

# 2019 MITS DATA

MARCH 10, 2020

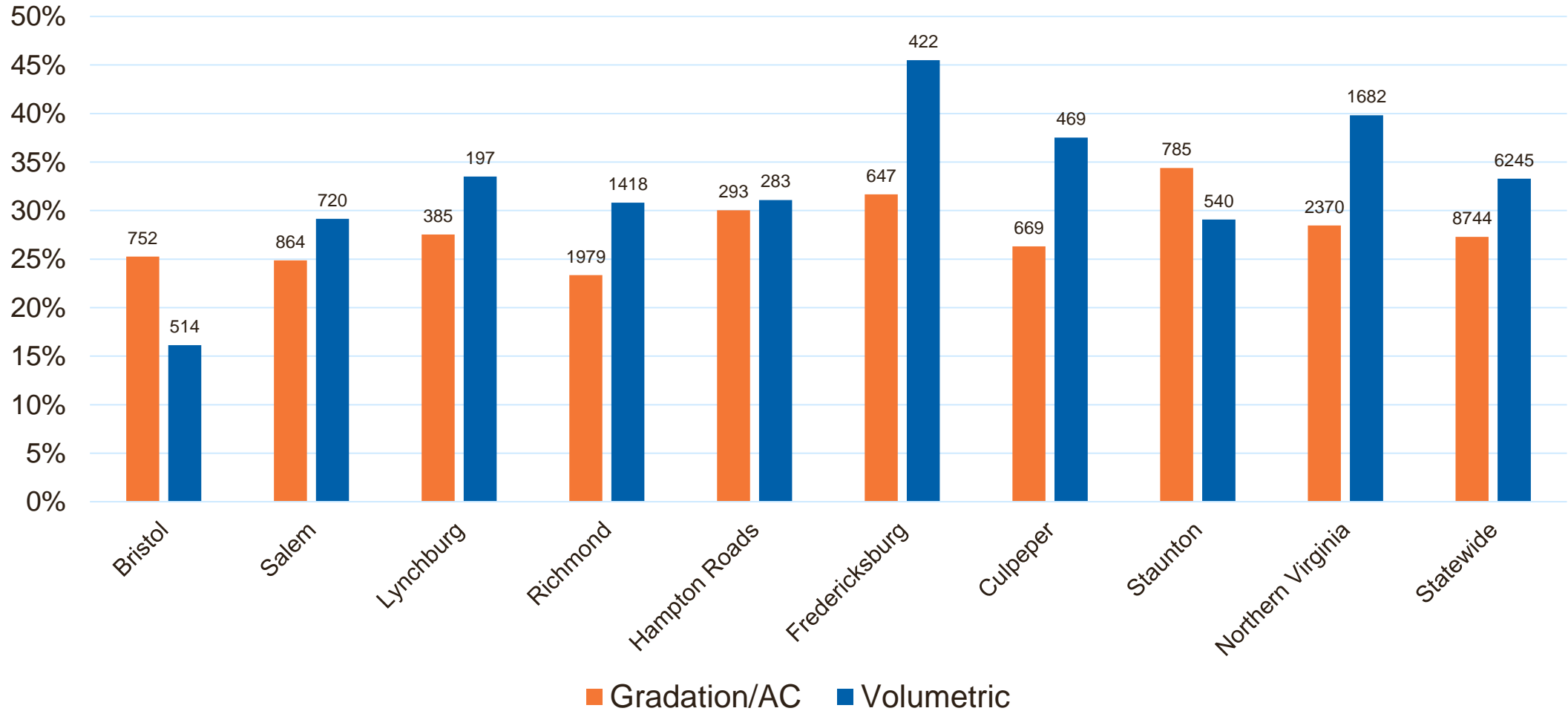
**CO Materials** / Sungho Kim, Ph.D., P.E.

