

National Bridge Inspection Program

Metrics Introduction

Risk-based, Data-driven FHWA
Oversight

National Bridge Management, Inspection and
Preservation Conference

St. Louis, Missouri

October 31—November 4, 2011

Overview

- Background: Why are we doing this?
- Differences between past and new
- Metrics process
- Current process status
- Efforts for consistency
- FANBITF
- FHWA Bridge Safety Engineer team

Background:

Why are we doing this?

- Recognition by FHWA of several opportunities for improvement
- NBIP continually identified as high-risk area
- Concerns by States that level of oversight is not consistent across the nation
- OIG & GAO audits
- I-35W bridge collapse – increased interest in bridge performance
- FY 2010 Appropriations Act

OIG Audit Recommendations

Develop and implement

- Minimum requirements
 - Data-driven, risk based bridge oversight during annual NBIS compliance reviews
- Detailed criteria
 - Determine compliance with greater consistency
- A policy
 - Defining procedures Division Offices follow to determine compliance with the NBIS

OIG Audit Recommendations

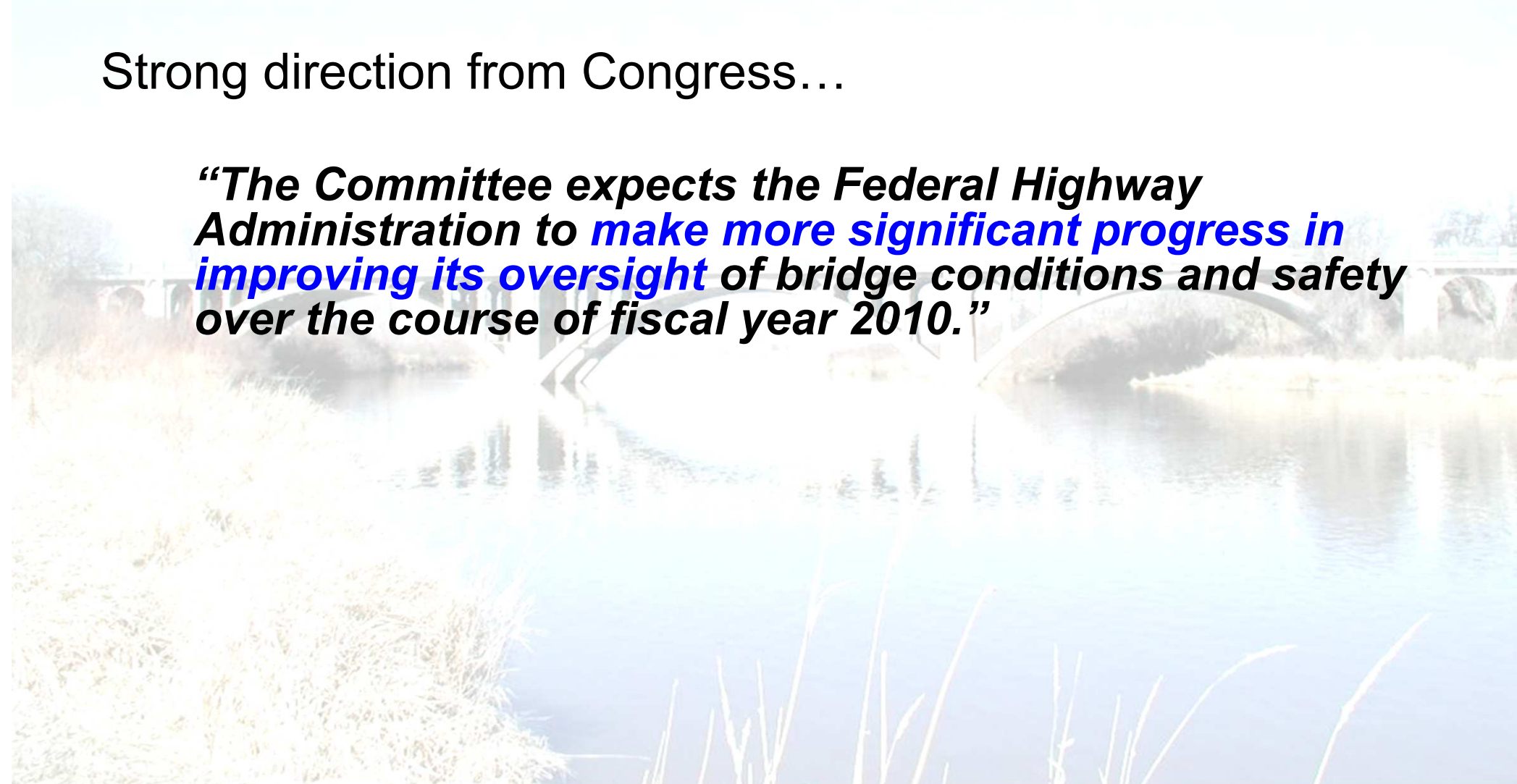
Develop comprehensive plan

- Routinely conduct systematic, data-driven analyses
 - identify nationwide bridge safety risks
- Prioritize identified risks
- Target higher priority risks
- In implementing the plan:
 - HIBT to prioritize nationwide bridge safety risks
 - Division offices to work with states to remediate higher priority nationwide bridge safety risks

Conference Report to FY 2010 Appropriations Act

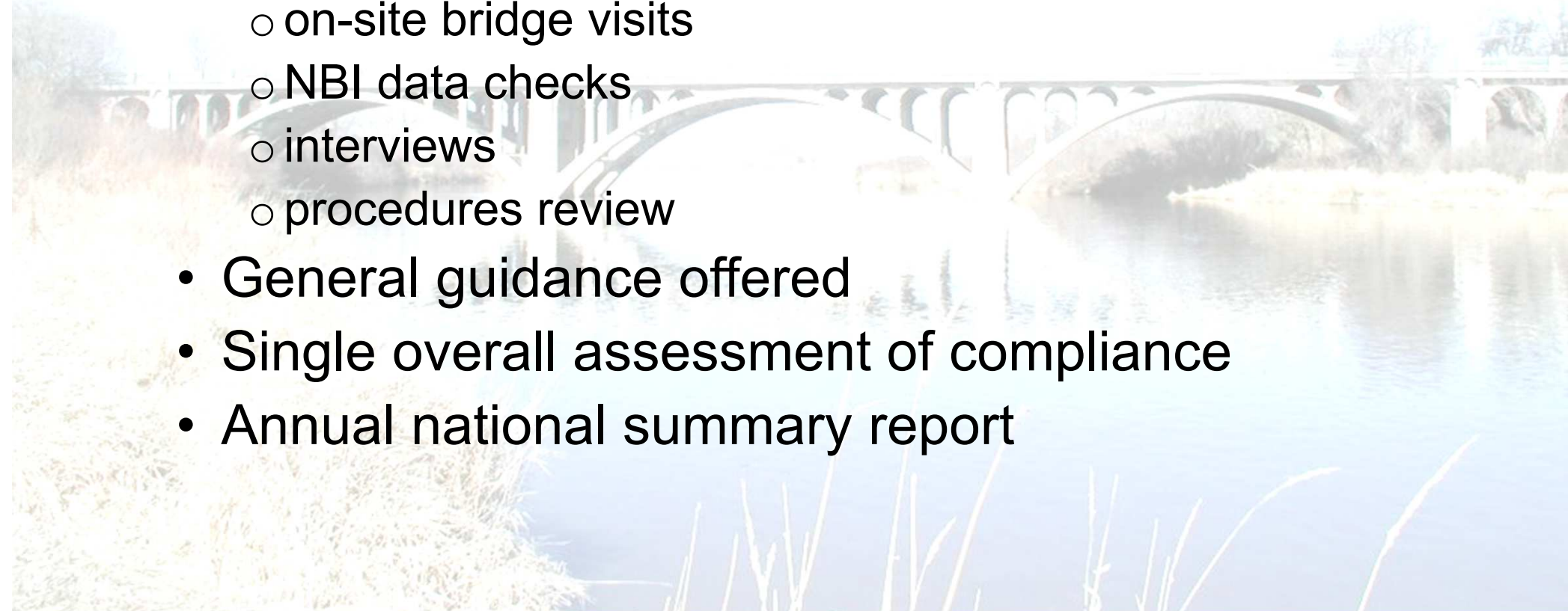
Strong direction from Congress...

