

Temporary Rule Necessary to protect public health, safety or welfare
 Compliance with deadlines in amendments to governing law or federal programs
 Conferring a benefit

Docket Number: <u>58-0108-0602</u>				
Section	Existing Rule Summary	Temporary and/or Proposed Rule Summary	Summary of Rule Changes Based on Public Comment	Outstanding Issues
002	Incorporation by Reference and Availability of Referenced Material.	Updates list of items referenced in these rules.	This section has not been changed. See attached Response to Comments.	None.
003	Definitions.	Adds definitions as necessary for this rulemaking.	This section has been changed. For consistency with the definition of "peak day demand," the terms using "daily" have been changed to "day" in this section and throughout the rule. Also see attached Response to Comments.	None.
005	General Provisions for Waivers.	N/A	This section has been revised to include reference to new rule sections.	None.
008	Health Hazards.	N/A	This section has been revised to include reference to new rule sections.	None.
010	Fee Schedule for Public Drinking Water Systems.	N/A	This section has been revised to include reference to new rule sections.	None.
013	Use of Guidance.	Changes "facility standards and design standards" to "facility and design standards."	No comment received. No change.	None.
500	Facility and Design Standards-Demonstration of Technical, Financial, and Managerial Capacity of Public Drinking Water Systems.	Corrects references to rule sections.	No comment received. No change.	None.
501	Facility and Design Standards-General Design Requirements for Public Drinking Water Systems.	Sets out general design requirements.	This section has been changed. See attached Response to Comments.	None.

Section	Existing Rule Summary	Temporary and/or Proposed Rule Summary	Summary of Rule Changes Based on Public Comment	Outstanding Issues
502	New section.	Facility and Design Standards– Facility Plans.	No comment received. However, this section has been changed for consistency with revisions made to the Wastewater Rules in response to a public comment.	None.
503	New section.	Facility and Design Standards– Preliminary Engineering Reports.	No comment received. However, this section has been changed for consistency with revisions made to definitions and for consistency with revisions to the Wastewater Rules in response to a public comment.	None.
504	New section.	Facility and Design Standards– Review of Plans and Specifications.	This section has been changed for consistency with revisions made to the Wastewater Rules in response to a public comment. See also attached Response to Comments.	None.
510	New section. Text from 550.03 revised and transferred to new sections 510, 511 and 512.	Facility and Design Standards– Siting and Construction of Wells.	This section has been changed. See attached Response to Comments.	None.
511	New section. Text from 550.03 revised and transferred to new sections 510, 511 and 512.	Facility and Design Standards – Well Pumps, Discharge Pumps, and Appurtenances.	No comment received. No change.	None.
512	New section. Text from 550.03 revised and transferred to new sections 510, 511 and 512.	Facility and Design Standards– Well Lot.	No comment received. No change.	None.
513	New section.	Facility and Design Standards– Number of Ground Water Sources Required.	This section has been changed. See attached Response to Comments.	None.
514	New section. Text from 550.04 revised and transferred to new section 514.	Facility and Design Standards– Spring Sources.	No comment received. No change.	None.

Section	Existing Rule Summary	Temporary and/or Proposed Rule Summary	Summary of Rule Changes Based on Public Comment	Outstanding Issues
515	New section.	Facility and Design Standards-Surface Sources and Ground Water Sources under the Direct Influence of Surface Water.	No comment received. No change.	None.
518	New section. Text from 550.05 revised and transferred to new section 518.	Facility and Design Standards-Additional Design Criteria for Surface Water Treatment.	No comment received. No change.	None.
519	New section.	Facility and Design Standards-Surface Water Treatment: Design Standards for Microscreening.	No comment received. No change.	None.
520	New section.	Facility and Design Standards-Surface Water Treatment: Clarification Process.	No comment received. No change.	None.
521	New section.	Facility and Design Standards-Surface Water Treatment: Filtration Using Rapid Rate Gravity Filters.	No comment received. No change.	None.
522	New section.	Facility and Design Standards-Surface Water Treatment: Filtration Using Diatomaceous Earth.	No comment received. No change.	None.
523	New section.	Facility and Design Standards-Surface Water Treatment: Slow Sand Filtration.	No comment received. No change.	None.
524	New section.	Facility and Design Standards-Surface Water Treatment: Direct Filtration.	No comment received. No change.	None.
530	New section.	Facility and Design Standards-Disinfection of Drinking Water.	No comment received. No change.	None.
531	New section.	Facility and Design Standards-Design Standards for Chemical Application.	No comment received. No change.	None.
532	New section.	Facility and Design Standards-Design Standards for Softening.	No comment received. No change.	None.
533	New section.	Facility and Design Standards-	No comment received. No change.	None.

