

National Park Service



EXPERIENCE
YOUR
AMERICA

PRESERVATION IN THE NATIONAL PARK SERVICE

Northeast Pavement Preservation Partnership Meeting
Portsmouth, NH
November 8-10, 2010

National Park Service



Pavement Management Implementation FY 2005 - 2011

EXPERIENCE
YOUR
AMERICA



National Park Service



EXPERIENCE
YOUR
AMERICA

1. Northeast Region (NER)
2. Road System
3. Pavement Condition
4. Comparisons
5. Preservation Approach
6. Projections
7. Conclusions

National Park Service



1. Northeast Region

EXPERIENCE
YOUR
AMERICA



National Park Service



- Park Units
- States/Territories
- Population
- Annual Visitation
- Economic Impact
- Alternate Transportation Systems
- Major Metropolitan areas in the Northeast Corridor

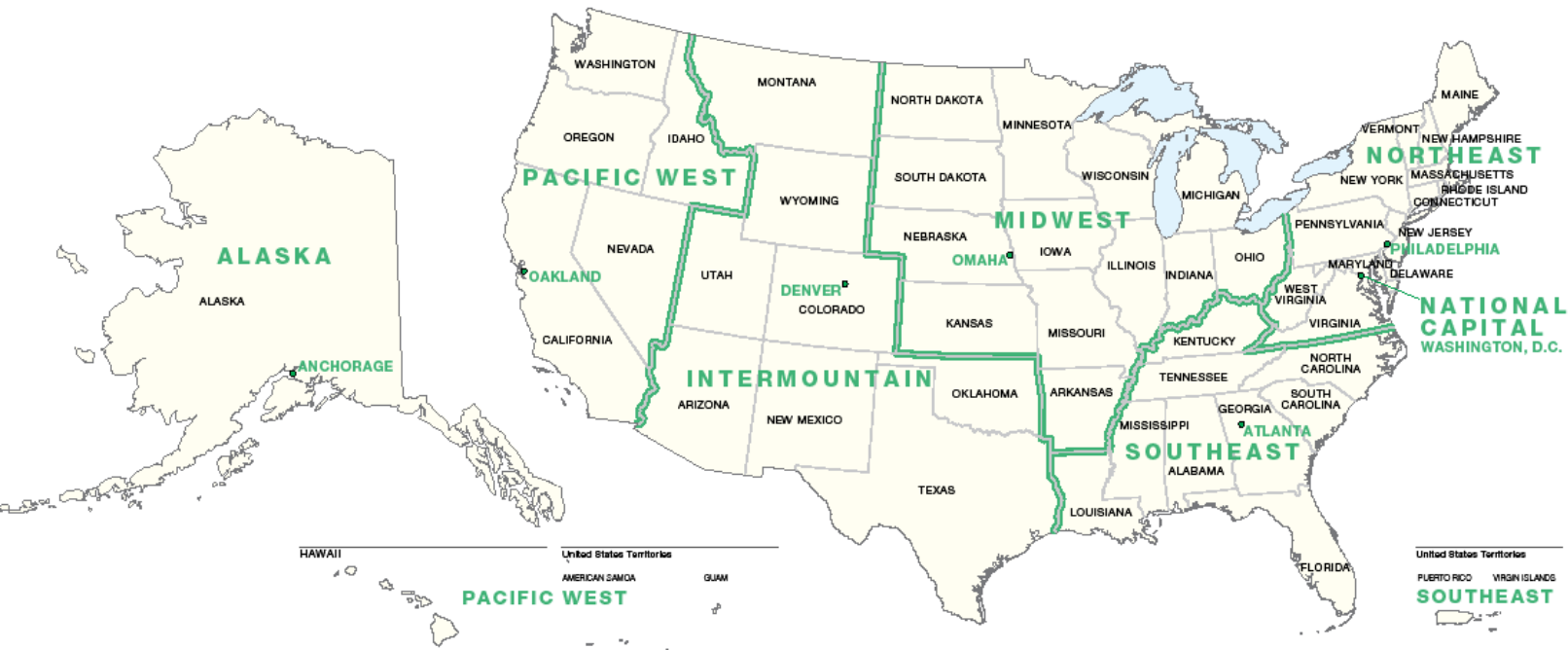
NPS

393
50+
311 M
285 M
\$ 11.6 B
110

NER

78 or 20%
13 or 26%
73 M or 24%
54 M or 19%
\$ 1.5 B or 13%
24 or 22%

EXPERIENCE
YOUR
AMERICA



National Park Service



NER Transportation Assets

EXPERIENCE
YOUR
AMERICA



National Park Service



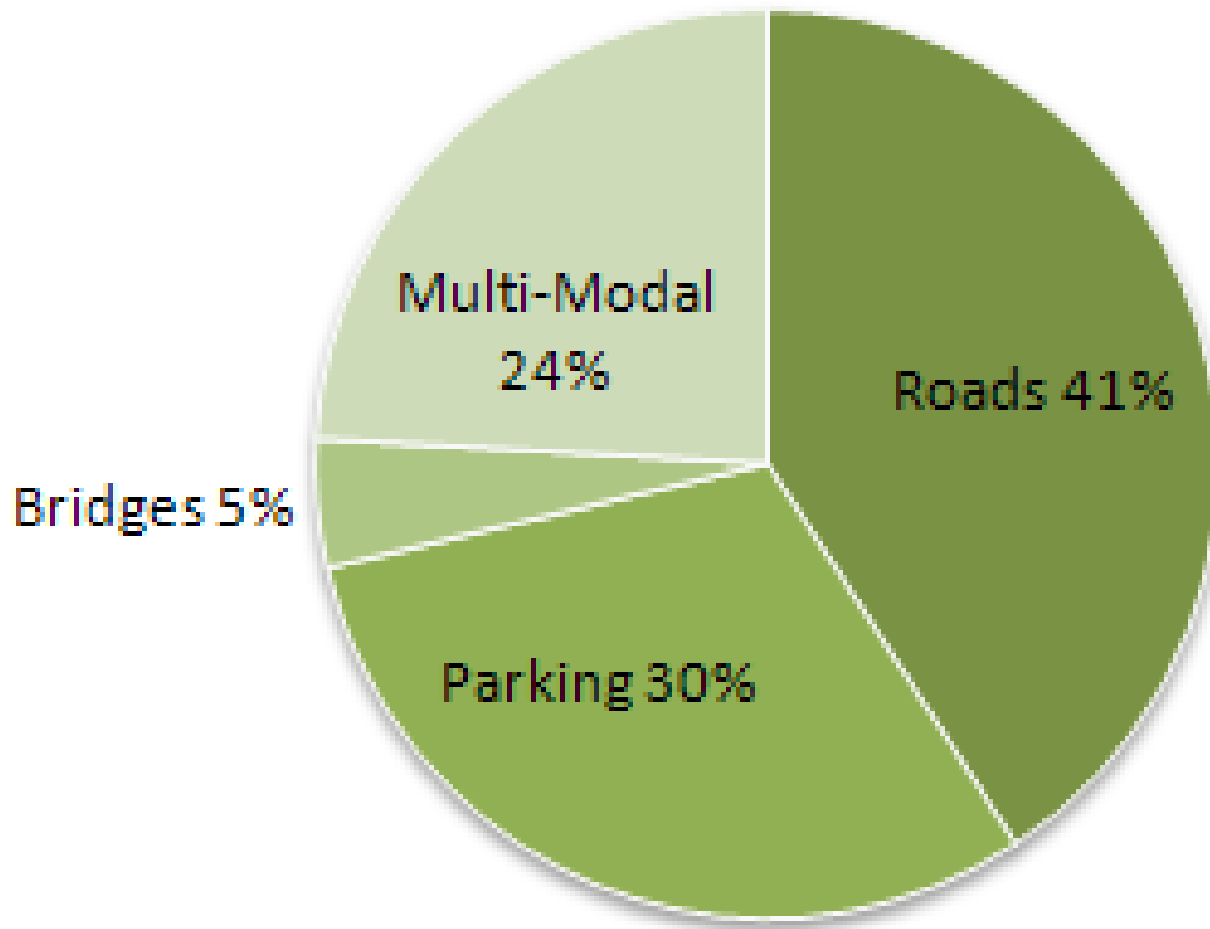
Road Network: Scenic, Historic and Unchanged

