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Fall 2019/Winter 2020

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PROJECT HIGHLIGHTS

Traffic Safety Culture Pooled Fund

<https://www.pooledfund.org/Details/Study/558>

In 2014, the Montana Department of Transportation initiated the Traffic Safety Culture Pooled Fund (TSC-TPF). This first Phase ran from federal fiscal year (FFY) 2015 through federal fiscal year 2019. Fourteen state DOTs (CA, CT, IA, ID, IL, IN, LA, MT, NH, NV, TX, UT, VT, and WA) contributed \$1,194,000 over this five-year period. This pooled fund resulted in 10 projects, as well as a management support contract. The following projects were funded:

- [Driving After Cannabis Use](#) (complete)
- [Exploring Traffic Safety Citizenship](#) (complete)
- [Guidance for Evaluating Traffic Safety Culture Strategies](#) (active)
- [Guidance on Messaging to Avoid Reactance and Address Moral Disengagement](#) (active)
- [Guidance to Promote Workplace Policies and Family Rules to Reduce Cell Phone Use While Driving and Promote Engaged Driving](#) (active)
- [Key Information for DUIC Policy](#) (complete)
- [Proactive Traffic Safety: Empowering Behaviors to Reach our Shared Vision of Zero Deaths and Serious Injuries](#) (complete)
- [Traffic Safety Culture Primer](#) (complete)
- [Traffic Safety Cultures and the Safe Systems Approach](#) (complete)
- [Understanding Law Enforcement Attitudes and Beliefs about Traffic Safety](#) (complete)



A follow-on Traffic Safety Culture: Phase 2 pooled fund was recently initiated to run FFY 2020-FFY 2024. Currently, 15 states are committed to providing \$1,340,000 over the five-year period. However, we are still accepting contributions. Projects for this second phase are yet to be determined.

For more information, please visit the project website or contact Susan Sillick (ssillick@mt.gov, 406.444.7693).



Traffic Safety Culture Primer

<https://www.mdt.mt.gov/research/projects/trafficsafety-primer.shtml>

There is growing interest in “traffic safety culture” (TSC) as a key factor to manage and sustain safe roadway transportation systems, especially as more jurisdictions adopt targets of zero traffic fatalities and serious injuries.



However, the theory, terminology, and methods involved in addressing TSC come from human and social science disciplines that are not typically included in traditional traffic safety, engineering, or other behavioral change agencies (e.g., departments of transportation, driver’s licensing, motor vehicle records, etc.).

The lack of shared language and understanding about TSC limits the ability of agencies to explore this topic and engage new stakeholders. Additionally, the variation in the interpretation and implementation of TSC strategies has resulted in no consensus about best practices. Communication tools that develop shared language and understanding about traffic safety culture and its relationship to vision zero goals are needed.

Through this project, which was conducted through the Traffic Safety Culture Pooled Fund (TPF-5(309)), the following products were developed: traffic safety culture primer, PowerPoint presentation, traffic safety culture primer video for traffic safety professionals, poster, final report, and a webinar.

For more information, please visit the project website or contact Susan Sillick (ssillick@mt.gov, 406.444.7693).

Proactive Traffic Safety: Empowering Behaviors to Reach our Shared Vision of Zero Deaths and Serious Injuries

<https://www.mdt.mt.gov/research/projects/trafficsafety-cc-tools.shtml>



Growing proactive traffic safety is a novel approach that strategically shifts our focus to the engagement of the larger majority of safe road users to influence the behaviors of the smaller group engaging in risky behaviors. Previous research sponsored by the Traffic Safety Culture Pooled Fund to understand traffic safety citizenship revealed a variety of opportunities to bolster proactive traffic safety to reduce traffic crashes and fatalities. However, in order for state highway safety agencies and stakeholders to embrace this strategic approach, information learned from research must be translated to practice.

