

12.0 Supplemental Requirements for Best Management Practices

12.2 Setbacks

12.2.1 All applicable federal, state and local laws, rules, regulations or permit requirements governing setbacks shall be followed.

12.2.2 Where multiple setbacks exist, the greatest setback requirement shall apply.

12.2.3 Horizontal setback distances for all applicable best management practices (BMPs) shall be shown on the design plans with dimensions. The setback distances shall be measured from the BMP's water surface elevation for the Cv event to the following:

12.2.3.1 Center of a public or domestic well.

12.2.3.2 Closest point of a drainfield or components of a septic system.

12.2.3.3 Outer edge of pipe or conduit for utilities.

12.2.3.4 Outside edge of slabs or vertical walls of buildings or structures.

12.2.3.5 Closest point of a property line.

12.2.4 Applicable Setbacks

12.2.4.1 Public and Domestic Wells

12.2.4.1.1 Setbacks from public and domestic wells are applicable to the following stormwater BMPs: infiltration practices, bioretention, permeable pavement systems, constructed wetlands, detention practices, and wet ponds.

12.2.4.1.2 The minimum setback from a public well as defined by the Office of Drinking Water shall be 150 feet.

12.2.4.1.3 The minimum by right setback from a domestic well as defined by the DNREC Water Supply Section shall be 100 feet.

12.2.4.1.4 In cases where the 100-foot setback cannot be met for a domestic well, the Department or Delegated Agency may consider an alternative method of compliance (AMC). The AMC shall consist of the following:

12.2.4.1.4.1 Developer shall notify owner of adjacent domestic well that a stormwater BMP is proposed on an adjacent property.

12.2.4.1.4.2 Developer shall offer to sample adjacent domestic well prior to installation of the stormwater BMP and two years after installation of the stormwater BMP.

12.2.4.1.4.3 Developer shall install a monitoring well between the proposed BMP and the adjacent well in accordance with Delaware regulations governing the construction and use of wells.

12.2.4.1.4.4 Prior to plan approval, developer shall perform a minimum of one (1) test of the groundwater from both the monitoring well and the adjacent domestic well, if access is granted. If accepted by the adjacent domestic well owner, developer shall perform a minimum of one (1) test of the groundwater from the adjacent domestic well two years after installation of the stormwater BMP.

12.2.4.1.4.5 All tests of groundwater shall monitor for the following constituents:

- 12.2.4.1.4.5.1 pH
- 12.2.4.1.4.5.2 Total Dissolved Solids
- 12.2.4.1.4.5.3 Total Phosphorus
- 12.2.4.1.4.5.4 Total Chloride
- 12.2.4.1.4.5.5 Specific Conductance
- 12.2.4.1.4.5.6 Nitrate Nitrogen
- 12.2.4.1.4.5.7 Total Nitrite/Nitrate
- 12.2.4.1.4.5.8 Total Carbon(Particulate Total

Carbon)

- 12.2.4.1.4.5.9 Total Organic Carbon
- 12.2.4.1.4.5.10 Total Petroleum Hydrocarbons
- 12.2.4.1.4.5.11 Turbidity
- 12.2.4.1.4.5.12 Total Coliform
- 12.2.4.1.4.5.13 Sodium
- 12.2.4.1.4.5.14 Antimony
- 12.2.4.1.4.5.15 Arsenic
- 12.2.4.1.4.5.16 Barium
- 12.2.4.1.4.5.17 Beryllium
- 12.2.4.1.4.5.18 Cadmium
- 12.2.4.1.4.5.19 Chromium
- 12.2.4.1.4.5.20 Lead
- 12.2.4.1.4.5.21 Nickel
- 12.2.4.1.4.5.22 Selenium
- 12.2.4.1.4.5.23 Silver
- 12.2.4.1.4.5.24 Thallium
- 12.2.4.1.4.5.25 Mercury
- 12.2.4.1.4.5.26 Fluoride
- 12.2.4.1.4.5.27 Nitrite Nitrogen
- 12.2.4.1.4.5.28 Cyanide, Total
- 12.2.4.1.4.5.29 Benzene
- 12.2.4.1.4.5.30 Carbon Tetrachloride
- 12.2.4.1.4.5.31 Chlorobenzene
- 12.2.4.1.4.5.32 o-Dichlorbenzene

