



## MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Martin O'Malley  
Governor

Robert M. Summers, Ph.D.  
Secretary

Anthony G. Brown  
Lieutenant Governor

February 25, 2013

Mr. Michael Furbish  
Furbish Company  
3430 2<sup>nd</sup> Street, Suite 100  
Baltimore, MD 21225

Dear Mr. Furbish:

Thank you for your recent letter to the Maryland Department of the Environment (MDE), Water Management Administration (WMA) regarding the EcoCline living roof system. In your letter, you have asked WMA to evaluate your product with respect to potential treatment applications in Maryland. We offer the following:

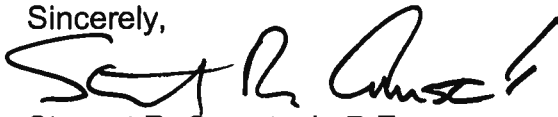
In Maryland, environmental site design (ESD) must be used to the maximum extent practicable (MEP) to reduce runoff and mimic natural hydrologic conditions. The use of ESD planning techniques and treatment practices must be exhausted before any approved structural practices may be used. WMA considers the EcoCline system to be a proprietary type of green roof. Innovative green roof systems may be used if designed and constructed in accordance with the guidance and criteria found in Chapter 5 and Appendix B.4 of the *2000 Maryland Stormwater Design Manual* (the Manual), and all structural components and planting media conform to industry (e.g., ASTM, ACI) standards.

Additionally, you have asked that the EcoCline 1+1, 2+1, and 3+1 (+1 series), and the 1+2, 2+2, and 3+2 (+2 series) roof products be considered equivalent to a traditional four-inch (RCN = 88) and eight-inch (RCN = 77) green roof, respectively. To support this, calculations were submitted comparing the performance of these systems to traditional green roofs over a narrow range of rainfall events (e.g., between 2.5 to 4.0 inches). MDE's calculations for the alternative surfaces found in Chapter 5 are based on a much broader range of rainfall events. When a similar approach is applied to the data found in your submittal, the resulting RCNs for each variant are different. However, the median RCNs for the +1 and +2 series are 88 and 78 respectively. Therefore, WMA concurs that these products may be considered equivalent to the traditional four-inch (RCN = 88) and eight-inch (RCN = 77) green roofs.

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In conclusion, WMA has no objections to the EcoCline system's use as an alternative surface provided that the pertinent design criteria found in the Manual and listed above are met, and it is accepted locally. However, local jurisdictions may request that a letter from MDE/WMA be provided verifying product classification. Please consider this that letter. Thank you again for your interest. If you have any additional questions, please contact me at (410) 537-3550 or [scomstock@mde.state.md.us](mailto:scomstock@mde.state.md.us).

Sincerely,



Stewart R. Comstock, P.E.  
Regulatory & Compliance Engineer  
Sediment, Stormwater & Dam Safety Program