TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Virginia DOT (VDOT) .

INSTRUCTIONS:
Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)* **TPF-5(268)** **National Sustainable Pavement Consortium**	**Transportation Pooled Fund Program - Report Period:** ☐ Quarter 1 (January 1 – March 31) ☑ Quarter 2 (April 1 – June 30) ☐ Quarter 3 (July 1 – September 30) ☐ Quarter 4 (October 1 – December 31)

Project Title:
National Sustainable Pavement Consortium

Name of Project Manager(s):	**Phone Number:**	**E-Mail**
Ben Bowers	(434) 293-1423	Ben.Bowers@vdot.virginia.gov
Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:**
VCTIR 103567	448679	7/1/2012
Original Project End Date:	**Current Project End Date:**	**Number of Extensions:**
6/30/2018	6/30/2018	0

Project schedule status:

☑ On schedule ☐ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
$450,027 [1]	$439,094 413,770	96%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
$25,324 (5.6%)	$25,324	96%

[1] Contracted; a contract modification is being processed. Total commitment $665,000

Project Description:

Through a regional pooled fund, this program of research focuses on enhancing pavement sustainability. The initial project scope covers:

- ✓ Examine emerging sustainable materials, technologies, products and pavement systems, how to facilitate their adoption, and what testing approaches and methods are needed to implement these technological improvements.
- ✓ Identify an appropriate set of metrics that comprises all aspects of pavement sustainability and the adaption or development of tools designed to assess pavement sustainability on qualitative and quantitative scales.
- ✓ Examine how sustainability considerations will affect all aspects of pavement engineering and management such as planning, design, construction, maintenance, management, and reclamation and develop guidelines for integration of these tools into pavement/ asset management business processes.
- ✓ Investigate the effect of climatic change on regional pavement engineering in terms of design, construction, maintenance, and management.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

- Continued work on incorporating LCA into the pavement-type selection process.
  - ✓ Collaborated with LCE4Roads on a paper comparing various pavement LCA tools.
- Continued work on integrating life-cycle environmental and cost assessment tools for supporting pavement management.
  - ✓ Prepared a paper that has been accepted for presentation at the Fifth International Symposium on Life-Cycle Civil Engineering, Oct 16-19 2016, Delft, The Netherlands: Santos J., Ferreira, A., Flintsch, G. and Cerezo, V., "A multi-objective optimization approach for sustainable pavement management."
- Prepared two presentations for the 11th National Transportation Asset Management Conference.
  - ✓ Flintsch, G., Santos, J., and Ferreira, A., "Multi-objective Optimization Approach for Sustainable Pavement Maintenance and Rehabilitation Programming."
  - ✓ Flintsch, G., and Qiao, Y., "Impact of Climate Change on the Performance, Maintenance, and Life-Cycle Costs of Flexible Pavements."
- Continued work on synthesizing long-term performance data from states with active in-place recycling programs.
  - ✓ Prepared a draft paper based on the sections constructed in Virginia.

Anticipated work next quarter:

- Complete work on integrating life-cycle environmental and cost assessment tools for supporting pavement management.
- Continue work on the synthesis of long-term performance data from states with active in-place recycling programs.
- Initiate a project on Influence of additives on mix design of in-place recycled materials.
- Participate in the Infrastructure Life Cycle Inventory Data Workshop being organized in Ann Arbor, MI.
- Organize the Fourth Technical Oversight Workshop.

Significant Results:

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

No problems were encountered in this quarter.

Potential Implementation: