Comments for SSA Seawater Intrusion Amendment

Count	Last Name	First Name	Organization/Address	Type of Comment	Method	Received Date
1	Madden	Mark	4910 N Indian Village Lane, Anacortes, WA 98040	Oppose	Email	05/27/2024
2	Loring	Kyle	PO Box 3356, Friday Harbor, WA 98250	Support	Letter Via Email	05/13/2024
3	Orsini	Stephen	4971 Guemes Island Road, Anacortes, WA 98221	Support	Email	05/29/2024
4	Havens	Dyvon	4709 South Shore Drive, Anacortes, WA 98221	Support	Email	05/24/2024
5	Horner	Bruce	7639 Hideaway Lane, Anacortes, WA 98221	Support	Email	05/26/2024
6	Stapp	Sally	5191 Lewis Lane, Anacortes, WA 98221	Support	Email	05/21/2024
7	Carl	Ullman	5162 West Shore Road, Anacortes, WA 98221	Support	Email	05/28/2024

From: Mark Madden <mtsmark44@outlook.com>

Sent: Monday, May 27, 2024 8:06 PM

To: PDS comments

Subject: Skagit County's Proposed Guemes Island Seawater Intrusion Amendment

I am a licensed Professional Engineer (PE) in Washington State. I am opposed to study requirements, prior to well drilling on Guemes Island, for 3 main reasons.

First, the proposed study elements do nothing to prevent or identify seawater intrusion or aquifer contamination. Site plans, drilling plans, or payment of fees have no impact on seawater intrusion or aquifer contamination.

Second, proponents of studies claim they are necessary because of well documented seawater intrusion. Seawater intrusion is not well documented. Although well drillers have noted a few pockets where seawater is found, it is not a common occurrence. Nothing in the past 20 years shows intrusion caused by well drilling. Changes in sea level are the threat we should be concerned about.

And third, the Guemes Island sole source aquifers do not need protection. The sole source is rainwater. Rainwater is less likely to get contaminated than streams, rivers, or lakes. If rainwater was contaminated, it would be filtered by dirt, sand, and rocks before reaching faucets. Much of the 3 billion gallons of rainwater falling on Guemes Island each year will flow through aquifers and drain back to the sea.

What is wrong with the age-old Health Department rules, that require a landowner to show potable water before being issued a building permit? Have those requirements caused problems?

The proposed studies either deny wells or add costs to landowners wishing to build on their building lots. The proposed study requires location, depth, and chlorine levels of surrounding wells. If neighbors will not give this information, drilling could be denied. Without drilling a landowner cannot show water. Without showing water a landowner cannot get a building permit.

The proposed study is also restrictive to property owners with existing wells. They may wish to drill a new well to replace a hand dug well or for many other reasons.

Landowners run the risk of denial when paying for an expensive study and possible survey. Without drilling approval their costs are wasted, and the study information remains worthless.

Guemes has several aquifers. The Vashon Aquifer, one of the Island's largest aquifers, serves most of North Guemes and is almost entirely above sea level. Wells taking water from aquifers above sea level like the Vashon Aquifer cannot have seawater intrusion. Seawater does not flow uphill. Seawater in aquifers below sea level will sink to the bottom of the aquifer. Wells taking water from such aquifers draw from the fresh water above the seawater. Most aquifers are so large that the aquifer water level will not be significantly impacted by the small amount of water taken by many residential wells. Rising sea levels are a much larger risk for possible seawater intrusion.

A preliminary well drilling study provides no benefit to property owners, or aquifers. It only increases risk and cost to some property owners paying property taxes for building lots.

Regards,

Mark Madden

4910 N Indian Village Lane, Anacortes, WA 98040

206 660 1209

From: Mark Madden <mtsmark44@outlook.com>

Sent: Monday, May 27, 2024 6:54 PM

To: PDS comments

Subject: Skagit County's Proposed Guemes Island Seawater Intrusion Amendments

Since Skagit County Planning Staff submitted their report from the 2023 Docket that was rejected by the Planning Commission, I am resubmitting my response to the staff report.

I am a licensed professional civil engineer in the State of Washington. I am opposed to the proposal in 2023 Docket C23-1 and to the similar requirements placed in the County Code for the following 3 reasons:

- The requirement makes many building parcels worthless.
- The proposal analysis has false and non-relevant narrative.
- The claims of water issues are unfounded and based on testimony only.

