



**WHATCOM COUNTY
HEALTH DEPARTMENT**

509 Girard Street
Bellingham, WA 98225
Phone (360) 676-6724

WATER AVAILABILITY NOTIFICATION

PRIVATE – RAINWATER CATCHMENT

SECTION ONE – APPLICABILITY:

Environmental Health approval of this form is NOT required if your building project:

- Does not include plumbing for potable water, or;
- Is a residential remodel or addition, which does not add additional bedroom(s) or results in an increase in floor space of more than 50%, or;
- Is replacing a permitted building, which has been demolished or removed. You must take evidence of the existence of the previous building to Whatcom County Planning & Development Services for review. Replacement building cannot have more bedrooms or more than 50% greater floor space than the previous building to be considered under this exemption.

SECTION TWO – INSTRUCTIONS:

Please read the attached information carefully for full instructions on how to proceed with obtaining rainwater catchment approval. Please submit this form and one copy of each document required to Whatcom County Health Department for review and approval.

Please allow at least 1 week for the approval process. This information will be kept on file at the Environmental Health Division. **The documents required are:**

For Initial Building Permit Approval

1. Water Availability Notification (this form)
2. A site plan (8.5" x 11", drawn to scale) showing all items listed in this packet
3. Completed Rainwater Catchment Design Checklist (attached)
4. Water treatment system schematic designed by a qualified individual or organization
5. Evaluation of Alternative Sources (attached)
6. Public Water Denial Form, if applicable (attached)
7. Affidavit of Owner/Operator (**signed, notarized, and recorded with the County Auditor**)
8. An Operation, Maintenance, and Monitoring plan for the water treatment system

For Final Occupancy Approval (to be done after treatment system installation)

9. Affidavit of Installer (**signed, notarized, and recorded with the County Auditor**)
10. A final post-treatment water sample results (conducted by a certified laboratory) showing adequate removal of contaminants

SECTION THREE – APPLICATION:

Applicant's Name _____

Current Mailing address _____

City _____ State _____ Zip _____ Phone _____ or _____

Project Type (check one): Single Family Residence ADU

Tax Parcel Number (proposed home) _____

Proposed residence address _____

Notification: Call _____ Mail to _____

I certify that all required water sample analyses will be obtained from the proposed source.

Signature _____ Print Name _____ Date _____

APPROVALS:

Initial (Building Permit)

Approved Denied Date _____

By _____
Whatcom County Health Department

Comments _____

Final (Occupancy)

Approved Denied Date _____

By _____
Whatcom County Health Department

Approval Expires _____

Comments _____

Required Documents For Rainwater Catchment Application

The Washington State Department of Ecology issued Policy Number 1017 on October 9, 2009, stating that residents can collect and store rooftop-collected rainwater for on-site use without having to go through the water right permit process per state water law RCW 90.03. The roof collecting the water must be part of a fixed, above-ground structure with a primary purpose other than collection of rainwater for beneficial use.

► SITE PLAN

Submit a site plan drawn to scale on an 8.5" X 11" sheet of paper. Items to be included on site plan include property lines, location of roof-top where collection is to occur, water storage tank locations, water line easements (if required), and the location any potential sources of contamination such as septic drainfields, septic tanks, sewer lines, and storm water infiltration trenches.

► DESIGN CHECKLIST (attached)

Design specifications must include gallons/person/day, dry period calculations, storage tanks, and capacities, collection surface area and material, filtration systems, and disinfection devices.

► TREATMENT SYSTEM DESIGN / SCHEMATIC

IMPORTANT: It is the specific intent of this approval to place the obligation of complying with the requirements specified under Treatment System Design and Maintenance, Operation, and Monitoring, upon the owner or operator of the water system. No provision and no term used in this application is intended to impose any duty whatsoever upon Whatcom County Health Department. The Health Department will simply act to receive the documents and information requested in these sections.

A qualified individual or organization must design the treatment system. **Unless all components and materials used in the treatment system are certified by the National Sanitation Foundation (NSF), a licensed engineer must design the entire treatment system.** Included in the category of qualified individuals and organizations, are accredited professionals with the American Rainwater Catchment Systems Association (ARCSA) and professional engineers with experience in the design of drinking water treatment systems. Good engineering practices shall be used in the design of all water systems, as specified in WAC 246-290.

