



DATE: November 21, 2007

TO: All Fire Departments and Other Interested Parties

FROM: Russell J. Chateaufneuf, P.E.
Chief, Groundwater & Wetlands Protection

SUBJECT: Dry Hydrants

In past years, several Fire Departments and DEM's Division of Forest Environment have responded to drought conditions with an interest in expanding the number of dry hydrants available for fire-fighting purposes. This memorandum and guidance on the permitting process for Dry Hydrants under DEM's Freshwater Wetlands Regulations was initially issued in 2002 to provide information on where to obtain assistance for establishing new dry hydrants. These documents have now been updated to align with the 2007 Freshwater Wetlands Rules and Regulations and to provide current contact information.

Guidance

According to literature published by the National Fire Protection Association, a dry hydrant is an arrangement of non-pressurized pipes, valves or couplings installed in or along a pond or stream for the purpose of quickly accessing water that may be needed from time to time for fire-fighting. Typically, a dry hydrant will consist of a common fire hydrant or riser with a steamer hose connection joined to a buried pipeline with a submerged, screened inlet located 24 inches above the bottom of a roadside pond. A fire apparatus is connected to the hydrant and water is drawn into the apparatus by suction. The water is either directly distributed onto a nearby fire or is stored and transported to the scene of a fire. Ideally, the pond should have adequate water volume throughout the year and during drought conditions. Care must be exercised in establishing dry hydrants to ensure that proper sites are selected which will minimize wetland disturbances and that wetland features and aquatic habitat are protected during construction.

The attached document provides detailed guidance on how to prepare an application for a dry hydrant under DEM's Freshwater Wetlands Regulations. Also included is a diagram showing the required elements that should accompany the application. You may wish to retain professional assistance in preparing an application, but it is not required. Anyone having general technical competency may prepare the application. Once the application is received and found to be complete, DEM will inspect the site and make a determination.

Generally, you may expect a permit decision within approximately 30 days. In times of drought, DEM will make every effort to process dry hydrant installation requests as soon as possible. Please note that the process is designed only for projects that will result in minimal or “insignificant” alterations to wetlands. Accordingly, if it is concluded that the project may cause significant impacts to wetlands, DEM will recommend that a different site be considered.

Assistance and Coordination

DEM’s Division of Forest Environment (DFE) and the RI Resource Conservation & Development Council (RC&D) have helped various Fire Departments obtain permitting assistance for dry hydrants and funding assistance for installation and materials. On a first-come first-serve basis, RC&D can provide assistance in the form of helping to identify wetlands, locating appropriate sites for dry hydrants, preparing site plans and design details, and providing a listing of necessary materials. Contact Chris Modisette, RC&D Coordinator, at (401) 822-8877 for further information.

Also, the DFE has an interest in knowing the locations of all of dry hydrant and keeps records of their locations. Fire Departments are encouraged to contact DFE’s regional headquarters for further information. The telephone numbers for the regional headquarters are:

- ◆ Chopmist Hill 647-4389 or 647-3367
- ◆ George Washington 568-2248 or 568-2013
- ◆ Arcadia 539-1052 or 539-2356

For information on possible grant assistance for equipment and materials, contact Catherine Sparks or Paul Dolan at the Division of Forest Environment at (401) 647-3367.

Pre-application meeting

The Department is available to meet with any Fire Department to go over application requirements or to discuss considerations in choosing dry hydrant locations. To arrange for a meeting either at your Department or at our offices, please contact Charles Horbert of the DEM Freshwater Wetlands Program at (401) 222-4700, ext. 7402.



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
Groundwater and Wetlands Protection Program



**Guidance for Preparation of a Request for Preliminary Determination
Application for Dry Hydrants**

This guidance document is provided to assist fire departments and other interested parties in preparing a complete Request for Preliminary Determination Application as needed to obtain a permit from DEM's Wetlands Program for installation of a dry hydrant. These guidelines are not intended as a substitute for the **Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act** ("Rules"), but rather as a supplement to the Rules that better details the requirements of the Rules as they apply specifically to dry hydrants. Additionally, these guidelines are intended to assist the applicant in preparing an adequate application that is likely to be approved at a minimum of cost.

