Preliminary Discussion Draft

Measurable Progress Draft Definition

Introduction

A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. A TMDL consists of two parts: *waste load allocations,* associated with permitted discharges and *load allocations,* associated with other sources of pollutants. When a TMDL is established, Ecology incorporates *waste load allocations* into the National Pollutant Discharge Elimination System (NPDES) permits and Best Management Practices are developed to manage *load allocations*. Washington State Department of Ecology has flexibility in how a TMDL is developed.

A traditional TMDL process begins with calculating waste load and load allocations and then reducing sources of pollutants. Because it can take a long time to gather data for the allocations, a traditional TMDL can take years or over a decade to complete. An alternative approach focuses on making immediate source reductions and collecting load allocation data at the same time. As a collaborative effort, this leverages the abilities and resources of all the waterbody stakeholders and fosters a level of cooperation and creativity.

In 2004, the State of Washington listed the Spokane River as impaired for toxics, in particular PCBs and dioxins. In 2011, Ecology, in consultation with the EPA and Spokane Tribe of Indians, included language in the NPDES permits for the Spokane River dischargers in Washington that requires the permittees to create and participate in the Spokane River Regional Toxics Task Force (SRRTTF), whose goal is to bring the Spokane River into compliance with water quality standards. The permits also obligate Ecology to proceed with developing a TMDL if Ecology determines the Task Force is failing to make measurable progress towards meeting applicable water quality criteria.

In January 2012, Ecology, along with other organizations, signed a Memorandum of Agreement (MOA) formally establishing the Spokane River Regional Toxics Task Force (SRRTTF). The MOA outlines an innovative, adaptive management approach to achieve water quality standards[1]. Washington dischargers that hold NPDES permits for the river must participate in the Task Force.

The Task Force's vision is to identify and implement the actions needed to meet water quality standards. If Ecology determines that the Task Force is failing to make measurable progress toward meeting applicable water quality standards, Ecology is obligated "*to proceed with development of a TMDL in the Spokane River for PCBs or determine an alternative to ensure water quality standards are met." (SRRTTF Memorandum of Agreement).*

[1] In December 2013, EPA published its "Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program." The SRRTTF aligns with two of the six key goals: *engagement* (actively engaging the public and other stakeholders to improve and protect water quality, and *alternatives* (use alternative approaches, in addition to TMDLs, that incorporate adaptive management . . .) Ref: A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program.

In other words, ***measurable progress*** reflects the success of the *Task Force* in reducing toxics to the Spokane River and achieving the applicable Water Quality Standards. *Permittees* contribute to the success through participation in, and funding of, the Task Force.

How the Definition Was Developed

As a result of a series of listening meetings with interested parties and members of the SRRTTF, Ecology collated ideas and opinions about the meaning of measurable progress. Ecology summarized responses from the sessions into the following themes: collaboration and communication, geography, goals, timeframes, point vs. nonpoint sources, data gaps, metrics, and fairness. For each theme, participants expressed a diversity of opinions, but there were areas of general agreement as well.

In evaluating the themes Ecology concluded that:

1) It is important to define measurable progress in a timely manner for use in the next permit cycle. However, determination of measurable progress is ongoing and achieving the goal of water quality may take several permit cycles.
2) There is a wide variety of metrics that can demonstrate measurable progress. Metrics are the specific facts and data used to evaluate progress. Metrics fall into three broad categories as:
    a. *Inputs:* organizing activities
    b. *Outputs:* activities and work products
    c. *Outcomes:* achievement of the water quality standards, health standards, and/or measured reductions of toxics to or in the Spokane River.
3) The relative importance of inputs, outputs, and outcomes changes over time. For example, inputs are important early in the life of the Task Force as the SRRTTF develops the structures, systems, and plans needed to conduct its business. As reductions occur over time, emphasis shifts towards outcomes, or the demonstration of progress through environmental results.

Adaptive Management

The evaluation of measurable progress is an *adaptive management* concept which focuses on toxics reductions in the river while fostering the collaborative vision of the Task Force. Both inputs (organizing and working collaboratively) and outputs (creating work products) must exist to achieve outcomes (toxics reductions and environmental/health goals).

At the end of each permit cycle, Ecology makes a measurable progress determination. The agency makes the determination by answering the three fundamental questions:

1) Is the Task Force still working together in a collaborative manner?
2) Is the Task Force still moving forward on activities that will lead to reduction of toxics in the river, development of best management practices, and a plan for achieving water quality standards?
3) Is there environmental evidence that progress is being made towards achieving water quality standards?

If the answer to question 1) or 2) is "no," then the Task Force is not achieving its stated purpose, vision, or goals and Ecology will develop a TMDL or alternative process to achieve the water quality standards.

If the answer to question 3) is "yes," then and the river meets water quality standards then the Task Force has achieved its goal.

