

**Quarterly Progress and Performance Indicators Report:**

**Project Number and Title: 2.15 Incorporation of Pollinator Plantings to Enhance Ecosystem Functions and Durability of Transportation Right-of-Way Infrastructure**

**PI:** *Rebecca Brown, U. Rhode Island*

**Co-PI(s):** *none*

**Reporting Period:** *7/1/2021-9/30/2021*

**Submission Date:** *9/29/2021*

**\*\*\*IMPORTANT:** *Please fill out each section fully and reply with N/A for questions/sections with nothing to report. For ease of reporting to the USDOT, please do not remove, or change the order of, any sections/text. You may remove/add each rows in tables as needed. Thank you! \*\*\*  
The report is due on the last day of the reporting period in .doc format to [tidc@maine.edu](mailto:tidc@maine.edu).*

**Overview:**

- Sites for seed establishment studies were identified and site preparation began

**Meeting the Overarching Goals of the Project:**

- Site selection and preparation are essential first steps to achieving objective 2: evaluate the effectiveness of different methods of establishing pollinator meadows from seed in the roadside environment

**Accomplishments:**

- N/A

**Task Progress and Budget:**

<b>Table 1: Task Progress</b>			
<b>Task Number: Title</b>	<b>Start Date</b>	<b>End Date</b>	<b>% Complete</b>
Task 1.1: Roadside Application Study	9/1/2021	6/1/2023	10%
Task 1.2: Establishment Methods Study	8/15/2021	11/30/2022	20%
Task 1.3: Conduct Vegetation Surveys	5/1/2022	9/30/2022	0%
Task 1.4: Analyze Data and Write Papers	10/1/2022	8/30/2023	0%
<b>Phase 1 Overall</b>	<b>8/15/2021</b>	<b>8/30/2023</b>	<b>2%</b>

<b>Table 2: Budget Progress</b>		
<b>Project Budget</b>	<b>Spend – Project to Date</b>	<b>% Project to Date (include the date)</b>
\$324,765	\$0	0% as of 9/29/21

**Is your Research Project Applied or Advanced?**

- Applied** (*The systematic study to gain knowledge or understanding necessary for determining the means by which a recognized and specific need may be met.*)
- Advanced** (*An intermediate research effort between basic research and applied research. This study bridges basic (study to understand fundamental aspects of phenomena without specific applications in mind) and applied research and includes transformative change rather than incremental advances. The investigation into the use of basic research results to an area of application without a specific problem to resolve.*)

**Professional Development/Training Opportunities:**

- N/A

**Technology Transfer:**

*Complete all of the tables below and provide additional information where requested. Please provide ALL requested information as this is one of the most important sections for reporting to the USDOT. **ONLY provide information relevant to this reporting period.***

*Use the table below to complete information about conference sessions, workshops, webinars, seminars, or other events you led/attended where you shared findings as a result of the work you conducted on this project:*

<b>Table 3: Presentations at Conferences, Workshops, Seminars, and Other Events</b>					
<b>Type</b>	<b>Title</b>	<b>Citation</b>	<b>Event</b>	<b>Location</b>	<b>Date(s)</b>
N/A					

*Use the table below to report any publications, technical reports, peer-reviewed articles, newspaper articles referencing your work, graduate papers, dissertations, etc. written as a result of the work you conducted on this project. Please list only completed items and exclude work in progress.*

<b>Table 4: Publications and Submitted Papers and Reports</b>				
<b>Type</b>	<b>Title</b>	<b>Citation</b>	<b>Date</b>	<b>Status</b>
N/A				

*Answer the following questions (N/A if there is nothing to report):*

1. Did you deploy any technology during the reporting period through pilot or demonstration studies as a result of this work? If so, what was the technology? When was it deployed? N/A
2. Was any technology adopted by industry or transportation agencies as a result of this work? If so, what was the technology? When was it adopted? Who adopted the technology? N/A

3. Did findings from this research project result in changing industry or transportation agency practices, decision making, or policies? If so, what was the change? When was the change implemented? Who adopted the change? N/A
4. Were any licenses granted to industry as a result of findings from this work? If so, when? To whom was the license granted? N/A
5. Were any patent applications submitted as a result of findings from this research? If so, please provide a copy of the patent application with your report. N/A
6. Were any industrial contracts awarded base on furthering planned research and development activities as a result of findings from this work? If so, when? How much was awarded? Who awarded the contract? N/A

*Describe any additional activities involving the dissemination of research results not listed above under the following headings:*

**Outputs:**

*Definition: Any new or improved process, practice, technology, software, training aid, or other tangible product resulting from research and development activities. They are used to improve the efficiency, effectiveness, and safety of transportation systems. List any outputs accomplished during this reporting period:*

