

**FINAL DRAFT - SCOPE OF WORK
BI-STATE NON-POINT SOURCE STUDY-PHASE 1
SPOKANE RIVER DISSOLVED OXYGEN TMDL**

INTRODUCTION

The Spokane River Dissolved Oxygen (DO) Total Maximum Daily Load (TMDL) process has established a phosphorus target of 10 µg/L, which is expected to reduce excessive algal productivity that causes DO concentrations to fall below the water quality standard. The Foundational Concepts for the Spokane River DO TMDL will begin guiding TMDL implementation, and meeting the phosphorus target will require a combination of improved point source wastewater treatment technology and reduced non-point source (NPS) pollutant loads.

Treatment technology currently cannot reliably meet the waste load target of 10 µg/L, and the difference between what current technology can achieve and the waste load target is referred to as “the Delta.” The Foundational Concepts requires that National Pollutant Discharge Elimination System (NPDES) permit holders develop a Delta Elimination Plan, and states that they may participate in a regional NPS program. If that participation demonstrates NPS phosphorus load reductions to the river, NPDES permit holders will be recognized as contributing toward achieving phosphorus waste load targets. As such, this Bi-State NPS study is a necessary first step towards demonstrating NPS phosphorus load reductions.

The Spokane River and Lake Spokane have been listed on a 303 (d) list for impairment of dissolved oxygen (DO). Modeling indicates that the main cause of the DO depletion is algae in the water bodies. The algae growth is primarily caused by excessive nutrients, with phosphorus being the largest nutrient contributor.

The DO Total Maximum Daily Load (TMDL) study recommended that both point sources and NPSs of phosphorus be identified and mitigated. The purpose of this proposed study, which will be conducted in phases, is to identify and quantify NPSs into the Spokane River and Lake Spokane, to identify best management practices (BMPs) to address the NPSs, to evaluate the cost-effectiveness and longevity of the identified BMPs, and to prepare an implementation plan for reduction of NPS based on the selected BMPs.

The study area of the Phase 1 NPS study includes the watersheds associated with Coeur d’Alene Lake, the Spokane River and its tributaries Hangman/Latah Creek and Little Spokane River, and Lake Spokane. The study area is shown on the attached Figure 1. As the NPS study progresses, the study area may be revised as appropriate.

Initial grant funding of approximately \$248,800 has been provided by the United States Congress, to be administered through the Environmental Protection Agency (EPA) for this project. This grant funding was a direct result of efforts by the Spokane Regional

Chamber of Commerce, Representative Butch Otter, Representative Cathy McMorris, and Senators Patty Murray, Maria Cantwell, Larry Craig, and Mike Crapo.

It has been estimated that the full cost to perform NPS studies through completion of the implementation plan could be in the range of \$750,000 to \$1,000,000. Therefore, it is anticipated that the project will be divided into two or three distinct phases. The scope of work proposed herein is for Phase 1 only. The scope presented below for future Phases 2 and 3 is preliminary in nature and is presented only to illustrate the general direction of the project from start to final completion. The scope for Phases 2 and 3 may be refined and adjusted during the completion of Phase 1.

Spokane County has agreed to be the grant recipient and lead agency for this regional NPS Study. As part of the effort to initiate the project and establish the grant, the County has invited participation by a number of agencies and interested parties from Idaho and Washington. Two meetings have been held to discuss the scope and budget for the project. A list of the participating agencies and interested parties, identified as the NPS Advisory Committee, is attached (Attachment A). Additional members may be added to the NPS Advisory Committee as appropriate. This group will continue as the Advisory Committee for this NPS Study and subsequent phases.

Additionally, the Spokane River DO TMDL Watershed Oversight Committee, currently proposed as part of the Foundational Concepts for the Spokane River DO TMDL, will be included on the Advisory Committee.

