# STAFF SUMMARY

**DATE:** April 14, 2025
**TOPIC:** Comprehensive Plan Periodic Update: Chapter 8 Utilities

**STAFF:** DCD – Planning
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**ACTION REQUESTED:** PAC take public comment, discussion, and suggested revisions as needed.

## SUMMARY

**Work Session = an informational session, allowing for discussion and deliberation; also a preparatory step prior to a public hearing. The number of work sessions prior to public hearing depends on scope (requirements of GMA) and schedule (mandated deadlines).**

**Chapter 8 Utilities**

The draft Utilities chapter provided for the April 14, 2025 work session is still undergoing data collection from County and non-County purveyors, please note the comments from SCJ staff in the margin of the document. Planning advisory members should read the draft in conjunction with the comments for pending information updates.

The GMA Checklist for the Utilities Chapter is attached, this checklist item is very straightforward and basically indicates that the chapter should list the general location, proposed location and capacity of all existing and proposed utilities. ⟵ **SCJ has been tasked with meeting this requirement using the information that County and Non-County providers furnish. Their ability to form the picture of the County's utilities will depend on the data and documentation that providers maintain.**

Goals for this Work Session

☐ Should the Capital Facilities Chapter and Utilities Chapter merge?

- There is a lot of overlap between these two chapters, merging keeps all facility and utility information in one place and avoids duplication of information.

☐ Goals and Policies – work on revising in session. (Mark up what you can prior to the meeting in preparation. Staff does not necessarily expect members to be able to review all of the goals and policies by the 14th. Concentrate on what stands out to you the most for the purposes of the meeting. We will provide additional time after the meeting to provide suggestions similar to the process for other chapters we reviewed).

- As the consultant noted in the draft, the previous version of the Utilities Chapter did not list goals and policies. This version lists goals, policies, and strategies which may be reduced to goals and policies to match other chapters. The strategy information was left as is in case there are ideas from those strategies that may help to shape the goals and policies further.
- The goals and policies listed are pulled from other sources (comp plans) and provide a springboard for shaping specific to Mason County.

## ATTACHMENTS

- **Attachment A – Growth Management Checklist – Utilities Section only**
- **Attachment B – Chapter 8 Utilities – Clean**
- **Attachment C – Chapter 8 Utilities - Redline**

## Utilities Element

**Consistent with relevant CWPPs and** RCW 36.70A.070(4)**. U**tilities include, but are not limited to: sanitary sewer systems, water lines, fire suppression, electrical lines, telecommunication lines, and natural gas lines.

| | In Current Plan? Yes/No If Yes, cite section | Changes needed to meet current statute? Yes/No | Notes |
|---|---|---|---|
| The general location, proposed location and capacity of all existing and proposed utilities. **RCW 36.70A.070(4)** and **WAC 365-196-420** | **Yes, pg. 145** | **Yes** | Figure 1. Map of Mason County 2018-2023 Capital Facilities Plan<br><br>Review and update existing and proposed locations and capacity of utilities. Coordinate with utility districts. |

# 9 Utilities Element

## 9.1 Overview

Washington's Growth Management Act requires that County Comprehensive Plans contain a Utilities Element. The purpose of the Utilities Element is to ensure that utility services provided by both public and private suppliers are consistent with the County's Comprehensive Plan and can support the community's growth and development as anticipated over the 20-year planning period.

The Utilities Element must include:

- An inventory of the general location of all existing and proposed utility facilities and
- A description of the current capacity and expected future capacity of each utility.

This plan identifies ways of improving the quality of these services and includes policies that ensure the provision of utilities is coordinated with land use. Mason County will implement these policies through its agreements with the utilities and through the land use permit process. This Element of the Mason County Comprehensive Plan is based on the same assumptions and is consistent with the Land Use Element, which establishes the overall growth strategy for the County and its Urban Growth Areas. The system design and timing for extension of utility services supports the land use pattern and policies proposed throughout the Comprehensive Plan.

The level of service standards established for public utilities determines capital facilities costs and revenue analysis in the Capital Facilities Element and provides a foundation for analysis of the existing utility delivery system and proposed improvements which are necessary to meet the changing demands in six primary areas including:

- Electricity
- Natural Gas
- Solid Waste Management Systems
- Telecommunications
- Utility pipelines
- Water

Water, sewer, storm water and solid waste, which are also often considered as utilities, are also discussed in the Capital Facilities Chapter 10.

Appendix A includes a map showing the general location of existing or proposed utility districts

### 9.1.1 Land Use and Utilities

Gas, electricity, and telecommunications in Mason County are each tied into a regional system, where local capacity depends on regional capacity. The greatest growth in demand for services will be in the urban growth areas, which are near major transmission lines, and in Rural Activity Centers.

Many land use policies that address rural areas provide for clustering of development. Neighborhood distribution needs will have to be met, but this type of development allows for more efficient provision of utilities and services. By encouraging clustering of rural development at the scale of the rural activity centers and community centers, or at the scale of an individual clustered subdivision, local distribution costs should be reduced.

Growth is also focused in the designated Urban Growth Areas of Shelton, Allyn and Belfair and within fully contained communities in rural Mason County. It will be most cost effective to provide utility services to these urban development patterns and more cost effective for residents as well.

The limited availability of natural gas heating in rural areas means many rural customers use electricity for heating which contributes to the difference in energy use.

Utility providers in Mason County project and plan for growth. The Mason County Comprehensive Plan will be a resource for each of these providers that will assist in determining the longer-term need for service expansion and new facilities.

### 9.1.2 Regulatory Context

Most development requires public and private utilities, whether it is residential, commercial, industrial, or agricultural. Public utilities in Mason County generally include water, broadband, electricity, sanitary sewer systems, stormwater management systems, and solid waste management systems. The Washington State Department of Health and local health departments define approved water systems serving more than one residence as "public" even though these systems may be owned and operated by a private person or company.

Mason County's electricity is served by two public utility districts, PUD No. 1 and PUD No. 3. In addition to electricity, PUD 1 is a municipal water purveyor and owns 77 water systems in Mason County as well as one sewer system and a small area of broadband. In addition to electricity, PUD 3 operates a wholesale telecommunications network in Mason County. The public utility districts, authorized by RCW Title 54, are governed by elected boards of commissioners. All decisions regarding rates and policies are made at the local level.

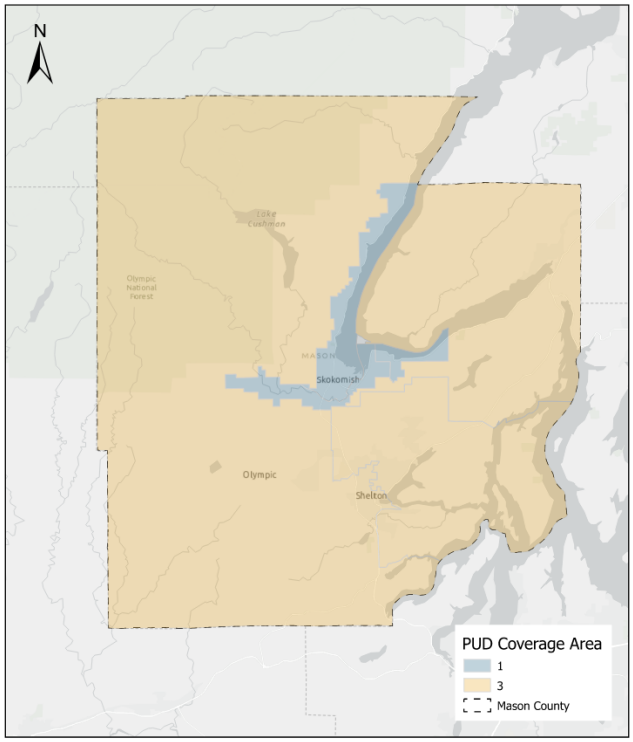
Private utilities in Mason County including Hood Canal Communications, Lumen (also known as Century Link), , Astound Broadband, and Cascade Natural Gas are regulated by the Washington State Utilities and Transportation Commission (WUTC).

These public and private utilities and water and sewer systems are also discussed in the Capital Facilities Element of the Plan, Chapter 10.

## 9.2 Public and Private Utilities

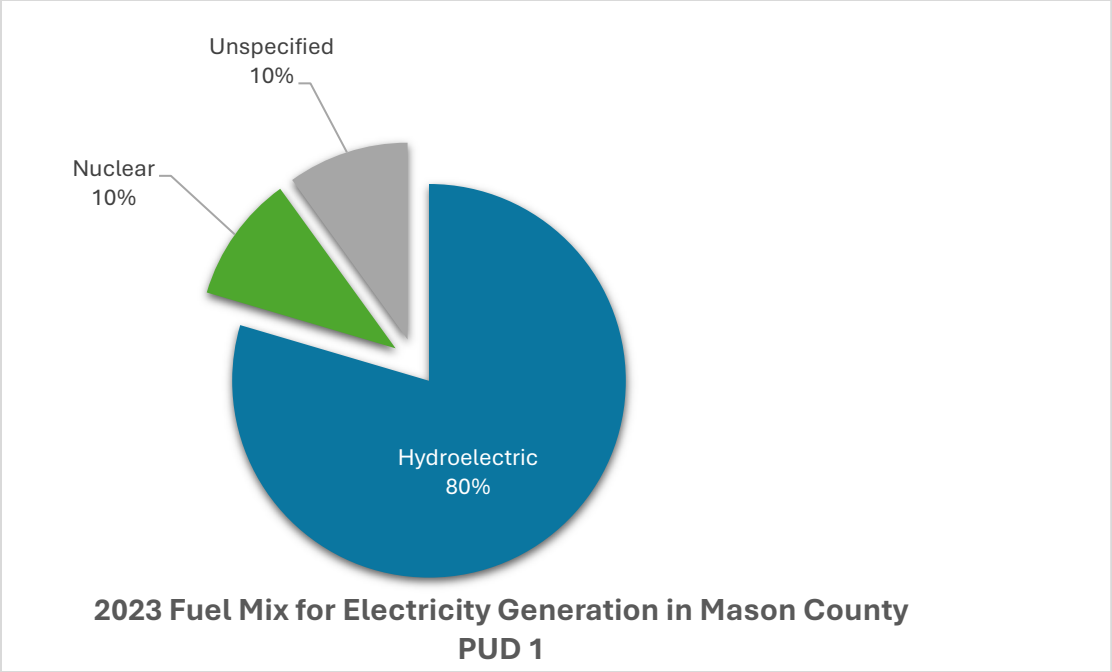
### 9.2.1 Electricity

Public Utility District No. 1 and Public Utility District No. 3 provide electrical power to residents of Mason County. Both districts purchase the majority of their power from the Bonneville Power Administration and distribute it to their customers. Neither public utility district has large-scale power production facilities. The Bonneville Power Administration and the City of Tacoma have transmission facilities in Mason County.




**PUD Coverage Areas 1PU**

The electrical power for Mason County is supplied through a regional transmission grid (which is the interconnected network of transmission lines and other supporting equipment) at 500,000 volt and 230,000 volts from 31 federally managed dams in the Columbia River Basin, and a nuclear power plant in Kennewick, Washington. Transmission to Mason County is through the Olympia Transmission Substation through 115,000 and 230,000 volt power lines which go to the BPA Shelton Transmission Substation, where service is split to serve East and West of the Hood Canal. The Mason County Urban Growth Areas are served by 115,000 volt power lines. The network connects to the PUDs through switching stations and then to distribution substations. The electrical power carried by the high voltage lines is transformed to lower voltages for distribution to PUD's neighborhood distribution substations and on to the user. Both PUDs provide annual capital improvement programs either directly from user revenues, or from the sale of bonds which are redeemed by user revenues.




**2023 Fuel Mix for Electricity Generation in Mason County PUD 1**

[image of PUD No.1]

Mason County PUD No. 1 (PUD 1) became the first operating Public Utility District in the State of Washington when voters approved a proposition on November 6, 1934. Mason County PUD No. 1 is publicly owned and serves approximately 5,667 electric customers.

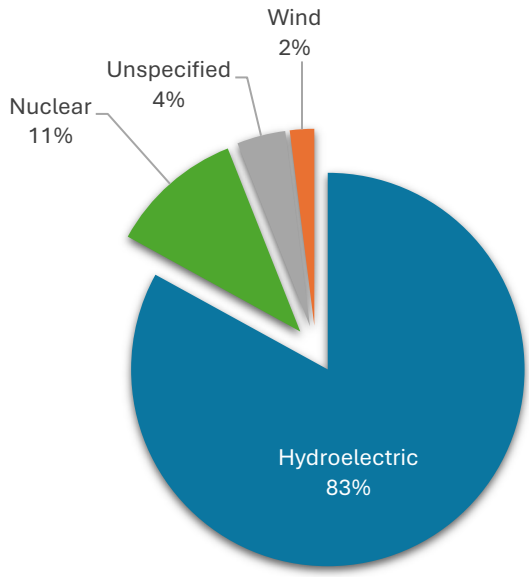
The electric service area for PUD 1 begins approximately one mile west of Twanoh State Park, on the south side of Hood Canal, and extends west to the end of Skokomish Valley Road and approximately 50 miles north along the Canal to the Mason/Jefferson County line.

PUD No. 1 also serves into south Jefferson County up to Mt. Walker. The district encompasses several river valleys including the Skokomish, Lilliwaup, Hamma Hamma, Duckabush and Dosewallips. PUD No. 1 serves power to the communities of Lilliwaup, Hoodsport, Potlatch, Union, and the Skokomish Indian Reservation. PUD No. 1 provides water services throughout all of Mason County. Both PUD 1 and PUD 3 have a memorandum of understanding that allows PUD No. 1 to provide water/wastewater services in PUD 3's service territory and PUD No. 3 may provide telecom services in PUD 1's service territory.

In 2019, PUD No. 1 sold 76.4 million kilowatt hours to customers within the service area and 2024, PUD No. 1 sold 81.1 inmillion kilowatt hours, an increase of 6 percent.

The district purchases power from the Lilliwaup Falls and Rocky Brook Hydro Facilities, with most of their energy provided by Bonneville Power Administration. PUD No. 1 has substations located at Potlatch (T3ba'das), Duckabush, Hoodsport, Manzanita Drive and Union.

PUD 1 has over $20 million in capital improvement projects planned for the both power and water utilities over the next six years. The funding for those projects is composed primarily of state and federal grants with additional funding coming from a combination of low interest loans and local revenue through utility rates.




**2022 Fuel Mix for Electricity Generation for PUD 3**

[image of PUD No.3]

Mason County PUD No. 3 provides electrical power to all areas of Mason County except those serviced by PUD No. 1. In 2016, PUD No.3 provided electrical power to approximately 33,000 and in 2024, the PUD supplied power to over 36,400 customers. In 2016, PUD No. 3 supplied a total of over 610 million kilowatt hours, and in 2024 681 million kilowatt hours were supplied.

Mason PUD 3 is a full-requirements customer of the Bonneville Power Administration (BPA), meaning that BPA provides all of the District's power requirements at cost-based rates. As of December, 2023 PUD No. 3 takes delivery of BPA power at 12 substations, 11 of which are owned by the utility. It has 1,842 miles of primary lines. and owns and operates 30.75 miles of 115 kV transmission lines.PUD 3 also receives small amounts of electricity from the Nine Canyon and White Creek wind farms, and Packwood Lake Hydroelectric Project. PUD 3 also maintains two solar projects at the Johns Prairie Operations Center, totaling 300 kW of installed capacity. Of that, 75 kW is a community solar project, where 110 customers reap the benefits of the solar array. PUD 3 also has 272 net metering systems, where individual customers own 270 solar arrays and two wind turbines to produce power for themselves, but also remain tied to the grid.

The PUD is subject to the Washington State Energy Independence Act (Chapter 19.285 RCW), which establishes a renewable portfolio standard with a renewable energy target of 15 percent of

customer load. Eligible resources include water, wind, solar energy, geothermal energy, landfill gas, wave, ocean or tidal power, gas for sewage treatment plants and biodiesel fuel and biomass energy. Electricity generated at existing hydropower facilities do not count towards this renewable portfolio compliance.

