Final Treatment Plant Financial Capability Assessment Guidance Puget Sound Nutrient General Permit

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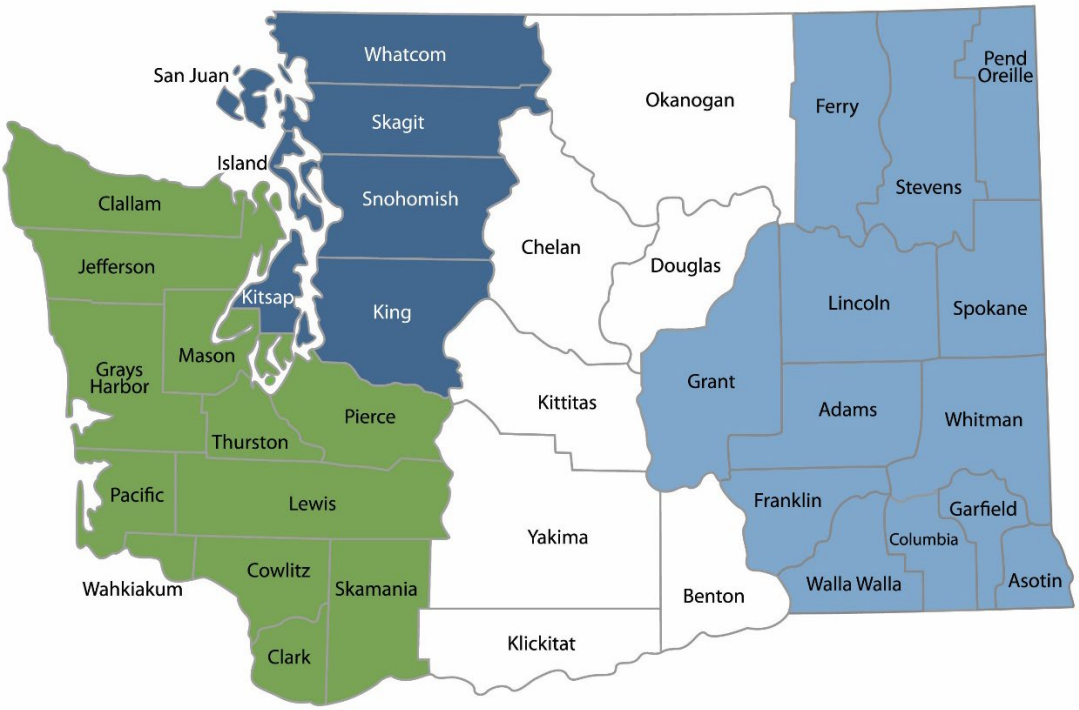
Department of Ecology's Regional Offices

Map of Counties Served



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Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	P.O. Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 West Alder Street Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 North Monroe Spokane, WA 99205	509-329-3400
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Updated 10/2024

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Abbreviations and Acronyms

ACS	American Community Survey
AWC	Association of Washington Cities
AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BLS	Bureau of Labor Statistics
CAP	Consumer Assistance Program
CDP	Census Designated Place
CPH	Pollution Control Cost per Household
CWA	Clean Water Act
CWSRF	Clean Water State Revolving Fund
EPA	US Environmental Protection Agency
FAA	Financial Alternatives Analysis
FCA	Financial Capability Assessment
FPL	Federal Poverty Level
LQI	Lowest Quintile of Income
LQPI	Lowest Quintile Poverty Indicator
MHI	Median Household Income
PSNGP	Puget Sound Nutrient General Permit
RCW	Revised Code of Washington
TIN	Total Inorganic Nitrogen
WWTP	Waste Water Treatment Plants
WQS	Water Quality Standards

1. The Purpose of Ecology's Guidance

The Washington State Department of Ecology (Ecology) issued the Puget Sound Nutrient General Permit (Nutrient Permit) on December 1, 2021. The Nutrient Permit requires 58 publicly owned domestic wastewater treatment plants (WWTPs) that discharge wastewater into Puget Sound, to prepare and submit a report to Ecology that identifies reasonable treatment alternatives as part of a required AKART (all known, available, and reasonable methods of prevention control and treatment) analysis for reducing nutrient discharges. The Puget Sound Nutrient General Permit has assigned a category of small, moderate, or dominant to each WWTP based on their percentage of the total inorganic nitrogen (TIN) load currently discharged to Puget Sound.

Wastewater Treatment Plants with Dominant or Moderate TIN loads are required to prepare a Nutrient Reduction Evaluation, which includes an AKART analysis and an Economic Evaluation of reasonable treatment alternatives. For WWTPs with Dominant or Moderate TIN loads, permittees must develop reasonable treatment alternatives for achieving two different levels of treatment: (1.) AKART for nitrogen removal (annual basis) and (2.) 3 mg/L TIN (or equivalent load), as a seasonal average (April through October).

Wastewater Treatment Plants with Small TIN loads are required to prepare an AKART analysis and an Economic Evaluation of reasonable treatment alternatives to maintain an annual TIN average of < 10 mg/L.

