



VTrans

Vermont Agency of Transportation

Vermont Agency of Transportation (VTrans)



**MICHAEL J. FOWLER, PE
PAVEMENT DESIGN ENGINEER**

**PROJECT DELIVERY BUREAU
HIGHWAY SAFETY AND DESIGN SECTION**

PAVEMENT DESIGN UNIT



- **Network of approximately 3800 Centerline Miles**
- **Share preventive maintenance treatment IRI improvement results on PPST/BWC and Micro-surfacing overlays**
- **Share how we are doing in terms of VTrans established performance measures**

INTERSTATE BONDED WEARING COURSE RESULTS

YEAR PAVED	PROJECT NAME	PROJECT #	ROUTE	WEARING COURSE	PRECON PROJ. AVG. IRI	POST CONST. PROJ. AVG. IRI	CHANGE IN IRI
2006	Williamstown-Montpelier	IM SURF(2)	I-89 SB	PPST	81.3	50.9	30.4
2007	Brookfield-Williamstown	IM SURF(3)	I-89 SB	PPST	93.3	54.1	39.2
2008	St. Albans-Highgate	IM SURF(5)	I-89 SB	PPST	73.1	45.9	27.2
2009	Rockingham-Springfield	IM SURF(10)	I-91 SB	PPST	59.9	49.3	10.6
2009	Brookfield-Berlin	IM SURF(11)	I-89 NB	PPST	66.5	53.6	12.9
2009	Colchester	IM SURF(12)	I-89 NB	PPST	74.5	56.0	18.5
2009	Colchester	IM SURF(12)	I-89 SB	PPST	74.3	51.5	22.8
2012	Fair Haven-Rutland	NH SURF(22)	US 4 EB	PPST	78.7	51.8	26.9
2012	Fair Haven-Rutland	NH SURF(22)	US 4 WB	PPST	81.5	51.7	29.8
2011	Springfield-Windsor	IM SURF(23)	I-91 SB	PPST	58.2	56.3	1.9
2011	Lyndon-Barton	IM SURF(25)	I-91 NB	PPST	66.0	53.3	12.7
2012	Swanton-Highgate	IM SURF(28)	I-89 NB	PPST	72.5	50.2	22.3
2012	Bennington-Manchester	NH SURF(29)	US 7	PPST	73.6	54.0	19.6
2012	Burlington-So.Burlington	IM SURF(30)	I-189 EB&WB	PPST	76.2	75.9	0.3
2012	Norwich-Bradford	IM SURF(31)	I-91 SB	PPST	52.2	50.7	1.5
2013	Waterbury-Richmond	IM SURF(33)	I-89 NB	PPST	68.4	48.0	20.4
2013	Waterbury-Richmond	IM SURF(33)	I-89 SB	PPST	61.9	58.4	3.5
2013	Lyndon-Barton	IM SURF(34)	I-91 SB	PPST	75.3	52.7	22.6
2013	Brattleboro-Westminster	IM SURF(37)	I-91 NB	PPST	63.6	44.3	19.3
2013	Brattleboro-Rockingham	IM SURF(37)	I-91 SB	PPST	59.7	43.5	16.2
2014	Fairlee-Newbury	IM SURF(40)	I-91 NB	PPST	61.1	43.2	17.9
2014	Bradford-Newbury	IM SURF(40)	I-91 SB	PPST	45.6	41.9	3.7
2014	Berlin-Montpelier	IM SURF(45)	I-89 NB	HIR/PPST	60.3	49.4	10.9
				AVE	69	52	17
				1STDEV	10.7	6.9	10.4

