From:	Evergreen Islands
To:	PDS comments
Cc:	Evergreen Islands Board of Directors; Hal Rooks (GIPAC); Stephen Orsini (SailingOrsini)
Subject:	Replacement Guemes Ferry Proposal
Date:	Thursday, February 15, 2018 8:13:30 AM
Attachments:	image018.png image020.png image002.png image008.png image010.png image016.png image022.png image023.png

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EVERGREEN ISLANDS
P.O Box 223
Anacortes, WA 98221

February 15, 2018

To: Skagit County Planning & Development Services
Ryan Walters, Assistant Director
cc: Evergreen Islands Board of Directors
Guemes Island Planning Advisory Committee: Hal Rooks (Chair), Stephen Orsini

Re: Replacement Guemes Ferry Proposal

On the behalf of Evergreen Islands and especially its members on Guemes Island, I am submitting the following comments regarding the SEPA environmental assessment for the Replacement Guemes Ferry Proposal

Introduction

The following statement from the 2008 Environmental Assessment for Guemes Island Ferry Service[1] encapsulates Guemes Island residents' concerns regarding increased Ferry Service:

> ***Overarching Concern – Guemes Island is at a crossroads:*** *The aquifer underlying Guemes Island is, or may be, at a "tipping point." Expanded ferry service to the island could induce additional population growth and development, which in turn, will lead to additional aquifer withdrawals, seawater intrusion and contamination of wells, and an erosion of rural character and quality of life.*

The current Transportation System Assessment report[2] for the Replacement Guemes Ferry justifies the Guemes Islands community's concerns as it states:

> The island population varies seasonally, ranging from approximately 750 to 2,750. **This could significantly increase in the next 40 years**.

Discussion

In planning the future of Guemes Island, the single most prevailing and overriding environmental issue is the fact that the Guemes Island water supply depends primarily on

its Sole Source Aquifers. The aquifer recharge areas that feed the Sole Source Aquifers are designated as a Category I Critical Recharge Area[3]. A vital corollary issue is that the aquifers are fresh water lens aquifers; aquifers that get thinner as they near the shorelines. A further compounding issue is that most of the existing housing are near the shorelines and most of the potential housing will be near the shorelines.

The Common Land Use Impacts section of the 2008 Environmental Assessment[4] identifies the likely impacts that may arise from significant increases in ferry capacity as follows:

> Land use impacts are generally categorized as **direct, indirect, and cumulative**. "**Direct impacts"** are caused immediately by a specific development proposal and are relatively proximate in time and place (e.g., conversion of land to a different or more intensive land use; displacement of existing activities; and incompatibilities or conflicts between various land uses and activities).
>
> In contrast, **"indirect impacts"** are generally more remote in time and place. **Indirect actions** frequently involve the actions of other parties and are typically experienced at a later time. For example, **significantly over-sizing ferry carrying capacity to Guemes Island in relation to the adopted land use plan and historic growth trends could cause an unanticipated increase in the rate of growth inconsistent with historic trends**.
>
> Finally, **"cumulative impacts"** are those that are generated by an action in conjunction or combination with the actions of other parties (e.g., **changes to the general character of an area resulting from the combined effects of numerous development projects over time**).

The 2008 Environmental Assessment[5] for the Guemes Island Ferry Service Schedule Changes further suggests the following strategies to further reduce the potential for impacts and describes some of the measures that Skagit County might employ to further reduce the possibility of such impacts. The following measures might be employed under any or all of the proposed ferry service alternatives:

> 1. Consider further downzones and adoption of a lot consolidation code requirement to reduce the potential for future subdivisions and to aggregate previously platted nonconforming size lots in common ownership. This approach could reduce the dwelling unit and population holding capacity of the island by 52 or more units, with notable reductions possible in the Rural Intermediate (RI) and Rural Reserve (RRv) zones. Reducing the number of potential future development units would reduce the total amount of potential future ground water withdrawals.
>
> 2. As a means to ensure that accessory dwelling units (ADUs) do not proliferate and result in an unintended and unnecessary increase in island population and ground water withdrawals, consider their prohibition on Guemes Island.
>
> 3. Consider adopting a building permit metering system that caps the number of permits issued for new residential dwelling units to a level proportional to, or less than, historic dwelling unit growth patterns (e.g., 10 to 15 units annually).