These reasons are expanded in more depth in the following paragraphs.

The requirement makes many building parcels worthless

The requirement to submit the location, depth, and chloride levels of surrounding wells cannot be met. Neighbors who own surrounding wells do not know this information and will most often stop anyone from collecting the information. They may prefer a vacant lot to a new building next door. A vacant lot can be viewed or used by neighbors without needing to pay taxes for their partial control.

Without surrounding well information the study requirements cannot be met. Without well drilling approval no potable water can be shown and therefore no building permit can be issued. Taxpayers that have been paying building lot property taxes for years, cannot build. A non-buildable lot with heavy building lot taxes is worthless.

The proposal analysis has false and non-relevant narrative

The proposal analysis does not justify the huge cost or impact of requiring an unnecessary study that has never been necessary. Although I respect hardworking County staff, they did not have resources to consult with professionals or time investigate professional studies from the 1990s. Professionals required by Skagit County for well drilling studies did not review the analysis. They would not agree with some of the rational requiring expensive studies. The studies would just show well drilling or water use does no harm to others.

Guemes Island has sole source aquifers. The sole source is rainwater. Rainwater is not easily contaminated. If it were contaminated it would be filtered through dirt, sand, and rocks. Well drilling or well use has no relation to the sole source and could not change contamination issues. This part of the analysis is irrelevant.

Aquifers are so huge that 100 residential wells could not make a measurable impact on water table levels. The top one foot of the Vashon Aquifer that covers most of North Guemes contains hundreds of millions of gallons of water. Any drawdowns by residential wells are covered by the 3 to 5 <u>billion</u> gallons of rainwater falling on Guemes each year. Also, according to a 1990s professional study, the Vashon Aquifer is almost entirely above

sea level. Seawater would have to flow uphill to intrude into wells. Most aquifers on Guemes have good water with no seawater intrusion. The analysis does not address how seawater could intrude on Guemes aquifers. An intrusion area simply means it is possible for seawater to intrude somewhere. Not everywhere.

Also, wells will not impact adjacent wells beyond their "cone of depression". In residential wells in aquifers with moderate hydraulic conductivity soil, the impact from of the "cone of depression" would rarely exceed 20 feet. Wells on Guemes are generally far apart on the large land parcels. Well drillers know where to drill. Existing rules require 100 feet of separation between wells.

The claims of water issues are unfounded and based on testimony only

Unfounded water issues have been common on Guemes Island for many years. Non-professionals have spread rumors and developed brochures advocating the shortage of water on Guemes Island as reasons to stop allowing any building development. They have pressured public agencies into making statements indicating water issues are prevalent. However, math proves that 19 inches of minimum rainfall (average 26 inches) on 8.6 square miles of Guemes is over 3 billion gallons per year. This quantity is more than adequate to replace water in aquifers removed to serve residential wells.

Many taxpayers of undeveloped building lots have been waiting years for the financial resources to build a cabin or home. They have no idea that secret forces have been working behind their back to keep them from pursuing their dreams. Current regulations are working against them. Vacant lot owners are not knowledgeable of these changes proposed. And they are not organized to oppose the small groups pushing the restrictions. These small groups pushing restrictions do not represent owners of vacant building lots on Guemes.

A few pockets on Guemes Island have experienced seawater presence. Mostly low elevation properties near the coast. There is no official documentation or evidence that shows that seawater intrusion has increased in the last 20 years. Rising sea levels are likely a much bigger challenge than new residential wells.

The proposed 2023 Docket C23-1 prevents vacant property owners from building but also prevents existing well owners from replacing hand dug or wells with poor water quality (chemicals, taste, or color). These owners may not be able to drill another well at a different location and a different depth. Aquifers overlap at different depths and a new location and depth could draw water from a different overlapping aquifer. Health Department tests have always required safe drinking water without the huge costs of data collection and analysis to prove nothing. The elimination of new wells will do nothing to protect existing wells. It will just harm owners of vacant building lots.