EXPERIENCE
YOUR
AMERICA





Transportation Assets

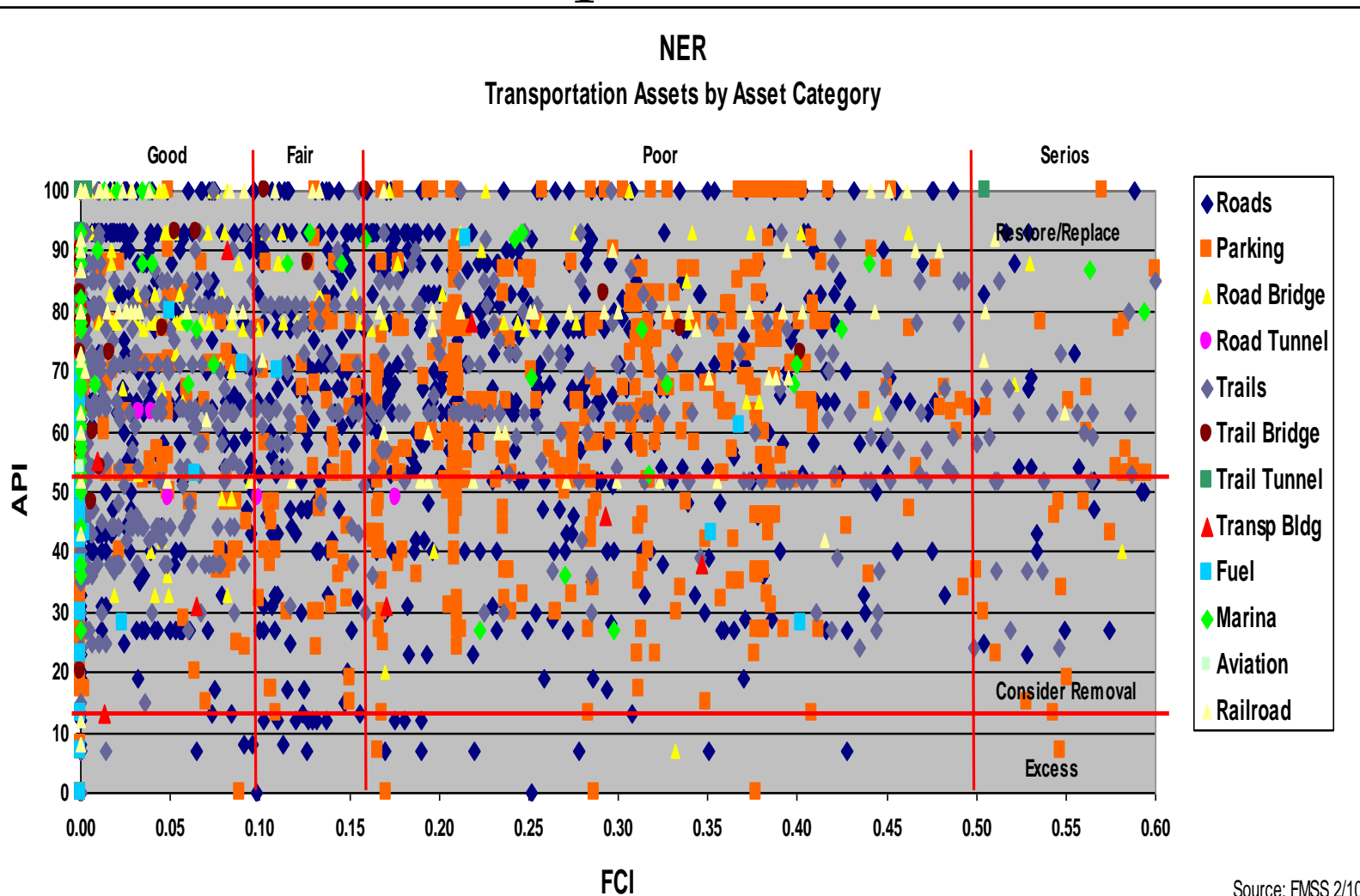


National Park Service



API / FCI Transportation Assets

EXPERIENCE
YOUR
AMERICA



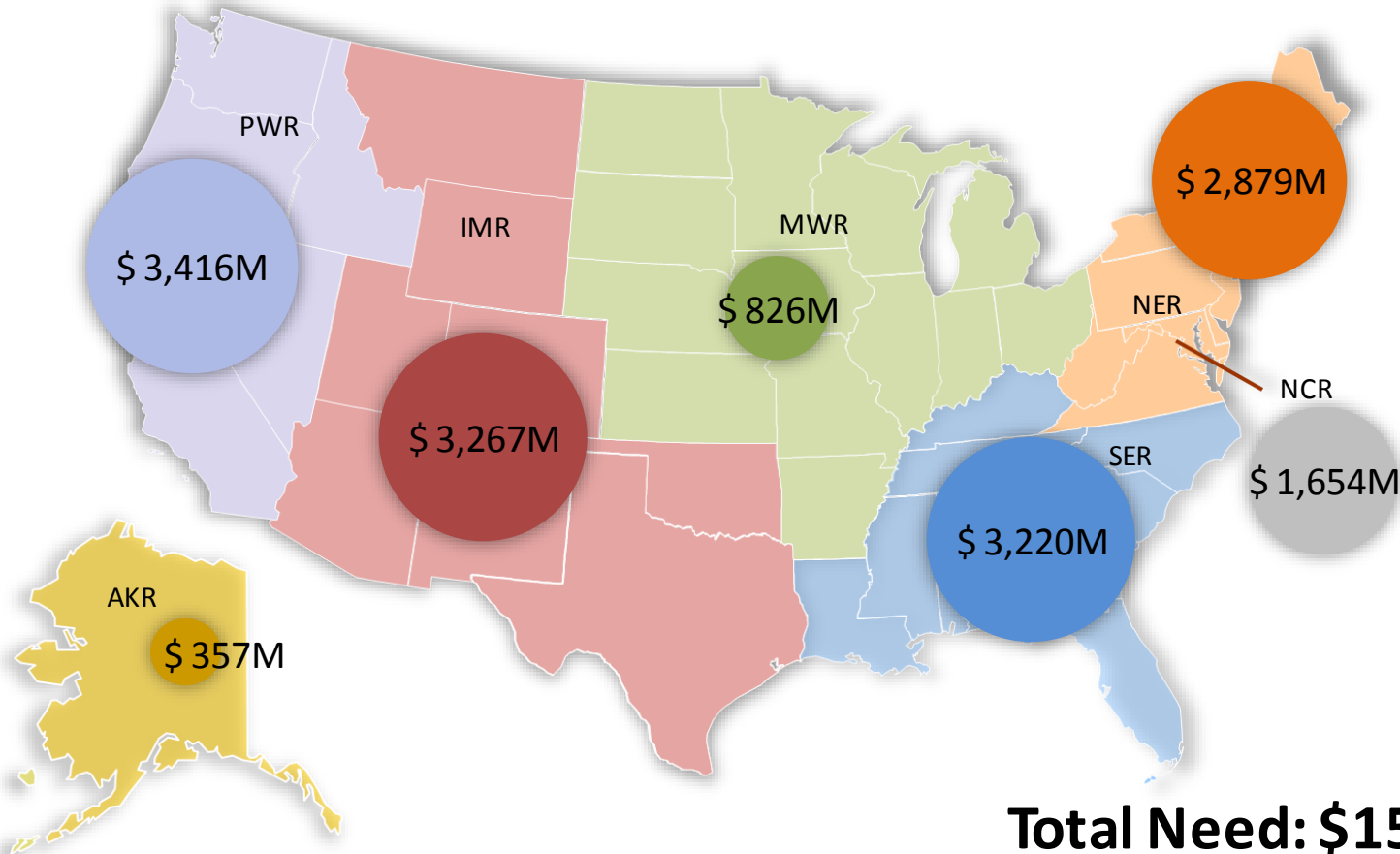
National Park Service



Total Deferred Maintenance Needs including Roads, Bridges and Multi-Modal Transportation