Through this project, which was conducted through the Traffic Safety Culture Pooled Fund (TPF-5(309)), the following proactive traffic safety communication tools that can be used to communicate and integrate proactive traffic safety into existing traffic safety efforts were developed: proactive traffic safety primer, PowerPoint presentation, conversation guide, poster, final report, and a webinar.

For more information, please visit the project website or contact Susan Sillick (ssillick@mt.gov, 406.444.7693).



2020 Federal Fiscal Year Research Projects and 2021 Federal Fiscal Year Solicitation Submit Your Research Ideas

<https://www.mdt.mt.gov/research/unique/solicit.shtml>



MDT is currently soliciting for research ideas. As described below, a [Stage 1: Research Idea form](#) is due by March 31, 2020. You can subscribe to the [MDT Research Solicitation listserv](#) (see the second to last listserv form) to receive notice of our annual solicitation for research ideas.

The Montana Department of Transportation solicits research ideas annually. The solicitation process begins with the submittal of the [Stage 1: Research Idea form](#), which is due by March 31st of each year. This form requires four basic fields (title, idea description, and submitter and champion information). While the champion field is required, a champion does not have to be identified prior to submitting this form. However, it is best if non-MDT staff reach out to their peers within the Department to identify issues and then to determine if any of these issues can be solved through research. This automatically creates a champion, who can be anyone from MDT. If a champion is not identified on this form, Research staff will attempt to identify a champion. If MDT staff submit this form, they are automatically the champion. If a champion is identified, a literature search is conducted on the topic and, based on the literature search results, the champion determines if the idea will progress to Stage 2. Ideas without champions do not move forward.

The [Stage 2: Research Topic Statement form](#) is due April 30th of each year. This form requires more detailed information, including: title; topic statement; related research summary; research proposed; research period; IT component; feasibility, probability of success, and risk; urgency, importance, and expected benefits/pay-off; implementability, implementation plan, and responsibility; MDT priority focus areas; cost estimate; funding source; funding partners; potential technical panel members; and submitter, champion, and sponsor information. All

fields are required. While the sponsor field is required, a sponsor does not need to be identified prior to submitting this form. For forms submitted without a sponsor, Research staff will attempt to identify a sponsor. However, if a sponsor is not identified, the project does not move forward. Only the highest levels of MDT staff can be sponsors: Director, Deputy Director, Chief Operations Officer, Division Administrators, and District Administrators.

For all research ideas with a champion and a sponsor, the champions present to MDT's high-level Research Review Committee (RRC) and the District Administrators in May, who, based on the presentation and available funding, determine which projects will move forward to the Technical Panel stage (June-August). It is critical to fine-tune the cost prior to submitting the Stage 2 form. Projects are moved forward to technical panels based on project ranking and available funds. If a proposal comes in higher than the Stage 2 cost, it could be delayed until the next funding cycle.

For FFY 2020, the following projects were moved forward to the Technical Panel stage:

- [Analyze Business Models for Implementation and Operation of a Statewide GNSS RTN](#)
- [Development of Deterioration Curves for Bridge Elements in Montana](#)
- [Economic Benefits of Improving Montana's Transportation Infrastructure \(EBIMTTI\)](#)
- [A Feasibility Study of Road Culvert Bridge Deck Deicing Using Geothermal Energy](#)
- [Icy Road Forecast and Alert \(IcyRoad\): Validation and Refinement Using MDT RWIS Data](#)

For more information, please visit the [MDT Research Solicitation web page](#) or contact Susan Sillick (ssillick@mt.gov, 406.444.7693).



LIBRARY CORNER

Free to Read? - A Poster Session

<http://www.mdt.mt.gov/research/unique/services.shtml>

Moving Forward and Advancing Society with Transportation Libraries, Information and Data was the heading of poster session 1486 at the TRB 99th Annual Meeting.

For this session the Montana Department of Transportation Library teamed up with the National Transportation Library to create and present a poster titled, Free to Read or Paywall Prisoner: Accessing Digital Transportation Journals. According to the research behind the poster, “90% of the journals we surveyed and rated as “Transportation Only” are at least partially available to researchers free of charge”.

