**CONNECTICUT DEPARTMENT OF**

**ENERGY & ENVIRONMENTAL PROTECTION**

**OFFICE OF ENVIRONMENTAL REVIEW**

**79 ELM STREET, HARTFORD, CT 06106-5127**

**To:** Mark W. Alexander – Transportation Assistant Planning Director
DOT - Bureau of Policy & Planning, 2800 Berlin Turnpike, Newington

**From:** David J. Fox - Senior Environmental Analyst **Telephone:** 860-424-4111

**E-Mail:** david.fox@ct.gov

**Date:** May 20, 2016

**Subject:** Route 34 and Route 490 Intersection Improvements, Newtown

The Department of Energy & Environmental Protection (DEEP) is responding to the Notice of Scoping for the project consisting of various intersection and roadway improvements in the vicinity of the I-84/Route 34 interchange. The following comments are submitted for your consideration.

The western end of the improvements to Wasserman Way is within the final adopted mapped Level A Aquifer Protection Area for the Fairfield Hill well operated by the Newtown Water Department. The western terminus of the project extends to within 200' of the well. Newtown has delineated the aquifer protection area boundary on the town zoning map and adopted local aquifer protection area regulations consistent with the state regulations pursuant to Section 22a-354p of the Connecticut General Statutes (CGS).

Best management practices should be required for construction within this area. BMPs from the *Connecticut's Aquifer Protection Area Program Municipal Manual* entitled, *Road and Highway Construction/Reconstruction in Aquifer Protection Areas*, are enclosed. Most importantly, catch basins and curbs should be installed in this area and designed to control runoff and direct it away from the wellhead. Wellhead protection signs should also be posted to alert motorists entering the aquifer protection area.

The majority of the project area is within the Pootatuck River drainage basin. The river is rated as a class A surface water body in Connecticut's Water Quality Standards, denoting fishable and swimmable water quality as well as potential drinking water supply. The opportunity to introduce treatment measures to the stormwater collection system as part of the project should be explored.

The project does not appear to be within the 100-year flood zone on the community's Flood Insurance Rate Map. Toddy Hill Road does cross the flood zone of Cedar Pond Brook, but the project description notes that this a separate local bridge replacement project.

The Natural Resources Conservation Service's Soil Survey does not depict any wetland soils within the project area. There does not appear to be any watercourses crossed by roadways to be improved, with the exception of the Toddy Hill Road bridge over Cedar Pond Brook. However, it is recommended that a certified soil scientist perform a reconnaissance of the project

site in order to confirm that there are not any areas which would be regulated as wetlands or watercourses as defined by section 22a-38 (15) and (16) of the CGS, respectively.

The Natural Diversity Data Base (NDDB) had made a preliminary assessment of the project. There is a record of the state species of special concern, wood turtle (*Glyptemys insculpta*), occurring along the Pootatuck River in the vicinity of the project. The protection strategies and protocols that DOT has developed for the turtles should be employed, particularly where Wasserman Way approaches the river. If these protection strategies are followed, then the proposed activities will not have an adverse impact on the wood turtle. This determination is good for one year. An NDDB Request for Review should be resubmitted if the scope of work changes or if work has not begun on this project by May 2017.

The Natural Diversity Data Base response includes all information regarding critical biological resources available at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEEP for the proposed site.

In order to mitigate potential air quality impacts from construction activities, the Department typically recommends the following measures.

> The Department typically encourages the use of newer off-road construction equipment that meets the latest EPA or California Air Resources Board (CARB) standards. If that newer equipment cannot be used, equipment with the best available controls on diesel emissions including retrofitting with diesel oxidation catalysts or particulate filters in addition to the use of ultra-low sulfur fuel would be the second choice that can be effective in reducing exhaust emissions. The use of newer equipment that meets EPA standards would obviate the need for retrofits.
>
> The Department also encourages the use of newer on-road vehicles that meet either the latest EPA or California Air Resources Board (CARB) standards for construction projects. These on-road vehicles include dump trucks, fuel delivery trucks and other vehicles typically found at construction sites. On-road vehicles older than the 2007-model year typically should be retrofitted with diesel oxidation catalysts or diesel particulate filters for projects. Again, the use of newer vehicles that meet EPA standards would eliminate the need for retrofits.
>
> Additionally, Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies (RCSA) limits the idling of mobile sources to 3 minutes. This regulation

applies to most vehicles such as trucks and other diesel engine-powered vehicles commonly used on construction sites. Adhering to the regulation will reduce unnecessary idling at truck staging zones, delivery or truck dumping areas and further reduce on-road and construction equipment emissions. Use of posted signs indicating the three-minute idling limit is recommended. It should be noted that only DEEP can enforce Section 22a-174-18(b)(3)(C) of the RCSA. Therefore, it is recommended that the project sponsor include language similar to the anti-idling regulations in the contract specifications for construction in order to allow them to enforce idling restrictions at the project site without the involvement of the Department.

As construction commences, the discovery of hazardous materials, hazardous waste and/or contaminated soils would be a potential throughout the project corridor. A site-specific hazardous materials management plan should be developed prior to commencement of construction and a health and safety plan for construction workers should also be prepared. The Department's standard comments concerning construction projects in urban areas are submitted for your information:

Development plans in urban areas that entail soil excavation should include a protocol for sampling and analysis of potentially contaminated soil. Soil with contaminant levels that exceed the applicable criteria of the Remediation Standard Regulations, that is not hazardous waste, is considered to be special waste. The disposal of special wastes, as defined in section 22a-209-1 of the Regulations of Connecticut State Agencies (RCSA), requires written authorization from the Waste Engineering and Enforcement Division prior to delivery to any solid waste disposal facility in Connecticut. If clean fill is to be segregated from waste material, there must be strict adherence to the definition of clean fill, as provided in Section 22a-209-1 of the RCSA. In addition, the regulations prohibit the disposal of more than 10 cubic yards of stumps, brush or woodchips on the site, either buried or on the surface. A fact sheet regarding disposal of special wastes and the authorization application form may be obtained at: Special Waste Fact Sheet.

