

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:



Amy Epkey, Senior Deputy Director

4/23/2021


Date



Aaron B. Keatley, Chief Deputy Director

4/26/2021

Date



Liesl Eichler Clark, Director

4/27/2021

Date

Attachments

cc: Robert Jackson, EGLE
Kathy Tetzlaff, EGLE
Rhonda S. Oyer, EGLE
Jeff Spencer, EGLE
Kirsten Clemens, EGLE

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: Jack Schinderle, Director
Materials Management Division 

DATE: January 15, 2020

SUBJECT: Approval of Scrap Tire Market Development Grant Recommendations for
Fiscal Year (FY) 2020

The Material Management Division (MMD), Solid Waste Section (SWS), Sustainable Materials Management Unit (SMMU), has completed the review of the applications received for the FY 2020 Scrap Tire Market Development Grant Program (Program) 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.

Thirty-one eligible market development and one law enforcement grant applications were received requesting \$11,133,724 in funding. Based on the remaining appropriated funds of \$2,222,649, we are recommending the funding of the one law enforcement grant project and six market development grant projects; these will utilize a total of \$2,104,486 from the Scrap Tire Regulatory Fund for FY 2020. The remainder of the unfunded projects (which total \$9,029,238) include \$3,625,000 from one application (Holcim – Alpena Lafarge) requesting funding for equipment and other requests for local road commission or municipal road paving projects. The remaining FY 2020 funding (approximately \$118,000) will be utilized for either additional market study analysis or a research study focused on performance evaluations of historic paving projects that have been funded through the Program.

Evaluation of the Grant applications was based on the three top priorities of the Market Development Program: 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 the projects were ranked in order by score. In addition, funding recommendations were made for each project. The spreadsheet for the individual scores, ineligible projects, unfunded projects, and recommended funding amounts is attached.

Continued development of scrap tire markets, other than tire derived fuel (TDF), is essential to the continuing success of the Scrap Tire Regulatory Program. It is anticipated that TDF use will continue to decline. This decline appears to be primarily due to reduced alternative energy costs, the costs of operation of small coal fired or co-generation plants, and federal clean air regulations. These recommended projects will promote and enhance existing markets, as well as help drive development of other emerging market segments.

The recommended projects are:

- **Detroit Police Department (DPD): \$52,760**

The DPD was the only Law Enforcement grant applicant for 2020 funding. In 2019, the DPD was granted \$232,000 to reduce the illegal dumping of scrap tires in the city of Detroit by providing for dedicated community police officers and educational materials. The effort to date has realized escalated enforcement within the city of Detroit, with multiple prosecutions, property seizures, and increased community awareness. The application this year is for equipment to further support the 2019 Law Enforcement grant. The DPD requested \$77,760 in the 2020 grant application. The amount was reduced by \$25,000 (the amount requested for the purchase of a panel van). Equipment to be purchased under the Grant includes overhead and license plate capture cameras, audio recording devices, night binoculars, GPS tracking devices, and other electronic surveillance equipment.

- **Packaging Corporation of America, Filer Mill (PCA): \$1,394,576**

PCA is installing a bubbling fluidized bed boiler (BFB), that will burn wood, wood waste, primary clarifier residuals, and paper recycling residuals. Tire derived fuel (TDF) will be supplemented to provide additional fuel heating value. Fuel delivery to the BFB will be done by installing solid fuel storage bins, extension of an existing idle conveyor, and addition of a new transfer screw to transport residuals from the screw presses to the new conveyor belt. A metering bin will be added for the TDF. The BFB is scheduled to be in operation by May of 2020, and once running, it will be capable of burning up to 24 tons per day of scrap tires (8.760 tons per year or 779,640 passenger tire equivalents [PTE]). The BFB has already received an Air Quality Permit (PTI No. 209-18), and PCA has begun installation.

- **Midland County Road Commission (MCRC): \$437,800**

The project is for construction of a "recycled" bridge on Alamondo Road over Little Salt Creek. The project is estimated to utilize 17,192 PTE as tire derived aggregate (TDA): 274 in rubber modified asphalt, and 1,182 in fiber-reinforced rubber concrete blocks. In addition to scrap tires, repurposed concrete beams, composted manure topsoil, straw wattle for erosion control, and crushed concrete for abutment fill and footings will be used. The proposed bridge design is less than half the cost of a conventional bridge at this location. The project will be a partnership with MCRC, Michigan Technological University (MTU), CM Rubber Technologies, and OHM Advisors. There is also potential for use of recycled glass and scrap tires as lightweight bridge decking material, as was demonstrated by a previous grant funded project.

