

THIS POLICY DOES NOT HAVE THE FORCE OF LAW

Significant Deficiencies for Sanitary Surveys

Division: DDAGW
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Category: Operations - Policy
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I. PURPOSE

As a primacy condition for the Interim Enhanced Surface Water Treatment Rule (IESWTR), USEPA requires that states develop significant deficiencies to be cited in sanitary surveys. According to USEPA, significant deficiencies must be enforceable. To help implement the IESWTR, this document explains what Ohio EPA considers to be a significant deficiency. In addition, it provides guidance on types of water system defects that may be cited as significant deficiencies along with regulatory basis for such citations.

II. BACKGROUND

DDAGW has used various terminology in the past to categorize deficiencies noted during sanitary surveys. The term “requirements” has generally been used to communicate to water systems what improvements must be completed for compliance and the term “recommendations” used for improvements Ohio EPA recommends as beneficial to the operation of the water system. Because significant deficiencies must be enforceable, anything identified as a significant deficiency must be supported by a requirement of the Ohio Administrative Code (OAC) or the Ohio Revised Code (ORC).

III. POLICY

Significant Deficiency Definition: A defect in the system that puts the system in violation of a drinking water requirement. This can be any defect in the system’s design, operation, or administration, as well as any failure or malfunction of any system component that puts the system in violation or that causes an unacceptable risk to health or affects the reliable delivery of safe drinking water.

IV. GUIDANCE

Some examples of significant deficiencies are cited below and are categorized according to the eight components of a sanitary survey required by 40 CFR 142.16(b)(3). The regulatory citations for the significant deficiencies are also provided. Most of these rule or statute citations are general in nature. For any specific condition found at a water system, the survey officer should confirm the regulatory citation and make it appropriately specific. Examples of significant deficiencies are provided to assist in their identification at public water systems.

<u>Category</u>	<u>Significant Deficiency Description</u>	<u>ORC/OAC Basis</u>
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1) Source

<p>a) Activities or pollution sources in the immediate source water area that will cause sanitary risks.</p> <p><i>Example: Contaminants located within source water isolation radius (a sanitary sewer within 10 feet of a well)</i></p>	<ul style="list-style-type: none"> • ORC 6109 - Safe Drinking Water Statute • OAC Chapter 3745-91 - Plan Approval • OAC rule 3745-81-03 - Siting Requirements • OAC rule 3745-81-76 - Source Water Designation • OAC Chapter 3745-09 - Well Standards
<p>b) Raw water monitoring that is indicative of an immediate sanitary risk.</p> <p><i>Example: Water quality problems indicate the need for a raw water reservoir or additional treatment. A ground water source with positive E. Coli result(s) and not providing surface water treatment</i></p>	<ul style="list-style-type: none"> • OAC rule 3745-81-76 - Source Water Designation • OAC Chapter 3745-09 - Well Standards • OAC Chapter 3745-91 - Plan approval
<p>c) Wells do not meet minimum well construction requirements.</p> <p><i>Example: Improperly vented well, lack of grouting, inadequate well cap.</i></p>	<ul style="list-style-type: none"> • OAC rule 3745-81-76 - Source Water Designation • OAC Chapter 3745-09 - Well Standards • OAC Chapter 3745-91 - Plan approval
<p>d) Insufficient raw water capacity</p> <p><i>Example: Insufficient capacity of raw water source indicates need for raw water reservoir, insufficient capacity of raw water pumps.</i></p>	<ul style="list-style-type: none"> • OAC Chapter 3745-91 - Plan approval • OAC rule 3745-85-01 - Contingency plans

2) Treatment

<p>a) System demand exceeds approved plant design capacity</p>	<ul style="list-style-type: none"> • OAC Chapter 3745-91 - Plan approval
<p>b) All chemicals and appurtenances not NSF approved</p>	<ul style="list-style-type: none"> • OAC rule 3745-83-01 - Operational requirements

