



Department of Health and Human Services  
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286 Water Street  
11 State House Station  
Augusta, Maine 04333-0011  
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Drinking Water Program

Fax (207) 287-4172

## DRINKING WATER SYSTEM CHANGE APPLICATION

**PURPOSE FOR THIS APPLICATION:** This application is used to capture information necessary for Drinking Water Program staff to review and approve proposed construction, addition, or alteration at a Public Water System involving the source, treatment, or storage of water.

**SCOPE:** This application applies to projects that are not funded by the Drinking Water State Revolving Fund (DWSRF). However, there are instructions on how to propose changes for a DWSRF project on page one of the stand-alone application.

**ORIGINATOR:** McKenzie Parker, Nathan Saunders

**OWNER:** Nathan Saunders

**PROCEDURE:** See instructions on the application.

**ASSOCIATED DOCUMENTS:**

- [DWP Treatment Review and Approval Policy & Procedure \(DWP0161\)](#)

**SUPERSEDED DOCUMENTS:** None

**RETENTION:** This document is retained per DWP Record Retention Schedules

**REVISION LOG:**

Section	Page	Rev.	Date	Description Of Change	Approved by:
		Original	4/12/17	This is an expansion of the Treatment Review and Approval Application which was in the Treatment Review and Approval Policy & Procedure (DWP0161). The application was expanded to cover treatment change and other system changes that are not treatment related.	Nathan Saunders

Title: Drinking Water System Change Application  
SOP ID: DWP0227  
Revision:

Prepared By: N. Saunders  
Date: 7-12-2017  
Date of Revision:

To print just the application, print pages 3-10.



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## **Drinking Water System Change Application**

The Maine Rules Relating to Drinking Water state that “No new construction, addition, or alteration involving the source, treatment, or storage of water in any system shall be commenced until the plans and specifications have been submitted to and approved in writing by the Department (DHHS), unless such construction, addition, or alteration is exempted... [for more detail see the Maine Rules Relating to Drinking Water, Section 3.C.1. at [www.medwp.com](http://www.medwp.com)]

In order for the Drinking Water Program (DWP) to review a water system change proposal, pertinent information must be made available to properly review the request. To avoid numerous individual requests for information, this application was created to request all necessary information at once.

When requesting review and approval of water system change, please complete this application and provide applicable information as requested. Not all questions on this application will apply to your project. If a question or request for information is not applicable to the project being reviewed, simply note this on the application.

Large scale projects for which plans and specifications have been prepared by an engineering firm (standpipes/reservoirs, entire treatment plant construction/modification, pump/booster station designs) may submit the prepared plans and specifications in place of the Drinking Water System Change Application. The proposal must include a reason for the project, the estimated project schedule, and a statement by the system’s Primary Operator acknowledging approval of the proposed plan.

Note: This application is not intended for Drinking Water State Revolving Fund (DWSRF) projects. For DWSRF projects, submit project plans and specs to the DWP Project Manager for that project. For questions on this, contact Nathan Saunders at 287-5685 or [Nathan.Saunders@Maine.gov](mailto:Nathan.Saunders@Maine.gov).

### **Completed applications can be mailed to:**

Maine Drinking Water Program  
Station #11  
Augusta, Maine 04333.

An electronic copy may also be emailed to your Public Water System Inspector.

If you have questions, please call 207-287-2070.

**Please note that the Drinking Water Program has 30 days to review your application and provide approval. Submit your application as soon as possible to prevent delaying your anticipated start date. No changes can be made to the water system before written approval is received from the DWP.**



Engineer stamp requirement. Note: Water Districts and Municipal Water Systems require a Professional Engineer stamp for projects exceeding \$100,000.

Cost Estimate Provided (< \$10,000)

Project Stamped by P.E. (>= \$10,000)

9. Provide validation (a written statement) that all plumbing work will be completed by a Maine licensed plumber when required by the Maine Internal Plumbing Code or Maine Statutes. (See Necessary Qualifications of Treatment Designers and Installers, DWP document DWP0161, available on-line at [www.medwp.com](http://www.medwp.com)).
10. All plumbing components meet the Reduction of Lead in Drinking Water Act (requirements and exemptions can be found at [www.epa.gov/safewater](http://www.epa.gov/safewater)).
- Yes  No

### Chemical Addition

1. What is the purpose of the chemical addition?
2. Identify the specific type of chemical(s) (e.g., chlorine, soda ash, potash etc.).
3. How will chemical injection be controlled? (Flow meter? Pressure switch?)
4. What size day tank will be used?
5. Will there be secondary containment?
6. What will be the target residual/pH?
7. Provide specifications from the supplier/manufacturer and NSF Standard 60/61 certification for each of the following:  

Provided

  - a. Chemical additive
  - b. Chemical day tank
  - c. Chemical feed pump
8. For Chlorination Systems, include maximum flow rate, temperature, pH, and contact tank size to be used to determine the free chlorine residual required for 4-log inactivation of viruses. [All chlorination systems installed after the date of this policy (3/27/14) must be capable of achieving 4-log inactivation of viruses]

