

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY**

**INTEROFFICE COMMUNICATION**

TO: Liesl Eichler Clark, Director

THROUGH: Aaron B. Keatley, Chief Deputy Director  
Amy Epkey, Senior Deputy Director

FROM: Elizabeth M. Browne, Director *EMB*  
Materials Management Division

DATE: April 23, 2021

SUBJECT: Approval of Scrap Tire Market Development Grant Program  
Recommendations for Fiscal Year (FY) 2021

The Materials Management Division (MMD), Solid Waste Section (SWS), Sustainable Materials Management Unit (SMMU), Scrap Tire Program (Program) has completed the review of the applications received for the FY 2021 Scrap Tire Market Development Grant funding under Part 169, Scrap Tires, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and is requesting approval to fund the recommended projects.

Twelve eligible market development grant applications were received requesting \$4,937,655 in funding. Based on the remaining appropriated funds of \$4,729,064 that would be available after the proposed Clean Up Grant funding (which will be routing in another grant package), we are recommending the funding of nine Market Development Grant projects; these will utilize a total of \$4,451,972 from the Scrap Tire Regulatory Fund for FY 2021. The unfunded projects total \$485,683, which include requests for city and village road paving projects. The remaining FY 2021 funding will be utilized for a research study (\$250,000) focused on performance evaluations of historic paving projects that have been funded through the Market Development Grants Program and an educational outreach series (\$15,000) for a total of \$4,716,972.

Evaluation of the Market Development Grant applications was based on the three top priorities of the Market Development Grants: the highest priority and points are awarded for equipment purchases; the next highest priority and points are awarded for research and development; and the lowest priority and points are awarded for paving projects. Each application was individually scored by two reviewers and ranked accordingly. In addition, funding recommendations were made for each project. The spreadsheet showing the eligible projects, ineligible projects, unfunded projects, and recommended funding amounts is attached.

Use of scrap tires in road projects have been successful in Michigan and across the United States. Several rubber modified asphalt (RMA) paving and chip seal technologies have years of successful installations on the ground with supporting research and documentation available. Although the Program is always interested in innovation, the focus for using scrap tires in road projects needs to shift toward making agencies aware of the use and availability of scrap tire technologies. The same focus shift is also being applied to Tire Derived Aggregate (TDA) projects. Several of the Market Development Grant applications received this year not only install material, but are aimed at educating engineers about the use of RMA and TDA, which will lead to increased use of the scrap tire technologies in the future.

These recommended projects will promote and enhance existing markets as well as help drive development of other emerging market segments.

The recommended projects are:

- **Entech, Inc.: \$1,303,120**  
Entech, Inc., is proposing to install 100 lane miles of asphalt rubber chip seal. The project goals are introducing agencies to rubberized chip seal, so they can see the benefits of the material firsthand, gain necessary experience in installation of the material, use the material as another tool to extend the life of roads, improve overall road quality, and incorporate the use of more scrap tires into road surfaces. Entech, Inc., is the largest single site producer of crumb rubber in the United States. Project partners will include Michigan Technological University (MTU), Cactus Paving, and road commissions including Bay, Ingham, Kalamazoo (and possibly Chippewa and Midland). Cactus Paving installs between 400 and 600 lane miles annually of asphalt rubber chip seal in various climate and geological conditions and will be involved with selection of roads to be sealed, installation, and staff training.
- **I Do TDA, Inc.: \$1,155,000**  
I Do TDA, Inc., is requesting funding for an innovative portable bagging unit to pre-compact Tire Derived Aggregate (TDA) meeting ASTM D6270-B specifications in T-DA blocks, encased in geotextile fabric that are easily stored, transported, and ultimately installed at the job site. Monte Niemi is the industry leader in civil engineering uses of TDA over the last 30 years. As part of the grant, I DO TDA, Inc., will be providing training to engineers in Michigan. This training will not only provide continuing education credit to these engineers and will also educate them on the many uses of TDA in construction and road projects. The project also will install TDA blocks on three demonstration sites in Michigan utilizing approximately 900,000 tires made into 15,000 TDA bales. The TDA material used to create TDA blocks will be sourced from Michigan scrap tire processors.
- **Ingham County Road Department (ICRD): \$450,000**  
ICRD is requesting to pave five lanes of Lake Lansing Road from Wood Street to US-127 in Lansing Township. The project team will consist of university research staff, a professional asphalt testing firm, and the Michigan Department of Transportation (MDOT). The project continues research on a previous ICRD grant project using devulcanized rubber (DVR) modified asphalt cement binders. The project has two primary goals: (1) to reproduce favorable observed performance of the DVR modified asphalt projects done in 2016 on Hagadorn Road and 2017 on Holt Road; (2) to partner with MDOT to perform production testing to verify that the DVR modified asphalt binder consistently meets Performance Grade Binder specifications, or if not, to correlate performance with laboratory testing results to develop/propose specification revisions applicable to DVR modified binder materials.
- **Dickinson County Road Commission (DCRC): \$410,000**  
DCRC is requesting to pave CR 577 from the Menominee County Line to the north, past CR 573. The project will utilize a technology not previously used in Michigan – a rubber-based pellet. The use of these pellets reduces the fuel and energy needed to prepare rubber modified asphalt. Compared to traditional terminal blended RMA, there is no need to keep rubberized liquid asphalt hot during shipping and storage, saving energy and money. MTU is a partner, doing laboratory testing, on-site performance evaluation, and technology transfer to other interested agencies.