Regards, Mark Madden, PE 4910 N Indian Village Ln. Anacortes, WA 98221



By Email

May 13, 2024

Skagit County Planning Commission 1800 Continental Place, Suite 100 Mount Vernon, WA 98273 pdscomments@co.skagit.wa.us

Re: C23-1--Sole Source Aquifer Seawater Intrusion Amendment

Dear Planning Commissioners,

I am writing this letter on behalf of the Guemes Island Planning Advisory Committee ("GIPAC") to express our support for the Planning and Development Services ("PDS") staff recommendation to adopt C23-1 to ensure that well drillers in seawater intrusion areas submit an application before, rather than after, they drill a well. We appreciate that Skagit County has recognized the importance of preserving Guemes Island's limited and fragile supply of groundwater by designating all of Guemes Island as both a Critical Aquifer Recharge Area and a Sole Source Aquifer. In recent years, that water has been tapped by additional users without examining whether the new water withdrawals would exacerbate seawater intrusion in existing wells. The amendment proposed for Skagit County Code 14.24.380(2)(a) would clarify that the information that is already required must now be submitted before the well is drilled. This common sense approach would ideally detect potential increases from chloride pollution in drinking water and protect the health and the senior water rights of the residents that rely on it.

The rest of this letter addresses several topics that arose at the Planning Commission's April 23, 2024 work session on the proposed amendment.

1. Wells on Guemes Island have failed from seawater intrusion.

As you can see from the map submitted with this letter as Attachment A, several wells have failed on Guemes Island due to seawater intrusion. Steve Orsini, a resident of the north end of the island, compiled this map after speaking with neighbors in that area. Note that the map identifies only known wells within the geographic scope of the map, and that other wells on Guemes may have experienced failure due to increased chloride levels from seawater intrusion. You can also see that two of the wells reportedly serve Group A water systems, which supply water to larger neighborhoods. According to Mr. Orsini, approximately 40 households have been negatively impacted.

Well failures impose substantial costs on residents, who must now find a way to remove the chloride pollution or install an alternative water source altogether. You can see from the attached map that water users have shifted to methods like reverse osmosis (desalination), water catchment, and well relocation. According to Mr. Orsini, who has experienced a well failure and was forced to turn to rainwater catchment, the costs that existing well users bear to correct their water supply can range from \$12,000 to \$100,000. In addition, a new well may fail if it is drilled in an area of potential seawater intrusion, causing additional frustration and costs. Consequently, the preferable method is to examine the potential impacts of a new well prior to drilling it.

2. The proposed code amendment would not increase the scope of information required for well drilling in a sole source aquifer.

There has been some confusion to date about the scope of the proposed amendment. It may be helpful to keep in mind that it would not change the type of information that would need to be gathered when drilling a new well, but instead, would change the timing of the gathering and submission of that information. The text states that, "[p]rior to drilling any new well in an area designated a sole source aquifer area, the information set forth in subsection (2)(a) must be submitted to the Department." In other words, in areas that have been designated by the Board of Commissioners for protection because they rely on a single source of water, information about the location of the well and the chloride levels in surrounding wells must be provided before drilling a well that could alter the amount of chlorides that intrude into those neighboring wells.

The goal is to resolve a loophole that has been interpreted into the existing code language. That language states that "[a]n application <u>proposing use</u> of a well must include all of the following...." PDS has interpreted this language to mean that information does not need to be submitted for a well that is not associated with a building permit, and thus is deemed not proposed for use. The amendment would acknowledge the reality that wells are drilled to be used for water withdrawals, whether or not associated with a building permit application, and thus direct well drillers to submit the information prior to drilling. Currently, some wells are being drilled without an application for a building permit and thus are not being studied even though they can exacerbate seawater intrusion.

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¹ Proposed SCC 14.24.380(2)(d).

² SCC 14.24.380(2)(a).

3. It is not overly burdensome to ask neighbors for the chloride counts in their wells.

Information about chloride levels in neighboring wells is essential to understand a new well's impacts, and is not overly burdensome. The Skagit County health codes require regular testing of wells to ensure that they are not subject to unhealthy contamination like that caused by chlorides.³ In addition, while existing well owners generally may be reluctant to share information about their wells, they have an interest in ensuring that drillers are well-informed and can use that information about their wells prior to drilling new wells. Consequently, information about chlorides in existing wells should be available and likely will not be difficult to obtain by the applicant or their consultant.

