Northeast Bridge Preservation Partnership

Bridge Management System
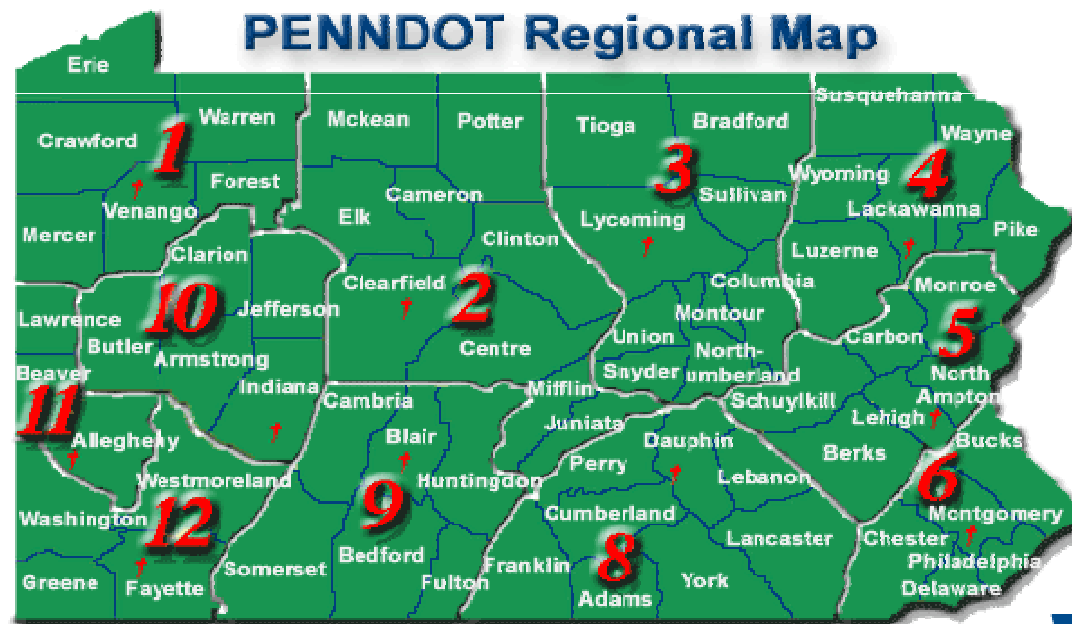
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2010 Northeast Bridge Preservation Partnership

Rocky Hill, CT

September 28, 2010

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BMS Workshop

- Organization and Assets
- Bridge Management Processes
- Noteworthy Policy and Practices

Organization and Assets

- ## Organization
  - – Central Office, 11 Districts, 67 County Maintenance Offices
  - – Oversight and policy from Central Office

PENNDOT Regional Map

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Organization and Assets

- ## Assets Managed
  - Bridges
    - 25,350 state-owned bridges > 8 ft
      - <5600 SD
    - 6,406 NBIS locally owned bridges
      - 2159 SD
  - Tunnels
  - Sign Structures
  - Retaining Walls
  - High Mast Lights

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Bridge Management Processes

- ## Software
  - BMS2 implemented November 2006
    - Pontis Based
    - Web version
    - iForms
    - Does not make future predictions
  - Multi-modal Project Management System (MPMS)
    - Stores planned projects (bridge and roadway)
    - Interfaces with Pontis

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Bridge Management Processes

- ## Management
  - ### Central Office
    - Oversees overall data quality in BMS2
    - Reports data to FHWA
  - ### Districts and consultants
    - Data input
    - Data quality

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Bridge Management Processes

- BMS Utilization
  - Stores bridge inspection and inventory data
  - Does not allocate funds
  - Does not predict future conditions
  - Does not track projects

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Bridge Management Processes

- ## BMS Utilization
  - Data extracted for Risk Assessment (RA)
    - Computes risk scores for all state-owned bridges
    - RA ensures more critical bridges are programmed
    - RA uses inventory, condition and appraisal data
    - Scores based on risk levels of bridge (i.e., structure type, system network, condition ratings)
    - Importance factors are applied based on bridge size, ADT, scour condition, detour length, feature under bridge
    - RA determines preliminary scopes of work (replace/rehab/preservation) and generates design and construction cost estimates

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Bridge Management Processes

- BMS Utilization
  - Identify and Prioritize Critical Maintenance Activities
  - Priority 0's (Critical) – POA in 3 days
    - Posting/clearance signs
    - Railings, etc.
  - Priority 1's (High) – POA in 7 days
    - Deck Joints
    - Advanced Scour
    - Serious Deck spalls and cracking

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Bridge Management Processes

- Program Decision Making
  - Central Office sets bridge program goals
    - Accelerated Bridge Program
      - Goal: Fix 1,145 SD Bridges in 3 years
      - Actual: Fix 1,322 SD Bridges in 2 ½ years
  - Districts select projects based on goals
    - Input from RPO's and MPO's
  - Central Office provides oversight and tracking

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Noteworthy Policy and Practices

- [BMS2 Web](#)
  - Allows access for consultants to our database
- iForms
  - Consistent and quality inspection data
- System Interfaces
  - BMS2 connected to RMS, MPMS, SAP
- Risk Assessment
  - Prioritization of bridge needs

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QUESTIONS

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