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Skagit County Auditor

Document Title: Drinking Water System
Report

Reference Number :

Grantor(s):

☐ additional grantor names on page ____

1. Glenn Dalgliesh
2. Stephanie Dalgliesh

Grantee(s):

☐ additional grantee names on page ____

1. Skagit County
- 2.

Abbreviated legal description:

☐ full legal on page(s) ____

GL 9 02/34/01

Assessor Parcel / Tax ID Number:

☐ additional tax parcel number(s) on page ____

P19152

I, Glenn Dalgliesh, am hereby requesting an emergency non-standard recording for an additional fee provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document. Recording fee is \$99.00 for the first page, \$1.00 per page thereafter per document. In addition to the standard fee, an emergency recording fee of \$50.00 is assessed. This statement is to become part of the recorded document.

Signed

Glenn Dalgliesh

Dated

5/23/2019

DRINKING WATER SYSTEM STATUS REPORT

I, the undersigned property owner, in making an application for a Skagit County building permit involving a single-family residence acknowledge that this Report is being signed, notarized and recorded in compliance with Skagit County Code Section 12.48.270. The drinking water source for this residence is an alternative source (S.C.C. 12.48.030).

1. I acknowledge and agree that this Report is binding on all my heirs and/or successors and agree not to hold the County harmless from any and all claims, damages, costs or expenses that are incurred whether personal injury or property damage that are water quantity, water quality or a result of the use of this alternative source.
2. Water systems with filed Status Reports will not be used as justification for the creation of new lots. Land subdivisions require either drilled wells or connections to an approved public system.
3. Future buyers should beware that the drinking water source for this residential building is provided by rainwater catchment. The Skagit County Health Department considers rainwater catchment as a surface water source. This source requires continuous filtration and disinfection on all sinks to be consistently sanitary. This source does not produce the minimum of 400 gallons a day. This water system was designed by RainBank Rainwater Catchment Systems LLC (Ken Blair, Chad Lindsly) and approved by Mark S. Buehrer, P.E. (professional engineer).
4. Attached to this Status Report are pages 7, 8 and 9 of conditions of approval and the Operation and Maintenance Schedule provided by the Engineer.
5. If substantial additional water is needed, the applicant agrees to install additional catchment and storage. All purchased or hauled water will come from a Department of Health approved Public Water System and be hauled by trucking approved to haul potable water. Well BBS700 (WA10-0080) may have no intertie to the rainwater catchment system without appropriate protection measures in place.
6. I agree to record this Report with the Skagit County Auditor's Office for the purpose of it being made a part of the record of title. We have no objection nor will we make any claim against Skagit County as a consequence of this recording.
7. Specific drinking water system information for this lot may be on file at the Skagit County Department of Health or at the Skagit County Permit Center in the water files. (WA17-0090)

LEGAL DESCRIPTION: A portion on Gov't Lot 9, Section 2, Township 34N, Range 1E of the WM and a portion of Gov't Lot 1, Section 11, Township 34N, Range 1E of the WM, along the shore of Lake Erie a distance of 100 feet.

SITE ADDRESS: 5022 Lake Erie Way, Anacortes, WA 98221

LOCATION: P#19152 & ASSESSOR'S ACCOUNT NO: 340111-0-036-0004

WATER FILE: WA17-0090 Building Permit: BLD-2017-0431 (City of Anacortes jurisdiction)

OWNER (PRINT NAME): Glenn and Stephanie Dalglish

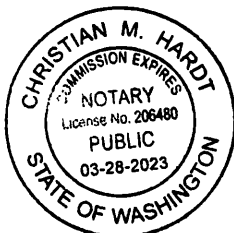
MAILING ADDRESS: 5022 Lake Erie Way, Anacortes, WA 98221

OWNER(SIGNATURE) Glenn Dalglish

Subscribed and sworn to me this 23 day of May, 2019.

Notary Public in and for the State of Washington.

Christian M. Hardt Residing at Mount Vernon, WA





3.2.3 Metering

The system shall be metered by a Badger Meter lead-free bronze alloy Recordall Disc Series Meter, or equivalent, in the mechanical room after filtration. It is recommended that a level indicator be installed on the primary cistern to allow for monitoring of water supply.

3.3 Treatment

3.3.1 Pre-filtration

The downspout pre-filtration design flow rate is based on a 1-hour/100-year storm event. The design flow rate for the pre filter is therefore determined as:

$$2968 \text{ sq ft} \times 0.01 \text{ gpm/sf} = 30 \text{ gpm}$$

The gutters shall be screened with Gutterglove Pro Series gutter screening and regularly maintained to prevent the accumulation of debris in conveyance plumbing and to reduce the water's contact time with contaminants. There shall be a screen basket with minimum of 1500 micron mesh per, ARCSA/ASPE/ANSI 63 4.3.1.a required treatment prior to storage, lined with a 40 micron Living Spring Water Co. screen basket filter. Water will be drawn from no less than 6" below the surface of the primary cistern, via a Wisy 2" coarse floating filter screening to 120 micron, ensuring no debris enters the primary pressure pump.

3.3.2 Primary Filtration

The primary filtration shall be a ONE 5 micron meltblown PP depth CT-COMM05-MB filter w/ ENPRESS cartridge tank purple series, followed by a ONE 3 micron carbon block high capacity CT-03-CB filter w/ ENPRESS cartridge tank blue series, followed by a ONE 1 micron absolute pleated PP CT-COMM1A filter w/ ENPRESS cartridge tank red series. This filtration train is rated to handle the MID of the household with a 7 psi pressure drop at the MID.