4. The County can deny drilling a well that would adversely impact the aquifer.

The Growth Management Act ("GMA") endows Skagit County with the authority and obligation to deny the drilling of a well likely to adversely impact an aquifer. This authority exists independent of the Washington Department of Ecology's oversight of water rights. The GMA directs counties to adopt development regulations, like the proposed amendment, that protect critical aquifer recharge areas.⁴ The GMA recognizes that potable water is essential for humans and animals and that much of it in Washington's rural areas comes from groundwater. Cleaning up contamination is costly and difficult, and prevention of contamination is necessary to avoid exorbitant costs and harm to senior water rights holders and ecosystems.⁵ As a result, the GMA directs counties to classify as critical areas places like recharge areas for sole source aquifers, and to adopt rules that protect them by safeguarding the public from hazards to health and safety in association with those areas.⁶

The GMA therefore endows counties with sufficient authority, and the obligation, to protect aquifer recharge areas like the sole source aquifer on Guemes Islands.

In addition, the GMA directs counties to ensure that applicants for building permits provide evidence of an adequate water supply for the intended use of a building.⁷ Applicants must demonstrate that the water is adequate both in quality and quantity.⁸ This demonstration must come in the form of a water right permit from the Department of Ecology or other form sufficient to verify the existence of an adequate water supply, but an application for a water

³ SCC 12.48.110.

⁴ RCW 36.70A.060(2); WAC 365-190-100, 365-196-830(3).

⁵ WAC 365-190-100(1).

⁶ WAC 365-190(100)(4), 365-196-830(1)-(3)..

⁷ WAC 365-196-825(1).

⁸ WAC 365-196-825(1).

right is not sufficient proof. 9 Requiring the submission of well information prior to drilling the well is consistent with these statewide directives and would be necessary to demonstrate that a well has a sufficient quantity of potable water.

5. The viability of rainwater catchment on Guemes Island.

While the County Public Health Department generally discourages alternative water sources, they authorize the use of sources like rainwater catchment where public water systems or drilled wells will not suffice to provide potable water. ¹⁰ Guemes Island residents have developed experience storing and treating water from rainwater catchment to meet their drinking water needs if necessary. This method is permitted by Skagit County and provides a viable alternative water supply to Guemes Island property developers in areas where drilling more wells is inadvisable because it would adversely affect existing wells.

We appreciate and support the efforts that County staff are taking to protect Guemes residents' primary source of drinking water and request that you recommend adoption of C23-1. Please do not hesitate to contact me at 360-622-8060 or kyle@loringadvising.com to discuss this topic.