- **MTU: \$396,031**

MTU is partnering with Bay County Road Commission and Clare County Road Commission. Mixture design and sample preparation will be completed in MTU laboratories. Pavement conditions prior to construction will be documented and the performance of the rubberized asphalt mixture will be evaluated. The project team will conduct field sampling, noise measurements and surveys and report the results to EGLE. The results will also be presented at regional or national conference and be offered for training to county road and MDOT engineers.

Clare County Road Commission will be dividing 1.15 miles of two-lane road (West Haskell Lake Road from Cook Avenue to Lake Station Avenue) into three test sections. The first test section will be conventional subgrade and conventional overlay. The second test section will be conventional subgrade and rubber overlay. The third test section will be tire derived aggregate (TDA) subgrade and rubber overlay.

Bay County Road Commission will be comparing a rubber overlay and a conventional pavement overlay on 4.5 miles of South 7 Mile Road from East Midland Road to East Beaver Road.

- **Cobalt Holdings, LLC (Cobalt): \$298,521**

Cobalt is requesting equipment to increase production by reducing two-inch nominal tire chips into material that is 4 or 5 mesh size crumb that is used by their customers. The equipment requested is another four shaft R-222 Quad shredder and a cooling fluid chiller. Also included are a truck scale which will produce operational efficiencies, an automatic tire feeder, and a separator magnet to be installed at the facility.

- **St. Clair County Road Commission (SCCRC): \$209,300**

SCCRC will pave 1.5 miles of Taylor Road in Kimball Township, which is a highly used commercial highway, with terminal blend RMA. During every day of paving, the asphalt will be sampled at the plant and taken to a certified laboratory for testing. Additional sampling and analysis will be completed by MTU staff. After construction, SCCRC will perform Pavement Surface Evaluation and Rating annually to document the condition of the project. The grantee meets monthly with several local cities and villages and will provide project updates. The grantee believes that the success of this RMA project could increase RMA production at the local asphalt plant by 25 percent.

- **Porous Pave: \$150,000**

The funding request is for increasing the market for Sand Guard and golf cart paths. Sand Guard is designed to be the most innovative golf course bunker lining material on the market and is made primarily from recycled tires along with stone aggregate and a binding agent. Porous Pave will incentivize three golf courses to complete sizeable bunker liner installations and do an educational media campaign for their products, which will be focused on the golf industry.

- **ICRD: \$80,000**

ICRD will be resurfacing Bellevue Road, the focus of the grant funded project area is a segment crossing 325 feet of wetland just west of Byrum Road. Construction is anticipated to begin in May 2021. The project area will excavate approximately three feet from proposed profile grade and replace with lightweight iron blast furnace slag fill placed within scrap tire casings as confinement. High density polyethylene geogrid reinforcement mats will be used below and above the lightweight fill to reinforce and separate the lightweight

“mattress.” The project design calls for approximately 5,000 passenger car tires to be used for containment of the 673 cubic yards of fill.

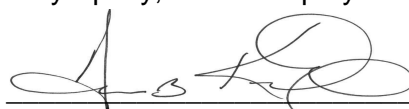
- **Paving Research/Market Development Study: \$250,000**  
There has been significant interest for details of evaluating performance of historical paving projects as well as further market analysis to determine trends in the scrap tire markets. The Program is proposing to either offer a Research Study Request for Proposals to curate details and information about historic projects and their performance, or to utilize funds for additional market study analysis and trending data. The results of this study are critical to expand the use of scrap tires in road construction projects.
- **Into the Outdoors: \$15,000**  
As a result of a contact forwarded by the EGLE Press Office, a partnership opportunity to produce an educational series with 17-time Emmy-award winner, *Into the Outdoors*, regarding the Life Cycle of a Scrap Tire has begun. Plans are for four 15-minute segments to be produced, including web content, classroom content and outreach. *Into the Outdoors* series are shown on syndicated educational television on five major networks and they are a broadcast partner with PBS. The Program will be contributing funding for one of the segments. The remainder of the funding is being raised through the U.S. Scrap Tire Workgroup, the U.S. Tire Management Association, and interested scrap tire industry partners.

Upon your approval of our recommendations, the Program will proceed with the grant awarding process. If you have any questions, please contact Mr. Jeff Spencer, Supervisor, SMMU, SWS, MMD, at 517-281-4411; SpencerJ3@Michigan.gov; or you may contact me at 517-242-2746.


Approved By:

  
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Amy Epkey, Senior Deputy Director

4/23/2021  
Date

  
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Aaron B. Keatley, Chief Deputy Director

4/26/2021  
Date

  
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Liesl Eichler Clark, Director

4/27/2021  
Date

Attachments

cc: Robert Jackson, EGLE  
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