“The Committee expects the Federal Highway Administration to **make more significant progress in improving its oversight** of bridge conditions and safety over the course of fiscal year 2010.”



FHWA NBIP Oversight – BEFORE

- Annual NBIS review included variations of:
 - targeted sampling
 - files and documentation review
 - on-site bridge visits
 - NBI data checks
 - interviews
 - procedures review
- General guidance offered
- Single overall assessment of compliance
- Annual national summary report



What does the new NBIP oversight process look like?

- 23 Individual Metrics – each metric is...
 - linked to specific NBIS requirement
- 3 Assessment Levels – each level has...
 - specific criteria to be reviewed
- 4 Levels of Compliance – each level has...
 - specific thresholds to meet for compliance

What does the new NBIP oversight process look like? (cont'd)

- Consistent compliance across the Nation
- Compliance determined based upon statistical sampling
- Compliance status is continuously being assessed and updated
- “Final Summary of Metric Compliance Report” reported annually as of December 31

Assessment Levels

- **Minimum**: Division Bridge Engineer's general knowledge and awareness of the state's program in relation to the metric
- **Intermediate**: Review through random sampling of inspection records or files, analysis of NBI data, visits to bridges, interviews of inspectors, and documentation of qualifications
- **In-depth**: Supplementing intermediate review with larger random sample sizes, more interviews, and research of records and/or history

Compliance Definitions

- **Compliance**: Adhering to requirements of the NBIS.
- **Substantial Compliance**: Adhering to the NBIS with minor deficiencies. Deficiencies to be corrected within 12 months, unless most efficient to correct over next inspection cycle.
- **Non-Compliance**: **NOT** adhering to the NBIS regulation. Deficiencies may adversely affect overall effectiveness of the program. Also, failure to adhere to a previously approved plan of corrective action (PCA).
- **Conditional Compliance**: Taking corrective steps outlined in FHWA approved PCA. Deficiencies may adversely affect the overall effectiveness of the program.

Five (5) Year Cycle

- Year 0 – 2011 – Baseline review
 - All metrics reviewed at intermediate level
 - Develop review strategy for next five years
- Years 1-5 – Annual review
 - At least 1 intermediate review for each metric
 - Remainder at minimum level
- Year 5 is wrap-up with 5-year evaluation
 - Report evaluating program over 5 years
- Cycle repeats

March through Metrics (brief)

- Metric 1 – Organization
 - Policies, procedures
- Metrics 2-5 – Qualifications
 - PM/TL/LR/Diver
- Metrics 6-11 – Inspection Frequency
 - Routine/Rx/UW/UWx/FC/Dam-InDpth-Spec
- Metrics 12-21 – Inspection Procedures
 - Inspt/LR/Post/Files/FC/UW/SC/Complex/QC-QA/CF
- Metrics 22-23 – Inventory
 - Maintain Inv/Update Inv

Effect of Process

- Overhaul of how compliance with the NBIS is monitored and assessed by FHWA including:
 - clear expectations for each State
 - consistent criteria to judge each metric annually
 - compliance based upon criteria listed for each metric rather than unstructured policy
- Procedure for taking non-compliance action
 - clear, consistent guidance provided Divisions

Metrics Process

- New NBIS regulations were not created
- Metrics process intended to:
 - Remove subjectivity... to extent possible
 - Improve consistency nationwide
 - Provide clear expectations/measurements
 - Base oversight on random sampling

Current Metrics Status

- CY 3rd qtr status – 42 Divisions underway on all metrics, others not far behind
- Many metric assessments have been made
 - Many metrics in compliance/substantial compliance
 - Where NC is assessed, Divisions are working with their state to develop PCAs
- December 31 – Final assessment

