National State of Practice on Local Road Asset Management

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Agenda

• Goals
• Methods
• Summary of Findings
  • Statewide Champions
  • Peer States
  • Lessons Learned
  • Individual Scoring Measures
Goal of the Study

- Determine national state of practice
- Incentives and directives for adoption
- Find best practices and lessons learned
- Identify Michigan peers
- What could benefit Michigan?
Methods of the Study
### Data Collection

**Method 1: Traditional literature review**

#### Primary Terms

<table>
<thead>
<tr>
<th>borough</th>
<th>pavement condition index</th>
<th>road asset management</th>
</tr>
</thead>
<tbody>
<tr>
<td>city</td>
<td>pavement condition data</td>
<td>road guide</td>
</tr>
<tr>
<td>county</td>
<td>pavement guide</td>
<td>road manual</td>
</tr>
<tr>
<td>engineer conference</td>
<td>pavement management</td>
<td>road plan</td>
</tr>
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<td>local agency asset management</td>
<td>pavement manual</td>
<td>road report</td>
</tr>
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<td>maintenance program</td>
<td>pavement plan</td>
<td>town</td>
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<td>maintenance system</td>
<td>pavement rating</td>
<td>transportation asset management</td>
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<td>parish</td>
<td>pavement report</td>
<td>transportation conference</td>
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<tr>
<td>PASER</td>
<td>PCI</td>
<td>transportation plan</td>
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</tbody>
</table>

#### Secondary Terms

- capital improvement plan
- capital transportation program
- capital improvement program
- comprehensive plan
Data Collection

Method 2: Survey of LTAP centers

Method 3: Web scraper
### Documents Identified

- 12,000 documents identified
- Over 6,000 reviewed
- 223 Sources used in report: [https://tinyurl.com/ye644hh5](https://tinyurl.com/ye644hh5)

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#### State of Practice Local Road Asset Management Project Report Resources

<table>
<thead>
<tr>
<th>Primary State</th>
<th>Resource Title</th>
<th>Author</th>
<th>URL</th>
<th>Y</th>
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<tr>
<td>Alabama</td>
<td>A Pavement Management System for County Roads in the State of Alabama</td>
<td>Wilson, Jeff; Anderson, Michael David</td>
<td><a href="https://trid.trb.org/view/904985">https://trid.trb.org/view/904985</a></td>
<td>2006</td>
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<tr>
<td>Alabama</td>
<td>Asphalt Pavement Preservation</td>
<td>Vargas, Adriana; Walbeck, Travis</td>
<td><a href="https://eng.auburn.edu/atap/files/2021-dec02-asphalt-pavement-preservation-brochure.pdf">https://eng.auburn.edu/atap/files/2021-dec02-asphalt-pavement-preservation-brochure.pdf</a></td>
<td>2021</td>
</tr>
<tr>
<td>Arkansas</td>
<td>CTTP: Technology Transfer: Pavement Management</td>
<td>University of Arkansas CTTP</td>
<td><a href="https://cttp.uark.edu/technology-transfer/pavement-management.php">https://cttp.uark.edu/technology-transfer/pavement-management.php</a></td>
<td>2017</td>
</tr>
</tbody>
</table>
Fourteen Data Collection Measures

- Champion?
- Incentives?
- Other Assets?
- Best Practices?
- Lessons Learned?
- TAM System?
- Rating System?
- Requirements?
- Funding?
- LTAP Involvement?
- Tools?
- Connections to Michigan?
- Amount of Adoption?
- What was their perspective?
Scored the Data Collection Measures on:

- Unified rating or TAM system
- Have data
- Mix of Fixes approach
- Preventive maintenance
- Have a written plan
- Assess needs
- Other road assets
- Use ratings to determine fix
- Evaluate ESL
Study Findings

Statewide Champions
Champions and Liaisons

• Statewide Champion – a program, board, or association who provides standardized asset management education, resources, and tools to agencies within the state

• Liaison – a council, board, or association working on behalf of legislative bodies
LTAP Statewide Local Road AM Involvement

- Training, 48%
- Training and tool, 20%
- Tool and liaison, 2%
- Tool, 2%
- None found, 24%
- Training, tool, and liaison, 4%
Average Overall Local Road AM Score

State LTAP local asset management involvement:

- Training, tool, and liaison: 71% (2 states)
- Training and tool: 53% (10 states)
- Training: 29% (24 states)
- Tool and liaison: 25% (1 state)
- Tool: 27% (1 state)
- None found: 12% (12 states)
Study Findings

Peer States
Michigan Scoring

Unified rating system
Collects local road data*
Mix of fixes trainings and tools
Preventative maintenance trainings and tools
Written asset management plan
Needs assessment*
Other road assets*
Use ratings to determine fix*
Overall Score

Median = 24%

Michigan
Peer State: California

- 98% of local roads are in a pavement management system
- MPO’s drive system with oversight committee
- Unilateral road data collection (with or without agency)
- Have dedicated funding for roads exceeding a specific PCI
Peer State: Maine

• LTAP provides tools
• Initial data collection assistance
• RSMS
• Manual simplified PCI
Peer State: Idaho

• Very Similar to TAMC
• Council is established by law
• Use software developed externally
• Encourage PASER
Peer State: New York

- LTAP provides tools and training
- CAMP-RS uses interns
- Culverts and Signs can be collected
- Manual simplified PCI
Peer State: Wisconsin

- Created PASER
- Mandatory data collection and reporting
- Data is not shared publicly
Peer State: Indiana

• Learned from TAMC
• Has dedicated funding for communities with TAMP
• Local Level of Effort
• PASER is most prevalent
• Large cities use PCI
Peer State: Utah

- LTAP created TAMS
- Interns collect data for LTAP
- RSL is recommended
- Visual inspection
- Can attach photos to segments
Study Findings

Lessons Learned and Best Practices
Lessons Learned

- Clearly define need
- Need consistent Data Collection
- Nominate or elect a TAM Champion for larger agencies
- Establish TAM Steering Committee
- Organize regular meetings and reporting requirements
- Involve agency staff
- Difficult to switch systems
Recommendations

- Make resources available, especially for smaller cities and smaller counties, to implement an asset management system.

- Host conferences, training sessions, webinars, or other forms of education to help those who want to begin or strengthen asset management practices in their jurisdictions.

- Consider advocating for the use of a few select, easy-to-use asset management systems, rather than many different systems, to promote consistency, collaboration, and capacity across jurisdictions.

- Facilitate the building of relationships with neighboring jurisdictions and consortia to build regional capacity for using asset management practices and systems.

- Explore public policy solutions that could make asset management a standard practice for every jurisdiction.

- More research is needed to understand how to best support Minnesota’s cities, counties, and state agencies in their use of asset management practices and systems.
Other interesting findings

- Wyoming counties use DOT contract
- North Dakota needs assessments
- Massachusetts and Ohio are conducting surveys
Study Findings

Individual Scoring Measures
Unified Rating or AM System Scoring Summary

- 29 states with a 0% score
- 17 states with a 100% score
- 4 states with a 50% score
State Practices: Unified Systems

Rating Systems

7 – Multiple
4 – PASER
3 – modified PCI
2 – PCI
1 – IRI
33 – None
State Practices: Unified Systems

AM Systems

9 – Created own system
3 – Purchased system
Have Data Scoring Summary

- 3 states with a 100% score
- 7 states with a 75% score
- 15 states with a 0% score
- 6 states with a 50% score
- 19 states with a 25% score
Mix of Fixes Approach Scoring Summary

- 6 states with a 100% score
- 16 states with a 0% score
- 28 states with a 50% score
Preventive Maintenance Scoring Summary

- 14 states with a 0% score
- 12 states with a 100% score
- 24 states with a 50% score
Have a Written Plan Scoring Summary

- 36 states with a 0% score
- 7 states with a 33% score
- 4 states with a 67% score
- 3 states with a 100% score
Assess Needs Scoring Summary

- 22 states with a 0% score
- 10 states with a 67% score
- 14 states with a 33% score
- 4 states with a 100% score
Other Assets Scoring Summary

- Signs
- Culverts
- Signals
- Imagery
- Urban Features

33 states with a 0% score
8 states with a 67% score
7 states with a 33% score
2 states with a 100% score
Use Ratings to Determine Fix Scoring Summary

- 26 states with a 0% score
- 12 states with a 33% score
- 11 states with a 67% score
- 1 state with a 100% score
Final Thoughts

Keep improving TAM practices

Keep educating new staff

Keep moving forward together!
Final Report

www.michigan.gov/mic/tamc
TAMC News and Upcoming Events

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