EXPERIENCE
YOUR
AMERICA

NER \$2.9 B = 18% of NPS





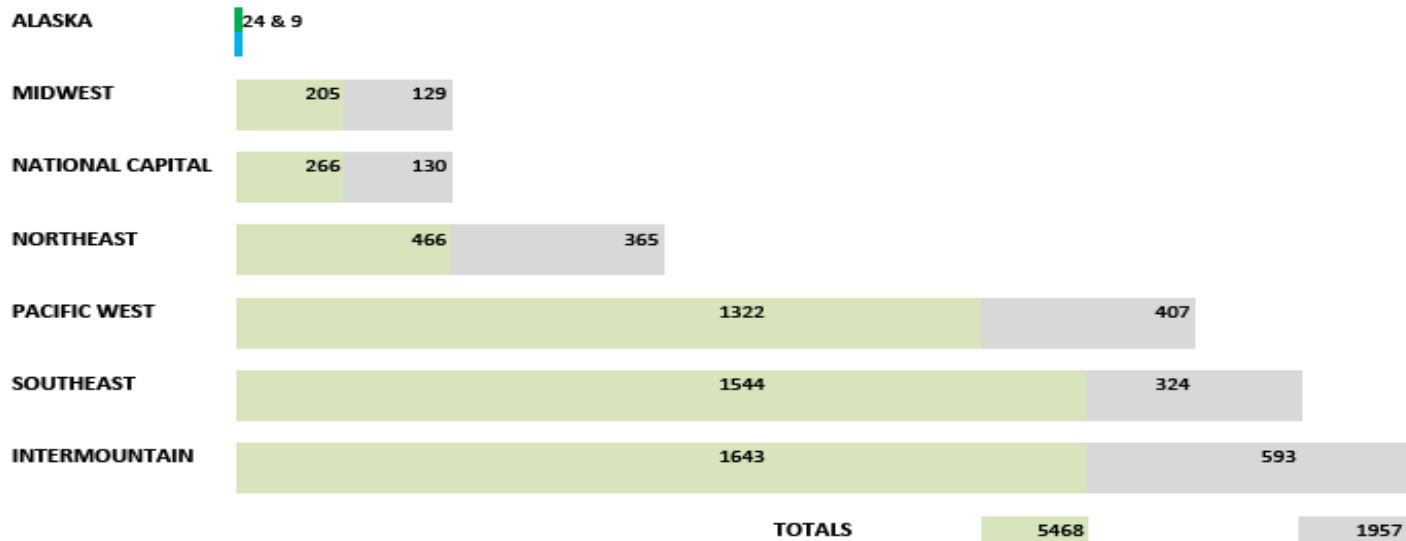
2. Road System

National Park Service



EXPERIENCE
YOUR
AMERICA

Paved Road and Equivalent Miles of Parking NER vs. NPS

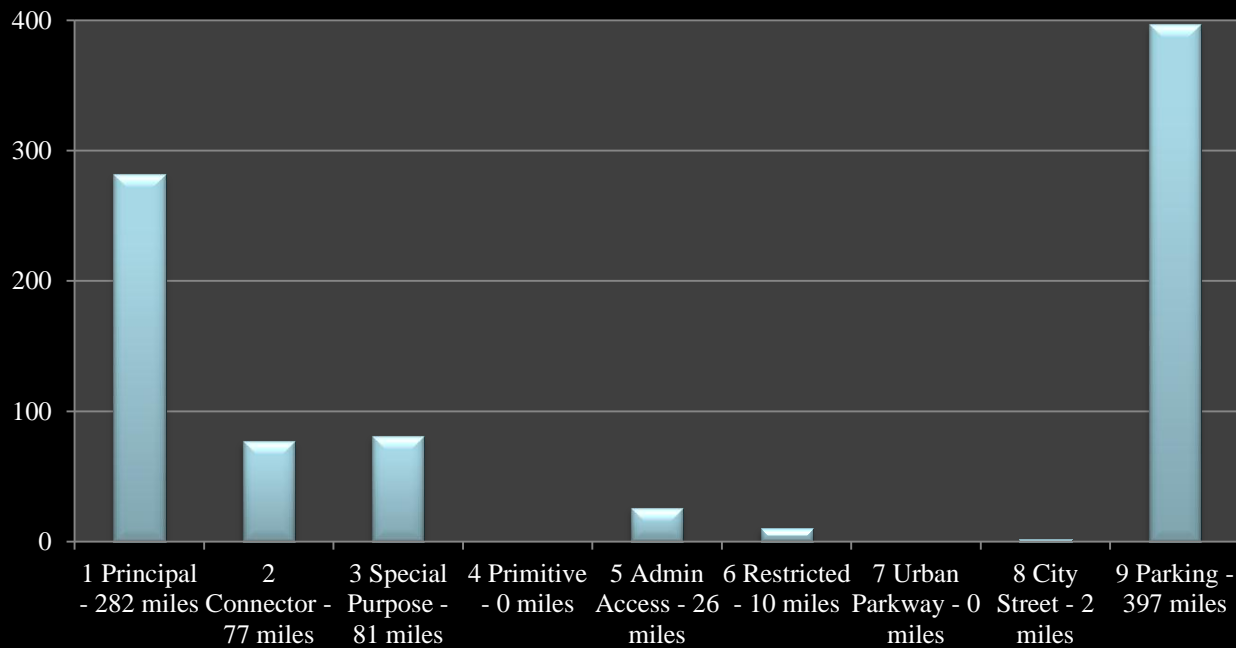


National Park Service



NER Paved Miles by Functional Class 478 Road Miles and 379 Parking Miles Equivalent

EXPERIENCE
YOUR
AMERICA





NER Funding

- \$15M FY10 Program Budget
- \$12M Construction Awards
 - Surface & Light 3R Treatments
- \$3M or 20% Planning, Design, Contracting and Supervision



3. Pavement Condition

National Park Service



EXPERIENCE
YOUR
AMERICA



The Road Inventory
of
Acadia National Park
ACAD - 1700



national park service



Road Inventory Program

Prepared By:
Federal Highway Administration
Eastern Federal Lands Highway Division
Cycle 3



- FHWA
Collects
Standard
Condition
Data for all
NPS Parks

National Park Service



Acadia National Park
Route Condition Area Map 3
PCR - Mile by Mile



- Collected on Cycles
- Parking Manually Rated
- Four Condition Categories

EXPERIENCE
YOUR
AMERICA

National Park Service



EXPERIENCE
YOUR
AMERICA

The Surface Condition Rating (SCR) and Roughness Condition Index (RCI) are combined to define the Pavement Condition Rating (PCR):

$$60\% \text{ SCR} + 40\% \text{ RCI} = \text{PCR}$$

National Park Service



NER 2009 Network Condition

EXPERIENCE
YOUR
AMERICA



Excellent Condition = 95 to 100 PCR

- Roads 8% or 36 Miles
- Parking 7%



Good Condition = 85 to 94 PCR

- Roads 42% or 193 Miles
- Parking 23%

(NER Goal is 85 PCR or Better)