Section	Existing Rule Summary	Temporary and/or Proposed Rule Summary	Summary of Rule Changes Based on Public Comment	Outstanding Issues
		Design Standards for Taste and Odor Control.		
534	New section.	Facility and Design Standards-Aeration Process.	No comment received. No change.	None.
535	New section.	Facility and Design Standards-Design Standards for Iron and Manganese Control Systems.	No comment received. No change.	None.
536	New section.	Facility and Design Standards-Design Standards for Fluoridation.	No comment received. No change.	None.
537	New section.	Facility and Design Standards-Design Standards for Stabilization.	No comment received. No change.	None.
540	New section.	Facility and Design Standards-Design Standards for Treatment and Disposal of Waste Residuals.	No comment received. No change.	None.
541	New section.	Facility and Design Standards-Pumping Facilities.	This section has been changed. See attached Response to Comments.	None.
542	New section. Text from 550.06 revised and transferred to new section 542.	Facility and Design Standards-Distribution System.	This section has not been changed. See attached Response to Comments.	None.
543	New section. Text from 550.07 revised and transferred to new section 543.	Facility and Design Standards-Cross Connection Control.	No comment received. No change.	None.
544	New section.	Facility and Design Standards-General Design of Finished Water Storage.	This section has been changed. See attached Response to Comments.	None.
545	New section.	Facility and Design Standards-Treatment Plant Storage Facilities.	No comment received. No change.	None.
546	New section.	Facility and Design Standards-Distribution System Storage	No comment received. No change.	None.

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Section	Existing Rule Summary	Temporary and/or Proposed Rule Summary	Summary of Rule Changes Based on Public Comment	Outstanding Issues
		Facilities.		
547	New section.	Facility and Design Standards-Hyrdopneumatic Tank Systems.	No comment received. No change.	None.
548	New section.	Facility and Design Standards-Disinfection of Facilities Prior to Use.	No comment received. No change.	None.
551	Facility and Design Standards-Construction Requirements for Public Water Systems.	This section struck out in its entirety. Relevant rule text retained and transferred to new sections.	No comment received. No change.	None.
552	Facility and Design Standards-Operating Criteria for Public Water Systems.	Adds provision for implementation of cross connection control programs for community and non-community water systems.	No comment received. No change.	None.
900	Tables.	Adds new Subsection 900.03, Well Casing Standards for Public Water System Wells.	No comment received. No change.	None.

IDAHO CODE § 39-107D STATEMENT

Section 39-107D, Idaho Code, provides that DEQ must meet certain requirements when it formulates and recommends rules which are broader in scope or more stringent than federal law or regulations, or which propose to regulate an activity not regulated by the federal government. There is no federal law or regulation that is comparable to plan and specification review and facility standard provisions set forth in these rules. Therefore, the changes to the rules are not broader in scope or more stringent than federal law or regulations.

Section 39-107D, Idaho Code, also applies to a rule which "proposes to regulate an activity not regulated by the federal government." The engineering standards for design, construction, and operation of public drinking water systems regulate activities that are not regulated by the federal government. These rules address the review and approval of plans and specifications for public drinking water systems and the standard by which the agency does the review and approval. This is not an activity regulated by the federal government. Therefore, Section 39-107D, Idaho Code, applies.

Section 39-107D(3), Idaho Code, provides that any rule subject to 39-107D that proposes a standard necessary to protect human health and the environment must also include in the rulemaking record and in the notice of rulemaking additional information. This additional information includes any estimates of risk accomplished, identification of populations or receptors addressed by any estimates, and other information related to an estimation of risk. These rules include facility and design standards which are intended to protect human health and the environment. The standards, however, are for the design and construction of public drinking water facilities. The rules are not based upon any express estimate or analysis of risk to public health or the environment. Instead, the facility and design standards are based upon guidelines set forth in documents, such as the "Recommended Standards for Water Works" and the "American Water Works Association Standards," that are generally accepted and used throughout the United States by engineers and state regulators.