Choosing a Location:

A dry hydrant, by its nature, needs to be located either within an open water body (pond, reservoir, etc.) with sufficient depth to avoid freezing to the intake pipe and allow at least a foot clearance for the intake above the pond bottom (generally, a minimum depth of 4 to 5 feet) or within a river or stream that flows year-round (where intake pipes can generally be put below the streambed within a gravel substrate). Beyond these requirements, other factors will improve the chances of a dry hydrant being approved. These include:

- Close proximity of the waterbody to an existing roadway or other public access;
- Ability to place intake pipe within a sparsely vegetated portion of the waterbody, to minimize any habitat impacts or clogging of intake screens;
- Ability to install pipe to pond with minimal clearing of vegetation along banks or shores or, if clearing is unavoidable, include provisions for re-planting cleared areas;
- Absence of any wide areas of swamp or marsh or other wooded areas between the hydrant and the waterbody to be utilized;
- No construction of new access roads across freshwater wetlands needed for fire apparatus to reach hydrant locations.

Generally, a location that allows installation of a dry hydrant with minimal vegetative clearing and easy access for both construction equipment and fire apparatus would be expected to have minimal impacts to freshwater wetlands.

Site Plan Preparation:

Once a location has been chosen, a site plan illustrating existing and proposed conditions must be prepared as part of any application submittal to DEM. In general, the plan needs to clearly illustrate existing conditions and your proposed construction with sufficient fixed reference points provided to allow DEM to readily identify on-site exactly where the dry hydrant will be located. Although a plan prepared by a professional engineer or land surveyor is desirable, a site plan for dry hydrant placement can be prepared by others having general technical competency. A summary of site plan requirements listed in Rule 7.03 but tailored to dry hydrants follows:

Site Plan Requirements: (see attached sample site plan for reference)

1. Site plans must be either drawn to a specific scale (no smaller than 1"=100'), or site plans must have distances and dimensions between fixed reference points and proposed features directly drawn and labeled on the plans (e.g. arrows drawn between points with labeled distances). **A total of four (4) copies of the plans are required.**
2. Site plans must be at least 8 ½" x 11" in size, but no larger than 24" x 36".
3. Use of plans pieced together by tape, or that contain pen, pencil, crayon or marker cannot be accepted: blue-line or blackline prints or photocopies of originals are acceptable.
4. A title block must be included that contains name of person or party involved; project title, if any; name of nearest street/road; tax assessor's plat & lot info.; name of city or town; name of preparer, scale of plans (if provided); original date of plan and (if applicable) any revision dates.
5. All plans must include the following basic information:
 - a. Street abutting the site showing at least edge-or-road and location of nearby utility poles (with #);
 - b. Magnetic North Arrow
 - c. Entire property boundary outline (submittal of a copy of the plat map with the lot identified is sufficient);
 - d. Locus map showing the location of the site in the community with sufficient detail to allow inspectors to find the site;
 - e. Any other fixed reference points, particularly the edge of the waterbody, stone walls, nearby fences or buildings, edge of fields/woods, trails, driveways, trees etc.
 - f. Scale of plans, if used (see #1 above);
 - g. A legend explaining any symbols used;
 - h. A signed, dated stamp of any professional that prepared the plan, if one is used.
6. Site plans containing more than one sheet must be numbered consecutively (1 of x, 2 of x, etc.)
7. The edges of all wetlands and waterbodies near the proposed work need to be shown on the plan. Generally, these points do not need to be flagged in the field. However, their locations must be depicted in relation to (or measured distances from) fixed reference points (described above) so that the edges may be verified in the field. After a field review, DEM may require flagging of wetland edges if needed to ensure sensitive wetlands are protected.
8. The location of the hydrant and associated piping must be clearly depicted on the plan in both plan view (as if looking from above) and profile (as if looking from side). The profile view must identify the depth of the waterbody at the location of the intake pipe. If any excavation of the waterbody's bottom is proposed (other than that necessary to get the pipe out to open water) the profile must also identify both the existing and proposed bottom of the waterbody.
9. All proposed work (new pipe and any associated excavation, access or other disturbance or clearing necessary to install it) must be completely enclosed by a labeled "limit of disturbance". All temporary and permanent erosion controls to be used must also be depicted and labeled.
10. Provide any "construction notes" you feel may clarify any aspect of your project to DEM reviewers.

Avoidance and Minimization Statement:

In addition to the site plans, another necessary component of your application will be what is called an “avoidance and minimization statement”. While guidelines for preparation of this document are provided in Rule 9.02D, this document is basically a brief narrative description of your project proposal and an explanation of all steps you have taken to both avoid and minimize impacts to freshwater wetlands. It is basically your opportunity to answer the question: “Why are you proposing a dry hydrant in the location depicted and what other options to reduce impacts were explored, if any?” In this narrative, which can easily be limited to one page, your goal is to convince DEM that you have chosen a location for the hydrant that both fulfills its intended purpose and minimizes impacts to the wetlands as much as possible. For dry hydrant permits, these statements are often provided by the person most familiar with the reasons for selecting the particular site for the hydrant.

