Drinking Water Bureau

Surface Water Rule and Interim Enhanced Surface Water Treatment Rule

Significant Deficiency Policy

Revision History					
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NEW MEXICO ENVIRONMENT DEPARTMENT
DRINKING WATER BUREAU

SURFACE WATER RULE AND INTERIM ENHANCED SURFACE WATER TREATMENT RULE SIGNIFICANT DEFICIENCY POLICY

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Review: _____ 2/5/16
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Approval: _____ 2/8/16
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BACKGROUND

The New Mexico Environment Department (NMED) is an executive agency of the State of New Mexico. NMSA 1978, § 9-7A-1. NMED requested drinking water primacy under the Safe Drinking Water Act (SDWA) through an application to the United States Environmental Protection Agency (EPA) dated January 6, 1978. Primacy was granted through public notice in the Federal Register on March 2, 1978. Determination of Primary Enforcement Responsibility, State of New Mexico, 43 Fed. Reg. 8590 (March 2, 1978). This delegation gives NMED the authority to enforce the state drinking water regulations and National Primary Drinking Water Regulations (NPDWR). 42 U.S.C.A. § 300g-2.

The purpose of this document is to support the requirements of 20.7.10.100 New Mexico Administrative Code, adopting and incorporating the 1989 Surface Water Treatment Rule (SWTR) (40 CFR 141.70-141.75) and the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR) (40 CFR 141.170-141.175) and subsequent amendments, which were implemented to protect public health by requiring increased protection against contamination of drinking water. This document is a uniform policy to assist staff in determining whether conditions identified during sanitary surveys or other site visits constitute significant deficiencies under the IESWTR and require corrective action pursuant to 20.7.10 New Mexico Administrative Code. This policy will be made available upon request to any interested parties and the citizens of New Mexico. The policy will also be made public on the DWB website: http:// www.env.nm.gov/dwb/index.htm. Further information may be obtained by contacting the Drinking Water Bureau Chief at (505) 476-8620 or toll free at (877) 654-8720.

AUTHORITY

The SDWA, 42 U.S.C.A. § 300g et seq., authorizes the promulgation of NPDWR, 40 C.F.R. Part 141. The SDWA also provides states with primacy enforcement of regulations if the state's regulations have been approved by EPA. 42 U.S.C.A § 300g-2.

The New Mexico Environmental Improvement Act (EIA) authorizes the New Mexico Environmental Improvement Board (EIB) to promulgate rules and standards consistent with the federal SDWA. NMSA 1978, § 74-1-8(A)(2). Additionally, the EIA empowers NMED to enforce the drinking water regulations promulgated by the EIB. NMSA 1978, § 74-1-7(A)(2).

NMED has primacy responsibility for enforcing drinking water rules through the adoption of State drinking water regulations, which are to be "no less stringent than the national primary drinking water regulations (NPDWRs)." 40 C.F.R. § 142.10(a). The federal Surface Water Rule and Interim Enhanced Surface Water Treatment Rule were incorporated by reference into the New Mexico Administrative Code. 20.7.10.100 New Mexico Administrative Code. The Drinking Water Bureau (DWB) is the bureau in NMED assigned to respond to violations of the state and federal drinking water regulations.

DISCUSSION

A sanitary survey is an onsite review of the water source (identifying sources of contamination by using results of source water assessments where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system (PWS)

to evaluate the adequacy of the PWS, its sources and operations, and the distribution of safe drinking water.

If a significant deficiency is identified, the system must meet the treatment technique requirements. As per 40 CFR 141.723(b), a significant deficiency is defined as a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that [the State] determines to be causing, or has the potential for causing the introduction of contamination into the water delivered to consumers. In addition to the significant deficiency definition noted in 40 CFR 141.723(b), any violation of the Drinking Water Regulations 20.7.10 New Mexico Administrative Code (NMAC) has the potential of being identified as a significant deficiency.

IDENTIFICATION OF SIGNIFICANT DEFICIENCIES

In the course of conducting a sanitary survey or performing other site visits, or reviewing monitoring data or operation reports, DWB staff may discover conditions at the PWS that may result in the introduction of contaminants into the water delivered to consumers. In determining if a deficiency is significant, the following guidelines shall be used:

Concern Guidelines

Direct contamination: The condition provided an opportunity or a potential for direct contamination of the PWS. *Examples: improperly constructed well; unprotected cross connections; inadequate inspection and/or cleaning of finished water storage tanks.*

Treatment: The condition demonstrated a failure in the treatment required to meet drinking water standards. *Examples: improper application of treatment chemicals; lack of redundant mechanical components in the treatment system.*

Confirmation/Monitoring: The condition demonstrated a failure to confirm that the water supply was safe for public consumption. *Examples: failure to sample, monitor, or report; improper recording keeping.*

Delivery: The condition demonstrated a failure to deliver safe water. *Examples: low pressure in the distribution system; inadequate preventative maintenance.*

Operation/Management: The condition demonstrated a failure to properly operate, maintain, manage, financially support or provide a reliable, adequate supply of safe drinking water.

