

**SNOHOMISH HEALTH DISTRICT BOARD OF HEALTH
ORDINANCE NO. 17-01**

AN ORDINANCE OF THE SNOHOMISH HEALTH DISTRICT AMENDING CHAPTER 9.1 OF THE SNOHOMISH HEALTH DISTRICT SANITARY CODE ENTITLED "WATER SUPPLY: DRINKING WATER RULES AND REGULATIONS" TO INCLUDE A NEW SECTION TO BE TITLED "SUPPLEMENTAL DRINKING WATER POLICIES AND PROCEDURES FOR INDIVIDUAL WATER SYSTEMS – RAINWATER CATCHMENT SYSTEMS"

WHEREAS, in order to preserve, promote, and improve the public health, and as set forth in RCW Chapter 70.05.060, the Snohomish Health District Board of Health has adopted rules known as the Sanitary Code of the Snohomish Health District Board of Health; and

WHEREAS, the duties and functions derived from the Sanitary Code of the Snohomish Health District Board of Health includes provisions and procedures for evaluation of individual water supplies for potability and adequacy; and

WHEREAS, there exists the technology and demand for alternative sources of adequate and potable water; and

WHEREAS, applicants for permits for new development desire additional options for meeting the minimum requirements for adequate and potable water; and

WHEREAS, rainwater catchment systems can offer an alternative, adequate, and potable source of domestic water;

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF HEALTH OF THE SNOHOMISH HEALTH DISTRICT THAT THE SNOHOMISH HEALTH DISTRICT SANITARY CODE BE HEREBY AMENDED TO INCLUDE A NEW SECTION TITLED "SUPPLEMENTAL DRINKING WATER POLICIES AND PROCEDURES FOR INDIVIDUAL WATER SYSTEMS – RAINWATER CATCHMENT SYSTEMS" AS SET FORTH BELOW.

**SNOHOMISH HEALTH DISTRICT SANITARY CODE
CHAPTER 9**

Chapter 9.1, New Section 2

TITLE: Supplemental Drinking Water Policies and Procedures for Individual Water Systems – Rainwater Catchment Systems

- I. In accordance with state and local regulations, the Snohomish Health District (SHD) performs assessments of proposed and existing Individual Water Supplies (IWS's) for adequacy and potability. These assessments are for the purposes of establishing proof of adequate and potable water as a part of the approval process for subdivisions, building permits and/or issuance of permits for installation of on-site sewage disposal systems. Further, assessments are requested in response to inquiries received from individuals, agencies, and other entities seeking information regarding IWS's.

- II. The following "Supplemental Drinking Water Policies and Procedures for Individual Water Systems-Rainwater Catchment Systems" (supplemental procedures) are established pursuant of Snohomish Health District Ordinance 17-01, prescribing minimum requirements, standards, and procedures for assessment and use of Rainwater Catchment IWS's, prescribing data to be disclosed to the Environmental Health Division concerning the use of Rainwater Catchment IWS's and setting forth the information to be furnished to the Environmental Health Division prior to response by SHD to any request for assessment of a particular Rainwater Catchment IWS. Nothing contained in this process shall be construed to prevent the Health Officer from requiring compliance with more stringent requirements than those contained herein where such requirements are essential to maintain a safe and sanitary condition and to protect public health.
- III. Definitions: In addition to the definitions found in the *Snohomish Health District Sanitary Code* Chapter 9.2, Section 2 of the *Guidelines for Determining Water Availability for New Buildings*, Ecology Publication 93-27, April 1993 and WAC 173-160, the following shall apply:
- A. "Adequate": Means meeting the design, construction, treatment and quantity requirements of these supplemental procedures.
 - B. "Individual Water Supply (IWS)": Consists of one rainwater catchment source serving one (1) Single Family Residence, in compliance with the State Department of Ecology Policy 1017 *Water Resources Program Policy Regarding Collection of Rainwater for Beneficial Use* and is exempt from the State Department of Health (DOH) Drinking Water Regulations WAC 246-291.
 - C. "Potable": Means meeting the water quality parameters as established in these supplemental procedures.
- IV. Individual Water Supplies: Assessments, Policies, and Procedures.
- A. Assessments for determining water availability and acceptance for new buildings and/or issuance of permits for installation of on-site sewage disposal systems for new residences includes the following:
 - SHD approval of "Request for Review: Individual Water Supply" including the following minimum submittals:
 - a. Signed Declaration of Applicant;
 - b. An accepted rainwater collection and treatment design meeting all the requirements of section B (below).
 - B. Determining Maximum Contaminant Level (MCL) exceedances for a Rainwater Catchment IWS:
 - 1. Coliform bacteria are not to exceed one per 100 ml. for any sample tested using the membrane filter method; nor are there to be any present using the Presence/Absence method of testing.
 - 2. The presence of any tested primary contaminant measured above the MCL, as defined in WAC 246-290-310, shall make that water supply initially unacceptable and subject to further sampling and testing to determine whether an MCL exceedance has occurred.
 - a. Three (3) samples must be taken of the treated water.