Max Flow Rate

Temp

pH

Tank Size

Contact Tank Baffle Factor

## Anion Exchange / Cation Exchange/ Adsorptive Media

1. What is the purpose of the treatment?
2. Identify the specific type(s) of media (e.g., Purolite A300E, ArsenXnp, etc.).
3. Specify the number of treatment vessels (if greater than one unit, describe the configuration (e.g., in series, parallel, twin-alternating, etc.).
4. What is the size (volume) of each vessel?
5. Describe backwash or regeneration processes that will occur (*N/A for non-backwashing Adsorptive Media*)
  - What is the purpose? (e.g., regenerate media, remove fines, to remove channeling, etc.)
  - What is the factor controlling backwash/regeneration? (e.g., specific time, volume of water). **Provide the specific controlling value** (e.g., unit regenerates automatically every 3,000 gallons per flow meter attached to head unit).
  - Describe the location of where spent backwash/regeneration water is being disposed (e.g., combined septic field, sanitary sewer, etc.) – note that the DEP and possibly the Radiation Control Program will be notified of all backwashing/regenerating water treatment systems with the potential that the proposed waste disposal method will be unacceptable. Applicant must show that a septic field is capable of handling the change in hydraulic load resulting from the new treatment backwash.

HHE-200 and Hydraulic Load Calculations Provided

6. Describe backflow prevention measures on all drains from treatment equipment.
7. Provide specifications from the supplier/manufacturer and NSF Standard certification for each of the following: Provided
  - a. Media
  - b. Treatment Vessel
  - c. Treatment Control Head
  - d. Salt
  - e. Brine Tank (Food grade acceptable)

## **Aeration**

1. What is the purpose of the treatment?
2. Identify the make and model number of aerator.
3. Describe the air inlet and vent design.
4. Provide specifications from the supplier/manufacturer.

Specifications Provided

## **Ultraviolet (UV)**

1. What is the purpose of the treatment?
2. What is the make/model number of the UV unit?
3. Provide specifications from the supplier/manufacturer and NSF Standard 55 certification.

Specifications/NSF Certification Provided

4. Describe any bypasses.

The following questions only pertain to UV installed for Disinfection (vs. oxidation for particulate removal).

5. How will it be ensured that the manufacturer's maximum rated flow and pressure are not exceeded.
6. What provisions will be in place to prevent untreated water from entering the distribution system in the case of a power outage/UV unit failure?
7. Describe how UV light intensity will be continuously monitored.





## **Storage / Pressure Tanks**

1. Will the new tank be replacing a tank currently installed or will it be installed in addition to existing storage?
2. What type of storage tank will be installed? (Bladder, hydropneumatic, atmospheric). Provide the make and model number, if applicable.
3. What is the volume of the storage tank?
4. Provide specifications for the tank from the supplier/manufacturer and NSF Standard 61 certification. (Food grade designation is acceptable in place of NSF 61 for synthetic tanks less than 15,000-gal in capacity which supplies less than 500 service connections.)

Specifications/NSF Certifications Provided

5. Will any other components be installed/applied as part of the tank installation? (Float switch, coatings/sealants for concrete tanks, etc.). Provide additional specifications from the supplier/manufacturer(s) and NSF Standard 61 certification.

## **Pumps**

1. Will the new pump be replacing a pump currently installed or will it be installed in addition to existing pumps?
2. What type of pump will be installed? (submersible well pump, booster pump, etc.). Provide the make and model number.
3. What is the capacity of the pump?
4. Provide specifications for the pump from the supplier/manufacturer and NSF Standard 61 certification.

Specifications/NSF Certification Provided

**Applicant Signature:**

Signature of individual completing this form: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of PWS's Primary Operator (PO): \_\_\_\_\_ Date: \_\_\_\_\_  
(or attach an e-mail from the operator showing the PO's approval of this proposal) If a water system is required to have an operator, the PO's signature or e-mailed approval for this project must be provided along with this application to the DWP.

Name of DWP Engineer (Reviewer, filled in by DWP): \_\_\_\_\_

**EXAMPLE: Diagram for a change application requesting to install a new GAC filter and upgraded UV unit.**

Note how the drawing designates between existing equipment and new proposed components. Use of a legend prevents the drawing from becoming cluttered and difficult to read, while still allowing the Reviewer a detailed view of the treatment system. Diagrams must include all new and existing treatment, location of sample taps, any bypasses, storage, pumps, and any other components in contact with potable water.

Existing System Components

- A = Sediment Filter
- B = Twin Alternating Softeners
- C = Brine Tank
- D = Arsenic Tanks
- E = Water Meter
- TP = Test point
- BV = Ball Valve
- CV = Check Valve
- PT = Pressure Tank

Proposed Equipment Changes

F = Viqua UV Max Pro10 Ultraviolet System & Solenoid Valve (Upgrade System)

G = 1 cf. Granular Activated Carbon

