

Roadway Surface Management

Regional Local Road Conference

October 20, 2010

Upper Great Plains Transportation Institute

North Dakota State University, Fargo

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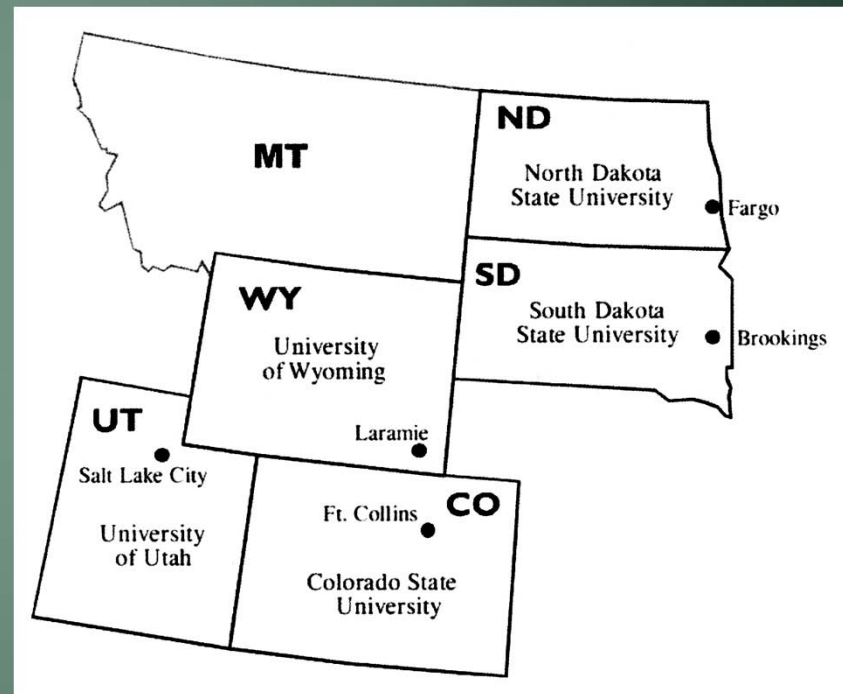
Outline

- What is Roadway Surface Management?
- How do you do Roadway Surface Management?
- Who's done what?
- What is the MPC/FHWA doing now?
- What can you do?



"A Center of Excellence for Rural and Intermodal Transportation"

- A competitively selected regional UTC.
- Composed of 5 major regional universities
- A national resource and focal point for the support of research and training
- Attracts the nation's best talent



What is Asset Management?

Transportation asset management is a **strategic approach** to managing transportation infrastructure assets.

It focuses on the business processes for **resource allocation** and utilization with the objective of **better decision-making** that is based upon quality information about assets and well-defined objectives expressed as Levels of Service.

Asset Management

- Practiced since the Romans.
- Evolved rapidly since 1956.
- Now fallen to county, small urban, and rural governments.
- Level of practice is uneven.



What Assets Do You Manage?

- Road/Street Surfaces
- Drainage
- Utilities
- Signals
- Curb/Gutter
- Lighting
- Bridges
- Small Structures
- Culverts
- Traffic Signs
- Approaches/Entrances
- Sidewalks
- Buildings
- Etc. etc. etc.

**Can Every Local Agency
Move to Full Asset
Management of
Everything Just Shown?**

Probably Not!

Matching Management to the Local Agency

- **Staff & Budget Constraints are Reality!**
- **Larger jurisdictions with multiple assets has greater need for high level of management**
- **Smaller jurisdictions need a simple system with limited data input and capability**

Roadway Surface Management

- RSM is a subset of Asset Management.
- Includes paved and unpaved roads.

What Managing Roadway Surfaces Means

Focus on two issues:

1. How good are the road surfaces?
2. How much money should we spend on them?

Proper Perspective

Doing the best
you can with the
resources
available



What Does Roadway Surface Management Provide?

The Roadway Surface Management is a tool to be used by the Road Managers and Decision Makers:

- Where to spend the available funds and prioritize future projects
- Assist in preparing long term budgets
- Documentation to traveling public on sequencing of projects – minimize emotional decision making
- Assist in supporting requests for additional funding

Roadway Surface Management: Five Core Questions

1. What is the current state of my roadway surfaces?
2. What are their required performance levels (level of service)?
3. Which roadways are critical to sustained performance?
4. What are my best Maintenance and Capital Improvement strategies?
5. What is my best long-term funding strategy?