Current Limited Access Ride Spec. for 100% payment = 51.7 IRI



NON-INTERSTATE BONDED WEARING COURSE RESULTS

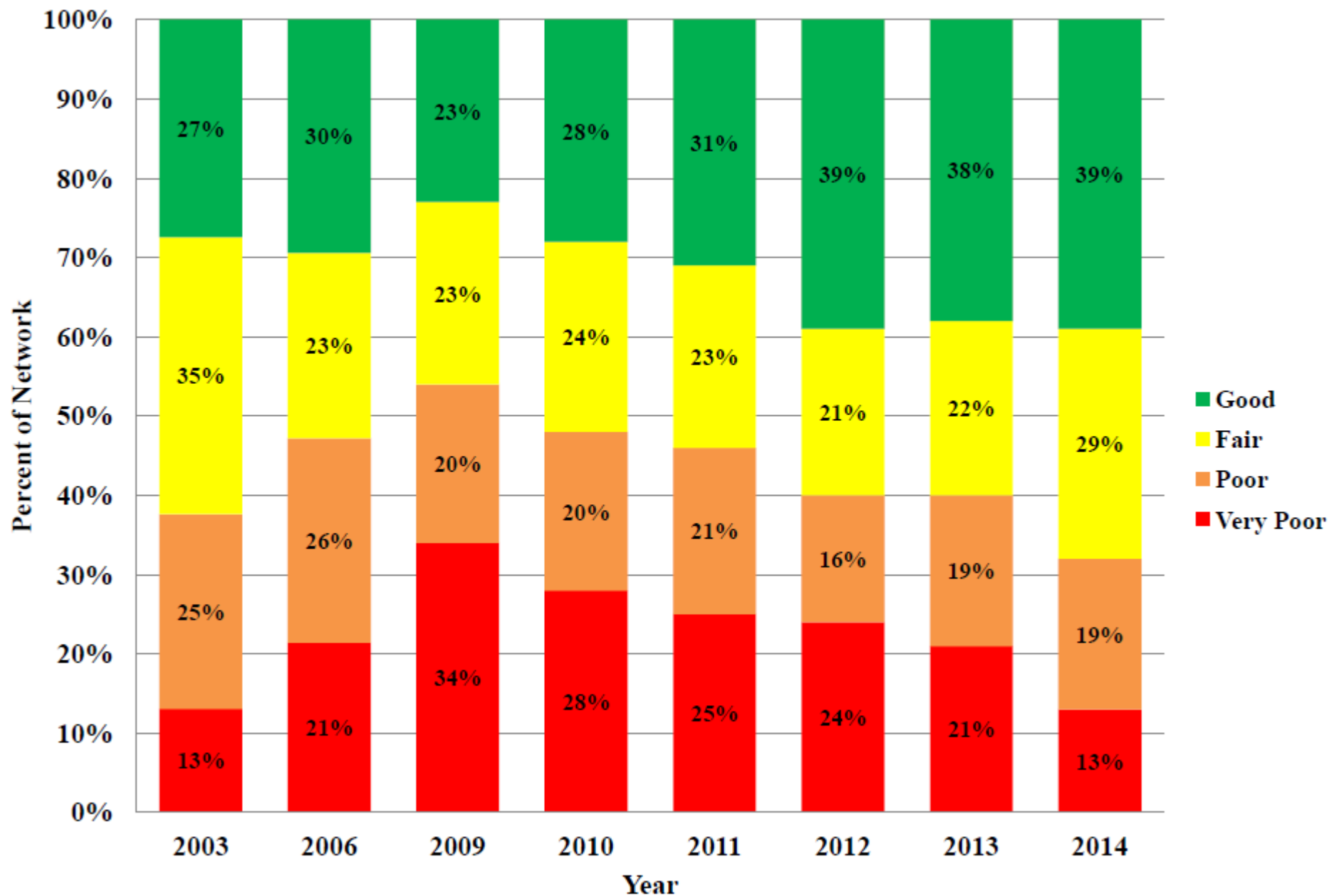
	<u>NON-LIMITED ACCESS</u>						
2010	Barre Town-Orange	STP SURF(15)	US 302	PPST	107.8	61.9	45.9
2010	Groton-Ryegate	STP SURF(16)	US 302	PPST	81.0	55.6	25.4
2011	Dorset-Danby	NH SURF(24)	US 7	PPST	89.2	68.4	20.8
2012	St. Johnsbury-Guildhall	NH SURF(32)	US 2	PPST	92.1	68.3	23.8
2013	Alburgh-North Hero	STP SURF(36)	US 2	IVS SHIM/PPST	142.8	62.7	80.1
2014	Grand Isle-Colchester	STP SURF(36)	US 2	IVS SHIMPPST	108.9	55.8	53.1
2014	Morgan-Brighton	STP SURF(41)	VT 111	HIR/PPST	102.3	55.7	46.6
2014	Pownal-Bennington	NH SURF(42)	US 7	PPST	90.7	63.0	27.7
2014	Brandon-Middlebury	NH SURF(43)	US 7	PPST	74.6	56.5	18.1
				AVE	98.8	60.9	37.9
				1STDEV	20	5	19
Current Non-Limited Access Ride Spec. for 100% payment = 61.6 IRI							



