



HPMS Reassessment

National Pavement Management
Conference

May 8, 2007

What is the HPMS?

- Provides essential highway information
 - Apportionment
 - C&P Report
 - Performance measures
 - Analytical models
- Three tiered data structure
- Cycle for updating
- Data accuracy

Uses of HPMS pavement data

- National pavement needs
 - Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance
 - Models
 - Performance measure (NHS and STRAHNET)
- Other studies (public and private)
- Information can be found at:
www.fhwa.dot.gov

Why a reassessment of the HPMS?

- Respond to current and future business needs
 - Where does FHWA want to be in 2010?
 - What types of reports and analyses will FHWA be asked to produce in the next 5 – 10 years?
- Respond to new data needs in SAFETEA-LU
- Capitalize on changing technology
- Where possible, address resource constraints and institutional changes

HPMS Reassessment Vision

- For HPMS to meet the transportation community's data needs in 2010 and beyond.

Reassessment outcomes

- Improve HPMS to support customer business needs.
- Maximize use of existing, future, and other data sources.
- Enhance value of information to providers and customers.

Activities to date and future activities

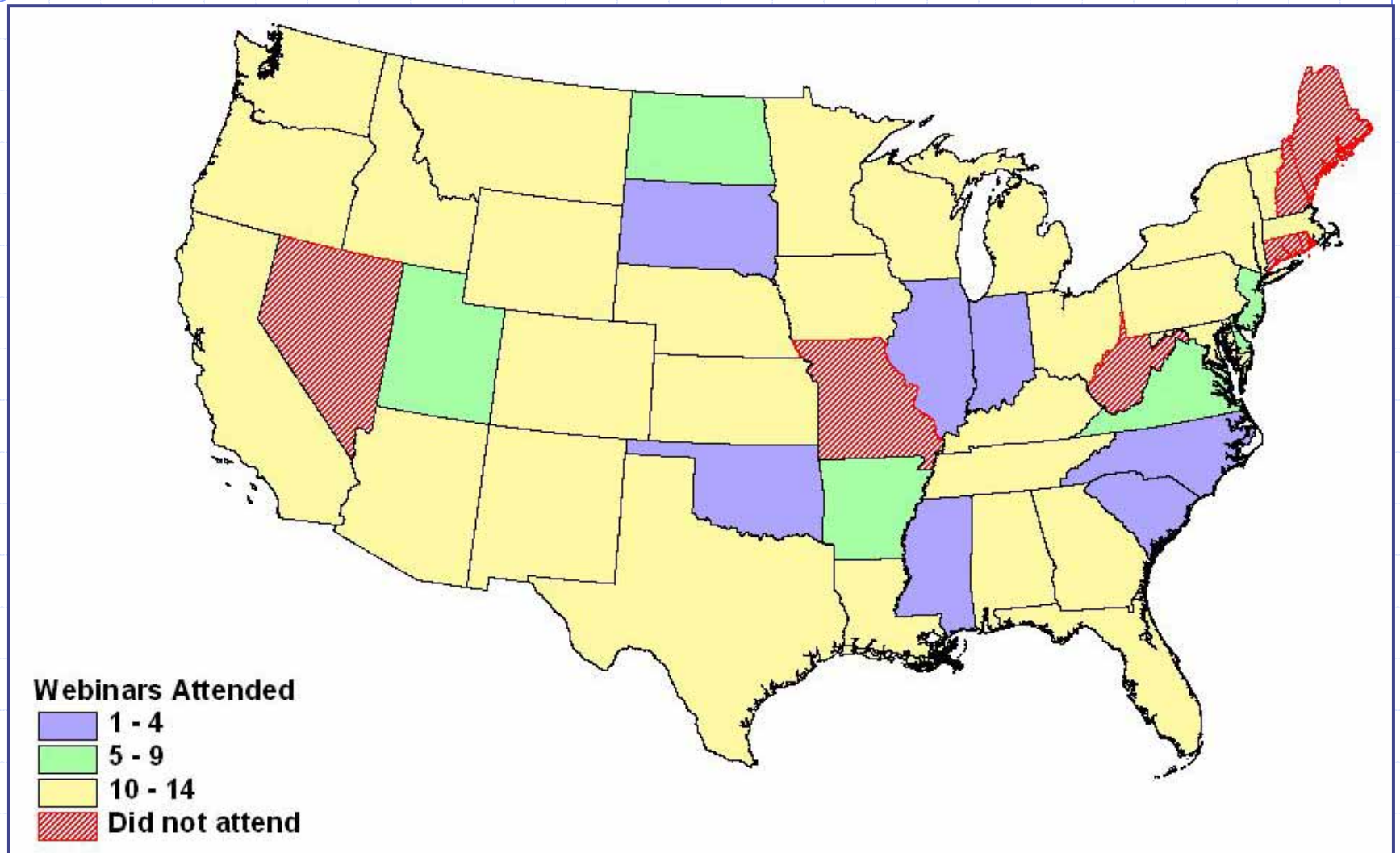
➤ Efforts to date

- Meetings with DOT users
- Development of Issue papers
- Outreach workshops
- Webinars
- Meeting with AASHTO
- Draft Recommendations document
- Outreach workshops