Steps to setting up a Roadway Surface Management Program

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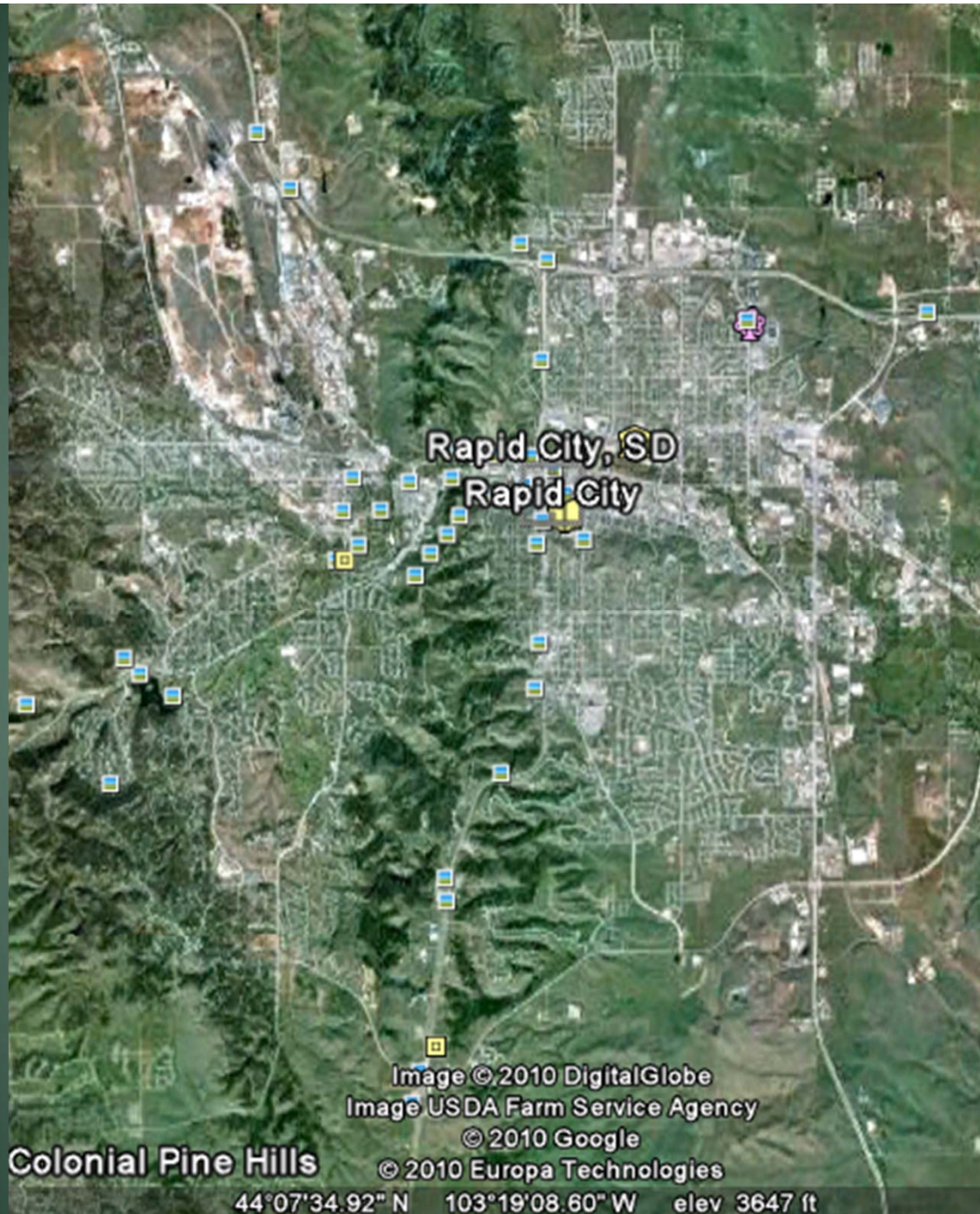
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3. Input the information into the spreadsheet and perform quality checking.

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2. Do an inventory, evaluating surface distress condition and, if possible, test for actual roadway condition.
3. Input the information into the spreadsheet and perform quality checking.
4. Identify the roads maintenance and rehabilitation priorities in the system.