- 12.2.4.1.4.5.33 p-Dichlorobenzene
- 12.2.4.1.4.5.34 1,2-Dichloroethane
- 12.2.4.1.4.5.35 1,1-Dichloroethene
- 12.2.4.1.4.5.36 cis-1,2-Dichloroethylene
- 12.2.4.1.4.5.37 trans--1,2-Dichloroethylene
- 12.2.4.1.4.5.38 Dichloromethane
- 12.2.4.1.4.5.39 1,2-Dichloropropane
- 12.2.4.1.4.5.40 Ethylbenzene
- 12.2.4.1.4.5.41 Styrene
- 12.2.4.1.4.5.42 Tetrachloroethene
- 12.2.4.1.4.5.43 Toluene
- 12.2.4.1.4.5.44 1,2,4-Trichlorobenzene
- 12.2.4.1.4.5.45 1,1,1-Trichloroethane
- 12.2.4.1.4.5.46 1,1,2-Trichloroethane
- 12.2.4.1.4.5.47 Trichloroethene
- 12.2.4.1.4.5.48 Vinyl Chloride
- 12.2.4.1.4.5.49 m-Xylene
- 12.2.4.1.4.5.50 o-Xylene
- 12.2.4.1.4.5.51 p-Xylene

12.2.4.1.4.6 Developer shall submit testing results of monitoring well and the adjacent domestic well, if applicable, to DNREC Source Water Assessment and Protection Program (SWAPP) and the Department Sediment & Stormwater Program or Delegated Agency.

12.2.4.1.5 The minimum setback distances for domestic wells with alternative method of compliance from applicable BMPs are as follows:

12.2.4.1.5.1 For Infiltration Practices, Bioretention, Permeable Pavement Systems, Constructed Wetlands and Wet Ponds into the water table:

12.2.4.1.5.1.1 50 feet for residential, commercial or institutional land uses.

12.2.4.1.5.1.2 100 feet for highway land uses.

12.2.4.1.5.2 For Detention Practices and Wet Ponds above the water table:

12.2.4.1.5.2.1 10 feet for residential, commercial or institutional land uses.

12.2.4.1.5.2.2 50 feet for highway land uses.

12.2.4.2 Septic Systems

12.2.4.2.1 Setbacks from septic system drainfields and components are applicable to the following stormwater BMPs: infiltration practices,

bioretention, permeable pavement systems, constructed wetlands, detention practices, wet ponds, restoration practices, rooftop disconnection, vegetated channels, sheet flow, stormwater filtering systems, proprietary practices and afforestation.

12.2.4.2.2 The minimum setbacks for septic system drainfields and components from applicable BMPs shall be as follows

12.2.4.2.2.1 For Infiltration Practices, Bioretention, Permeable Pavement Systems, Detention Practices, Restoration Practices, Rooftop Disconnection, Vegetated Channels, Sheet Flow, Stormwater Filtering Systems, Proprietary Practices and Afforestation, the setback distances for both the drainfield and components shall be 10 feet.

12.2.4.2.2.2 For Constructed Wetlands and Wet Ponds, the setback distance shall be 50 feet for the drainfield and 25 feet for components.

12.2.4.3 BMPs shall not be located within a non-blanket utility easement unless a letter of no objection from the utility owner is provided. Utilities shall not impact existing BMPs unless a letter of no objection from the BMP owner is provided.

12.2.4.4 Buildings and Structures

12.2.4.4.1 Setbacks from buildings or structures are applicable to the following stormwater BMPs: Infiltration Practices, Bioretention, Permeable Pavement Systems (excluding sidewalks or minor linear paved areas), Detention Practices, Constructed Wetlands, and Wet Ponds.

12.2.4.4.2 BMPs shall be setback from buildings or structures having a below-grade crawl space or basement such that the below-grade crawl space or basement of the building or structure is outside of the calculated or assumed 4:1 phreatic zone of the BMP unless the building or structure is designed to be waterproof. .

12.2.4.4.3 Building and structure setback distances shall be no less than that needed for maintenance.

12.2.4.5 Property line setback distances shall be no less than that needed for maintenance unless a shared use agreement exists between property owners.