Procedure

1. After one or more significant deficiencies have been identified, DWB staff shall prepare a sanitary survey report and send it **by certified mail** to the PWS within thirty (30) days of completing the site visit(s). The report shall identify all conditions constituting significant deficiencies. Staff shall refer to this policy and other Bureau guidelines for guidance regarding citations and in identifying significant deficiencies.
2. The PWS systems must respond, in writing, to significant deficiencies identified in sanitary survey reports no later than 45 days after receipt of the report. The response

must indicate how and on what schedule the system will address significant deficiencies noted in the survey. 40 CFR 141.723(c).

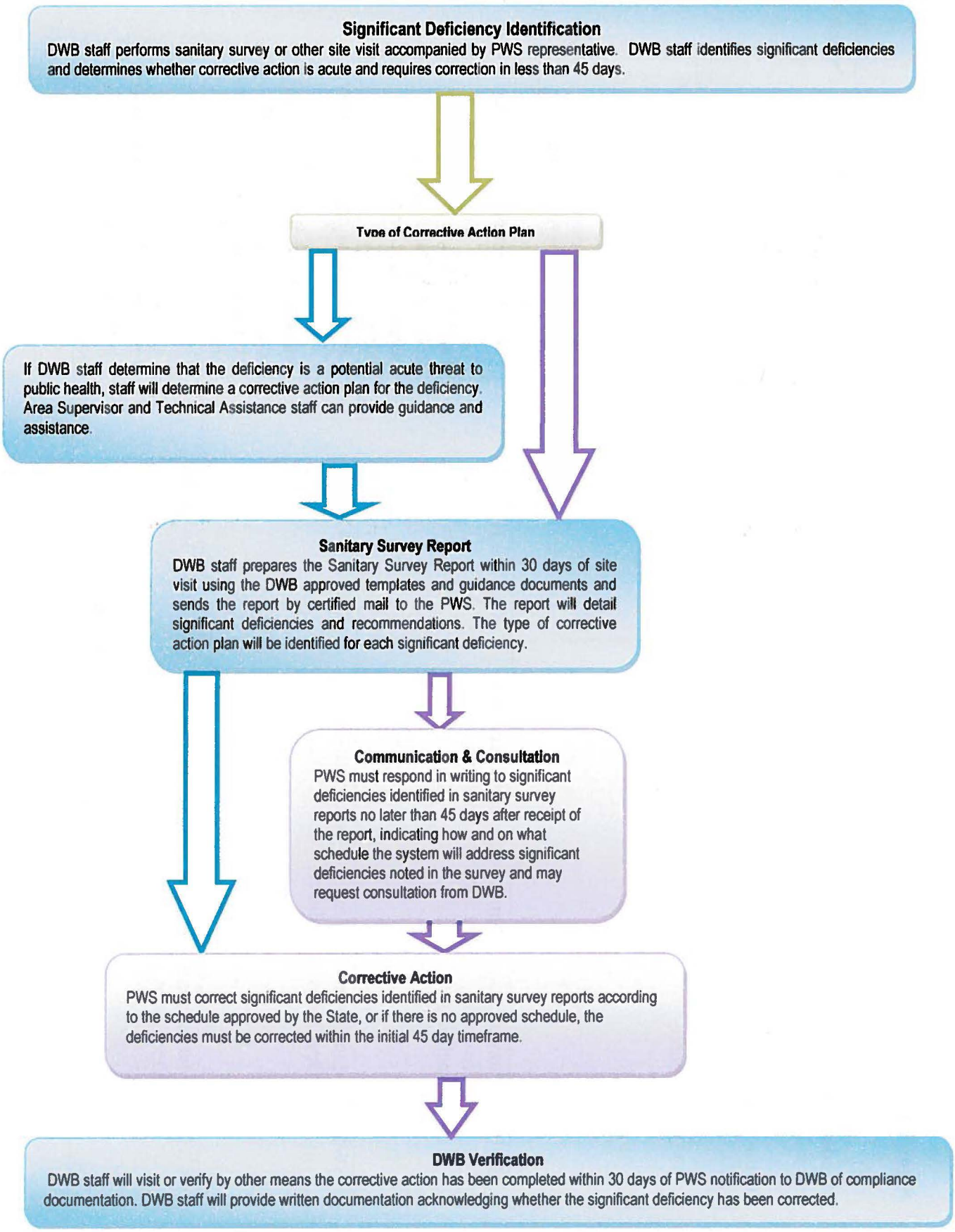
3. The DWB staff shall promptly respond to requests for consultation from the PWS. Compliance Officers are highly encouraged to meet with the PWS following any significant deficiency notice, including where consultation is not required due to DWB-directed corrective action. During consultation, the DWB and PWS shall determine the appropriate corrective action plan and the timeline required to resolve the significant deficiencies. The PWS shall provide the finalized corrective action plan within 45 days of the date of the letter. DWB staff shall respond to a proposed corrective action plan within 30 days of the date of the letter. If PWS requires additional assistance, a Technical Assistance Request (TAR) may be initiated and submitted to the Area Supervisor. TAR will then be submitted to Technical Services Manager of the DWB.

