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DIVISION B  
DRINKING WATER

## CHAPTER 40

## SCOPE OF DIVISION—DEFINITIONS—FORMS—RULES OF PRACTICE

[Prior to 12/3/86, Water, Air and Waste Management [900]]

**567—40.1(455B) Scope of division.** The department conducts the public water supply program and establishes minimum standards for private water supply system construction. The public water supply program includes the following: establishing drinking water standards, including maximum contaminant levels, treatment techniques, maximum residual disinfectant levels, action levels, monitoring, viability assessment, consumer confidence reporting, public notice, public water supply system (PWS) operator certification standards, environmental drinking water laboratory certification program, a state revolving fund (SRF) loan program consistent with the federal Safe Drinking Water Act (SDWA), and establishing construction standards. The construction, modification, and operation of any PWS requires a permit from the department. Certain construction permits are issued upon certification by a licensed professional engineer that a project meets standards, and, in certain instances, permits are issued by local authorities. Private water supplies are regulated by local boards of health.

The rule chapters listed below contain the requirements and provisions for the noted portions of the public water supply program.

Chapter 39 - proper well closure or abandonment.

Chapter 40 - rules of practice applicable to the public in the department's administration of this division's subject matter.

Chapter 41 - drinking water standards and monitoring requirements.

Chapter 42 - public notification, public education, consumer confidence reporting, and record-keeping requirements.

Chapter 43 - design, construction, fee, operating, and operation permit requirements.

Chapter 44 - drinking water state revolving fund program.

Chapter 49 - nonpublic water supply wells.

Chapter 50 - for water use, withdrawals, and diversions.

Chapter 53 - protected water sources.

Chapter 54 - water use permit restrictions and well interference compensation.

Chapter 55 - aquifer storage and recovery.

Chapter 81 - operator certification.

Chapter 82 - water well contractor certification.

Chapter 83 - laboratory certification.

**567—40.2(455B) Definitions.** The terms, references, and abbreviations defined in this rule are applicable to this division and the chapters listed in **rule 567—40.1(455B)**, unless otherwise specified.

**40.2(1) Defined terms.**

"Act" means the **Safe Drinking Water Act (SDWA) as amended (42 U.S.C. 300f et seq.)**.

"Action level" or "AL" means the lead or copper concentration(s) in water which determine, in some cases, the treatment requirements that a water system is required to complete.

"Acute health effect" means the health effect of a contaminant which is an immediate rather than a long-term risk to health.

"Animal confinement" means a lot, yard, corral, or similar structure in which the concentration of livestock or poultry is such that a vegetative cover is not maintained.

"Animal pasturage" means a fenced area where vegetative cover is maintained and animals are enclosed.

"Animal waste" means animal wastes consisting of excreta, leachings, feed losses, litter, washwaters or other associated wastes.

"Animal waste stockpiles" means the stacking, composting or containment of animal wastes.

"Animal waste storage basin or lagoon" means a fully or partially excavated or diked earthen structure used for containing animal waste, including earthen side slopes or floor.

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*“Animal waste storage tank”* means a completely fabricated structure, with or without a cover, either formed in place or transported to the site, used for containing animal wastes.

*“Antisiphon device”* means a device that prevents back siphonage by means of a relief valve which automatically opens to the atmosphere, preventing the creation of subatmospheric pressure within a pipe, thereby preventing water from reversing its flow.

*“Authority”* means the Iowa Finance Authority (IFA) as established by Iowa Code chapter 16.

*“Backflow”* means the flow of water or other liquids, mixtures, or substances into a potable water supply’s distribution system from any source other than its permitted source.

*“Backflow preventer”* is a device or means to prevent backflow into a potable water system.

*“Back siphon”* means the flowing back of used, contaminated, or polluted water from a plumbing fixture or vessel as a result of negative or subatmospheric pressure within the distribution system.

*“Best available technology”* or *“BAT”* means the best technology, treatment techniques, or other means that the state finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available after taking cost into consideration.

*“Cistern”* means a tank that stores rainwater from roofs.