Process Consistency

- Steps FHWA is taking:
 - Training: Nov '10 – Jan '11
 - FHWA National Bridge Inspection Program Oversight Team – NBIPOT
 - Use of data-based reports where applicable
 - Monthly BSE teleconferences
 - Sept/Oct face-to-face meetings
 - Internal Q&As to provide guidance/interpretation
 - PCA guidance

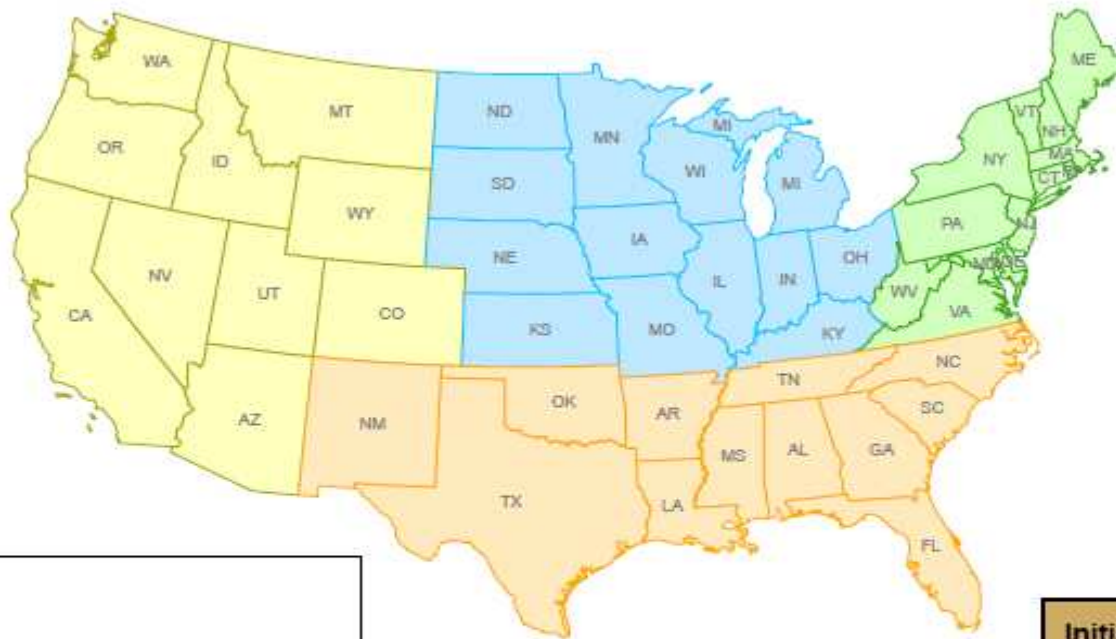
Process Consistency

- Bridge Safety Engineers role:
 - Training of DBEs
 - Develop & provide guidance
 - Work with and assist Divisions
 - Monthly teleconferences with Divisions
 - Some visits with Divisions
 - Biweekly BSE teleconferences
 - NBIPOT
 - Review Division compliance assessments and PCAs


FANBITF

- FHWA/AASHTO Joint National Bridge Inspection Task Force
 - Purpose
 - Discuss 2011 baseline review process and results
 - Discuss ideas AASHTO & FHWA Divisions offer for modifications and improvements
 - Final decisions will rest with FHWA
 - Several meetings July – Feb '12
 - Questionnaire to States & Divisions
 - Gather comments, suggestions, etc
 - Results: short term ('12), long term ('13+), NBIS Regulation issues