➤ Future activities

- Conduct outreach around Recommendations document
- Finalize Recommendations document

State participation in Webinars



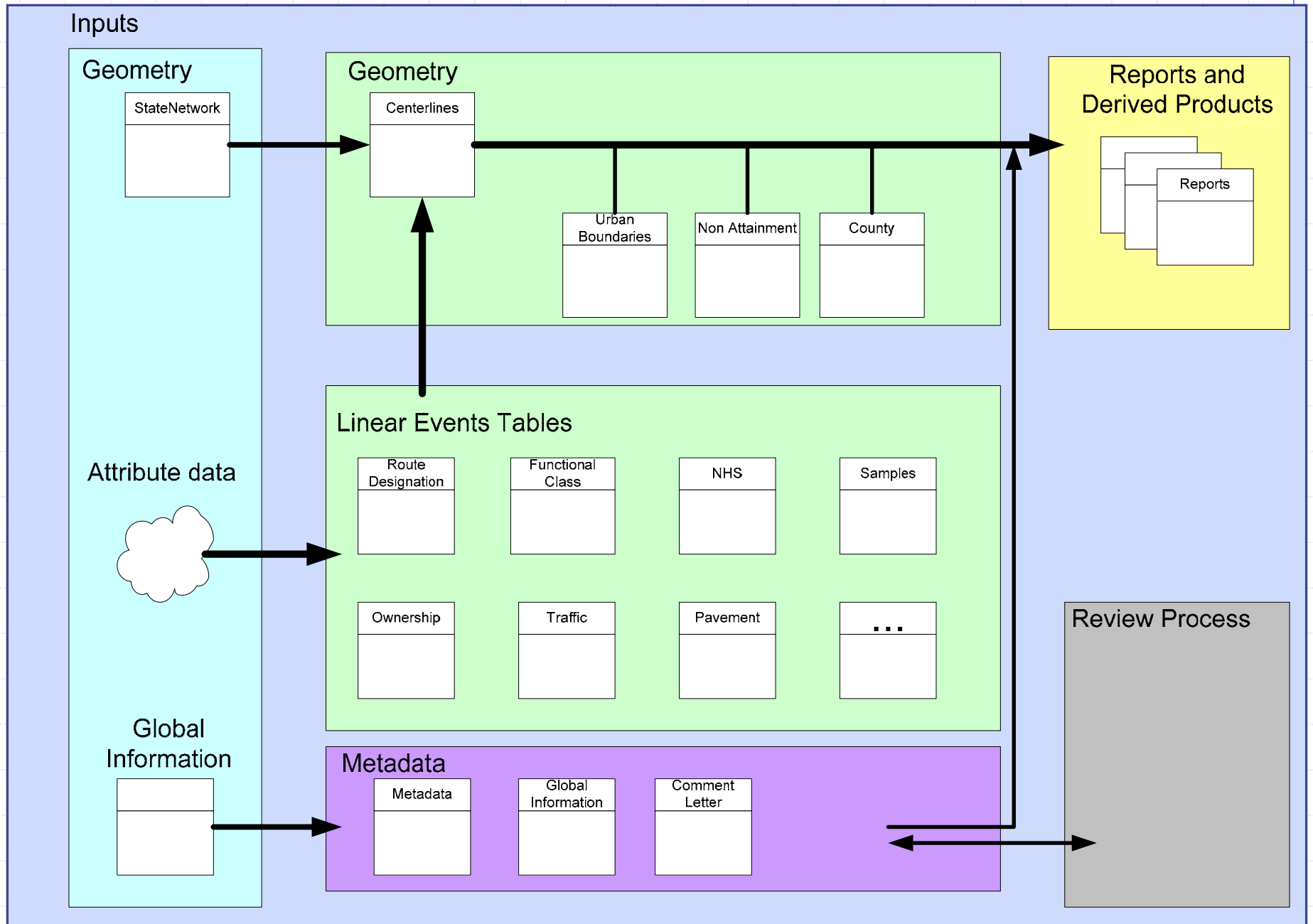
Dates to remember

- 2007
 - March – Outreach workshops
 - June – Final Recommendations Report
 - September – Final Reassessment Report
 - December – Draft Field Manual
- 2008
 - June 15 – Mandatory Motorcycle VMT and Metadata
- 2009
 - June 15 – Optional Geospatial Submittal
- 2010
 - June 15 – HPMS Submittal under New Data Model

Cross cutting topics addressed

- Process improvement
- Data quality
- Revise existing data model
- Sampling
- Boundaries and Functional Classification