*“Clean compliance history”* means, for the purposes of 567—paragraph 41.2(1)“e”(4)“2,” a record of no monitoring violations and no coliform treatment technique trigger exceedances or treatment technique violations under 567—subrule 41.2(1).

*“Combined filter effluent”* or *“CFE”* is generated when the effluent water from the individual filters in operation is combined into one stream. Representative samples of the combined filter effluent are monitored to determine compliance with treatment technique requirements.

*“CFR”* or *“Code of Federal Regulations”* means the federal administrative rules adopted by the United States in effect as of July 1, 2024. The amendment of the date contained in this definition shall constitute the amendment of all CFR references contained in Division B, unless a date of adoption is set forth in a specific rule.

*“Composite correction program”* or *“CCP”* is a systematic procedure that identifies and corrects the unique factor combinations in the areas of design, operation, maintenance and administration that limit the performance of a filtration plant. A CCP includes a comprehensive performance evaluation (CPE) and comprehensive technical assistance (CTA).

*“Comprehensive technical assistance”* or *“CTA”* is the CCP’s performance improvement phase that is implemented if the CPE results indicate improved performance potential by a filtration plant, whereby the system must identify and address plant-specific factors.

*“Consecutive public water supply”* means an active PWS which purchases or obtains all or a portion of its water from another PWS, also called a wholesale system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

*“Conservation easement”* means an interest in land that entitles a person to use the land possessed by another (affirmative easement), or to restrict uses of the land subject to the easement (negative easement). A conservation easement restricts the landowner to uses that are compatible with resource conservation.

*“CT”* means the product of the residual disinfectant concentration (C, in mg/L) determined before or at the first customer, and the corresponding disinfectant contact time (T, in minutes); C x T. If a PWS applies disinfectants at more than one point prior to the first customer, it must determine the CT for each disinfectant sequence at or before the first customer to determine the total inactivation ratio (aka total percent inactivation). When determining the total inactivation ratio, a PWS must determine C for each disinfection sequence and the corresponding T before any subsequent disinfection application point(s). The CT is dependent upon the microorganism to be inactivated, and is affected by the disinfectant type, pH, and water temperature.

*“Contiguous”* means directly adjacent or touching along all or most of one side of a legally defined piece of property. Tracts of land involved in the same operation or water supply and separated only by roads, railroads, or bike trails are deemed contiguous tracts.

*“Corrosive water”* means a water which due to its physical and chemical characteristics may cause leaching or dissolving of the constituents of the transporting system in which it is contained.

*“Cross connection”* means any actual or potential connection between a potable water supply and any other

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source or system through which it is possible to introduce into the potable system any used water, industrial fluid, gas, or other substance other than the intended potable water with which the system is supplied.

“*Customers*” in consumer confidence reports are defined as billing units or service connections to which water is delivered by a CWS.

“*Deep well*” means a well located and constructed such that there is a continuous layer of low permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

“*Disinfection profile*” is defined in 40 CFR § 141.2. The procedure for developing a disinfection profile is contained in 567—paragraph 43.9(2)“b” and 567—subrule 43.10(2).

“*Drinking water state revolving fund*” or “*DWSRF*” means the department-administered fund intended to develop drinking water revolving loans to help finance drinking water infrastructure improvements, source water protection, system technical assistance, and other activities intended to encourage and facilitate PWS rule compliance and public health protection.

“*DWSRF funds*” means the combination of a particular fiscal year’s federal capitalization grant appropriation plus the 20 percent state of Iowa match, and any additional funds made available through the program.

“*Eligible cost*” means the cost of all labor, material, machinery, equipment, loan initiation and loan service fees, project planning, design and construction engineering services, legal fees and expenses directly related to projects, capitalized interest during the construction of projects, and all other expansion, construction, and rehabilitation of all or part of projects included in the funding request placed on the draft intended use plan as a fundable project, subject to commission approval.

“*Emergency/standby well or connection*” means a well or a connection to another PWS that is used less than 30 calendar days per calendar year.

“*Federal cross-cutters*” means the federal laws and authorities that apply to projects funded through the DWSRF.

“*First draw sample*” means a one-liter tap water sample, collected in accordance with 567—paragraph 41.4(1)“c” that has been standing in plumbing pipes at least six hours and is collected without flushing the tap.