Site Work:

To aid DEM’s inspector in their review, you should stake and label the proposed location of the dry hydrant on site so it is readily identifiable. If the distance between the hydrant and the waterbody is great (over 50 feet), the centerline of the proposed pipe should be staked to where it is proposed to enter the pond.

Authorization:

If you own the property on which the hydrant is to be installed, you can proceed to file an application as the applicant. Otherwise, you must first obtain a written easement signed by the current landowner which clearly either designates an area within which the hydrant will be installed or clearly authorizes you to install a dry hydrant on their property. All signatures should be notarized by a Notary Public.

Application:

Application packages which include the application form can be either mailed to you or obtained at our offices. The application form contains many sections. The following sections apply for a Request for Preliminary Determination for Dry Hydrants:

Part A: Check the box for “Request for Preliminary Determination.”

Part B: Fill out all requested information.

Part C: Fill out to the best of ability.

Part G: If you use a professional to prepare the application or associated site plans and reports, have them fill out and sign this section. Otherwise skip to Part H.

Part H: Complete and sign. For fire departments, this should be completed by an elected or appointed officer of the department.

The application form should be submitted to DEM’s Freshwater Wetlands Program, together with the following enclosures:

- Four (4) copies of the site plan(s)
- Four (4) copies of the Avoidance and Minimization Narrative
- A copy of the written, signed easement agreement (if applicant is other than the landowner)
- A fee in the form of a check for \$100.00, payable to the R.I. General Treasurer; Rule 7.11(D)(7)(a)(3)

This guidance document is specific to dry hydrants that involve insignificant alterations that can receive approval through a Request for Preliminary Determination. Refer to Rule 9.00 of the Rules for more details regarding this process. Certain limited instances may occur where a proposed dry hydrant, due to (for example) extensive clearing or excavation activities, or construction of access roads over wetlands, may be considered to involve Significant Alterations to freshwater wetlands requiring a formal Application to Alter, which is a more extensive, involved process. For more details regarding this process, refer to Rule 10.00.

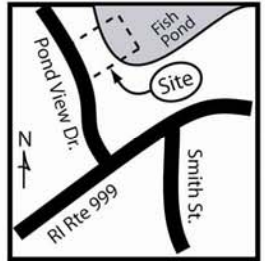
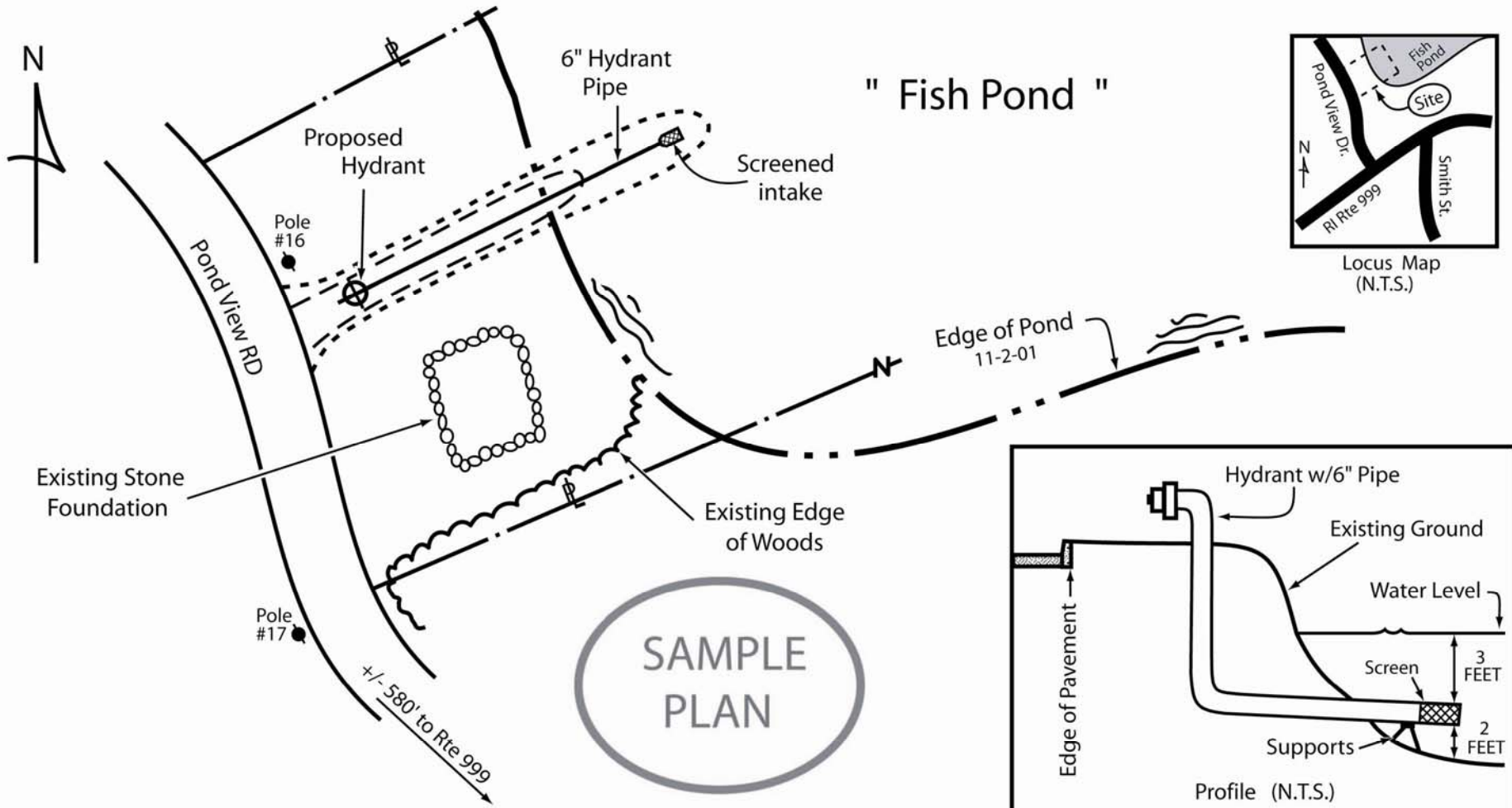
This guidance document does not substitute for the Rules, and adherence to this guidance does not guarantee an approval of your project.

