

Questions & Comments: Community Meeting Aug. 29, 2017.



General Questions

Answers provided by Skagit County.

- **Do commercial users of the ferry (landscape companies, Waste Management, propane delivery companies, building contractors, etc.) pay an additional fee? Or do they pay the same rates as the rest of us? Since they generate income for themselves by being able to use the ferry to do business on the island, they should pay a surcharge especially if ordinary riders will have a fare surcharge for the new ferry.**
 - *A: The current fare schedule applies to all vehicle and passenger traffic, including commercial users. If the county implemented a surcharge only for commercial traffic, the business owner could pass that on to the customer who might be a property owner on Guemes Island.*
- **Would a fare surcharge be permanent?**
 - *A: We haven't decided whether or not to implement a user surcharge, so we don't know how long it would be in place (if we implement it). If we decide to move forward with a surcharge, which we won't know for another several months, we'll discuss the duration of the surcharge (and the rationale for the duration) with the Ferry Committee and Guemes Island residents. Following a public hearing, this would ultimately be a decision that would be made by the Board of Skagit County Commissioners.*
- **What is the distance the [Gee's Bend](#) (Alabama) electric ferry has to go?**
 - *A: About 1.5 miles each way; however, there is a road that goes around, and the ferry is not the sole link.*
- **In the study on ferry traffic and what size ferry is needed, will the average ferry wait time be part of that equation? Or just the total number of trips/cars?**
 - *A: We're going to look at everything to make sure we use the new ferry as efficiently as possible. We want to not only ask our local experts – residents/ferry riders/crew – but also our naval architects so we can get comprehensive data using all available sources of information.*
- **Is there a way a questionnaire could be devised and everyone could access the same questions? You need to create that somehow.**
 - *A: Skagit County could implement an online program such as [publicinput.com](#) so that we can have a platform for questions, comments and discussions. Note: There was a positive response when the audience was asked if they would like to see something like this.*
- **You said the county's application to CRAB for CFCIP funding is a last resort because other funding sources have fallen through. If you go down this road, does it mean you've given up on other funding sources? If you start this application process, will it shut the door to other less expensive alternatives?**
 - *A: No. It doesn't eliminate other options. Funding through the County Ferry Capital Improvement Program (CFCIP) may not be approved until the state budget passes in 2019. So between now and then, if other funding programs become available, we will apply. A lot of times, our projects have multiple sources of funding. Applying for one pot of money or the other doesn't mean we would be eliminated from receiving other funding. Once one agency gets involved, others tend to want to get involved. When we say "last resort," what that means is that the County Road Administration Board (CRAB) wants to make sure all other available funding has already been pursued.*
- **Does anyone have a ballpark figure on what this new ferry will cost?**
 - *A: Right now, no. We currently only have some estimates in our Transportation Improvement Program plan. We base these numbers off information included in the 2013 Elliot Bay Design Group Replacement Study and other factors. Our estimate in 2013 was \$12M. However, it's*

four years later and this estimate doesn't mean a whole lot to the existing project. Once Glosten completes concept design, in December 2017, we'll have a much more accurate cost estimate.

- **Skagit County will commit possibly to a vessel of whatever design, and it will have a cost. And there will be funding sources going against that cost. How is that going to be paid for on the county end?**
 - *A: There are several options out there for loans or for low-interest programs. There's the potential to bond. There are County road funds. Lots of sources will likely complete the funding package. When we get to concept design at the end of the year and submit an application to CRAB, we can still make changes after that. We're presenting what our research has found. (Comparison of vessel propulsion systems, etc.) Design won't be final by the end of the year.*
- **At what point the Skagit County Commissioners commit to financing the project? Regardless of type/propulsion sources, we can't have it not go forward due to a lack of commitment**
 - *A: We hope to find the funds to make it happen. But remember: It's hard for others in the county, like Sedro-Woolley and Mount Vernon, to want to raise their taxes to pay for this ferry. We need to make sure that revenue from the ferry helps cover those costs, too. If we couldn't find funding immediately, the project wouldn't stop, just get delayed until sometime after 2020. No one wants to pay more than they have to for a project, but there's just not a lot of funding for ferries – either here in Olympia or in Washington, D.C. We're fortunate that we have good working relationships with folks to help us get funding.*
- **Have you considered the impact of Air B&B and VRBO on island traffic, ferry traffic and water usage?**
 - *A: It is an interesting consideration; however, this is something that could be difficult to quantify since we currently don't have a code that encompasses Air B&B and VRBO. In other words, we just don't have data on whether or not properties are being used for those purposes.*
- **Is a new ferry really needed? What are the conditions of the engine and hull of the old one?**
 - *Skagit County has determined an immediate need to replace the M/V GUEMES. If not, the vessel will require a major re-fit/re-power that is estimated at \$3.5 million, plus. The 14-Year Ferry Capital Improvement Plan currently has this re-fit and re-power planned for 2022.*
 - *In a study conducted by Elliott Bay Design Group in 2013, the engineering firm said, "While the overall condition of the vessel is fair, it is recommended that the M/V GUEMES not be operated for another ten years without a major overhaul. This is due to the advanced age of the vessel and high cost of extending the operation of the vessel beyond its economic useful life of 30-40 years." A major overhaul could take the vessel out of service for 6 months to 1 year, according to the study. The report goes on to say, "...given its age, it is recommended that the life of the vessel not be extended beyond for another 15-18 years. As a vessel reaches 50 years of age, it becomes economically impractical to preserve the vessel. At such an age, many systems must be replaced, salt-water corrosion to the hull makes maintaining the vessel expensive, and the vessel may no longer be capable of meeting the service needs of the island."*
- **The AAA (Art Anderson Associates) study seems to conclude that Lithium batteries will require charging between runs. How will this be accomplished (manual, automatic, other?) and will it affect the minimum turn-around time and number of runs per day? In general, does the contract with Glosten include design efforts to improve ferry turn-around time?**
 - *A: You are correct in that if we choose all-electric, the Lithium batteries will require charging between runs. You might want to check out the "Ampere" if you have not already. They operate in Norway, and there are some pretty cool videos demonstrating how they charge with an automatic (or maybe remote control) plug. <https://www.youtube.com/watch?v=a6Lp-qV9ZJU>*
 - *A: Our work includes the goal of improving level of service – that is a must with any propulsion system that we may end up with whether it is hybrid or all-electric. A bigger ferry might take longer to load, but other efficiencies may be realized elsewhere, like how we sell tickets.*
- **At a recent meeting, a number of ancillary site and operational improvements were mentioned. Are these captured in the project and operational cost estimates? Related, is a total project cost estimate available?**