“*Federal fiscal year*” or “*FFY*” means the federal fiscal year starting October 1 and ending September 30.

“*GAC10*” means granular activated carbon filter beds with an empty-bed contact time of ten minutes based on average daily flow and a 180 day carbon reactivation frequency, except that the reactivation frequency for GAC10 is 120 days when used as a best available technology for compliance with the maximum contaminant level locational running annual average for total trihalomethanes and haloacetic acids.

“*Health advisory*” or “*HA*” means a group of levels set by the EPA below which no harmful health effect is expected from a given contaminant in drinking water. The HAs used by the department are listed in the most current edition of the EPA’s Drinking Water Regulations and Health Advisories, available at: <https://www.epa.gov/sdwa/drinking-water-health-advisories-has>. The lifetime HA is the concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects over a lifetime of exposure, with a margin of safety. The long-term HA is the concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects up to approximately seven years (10 percent of an individual’s lifetime of exposure), with a margin of safety.

“*Human consumption*” means water used as part of or in connection with drinking; washing; food processing, or; incidental to commercial food preparation, such as: water used in beverages or other food items; ice used in drinks or in salad bars; water for washing of food; water used for washing dishes, pans or utensils used in food preparation or service; water used for cleanup and washing of food preparation or service areas, or; water for bathing, showering, hand washing, or oral hygiene purposes. Human consumption does not include: water for production of packaged or bulk food products regulated by other state or federal regulatory agencies, such as livestock slaughtering or bottled or canned food and beverages; cooling water; industrial or commercial wash waters used for nonfood products; irrigation water, or; water used in toilets or urinals.

“*Individual filter effluent*” or “*IFE*” means the effluent water from a specific filter. Representative samples of the IFE are monitored to determine compliance with TT requirements.

“*Impoundment*” means a reservoir, pond, or lake in which surface water is retained for a period of time,

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ranging from several months upward, created by constructing a barrier across a watercourse and used for water storage, regulation, or control.

“*Influenced groundwater*” or “*IGW*”, a.k.a. groundwater under the direct influence of surface water, or GWUDI, means any groundwater that is under the direct or indirect influence of surface water, as determined by the presence of (1) significant occurrence of insects or other macroorganisms, algae or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*; or (2) significant and relatively rapid shifts in water characteristics such as turbidity (particulate content), temperature, conductivity, or pH which correlate to climatological or surface water conditions, or other parameters as specified in 567—43.5(455B).

“*Initial compliance period*” means a compliance cycle’s first full three-year compliance period.

“*Intended use plan*” or “*IUP*” means a plan identifying the intended uses of funds available for loans in the DWSRF for each fiscal year as described in Section 1452 of the SDWA.

“*Lead free*,” when used with respect to solder and flux, refers to solders and flux containing not more than 0.2 percent lead; and not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures in accordance with 42 U.S.C. 300-g-6. The following requirements of 40 CFR 143 Subpart B that pertain to PWSs are adopted by reference: 40 CFR § 143.10; 40 CFR § 143.11; and 40 CFR § 143.12(b-f).

“*Lead service line*” or “*LSL*” means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck, or other fitting which is connected to such lead line. A lead gooseneck is not considered a lead service line unless it exceeds 10 feet.

“*Level 2 assessment*” is defined in 40 CFR § 141.2. A Level 2 assessment is conducted by a department water supply inspector and will typically include the system operator. The department may tailor specific assessment elements with respect to a system’s size and type and a distribution system’s size, type and characteristics. The system must comply with any expedited actions or additional actions required by the department in the case of an *E. coli* MCL violation.

“*Maintenance*” means the replacement of equipment or materials that are necessary to maintain the operation of a PWS but do not alter capacity, water quality or treatment method, or effectiveness.

“*Nonacute health effect*” means the health effect of a contaminant which is a long-term rather than immediate risk to health.

