

Measurable Progress 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 and when 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 decades to complete and implement. Since there are competing priorities for the resources that can be devoted to the development of a specific TMDL, progress on addressing water quality issues can be made by taking interim actions that are focused on making immediate source reductions while collecting 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 that ultimately leads to more immediate environmental improvements to water quality.

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 develop a comprehensive plan to bring the Spokane River into compliance with applicable water quality standards for PCBs. The permits state that if Ecology determines that the SRRTTF is failing to make measurable progress toward meeting applicable water quality criteria for PCBs, Ecology would be obligated to proceed with the development of a TMDL in the Spokane River for PCBs or determine an alternative to ensure water quality standards are met.

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 applicable water quality standards for PCBs¹. 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 applicable water quality standards for PCBs. The Washington permits state that if Ecology determines that the Task Force is failing to make measurable progress toward meeting applicable water quality criteria for PCBs, Ecology

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](#).

34 is obligated “to proceed with development of a TMDL in the Spokane River for PCBs or determine an
35 alternative to ensure water quality standards are met.” (SRRTTF Memorandum of Agreement).

36 In other words, **measurable progress** reflects the success of the *Task Force* towards reducing PCBs in the
37 Spokane River and towards achieving the applicable water quality criteria for PCBs. *Permittees* and
38 stakeholders contribute to the success through participating in the activities of the Task Force.

39 **How the Definition Was Developed**

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

45 In evaluating the themes Ecology concluded that:

- 46 1) It is important to define measurable progress in a timely manner for use in the next permit cycle.
47 However, determination of measurable progress is ongoing and achieving the goal of bringing the
48 Spokane River into compliance with applicable water quality standards for PCBs may take several 5-
49 year permit cycles.
- 50 2) There is a wide variety of metrics that can demonstrate measurable progress. Metrics are the
51 specific facts and data used to evaluate progress. Metrics fall into three broad categories as:
 - 52 a. *Inputs*: organizing activities
 - 53 b. *Outputs*: activities and work products
 - 54 c. *Outcomes*: Progress toward achievement of the applicable water quality criteria for PCBs in
55 the Spokane River which could be demonstrated by achievement of the applicable water
56 quality standards, health standards, and/or measured reductions of toxics to or in the
57 Spokane River.
- 58 3) The relative levels of progress made in the areas of inputs, outputs, and outcomes changes over
59 time. For example, progress made relative to inputs is likely greater early in the life of the Task Force
60 as the SRRTTF develops the structures, systems, and plans needed to conduct its business. Over time
61 outcomes, with the demonstration of progress through environmental results, are expected to
62 dominate the level of progress made.

63 **Adaptive Management**

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

68 At the end of each 5-year permit cycle (i.e., 2016), Ecology makes a measurable progress determination.
69 The agency makes the determination by assessing the status of three fundamental criteria:

- 70 1) Is the Task Force still working together in a collaborative manner?

- 71 2) Is the Task Force still moving forward on activities that will lead to identification of sources,
72 reduction of PCBs in the river, the development of best management practices, and a
73 comprehensive plan for progress toward achieving applicable water quality criteria for PCBs?
74 3) Is there environmental evidence that progress is being made towards achieving applicable water
75 quality criteria for PCBs in the Spokane River?

76 Ecology recognizes that the environmental response to reductions in PCB loading is complex, which
77 reinforces the need for an adaptive management approach. To make the measurable progress
78 determination, Ecology will first evaluate evidence that demonstrates whether or not the water quality
79 standards for PCB have been achieved. If water quality standards have been achieved then the Task
80 Force has achieved its goal, measurable progress has been demonstrated, and Ecology does not need to
81 develop a TMDL.

82 There are certain criteria that Ecology believes must be in place in order to demonstrate measurable
83 progress. Specifically, the Task Force must be functioning in a collaborative manner and continue to
84 engage in activities that will lead to the reduction of PCBs in the river.

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

91 Ecology is obligated to proceed with the development of a TMDL in the Spokane River or determine an
92 alternative process to ensure water quality standards are met if, in the evaluation of measurable
93 progress, the following conditions exist:

- 94 • The answer to questions 1) or 2) is “no.”
95 • There is no evidence that source reduction activities are occurring.
96 • Permittees are not in compliance with permit conditions

97 If the applicable water quality standards for PCBs have not been met but the evaluation identifies

- 98 • Measureable inputs, outputs, and outcomes
99 • Activities relating to source reductions
100 • Compliance with permit conditions

101 then measurable progress has been demonstrated. Adaptive management actions will be taken to
102 identify and implement changes needed to achieve the applicable water quality standards.