In 2020, the state legislature also passed the Clean Energy Transformation Act (CETA), to which PUD 3 also is subject. The law requires no coal-fired electricity from state energy portfolios by 2025, greenhouse-gas neutral portfolios by 2030, and 100% clean energy by 2045. PUD 3 is well on its way to compliance, with an energy portfolio that is around 96% clean, mainly from hydropower facilities. PUD 3 will be greenhouse gas neutral by 2030. The law also requires utilities make energy assistance programs and funding available to low-income households, leading PUD 3 to create a Low-Income Energy Assistance Grant, funded by a surcharge on customer bills. PUD 3 also historically has offered assistance through Project Share, a donation-based bill assistance program.

In 2021, the state legislature also passed the Climate Commitment Act (CCA) to establish a market-based program to reduce carbon pollution and greenhouse gas emissions. Four annual auctions, beginning in 2023, provide a platform for various fuel suppliers, utilities and others to sell or buy allowances for emissions (known as the Cap and Invest program). The goals include reducing emissions by 45% by 2030, 70% by 2040, and to net zero by 2050. PUD 3 will have 100% non-emitting and renewable resources by 2045.

There are 12 substations that serve PUD 3 customers. They are Collins Lake, Union River, Belfair, Benson (Mason-Benson Rd.), Pioneer (Highway 3, near Pickering Rd.) Mason (Downtown Shelton), Dayton, Skookum (near the Hwy 108 and Hwy 101 intersection), Mountain View, Totten (near Taylor Towne), Johns Prairie (near the PUD's Operations Center) and Potlatch (near Lake Cushman, owned by BPA). To expand electrical capacity in both north and central Mason County, two 115 kV switching stations and subsequent substations are planned, with one project outside the Belfair area and the other west of Highway 101 near the Port of Shelton's Sanderson Field. While there are reliability benefits for existing customers, these projects are primarily focused on industrial site readiness and ensuring timely response for large electrical capacity requests in greenfield sites. PUD 3 continues to pursue grant funding at state and federal levels to offset the costs of these major projects, having secured about $4.7 million as of 2024.Substations and distribution networks are constructed or improved to meet electrical demand and ensure reliable and safe operation of the PUD 3 power grid. The utility is demand driven - that is, it expands its level of service to meet demand as needed or projected. Customers needing to be connected to the service generally cover the costs of the connection, partially through a system capacity fee paid when new homes or businesses connect to the grid. This may include infrastructure expansion and improvements, which vary by site and service requirements. Once service is connected, costumers in the same class of service (for instance, residential) pay a rate based on the cost to serve their type of energy demand and consumption.

The PUD plans to construct another three or four substations during the current decade to keep pace with growing demand. When land developers submit an application for connection, the utility plans and coordinates construction of the required electrical facilities to serve the load of the completed planned development. The developer bears the cost of required infrastructure improvements.

Rural sprawl is a challenge PUD 3 faces in providing reliable electricity service to Mason County. There is a need for increased density and increased variety of efficient housing options focused within the existing designated Urban Growth Areas. Distributing growth throughout the county (outside of City and designated UGAs) is currently negatively impacting power quality and is resulting in the need for significant investment and early upgrades of existing electrical equipment and infrastructure.

Substations which serve the City of Shelton and Mason County's existing designated urban growth areas are designed and equipped to better serve the significant residential growth that is needed in our community. These are the areas where growth is to be focused, and these are the areas where electrical infrastructure has been designed to meet service needs (per long-standing designations). There is significant and currently unrealized opportunity to meet current housing needs by strategically focusing growth within these designated areas.

As an example, PUD 3's Pioneer Substation, serving communities in Agate, Pickering, and Harstine Island has seen compounded growth over the past six years, causing power quality issues and the need for significant investment for upgrades at just half of the equipment's useful life. Benson Substation, which serves Grapeview, Mason Lake, and Trails End, is the second most heavily loaded power transformer in the system, serving almost entirely residential loads. This is in-part due to tremendous growth in rural areas versus urban growth areas, which are better suited for development. Substations which serve the City of Shelton and Mason County's urban growth areas are better prepared for the significant residential growth that is needed in our community.

Medium-to-Higher density multifamily residential should be encouraged within all urban growth areas, including quadplexes and walk-up apartments, as well as larger-scale apartments as have recently been added in Belfair. These can help to meet the demand for both affordable and market-rate housing, while still respecting the character of the community. Specifically encouraging in-fill ("missing middle") housing within urban growth areas is also a recommended strategy. This should include fast-track permitting of auxiliary dwelling units (ADUs), multiplex housing, townhouses, rowhouses, and cottage courts. Strategies to help achieve this within UGAs include reducing setback requirements and lot coverage rules, increasing allowable heights, and reducing parking requirements within all UGA zones. Proactive pursuit of developers and builders to bring these types of units to our community is essential.Existing transmission lines are generally located in road rights- of-way. The PUD does not normally purchase or condemn rights-of-ways for their utility lines, and plans to continue to use public rights-of-way for their utility lines in the future, except where it makes economic and land-use sense to develop within or adjacent to existing utility

corridors; notably siting PUD 3 transmission lines alongside BPA transmission lines. The location of electrical lines on property being developed is determined by the property owner, although the county subdivision regulations provide for utility easements. These usually include the roadways and along lot lines.

PUD 3 recommends installation of new distribution facilities below ground and in conduit. Although this method of installation is more expensive, the benefits include greater reliability, lower maintenance costs, and improved aesthetics.

In March of 2025, the Mason County Economic Development Council (EDC) penned a letter to Senator Murray of Washington State to demonstrate its support for the Shelton Urban Growth Area electrical capacity project. The project would fund the construction of much-needed electric substation infrastructure within the Shelton UGA to help foster the necessary capacity, reliability, and utility resilience needed to support the recruitment of employers to Mason County.

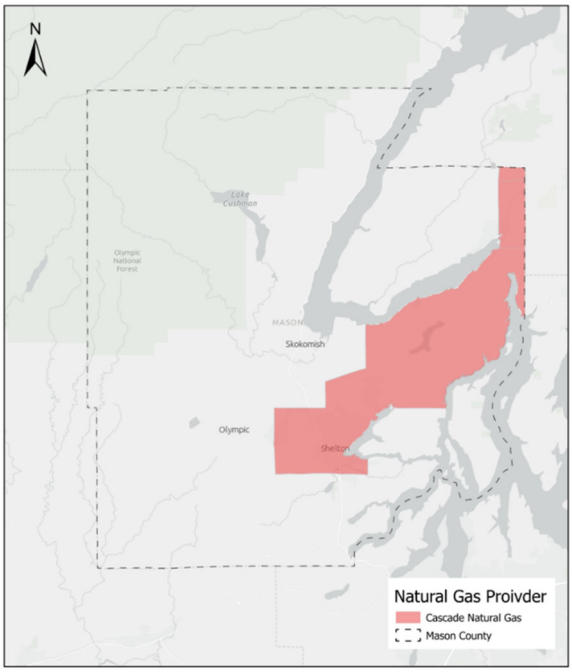
### 9.2.2 Natural Gas

#### *Cascade Natural Gas*

Cascade Natural Gas Corporation provides natural gas throughout Mason County. It has offices in Aberdeen and Bremerton. The Aberdeen office serves the Shelton, Oak Park and Lake Limerick areas. The Bremerton office serves the Belfair area.

In 1993, Cascade Natural Gas served 1,450 commercial and residential customers. Today they serve 2,300 customers throughout Mason County, a nearly 60 percent increase, providing 30 million cubic feet of natural gas monthly. The company does not plan for individual connections, but responds to requests for service which might be for new development or for conversion from other energy sources. System expansions generally use existing rights-of-way or public road rights-of-way. Transmission capacity can be expanded through existing lines or by adding or enlarging lines. Cascade Natural Gas provides service to 67 communities throughout Washington State.

Cascade Natural Gas provides gas service to Mason County from a tap off Williams Northwest Pipeline in Shelton. A major supply line for the company runs through Mason County by the Shelton Urban Growth Area and the Belfair Urban Growth Area. The company continually expands its natural gas system in response to demand. The method used to determine the economic viability of natural gas system expansion is regulated by the Washington Utilities and Transportation Commission. Routes for expansion of services depends on the demand, available rights-of-way, environmental permitting issues, and opportunities created by new development, or the work in rights-of-way by other utilities or the county or state.




**Cascade Natural Gas Service Area**

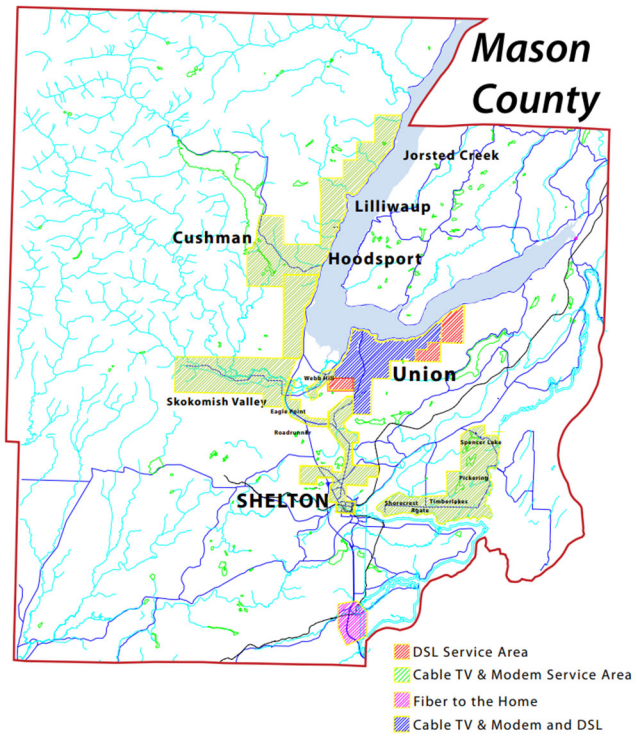
### 9.2.3 Telecommunications

#### *Telephone Services*

Several companies provide local telephone service in Mason County. They include Hood Canal Telephone Company, Inland Networks, and Century Link. Century Link serves over 90 percent of Mason County Residents. Existing transmission lines are generally located in road rights-of-ways. The location of telephone lines on property being developed is determined by the property owner, although the county subdivision regulations provide for utility easements. These usually include roadways and along lot lines.

## Hood Canal Telephone Company

Hood Canal Telephone Co. Inc, dba as Hood Canal Communications is the Local Exchange Carrier (ILEC) in Union. They are a Competitive Local Exchange Carrier (CLEC) providing the same services into CenturyLink's serving territory using fiber and coaxial cables. The CLEC serves the communities of Skokomish Reservation, Potlatch, Hoodsport, Lilliwaup, Hamma Hamma, Lake Cushman, Skokomish Valley, Shelton, Squaxin Tribe, Kamaliche, Timberlakes, Shorecrest, and Spencer Lake. They have interconnection agreements with CenturyLink for telephone service and utilize multiple providers for middle mile fiber connections. They provide telecommunication services to approximately 8,500 business and residential customers. This is a significant growth in services from 930 customers in 1993. Hood Canal Communications is currently in the process of applying for Broadband Equity Access and Deployment (BEAD) Program funds to help expand broadband service to more rural users. It has also invested $20 million in major projects within Mason County over the last couple of years.




**Hood Canal Telephone Company Service Area**

## Inland Networks

The Inland Networks, formally Inland Telephone Company, provides local telephone service in the Dewatto area. Its service area includes the east shore of Hood Canal from the Mason/Kitsap County Line south to Red Bluff. Inland Telephone provides single party service to business and residential customers.

## CenturyLink

CenturyLink is the largest provider of local exchange service in Mason County, with a service area that includes all areas of the county not served by the Hood Canal and Inland Telephone Companies. The company provides telephone service to the urban growth areas in the county. Century Link generally provides a full range of telecommunication services, however services available in specific areas depend on customer demand and the capabilities of the local central offices.

## Cellular Communications

Cellular communications differs from other types of telecommunications in that cellular communications systems use phones and other communication devices that transmit and receive radio signals on bands reserved solely for such activity. Signals are transmitted and received by low power antennae. The area one antenna can transmit and receive to the individual phones is called a cell. The coverage of the cells overlaps so that, ideally, the user can be transferred from one cell to another without interruption of service.

### *Fiber Optics*

PUD 3 provides wholesale fiber optic services to service providers, who in turn provide retail services to over 4,000 customers through over 777 miles of fiber optic lines within Mason County. PUD 3 is also a major hub for high-capacity data lines throughout western Washington. Its strategic location provides redundant service capabilities through three major internet routes.

Consumer demand for internet services continues to increase year after year. PUD 3 continues to roll out "Fiberhood" connections as communities reach a threshold of demand. More than 80 neighborhoods have been connected so far, with more than two dozen in the construction phase. PUD 3 continues to pursue funding for these projects as well, having receiving loan and grant funding from Community Economic Revitalization Board (CERB), Washington State Broadband Office (WSBO), United States Department of Agriculture's Rural Utility Services (USDA RUS), and others.

### *Forecasted Telecommunication Needs*

The forecasted needs of Fiber Optic providers will depend on the demand as Mason County continues to grow. Coordination between telecommunications providers and developers will be critical to meet the demand for highspeed internet and cellular coverage into any growth areas within Mason County.

## 9.2.4 Sewer and On-site Sewage Systems

Mason County Utilities and Waste Management is a Division of the Mason County Public Works Department. It is responsible for managing water, wastewater and solid waste facilities in the unincorporated areas of Mason County. This includes operations of the Rustlewood and Beards Cove water systems and the Rustlewood, North Bay/Case Inlet, and Belfair water reclamation/sewer collection and treatment facilities.

In 2013, Mason County Board of County Commissioners established the Belfair Sewer Advisory Committee through Resolution No. 14- 13 in order to gather community input and provide recommendations to the Mason County Board of County Commissioners regarding the development and funding of the existing and subsequent phases of the Belfair Sewer System.

Mason County also manages the On-Site Sewage System Program with the goal of protecting public health and the environment by minimizing the threat of surface and ground water contamination from failing or improperly designed, installed or maintained onsite sewage systems.

There are currently about 26,000 on-site sewage systems across Mason County. These sewage systems play an important role in groundwater recharge often overlooked in water and stormwater management discussions. Activities of the On-Site Sewage Program include:

- Soil evaluation to determine site suitability for an on- site sewage system
- Review and inspect on-site system designs and installations.
- Provide homeowner education about on-site sewage system maintenance and operation
- Review building permits
- License onsite sewage system Installers, operation & maintenance service providers and pumpers.

There are two facilities in Mason County that accept septage pumped from on-site sewage systems. These are located at Shelton City Wastewater Treatment Plant and Biorecycling LSP North Ranch. While these facilities can handle the septage being generated in Mason County, they also support surrounding jurisdictions that do not have septage receiving facilities in their area.

### 9.2.5 Solid Waste Management

#### *Mason County Solid Waste Facilities*

The Mason County Landfill is located near Shelton in Mason County, Washington (Section 4, Township 20 North, Range 4 West). The site address is 501 West Eells Hill Road, Shelton, Washington.

The facility is in a sparsely populated area used primarily for tree farming. Two private properties, the Culver (formerly Ruggle) residence and the Shelton Auto Yard, are located within 1 mile of the facility. The 8-acre landfill is situated within a 77-acre property and was the primary municipal solid waste disposal facility for Mason County from the early 1970s until the summer of 1993, when closure construction began. Closure activities were completed in 1993 and consisted of capping, implementing surface water controls, and constructing a gas extraction system.

A solid waste transfer station is currently operating at the facility. Solid waste from a majority of Mason County is transported to this transfer station. Then it is trucked to Chehalis and placed on a train to the Roosevelt landfill in Goldendale, WA. Solid waste from Belfair and Tahuya are transported to Olympic View Transfer Station in Port Orchard. Waste Management then transports it by train to their landfill in Arlington, WA.