For all the WWTPs regulated by the Nutrient Permit, an Economic Evaluation of reasonable treatment alternatives includes completion of an affordability assessment to help identify an economically reasonable level of treatment in the context of AKART.

As referenced on Ecology's website and in the 2022 Fact Sheet, Ecology has used the US Environmental Protection Agency's (EPA) Financial Capability Assessment (FCA) guidance when looking at options for assessing financial capabilities of municipal WWTPs to implement requirements under the Clean Water Act.[2] Specifically, the EPA assessment helps identify the feasibility of permittees to take on the financial costs of an upgrade or municipal wastewater capital improvement reducing nutrients in wastewater effluent by considering factors such as debt capacity of a community, affordability of wastewater utility rate increases to impacted households, and disproportionate impacts to low income and impoverished populations.

Background

In February 2023, the EPA updated its Clean Water Act Financial Capability Assessment Guidance (2023 EPA guidance) to supplement and describe the following: 1995 Interim Economic Guidance for Water Quality Standards (1995 EPA guidance from here on) and 1997 Combined Sewer overflows Guidance for Financial Capability Assessment and Schedule

2 https://ecology.wa.gov/regulations-permits/permits-certifications/nutrient-permit#:~:text=The%20Nutrient%20General%20Permit%20applies,the%20WWTPs'%20existing%20individual%20permits.

Development (1997 EPA guidance from here on).[3,4,5] The largest additions to otherwise similar calculations across both historical guidance approaches is the Lowest Quintile Poverty Indicator (LQPI) that defines disadvantaged households within a community, and the "Expanded Economic Impacts Matrix" that combines the LPQI with previous measures of financial health.

Refining calculations: While Ecology recommends continued use of EPA's FCA guidance, the release of the February 2023 version (revised March 2024) and an updated EPA spreadsheet tool created an opportunity to review and improve its usefulness for evaluating public project impacts in the context of state-specific data.

For example, at the time of this writing, EPA's FCA spreadsheet tool provides calculations necessary to evaluate wastewater treatment projects under "Alternative 1" in the 2023 EPA guidance. 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). Despite the former approach garnishing an outsized level of detail and support in EPA's 2023 guidance document and spreadsheet tool, the context of the latter is more applicable to requirements of the Nutrient Permit. In addition, the EPA's LQPI leverages national baselines in its calculation and reports impacts in total (i.e. existing and project impact together) that could limit fair and robust evaluation in the Washington state context. [6]

To be consistent with EPA's 2023 guidance and available tools, whilst better assisting Washington public sector wastewater entities, Ecology developed an amended EPA FCA spreadsheet tool (hereafter referenced as Ecology's spreadsheet tool, located on Ecology's Puget Sound Nutrient General Permit web page). Ecology's spreadsheet tool aligns calculations with Section 3 of EPA's 2023 guidance "economic impact analysis for WQS decisions for the public sector." To this, Ecology's spreadsheet tool also reports total impacts and non-project baselines, state-regional level baselines, and alternative measures like costs as a percent of lowest quintile of income (LQI).

No new data inputs are needed to complete Ecology's spreadsheet tool beyond what was already required in EPA's configuration. Ecology's spreadsheet tool also fully maintains EPA's original Alternative 1 results and overall layout to the degree that they are useful for other federal or state consultation.

The purpose of this guidance document is to:

[3] https://www.epa.gov/system/files/documents/2023-01/cwa-financial-capability-assessment-guidance.pdf
[4] https://www.epa.gov/system/files/documents/2024-01/interim-economic-guidance-water-quality-standards-workbook-1995.pdf
[5] https://www3.epa.gov/npdes/pubs/csofc.pdf
[6] Note that other versions and vintages, reflecting adjustments to the EPA's FCA calculator may be in use elsewhere throughout state government, including Ecology. If completing an FCA for a use outside of Nutrient Permit purposes, be sure to consult with appropriate contacts.

- Provide tips for completing Ecology's spreadsheet and steps for submitting materials to Ecology (Section 2),
- Describe Ecology's motivation in amending EPA guidance (Section3), and
- Give updated information on funding opportunities for public wastewater treatment plants in Washington state (Section 4).

Environmental justice considerations

> Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies (**RCW 70A.02.005**).

Ecology supports state and local government evaluation of environmental justice impacts of permitted actions on rate payers and vulnerable populations and corresponding efforts to mitigate negative impacts for communities that have the greatest environmental and health burdens.

This FCA guidance and the assessment results are not intended to be an absolute or comprehensive picture of the environmental justice impacts from municipal wastewater management, including any nutrient reduction actions to comply with the Nutrient Permit. Permittees are required to assess environmental justice broadly and identify strategies to mitigate harms and amplify benefits for people experiencing the greatest environmental and health burdens in the Nutrient Permit (page 18).[7]

In this FCA guidance, Ecology provides tools to understand the *financial* impacts of anticipated permitted actions. These financial impacts include economic justice considerations such as, income inequality, poverty, and income-based food assistance among other measures. Permittees should incorporate the recommended justice considerations within their FCA, particularly the lowest quintile of income (LQPI), with the broader environmental justice review in the Nutrient Permit to develop a fuller understanding of the equity considerations of each permitted project.

