

An Ordinance Adopting the Guemes Island Seawater Intrusion Amendments

WHEREAS, the Washington Growth Management Act, RCW 36.70A (the “GMA”), and specifically RCW 36.70A.172, requires that cities and counties designate and protect critical areas, including critical aquifer recharge areas, using best available science; and

WHEREAS, Skagit County Code 14.24.380 regulates wells and development applications in designated seawater intrusion areas; and

WHEREAS, there is documented seawater intrusion in some wells used for potable water use on Guemes Island; and

WHEREAS, Guemes Island has the only Sole Source Aquifer in Skagit County and therefore additional measures are needed to protect the aquifer from contamination; and

WHEREAS, on June 11, 2024, the Planning Commission recommended denial of C23-1 Guemes Island Seawater Intrusion Area Well Drilling Amendment and found that the proposed language of C23-1 does not achieve protection of the aquifer; and

WHEREAS, Guemes Island has the only Sole Source Aquifer in Skagit County and therefore additional measures are needed to protect the aquifer from contamination; and

WHEREAS, required regular and ongoing data collection of wells on Guemes Island that is compiled in a central repository is necessary to make future informed decisions; and

WHEREAS, Skagit County is currently updating its Comprehensive Plan and development regulations, which will include updates to the Environmental Element and Critical Areas Ordinance; and

Now Therefore Be It Ordained by the Board of County Commissioners:

Section 1. The proposed C23-1 Guemes Island Seawater Intrusion Areas Well Drilling Amendment is approved as shown on the redline code changes (**Attachment 1**).

Section 2. As part of the 2025 Comprehensive Plan Update, Planning and Development Services will work with the Public Health and Public Works Departments to develop recommendations on Comprehensive Plan policies and development regulations that will support implementing a centralized data collection, storage, retrieval, and analysis system for groundwater data on Guemes Island; and

Develop recommendations on Comprehensive Plan policies and development regulations in the Critical Areas Ordinance that will achieve further protection of the Guemes Island Sole Source Aquifer by using best available science.

PASSED this 23 day of July, 2024.

BOARD OF COUNTY COMMISSIONERS

SKAGIT COUNTY, WASHINGTON



Peter Browning, Chair

Lisa Janicki, Commissioner

Ron Wesen, Commissioner

Attest:

Keri Williams
Clerk of the Board

Approved as to form:

[Signature]
Civil Deputy Prosecuting Attorney

Approved as to Content:

[Signature]
Department Head

Staff Report Attachment 1

Seawater Intrusion Areas Amendment

Key to changes:

Plain text = existing writing with no changes

~~Strikethrough~~ = existing writing to be deleted

Underlined = new writing to be added

~~Double Strikethrough~~ = existing writing moved
to another location

Double Underline = existing writing moved
from another location

Italics = instructions to writing reviser

14.24.380 Seawater intrusion areas.

(1) **Applicability.** This Section applies to wells and applications for building permits; special use permits; shoreline substantial development, variance, and conditional use permits; and land divisions in the following areas:

(a) Areas within one-half mile of a marine shoreline; and

(b) The entirety of Guemes, Sinclair, Cypress, and Vendovi Islands.

(2) **Application Requirements.**

(a) **For Wells.** An application proposing use of a well must include all of the following, which must be submitted for review prior to drilling any new well:

(i) A site plan, including:

(A) A dedicated inland well site location;

(B) Estimated depth of proposed well;

(C) An estimated land elevation of the well, except that if the well is within 250 feet of the shoreline, or if determined a hydrogeologist engaged or employed by the County, the elevation of the well must be surveyed by a licensed surveyor; and

(D) Depth and chloride levels of surrounding wells;

(ii) A drilling plan; and

(iii) Payment of applicable fees.

(b) **For Alternative Water Sources.** An application proposing use of an alternative water source must include the following:

(i) Documentation of system design consistent with this Section and SCC 12.48.250;
and

(ii) Payment of applicable fees.

(c) **For Land Divisions.** In addition to any applicable requirements above, an application for a land division proposing use of a well must include the following:

(i) An assessment of the available groundwater, including a report from a demonstration well located so that it will represent the groundwater under the entire land division and with consideration to where other wells will be located in the land division;

(ii) If the proposed land division is within an area of documented chlorides in excess of 25 ppm, all well locations must be specified and spaced 100 feet or more from any other well, including wells on neighboring properties.

(d) For Wells in a Sole Source Aquifer Area. Prior 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.

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(3) Development Standards for Alternative Water Sources.

(a) Where a known seawater intrusion problem exists, alternative sources of water are encouraged, but must comply with the requirements of SCC 12.48.250.

(b) **Reverse Osmosis (RO) Systems.** Any reverse osmosis (RO) system must be designed to:

(i) Use seawater collected from the open sea as the water source; and

(ii) Discharge effluent only to the open sea.

(4) Development Standards for Wells.

(a) **Generally.** For both existing and new wells, a well driller must:

(i) Install a wellhead source meter;

(ii) Install a sounding tube to allow water level measurements;

(iii) Set the maximum pumping rate consistent with Table 14.24.380-1;

(iv) Conduct a pump test under the supervision of a licensed well driller or licensed hydrogeologist, consistent with the following:

(A) Use the conservative maximum pumping rate defined in Table 14.24.380-1, or if the well driller proposes to use more than the maximum pumping rate in Table 14.24.380-1, include a hydrogeological assessment (including pump tests) using observation wells;

(B) Pump a minimum of 350 gallons from the formation during the test;

(C) Continue the pump test for at least four hours after water level stabilization has occurred, or for the timespan determined by a hydrogeologist engaged or employed by the County.

(b) **Documentation of Installation.** The well driller must submit the following after the pump test:

- (i) Well ID;
- (ii) Proof of the sounding tube installation;
- (iii) The maximum pumping rate set;
- (iv) A record of the static water level depth prior to starting the pump test;
- (v) Pumping rates during the pump test;
- (vi) Drawdown measurements recorded throughout the pumping test in intervals as approved by a hydrogeologist engaged or employed by the County;
- (vii) The time of day when the drawdown measurement was observed;
- (viii) Exact time of pump start and stop;
- (ix) Any changes in pumping rate during the test;
- (x) Measurement of water level following pump shutoff until the water level in the well recovers to at least 95 percent of its pre-pumping level, including time of measurement.

(c) **Documentation of Elevation.** Before final inspection, the applicant must submit a land elevation of the well as surveyed by a licensed surveyor.

(d) **Maximum Pumping Rates.**

- (i) The maximum pumping rate for wells must be set consistent with the following table.
- (ii) A maximum pumping rate other than that in the table may be set if approved by a hydrogeologist engaged or employed by the County.

Table 14.24.380-1. Maximum pumping rates.

Location	Chloride level		
	0—24 ppm	25—99 ppm	100—250* ppm
less than 1/2 mile from the coast for areas in (1)(a)	as determined or approved by a hydrogeologist engaged or employed by the County		
less than 1/2 mile from the coast for islands in (1)(b)	3 gpm	2 gpm	1 gpm

Table 14.24.380-1. Maximum pumping rates.

Location	Chloride level		
	0—24 ppm	25—99 ppm	100—250* ppm
greater than 1/2 mile from the coast for islands in (1)(b)	3 gpm	3 gpm	3 gpm

(Ord. O20160004 § 6 (Att. 6))