

General Permit for the Discharge of Stormwater from Construction Activities

APPENDIX C

Aquifer Protection Areas and Other Groundwater Drinking Supply Areas Guidance Information

1.0 Connecticut Aquifer Protection Areas (APA)

Link: [CT Aquifer Protection Map Viewer](#)

Overview

Connecticut Aquifer Protection Areas (“APAs”), sometimes referred to as “wellhead protection areas,” are designated on municipal zoning maps as groundwater overlays to protect major public water supply wells in sand and gravel aquifers. The goal is to ensure a plentiful supply of public drinking water for present and future generations. The Aquifer Protection Area Program compliments other programs that protect groundwater resources, such as public drinking water supply watersheds, Class GA/GAA groundwaters and Class A/AA surface waters.

Land use and stormwater management practices in these areas should prevent the pollution of groundwater.

2.0 Stormwater Pollution Control Plan (SPCP)

The Stormwater Pollution Control Plan (SPCP) must address and mitigate potential impacts to both groundwater (aquifers) and surface waters, considering both the quantity and quality of stormwater runoff.

3.0 Emphasis:

- Minimize changes between pre-development and post-development runoff rates and volumes.
- Prevent inadvertent pollutant releases to the ground.
- Encourage stormwater recharge only when it does not pose a risk to groundwater quality.

4.0 Recommended Measures for Aquifer Protection Areas (APAs)

Prevent Illicit Discharges

- Avoid fuel or chemical pollution releases to the ground.
- Store and handle significant fuel, chemical, or hazardous materials outside the well field and APA whenever practicable.
- If storage within the APA is necessary, materials must be stored inside a building with secondary containment.

Minimize Impervious Cover

- Disconnect large impervious areas using natural or landscaped buffer zones.

Use Surface Treatment Structures

Direct paved surface runoff to above-ground treatment systems, such as:

- Sheet flow areas
- Surface swales
- Depressed grass islands
- Detention/retention basins
- Infiltration basins
- Wet basins

These systems help volatilize organic pollutants before stormwater infiltrates into the ground.

Address Stormwater “Hot Spots”

- Use impervious pavement in areas with a high risk of pollutant release (e.g., fueling stations, loading docks, material storage zones, and intensive traffic areas).

Limit Subsurface Recharge Structures

- Utilize dry wells, infiltration galleries, or leaching trenches only for clean runoff from rooftops or similarly uncontaminated surfaces.

These systems are not suitable for treating salts, solvents, fuels, or other soluble pollutants.

Restrict Deicing Chemicals

Use alternatives to traditional road salts, such as:

- Sand only
- Calcium chloride or calcium magnesium-based products

Develop an Emergency Spill Response Plan

- Include coordination with the local water supplier in the plan.

Secure the Site

- Prevent unauthorized access and illegal disposal of waste materials by maintaining secure site access at all times.

5.0 Conditions Where Infiltration Should Be Restricted

Land Uses or Activities with High Pollutant Loads

These stormwater “hot spots” can pose a threat to groundwater. Infiltration may be allowed only with proper pretreatment such as:

- Primary/secondary treatment systems (as described in the Stormwater Quality Manual)
- Gross particle separators (e.g., swirl concentrator types)
- Deep catch basins (minimum 4 ft deep, tight construction, with baffles)

Subsurface Contamination

Avoid infiltration in:

- Brownfield sites
- Urban redevelopment zones

Mobilization of existing soil or groundwater contaminants is a concern.

Groundwater Supply and Wellhead Areas

[Link: Public Water Supply Mapping Application](#)

Stormwater infiltration may contaminate drinking water in immediate public drinking water wellhead zones.

Use:

- Catch basins
- Curbs

These help manage stormwater and reduce direct infiltration in sensitive areas.

6.0 Activities with Higher Potential Pollutant Loads

Table 10- 4 Land Uses or Activities with Higher Potential Pollutant Loads (LUHPPLs)

Land Use/Activities	Stormwater Infiltration Systems Allowed?
Industrial facilities subject to the CT DEEP General Permit for the Discharge of Stormwater Associated with Industrial Activity ¹	Yes ²
Vehicle salvage yards and vehicle recycling facilities	No
Vehicle fueling facilities (gas stations and other facilities with on-site vehicle fueling)	No
Vehicle service, maintenance, and equipment cleaning facilities	No
Fleet storage areas (cars, buses, trucks, public works)	Yes ²
Public works storage areas	Yes ²
Road salt storage facilities (if exposed to rainfall)	No
Commercial nurseries	Yes ²
Flat metal rooftops of industrial facilities	No
Facilities with outdoor storage and loading/unloading of hazardous substances or materials, regardless of the primary land use of the facility or development	No
Facilities subject to chemical inventory reporting under Section 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA), if materials or containers are exposed to rainfall	Yes ²
Marinas (service and maintenance)	No
<p>Notes:</p> <p>¹ Stormwater pollution prevention plans are required for these facilities. Source control practices and pollution prevention (refer to Chapter 6) are recommended for the other land uses and activities listed above.</p> <p>² If allowed by the review authority under the conditions described in this section, special considerations to site that have subsurface contamination are essential and may severely limit the applications in vehicle salvage yards and recycling facilities.</p>	

For further information

Regarding the design of stormwater collection systems in Aquifer Protection Areas, contact the Aquifer Protection Area Program by email at DEEP.AquiferProtection@ct.gov or by phone at (860) 424-3020 or visit <https://portal.ct.gov/deep/aquifer-protection-and-groundwater/aquifer-protection/aquifer-protection-program>.