- *A: We do not have project cost estimates yet; however, we anticipate having these by the end of the year.*
- *A: The estimates will include upgrades to shore side facilities as well.*
- **I believe I saw a breakdown of operating costs – diesel vs. electric. Can you point me to that information? In that breakdown, I thought I remember that there were substantial operating cost savings for the electric ferry option. Is the County’s expectation and policy that the users will share in those savings in the form of reduced fares?**
 - *A: You might want to check out our project website, at skagitcounty.net/ferry. In the “Document and Archive Report” section, there is a link to a presentation titled, “Electric Ferry Design Concept” from December 8, 2015. It is important to note that the savings estimated in this presentation were not based on actual design work, rather assumptions made on the part of the presenters based on some operational information they were able to obtain. So, we are not using these numbers in our current work with Glosten.*
 - *A: The all-electric ferry option could reduce some operational costs; however, we still have a vessel and vessel systems that we have to maintain. And, if all-electric propulsion is selected, batteries could require replacement potentially every 8-10 years. At this time, we do not think that fare reductions will be feasible or practical.*
- **Related, will the operation & maintenance of an electric ferry require additional Skagit County personnel? If not, then fewer personnel? In general and except for financing repayment, what is the expectation for increase/reduction in operating costs?**
 - *A: All of these concerns (engine life expectancy, cost, battery type, etc.) will be addressed during the design study process. The answers to these questions will help Skagit County decide whether all-electric propulsion is economically and operationally viable.*
- **Has any consideration been given to using hand-held phone/card swipe devices for payment in the ferry line?**
 - *A: The Pursers were handling credit card transactions on a hand-held mobile device recently, but due to lack of a Wi-Fi connection at the terminal, this quickly became a frustration. Therefore, this year, we plan to install Wi-Fi at the ferry terminal and along part of 6th St. Once this project is complete, we can resume accepting credit cards in the ferry line.*
- **Why can’t we designate the portion of the real estate tax (REET) that is paid on Guemes Island property to be used for a new ferry? This year, this may amount to \$50,000 for the County and \$128,000 for the State. If we designated at least the County’s portion, would this help meet the CRAB requirement for having “skin in the game?”**
 - *A: Within the limitations of RCW 82.46.010 and RCW 82.46.035, it is the responsibility and authority of the Board of Skagit County Commissioners to determine how Real Estate Excise Tax (REET) dollars are spent.*
- **Tax statement - was looking over and noticed this year \$1,200 was for the Road Fund. Does any of that go to support ferry?**
 - *A: These estimates are based on assessor data. Guemes Island property taxes going to the road fund are about \$554K per year. Roads on Guemes are about 2% of total county roads. It costs approximately 13K per mile per year to maintain a road. There are about 20 miles of roads on Guemes. So on average, it costs \$282K annually to maintain Guemes Roads. In the past 5 years, ferry deficit is \$750K/year. So roughly \$1M a year for ferry and roads on Guemes. The rest of the county subsidizes Guemes ferry and roads to the tune of \$445K-ish per year. The reality is that those road funds can, and are, used to support the ferry.*
- **The presentation pointed out level of services as critical need. Is there a criteria developed for Guemes Ferry? I see it for WSF and wondering if we have one for Guemes and if we do can we see it?**
 - *A: Yes, WSF has standards published, and Whatcom County as well. For smaller agencies like ours with fewer staff, it’s more difficult for us to undertake something like that. One of the things we like about this new project is opportunity to establish standards.*



Technical Questions

Answers provided by naval architecture firm Glosten.

