the lake, which are to:
  - Protect Pend Oreille Lake water quality by maintaining or reducing current rates of nutrient loading from the Clark Fork River; and
  - Reduce nearshore eutrophication in Pend Oreille Lake by reducing nutrient loading from local sources.
- (b) The goal of the border nutrient loading strategy is to maintain water quality in the open water of the lake. Water quality of the lake's open waters is predominantly influenced by the Clark Fork River. Studies indicate that water quality in Pend Oreille Lake is acceptable and has not changed statistically since the mid-1950's. However, studies also show that population growth and development in the lake's nearshore areas pose a threat to the lake's water quality. Therefore a preventative approach that addresses contributions from both the Clark Fork River and local sources is appropriate to prevent future pollution of the lake.
- (c) Open lake water quality can be maintained by meeting a concentration target for total phosphorus. Because phosphorus is the nutrient most often limiting algae

and aquatic plants in Pend Oreille Lake, it is the focus of the border nutrient loading strategy. A target of 7.3 ug/l total phosphorus is recommended in the Technical Guidance to maintain open lake water quality. This target is based on (1) observed in-lake data from §525 studies in 1989 and 1990 and (2) approved modeling methods for calculating the correlation between oligotrophic and mesotrophic lake conditions.

(d) To meet the in-lake concentration target of 7.3 ug/l, a total loading target of 328,651 kg/yr total phosphorus to Pend Oreille Lake is recommended. An allocation between Montana's and Idaho's portion of this load is recommended as follows: 259,500 kg/yr total phosphorus from Montana (Clark Fork River at Montana/Idaho state line) and 69,151 kg/yr total phosphorus from the Pend Oreille Lake watershed in Idaho. Both states will pursue development of an allocation strategy to meet these targets within their respective portion of the watershed.

(e) Although the targets are for total phosphorus, the in-lake nitrogen to phosphorus (N:P) ratio will be monitored. An observed N:P ratio of 15:1 or lower may indicate a shift toward nitrogen limitation in the lake and will serve as a trigger to initiate the setting of a target for total nitrogen and the development of a nitrogen allocation strategy and monitoring plan.

(f) A water quality monitoring program is an essential element to implement this MOA. Utilizing a feedback loop approach, the parties will conduct water quality sampling and analysis to determine if the goal of maintaining open lake water quality is being met and if respective state nutrient allocation targets are being achieved. Based on these evaluations, revisions to the in-lake concentration target, total loading target and/or load allocation targets may be made as deemed necessary and agreed upon by the parties.

#### **IV. Monitoring Program**

The monitoring program recommended in the Technical Guidance includes sampling design to evaluate annual phosphorus loading to Pend Oreille Lake from the Clark Fork River and local sources and in-lake concentrations of total phosphorus. The program will also provide the means to detect long-term trends in trophic status of the lake. The program is a statistically based design derived from analysis of approximately 10 years of historical data for the Clark Fork River and limnological studies of Pend Oreille Lake.

The recommended monitoring program is comprised of three principle water quality monitoring objectives for Pend Oreille Lake. These include: 1) estimation of annual total phosphorus loads to Pend Oreille Lake from the Clark Fork River; 2) assessment of open water, lake-wide average total phosphorus concentrations in the euphotic zone; and 3) assessment of trends in Pend Oreille Lake trophic status. Monitoring is recommended for total phosphorus, total nitrogen, soluble reactive phosphorus, total soluble inorganic nitrogen, Chlorophyll-*a* and Secchi depth.

Idaho and Montana are committed to development of a sampling analysis plan to implement the monitoring program.

#### **V. Standard Frequency of Data Review and Evaluation**

The parties agree to meet at least annually to review the monitoring data, analyze whether the targets are being met, and review the overall success of the program. This evaluation will be based on data collected and analyzed for nutrient loading to Pend Oreille Lake as set forth in this MOA, and may also include other data such as the Council's three-state watershed monitoring program to assess overall watershed trends and status.

#### **VI. Revisions to the Water Quality Targets, Nutrient Allocations and Monitoring Program**

The annual monitoring data evaluations may indicate the need for revisions to the targets or the monitoring program. These revisions will be developed through cooperative problem solving and a consensus-based approach, with all parties agreeing to such revisions.

#### **VII. Nutrient Targets**

The in-lake concentration target for Pend Oreille Lake is 7.3 ug/l total phosphorus. The total nutrient loading target for Pend Oreille Lake is 328,651 kilograms per year of total phosphorus. The nutrient loading target is further allocated to the Clark Fork River and local sources in Idaho. The nutrient loading target for the Clark Fork River at the Montana/Idaho border is 259,500 kilograms per year of total phosphorus and the nutrient loading target for local sources in Idaho is 69,151 kilograms per year of total phosphorus. Additionally, a target is set to maintain a ratio greater than 15:1 of total nitrogen to total phosphorus.

These targets are designed to maintain water quality in the open water of the lake (water where the maximum depth is greater than 2.5 times water transparency as measured by secchi depth) from the mouth of the Clark Fork River to the Long Bridge (Highway 95).

#### **VIII. Exceedance of the Target**

The parties agree that an exceedance of the target exists when either of the following conditions are documented:

- (a) A short-term exceedance of the targets (three consecutive years of total phosphorus load increases at the border that are above the targets by greater than 10%); or
- (b) A long-term exceedance of the targets (a ten year average total phosphorus concentration in the lake greater than 7.3 ug/l).