- **Michigan State University: \$130,000**

The project will develop new methods to use scrap tire derived materials for wall and attic thermal insulation in new and existing building applications. The research team will: evaluate the index and thermal properties of scrap tires and mixtures of scrap tire derived materials; evaluate, through bench scale and full scale laboratory testing, the thermal performance and ease of installation in comparison to common insulation materials; conduct life cycle environmental impacts of the use of these materials; and engage with diverse stakeholders in the building industry to assess market interest and acceptance.

- **Porous Pave: \$55,750**

The grant application requests funding to develop a new mobile paving unit (MPU) that will increase productivity and reduce installation costs of Porous Pave materials, which includes scrap tire material, aggregate, and a binder. Porous Pave is typically used for walkways, sidewalks, golf cart paths, tree surrounds, and other suitable applications. Use of the MPU will triple daily capacity, which triple the scrap tire usage. Porous Pave utilized 2,446,700 pounds of Michigan's scrap tire rubber in 2018. Porous Pave also wishes to retain the exclusive rights to the distributorship for future MPU sales in the United States. Training for certified installers regarding proper use of the MPU will also be developed under this grant. Further discussion with the grantee prior to grant agreement execution, regarding their exclusive rights claim, will determine the possibility of grant repayment (if a suitable number of MPU distributors are identified).

- **Environmental Rubber Recycling (ERR): \$33,600**

Grant application for beneficial use of TDA as a lightweight, permeable alternative to traditional aggregate materials. The project will utilize TDA for fill in a 450-foot stretch of ditch/drain in rural Tuscola County. Construction utilizing TDA will lessen the ditch slopes from five feet to a two-foot maximum. Land near the ditch that was previously unusable will become suitable for expanded agricultural use. ERR is a registered producer in Michigan of TDF and TDA. The project will utilize 33,800 PTE. Water quality testing will be performed by EGLE to acquire additional data related to TDA projects.

- **Paving Research/Market Development Study: \$118,000**

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 RFP to curate details and information about historic projects and their performance, or to utilize funds for additional market study analysis and trending data.

Additional projects that the Program has interest in funding and could be considered, if additional funding were appropriated from the Scrap Tire Fund:

- **Holcim US Inc., Alpena Plant: \$3,625,000**

The Grantee requested funding in excess of the total annual grant appropriation of \$3.5 million. The project is for the installation of mid-kiln tire injection system equipment for Kilns 22 and 23 to burn TDF. Use of whole-tire TDF would partially replace thermal energy derived from fossil fuels and would completely consume the tires. The plant would utilize between 2.2 and 3.1 million PTE annually. The applicant states that they will reapply if the project is not funded in 2020. If funding became available, the Program would ask that they also consider a lesser funding amount or multi-year project, as well as utilizing shredded tires in their process, and potentially partnering with local units of government in northern Michigan to provide for ongoing scrap tire collections that would act as a low-cost fuel source.

- **Ingham County Road Commission: \$500,000**

The grant requested funding for the use of de-vulcanized rubber (DVR) in a chip seal program. There is interest from the review committee, including MDOT staff, as the use of chip seal is one of the most popular preventative maintenance techniques, and it would be

utilized on a significant amount of roadway in Ingham County. This project would encompass utilization of DVR single chip seal on 40 to 60 lane miles and DVR double chip seal on two to four total lane miles. The project partner for testing is Michigan State University.

- Dickinson County Road Commission: \$367,331
The project proposes to utilize rubber-based pellet modified asphalt binder (RMA pellet). The RMA pellets will replace 25 percent of the virgin asphalt binder in the asphalt mixture. Interest from the review committee, including MDOT staff, was expressed due to the claim that the RMA pellets may be shipped in conventional trucks and stored in any weather conditions, eliminating the need for specialized heated tanks to ship and store liquid asphalt binder. This would allow more scrap tires to be utilized in paving projects. The project partner is MTU.
- City of Davison: \$216,879
The application proposes to reconstruct approximately 600 feet of city streets with rubber modified concrete, utilizing approximately 25 percent ground tire aggregate. The project also includes a conventional concrete section for comparison purposes and the use of recycled concrete aggregate for base material. There was interest from the review committee (i.e., EGLE and MDOT), since rubber modified concrete is a new technology. The project partners are MTU and Rowe Engineering.

If you have any questions, please contact Mr. Jeff Spencer, Supervisor, SMMU, SWS, MMD, at 517-284-6879; SpencerJ3@Michigan.gov; or you may contact me at 517-284-6551.