“*Nontransient noncommunity water system*” or “*NTNC*” means a PWS, other than a CWS, which regularly serves at least 25 of the same persons four hours or more per day, for four or more days per week, for 26 or more weeks per year. Examples of NTNCs are schools, day-care centers, factories, offices and other PWSs which provide water to a fixed population of 25 or more people. In addition, other service areas, such as hotels, resorts, hospitals and restaurants, are considered as NTNCs if they regularly serve at least 25 or more of the same persons for four or more hours per day, for four or more days per week, for 26 or more weeks of the year.

“*Point-of-use treatment device*” or “*POU*” is a treatment device applied to a single tap or multiple taps that reduces contaminants in drinking water at those taps, but is not intended to treat all of the water in the facility.

“*Population served*” means the total number of persons served by a PWS that provides water intended for human consumption. For municipalities which serve only the population within their incorporated boundaries, it is the last official U.S. census population (or officially amended census population). For all other CWS, it is either the actual population counted that is verifiable by the department, or population as calculated by multiplying the number of service connections by an occupancy factor of 2.5 persons per service connection. For municipalities which also serve outside their incorporated boundaries, the served population must be added to the official census population as determined either by verifiable count or by the 2.5 persons per service connection occupancy factor. For NTNC and TNC systems, it is the average number of daily employees plus the average number of other persons served such as customers or visitors during the peak month of the year regardless if each person actually uses the water for human consumption. Where a system provides water to another PWS (consecutive PWS) that is required to have an operation permit, the population of the recipient PWS shall not be counted as a part of the system providing the water. CWSs and NTNCs will pay their operation permit fees based upon the population served.

“*Potable water*” means water that is suitable for human consumption. Drinking water which meets the requirements of 567— Chapters 40-43 is considered to be potable water.

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“*Privy*” means a structure used for the deposition of human body wastes.

“*Project*” includes the planning, design, construction, alteration or extension of any PWS but does not include the maintenance of a system.

“*Project priority list*” means the project list in priority order that may qualify for DWSRF loan assistance contained in the IUP document prepared pursuant to rule 567—44.8(455B). The priority list shall identify all projects eligible for funding and the points assigned to each project pursuant to 567—subrule 44.7(7).

“*Public water supply system control*” is defined as one of the following forms of authority over a service line: authority to set standards for construction, repair, or maintenance of the service line; authority to replace, repair, or maintain the service line, or; ownership of the line. Contaminants added to the water under circumstances controlled by the water consumer or user, with the exception of those contaminants resulting from the corrosion of piping and plumbing caused by water quality, are excluded from this definition of control.

“*Public water supply system*” or “*PWS*” means a system that provides water to the public for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under the system operator’s control and used primarily in connection with such system; and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. The term does not include any “special irrigation district.” A PWS is either a community water system (CWS) or a noncommunity water system (NCWS).

“*Regional water system*” means a PWS in which the projected number of service connections in at least 50 percent of the distribution system’s length does not average more than eight service connections per linear mile of water main.

“*Sanitary sewer pipe*” means a sewer complying with the department’s standards for sewer construction.

“*Sanitary survey*” means a review and on-site inspection conducted by the department of: water source(s), facilities, equipment, operation and maintenance (O & M), and records of a PWS for the purpose of evaluating the adequacy of such source(s); and facilities, equipment, and O & M for producing and distributing safe drinking water in order to identify improvements necessary to maintain or improve drinking water quality, pursuant to 567—subrule 43.1(7).

“*SDWA*” means the Safe Drinking Water Act as amended (42 U.S.C. 300f et seq.)

“*Sedimentation*” means a water treatment process for solid particle removal from a suspension before filtration by gravity or separation.

“*Septic tank*” means a watertight structure into which wastewater is discharged for solids separation and digestion.

“*Service connections*” means the total number of active and inactive service lines originating from a water distribution main for the purpose of delivering water intended for human consumption. For municipalities, rural water districts, mobile home parks, housing developments, and similar facilities, this includes, but is not limited to, occupied and unoccupied residences and buildings, provided that there is a service line connected to the water main (or another service line), and running onto the property. For rental properties which are separate PWSs, this includes, but is not limited to, the number of rental units. Connections to a system that delivers water by a constructed conveyance other than a pipe are excluded from the definition if:

1. The water is used exclusively for purposes other than human consumption;
2. The department determines that alternative water to achieve the equivalent level of public health protection provided by the applicable national primary drinking water regulation is provided for human consumption; or
3. The department determines that the water provided for human consumption is centrally treated or treated at the entry point by the provider, a pass-through entity, or the user to achieve the equivalent protection level provided by the applicable national primary drinking water regulations.