5. Expedite the development, implementation, and funding of a long-term ground water monitoring program for Guemes Island. Historically, resident volunteers, supplied with equipment by the Skagit County Health Department, have conducted ground water monitoring. A formalized and fully funded monitoring program, guided by a ground water flow model, would help to provide the information necessary to adapt land use and ground water protection policies and regulations if needed.

7. Consider amending the Skagit County Code to severely restrict or prohibit the development of lots in areas where the drilling of new wells would exacerbate existing seawater intrusion contamination.

Sea Water Intrusion History

In a May 27, 1994 letter[6] from the Washington State Department of Ecology to the Skagit County Department of Heath expressing their concern held by the Water Resources and Water Quality Programs of Ecology regarding ground water withdrawal on Guemes Island. The letter, included in Attachment 1, states in part:

> Several areas of the island are experiencing elevated chloride levels in ground water wells. The data indicate that some parts of the island are experiencing significant sea water intrusion.
>
> We are particularly concerned about the north end of the island, specifically that part lying within Township 36 North. Ground water sampling data indicate consistently high chloride values often exceeding 100 mg/l.
>
> In summary, we have concerns regarding how the County can make findings of adequacy of water in this part of Guemes Island under Section 63 of the Growth Management Act. With this in mind, we would encourage you to deny well site approvals until a site-specific management program is in place. We recognize that this may cause difficulties in the development community, but it is better to address water availability now than when the property has been platted and homes built.

After twenty-four years, Skagit County has still not adequately controlled the use of exempt wells on Guemes Island.

The Guemes Island Aquifers' Capacities were exceeded by the year 2006. Figure 1 and 2, a copies of the Draft Guemes Island Subarea Plan's Figure 5.6, illustrates the chloride levels in the drinking water wells on Guemes Island. A summary of the data is as follows:

- 7 wells exceed 200 mg/L and are unfit for human consumption
- 4 wells are between 100 mg/L and 200 mg/L are above Ecology's threshold.
- 40 wells are between 25 mg/L and 100 mg/L.

The figure indicates that in 2006 over 50 wells are either degraded, injured, or destroyed by seawater intrusion. ***These results indicate that the capacity of the Guemes Island aquifers to produce drinking water have not only been reached but also have been exceeded.***

On p. 26, the Draft Plan states, "The Rural Intermediate zone will shoulder the majority

of the island's future growth." On p. 27, the Plan states (emphasis added), "This zone contains the greatest risk of adverse environmental effect upon critical areas because ***much of it is located near the shoreline***." Now note that on p. 22, Table 2.2, Present and Potential Development on Guemes Island, indicates that ***Guemes Island's Rural Intermediate zones have the potential for another 943 homes!***

Taking into consideration the following facts:

- The fresh water lens is thinnest at the shorelines.
- The majority of the existing homes are close to the shorelines.
- Most of the potential homes will be close to the shorelines.
- Increased utilization of the aquifers will negatively impact the availability of fresh water for homes close to the shorelines, both existing and potential.

More homes will lose their existing sources of potable water as a result of saltwater intrusion, and more homeowners will be financially harmed if not devastated. Skagit County must limited the number of exempt wells.