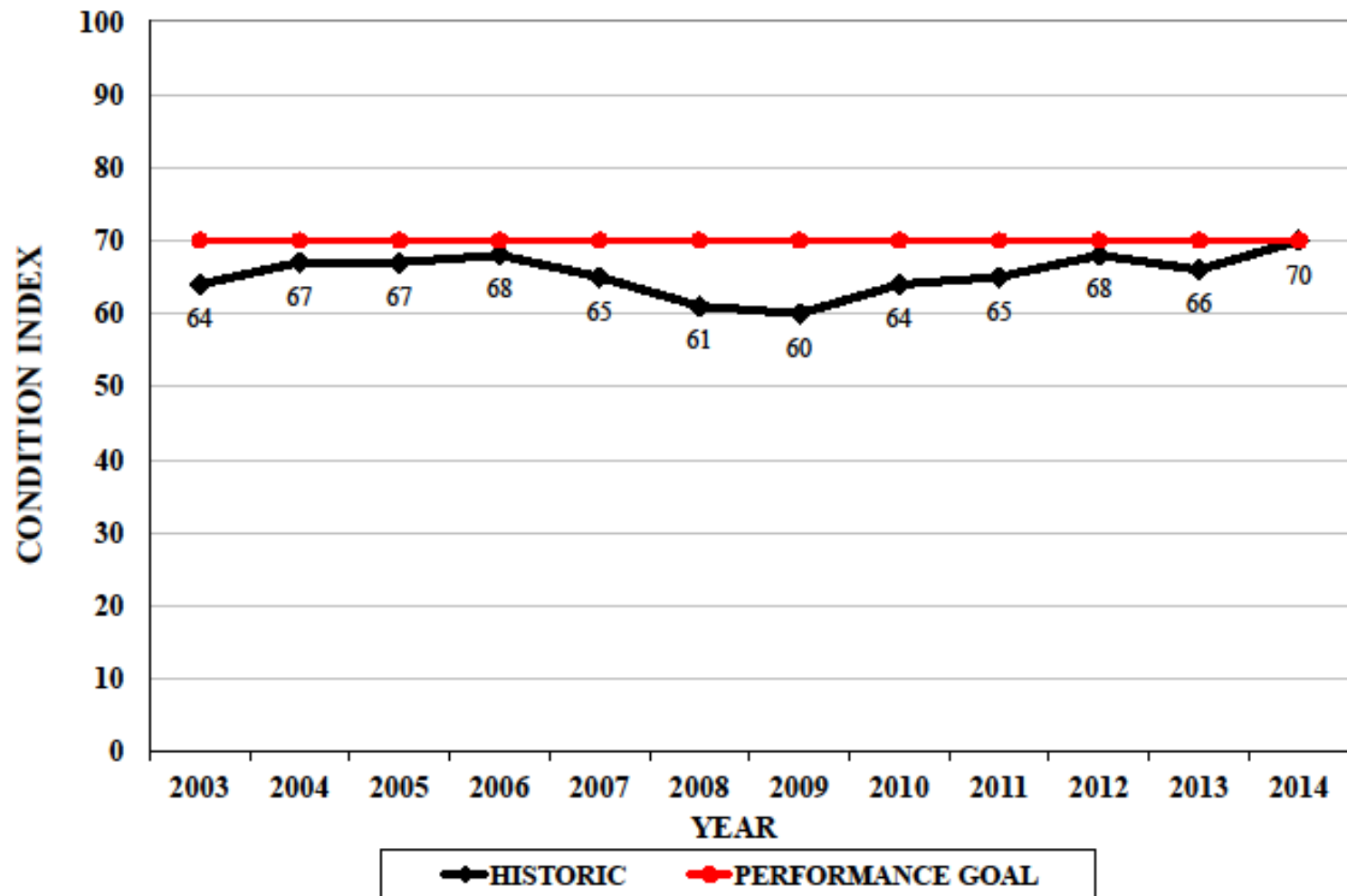
MICROSURFACE RESULTS

YEAR PAVED	PROJECT NAME	PROJECT #	ROUTE	WEARING COURSE	PRECON PROJ. AVG. IRI	POST CONST. PROJ. AVG. IRI	CHANGE IN IRI
	<u>LIMITED ACCESS</u>						
2007	Barnet-Waterford	IM SURF(4)	I-91 SB	Microsurface	70.2	63.1	7.1
2008	Newbury-Barnet	IM SURF(6)	I-91 SB	Microsurface	98.7	68.0	30.7
2009	Waterford-Lyndon	IM SURF(14)	I-91 NB	Microsurface	71.3	60.5	10.8
2009	Waterford-Lyndon	IM SURF(14)	I-91 SB	Microsurface	82.5	61.0	21.5
2010	Sheffield-Barton	IM SURF(18)	I-91 SB	HIR/Microsurface	105.2	56.3	48.9
2010	Norwich-Fairlee	IM SURF(19)	I-91 NB	Microsurface	54.4	55.1	-0.7
2011	Georgia-St. Albans	IM SURF(21)	I-89 NB	Microsurface	64.3	51.9	12.4
2011	Georgia-St. Albans	IM SURF(21)	I-89 SB	Microsurface	69.3	59.8	9.5
				<i>AVE</i>	77.0	59.5	17.5
				<i>1STDEV</i>	17.3	5.0	14.8
Current Limited Access Ride Spec. for 100% payment = 51.7 IRI							
	<u>NON-LIMITED ACCESS</u>						
2010	Ryegate-Newbury	STP SURF(17)	US 302	HIR/Microsurface	115.8	92.5	23.3
Current Non-Limited Access Ride Spec. for 100% payment = 61.6 IRI							

% Conditions Over Time - Unweighted



TRAVEL WEIGHTED AVERAGE NETWORK CONDITION 2014





Questions?

Contact Information

Michael J. Fowler

Mike.fowler@state.vt.us

802-828-0160