“*Service line sample*” means a one-liter water sample, collected in accordance with 567—paragraph 41.4(1)“c” for determining the concentration of lead and copper which has been standing for at least six hours in a service line.

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“*Shallow well*” means a well located and constructed such that there is not a continuous layer of low permeability soil or rock (or equivalent retarding mechanism acceptable to the department) at least five feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

“*Significant deficiency*” includes a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the department determines to be causing, or has the potential for causing the introduction of contamination into the water delivered to consumers.

“*Significant noncompliance*” or “*SNC*” means the failure to comply with any national primary drinking water standard as adopted by the state of Iowa according to criteria established by the EPA administrator.

“*Source/entry point*” or “*SEP*” means the entry point of water into the distribution system which is representative of each source after application of all treatment and before the first service connection. This point is used for the collection of certain compliance samples. If a representative sample of all water sources cannot be obtained, as determined by the department, separate SEPs with the appropriate monitoring requirements will be assigned by the department.

“*Special irrigation district*” means an irrigation district in existence prior to May 18, 1994, that provides primarily agricultural service through a piped water system with only incidental residential or similar use where the system or the residential or similar users of the system comply with **numbered paragraphs “2” and “3” in the definition of “service connections.”**

“*Standard specifications*” means specifications submitted to the department for use as a reference in reviewing future plans for proposed water main construction.

“*Ten States Standards*” means the “Recommended Standards for Water Works,” 2022 edition, a report of the Great Lakes—Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, available on their website at: [www.health.state.mn.us/communities/environment/water/tenstates/standards.html](http://www.health.state.mn.us/communities/environment/water/tenstates/standards.html).

“*Transient noncommunity water system*” or “*TNC*” is defined in **40 CFR § 141.2**.

“*Treatment technique*” or “*TT*” means a treatment process required to minimize the level of a contaminant in drinking water. A treatment technique is specified in cases where it is not technically or economically feasible to establish an MCL, and it is an enforceable procedure or level of technological performance which PWSs must follow to ensure control of a contaminant.

“*Uncovered finished water storage facility*” is defined in **40 CFR § 141.2**. Such facilities are prohibited.

“*Unregulated contaminant*” means a contaminant for which no MCL has been set, but which does have federal monitoring requirements for certain PWSs set forth in **40 CFR § 141.40**, and additional reporting requirements in **rule 567—42.3(455B)**.

“*Viability*” means the technical, financial, and managerial ability to comply with applicable national primary drinking water standards as adopted by the state of Iowa. Viability is the ability of a system to remain in compliance insofar as the requirements of the SDWA.

“*Waterborne disease outbreak*” means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a PWS which is deficient in treatment, as determined by the Iowa Department of Health and Human Services.

“*Water distribution system*” is defined in **Iowa Code section 455B.211**. The term includes any storage facilities and pumping stations.

“*Water main pipe*” means a water main complying with the department’s standards for water main construction.

**40.2(2) Definitions in Iowa Code and Iowa Administrative Code (IAC).** The following terms are defined in the referenced locations.

- a. **Iowa Code section 455B.101**: “commission,” “department,” and “director.”
- b. **Iowa Code section 455B.171**: “maximum contaminant level.”
- c. **40 CFR § 141.2**: “bag filters,” “bank filtration,” “cartridge filters,” “coagulation,” “combined distribution system” or “CDS,” “community water system” or “CWS,” “compliance cycle,” “compliance period,” “comprehensive performance evaluation” or “CPE,” “confluent growth,” “contaminant,”