NPS Scope of Work

It is anticipated that due to funding, workload timing, and subcontractor needs, this will be a multi-phase project. This Scope of Work describes three (3) phases; however, the current funding (\$248,800) is limited to Phase 1 activities only. It is anticipated that several significant studies will be needed to quantify the non-point loading to the Spokane River; thus, funding needed for later phases (Phases 2 and 3) will greatly exceed the \$248,800 currently available. If sufficient future funding is available following completion of Phase 1, Phases 2 and 3 could be performed as one phase to complete the overall NPS Study Project.

Phase 1. Data Collection and Assessment (To be funded by the currently available EPA Grant)

Compilation of existing data, data evaluation – data gap identification, and pursuit of early action data collection efforts. Time allotted for completion of Phase 1: 12 – 18 months after grant approval

Task 1-1. Identify potential NPSs;

Task 1-1a. Develop list and identify sources for existing/available data & NPS studies: Estimated Budget \$10,000

Potential NPSs include, but may not be limited to:

- Agricultural activities in the Hangman/Latah Creek watershed in Idaho and Washington,
- Agricultural and residential activities in the Little Spokane River watershed,
- Agricultural, residential and other development activities in the Coeur d'Alene Lake watershed and along the Spokane River in Idaho
- In-direct stormwater disposal, examples include but are not limited to drywells, swales, and other areas where stormwater infiltration occurs,
- Spokane Valley Rathdrum Prairie Aquifer recharge,
- On-site domestic waste disposal systems
- Residential lawn fertilizers
- Logs on the bottom of Lake Coeur d'Alene and throughout the Coeur d'Alene watershed.

Task 1-1b. Collect available NPS data and NPS studies; consultant evaluates data: Estimated Budget \$60,000

Evaluate collected data consistent with the Washington State Water Quality Data Act and Washington Department of Ecology Credible Data Policy. Identify credible and non-credible data. Identify data gaps. These are identified potential NPSs with little or no existing credible data necessary to quantify NPS loads and the impacts of BMPs.

Action Items:

- Meetings with agency staff to identify known and potential sources/problems
- Public workshop/meeting to inform stakeholders and broaden base for source/problem identification (included as part of Task 1-5)
- Retain consultant to evaluate data.
- Consultant data collection and evaluation

Task 1-2. Assess and prioritize relative contribution of NPSs: Estimated Budget \$40,000

Task 1-2a. Prioritize identified potential sources in terms of P loading based on existing credible data and professional judgment

Task 1-2b. Identify early action data collection efforts – high-priority sources with inadequate credible data constitute early action data collection efforts

Task 1-2c. Technical Memo 1—Summarize existing studies and available existing data; summarize adequacy of existing studies and existing data; ranking of sources; identification of and recommendations for early action data collection efforts.

Action Items:

- Meetings between agency and consultant staff to review adequacy of data sets
- Staff review of identified early action items to assure concurrence
- Public workshop/meeting to inform stakeholders (included as part of Task 1-5)

Task 1-3. Develop a priority for studies to fill data gaps; develop scopes for early action data collection studies deemed feasible under available budget, collect early action data:
Estimated Budget \$60,000

Task 1-3a. Develop scope for early action data collection studies

Task 1-3b. To the extent funding is available, initiate early action data collection studies

Task 1-3c. Prioritize remaining data gap completion actions

Task 1-3d. Results of early action studies; recommendation and prioritization for future studies

Action Items:

- Establish work groups of agency/citizens with knowledge of data gaps/sources/problems
- Work groups meet to develop study plans
- Acquire contractor services for early action data collection studies deemed fundable in Phase 1. Early action items preliminarily identified by the Advisory Group include phosphorus loading to Lake Spokane from on-site waste disposal systems and phosphorus release from sediments.
- Prepare Quality Assurance Project Plan for early action studies
- Public workshop/meeting to inform stakeholders (included as part of Task 1-5)

Task 1-4. Project Management: Phase 1: Estimated Budget \$30,000

Task 1-4a. Contract management: EPA and subcontractors

Task 1-4b. Develop project specific Quality Assurance Project Plan(s)

Action Items:

- Complete and submit timely progress reports and requests for reimbursement
- Conduct work group meetings (included in Task 1-3) on an as- needed basis

Task 1-5. Public Education and Information: Phase 1: Estimated Budget \$48,800

Task 1.5a. Conduct three public workshop/meetings during Phase 1

Task 1.5b. Other information dissemination as deemed necessary

Action Items:

- Retain independent facilitator to conduct work group sessions (see Task 1-3) and public workshops/meetings.
- Conduct a public meeting early in the program to provide information to the public on the goals and approach of the project, conduct a second meeting following completion of Task 1-2 and a third meeting near the end of the Phase 1 funding cycle. Meetings will be held in central locations within the watershed to better reach stakeholders in Idaho and Washington.

Phase 2. Complete NPS Characterization (if needed), Identify and Evaluate BMPs (Future Scope, Budget, and Funding)

The final Scope of Work for Phase 2 will be completed following completion of Phase 1. For the purposes of this Scope of Work, a preliminary scope for Phase 2 is presented below. This scope will be refined based on the funding and progress in Phase 1.

Tasks to be completed in Phase 2 include:

- Complete data collection and data assessment (if needed),
- Characterize NPS loading by sources, and prepare non-point source loading reports,
- Identify and evaluate BMPs to address NPS areas

Task 2-1. Conduct Additional Data Collection (if needed)

Task 2-1a. Conduct needed additional field work, data analysis, characterization of individual NPS loading, and report preparation

Action Items:

Task 2-2. Identify and Evaluate Potential Best Management Practices to control priority Non Point Sources

Task 2-2a. Identify and correlate BMPs appropriate to each problem source studied,

Task 2-2b. Evaluate cost-effectiveness and longevity of identified BMPs. Develop effectiveness monitoring plans for selected BMPs, employ monitoring on pilot projects to assess effectiveness,

Task 2-2c. Prepare summary report of NPS areas, including evaluation of cost-effectiveness and longevity of identified BMPs and monitoring plans,

Action Items:

- Establish work groups (from Task 1-3) to identify BMPs
- Incorporate effectiveness monitoring into proposed BMP project scopes where possible
- Prepare Summary Report

Task 2-3. Project Management

Task 2-3a. Contract management: EPA and subcontractors

Task 2-3b. Develop project specific Quality Assurance Project Plan(s)

Action Items:

- Negotiate contracts with selected contractors, (from Task 2-1)
- Supervise contractor work
- Complete and submit timely progress reports and requests for reimbursement
- Conduct work group meetings on an as needed basis
- Conduct Public workshops at least annually during the grant period, in addition to those proposed in Phase 1.

Phase 3. Develop NPS Implementation Plan (Future Scope, Budget, and Funding)

The Scope of Work for Phase 3 will be prepared following completion of Phase 1 and Phase 2. A preliminary, conceptual scope is presented below.

Task 3-1. Develop a BMP Implementation Plan

Action Items:

- Develop matrix matching best management practices with problem areas
- Identify funding sources and lead agencies for implementing each practice
- Identify adaptive management elements where appropriate to elements and defining monitoring triggers for changing management

Task 3-2. Project Management

Task 3-2a. Contract management: EPA and subcontractors

Task 3-2b. Develop project specific Quality Assurance Project Plan(s)

Action Items:

- Complete and submit timely progress reports and requests for reimbursement
- Conduct Technical Committee meetings on an as needed basis
- Conduct Public workshops at least annually during the grant period

Attachment A

Non Point Source Advisory Committee Participants

United States Environmental Protection Agency

Washington Department of Ecology
Spokane County
Spokane County Conservation District
City of Spokane
City of Spokane Valley
Liberty Lake Water and Sewer District
Spokane Tribe

Idaho Dept. of Environmental Quality
Kootenai County
Panhandle Health District
City of Coeur d'Alene
City of Post Falls
Coeur d'Alene Tribe

Spokane River DO TMDL Watershed Oversight Committee

Sierra Club – Center for Justice
Lands Council