

IPMP-OVERVIEW

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MOTIVATION

Implementation of a GIS system to **visualize, analyze, provide easy access and enable effective decision making**



"IPMP promotes optimal, cost-effective decisions on highway maintenance, rehabilitation, and reconstruction, using accurate past and projected pavement conditions."

IPMP integrates data collection and a database to track the condition of pavements on non-National Highway System (non-NHS) federal-aid-eligible roads. Non-NHS roads may be in state, county, and city jurisdictions."

IPMP MISSION

- Providing local agencies
 - pavement management information,
 - tools and training
- supporting **PROJECT, NETWORK, and STRATEGIC** level activities

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IPMP TIMELINE

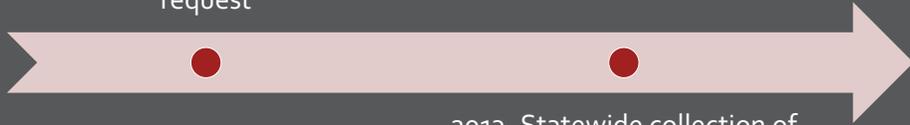
1999 – IPMP design phase is completed.



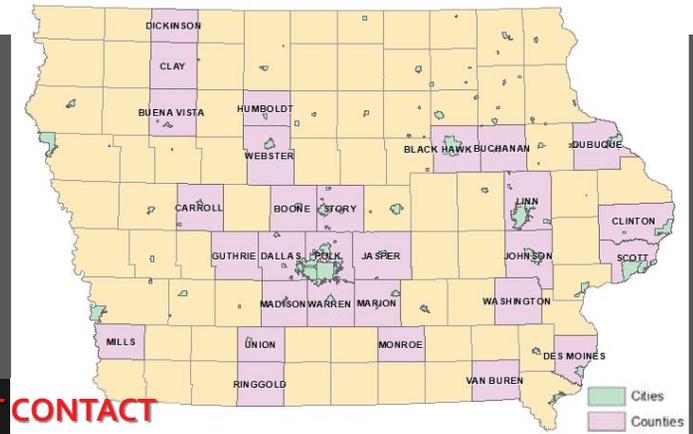
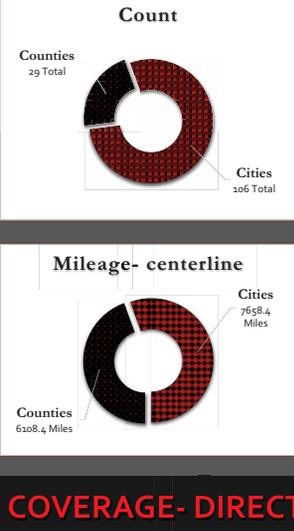
2002 – 2005 Collected all county paved roads. FAE roads and other municipal NFAE by request

IPMP TIMELINE

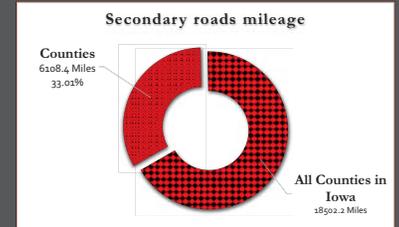
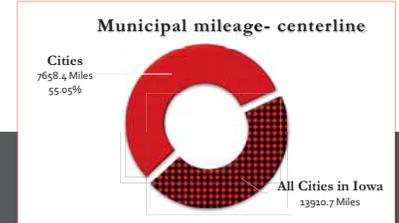
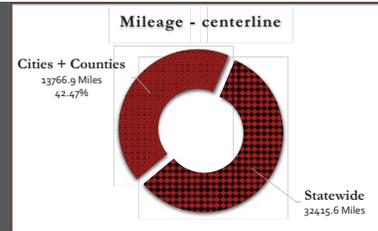
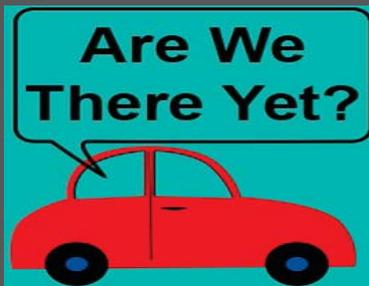
2005 – 2012 Collected select RPA/MPOs FAE roads. Municipal NFAE data by request



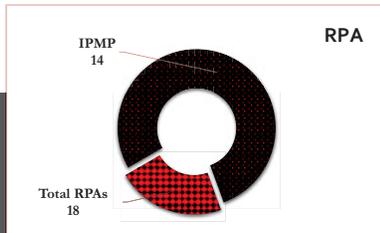
2013- Statewide collection of all public paved roadways begins