Figure 1. The Draft Subarea Plan's Figure 5.6, Well Chloride Levels

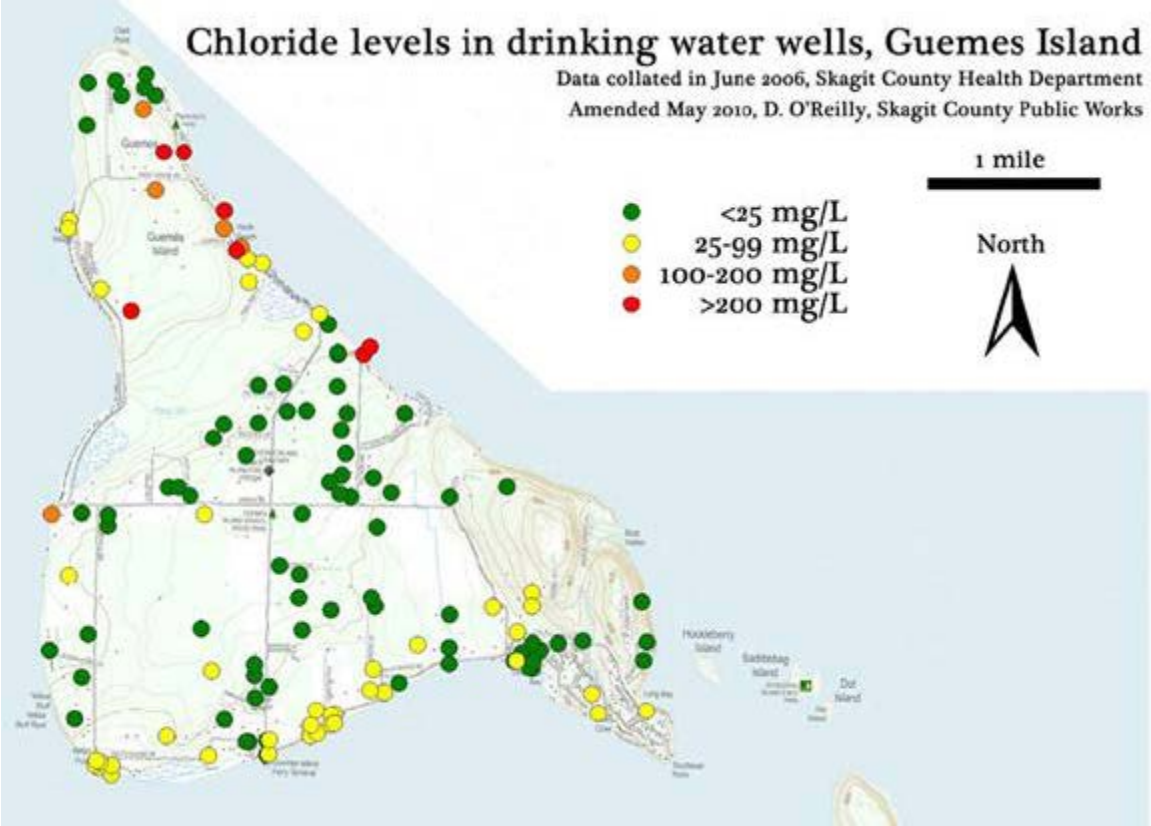
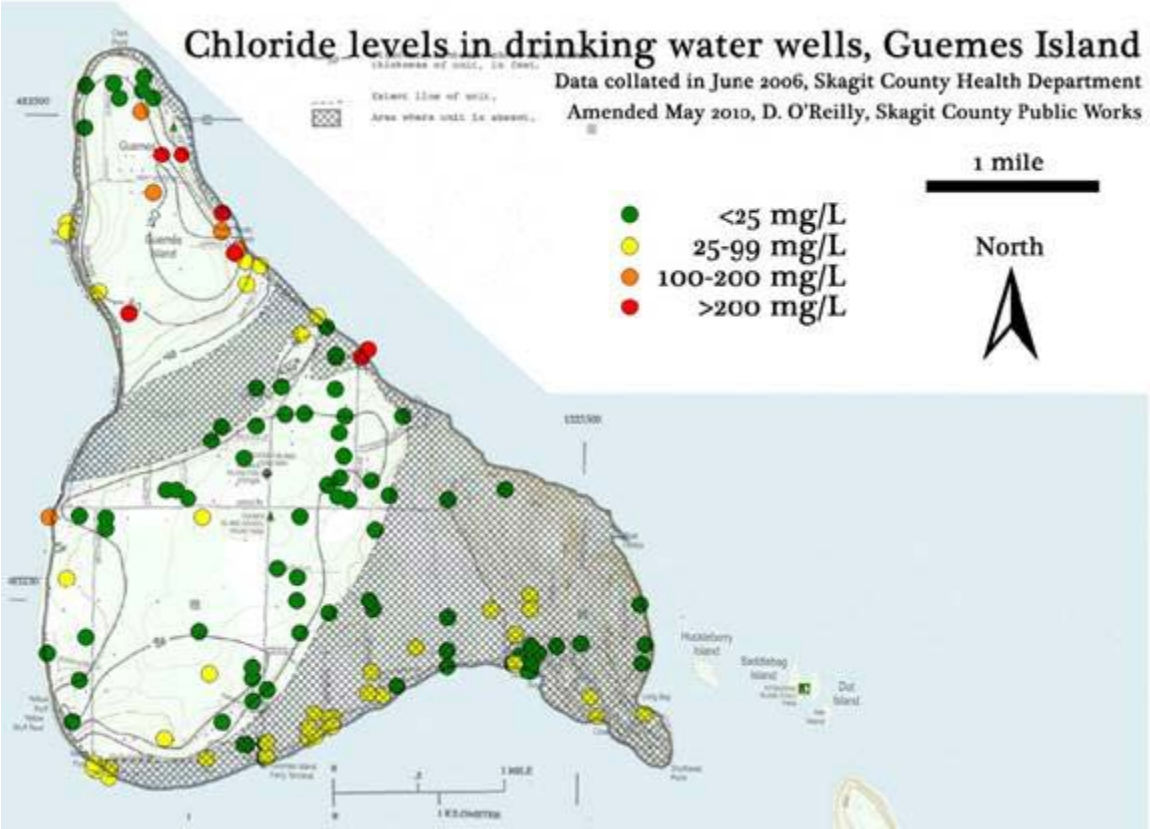