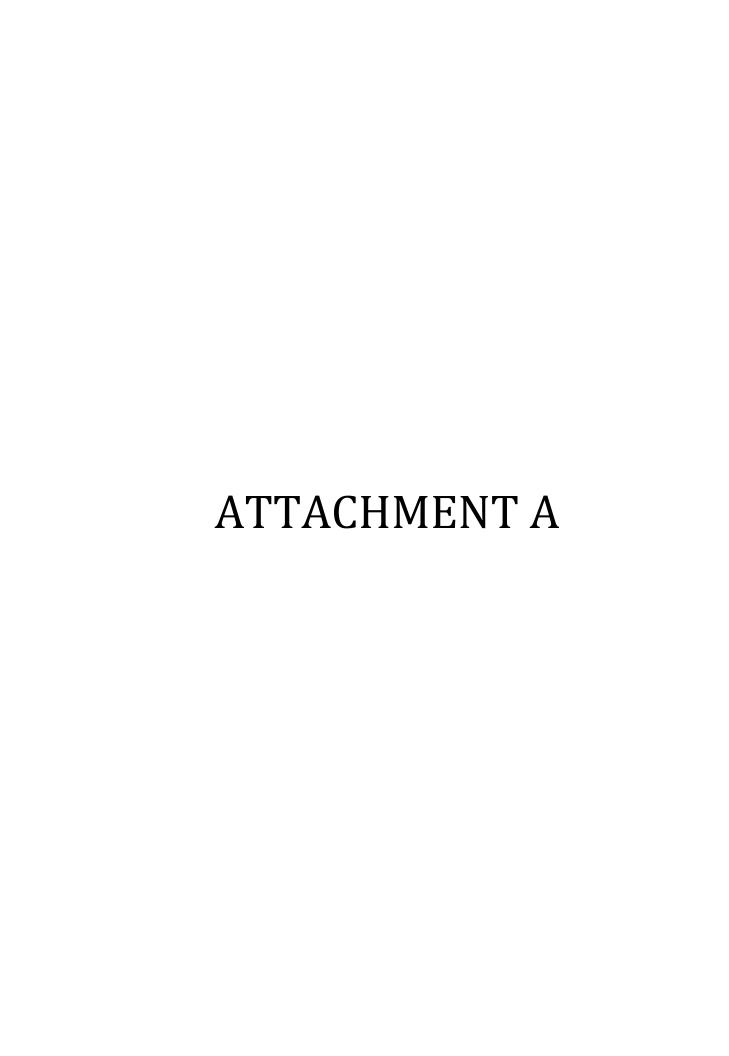
Sincerely,

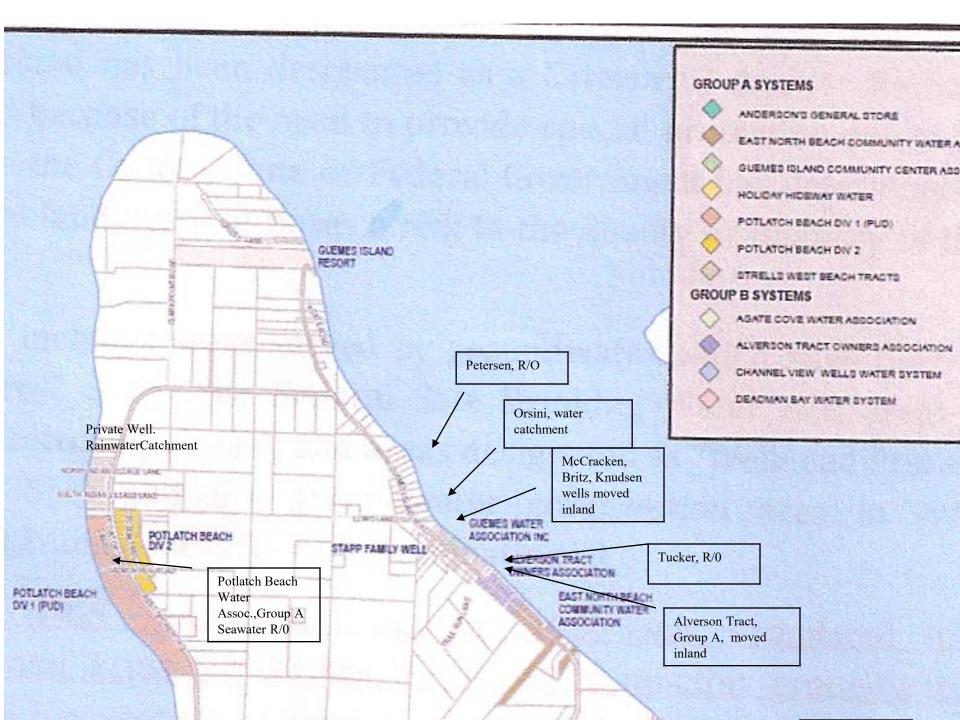
Kyle A. Loring

Cc: Michael Brown, GIPAC Steve Orsini, GIPAC

⁹ RCW 19.27.097(1)(a).

¹⁰ SCC 12.48.250.





From: Stephen Orsini <sailingorsini@gmail.com>

Sent: Wednesday, May 29, 2024 7:11 AM

To: PDS comments

Subject: Sole Source Aquifer Seawater Intrusion Amendment, C23-1 **Attachments:** Grid Map of N Guemes Wells.pdf; failed May 2024.ppt.txt

To: Skagit County Planning Commission and Planning Staff Re: Sole Source Aquifer Seawater Intrusion Amendment

From: Stephen Orsini

Thank you for the opportunity to present information regarding the Seawater Intrusion Amendment, C23-1.

