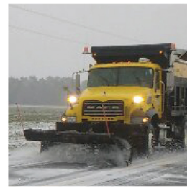
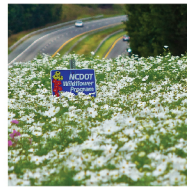


NORTH CAROLINA

Department of Transportation



Advancing Transportation Asset Management (TAM) at NCDOT

Patrick A. Norman, PE

NCDOT – Director of Highway Operations

SASHTO - 2019

Background

Statewide Mileage Inventory

Route Designation	Route Miles	Lane Miles	NHS Route Miles	NHS Lane Miles	% NHS by Route Miles	% NHS by Lane Miles
Interstate*	1,366.6	6,472.8	1,364.9	6,466.0	99.88%	99.89%
Primary	13,775.5	34,994.3	4,076.2	14,115.2	29.59%	40.34%
Secondary	64,901.1	131,612.4	197.1	762.9	0.30%	0.58%
Total State Maintained	80,043.2	173,079.5	5,638.2	21,334.1	7.02%	12.33%

Background

National Highway System Mileage Inventory

Route Designation	NHS Route Miles	NHS Lane Miles	% of Total NHS Route Miles	% of Total NHS Lane Miles
State Maintained	5,638.2	21,344.1	99.22%	99.19%
Federal	2.3	4.5	0.04%	0.02%
Local Government	42.0	170.7	0.74%	0.79%
Total NHS	5,682.5	21,519.3	100.00%	100.00%

96% of the NHS is contained within the Interstate & Primary System

Background

State System Structure Inventory

- 13,400+ Bridges (100M+ SF of Deck Area)
- 4,600+ NBIS Culverts



Marc Basnight Bridge – Dare County, NC - NC 12 Over Oregon Inlet

Background

Asset Management History

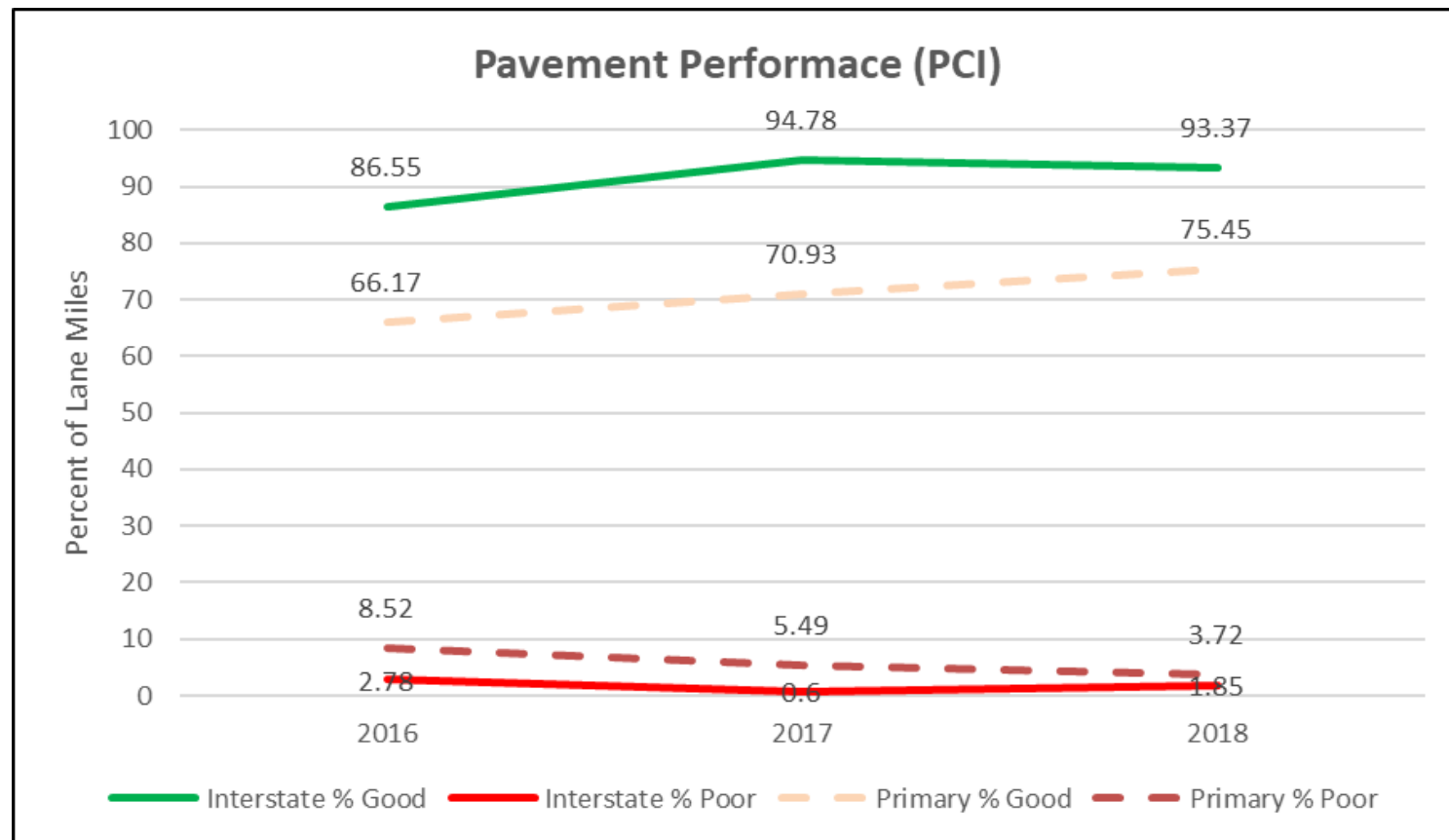
- A. Early Development of Management Systems
- B. Inspection/Survey Programs
- C. Data Available for Decision Making

