

Section 3.2.8 RISDISM Subsurface Contamination Guidance

Guidance regarding RISDISM Manual pg 3-7 “infiltration practices should not be used where subsurface contamination is present from prior land use due to the increased threat of pollutant migration associated with increased hydraulic loading from infiltration systems, unless the contamination is removed and the site has been remediated, or if approved by DEM on a case-by-case basis.”

Locating stormwater systems on a contaminated site can be challenging. Therefore, this guidance is designed to provide clarity of RIDEM reviews. The Department has condensed stormwater BMP choices on contaminated sites to essentially 3 types of allowable hydraulic loads. They are, no hydraulic load allowed, direct precipitation only and concentrated loading allowed. For simplicity moving forward we are designating the areas **red, yellow and green** (no hydraulic load, direct precipitation only and concentrated loading allowed). Since each contaminated site is unique, the DEM Office of Waste Management (OWM) project manager is best prepared to advise the consultant on the allowable hydraulic loads. Therefore, in order to facilitate your stormwater review, it is recommended that you work with OWM to characterize your site as described below. This characterization provided to the DEM Office of Water Resources (OWR) stormwater program will facilitate and expedite the coordination when the project is considered for development.

Step 1 – If the proposed site is a State listed site with the OWM, it is crucial that there is enough information about the site to assign the level of hydraulic loading allowed to protect critical cleanup systems and to prevent further contamination. Therefore, it is recommended that you not apply for a stormwater permit until you have at least received a Remedial Decision Letter.

Step 2 – Please provide a copy of the Remedial Decision Letter or Remedial Action Work Plan Approval as part of your submission to the Office of Water Resources along with hydraulic loading designation (**Green, Yellow** and/or, **Red**) as reviewed by the OWM.

Red – No hydraulic loading is allowed. These areas are required to have an engineered hard cap by OWM. There may be active remediation or known contamination on or near these sites which require protection from hydraulic loads. Any stormwater BMP proposed in these areas must be lined.

Yellow – Direct Precipitation is allowed in these areas. Typical BMPs include pervious pavers and pervious asphalt are allowed. The concern is that high hydraulic loading from concentrated stormwater practices could degrade groundwater quality by mobilizing contamination within the soils. Please note, it is possible that a **Yellow** area on the property can be converted to a **Green** area if contaminated soils are excavated to a minimum of two feet below the lowest point of the infiltration area and backfilled with clean fill.

