



Defining the “Site”

Vermont Stormwater Management Manual Update, Meeting #3

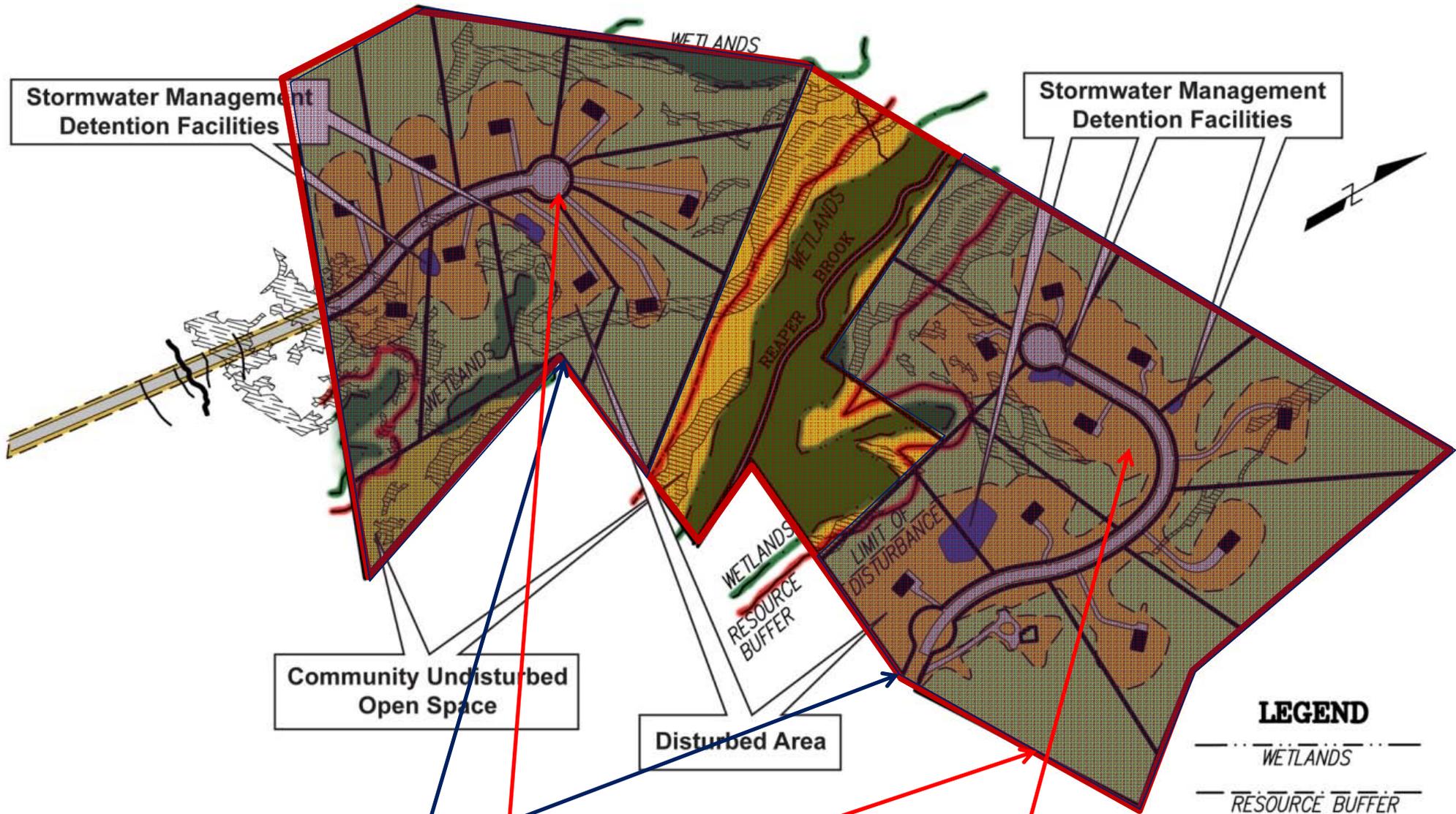
Shelburne, Vermont Town Office

December 12, 2013



7a. Current VSMM Definition of Site

- The **drainage area** that includes all portions of a development contributing stormwater runoff to one or more discharge points. In cases where there are multiple discharges to one or more waters, “site” shall mean the **total area of the subwatersheds**. For linear projects, including but not limited to highways, roads, and streets, the term site includes the **entire right of way** within the **limits of the proposed work**.