However, Ecology recognizes that the environmental response to reductions in PCB loading is complex, which reinforces the need for an innovative adaptive management approach. If the answer to question 3) is "no," then Ecology will reevaluate the Task Force activities and results. In this adaptive management step, Ecology and the Task Force will identify actions and implement changes needed to achieve water quality standards. If additional actions do not result in compliance with water quality standards, Ecology will develop a TMDL or alternative process to achieve water quality standards.

Environmental response will not be the only measure used to assess outcomes. The difficult nature of reducing PCB contamination requires Ecology to also evaluate progress towards actual source reductions and permit compliance. PCBs come from a variety of sources: past mismanagement of PCB materials, current use of every-day products that contain trace amounts, and even unknown sources. Removal of PCB from the environment may result in immediate reductions in water column and sediment concentrations, whereas the response in fish may lag behind the change in water quality.

If no source reduction actions are occurring and/or permittees are not in compliance with permit conditions then the Task Force is not achieving its stated purpose, vision, or goals and Ecology will develop a TMDL or alternative process to achieve the water quality standards.

The Measurable Progress determination process is diagrammed in Figure 1. The criteria used for the evaluation are in Attachment A.

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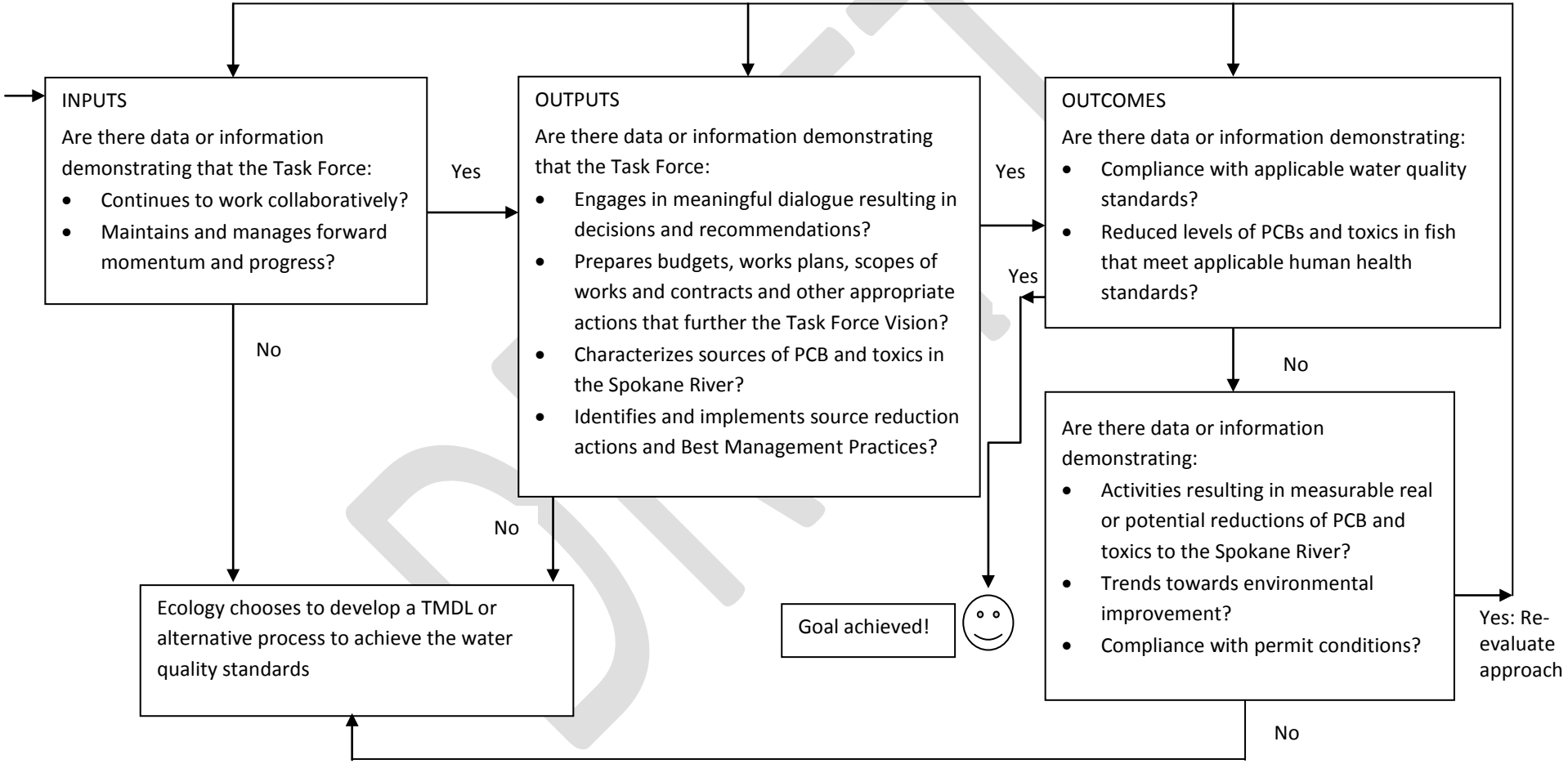
Figure 1