2. Analytical Steps and Deliverables

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. Whether or not the community faces substantial impacts from the Nutrient Permit depend on existing pollution control burdens, the cost of new pollution control projects, the financial health of the community, and its socioeconomic vulnerability, among other factors.

[7] https://apps.ecology.wa.gov/paris/DownloadDocument.aspx?Id=390719

To provide a standardized categorization of these impacts, **we recommend the following steps outlined in Ecology's FCA spreadsheet tool (tab references in red below), and related analytical sections of the 2023 EPA FCA guidance**.[8] This multistep approach includes:

1. Identifying your affected community (**Instructions_Demographic, Inputs_Demographic**),
2. Calculating pollution control cost per household as a percent of median household income (%MHI) and upper limit of the lowest quintile income (%LQI) (**Instructions_RI, Inputs_RI**),
3. Determining initial financial capability through a combination of %MHI and an index of six socioeconomic, debt, and financial indicators (**Instructions_FCI, Inputs_FCI**),
4. Calculating the Lowest Quintile Poverty Indicator (LQPI) score (**Instructions_Results_LQPI, Results_LQPI**),
5. Combining the results of the Initial Economic Impact and the LQPI score to determine the Expanded Economic Impact (**Results_FCA_ECY**),
6. Performing a Financial Alternatives Analysis (FAA) (**Instructions_Checklist_FAAs , Checklist_FAA**),
7. Iterating step 1-6 as needed with any updates resulting from the financial alternative analysis and related research.

Upon completion, we recommend permittees submit, at a minimum, the following materials to Ecology's Water Quality Permitting Portal (WQWebPortal):

1. The Ecology FCA spreadsheet tool, filled out with required information. This includes providing links or citations for non-automatically generated data inputs (in comments and sources columns, where applicable). Please attach documentation if an internal source is used. The WWTP should provide this information for chosen treatment alternatives. Permittees may also include in materials for context additional instances of the tool, related to the consideration of other options (please clearly mark as non-chosen alternatives).
2. A document discussing results of the Expanded Financial Capability Assessment (Results_FCA_ECY). This should include, but is not limited to:
    - Screenshot(s) of the expanded FCA matrix with and without project(s), along with intermediate statistics such as %MHI and %LQI.

[8] Caveats and additions to note when comparing EPA's current online FCA spreadsheet tool and Ecology's spreadsheet tool are discussed in greater detail in Section 2.2.

- Project and community details that may drive (or attenuate) impacts.
- Other key inputs and unique characteristics of the affected community that the permittee feels are not fully captured by the analysis (an example could include a community that imposes restrictions on property taxes).
- Summaries of similar relevant analysis performed by, or known to, the permittee. This could include data, presentations, local rate studies, surveys, or interviews.

3. A completed FAA. This can be printed from the completed Ecology FCA spreadsheet tool (Checklist_FAA), or a word document if room for additional discussion and formatting is desired.[9, 10]
4. Supplemental material as needed.

When preparing materials, keep in mind that break points between categories in the FCA analysis are not, nor are intended to be, an absolute or comprehensive demarcation of financial capability.

Identifying overburdened communities and barriers to affordability do not relieve jurisdictions from meeting Water Quality Standards. On one hand, low-income households may pay a higher percentage of their total income for basic services and clean water, but on the other, if water quality standards of a community remain lower, overburdened and/or low-income neighborhoods will likely continue to suffer impacts to human health and use of the state's waters for activities such as swimming, and fishing. In short, if one of the intended goals of the permit is to address impacts to residents, allowing lower water quality may have the opposite effect by increasing pollution in the neighborhoods where they live, recreate, or consume local fish and shellfish.

While the Financial Alternatives Analysis (FAA) provides permittees, Ecology, and the public, information about mitigating efforts, where high impacts are found, it is especially critical that communities develop a solution that accommodates the need to protect the receiving water while also providing a level of service to all residents within their community. In these instances, Ecology encourages permittees to evaluate, or re-evaluate, tiered or other alternative rate structures to offset adverse effects to the lowest income populations within the sewer service area or other innovative measures (e.g., fixed vs. variable charges, efficiency-

[9] We highly recommend first reviewing Chapter 4 of this guidance for funding and rate assistance options, and Appendix C of EPA's 2023 FCA Guidance for additional details and resources associated with FAA question.

[10] See EPA compendium of Drinking Water and Wastewater Customer Assistance Programs that describes the benefits, implementation, and examples of customer assistance programs (CAPs) throughout the country (https://www.epa.gov/waterfinancecenter/compendium-drinking-water-and-wastewater-customer-assistance-programs). EPA's financial leadership guidance offers additional discussion on several themes found in the FAA (https://www.epa.gov/waterfinancecenter/water-infrastructure-financial-leadership).

oriented rate design, or usage based rates) that ensure affordability when adopting a new rate structure to support treatment upgrades.