Community Undisturbed Open Space

Disturbed Area

- LEGEND**
- WETLANDS ---
 - RESOURCE BUFFER ---
 - LIMIT OF DISTURBANCE ---
 -  AREA OF STEEP SLOPES

Is this the Site?

Or is this the Site?

Or is it just the highlighted drainage area?



Map



Photos

Is this the Site?

Nashville Definition

Site - All contiguous land and bodies of water in one ownership, graded or proposed for grading or development as a unit, although not necessarily at one time.

Nashville – Volume 5 (LID)

■ Runoff Reduction Method based on Rv

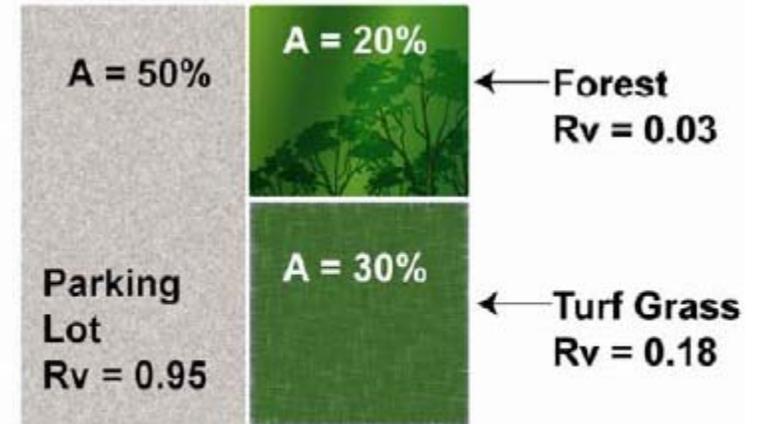


Figure 2 Site Example with Land Uses

STEP 1 EXAMPLE

As shown in Figure 2, if we have a 10 acre site and 50% of the site was impervious, 20% forest, and 30% turf grass all over B Soils the Rv value would be:

$$\text{Site Weighted Rv} = [(5.0 \cdot 0.95) + (2.0 \cdot 0.03) + (3.0 \cdot 0.18)] / 10 = 0.54$$

That is, 54% of the rainfall for the larger design storms on the site runs off. This step does not consider the flow path of the runoff but simply the land use. The standard is the capture of the first inch and an Rv of 0.20 or less so additional GIPs must be planned and implemented.

Table 2. Site Cover Runoff Coefficients				
Soil Condition	Volumetric Runoff Coefficient (Rv)			
Impervious Cover	0.95			
Hydrologic Soil Group	A	B	C	D
Forest Cover	0.02	0.03	0.04	0.05
Turf	0.15	0.18	0.20	0.23

Other States – Other Terms

- Rhode Island: Site defined - One or more lots, tracts, or parcels of land to be developed or redeveloped for a complex of uses, units or structures, including but not limited to...When calculating site size, **jurisdictional wetland areas** defined by DEM/CRMC regulations and **undeveloped lands protected by conservation easements** should be subtracted from the site area.
- Maryland: Disturbed Area defined - An area in which the natural vegetation soil cover has been removed or altered and, therefore is susceptible to erosion.
- Maryland: Environmental Site Design - "...capturing and retaining enough rainfall so that the runoff leaving **the site** is reduced to a level equivalent to a wooded site in good condition..."

Critical Issues to Address

- The runoff reduction target is an “undeveloped” condition. If you **include** undeveloped natural areas in the “site” area, you make it easier to meet the criteria.
- If you **include** undeveloped natural areas in the site area, you provide a built-in **incentive** to preserve these areas.

However,

- If you **include** wetlands/natural areas in site area, and have a runoff reduction approach (similar to Nashville), you may have discharges of **uncontrolled runoff** to wetlands/natural areas.

Questions?

