UNH Stormwater Research –
Green Infrastructure Adaptation to Intensifying Rainfall

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MISSION and RESEARCH GOALS
- Understand and communicate the significance of stormwater issues
- Research and understand major contributors to typical urban flooding
- Determine climate change projections for the West Haven area; report the anticipated implications for local urban flooding
- Propose green infrastructure adaptation measures based upon review of relevant green infrastructure life cycle and cost assessments

METHODOLOGY
- Investigate UNH’s 2012 urban flooding event to understand major contributing factors
- Obtain UNH site specifics: soil types, percent imperviousness, climate projections, etc.
- Research local stormwater history, impacts, and current practices, as well as national trends; Report about green infrastructure’s growing role as a stormwater management strategy
- Canvass available green infrastructure life cycle and cost assessments for common and/or conflicting scientific findings pertaining to economic, social, and environmental impacts

RESULTS
- Imperviousness of locality contributes immensely to stormwater runoff; this runoff is a leading cause of water degradation
- Climate projections for the Northeast U.S. predict more intense precipitation to be handled by already overburdened systems
- Green infrastructure cost effectively addresses stormwater issues, provides additional benefits that traditional infrastructure lacks
- Material choice and transportation during construction and maintenance of green infrastructure features typically lead to the most impacts

RECOMMENDATIONS and PROJECT CONTINUATION
- UNH leadership continues to work with DOT and other stakeholders about the local urban flooding issues
- To adapt to projected increases in rainfall intensity, all new and retrofit construction should incorporate GI; Specifically, UNH should convert unused turf areas to native vegetation, direct downspouts to infiltration or storage features, and retrofit impervious parking areas with permeable options as the need for repaving arises
- UNH should stay informed about the University of New Hampshire’s Stormwater Center research findings

REFERENCES
- National Climate Assessment, 2014.
- University of Connecticut Center for Land Use Education and Research, 2014.

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