- b. The water must be tested for the same contaminant(s) found in excess of the MCL in the initial sample and the results of the three samples will be averaged. The average of these three (3) sample results will be used to determine if an MCL exceedance has occurred. If any single sample exceeds double the MCL, then the violation will be considered confirmed.
 - c. At least one of the three (3) samples must be collected by SHD personnel.
 - d. No two samples used for averaging may be collected on the same day.
- C. Water Treatment-Required: Pursuant to these supplemental procedures, as well as other guidelines presently in effect, when evaluating test results for primary contaminants, the MCL's cannot be exceeded and must be in compliance with RCW 19.27.097, as a potable water supply. However, RCW 19.27.097 and the Department of Ecology (DOE) Guidelines have not provided specifics on the issue of treatment of such water to be in compliance with RCW 19.27.097. Therefore, for the sake of consistency in the evaluation by SHD and to provide commonality of standards for applicants, as well as standards by which the County can consider the recommendations of the SHD relative to the same, the following constitute what the SHD considers to be minimum acceptable standards for treatment when a rainwater catchment system is proposed.

The SHD shall provide to Snohomish County a recommendation of general compliance with the DOE Guidelines and these procedures for a Rainwater Catchment IWS, provided that an applicant has demonstrated satisfactory treatment and provided the following all of the following conditions have been or shall be met:

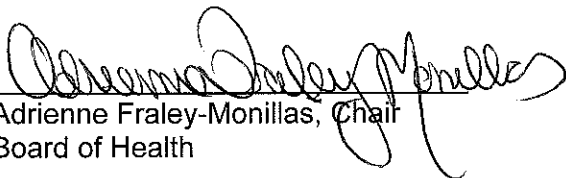
1. Water treatment must be installed at or before the point of entry and provide for whole house treatment. Any supplied supplemental water must also be treated by the same system.
2. Point of use treatment devices shall not be considered to satisfy the requirements of these procedures.
3. The treatment system must be capable of producing a minimum of 350 gallons of treated water per residential connection per day to meet peak daily demands. However, a daily volume of less than 350 gallons per residential connection may be considered adequate if such a reduced volume is combined with appropriate conservation or storage measures rendering the additional volume unnecessary. The treatment system plan shall not allow the plumbing arrangement to bypass the treatment system.
4. Rainwater Catchment and Treatment Proposals shall be designed by a State of Washington Licensed Professional Engineer (P.E.) and shall at a minimum include:
 - a. A "water budget" detailing the expected quantities of rainwater to be stored and treated, expected consumptive use, and methods of supplementing potable water in case of shortages. The water budget must demonstrate a minimum of 200 gpd as the long-term average daily demand. Data sources for expected precipitation must be provided.
 - b. Square footage of rainwater catchment area.
 - c. Type of all materials to be used in constructing the proposed rainwater catchment system. Wood and petroleum based roofing materials are not allowed. All piping, storage tanks and treatment system components shall be NSF or FDA approved for