“Without data,
you’re just another
person with an
opinion.”

-W. Edwards Deming

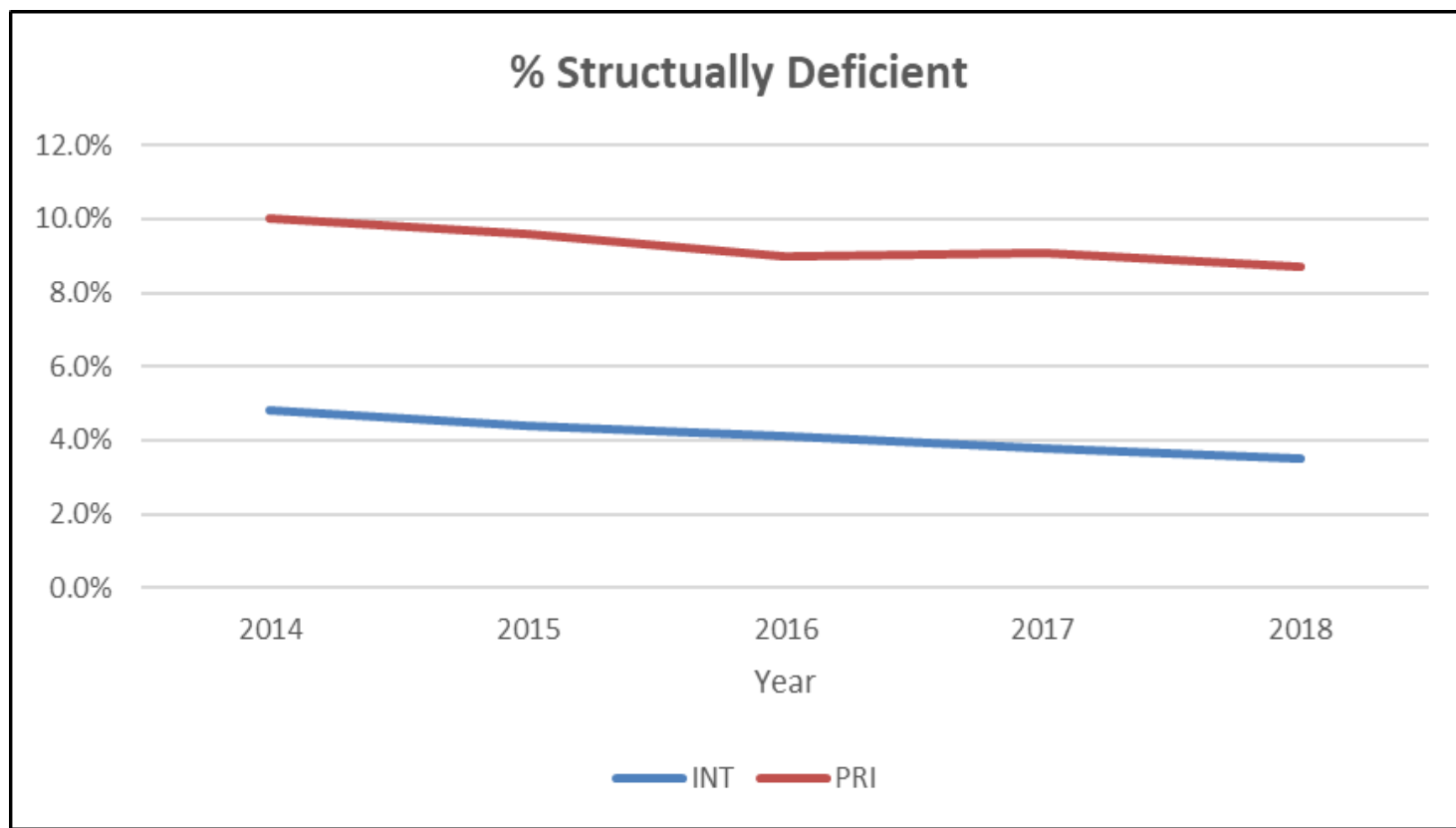
Background

Pavement Condition (NCDOT Measures)



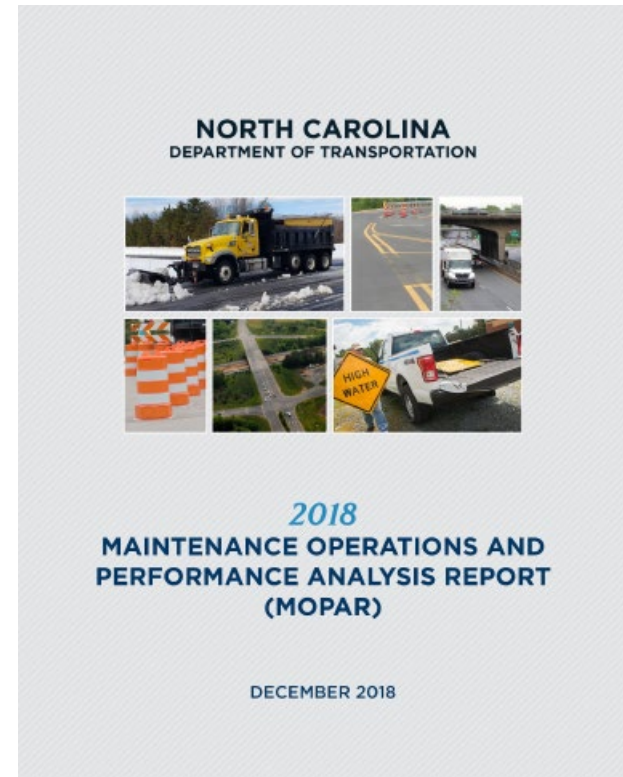
Background

Bridge Condition (NCDOT Measures)



Maintenance Operations and Performance Analysis Report (MOPAR)

- Established in 2014 (NCGS 136-44.3)
- Current condition and cost
- Projected condition and needs



Funding Programs

Primary Funding Sources:

- NCDOT Interstate Maintenance Program (Federal)
- Contract Resurfacing Program (State)
- Pavement Preservation Program (State)
- Bridge Program (State/Federal)
- Bridge Preservation Program (State)
- General Maintenance Reserve (State)

Investments

	Interstate Maintenance		General Maintenance Reserve		Preservation		Contract Resurfacing	Bridge Program
Fiscal Year	Pavement	Bridge	Pavement	Bridge	Pavement	Bridge	Pavement	Bridge
2018-19	110	20	286	37	98	82	507	348
2019-20	110	20	294	38	101	85	521	356
2020-21	110	20	306	40	104	88	542	367
2021-22	110	20	311	40	106	89	551	372
2022-23	110	20	315	41	108	91	558	376
2023-24	110	20	319	41	109	92	565	380
2024-25	110	20	331	43	113	95	587	392
2025-26	110	20	334	43	114	96	592	395
2026-27	110	20	337	44	115	97	598	398
2027-28	110	20	341	44	117	98	604	402