IPMP BY THE NUMBERS



COVERAGE- DIRECT CONTACT



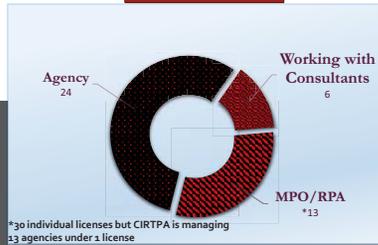
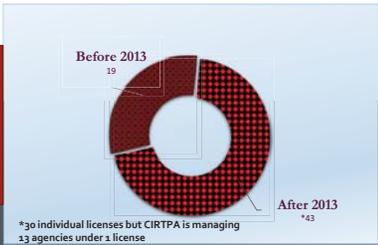
LPA COVERAGE- DIRECT CONTACT

WHAT'S AVAILABLE

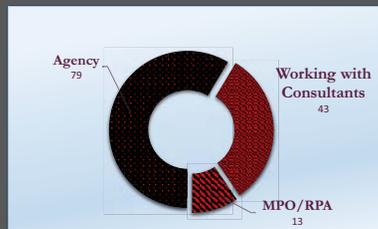
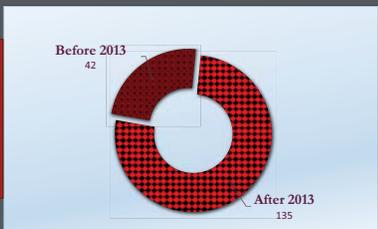


DTIMS LICENSE

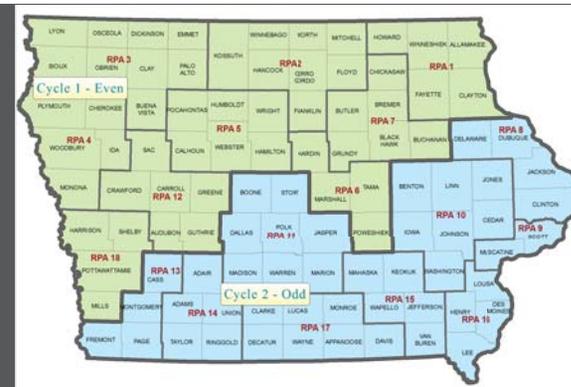
AFTER 2013



DATA REQUESTS



DATA COLLECTION



HISTORIC DATA

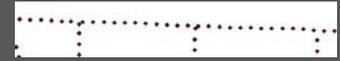
- Roughness (IRI) – left, right
- Rutting – left, right
- Alligator cracking – SLMH, sq. feet
- Transverse cracking – SLMH, linear feet
- Longitudinal cracking – SLMH, feet
- Longitudinal wheelpath cracking – SLMH, feet
- Patch – good, bad, sq area
- Patch count
- Failure
- Bearing
- Durability cracking – MH, count
- Joint spalling – count
- Faulting – total joints, faulted joints, average, min, max, cumulative by wheel path

100%



PCI SUMMARY

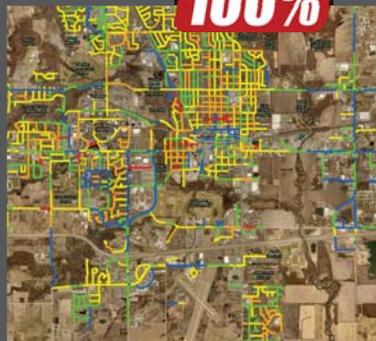
- Processing pavement condition data
- Surface type
- Pavement history
- Additional inventory information
- Trending



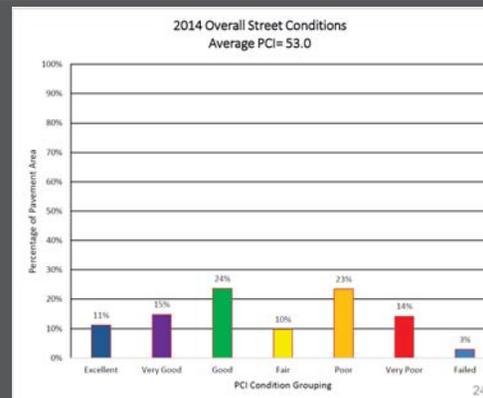
HISTORIC DATA

- **Sufficient coverage**
 - Temporal and spatial
 - Can't fix if you don't know a problem exists
- **Inspections every other year**
 - Can't fix it based on 5 year snapshots for FAE
- **Current data**
 - Repair prioritization based on current data
 - Can optimize impact and cost of repair