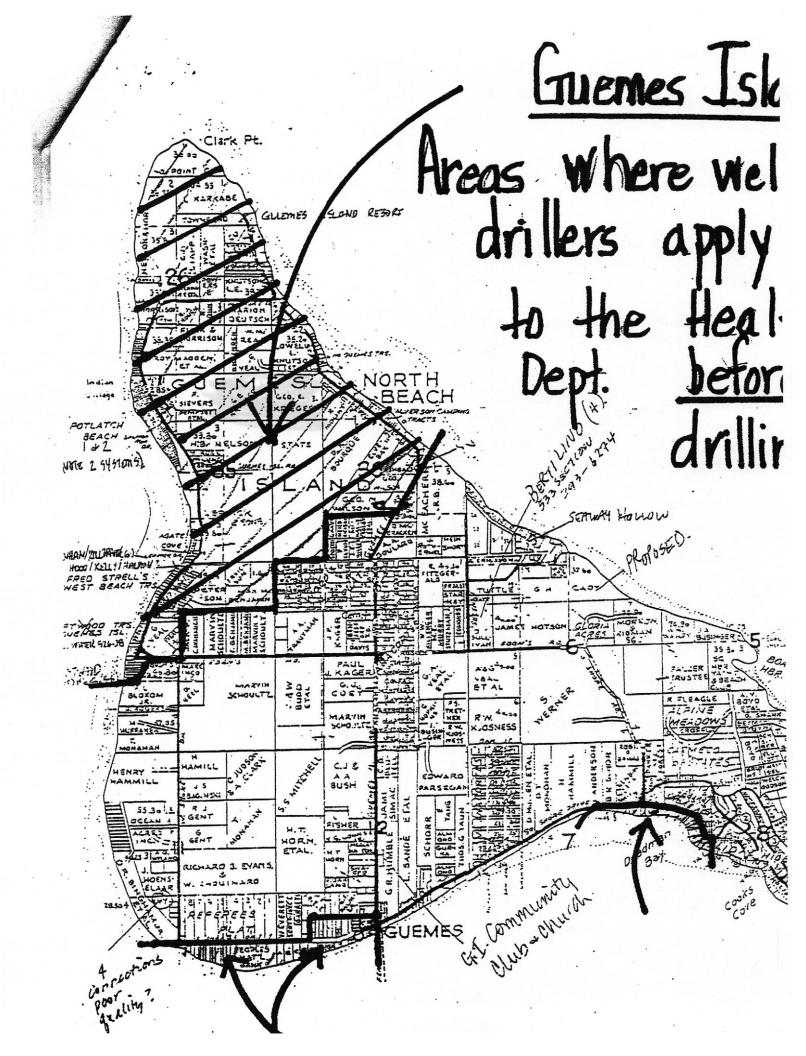
1. This Amendment is about protecting the senior water right holders of Guemes Island, not about limiting the development of a new lot. By pre-inspecting a well site before the well is drilled, the property developer will be given information about the likelihood this proposed well may itself be vulnerable to seawater intrusion or will contribute to seawater intrusion on nearby existing wells. The hydrogeologic information will help the developer to decide whether to drill a well or opt for Skagit County approved rainwater catchment system to provide the new house with its potable water supply.

Comment #3

- 2. The requirements of information, including neighboring well chlorides, is not new language. This requirement already exists in the code language once the well is drilled. By adopting C23-1, the exact same requirements are to be met before the well is drilled. The current code language is simply not being enforced.
- 3. The C23-1 code amendment applies only to Guemes Island because it is a Federally designated Sole Source Aquifer and a Critical Area defined by Skagit County. Guemes Islanders have proven a way to allow continued development even if a well on a new lot is a bad idea. The proof of the viability of rain water catchment for safe drinking water is already being adopted in new building on Guemes over the option to drill another well. Further this option gets the new house out of the threat of losing its new well to seawater pollution in an era of sea level rise.
- 4. The current system of well drilling on Guemes has made matters worse. On the north end of the island some 40 houses have now lost potable drinking water due to seawater intrusion. This is because a one foot drop in aquifer head height leads to a 40 foot rise in seawater under the aquifer. The cost of replacement of senior water right well runs from \$10,000 to \$100,000. By 2000 my well failed from seawater intrusion. The cost for my implementation of a new fresh water source for my house was \$95,000. Why does the County continue a policy which hands senior water rights to the newest junior water right applicant from say Idaho or California? C23-1 is a way to stop this egregious subversion of water rights.
- 5. Attachments: A. 1998 Grid Map of Guemes showing areas where well drillers were to notify the Skagit County Department of Health before drilling a well. The procedure was not followed and the responsibility for water quality was departmentally moved to Planning and Permitting.
- B. Map showing failed wells due to seawater intrusion on the North end of Guemes Island. Thank you,

Stephen Orsini

4971 Guemes Island Rd. Anacortes, WA 98221



From: dyvon.havens@gmail.com **Sent:** Friday, May 24, 2024 4:33 PM

To: PDS comments

Subject: Sole Source Aquifer Seawater Intrusion Amendment

I am in favor of the Skagit County Planning Commission adoption of the proposed code amendment (C23-1) to Skagit County Code SCC 14.24.380.