Figure 2. The Draft Subarea Plan's Figures 5.6 and 5.5 Overlaid (Extent and Thickness of the Vashon Aquifer)



Washington State's Legal Requirements for Water Supplies

The Growth Management Act

Washington's Growth Management Act (the GMA) includes 13 goals[7] that Comprehensive Plans must address. The Goals 10 and 12, which are especially applicable to the Guemes Island are as follows (emphasis added):

> (10) Environment. **Protect the environment** and enhance the state's high quality of life, **including air and water quality, and the availability of water.**
>
> (12) Public facilities and services. Ensure that those public facilities and services necessary to support development **shall be adequate** to serve the development at the time the development is available for occupancy and **use without decreasing current service levels below locally established minimum standards.**

The GMA[8] also requires that the Land Use Element of Comprehensive Plans include the following mandatory elements (emphasis added):

> A land use element designating the proposed general distribution and general location and extent of the uses of land, where appropriate, for agriculture, timber production, housing, commerce, industry, recreation, open spaces, general aviation airports, public utilities, public facilities, and other land uses. The land use element shall include population densities, building intensities, and estimates of future population growth. **The land use element shall provide for**

> **protection of the quality and quantity of groundwater used for public water supplies**. Wherever possible, the land use element should consider utilizing urban planning approaches that promote physical activity. Where applicable, the land use element shall review drainage, flooding, and storm water run-off in the area and nearby jurisdictions and provide guidance for corrective actions to mitigate or cleanse those discharges that pollute waters of the state, including Puget Sound or waters entering Puget Sound.