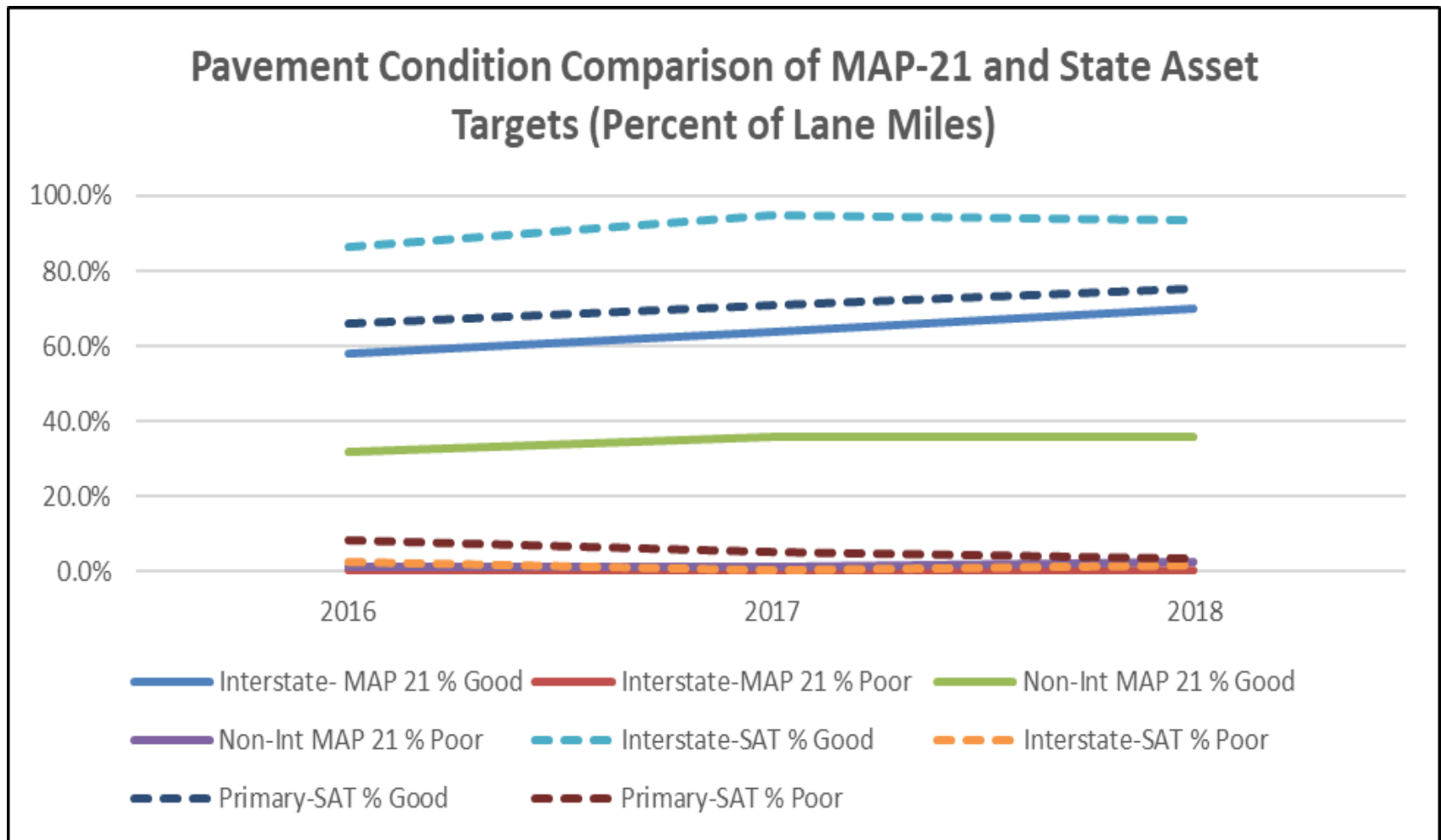
(\$ millions)