# Sample Submission Time

District	% within 24 hr				% within 2 hr			
	2017	2018	2019	Sparkline	2017	2018	2019	Sparkline
Bristol	89%	92%	82%		2.1%	4.2%	3.6%	
Salem	86%	84%	86%		0.7%	0.4%	0.1%	
Lynchburg	92%	86%	85%		0.4%	0.8%	0.8%	
Richmond	90%	91%	84%		1.9%	1.1%	1.7%	
Hampton Roads	83%	80%	75%		0.1%	0.7%	1.0%	
Fredericksburg	94%	95%	94%		0.3%	0.6%	1.4%	
Culpeper	86%	86%	86%		0.7%	0.8%	0.3%	
Staunton	72%	86%	79%		0.8%	0.8%	1.8%	
NOVA	88%	89%	91%		1.3%	1.0%	0.5%	
<b>Statewide</b>	<b>87%</b>	<b>89%</b>	<b>86%</b>		<b>1.2%</b>	<b>1.3%</b>	<b>1.2%</b>	

# Sample Rate

2019 Sample Submission Rate (# of producer samples above bars)



# 2019 Gradation/AC Flags

	Producer	VDOT	d2S
Total Samples	8750	2388	
1"	128	72	77
3/4"	541	281	101
1/2"	719	362	100
3/8"	1021	462	97
No. 4	1555	668	57
No. 8	1731	794	63
No. 16	15	7	1
No. 30	435	233	36
No. 50	1	0	0
No. 100	1	0	0
No. 200	830	507	23
AC	1639	784	135
Total Flagged Samples	4794	<u>1888</u>	

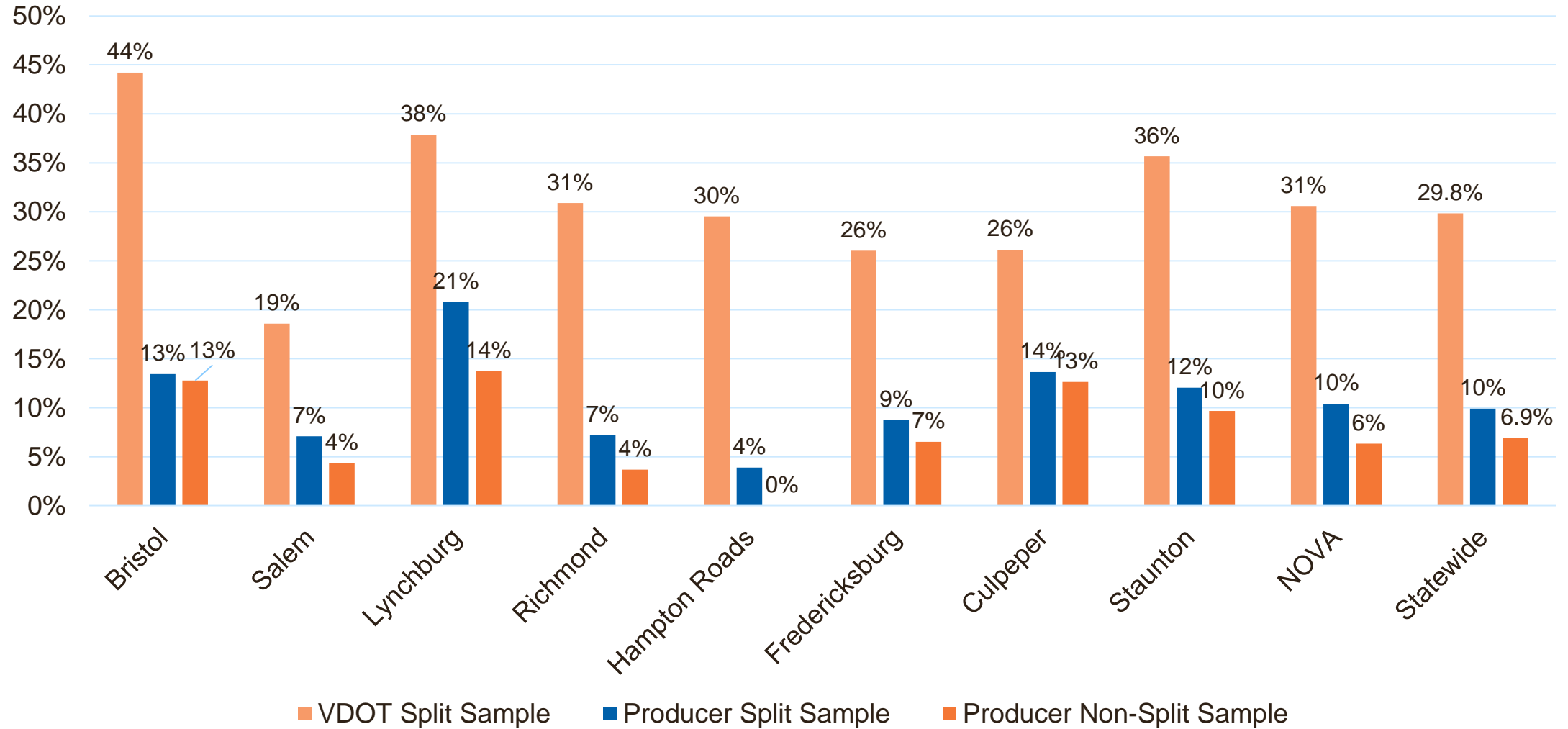
- **#8, AC, #4 most flagged sieves/property**
- **3/8" and No. 200 next.**
- **1607 lots**
- **124 lots with a point adjustment**
- **Total point???**

