Frequently Asked Questions about Water Main Construction Permit Applications.

These FAQs have been prepared by the Iowa Department of Natural Resources (DNR) to assist applicants and engineers with submitting water main construction permit applications. This document is intended solely as general guidance, cannot be used to bind the DNR and is not a substitute for reading and following applicable statutes and rules.

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Q: What's the difference between a water main and a water service line?

A: A water main is a pipe that distributes finished water throughout a distribution system. A water main is owned and maintained by a utility or private entity and can be extended to serve new users. A service line is a pipe tapped into a water main that provides finished water to a specific property owner with no intention of being extended to serve future users. If a service line provides finished water to multiple customers, it may be classified as a water main and subjected to water main construction standards depending on configurations such as meter placement and fire hydrant connections.

Q: How does one calculate the construction permit application fee for water mains?

A: The "Water Mains" fee is based only on the length of the water main in the project but covers all aspects of water main construction (i.e. hydrants, valves, tapping sleeves, bends, thrust blocks, fittings, etc.). The costs of the water main appurtenances do not need to be included under the "Water Mains" fee or under the "Other Water Supply Related Construction" fee. The total water main length listed on Schedule 1c must NOT include fire hydrant leads, service lines, or yard piping. Ensure the total length of water main listed on Schedule 1c matches Schedule 2a.

If a project has an incidental portion of water main (e.g. connecting a new well to existing raw water main) or the project involves yard piping, those water main costs can be classified as "Other Water Supply Related Construction" on Schedule 1c.

Q: What is considered a complete water main construction permit application?

A: A complete water main construction permit application includes the following:

- Construction plans
- Construction specifications (if not using standard specifications)
- Schedules 1a, 1c, 2a, 2b (if applicable), Water Supply Service agreement (if applicable)
- Fee payment in the amount from Schedule 1c
- Petition for Waiver (if applicable)

All plans, specifications, schedules, Service Agreements, and Petition for Waiver (if applicable) must be appropriately signed and dated when submitted. Signatures on the schedules must be completed by the listed applicant, engineer, and authorized representative of the owner of the water system, as applicable.

The construction permit fee must be paid in full and processed by the department before the project can be assigned.

Submitted plans must be the final version. Plans must NOT be labeled as "Preliminary design," "Not for Construction," "Draft" or similar.

All questions on schedules must be answered.

For electronic submissions, plans and specs under 25 MB may be sent as PDF attachments. For plans and specs larger than 25 MB, send as zip files or use other options for submission as outlined on the DNR's Water Supply Engineering website.

Any application that does not meet the above criteria will NOT be assigned for technical review until all criteria have been met.

Q: What items must be included on a plan set in order for it to be considered complete?

A: The following must be included in a completed plan set:

- Complete engineer's certification block in accordance with 481 IAC 1050.1
- Plan set must reference DNR approved specifications (including the date of the specifications or date of approval) if applicable
- The location of the water main project (e.g. a map on the first page)
- Scale(s)
- North arrows
- Size, length, and material(s) of the proposed water mains
- Locations of appurtenances if applicable
- Nearby storm and sanitary sewers. The plans should contain enough information to verify horizontal and vertical separations between the sewers and the proposed water main.
- In projects where water main is routed through a LUST plume / contaminated site plume, use of appropriate materials within that plume need to be shown. Also involve the appropriate DNR sections with routing of water main through impacted soils.
- If there is a stream crossing in the project, profiles with elevations of the stream bed and the width of the stream at the point of crossing.

In addition to the listed items, a completed plan set must meet the following submission criteria:

- Ability to accept a digital stamp and digital signature applied by Iowa DNR for approval.
- Plan set must be legible (line types and line scaling are distinguishable from each other and/or defined in the legend)
- Plan set must be a flattened PDF

Q: How to determine if specifications have been approved by the Iowa DNR and how should specifications be referenced on plan sets?

A: All water main construction permit applications must use specifications that either have been approved by the DNR or will be approved as part of the project.

Specifications can be approved as standard specifications or as project specifications.

Standard Specifications: specifications submitted for review as a standalone project. If approved, standard specifications may be referenced on plan sets without additional review. When referencing standards specifications on plans, the note should include the specification's date of approval.

Project Specifications: specifications submitted with a water main construction permit application. These specifications are reviewed in tandem with the water main plan set. When approved, project specifications may only be used with their submitted plan set. Schedule 2b must be submitted when project specifications are used.

Standard Specifications that are approved and on file with the Iowa DNR can be found on the DNR's Water Supply Engineering website.

If a project references specifications or supplemental specifications that are NOT on file with the Iowa DNR, one of three options is required for permit approval:

1. The project is required to submit said specifications for review alongside the plans as project specifications.
2. Said specifications must be submitted for standard specifications review.
3. The reference must be removed from the plans.

Some common examples of non-DNR approved specifications include a city's supplement to SUDAS, or an engineering firm's standard specifications.

If a project is using Iowa DOT specifications, the plan set must reference the Iowa DOT specifications. If the plan set references a proposal form for applicable Iowa DOT specifications, that form must be submitted for review with the plan set.

