

August 14, 2024

Mr. William Weaver
WA Department of Ecology
PO Box 47696
Olympia, WA 98504-7696

Subject: Draft Financial Capability Assessment Guidance for the Puget Sound
Nutrient General Permit

Dear Mr. Weaver,

The City of Everett supports Ecology's efforts assess the financial impacts of the Puget Sound Nutrient General Permit and to provide guidelines for the analysis. The City believes that the financial assessment should reflect the potential financial impacts on our most vulnerable community members through direct measures of the local impacts that include consideration of all of the City's compliance obligations, as well as our need to maintain infrastructure assets to sustain the expected level of service into the future. For these reasons, the City has reviewed Ecology's Draft Financial Capability Assessment Guidance document and is providing comments here with the intent to improve Ecology's approach to the assessment.

Ecology's Draft Financial Capability Assessment (FCA) Guidance appears to reflect Ecology's focus on water quality standards and soliciting financial information from wastewater utilities to submit to Ecology for Ecology's financial analysis of standards:

- "However, alternative 1 (based on 1997 FCA guidance) is intended for schedule development and negotiation, and Section 3 (based on 1995 Water Quality Standards (WQS) guidance) is intended to guide states in evaluating the economic impact of water quality decisions (2023 EPA guidance pg. 34)." (Ecology 2024, page 9)
- "Ecology's spreadsheet tool aligns calculations with Section 3 of EPA's 2023 guidance "economic impact analysis for WQS decisions for the public sector"." (Ecology 2024, page 9)


Ecology's Draft Financial Capability Assessment (FCA) guidance emphasizes that detachment from the importance of schedule and a lack of understanding of its importance to wastewater utilities.

- **"We also emphasize that results, for purpose of the Nutrient Permit, are not intended for schedule negotiation."** (Ecology 2024, p. 15)

Ecology's approach seems to contradict the clear direction in the Puget Sound Nutrient General Permit (PSNGP) that explicitly calls for the AKART analysis to address an attainable implementation schedule:

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- “Section S6.C. AKART ANALYSIS Subpart f. Attainable implementation schedule that includes funding, design and construction of infrastructure improvement capable of achieving and maintaining AKART.” (Ecology 2021)

Wastewater utilities are focused on economically managing wastewater to satisfy multiple regulatory compliance requirements for all customers, as well as maintaining the viability of all of their infrastructure assets, to sustain the current level of service at a cost that customers can afford. Consequently, wastewater utilities are interested in the financial analysis of the impact of compliance with new regulatory requirements to inform appropriate compliance schedules that are feasible, affordable, and reflect local community priorities for investments. For considerations of Environmental Justice analysis, wastewater utilities are most interested in the direct impact of customer rates on those most economically vulnerable in their local community, as represented by the Lowest Quintile Poverty Income (LQPI) metric.

Provide Realistic Rate Impacts

In federal guidance, EPA includes Alternative 2 to provide a more realistic representation of financial impacts by including the entire schedule of projects in a cash flow analysis. The intent is to represent realistic wastewater utility bills that are within reasonable bounds when establishing compliance schedules.

- “Unlike Alternative 1, EPA has not recommended benchmark percentages of household income for Alternative 2. However, EPA intends to keep the percentage of household income spent on wastewater utility bills within reasonable bounds when establishing compliance schedules. Where drinking water costs are substantial and impacting households, a community may submit information on those costs as part of its financial and rate model. See Section II.c.1 for more direction. Schedules developed using Alternative 2 should be generally consistent with the recommended scheduling boundaries in Exhibit 9. Communities are encouraged to provide local information to EPA to support any predictions of a likely occurrence of rate shock. Other Metrics, such as drinking water costs, may also impact rate shock.” (EPA 2024)

Ecology should include Alternative 2 in the financial capability assessment guidance for Puget Sound. Although Alternative 2 requires additional information and supporting analysis for cash flow, it should be provided as an option because it provides a more complete representation of financial impacts. Further, it should be tailored for application to Puget Sound by cash flow forecasts projecting the customer bills as a percentage of the Lowest Quintile Income, not the Median Household Income (MHI), for a direct measure of the impact on the economically challenged members of the community. Further, Ecology should acknowledge in the financial capability assessment guidance for Puget Sound that wastewater utility bills must be kept within reasonable bounds, just as EPA has acknowledged in the federal FCA guidance.