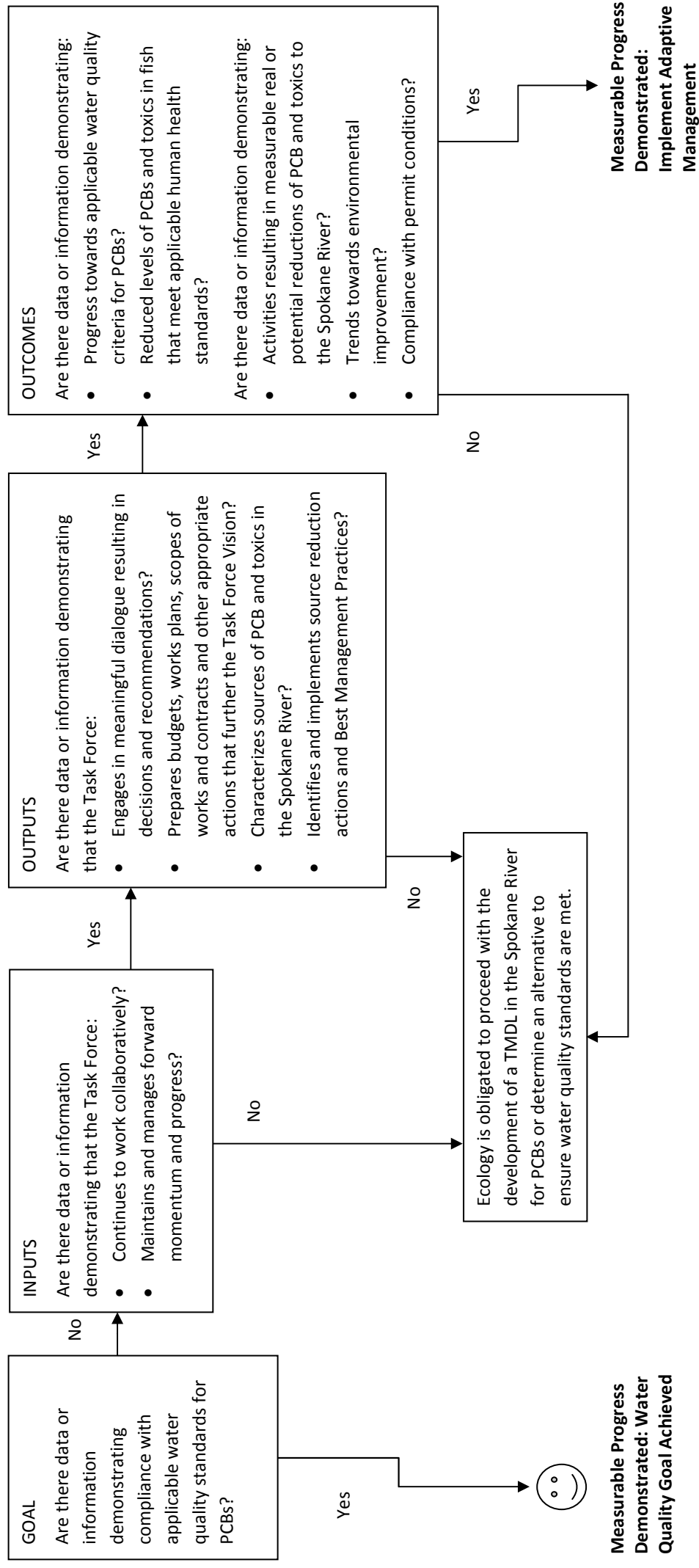
103 The Measurable Progress evaluation process is diagrammed in Figure 1. The criteria used for the
104 evaluation are in Attachment A.

Figure 1

Measurable Progress Evaluation Process

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.

Ecology is obligated to proceed with the development of a TMDL in the Spokane River for PCBs or determine an alternative to ensure water quality standards are met if, in the evaluation of measurable progress, inputs are absent or not productive.

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.

Ecology is obligated to proceed with the development of a TMDL in the Spokane River for PCBs or determine an alternative to ensure water quality standards are met if, in the evaluation of measurable progress, outputs are absent or not productive.

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 understanding 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 begin implement appropriate actions* needed to **make measurable progress** towards meeting **applicable water quality criteria for PCBs**?

- 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.
- Improvements to treatment facilities
- Regulatory reform to eliminate new PCBs from entering the environment.

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

- Websites
- Workshops
- Outreach activities

Criteria relating to the evaluation of OUTCOMES

Outcomes are the environmental results and measurable source reductions in the river as well as quantifiable source reduction actions. Outcomes indicate the effectiveness of actions that have been taken and quantify the amount of PCB known to have been removed from the Spokane River and Spokane River watershed. Outcomes are important throughout the entire process but of higher priority after the first permit cycle. Examples of output measures include trending levels of PCB in fish and the water column, achievement of the applicable water quality standards for PCBs, permit compliance status and environmental trends relating to PCBs.

Ecology will evaluate if specific source reduction activities have been taken, and the amount of PCB that has been removed as a result of those activities. This includes measured amounts of PCB eliminated, isolated, or removed from the water, or watershed; including PCB eliminated from river discharges, stormwater, and other sources. If source reduction activities do not result in decreasing toxics in the river, then Ecology and the Task Force will reevaluate the approach.

Ecology is obligated to proceed with the development of a TMDL in the Spokane River for PCBs or determine an alternative to ensure water quality standards are met if, in the evaluation of measurable progress, source reduction activities are absent or permittees are not in compliance with permit conditions.

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

Were the applicable water quality standards for PCBs achieved? Is progress toward achieving water quality criteria for PCBs being made?

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

Is progress toward meeting the interests of public and environmental health being 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?

PCBs are persistent in the environment. Removal of PCBs 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 PCBs to increase, even though the SRRTTF is actively engaged in source identification and reduction. Therefore, it may take several permit cycles before measures of PCBs in the environment demonstrate compliance with applicable water quality standards.

Demonstration of Measurable Progress

The following conditions, when accompanied by defensible data, will be considered a demonstration of measurable progress:

- Compliance with applicable water quality standards for PCBs.
- Evidence that the Task Force is functioning in a collaborative manner and continuing to engage in activities that will lead to the reduction of PCBs in the river.
- Development and implementation of a comprehensive Spokane River toxics reduction plan.
- Actions that eliminate, remove, or isolate PCB from the river or watershed.
- Environmental trends showing a decrease of PCB in the river, sediments, or biota.