The Association of Washington Cities (AWC) 2018 Utility Rate Survey is an excellent resource for sewer rates and examples.[11] These data allow permittees to compare utility rates, rate structures, number of connections, and other characteristics for up to three cities at a time (note there are no counties or special purpose districts included in the AWC data). Out of 295 communities Ecology surveyed in 2016, 116 offered a discounted rate based on criteria determined by the billing entity or city ordinance.[12]

2.1 Notes on Identifying the Affected Community

It is important to first define the affected community prior to completing other steps in the FCA. This is to ensure that fiscal and socioeconomic data is appropriately described throughout the analysis. For the purposes of the FCA, the "affected community" is typically made up of households at the city, town, or Census designated place (CDP) level, in a utility or water-sewer district service area responsible for paying the compliance costs of water treatment (see 57 RCW for water-sewer district definitions). We reference "city" hereafter for simplicity.

In the simple case (Case A), water-sewer districts generally line up with the jurisdictional boundaries of a single city, while in more complex cases, others may serve just portions of a city, multiple cities, or some combination of cities and portions of cities.

- **Case A (Simple):** When all households in a single city pay compliance costs of water treatment, the city is the affected community.

  Case B. When all households in two or more cities pay compliance costs of water treatment, multiple cities make up the affected community.

- **Case C**. One or more cities with partial service can make up the affected community if a predominant share of households within each are responsible for paying the compliance costs of water treatment.

  What constitutes a "predominant share" should be dependent on several factors. Generally, at least 75% of all households in the city should be responsible for paying the compliance costs of water treatment. More importantly, households that are not in the service area but included by way of city level reporting should not skew fiscal and social information in a material way. Permittees should provide, to the extent possible, quantitative or qualitative information about the balance of these households including but not limited to income, average assessed property value, and unemployment rates. Documented plans to connect

[11] https://datadatadata-awcnet.opendata.arcgis.com/pages/utrs2018
[12] Summary report: https://apps.ecology.wa.gov/publications/documents/1710024.pdf . Data available at: https://data.wa.gov/Natural-Resources-Environment/2016-Residential-Sewer-Rate-Survey/sibs-5k6j/data

the balance of households to services in the foreseeable future may be another justification for including otherwise partially served cities as the affected community.[13]

- Any combination of **Case B** and **Case C** can make up the affected community
- **Case D**. If only a portion of a single city is served (e.g., less than 75% of households served in a small special district), and limited in reporting standard fiscal and socioeconomic data, you may consider the city as the affected community. As with **Case C** above, permittees should take efforts to consider whether socioeconomic information at the city level would misrepresent the subset of households responsible for compliance cost. If so, describe to the best of your ability how, or contact Ecology for additional guidance.

A Note on Tribal Service Agreements

Permittees may have agreements with Tribes to provide wastewater services on Tribal reservation lands. Therefore, we encourage permittees to consider the following questions for each Tribe impacted by this permit:

1. Do you have a wastewater service agreement with neighboring Tribe(s)?
2. What is your relationship with the Tribal government?
3. Is the Tribe (Tribal government) aware that you will report social and economic data to Ecology for this permit?

Before collecting any Tribal information, permittees should discuss the data required by the FCA with the Tribes included in their wastewater service agreements. These discussions should describe the purpose of the PSNGP and the FCA and whether publicly available data accurately describes the portion of the Tribe affected by the service agreement.

Ecology recommends breaking these communications into two categories:

1) Household level data from the US Census Bureau,

The FCA requires collection of household demographic data. Census data at the city, town, or CDP level, may not accurately represent data for households on the Tribal reservation. One way to incorporate this Tribal data into Residential indicators (RI) and Lowest Quintile

[13] For complex service areas, electronic Geographic Information System (GIS) shapefiles can be analyzed with census electronic shapefiles, allowing a more precise characterization. This includes but is not limited to intersecting parcel maps with permittee service areas. Ultimately, it is the applicant's responsibility to describe these data, and their limitations. We recommend including any service maps, Census data, and files/code used in this step with materials submitted to Ecology.

Poverty Indicator (LQPI) scores, is to rely on data from the US Census at the "American Indian Area" level.[14, 15]

However, if a Tribe or permittee feels that the "American Indian Area" level misrepresent households within the service area, the Tribe or permittee may provide alternative data. An example is if service agreements do not extend to an entire "American Indian Area" level but Census data is not available below the reservation level. In this instance, the Tribe could provide more localized data, or a Tribe could confirm that alternate publicly available data is a good proxy for the portion of the reservation receiving services.

2) Government level finances

Financial obligations of a Tribe that are shared with the local government responsible for running the permittee's facility should be reflected in the permittee's certified annual financial reports, local governments assessor's office records, or other standard budgeting and accounting materials. This is similar to overlapping debt with non-Tribal local governments with service agreements (see Instructions_FCI tab in Ecology's spreadsheet tool for additional details) and might include debt held by a Tribe for public services that are partially chargeable to the permittee's non-Tribal government annually for their use, such as a local park or law enforcement.