Eliminate Continued Reliance on Median Household Income (MHI)

Ecology’s adaptation of EPA’s federal FCA analysis continues to rely on Median Household Income (MHI) metrics in the financial capacity assessment, which do not represent the disproportionate impact of utility rates on the working poor who are the very community that Environmental Justice considerations are intended to protect. Use of MHI is inappropriate for an Environmental Justice assessment of affordability because it misrepresents the local community and fails to characterize all of the economic burdens of households who are the most challenged to pay for their wastewater bill.



Assessing the direct impact of utility rates on the working poor was the entire motivation for use of the Lowest Quintile Income as a direct measure of the impact on economically challenged community members. EPA’s continued reliance on MHI metrics reflects EPA’s other nationwide considerations, such as wet weather compliance consent decrees. Those EPA considerations are not related to the Puget Sound Nutrient General Permit (PSNGP). Ecology’s financial capability assessment should reflect the direct impact on financially challenged members of the community by use of the Lowest Quintile Income for a legitimate Environmental Justice analysis. Further, that should not be diluted by continued reliance on MHI metrics in the Financial Capability Assessment Analysis. Measures of community impacts should be based on local economic metrics undiluted by state or nationwide metrics.

Ecology’s spreadsheet tool inappropriately dilutes consideration of the Lowest Quintile Income in the Lowest Quintile Poverty Indicator (LQPI) to only a 25% fraction of the LQPI in a mixture with other factors:

- “Inputs into the LQPI (other than “Trend in Household Growth”) are evaluated using a $\pm 25\%$ benchmark to national.¹⁵ This bracketing is a commonly used methodology to characterize outliers on either end of the data distribution. Using a $\pm 25\%$ benchmark closely aligns with the middle quintile of data for the parameter, which can characterize the “middle class.” (Ecology 2024, p. 15).

Insensitivity of Ecology’s FCA Spreadsheet Tool

As a test application of Ecology’s spreadsheet FCA tool using realistic entries representing baseline and project conditions reveals a surprising lack of sensitivity to the magnitude of project costs. The results in the Expanded Financial Capability Assessment Analysis are similar in terms of the Low, Mid-Range, or High Impact over a very broad range of Project Costs. This apparent insensitivity to project cost input was revealed in preliminary investigations using the FCA spreadsheet tool. The City’s projected near-term wastewater treatment plant capital improvement plan costs of \$18 million were used as baseline status quo costs together with the best available City-specific financial data obtained from the most recent Audited Comprehensive Annual Financial Report. This baseline scenario received a ranking of “Low Impact” in the final FCA matrix assessment. In a sensitivity analysis, the project costs needed to be increased to extraordinarily high levels to even trigger a shift from “Low Impact” to a “Medium Impact” assessment in the FCA matrix. It seems unexpected that doubling the annual debt service and O&M expenses would result in only a “Medium Impact.” This suggests that the formulation of Ecology’s FCA tool may not be sensitive enough to reflect the severity of the financial impact of a doubling of costs.

Financial Alternatives Analysis

Ecology’s Draft Financial Capability Assessment Guidance adds a new burden for wastewater utilities to conduct a Financial Alternatives Analysis. Ecology appears to have mimicked EPA’s federal approach to including the Financial Alternatives Analysis mixed in with the guidance document for the financial capability assessment. Financing options, rate design, and utility financial management go well beyond the FCA to determine the financial impact of a proposed program. At this time, the City is not in a position to be able to complete the Financial Alternatives Analysis Worksheet. We have not considered or implemented financial alternatives, or determined why, or why not, specific tools are appropriate. These complicated considerations and a requirement to provide justifications should not be called for at this time.

Integrated Planning Framework

The Clean Water Act was amended in 2019 to codify EPA's Integrated Planning Framework as a new tool to inform discharge permitting, compliance schedules, and water quality based effluent limits. Ecology's Draft Interim Financial Capability Assessment Guidance appears to have omitted any consideration of the Integrated Planning Framework. EPA's FCA guidelines include Integrated Planning and clarified that an FCA can include the costs of all CWA obligations:

- “2. Integrated Planning Framework. In 2012, EPA developed the Integrated Municipal Stormwater and Wastewater Planning Approach Framework (Integrated Planning Framework) that offers a voluntary opportunity for a municipality to develop an integrated plan to meet multiple CWA requirements. Integrated planning is a process that municipalities can use to achieve clean water and human health goals while addressing aging infrastructure, changing population and precipitation patterns, and competing priorities for funding. With the release of the Integrated Planning Framework, the Agency clarified that an FCA could include the following costs: stormwater and wastewater; ongoing asset management or system rehabilitation programs; existing CWA related capital improvement programs; collection systems and treatment facilities; and other CWA obligations required by state or other regulators. On January 14, 2019, the Water Infrastructure Improvement Act (WIIA) (H.R. 7279) added a new section 402(s) to the CWA to include the 2012 Integrated Planning Framework.” (EPA 2024)

Ecology's FCA guidance should be amended to include Integrated Planning and embrace inclusion of all CWA compliance costs in financial capability assessments.

Life Cycle Cost Analysis

Ecology's Draft Financial Capability Assessment Guidance notes that the PSNGP calls for treatment alternatives to be developed for achieving AKART for nitrogen removal on an annual basis and a seasonal average of 3 mg/L TIN from April through October. Ecology's FCA guidance fails to mention achieving effluent TIN of 3 mg/L is an extraordinarily level of treatment that is expected to be costly and result in other environmental impacts that should be carefully considered before being required. Ecology's FCA doesn't account for the costs of these externalities that impact the environment at this level of treatment.

EPA conducted life cycle cost analysis (LCA) to assess various levels of nutrient removal wastewater treatment considering treatment costs, as well as human health and ecosystem impacts (EPA 2023). EPA applied best practices for estimating eutrophication potential, ecosystem impacts, human health toxicity, ecotoxicity, fossil energy use, and global warming potential. EPA's analysis revealed the potential for pursuit of increasing levels of nutrient removal with diminishing potential to reduce receiving water eutrophication to result in other costs to the environment:

- “These results also demonstrate the significance of impacts associated with a broad range of impact categories not typically thought of in relation to wastewater treatment, particularly at the more advanced levels of nutrient removal, and indicate a possibility for shifting burdens from eutrophication to other categories of environmental impact.” (EPA 2023)

Ecology's seasonal average of 3 mg/L TIN would be equivalent to EPA's Level 4 in the Life Cycle Cost Analysis (EPA 2023), the highest level of treatment short of reverse osmosis (Level 5). Costs increase as the treatment levels increase, as does energy use, chemical use, excess solids residuals generation, and damaging greenhouse gas emissions. Nitrogen removal at these levels requires supplemental carbon



addition using dangerous chemicals, such as methanol. At the same time, the effluent nutrients that remain to be removed is a smaller and smaller quantity with less and less of an impact on receiving waters. Costs and complexity increase to accomplish less and less in terms of nutrient reduction and that is accompanied by environmental impacts from energy use, chemical use, and GHG emissions. This is why the EPA life cycle cost analysis cautions that careful consideration be given to lower nutrient levels:

- “First, clear trade-offs in cost and potential environmental impact were demonstrated between treatment level configurations. This suggests that careful consideration should be given to the benefits from lower nutrient levels compared to the potential environmental and economic costs associated with treatment processes used to achieve those levels.” (EPA 2023)

Other Comments

Ecology’s Draft Financial Capability Assessment Guidance appears to reflect a misunderstanding that wastewater utilities are somehow funded by local taxes, when in fact, wastewater utilities are enterprise funds that generate revenue from user charges, not tax assessments. Reference Section 2. Analytical Steps and Deliverables reads as follows:

- “Governments have the authority to levy taxes and distribute pollution control costs among households and businesses according to the tax base. Similarly, sewage authorities charge for services, and thus can recover pollution control costs through user fees.” (Ecology Page 10).

Section 2. Analytical Steps and Deliverables should be revised to more accurately represent that wastewater utilities are funded through user fees.

The City welcomes an opportunity to discuss these comments with Ecology staff.

Sincerely,



Jeff Marrs
Assistant Public Works Director
City of Everett Public Works

REFERENCES

Ecology. 2024. Draft Interim Financial Capability Assessment Guidance Updated June 2024. Publication 24-10-034.

USEPA. 2023. 2023 Revision* to: Life Cycle and Cost Assessments of Nutrient Removal Technologies in Wastewater Treatment Plants. August 2021. EPA 832-R-21-006A. [life-cycle-nutrient-removal-2023-update.pdf \(epa.gov\)](#)

USEPA. 2024. Clean Water Act Financial Capability Assessment Guidance. March 2024 Revision*.