Fair Condition = 61 to 84 PCR

- Roads 29% or 135 Miles
- Parking 35%



Poor Condition = 0 to 60 PCR

- Roads 21% or 97 Miles
- Parking 35%

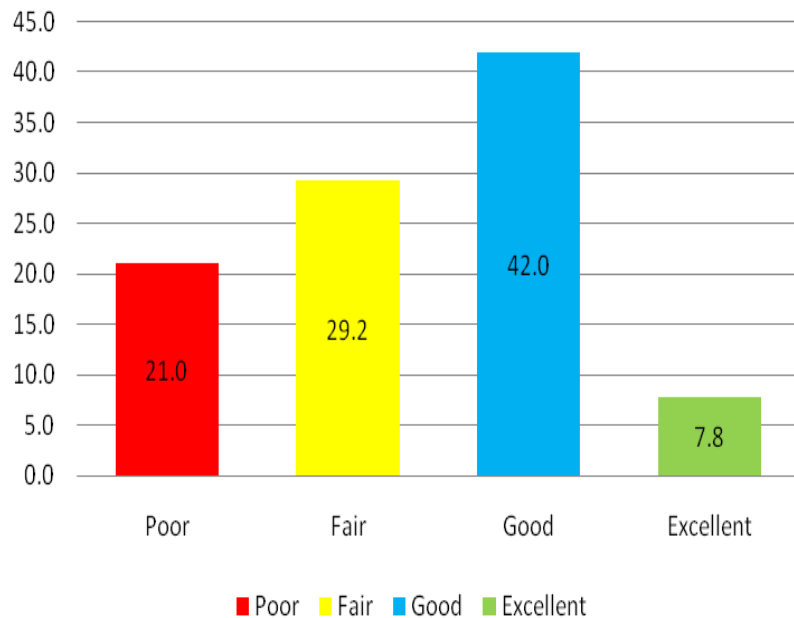
National Park Service



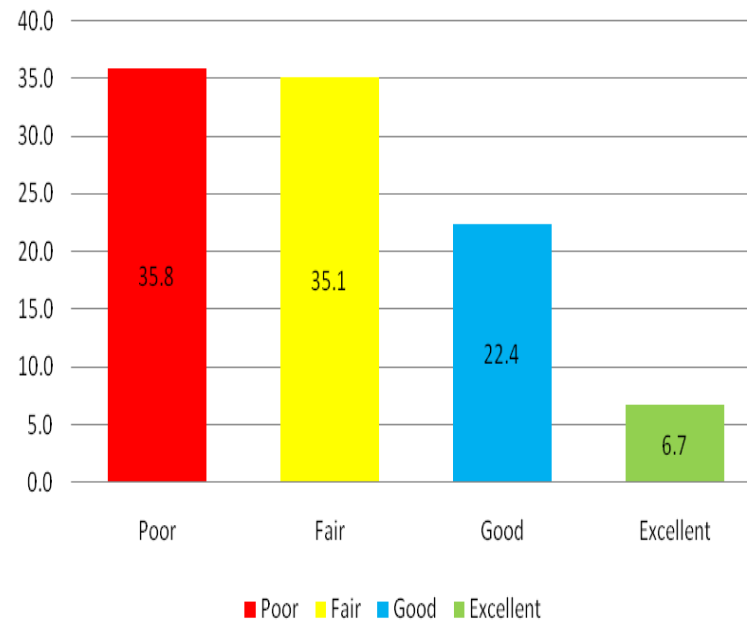
EXPERIENCE
YOUR
AMERICA

NER Pavement Condition Rating – 2009

Northeast Region - Roads Pavement Condition Categories



Northeast Region - Parking Areas Pavement Condition Categories





4. Comparisons

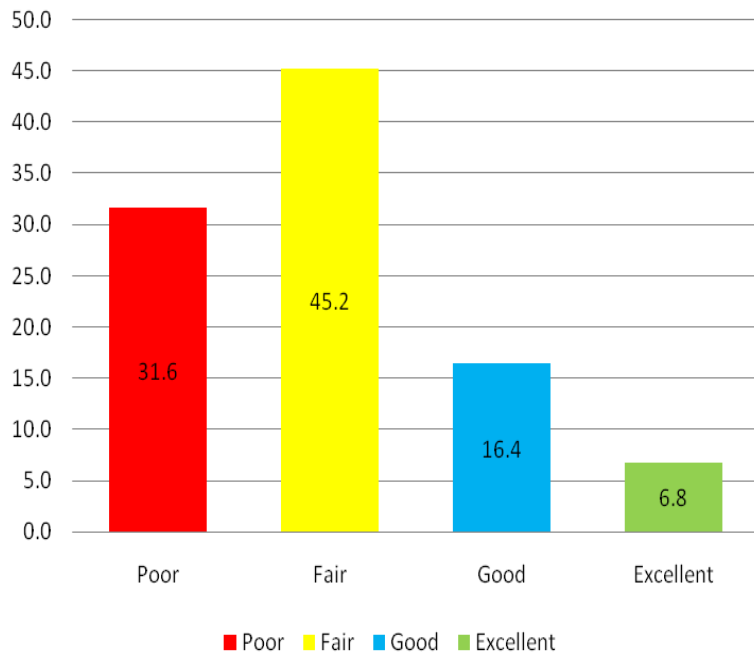
National Park Service



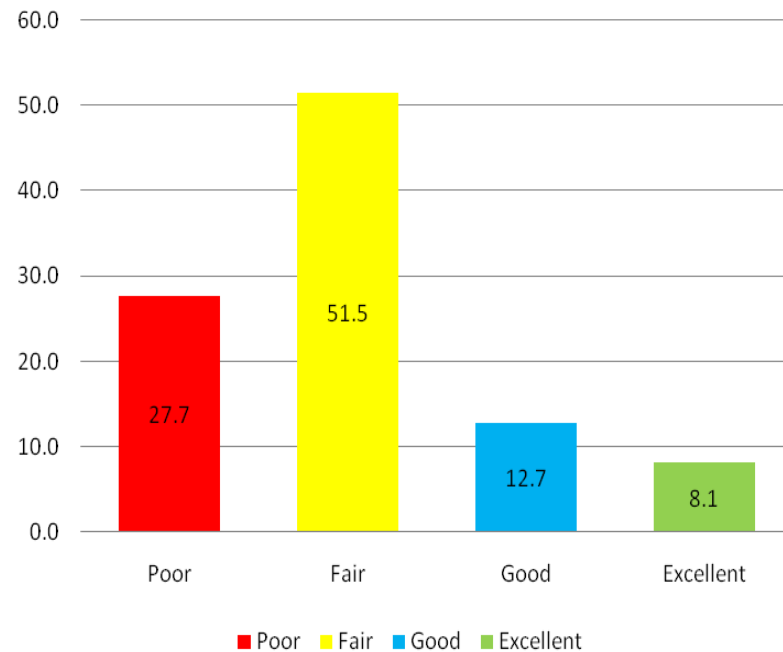
EXPERIENCE
YOUR
AMERICA

Servicewide Breakdown by Condition Category - 2009