At first glance that sounds fantastic, but it gets tricky when cross-disciplinary journals come into the picture. By cross-disciplinary journals we mean those that are not limited to just transportation. It could be anything from a medical journal to something targeting technology in engineering. Papers on these sorts of topics are not technically in transportation journals, but they often include very important transportation topics, such as information about crashes or advancements in technology.

A fair-sized portion of those ranked as cross-disciplinary journals with some transportation content are only accessible at a cost. This creates barriers to ongoing transportation research and practice.

While anyone can look up an article in an index or a search engine, for many, that is where the trail ends. The title and an abstract might be available, but it comes with a paywall noting the cost associated with reading the true content of the article. Just because a search engine helps locate an article it does NOT mean searchers will have access to it when they find it.

This poster goes on to discuss how much is spent on journal access and how librarians can break down barriers to help researchers access materials. Despite many publishers moving to open access platforms there are still plenty of journals that have not. The poster points out how much is being paid out by different kinds of libraries to create nearly invisible access for their researchers and patrons. Libraries are often so good at making it look seamless that researchers and patrons can be surprised to learn how

**According to the Bethesda statement in 2003, to be considered “Open Access”
a publication must meet the following conditions:**

1. The author(s) and copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship, as well as the right to make small numbers of printed copies for their personal use.
2. A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in a suitable standard electronic format is deposited immediately upon initial publication in at least one online repository that is supported by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving.



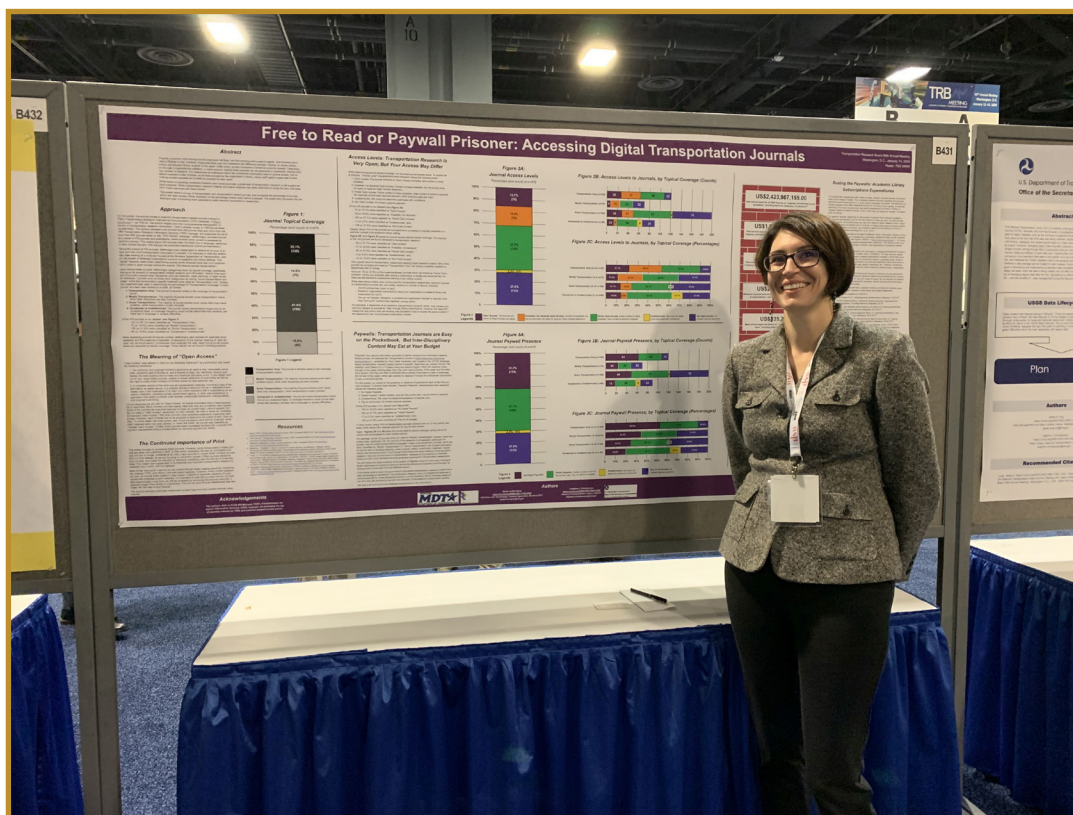
Libraries and librarians can also help with discoverability. This means discovering the right material for the right person at the right time. Discoverability aids researchers in finding materials they never realized existed.