The Washington Administrative Code (WAC) includes an Antidegradation Policy[9], which strives to ensure the purity of the state's ground waters and to protect the natural environment. The first policy in Section 30 is as follows:

> (a) Existing and future beneficial uses shall be maintained and protected and **degradation of ground water quality that would interfere with or become injurious to beneficial uses shall not be allowed.**

Also, the Revised Code of Washington (RCW)[10] requires the following:

> The legislature hereby declares that **the protection of groundwater aquifers which are the sole drinking water source for a given jurisdiction shall be of the uppermost priority** of the state department of ecology, department of social and health services, and **all local government agencies with jurisdiction over such areas**. In administration of programs related to the disposal of wastes and other practices which may impact such water quality, the department of ecology, department of social and health services, and such affected **local agencies shall explore all possible measures for the protection of the aquifer, including any appropriate incentives, penalties, or other measures designed to bring about practices which provide for the least impact on the quality of the groundwater.**

Conclusions

Evergreen Islands concurs with the Guemes Island Planning Advisory Committee's (GIPAC's) list of the environmental impacts that must be carefully assessed in considering the ferry replacement proposal and its alternatives. GIPAC's lists includes the following impacts:

> 1. The impact of any ferry capacity increase on island growth and development;
>
> 2. Associated impacts relating to loss of rural character, encroachment of development into designated critical areas, loss of marine shoreline resources, and degradation of the island's sole source aquifer; and
>
> 3. Impacts on parking and congestion at the ferry docks on the Anacortes and Guemes ends of the run, resulting from both expected ferry usage and the development of any shore side facilities necessitated under each ferry alternative.

Evergreen Islands also strongly supports GIPAC's ongoing efforts to revise the Skagit County Code to protect Guemes Island's water supply for the future. GIPAC's ongoing efforts are as follows:

> 1. "Revise code standards and requirements to allow and encourage rainwater catchment systems for potable water on Guemes Island."

2. Amend SCC 14.24.380 (Critical Areas Ordinance, Seawater Intrusion Areas) to require, prior to drilling, a permit application and County approval for any new well to be drilled on Guemes Island. In addition to requiring that plans for new wells be submitted to the County for review and approval prior to drilling, in areas of known seawater intrusion the applicant should be required to conduct a hydrogeologist well impact assessment."

Evergreen Islands also supports the GIPAC's proposed efforts to address the threats to the Guemes Island water supply and to study and analyze the problem in more detail. Those efforts include the following actions:

1. **Undertake critical areas review beginning immediately for <u>any</u> new well**

2. Clarify that **new wells on Guemes Island require a permit application with County approval**.

3. In a collaborative effort between Skagit County and the Guemes community, **develop and collate data on island wells and undertake data analyses** to better understand trends affecting the aquifer.

4. Conduct further **research to understand better the process of aquifer recharge on the island**, including possible support from the State Department of Ecology.

5. In collaboration with Western Washington University (WWU), develop a template for rainwater catchment systems and work with Skagit County to support their development of a workable rainwater catchment program.

6. Pursue code amendments and administrative procedures needed to remove barriers to rainwater catchment systems and ensure that the code conflicts do not impede future systems.

7. Initiate public education and community dialogue on water conservation, aquifer protection, and well water data sharing

8. Conduct a thorough review of County code and current County practice relating to the review and approval of variances and "reasonable use exceptions."

After twenty-four years of indifference, Skagit County has still not adequately addressed the water quality problems associated with salt water intrusion, a problem which can be remedied by severely limiting the future use of exempt wells on Guemes Island and moving towards rainwater catchment systems for potable water.

While Skagit County has incrementally improved the protections for the Guemes Island water supply, there's still more work that needs to be done to safeguard Guemes Island's water supply for generations to come.

Respectfully yours,

Tom Glade, President
Evergreen Islands

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[1] Skagit County Code 14.24.310

[2] Guemes Island Ferry Service Schedule Changes: Environmental Assessment & SEPA Non-Project Checklist FINAL REPORT Submitted: May 6, 2008. P. 9

[3] Transportation System Assessment, Guemes Island Ferry Replacement, Report No. 17097-000-02, December 14, 2017.
p.32

[4] Ibid 2, p. 25-26

[5] Guemes Island Ferry Service Schedule Changes: Environmental Assessment & SEPA Non-Project Checklist FINAL REPORT Submitted: May 6, 2008.

[6] Stephen Hirschey, Water Resources Program Supervisor and John Glynn, Water Quality Supervisor, to John Thayer, Skagit County Environmental Health Director; "Ground Water Withdrawal on Guemes Island", May 27, 1994.