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c)	<p>One or more of the unit processes is incapable of producing water that meets standards under all conditions of raw water quality</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> • <i>Rapid mix: Inadequate mixing (no mixer/ inoperable mixer/ short circuiting)</i> • <i>Flocculation basin: Inadequate flocculation (No flocculator/ broken paddle/ short circuiting), Lack of visible floc.</i> • <i>Sedimentation basin: Short circuiting, No sludge collection/removal equipment or improper sludge withdrawal.</i> • <i>Chemical feed: WTP doesn't have the appropriate chemicals, No backup feeder for necessary chemicals, Inadequate feed control (doesn't vary with raw water conditions, doesn't vary with flow, no calibration), Inadequate safety equipment/spill containment, Lack of backflow prevention devices in the treatment plant.</i> 	<ul style="list-style-type: none"> • OAC Chapter 3745-91 - Plan approval • OAC rules 3745-81-71 through 3745-81-75 - Requirements for filtration and disinfection of surface water sources • OAC Chapter 3745-95 - Backflow prevention
d)	<p>Filters are not in good repair/filter operational components not functioning as approved to provide treatment to meet turbidity standards or water quality goals</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> • <i>Filtration - Insufficient control and measurement of filtration and backwash rates, Exceeding filtration rate, Insufficient backwash procedures/facilities, No air gap on backwash waste, Filter media in poor condition (mudballs, cracks, depressurizations, size, depth, distribution).</i> 	<ul style="list-style-type: none"> • OAC Chapter 3745-91 - Plan approval • OAC rules 3745-81-71 through 3745-81-75 - Requirements for filtration and disinfection of surface water sources • OAC Chapter 3745-95 - Backflow prevention

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	e) Inadequate disinfection contact time (CT) <i>Examples:</i> <i>Clearwell - Inadequate size/inadequate baffling (effective volume factor), Maintenance (lack of a vent, unlocked access hatches).</i>	<ul style="list-style-type: none"> • OAC Chapter 3745-91 - Plan approval • OAC rule 3745-81-72 - Disinfection of water from surface water sources • OAC rule 3745-81-73 - Filtration of water from surface water sources
	f) Lack of redundant power supply or an auxiliary source	<ul style="list-style-type: none"> • OAC rule 3745-91-08

3) Distribution Systems

a) Total coliform sample siting plan is not representative of the distribution system or not available	<ul style="list-style-type: none"> • OAC rule 3745-81-21 - Total Coliform Rule
b) System pressure is less than 20 psi	<ul style="list-style-type: none"> • OAC rule 3745-83-01 - Operational requirements
c) Minimum Chlorine residuals not continually maintained. <i>Example: No chlorine residual at representative location <u>in</u> its distribution system.</i>	<ul style="list-style-type: none"> • OAC rule 3745-83-01 - Operational requirements • OAC rule 3745-81-72 - Disinfection of water from surface water sources
d) Failure to have a cross connection control program <i>Example: Residential booster pumps, unapproved sources connected to public water system, no inspection program, no testing records maintained, lack of inventory.</i>	<ul style="list-style-type: none"> • OAC Chapter 3745-95 - Backflow prevention

4) Finished water storage

a) Structural conditions poor <i>Examples:</i> <ul style="list-style-type: none"> • <i>Operating in a manner not approved (holes in storage tank)</i> • <i>Insufficient venting of storage tank</i> 	<ul style="list-style-type: none"> • OAC Chapter 3745-91 - Plan approval
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5) Booster pumps/pump facilities and controls

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| a) Inadequate pump capacity/chemical feed equipment | <ul style="list-style-type: none"> OAC Chapter 3745-91 - Plan approval |
| b) Lack of redundant power supply or auxiliary source | <ul style="list-style-type: none"> OAC rule 3745-91-08 |

6) Monitoring/reporting/data verification

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| a) Monitoring violations | Various rules |
| b) MCL/TT/PN violations | Various rules |
| c) Laboratory/Lab analysts not certified | <ul style="list-style-type: none"> OAC Chapter 3745-89 - Laboratory approval 3745-81-27 - Analytical techniques |
| d) CCR violations | <ul style="list-style-type: none"> OAC Chapter 3745-96 - Consumer confidence reports |

7) Water system management/operation

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| a) Violations relate to managerial, technical and/or financial inadequacies | <ul style="list-style-type: none"> For SRF recipients, OAC Chapter 3745-87 - Capability assurance plans |
| b) Lack of adequate contingency plan | <ul style="list-style-type: none"> OAC rule 3745-85-01 - Contingency plans |
| c) Inadequate follow-up to deficiencies noted in previous inspections/sanitary surveys | <ul style="list-style-type: none"> OAC rule 3745-81-60 - Sanitary surveys |
| d) Lack of detail plan approval for modifications to the water system | <ul style="list-style-type: none"> OAC rule 3745-91-08 - Procedure for approval; changes |