The Waste Engineering & Enforcement Division has issued a *General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)* (DEP-SW-GP-001). It establishes a uniform set of environmentally protective management measures for stockpiling soils when they are generated during construction or utility installation projects where contaminated soils are typically managed (held temporarily during characterization procedures to determine a final disposition). Temporary storage of less than 1000 cubic yards of contaminated soils (which are not hazardous waste) at the excavation site does not require registration, provided that activities are conducted in accordance with the applicable conditions of the general permit. Registration is required for on-site storage of more than 1000 cubic yards for more than 45 days or transfer of more than 10 cubic yards off-site. A fact sheet describing the general permit, a copy of the general permit and registration forms are available on-line at: Soil Management GP.

Thank you for the opportunity to review this proposal. If you have any questions concerning these comments, please contact me.

cc: Jeff Caiola, DEEP/IWRD
Louis Corsino, DEEP/APSD
Kim Czapla, DEEP/WPSD
Robert Hannon, DEEP/OPPD
Dawn McKay, DEEP/NDDB

## 14.4.3 BEST MANAGEMENT PRACTICE (BMP) RECOMMENDATIONS

# Road & Highway Construction/Reconstruction in Aquifer Protection Areas

### Introduction

A plan for road construction or reconstruction should have a siting and design assessment to avoid or mitigate potential impacts. A stormwater management plan considering both the quality and quantity of runoff should be developed. The plan should be described, at least on a conceptual level, in a CEPA or similar document.

Overall, a stormwater management plan shall consider measures to reduce or mitigate water quality impacts to the groundwater aquifer. While the emphasis should be to protect groundwater quality, the plan should also consider impacts to surface waters and runoff rates.

The DEEP Aquifer Protection Area regulations require stormwater management plans for all permits, and can also be required for registrations. The management plans shall assure that stormwater runoff is managed to prevent groundwater pollution and shall meet the requirements of the DEEP Commercial Stormwater General Permit, including:

- Facility information: primary activity
- Stormwater discharge information: number and type of conveyance
- Stormwater management measures: pollution prevention, pavement sweeping, outdoor storage and washing restriction, illicit discharges, spill control/response, and maintenance and inspection of stormwater structures.

The basic stormwater principles for Aquifer Protection Areas (and other groundwater drinking supply areas) are to prevent inadvertent pollution discharges or releases to the ground, while encouraging recharge of stormwater where it does not endanger groundwater quality.

### Management Measures Include:

- Prevent illicit discharges to stormwater, including fuel/chemical pollution releases to the ground.
- Provide necessary impervious pavement in high potential pollutant release areas. These "stormwater hot spots" include certain land use types or storage and loading areas, fueling areas, intensive parking areas and roadways.
- Direct paved surface runoff to above-ground-type land treatment structures – sheet flow, surface swales, depressed grass islands, detention/retention and infiltration basins, and wet basins. These provide an opportunity for volatilization, breakdown and attenuation of volatile organic compounds to the extent possible before the stormwater can infiltrate into the ground.
- Do not use direct subsurface recharge structures such as dry wells, galleries, or leaching trenches to directly infiltrate runoff, unless it is solely from clean areas such as rooftops or other clean surfaces. These structures do not adequately allow for attenuation of salts, solvents, fuels or other soluble compounds in groundwater that may be contained in runoff.
- Minimize pavement deicing chemicals; use an environmentally suitable substitute or alternative deicing agent such as calcium chloride or calcium magnesium.

## 14.4.3 BEST MANAGEMENT PRACTICE (BMP) RECOMMENDATIONS

# Road & Highway Construction/Reconstruction in Aquifer Protection Areas (continued)

### Road and Highway Aquifer Protection Provisions

1. Planning and siting of roads, stormwater outfalls and other drainage structures.
   - Avoid aquifer areas and consider alternative routes
   - Maintain minimum separation from the well field (200' minimum, 500' where possible)

2. Drainage system design criteria
   - Select stormwater management methods from the DEEP Stormwater Quality Manual based on treatment effectiveness and low groundwater pollution potential
   - Stormwater discharge points should outlet to above-ground land surface or basin type structures – sheetflow, swales, basin collection is encouraged where possible.
   - Catch basins, curbs or other collection may be used in the immediate wellhead area to divert and control runoff and spills away from wellhead.
   - Dry wells, galleries, leaching trenches or similar subsurface structures should not be used for stormwater disposal from roadways. Existing subsurface structures that have high potential to pollute groundwater should be removed or converted.
   - Critical discharge points should have a basin designed with a forebay (tight soil or lined) capable of containing a 8,000-10,000 gallon spill volume and 3-6 feet above water table, 4 feet above bedrock.

3. Deicing management areas should be established, including low salt use areas, alternative chemical or other methods.

4. Wellhead protection signs shall be posted in clear visibility of the highway at the Aquifer Protection Area entrance and exit points and at half-mile intervals.

5. Potential strategic groundwater monitoring may need to be considered in very critical areas or circumstances.

6. Temporary construction measures
   - Significant fuel, chemical or other hazardous materials storage and handling should be located outside well field area and Aquifer Protection Area if possible.
   - Any necessary temporary storage should be above ground, protected from rainfall, and on a impervious containment surface.
   - An emergency spill and response plan should be developed, including coordination with the water supplier.

**For more information, contact the Bureau of Water Protection and Land Reuse at 860-424-3020.**