The County's four solid waste facilities include:

- Shelton transfer station and recycling facilities, 501 W Eells Hill Road
- Belfair drop box station, 1611 NE Sand Hill Road
- Union drop box station, 1391 E McReavy Road
- Hoodsport drop box station, 260 N Foothills Park Road

### *Shelton-Matlock Landfill*

This landfill is located in the unincorporated Matlock area. It operated for an unknown period of time prior to its closure in 2001. While the landfill was open, it was receiving wood waste from nearby forest product operations. The landfill has a groundwater monitoring system in place and has been monitored since 1997. It is currently in post-closure stage and has continued to have groundwater monitoring as part of the post-closure agreement. As of early 2017, there is discussion on the potential for this landfill to end its post- closure care due to evidence that suggests the landfill has reached stability.

### *Simpson Dayton Landfill*

This landfill is located in the unincorporated Dayton area. This landfill was also operated for an unknown period of time prior to its discontinued use in 2006. The material that was accepted at this site was mostly wood waste and an unlimited amount of wood ash. A groundwater monitoring system has been in place and monitored since 1997. In 2016, the closure process was completed and the application for a post-closure permit was submitted and officially accepted in early 2017. The landfill is now moving into post-closure status with limited monitoring.

### *City of Shelton – C Street Landfill*

The C Street landfill is located on a 16.7 acre parcel located southwest of the intersection of West C Street and US Highway 101. The property was acquired by the City in 1928 for use as a municipal landfill. Landfilling operations occurred at the site between 1928 and 1974. After that time, municipal solid waste was sent to the Eells Hill facility to the northwest of Shelton. The City of Shelton has entered into an Agreement with the Washington State Department of Ecology and in 2021 conducted a Remedial Investigation and Cleanup Action Plan to finalize the closure of the facility. As of March 2025, the C Street Landfill has entered the cleanup phase of the Cleanup Action Plan.

**Total solid waste tonnage generated in Mason County**

| **Total Tonnage** | **2020** | **2021** | **2022** | **2023** | **2024** |
|---|---|---|---|---|---|
| Exported for land disposal | 44129 | 48971 | 50298 | 50064 | 52379 |
| Collected through recycling | | | | 639.3 | 653.03 |
| Total Tons generated | | | | 50703.3 | 53032.03 |
| **Per Capita Annual Tonnage** | **2020** | **2021** | **2022** | **2023** | **2024** |
| OFM Population for Mason County | 65,726 | 65,750 | 66,200 | 67,000 | 67,475 |
| Exported for land disposal | 0.67 | 0.74 | 0.76 | 0.75 | 0.78 |
| Collected through recycling | | | | 0.01 | 0.01 |

| | | | | | |
|---|---|---|---|---|---|
| Total tons generated per capita | | | | 0.76 | 0.79 |

State law, RCW 70A.205, requires that county and city governments assume the primary responsibility for solid waste management and implement effective waste reduction and recycling strategies. Also, under Washington State Growth Management Act 36.70A, all Counties and Cities are required to establish a process for siting essential public facilities, including those facilities typically difficult to site like solid waste handling facilities and other regional utility facilities, as well as facilities like regional transportation facilities, state education or correctional facilities, substance abuse and mental health facilities, and secure community transition facilities.

### *Forecasted Solid Waste Needs*

## 9.2.6 Water

### *PUD No. 1*

PUD No. 1 owns 77 and manages two water systems throughout Mason County serving approximately 3,176 connections.

### *Washington State Department of Health – Public Water Systems*

In Mason County, there are 30 Group A wells, including those managed by PUD 1, 229 are active with over 23,000 connections providing water to over 39,000 people.

Of the 775 existing Group B wells in Mason County (including those managed by PUD 1), 539 are active and provide water to over 6,750 people through 3,500connections.

### *Exempt Wells*

Currently, there are an estimated 1,490 exempt wells serving 11,000 connections in Mason County, based on data collected by the County from 1992 to the present.

### *Regulating Water*

There are three types of public water systems: Group A, Group B and Two-Party. A Group A system is the largest type of system. Any system with more than 14 connections or that serves 25 or more individuals for 60 or more days per year is considered a Group A public water system. All Group A systems are regulated by the State Department of Health Office of Drinking Water.

Mason County Public Health regulates all Group B Water Systems in Mason County. A Group B water system serves from 1 to 14 connections and less than 25 individuals per day. The regulations governing public water systems are Washington Administrative Code (WAC) 246-290 for Group A systems and WAC 246-291 for Group B systems.

### 9.2.7 Stormwater

*Managing Stormwater*

Mason County is in compliance with state and federal requirements and continues to develop and improve its Stormwater Management Program. The County is also working to raise awareness of the importance of stormwater management among development partners and others.

In 2008, Mason County adopted a Countywide Stormwater Management Plan to both protect and enhance water quality. Of special concern are the impacts of continued and increased stormwater discharges to the local water quality of Hood Canal, Oakland and Annas Bays, and the rich shellfish habitat in nearby natural and commercial rearing areas. Pollution from pathogens in sewage and animal wastes are a chronic problem in many areas of Puget Sound and is closely associated with rainfall events and stormwater runoff as well as being influenced by population densities and development levels. Because of fecal contamination, shellfish beds in both Oakland and Annas Bays have been downgraded and shellfish protection districts have been created to improve water quality and preserve natural resources.

As part of the Stormwater Management Plan development process, Mason County Board of County Commissioners created a Stormwater Task Force of eight community members to assist in review and development of the Plan. The composition of the Task Force reflected major stakeholder groups such as business owners, the timber and shellfish industries, the Tribes, environmental groups, the Washington Association of Sewer and Water Districts, the City of Shelton and the general public. Over the course of a series of meetings and briefings, the Task Force facilitated public input and provided feedback that helped to ensure the public's interests were represented and that contributed to shaping the final plan.

The Allyn, Belfair and Hoodsport Stormwater Management Plans complement and support the development of the Comprehensive Countywide Stormwater Management Plan and are incorporated as part of the Comprehensive Plan by reference.

Mason County's Stormwater Management Plan takes a decentralized approach that is based on low impact development (LID) techniques, innovative stormwater management designs with the basic principle that they are modeled after nature. The goal of the Plan is to minimize the impacts of future land use changes, as well as promote the design and construction of onsite LID systems.

Significant steps have been taken in the implementation of the County Stormwater Management Plan, including:

- Establishing a Countywide Stormwater Utility.
- Implementing a facility retrofit program to detain and treat the runoff from
- existing development using LID techniques.
- Treating county road runoff by retrofitting existing facilities, as well as by adding water quality treatment to all new County road designs.
- Pursuing further expansion of these programs, particularly maintenance.
- Creating a Clean Water District

*Forecasted Stormwater Needs*

## 9.3 Meeting Future Utilities Demands

A projected inflow of about 16,000 new residents are expected by 2045 in Mason County and services areas of PUD 1 and PUD 3. This will increase the electric service territory population to almost 82,000 by 2045.

These projections form the basis of the utility forecast for Mason County to help ensure adequate services are in place and identify potential changes or adjustments needed.

### 9.3.1 Projecting Energy Demand

Washington State Department of Commerce projects statewide energy demand to increase by six percent by 2050, relative to 2023 demand, if business continues as usual under its 2021 State Energy Strategy. However, with the state working towards a just energy transition by 2050, alternative scenarios show a decrease in energy demand ranging from 23 percent to 32 percent depending on the strategies utilized.

To better understand Mason County's future energy demand, an initial projection can be made using current energy consumed divided by population. This per capita indicator can be a good measure of local energy consumption because decisions by individual consumers have an important effect on overall energy consumption. Combined with efforts from local public utility districts, this provides a picture of anticipated demand based on historic trends.

This projection does not consider additional innovation and efficiencies expected from the building industry or other innovations over the 20-year planning horizon.

#### *System-level Impacts of Energy Efficiency*

The Energy Independence Act (EIA) requires electric utilities with 25,000 or more retail customers in Washington to use renewable resources and conservation to help meet their customers' energy needs. The utilities report annually to the State Department of Commerce on their compliance.

Many utilities in Washington State use wind power to meet about 80 percent of their EIA requirements. Since 2020, these utilities must provide at least 15 percent of their power from renewable sources.

The Washington State renewable energy production incentive payment program is nearly complete. Under this program, the PUD facilitates payments from the state program to interconnected electric customers who own and operate eligible renewable energy systems based on the amount of energy their system generates.  Final payments will be sent by 2027, as the program has since retired.

In 2024, PUD 3 met its renewable energy target at 15 percent of customers' electric load and exceeding its energy conservation target. Projections show the potential for energy conservation in Mason County to be over 116,000 megawatt-hours over the next 20 years. Washington State Department of Energy anticipates that electric demand side efficiency efforts have the potential to continue to reduce statewide consumption by an estimated 20 percent by 2035.

**Table 5: Mason County Electricity Demand**

| | 2025 OFM Adjusted Census | 2035 Projection | 2045 Projection |
|---|---|---|---|
| Mason County Population | 65,726 | 76,485 | 82,932 |
| Mason County Electricity consumption | 531,923,992 | 493,238,611 | 478,878,128 |
| Per Capita kWh | 8093.05 | 6448.82 | 5774.35 |

Source: 2022 OFM Population Projections, PUD 3, and PUD 1Energy efficiency continues to be a leading solution for resource planning. While de-carbonization removes some power supply, other sectors are increasing demand through electrification. Specifically, the deployment of electric vehicles and switching natural gas heating or appliances to electric will increase demand for carbon-free power in the coming years. Nearly all electric utilities offer incentives for energy efficiency upgrades to homes and businesses in their service territory.

Carbon-free, renewable hydropower remains the cornerstone of electricity production in the Pacific Northwest. Additional wind farms (both onshore and offshore) are expected and encouraged, along with well-sited solar, providing variable renewable power supply. Pumped water storage and battery storage projects are also being pursued. Columbia Generating Station is currently the only nuclear plant in the region, but development of small modular nuclear reactor projects are underway. In addition, the first hydrogen energy project in Washington has begun producing hydrogen in 2025. In the meantime, regional coal-fired generation is expected to be shuttered by the end of the decade, and natural gas retirements or reductions are on the horizon.

### 9.3.2 Projecting Water Demand

Table 6. shows an estimate of current and water consumption. Estimating demand for water is more complex than other utilities as we know much less about the amount of water in ground water stores and have a limited ability to estimate potential impacts of water conservation, recycling, reuse and recharge. A collaborative study is necessary to help the County and partner agencies learn more about future supply and demand.

**Table 6. Mason County Water Demand 2016**

| | 2016 | |
|---|---|---|
| **Source** | **2016 Gallons per Year (millions)** | **2016 Connections** |
| Group A Systems | 2100 | 24,000 |
| Group B Systems | 930 | 3,000 |
| Exempt Wells | 790 | 11,000 |
| TOTALS | **3,820** | **38,000** |

Source: PUD No.1, Washington State Department of Health, and Mason County

### 9.3.3 System-level Impacts of Recharge

Water conservation, wastewater recycling, and reuse are becoming more important due to increases in:

- Demand on potable water resources,
- The cost of treating wastewater,
- Regulations requiring greater flows for streams and rivers, which reduces irrigation sources, and
- The demand for sustainable building options.

By design, on-site sewage systems, also known as septic systems, naturally recycle wastewater by recharging ground water. To ensure on-site sewage systems are treating waste effectively and not polluting the ground water, there must be a strong commitment to regular and ongoing monitoring to ensure these systems are working properly.

Under existing Washington State Law, several types of water conservation, recycling and reuse are currently permitted and regulated as shown in Table 7. However, additional State policy innovation and flexibility for Washington Counties promoting water conservation, recycling and reuse will be critical over the 20 year planning horizon in order to support projected growth and development in the way Mason County envisions, a way that maintains rural character, quality of life, and unique natural environment.

**Table 7. Existing Options for Water Conservation, Recycling or Reuse in Washington State**

| State Law | Methods | Description | Benefits |
|---|---|---|---|
| WAC 246-272A | On Site Septic - Using Subsurface (Underground) Drip Irrigation | Treats residential wastewater for subsurface irrigation of plants. | All wastewater from buildings can be used and irrigation can be controlled precisely for maximum benefit |

| | | | |
|---|---|---|---|
| WAC 246-272A | Greywater On Site Septic | On-site sewage system used in a building equipped with waterless toilets | Reduction in total volume of water used and wastewater irrigates vegetation |
| WAC 246-272A | Greywater for Subsurface Irrigation | Treats residential wastewater for subsurface irrigation of plants. | Reduction in total volume of water used and wastewater irrigates vegetation |
| WAC 51-56-1600 | Greywater and Rainwater Recycling | Recycling of any water, including greywater, inside of a building and using it for flushing toilets and other non-potable water uses | Reduces water use by recycling greywater or rainwater for surface irrigation, industrial processes, toilet flushing, and other non-potable water needs. |
| WAC 246-272B | Large On-site Sewage Systems | Provides subsurface soil treatment and disposal of sewage for a design flow of 3,500 to 100,000 gallons per day for 10-350 homes. | Can accommodate developments, schools, churches, campgrounds, business parks, parks, resorts, etc. |
| RCW 90.46 | Reclaimed Water | Wastewater (sewage) that is treated to remove solids and impurities and recycled | Reduces water use by recycling wastewater for surface irrigation, industrial processes, toilet flushing, and other non-potable water needs. |

*Greywater - Flows from bathtubs, showers, bathroom sinks, washing machines, dishwashers, and kitchen or utility sinks.

The amount of runoff entering streams and the amount of precipitation entering groundwater systems in Mason County can and has been estimated by Washington State Department of Ecology using annual rainfall of 65 inches, based on Western Regional Climate Center data. Assuming one-third of the 65 inches of rainfall infiltrates to groundwater, that is 22 inches or 1.8 feet of water into each acre of land per year.

### 9.3.4 Projecting Solid Waste Needs

Table 8. provides an estimate of future total solid waste tonnage using the OFM Growth Management projections assuming Mason County continues to generate 0.6 tons of solid waste per person. In terms of population and waste stream tonnage, Mason County has been following the mid- range growth rate. Solid waste projections for the 20-year planning horizon show that the County's waste stream will exceed 50,000 tons of solid waste when Mason County's population exceeds roughly 83,000 residents.

**Table 8. Low, Intermediate, and High Projections for Total Waste Stream, 2020 through 2045**

| Year | 2020 OFM Adjusted Census | 2025 Projection | 2035 Projection | 2045 Projection |
|---|---|---|---|---|
| | 65, 726 | - | - | - |
| High Range Population | - | 74,803 | 83,914 | 92,187 |
| High-Range Tonnage | - | 44,882 | 50,348 | 55,312 |
| Mid-Range Population | - | 69,262 | **76,485** | **82,932** |
| Mid-Range Tonnage | - | 41,557 | **45,891** | **49,759** |
| Low Range Population | - | 65,106 | 66,316 | 66,796 |
| Low Range Tonnage | - | 39,064 | 39,790 | 40,078 |

Source: Office of Financial Management, 2022

### 9.3.5 Moving Toward Zero Waste

Despite new technologies and processes that have improved the ability of residents, businesses and municipalities to handle, sort, and recycle materials, recycling volumes, including yard and food waste, only remove approximately one percent of the waste stream.

As more landfills in the region close and the County seeks innovative solutions to the problem of higher waste disposal costs, state government has fewer resources to help. Solid waste continues to be a contributor to greenhouse gas (GHG) emissions. Washington is bound by law to reduce GHG emissions by 25 percent by 2020 below 1990 levels and 80 percent by 2050.

Waste reduction is the highest priority for solid waste management and is preferred over recycling and composting because the social, environmental and economic costs are typically lower for waste reduction. All three methods avoid the cost of disposing of the diverted materials as garbage, but recycling and composting frequently require significant additional expenses for collecting and processing the materials.