New data model



Specific data areas addressed

- Safety
- Pavements
- Interchanges
- Freight
- Capacity

Traffic data

- Universe AADT through Major Collector
- Truck AADT for NHS and all samples
- Peak single and combination truck %
- K & D Factors
- Future AADT

Pavement issues

- New/deleted data items
- Standards/Guidance
 - *HPMS Field Manual* Appendix E
 - Others...
- Data collection and reporting issues
 - Annual NHS IRI
 - Equipment (limitations, sensitivities, etc.)
 - Structures in/out
 - State vs. off-State roadways

Pavement Data Needs

- By itself, IRI is not an adequate predictor of future pavement performance
- Other pavement distress data are needed for accurate predictions
 - Rutting
 - Faulting
 - Cracking
- Additional structural data are also needed

HPMS Reassessment pavement data items

Data Item	Add/Delete/Change	Summary	Universe	Sample	C&P/HERS	Apportionment	Performance Measure	Other (HCA/TS&W)	Rural - Int	Rural - OPA	Rural - MA	Rural - Maj Coll	Rural - Min Coll	Rural - Local	Rural - NHS	Urban - Int	Urban - OFE	Urban - OPA	Urban - MA	Urban - Coll	Urban - Local	Urban - NHS
IRI	C	X			X	X	X	X	X	X ³				X	X	X	X					X
PSR				X	X		X				X							X	X			
Surf/Pave Type	C ¹			X	X		X	X	X	X	X				X	X	X	X	X			
SN/D	D			X	X		X	X	X	X	X				X	X	X	X	X			
Climate Zone				X	X		X	X	X	X	X				X	X	X	X	X			
Year of Surf Imp	D			X	X		X	X	X	X	X				X	X	X	X				
Rutting	A			X	X		X	X	X	X	X				X	X	X	X	X			
Faulting	A			X	X		X	X	X	X	X				X	X	X	X	X			
Cracking	A			X	X		X	X	X	X	X				X	X	X	X	X			
Year of Last Resurface	A			X	X		X	X	X	X	X				X	X	X	X	X			
Year of Last Construction	A			X	X		X	X	X	X	X				X	X	X	X	X			
Last Overlay Thickness	A			X	X		X	X	X	X	X				X	X	X	X	X			
Asphalt Thickness	A			X	X		X	X	X	X	X				X	X	X	X	X			
Concrete Thickness	A			X	X		X	X	X	X	X				X	X	X	X	X			
Base Type	A			X	X		X	X	X	X	X				X	X	X	X	X			
Base Thickness	A			X	X		X	X	X	X	X				X	X	X	X	X			
Soil Type	A ²			X	X		X	X	X	X	X				X	X	X	X	X			
Binder Type	A	X			X		X															
Dowel Bars	A	X			X		X															
Joint Spacing	A	X			X		X															

Notes:

1/ Additional pavement types.

2/ Software coded with State override option.

3/ Sample only.

Highway

Pavement roughness (IRI)

- Universe data item for National Highway System and Principal Arterials
- Sample data item for rural Minor Arterial and recommended for all other functional systems
- Required annually for NHS and every two years for all other required sections
- Mean roughness index required (not half-car)
- Bridge and grade crossings included
- AASHTO PP37-04

Asphalt rutting

- New data item
- Sample sections only
- Pavements only, not collected for bridges and railroad grade crossings
- AASHTO PP38-00

Asphalt cracking

- New data item
- Sample sections only
- Pavements only, not collected for bridges and railroad grade crossings
- AASHTO PP44-01

Faulting

- New data item
- Sample sections only
- Pavements only, not collected for bridges and railroad grade crossings
- AASHTO R 36-04

New sample data items

- Year of Last Resurface
- Year of Last Construction
- Last Overlay Thickness
- Asphalt Thickness
- Concrete Thickness
- Base Type
- Base Thickness
- Soil Type

New summary data items

- Binder Type
- Dowel Bars
- Joint Spacing

Summary of applicable standards

- Currently referenced in Field Manual
 - *Highway* Pavement roughness (IRI)
AASHTO PP37-04
- To be added to Field Manual
 - Asphalt Rutting
AASHTO PP38-00
 - Asphalt Cracking
AASHTO PP44-01
 - Faulting
AASHTO R 36-04

HPMS Reassessment Pavement Data Issue Champions

- Mark Swanlund (FHWA Office of Pavement Technology)
- Ross Crichton/Darren Timothy (FHWA Office of Legislative & Governmental Affairs)
- Bob Orthmeyer (FHWA Resource Center- IL)
- Pavement Issue Paper co-author: Robert Rozycki (FHWA Office of Highway Policy Information)

Additional Information

➤ HPMS Web Site:

<http://www.fhwa.dot.gov/policy/ohpi/hpms/index.htm>

➤ Feedback please:

- HPMS Docket Site: <http://dms.dot.gov>
docket #23638

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Discussion