We encourage permittees and Tribes to discuss and coordinate on how to report shared financial agreements. If using Ecology's spreadsheet tool, overlapping debt shares can be itemized on the "Inputs_FCI" tab.

2.2 Notes on Project Costs

Permittees shall provide project costs at the Class 5 level of estimates as established by the Association for the Advancement of Cost Engineering International (**Inputs_RI**).

[14] To find data on Tribal geographies, navigate to https://data.census.gov/, select "All Geographies" on the left hand side pane, and then "American Indian Areas". After selecting relevant Tribal areas, data tables can be searched for in the Census website's search bar. See the "Census Bureau Data" table on the "Inputs Demographic" tab of Ecology's spreadsheet tool for exact table numbers. Permittees will need to paste (hardcode) these data into Ecology's spreadsheet because only CDPs, towns, or cities are currently available as an auto-populate features in the Census Bureau Demographic Data Generator (see Inputs_Demographic tab).

[15] If unemployment rates are not available from the BLS in Tribal areas, consider 5-year ACS data on unemployment rate for populations 16 years and over, in the civilian labor force on table DP03 for American Indian Area geographies.

3. Ecology Additions and Motivation

The following subsections describe Ecology's amendments to EPA's 2023 guidance and online FCA spreadsheet tool (as of 09/2024) in more detail. Note that these amendments are automatically incorporated into the results of Ecology's FCA spreadsheet tool in tab "Results_FCA_ECY" and require no new input or calculation on the permittee's part beyond what is already required by the EPA's original tool.

3.1 Puget Sound Regional Baselines

State level baselines for some calculations are recommended by EPA's 2023 guidance when calculating public sector impacts, as opposed to national baselines (see Section 3). It is also the only substantive statistical difference between "Alternative 1" and "Section 3" results in EPA's guidance beyond naming conventions and terminology.[16]

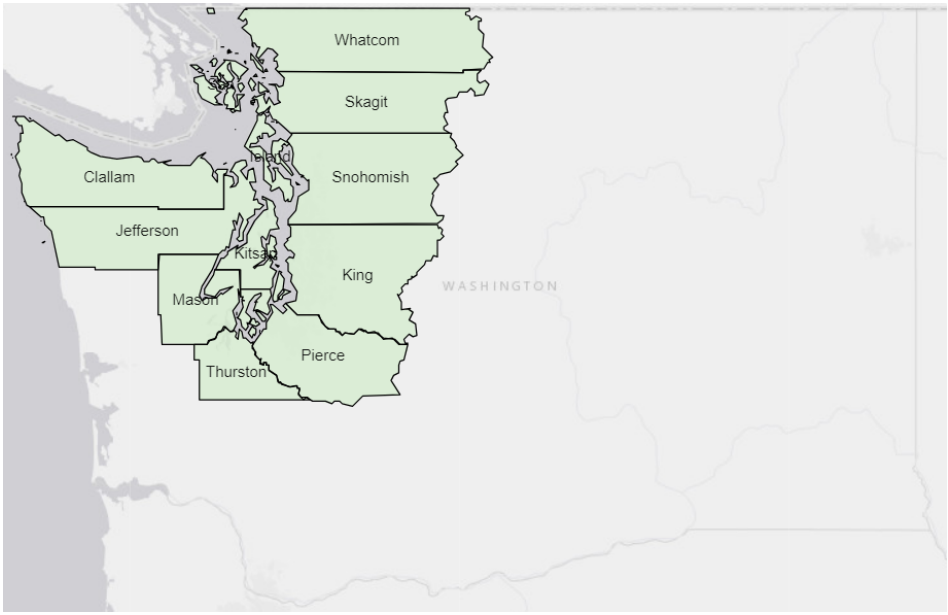
Ecology's guidance and spreadsheet tool makes an additional baseline distinction within the state between the Puget Sound, and other regions such as western Washington non-Puget sound, and eastern Washington. For the purposes of Ecology's FCA spreadsheet tool, the Puget Sound baseline is made up of counties defined by the University of Washington's Puget Sound Institute and the United States Geologic Survey (USGS), excluding Lewis County.[17, 18] Other state-regional baselines, such as Western Washington non-Puget Sound and Eastern Washington are available in Ecology's spreadsheet tool and may be considered for non-PSNGP applications.

[16] See Section 1(3)(b) of EPA's 2023 guidance for additional discussion.

[17] https://www.eopugetsound.org/terms/85

18 Lewis County is hydrologically linked to the Puget Sound through drainages and therefor in the watershed, however it does not contain PSNGPs which are defined as direct dischargers into the Sound. It is also absent of some economic features that characterize counties directly adjacent to the Puget sound such as ports, water views, and direct recreational access.

Figure 1. Counties in the Puget Sound Regional Baseline



Ecology's spreadsheet tool retains Alternative 1 labeling and references throughout the calculator for consistency with other helpful portions of EPA's guidance, such as robust technical appendices describing Alternative 1 calculations and data sources. Ecology's spreadsheet tool also provides a separate section producing all results using national baselines.