Approved:


Amy Epkey, Senior Deputy Director

1/21/20
Date


Aaron B. Keatley, Chief Deputy Director

1-22-20
Date


Liesl Eichler Clark, Director

1/24/2020
Date

Attachments

cc: Elizabeth M. Browne, EGLE
Kathy Tetzlaff, EGLE
Rhonda S. Oyer, EGLE
Jeff Spencer, EGLE
Kirsten Clemens, EGLE

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: Liesl Eichler Clark, Director *YEC*

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

FROM: Jack Schinderle, Director *Amb. Schinderle*
Waste Management and Radiological Protection Division

DATE: February 12, 2019

SUBJECT: Approval of Scrap Tire Market Development Grant Recommendations for
Fiscal Year (FY) 2019

The Waste Management and Radiological Protection Division (WMRPD), Solid Waste Section's (SWS), Sustainable Materials Management Unit (SMMU) has completed the review of the applications received for the FY 2019 Scrap Tire Market Development Grant Program 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.

Thirty one eligible market development and one law enforcement grant applications were received requesting \$8,035,058 in funding. Based on remaining appropriated funds, we are recommending the funding of one law enforcement grant project, five market development grant projects, and a Scrap Tire Market Development Study; these will utilize a total of \$2,516,756 from the Scrap Tire Regulatory Fund for FY 2019. The majority of unfunded projects, which total \$5,518,302, are local road commission or municipal road paving projects.

Grant evaluation was based on the three top priorities of the Market Development Program: 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, and the projects were ranked in order by score. In addition, funding recommendations were made for each project. The spreadsheet for the individual scores, ineligible projects, unfunded projects, and recommended funding amounts is attached.

Continued development of scrap tire commodity markets, other than Tire Derived Fuel (TDF), is essential to the continuing success of the Scrap Tire Regulatory Program. It is anticipated that TDF use will continue to decline. This decline appears to be primarily due to reduced alternative energy costs, the costs of operation of small coal fired or co-generation plants, and federal clean air regulations. This year's grant applicants did not request any funds for TDF. The recommended projects will help to drive development of other market segments.

The recommended projects are:

- Detroit Police Department (DPD) (\$232,000): The city of Detroit covers 142.9 square miles, and the dumping of scrap tires is a significant issue. The grant has three goals: the first goal is to increase DPD's capability to inspect tire shops independently of MDEQ; the second goal is to continue implementation of preventative measures by purchasing and

installing cameras at known dumping locations; the third goal is to prevent future dumping by raising awareness in the tire industry, scrap tire haulers, and the community.

- City of Mackinaw Island (\$61,772): Funds will be used for the development of a closed loop system for collecting, processing, and utilizing waste glass generated on Mackinaw Island as aggregate for use in road repairs, in conjunction with scrap tire rubber material containing GreenDeck Repair Solution (Renewable Infrastructure Solutions, LLC). GreenDeck material containing Michigan scrap tires and glass generated on Mackinaw Island will be utilized as aggregate to repair approximately 900 feet of Market Street and study how well it resists rutting.
- Cobalt Holdings, LLC (\$491,250): Funds will be used for expansion and processing improvements, i.e., replacing a twenty year old shredder, adding a second shredder, installing a new rasper, and upgrading a cracker mill. Processing is estimated to increase monthly by 25 to 35 percent with these improvements.
- Entech, Inc. (\$1,237,561): Funds will be used for installation of two tire shredding systems and auxiliary equipment to process high wire chips. The chips will be processed into wire, tire derived fuel (TDF) chips, and crumb rubber. Wire recovered from this process will be melted and sold as ingots to foundries in Michigan and other midwestern states. The facility estimates annual capacity of 50,000 to 70,000 tons of wire/chip production (50,000 tons would be equivalent to approximately 4.5 million passenger car tires).
- Marquette County Solid Waste Management Authority (MCWMA) (\$202,296): Funds will be used for the installation of two tire shredders. MCWMA is centrally located in the Upper Peninsula and is a licensed solid waste disposal facility. Scrap tires will be processed and utilized as daily cover at the landfill. Additional market opportunities for processed tire material will also be explored.
- Kent County Road Commission (\$241,876): This will fund a project utilizing advanced surface-treated ground tire rubber-modified asphalt to be done in conjunction with Michigan Technological University. The project will be paving Cascade Road from Burton Street to 28th Street (Cascade Township), equating to 0.5 miles with a width of 60 feet. Half of the project will utilize polymer-modified asphalt emulsion to be compared with the half that will utilize emulsified rubber. The project will use more than 3200 scrap tires.
- Scrap Tire Market Development Study (\$50,000): A Request for Proposals will be offered to secure third-party development of a scrap tire market study. The purpose of this study is to help determine where future Market Development Grant funds are best directed to develop scrap tire commodity markets other than TDF, and ensure the continuing success of the Scrap Tire Regulatory Program.

