

## Appendix A. Significant Deficiencies

Deficiency (Code Section)	Deficiency Description
Approval of Construction or Modification (LAC 51:XII.319.D.1)	No public water supply shall be hereafter constructed, operated or modified to the extent that the capacity, hydraulic conditions, functioning of treatment processes, or the quality of finished water is affected, without, and except in accordance with the plans and specifications for the installation which have been approved, in advance, as part of a permit submitted by the person having responsible charge of a municipality owned public water supply or by the owner of a privately owned public water supply. The permit shall be issued by the state health officer prior to the start of such construction or modification.
Standby Power (LAC 51:XII.319.D.2 – Effective 8/1/2018)	Dedicated Standby power shall be provided by any community water supply and any non-community water supply serving a hospital so that water may be treated and/or pumped to the distribution system during outages to meet the average daily demand during the month of maximum water use. To ensure continuous service when the primary power has been interrupted, a standby power supply shall be provided through connection to at least two independent public power sources, or portable or in-place auxiliary power.
Flood Protection (LAC 51:XII.319.D.3 – Effective 8/1/2018)	Other than surface water intakes, all critical water supply facilities for community water systems shall be protected to at least the 100-year flood elevation. Use of a levee system or flood walls are acceptable.
Groundwater Sources Backup/Redundancy (LAC 51:XII.319.D.4 – Effective 8/1/2018)	When groundwater is the only source of water supply for any community water supply or for any non-community water supply serving a hospital, a minimum of two approved and active groundwater wells (or, if not a second well, connection to another approved water supply of sufficient capacity) shall be provided, unless a LDH-approved annual public notice is provided to customers.
Minimum System Pressure (LAC 51:XII.319.D.5 – Effective 8/1/2018)	The system shall be designed to maintain a minimum pressure of 20 psig (140 kPa) at ground level at all points in the distribution system under all conditions of flow. <i>Note: Prior to 8/1/2018, 15 psi was required per LAC 51:XII.319.D.10</i>
Operator Duly Certified (LAC 51:XII.319.D.6)	All public water supplies shall be under the supervision and control of a duly certified operator as per requirements of the State Operator Certification Act, Act 538 of 1972, as amended.
Pathway for Contamination / Water Source (LAC 51:XII.319.D.7)	There shall be no pathway for contamination into the well casing and/or discharge piping. The well site grading, the well slab and all well appurtenances including casing, sanitary seal, vent, and drawdown tube shall be maintained to prevent the introduction of contamination into the well casing and discharge piping.
Source of Contamination / Safe Distance (LAC 51:XII.319.D.8)	Every potable water well, and the immediate appurtenances thereto that comprise the well, shall be located at a safe distance from all possible sources of contamination, including but not limited to, privies, cesspools, septic tanks, subsurface tile systems, sewers, drains, barnyards, and pits below the ground surface. The horizontal distance from any such possible source of pollution shall be as great as possible, but in no case less than the following minimum distances, except as otherwise approved by the state health officer.
Security (LAC 51:XII.319.D.9)	All public water supply wells, treatment units, tanks, etc., shall be located inside a fenced area that is capable of being locked; said areas shall be locked when unattended. The fence shall be resistant to climbing and at least 6 feet high
Chemical Application / Certified for Potable Use (LAC 51:XII.319.D.10)	Chemicals used in the treatment of water to be used for potable purposes shall either meet the standards of the American Water Works Association or meet NSF 60 requirements as verified by an ANSI accredited testing agency. System wetted components shall meet NSF 61 as verified by an ANSI accredited testing agency.
Sample Tap (LAC 51:XII.319.D.11)	All potable water supply wells shall be provided with a readily accessible faucet or tap on the well discharge line at the well for the collection of water samples. The faucet or tap shall be of the smooth nozzle type, shall be upstream of the well discharge line check valve and shall terminate in a downward direction.