National Bridge Safety Engineers Team




Initial Points of Contact

 Barry Brecto, PE
360-753-9556
Olympia, Washington

 Tom Drda, PE
919-747-7011
Raleigh, NC

 Jon Nekritz, PE
708-283-3535
Matteson, Illinois

 John Thiel, PE
202-366-8795
Washington, DC

Notes:
-Washington D.C. and
Federal Lands will be
covered by John Thiel

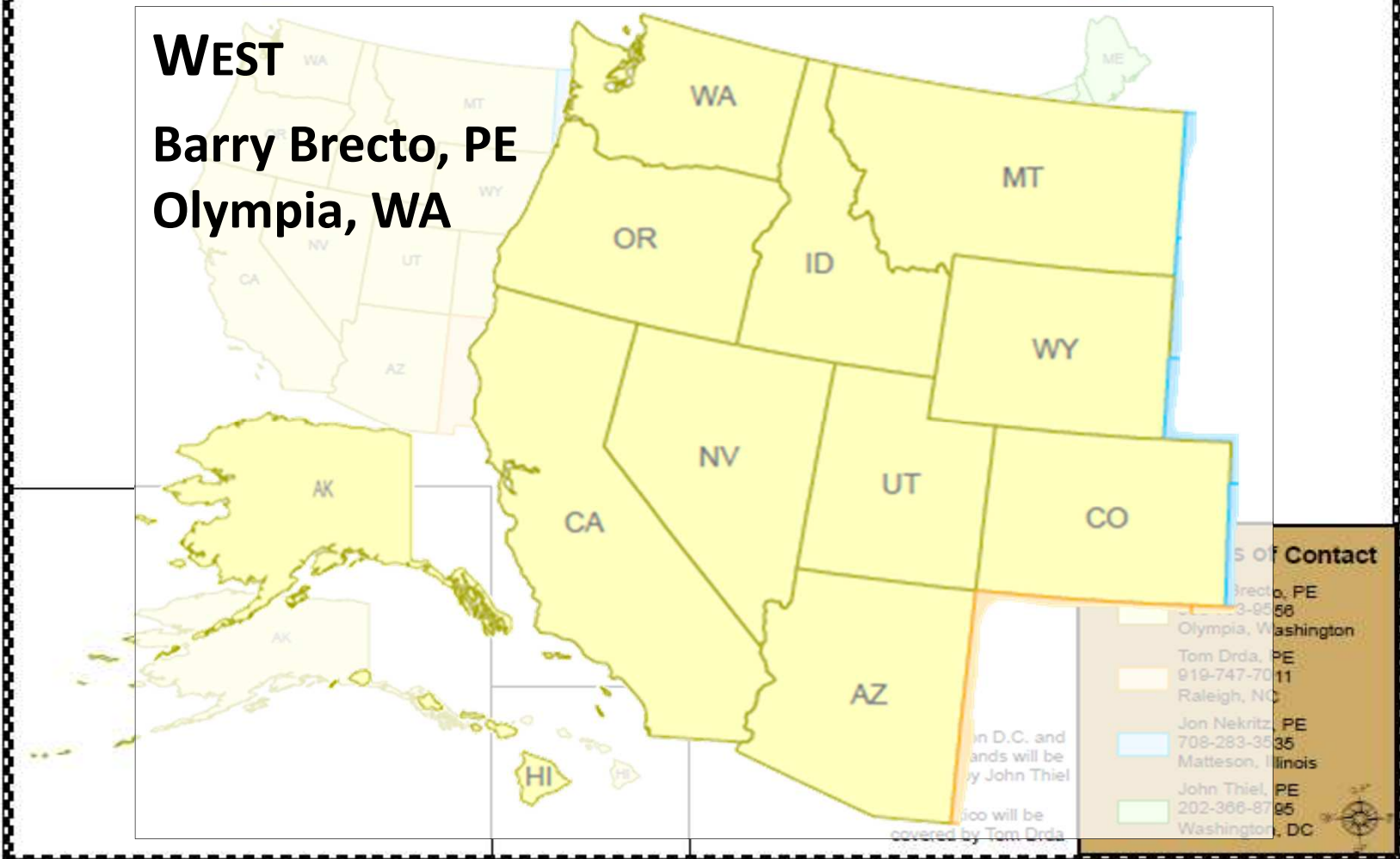
-Puerto Rico will be
covered by Tom Drda