If you have any questions, please contact Mr. Jeff Spencer, Supervisor, SMMU, SWS, WMRPD, at 517-284-6879; spencerj3@michigan.gov; or you may contact me at 517-284-6551.


Approved:



Amy Epkey, Administration Deputy Director

2/13/19

Date



Aaron B. Keatley, Chief Deputy Director

2.14.19

Date



Liesl Eichler Clark, Director

2/21/19

Date

Attachments

cc: Kathy Tetzlaff, DEQ
Rhonda S. Oyer, DEQ
Jeff Spencer, DEQ
Kirsten Clemens, DEQ

Sigma Name	Score	ASK	# Ties	Cost/Tie	Amount	Funding	Notes	Email
4 INELIGIBLE - TRUSTED CARE LLC								
2019 LE APP - CITY - DETROIT	SCORE?	\$45,000,000.00	0	#DIV/0!		NO	INCOMPLETE APPLICATION	McClidink@Outlook.com
2019 MD APP - EQUIPMENT - CITY - MACKINAW ISLAND	28/28	\$285,947.83	NA	NA		\$ 232,000.00	LAW ENF. MATCHING FUNDS \$207,959.14	Krysvyake@detromi.gov
2019 MD APP - EQUIPMENT - COBALT	30/30	\$586,250.00	10,000	\$58.63		\$61,772.00	EQUIPMENT & TIRES	MIDPW@CITYOFMI.ORG
2019 MD APP - EQUIPMENT - ENTECH	30/30	\$1,237,561.00	10,000	\$123.76		\$491,250.00		dallen@cobalttriber.com
2019 MD APP - EQUIPMENT - MCSWMA	30/30	\$202,296.50	10,000	\$20.23		\$1,237,561.00		mattoyer@4entech.com
2019 MD APP - ROAD - CITY - BAY CITY	12/9	\$200,000.00	1,500	\$133.33		\$202,296.50		landfillwarrior@gmail.com
2019 MD APP - ROAD - CITY - BURTON	14/10	\$500,000.00	9,400	\$53.19				trhills@baycitymi.org
2019 MD APP - ROAD - CITY - CARO	12/10	\$230,000.00	3,400	\$67.65				r.statterly@burtonmi.gov
2019 MD APP - ROAD - CITY - CLIO	13/10	\$357,622.00	2,350	\$152.18				msilverman@caroity.net
2019 MD APP - ROAD - CITY - DAVISON	13/9	\$75,280.00	565	\$133.24				352hrcader@cityofdavison.org
2019 MD APP - ROAD - CITY - FLUSHING	12/9	\$205,815.75	1,454	\$141.55				bharrett@flushingcity.com
2019 MD APP - ROAD - CITY - GLADSTONE	14/11	\$108,460.00	1,735	\$62.51				dliong@gladstoneml.org
2019 MD APP - ROAD - CITY - LAPEER	10/9	\$204,750.00	1,900	\$107.76				preid@cl.lapeer.mi.us
2019 MD APP - ROAD - CITY - MUNISING	16/9	\$128,256.00	1,320	\$97.16				cckmanajer@cityofmunising.org
2019 MD APP - ROAD - CITY - MUSKEGON	15/12	\$228,949.00	2,475	\$92.50				leo.evans@shoelinecity.com
2019 MD APP - ROAD - CITY - ST CLAIR	13/9	\$69,620.00	826	\$84.29				mbooth@cityofstclair.com
2019 MD APP - ROAD - CITY - SMARTZ CREEK	10/7	\$203,997.00	925	\$220.54			sigma only	azetzel@cityofsmartzcreek.org
2019 MD APP - ROAD - CITY - VASSAR	10/8	\$50,675.00	495	\$102.37				cllymanajer@cityofvassar.org
2019 MD APP - ROAD - CITY - YALE	12/10	\$244,381.00	1,914	\$127.68				igoshorn@yalemi.us
2019 MD APP - ROAD - CRC - DICKINSON	13/12	\$347,331.00	5,406	\$64.25				lancos@clarkinsorc.com
2019 MD APP - ROAD - CRC - INGHAM	17/16/14	\$500,000.00	4,000	\$125.00		\$ 241,876.50	TEAM WITH MSU	wconklin@ingham.org
2019 MD APP - ROAD - CRC - KENT	13/11	\$247,371.00	3,286	\$75.28			TEAM WITH MTU	wintrall@kentcountyrads.net
2019 MD APP - ROAD - CRC - LAPEER - Bronson Lake	14/11	\$101,964.00	1,992	\$51.19				ddingell@lcconline.com
2019 MD APP - ROAD - CRC - LAPEER - Myers	14/11	\$177,503.00	2,058	\$86.25				ddingell@lcconline.com
2019 MD APP - ROAD - CRC - LAPEER - Oregon	14/12	\$408,123.00	7,004	\$58.27				ddingell@lcconline.com
2019 MD APP - ROAD - CRC - LAPEER - Tuspring	14/12	\$314,129.00	6,107	\$51.44				ddingell@lcconline.com
2019 MD APP - ROAD - CRC - ST CLAIR	11/11	\$97,468.00	742	\$131.36			TEAM WITH MTU	whazell@stclaircounty.org
2019 MD APP - ROAD - MSU	28/28	\$49,497.66	0	#DIV/0!				edproposals@osp.msu.edu
2019 MD APP - ROAD - MTU	28/12	\$241,264.00	1,408	\$171.35			TEAM WITH MUSKEGON CRC	carwillian@mtu.edu
2019 MD APP - ROAD - VILLAGE - BIRCH RUN	11/8	\$74,725.00	864	\$86.49				pmoore@villageofbirchrun.com
2019 MD APP - ROAD - VILLAGE - MILLINGTON	9/7	\$96,500.00	5,106	\$18.90				yom.dow@millingtonvillage.org
2019 MD APP - ROAD - VILLAGE - ORTONVILLE	13/9	\$147,550.00	1,810	\$81.52				villagepresident@ortonvillevillage.com
MARKET STUDY		\$50,000.00	0	#DIV/0!	\$ 50,000.00	\$ 50,000.00	Market Study	
Available Funding Amount - APPROXIMATELY \$2.5 MILLION		\$53,035,058.74						
FY19 ASK		45,000,000.00	INCOMPLETE APPLICATION		\$ 2,516,756.00			
FY19 ASK		\$9,035,058.74						
FY19 AVAIL		\$3,500,000.00	FY19 AVAILABLE FUNDING					
UNFUNDED		\$2,516,756.00	FUNDED FY19 CLEAN-UP GRANTS					
		\$0.00	AVAILABLE FUNDING FOR LEMD GRANTS					
		\$5,518,302.74	REMAINING FUNDS					
			UNIVERSITY					
			500,000.00 MSU / INGHAM CRC WERE FUNDED IN FY18					
			247,371.00 MTU / KENT CRC					
			97,468.00 MTU / ST CLAIR CRC					
			49,497.66 MSU					
			241,264.00 MTU / MUSKEGON CRC					
			1,135,600.66					