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Pump Bearing Lubricated with Sanitary Lubricant (LAC 51:XII.319.D.12)	Well pump bearings shall be lubricated with oil of a safe, sanitary quality or potable water.
Well Abandonment (LAC 51:XII.319.D.13)	Abandoned water wells and well holes shall be plugged in accordance with the Louisiana Water Well Rules, Regulations, and Standards.
Pathway for Contamination / Water Storage (LAC 51:XII.319.D.14)	Any vent, overflow, or water level control gauge provided on tanks or other structures containing water for any potable water supply shall be constructed so as to prevent the entrance of birds, insects, dust or other contaminating material. Openings or vents shall face downward and shall be not less than 2 feet above the floor of a pump room, the roof or cover of a tank, the ground surface or the surface of other water supply structures.
Cross Connection / Non-potable Source (LAC 51:XII.319.D.15)	There shall be no physical connection between a public water supply and any other water supply which is not of equal sanitary quality and under an equal degree of official supervision; and there shall be no connection or arrangement by which unsafe water may enter a public water supply system.
Cross Connection Control / Backflow Protection (LAC 51:XII.319.D.16)	Each water supplier shall protect the water produced and distributed by its water supply system from potential contamination by ensuring compliance with the containment practices and maintenance/field testing requirements. In implementing ordinances, rules, contracts, policies, or other steps to achieve such compliance, water suppliers shall have the authority to prohibit or discontinue water service to customers who fail to install, maintain, field test, or report the results of the field test for containment assemblies or methods.
Chemical Application / Adequate Supply (LAC 51:XII.319.D.17)	General equipment design shall be such that feeders will be able to supply, at all times, the necessary amounts of chemicals at an accurate rate throughout the range of feed.
Day Tank for Fluoride (LAC 51:XII.319.D.18)	Day tanks shall be provided where bulk storage of liquid Fluoride chemical is provided, meet all the requirements of §203.J, hold no more than a 30 hour supply, and be scale mounted or have a calibrated gauge painted or mounted on the side if liquid levels can be observed in a gauge tube or through translucent sidewalls of the tank. In opaque tanks, a gauge rod extending above a reference point at the top of the tank, attached to a float may be used. The ratio of the area of the tank to its height must be such that unit readings are meaningful in relation to the total amount of chemical fed during a day.
Cross Connection / Drain (LAC 51:XII.319.D.19)	No drain on a water storage structure may have a direct connection to a sewer or storm drain. The design shall allow draining the storage facility for cleaning or maintenance without causing loss of pressure in the distribution system.
Monitoring Plans (LAC 51:XII.319.D.20)	Water systems shall have a monitoring plan that includes a list of all routine compliance samples required on a daily, weekly, monthly, quarterly, and annual basis and identify the sampling location where samples are to be collected. The public water system shall revise and re-submit its monitoring plan if changes to the sampling locations or if any significant changes to the disinfection methods are made. In addition, the public water system shall update and re-submit its monitoring plan when the system's sampling requirements or protocols change.
Compliance Sampling / Laboratory (LAC 51:XII.319.D.21)	All samples collected for compliance determination shall be either analyzed in a certified chemical laboratory/drinking water or in an approved chemical/laboratory drinking water. Samples collected for compliance determination which are allowed to be analyzed in an approved chemical laboratory/drinking water include the following: a. daily chlorite levels (at point of entry to the distribution system when using chlorine dioxide); b. daily fluoride levels; c. daily corrosion inhibitor concentration (orthophosphate and silica); d. pH; e. calcium; f. conductivity; g. temperature; h. alkalinity; i. turbidity; j. jar test for ACC #6; k. jar tests for determining optimum coagulant dose; and l. other drinking water analytes which are not required to be analyzed in a certified chemical laboratory/drinking water under other requirements of this Part or USEPA requirements.

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Deficiency (Code Section)	Deficiency Description
Compliance Sampling / Test Method (LAC 51:XII.319.D.22)	An approved chemical laboratory/drinking water shall perform all analyses using the laboratory methodology specifically required to be used under the provisions of this Part for such analyte.
Chemical Storage / Label (LAC 51:XII.319.D.23)	Storage tanks and pipelines for liquid chemicals shall be specified for use with individual chemicals and not used for different chemicals. Offloading areas must be clearly labeled to prevent accidental cross-contamination.
Critical System Component Failure/Defect (LAC 51:XII.319.D.24)	Critical water system component is in poor condition or defective and indicative of failure or imminent failure. Component failure is expected to critically impact the quality and/or quantity of produced water.
Leaks in System / Components (LAC 51:XII.319.D.25)	All potable water systems shall be designed, constructed and maintained so as to prevent leakage of water due to defective materials, improper jointing, corrosion, settling, impacts, freezing, or other causes. Valves and blow-offs shall be provided so that necessary repairs can be made with a minimum interruption of service.
Other Condition - Maintenance (LAC 51:XII.319.D.26)	Other condition which is deemed by the state health officer to be a significant deficiency.

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In 2019, 729 sanitary surveys were conducted by LDH statewide. 24 of the 26 significant deficiencies were cited in 2019 for a total of 1,196 significant deficiencies. The below table shows the number of citations and the number public water systems cited for each significant deficiency in 2019.

Significant Deficiency		Number of Citations	Number of PWSs
1	Pathway for Contamination / Water Source	267	187
2	Cross Connection Control / Backflow Protection	195	195
3	Other Condition / Maintenance or Repair	94	71
4	Pathway for Contamination / Water Storage	87	52
5	Groundwater Source Backup / Redundancy	83	82
6	Security	79	79
7	Standby Power	58	58
8	Cross Connection / Drain	49	49
9	Sample Tap	38	29
10	Critical System Component Failure/Defective	37	37
11	Leaks in System Components	34	34
12	Approval of Construction or Modification	31	31
13	Well Abandonment	30	24
14	Compliance Sampling / Test Method	25	25
15	Monitoring Plans	23	23
16	Operator Duly Certified	18	18
17	Chemical Application / Adequate Supply	16	15
18	Chemical Application / Certified for Potable Use	12	12
19	Chemical Storage / Label	9	9
20	Source of Contamination / Safe Distance	5	5
21	Cross Connection / Non-potable Source	4	4
22	Day Tank for Fluoride	1	1
23	Flood Protection	1	1
24	Minimum System Pressure (20 psi)	0	0
25	Compliance Sampling / Laboratory	0	0
26	Pump Bearing Lubricated with Sanitary Lubricant	0	0
<b>Total</b>		<b>1196</b>	<b>1041</b>

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