- **It would have been better if the first all-electric ferry had been introduced (in Norway) in 2005, not 2015. Less than two years is too little time to judge whether a technology is ready for prime time, in my view.**
 - *Electric propulsion of ships in general is not a new technology. Using batteries for propulsion on ships dates back to the early submarines. What **is** changing is battery technology, and that allows for higher power densities and rapid recharging rates. For vessels like ferries with short, well-defined routes, this allows for consideration of replacing the onboard diesel engines with a battery bank and a “plug-in” connection for charging the battery bank from shore.*
- **All new technologies have start-up problems. What have been the problems with the Norwegian experience?**
 - *New hybrid propulsion technologies use batteries and power conversion technologies similar to the Norwegian vessel. Expanding the answer beyond the Norwegian experience, most problems have been with the battery banks themselves and the power conversion equipment failures.*
- **I expect that maintenance of all-electric is cheaper than diesel. Is that true?**
 - *Limiting the answer to the propulsion equipment itself, the answer is expected to be “yes,” until the battery bank needs replacing. Only once the size and type of battery is selected (during the propulsion system study) will the overall maintenance cost difference be known. The rest of the ferry will still need a similar amount of maintenance regardless of the propulsion system selected.*
- **I believe that it is incorrect to consider electric ferries as being especially green, at least as far as CO2 emissions are concerned. About 60% of the energy for the electricity sold by PSE comes from fossil fuels. Consequently, while the ferries may not be emitting themselves, at least 60% of the power is coming from plants that do emit. (See <https://pse.com/aboutpse/EnergySupply/Pages/Electric-Supply.aspx>.)**
 - *Your comments about PSE’s source of power are noted. The large fossil-fuel power generation plants of PSE are expected to have higher overall efficiency and be considerably cleaner-burning than the diesel engines on the ferry. Consequently, while not eliminating emissions altogether, there should still be a net reduction in overall emissions from an all-electric ferry. Locally, the elimination of diesel exhaust emissions from the ferry will be a significant benefit to ferry riders, the ferry crew and the residents who live in the surrounding areas in terms of reduced CO (Carbon Monoxide), NOx (Nitrogen Oxides), THC (Total Hydrocarbons) and PM (Diesel Particulate Matter) emissions.*
- **Recently I heard Commissioner Dahlstedt discuss the ferry on KNKX radio. In that interview, he seemed to emphasize the reduction in noise from the use of an all-electric ferry. He commented that such noise reduction would benefit fish and marine mammals. I think that he may have over-emphasized the benefits of all-electric. Two web sources from the Port of Vancouver suggest that the means of propulsion plays a very minor role in “vessel quieting.” Those two web sources also suggest that noise produced by small vessels such as ours plays only a minor role in the noise problem writ large. (See <https://www.portvancouver.com/wp-content/uploads/2017/01/Regional-Ocean-Noise-Contributors.pdf> and <https://www.portvancouver.com/wp-content/uploads/2017/01/Vessel-Quieting.pdf>.)**
 - *Most of the noise-reduction benefits of an all-electric ferry will be airborne noise from the elimination of the diesel engines. This will benefit the crew and passengers on the ferry, as well as people in the vicinity of the ferry. Your other observations about the underwater noise*

produced from the means of propulsion and from small vessels (relative to large vessels) are generally correct.

- **It is my understanding that the current ferry has the capability of providing electrical power to the ferry docking platforms (on both sides of the channel) in the event that there is a PSE electrical power outage. Will the proposed, new all-electric ferry have this capability?**
 - *We are aware that the current vessel can power the dock ramps. We'll need to get further into development of the design in order to determine if the new vessel can maintain this feature in the event of a power failure.*
- **There are fire-related problems with lithium batteries. Will the batteries to be used by the ferry be made of lithium? More generally, are there fire-related problems with the proposed batteries?**
 - *Several years ago, there were a number of well-publicized lithium-ion battery fires in marine vessels. Lithium battery technologies and safety features have advanced since that time and are continuing to advance. National and international regulations now require improved design features and monitoring systems for marine lithium battery installations.*
 - *A specific battery system has not been selected for the ferry at this time, but will be recommended by the propulsion system study.*
- **What are the initial capitalization costs of electric vs. diesel? What is the life expectancy of an electric motor vs. diesel engine? It appears that electric wins this competition. True?**
- **What kind of batteries will be used? How long do the batteries last? What are the environmental downsides to the use of these batteries? How long will it take to charge the batteries? How long will a charge last? How often do the batteries need to be recharged? (This might be critical).**
 - *All of these concerns (engine life expectancy, cost, battery type, etc.) will be addressed during the design study process. The answers to these questions will help Skagit County decide whether all-electric propulsion is economically and operationally viable.*

