



Alaska Department of Transportation & Public Facilities

In-Place Recycling Activities in Alaska

September 2012
Newton Bingham PE
Central Region Materials Engineer

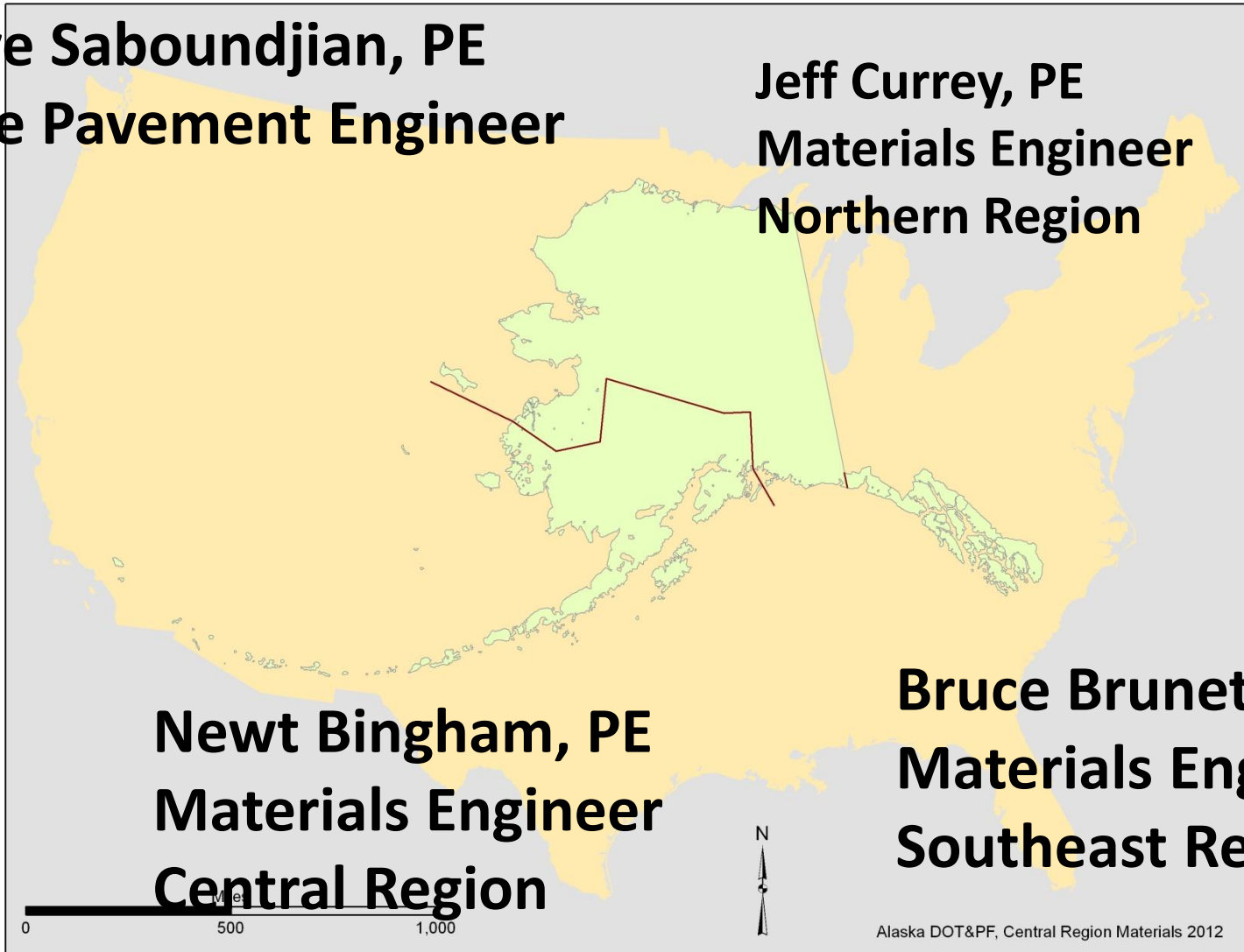
