

X. WATER TREATMENT WASTEWATER

The Commissioners of the Department of Energy and Environmental Protection and the Department of Public Health entered into a delegation agreement in July 2017 that provides the authority for the DOH to approve and permit discharges of water treatment wastewater (WTW) on properties governed by PHC Sections 19-13-B103a through f. The agreement authorizes WTW discharges to approved WTW disposal systems which include (1) WTW dispersal systems, (2) SSDSs, and (3) holding tanks. All WTW disposal systems shall prevent the discharge of WTW to the ground surface, wetlands, or open watercourse, and shall comply with the following requirements and any future regulations promulgated by the Department of Public Health:

1. The applicant (property owner or duly authorized agent) shall submit to the DOH a design plan/sketch of the proposed WTW dispersal system, WTW holding tank, or connection to the SSDS. The submittal shall also include the name and contact information of the installer.
2. If warranted, the applicant shall demonstrate compliance with PHC Section 19-13-B100a (e).
3. The applicant shall specify the type of water treatment device, name and model number, and its anticipated WTW discharge volume per cycle and frequency.
4. WTW solid conveyance piping shall have a minimum separating distance of 25 feet, 75 feet, and 100 feet, respectively, to public and private water supply wells with required withdrawal rates of <10 GPM, 10 to 50 GPM, and >50 GPM. The DOH may further reduce the distance to no less than 10 feet to private wells on existing developed properties if compliance cannot be met due to site limitations. WTW solid conveyance pipe shall be approved by the DOH and protected from freezing. Solid pipe listed in Table 2-A is acceptable for gravity WTW conveyance pipe, and pipe listed in Table 2-B is acceptable for pressure WTW conveyance pipe.
5. Non-discharging WTW disposal system components (e.g., WTW holding tanks, WTW dispersal system settling or filtration structures) shall meet the minimum separation distances cited in Table 9, unless otherwise authorized by the Commissioner.
6. WTW dispersal systems shall meet the separation distances cited in Table 1 (Item Q), and WTW dispersal system receiving structures shall meet the minimum separation distances cited in Table 9. Air gaps/breaks in WTW conveyance pipes that are outside of the building foundation shall meet the minimum separation distances cited in Table 9, unless otherwise authorized by the Commissioner.
7. WTW holding tanks, including piping, shall be located at least 10 feet from SSDSs.
8. WTW dispersal systems and WTW holding tanks shall be H-20 load rated in vehicular travel areas.
9. The bottom of the WTW dispersal system shall be located a minimum 12 inches above maximum groundwater and 24 inches above ledge rock.
10. WTW dispersal systems shall have a minimum storage volume of 1.5 times of either the anticipated discharge per cycle or daily average, whichever is greater.
11. Stone aggregate used shall be free of silt, dirt and debris and covered with approved filter fabric.
12. WTW holding tanks shall provide an access cleanout to grade and be equipped with a high-level alarm.
13. The DOH or registered sanitarian licensed pursuant to Chapter 395 shall approve the design of a WTW dispersal system or WTW holding tank prior to installation. Approval is not required from the Commissioner for WTW holding tanks; however approval from the Commissioner is required for WTW discharges directed to sewage holding tanks (See Section XI).
14. The installer shall provide twenty-four (24) hour minimum notice to the DOH prior to commencement of installation, unless otherwise agreed upon.
15. All applicable permits (electrical, plumbing, etc.) shall be obtained from the local building official.
16. An as-built drawing shall be submitted to the DOH that includes distances from two or more permanent reference points to the WTW disposal system.

The DOH may require an inspection of the WTW disposal system. In areas where well water treatment is anticipated, plans for new SSDSs should designate an area where a WTW dispersal system can be installed in accordance with Table 9. The Commissioner may authorize WTW discharge to a SSDS if it is determined that the nature and volume is unlikely to cause problems with the SSDS. WTW cannot be discharged to a cesspool. WTW from ion exchange systems, either cationic (e.g., water softener) or anionic (e.g., radionuclide treatment), cannot be discharged to a SSDS. WTWs approved to discharge to a SSDS are listed in Appendix E, which may be updated prior to the next publication of these standards.

Table 9

Item	Separation Distance (feet)	Special Provisions
Public or private water supply well with required withdrawal rate of: < 10 GPM 10 to 50 GPM > 50 GPM	75 150 200	The DOH may allow certain separation distance reductions on existing developed properties if compliance cannot be met due to site limitations. ⁽¹⁾⁽²⁾⁽³⁾
Open watercourse	25	
Public water supply reservoir	100	
Property line	10	
Subsurface sewage disposal system	See Table 1 (Item Q)	

- (1) Reductions cannot be granted to public water supply reservoirs or public water supply wells.
- (2) Reductions to private wells shall not be reduced to less than 25 feet. WTW discharges less than 75 feet up-gradient of a private well shall be avoided, whenever possible.
- (3) The DOH may not allow reduced setback distances if there is a concern that the WTW may negatively impact the quality of the groundwater.

APPENDIX E: WATER TREATMENT WASTEWATER DISCHARGES TO SSDSs

Authorized WTW Sources

WTW shall only be from a calcite filter, granular activated carbon filter, or a Point of Use (POU) reverse osmosis unit.

WTW Discharge Limits

Single-family residential buildings: WTW discharge is less than 150 gallons per backwash cycle, and cannot exceed a daily average of 50 GPD.

Other buildings: WTW discharge is less than 150 gallons per backwash cycle or less than 10 percent of the building's SSDS daily design flow, whichever is greater. Additionally, discharges cannot exceed a daily average of 50 GPD or 2 percent of the buildings SSDS daily design flow, whichever is greater.

Existing SSDS Requirements

Septic tanks must have two compartments, an effluent filter, and be properly sized for the daily design flow of the building. Single compartment tanks can remain only if receiving WTW from a POU reverse osmosis unit that discharges less than 50 GPD. Septic tanks must have been cleaned and inspected within three years with no reported signs of malfunctioning.

Leaching systems must provide at least 50 percent of the required ELA and be in good operating condition with no signs of malfunction or at risk of hydraulically overloading the receiving soil.

Proprietary Leaching Systems

Proprietary leaching system companies may not support the discharge of WTW into their SSDS products. Therefore the applicant should consult with the proprietary company to determine if use of their leaching system product is suitable with WTW discharge.