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“conventional filtration treatment,” “corrosion inhibitor,” “diatomaceous earth filtration,” “direct filtration,” “disinfectant,” “disinfection,” “dose equivalent,” “effective corrosion inhibitor residual,” “enhanced coagulation,” “enhanced softening,” “filter profile,” “filtration,” “finished water,” “flocculation,” “flowing stream,” “GAC20,” “gross alpha particle activity,” “gross beta particle activity,” “haloacetic acids” or “HAA5,” “halogen,” “lake” or “reservoir,” “large water system,” “legionella,” “level 1 assessment,” “locational running annual average” or “LRAA,” “man-made beta particle and photon emitters,” “maximum contaminant level” or “MCL,” “maximum contaminant level goal” or “MCLG,” “maximum residual disinfectant level” or “MRDL,” “maximum residual disinfectant level goal” or “MRDLG,” “medium-size water system,” “membrane filtration,” “noncommunity water system” or “NCWS,” “optimal corrosion control treatment,” “performance evaluation sample,” “picocurie” or “pCi,” “plant intake,” “point of disinfectant application,” “point-of-entry treatment device” or “POE,” “presedimentation,” “rem,” “repeat compliance period,” “residual disinfectant concentration,” “sanitary defect,” “seasonal system,” “single-family structure,” “slow sand filtration,” “small water system,” “standard sample,” “supplier of water,” “surface water” or “SW,” “SUVA,” “too numerous to count,” “total organic carbon” or “TOC,” “total trihalomethanes” or “TTHM,” “trihalomethane” or “THM,” “two-stage lime softening,” “virus,” and “wholesale system.”

**40.2(3) References and abbreviations.**

a. *References.* The abbreviated name of the professional associations and societies whose standards are referenced in this division and the websites where the standards, methods, or guidance documents may be obtained are listed in the following table. The specific standards, editions, or volumes are set forth in specific rules of this division.

<b>Abbreviated Name</b>	<b>Association/Society Name</b>	<b>Standards/Publications Website</b>
ANSI	American National Standards Institute	<a href="https://webstore.ansi.org/">https://webstore.ansi.org/</a>
APHA	American Public Health Association	<a href="https://www.apha.org/">https://www.apha.org/</a>
API	American Petroleum Institute	<a href="https://www.api.org/products-and-services/standards/">https://www.api.org/products-and-services/standards/</a>
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers	<a href="https://www.ashrae.org/technical-resources/standards-and-guidelines">https://www.ashrae.org/technical-resources/standards-and-guidelines</a>
ASME	American Society of Mechanical Engineers	<a href="https://www.asme.org/codes-standards">https://www.asme.org/codes-standards</a>
ASTM	Annual Book of Standards published by ASTM International	<a href="https://www.astm.org/products-services/standards-and-publications.html/">https://www.astm.org/products-services/standards-and-publications.html/</a>
AWS	American Welding Society	<a href="https://www.aws.org/Standards-and-Publications/">https://www.aws.org/Standards-and-Publications/</a>
AWWA	American Water Works Association	<a href="https://www.awwa.org/Publications/Standards">https://www.awwa.org/Publications/Standards</a>
Iowa DOT	Iowa Department of Transportation	<a href="https://iowadot.gov/specifications/">https://iowadot.gov/specifications/</a>
NACE	National Association of Corrosion Engineers International, part of the Association for Materials Protection and Performance (AMPP)	<a href="https://www.ampp.org/standards/ampp-standards/about-ampp-standards">https://www.ampp.org/standards/ampp-standards/about-ampp-standards</a>
NARA	National Archives and Records Administration	<a href="https://www.archives.gov/">https://www.archives.gov/</a>
NEC	National Electrical Code, part of the National Fire Codes published by the National Fire Protection Association (NFPA)	<a href="https://www.nfpa.org/">https://www.nfpa.org/</a>
NEMI	National Environmental Methods Index	<a href="http://www.nemi.gov">www.nemi.gov</a>
NGWA	National Ground Water Association	<a href="https://www.ngwa.org/publications-and-news/industry-resource-library">https://www.ngwa.org/publications-and-news/industry-resource-library</a>
NSF	National Sanitation Foundation	<a href="https://www.nsf.org/nsf-standards">https://www.nsf.org/nsf-standards</a>
NTIS	National Technical Information Service, a bureau of the U.S. Department of Commerce	<a href="https://www.ntis.gov/">https://www.ntis.gov/</a>
Standard Methods, SM, or SM Online	Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF)	<a href="https://www.standardmethods.org/">https://www.standardmethods.org/</a>
USGS	United States Geological Survey	<a href="https://www.usgs.gov/">https://www.usgs.gov/</a>
WSC	Water Systems Council	<a href="https://www.watersystemscouncil.org/resources/well-standards/">https://www.watersystemscouncil.org/resources/well-standards/</a>

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*b. Abbreviations.* In addition to the abbreviations listed in the definitions in **subrule 40.2(1)**, the following abbreviations are used in this division.

