HPMS Pavement Data
Issues & Uses

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Introduction

• Review of principal HPMS pavement data items

• Various data issues

• Some uses
Main HPMS Pavement Data Items– current requirements

- **IRI (MRI):** full extent for all principal arterials & NHS. Sampled on rural minor arterials. 2-yr. cycle. Annual for NHS. 0.1 mi max. section length
- **Surface Type:** sampled. 2-yr. cycle.
- **Rutting:** sampled. 2-yr. cycle.
- **Faulting:** sampled. 2-yr. cycle.
- **Cracking Length (optional):** sampled. 2-yr. cycle.
- **Cracking Percent:** sampled. 2-yr. cycle.

- Note: sampled functional systems exclude rural minor collectors and rural & urban locals.

[Image]
Various Issues

- Data collection frequency
- Data collection extent/completeness
- Section length (IRI)
- Data standards (AASHTO, ASTM, LTPP Guide, etc.)
- QA/QC by State and FHWA staff
Completeness

• 2012 HPMS data:
  • Virtually all States report complete IRI
  • 27 States missing >5% rutting data where expected
  • 28 States missing >5% percent cracking where expected
QA/QC Initiative

- FHWA memo to field offices re: HPMS pavement data (8/9/2012)
  - MAP-21: Using HPMS data, report conditions, performance, & investment needs
  - Recent studies indicate significant variation, errors, & omissions
  - FHWA tasked to develop standards & guidance for National Highway Performance Program
  - Involves Division pavement staff to assist in HPMS QA/QC (see next slide)

- Soon-to-be-developed FHWA Pavement Monitoring Guide (PMG)
  - Phase 1 completed
  - Used in conjunction with *HPMS Field Manual*
  - Best practices, references to standards, etc.
FHWA Roles & Responsibilities

• Headquarters
  • Provides technical assistance and training to DOTs for data collection/submission purposes
  • Reviews annual submittals for QA/QC purposes
  • Communicates priority data issues to be addressed to DOTs via Division Offices

• Division Offices
  • Conducts annual Program Reviews to identify micro-level deficiencies and develops Action Plans

• Resource Centers - TBD
Uses

• *Highway Statistics* tables

• Support of FHWA Performance Management (recently per MAP-21)

• HERS pavement models

• Dashboards, analysis/visualization tools, reports, etc. ITIP (Integrated Transportation Information Platform) and HIPAT (Highway Infrastructure Performance Analysis Tool)
Map View (right-click map surface for tools)

**Data Layers**

- **HPMS**: On
- **Status**: Query results retrieved

**Distance 1,000**

**Status**:
- < 95
- 95 - 170
- > 170

**Map Legend**

- Green: Query results retrieved
- Blue: All

**SQL Query**:

```sql
SELECT Rads.Map_HPMS_WKB * FROM Rads.Map_HPMS_WKB WHERE AQC: 1270
AHC: 0
```
Conclusion / Contact

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