Consistent with Mason County's Comprehensive Solid Waste Management Plan and through a blend of innovative policies, ranging from technical assistance to legislation and initiatives prioritizing waste reduction, Mason County is addressing these challenges and placing the County on the pathway to higher reuse and recycling volumes that will help make zero waste a reality.

## 9.4 Utility Goals and Policies

### 9.4.1 Infrastructure

*Goal:*

Ensure that utility infrastructure meets the demands of current and future development, with a focus on resilience, sustainability, and capacity.

*Policies:*

1. Ensure that development regulations require timely development of utility facility additions and improvements and evaluate the need for offsite improvements for projects exceeding planned system capacities.
2. Support utility programs that reduce greenhouse gas emissions, promote energy diversification, or increase energy conservation, such as retrofitting buildings and expanding alternative energy.
3. Encourage new electrical distribution lines to be installed underground, when feasible, to increase resilience.
4. Ensure utility project designs mitigate impermeable surfaces' impact on groundwater recharge and water quality, considering increased flooding and rain events.
5. Support the extension of fiber optic cables in Mason County.

*Strategies:*

- Consider how increasing frequency or severity of natural hazards and extreme weather events could affect the lifespan and replacement cycle of utility infrastructure across the county.
- Utilize the most up-to-date utility information to assess and plan for the impacts of more frequent or severe hazards.

### 9.4.2 Utility Service Quality

*Goal:*

Enhance utility service quality through collaboration with service providers to eliminate deficiencies, upgrade obsolete facilities, and ensure the system's resilience to climate impacts.

*Policies*

- Coordinate with utility providers to eliminate service gaps and enhance existing facilities to meet current and future needs.
- Assess and plan for impacts on sewer capacity from coastal flooding and extreme rain events, with appropriate mitigation and adaptation measures.

*Strategies:*

- Determine the fiscal costs of eliminating service deficiencies, enhancing service quality, increasing resilience, and reducing greenhouse gas emissions in partnership with utility providers and community members.
- Address service deficiencies across the county by engaging county residents on issues experienced and prioritizing improvements that benefit at-risk populations.
- Use health impact assessments and tools to evaluate and prioritize service deficiencies.
- Promote the use of emerging technologies to mitigate impacts from pollutants, increased rain events, and coastal flooding in sewer and septic systems.

### 9.4.3 Protection of Natural Resources

*Goal:*

Safeguard the quality and quantity of groundwater, surface water, and other natural resources, ensuring sustainable and environmentally conscious utility practices.

*Policies:*

- Protect the quality and quantity of groundwater used for domestic water supplies.
- Encourage new development to connect to existing public water and wastewater systems where feasible, rather than rely on exempt wells or onsite septic systems.
- Support efforts to correct failing on-site sewage systems and address the impacts of heavier rainfall events on public and environmental health.

*Strategies:*

- Promote innovative technologies and best practices to protect groundwater and surface water quality.
- Analyze cumulative impacts of existing and future utilities development on groundwater and surface water systems.
- Evaluate opportunities for groundwater quality and quantity enhancement through sewer plants and responsible maintenance of septic systems.
- ~~Evaluate, minimize, and mitigate unavoidable impacts on groundwater and surface water quality during development reviews.~~

### 9.4.4 Affordable Utility Access

*Goal:*

Support access to affordable and reliable utilities in Mason County.

*Policies:*

1. Collaborate with utility service providers and community stakeholders to identify and address service affordability challenges.
2. Support the expansion of reliable infrastructure, such as telecommunications, to provide access to residents and businesses in all communities across the county. Prioritize areas underserved or face higher costs for services.

# 9 Utilities Element

## 9.1 ~~Existing Conditions~~Overview

Commented [MG1]: Zoë Tapert: heading change from previous file

Washington's Growth Management Act requires that County Comprehensive Plans contain a Utilities Element. The purpose of the Utilities Element is to ensure that utility services provided by both public and private suppliers are consistent with the County's Comprehensive Plan and can support the community's growth and development as anticipated over the 20-year planning period.

The Utilities Element must include:

- An inventory of the general location of all existing and proposed utility facilities and
- A description of the current capacity and expected future capacity of each utility.

This Plan identifies ways of improving the quality of these services and includes policies that ensure the provision of utilities is coordinated with land use. Mason County will implement these policies through its agreements with the utilities and through the land use permit process.

This Element of the Mason County Comprehensive Plan is based on the same assumptions and is consistent with the Land Use Element, which establishes the overall growth strategy for the County and its Urban Growth Areas. The system design and timing for extension of utility services supports the land use pattern and policies proposed throughout the Comprehensive Plan.

The level of service standards established for public utilities determines capital facilities costs and revenue analysis in the Capital Facilities Element and provides a foundation for analysis of the existing utility delivery system and proposed improvements which are necessary to meet the changing demands in six primary areas including:

~~10.~~ Electricity
~~11.~~ Natural Gas
~~12.~~ Solid Waste Management Systems
~~13.~~ Telecommunications
~~14.~~ Utility pipelines
~~15.~~ Water

Water, sewer, storm water and solid waste, which are also often considered as utilities, are also discussed in the Capital Facilities Chapter ~~VI~~10.

Commented [ZT2]: Check chapter numbering

Appendix A includes a map showing the general location of existing or proposed utility districts~~, major electrical transmission lines, electrical distribution substations, natural gas pipelines and service areas, telecommunications service areas, cellular communication tower sites.~~

Commented [ZT3]: The practice these days is to not map electric lines as much (PSE at least takes this route)

## ~~15.1.1~~9.1.1 Land Use and Utilities

Gas, electricity, and telecommunications in Mason County are each tied into a regional system, where local capacity depends on regional capacity. The greatest growth in demand for services will be in the urban growth areas, which are near major transmission lines, and in Rural Activity Centers.

Many land use policies that address rural areas provide for clustering of development. Neighborhood distribution needs will have to be met, but this type of development allows for more efficient provision of utilities and services. By encouraging clustering of rural development at the scale of the rural activity centers and community centers, or at the scale of an individual clustered subdivision, local distribution costs should be reduced.

Growth is also focused in the designated Urban Growth Areas of Shelton, Allyn and Belfair and within fully contained communities in rural Mason County. It will be most cost effective to provide utility services to these urban development patterns and more cost effective for residents as well. ~~For example, an analysis of electricity rates conducted by the Northwest Power and Conservation Council shows that the wholesale cost per megawatt-hour is not significantly different for customers in rural vs. urban areas. On the other hand, r~~Retail electricity prices in rural communities ~~tend to be somewhat lower than urban areas. This is primarily due to the fact that most rural areas of Washington State are served by not for profit~~not-for-profit ~~electrical utilities, such as electric cooperatives or public utility districts.~~

The limited availability of natural gas heating in rural areas means many rural customers use electricity for heating which contributes to the difference in energy use.

~~Private u~~Utility providers in Mason County project and plan for growth. The Mason County Comprehensive Plan will be a resource for each of these providers that will assist in determining the longer-term need for service expansion and new facilities.

## ~~15.1.2~~9.1.2 Regulatory Context

Most development requires public and private utilities, whether it is residential, commercial, industrial, or agricultural. Public utilities in Mason County generally include~~:~~ water, broadband, electricity, sanitary sewer systems, stormwater management systems, and solid waste management systems. The Washington State Department of Health and local h~~H~~ealth d~~D~~epartments define approved water systems serving more than one residence as "public" even though these systems may be owned and operated by a private person or company.

~~In Washington State, electricity is also often a publicly owned utility. This is true in~~ Mason County's electricity is served by ~~where~~ two public utility districts, PUD No. 1 and PUD No. 3~~, provide electricity services~~. In addition to electricity, PUD 1 ~~manages a number of~~ is a municipal water purveyor and owns 77 water systems in Mason County as well as one sewer system and a small area of broadband. In addition to electricity, PUD 3 operates a wholesale telecommunications network in Mason County. The public utility districts, authorized by RCW Title 54, are governed by

**Commented [KM4]:** I don't think this section I deleted is wholly true. Electricity bills are typically comprised of basic monthly charges and kWh rates, with other various adders, per utility policy.

Investor Owned Utilities, like Puget Sound Energy might have a higher kWh rate (14-16 cents/kWh for residential) but they have a much lower basic monthly rate ($7.49/month) than either of Mason County's two PUDs.

So to say generally that the price of electricity is higher or lower is disingenuous in this context.

I would omit this entire section. It is boilerplate language that is not specific or relevant to Mason County, who has two electricity providers.

**Commented [ZT5R4]:** That sounds good.

**Commented [KM6]:** Should we just say "utility providers"? The only private utilities are telecom and small water systems.

**Commented [ZT7R6]:** That would probably be best.

elected boards of commissioners. All decisions regarding rates and policies are made at the local level.

Private utilities in Mason County ~~Washington State~~ including Hood Canal Communications, ~~CenturyLink~~Lumen (also known as Century Link), ~~iFiber One~~, ~~Wave~~Astound Broadband, and Cascade Natural Gas are regulated by the Washington State Utilities and Transportation Commission (WUTC).

These public and private utilities and water and sewer systems are also discussed in the Capital Facilities Element of the Plan, Chapter ~~V~~10.

### ~~15.1.3 State Regulations~~

~~Investor-owned utilities are regulated in Washington by the Washington Utilities and Transportation Commission (WUTC). WUTC is empowered by Title 80 of the Revised Code of Washington (RCW) to regulate electricity, gas, irrigation, telecommunications, and water providers. State law directs the commission to regulate the rates, charges, services, facilities, and practices of the utilities. Any change in customer charges or service provision requires commission approval.~~

~~The WUTC, under Title 81 RCW, also regulates the rates and safety practices of the transportation of solid waste (garbage), intrastate petroleum and gas products via pipeline, and scheduled auto transportation services.~~

### ~~15.1.4 Federal Regulators~~

~~The Federal Energy Regulatory Commission is an independent five-member commission working with the U.S. Department of Energy. The Commission regulates the interstate transmission of natural gas, oil, and electricity, as well as licensing natural gas and hydropower generation projects.~~

~~The Federal Communications Commission regulates interstate and international communications by television, wire, satellite, and cable. An independent U.S. government agency overseen by Congress, the five-member commission is the United States' primary authority for communications laws, regulation, and technological innovation.~~

**Commented [ZT8]:** Need confirmation from County about these being current

**Commented [ZT9R8]:** PUD 1 and 3 were able to provide an updated list

**Commented [ZT10R8]:** Flagging that Century Link is still used as their name for residential telecom but Lumen is the parent company

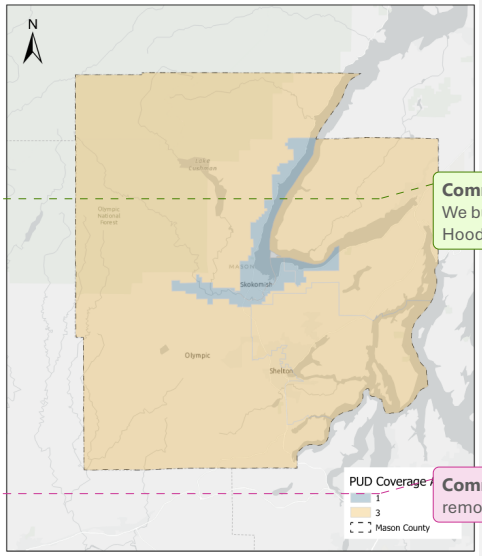
**Commented [ZT11]:** Suggest removing this as it isn't necessary for this element

## ~~15.2~~9.2 Public and Private Utilities

### ~~15.2.1~~9.2.1 Electricity

Public ~~Utilities~~ Utility District No. 1 and Public ~~Utilities~~ Utility District No. 3 provide electrical power to residents of Mason County. Both districts purchase the majority of their power ~~marketed by~~from the Bonneville Power Administration and distribute it to their customers. Neither public utility district has large-scale power production facilities. The Bonneville Power Administration and the City of Tacoma have transmission facilities in Mason County.

~~The City of Tacoma also has an electrical generation facility near Hoodsport, which uses water drawn from Lake Cushman. It does not provide local service in Mason County.~~

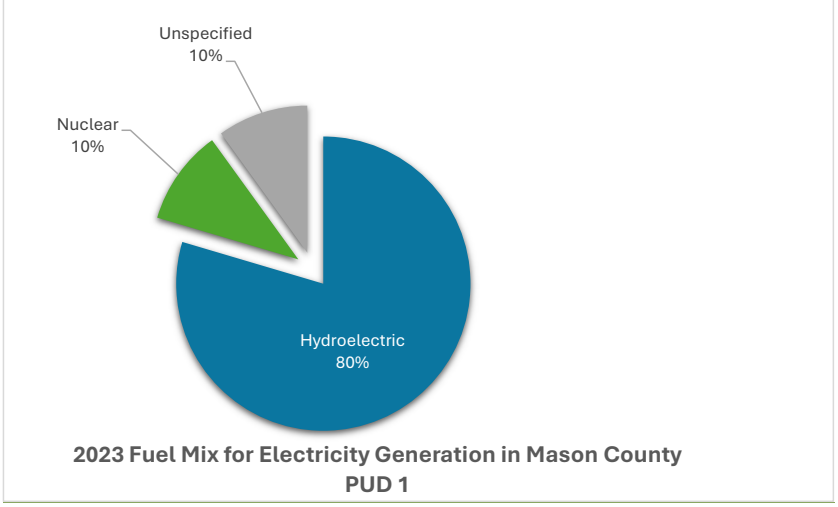



PUD Coverage Areas 1PU

**Commented [KM12]:** We are not full BPA subscribers. We buy locally produced energy from hydro projects on Hood Canal. 11% of our power comes from this hydro.

**Commented [ZG13]:** This comment could probably be removed.

The electrical power for Mason County is supplied through a regional transmission grid (which is the interconnected network of transmission lines and other supporting equipment) at 500,000 volt and 230,000 volts from 31 federally managed dams in the Columbia River Basin, and a nuclear power plant in Kennewick, Washington. Transmission to Mason County is through the Olympia Transmission Substation through 115,000 and 230,000 volt power lines which go to the BPA Shelton Transmission Substation, where service is split to serve East and West of the Hood Canal. The Mason County Urban Growth Areas are served by 115,000 volt power lines. The network connects to the PUDs through switching stations and then to distribution substations. The electrical power carried by the high voltage lines is transformed to lower voltages for distribution to PUD's neighborhood distribution substations and on to the user. Both PUDs provide annual capital improvement programs either directly from user revenues, or from the sale of bonds which are redeemed by user revenues.




[image of PUD No.1]

Mason County PUD No. 1 (PUD 1) became the first operating Public Utility District in the State of Washington when voters approved a proposition on November 6, 1934. Mason County PUD No. 1 is publicly owned and serves approximately 5,667 ~~4,770~~ electric customers.

Commented [ZG14]: Provided by the PUD

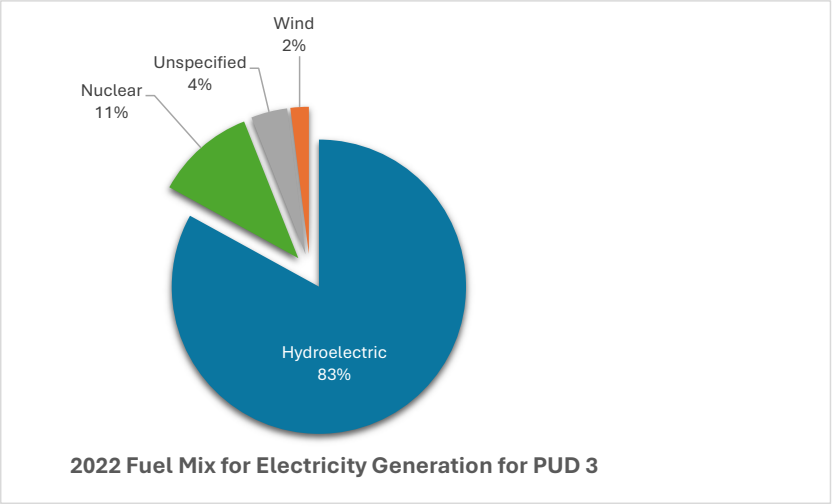
The electric service area for ~~Mason County Public Utility District 1 (PUD No. 1)~~PUD 1 begins approximately one mile west of Twanoh State Park, on the south side of Hood Canal, and extends west to the end of Skokomish Valley Road and approximately 50 miles north along the Canal to the Mason/Jefferson County line.