National Bridge Safety Engineers Team

WEST

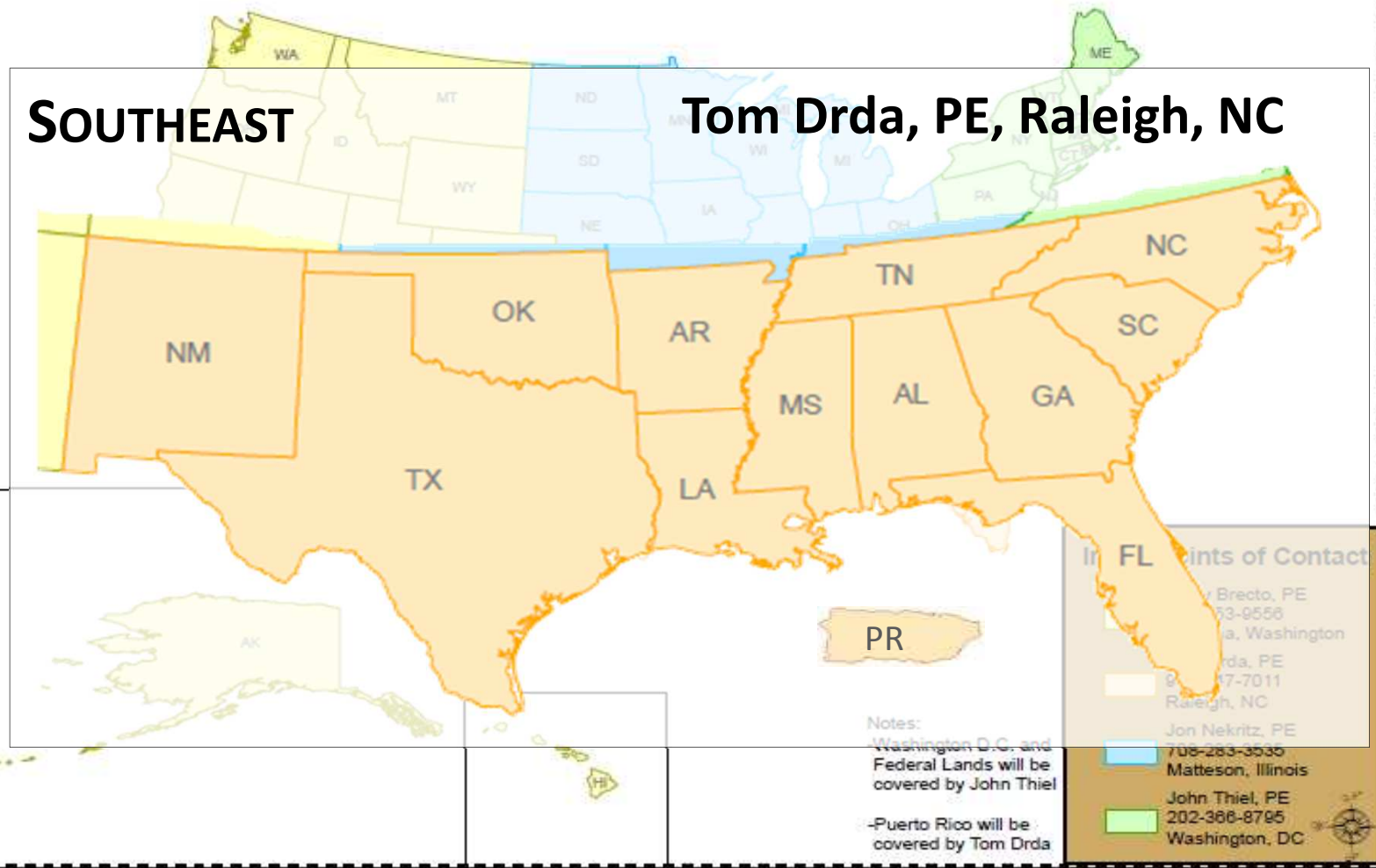
Barry Brecto, PE
Olympia, WA



National Bridge Safety Engineers Team