Along this same line, the poster points out the myriad of print resources that could not be included in the research because they were never made available in an electronic form. The good news is just because they could not be included in this research does not mean they are inaccessible when someone needs them. Thanks to interlibrary loan services your librarian can usually request these materials from the holding library.

References:

Bethesda Statement on Open Access Publishing. 2020. Accessed 2020-01-03, from <http://legacy.earlham.edu/~peters/fos/bethesda.htm>

DeMontigny, Bobbi <https://orcid.org/0000-0001-7140-0982>; and, Leighton L Christiansen <http://orcid.org/0000-0002-0543-4268>. 2020. Free to Read or Paywall Prisoner: Accessing Digital Transportation Journal Articles. United States. Department of Transportation. Bureau of Transportation Statistics. National Transportation Library. <https://doi.org/10.21949/1506101>



For more information, please view the full poster at <https://doi.org/10.21949/1506101> or contact Bobbi deMontigny (bdemontigny@mt.gov, 406.444.0871).



DID YOU KNOW?

The Annual Meeting of the Transportation Research Board (TRB): More than transportation research

Just under 14,000 people from around the world participated in more than 5,000 presentations in nearly 800 sessions and workshops at the TRB Annual Meeting 2020. Wide-ranging coverage was revealed in lectern sessions, workshops, poster sessions, and committee meetings.

Are you in Planning? Thanks to this year's futuristic focus on resilience and sustainability there were 357 sessions for you to choose from. Of these 184 were specific to traffic management.

Do you deal with bicycles and pedestrians? A substantial 94 sessions focused on pedestrians while 37 targeted bicycle use. Many of these sessions discussed both modes of transportation.

Transit devotees enjoyed 205 sessions. Of these 83 discussed automated and connected vehicles.

Environmental issues were well represented. To be exact there were 111 sessions. Air quality issues made up 19 of them.

It seems you couldn't walk two steps without running into a presentation about safety! There were 334 sessions that were in part dedicated to safety, and 185 sessions made safety its total focus. Safety culture and behavior was the spotlight of an interactive hybrid session called, "What Is Novel and Innovative in Novice and Experienced Driver Behavior Research". Presenters on this topic shared knowledge in a lightning talk format followed by a Q and A session in which the audience had an opportunity to talk one on one with the presenters.

Materials (99), Pavements (150), maintenance (95), and construction (70) were nothing to sniff at with

a combined 414 sessions among them. That doesn't even count the 66 sessions specific to geotechnology and 22 sessions all about equipment.

Road design came in at 124 sessions while sessions specific to bridges had 109. Hydraulics even had 10 sessions all their own.

Administrators and asset managers heard fascinating insights in 57 sessions targeting administration, and 111 with an emphasis on policy.

There is such a focus on technology when looking toward the future that it almost goes without saying that big data was, as always, a big deal. Those in Data Governance, security, and knowledge management didn't get much down time with 152 sessions on data and information technology.

If you attended the meeting you will be happy to know these sessions count towards Professional Development hours (and Certification Maintenance for those APA and AICP planners out there).

To see some of the presentations, you can log into the [interactive program](#), then search for the session in which you are interested. If approved for posting by the speaker, the presentations, papers and posters associated with each session are listed towards the bottom of the page. Click the 'View Presentation' button to view. (If there is no paper, poster or presentation listed, it means either none was given, or the author did not give TRB permission to post it).

For more information, please contact Bobbi deMontigny (bdemontigny@mt.gov, 406.444.0871).



2019 Annual Report for the Montana Department of Transportation Research Programs

https://www.mdt.mt.gov/research/annual_report.shtml

Our 2019 Annual Report gives an overall description of research, development, and technology transfer activities for the federal fiscal year within the Research Programs of the Montana Department of Transportation (MDT).

Responsibilities of the MDT Research Programs include:

- Administer the Research portion of the State Planning and Research Program (SPR);
- Lead and participate in cooperative research efforts with other states, universities, industry, and other partners through pooled fund and other cooperative research, development, and technology transfer efforts;
- Assist MDT staff in identifying and finding ways to meet research needs;

- Provide leadership for research, development, technology, and technology transfer initiatives within MDT;
- Conduct the Research and Experimental Projects Programs, and the Technology Transfer Program;
- Assist with the implementation of research results; and
- Conduct project and program evaluation.

Through these activities the Research Programs enhances MDT's ability to deliver a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.

For more information, please visit [Annual Reports on our Research website](#) or contact Susan Sillick (ssillick@mt.gov, 406.444.7693).

CALENDAR OF EVENTS

February

NCHRP Synthesis Topics Due - 2/17
BTSCRP Problem Statements Due - 2/21

March

ACRP Problem Statements Due - 3/1
NCHRP IDEA Proposals Due - 3/1
TCRP Synthesis Topics Due - 3/18
ACRP Panel Nominations Due - 3/27
MDT RRC Meeting - 3/27
Submission of High Value Research Due - 3/31

April

MDT RRC Meeting - 4/29

May

Transit Idea Proposals Due - 5/1

June

MDT RRC Meeting - 6/1
TCRP Problem Statements Due - 6/19
NCHRP Panel Nominations Due - 6/30
TCRP Synthesis Panel Nominations - 6/30
MDT RRC Meeting - 6/24

July

BTSCRP Panel Nominations Due - 7/24
MDT RRC Meeting - 7/29



For additional information, please see: <http://rppm.transportation.org/Lists/Calendar/calendar.aspx>.



NEW RESEARCH PROJECTS

[Analyze Business Models for Implementation and Operation of a Statewide GNSS RTN](#)

[Economic Benefits of Improving Montana's Transportation Infrastructure \(EBIMTTI\)](#)

[A Feasibility Study of Road Culvert Bridge Deck Deicing Using Geothermal Energy](#)

[Icy Road Forecast and Alert \(IcyRoad\): Validation and Refinement Using MDT RWIS Data](#)

[Development of Deterioration Curves for Bridge Elements in Montana](#)

NEW RESEARCH REPORTS

[Proactive Traffic Safety: Empowering Behaviors to Reach our Shared Vision of Zero Deaths and Serious Injuries](#)

[Traffic Safety Culture Primer](#)

A listing of all past and current research projects can be found at

http://www.mdt.mt.gov/research/projects/sub_listing.shtml

NEW EXPERIMENTAL PROJECTS

[Barrier Reflector Durability Study](#)

NEW EXPERIMENTAL REPORTS

[Kwik Bond PPC 1121 Polyester Polymer Concrete \(PPC\) Overlay](#)

A listing of all past and current experimental projects can be found at

http://www.mdt.mt.gov/research/projects/exp_sub_listing.shtml



SOLUTIONS

Fall 2019 / Winter 2020

MONTANA DEPARTMENT OF TRANSPORTATION
RESEARCH PROGRAMS

REMINDER

Information on research services and products, such as research and experimental project processes and reports and technology transfer services, can be found on the Research web site at www.mdt.mt.gov/research.

MDT's library collection can be searched through the [library catalog](#). The catalog and other information resources are available through the [MDT Library web site](#).

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