Task Force Vision Statement

*The Regional Toxics Task Force will **work collaboratively** to **characterize the sources of toxics** in the Spokane River and **identify and implement appropriate actions** needed to **make measurable progress** towards meeting **applicable water quality standards** for the **State of Washington**, **State of Idaho**, and **The Spokane Tribe of Indians** and in the **interests of public and environmental health**.*



Attachment A

Criteria relating to the evaluation of INPUTS

Inputs *focus on the activities needed for the SRRTTF to organize, function, and achieve results. Examples include signing the MOA, convening regular meetings, seeking financial assistance, and budgeting. Inputs are important because they lead to trust, collaboration and agreement on actions needed to achieve results. Measures include numbers of key decisions, meetings, and actions directed towards funding the Task Force activities. Inputs are important during the entire process but of higher priority during the first permit cycle. If inputs are absent or not productive, then Ecology would choose to develop a TMDL or alternative process.*

Was a Regional Toxics Task Force created?

Was the Regional Toxics Task Force functional; did the signatories to the MOA:

- Participate in the functions of the Task Force?
- Work collaboratively and in a cooperative effort?
- Provide Ecology with the details of the organizational structure, specific goals, funding and governing documents of the Task Force, in accordance with the MOA?
- Work towards achieving the specific goals for the Task Force during the 2011 to 2016 permit cycle?

Did the Task Force provide a forum for the review and discussion of Spokane River toxics issues?

Did the Task Force establish and maintain a clearinghouse for data, reports, minutes, and other information gathered, collected, or developed by the Task Force?

Was there participation in public education and engagement to advance the understanding of Spokane River toxics issues?

Did the Task Force establish an independent community technical advisor(s)?

Did the Task Force identify and establish funding mechanisms?

Criteria relating to the evaluation of OUTPUTS

Outputs *are the activities and work products of the SRRTTF. Examples include reports, plans, studies, contracts, workshops, and permits. Outputs are important because they fill in the gaps with respect to the data and processes needed to identify and implement source reductions. Measures include numbers of reports, plans, studies, contracts, workshops, and permits that contribute towards achieving source reductions. Outputs are important to the entire process but of higher priority during the first permit cycle. If outputs are absent or not productive, then Ecology would choose to develop a TMDL or alternative process.*

Did the Task Force engage in activities that better characterize the amounts, sources, and locations of PCBs and other toxics in the Spokane River?

- Incorporate findings from technical studies to advance understand of toxics in the river.
- Increase region-wide understanding of toxics in the Spokane River.
- Identify data gaps.
- Collect necessary data on PCBs and other toxics.
- Engage in technical studies.

Did the Task Force Further analyze the existing and newly collected data, including:

- Results of past and recent studies and implementation actions including those conducted by individual dischargers within their operations and/or service areas?
- Review of data, studies, and control measures?

Did the Task Force work towards *identifying and implementing or beginning to implement appropriate actions* needed to ***make measurable progress*** *towards meeting* ***applicable water quality standards*****?**

- Review of proposed Toxic Management Plans, Source Management Plans, and Best Management Practices.
- Develop recommendations and Best Management Practices for specific actions that will reduce toxics.
- Develop a comprehensive Spokane River toxics reduction plan.

Did the Task Force provide technical education information to the public?

- Websites
- Workshops
- Outreach activities

Ecology will also evaluate if specific source reduction activities have been taken, and the amount of PCB that has been removed as a result of those activities. If source reduction activities do not result in decreasing toxics in the environment, then Ecology and the Task Force will reevaluate the approach. If source reduction activities are absent then Ecology would choose to develop a TMDL or alternative process.

Criteria relating to the evaluation of OUTCOMES

Outcomes *are the environmental results and measurable source reductions in the river. Examples of measures include decreasing levels of PCB in fish, achievement of water quality standards, permit compliance status and environmental trends as well as grams of PCB eliminated, isolated, removed from the water or watershed. Outcomes are important because they measure the effectiveness of the actions that have been taken as well as the amount of PCB known to have been removed from the watershed. Outcomes are important throughout the entire process but of higher priority during the second permit cycle and beyond.*

Was there monitoring and assessment of the effectiveness of toxic reduction measures?

Were the applicable standards for the State of Washington, State of Idaho, and The Spokane Tribe of Indians achieved?

Were the applicable standards and interests of public and environmental health achieved?

Were actions implemented that:

- Eliminated, removed, or isolated sources of PCB from the river or watershed?
- Implemented actions recommended in the comprehensive Spokane River toxics reduction plan?
- Implemented identified Best Management Practices?

PCB is persistent in the environment. Removal of PCB from the environment may result in immediate reductions in water but slower reductions over time in fish. There may also be other unknown sources that cause environmental levels of PCB to increase, even though the SRRTTF is actively engaged in source identification and reduction. Therefore, it may take several permit cycles before measures of PCB in the environment demonstrate compliance with applicable water quality standards.