Michigan Department of Environmental Quality News Release

For Immediate Release: February 11, 2019

For More Information:

Kirsten Clemens, Scrap Tire Program Coordinator, clemensk@michigan.gov, 517-284-6580
DEQ Media Office, deq-assist@michigan.gov, 517-284-9278

MDEQ awards \$2,516,756 million for scrap tire market development and law enforcement

The Michigan Department of Environmental Quality (MDEQ) announced today the funding of more than \$2.5 million in grants to develop new uses for used vehicle tires and to support increased law enforcement activities within the City of Detroit.

When illegal dumping in the environment occurs, scrap tires pose both a fire hazard and a human health risk as a mosquito breeding ground. These grants help reduce or eliminate instances of illegal dumping, support proper collection and handling, and begin to define scrap tires as a commodity, rather than a waste material.

These scrap tire grants support building sustainable markets for recycled tire materials in Michigan. Grants have traditionally included support for essential equipment and materials that aid in the establishment of new markets, including various manufacturing processes, implementation and testing of paving materials, energy generation, and other innovative approaches.

These grants contribute to a more sustainable business model for the scrap tire industry through increased market opportunities for scrap tire processors, end users, and manufacturers. The 2019 funding will be used to support the following projects:

- Detroit Police Department (DPD) (\$232,000): The city of Detroit covers 142.9 square miles, and the dumping of scrap tires is a significant issue. The grant has three goals: the first goal is to increase DPD's capability to inspect tire shops independently of MDEQ; the second goal is to continue implementation of preventative measures by purchasing and installing cameras at known dumping locations; the third goal is to prevent future dumping by raising awareness in the tire industry, scrap tire haulers and the community.

