

From Spokane River Draft PCB TMDL to Draft Variance

A Roadmap for Cabining NPDES Permit Holders from Enforcement of the Clean Water Act

Background

Studying and quantifying the impacts of PCBs in the Spokane River began in the early 1980s. In 1996, eight segments of the Spokane River were added to the 303(d) list of [impaired waterbodies](#) exceeding state [water quality standards](#) (WQS) for PCBs. In 2004, another seven river segments were added. In 2006, the Washington Department of Ecology (Ecology) drafted (but never completed) the [Spokane River PCBs Total Maximum Daily Load: Water Quality Improvement Report](#).

Since release of the draft [Total Maximum Daily Load \(TMDL\)](#), a fourteen-year regulatory odyssey has ensued resulting in novel and untested regulatory maneuvers that are being tested judicially. In a conventional pathway, the [Clean Water Act \(CWA\)](#) supports numerous regulatory steps that extend from identifying impaired water bodies not meeting water quality standards to taking actions that result in achieving water quality standards.

In the Spokane River Basin, however, novel approaches to implementing the CWA have created uncertain and legally ambiguous terrain that has both prolonged cleanup efforts to meet WQS and cabined wastewater dischargers from being impacted by the CWA. The term 'cabin' is used to identify actions and processes that systematically shield and protect dischargers from the intent and implementation of the CWA.

This article highlights the shifting tides and regulatory approaches that mark this odyssey. For the Environmental Protection Agency (EPA) and Ecology, this odyssey cabins dischargers from:

- Delaying creation of a TMDL which, by definition, would require:
 - development of a total pollution budget with both point and nonpoint waste load allocations, and
 - a compliance schedule for PCB reductions that would result in meeting water quality standards.
- Writing NPDES permits that, based on the TMDL, would:
 - be based on end-of-pipe numeric effluent water quality limits for PCBs,
 - identify AKART (All Known, Available and Reasonable Treatment) methods for end-of-pipe PCB reductions needed to meet waste load allocations, and
 - include compliance schedules to meet the underlying WQS.

To accomplish this cabining, EPA and Ecology acted both individually and collaboratively to deploy the following strategies:

- Created a non-regulatory body, the [Spokane River Regional Toxics Task Force](#) (Task Force), to guide efforts.
- Invented the non-regulatory standard of “measurable progress,” a highly flexible method not grounded in statute for Ecology to ascertain if PCB reductions over time are sufficient and thus avoid regulatory requirements to create a TMDL.

- Support Task Force priorities that almost exclusively rely on existing control actions, nonpoint source reductions, regulatory reform, and educational outreach to meet PCB water quality standards.

Proposed Spokane River PCB variances are the latest, most novel regulatory maneuver. They are also the most ambitious with far reaching statewide and national consequences. As currently proposed, Washington State variances offer a road map and all-important precedent for EPA, other states and dischargers to utilize a provision of the CWA as a means to delay and avoid meeting water quality standards.

TMDL Abandonment

[Sierra Club, et al. v. McLerran, the U.S. Environmental Agency \(EPA\): the 2015 U.S. District Court Decision](#)

In 2011 the Sierra Club initiated a lawsuit against EPA asserting that Ecology abandoned the Spokane River PCB TMDL and thereby triggered EPA's duty to prepare a Spokane Rive PCB TMDL. For a summary of this case, [click here](#).

The Sierra Club argued that the CWA created a nondiscretionary duty for the EPA "to make measurable progress toward meeting applicable water quality criteria for PCBs," and that EPA's non-discretionary duty to act is triggered "when a state clearly and unambiguously abandons a particular TMDL."

In addition, the Sierra Club argued that the Task Force created in 2011 with a goal to "develop a comprehensive plan to bring the Spokane River into compliance with applicable water quality standards for PCBs" cannot be a replacement of the TMDL and therefore violates Section 706(2)(a) of the CWA.

The Court's ruling included an order directing EPA to "... consult with Ecology and file herein, within 120 days of the date of this order, a complete and duly adopted reasonable schedule for the measuring and completion of the work of the Task Force, including quantifiable benchmarks, plans for acquiring missing scientific information, deadlines for completed scientific studies, concrete permitting recommendations for the interim, specific standards upon which to judge the Task Force's effectiveness, and a definite endpoint at which time Ecology must pursue and finalize its TMDL."