TAMP Development

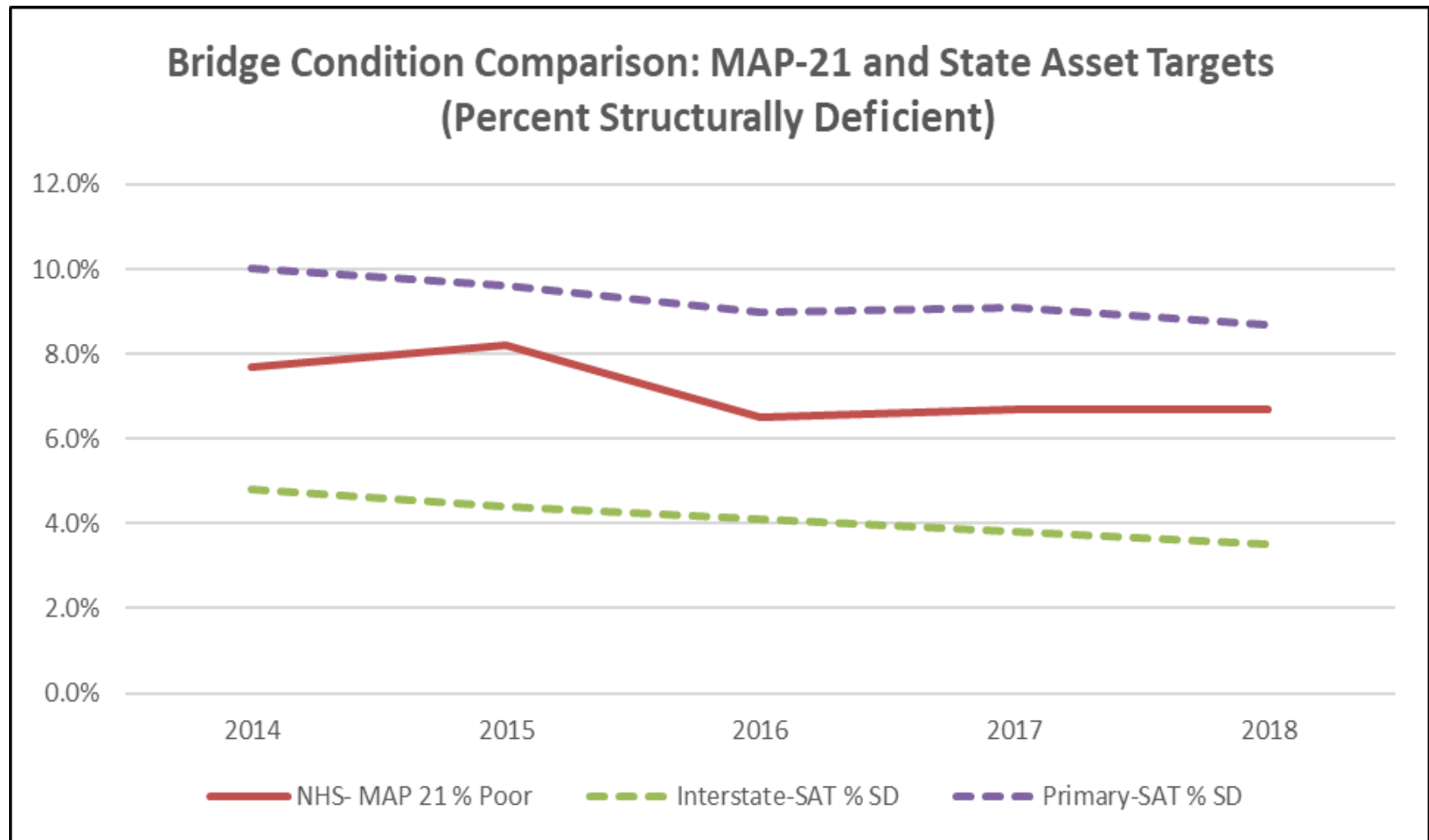
Key Items

- 96% of the NHS is contained with the Interstate and Primary Systems
- Investment decisions are not made specifically for NHS routes
- Funding Programs define projected investments and investment strategies by work type
- NHS performance should mirror that of State Asset Targets on interstate and primary systems

TAMP Development



TAMP Development



Next Steps

- Evaluate pavement and bridge condition performance on the NHS vs. Interstate & Primary
- Refine performance targets
- Refine management systems to more accurately predict NHS performance
- Refine financial investments based on performance
- Evaluate risks from changing weather patterns



Hurricane Florence Damage US 421

Questions?