<b><u>Abbreviation</u></b>	<b><u>Meaning</u></b>
ALE	action level exceedance
ASR	aquifer storage and recovery
CCR	consumer confidence report
CCT	corrosion control treatment
CDC	Centers for Disease Control and Prevention
CEU	continuing education unit
DBP	disinfection byproduct
DIT	direct integrity test
DOC	dissolved organic carbon
DRC	Direct responsible charge
EPA	U. S. Environmental Protection Agency
FDA	U. S. Food and Drug Administration
ft	foot
GAC	granular activated carbon
GW	groundwater
HAA	haloacetic acids
HAL	health advisory level
HPC	heterotrophic plate count
ID	identification (number)
IDSE	initial distribution system evaluation
IFA	Iowa Finance Authority
IGS	Iowa Geological Survey
IOC	inorganic chemical
L	liter
LRV	log removal value
LSLR	lead service line replacement
MDL	method detection limit
µg/L	microgram per liter
mg/L	milligram per liter
mL	milliliter
mm	millimeter
MOR	monthly operating report
mrem	1/1000 of a rem
MRT	maximum residence time
MS	matrix spike
NRCS	Natural Resources Conservation Service (part of the U. S. Department of Agriculture)
NTU	nephelometric turbidity units
O & M	operation and maintenance
OCC	optimal corrosion control
OCCT	optimal corrosion control treatment
OEL	operational evaluation level
OWQP	optimal water quality parameter
OXID	oxidation
P/A	presence-absence
PAC	powdered activated carbon
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter



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<b><u>Abbreviation</u></b>	<b><u>Meaning</u></b>
PE	public education
PN	public notice
PQL	practical quantification level
psi	pounds per square inch
PTA	packed tower aeration
PVC	polyvinyl chloride
QCRV	quality control release value
RAA	running annual average
RDC	residual disinfectant concentration
SCH	schedule (as in schedule 40 rating)
SDR	standard dimension ratio
SEP	source/entry point
SMP	standard monitoring plan
SMR	self-monitoring requirement
SOC	synthetic organic chemical
SW/IGW	surface water/influenced groundwater
TRC	total residual chlorine
U.S.C.	United States Code
URTH	unacceptable risk to health
UV	ultraviolet
VOC	volatile organic chemical
WCP	watershed control program

**567—40.3(17A,455B) Forms.** All forms used by the public to apply for department approvals and to report on activities related to the department's public water supply program may be obtained on the department's website at [www.iowadnr.gov](http://www.iowadnr.gov) or upon request. Properly completed forms shall be submitted to the department as noted in the form instructions.

**40.3(1) Construction permit application forms.** The required public water supply construction permit application forms (a.k.a. schedules) and other forms are listed below.

<b><u>Schedule No.</u></b>	<b><u>Form Name</u></b>	<b><u>Form Number</u></b>
-	Water Supply Service Agreement	542-3121
1a	General Information	542-3178
1b	Minor Water Main Construction Permit	542-3151
1c	Fee Calculations	542-3179
2a	Water Mains, General	542-3030
2b	Water Mains, Specifications	542-3031
2c	Notification of Minor Water Main Construction	542-3152
3a	Water System, Design Capacity Data	542-3032
3b	Source Information	542-3029
3c	Water Quality Data	542-3028
4	Site Approval	542-3078
5a	Well Construction	542-3027
5b	Well Appurtenances	542-3026
5c	Well Profile	542-3077
5d	Surface Water Supply	542-3139
6a	Distribution Water Storage Facilities	542-3140
7	Schematic Flow Diagram	542-3142
8	Aeration	542-3143
9	Clarification-Sedimentation	542-3144
10	Suspended Solids Contact	542-3145
11	Ion Exchange	542-3146
12	Filters	542-3147

