STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH
DRINKING WATER SECTION

WATER MAIN APPLICATION

Instructions

This application is provided in the interest of facilitating the approval process for federally or state funded projects such as Drinking Water State Revolving Fund and STEAP grant projects that may include water main replacements or installations. Additional supporting information in response to any of the checklist items below may be included on a separate attached sheet(s) of paper if sufficient space is not provided. Clear reference should be made on which checklist item(s) are being addressed in more detail on the attached additional sheet(s). If a question is not applicable to the project, select N/A if available.

Section A. Type of Water Main Project (select all that apply)

☐ Water Main Extension (to serve customers with contaminated or low yielding private wells, new subdivision, etc.)
☐ Interconnection between Public Water Systems
☐ New Transmission Main (☐ Source or ☐ Distribution)
☐ Water Main Replacement (does not apply for emergency repairs)
☐ New Public Water System
☐ Other: _____

Section B. General Information

1. PWS Name: _____

   PWSID #: CT_____

   Project Name: _____

2. Please provide the name of the primary contact person who can answer technical questions regarding this project:

   Name: _____

   Title: _____

   Company: _____

   Address: _____

   _____

   _____

   _____

   Phone Number: _____

   Fax Number: _____

   E-mail: _____

3. Has a completed *Public Water System General Application for Approval or Permit* for this project been submitted? ☐ Yes ☐ No

4. Has one set of scaled plans been submitted showing, at a minimum, any known existing or proposed sanitary or storm sewers? ☐ Yes ☐ No

5.	Is the location of the proposed water main work in reference to the rest of the distribution system shown on the submitted plans or separate map?	☐ Yes	☐ No	
6.	If required, has a *Water Company Owned Lands (Change In Use) Permit Application* been submitted?	☐ Yes	☐ No	☐ N/A
7.	If required, has a *Sale of Excess Water Permit Application* been submitted?	☐ Yes	☐ No	☐ N/A
8.	Has any additional supporting information/documentation been submitted along with this application?	☐ Yes	☐ No	
9.	Will there be any significant planned interruptions of service during construction? (Note: interruptions of service must be reported to the Department on the standard *Notification Form* within 24 hours of the interruption per RCSA Section 19-13-B46)	☐ Yes	☐ No	

Section C. Existing Available System Capacity

1.	Do the existing sources of supply, treatment, transmission/distribution, pumping, and storage facilities have sufficient capacity to meet the expected demands of the project? If no, explain what measures will be taken to ensure that existing facilities will have sufficient capacity: _____ _____ _____ _____	☐ Yes	☐ No	

Section D. Sizing and Layout

1.	Will water mains be sized to meet peak demands, and will all service connections have a minimum water pressure at the main of 25 psi under normal operating conditions (including normal peak demands but excluding fire flows)?	☐ Yes	☐ No	
2.	Will any individual home booster pumps be installed?	☐ Yes	☐ No	
3.	Will positive pressure be maintained under all flow conditions, including fire flows if fire protection is provided, at all points in the distribution system?	☐ Yes	☐ No	
4.	Will pressure reducing devices be installed in areas where static pressures will exceed 125 psi?	☐ Yes	☐ No	☐ N/A
5.	If fire protection will be provided, will the system be designed in accordance with the requirements of the local fire protection regulatory authority?	☐ Yes	☐ No	☐ N/A
6a.	Will the water mains be sized to minimize excessive retention times and low flow areas during normal operating conditions whenever possible?	☐ Yes	☐ No	

6b. If excess capacity is required, explain what measures will be taken to minimize water quality deterioration during normal operating conditions: ☐ N/A

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7a. Will water mains be looped and dead-end water mains avoided whenever possible? ☐ Yes ☐ No

7b. If dead-end water mains are unavoidable, will flushing devices be installed at the termini of the dead-end water mains and an operational plan implemented to routinely flush the dead-end mains? ☐ Yes ☐ No ☐ N/A

Section E. Materials and Products

1. Specify all piping materials that will be used (not including service connections):

Pipe Material	Diameter (in.)	Length (l.f.)[1]	Thickness Class[2]	Pressure Rating[2]

1. Approximate length
2. If applicable

2. Will pipes, fittings, valves, meters, and fire hydrants conform, at a minimum, to the most current applicable AWWA standards if available? ☐ Yes ☐ No

3. Will all materials and products in direct contact with potable water be certified to NSF/ANSI Standard 61? ☐ Yes ☐ No

4. Will the materials and products be capable of withstanding internal and external forces to which they may be subjected while in service? ☐ Yes ☐ No

5. Will metallic materials and products be protected against internal and external corrosion? ☐ Yes ☐ No ☐ N/A

6. For non-metallic buried pipe, will a tracer wire, underground utility detection tape, or equivalent means be provided for pipe location? ☐ Yes ☐ No ☐ N/A