# 2019 Volumetric Failures

	Producer	VDOT
<b>Vol Samples</b>	<b>6245</b>	<b>2082</b>
VTM	213	236
VMA	167	252
VFA	282	285
VCA	20	15
F/A Ratio	125	92
<b>Total Vol Failures</b>	<b>609</b>	<b>620</b>

	d2s Flags
RICE	88
BULK	13

# Volumetric Failure Rate



# **MITIS/PLAID updates in progress**

- **TL50 Email uploader (PLAID): xml file**
- **TL50 Automated Submit (PLAID): xml file**
- **Investigation**
- **Header changes**

# 2019 DENSITY DATA

MARCH 10, 2020

**CO Materials** / Sungho Kim, Ph.D., P.E.

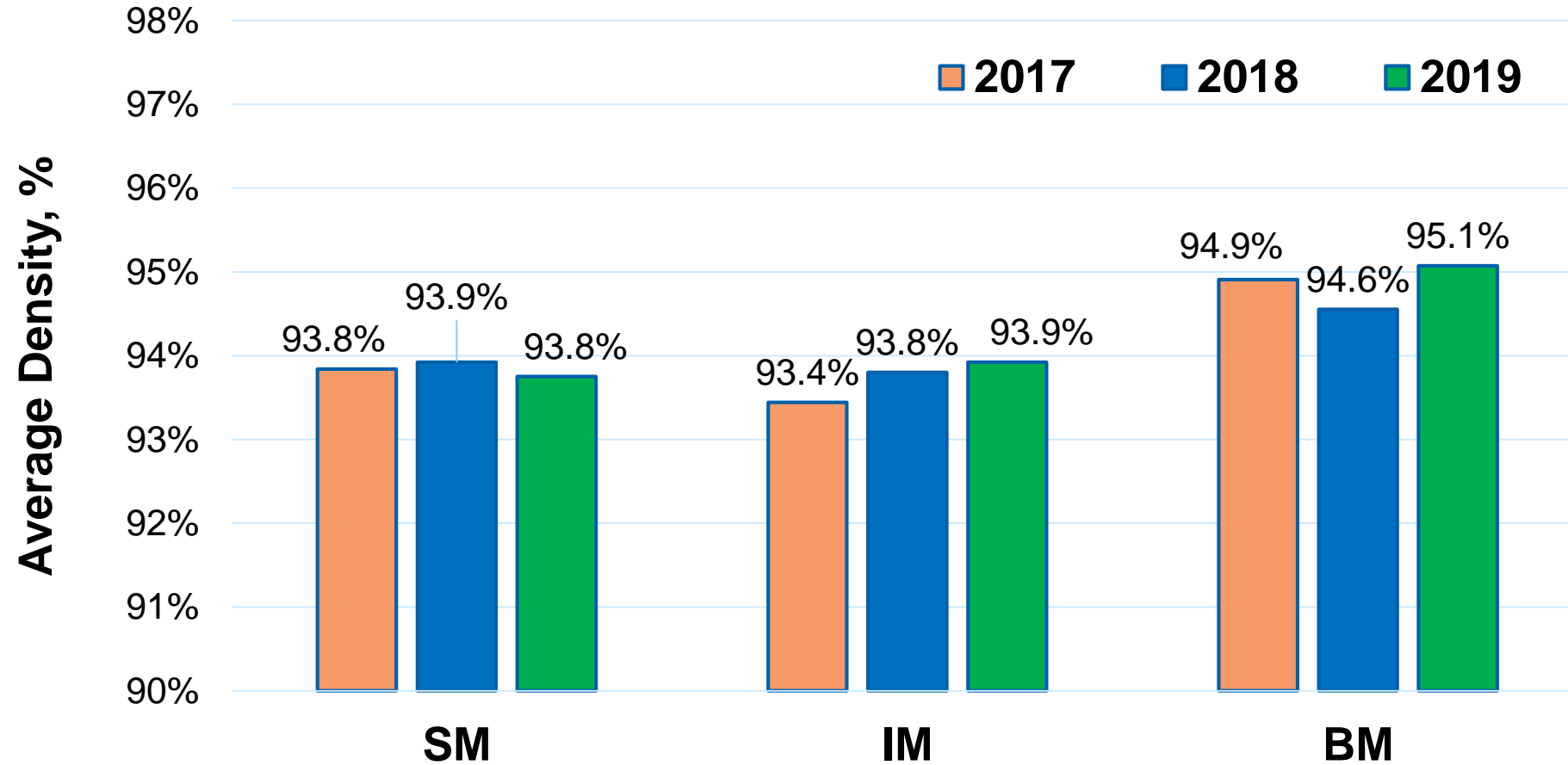


# Density Data

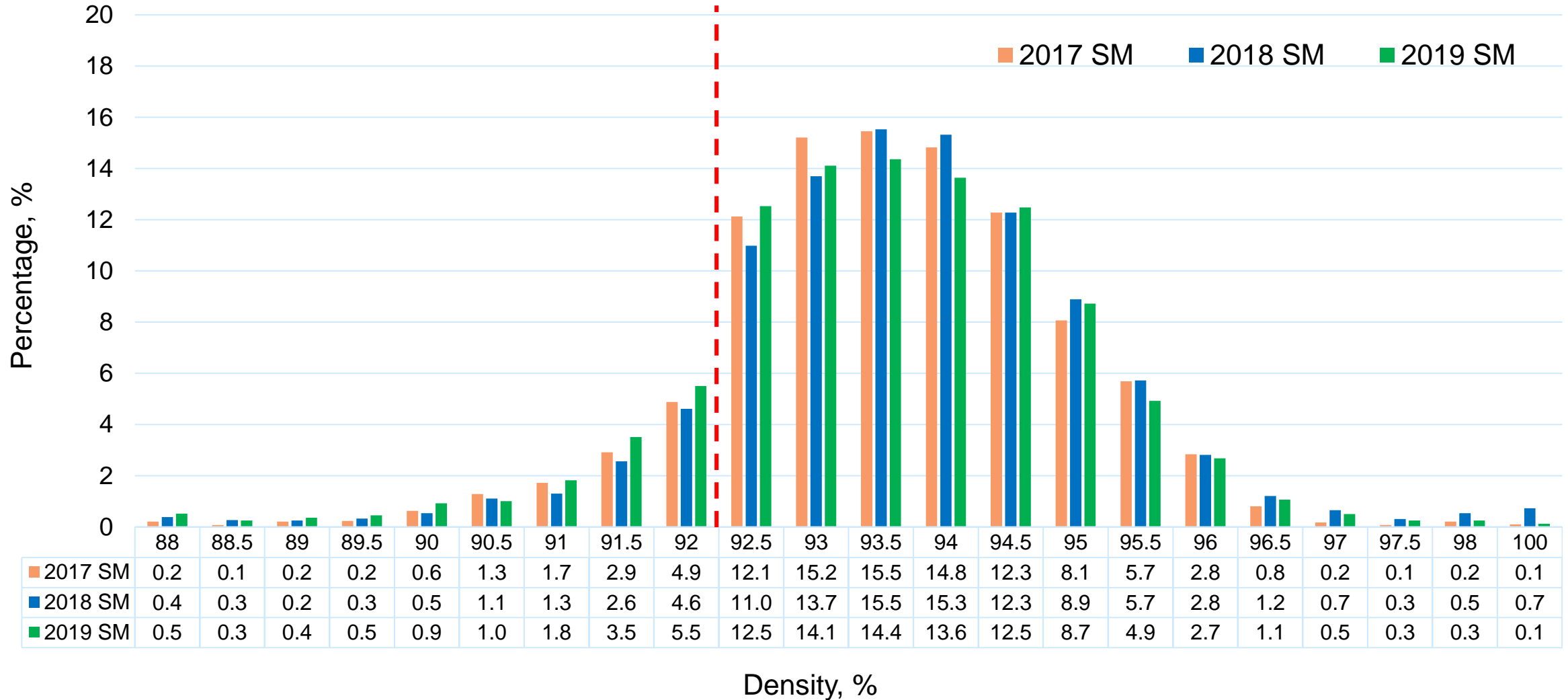
- 2019 Density data from Districts
- Select SM, IM, and BM Data