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13a	Chemical Addition	542-3241
13b	Dry Chemical Addition	542-3130
13c	Gas Chlorination	542-3131
13d	Fluoridation	542-3132
13e	Sampling and Testing	542-3133
14	Pumping Station	542-3134
15	Water Storage Facilities	542-3135
16a	Wastewater General	542-3136
16b	Waste Treatment Ponds	542-3137
16c	Filtration and Mechanical	542-3138
16d	Discharge to Sewer	542-3103
-	Notification of Completion of Construction	542-3019

**40.3(2) Operation permit and public water supply forms.** The required operation permit application and monthly operating report (MOR) forms and the public water supply sampling forms are available from the department.

**567—40.4(17A,455B) PWS construction permit application procedures.**

**40.4(1) General procedures.** Applications for written department approval for any new construction or for reconstruction pursuant to 567—Chapter 43 shall consist of complete plans and specifications, application fee, and appropriate water supply construction permit application schedules.

a. Upon review, the department will issue a construction permit for approval of a project if the review shows that the project meets all construction standards in accordance with 567—Chapter 43. Approval of a project which does not meet all construction standards will be denied unless a waiver pursuant to 567—paragraph 43.3(2)“b” is granted. A waiver may be requested when plans and specifications are submitted or after a design discrepancy is pointed out to the applicant.

b. The department may review submitted project plans and specifications and provide comments or recommendations to the applicant. Departmental comments and recommendations are advisory, except when departmental review determines that a facility does not comply with the department-approved plans or specifications or comply with the construction standards, pursuant to the criteria for certification of project design. The owner of the system must correct the deficiency in a timely manner as set forth by the department.

**40.4(2) Site survey.** For public water sources and for below-ground level finished water storage facilities, a site survey and approval must be made by the department. The manner and procedures for applying for and processing a site survey are the same as in subrule 40.4(1), except that the following information must be submitted by the applicant’s engineer.

a. A preliminary engineering report or a cover letter which contains a brief description of the proposed source or storage facility and assurance that the project is in conformance with the long-range planning of the area.

b. Completed Schedules 1a and 4.

c. A detailed map showing all potential sources of contamination (see 567—Chapter 43, Table A) within:

(1) 1,000 feet of a proposed well location. The scale shall not be smaller than 1 inch = 200 feet.

(2) 200 feet of a proposed below-ground level finished water storage facility.

(3) 2,500 feet from a proposed surface water source and a plat showing all facilities more than 2,500 feet from an impoundment (within the drainage area) that may be potential sources of contamination. The scale shall not be smaller than 1 inch = 660 feet.

(4) Six miles upstream of a proposed river intake.

**40.4(3) Modifications of an approved construction project.** Persons seeking to make modifications to a water supply construction project after receiving a construction permit from the department shall submit an addendum to plans and specifications, a change order, or revised plans and specifications at least 30 days prior to the planned modification, and the appropriate fee. The department shall review the submitted material within 30 days of submission and shall issue a supplemental permit if the proposed modifications meet departmental standards.

**40.4(4) Certification of project design.** A permit shall be issued for the construction, installation, or modification of a PWS or for a water supply distribution system extension if a qualified, licensed professional engineer certifies that the plans and specifications comply with federal and state laws and regulations, or that a

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waiver to standards has been granted by the department.

**567—40.5(17A,455B) PWS operation permit application procedures.** An entity requesting a water supply operation permit pursuant to **567—43.2(455B)** must complete the appropriate application form provided by the department. Upon receipt of a complete application, the department will review the application and prepare a draft or final water supply operation permit, as applicable, and transmit it to the applicant.

**567—40.6(455B) DWSRF loan application procedures.** An entity requesting a DWSRF loan pursuant to **567—44.7(455B)** must complete the appropriate application form provided by the department. The department will review the application pursuant to **567—44.9(455B)**. Eligible projects will be ranked according to priority, with the highest-ranked projects receiving funding priority.

These rules are intended to implement **Iowa Code sections 455B.171 through 455B.188 and 455B.190 through 455B.192.**