- City of Mackinaw Island (\$61,772): Funds will be used for the development of a closed loop system for collecting, processing and utilizing waste glass generated on Mackinaw Island as aggregate for use in road repairs, in conjunction with scrap tire rubber material containing GreenDeck Repair Solution (Renewable Infrastructure Solutions, LLC). GreenDeck material containing Michigan scrap tires and glass generated on Mackinaw Island will be utilized as aggregate to repair approximately 900 feet of Market Street and study how well it resists rutting.
- Cobalt Holdings, LLC (\$491,250): Funds will be used for expansion and processing improvements, i.e., replacing a twenty year old shredder, adding a second shredder, installing a new rasper and upgrading a cracker mill. Processing is estimated to increase monthly by 25 to 35 percent with these improvements.
- Entech, Inc. (\$1,237,561): Funds will be used for installation of two tire shredding systems and auxiliary equipment to process high wire chips. The chips will be processed into wire, tire derived fuel (TDF) chips and crumb rubber. Wire recovered from this process will be melted and sold as ingots to foundries in Michigan and other midwestern states. The facility estimates annual capacity of 50,000 to 70,000 tons of wire/chip production (50,000 tons would be equivalent to approximately 4.5 million passenger car tires).
- Marquette County Solid Waste Management Authority (MCWMA) (\$202,296): Funds will be used for the installation of two tire shredders. MCWMA is centrally located in the Upper Peninsula and is a licensed solid waste disposal facility. Scrap tires will be processed and utilized as daily cover at the landfill. Additional market opportunities for processed tire material will also be explored.
- Kent County Road Commission (\$241,876): This will fund a project utilizing advanced surface-treated ground tire rubber-modified asphalt to be done in conjunction with Michigan Technological University. The project will be paving Cascade Road from Burton Street to 28th Street (Cascade Township), equating to 0.5 miles with a width of 60 feet. Half of the project will utilize polymer-modified asphalt emulsion to be compared with the half that will utilize emulsified rubber. The project will use more than 3200 scrap tires.
- Scrap Tire Market Development Study (\$50,000): A Request for Proposals will be offered to secure third-party development of a scrap tire market study. The purpose of this study is to help determine where future Market Development Grant funds are best directed to develop scrap tire commodity markets other than TDF, and ensure the continuing success of the Scrap Tire Regulatory Program.

For more information about Michigan's Scrap Tire Program, visit www.michigan.gov/scraptires.

2019 SCRAP TIRE MARKET DEVELOPMENT AND LAW ENFORCEMENT GRANT TALKING POINTS

- **There were 31 eligible market development and one law enforcement grant applications received by Waste Management and Radiological Protection Division (WMRPD), Solid Waste Section, Sustainable Materials Management Unit.**
- **Applicants requested a total of more than \$8 million to fund equipment, law enforcement, paving, or research and development projects.**
- **The grant review committee within the WMRPD recommends funding the law enforcement grant project for city of Detroit Police Department for \$232,000.00.**
- **Additionally, four grant projects will support purchase of new equipment for scrap tire processing in Michigan. These projects total \$1,992,879.50.**

- One paving project will be funded for Kent County Road Commission working with Michigan Technological University for \$241,876.50 (the ask was for \$247,371.00). This project will pave 0.5 miles of Cascade Road (a heavily trafficked road) using polymer-modified asphalt emulsion on half and emulsified rubber on half for comparison purposes.
- The FY 2019 Scrap Tire Cleanup Grant Program is administrated under Part 169, Scrap Tires, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.
- A total of \$3.5 million has been appropriated for FY 2019 from the Scrap Tire Regulatory Fund for the Scrap Tire Cleanup and Scrap Tire Market Development Grant Programs.
- The scrap tire cleanup grants are given priority and are awarded before the market development grants.

- **All regions of the state of Michigan were represented by grantees.**

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

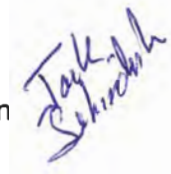
TO: C. Heidi Grether, Director

THROUGH: Amy Epkey, Administration Deputy Director
Michael McClellan, Environment Deputy Director

FROM: Jack Schinderle, Director
Waste Management and Radiological Protection Division

DATE: March 14, 2018

SUBJECT: Approval of Scrap Tire Market Development Grant Recommendations for Fiscal Year (FY) 2018



The Waste Management and Radiological Protection Division (WMRPD), Solid Waste Section's (SWS) Sustainable Materials Management Unit (SMMU) has completed the review of the applications received for the FY 2018 Scrap Tire Market Development Grant Program 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.

Twenty grant applications were received requesting \$3,989,598 in funding. Based on remaining appropriated funds, we are recommending the funding of 10 grant projects and a Scrap Tire Market Development Study; these will utilize a total of \$2,201,688 from the Scrap Tire Regulatory Fund for FY 2018.

Grant evaluation was based on the three top priorities of the Market Development Program: 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, and the projects ranked in order by score. In addition, funding recommendations were made for each project. The spreadsheet for the individual scores and recommended funding amounts is attached.

Continued development of scrap tire commodity markets, other than Tire Derived Fuel (TDF), is essential to the continuing success of the Scrap Tire Regulatory Program. It is anticipated that TDF use will continue to decline. This decline appears to be primarily due to reduced alternative energy costs, the costs of operation of small coal fired or co-generation plants, and federal clean air regulations. This year's grant applicants did not request any funds for TDF. The recommended projects will help to drive development of other market segments.