Q: What are the most common holdups seen in water main construction permit application review?

A: The Iowa Department of Natural Resources receives 450-550 water main construction permit applications per fiscal year. The review of water main construction permit applications is on a first in - first out basis. The following items are the most common holdups that delay water main construction permit issuance:

- Incomplete applications - This includes not having proper signatures from the applicant/engineer/water supply representative on Schedule 1a and the Water Service Agreement form when applicable. It also includes applications that do not answer every question on Schedule 2a. A submitted application is considered complete once the construction permit application fee is paid, in addition to submission of application materials. Be sure the construction permit application fee is paid and properly documented at the time of submission.
- Inconsistencies between the plans and specifications and schedules - If the answers on the schedules contradict the plans and specifications, either revised plans or specifications or schedules will have to be submitted before a permit can be issued. Not properly indicating if a water main project has applied for DWSRF funding can also delay construction permit issuance.
- Missing LUST site or Contaminated Site information (See below) - Documentation showing the project area and LUST and Contaminated Sites around the project area must be submitted with the application. If Schedule 2a indicates there are no such sites within 500 feet of the proposed water main, documentation must still be provided. If there are LUST or Contaminated Sites within 500 feet of the water main, then additional information (i.e., contamination plume maps) must be submitted to demonstrate the proposed water main is constructed of appropriate materials.
- Failure to comply with sewer separation requirements - Water mains must maintain 10 feet of horizontal separation and 18 inches of vertical separation from all existing or future sanitary and storm sewers unless the conditions listed in IAC 43.3(2)"a"(3) are met. A Water Main and Sewer Separation Requirements FAQ can be found on the Iowa DNR website.
- Improper specifications reference on plan set (See above) - If a project references project-specific specifications or references city specifications that have not been approved by the Iowa DNR, those documents must be provided with the construction permit application. If the specifications are not provided, then the permit review is delayed until the specifications are submitted or the plans reference approved specifications.

Q: What is required of water main construction if contamination from a Leaking Underground Storage Tanks (LUST) site or Contaminated site is within the project area?

A: If the proposed infrastructure is to be installed within an area with groundwater contaminated by organic compounds from a LUST site or Contaminated site, special construction is required. For example, in areas of

groundwater contaminated by organic compounds, all portions of the distribution system must be constructed of materials that prevent permeation of organic compounds.

Water main permit applications require the identification of all LUST sites and Contaminated sites within 500 feet of the project area. If there are LUST sites or Contaminated sites within 500 feet of the project area, engineers are required to submit documentation showing the extent of contamination. Specifically, groundwater plume maps should be submitted for each site if applicable.

- LUST and Contaminated sites locations can be found on the DNR's Facility Explorer site.
- Plume maps for specific sites can be found on the DNR's Electronic Document Search site.
    - Refer to "user guide" for greater detail about looking up information using the "Document Search" website

Be advised that proposed drinking water distribution system construction through an organic free product plume from a LUST site or Contaminated site, the project must meet requirements of those programs, regardless of whether the LUST or Contaminated site is active or closed. Coordination with those programs should happen before the construction permit application is submitted for review.

If a LUST site has a "No Further Action" classification, that does not necessarily mean contamination has been removed from the site. Documentation will still need to be submitted for all LUST sites within 500 feet of a project area, even if the sites have an NFA classification.

Q: What additional documentation is required when a project is installing water mains smaller than 3-inches in diameter?

A: If a project involves installing water mains smaller than 3-inches in diameter, Schedule 2c and a hydraulic analysis must be submitted with the application. The hydraulic analysis must demonstrate that the proposed water main will maintain minimum pressure requirements under all conditions of flow in the system as defined in IAC 43.3(2)"a"(5).

Q: What is a Petition for Waiver and how will that affect permit reviews?

A: If a project cannot meet a construction standard, a Petition for Waiver for that standard may be submitted for review. To obtain a waiver to an administrative rule adopted by the DNR a petitioner must provide comprehensive justification that satisfies all of the criteria in Iowa Code section 17A.9A and Iowa Administrative Code (IAC) Chapter 7–2504 and 567 IAC 43.3(2)"b".

The Petition for Waiver must be submitted to the DNR project manager. The application must be signed and dated by the petitioner. If an applicant or engineer believes a waiver will be needed for a project, please reach out to the Water Supply Engineering section BEFORE an application is submitted to discuss the waiver process.

A Petition for Waiver review process entails a four-level review by four separate DNR employees and will add construction permit application review time. Submit applications with Petition for Waivers accordingly.

Q: How can a permit extension be requested?

A: To request a permit extension the applicant or engineer must:

- Submit the request in writing to the assigned Iowa DNR project manager/water supply inbox (please reference the PWSID# and permit number).
- The time extension request fee must be paid. Submit an additional schedule 1c, referencing the original permit number.

Permit extensions must be requested within one year of a permit's issuance or the permit is no longer valid. A maximum of two extensions may be granted for one permit. A permit may only be extended by 1-year increments. A permit extension can only be granted if the permitted plans and specifications have not changed since the date of the original permit issuance. Permit extensions are only issued for projects that have not started construction.