7. Will non-permeable pipe materials and products, including joint gaskets, be used in areas where organic contamination is reasonably known to exist or encountered during construction? ☐ Yes ☐ No

Section F. Appurtenances

1.	Will shut-off valves be installed at intervals and locations as determined by the PWS to minimize interruptions of service to customers during repairs or maintenance?	☐ Yes	☐ No	
2a.	Will air release valves or equivalent means be provided at high points where air may accumulate and cause pipe restrictions?	☐ Yes	☐ No	☐ N/A
2b.	Will air release valves be located and installed to prevent the entry of rainwater and vermin and not be subject to being submerged?	☐ Yes	☐ No	☐ N/A
3.	Will blow-offs or equivalent appurtenances be installed at low points of the water main installation where sediment may accumulate?	☐ Yes	☐ No	☐ N/A
4a.	Will chambers, pits, or manholes containing distribution system appurtenances be located, to the extent feasible, to prevent flooding or adequately drained to keep the structure dry?	☐ Yes	☐ No	☐ N/A
4b.	Where gravity drainage is not practical and a sump pump or other mechanical means are employed to drain the water to a storm sewer or other drainage system, will a check valve be installed on the pump discharge line and the discharge located above the normal flow elevation in the receiving chamber or pit?	☐ Yes	☐ No	☐ N/A
4c.	Will chamber, pit, or manhole drains NOT be connected directly to a sanitary or combined sewer?	☐ Yes	☐ No	☐ N/A
5.	Will flushing devices be installed at intervals and locations as determined by the PWS to allow for adequate flushing of the entire water main?	☐ Yes	☐ No	☐ N/A
6a.	Will the drain ports for dry-barrel fire hydrants be provided with suitable drainage and not be connected to any sewer?	☐ Yes	☐ No	☐ N/A
6b.	Will hydrant drains be located at least 10 feet from sanitary sewer force mains or any part of a subsurface sewage disposal system and at least 18 inches from gravity sanitary and storm sewers?	☐ Yes	☐ No	☐ N/A
6c.	If the water table in the area is known to be high will the drain ports be plugged and an operational plan implemented to pump the barrels dry during freezing weather?	☐ Yes	☐ No	☐ N/A
7.	Will fire hydrants NOT be installed on water mains that are not sized for fire protection and NOT connected to a PWS which does not have adequate flows/capacity to meet fire flows?	☐ Yes	☐ No	☐ N/A
8.	Will flushing devices NOT be directly connected to any sanitary or storm sewers?	☐ Yes	☐ No	☐ N/A
9.	Will flushing devices be capable of providing a minimum flushing velocity of 2.5 fps?	☐ Yes	☐ No	☐ N/A

10. Will appurtenances be installed in accordance with the more stringent of current applicable AWWA standards/manuals or manufacturer's instructions, if available? ☐ Yes ☐ No

11. Will appurtenances be firmly supported to prevent excessive settlement? ☐ Yes ☐ No

Section G. Service Connections

1. What is the approximate number of new domestic service connections that will be added for this project? (if no new service connections will be added, select N/A) _____ ☐ N/A

2. Will domestic service pipes have a minimum diameter of ¾ inch? ☐ Yes ☐ No ☐ N/A

3. Will domestic service pipes be sufficiently flexible to prevent fracture from expansion, contraction, and differential settlement? ☐ Yes ☐ No ☐ N/A

4. Will domestic service pipes be connected to a single-service corporation stop at the water main and be installed with a shut-off valve and curb box? ☐ Yes ☐ No ☐ N/A

5. Will domestic service connections be individually metered? ☐ Yes ☐ No ☐ N/A

6. Will means be provided to flush dedicated fire service lines to remove stagnant water? ☐ Yes ☐ No ☐ N/A

Section H. Installation

1a. Will the installation of water pipe be done in accordance with the more stringent of current applicable AWWA standards/manuals or manufacturer's instructions, if available? ☐ Yes ☐ No

1b. At a minimum will: ☐ Yes ☐ No

- continuous uniform and stable support, free of unsuitable materials, be provided such that the water main will be fully and firmly supported along its entire length, and
- proper embedment and backfill, free of unsuitable materials, be provided and sufficiently compacted to ensure that the water pipe is adequately supported, stabilized, and protected, and
- water pipe joints will be made as watertight as possible?