National Average - Roads Pavement Condition Categories



National Average - Parking Areas Pavement Condition Categories

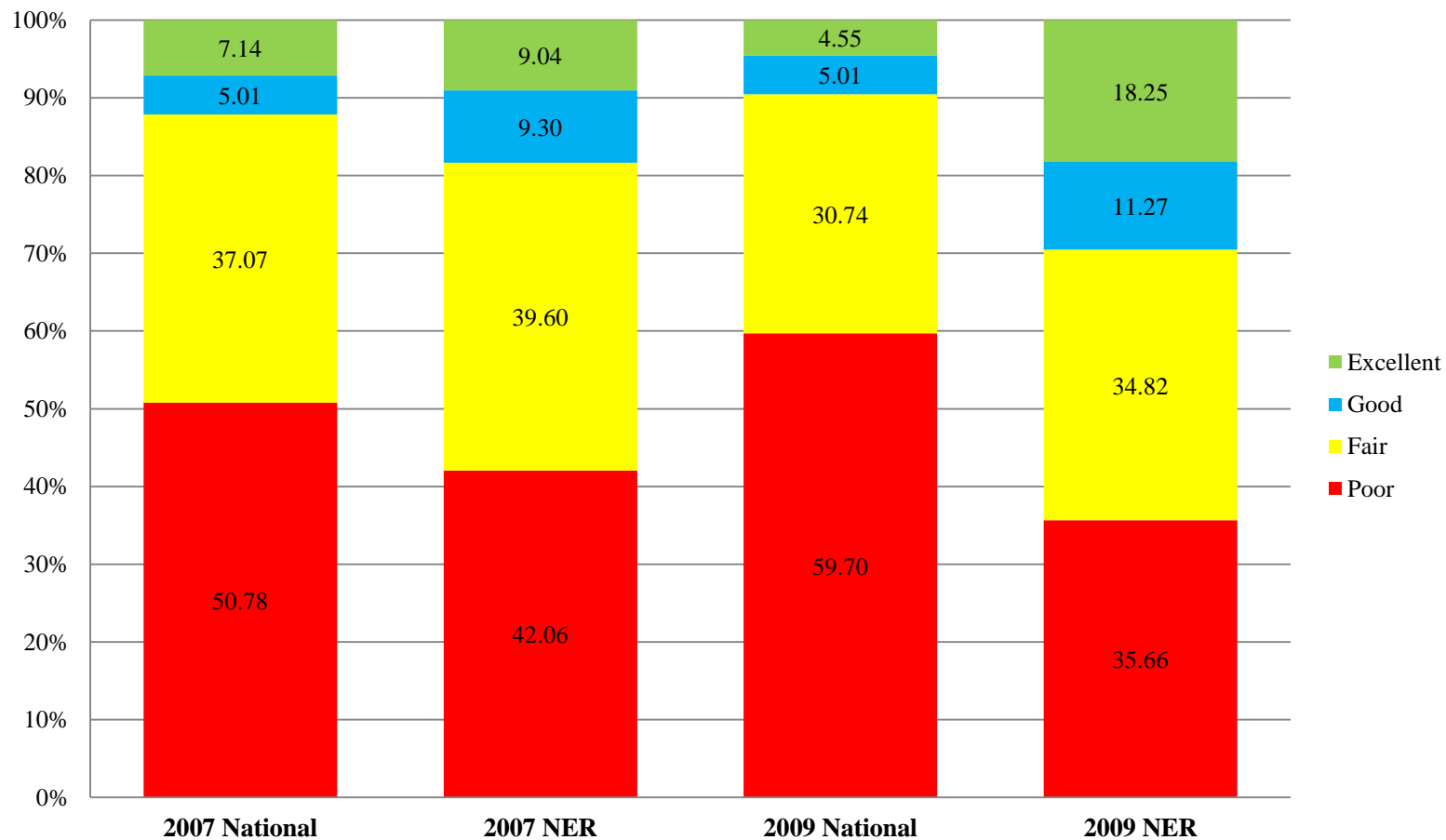


National Park Service



EXPERIENCE
YOUR
AMERICA

2007-2009 National-NER Comparison

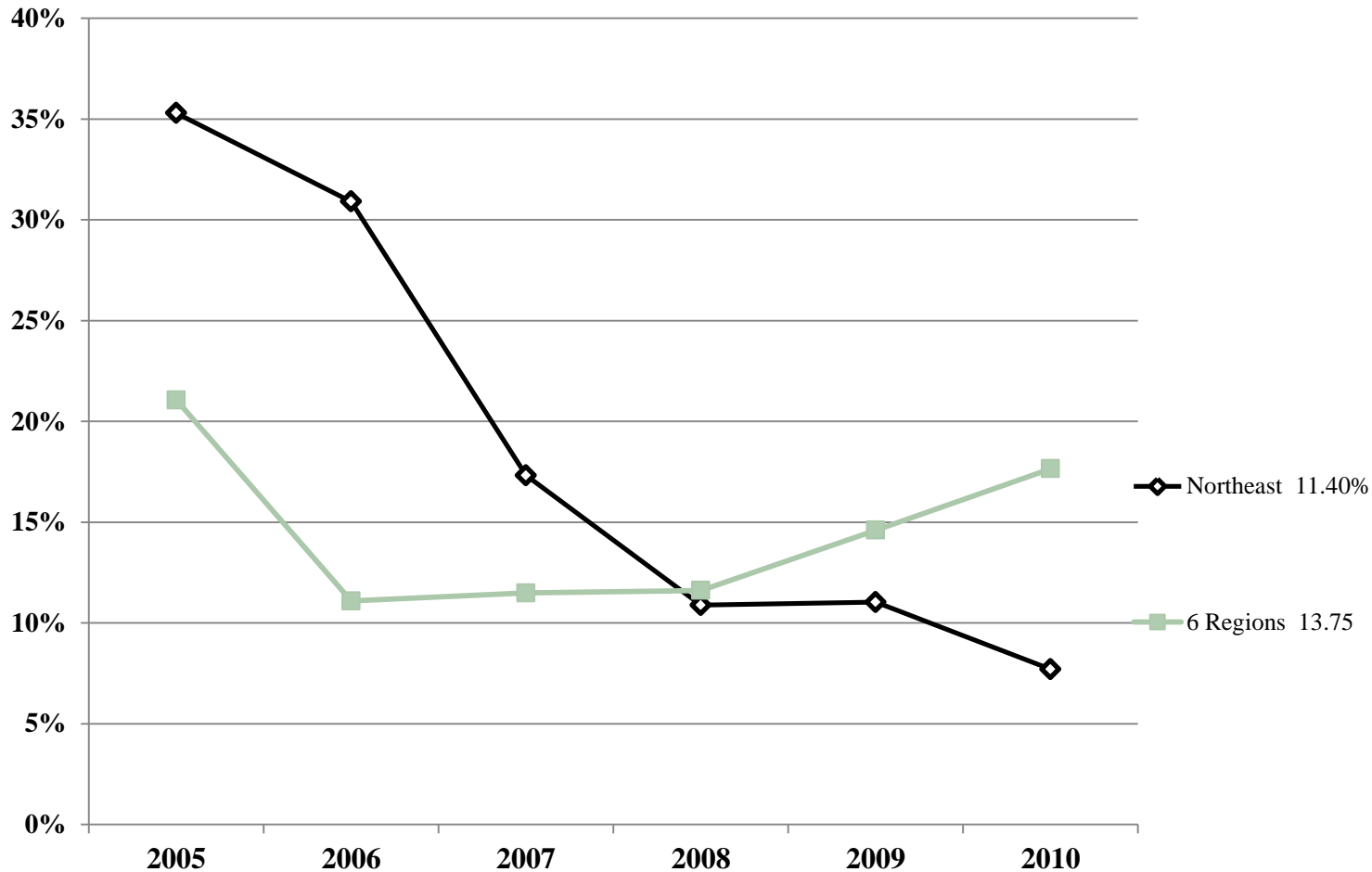


National Park Service



EXPERIENCE
YOUR
AMERICA

Construction Design (PE) to Construction (CN) Costs

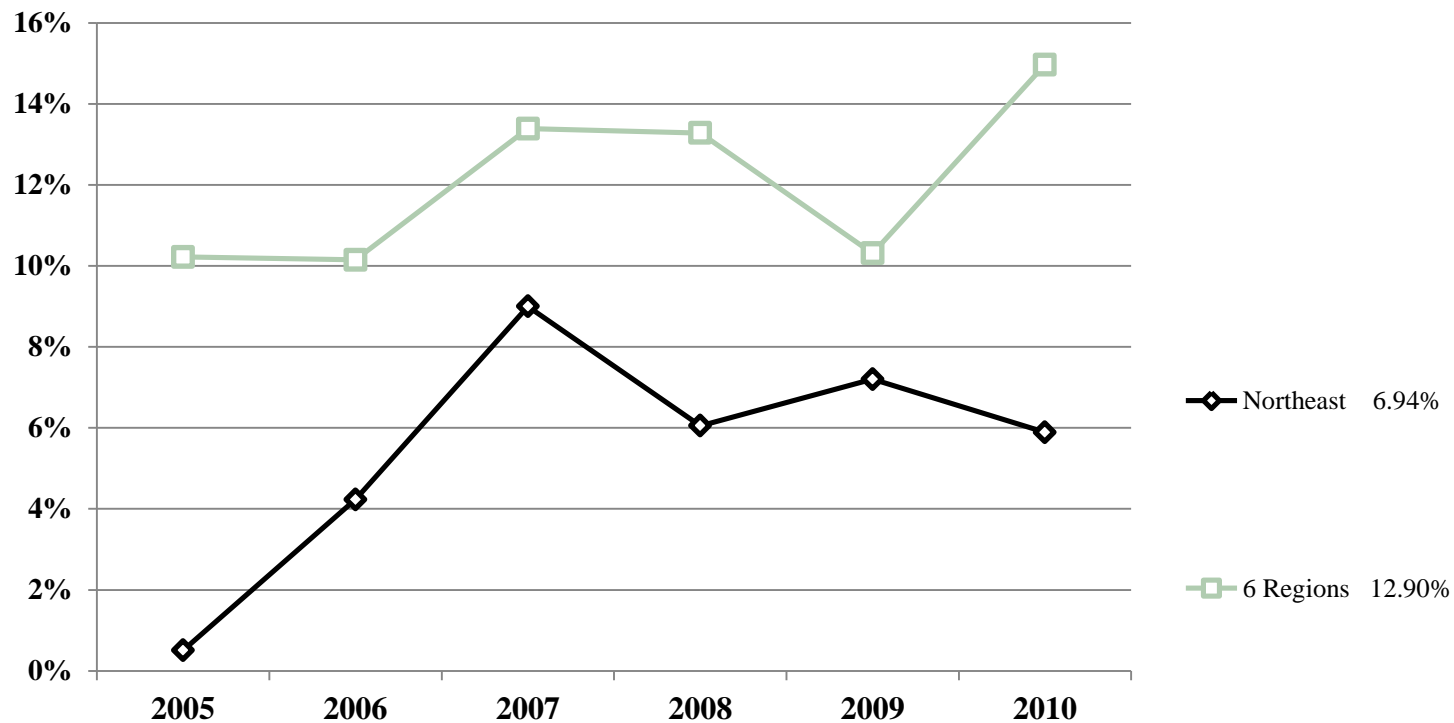


National Park Service



EXPERIENCE
YOUR
AMERICA

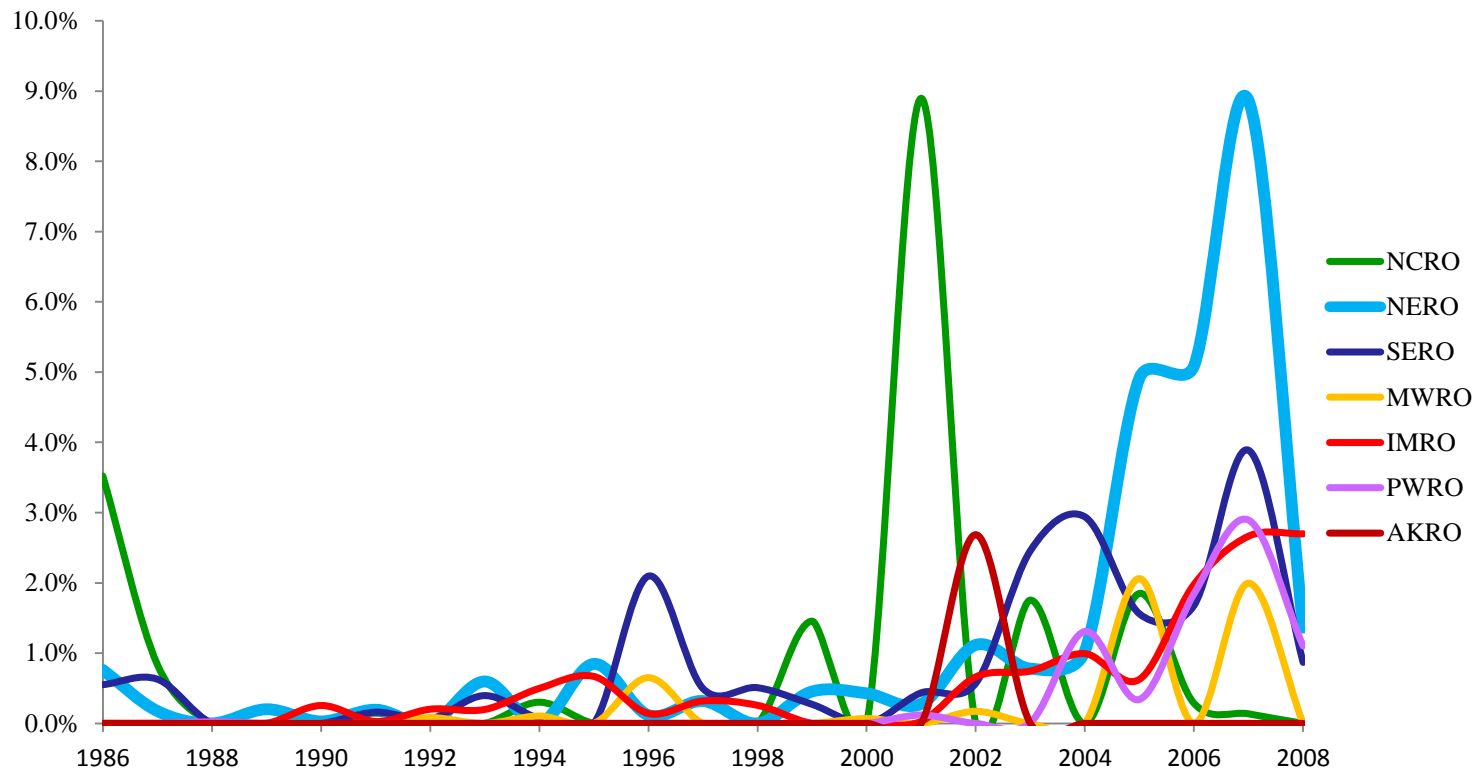
Construction Supervision (CE) to Net Construction (CN) Costs





- Project Miles as Pct. of Route Miles

EXPERIENCE
YOUR
AMERICA



National Park Service



EXPERIENCE
YOUR
AMERICA

Difference in Pavement Condition Ratings (Northeast - National)

	2007	2009
Excellent	+2%	+1%
Good	+4%	+26%
Fair	+3%	-16%
Poor	-9%	-11%



5. Preservation Approach

National Park Service



EXPERIENCE
YOUR
AMERICA

Approach:

- RIP Data Collection
- HPMA Modeling
- 100% Field Validation
- ROS Prioritization (Roadway Objective Score)
- Program Formulation

Key Assumptions:

- Focus on Primary Roads
- Stay Between the White Lines
- Minimize Investment in Parking Lots
- Demolish Non Performing Assets
- Minimize Design and Supervision Costs
- Follow Established Priorities