MIX	SM	IM	BM
# of DATA	6,377	696	300

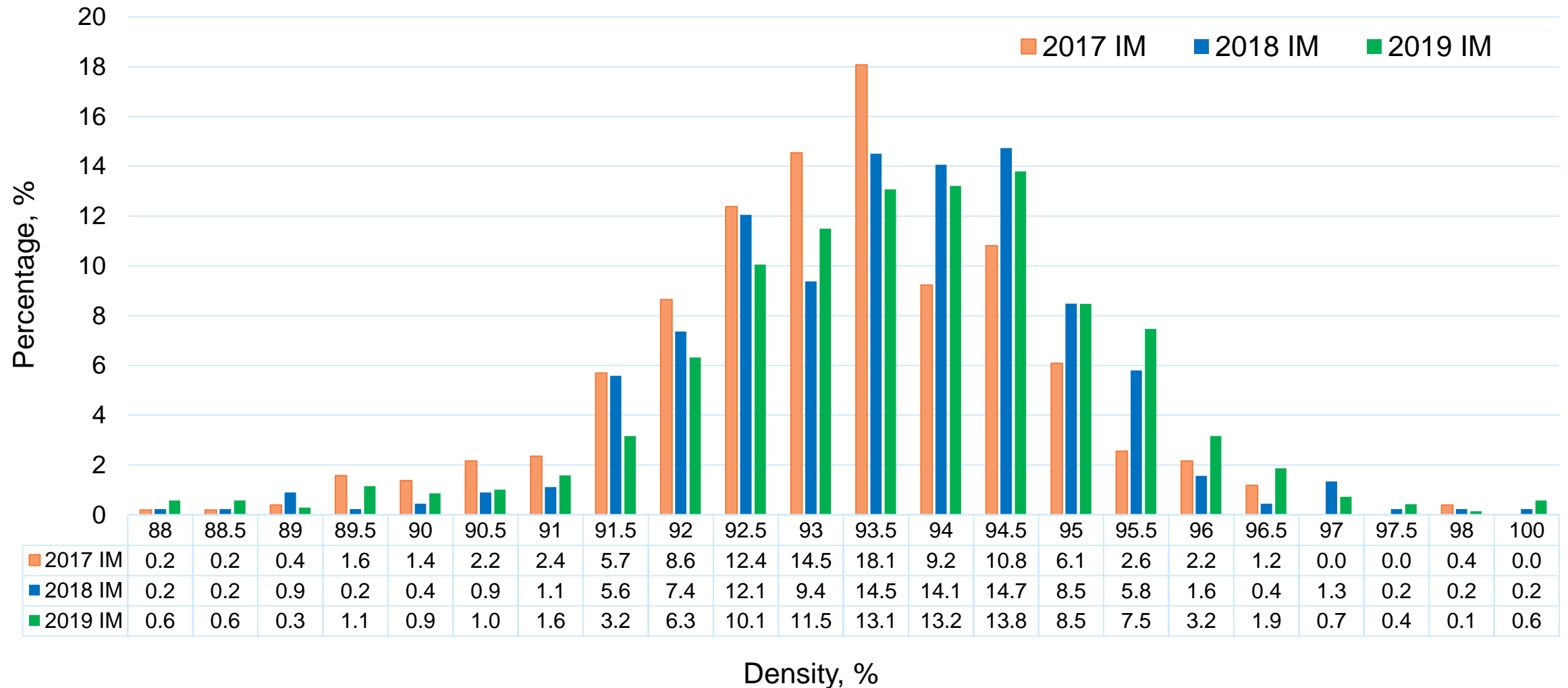
# Density Comparison: 2017 vs 2018 vs 2019 Averages