SOUTHEAST

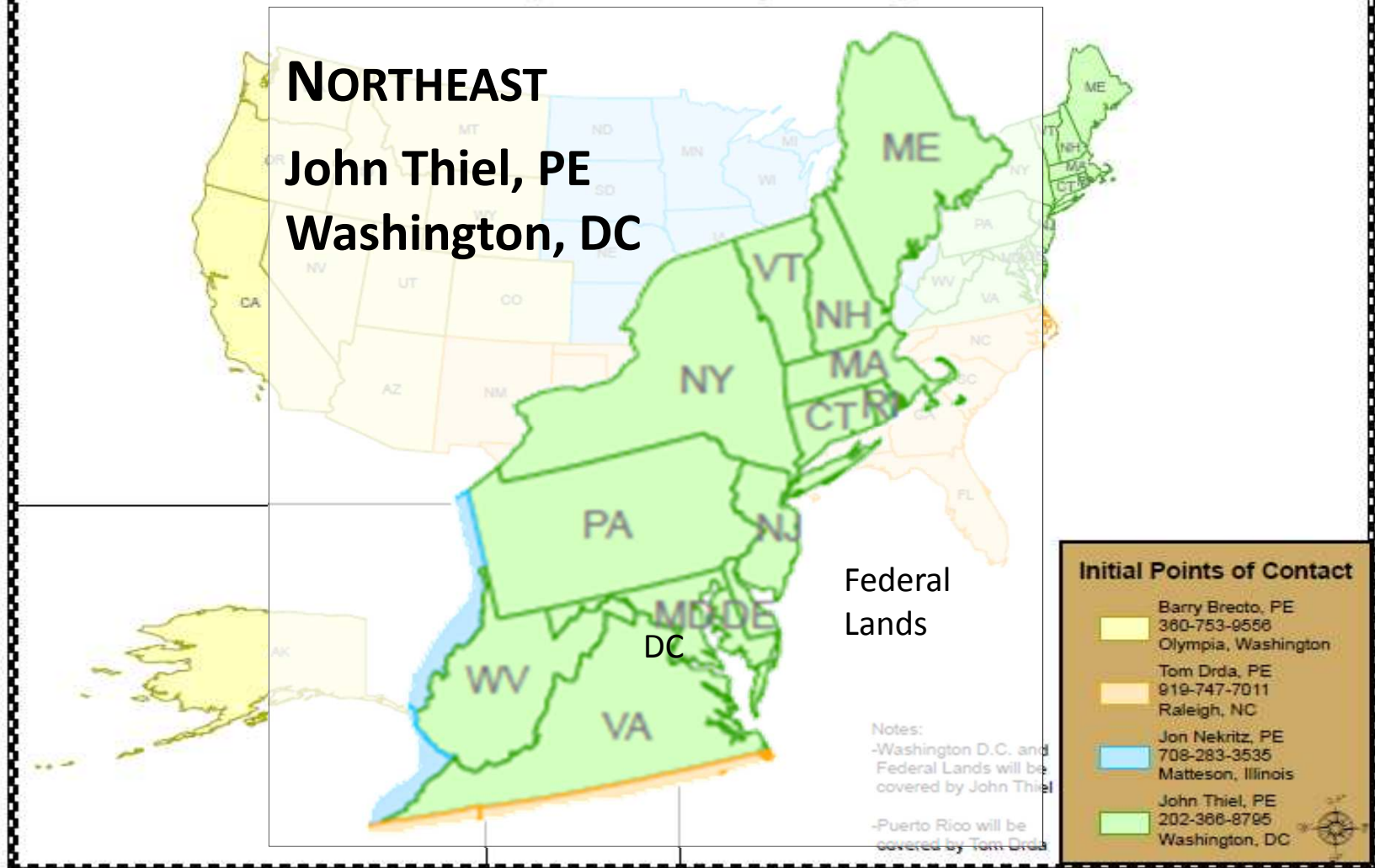
Tom Drda, PE, Raleigh, NC



National Bridge Safety Engineers Team

NORTHEAST

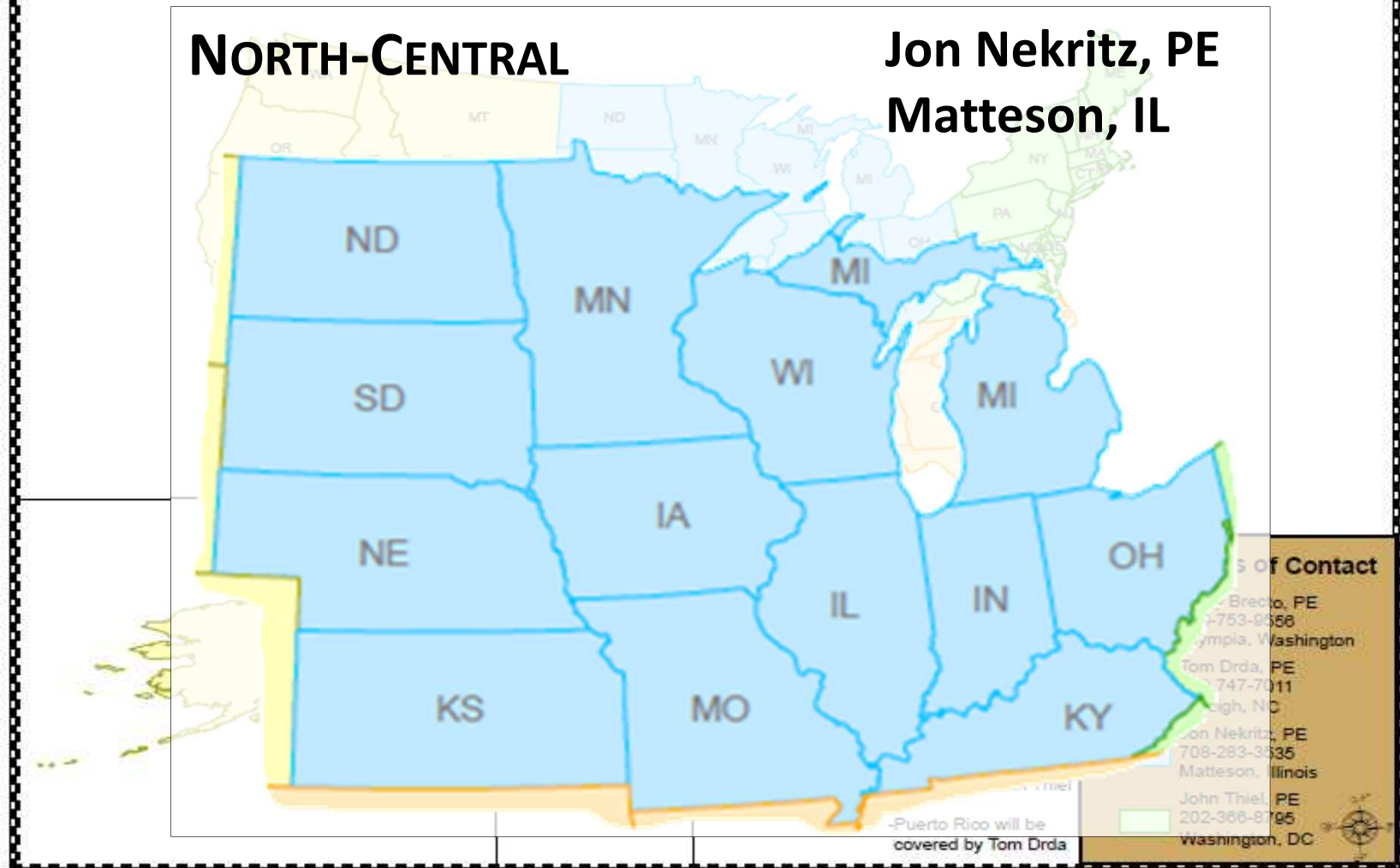
John Thiel, PE
Washington, DC



National Bridge Safety Engineers Team

NORTH-CENTRAL

Jon Nekritz, PE
Matteson, IL



Thank you

Questions