The Court also found in favor of the Sierra Club that the Task Force cannot replace the TMDL because there is no evidence that it was "effective in furthering the preparation of a TMDL."

[EPA's Plan Responding to the U.S. District Court Order](#)

Most focus on the part of EPA's plan that delivers a "... schedule for achievement of benchmarks and triggers for TMDL initiation and completion." If benchmarks and triggers were met, the Court found there would be no need to initiate a TMDL. Per EPA, "Under this schedule, a TMDL could be completed as early as July 2019 or as late as July 2030. Initiation of a TMDL can only be delayed as long as successive reductions of instream concentrations of PCBs are occurring consistent with the schedule."

Within the plan, EPA makes clear its continued support of the Task Force as the best, most collaborative method to meet applicable water quality criteria for PCBs. The plan, however, stipulates that the Task Force goal "... is to be accomplished through actions funded, designed, and implemented by members of

the Task Force to identify and eliminate diffuse nonpoint sources of PCBs.” Effectively, EPAs plan cabins NPDES permit holders from further point source reductions that are not already occurring due to other regulatory activity (e.g.—implementation of wastewater treatment upgrades to satisfy the Spokane River Dissolved Oxygen TMDL).

Such cabining stands in stark contrast to CWA requirements for a water quality based approach that identifies key water pollutants, their source, reductions necessary to meet water quality standards, and a plan with schedule to meet water quality standards that include options to reduce point and/or non-point sources. Establishing TMDLs (also known as water quality improvement plans) is the center piece of the CWA framework. The Sierra Club noted the importance of ensuring “... that the cumulative impacts of multiple point source dischargers are accounted for and evaluated in conjunction with pollution from nonpoint sources.”

The effect of this cabining on PCB reduction options is easily understood when considering Ecology’s [Spokane River PCB Source Assessment 2003-2007](#), which was released in 2011. This document notes that “Overall, PCB loading to Washington reaches of the river can be divided into the following source categories: City of Spokane stormwater (44%), municipal and industrial discharges (20%), and Little Spokane River (6%). In addition, PCB loading from Idaho at the state line represented 30% of the overall loading.”

EPA’s Plan also distances itself from enforcing its own schedule and therefore accountability from its duty to trigger a TMDL. The plan indicated that “In submitting this schedule, EPA clarifies that it does not interpret its regulations at 40 C.F.R. 130.7(d)(1), which are referenced in the Court’s order, to give EPA the authority to establish a legally enforceable schedule for either the Task Force or the State.”

Ecology TMDL Avoidance Strategy

Ecology’s Cabining Approach with Task Force

In January 2013 Ecology released a publication to the public titled [Fund innovative approach to get PCBs out of the Spokane River](#). Rather than develop a TMDL, Ecology introduces a novel approach called “direct-to-implementation,” which it heralds as an alternative to the more complex TMDL process. This approach “... means that when we know where the pollution is coming from, we implement a plan to stop it. This water cleanup model results in effective and immediate improvements to water quality.” Further, Ecology identifies the Task Force as the lead vehicle in carrying out this approach.

Ecology, however, does not offer an explanation or schedule of when water quality standards will be met without development of a TMDL to establish point and nonpoint waste load allocations to the river, often referred to as establishing a pollution budget and compliance schedule. As noted above, the U.S. District Court 2015 decision sought to remedy the situation by remanding EPA to provide a schedule to achieve water quality standards and, if the schedule is not met, trigger the development of a TMDL. As also noted above, EPA provided the schedule with commentary that it does not believe it has the authority to enforce the schedule or use it to trigger a TMDL.

In November 2016, the Task Force published and Ecology embraced the [2016 Comprehensive Plan to Reduce Polychlorinated Biphenyls \(PCBs\) in the Spokane River](#) (Comp Plan). According to the Comp Plan, the NPDES permits identify the goal of the Task Force as being development “... of a Comprehensive Plan to bring the Spokane River into compliance with applicable water quality standards for PCBs.” If the Task

Force fails, Ecology is “obligated to proceed with a TMDL in the Spokane River for PCBs or determine an alternative to ensure that water quality standards are met.” Lastly, the Comp Plan notes that “Ecology conducts the measurable progress evaluation at the end of the permit cycle. Actions taken in this Comprehensive Plan would be one aspect of Ecology’s evaluation for measurable progress.”