Such exceedances shall trigger the following actions:

- (a) The parties shall convene an evaluation committee.
- (b) The committee shall review available data and information to confirm whether an exceedance occurred and identify proximate and/or ultimate causes to the extent possible.
- (c) The committee shall advise the respective state offices with a preliminary assessment of concern appropriate to the triggering event(s).
- (d) The committee shall develop, if necessary, technical recommendations to further define the triggering event(s), identify cause(s) and list corrective measure(s).
- (e) The committee shall produce a report that summarizes the findings from (b), (c), and (d) of this section, as applicable.
- (f) The report shall be submitted to the respective state offices for appropriate action and made available for public review.

## **IX. Public Participation**

The parties are committed to keeping the public informed about the development and implementation of strategies to meet the goals and targets of this MOA. The parties further agree to encourage public review and participation in the annual review of data and in the development of any revisions to the targets or implementation strategies.

## **X. Responsibilities of Parties**

The parties to this MOA commit to taking the following actions to meet the nutrient targets for Pend Oreille Lake;

- (a) MDEQ agrees to:
  - (1) Develop a nutrient management strategy to meet the nutrient loading target for the Clark Fork River as set forth in Section VII of this MOA.
  - (2) Participate with other parties in the evaluation of monitoring data to determine if the targets for Pend Oreille Lake are being met and to evaluate causal factors in the case of exceedances;
  - (3) Participate with other parties in an adaptive approach that may call for revisions to the in-lake water quality target, nutrient loading and allocation targets, the implementation strategy and/or the monitoring program;
  - (4) Revise the nutrient management strategy for the Clark Fork River if water quality data indicate it is necessary to meet the nutrient loading target at the Montana-Idaho border;
  - (5) Strengthen the Clark Fork River border nutrient loading target if water quality data from Pend Oreille Lake indicate that the targets set forth in Section VII are exceeded and the source of that exceedance is Montana loading; and

(6) Participate in the water quality monitoring program to track if the targets are being met and to assess overall program success.

(b) IDEQ agrees to:

- (1) Develop a nutrient management strategy for the Pend Oreille/Clark Fork sub-basin to meet the target for local Idaho sources as set forth in Section VII of this MOA;
- (2) Participate with other parties in the evaluation of monitoring data to determine if the targets for Pend Oreille Lake are being met and to evaluate causal factors in the case of exceedances;
- (3) Participate with other parties in an adaptive approach that may call for revisions to the in-lake water quality target, nutrient loading and allocation targets, the implementation strategy and/or the monitoring program;
- (4) Revise the nutrient management strategy for the Pend Oreille/Clark Fork sub-basin if water quality data indicate it is necessary to meet the nutrient loading target;
- (5) Strengthen the nutrient loading target for local sources in Idaho if water quality data from Pend Oreille Lake indicate that the targets set forth in Section VII are exceeded and the source of that exceedance is Idaho loading; and
- (6) Participate in the water quality monitoring program to track if the targets are being met and to assess overall program success.

(c) The Council agrees to:

- (1) Facilitate the implementation of this MOA among the parties;
- (2) Implement and provide oversight of the water quality monitoring program;
- (3) Provide neutral party review of the monitoring data through its monitoring subcommittee;
- (4) Facilitate the review and revision of the existing Lake Pend Oreille Management Plan to assist with IDEQ's development of a nutrient management strategy for the Pend Oreille-Clark Fork sub-basin to meet the targets of this MOA; and
- (5) Serve as a neutral body in dispute resolutions or unresolved issues associated with implementation of this MOA.

## **XI. Dispute Resolution**

The parties agree that disputes that arise as a result of this MOA shall be resolved through cooperative problem solving and communication involving the parties.

## **XII. Amendment**

This MOA may be amended or modified at any time upon the consent of all parties.

### **XIII. Effect of MOA Regarding States' Authorities**

Nothing in this MOA shall be construed as increasing, limiting or modifying, in any way, the authority or statutory or regulatory responsibilities of the parties, or bind the parties to perform beyond their respective appropriations. Each and every provision of this MOA is subject to the laws and regulations of the States of Idaho and Montana.

### **XIV. Vacating Agreement**

Any party may withdraw from this MOA by providing written notice to the other parties.

### **XIV. Effective Date**

This MOA is effective upon the last date of signature by a party, as listed below.

Signed:

Jan Sensibaugh, Director of Montana Department of Environmental Quality, 4/2/02

C. Stephen Allred, Director of Idaho Department of Environmental Quality, 4/16/02

Robert A. Farren, Tri-State Water Quality Council, Montana representative on the Board of Directors, 4/25/02

Pierre Bordenave, Tri-State Water Quality Council, Idaho representative and President of Board of Directors, 4/25/02

Charlotte Yergens, Tri-State Water Quality Council, Washington representative on the Board of Directors, 4/25/02

Tim Closson, Tri-State Water Quality Council, Board of Directors, member at large, 4/25/02

- **MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

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Jan Sensibaugh, Director

Date

- **IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY**

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C. Stephen Allred, Director

Date

- **TRI-STATE WATER QUALITY COUNCIL**

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Robert A. Farren, Board of Directors, Montana

Date

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Pierre Bordenave, Board of Directors, Idaho

Date

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Charlotte Yergens, Board of Directors, Washington

Date

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Tim Closson, Board of Directors, At Large

Date