- ❑ A detailed schematic of the treatment system and specifications of components must be submitted to the Health Department. All equipment and materials used by the treatment system must be certified by the most recent National Sanitarian Foundation (NSF) Listings: Drinking Water Treatment Units and Related Products, components and Materials. Where NSF certified equipment or materials are not available to address contamination problems for a particular water supply, the Health Department may accept alternates designed by a licensed engineer. Ultraviolet light disinfection systems must conform to State Department of Health Guidelines for Ultraviolet Systems.
- ❑ The treatment system must be designed as a whole house treatment system; all faucets must provide treated water. Plans for a storage tank(s) must be included in the design submitted to the Health Department. Plans must include size, type, and location on property. It is recommended as part of the design to designate area for additional storage tanks if they are needed.

Finished Water Quality

Finished water quality from a proposed source of supply shall conform to the minimum quality standards established in the Whatcom County Drinking Water Ordinance and WAC 246-290. Treatment system design must include filtration and disinfection.

► EVALUATION OF ALTERNATIVE SOURCES (attached)

The Health Department will only consider the use of rainwater catchment for a private water system if no suitable alternative is available. Preferred alternative sources include:

- Connection to an existing public water system.
- Connection to an existing or neighboring well.
- Drilling a new well.

Examples of evidence of no alternative source include:

- An evaluation of well logs in the area showing lack of groundwater.
- Written statements from a licensed well driller indicating there is no groundwater in a particular area.
- Descriptions of the site limitations, such as set backs to property lines, sewer lines or on-site septic systems.

► AFFIDAVIT OF OWNER/OPERATOR BEFORE BUILDING APPROVAL

- The system **owner/operator** must submit a signed, notarized and recorded (with the County Auditor) copy of an Affidavit of Owner/Operator (see attached form) indicating that they are the Owner/Operator of this treatment system.

► MAINTENANCE, OPERATION AND MONITORING PLAN

A Maintenance, Operation and Monitoring Plan that specifies what must be done to ensure that the treated water will meet the quality standards for which the system was designed. This Plan needs to include the following:

- A plan to provide for the monitoring of the operation of the water treatment equipment, including means to provide for the servicing, disinfecting, repairing and replacements for the system as frequently as necessary (taking into consideration the system's design, anticipated use, and the type and level of contaminants present).
- A schedule for on-going water quality monitoring.
- Provisions (which may include a contract) for the on-going servicing, repair and necessary replacements of the water treatment system as described in the plan must be provided by the owner or operator of the system. Operation and maintenance of system components should include, but may not be limited to the following:
 - ✓ **Roofing:** Roof should be cleaned as needed or at least once per year.
 - ✓ **Rain Gutters:** Gutters should be cleaned at least monthly during winter storm season to prevent accumulation of debris, leaves and needles. Screens should be installed on top of downspouts to prevent accumulation of debris from getting into system.

- ✓ **Pre-storage filtration:** Designed to prevent accumulation of sediments and other particles in water storage tank(s)
- ✓ **Storage Tanks:** Should be cleaned and disinfected as needed or at least once per year.
- ✓ **Filtration:** Operation and maintenance of the filtration system is critical. If proper maintenance is not followed, contaminants can pass through the filter and/or collect and multiply on the filter's surface. Specific maintenance schedules are based on manufacturer's recommendation.
- ✓ **Disinfection:** If manually chlorinated, describe procedure. All other types of disinfection (automatic chlorinator, ozone, ultraviolet) will have specific maintenance schedules based on manufacturer's recommendations.

▶ **AFFIDAVIT OF INSTALLER**

- ❑ The system **installer** must submit a signed, notarized and recorded (with the County Auditor) copy of an Affidavit of Installer (see attached form) indicating that the installation is in compliance with the requirements specified in the Treatment System Design section of this application. It is recommended that the installer work under the oversight of the system designer.

▶ **TREATED WATER TESTING REQUIREMENTS**

The following tests must be completed with satisfactory results obtained and reported to the Health Department prior to occupancy of the building. A Washington State certified laboratory must conduct all testing.

- ❑ **Bacteriological:** If a disinfection system is required, a treated water sample must be taken following treatment and analyzed for total and fecal coliform. Satisfactory results require that no coliform bacteria be present.
- ❑ **Inorganic Chemical and Physical:** Raw and treated water samples must be collected and analyzed for the parameter(s) that are to be removed through treatment such as arsenic, barium, cadmium, chromium, fluoride, lead, mercury, nitrate (as N), selenium, silver, and turbidity. Satisfactory results require: (1) Compliance with the MCL's specified in the Whatcom County Drinking Water Ordinance, and (2) System performance specified in the treatment system design.
- ❑ **Other:** Additional sample(s) must be collected and analyzed for any other contaminants that were identified as requiring treatment in the pre-design study. Satisfactory results require compliance with the MCL's specified in the Whatcom County Drinking Water Ordinance, or if not specified in the Ordinance, EPA Primary Drinking Water Requirements (40 CFR Parts 141 and 142).