The recommended projects are:

- Ingham County Road Commission (\$500,000): The project is in cooperation with Michigan State University, consisting of the application and study of Polymer Coated Rubber (PCR) Modified Asphalt, and field evaluation of "dry" PCR technology and laboratory evaluation of "wet" PCR technology. It will pave Haslett Road (1.35 miles), Kalamazoo Street (0.5 miles), and Grand River Avenue (1.18 miles). The project is estimated to use 8,100 scrap tires.

- Dickinson County Road Commission (\$325,000): The project is in cooperation with Michigan Technological University. It uses rubberized asphalt to maintain highly trafficked roads. The project will pave County Road 607 with ground tire rubber (GTR) asphalt, recycled asphalt pavement (RAP), and recycled shingles; this will be a performance evaluation of GTR in a cold climate. The project is estimated to use 3,210 scrap tires.
- City of Lansing (\$283,550): The project is for a terminal blend asphalt mix design incorporating GTR for paving improvements on East Mount Hope Road (Aurelius Road to Fidelity Road). This pilot project will be compared to a traditional hot mix asphalt (HMA) paving project on Aurelius Road (Fidelity Road to the city limits) which will be completed the following year. The project is estimated to use 2,691 scrap tires.
- Kalamazoo County Road Commission (\$221,964): This project is in cooperation with Michigan Technological University and will use new rubber technology to construct a high traffic volume road in Kalamazoo (West Avenue from the Schoolcraft village limits to Portage Road). The project will use hot rubber chip seal (HRCS) and hot rubber thin overlay (HRT0). The project is estimated to use 13,672 scrap tires.
- City of Clio (\$193,751): The project will use rubber-modified asphalt (RMA) for paving improvements of Rogers Lodge Drive, Campbell Street, and Curry Street. The project is estimated to use 2,297 scrap tires.
- Saginaw County Road Commission (SCRC) (\$180,000): The project will utilize RMA to pave Meridian Road (Jonesville and Lakefield Townships in Saginaw County; and Wheeler and Lafayette Townships in Gratiot County). The project is estimated to use 4,800 scrap tires.
- City of St. Clair (\$141,279): The project will utilize rubber-modified HMA for paving improvements on Third Street. The project is estimated to use 1,116 scrap tires.
- Village of Frankenmuth (\$122,495): The project will utilize rubber-modified HMA for paving improvements on Craemer Court and Craemer Drive. The project is estimated to use 1,525 scrap tires.
- Village of Birch Run Local Streets (\$77,900): The project will utilize rubber-modified HMA for paving improvements on Silver Creek Drive, Elmhurst Court, and Fairlane Drive. The project is estimated to use 1,199 scrap tires.
- City of Vassar (\$54,400): The project will utilize rubber modified HMA for Main Street (M-15 to Oak Street). The project will provide comparison to traditional HMA projects. The project is estimated to use 640 scrap tires.
- Scrap Tire Market Development Study (\$50,000): A Request for Proposals will be offered to secure third-party development of a scrap tire market study. The purpose of this study is to help determine where future Market Development Grant funds are best directed to develop scrap tire commodity markets other than TDF and ensure the continuing success of the Scrap Tire Regulatory Program.

March 14, 2018

The following administratively complete applications are not being recommended for funding:

- Michigan Technological University: Three applications (\$485,373, \$249,944, and \$249,944). The grant committee is recommending that only one grant be awarded per entity, unless the multiple applications are significantly different and promote markets for scrap tire usage in significantly different ways.
- SCRC, Bueche Road (\$56,250): The grant committee is recommending that only one grant be awarded per entity unless multiple applications are significantly different and promote markets for scrap tire usage in significantly different ways. SCRC listed this project as "second priority."
- Village of Almont (\$349,800) : A low scoring project.
- Village of Ortonville (\$67,800): A low scoring project.
- Remold (\$7,500): Tire Derived Aggregate (TDA) for drainage project. TDA usage is not approved by Washtenaw County.
- Village of Birch Run Major Streets (\$62,350): The grant committee is recommending that only one grant be awarded per entity, unless the applications are significantly different and promote markets for scrap tire usage in significantly different ways. This project scored lower than the awarded Village of Birch Run project.
- City of Davison (\$65,189): A low scoring project.
- City of Caro (\$245,100): A low scoring project.

If you have any questions, please contact Mr. Jeff Spencer, Supervisor, SMMU, WMRPD, at 517-284-6879; spencerj3@michigan.gov; or you may contact me at 517-284-6551.