It is well-known that 27 years ago the EPA designated Guemes Island as a Sole Source Aquifer. More and more wells on the Island have either failed, or are in danger of failing, due to sea water intrusion. I have been a full-time resident of Guemes Island for 22 years and am <u>very fearful</u> that there will come a time when I will no longer have safe water to drink from my well.

It is important for the future of the residents of Guemes Island that application for ANY future drilling of wells be subject to the same County rules as those applications tied to a development. The proposed code will ensure better protection of my, and my neighbors', wells.

Dyvon Marie Havens 4709 South Shore Drive Anacortes WA 9822



Virus-free.www.avast.com

From: Bruce Horner <horner.bruce@gmail.com>

Sent: Sunday, May 26, 2024 9:37 AM

To: PDS comments

Subject: Sole Source Aquifer Seawater IntrusionAmendment

As a Guemes Island resident and property owner, I'm supporting the code amendment C23-1 and ask that the Planning Commission support the current recommended changes as proposed by Planning Department staff. The simple clarification of the code, that all wells being drilled in sole source aquifer have to go through the same review that is required when a well is being drilled as part of development permit, means you are protecting the property rights and water quality of Guemes Island residents. It does not prevent a well from being drilled. It simply considers the potential impact on neighbors, while also providing insight to the landowner of the potential quality of their well water. Additionally, now that Skagit County will allow rainwater catchment systems for potable use, landowners have more choices and are not prevented from property development This is a straightforward solution to protecting the Island's Sole Source Aquifer and the health of the drinking water for Island residents.

Bruce Horner 7636 Hideaway Lane Guemes Island Anacortes, WA 98221

From: Sally Stapp <stappbrigham@gmail.com>

Sent: Tuesday, May 21, 2024 1:00 PM

To: PDS comments

Subject: Guemes Island Salt Water Intrusion prevention.

When I bought my acre of land on North Beach Guemes Island in 1972-ish I got a permit to drill a well. I believe you had to have a well to get a building permit, The water was slightly salty. We currently use the water for household uses included cooking & drinking & bathing but not for my extensive gardening projects. We installed a 2000 gallon underground rainwater catchment system specifically for gardening & outdoor occasional dog washing.

This is a particularly appropriate day to encourage rainwater catchment as it has poured all day. If everyone on the island relied on our ample rain water (.65" so today at 1:00pm) it would be a large step toward protecting the aquifer. Sally & Dick Stapp-Brigham

1

From: Stephen Orsini <sailingorsini@gmail.com>

Sent: Tuesday, May 28, 2024 4:23 PM bullman31971@gmail.com

Cc: PDS comments

Subject: Re: Sole Source Aquifer Seawater Intrusion Amendment

Thanks Bud.

Steve O

Sent from my iPhone

Comment #7

On May 28, 2024, at 12:27, bullman31971@gmail.com wrote:

Hello, Planning & Development Services. The proposed County Code amendment to require applicants to submit an application and supporting materials for review prior to drilling a well in a seawater intrusion area within a sole source aquifer should be adopted and implemented. The amendment is important for the protection of property rights.

One's existing well water rights are property rights equivalent to land ownership rights. The idea that one can do whatever one wants within one's land ownership regardless of the impacts on the rights of adjacent right holders was abandoned long, long ago by all reasonably organized societies.

Existing well water right holders have property rights in that resource. Aspiring developers should not be able to ignore those rights simply because the aspirant owns adjacent land.

The idea really has no place in crowded, water-limited, salt-intruded areas of the County. The County's rules should reflect this reality.

Thank you for your time and attention, and for your work on the County's behalf.

Carl Ullman 5162 West Shore Road Anacortes, WA 98221