PUD No. 1 also serves into south Jefferson County up to ~~Walker Mountain~~Mt. Walker. The district encompasses several river valleys including the Skokomish, Lilliwaup, Hamma Hamma, Duckabush and Dosewallips. PUD No. 1 serves power to the communities of Lilliwaup, Hoodsport, Potlatch, Union, and the Skokomish Indian Reservation. PUD No. 1 provides water services throughout all of Mason County. Both PUD 1 and PUD 3 have a memorandum of understanding that allows PUD No. 1 to provide water/wastewater services in PUD 3's service territory and PUD No. 3 may provide telecom services in PUD 1's service territory.

In 2019, PUD No. 1 sold 76.4 million kilowatt hours ~~1993, PUD No. 1 supplied a total of 58.7 million kilowatt hours~~ to customers within the service area and 2024, PUD No. 1 sold 81.1 in ~~2016, PUD No. 1 sold 73.1~~ million kilowatt hours, an increase of ~~25~~ 6 percent.

The district purchases power from the Lilliwaup Falls and Rocky Brook Hydro Facilities, with ~~the remainder~~most of their energy provided by Bonneville Power Administration. PUD No. 1 has substations located at Potlatch (T3ba'das), Duckabush, Hoodsport, Manzanita Drive and Union.

PUD 1 has ~~invested~~ over $20 million in ~~several~~ capital improvement projects planned for the both power and water utilities over the next ~~6~~six years. The funding for those projects is composed primarily of state and federal grants with additional funding coming from a combination of low interest loans and local revenue through utility rates.



2022 Fuel Mix for Electricity Generation for PUD 3

[image of PUD No.3]

Mason County PUD No. 3 provides electrical power to all areas of Mason County except those serviced by PUD No. 1. In 2016,~~1993,~~ PUD No.3 provided electrical power to approximately ~~24,400 customers. That service population has risen to nearly~~ 33,000 ~~in 2016~~ and in 2025~~5~~4, the PUD supplied power to ~~almost~~over 36,~~0~~400 customers. ~~Similarly, i~~In ~~1993~~2016, PUD No. 3 supplied a total of ~~493 million kilowatt hours and in 2016,~~ over 610 million kilowatt hours, and in 202~~2~~4 681 million kilowatt hours were ~~sold~~supplied ~~are being supplied~~.

Mason ~~County~~ PUD ~~No.~~ 3 is a full-requirements customer of the Bonneville Power Administration (BPA), meaning that BPA provides all of the District's power requirements at cost-based rates. As of December, 2023 PUD No. 3 takes delivery of BPA power at ~~eleven twelve~~12 substations, ~~ten eleven~~11 of which are owned by the utility. It has 1,~~777~~ 8~~36~~42 miles of primary lines. and owns and operates 30.75 ~~29.80~~ miles of 115 kV transmission lines.

**Commented [ZG15]:** Provided by Kristin Masteller at PUD 1

**Commented [ZT16]:** PUD 3 provided their own chart; however for document formatting purposes, I made changes in our chart to reflect their shared data

**Commented [ZG17]:** From PUD website

**Commented [KM18R17]:** Yeah, PUD 3 is going to want to review and rewrite a lot of this. So much of it below is random and doesn't make sense for a comp plan.

Can you guys please send it to Sheila Corson at PUD 3? sheila.corson@masonpud3.org

**Commented [ZT19R17]:** Separate review was provided by Sheila Corson and Justin Holzgrove with PUD3 and their edits are added

-PUD 3 also receives small amounts of electricity from the Nine Canyon and White Creek wind farms, and Packwood Lake Hydroelectric Project. ~~The PUD owns a 5.4 megawatt natural gas-fired generator (Olympic View Generating Station) located on Highway 102 near Shelton. The station is powered by reciprocating natural gas engines. The generator was used during the 2001 energy crisis to reduce energy demands. It is kept on standby for potential demand reduction, backup, reduction of Bonneville Power Administration transmission congestion on the Olympic Peninsula, or load shedding during times of high power demands in the region.~~ PUD 3 also maintains two solar projects at the Johns Prairie Operations Center, totaling 300 kW of installed capacity. Of that, 75 kW is a community solar project, where 110 customers reap the benefits of the solar array. PUD 3 also has 272 net metering systems, where individual customers own 270 solar arrays and two wind turbines to produce power for themselves, but also remain tied to the grid.

**Commented [ZT20]:** Deleted by PUD 3

**Commented [ZT21]:** Provided by PUD 3

The PUD is subject to the Washington State Energy Independence Act (Chapter 19.285 RCW), which establishes a renewable portfolio standard with a renewable energy target of 15 percent~~s as a percentage~~ of customer load~~. The targets have increased over time, from 3 percent in 2012, to 9 percent in 2016, to 15 percent in 2020~~. Eligible resources include water, wind, solar energy, geothermal energy, landfill gas, wave, ocean or tidal power, gas for sewage treatment plants and biodiesel fuel and biomass energy. Electricity generated at existing hydropower facilities do not count towards ~~I-937~~ this renewable portfolio compliance.

In 2020, the state legislature also passed the Clean Energy Transformation Act (CETA), to which PUD 3 also is subject. The law requires no coal-fired electricity from state energy portfolios by 2025, greenhouse-gas neutral portfolios by 2030, and 100% clean energy by 2045. PUD 3 is well on its way to compliance, with an energy portfolio that is around 96% clean, mainly from hydropower facilities. PUD 3 will be greenhouse gas neutral by 2030. The law also requires utilities make energy assistance programs and funding available to low-income households, leading PUD 3 to create a Low-Income Energy Assistance Grant, funded by a surcharge on customer bills. PUD 3 also historically has offered assistance through Project Share, a donation-based bill assistance program.

In 2021, the state legislature also passed the Climate Commitment Act (CCA) to establish a market-based program to reduce carbon pollution and greenhouse gas emissions. Four annual auctions, beginning in 2023, provide a platform for various fuel suppliers, utilities and others to sell or buy allowances for emissions (known as the Cap and Invest program). The goals include reducing emissions by 45% by 2030, 70% by 2040, and to net zero by 2050. PUD 3 will have 100% non-emitting and renewable resources by 2045.

**Commented [ZT22]:** Provided by PUD 3

There are 12~~+~~ substations that serve PUD 3 customers. They are Collins Lake, Union River, Belfair, Benson (Mason-Benson Rd.), Pioneer (Highway 3, near Pickering Rd.) Mason (Downtown Shelton), Dayton, Skookum (near the Hwy 108 and Hwy 101 intersection), Mountain View, Totten (near Taylor Towne), Johns Prairie (near the PUD's Operations Center) and Potlatch (near Lake Cushman, owned by BPA)~~, and Totten Substation~~. To expand electrical capacity in both north and central Mason County, two 115 kV switching stations and subsequent substations are planned, with one project

outside the Belfair area and the other west of Highway 101 near the Port of Shelton's Sanderson Field. While there are reliability benefits for existing customers, these projects are primarily focused on industrial site readiness and ensuring timely response for large electrical capacity requests in greenfield sites. PUD 3 continues to pursue grant funding at state and federal levels to offset the costs of these major projects, having secured about $4.7 million as of 2024.

Substations and distribution networks are constructed or improved to meet electrical demand and ensure reliable and safe operation of the PUD 3 power grid. The utility is demand driven - that is, it expands its level of service to meet demand as needed or projected. Customers needing to be connected to the service generally cover the costs of the connection, partially through a system capacity fee paid when new homes or businesses connect to the grid. This may include infrastructure expansion and improvements, which vary by site and service requirements. Once service is connected, costumers in the same class of service (for instance, residential) pay a rate based on the cost to serve their type of energy demand and consumption.

The PUD plans to construct another three or four substations during the current decade to keep pace with growing demand. ~~has not identified any lands needed for future expansions of facilities as capital or maintenance projects. However,~~ W~~w~~hen land developers submit an application for connection, the utility plans and coordinates construction of the required electrical facilities to serve the load of the completed planned development. The developer bears the cost of required infrastructure improvements.

Rural sprawl is a challenge PUD 3 faces in providing reliable electricity service to Mason County. There is a need for increased density and increased variety of efficient housing options focused within the existing designated Urban Growth Areas. Distributing growth throughout the county (outside of City and designated UGAs) is currently negatively impacting power quality and is resulting in the need for significant investment and early upgrades of existing electrical equipment and infrastructure.

Substations which serve the City of Shelton and Mason County's existing designated urban growth areas are designed and equipped to better serve the significant residential growth that is needed in our community. These are the areas where growth is to be focused, and these are the areas where electrical infrastructure has been designed to meet service needs (per long-standing designations). There is significant and currently unrealized opportunity to meet current housing needs by strategically focusing growth within these designated areas.

As an example, PUD 3's Pioneer Substation, serving communities in Agate, Pickering, and Harstine Island has seen compounded growth over the past six years, causing power quality issues and the need for significant investment for upgrades at just half of the equipment's useful life. Benson Substation, which serves Grapeview, Mason Lake, and Trails End, is the second most heavily loaded power transformer in the system, serving almost entirely residential loads. This is in-part due to tremendous growth in rural areas versus urban growth areas, which are better suited for development. Substations which serve the City of Shelton and Mason County's urban growth areas are better prepared for the significant residential growth that is needed in our community.



**Commented [ZT23]:** Provided by PUD 3

**Commented [ZT24]:** Added by PUD 3

**Commented [ZG25]:** From the PUD website

**Commented [KM26R25]:** Sheila Corson, Mason 3 <sheila.corson@masonpud3.org>

**Commented [ZT27R25]:** PUD 3 hadn't seen this edit and struck out the previous language. To check whether they would like to include or not

Medium-to-Higher density multifamily residential should be encouraged within all urban growth areas, including quadplexes and walk-up apartments, as well as larger-scale apartments as have recently been added in Belfair. These can help to meet the demand for both affordable and market-rate housing, while still respecting the character of the community. Specifically encouraging in-fill ("missing middle") housing within urban growth areas is also a recommended strategy. This should include fast-track permitting of auxiliary dwelling units (ADUs), multiplex housing, townhouses, rowhouses, and cottage courts. Strategies to help achieve this within UGAs include reducing setback requirements and lot coverage rules, increasing allowable heights, and reducing parking requirements within all UGA zones. Proactive pursuit of developers and builders to bring these types of units to our community is essential.

Existing transmission lines are generally located in road rights- of-way. The PUD does not normally purchase or condemn rights-of-ways for their utility lines, and plans to continue to use public rights-of-way for their utility lines in the future, except where it makes economic and land-use sense to develop within or adjacent to existing utility corridors; notably siting PUD 3 transmission lines alongside BPA transmission lines. The location of electrical lines on property being developed is determined by the property owner, although the county subdivision regulations provide for utility easements. These usually include the roadways and along lot lines.

~~The~~ PUD 3 recommends installation of new distribution facilities below ground and in conduit. Although this method of installation is more expensive, the benefits include greater reliability, lower maintenance costs, and improved aesthetics.

In March of 2025, the Mason County Economic Development Council (EDC) penned a letter to Senator Murray of Washington State to demonstrate its support for the Shelton Urban Growth Area electrical capacity project. The project would fund the construction of much-needed electric substation infrastructure within the Shelton UGA to help foster the necessary capacity, reliability, and utility resilience needed to support the recruitment of employers to Mason County.

## ~~15.2.2~~9.2.2 Natural Gas

### *Cascade Natural Gas*

Cascade Natural Gas Corporation provides natural gas throughout Mason County. It has offices in Aberdeen and Bremerton. The Aberdeen office serves the Shelton, Oak Park and Lake Limerick areas. The Bremerton office serves the Belfair area.

In 1993, Cascade Natural Gas served 1,450 commercial and residential customers. Today they serve 2,300 customers throughout Mason County, a nearly 60 percent increase, providing 30 million cubic feet of natural gas monthly. The company does not plan for individual connections, but responds to requests for service which might be for new development or for conversion from other energy sources. System expansions generally use existing rights-of-way or public road rights-of-way. Transmission capacity can be expanded through existing lines or by adding or enlarging lines.

**Commented [ZT28]:** Provided by Justin Holzgrove with PUD 3

**Commented [ZT29]:** Provided by PUD 3

**Commented [KM30]:** This seems like a weird thing to put in here. The EDC writes lots of letters of support for federal applications for a wide range of infrastructure projects.

If you wanted to highlight the UGA needs and PUD3's work and partnerships with other agencies to build electrical capacity here, that makes sense.

**Commented [ZT31R30]:** There had been direction by the county to work this into the plan, but there is probably a better way to do so.

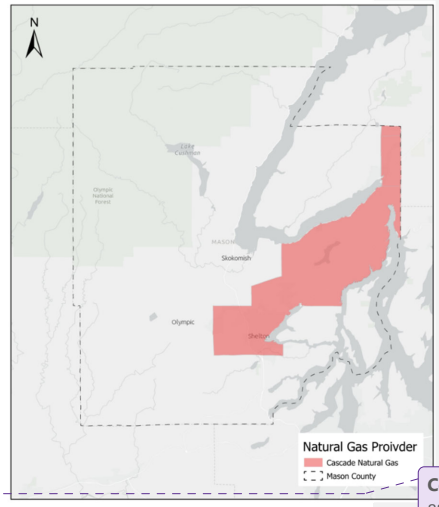
**Commented [ZG32]:** I cannot find the updated numbers

**Commented [ZT33R32]:** Loretta Swanson to provide Cascade Gas contact

~~Cascade Natural Gas serves 16 counties in Washington State.~~ Cascade Natural Gas provides service to 67 communities throughout Washington State.

**Commented [ZG34]:** From Cascade Gas Website

Cascade Natural Gas provides gas service to Mason County from a tap off ~~of~~ Williams Northwest Pipeline in Shelton. A major supply line for the company runs through Mason County by the Shelton Urban Growth Area and the Belfair Urban Growth Area. The company continually expands its natural gas system in response to demand. The method used to determine the economic viability of natural gas system expansion is regulated by the Washington Utilities and Transportation Commission. Routes for expansion of services depends on the demand, available rights-of-way, environmental permitting issues, and opportunities created by new development, or the work in rights-of-way by other utilities or the county or state.