Improving Management with Minimal Investment

- Train current staff to record data during routine street/road inspection.
- Use laptop computers, digital cameras or GPS units for real time data entry – eliminate transfer from paper to electronic records in office.
- For smaller jurisdictions, take advantage of existing electronic maps – even Google Earth™ has potential



Colonial Pine Hills

44°07'34.92" N 103°19'08.60" W elev 3647 ft

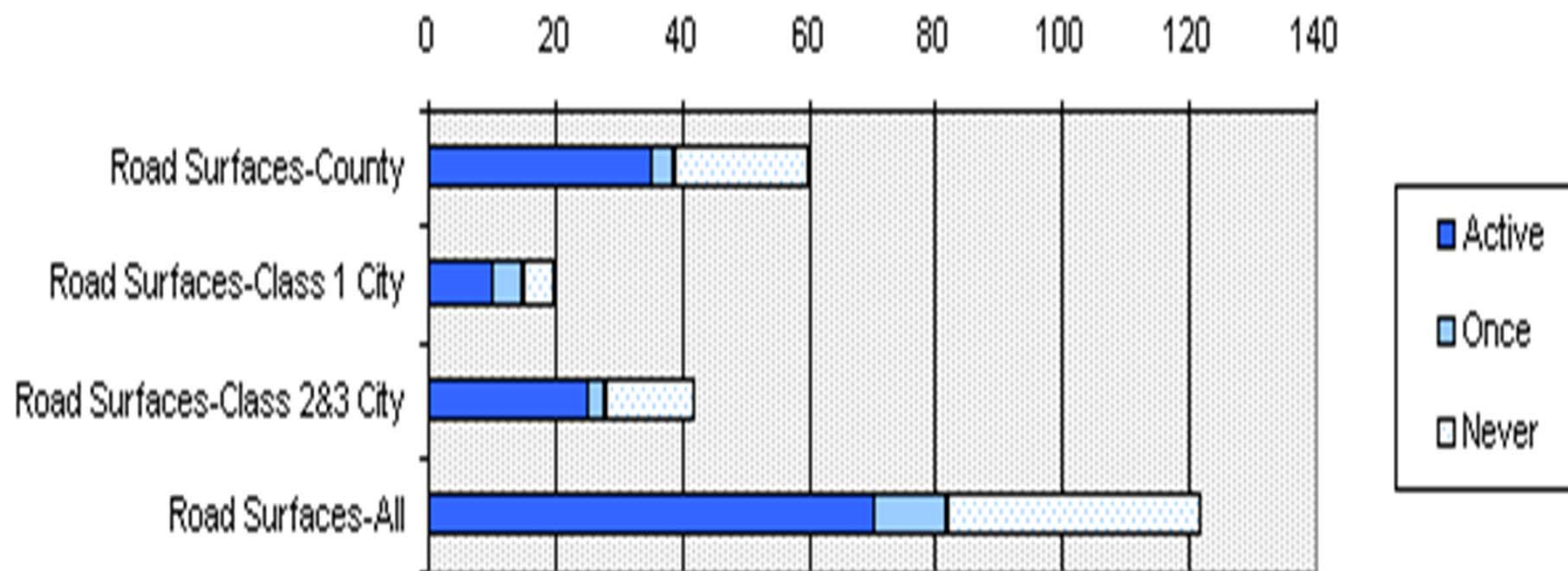
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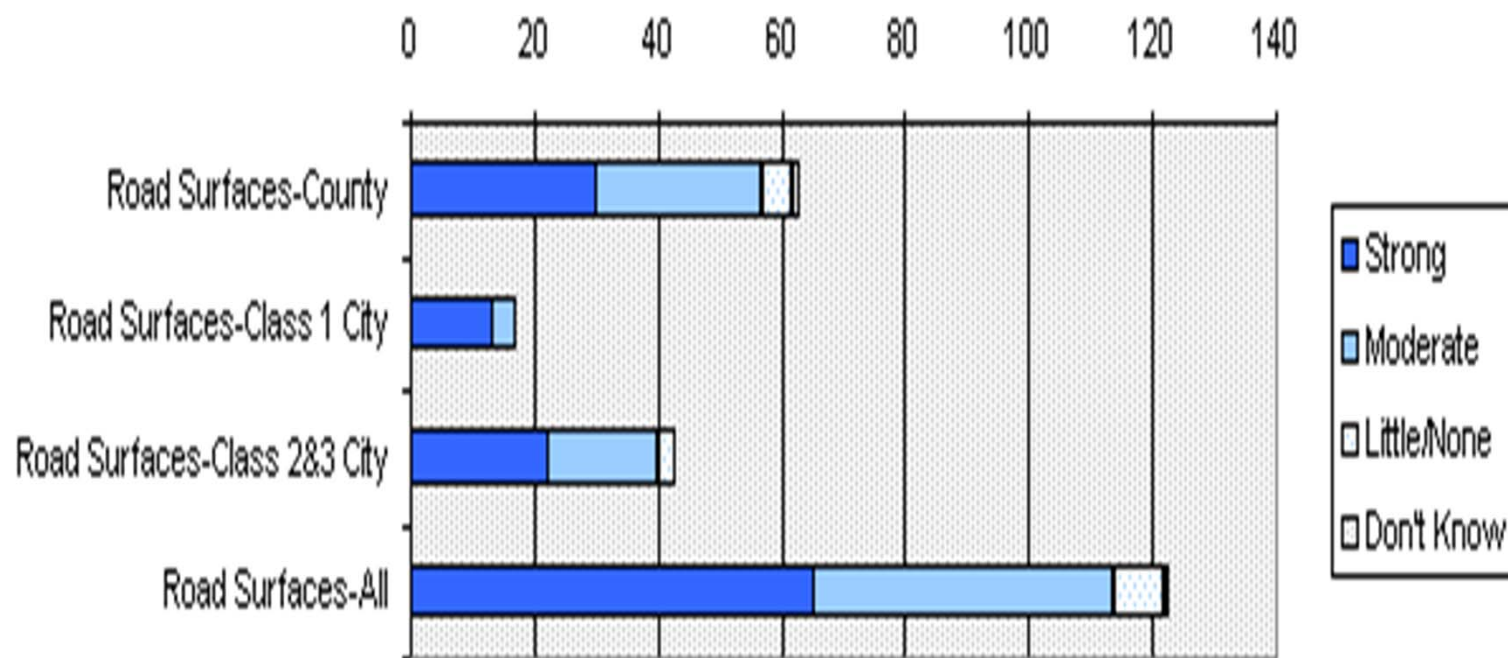
What is the status of Road Surface Management System use?