6. Projections

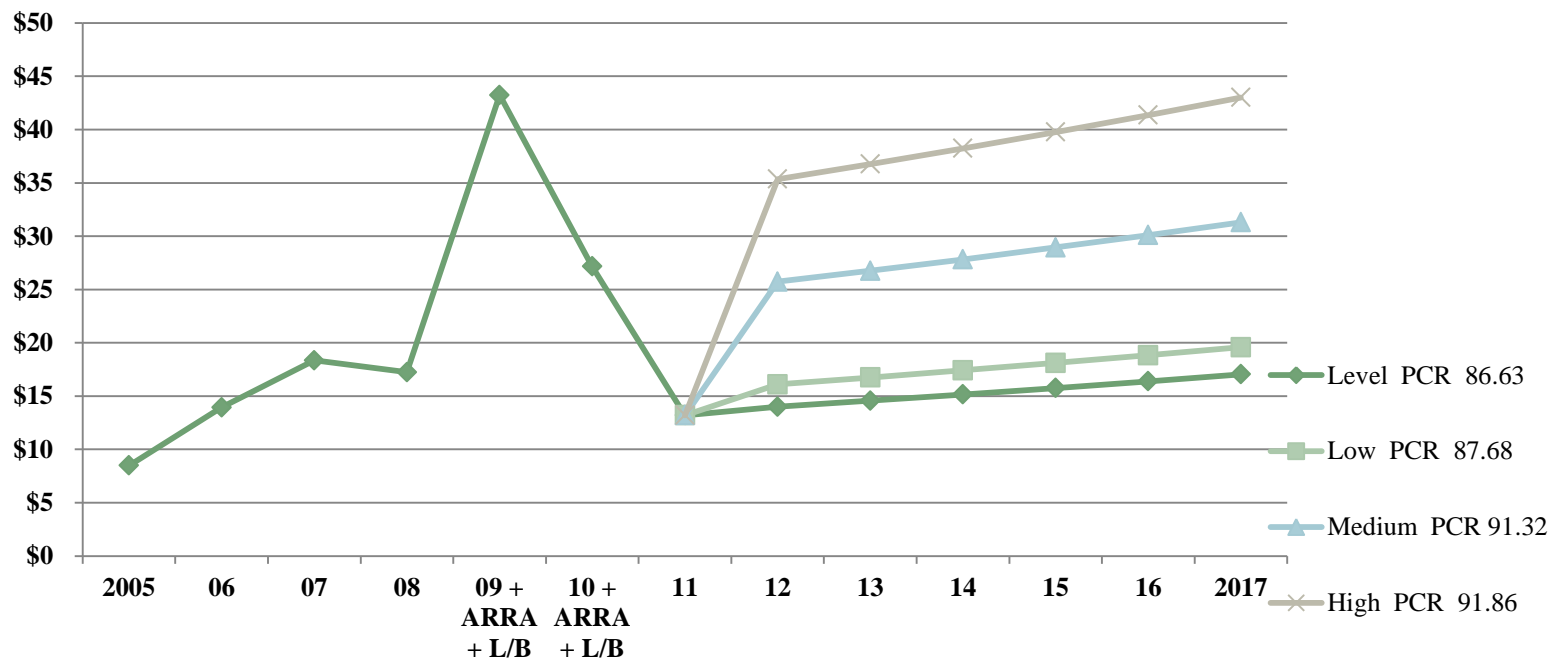


Route Miles – Pre and Post Pavement Management

- **Prior to 2005**
 - 4.7 Miles Per Year
 - 65 PCR in 2005
- **2005 thru 2010**
 - 50+ Miles Per Year
 - 76 PCR in 2010
- **Continue Approach Through 2017 with Increase in Surface Treatments to achieve minimum 85 PCR to optimum 94 PCR**