Cascade Natural Gas Service Area

**Commented [ZT35]:** It is suggested to remove this text as it isn't necessary for this element.

~~Natural Gas Regulation~~

~~The activities of Puget Sound Energy are regulated by both federal and state legislation. This legislation is primarily concerned with promoting competition among gas suppliers and controlling the cost of natural gas to the consumer.~~

~~Cascade Natural Gas is subject to the general regulations and oversight by the energy agencies, such as the Washington Utilities and Transportation Commission (WUTC) and the Federal Energy Regulatory Commission. WUTC regulations prohibit extending gas facilities to areas that are not expected to pay for themselves from the outset. While this keeps the existing ratepayers from financing improvements to other areas, it does limit service delivery of natural gas to marginally profitable areas.~~

~~Other pieces of legislation that have specific implications for the natural gas industry are described below:~~

~~Natural Gas Policy Act 1978~~

~~The National Gas Policy Act encouraged competition among fuels and suppliers across the United States. As a result, natural gas has essentially been de-controlled. The Act also contained incentives for developing new natural gas resources and a tiered pricing structure aimed at encouraging the development of national transmission pipelines.~~

~~The Clean Air Act Amendment of 1990~~

~~The passage of the Clean Air Act amendments in 1990 has shown a federal intent to promote the diversification of fuel sources for motor vehicles. This is in response to the need to both reduce carbon dioxide atmospheric emissions and to reduce the nation's reliance on gasoline for strategic reasons.~~

~~The Olympic Region Clean Air Agency serves Clallam, Grays Harbor, Jefferson, Mason, Pacific, and Thurston counties and it is one of seven such regional air pollution control agencies in the state of Washington. Olympic Region Clean Air Agency works cooperatively with the State Department of Ecology and the regional United States Environmental Protection Agency to measure criteria ambient air pollutants, meteorological parameters, and other air-related data. It currently operates and maintains air monitoring equipment for measurement of three of the six criteria pollutants: particulate matter (PM2.5), ozone (O3), and carbon monoxide (CO).~~

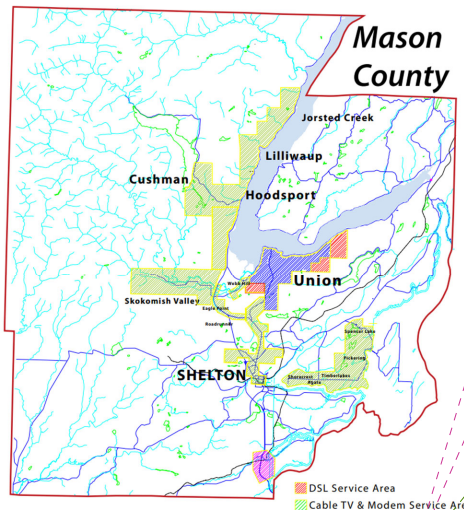
## ~~15.2.3~~9.2.3 Telecommunications

### *Telephone Services*

Several companies provide local telephone service in Mason County. They include Hood Canal Telephone Company, Inland ~~Telephone Company~~Networks, and Century Link. Century Link serves over 90 percent of Mason County Residents. Existing transmission lines are generally located in road rights-of-ways. The location of telephone lines on property being developed is determined by the property owner, although the county subdivision regulations provide for utility easements. These usually include ~~the~~ roadways and along lot lines.

#### Hood Canal Telephone Company

Hood Canal Telephone Co. Inc, dba as Hood Canal Communications is the Local Exchange Carrier (ILEC) in Union. They are a Competitive Local Exchange Carrier (CLEC) providing the same services into CenturyLink's serving territory using fiber and coaxial cables. The CLEC serves the communities of Skokomish Reservation, Potlatch, Hoodsport, Lilliwaup, Hamma Hamma, Lake Cushman, Skokomish Valley, Shelton, Squaxin Tribe, Kamaliche, Timberlakes, Shorecrest, and Spencer Lake. They have interconnection agreements with CenturyLink for telephone service and utilize multiple providers for middle mile fiber connections. They provide telecommunication services to approximately 8,500 business and residential customers. This is a significant growth in services from 930 customers in 1993. Hood Canal Communications is currently in the




Hood Canal Telephone Company Service Area

**Commented [36]:** What are the current customers totals?

**Commented [ZG37R36]:** Information obtained via a phone call with Hood Canal

**Commented [KM38R36]:** I would also invite HCC to review their section for accuracy. Mike Oblizalo- mikeo@hoodcanal.net

**Commented [ZT39R36]:** Thank you!

process of applying for Broadband Equity Access and Deployment (BEAD) Program funds to help expand broadband service to more rural users. It has also invested $20 million in major projects within Mason County over the last couple of years. ~~They provide telecommunication services to approximately 5,000 business and residential customers. This is a significant growth in services from 930 customers in 1993.~~

### Inland ~~Telephone Company~~ Networks

The Inland Networks, formally Inland Telephone Company, provides local telephone service in the Dewatto area. Its service area includes the east shore of Hood Canal from the Mason/Kitsap County Line south to Red Bluff. Inland Telephone provides single party service to business and residential customers.

### CenturyLink

CenturyLink is the largest provider of local exchange service in Mason County, with a service area that includes all areas of the county not served by the Hood Canal and Inland Telephone Companies. The company provides telephone service to the urban growth areas in the county. Century Link generally provides a full range of telecommunication services, however services available in specific areas depend on customer demand and the capabilities of the local central offices.

### Cellular Communications

Cellular communications differs from other types of telecommunications in that cellular communications systems use phones and other communication devices that transmit and receive radio signals on bands reserved solely for such activity. Signals are transmitted and received by low power antennae. The area one antenna can transmit and receive to the individual phones is called a cell. The coverage of the cells overlaps so that, ideally, the user can be transferred from one cell to another without interruption of service.

### *Fiber Optics*

PUD ~~No.~~ 3 provides wholesale fiber optic services to ~~five~~ service providers, who in turn provide retail services to ~~approximately~~ over ~~3~~41~~,~~000 ~~devices~~ customers ~~homes and businesses~~through over ~~467~~ 7~~3~~77 miles of fiber optic lines within Mason County. PUD ~~No.~~ 3 is also a major hub for high-capacity data lines throughout western Washington. Its strategic location provides redundant service capabilities through ~~two~~ three major internet routes.

Consumer demand for internet services continues to increase year after year. PUD 3 continues to roll out “Fiberhood” connections as communities reach a threshold of demand. More than 80 neighborhoods have been connected so far, with more than two dozen in the construction phase.

PUD 3 continues to pursue funding for these projects as well, having receiving loan and grant funding from Community Economic Revitalization Board (CERB), Washington State Broadband Office (WSBO), United States Department of Agriculture's Rural Utility Services (USDA RUS), and others. ~~The demand for service and new facilities for telecommunications is difficult to assess because of the changing technologies and the consumer demand for new services.~~

~~Known service providers with facilities located or currently applied for in Mason County include United States Cellular, CenturyLink, Air Touch Cellular, and NEXTEL, Sprint, AT&T, T-Mobile.~~

Commented [ZT40]: Provided by PUD 3

~~15.2.3.1.1.1.1.1.1~~ ~~*Table 2. Inventory of Telecommunications Infrastructure*~~

| ~~Infrastructure~~ | ~~Number~~ |
|---|---|
| ~~Cell Phone Towers~~ | ~~64~~ |
| ~~Antenna Towers~~ | ~~10~~ |
| ~~Maritime Coast & Aviation Ground Towers~~ | ~~3~~ |

*Forecasted Telecommunication Needs*

The forecasted needs of Fiber Optic providers will depend on the demand as Mason County continues to grow. Coordination between telecommunications providers and developers will be critical to meet the demand for highspeed internet and cellular coverage into any growth areas within Mason County.

## ~~15.2.4~~9.2.4 Sewer and On-site Sewage Systems

Commented [ZT41]: Future edit to separate out OSS and clarify that it's the health district that plays a large role with this.

Mason County Utilities and Waste Management is a Division of the Mason County Public Works Department. It is responsible for managing water, ~~waste water~~wastewater and solid waste facilities in the unincorporated areas of Mason County. This includes operations of the Rustlewood and Beards Cove water systems and the Rustlewood, North Bay/Case Inlet, and Belfair water reclamation/sewer collection and treatment facilities.

In 2013, Mason County Board of County Commissioners established the Belfair Sewer Advisory Committee through Resolution No. 14- 13 in order to gather community input and provide recommendations to the Mason County Board of County Commissioners regarding the development and funding of the existing and subsequent phases of the Belfair Sewer System.

Mason County also manages the On-Site Sewage System Program with the goal of protecting public health and the environment by minimizing the threat of surface and ground water contamination from failing or improperly designed, installed or maintained onsite sewage systems. There are currently about 26~~5~~,000 on-site sewage systems across Mason County. These sewage systems play an important role ~~of~~in groundwater recharge often overlooked in water and stormwater management discussions. Activities of the On-Site Sewage Program include:

- Soil evaluation to determine site suitability for an on- site sewage system

- Review and inspect on-site system designs and installations.
- Provide homeowner education about on-site sewage system maintenance and operation
- Review building permits
- License onsite sewage system Installers, operation & maintenance service providers and pumpers.

There are two facilities in Mason County that accept septage pumped from on-site sewage systems. These are located at Shelton City Wastewater Treatment Plant and Biorecycling LSP North Ranch. While these facilities can handle the septage being generated in Mason County, they also support surrounding jurisdictions that do not have septage receiving facilities in their area.

### ~~15.2.5~~9.2.5 Solid Waste Management

*Mason County Solid Waste Facilities*

The Mason County Landfill is located near Shelton in Mason County, Washington (Section 4, Township 20 North, Range 4 West). The site address is 501 West Eells Hill Road, Shelton, Washington.

The facility is ~~located~~ in a sparsely populated area used primarily for tree farming. Two private properties, the Culver (formerly Ruggle) residence and the Shelton Auto Yard, are located within 1 mile of the facility. The 8-acre landfill is situated within a 77-acre property and was the primary municipal solid waste disposal facility for Mason County from the early 1970s until the summer of 1993, when closure construction began. Closure activities were completed in 1993 and consisted of capping, implementing surface water controls, and constructing a gas extraction system.

A solid waste transfer station is currently operating at the facility. Solid waste from a majority of Mason County is transported to this transfer station. Then it is trucked to Chehalis and placed on a train to the Roosevelt landfill in Goldendale, WA. Solid waste from Belfair and Tahuya are ~~is~~ transported to Olympic View Transfer Station in Port Orchard. Waste Management then transports it by train to their landfill in Arlington, WA.

The County's four solid waste facilities include:

- Shelton transfer station and recycling facilities, 501 W Eells Hill Road
- Belfair drop box station, 1611 NE Sand Hill Road
- Union drop box station, 1391 E McReavy Road
- Hoodsport drop box station, 260 N Foothills Park Road

*Shelton-Matlock Landfill*

This landfill is located in the unincorporated Matlock area. It operated for an unknown period of time prior to its closure in 2001. While the landfill was open, it was receiving wood waste from nearby forest product operations. The landfill has a groundwater monitoring system in place and has been monitored since 1997. It is currently in post-closure stage and has continued to have

groundwater monitoring as part of the post-closure agreement. As of early 2017, there is discussion on the potential for this landfill to end its post- closure care due to evidence that suggests the landfill has reached stability.

### *Simpson Dayton Landfill*

This landfill is located in the unincorporated Dayton area. This landfill was also operated for an unknown period of time prior to its discontinued use in 2006. The material that was accepted at this site was mostly wood waste and an unlimited amount of wood ash. A groundwater monitoring system has been in place and monitored since 1997. In 2016, the closure process was completed and the application for a post-closure permit was submitted and officially accepted in early 2017. The landfill is now moving into post-closure status with limited monitoring.

### *City of Shelton – C Street Landfill*

The C Street landfill is located on a 16.7 acre parcel located southwest of the intersection of West C Street and US Highway 101. The property was acquired by the City in 1928 for use as a municipal landfill. Landfilling operations occurred at the site between 1928 and 1974. After that time, municipal solid waste was sent to the Eells Hill facility to the northwest of Shelton. The City of Shelton has entered into an Agreement with the Washington State Department of Ecology and in 2021 conducted ~~is working with the agency to conduct~~ a Remedial Investigation and Cleanup Action Plan ~~as well as~~ to finalize the closure of the facility. As of March 2025, the C Street Landfill has entered the cleanup phase of the Cleanup Action Plan.

**Total solid waste tonnage generated in Mason County ~~is reported in Table 3.~~**

| **Total Tonnage** | **2020** | **2021** | **2022** | **2023** | **2024** |
|---|---|---|---|---|---|
| Exported for land disposal | 44129 | 48971 | 50298 | 50064 | 52379 |
| Collected through recycling | | | | 639.3 | 653.03 |
| Total Tons generated | | | | 50703.3 | 53032.03 |
| **Per Capita Annual Tonnage** | **2020** | **2021** | **2022** | **2023** | **2024** |
| OFM Population for Mason County | 65,726 | 65,750 | 66,200 | 67,000 | 67,475 |
| Exported for land disposal | 0.67 | 0.74 | 0.76 | 0.75 | 0.78 |
| Collected through recycling | | | | 0.01 | 0.01 |
| Total tons generated per capita | | | | 0.76 | 0.79 |

**Commented [ZG42]:** Could this be removed from this section?

**Commented [ZT43R42]:** It still would be good to have in as a record of its land use, but leaving to County to decide

**Commented [ZT44R42]:** Direction to cut down into a line or two, but not this extensive.

**Commented [ZT45]:** We can get OFM population numbers quickly. The rest.... That may require phone calls/emails to the best of our ability

**Commented [ZG46R45]:** I have reached out to Lorreta about this earlier in the process, but she didn't have the data at hand but CC'ed some county staff that have yet to respond. I will nudge them now.

**Commented [ZG47]:** Population from OFM

**Table 3. Solid Waste Tonnage Produced by Mason County Residents 2010-2016**

| **Total Tonnage** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** |
|---|---|---|---|---|---|---|---|
| Exported for land disposal | 33,474 | 31,484 | 31,447 | 32,340 | 33,558 | 33,779 | 33,880 |
| Collected through recycling | 1,302 | 1,229 | 1,318 | 1,313 | 1,375 | 1,464 | 1,590 |
| Total Tons generated | 34,776 | 32,713 | 32,766 | 33,653 | 34,933 | 35,243 | 35,345 |
| **Per Capita Annual Tonnage** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** |
| OFM Population for Mason County | 60,699 | 61,100 | 61,450 | 61,800 | 62,000 | 62,200 | 62,320 |
| Exported for land disposal | 0.551 | 0.515 | 0.512 | 0.523 | 0.541 | 0.543 | 0.544 |
| Collected through recycling | 0.05 | 0.049 | 0.051 | 0.05 | 0.053 | 0.054 | 0.026 |
| Total tons generated per capita | 0.601 | 0.564 | 0.563 | 0.573 | 0.595 | 0.597 | 0.567 |

~~Regulating Solid Waste~~

**Commented [ZT48]:** Suggest removing the below text as it isn't necessary.

~~The Federal Resource Conservation and Recovery Act is our nation's primary law governing the disposal of solid and hazardous waste. Congress passed this Act on October 21, 1976, to address the increasing problems the nation faced from our growing volume of municipal and industrial waste. The Resource Conservation and Recovery Act, which amended the Solid Waste Disposal Act of 1965, set national goals for:~~

- ~~Protecting human health and the environment from the potential hazards of waste disposal~~
- ~~Conserving energy and natural resources~~
- ~~Reducing the amount of waste generated~~
- ~~Ensuring that wastes are managed in an environmentally-sound manner.~~

~~Washington State Regulations~~

~~Similar to federal regulations, laws for waste disposal are established in the Revised Code of Washington (RCW) and implemented through the Washington Administrative Code (WAC). The laws related to solid waste are found in several sections which include:~~

- ~~Title 36 Counties - establishes all County authorities and responsibilities~~
- ~~Title 70 Public Health and Safety – establishes programs and responsibilities for public health and safety~~
- ~~Title 80 Public Utilities – establishes the Public Utilities and Transportation Commission with its authorities and responsibilities~~
- ~~Title 81 Transportation – establishes laws relative transportation activities such as motor transport, ferries, pipelines, railroads and air transport.~~

State law, RCW 70A.205~~95~~, ~~is of particular importance to Mason County's Comprehensive Plan. It~~ requires that county and city governments assume the primary responsibility for solid waste management and implement effective waste reduction and recycling strategies. ~~In addition, RCW~~

~~70.95 requires that local solid waste management plans demonstrate how the following goals will be met:~~

- ~~Washington State's goal is to achieve a statewide recycling and composting rate of 50 percent.~~
- ~~There is a statewide goal to eliminate yard debris from landfills by 2012 in those areas where alternatives exist.~~
- ~~Source separation of waste (at a minimum, separation into recyclable and non-recyclable fractions) must be a fundamental strategy of solid waste management.~~
- ~~Steps should be taken to make recycling at least as affordable and convenient to the ratepayer as mixed waste disposal.~~

Also, under Washington State Growth Management Act 36.70A, all Counties and Cities are required to establish a process for siting essential public facilities, including those facilities typically difficult to site like solid waste handling facilities and other regional utility facilities, as well as facilities like regional transportation facilities, state education or correctional facilities, substance abuse and mental health facilities, and secure community transition facilities.