4. The PWS must correct significant deficiencies identified in sanitary survey reports according to the schedule approved by DWB. For the purposes of this policy, these schedules may initially not be longer than 135 days in length. If needed, water systems may request an extension to the initial approved schedule. 40 C.F.R. § 141.723(d).

5. Significant Deficiency extension approvals or denials will be initially determined by the Compliance Officer and submitted to their immediate supervisor for final approval. Final approval or denial of the extension will be provided by the Compliance Officer's immediate supervisor via letter.

6. Failure to submit a corrective action plan or to be in compliance with the State-directed plan will result in a treatment technique violation requiring Tier 2 public notification pursuant to 40 CFR 141.203. If the significant deficiency is of an acute nature that would potentially have an immediate health risk to the public, the DWB may determine that a Tier 1 notice is required. If the Compliance Officer believes that the significant deficiency is of an acute nature, an immediate discussion with their supervisor should be initiated and a formal acute determination made. 40 CFR 141.404(a)-(d).

7. The PWS shall provide compliance documentation to the DWB along with any supporting evidence once a significant deficiency has been adequately addressed. DWB will inspect or verify the completed action within 30 days of notice of completion. If the Compliance Officer is not comfortable accepting the documentation that has been provided, they may elect to conduct an on-site inspection to verify the resolution in person.


Significant Deficiency Identification
DWB staff performs sanitary survey or other site visit accompanied by PWS representative. DWB staff identifies significant deficiencies and determines whether corrective action is acute and requires correction in less than 45 days.
Type of Corrective Action Plan
If DWB staff determine that the deficiency is a potential acute threat to public health, staff will determine a corrective action plan for the deficiency. Area Supervisor and Technical Assistance staff can provide guidance and assistance.
Sanitary Survey Report
DWB staff prepares the Sanitary Survey Report within 30 days of site visit using the DWB approved templates and guidance documents and sends the report by certified mail to the PWS. The report will detail significant deficiencies and recommendations. The type of corrective action plan will be identified for each significant deficiency.
Communication & Consultation
PWS must respond in writing to significant deficiencies identified in sanitary survey reports no later than 45 days after receipt of the report, indicating how and on what schedule the system will address significant deficiencies noted in the survey and may request consultation from DWB.
Corrective Action
PWS must correct significant deficiencies identified in sanitary survey reports according to the schedule approved by the State, or if there is no approved schedule, the deficiencies must be corrected within the initial 45 day timeframe.
DWB Verification
DWB staff will visit or verify by other means the corrective action has been completed within 30 days of PWS notification to DWB of compliance documentation. DWB staff will provide written documentation acknowledging whether the significant deficiency has been corrected.

Significant Deficiencies Identified to Date

DWB has determined the conditions in Table 1 (below) are significant deficiencies whenever identified at a PWS. Column six identifies the applicable concern guidelines and a description of why the condition constitutes a significant deficiency. The list is not exhaustive and unlisted conditions may be significant deficiencies pursuant to 40 C.F.R. § 40 CFR 141.723(b).

Table 1: Significant Deficiencies

SDWIS #	Element	Condition	Citation	Concern/Description
SW01	Source	Intake Screens or grates inadequate to minimize debris intake	40 CFR 141.723(b)	Direct Contamination; Delivery. May cause large debris to enter intake structure which may result in introduction of unwanted materials or clogging of intake lines.
SW02	Pumps, Treatment Facilities	Pumps or treatment facilities are subject to flooding	40 CFR 141.723(b)	Direct Contamination; Delivery. Facilities which are susceptible to flooding have an increased potential for contamination or failure.
SW03	Management /Operations	Chemical Tanks Inadequately Labeled	40 CFR 141.723(b)	Direct Contamination; Delivery. Inadequate labeling of chemical tanks could result in improper chemical injections or treatment of the drinking water.
SW04	Management /Operations	Chemicals improperly stored	40 CFR 141.723(b)	Direct Contamination; Delivery. Improper storage of liquid or dry chemicals could result in accidental spills of chemicals.

SDWIS #	Element	Condition	Citation	Concern/Description
SW05	Management /Operations	Lack of, or improper containment for liquid chemicals	40 CFR 141.723(b)	Direct Contamination; Delivery. Improper chemical storage containment could result in large quantity spills and/or mixing of incompatible chemicals during a spill event.
SW06	Management /Operations	Lack of standby chemical feeders for each chemical	40 CFR 141.723(b)	Direct Contamination; Delivery. Lack of standby feeders could result in improper treatment if the main chemical feeders malfunction.
SW07	Management /Operations	Lack of excessive sludge accumulations prevented	40 CFR 141.723(b)	Direct Contamination; Delivery. Improper sludge control could result in short circuiting of the treatment process.
SW08	Management /Operations	Unacceptable Filter Media, including visual observations of mud balls or cracking	40 CFR 141.723(b)	Direct Contamination; Delivery. Unacceptable filter media could result in improper filtration of treated water.
SW09	Management /Operations	Lack of, or improper filter backwashing criteria	40 CFR 141.723(b)	Direct Contamination; Delivery. Lack of, or improper filter backwashing criteria could result in improper filtration of treated water, breakthrough of pathogens, or possibly shorter filter runs.

SDWIS #	Element	Condition	Citation	Concern/Description
SW10	Management /Operations	Lack of or improper pipe labeling within the treatment plant	40 CFR 141.723(b)	Direct Contamination; Delivery. Improper pipe labeling could result in potential cross connections within treatment plant.
SW11	Management /Operations	Improper disinfectant feed locations	40 CFR 141.723(b)	Direct Contamination; Delivery. Improperly located disinfection feed points could result in improper inactivation of pathogens or formation of disinfection byproducts.
SW12	Management /Operations	Lack of, or improper calibration and record keeping of calibrations for meters or lab equipment	40 CFR 141.723(b)	Direct Contamination; Delivery. Improper calibration of meters or lab equipment could result in improper dosing of chemicals, inadequate treatment, or improper compliance reporting to NMED-DWB.
003Z	Management /Operations	Inadequate access to critical facilities (no keys, etc.).	40 CFR 141.403(a)(4)	Operation/Management. Inadequate access to facilities could lead to the inability to maintain the facilities during critical emergencies. Unable to operate/maintain system.

SDWIS #	Element	Condition	Citation	Concern/Description
001W 004B	Management /Operations	Inadequate or lack of an emergency operations plan.	20.7.10.400.E NMAC 40 CFR 141.403(a)(4)	Operation/Management. Lack of an adequate Emergency Plan could lead to extended delays in supplying safe potable drinking water during minor or major emergencies. Public Water Systems that assess their vulnerabilities and adopt thorough emergency response plans are minimizing the likelihood of major delays in supplying safe potable drinking water to their customers. Emergency plan is not functional.

SDWIS #	Element	Condition	Citation	Concern/Description
001V 006F 004C 003L	Management /Operations	Inadequate or lack of an operations and maintenance plan or necessary operational policies.	20.7.10.400.E NMAC 40 CFR 141.63(d)(3) 40 CFR 141.403(a)(4) 40 CFR 141.23(c)(5)(iii)	Direct contamination; Delivery; Operation/Management. An Operation and Maintenance Plan is an essential part of any water supply system. The manual should summarize the actions necessary to identify those steps required for cost effective, efficient, safe, and reliable project start-up and continued successful operation. A proper plan should result in a flawless transition from one operator to the next. Lack of a proper O&M plan could result in insufficient operation of the water system as well as prolonged water outages during emergency situations. Lack of an adequate O & M plan can result in poor treatment decisions, water outages; failure to monitor; equipment failures; inability to obtain needed services or parts, and improper operation of facilities.

SDWIS #	Element	Condition	Citation	Concern/Description
001U	Management /Operations	Inadequate spare parts for key equipment.	20.7.10.400.E NMAC	Operation/Management. Inadequate access to spare parts and/or repair parts could lead to the inability to maintain the water system facilities during critical emergencies. This could cause extended water outages as a result of not being able to immediately repair or replace non-functioning facilities. Production of non-compliant water.
001T	Management /Operations	No or inadequate system maps.	20.7.10.400.E NMAC	Operation/Management. Mapping of water supply infrastructure provides a number of benefits, including the capacity to more accurately respond to emergencies. System operations and maintenance also benefit by easily locating problems; completing repairs; and scheduling maintenance as well as the ability to identify required compliance sampling points such at Total Coliform sampling locations.

SDWIS #	Element	Condition	Citation	Concern/Description
003Q	Monitoring/ Reporting	Required records not kept on site.	40 CFR 141.33	Confirmation/Monitoring. Failure to maintain records on site will affect the operator's ability to make process control decisions for treatment, operational decisions for system maintenance and system monitoring requirements.
SW13	Treatment	Improper treatment of drinking water, including not meeting proper inactivation of pathogens	40 CFR 141.723(b)	Direct Contamination; Delivery. Improper treatment of drinking water or not meeting proper inactivation of pathogens could result in improperly treated water.
005P	Treatment	Inadequate treatment plant failure alarm or auto shut down	40 CFR 141.723(b)	Delivery; Operation/Management. Inadequate treatment plant alarm or auto shut down could result in inadequate treatment of the drinking water and possible adverse health effects for consumers of that drinking water.