2. Will all pipe materials be kept as clean as possible during construction? ☐ Yes ☐ No

3a. Will all buried pipe be placed at such a depth below finished ground level, four feet minimum, that will prevent freezing during the coldest weather experienced? ☐ Yes ☐ No

3b.	If a minimum of four feet of cover cannot be provided explain what measures will be taken to protect the pipe from freezing: _____ _____ _____ _____			☐ N/A
4a.	Will thrust blocks and/or restrained joints be installed as necessary to prevent joint separation?	☐ Yes	☐ No	☐ N/A
4b.	If a combined thrust block/restrained joint system is used, will either the thrust blocks or restrained joints be designed to provide full thrust restraint?	☐ Yes	☐ No	☐ N/A
5.	Will water mains be adequately protected by the use of flexible joints or equivalent in critical areas of water main stress such as piping through rigid walls or structures and/or where differential settlement may occur?	☐ Yes	☐ No	☐ N/A
6a.	Will water mains and service lines be laid at least 10 feet horizontally, measured edge to edge, from any existing or proposed sewer (sanitary, building/house, and storm) whenever possible?	☐ Yes	☐ No	☐ N/A
6b.	If the 10-foot horizontal separating distance cannot be physically achieved, will the water pipe be located in a separate trench or on an undisturbed shelf such that there is a minimum horizontal separation of 12 inches (18 inches recommended), measured edge to edge, and a minimum vertical separation of 18 inches, measured from crown to invert, above the top of the sewer?	☐ Yes	☐ No	☐ N/A
6c.	Will there be a minimum horizontal separating distance of 10 feet between water mains/service lines and sanitary sewer force mains?	☐ Yes	☐ No	☐ N/A
6d.	Will any water pipe NOT come in contact with any part of a sewer manhole?	☐ Yes	☐ No	☐ N/A
6e.	At sewer crossings will a minimum vertical clearance of 18 inches (or 12 inches*), measured from crown to invert, be maintained between the water pipe and sewer? (*if the water pipe will cross above the sewer and item 6f is satisfactorily addressed, the vertical separation may be reduced to 12 inches. At force main crossings a minimum vertical separation of 18 inches shall be maintained at all times.)	☐ Yes	☐ No	☐ N/A
6f.	At crossings will the water pipe be centered at the crossing such that the water pipe joints are spaced as far as possible from the sewer?	☐ Yes	☐ No	☐ N/A
6g.	Where water mains will cross under sewers, will special consideration be given to the structural support of the sewer to prevent settling or deflection of the sewer which may damage the water mains?	☐ Yes	☐ No	☐ N/A
6h.	Will there be a minimum separating distance of 10 feet between water mains/service lines and any part of a subsurface disposal system?	☐ Yes	☐ No	☐ N/A

6i. If the separating distance requirements in items 6a, 6b, 6c, and 6e cannot be achieved explain what measures will be taken to protect the water mains: ☐ N/A

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7a.	For bridge crossings will the water pipe be adequately supported, protected from damage, and insulated to protect the pipe from freezing?	☐ Yes	☐ No	☐ N/A
7b.	Will expansion or flexible joints be installed as necessary?	☐ Yes	☐ No	☐ N/A
7c.	For bridge and underwater crossings will shut-off valves be installed on both sides of the crossing?	☐ Yes	☐ No	☐ N/A

Section I. Cross Connections

1a.	If a physical connection will be made between the PWS and any customer with a private well or existing PWS well, will the well be physically disconnected from the customer's plumbing?	☐ Yes	☐ No	☐ N/A
1b.	In addition, if such well is known to be contaminated, will an RPD be installed on the service line from the PWS?	☐ Yes	☐ No	☐ N/A

Section J. Testing and Disinfection

1.	After construction is completed will all new water pipe and appurtenances be subjected to hydrostatic pressure and leakage testing in accordance with the more stringent of current applicable AWWA standards/manuals or manufacturer's instructions, if available?	☐ Yes	☐ No
2.	After construction is completed will all new water pipe and appurtenances be disinfected and flushed in accordance with the most current version of AWWA Standard C651?	☐ Yes	☐ No
3.	Will chemicals used in the disinfection process be certified to NSF/ANSI Standard 60?	☐ Yes	☐ No
4.	After disinfection and flushing but prior to placing the water main into active service, will water sample(s) representative of the new construction be collected in accordance with the most current version of AWWA Standard C651 and analyzed, at a minimum, for the water quality parameters as shown in Table 1 of the Water Main Design and Construction Guidelines?	☐ Yes	☐ No

Section K. Certification

This application must be signed by the PWS administrative official, his/her authorized representative, or certified operator of the PWS.

I hereby certify that I have examined the information contained in this application as submitted to the Department and found it to be accurate to the best of my knowledge:

Signature:	Date Signed:
Name (Print):	Telephone #:
Title and Relationship to PWS:	

Drinking Water Section Use Only

Note: Sections A, B, C and all questions with item numbers that are bold and underlined in Sections D through J must be satisfactorily addressed prior to issuing an approval.

DWS staff who conducted technical review: _____

Date of technical review: _____

Project is ☐ Approved ☐ Rejected

Comments: _____

_____

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