DEQ'S RESPONSE TO COMMENTS

Commenter: Dan Brown, P.E., United Water Idaho (Dan Brown's comments were directly supported or duplicated by James Bledsoe, P.E., Keller Engineering Associates; Terry Scanlan, P.G., SPF Water Engineering; and Tim Haener, P.E., JUB Engineering—the following response applies to all of these commenters)

Comment: As currently written, the proposed rule requires pumping redundancy for peak hour flow, including fire flow for those systems that are designed to provide fire flow. Because fire flow is much larger than peak domestic flow, and because fire flow is rarely required, the requirement for redundant pumping to support fire flow is excessive. Recommend that the rule language be modified to separate fire flow and domestic flow for purposes of mechanical redundancy requirements.

Response: Commenters do not contest the need for mechanical redundancy in respect to domestic flows, but they believe it was a mistake to include fire flow in the definition of peak demand and then go on to require systems to provide peak demand with the largest pump out of service. These observations come for the most part from professionals who participated in rule negotiations earlier this year and were in general agreement with the proposed rule until their field experiences began to cause alarm. Their essential argument is that fire flow, whether for large or small systems, is a much larger flow than a system is required to provide for domestic purposes. This leads to system designs that often involve providing fire flow from a separate well, or at least from a separate pumping system that is much larger than the pump or pumps used to support daily domestic flow. The fact that fire flows are large and often supported by separate sources/pumps means that providing mechanical redundancy is potentially very expensive. The fact that fire flow is rarely needed makes the cost of redundancy very large in proportion to the risk reduction achieved. These remarks apply most directly to systems that have little or no elevated storage and rely on pumping to supply their needs.

DEQ agrees that redundancy requirements for domestic and fire flows should be considered separately in the rule, and that systems should be allowed to reduce or eliminate redundancy for fire flow systems if local fire authorities certify that the water system's fire fighting capabilities are compatible with the water demand of existing and planned fire fighting equipment and fire fighting practices in the area served by the system. These changes were accomplished by re-defining peak hour demand and maximum day demand to exclude fire flow, substituting these key terms as appropriate in the rule sections dealing with pumping redundancy, and adding a section to the General Design Criteria to address redundancy requirements for fire flow systems.

As a condition for DEQ approval of fire flow designs that do not incorporate full redundancy, the proposed rule language includes a requirement that existing or potential customers be informed of the system's fire fighting capabilities and the acceptance of these capabilities by the local fire authority. Although some commenters opposed this provision, DEQ feels that this requirement is consistent with similar language negotiated for the rule section dealing with standby power. In both situations, the operative principle is that systems that obtain approval for a reduction in reliability or redundancy criteria should be willing to inform customers of this fact. This notification does not need to be stated in negative terms, because the system design is in compliance with regulations.

Commenter: Tim Haener, JUB Engineering

Comment: In Section 002.01, you still have the AWWA Standards as fully incorporated by reference. I thought we'd agreed to move this to Section 002.02 to only incorporate the specific AWWA Standards that are actually referenced in the rule. This is a big issue since the AWWA Standards are enormous. Fully incorporating those as rule will be very problematic. Referencing the specifically applicable AWWA Standard within the text of the rule itself is the way to go.

Response: DEQ agrees that it would be desirable to incorporate only those standards that are specifically referenced in the rules. However, there are several rule provisions that have the following general wording: ". . .shall meet applicable AWWA standards."

Because water systems vary in terms of methods and materials used, it would be difficult to anticipate all AWWA standards that might be applicable. It is convenient and practical to be able to use the phrase quoted above. DEQ did not in the course of this rulemaking have enough resources to undertake the task of sorting through the standards to determine which among them should be incorporated. The standards are regularly revised and new ones are added each year. Detailed lists of applicable standards could be very lengthy and require annual rulemaking to keep abreast of revisions. Further, the AWWA standards have been incorporated in their entirety in the drinking water rules for many years, and DEQ is not aware of any circumstances where this fact has caused conflict or difficulty

for either design engineers or reviewers. DEQ will continue to monitor this issue and possibly consider incorporation of individual standards in a future rulemaking, if sufficient justification exists.