SDWIS #	Element	Condition	Citation	Concern/Description
006C 003U	Treatment	Interruptions in treatment process	40 CFR 141.63(d)(2); 40 CFR 141.723(b)	Direct Contamination; Treatment; Confirmation/Monitoring; Delivery; Operation/Management. Interruptions in disinfection processes could potentially lead to microbial growth within the distribution system as well as violation of the contact time (CT) requirements. Failure in treatment could result in microbial detects
004G	Treatment	Disinfectant residuals not measured and recorded at entry point or in distribution	40 CFR 141.72	Operation/Management. Verification of disinfectant residuals is essential in determining if potential contamination is occurring within the distribution system. An increased disinfectant demand is an indicator of microbial growth within the system.

SDWIS #	Element	Condition	Citation	Concern/Description
SW14	Treatment	Inadequate filtration of subpart H source	40 CFR 141.73; 40 CFR 141.170; 40 CFR 141.500	Direct Contamination; Treatment; Confirmation/Monitoring; Delivery; Operation/Management. Inadequate filtration could lead to microbes entering the distribution system.
SW15	Treatment	Inadequate process control monitoring or record keeping	40 CFR 141.723(b)	Operation/Management. Inadequate monitoring or recordkeeping could lead to contamination. If the flocculation, sedimentation, and coagulation processes are not adequately recorded and tracked, the operators are less likely to adjust to changing water quality which could result in improperly treated water.
SW16	Treatment	4 in 1 valve pump supports a critical process (fluoride, coagulant feed, chlorine)	40 CFR 141.723(b)	Operation/Management. Critical processes require a reliable pump to deliver continuous and uninterrupted additive feeds. 4 in 1 valve pumps are inadequate for critical processes.

SDWIS #	Element	Condition	Citation	Concern/Description
SW17	Treatment	Required Monthly Operating Report (MOR) not completed (subpart H)	40 CFR 141.75(a) or (b); 40 CFR 141.175(a)&(b); 40 CFR 141.570	Operation/Management. This is a Tiered violation and may not be a significant deficiency. Lack of, late, incomplete, or inadequate MORs should be identified on a monthly basis by compliance staff.
SW18	Treatment	No flow pacing of key chemical	40 CFR 141.723(b)	Operation/Management. Fluctuating or irregular chemical flow could result in inadequate removal of contaminants and sediment.
SW19	Treatment	No over feed protection of a chemical feed	40 CFR 141.723(b)	Operation/Management. No over feed protection could result in over treatment of the drinking water and also chemical contamination of the drinking water supply.

SDWIS #	Element	Condition	Citation	Concern/Description
SW20	Treatment	Inadequate sample locations (e.g. no raw or finished water tap)	40 CFR 141.74(b)(3)(iv) 40 CFR 141.723(b)	Operation/Management. A finished water tap is required in order to calculate CT and for entry point sampling. Without a properly placed raw water tap, the operators cannot adequately determine treatment procedures to minimize contamination and turbidity
SW21	Treatment	Leak at chlorine injection point	20.7.10.400.B NMAC	Direct Contamination; Delivery. Leaks can result in direct contamination of the water delivered to distribution. A leaky chlorine injection point could result in fluctuating and potentially inadequate addition of disinfectant to the water supply.
SW22	Treatment	Cross Connection present	20.7.10.400.P NMAC	Direct Contamination; Delivery. Cross connections could result in direct contamination of the water delivered to distribution.

SDWIS #	Element	Condition	Citation	Concern/Description
SW23	Treatment	The waste lagoon is overflowing	40 CFR 141.723(b)	Direct Contamination. A leaking or overflowing lagoon contaminates the surrounding area and could contaminate the water supply.
SW24	Treatment	The settling process not working properly	40 CFR 141.723(b)	Operation/Management. The filtration process could potentially become severely limited or overwhelmed by excess floc or sediment if the settling process is not functioning properly.
SW25	Treatment	Unapproved chemical used	20.7.10.400.K NMAC	Direct Contamination; Operation/Management If additives not approved for use in drinking water are used, potentially harmful impurities in the additives could lead to contamination of the water supply.

SDWIS #	Element	Condition	Citation	Concern/Description
SW26	Treatment	Lab equipment out of calibration, or calibration records not kept, or calibrations not performed according to manufacturer	40 CFR 141.74(a)(1), 40 CFR 141.174(a), 40 CFR 141.560(b), 40 CFR 141.74(a)(2)	Operation/Management Each turbidimeter or chlorine residual meter must be calibrated and the accuracy validated on a routine basis. Instruments not calibrated or out of calibration range pose the risk of contamination because the safe data ranges cannot be known or verified.
SW27	Treatment	Inadequate turbidity measurements	40 CFR 141.74, 40 CFR 141.174(a), 40 CFR 141.560(c)	Operation/Management. The regulations specify minimum requirements for turbidity measurement. Less frequent or inaccurate measurement could result in unseen high turbidity entering the water supply.
SW28	Treatment	Chlorine analyzer is not functional	40 CFR 141.74(c)(2)	Operation/Management. The regulations specify minimum requirements for residual measurement. Less frequent or no measurement could result in inadequately disinfected water entering distribution thus potentially increasing the risk of microbial contamination.