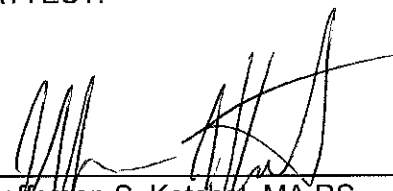
- drinking water systems. Storage tanks shall be located above ground or designed by a P.E. All concrete tanks must be designed by a P.E.
- d. Filtration and disinfection is required with a detectable disinfectant residual maintained. Treatment systems shall be designed to achieve 99.99% (4-log) removal/inactivation of viruses, 99.9% (3-log) removal/inactivation of *Giardia lamblia* and 99% (2-log) removal of *Cryptosporidium*.
 - e. Level of required disinfectant residual.
 - f. Expected yield of treated water.
 - g. Locations at which treated water will be supplied.
 - h. Other water quality parameters considered in the design of the treatment process.
 - i. Minimum Operation and Maintenance requirements for the treatment process.
 - j. Method of treatment process residuals management.
 - k. Minimum ongoing testing requirements. To include, at a minimum, daily residual disinfectant monitoring, flow usage data collection, quarterly testing of those parameters listed in section IV(C)(9) of these supplemental policies and procedures as well as any additional possible contaminants identified by the design engineer.
 - l. Submittal of the Health District *Individual Water System Treatment System* fee.
5. Prior to acceptance of a rainwater catchment proposal the applicant/property owner is required to record with the Snohomish County Auditor, at the applicant/property owner's expense, a statement containing the common and legal address of the property, the property legal description and tax parcel number, as well as the present owner's name and containing, as a minimum, the following additional information:
- a. An identification of the water source for the residence as a rainwater catchment system.
 - b. A disclosure of the gallons per day flow that the system is expected to produce from rainwater catchment on an annualized basis.
 - c. The proposed source of water to be utilized in the event that the rainwater catchment system cannot produce the quantities needed.
 - d. The type of treatment process installed.
 - e. The expected yield of treated water, expressed in gallons per day.
 - f. Locations at which treated water is provided.
 - g. That the treatment device will be properly maintained, along with periodic sampling, to insure continued safety of the water supply. (NOTE: Specific sampling frequency is to be set in accord with the designing engineer's recommendations, with a minimum of no less than quarterly.)
 - h. A stated understanding and acknowledgment, by the property owner, that failure to sample and maintain the treatment system may result in adverse health effects to the users of the water supply and that any untreated water is considered unsafe for consumption.
 - i. The owner's obligation and responsibility to conduct routine testing as required and to provide testing results to the Health District upon request.

- j. The owner's obligation and responsibility to notify future property owners, heirs, successors, or tenants about the treatment device, proper maintenance and operations, sampling requirements, potential health risks, and most recent sample results of the water supply both before and after treatment.
6. All proposals for rainwater catchment water systems shall be reviewed by SHD for consistency with these policies and procedures. Furthermore, the applicant shall execute a statement which provides that any such review shall not constitute a warranty or endorsement by SHD that such a collection and treatment system in fact works, is reliable, or otherwise warranted or guaranteed to effectively treat the water to eliminate all health risks. In all respects, the applicant assumes full and complete responsibility and liability relative to the effectiveness, reliability and viability of a water treatment system.
7. Once approved by SHD, a rainwater catchment IWS proposal will remain valid for two calendar years from date of written approval. Upon issuance of development permits for the associated single family residence the proposal will remain valid for the term of the development permit(s).
8. The applicant/property owner, prior to final approval of an onsite sewage disposal system installation and/or occupancy of the structure served by the water supply, is required to submit:
 - a. Signed Declaration of Applicant.
 - b. Satisfactory results of a bacteriological analysis.
 - c. Satisfactory results of inorganic chemical analyses for the following: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, sodium, fluoride, nitrate, and any other possible contaminants identified by the designing engineer as a required test parameter.
 - d. A signed statement from a P.E., stating that the system was installed/constructed according to the submitted design or with any changes from the design clearly identified. Changes that may affect the quality or quantity of treated water delivered may require submittal of additional design information.

ADOPTED BY THE BOARD OF HEALTH this 12th day of September 2017.

ATTEST:


Adrienne Fraley-Monillas, Chair
Board of Health


Jefferson S. Ketchel, MA RS
Interim Administrator