[7] RCW 36.70.A.020, Planning Goals

[8] RCW 36.70A.070, Comprehensive plans — Mandatory elements.

[9] WAC 173-200-030, Antidegradation policy.

[10] RCW 90.54.140, Protection of groundwater aquifers if sole drinking water source.

Attachment 1

"Ground Water Withdrawal on Guemes Island", May 27, 1994
Letter from Stephen Hirschey, Water Resources Program Supervisor
and John Glynn, Water Quality Supervisor,
to John Thayer, Skagit County Environmental Health Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office, 3190 - 160th Ave. S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

May 27, 1994

Mr. John Thayer
Environmental Health Director
Skagit County Department of Health
County Administration Building, Room 301
700 South Second

Mount Vernon, WA 98273-3864

Dear Mr. Thayer:

This letter is to express concern held by the Water Resources and Water Quality Programs of Ecology regarding ground water withdrawal on Guemes Island. Ecology has historically been involved with water rights administration, ground water quality surveys, SEPA review and water availability questions on Guemes. Several of our staff have been working with your department and Guemes Island residents regarding sea water intrusion in island aquifers.

Several areas of the island are experiencing elevated chloride levels in ground water wells. The data indicate that some parts of the island are experiencing significant sea water intrusion.

We are particularly concerned about the north end of the island, specifically that part lying within Township 36 North. Ground water sampling data indicate consistently high chloride values often exceeding 100 mg/l.

As you may know, Ecology uses 100 mg/l as the threshold for indicating a medium risk of sea water intrusion.

Pumping from near shore wells with elevated chloride concentrations usually induces movement of saline water into the fresh water aquifer. This initially occurs in the vicinity of the pumping well intake. The cumulative effect of numerous withdrawals will eventually cause large scale saline intrusion of the coastal aquifer.

The Antidegradation Policy, as stated in the Water Quality Standards for Ground Waters, Washington Administrative Code (WAC) 173-200-030, ensures the purity of the state's ground waters and protects the natural environment. Permitting saline

intrusion into fresh water aquifers could be a violation of the state's Antidegradation Policy, and can cause adverse water quality effects in existing wells.

For these reasons, we would recommend limiting new well construction on the north end of the island. We would encourage no well site approval or plat approval for developments planning on using ground water from this part of the island, unless they have a valid permit from Ecology. We would also recommend the county discourage wells completed within unconsolidated materials near the coast island-wide.

We are interested in working with the county regarding water supply and water quality issues on Guemes Island. We see the ground water resource in the area as important and vulnerable to overdraft. We look forward to evaluating the recently completed USGS study on Guemes Island ground water. When our staff resources allow, we would welcome meeting with appropriate county agencies toward a cooperative evaluation of water supply issues for the whole island.

In summary, we have concerns regarding how the County can make findings of adequacy of water in this part of Guemes Island under Section 63 of the Growth Management Act. With this in mind, we would encourage you to deny well site approvals until a site specific management program is in place. We recognize that this may cause difficulties in the development community, but it is better to address water availability now than when the property has been platted and homes built.

If you have any questions regarding our concerns, please call either of us. Thank you for your consideration.

Sincerely,

Stephen J. Hirschey
Supervisor
Water Resources Program

John Glynn
Supervisor
Water Quality Program

SJH:eg:w
Enclosures

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[1] Guemes Island Ferry Service Schedule Changes: Environmental Assessment & SEPA Non-Project Checklist FINAL REPORT Submitted: May 6, 2008. P. 9

[2] Transportation System Assessment, Guemes Island Ferry Replacement, Report No. 17097-000-02, December 14, 2017.
p.32

[3] Skagit County Code 14.24.310

[4] Ibid 2, p. 25-26

[5]

[6] Stephen Hirschey, Water Resources Program Supervisor and John Glynn, Water Quality Supervisor, to John Thayer, Skagit County Environmental Health Director; "Ground Water Withdrawal on Guemes Island", May 27, 1994.

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