SDWIS #	Element	Condition	Citation	Concern/Description
SW29	Treatment	Chlorine residual should be kept at least 0.2 mg/l throughout	40 CFR 141.74(c)(2)	Operation/Management. The regulations specify a minimum chlorine residual being greater or equal to that required to maintain minimum CT, or at least 0.2 ppm entering distribution. A lower residual chlorine concentration could result in inadequately disinfected water entering distribution thus potentially increasing the risk of microbial contamination.
SW30	Treatment	Required monitoring equipment isn't present (e.g., bench top turbidimeter)	40 CFR 141.74(a)(1) 40 CFR 141.174(a) 40 CFR 141.560(b) Turbidity 40 CFR 141.74(a)(2) Chlorine	Operation/Management. If a water system has continuous turbidity measurement, each turbidimeter must be calibrated and the accuracy validated on a routine basis with a bench top unit or other accepted instrument. If grab samples are taken, then a bench top turbidimeter is required. If a chlorine residual meter is not present, then the water system has no way to track residuals in the event the on-line meter malfunctions.

SDWIS #	Element	Condition	Citation	Concern/Description
SW31	Treatment	Cartridge filters operated outside specification ranges	40 CFR 141.73(d)	Direct Contamination; Delivery. Operating outside the specifications of cartridge filters could result in improper filtration of treated water.
SW32	Treatment	Lack of temperature and pH data	40 CFR 141.74(a)(1)	Operation/Management. CT remains unchanged for a given facility only if there are no changes in flow, piping, chlorine residual, temperature, or pH. If any of these parameters change, the CT will also change and water systems must ensure that the CT values are within the compliant range.
SW33	Treatment	Lack of CT calculations during periods of fluctuating chlorine residuals, increased flows, or following changes in plant design or piping	40 CFR 141.72(a)(1)	Operation/Management. CT remains unchanged for a given facility only if there are no changes in flow, piping, and chlorine residual. If any of these parameters change, the CT will also change and water systems must ensure that the CT values are within the compliant range.

SDWIS #	Element	Condition	Citation	Concern/Description
SW34	Treatment	Failure to conduct direct membrane integrity testing on a daily basis or as formally established by DWB	40 CFR 141.719(b)(3)	Direct Contamination; Delivery; Operation/Management. Direct Membrane integrity testing ensures that each membrane is operating within set parameters for excluding contaminants and particulates. Operating outside the specifications of membrane filters could result in improper filtration of treated water. When integrity testing is not performed on each unit at the designated timeframe, the efficacy of the unit is unknown.

SDWIS #	Element	Condition	Citation	Concern/Description
SW35	Treatment	Failure to conduct indirect membrane integrity testing	40 CFR 141.719(b)(4)	Direct Contamination; Delivery; Operation/Management. Indirect Membrane integrity testing ensures that each membrane is operating within set parameters for excluding contaminants and particulates. Operating outside the specifications of membrane filters could result in improper filtration of treated water. When integrity testing is not performed on each unit at the designated timeframe, the efficacy of the unit is unknown.
SW36	Treatment	Failure to inactivate, bypass, or replace a membrane unit after direct or indirect membrane integrity tests failed	40 CFR 141.719(b)(3)(v)	Direct Contamination; Delivery; Operation/Management. Indirect Membrane integrity testing ensures that each membrane is operating within set parameters for excluding contaminants and particulates. Operating outside the specifications of membrane filters could result in improper filtration of treated water.

SDWIS #	Element	Condition	Citation	Concern/Description
SW37	Treatment	Failure to monitor UV lamp performance	40 CFR 141.720(d)(2)	Direct Contamination; Delivery; Operation/Management. Monitoring UV lamp performance ensures that each lamp is operating within set parameters for inactivating microbes and viruses. Operating outside the specifications of UV lamp dose and intensity could result in inadequate inactivation and increase the probability of contamination.
SW38	Treatment	Employing a treatment technology without a proven and approved challenge test	40 CFR 141.719	Direct Contamination; Delivery; Operation/Management. Employing a treatment technology without an approved challenge test poses the risk of contamination by not demonstrating beyond a doubt that the technology is properly chosen and operated as intended.

SDWIS #	Element	Condition	Citation	Concern/Description
TBD	TBD By Compliance Officer	Any other deficiency or situation that the DWB determines to be significant	40 CFR 141.723(b)	Compliance officer should include a detailed description of the situation or deficiency as well as the following statement: The DWB has determined that this is currently causing, or has the potential for causing, the introduction of contamination into the water delivered to consumers.
001H	Distribution	Air vac/relief valve is susceptible to flooding.	20.7.10.400.B NMAC	Direct Contamination; Delivery. Valve can be flooded and introduce contamination into water supply.
001X 002B 006R	Distribution	Distribution lines not properly disinfected when doing repairs.	20.7.10.400.F NMAC; 20.7.10.400.G NMAC; 40 CFR 141.63(d)(3)	Direct Contamination; Installation and repair of water mains provides the potential for direct microbial contamination of the distribution system.
006Q	Distribution	Insufficient number of valves.	40 CFR 141.63(d)(3)	Operation/Management; Direct contamination; Delivery. Lack of valves in the distribution system creates excessive water outages during repair of leaks or line breaks. Water outages can result in bacteriological contamination or backflow events.