Funding and Reauthorization Scenarios

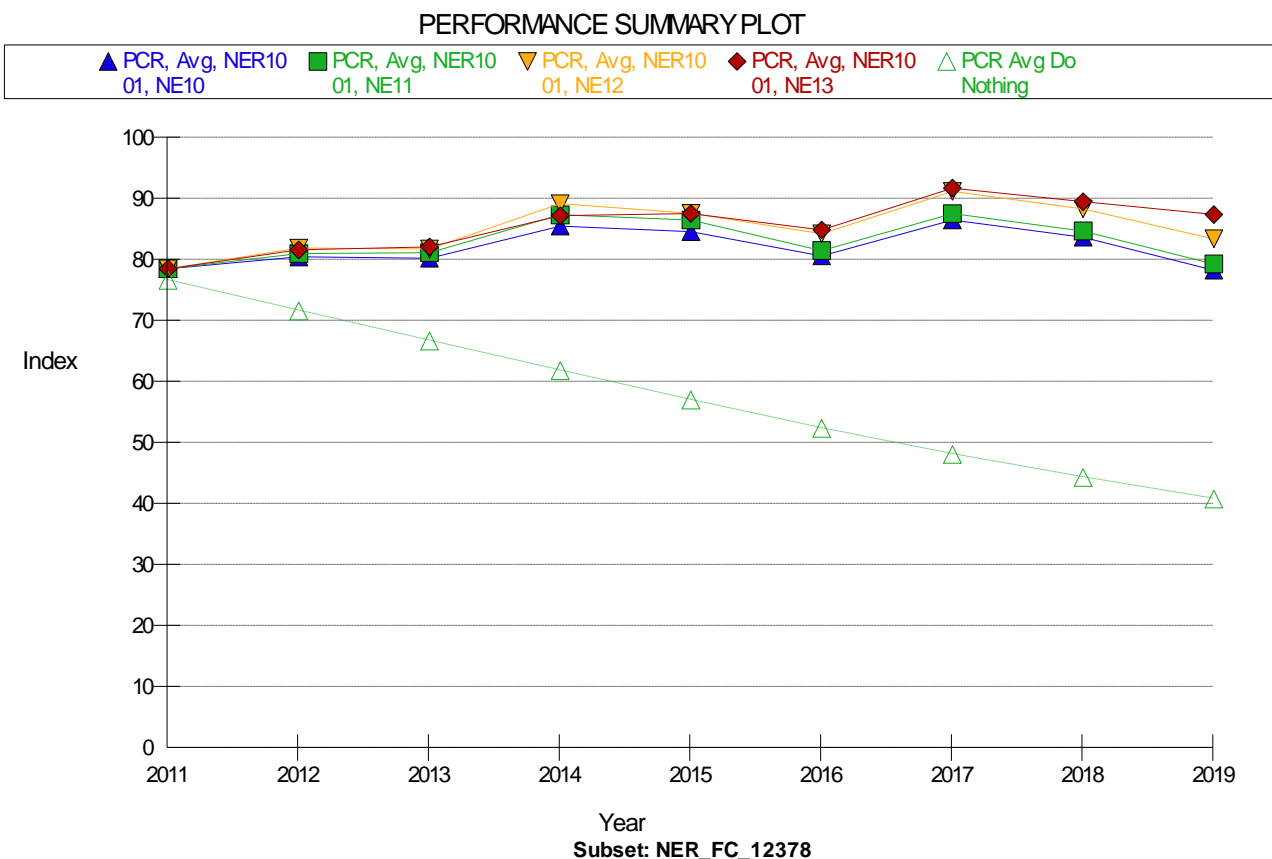


National Park Service



A Comparison of 4 funding levels over a 9-year analysis period – 2011-2019

EXPERIENCE
YOUR
AMERICA



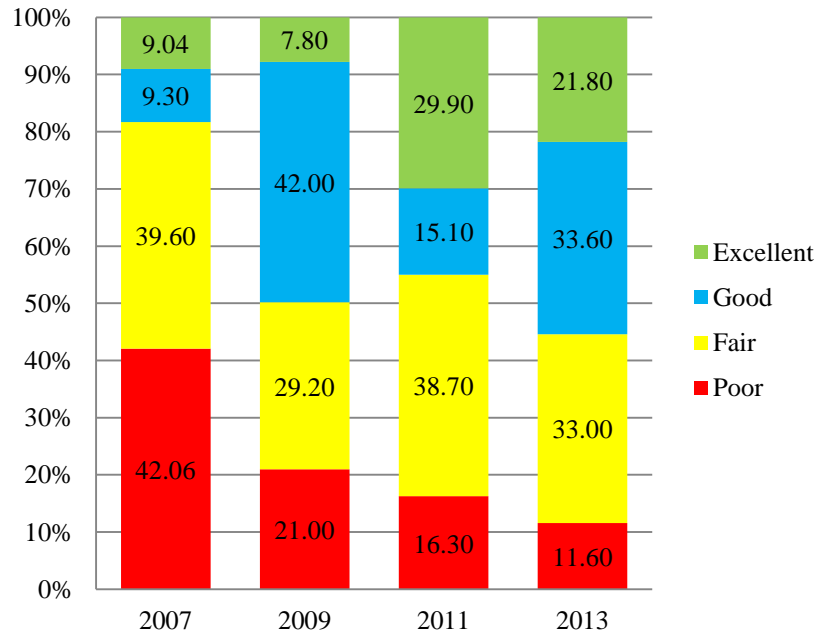
National Park Service



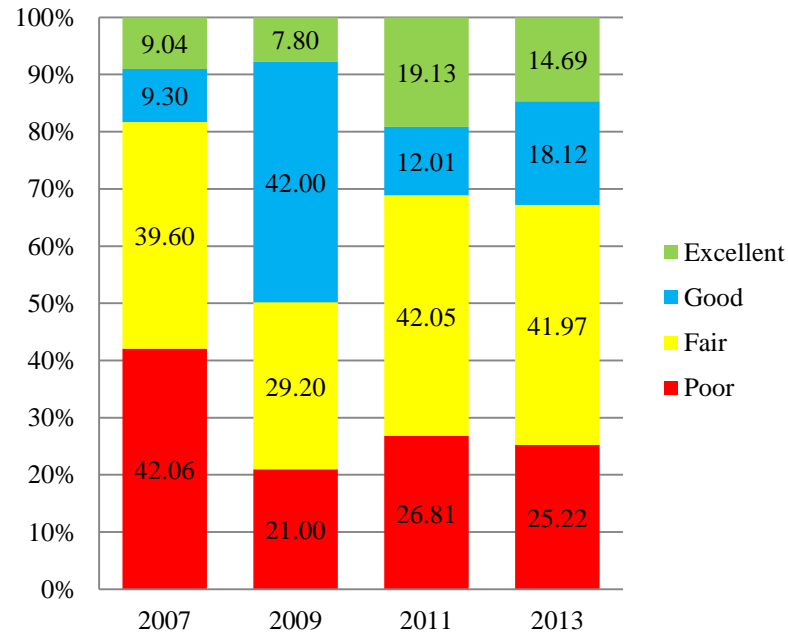
EXPERIENCE
YOUR
AMERICA

By 2013 Excellent and Good Categories will exceed 55% of the NER network (FC 12378)

Low Funding + 4% Inflation FC12378



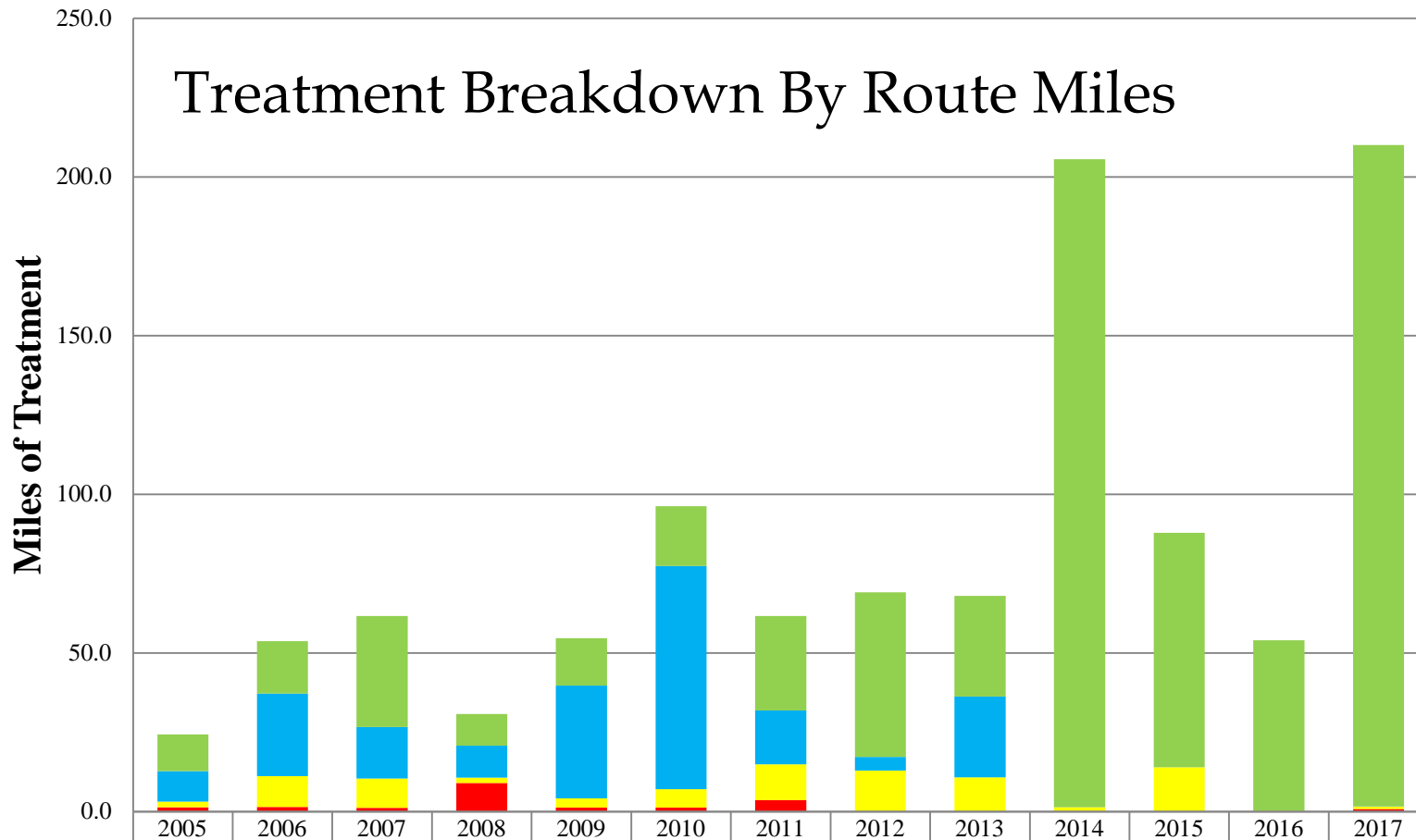
Low Funding + 4% Inflation All Function Classes



National Park Service



EXPERIENCE
YOUR
AMERICA



■ Preservation	11.6	16.5	35.0	10.0	15.0	18.9	29.7	51.9	31.7	204.3	73.9	53.8	208.4
■ Light 3R	9.6	26.0	16.2	10.0	35.5	70.3	17.0	4.3	25.5	0.0	0.0	0.0	0.1
■ Heavy 3R	1.8	9.7	9.2	1.7	2.9	5.8	11.3	13.0	10.8	1.4	14.0	0.3	0.7
■ 4R Reconstruct	1.4	1.5	1.2	9.1	1.3	1.3	3.6	0.0	0.0	0.0	0.0	0.0	0.9



7. Conclusions



Summary

- Continue Pavement Management & Preservation Program
- Increase Condition Data Collection Cycle
- Preserve Investment Thru Increased Preservation
- Focus - High Priority Roads - Where 80% of Visitors Travel
- “Outside the White Lines” - Only as Necessary
- Improve Highest Priority Visitor Parking
- Limited Heavy 4R Construction if Funding Allows
- Integrate Safety Countermeasure Priorities, Congestion Mitigation Priorities and Multi Modal Priorities

National Park Service



EXPERIENCE
YOUR
AMERICA

A photograph of a paved road with a double yellow line leading out of a dark cave opening. The road curves to the right and is flanked by trees with vibrant autumn foliage in shades of yellow and orange. The scene is brightly lit from the cave's exit, creating a strong contrast with the dark interior.

Questions?