- N/A

**Outcomes:**

*Definition: The application of outputs; any changes made to the transportation system, or its regulatory, legislative, or policy framework resulting from research and development activities. List any outcomes accomplished during this reporting period:*

- N/A

**Impacts:**

*Definition: The effects of the outcomes on the transportation system such as reduced fatalities, decreased capital or operating costs, community impacts, or environmental benefits. The reported impacts from UTCs are used for the assessment of each UTC and to make a case for Federal funding of research and education by demonstrating the impacts that UTC funding has had on technology and education. NOTE: The U.S. DOT uses this information to assess how the research and education programs (a) improve the operation and safety of the transportation system; (b) increase the body of knowledge and technologies; (c) enlarge the pool of people trained to develop knowledge and utilize technologies; and (d) improves the physical, institutional, and information resources that enable people to have access to training and new technologies. List any outcomes accomplished during this reporting period:*

- N/A

**Participants and Collaborators:**

*Use the table below to list **all** individuals (compensated or not) who have worked on the project.*

**Table 5: Active Principal Investigators, faculty, administrators, and Management Team Members**

Individual Name & Title	Dates involved	Email Address	Department	Role in Research
Rebecca Brown, Professor	8/15/21 – 9/30/21	brownreb@uri.edu	Plant Sciences and Entomology	Project Leader
Rahmatallah Gheshm, Post-Doc	8/15/21 – 9/30/21	rgheshm@uri.edu	Plant Sciences and Entomology	Field work leader

Use the table below to list **all** students who have participated in the project during the reporting period. (This includes all paid, unpaid, intern, independent study, or any other student that participated in this project.) **ALL FIELDS ARE REQUIRED.**

**Table 6: Student Participants during the reporting period**

Student Name	Start Date	End Date	Advisor	Email Address	Level	Major	Funding Source	Role in research
Katie Marcil	9/1/2021	9/30/21	R. Brown		Master's	Biological and Environmental Science – Sustainable Agriculture and Food Systems	University non-TIDC match (teaching assistantship)	Assisting with field plot establishment

Use the table below to list any students who worked on this project and graduated or received a certificate during this reporting period. Include information about the student's accepted employment (i.e. the student is now working at MaineDOT) or if they are continuing their students through an advanced degree (list the degree and where they are attending).

**Table 7: Students who Graduated During the Reporting Period**

Student Name	Degree/Certificate Earned	Graduation/Certification Date	Did the student enter the transportation field or continue another degree at your university?
N/A			Please list the organization or degree

Use the table below to list any students that participated in Industrial Internships:

**Table 8: Industrial Internships**

Student Name	Degree/Certificate Earned	Graduation/Certification Date	Did the student enter the transportation field or continue another degree at your university?
N/A			Please list the organization or degree

Use the table below to list **organizations** that have been involved as partners on this project and their contribution to the project.

Table 9: Research Project Collaborators during the reporting period						
Organization	Location	Contribution to the Project				
		Financial Support	In-Kind Support	Facilities	Collaborative Research	Personnel Exchanges
RIDOT	Rhode Island			x		
Ernst Conservation Seeds	Meader, PA		20 lbs wildflower seed mix values at \$510			

Use the table below to list **individuals** that have been involved as partners on this project and their contribution to the project.

*(List your technical champion(s) in this table. This also includes collaborations within the lead or partner universities who are not already listed as PIs; especially interdepartmental or interdisciplinary collaborations.)*

Table 10: Other Collaborators				
Collaborator Name and Title	Contact Information	Organization and Department	Date(s) Involved	Contribution to Research
Susan Votta		RIDOT Environmental	8/15/21 – 9/30/21	Technical champion
Trevor Jones		RIDOT Environmental	8/15/21 – 9/30/21	Site access and logistics
Patrick Maguire		RIDOT Maintenance	9/1/21 – 9/30/21	Coordination of in-kind support (labor and equipment) from RIDOT Maintenance for study establishment

Use the following table to list any transportation related course that were taught or led by researchers associated with this research project:

Table 11: Course List						
Course Code	Course Title	Level	University	Professor	Semester	# of Students
N/A						

**Changes:**

*List any actual or anticipated problems or delays and actions or plans to resolve them (list no-cost extension requests here)...*

*List any changes in approach and the reasons for the change...*

n/a

**Planned Activities:**

*List the activities planned during the next quarter.*

- Complete installation of establishment method study plots on roadside (milestone 2.1)
- Select wildflower species for roadside adaptation study (milestone 1.1)
- Begin germinating seeds and growing transplants for roadside adaptation study (milestone 1.2)