SDWIS #	Element	Condition	Citation	Concern/Description
006P	Distribution	Pressures in the distribution system are too high (100 psi) or too low (20 psi).	40 CFR 141.63(d)(3)	Delivery; Operation/Management. Extremely high pressures could cause an increase in water line breaks. Breaks in the distribution lines could introduce contaminants and/or microbes into the system. Extremely low pressure occurrences could lead to backflow occurrences and/or introduce contaminants and/or microbes into the distribution system.
002V	Operator Compliance	Inadequate number of operators' for system	20.7.10.400.M NMAC	Operation/Management. Inadequate number of operators for the water supply could result in inadequate or improper operation and maintenance of the drinking water system. All process control decisions must be made by a certified operator who is onsite. If system must operate outside normal working hours additional operators are required.

SDWIS #	Element	Condition	Citation	Concern/Description
002U	Operator Compliance	Operators lack proper level of certification.	20.7.10.400.M NMAC	Operation/Management. Inadequate certification of a public water supply operator could result in inadequate or improper operation and maintenance of the drinking water system. Uncertified operators may have inadequate knowledge or skills for the proper operation and maintenance of the drinking water system
004J	Pumps	No low pressure cut off on pump suction side.	40 CFR 141.403(a)(4)	Delivery. Lack of proper low pressure cut off on a pump could cause failure of the pump which would lead to a low pressure or water outage within the distribution system. This leads to potential for contaminant and/or microbial entry into the system.

SDWIS #	Element	Condition	Citation	Concern/Description
001O 001G 006K 004E	Storage	Inadequate construction , missing or inappropriately sized appurtenances for storage facility (e.g. no or incorrectly sized air vent, no bypass lines, no ladder, no access to interior of facility, undersized overflow, lack of a drain line, etc)	20.7.10.400.D NMAC; 20.7.10.400.B NMAC; 40 CFR 141.63(d)(3); 40 CFR 141.403(a)(4)	Direct Contamination; Delivery; Operations/Management. Missing or inadequately sized appurtenances can result in damage and contamination of the storage facility. Undersized vents can result in imploding of facility, lack of access to storage facility creates an inability to inspect and maintain the storage facility. Inability to drain or bypass the storage facility also limits the system's ability to inspect and maintain the storage facility. If a storage facility is not inspected and maintained it may result in potential microbial growth or a failure of the structure.
001F 006U 006T	Storage	Missing or inoperative altitude valve.	20.7.10.400.B NMAC; 40 CFR141.63(d)(3); 40 CFR141.403(a)(4)	Delivery. May cause distribution system pressure issues, internal corrosion of storage facilities, or cause storage facility to overflow and erode facility site.

SDWIS #	Element	Condition	Citation	Concern/Description
001Q 001B 006G 003W	Storage	Storage facility is not secured from the elements (e.g. hatch does not create a water tight seal, air vent not screened, overflow is not protected, roof has penetrations, direct access to water, hatch is not locked, etc)	20.7.10.400.D NMAC; 20.7.10.400.B NMAC; 40 CFR 141.63(d)(3); 40 CFR 141.403(a)(4);	Direct Contamination. Properly protected storage facilities prevent contaminated water, insects, vermin, or other potential contaminants from entering the facility.
004P	Treatment	Chemical dosage records are insufficient to ensure proper operation of treatment facility.	40 CFR 141.403(a)(4)	Confirmation/Monitoring. Chemicals are used in treatment to remove contaminants, including pathogens, from water. If chemical dosages are not properly monitored a potential exists for the treatment process to fail which would allow for the entry of contaminants into the water system.
005T 005Z	Treatment	Chemical feed pumps are inappropriately installed, are in poor condition, or are not operating. (e.g. chlorine pump, polyphosphate pump, alum pump, etc)	40 CFR 141.403(a)(4) 40 CFR 141.63(d)(2);	Treatment. Chemicals are used in treatment to remove contaminants, including pathogens, from water. If treatment is inadequate a potential exists for pathogens to reach customers.
002G	Treatment	Chemicals are not approved for use in drinking water.(e.g. scented chlorine, etc)	20.7.10.400.K NMAC	Direct Contamination. Unapproved chemicals may introduce unknown contaminants into water system.