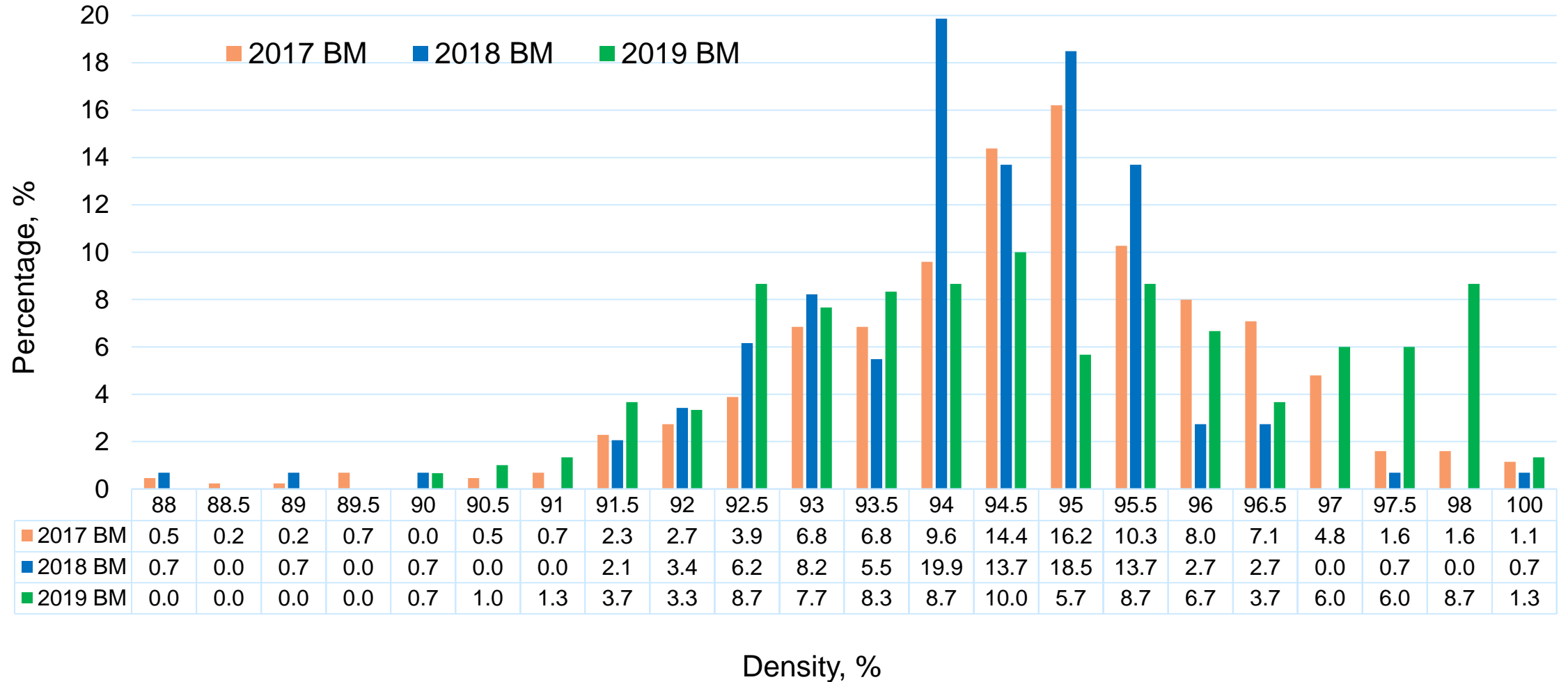
# Density Comparison: 2017 vs 2018 vs 2019 (SM)