▶ **ADDITIONAL REQUIREMENTS**

Additional requirements may be specified by the Health Officer.

RAINWATER CATCHMENT DESIGN CHECKLIST

Applicant Name _____ Telephone: _____

Tax Parcel Number _____

The design for a rainwater catchment system is required to contain the following information:

- 1. A scaled layout sketch of the system showing the system design.
- 2. A completed rainwater catchment water budget (see Attachment A – include with Operation and Maintenance Manual).
- 3. Description of how the system works. Include system components and their uses and the number of persons the system is designed for (include with Operations and Maintenance Manual).
- 4. Materials Used. Items C-F below must comply with NSF, FDA, or AWWA Drinking Water Standards for potable water (include model #, manufacturer and NSF, FDA or AWWA certification, and sizing):

A. Roofing Material (enameled metal, tile or cement tile):

B. Rain gutters (PVC or enameled metal):

C. Pre-storage filtration (prior to storage tank):

D. Water Storage Tanks:

E. Filtration (must meet NSF Standard 53 or 58 for cyst removal).

F. Disinfection (chlorination, ozone or ultraviolet [ozone and ultraviolet units must have a system failure warning device]):

ATTACHMENT A – RAINWATER CATCHMENT WATER BUDGET

Step 1 Number of users (minimum 2): _____
 Gallons per day/person: x _____ (50g/person/day min, recommend 65)*
 Gallons per day: = _____ (users x gpd/p=)

*These values are for indoor water use. Outdoor water use needs to be added to this value, if necessary.

Step 2 Gallons per day: _____ (see total for Step 1)
 Days in residence/year: x _____
 Total water use per year = _____

Step 3 Rainfall (see table): _____
 Water per sq. ft/inch of rain: x 0.623
 Gallons water/sq. ft/year: = _____

The following rainfall values are taken from the Western Regional Climate Center www.wrcc.dri.edu

Blaine	41"
Bellingham	35"
Clearbrook	46"
Glacier	61"
Lake Whatcom	64"
Marietta	32"

If you are designing based on a different rainfall amount or for a different location than those specified, justify the amount you are using.

Step 4 Total water use per year: _____ (see total for Step 2)
 Gallons required per day: ÷ _____ (see total for Step 3)
 Sq. ft. collection area needed: = _____ (divide total water use by gallons water/sq. ft./yr)

Step 5 Days of storage needed: _____ (90 or # of days in Step 2)
 Gallons required per day: x _____ (see total for Step 1)
 Gallons of storage required: = _____ (days of storage x gpd)

REQUIRED COLLECTION AREA (roof sq. footage): _____ (see total for Step 4)

REQUIRED STORAGE CAPACITY: _____ (see total for Step 5)

CERTIFICATION OF DESIGNER:

I have carefully reviewed the requirements of the Whatcom County Health Department's Water Availability Policy for design of rainwater catchment and treatment systems. The rainwater catchment and treatment system designed for the above building is in full compliance with the Health Department's Water Availability Policy and effectively secures a potable water supply for the building.

 Designer (Print Name)

 Signature

 Date

Evaluation of Alternative Sources

The use of rainwater for private water systems will be considered only if no suitable alternative is available. Preferred sources include public water systems and uncontaminated groundwater and springs. Evidence must be provided to the Health Department indicating that no such alternative sources are available. Evidence could consist of a the "Denial for Public Water System" form (attached), an evaluation of adjacent well reports and water quality information, exploration of potential to share a neighbor's uncontaminated well, or other descriptions of the site limitations.

Tax Parcel Number: _____

- o Can you connect to an existing public water system? _____
(If you are in the service area of an existing public water system please submit the "Denial for Public Water System" form in this packet).
- o Can you connect to an existing uncontaminated neighboring well or spring? _____
- o Can you drill a new well? _____
If not, do you have evidence of existing sources near your project that are also contaminated? _____
Please submit any related information.
- o Please explain any other site limitations:

Applicant Signature

Date



WHATCOM COUNTY HEALTH DEPARTMENT
DENIAL FROM PUBLIC WATER SYSTEM

509 Girard Street
Bellingham, WA 98225
Telephone: 360-676-6724
Fax: 360-676-6771

If public water is available for your Land Use Application, please complete the Water Availability Notification Form for Public Water. Forms are available at our office.

SECTION ONE - APPLICABILITY:

Complete this form if you are applying for a Land Use Application and there is an existing public water system that may be able to serve your project.

SECTION TWO - INSTRUCTIONS:

After you have completed Section Three, take this form to the water system manager or authorized representative so they can complete Section Four. Then return this form to Whatcom County Health Department for review.