100%



PCI SUMMARY



PCI SUMMARY

- Pavement condition summary

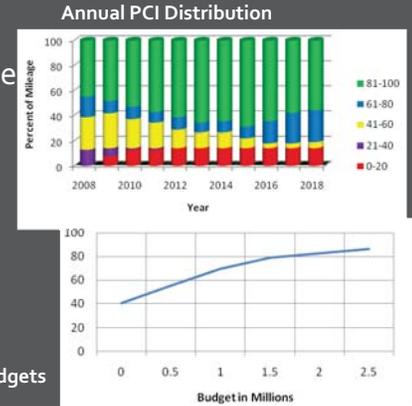


Extract actionable information and features for doing the **Right Repair, at the Right Place, in the Right Time**

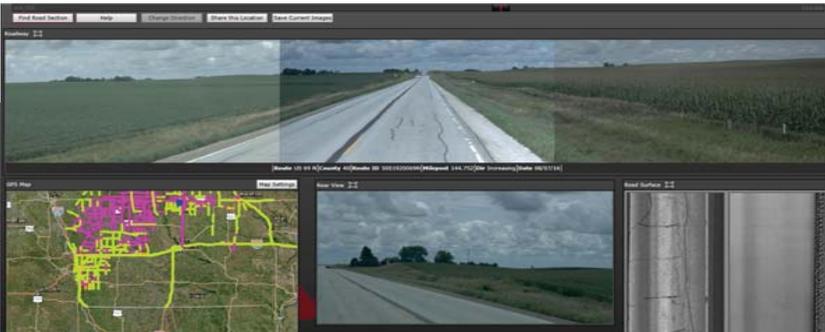


PMS SOFTWARE

- PMS Software
 - Customized dTIMS Setup template
 - Training and support
 - Long range transportation plan
 - Engaging stakeholders
 - Forecasting



Video log



Detailed Software to Measure / Review Distress

Pathweb
<http://rams.iowadot.gov/pathweb/>

PMS SOFTWARE

Always work from a Position of Knowledge

1. Must Know Current Conditions
2. Reasonable Projection of Future Needs
3. Show Long-term Consequences of Potential Funding Scenarios

Fact Based, Data Driven Decision-making!!!
 (minimize the guessing)



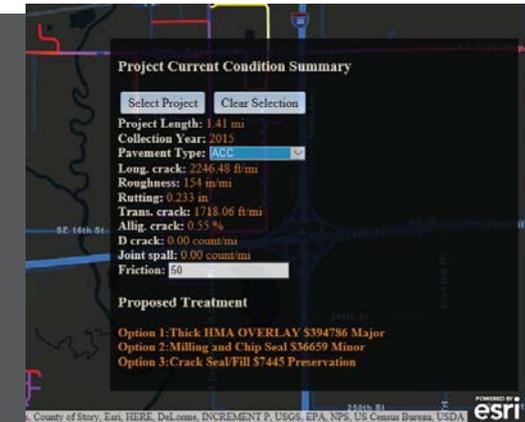
BENEFITS

- Funding justification
 - Increased funding
 - New funding source?
- Focus justification
 - Maintain vs adding new infrastructure
- Forecasting system
- Repeatability and efficiency



TOOLS

- Project Selection Tool



PEER EXCHANGE

- Peer Exchange
 - Quarterly
 - Training and support

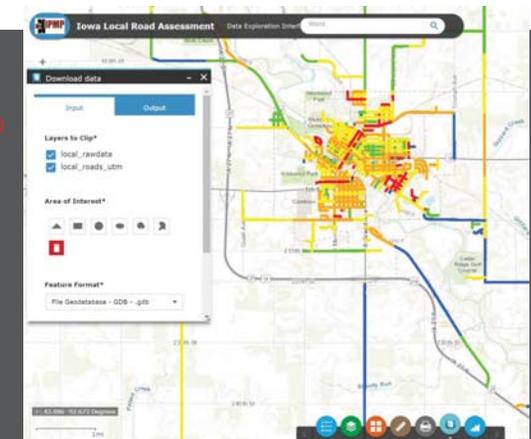


<https://intrans.iastate.edu/events/iowa-pavement-management-program-ipmp-users-group-quarterly-meeting/>

TOOLS

- IPMP Web
 - (For viewing at the moment, Undergoing website upgrade)

<https://ipmp.ctre.iastate.edu/maps/home/>



BOTTOM-LINE

- Asset inventory
 - History?
- Data collection
 - IPMP
- Data organization and presentation
 - IPMP
 - In house
- Identification and prioritization of projects
 - Manual/Maps
 - dTIMS
- Project tracking



2018 DATA COLLECTION

- Has concluded
- Delivery complete
- Now processing
- Available as from mid-April