

# NHDOT SPR2 PROGRAM

## RESEARCH PROGRESS REPORT

<b>Project #</b> SPR 42372H		<b>Report Period</b> Year 2022 <input type="checkbox"/> Q1 (Jan-Mar) <input type="checkbox"/> Q2 (Apr-Jun) <input checked="" type="checkbox"/> Q3 (Jul-Sep) <input type="checkbox"/> Q4 (Oct-Dec)	
<b>Project Title:</b> Water Quality Test Site and Public Outreach at the I-89 Sutton Rest Area			
<b>Project Investigator:</b> Tom Ballestero <b>Phone:</b> 603.862.1405		<b>E-mail:</b> <a href="mailto:tom.ballestero@unh.edu">tom.ballestero@unh.edu</a>	
<b>Project Start Date:</b> 5/5/2021	<b>Project End Date:</b> 1/31/2024	<b>Project schedule status:</b> <input checked="" type="checkbox"/> On schedule <input type="checkbox"/> Ahead of schedule <input type="checkbox"/> Behind schedule	

**Brief Project Description:**

NHDOT has been and will continue to construct water quality best management practices to meet stormwater runoff quality regulations. The size of the measures required often extend beyond the available right-of-way (ROW) and require the acquisition of private property. These measures also require maintenance to remain effective. NHDOT would benefit from solutions that require less space, that can be constructed in our linear ROWs, and be very low or zero maintenance. The current construction project, Sutton 42419, will explore the design, construction, efficiency, and monitoring of smaller, linear water quality measures that will require very little to no maintenance.

Another potential component to this project is public outreach. Due to the location of this test site there is an opportunity to share this research with the public who stop to use the rest area. This outreach may help the public understand the reason NHDOT constructs these features along the highways and may influence others to think about storm runoff and the impact it can have on the environment.

**Progress this Quarter (include meetings, installations, equipment purchases, significant progress, etc.):**

Throughout the summer of 2022, the UNH Stormwater Center has been collecting conductivity measurements using ONSET HOBO conductivity loggers. Three loggers are placed throughout the rest stop. One placed in the stream upstream of the rest stop, and two others placed across I-89 downstream. These loggers are downloaded every 41 days. Conductivity is a surrogate variable for road salt and other pollutants.

**Items needed from NHDOT (i.e., Concurrence, Sub-contract, Assignments, Samples, Testing, et):**

At the present time, the site is closed. If we are to complete the project by the scheduled end date. The site needs to be constructed and open by August 2023. Otherwise, we should consider a contract extension.

**Anticipated research next three(3) months:**

During the Summer 2022 months, downloading the real-time conductivity data will continue. No water sampling equipment will be deployed until construction is completed and the site stabilized.

**Circumstances affecting project:**

Nothing outstanding at this time. Construction will affect monitoring, as anticipated.

Tasks (from Work Plan)	Planned % Complete	Actual % Complete
Task 1 Set-up Pre-construction Monitoring equipment and sample	100	100
Task 2 Provide design details for stormwater systems	100	100
Task 3 Set-up Post-construction Monitoring equipment and sample	0	0
Task 4 Assist with development of public outreach materials	0	0
Task 5 TAG Meetings and Quarterly Reports	30	30
Task 6 Final Report	0	0

**Barriers or constraints to implementing research results**

Nothing to report at this time.