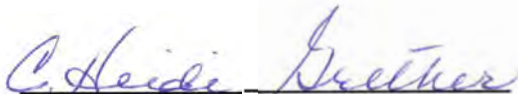
Approved:


Amy Epkey, Administration Deputy Director

3/14/18
Date


Michael McClellan, Environment Deputy Director

3/27/18
Date


C. Heidi Grethner, Director

3/27/18
Date

Attachments

cc: Kathy Tetzlaff, RMD
Rhonda S. Oyer, WMRPD
Jeff Spencer, WMRPD
Kirsten Clemens, WMRPD



Michigan Department of Environmental Quality News Release

For Immediate Release: March 14, 2018

For More Information:

Kirsten Clemens, Scrap Tire Program Coordinator, clemensk@michigan.gov, 517-284-6580

Tiffany Brown, MDEQ Public Information Officer, brownt22@michigan.gov, 517-242-1376

DEQ awards \$2.1 million for scrap tire market development

The Michigan Department of Environmental Quality (MDEQ) announced today the funding of more than \$2.1 million in grants to help develop new uses for used vehicle tires.

When illegal dumping in the environment occurs, scrap tires pose both a fire hazard and a human health risk as a mosquito breeding ground. These grants help reduce or eliminate instances of illegal dumping, support proper collection and handling, and begin to define scrap tires as a commodity, rather than a waste material.

These scrap tire grants are employed as direct support to building sustainable markets for recycled tire materials in Michigan. Grants have traditionally included support for essential equipment and materials that aid in the establishment of new markets, including various manufacturing processes, implementation and testing of paving materials, energy generation, and other innovative approaches.

These grants continue to provide direct support to increase Michigan's recycling rate.

2018 funding will be used to support the following projects:

- Ingham County Road Commission, in cooperation with Michigan State University (\$500,000): The project consists of the application and study of Polymer Coated Rubber (PCR) Modified Asphalt, and field evaluation of "dry" PCR technology and laboratory evaluation of "wet" PCR technology. It will pave Haslett Road (1.35 miles), Kalamazoo Street (0.5 miles), and Grand River Avenue (1.18 miles). The project is estimated to use 8,100 scrap tires.
- Dickinson County Road Commission, in cooperation with Michigan Technological University (\$325,000): The project uses rubberized asphalt to maintain highly trafficked

roads. The project will pave County Road 607 with ground tire rubber (GTR) asphalt, recycled asphalt pavement (RAP), and recycled shingles; this will be a performance evaluation of GTR in a cold climate. The project is estimated to use 3,210 scrap tires.

- City of Lansing (\$283,550): The project is for a terminal blend asphalt mix design incorporating GTR for paving improvements on East Mount Hope Road (Aurelius Road to Fidelity Road). This pilot project will be compared to a traditional hot mix asphalt (HMA) paving project on Aurelius Road (Fidelity Road to the city limits) which will be completed the following year. The project is estimated to use 2,691 scrap tires.
- Kalamazoo County Road Commission, in cooperation with Michigan Technological University (\$221,964): This project will use new rubber technology to construct a high traffic volume road in Kalamazoo (West Avenue from the Schoolcraft village limits to Portage Road). The project will use hot rubber chip seal (HRCS) and hot rubber thin overlay (HRT0). The project is estimated to use 13,672 scrap tires.
- City of Clio (\$193,751): The project will use rubber-modified asphalt (RMA) for paving improvements of Rogers Lodge Drive, Campbell Street, and Curry Street. The project is estimated to use 2,297 scrap tires.
- Saginaw County Road Commission (SCRC) (\$180,000): The project will utilize RMA to pave Meridian Road (Jonesville and Lakefield Townships in Saginaw County; and Wheeler and Lafayette Townships in Gratiot County). The project is estimated to use 4,800 scrap tires.
- City of St. Clair (\$141,279): The project will utilize rubber-modified HMA for paving improvements on Third Street. The project is estimated to use 1,116 scrap tires.
- Village of Frankenmuth (\$122,495): The project will utilize rubber-modified HMA for paving improvements on Craemer Court and Craemer Drive. The project is estimated to use 1,525 scrap tires.
- Village of Birch Run Local Streets (\$77,900): The project will utilize rubber-modified HMA for paving improvements on Silver Creek Drive, Elmhurst Court, and Fairlane Drive. The project is estimated to use 1,199 scrap tires.
- City of Vassar (\$54,400): The project will utilize rubber modified HMA for Main Street (M-15 to Oak Street). The project will provide comparison to traditional HMA projects. The project is estimated to use 640 scrap tires.

For more information about Michigan's Scrap Tire Program, visit www.michigan.gov/scraptires.

The DEQ is dedicated to respect for Michigan's citizens, stewardship of the environment, and support for a sustainable economy.