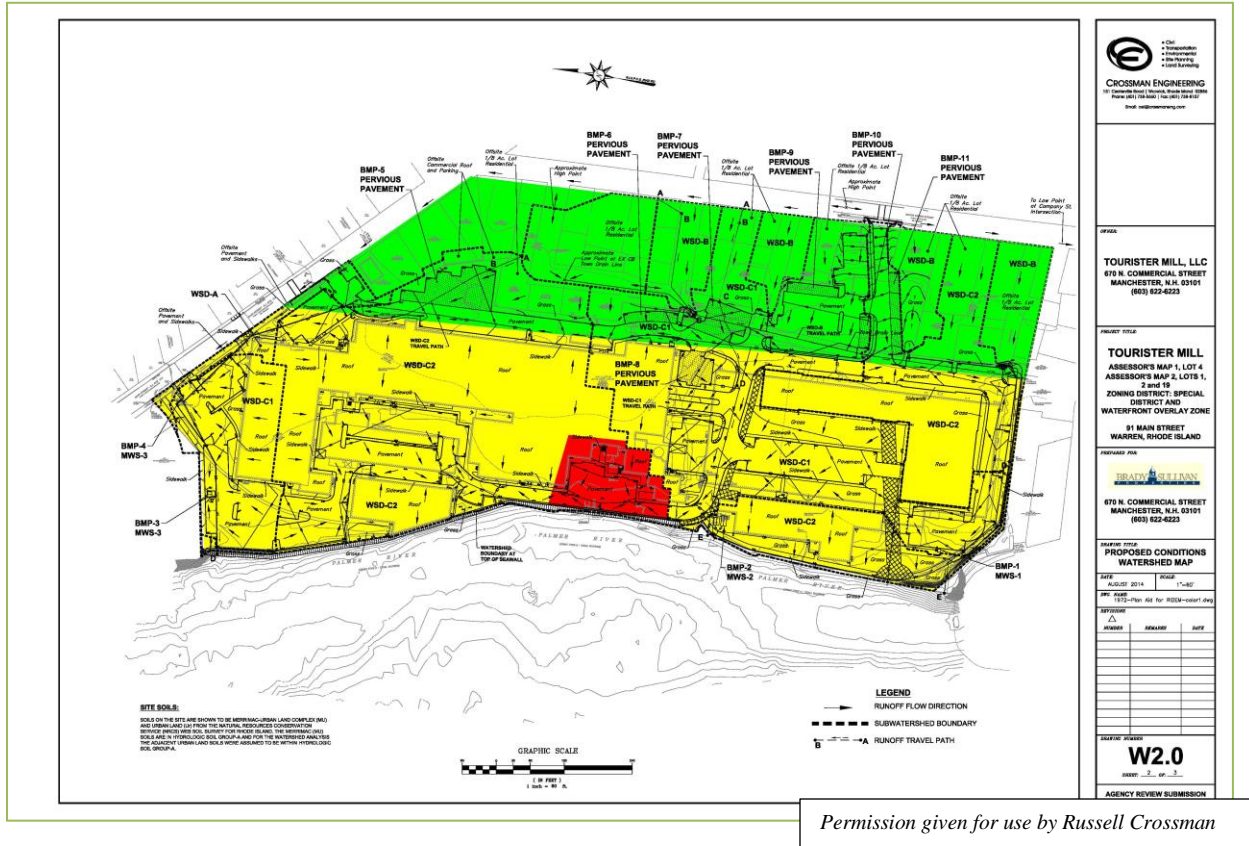
Green – Unrestricted Hydraulic Loading. These areas are allowed to accept any stormwater directed to them. They can accept precipitation falling directly on them, sheet flow directed to the area, or stormwater collected and placed into an engineered infiltration system. Please remember, these areas are still subject to infiltration rate restrictions and sizing.



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Example

Example: Below is an example of Tourister Mills in Bristol, RI. The site had a #6 leak some years ago (Red area) and general soil contamination in the Yellow areas. The applicant qualified for redevelopment as the site is nearly 100% impervious and proposed the following stormwater plan. The proposal includes removal of roof drains from the sewer, and treatment of almost 100% of the site through a carefully selected choice of stormwater practices including pervious pavers and pavement, proprietary BMPs and grass. The loading analysis was reviewed and accepted by the OWM.



Criteria for setting Green Areas (hydraulic loading allowed):

- If the proposed stormwater BMP is in a GAA or GA area, all soils to the water table in the detention/infiltration area need to meet GA leachability standards as listed in Table 2 of the Remediation Regulations for VOCs, SVOCs, Pesticides, PCBs, and inorganics; this includes SPLP analysis for inorganic contaminants and the GA TPH Leachability Criteria outlined in Rule 8.02(A)(iv)(2) of the Remediation Regulations.
- If the proposed BMP is in a GB or GC area, all soils to the water table in the detention/infiltration area need to meet GB leachability standards as listed in Table 2 of the Remediation Regulations for VOCs and PCBs, unless the infiltration area is located within 200 feet of an Environmentally Sensitive Area. This also includes the GB TPH Leachability Criteria outlined in Rule 8.02(A)(iv)(2) of the Remediation Regulations.

If you are in a GB or GC area and are within 200 feet of an Environmentally Sensitive Area, all soils must meet GA leachability standards. A waiver from this requirement may be requested if: A) a sufficient number of SPLP samples are taken of the soil that prove all contaminants of concern are not leaching out of the soil into the groundwater and B) groundwater samples show said contaminants of concern are not above applicable standards.