3.3.3 Disinfection

The Viqua UV Max Pro30, UV disinfection system treats up to 30 gpm at the radiant energy density specified by NSF. This UV carries a NSF 55 class "A" certification and the visual/audible alarm notifies of low UV conditions. The UV controller shall be assigned to a designated breaker and shall be maintained to manufacture's specifications.

3.4 Water Demand

Collected rainwater is to be used as a supplemental source of potable water for single-family dwelling.

3.5 Collection

3.5.1 Roofing

Roofing material is proposed as ~~metal~~ ^{Teksa 506mm Roof} baked enamel. All roofing materials (including flashing and solder) shall be free of potentially harmful metals such as copper or lead. The roof area shall be kept free of organic material, and trees should be well trimmed so as to minimize deposits of debris on the roof. Special care should be taken to avoid cedar trees in the vicinity of the roof collection area.

3.5.2 Gutters

Gutters shall be slopped at 1/16" per foot (min) and free of potentially harmful metals such as copper or lead. Gutters shall be screened with Gutter Glove Pro Series according to manufacturer's instructions.

3.5.3 Downspouts

Downspouts shall be either typical 4" aluminum seamed or 3" diameter pipe (min) and installed with watertight connections. All horizontal runs of downspout(s) shall have at least a 1% fall and clean outs shall be provided on any bends greater than 45 degrees. Tight line plumbing shall be constructed of a suitable material holding NSF certification for drinking water.



4.0 Testing

The following testing is required as noted, in Table shown below. Test results must be provided to the designer. The following samples should be tested and sent to a certified lab for testing and results. Prior to placing the water system into service, water quality testing at a minimum shall be performed for E. coli, total coliform and heterotrophic bacteria using the minimum quality standards in ARCSA/ASPE/ANSI 63 Table 4.1, outlining the potable water standards for the U.S Environmental Protection Agency's drinking water standard for pathogens. It is recommended that records of test results be maintained for at least two years.

Sample location	Constituents	Date
Downspout/Cistern raw water	Well test per Skagit County Alternative Source Application Rainwater Collection Water Quality	Prior to system put in service
Upstream of household use REQUIRED	total coliform and bacterial	Prior to system put in service as per system startup described below
Kitchen Tap Recommended	total coliform and bacterial	3 months after system is put into service
Kitchen Tap Recommended	total coliform and bacterial	1 year after system is put into service and annually thereafter

5.0 Inspections

The designer shall be provided results of testing for the first year of service and an inspection is required after completion of plumbing and prior to system being put into service following the initial water test. System maintenance and inspection is the responsibility of the owner/operator.

6.0 System Startup

System should be run for 15 minutes to flush the plumbing system without the filters in place. Once this flush has occurred, the filters may be installed in the filter housings and the system may be tested. Sample to be taken up stream of household use. Follow instruction of laboratory for sampling.

Note: System is not to be brought on line to household demand until after final inspection of system.

7.0 Operation and Maintenance

7.1 General Discussion

The operation and maintenance (O&M) of a rainwater collection system is crucial to its successful operation. The applicant(s) and any future residents are required to provide the necessary O&M.

The following O&M instructions are intended to highlight and supplement the O&M instructions of the individual equipment manufactures and the standard practice of "well water systems" and other small water systems. Therefore, the recommendations, of the various equipment manufacturers, must be followed in order to meet the O&M requirements of this system.

7.2 Inspections and Maintenance Schedule

Owner(s) / operator(s) of this water system are recommended to follow all inspection and maintenance frequency in this design. For inspections and maintenance see Operations and Maintenance procedures in Appendix E.



7.3 Required Documentation

The owner shall maintain a maintenance log showing all maintenance performed with dates and notes. This maintenance log shall be stored in the mechanical room in the vicinity of filtration equipment. A copy of this design shall be kept in this same location. A maintenance log is provided in Appendix E.

7.4 Positive Bacterial Test Procedure

If the water sampling results in a positive bacterial test, the following procedure is recommended:

1. Do not drink the water until bacterial test comes back negative, use bottled water, or boil water for 1 minute prior to drinking
2. Inspect UV light for proper operation, clean and/or replace bulb as needed
3. Inspect all gutters, pre-filters, and filters and the cistern for proper operation to identify the source of contamination
4. Add chlorine to the system to result in 2-4 ppm of chlorine in water. The chlorine test kit should be used to verify the concentration. Use approximately 5 fl oz. for 1,000 gallons to achieve 2 ppm
5. Allow 15 minutes of contact time with chlorine
6. Run all taps for 5 minutes to flood the system with the chlorinated water
7. Retest
8. If positive results, replace UV bulb and all filters, then repeat steps 1 through 8
9. If negative results, retest in one month.

The carbon filter will remove the chlorine prior to drinking, however some chlorine smell and taste may be noticed. The amount of chlorine in water will decline over time as new rainwater dilutes the tank and the chlorine naturally dissipates.

7.5 pH Test Out of Range Procedure

If the water sampling results a pH result for the water outside of acceptable range of 5.5-8.5 and the water is too acidic, then add 1 tablespoon of baking soda per 100 gallons in the cistern to restore the pH to closer to neutral.

7.6 Back-up water supply

Existing well or hauled water.