The Comp Plan makes no reference to the U.S. District Court Decision or EPA’s plan and schedule in response to the court.

Instead of supporting the EPA schedule ordered by the court, Ecology continued its effort to avoid creation of a TMDL in order to cabin NPDES permit holders from PCB numeric limits, waste load allocations and a schedule for compliance. This strategy has three essential components:

- Reliance on a Non-numeric, Non-Regulatory Standard of Measurable Progress
- Reliance on Existing Control Actions
- Reliance on Nonpoint Source Reductions, Regulatory Reform and Educational Outreach

Reliance on a Non-numeric, Non-Regulatory Standard of Measurable Progress

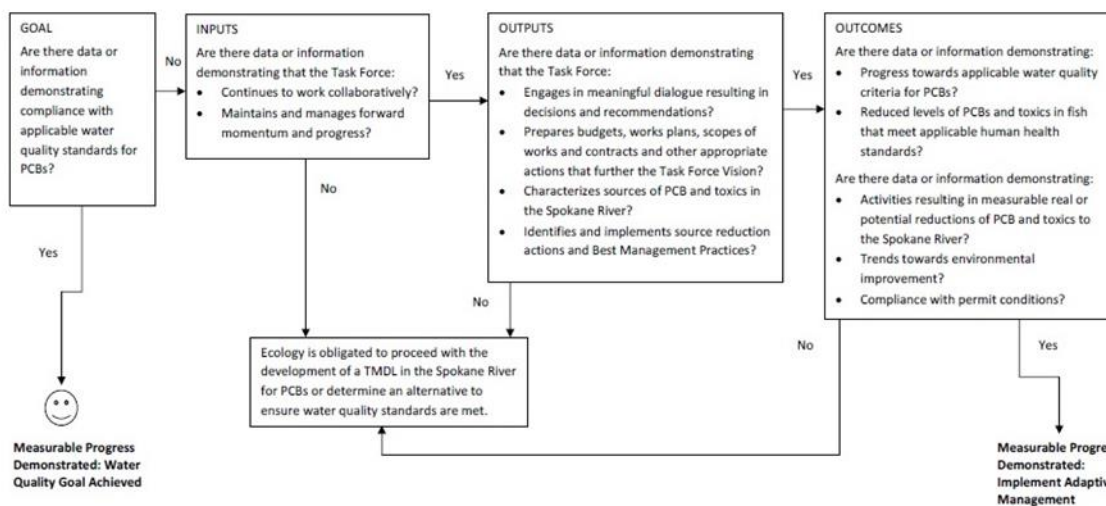
Rather than establish a pollution budget and schedule through the traditional TMDL regulatory process, Ecology introduced the novel concept of measurable progress. As shown in the Ecology created figure below, Ecology charts out a path that cabins the need for a TMDL if other measurable progress conditions are met.

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.



Termed “outputs” and “outcomes,” measurable progress relies on process checks and interpretation of progress toward meeting water quality goals. Void of waste load allocations and numeric limits, Ecology appoints itself the arbiter of knowing if sufficient progress toward meeting water quality standards is being made. There is no acceptance or intent to implement EPA’s plan and schedule for PCB reductions

provided to the U.S. District Court as the basis to avoid triggering development of a TMDL, effectively cabining dischargers from the court ruling.

Reliance on Existing Control Actions

As shown in Figure A, which is based on data from the Comp Plan, the Task Force estimated PCB loading rates into the river using a range of low and high contribution rates for each delivery source. Depending on the estimated rate, NPDES permit holders account for 19 to 59 percent of the burden.