*Forecasted Solid Waste Needs*

## ~~15.2.6~~9.2.6 Water ~~and Stormwater~~

### *PUD No. 1*

PUD No. 1 owns 77 and manages ~~40~~ ~~70~~two water systems throughout Mason County serving approximately ~~1,860~~3,~~000~~176 connections. ~~and providing 93 million gallons of water annually to customers across the service area (about 50,000 average annual gallons per connection).~~

### *Washington State Department of Health – Public Water Systems*

In Mason County, there are 30~~40~~ Group A wells, including those managed by PUD 1, 229~~30~~ are active with over 23~~4~~,000 connections providing water to over 39~~44~~,000 people. ~~These wells provide an estimated 2.1 billion gallons of water annually across the County.~~

Of the 775~~50~~ existing Group B wells in Mason County (including those managed by PUD 1), 539~~20~~ are active and provide water to over 6,~~000~~ 750 people through 3,~~000~~ 500connections. ~~These wells provide an estimated 935 million gallons of water annually.~~

### *Exempt Wells*

Currently, there are an estimated 1,490 exempt wells serving 11,000 connections in Mason County, based on data collected by the County from 1992 to the present. ~~These wells provide an estimated 790 million gallons of water annually.~~

**Commented [ZT49]:** Need to double check the RCW for any updates to this

**Commented [ZT50R49]:** The RCW changed and I also think that for updates, this should just be shortened.

**Commented [ZT51]:** Seeking County input for this section. I know we're waiting on current data so it is hard to complete this section before then.

**Commented [ZT52R51]:** Public Works to provide information on

**Commented [ZG53]:** This still needs to be updated

**Commented [ZG54]:** Needs to be updated

**Commented [ZT55R54]:** Removing water generation numbers unless the estimates can be provided.

**Commented [ZG56]:** Needs to be updated

**Commented [ZT57R56]:** Removing water generation numbers unless the estimates can be provided.

**Commented [ZG58]:** Needs to be updated

**Commented [ZG59R58]:** I saw we remove estimated gallons produced from those above sections.

**Commented [ZT60R58]:** Agreed, unless County is able to provide insight on these estimations.

### *Regulating Water*

There are three types of public water systems: Group A, Group B and Two-Party. A Group A system is the largest type of system. Any system with more than 14 connections or that serves 25 or more individuals for 60 or more days per year is considered a Group A public water system. All Group A systems are regulated by the State Department of Health Office of Drinking Water.

Mason County Public Health regulates all Group B Water Systems in Mason County. A Group B water system serves from 1 to 14 connections and less than 25 individuals per day. The regulations governing public water systems are Washington Administrative Code (WAC) 246-290 for Group A systems and WAC 246-291 for Group B systems.

## 9.2.7 Stormwater

### *Managing Stormwater*

Mason County is in compliance with state and federal requirements and continues to develop and improve its Stormwater Management Program. The County is also working to raise awareness of the importance of stormwater management among development partners and others.

In 2008, Mason County adopted a Countywide Stormwater Management Plan to both protect and enhance water quality. Of special concern are the impacts of continued and increased stormwater discharges to the local water quality of Hood Canal, Oakland and Annas Bays, and the rich shellfish habitat in nearby natural and commercial rearing areas. Pollution from pathogens in sewage and animal wastes are a chronic problem in many areas of Puget Sound and is closely associated with rainfall events and stormwater runoff as well as being influenced by population densities and development levels. Because of fecal contamination, shellfish beds in both Oakland and Annas Bays have been downgraded and shellfish protection districts have been created to improve water quality and preserve natural resources.

As part of the Stormwater Management Plan development process, Mason County Board of County Commissioners created a Stormwater Task Force of eight community members to assist in review and development of the Plan. The composition of the Task Force reflected major stakeholder groups such as business owners, the timber and shellfish industries, the Tribes, environmental groups, the Washington Association of Sewer and Water Districts, the City of Shelton and the general public. Over the course of a series of meetings and briefings, the Task Force facilitated public input and provided feedback that helped to ensure the public's interests were represented and that contributed to shaping the final plan.

The Allyn, Belfair and Hoodsport Stormwater Management Plans complement and support the development of the Comprehensive Countywide Stormwater Management Plan and are incorporated as part of the Comprehensive Plan by reference.

~~Mason County's 2008 Stormwater Management Ordinance was codified in Mason County Code Chapter 14.46. The adoption and application of this Ordinance based on the 2005 Ecology Manual will further reduce erosion and sedimentation provided effective enforcement authority is established and exercised.~~

**Commented [ZG61]:** This might need to be updated to reflect more recent versions of the manual.

**Commented [ZG62R61]:** Does this need to the reflect the newest Ecology Stormwater management Manual?

**Commented [ZT63R61]:** Its not required to be included. I checked the code and 14.46 was last updated in 2023; however discussions on ordinances are not common in the comp plan. This is largely due to comp plans guiding code edits. It is recommended to strike for now, but open to rewording as County or others see fit.

Mason County's Stormwater Management Plan takes a decentralized approach that is based on low impact development (LID) techniques, innovative stormwater management designs with the basic principle that they are modeled after nature. The goal of the Plan is to minimize the impacts of future land use changes, as well as promote the design and construction of onsite LID systems.

Significant steps have been taken in the implementation of the County Stormwater Management Plan, including:

- Establishing a Countywide Stormwater Utility.
- Implementing a facility retrofit program to detain and treat the runoff from
- existing development using LID techniques.
- Treating county road runoff by retrofitting existing facilities, as well as by adding water quality treatment to all new County road designs.
- Pursuing further expansion of these programs, particularly maintenance.
- Creating a Clean Water District

~~Regulating Stormwater~~

~~Under the Federal Clean Water Act regulations, local governments in Washington subject to the federal National Pollutant Discharge Elimination System (NPDES) Storm Water Program, including Mason County, are required to have stormwater management programs.~~

~~The U.S. Envornmental Protection Agency controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The Washington State Department of Ecology (DOE) administers the federal NPDES program in the state.~~

~~Also, the listing of salmon under the Endangered Species Act (ESA) requires that streams and wetlands be protected. All local governments with salmon habitats are encouraged to develop storm water management plans.~~

*Forecasted Stormwater Needs*

## ~~15.3~~9.3 Meeting Future Utilities Demands

A projected inflow of ~~19,400~~about 16,000 new residents are expected ~~between 2024 and~~by 2045 in Mason County and services areas of PUD 1 and PUD 3. This will increase the electric service territory population to almost 82,000 by 2045. ~~The growth in housing as shown in Table 4 is similar to trends in population growth, with a projected 7,500 housing units being added in Mason County by 2036 with 3,900 of these new housing units in the Urban Growth Areas.~~

~~There were 13,800 jobs in Mason County in 2016. Additionally, employment is expected to grow at an average annual rate of 0.7 percent between 2016 and 2035, manufacturing employment is expected to decline annually by 0.4 percent on average between 2016 and 2035, and local~~



**Commented [ZT64]:** This came up in discussions with the County Public Works as a product of stormwater efforts

**Commented [ZT65]:** Suggest removing this as it isn't necessary to include in this element

**Commented [ZT66]:** It may be beneficial to tie this in with language from the climate element. Open to thoughts from the County.

**Commented [ZG67]:** Need to update this

**Commented [ZT68R67]:** Will need to ensure consistency with Land Use Element - data should be OFM

**Commented [ZT69R67]:** This is from the HNA

**Commented [ZG70]:** Need to update this

**Commented [ZG71]:** Update this in coordination with the housing component

**Commented [ZT72R71]:** And possibly land use

**Commented [ZG73]:** Confirm and update this.

**Commented [ZT74R73]:** Part of land use and housing conversations

**Commented [ZG75]:** Update this

**Commented [ZT76R75]:** US Census Data can get pulled for this from ACS

**Commented [ZT77R75]:** This also could be coordinated with the Economic Development Element

**Commented [ZG78]:** Confirm and update this

**Commented [ZT79R78]:** Should be US Census data

~~employers are expected to create about 2,100 jobs between 2016 and 2035. The gain in employment is primarily in the areas of government, professional services, and retail.~~

~~15.3.1.1.1.1.1.1~~ ~~Table 4. Projected Housing Needs 2016-2036~~

~~15.3.1.1.1.1.1.2~~

| | ~~2016 Housing Units~~ | ~~2036 Housing Units~~ | ~~Number of New Housing Units~~ | ~~% Increase 2016-2036~~ |
|---|---|---|---|---|
| ~~Urban Growth Areas~~ | ~~3,000~~ | ~~4,500~~ | ~~1,500~~ | ~~50%~~ |
| ~~Rural County~~ | ~~26,500~~ | ~~34,500~~ | ~~8,000~~ | ~~30%~~ |
| ~~Shelton~~ | ~~3,900~~ | ~~5,000~~ | ~~1,150~~ | ~~30%~~ |
| ~~Mason County Total~~ | ~~33,400~~ | ~~44,000~~ | ~~10,650~~ | ~~32%~~ |

~~Source: US Census Housing Survey and Office of Financial Management~~ ~~The biggest changes in employment occur in information, construction, and utilities.~~

Commented [ZG80]: Update this

Commented [ZT81R80]: This would be more likely in Ec Dev Element

Commented [ZG82]: Update this

Commented [ZT83R82]: Should probably stay in Housing Element unless showing table on Utilities

Commented [ZG84]: Update this

Commented [ZT85R84]: See comment above

These projections form the basis of the utility forecast for Mason County ~~helping~~to help ensure adequate services are in place and identify potential changes or adjustments needed.

### ~~15.3.2~~9.3.1 ~~A.~~ Projecting Energy Demand

Washington State Department of Commerce projects statewide energy demand to increase by six percent by 2050, relative to 2023 demand, if business continues as usual under its 2021 State Energy Strategy. However, with the state working towards a just energy transition by 2050, alternative scenarios show a decrease in energy demand ranging from 23 percent to 32 percent depending on the strategies utilized.

Commented [ZT86]: Source: https://deptofcommerce.app.box.com/s/zsbjvf0nato9q7dk3t7jjh0vjbd4iqof

To better understand Mason County's future energy demand, an initial projection can be made using current energy consumed divided by population. ~~One simple measure of the energy intensity is the gross measure of total energy consumed divided by the population.~~ This per capita indicator ~~is~~ can be a good measure of local energy consumption because decisions by individual consumers have an important effect on overall energy consumption. Combined with efforts from local public utility districts, ~~energy efficiency projections outlined in this document, this measure provides a straight-line projection that~~this provides a picture of anticipated demand based on historic trends.

*This projection does not ~~take into account~~consider additional innovation and efficiencies expected from the building industry or other innovations ~~that could be as high as 20 percent~~ over the 20-year planning horizon. ~~based on Washington State Department of Energy studies.~~*

Commented [ZT87]: On a state level I'm no longer seeing a WA DOE but instead energy programs are falling under Department of Commerce?

*System-level Impacts of Energy Efficiency*

The Energy Independence Act (EIA) requires electric utilities with 25,000 or more retail customers in Washington to use renewable resources and conservation to help meet their customers' energy needs. The utilities report annually to the State Department of Commerce on their compliance.

Many utilities in Washington State use wind power to meet about 80 percent of their EIA requirements. Since 2020, these utilities must provide at least 15 percent of their power from renewable sources.

The Washington State renewable energy production incentive payment program is nearly complete. Under this program, the PUD facilitates payments from the state program to interconnected electric customers who own and operate eligible renewable energy systems based on the amount of energy their system generates. Final payments will be sent by 2027, as the program has since retired.

In 2024, PUD 3 met its renewable energy target at 15 percent of customers' electric load and exceeding its energy conservation target. Projections show the potential for energy conservation in Mason County to be over 116,000 megawatt-hours over the next 20 years. Washington State Department of Energy anticipates that electric demand side efficiency efforts have the potential to continue to reduce statewide consumption by an estimated 20 percent by 2035.

~~year Clean~~**Table 5: Mason County Electricity Demand**

| | **2025~~0~~ OFM Adjusted Census** | **2035 Projection** | **2045 Projection** |
|---|---|---|---|
| Mason County Population | 65,726 | 76,485 | 82,932 |
| Mason County Electricity consumption ~~PUD 3 Electricity (kWh)~~ | 531,923,992 | 493,238,611 | 478,878,128 |
| ~~PUD 1 Electricity (kWh)~~ | | | |
| Per Capita kWh | 8093.05 | 6448.82 | 5774.35 |

Source: 2022 OFM Population Projections, PUD 3, and PUD 1

Energy efficiency continues to be a leading solution for resource planning. While de-carbonization removes some power supply, other sectors are increasing demand through electrification. Specifically, the deployment of electric vehicles and switching natural gas heating or appliances to electric will increase demand for carbon-free power in the coming years. Nearly all electric utilities offer incentives for energy efficiency upgrades to homes and businesses in their service territory.

**Commented [JH88]:** Get updates from Koral.

**Commented [ZT89]:** Edits provided by PUD 3

**Commented [ZT90]:** PUD 3 provided information that the 2016 number was 598,188,888 kWh, and the 2036 projection in table for electricity demand can be updated to 785,849,994 kWh - but this was for the old table.

**Commented [ZT91R90]:** This table was done separately from PUD provided information - to refine

**Commented [ZT92]:** OFM's middle growth scenario is a placeholder until the county finalizes allocations

**Commented [ZG93]:** What about removing the PUD specific demand and replacing it with countywide demand that can be seen at the National Renewable Energy Lab Website.

**Commented [ZT94R93]:** That's probably fine unless the PUDs would like to show their expected consumption rates from now till 2045

Carbon-free, renewable hydropower remains the cornerstone of electricity production in the Pacific Northwest. Additional wind farms (both onshore and offshore) are expected and encouraged, along with well-sited solar, providing variable renewable power supply. Pumped water storage and battery storage projects are also being pursued. Columbia Generating Station is currently the only nuclear plant in the region, but development of small modular nuclear reactor projects are underway. In addition, the first hydrogen energy project in Washington has begun producing hydrogen in 2025. In the meantime, regional coal-fired generation is expected to be shuttered by the end of the decade, and natural gas retirements or reductions are on the horizon.

**Commented [ZT95]:** PUD 3 provided these edits for the previous climate impacts section. However, with the climate element in progress, this may be a good spot for their edits or to later move to the climate element.

~~Utilities in Washington State use wind power to meet about 80 percent of their mandated renewable requirements. Energy efficiency improvements, solar, and other various qualified sources account for about 15 percent. In 2016, the renewable energy target increased from 3-9 percent of customers' electricity load, and in 2020, the target will increase to 15 percent.~~

~~In 2005, in response to Washington Administrative Code 458-20-273, PUD No. 3 serving Mason County participated in the Washington State renewable energy production incentive payment program. Under this program, the PUD facilitates payments from the state program to interconnected electric customers who own and operate eligible renewable energy systems. The renewable sources may include solar PV, wind, anaerobic digesters, or microhydro.~~

**Commented [ZT96]:** Check for updates

**Commented [ZT97R96]:** It is suggested to remove and replace this language as specific details regarding energy efficiency and renewable programs have changed drastically since the last update.

~~**Table 5. Mason County Residential, Commercial, Industrial Electricity Demand 202016-204536**~~

| | ~~19932025~~ | ~~20162035~~ | ~~204536 Projection~~ |
|---|---|---|---|
| ~~**Mason County Population**~~ | ~~**38,350**~~ | ~~**62,320**~~ | ~~**83,850**~~ |
| ~~Mason County~~PUD 3 Electricity (kWh) | ~~493,000,000~~ 531,923,992 | ~~610,000,000~~ 493,238,611 | ~~770,000,000~~ 478,878,128 |
| ~~PUD 1 Electricity (kWh)~~ | ~~58,700,000~~ | ~~73,100,000~~ | ~~91,000,000~~ |
| ~~Per Capita kWh~~ | ~~14,390~~ | ~~10,960~~ | ~~10,000~~ |

**Commented [ZT98]:** Check these numbers with land use element

**Commented [ZT99]:** To edit based on population numbers above

~~Source: U.S. Energy Information Administration (EIA) State Energy Data System, PUD No. 1, PUD No.3, and the 2010 Census~~

~~* Average household size was estimated to be 2.57, US Census Bureau, American Community Survey~~

~~Average annual credits range from $0.12 to $1.08 per kWh of energy produced by their system. The PUD receives a state tax credit equal to the payments made to customers.~~

**Commented [ZT100]:** I would be hesitant to include these rates and numbers in the comp plan as they can become outdated fast.