Comments

- Appreciate the attention to detail and all the ways information is being provided. On behalf of the historical society, this is 100th anniversary of launching of the very first car ferry/horse team ferry in 1917. Glad to hear all this information about the possible all-electric ferry. How far have we come? Also, on behalf of the historical society, we want first right of refusal of pilothouse on the old ferry. And would like to recommend that the Island be involved in naming a new ferry rather than having a name thrust on us by politicians.
- Very informative. Please put slideshow on the website. It would really help for you to know how many vehicles are being left on each trip vs. capacity/reality for each trip.
- Let us name the new ferry.
- Great work! I hope an all-electric ferry comes into being. We need to look to the future, to a clean ferry with minimal environmental impact.
- As a property owner on Guemes, I'd support an assessment to help pay for the ferry. In return, property owners should receive a break on taxes - similar to college tuition for state vs. out-of-state residents.
- Thank you! For the chance to know more about the decision making on the ferry. This affects the quality of our life. I will attend more meetings. Good meeting!
- We use the ferry in multiple ways: car/pickup truck drive on, walk on, sometimes with bicycles, dogs and/or a cart or wheelbarrow of groceries, etc. Utilization of services such as propane delivery. Don't forget the additional walk-ons generated by the Guemes Island Store's concerts. Lots of non-Guemes residents come to those. We agree that safety, reliability, environmental protection and affordability are most important.
- Please try to determine wait times to help determine ferry size needed.
- I very much encourage use of an all-electric power for the ferry.
- Thanks for serious look at pioneering with sustainable energy. Make the new ferry elegant. Keep its construction local.

- It is time to replace it. In need of new waiting room on Guemes side - old one is full of bikes and very dirty and gross.
- I really would like to see the all-electric ferry. The interactive website sounds good.
- The electric ferry would of course reduce ferry carbon footprint/reduce noise, etc. Along with ferry improvement, I would like USER reduction; i.e., County providing electric van to pick up (seniors) in mornings for grocery runs, RX pickups, etc. and return to island in a few hours. This would greatly reduce cars with one person and shorten lines of cars, fewer trips for ferry, etc.
- Diesel Dinosaur - really? Electric is the future; put some solar panels on ferry and terminal building; Diesel is noisy and polluting; if it costs a little more - so be it; Yes for the electric ferry.
- Impressed with commitment of Commissioners and the Company. Skin in the game: look to ticket surcharges rather than property tax as a way to cover CRAB interest and show buy in. Property tax is a slippery slope and may well be unfair. Ticket pricing should go up more for one-time tickets, say, \$1 and .50 for multiple ticket cards/per punch. Do not raise/penalize on bikes, dogs, wheelbarrows.
- Applause for looking at electric option. Affects everyone's health and contributes to ocean acidification. Hope you find a way to be environmentally friendly. We see big numbers here but it's not as much money as it seems. Engineering is expensive and want it right the first time, best options for best final product. These kind of things cost money and sometimes we all have to feel the squeeze to get the best system for best service possible. Guemes and Anacortes interface a lot. We hear the ferry running; we get traffic impacts when ferry is hauled out. As much as you can encourage friends and neighbors and talk about benefits, it's really important.
- Working on a ferry decision for the next 40 years. It's a complex decision. We have some unique opportunities with an all-electric ferry. Right now, the problem I see is that this one funding source, which isn't going to be complete and has a lot of questions, is really driving the design process and that worries me a lot. Don't see a lot of options with a tight schedule to get a lot of feedback from the community. See design moving forward really fast. My request is that the County looks carefully at not letting the funding source drive the design decision and the whole funding decision. It's a very tight schedule and we have a very big chance and opportunity to make a good sound decision. I think we need more time.
- Appreciate enthusiasm for new ferry. With your excitement (Anacortes council) for new ferry we presume you'll be part of the ferry district.
- We want the county to proceed as quickly as possible to pursue the grant due at the end of the year. We do not think that drawing out the project will help it. We are willing to pay more because we know that we all benefit from the upgrade.
- In response to your questionnaire regarding the ferry service to Guemes-my husband and I currently live on the island part time and will move to full time residency in the next couple of years. We use the ferry daily, many times twice a day and will continue to work off the island leaving for Anacortes daily as well. We would be in favor of an electric ferry and also extended hours of operation. In the short time we've lived on the island the current ferry has been out of service and as you've stated, more and more frequently it appears. We were able to read meeting minutes from the Facebook account for Skagit County. Excited to be using this new technology!