Figure A				
Estimated PCB Loading Rates by Delivery Source				
Delivery Mechanism	PCB Loading Rate Range (mg/day)		% Contribution Range	
	Low Rate	High Rate	Low Rate	High Rate
Upstream Sources (Idaho Above Stateline)	33	444	11%	28%
Groundwater loading	60	300	20%	19%
Tributaries				
Latah Creek	~0	215	0	14%
Little Spokane River	15	200	5%	13%
WWTPs				
Industrial	126	165	42%	11%
Municipal	51	125	17%	8%
Idaho	4	10		
Washington	47	115		
MS4 stormwater /CSOs	15	94	5%	6%
Other	Bottom sediments, fish hatcheries, atmospheric		0	1%
Total			100%	100%

Source: Extrapolate from Table 5, 2016 Comprehensive Plan to Reduce Polychlorinated Biphenyls (PCBs) in the Spokane River

Although the Task Force’s own analysis points to a large contribution by NPDES permit holders (thus confirming the 2011 assessment), the plan does not call for researching, piloting, or installing additional treatment technologies. Rather, the Comp Plan says to “...maintain current efforts and document those efforts in the Plan.”

The Comp Plan finds comfort in 2011 NPDES permit language to justify this position. Per the Comp Plan, “Similar to the Idaho municipal permits, the goals of the Toxics Management Plan are to reduce loadings of PCBs to the Spokane River to the maximum extent practicable realizing statistically significant reductions in the influent concentration of toxicants to the treatment plants over the next 10 years, and reduce PCBs in the effluent to the maximum extent practicable to bring the Spokane River into support of relying on current efforts compliance with WQS for PCBs.”

Beyond actions at NPDES discharger facilities, the Comp Plan’s reliance on current efforts includes: remediate known contaminated sites, stormwater controls, low impact development ordinance, street sweeping and purchasing standards.

Reliance on Nonpoint Source Reduction and Regulatory Reform

With the largest sources of PCB reduction either relegated to relying on current efforts or regulatory relief, the focus of Task Force research and actual PCB reduction strategies becomes very unlikely to make a meaningful contribution to meeting water quality standards.

For instance, the Task Force continues to make regulatory reform of discharging inadvertent PCBs in products a mainstay of efforts. The Task Force has called for reform of the [Toxic Substances Control Act \(TSCA\)](#) to reduce or eliminate use of inadvertent PCBs in products. In addition, the task force has invested in related product testing to identify local sources on inadvertent PCBs, and engaged with leaders in green chemistry to identify PCB free alternatives.

As passionate and laudable as the effort appears, the Comp Plan clearly shows that inadvertent PCBs make up less than one percent of mass PCB loading into the Spokane River (See Figure A). To prioritize reduction of inadvertent PCBs, therefore, is counter to how the Comp Plan suggests using the data in Figure A. Specifically, the Comp Plan states that “Although uncertain, these estimates are still worthwhile in distinguishing between source areas as likely significant or relatively unimportant in developing the Comprehensive Plan.”

Beyond reduction of inadvertent PCB loading, the Task Force then largely relies on various forms of education and outreach, surveying of facilities and infrastructure, and stronger enforcement of related regulations.

2016: The Goalposts Change and the Regulatory Strategy Shifts to Variances

2016 forced Ecology and EPA to become much more innovative in efforts to cabin NPDES permit holders from development of a TMDL. In the first part of 2016, Ecology drafted NPDES permits that included a performance based total PCB effluent limit as an interim limit, and a final water quality based effluent limit based on the state’s water quality standard of 170 parts per quadrillion (ppq). The final limit would be effective in 10 years (2026 or 2 permit cycles).

Completion of the permits was sidetracked when EPA promulgated a rule establishing a PCB water quality standard of 7 parts per quadrillion (ppq) for Washington State. Based on Ecology and discharger concerns that the standard could not be met or monitored for compliance with available technology, Ecology chose to issue agreed upon orders for each discharger that set the terms for extending the 2011 NPDES permits to 2021.

The Spokane Riverkeeper chose to leave the Task Force largely because Ecology chose not to include numeric limits in the agreed upon orders and chose not to use its regulatory authority to trigger development of a PCB TMDL.

What Ecology and EPA did do was initiate research to apply a provision within the CWA that offers states and dischargers the option of pursuing a water quality standards [variance](#).