Upon receipt of a complete application, processing should take approximately 30 days. During times of drought, the Department is willing to expedite review of these applications to substantially reduce this review time. Your cooperation in submitting a complete application as described herein will aid us in this effort.

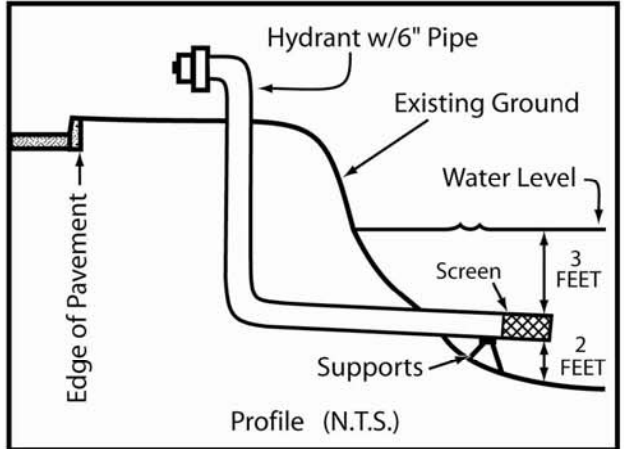
If your project is approved, you will be issued a permit with conditions. **Read your Permit!** It will contain important information that will allow you to remain in conformance with your permit, including reporting requirements and time limitations. As an example, if your installation is taking place within a stream or river, your permit is likely to include a condition that all in-stream construction work be limited to the typical period of low flow conditions, July 1 through October 31.

The Department is willing to meet with any Fire Department to go over application requirements or to discuss considerations in choosing dry hydrant locations. To arrange for a meeting either at your Department or at our offices, please contact Charles Horbert of the DEM Freshwater Wetlands Program at (401) 222-4700, ext. 7402.

Please See Attached Graphic



Locus Map (N.T.S.)



Profile (N.T.S.)

Construction Notes

- ① All disturbed areas to be returned to original grade, loamed & seeded.
- ② If necessary, intake pipe to be attached to support rods with stainless steel clamps or other non-corrosive strapping.
- ③ All work to be done within a period of two to three days.

Legend

- = Property Line
- = Erosion Controls
- = Limits of Disturbance
- = Edge of Pond
- = Woods line

SAMPLE PLAN

Plan Scale 1" = 50'

PROPOSED DRY HYDRANT
 for
 South End Fire Department
 on
 Pond View Drive

A.P. 100, Lot 2 ; Smallville, RI
 date: 5 - 7 - 02 Revised 7 - 23 - 02
 Prepared by: John Doe Sheet 1 of 1