Alaska's Introduction

Steve Saboundjian, PE
State Pavement Engineer

Jeff Currey, PE
Materials Engineer
Northern Region

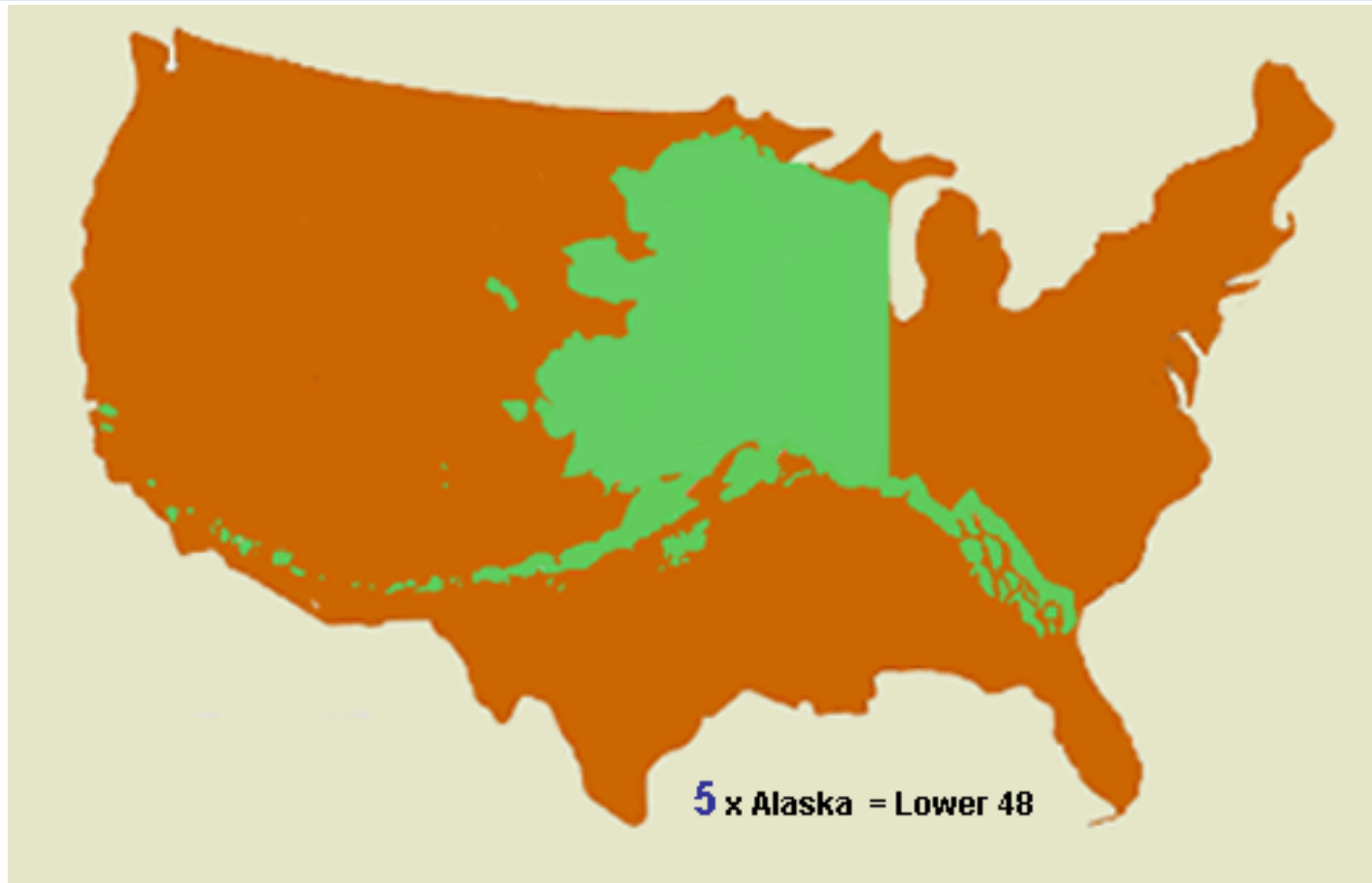
Newt Bingham, PE
Materials Engineer
Central Region

