



Screening Alteration of Terrain Project Areas for Contaminants for the Purpose of Evaluating the Impacts of Infiltration

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Introduction

Alteration of Terrain (AoT) regulations (Env-Wq 1507.02(c)) adopted in 2009 include a prohibition on infiltration of stormwater in areas that have contaminants in groundwater at levels above the ambient groundwater quality standards (AGQS) established in Env-Or 603.03; or in soil with contaminants at levels above site-specific soil standards developed pursuant to Env-Or 606.19. This document provides guidance in evaluating project areas for the applicability of this regulation.

If the design proposes infiltration, then to address this rule provision the engineer must evaluate whether the site development will encounter areas where the AGQS or Soil Remediation Standards¹ (SRS) are exceeded (exceedance of either standard is hereafter referred to as contamination). The recommended approach is to follow Steps 1 and 2 below. Based on the findings of this review:

- If contamination **is not** present, then proceed with the infiltration design.
- If contamination **is or may be** present, evaluate the impact of infiltration as described in Steps 4, and revise the design as necessary.

Two resources must be utilized to evaluate whether contamination is present: (1) the remediation database for site specific information on known contaminated sites; and (2) the PFAS Sampling Database interactive mapper. Follow Steps 1 and 2, below, to identify site restraints early in the design process.

¹ In lieu of developing site-specific soil standards as referenced in Env-Wq 1507.02(c), the Soil Remediation Standards (SRS) in Env-Or 606.19 can be applied. This guidance references the SRS, but an applicant can alternately choose to perform a risk assessment to develop site-specific soil standards to be reviewed by the NHDES Hazardous Waste Remediation Bureau.

Step 1: Review Remediation Sites for Reports and Data for Available Information.

The remediation site GIS data layer includes release- and site-specific information, but must be used in conjunction with Step 2.

- a. Remediation sites have been added to the AoT screening layers to allow the user to see whether there are any known remediation sites in the area, and to learn whether there are any AGQS or SRS exceedances for regulated contaminants. Remediation sites are currently represented by red asterisks.
- b. If the remediation site is within the property's boundary, or is located within 500 feet of the project property boundary, additional action is required. Click on the red asterisk, and then click the Master ID Link. From the Master ID screen, select an Interest at this Location, such as "Hazardous Waste Project."
- c. From the Interest page, select "Site Documents" (the filing cabinet icon). This will bring you to a table showing a set of documents related to the site, you may then review the documentation to find whether the contaminant levels in the vicinity of the proposed area of development exceed the AGQS or SRS, which indicates that contamination is present.

Step 2: Review the PFAS Sampling Database.

Some of the available PFAS-specific water quality data is available on interactive maps on the NHDES PFAS webpage. This includes some PFAS results for drinking water wells not available in Step 1. Note that the PFAS data for some, but not all, known remediation sites that you accessed in Step 1 may also be shown on this mapper.

- a. Go to the [NHDES PFAS Sampling Map](#). If you have problems using the map, read [troubleshooting the GIS Online Maps webpage](#).
- b. Zoom to your area of interest. (If you zoom in too close the map background will disappear.)
- c. Click on the "legend" at the top left hand side of the page. If you can't see the "legend" heading, or if other problems persist after troubleshooting, you may want to try using a different browser. (Internet Explorer will not work well with this application.)
- d. First, review the PFAS analytical data uploaded to the Environmental Monitoring Database (EMD), shown in colored symbols currently shown as circles, squares and triangles. The shapes associated with the first data type, to be screened in this step, represent sites with:
 - Exceedances of the current AGQS (currently shown as orange or red).
 - Detections less than the current AGQS or non-detect values (currently shown as green).

If one of these data points for **Groundwater Samples or Other Sample Types** shows an exceedance of the current AGQS on the property, or within 1,000 feet of the property boundary, contamination is present in the area. See Step 3, after consideration of (g) below.

- e. The *Sites Screening for PFAS* symbols (currently shown as "stars") on the Sampling Map represent data that was evaluated in Step 1, so do not need to be reviewed in this step.
- f. If you do not see any PFAS data within 1,000 feet of the property boundary, but the property is located within the Consent Decree boundary (currently shaded in gray on the map) for the Saint-Gobain Performance Plastics (SGPP) site (NHDES Site No. 199712055), contamination may be present. (See Step 4.)

Step 3: Determine suitable location of infiltration practice.

- If the results of Steps 1 and 2 indicate that contamination is not present and the property is not located within the Consent Decree boundary, then proceed without any restrictions on location of the infiltration practice.
- If the results of Steps 1 or 2 indicate that contamination is present and you can locate infiltration practices to avoid areas of contamination, proceed to Step 5.
- If the results of Step 1 or 2 indicate that contamination is present, but it is infeasible to avoid areas of contamination, or if you are unsure of the location of the contamination, proceed to Step 4.
- If the results of Steps 1 or 2 indicate that contamination may be present, proceed to Step 4.

Step 4: Evaluate potential impact of infiltration practice.

If it is infeasible to avoid areas of contamination, or the results of Steps 1 or 2 indicate that contamination **may be present**, then you need to evaluate whether stormwater infiltration might mobilize contaminants to cause negative impacts to offsite properties and drinking water wells. Do this by evaluating the proposed infiltration area relative to the extent of contamination and identifying the location of potential drinking water receptors (e.g., water supply wells) that might be impacted if the infiltration practice causes mobilization of contaminants toward those receptors. **If you need assistance with your evaluation, you can contact one of the AoT reviewers who will coordinate with the NHDES Hazardous Waste Remediation Bureau.**

Step 5: Provide the results of your evaluation with your AoT application.

Submit supporting documentation of the data reviewed and any pertinent communication with NHDES personnel, to support a conclusion that either:

- No impact is expected, and infiltration practices are located as desired; or
- A negative impact is expected, and infiltration practices are prohibited in accordance with Env-Wq 1507.02(c).