~~In 2016, PUD No. 3 was meeting its renewable energy target at 9 percent of customers' electric load and exceeding its energy conservation target. Washington State Department of Energy anticipates that electric demand side efficiency efforts have the potential to continue to reduce statewide consumption by an estimated 20 percent by 2035.~~

Commented [ZT101]: Removed for now unless PUDs would like to include language on renewable status.

### ~~15.3.3~~9.3.2 ~~B.~~ Projecting Water Demand

Table 6. shows an estimate of current and water consumption. Estimating demand for water is more complex than other utilities as we know much less about the amount of water in ground water stores and have a limited ability to estimate potential impacts of water conservation, recycling, reuse and recharge. A collaborative study is necessary to help the County and partner agencies learn more about future supply and demand.

**Table 6. Mason County Water Demand 2016**

Commented [ZT102]: To update

| | 2016 | |
|---|---|---|
| **Source** | **2016 Gallons per Year (millions)** | **2016 Connections** |
| Group A Systems | 2100 | 24,000 |
| Group B Systems | 930 | 3,000 |
| Exempt Wells | 790 | 11,000 |
| TOTALS | **3,820** | **38,000** |

Commented [ZT103]: Need updated data - Does County have records on this?

Commented [KM104R103]: Mason County Public Health should have the water system data and PE well figures.

Source: PUD No.1, Washington State Department of Health, and Mason County

### ~~15.3.4~~9.3.3 System-level Impacts of Recharge

Water conservation, wastewater recycling, and reuse ~~is~~are becoming more important due to increases in:

- Demand on potable water resources,
- The cost of treating wastewater,
- Regulations requiring greater flows for streams and rivers, which reduces irrigation sources, and
- The demand for sustainable building options.

By design, on-site sewage systems, also known as septic systems, naturally recycle wastewater by recharging ground water. To ensure on-site sewage systems are treating waste effectively and not polluting the ground water, there must be a strong commitment to regular and ongoing monitoring to ensure these systems are working properly.

Under existing Washington State Law, several types of water conservation, recycling and reuse are currently permitted and regulated as shown in Table 7. However, additional State policy innovation and flexibility for Washington Counties promoting water conservation, recycling and reuse will be

critical over the 20 year planning horizon in order to support projected growth and development in the way Mason County envisions, a way that maintains rural character, quality of life, and unique natural environment.

**Table 7. Existing Options for Water Conservation, Recycling or Reuse in Washington State**

Commented [ZT105]: Not necessary to have but helpful to know.

Commented [ZT106R105]: County Public Works wanted to keep this in.

| State Law | Methods | Description | Benefits |
|---|---|---|---|
| WAC 246-272A | On Site Septic - Using Subsurface (Underground) Drip Irrigation | Treats residential wastewater for subsurface irrigation of plants. | All wastewater from buildings can be used and irrigation can be controlled precisely for maximum benefit |
| WAC 246-272A | Greywater On Site Septic | On-site sewage system used in a building equipped with waterless toilets | Reduction in total volume of water used and wastewater irrigates vegetation |
| WAC 246-272A | Greywater for Subsurface Irrigation | Treats residential wastewater for subsurface irrigation of plants. | Reduction in total volume of water used and wastewater irrigates vegetation |
| WAC 51-56-1600 | Greywater and Rainwater Recycling | Recycling of any water, including greywater, inside of a building and using it for flushing toilets and other non-potable water uses | Reduces water use by recycling greywater or rainwater for surface irrigation, industrial processes, toilet flushing, and other non-potable water needs. |
| WAC 246-272B | Large On-site Sewage Systems | Provides subsurface soil treatment and disposal of sewage for a design flow of 3,500 to 100,000 gallons per day for 10-350 homes. | Can accommodate developments, schools, churches, campgrounds, business parks, parks, resorts, etc. |
| RCW 90.46 | Reclaimed Water | Wastewater (sewage) that is treated to remove solids and impurities and recycled | Reduces water use by recycling wastewater for surface irrigation, industrial processes, toilet flushing, and other non-potable water needs. |

*Greywater - Flows from bathtubs, showers, bathroom sinks, washing machines, dishwashers, and kitchen or utility sinks.

The amount of runoff entering streams and the amount of precipitation entering groundwater systems in Mason County can and has been estimated by Washington State Department of Ecology

using annual rainfall of 65 inches, based on Western Regional Climate Center data. Assuming one-third of the 65 inches of rainfall infiltrates to groundwater, that is 22 inches or 1.8 feet of water into each acre of land per year.

### ~~15.3.5~~9.3.4 ~~C.~~ Projecting Solid Waste Needs

Table 8. provides an estimate of future total solid waste tonnage using the OFM Growth Management projections assuming Mason County continues to generate 0.6 tons of solid waste per person. In terms of population and waste stream tonnage, Mason County has been following the mid- range growth rate. Solid w~~W~~aste projections for the 20-~~-~~year planning horizon show that the County's waste stream will exceed 50,000 tons of solid waste ~~per year by 2036~~when Mason County's population exceeds roughly 83,000 residents.

**Table 8. Low, Intermediate, and High Projections for Total Waste Stream, 2020 through 2045**

| Year | 2020 OFM Adjusted Census | 2025 Projection | 2035 Projection | 2045 Projection |
|---|---|---|---|---|
| | 65, 726 | - | - | - |
| High Range Population | - | 74,803 | 83,914 | 92,187 |
| High-Range Tonnage | - | 44,882 | 50,348 | 55,312 |
| Mid-Range Population | - | 69,262 | 76,485 | 82,932 |
| Mid-Range Tonnage | - | 41,557 | 45,891 | 49,759 |
| Low Range Population | - | 65,106 | 66,316 | 66,796 |
| Low Range Tonnage | - | 39,064 | 39,790 | 40,078 |

Source: Office of Financial Management, 2022

**Commented [ZT107]:** I updated these for 2045 and also to reflect 2022 OFM data… not sure what was used previously.

**Commented [ZT108R107]:** I also moved this up to the appropriate section

### ~~15.3.6~~9.3.5 ~~D.~~ Moving Toward Zero Waste

**Commented [ZT109]:** Public Works to provide solid waste trends and updates to the 'moving towards zero waste' section.

Despite new technologies and processes that have improved the ability of residents, businesses and municipalities to handle, sort, and recycle materials, recycling volumes, including yard and food waste, only remove approximately one percent of the waste stream.

As more landfills in the region close and the County seeks innovative solutions to the problem of higher waste disposal costs, state government has fewer resources to help. Solid waste continues to be a contributor to greenhouse gas (GHG) emissions.~~, which~~ Washington is bound by law to reduce GHG emissions by 25 percent by 2020 below 1990 levels and 80 percent by 2050.

Waste reduction is the highest priority for solid waste management and is preferred over recycling and composting because the social, environmental and economic costs are typically lower for waste reduction. All three methods avoid the cost of disposing of the diverted materials as garbage, but recycling- and- composting frequently require significant additional expenses for collecting and processing the materials.

~~**Table 8. Low, Intermediate, and High Projections for Total Waste Stream, 2020 through 2040**~~

| Year | 2020 | 2025 | 2035 | 2040 |
|---|---|---|---|---|
| High Range Population | 76,240 | 82,620 | 95,470 | 101,580 |
| High Range Tonnage | 45,740 | 49,570 | 57,280 | 60,950 |
| Mid Range Population | 67,550 | 71,930 | **80,780** | **84,920** |
| Mid Range Tonnage | 40,530 | 43,160 | **48,470** | **50,950** |
| Low Range Population | 58,740 | 61,080 | 65,820 | 67,930 |
| Low Range Tonnage | 35,250 | 36,650 | 39,490 | 40,760 |

Consistent with Mason County's Comprehensive Solid Waste Management Plan and through a blend of innovative policies, ranging from technical assistance to legislation and initiatives prioritizing waste reduction, Mason County is addressing these challenges and placing the County on the pathway to higher reuse and recycling volumes that will help make zero waste a reality.

## Potential Impacts of Climate Change

There are at least two ways in which climate change can affect energy demand and availably. First, long-term changes in temperature will alter electricity demand and change precipitation patterns, river flows and hydroelectric generation. Second, policies enacted to reduce greenhouse gases will affect future resource choices.

Northwest Power and Conservation Council (NPCC) analysis and planning shows that climate induced changes to loads and river flows will not affect resource choices during the period 2016 through 2021. However, beyond 2026, resource decisions may be impacted.

NPCC predicts the Pacific Northwest will have less snow and more rain during winter months, resulting in a smaller spring snowpack and lower summer flows. Winter electricity demands would decrease with warmer temperatures, easing generating requirements. In the summer, demands driven by air conditioning and irrigation loads would rise.

Power supplies projected through 2026 are anticipated to meet demand, even under a climate change scenario. After considering the climate induced shift in river flows and load to the assumptions in NPCC's modeling scenarios, the likelihood of a shortfall in 2035 grows to 15 percent.

Other potential climate change impacts include increased flooding concerns in fall and winter, reduced salmon migration survival due to lower summer river flows and higher water temperatures, and increased summer electricity prices.

Increased diversion of water from electricity generation to salmon migration and survival may mean foregone power supplies and rate revenues.

**Commented [ZT110]:** This should be addressed in the climate element

~~Washington utility agencies recommend that research continue in this area and suggest that while no immediate actions regarding reservoir operations are indicated, the region should consider alternative reservoir operations that could potentially mitigate for future climate change impacts.~~

## 9.4 Utility Goals and Policies

### 9.4.1 Infrastructure

*Goal:*

Ensure that utility infrastructure meets the demands of current and future development, with a focus on resilience, sustainability, and capacity.

*Policies:*

1. Ensure that development regulations require timely development of utility facility additions and improvements and evaluate the need for offsite improvements for projects exceeding planned system capacities.
2. Support utility programs that reduce greenhouse gas emissions, promote energy diversification, or increase energy conservation, such as retrofitting buildings and expanding alternative energy.
3. Encourage new electrical distribution lines to be installed underground, when feasible, to increase resilience.
4. Ensure utility project designs mitigate impermeable surfaces' impact on groundwater recharge and water quality, considering increased flooding and rain events.
5. Support the extension of fiber optic cables in Mason County.

*Strategies:*

- Consider how increasing frequency or severity of natural hazards and extreme weather events could affect the lifespan and replacement cycle of utility infrastructure across the county.
- Utilize the most up-to-date utility information to assess and plan for the impacts of more frequent or severe hazards.

### 9.4.2 Utility Service Quality

*Goal:*

Enhance utility service quality through collaboration with service providers to eliminate deficiencies, upgrade obsolete facilities, and ensure the system's resilience to climate impacts.

*Policies*

- Coordinate with utility providers to eliminate service gaps and enhance existing facilities to meet current and future needs.
- Assess and plan for impacts on sewer capacity from coastal flooding and extreme rain events, with appropriate mitigation and adaptation measures.

**Commented [ZT111]:** Goals and policies were not in the previous plan - these are all new ideas

**Commented [ZT112R111]:** These need to be updated to match the goals and policies formatting in the other chapters.

*Strategies:*

- Determine the fiscal costs of eliminating service deficiencies, enhancing service quality, increasing resilience, and reducing greenhouse gas emissions in partnership with utility providers and community members.
- Address service deficiencies across the county by engaging county residents on issues experienced and prioritizing improvements that benefit at-risk populations.
- Use health impact assessments and tools to evaluate and prioritize service deficiencies.
- Promote the use of emerging technologies to mitigate impacts from pollutants, increased rain events, and coastal flooding in sewer and septic systems.

### 9.4.3 Protection of Natural Resources

*Goal:*

Safeguard the quality and quantity of groundwater, surface water, and other natural resources, ensuring sustainable and environmentally conscious utility practices.

*Policies:*

- Protect the quality and quantity of groundwater used for domestic water supplies.
- Encourage new development to connect to existing public water and wastewater systems where feasible, rather than rely on exempt wells or onsite septic systems.
- Support efforts to correct failing on-site sewage systems and address the impacts of heavier rainfall events on public and environmental health.
- ~~Prioritize sustainable utility practices that minimize contamination and depletion of natural water resources.~~

*Strategies:*

- Promote innovative technologies and best practices to protect groundwater and surface water quality.
- Analyze cumulative impacts of existing and future utilities development on groundwater and surface water systems.
- Evaluate opportunities for groundwater quality and quantity enhancement through sewer plants and responsible maintenance of septic systems.
- ~~Evaluate, minimize, and mitigate unavoidable impacts on groundwater and surface water quality during development reviews.~~

~~G~~

### 9.4.4 Affordable Utility Access

*Goal:*

**Commented [KM113]:** Give me an example of a utility practice that contaminates and depletes?

Again, this language has impacts to those of us that do this work.

**Commented [ZT114R113]:** Appreciate the question. I think the language meant to avoid water contamination or overuse of water resources but was very poorly worded. This will be stricken.

**Commented [KM115]:** Where did they get these goals? Are these a cut/paste from a template or did these come out of workshops from a while back?

I have some issues with the language on this section. There are consequences for having unattainable or unfunded goals and strategies listed in here.

There also is nothing in any of this section about encouraging new development to connect to the public water supply or public sewerage systems where feasible, in lieu of drilling new exempt wells or installing onsite septic systems. Seems like this would be the most impactful protection of natural resources from a utility perspective.

**Commented [ZT116R115]:** The utility element previously did not have any goals/policies. These were pulled from a variety of outside sources (ex. Other county comp plans) as initial ideas to hear Mason County and utility feedback as to whether they are applicable here or not. We agree that the language has issues and needs experts to weigh in on how to address or what to cut.

There are goals and policies in the Capital Facilities Element that would either need to be pulled over to this element or these elements need to be merged. That may explain some of the subject gaps, but between the two - we will ensure that piece gets covered.

**Commented [KM117]:** Given the state's strict mitigation requirements for Foster and Hirst, I think this should be reworded. If you're going to require a development to mitigate in kind, in place, water for water, for every single project you are reviewing, you're going to halt all new development.

If you're referring to drinking water and water rights, then the mitigation mandate should fall to Ecology to manage, not the County.

... [1]

**Commented [ZT118R117]:** Thank you. This strategy was aimed at stormwater runoff and impacts from development in water quality to avoid pollutants; however, in review this policy doesn't really belong here as this topic should be covered in land use or environmental policies.

Support access to affordable and reliable utilities in Mason County.

*Policies:*

1. Collaborate with utility service providers and community stakeholders to identify and address service affordability challenges.
2. Support the expansion of reliable infrastructure, such as telecommunications, to provide access to residents and businesses in all communities across the county. Prioritize areas underserved or face higher costs for services.

~~*Utility Infrastructure*~~

~~Utility Service Qualityies~~

~~Adapting Utility Systems to Changing Climates~~

~~*Goal:Affordable Utility Access*~~

- ~~Policies:~~
  ~~ies:~~

**Page 28: [1] Commented [KM117]** **Kristin Masteller** **4/2/2025 2:55:00 PM**

Given the state's strict mitigation requirements for Foster and Hirst, I think this should be reworded. If you're going to require a development to mitigate in kind, in place, water for water, for every single project you are reviewing, you're going to halt all new development.

If you're referring to drinking water and water rights, then the mitigation mandate should fall to Ecology to manage, not the County.

If you're talking about stormwater runoff and whatnot, then you should be specific here in this bullet that you're referring to runoff and not to drinking water.