

The following document attempts to address questions and concerns about the Belfair Wastewater and Water Reclamation Facilities Project that Mason County officials have heard in the community. Do you have questions about the project? Email us at info@masoncountywastewater.com.

Project Status, Cost and Funding

Why do we need a sewer?

Septic systems have been identified as one of the causes of nitrogen-pollution in Hood Canal. The wastewater utility offers a sustainable approach to water management, protects the health of Hood Canal and provides economic development potential for the Belfair community. On a long-term basis, the project will support the backbone for urban infrastructure in the Belfair Urban Growth Area (UGA), as mandated by the Growth Management Act.

Is the project on schedule?

The project remains on schedule to break ground in late summer or early fall of 2009. It is anticipated that the project will be completed, with the treatment facility coming online in Spring 2011.

How much will the project cost to build? I heard total project cost went up.

Recent cost estimates pegged the project at \$40 million in total. This cost includes planning, design, environmental compliance, permitting, environmental studies, wetland surveys, biological assessments, cultural surveys, topographic and property surveys, financial analysis and planning, property acquisition, construction management, inspection of construction work, construction of a membrane bioreactor treatment plant, construction of three pump stations, construction of public sewer lines, construction of a storage pond to support water reuse, construction of a spray irrigation system, escalation and contingency.

Based on the bidding climate in the current economy, Mason County is anticipating the total cost of the project to be less. Project engineers are currently reevaluating project costs to take into account for design refinements from the value engineering study and competitive bidding climate. Early in the Belfair sewer project planning phases, the total project costs were projected to be approximately \$24 million dollars, which offered a basic understanding of the project and allowed the County to begin to obtain funding for further design and construction of the project. As with many projects, this project's complexities and realities were revealed during the field study and design process.

Does the project have enough funding to start construction?

Yes. The project has secured \$38.13 million in funding for the project, and the project is moving forward.

Is design of the project facilities complete?

Project designs for the treatment plant and the wastewater conveyance system are over 90 percent complete. The Washington State Department of Ecology has notified the County that they have no comments on the treatment plant and the conveyance design submittal. Bidding documents and final plan sheets for construction are now being finalized. Locations of pump stations, treatment plant, and lines for conveyance are essentially "set."

How much will it cost to convert from septic to sewer and connect to the system?

Connecting to the new sewer system does have associated fees that property owners will be responsible for:

- There will be a one-time conversion fee per connection to the mainline sewer. The conversion connection fee is being developed and will likely be between \$3,000 and \$5,000 per equivalent residential unit (ERU) for homes and businesses with a septic system of record.

- There will be costs to re-plumb your sewer to connect to the public system and disconnect from your septic tank. Sometimes this is referred to as “building a side sewer.” The costs for this work vary and depend on a number of property specific factors including your property’s topography, distance from the building to the property line, and the contractor you use. The average costs are estimated to be approximately \$3,000.
- Once the system is operational, the average household can expect to pay \$86-\$100 per month for sewer service.

Project Design and Sizing

How big is the sewer system? How many properties could be connected to it?

The wastewater system was designed to be able to expand to ultimately serve the Belfair UGA. Pipelines were sized to handle flows predicted to be generated within the Belfair UGA in the future. The wastewater treatment plant is being designed to provide enough treatment capacity for design flows of 500,000 gallons of wastewater per day in a maximum month. That will be approximately 2,000 equivalent residential units, or “ERU.” Since much of the cost of installing the pipelines is in the digging and backfill of the trenches, and in restoration of the road, it makes sense to size pipes underground and in roadways large enough that they do not need to be replaced for a long period of time. The wastewater treatment plant itself was designed so that it can be expanded as new customers come online, allowing the plant to grow over time to meet the needs of the community. Some elements of the treatment plant are not easily expandable and generally these elements were sized so that they would not have to be replaced for a long period of time.

To reduce cost, maintain flexibility, and allow more opportunities for future water reuse, the irrigation system is sized for approximately 500 ERUs. The County could expand the irrigation system when needed, however is actively working to develop a customer base for the reuse water.

What is an ERU (equivalent residential unit)?

An ERU is a way to think about the amount of wastewater generated. One single family house is considered “one ERU.” For the purpose of this discussion, an ERU is considered to be one single family house, with 2.5 people, each generating approximately 100 gallons per day of wastewater, including the water that leaks into the system from the environment (groundwater and water from storms). A business could have multiple ERUs depending on the amount of water they use.

I heard the County has sized the plant to provide sewer service to SKIA and Bremerton, is that true?

No. The plant is sized for the County’s plan to provide service to the Belfair UGA. During the facility plan development process, Alternative 4 – South Kitsap Industrial Area (SKIA) was considered and dropped for future planning.

Why did the County decide to build a treatment plant to be able to accommodate so many people if Belfair is not that big now?

Initially, the sewer system will serve properties within 500 feet of the pipeline route in the Belfair UGA. A single parcel, however, may use more than one ERU – as some properties are commercial and institutional. The *Belfair/Lower Hood Canal Water Reclamation Facilities Plan*, which was approved by the Washington State Department of Ecology in 2007, shows that between 2015 and 2025 flows are predicted to exceed 500,000 gallons a day. According to information outlined in the facility plan, these flows could occur as early as 2018, which is only seven years after the plant comes online. It takes considerable time and money to expand a treatment plant, so Mason County is investing in building enough capacity now to carry the community forward.