3.1.1 Household Income Baseline

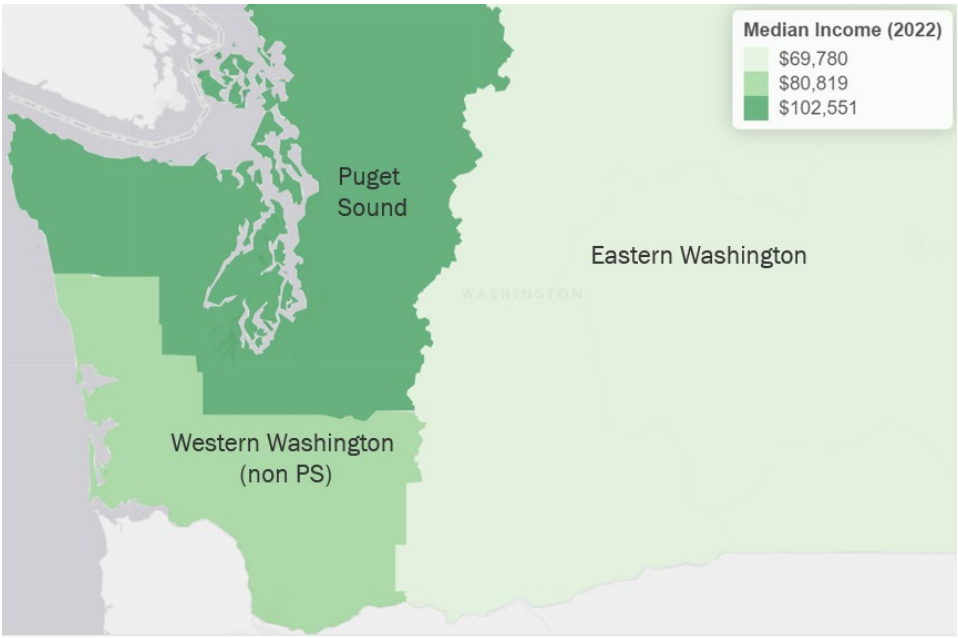
Comparing service area income to broader conditions in the Puget Sound region is a practically important feature. Considering that median household income in the Puget Sound region was $102,551 in 2022 (Figure 2), or over 30% higher than the broader US ($75,149).[19] In this way, Puget Sound communities would appear arbitrarily strong against national or statewide baselines when calculating components of the FCI. But because of unique regional characteristics—chief among them a higher cost of living—results would not accurately capture local hardship.

In consultation with the EPA, and response to feedback from stakeholders during public comment, Ecology's amended spreadsheet tool calculates relevant FCI results from the Puget Sound regional baseline (with alternative options for Western Washington Non-Puget Sound, and Eastern Washington baselines, if relevant). [20]

[19] Using 2022 ACS 5-year estimates https://data.census.gov/table?q=b19013.

[20] Regional baseline statistics are summarized from county level ACS 5-year estimates, weighted by the proportion of households each county represents in the region.

Figure 2. Median Household Income by Region



3.1.2 Lowest Quintile Poverty Indicator Baselines

The Lowest Quintile Poverty Indicator (LQPI) aids in assessing the severity and prevalence of poverty in the affected community. In EPA's original formulation, the weighted index is made up of 6 measures, which take on a 1, 2, or 3 to describe poverty conditions, mid-range, or strong (good) conditions respectively after comparing the affected community with national averages. Inputs into the LQPI (other than "Trend in Household Growth") are evaluated using a ±25% benchmark to national figures.[21] This bracketing methodology is commonly used to characterize outliers on either end of the data distribution. Using a ±25% benchmark closely aligns with the middle quintile of data for the parameter, which can characterize the "middle class."

As with concerns over household income in FCI calculation above, comparing LQPI measures in Washington to a national baseline may misrepresent local hardship. For example, the Percentage of Population with Income Below 200% of the Federal Poverty Level (FPL) in the US is 28.8% (2022 ACS 5-year estimates), while in parts of Washington State, such as the Puget Sound region, is only 20%.[22] Again, this differential does not necessarily suggest households in