Commenter: Brad Andersen, INL, Idaho Falls

Comment: There are references in the rule dealing with “dead end mains” in distribution systems, but this term is not defined as to what length and diameter of pipe would need to be treated as a dead end main. Request that a definition be added to the rule.

Response: A definition was developed and added to the proposed rule, as follows:

Dead End Main. A distribution main of any diameter and length that does not loop back into the distribution system.

Commenter: William Johnson, City of Boise Public Works Department

Comment 1: Section 002.01– Incorporation by Reference and Availability of Reference Materials. City of Boise suggests IDEQ consider including Stormwater Drainage Design standards by reference similar to ANSI and AWWA handbooks and standards. Example: "Stormwater Management: A Design Manual" and "Boise City Non-Stormwater Disposal Best Management Practices"

Response: DEQ recognizes the usefulness of these documents for design engineers, particularly in regard to separation of storm water features from critical water system infrastructure. However, other than specification of minimum separation distances, the subject of storm water is outside of the scope of the Drinking Water Rules. Incorporation of these documents would constitute an extension of regulatory authority beyond what is authorized by statute.

Comment 2: Section 003.101 – Definition of “Waiver.” City of Boise does not take exception to the basic definition, but suggests the final Rules should outline the procedures IDEQ will use in administering waivers and appeals.

Response: Section 005 of the rules addresses waivers and variances in considerable detail. This section was not changed during the current rulemaking, and was therefore not included in the proposed rule that was posted for public comment.

Comment 3: Section 504.09 - Record Plans and Specifications Required.

City of Boise recommends deleting the word "accurate" when referring to record drawings. Standards of the construction/engineering industries can not guarantee perfectly accurate record drawings.

Response: Taken as a whole, 504.09 recognizes that record drawings are “based on information provided by the construction contractor and field observations made by the engineer or the engineer’s designee. . .” and that the purpose of record drawings is to “confirm material compliance with the approved plans and specifications or disclose any material deviations therefrom”. This language acknowledges that the engineer submitting record drawings cannot certify from personal knowledge that the drawings are “complete and accurate,” since the information on which the drawings are based comes from multiple observers. However, a sincere effort to provide complete and accurate record drawings is consistent with professional standards of practice and DEQ believes that it should remain in the rule in its current context as a performance goal.

Comment 4: Section 510.02 – Facility and Design Standards – Siting and Construction of Wells – Location. City of Boise recommends substituting “qualified design professional” in place of “design engineer”. Professional geologists and hydro-geologists are qualified to locate a well prior to drilling.

Response: DEQ agrees that licensed geologists can also locate a public water system well, as provided in Section 504.06. However, DEQ believes that the term “qualified design professional” leaves too much room for interpretation. We suggest changing the language in 510.02 as follows (added language in bold):

“Each well shall be staked by the design engineer or licensed professional geologist prior to drilling. . .”

Comment 5: Section 541.01.i – Facility and Design standards – Pump Houses.

City of Boise recommends consideration of allowing pump house floor drains to connect to sanitary sewers. We suggest that acceptable air gaps can be provided to protect the water system by providing a design barrier from the sanitary sewer. This approach would provide a safer solution than eliminating a floor drain completely or constructing a “dead-end” sump to collect wastewater generated inside the pump house.

Response: There are a number of similar restrictions in the rules. It is standard practice to avoid connecting drains that serve critical water system components directly to sanitary sewers because of backflow risk. If a design engineer has a sound reason to propose such a connection, a waiver can be considered by DEQ. See IDAPA 58.01.08.005.01.a. for conditions that must be met.

Comment 6: Section 542.08 – Facility and Design Standards – Distribution System- Separation from Subsurface Wastewater Systems and Other Sources of Contamination.

City of Boise recommends deleting the reference to storm water guidance documents in this section. This guidance reference introduces confusion and perpetuates the mixing of rules and guidance which we believe was to be avoided by this Rule development.

Response: DEQ does not agree that referring to a guidance document in the rule “mixes rules and guidance.” The proposed rule contains a new Section 013, which describes in detail how guidance is to be used and makes it clear that mention of guidance materials in the rule does not constitute a requirement to use those materials, but is intended to “assist both designers and reviewers in determining a reasonable way to achieve compliance with the rules.” DEQ believes that the proposed rule always refers to guidance in a manner that is consistent with Section 013.