Variance Rationale

A variance modifies the designated uses and parameter-specific pollutant criteria for a waterbody for a limited time. Its purpose is to allow an NPDES permit holder to focus on making incremental progress toward meeting WQS. The variance stands in place of the existing WQS by using the highest attainable

condition for a specific pollutant being discharged. Once the variance term has ended or discontinued, the underlying WQS is reinstated.

EPA lists six factors that can justify a variance. The justification used by Ecology is that “treatment technology that would reduce PCBs in the Spokane River to levels that achieve the human health criterion necessary to protect for the fish harvest and water supply uses in the river is not presently achievable.”

Ecology’s process to approve variance applications from NPDES permit holders is through formal rulemaking. In addition, EPA must review and approve variances as a regulatory requirement of the CWA.

Key elements of Spokane River PCB variances include:

- 1) Identify and provide the rationale for the pollutant specific criteria and designated uses to be modified. In this case, replacing the state’s “fish harvesting” and “water supply” standard with “limited fish harvest” and “limited water supply.”
- 2) Establish the [highest attainable condition \(HAC\)](#) for ambient water quality and/or effluent being discharged.
- 3) Create a framework for each NPDES holder to make measurable progress toward compliance with the 7 ppq PCB water quality criterion.
- 4) Establish a time frame for achieving water quality compliance, in this case 20 years for four NPDES permit holders and 10 years for one NPDES permit holder. Further, Ecology would review variances at least every five years to determine if conditions are being met, require further investments in PCB reduction technologies or adaptive management as considered practical, and whether variances should be continued. By regulation, variances must be time-limited to prevent backsliding or nullifying progress toward the water quality standard.

Without a TMDL or variance, the remaining regulatory path to avoid meeting WQS is development of a [use attainability analysis \(UAA\)](#). A UAA, which has also never been used in the State of Washington, would justify a permanent downgrade to the WQS. For the Spokane River and PCBs, for instance, the designated uses for fishing could be changed to memorialize the temporary standards established in the variance.

Specifically, a UAA evaluates the potential to remove non-existing and non-attainable designated uses. EPA’s regulatory language states that “If during the period of the variance it is determined that the designated use [of the underlying standard] cannot be attained, then a use attainability analysis will be initiated.” (40 C.F.R. 131.14(a)(4)).

Setting Precedence with National Significance

State adoption of a variance under the CWA is particularly bold because there is no national precedent for allowing a variance for PCBs or other [Persistent Bioaccumulative Toxins \(PBTs\)](#). PBTs are chemicals that are persistent in the environment, bioaccumulate in people and/or wildlife, and are toxic. As a regulatory tool, the State of Washington has never pursued a variance of any sort.

If successful, use of a variance in this way would immediately open the doors to Washington and other states adopting variances as an alternative to TMDLs for PBTs, thus broadly cabining NPDES holders

nationally from responsibility to address PCB-impaired waters through end of pipe numeric limits and waste load allocations.

As described in an [article by K&L Gates](#), a law firm for NPDES permit holders, “As new, more stringent, WQS are adopted ahead of the technology needed to meet the WQS, a variance provides a legal framework to reduce pollution to the extent feasible without being exposed to expensive lawsuits seeking compliance with an impossible task.”

The counter argument is clearly articulated in the [Water Policy Pathways](#) white paper, “This process (using variances) has turned the protections of existing and designated uses through water quality criteria, effluent limitations in NPDES permits, Total Maximum Daily Loads and best management practices into a technological debate and discussion of affordability.”

Exploring Variances in Detail

The [variance white papers](#) explore a host of legal, policy, technical and environmental justice issues with the variance approach. These include:

- 1) Creation of a TMDL includes detailing sources, contribution rates, a point and non-point pollution budget, and numeric criteria needed to achieve a water quality standard. Without the TMDL in place, the variance relies on the Task Force (a non-regulatory authority) to establish the road map for meeting water quality standards.
- 2) Variances for four of five NPDES permit holders would be twenty years in length with Ecology doing five-year reviews of measurable progress. Without clear benchmarks and a compliance schedule (such as that provided by EPA to the U.S. District Court), measurable progress is an amorphous moving target. This concern is similar to litigation in Montana. In 2019 the [Upper Missouri Waterkeeper successfully challenged in U.S. District Court Montana State approval of a 17—20 year variance](#) because it lacked mandatory actions to actually achieve important water quality limits on nitrogen and phosphorus pollution. The case has now worked its way up to the United States Court of Appeals for the Ninth Circuit for hearing.
- 3) From a technology perspective, the highest attainable condition (HAC) (which is the attainable condition that end of pipe technology can achieve) enshrines what is currently attainable. By the variances accepting the sufficiency of existing effluent reduction conditions, they de facto accept that the best available technology has been installed. Unless Ecology determines otherwise during the time of the variance, this effectively cabins dischargers from identifying, piloting, or installing additional effluent reduction technology. In addition, for those dischargers working toward a proposed HAC, issuing a variance runs afoul of the regulatory requirement for the HAC to be in place before a variance is considered.
- 4) The [Pollution Minimization Plans \(PMPs\)](#) of variance applications are scarce on detail and accountability as relates to achieving PCB reductions, monitoring and reporting, and public transparency. PMPs are the planned actions that the discharger must take to continue pollutant reduction. With further control actions already discounted in the Comp Plan, the PMPs are working within a very narrow band of reduction opportunities. This further diminishes the probability that WQS will be met and a UAA triggered as the next alternative.
- 5) The Spokane Tribe’s EPA approved 2013 PCB water quality standard of 1.3 ppq is even more stringent, yet there is little to no consideration of how a variance will meet this downstream

standard. EPA's regulations must address how WQS variances affect stricter downstream tribal WQS following timely and meaningful tribal consultation.

- 6) Specific to the Preliminary Draft Environmental Impact Statement (DEIS), concerns include failures to properly define the no-action alternative; identifying a reasonable range of alternatives for schedules, testing, monitoring and strengthening PMPs; offering a rationale for why there is a rejection of a TMDL as a stand-alone alternative while not considering a TMDL as a required component of the proposed variances; explaining the contradiction between rejection of a compliance schedule alternative while embracing proposed variances that rely on a vague twenty-year time frame to meet the underlying WQS.

February 2021 Status

The goal of PCB reduction in the Spokane River is in a state of regulatory limbo due to multiple policy and legal threads that are currently unresolved. These include:

- 1) The U.S. District Court granted Sierra Club's motion to file a supplemental complaint that "EPA's duties to approve or disapprove TMDL submissions, and to promulgate its own TMDLs upon disapproval, are non-discretionary, and these duties extend to a state's constructive submission of TMDLs." This could result in the court ordering EPA to create a Spokane River PCB TMDL. Whether, or how, such a ruling would affect rulemaking to approve variance applications is not known.
- 2) Ecology suspended the Spokane River PCB rulemaking process needed to issue variances during the summer of 2020. This occurred because EPA issued a new rule in May 2020 that reinstated Ecology's originally proposed PCB standard of 170 ppq. Because Washington State is suing EPA to reinstate the 7 ppq standard, the underlying numeric basis for why a variance is being justified is uncertain. Whether this litigation is successful or a new administration with new EPA leadership moves back to the 7 ppq standard is unknown.
- 3) Ecology has said that new NPDES permits will be issued in 2021. How this will be done given the current flux with standards is unclear.

While these legal and regulatory conditions are in limbo, 2021 includes another reporting and monitoring milestone. Specifically, Ecology is scheduled to issue its 2021 Task Force Measurable Progress Report. As noted in Ecology's [2016 report](#), "If the proposed Task Force approach is not successful, other means and methods will be employed including a PCB TMDL. Ecology's obligation to pursue the other means and methods, including a PCB TMDL option, is triggered when the Task Force fails to make measurable progress toward achieving the PCB water quality criteria in the Spokane River."

In its 2016 Measurable Progress Report, Ecology foreshadows a more rigorous standard for the 2021 report when it states that "This evaluation cycle emphasizes the activities that position the Task Force to achieve on-the-ground reductions and environmental outcomes in future permit cycles. In future evaluations Ecology will place more emphasis on outcomes that demonstrate toxics reductions as well as achievement of environmental and public health goals."

Tribes, environmental groups and concerned citizens are tracking these complex issues with great care.