# Density Comparison: 2017 vs 2018 vs 2019 (IM)

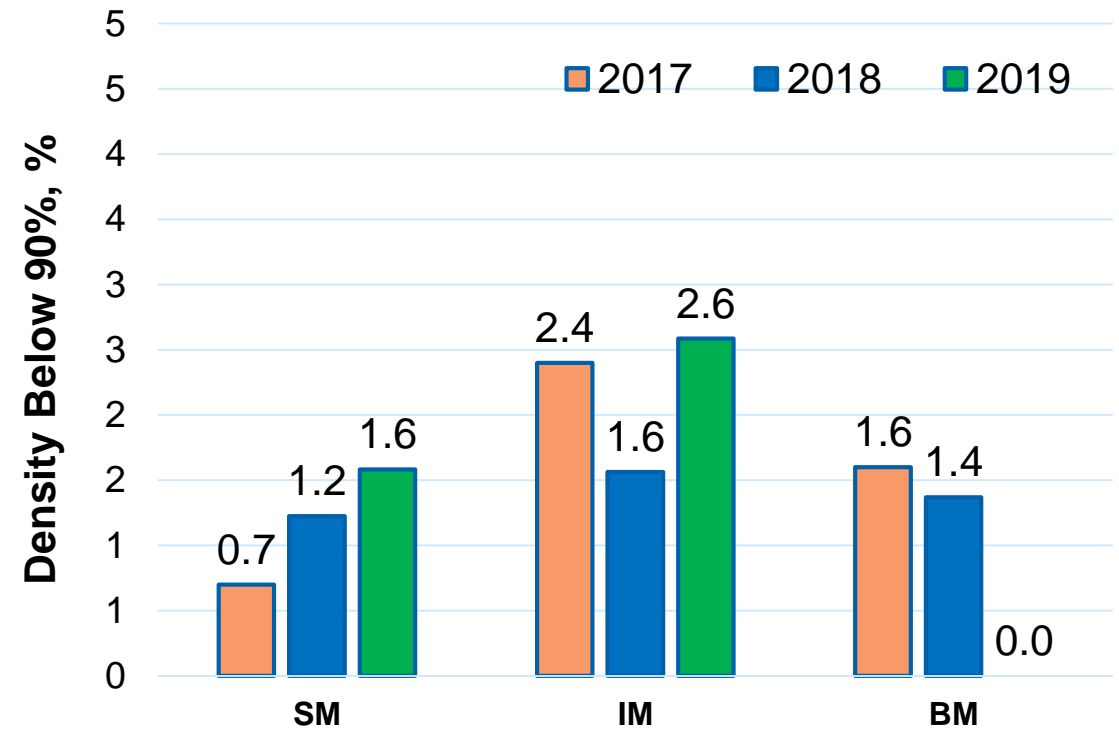
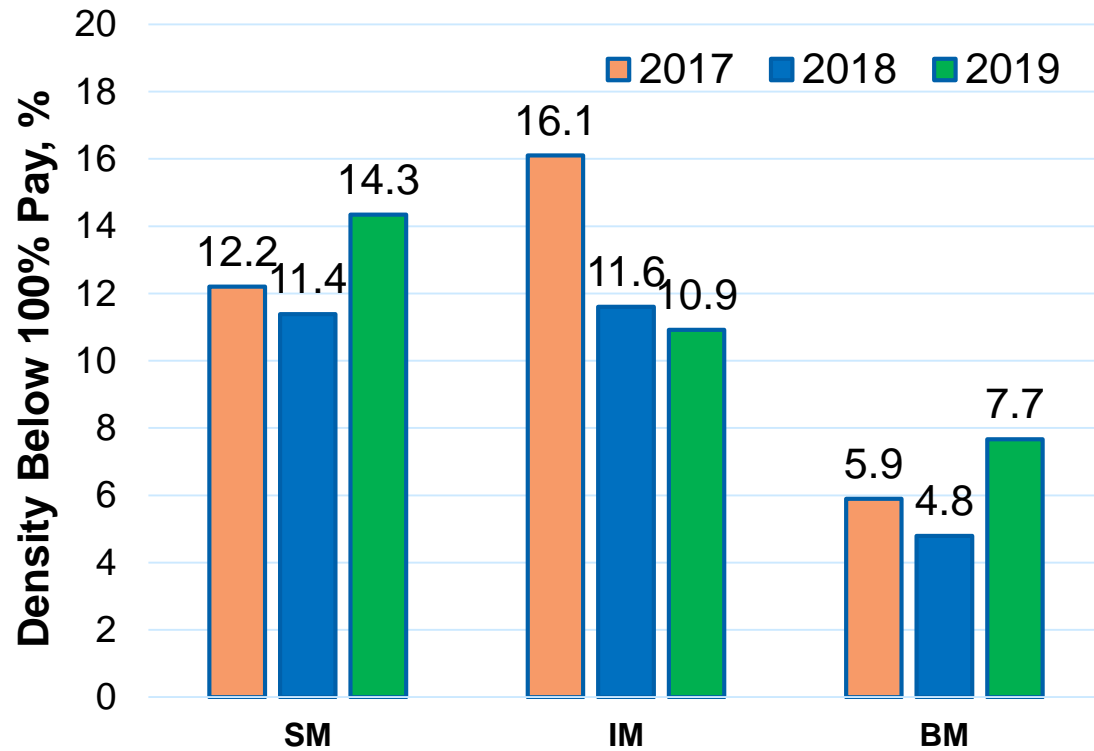