SECTION THREE - APPLICATION:

Completed by Land Use applicant:

Applicant's Name _____ Applicant's Phone _____

Project Name _____ Project Number _____

Project Type (check one): [] Single Family Residence [] ADU [] Commercial [] Plat

Tax Parcel Number _____

Contact Name _____ Contact Phone _____ or _____

Contact Address _____ City _____ State _____ Zip _____

SECTION FOUR - CERTIFICATION:

Completed by water system manager or representative.

Water System Name _____ State ID# _____ This water system is unable or unwilling to supply water to the above listed land use application.

Signature and Title _____ Date _____

Address _____ Phone _____

SECTION FIVE - REVIEW:

Completed by Whatcom County Health Department.

Date received _____

[] Accepted

[] Rejected

Reason _____

_____ Date _____

Whatcom County Health Department

RETURN DOCUMENT TO:

Whatcom County Health Department
509 Girard Street
Bellingham, WA 98225

Use dark black ink and print legibly. Documents not legible will be rejected per RCW.

Document Title(s):

Affidavit of Owner or Operator

Grantor(s):

Page number where additional grantor(s) can be found:

Grantee(s):

Page number where additional grantee(s) can be found:

Abbreviated legal description: (lot, block, plat name or; qtr/qtr , section , township & range or; unit, building and condo name). *Complete legal description from current deed must also be attached.*

Page number where complete legal description can be found:

Assessor's Parcel Number:

Affidavit of Owner/Operator

STATE OF WASHINGTON)
)
COUNTY OF WHATCOM) ss. Affidavit of _____

_____, being first duly sworn upon oath,
deposes and says:

I have a rainwater catchment and treatment system for the building located at _____
_____ (address) with a legal description as follows:

I understand that the only source of water for this property is collected rainwater that is stored and treated. The total number of gallons stored on-site and the treatment system design are detailed in the approved water availability packet. I agree to adhere to the operation, maintenance and monitoring plan outlined in the approved rainwater catchment treatment design.

I understand that the obligation to comply with treatment system design, installation, operation and monitoring lies with the property owner and not Whatcom County.

I agree to disclose all provisions of the plan to any person to whom I sell, lease, rent, or otherwise allow to occupy the building or operate the treatment system.

SUBSCRIBED and SWORN to before me this ____ day of _____, 20____.

NOTARY PUBLIC in and for the
State of Washington,
residing at:

My Commission expires:

RETURN DOCUMENT TO:

Whatcom County Health Department
509 Girard Street
Bellingham, WA 98225

Use dark black ink and print legibly. Documents not legible will be rejected per RCW.

Document Title(s):

Affidavit of Installer

Grantor(s):

Page number where additional grantor(s) can be found:

Grantee(s):

Page number where additional grantee(s) can be found:

Abbreviated legal description: (lot, block, plat name or; qtr/qtr , section , township & range or; unit, building and condo name). *Complete legal description from current deed must also be attached.*

Page number where complete legal description can be found:

Assessor's Parcel Number:

Affidavit of Installer

STATE OF WASHINGTON)
)
COUNTY OF WHATCOM) ss. Affidavit of _____

_____, being first duly sworn upon oath,
deposes and says:

I have installed a rainwater catchment and treatment system for the building
located at _____ (address) with a
legal description as follows: _____

The rainwater catchment and treatment system installed at the above residence
is installed according to the design approved by the Whatcom County Health
Department. All components and materials used in the water treatment system
are as specified in the approved design. The attached treated water sample
results verifying system performance were taken from the residence served by
the treatment system.

SUBSCRIBED and SWORN to before me this ____ day of _____, 20____.

NOTARY PUBLIC in and for the
State of Washington,
residing at:

My Commission expires:



WHATCOM COUNTY HEALTH DEPARTMENT
LABORATORIES IN WHATCOM COUNTY
CERTIFIED BY THE STATE OF WASHINGTON
February 2010

509 Girard Street
Bellingham, WA 98225
Telephone: 360-676-6724
Fax: 360-676-6771

The following laboratories are certified by the Washington State Department of Ecology. Please contact the laboratory to verify correct sampling processes and associated fees.

Avocet Environmental Testing
1500 N. State Street, Suite 200
Bellingham, WA 98225
(360) 734-9033

Edge Analytical Inc. – Bellingham
805 W. Orchard Street, Suite 4
Bellingham, WA 98225
(360) 715-1212
(800) 755-9295

Exact Scientific Services, Inc.
3929 Spur Ridge Lane, Suite 1
Bellingham, WA 98226
(360) 733-1205

Please note, this list of laboratories is for Whatcom County only.

A complete list of State Certified Laboratories is available on the Department of Ecology's website at: <http://www.ecy.wa.gov/programs/eap/labs/search.html>