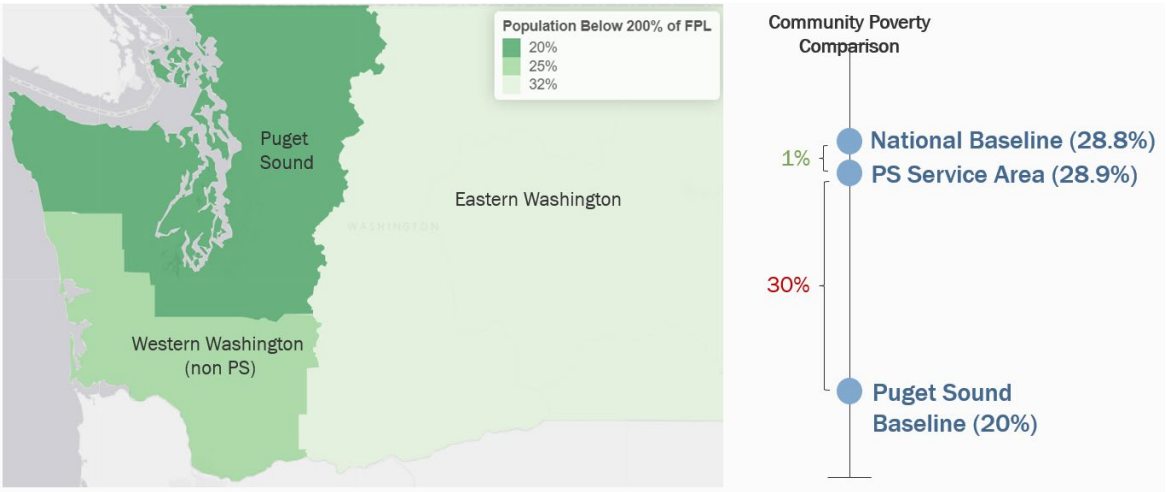
[21] Note that "Trend in Household Growth," the fifth indicator, is based on 5-year Geometric Average Growth Rates instead of quintiles. $5\ Year\ Geometric\ Growth\ Rate = (1 + (HH_n - HH_{n-5})/\ HH_{n-5})^{1/5} - 1$; where HH is the number of occupied housing units, and n is most recent Census data year. For example, if a community had 15,500 occupied housing units in the most recent census data year and had 15,000 occupied units five census data years prior, the 5-year average geometric growth rate would be 0.66% = $(1 + (15{,}500 - 15{,}000)/\ 15{,}000)^{1/5} - 1$.

[22] Table S1701 (https://data.census.gov/table/ACSST5Y2022.S1701?q=S1701&g=040XX00US53). Note that outside of Alaska and Hawaii, the threshold establishing federal poverty is the same for all states.

the Puget Sound are better off financially than other parts of the state or country. Rather, it partially reflects the cost of living in the region, the income necessary to support basic needs, and the fact the federal poverty levels are fixed for all contiguous states.

Consider a single Puget Sound community as a service area. Here, the Census reported that 28.9% of its population fell below 200% of FPL in 2022 (ACS 5-year estimate). Since that statistic is almost identical to the national average (1% lower), the service area would fall into the LQPI's "mid-range" using the standard EPA formula (Figure 3). Conversely, when compared to its state-regional peers, poverty in this community is shown to be 30% higher, and therefore would fall into the LQPI's "weak" (high poverty) category.

Figure 3. Percent of Population Below 200% of FPL and Baseline Comparison



In consultation with the EPA, and response to feedback from stakeholders during public comment, Ecology's amended spreadsheet tool calculates relevant LQPI results from the Puget Sound regional baseline (with alternative options for Western Washington Non-Puget Sound, and Eastern Washington baselines, if relevant). [23]

3.2 Impacts of Wastewater Treatment With and without Project

Capturing baseline impacts of wastewater treatment in a community is critical when comparing to the same community with the proposed project(s). Ecology's spreadsheet tool presents a side-by-side comparison simultaneously which aids permittees and Ecology in understanding the impacts of permit requirements, and their potential contribution to cumulative burden on ratepayers.

[23] Regional baseline statistics are summarized from county level ACS 5-year estimates, weighted by the proportion of households each county represents in the region.

3.3 Costs in Terms of Percent of Upper Limit of Lowest Quintile Income

While the upper limit of the lowest quintile of income (LQI) is incorporated into results through baseline comparisons in the LQPI, we calculate and report existing and new treatment costs as a percentage of LQI as a standalone statistic. This isolates additional information about impacts beyond median income households, impact disparities, and changes in disparity across treatment alternatives when compared with %MHI.

4. Assistance and Funding Sources to Consider

Ecology's water quality financial management section (FMS) provides technical assistance, in coordination with the EPA, Rural Community Assistance Corporation (RCAC), Evergreen Rural Water of Washington (ERWoW), and the Washington State Department of Commerce's Small Communities Initiative (SCI). With a single application to Water Quality Combined Fund, Ecology can identify water quality-related opportunities, that best match the financial needs of project applicants.[24] This coordinated effort offers a wide variety of resources for supporting communities in accessing funds, and identifying support for managing and implementing infrastructure improvements.[25] Particularly relevant loans and grants administered through the Combined Fund:

- Puget Sound nutrient reduction grants program. In the 2021-23 biennial budget, the state Legislature appropriated $9 million for the to help municipalities prepare and plan for future treatment facility upgrades and implement operational modifications necessary to maximize nutrient removal from existing treatment processes. Ecology is currently working on the next phase of funds in the form of a budget request for the next biennium (beginning August 2025). If funds are approved, eligible applicants are the 42 municipalities that operate the 58 wastewater treatment plants that discharge to Puget Sound and are covered by the permit.[26]
- The Clean Water State Revolving Fund (CWSRF) which provides low-interest and forgivable principal loan funding for wastewater treatment construction projects, eligible nonpoint source pollution control projects, and eligible "green" projects. Established by the federal Clean Water Act (CWA), the CWSRF is funded through an annual EPA capitalization grant, state matching funds, and principal and interest repayments on past program loans.
- Income and need based programs, including the Centennial Clean Water Program, that provides wastewater treatment construction projects for financially distressed communities.