# Density Comparison: 2017 vs 2018 vs 2019 (BM)



# Density: Below 100% Pay / 90% Density

- 100% Pay: SM = 92.5% / IM, BM = 92.2%



# 2020 SPECIFICATION CHANGES

MARCH 10, 2020

**CO Materials** / Sungho Kim, Ph.D., P.E.

# SS 210 & SS310: Tack Requirements





# SS210: Binder & Tack Spec

- Will use “the Curve” (MSCR Grading) for % recovery of binder**
  - Reference to AASHTO R92
- Some Minor Clarifications on Emulsion Testing**
- New Requirements for Non-Tracking and Hot-Applied Tacks**

# SS210: Non-Tracking Tack Requirement

## □ Based on Discussion with Binder Suppliers

Property	Test Method	Min	Max
Residue by Evaporation, %	AASHTO T59	50	
Viscosity, 77° F	AASHTO T59		150
Sieve (plant)	AASHTO T59		0.1%
Sieve (field)	AASHTO T59		0.3%
Penetration	AASHTO T49		50
Softening Point	AASHTO T 53	57° C	

# SS210: Hot-Applied Tack Requirement

□ Based on Discussion with Binder Suppliers

Test	Test Method	Min	Max
Penetration, 25°C, 100g, 5s (dmm)	AASTHO T49		35
Softening Point (°C)	ASTM D36	70	
Rotational Viscosity, 149°C, (Pa-s)	AASHTO T316		3.0
Ductility, 25°C, (cm)	ASTM D113-17	20	