SDWIS #	Element	Condition	Citation	Concern/Description
005K	Treatment	Inadequate process control monitoring or record keeping.	40 CFR 141.403(a)(4)	Confirmation/Monitoring. Improper process control and/or monitoring records could lead to improper treatment of drinking water resulting in a MCL exceedance or treatment technique violation.
003C 003B 002Y 003G 003M 003P 003S 005N	Treatment	Inadequate sampling locations	40 CFR 141.21(a) 40 CFR 141.132(f) 40 CFR 141 Subpart I 40 CFR 141.23 40 CFR 141.24 40 CFR 141.25 40 CFR 141.33(f) 40 CFR 141.403(a)(4)	Confirmation/Monitoring. Lack of sampling locations may result in improper process control decisions resulting in a potential for the treatment process to fail, which would allow for the entry of contaminants into the water system. Improper sampling and/or sampling locations could result in MCL, Treatment Technique, or Monitoring and Reporting Violations.
005O	Treatment	Operations staff unfamiliar or lacks understanding of treatment method or process control (e.g. flow pacing, lack of treatment objectives; operator is unable to describe key chemical interactions or process control requirements).	40 CFR 141.403(a)(4)	Operation/Management. Improperly operated or maintained treatment systems could potentially cause improper treatment of drinking water which could lead to MCL and/or treatment technique violations.

SDWIS #	Element	Condition	Citation	Concern/Description
002R, 002P, 002O, 002Q, 002T	Distribution, Pumps, Source, Storage, Treatment	Cross connections are present in the water system.	20.7.10.400.L NMAC	Direct Contamination; Operation/Management. Cross connections are considered direct links through which it is possible for contaminating materials and microbes to enter a potable water supply. Backflow and back siphonage prevention devices protect the water system from backflow events.
002E, 002F, 002I, 002D, 002J	Distribution, Pumps, Source, Storage, Treatment	Materials in contact with potable water are not approved for use in PWS.	20.7.10.400.K NMAC	Direct Contamination; Delivery. Materials which are not approved for use in drinking water may fail prematurely or introduce contaminates into the drinking water supply.
002N, 002S, 002M, 002L	Distribution, Pumps, Source, Storage	Inadequate or malfunctioning backflow/back siphonage prevention device.	20.7.10.400.L NMAC	Direct Contamination; Operation/Management. There exist a potential for liquids of unknown quality to enter a public water system during line breaks, fires, etc. through a cross connection. Cross connections are considered direct links through which it is possible for contaminating materials and microbes to enter a potable water supply. Backflow and back siphonage prevention devices protect the water system from backflow events.

SDWIS #	Element	Condition	Citation	Concern/Description
001Z, 002C, 006N, 004Z	Distribution, Source, Storage, Treatment	Lack of a disinfection policy in accordance with AWWA standards	20.7.10.400.F NMAC; 20.7.10.400.G NMAC; 40 CFR 141.63(d)(3) 40 CFR 141.403(a)(4)	Direct Contamination; Delivery. Installation and repair of water mains provides the potential for direct microbial contamination of the distribution system.
004V, 004U, 004T, 005B	Pumps, Source, Storage, Treatment	No road/access to the facility.	40 CFR 141.403(a)(4)	Operation/Management. Improper or no access to water system facilities such as a storage facility could lead to the inability to maintain those facilities during emergency situations. Unable to operate/maintain facility.
004Y, 005L, 004X, 004W	Pumps, Source, Storage, Treatment	Inadequate construction , missing or inappropriately sized appurtenances for treatment facility (e.g. no overfeed protection, lack of control valves, lack of meters, lack of injection points, insufficient system controls, etc.)	40 CFR 141.403(a)(4)	Direct Contamination; Treatment; Confirmation/Monitoring; Delivery; Operation/Management. Meters, valves, injection points, etc, allow for appropriate process control decisions and enable an operator to provide the correct dosage of chemicals. Under dosing of chemicals may result in inadequate treatment which could lead to MCL and/or treatment technique violations, and overfeeding of chemicals can be toxic to users.

SDWIS #	Element	Condition	Citation	Concern/Description
006L, 005J, 005A	Pumps, Source, Treatment	Controls are not secured from the elements or are inadequate/non-functional.	40 CFR 141.63(d)(3); 40 CFR 141.403(a)(4)	Delivery. Inadequate or nonfunctional controls may result in inadequate water production, inadequate water pressure, water outage or treatment failure. If controls are not secured from the elements they can become damaged and not operate properly.
006S, 004S	Distribution, Source	Air vac/relief valve is not functioning properly.	40 CFR 141.63(d)(3) 40 CFR 141.403(a)(4)	Direct Contamination; Delivery. May cause a water outage, may result in introduction of contamination to water, may result in a water hammer and cause structural damage to system components. Valve can be flooded and introduce contamination into water supply.

Identifying New Significant Deficiencies

DWB staff may encounter conditions believed to be significant deficiencies that are not included in the above tables. If DWB staff performing a sanitary survey or other site visit is unsure whether a condition constitutes a significant deficiency, the staff member shall discuss the condition with the Area Supervisor, who will make an initial determination based on expertise and the five concern guidelines included in this policy. If the Area Supervisor believes the deficiency to be significant, it shall be forwarded to the PWSS Manager for review. If the PWSS Manager agrees, the condition shall be marked as a significant deficiency and added to the appropriate table and issued to the PWS in the Sanitary Survey Report.