[24] https://ecology.wa.gov/water-shorelines/water-quality/water-quality-grants-and-loans
[25] For this permit, technical assistance can be requested by contacting Stephanie Allen (sall461@ecy.wa.gov).
[26] https://ecology.wa.gov/About-us/Payments-contracts-grants/Grants-loans/Find-a-grant-or-loan/Puget-Sound-Nutrient-Reduction[27] Active and available at the time of this writing.

In addition to State, federal technical assistance is also available, largely from the EPA.[27] These include, but are not limited to:

- EPA's Environmental Finance Centers, which deliver targeted technical assistance to local governments, states, tribes, and non-governmental organizations to protect public health, safeguard the environment, and mitigate environmental justice concerns.[28] The EFCs serve an important role in helping to ensure that communities that have difficulty in securing public funding receive the help they need to access resources to support infrastructure improvements. Requests for technical assistance can be made through EPA's Water Technical Assistance Program or by emailing WaterTA@epa.gov
- EPA's Training and Technical Assistance for Small Systems Funding provides technical assistance through national providers via grant funding to support small drinking water and wastewater systems that serve small and rural communities.[29] EPA is committed to helping communities across America upgrade and maintain water infrastructure that is essential to public health and environmental protection.
- EPA's Environmental Justice Small Grants Program, which supports and empowers communities working on solutions to local environmental and public health issues.[30] The program is designed to help communities understand and address exposure to multiple environmental harms and risks.
- EPA resources associated with the Bipartisan Infrastructure Law (BIL), including Closing America's Wastewater Access Gap Community Initiative.[31,32]

Federal and private water infrastructure funding, active and available at the time of this writing including but not limited to:

- Water Infrastructure Finance and Innovation Act (WIFIA): https://www.epa.gov/wifia
- The Environmental Justice Collaborative Problem-Solving (CPS) Cooperative Agreement Program: https://www.epa.gov/environmental-justice/environmental-justice-collaborative-problem-solving-cooperative-agreement
- Source Reduction Assistance (SRA) Grant Program: https://www.epa.gov/p2/source-reduction-assistance-grants
- CoBank's Rural Water and Wastewater Lending: https://www.cobank.com/corporate/industry/water

[27] Active and available at the time of this writing.
[28] https://www.epa.gov/waterfinancecenter/efcn
[29] https://www.epa.gov/dwcapacity/training-and-technical-assistance-small-systems-funding
[30]https://www.epa.gov/environmentaljustice/environmental-justice-small-grants-program[31] https://www.epa.gov/infrastructure
[31] https://www.epa.gov/infrastructure
[32] https://www.epa.gov/water-infrastructure/closing-americas-wastewater-access-gap

- National Rural Water Association (NRWA)'s Rural Water Loan Fund: https://nrwa.org/members/products-services-portfolio/rural-water-loan-fund/
- U.S. Department of Agriculture (USDA)'s Water and Waste Disposal Guaranteed Loan Program: https://www.rd.usda.gov/programs-services/water-waste-disposal-loan-guarantees
- USDA's Water & Environmental Programs (WEP): https://www.rd.usda.gov/programs-services/all-programs/water-environmental-programs
- USDA's Water & Wastewater Projects Revolving Fund Program: https://www.rd.usda.gov/programs-services/revolving-funds-for-financing-water-and-wastewater-projects
- USDA's Water & Waste Disposal Loan & Grant Program: https://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program
- USDA's Water & Waste Disposal Predevelopment Planning Grants: https://www.rd.usda.gov/programs-services/water-waste-disposal-predevelopment-planning-grants
- U.S. Department of Commerce – Economic Development Administration (EDA)'s funding and technical assistance: https://www.eda.gov/funding/programs
- U.S. Department of Health and Human Services – Indian Health Service (IHS)'s Sanitation Facilities Construction (SFC) Program: https://www.ihs.gov/dsfc/
- U.S. Department of Housing and Urban Development (HUD)'s Community Development Block Grant (CDBG) Program: https://www.hud.gov/program_offices/comm_planning/communitydevelopment
- HUD's Section 108 Loan Guarantee Program: https://www.hudexchange.info/programs/section-108/
- Others, including private funding, can be

Bipartisan Infrastructure Law (BIL) Resources

- Overview BIL: https://www.epa.gov/infrastructure
- Closing America's Wastewater Access Gap Community Initiative: https://www.epa.gov/water-infrastructure/closing-americas-wastewater-access-gap-community-initiative
- Bipartisan Infrastructure Law SRF Memorandum: https://www.epa.gov/dwsrf/bipartisan-infrastructure-law-srf-memorandum

- Frequent Questions about BIL State Revolving Funds: https://www.epa.gov/system/files/documents/2024-10/bil-srf-qs-and-as-10-01-2024_1.pdf