Why are three pump stations needed?

An additional pump station was added to the system, beyond that in the final Facilities Plan adopted by Mason County in 2007. The third pump station, Pump Station # 3, was added to lift the sewer water up the hill to be treated at the treatment plant. This third pump station will allow the system to operate successfully and will better support future development of the UGA.

What will be done with the reclaimed water? How will it be reused?

Mason County has plans for the reclaimed water for this project and is developing plans for future use of that generated water as the community grows. As adopted in Spring 2007, Mason County's *Belfair/Lower Hood Canal Water Reclamation Facilities Plan* called for a new water reclamation facility near Belfair using Membrane Biological Reactor (MBR) treatment methodology. As stated in the plan, the reclaimed water produced by the facility will be used to irrigate forest land. Reclaimed water will be used for irrigation during dry periods of the year, and stored during wet periods of the year. The forest irrigation will occur on land that is near the wastewater reclamation facility. On a longer-term basis, Mason County is seeking to maximize use of reclaimed water and is currently investigating potential customers for reclaimed water, including industrial use, stream augmentation, irrigation, or other uses.

Project Facility Locations

Where is the treatment plant located? When was the location selected?

The wastewater treatment facility will be located just east of Romance Hill, just outside the boundary of the Urban Growth Area. This general location was identified in the Facility Plan approved by the Department of Ecology in 2007. Other alternative sites were considered as part of early project planning. Some options were examined again during the value engineering review process in February 2009. The advantage of the location is that it is generally centrally situated in a north/south direction of the UGA with spray field areas and will produce high quality water that can take advantage of gravital flow toward Belfair once reuse opportunities are identified.

Where are pump stations located? Why were those locations selected?

The pump stations are located to move collected sewage towards the treatment plant. Pump Station #2 collects wastewater from a lower area generally along State Route 3 and sends it to a higher area along State Route 3. Pump Station #1 then pumps the wastewater toward Pump Station #3 where it is lifted the rest of the way up the hill to the treatment plant. The pump stations were located to provide the lift needed to get the wastewater up the hill to the plant, to minimize environmental impact, and to fit within other design requirements.

Individual Properties: Hooking into the System Now and in the Future

If my property is not on the initial hook-up list, but I live in the UGA, am I off the hook?

If your property is located in the UGA, but you are not located within 500 feet of the system, you will not be required to hook into the system and convert your septic to sewer at this time. However, future expansions are expected in the coming years, and properties will be required to connect when the sewer becomes available within 500 feet of your property line.

Will new growth and developments be required to hook into the sewer system?

Yes. Per Mason County Ordinance, new homes, multi-family residences, and businesses are not permitted to build on-site wastewater systems. Developers will be required to build necessary pipes to serve their development through developer extension agreements. This is a concept known as "growth pays for growth," and is very common for municipal sewer utilities around the nation. The County will continue to seek funding to expand the sewers and will bring more of the community on line as funds become available.



What is Mason County doing to stabilize sewer rates?

The County has worked hard to obtain as much grant funding as possible and has thereby significantly reduced the debt service that the utility will carry, greatly helping rate stabilization. The County estimates that monthly rates for the sewer utility will be between \$86 - \$100 per ERU, per month. County officials are now working closely with the engineering team and financial planners to develop and update financial evaluations of the utility. For example, one of the biggest costs that go into a sewer rate is the electric bill that the sewer utility pays to operate the plant. These electrical costs are passed on to the sewer customer in the monthly sewer rate. Mason County is working hard to stabilize the utility rate by using grant money to purchase energy efficient equipment like air bearing blowers needed at the treatment plant. Because these blowers will use less energy, the sewer utility's electric bill will be lower and that savings will be reflected in the monthly sewer bill. The County is aware of the difficult economic times and is working hard to stabilize the rate.

Down the Road: Sewer System Operations

Who will operate the sewer utility?

Mason County Department of Utilities and Waste Management will build and operate the sewer utility. Mason County currently operates the Rustlewood Water and Sewer System, Harstene Pointe Water and Sewer System, Beards Cove Water System and the North Bay/Case Inlet Water Reclamation Facility/Sewer Collection System.

How will County employees reach the treatment plant?

An access road will approach the wastewater treatment facility from the north, turning off SR 3 just north of the railroad trestle that crosses SR 3.

If I live near one of the treatment facilities – pump stations or treatment plant - will I be able to smell it?

Modern odor controls have been designed into the conveyance system and the wastewater treatment plant. It is unlikely that noticeable odors will be associated with any of these facilities for neighbors, or those who may live "down wind."

Constructing Facilities

How will construction workers travel to the treatment plant and other construction sites?

In order to construct the Belfair wastewater system, construction activities will occur throughout the Belfair Urban Growth Area, with the most long-term work occurring at the wastewater treatment facility site, and three pump stations. Installing pipes will be a mobile operation, completing a section, backfilling, and moving on to the next segment. Therefore, construction vehicles are expected to be seen throughout the community. Public outreach staff will notify residences, businesses and other institutions when construction nears a particular area or neighborhood. The 24-hour hotline will continue to be active during construction.

Has the County coordinated with the Washington State Department of Transportation on future SR 3 widening?

Yes. Mason County has coordinated with engineers at the state on designs for anticipated future SR 3 roadway improvements.

