



**To:** Tommy Nantung, INDOT  
**From:** Jan Olek, Director, North Central Superpave Center  
**Date:** July 15, 2011  
**Subject:** Status Report – April - June 2011

### **Background**

The North Central Superpave Center began on July 1, 1995, as one of five regional centers established to assist the states/provinces and industry with the implementation of the Superpave Mix Design system for hot mix asphalt. The role of the NCSC has evolved to include all general hot mix asphalt issues, as states in the region have adopted Superpave. The Center is administered through the Joint Transportation Research Program at Purdue University.

### **Work Performed – April - June 2011**

#### Training:

There were no formal training programs offered this quarter. The Wisconsin Asphalt Pavement Association had contacted the Center about providing training in Wisconsin on noise walls and quiet pavements (for the public) and for one district of WisDOT in the spring, but this was cancelled.

#### Communication:

A new contract for the joint newsletter was finally established with Auburn University at the end of 2010. Work is beginning on planning the next issue for publication next quarter.

Routine updates were made to the NCSC website. Information is added and updated when received. Presentations, HMA “hot topics” and news articles, as well as HMA-related calendar events are frequently added to the website.

NCSC staff responds to approximately 25 calls and emails each quarter. These inquiries typically include questions and requests for information from HMA professionals across the country and around the world. Some example questions from this quarter included a request from FHWA for RAP related literature and a call for information about seal coating from a private citizen.

#### Third Party Lab and Testing Services:

The NCSC lab has been AMRL accredited since December 2009; the next inspection is scheduled for July 12-13. Work is ongoing to maintain the equipment calibrations, training and record-keeping required to keep the accreditation current. RAP testing was performed for two out-of-state contractors this quarter. Requests for testing to be done next quarter were received from one contractor (dynamic modulus testing) and FHWA (volumetrics, dynamic modulus and indirect tensile strength).

Research:

Slab polishing and testing is continuing on the study entitled *Maximizing the Use of Local Materials in HMA*. This study is evaluating blends of polish resistant and polish susceptible aggregates in terms of their frictional properties. Selected slabs are being subjected to additional polishing and testing to verify that terminal friction has been achieved. A no-cost, short time extension was approved last quarter due to changes in the test plan and problems with the tires on the polishing machine.

Data analysis of field friction testing on sites used in the study entitled *Investigating the Feasibility of Integrating Pavement Friction and Texture Depth Data in Modeling for INDOT Pavement Management System* is underway. The draft final report is nearing completion. A SAC meeting will be held next quarter.

The draft final report on the NCHRP study *History of Superpave* was completed in March. The research team is addressing panel comments that were received late this quarter.

The study entitled *Risk Management of Low Void Content Asphalt Mixtures* is underway. Accelerated pavement testing was completed in March. Data analysis is also underway. A no-cost, short time extension was requested and approved by the SAC since a graduate student was never identified to work on the project and our former post doc will return in August to assist with writing the final report.

Work continues on data analysis and report preparation for the *Evaluation of Recycled Asphalt Pavement for Surface Mixtures* study. The current plan is to have the data analysis and report completed next quarter.

Regarding the *Continued Monitoring Indiana's SPS9-A Site* study, the binder direct tension testing was completed this quarter, after a delay because of equipment problems. Purdue Mechanical Engineering IT personnel are still working on programming the Cox machine to be used for IDT testing. As soon as the software is available, IDT testing of the surface layers will be conducted. The draft final report writing is in progress.

Work continued on mix designs, slab fabrication, dynamic modulus testing and noise testing (grazing incidence) for the *Quiet Pavements* study this quarter. A request for no-cost time extension will be prepared and submitted to the sponsor early next quarter along with already completed sections that include literature review and final experimental plan. The paper based on this study was presented at the 2011 TRB meeting. Another paper is planned to be developed next quarter to be submitted for the 2012 meeting

The revised final report for the study on the *Investigation of Low and High Temperature Properties of Plant-Produced RAP Mixtures, Phase II*, was completed this quarter. Comments were received and addressed and the revised final report was submitted in June. A technical paper based on this project is being prepared to submit to the Association of Asphalt Paving Technologists next quarter.

Technology Transfer, Presentations and Interactions with other Centers and Organizations:

Planning for the 2012 North Central Hot Mix Asphalt Technical Conference, sponsored by the North Central Asphalt User Producer Group (NCAUPG), is beginning. The NCSC staff is attempting to confirm the host state after which a conference call will be scheduled with the NCAUPG Management Committee to suggest topics for the conference and appoint a planning committee. A web meeting with the NCSC Steering Committee will be scheduled for around the same time since many of the same people are involved in both.

The Technical Director hosted a meeting of the Transportation Research Board Committee on General Issues in Asphalt Technology in Indianapolis in April.

The Technical Director participated in the meetings of the FHWA Reclaimed Asphalt Pavement ETG and Warm Mix Asphalt Technical Working Group in California in May. She also participated in an invitation only workshop on testing warm mix asphalt after the WMA TWG.

The Technical Director also participated in asphalt and aggregate related subcommittees at ASTM in June. She represented the region in meetings of the Long Term Pavement Performance ETG on Special Activities in April and the LTPP Committee in May.

**SAC Meeting:** The Steering Committee will meet via web or phone conference next quarter.

**Work Next Quarter:** Work will continue on research, communication, training and testing as planned.

**Financial Information**

North Central Superpave Center Base Funding Expenditures TPF-5 (021)					
July 1, 2010 - June 30, 2011 (Base Six-Year Two)					
States	Quarter One July - Sept 10	Quarter Two Oct - Dec 10	Quarter Three Jan - Mar 11	Quarter Four Apr - June 11	Total per State
Illinois					
Indiana	6,250	6,250	6,250	6,250	25,000
Iowa					
Kansas	6,250	6,250	6,250	6,250	25,000
Michigan	6,250	6,250	6,250	6,250	25,000
Minnesota					
Missouri					
Wisconsin	6,250	6,250	6,250	6,250	25,000
Quarterly Total					
Cumulative Grand Total					100,000