- **Desire to find out what experiences the Small Urban and Rural agencies are having using Road Surface Management Systems**
- **In Summer 2009, MT, ND, SD and WY LTAPs Conducted a Roadway Surface Management survey**

Agency Experience with Roadway Surface Management



Agency's Level of Need for Roadway Surface Management



Why don't the Agencies use Roadway Surface Management?

1. Cost to set up needed computer networks prohibitive
2. Much training needed to operate software
3. Can not see benefit when operating funds are so limited
4. Do not have personnel

Why don't the Agencies use Roadway Surface Management? (cont'd)

5. Limited funding for road construction
6. Minimal maintenance funding
7. Barely able to do what they are doing now

What's Been Going On Recently

- MPC
- FHWA
- 6 LTAPs
- 2 TTAPs



Together, put on a 1 ½ day workshop for rural, local, small urban and tribal governments via the TLN in November 2009 :

- 19 sites in 6 states
- 112 attendees
- 10 formal presentations made from 7 sites.

What's Being Planned?

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1. Update and refined SD DOT “manual” process
2. If feasible, prepare ND LTAP software for Rural Roadway Inventory & Management System widespread distribution
3. Deliver the Roadway Surface Management **workshop** for rural and Tribal road managers developed for FHWA

What's Being Planned?

1. Manual Method September, 2011
2. Software Feasibility July, 2011
3. LTAP Workshop Spring, 2011

What is asked of you

- Learn more about Roadway Surface Management
- Identify barriers to implementing a program and tell your LTAP about them
- Begin compiling data for Roadway Surface Management
- Explain your needs to your LTAP

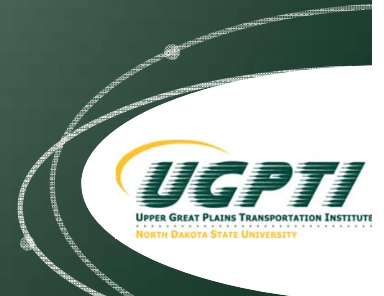
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But Mostly Thank You



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