Bruce Brunette, PE
Materials Engineer
Southeast Region





Conditions Vary Dramatically



Alaska Highlights

Bowhead whale



King salmon



Moose



Ptarmigan



Black bear

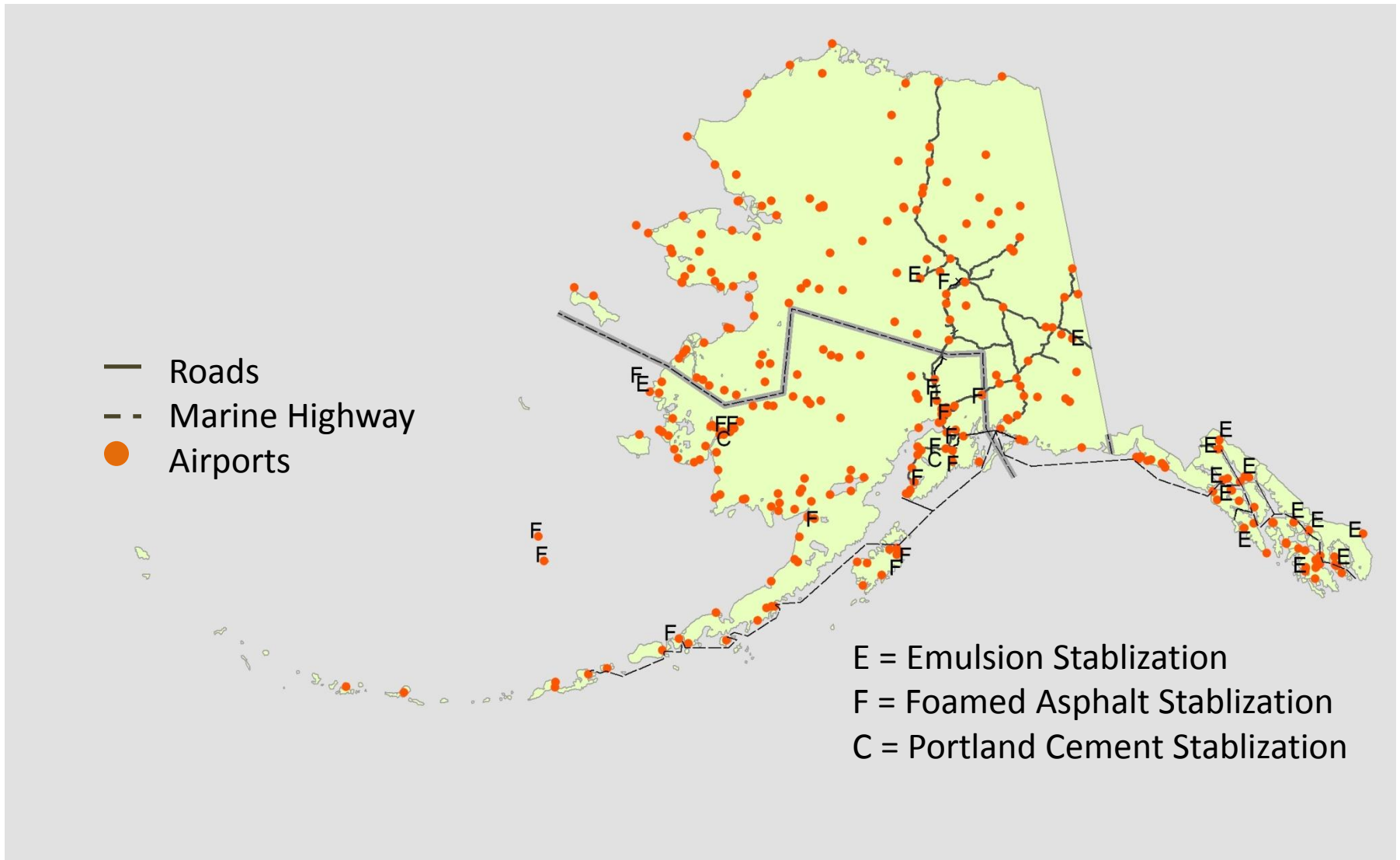




Summary of Alaska's Oversight

- Road – 5,600 Total, Paved 3500 Miles
- Airports – 681 unpaved, 55 paved
- Marine Highway – 3,500 miles
- Pavement Related FY 2012 funding ~ \$160 million

Transportation Demographics

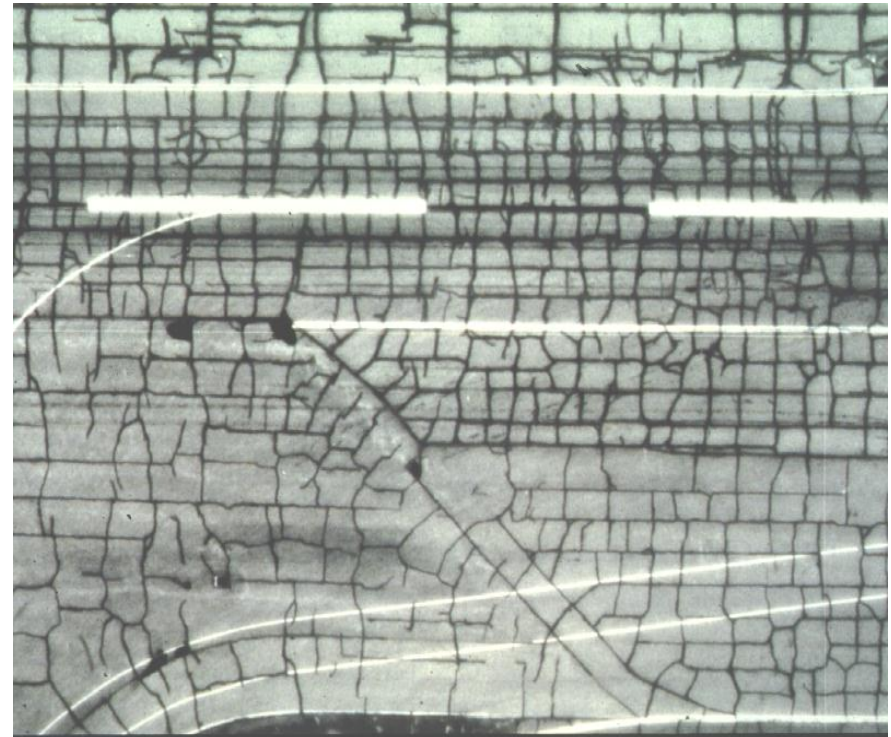




Why In-Place Recycle and Stabilize



Permafrost Foundation,
fix every 3 years



Airport Block Cracking,
Change PG of Asphalt



Additional Reasons



Reuse Existing Material, Build Stronger Section

- Low Traffic Volume
- Historic Typical
- 2" HMA
- 6" CABC
- 36" NFS Pit Run (if available)
- Unclassified fill



Alaska's Experience in FDR

- **Reclaim** existing pavement (HMA) and crushed aggregate base (CABC)-3 Projects/yr
- **Reclaim** HMA + CABC & **Stabilize** With;
 - Portland Cement-1 Project/yr
 - Foamed Asphalt-2 Projects/yr
 - Emulsion-1 Project/yr
 - Chemical Stabilization with Fiber Reinforcing



In-Place Recycle Factors

- Annual Workload Is Needed to Justify Equipment Investment
- Remoteness of Project- unproductive time on Project
- Local Materials Determine Process Used As Imported Material To Remote Locations Can Cost \$200/ton