

IMPROVE Data and RHR Metrics



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IMPROVE Steering Committee
10/29/2024



IMPROVE Data and Network

- Latest IMPROVE data delivered is February 2024. RHR metrics through 2023 posted on my Google Drive, and available through FED.
- 50 SD samples to date. No SD data delivered?
- A number of FS sites are offline for a various reasons, no operator, inaccessible location, etc.



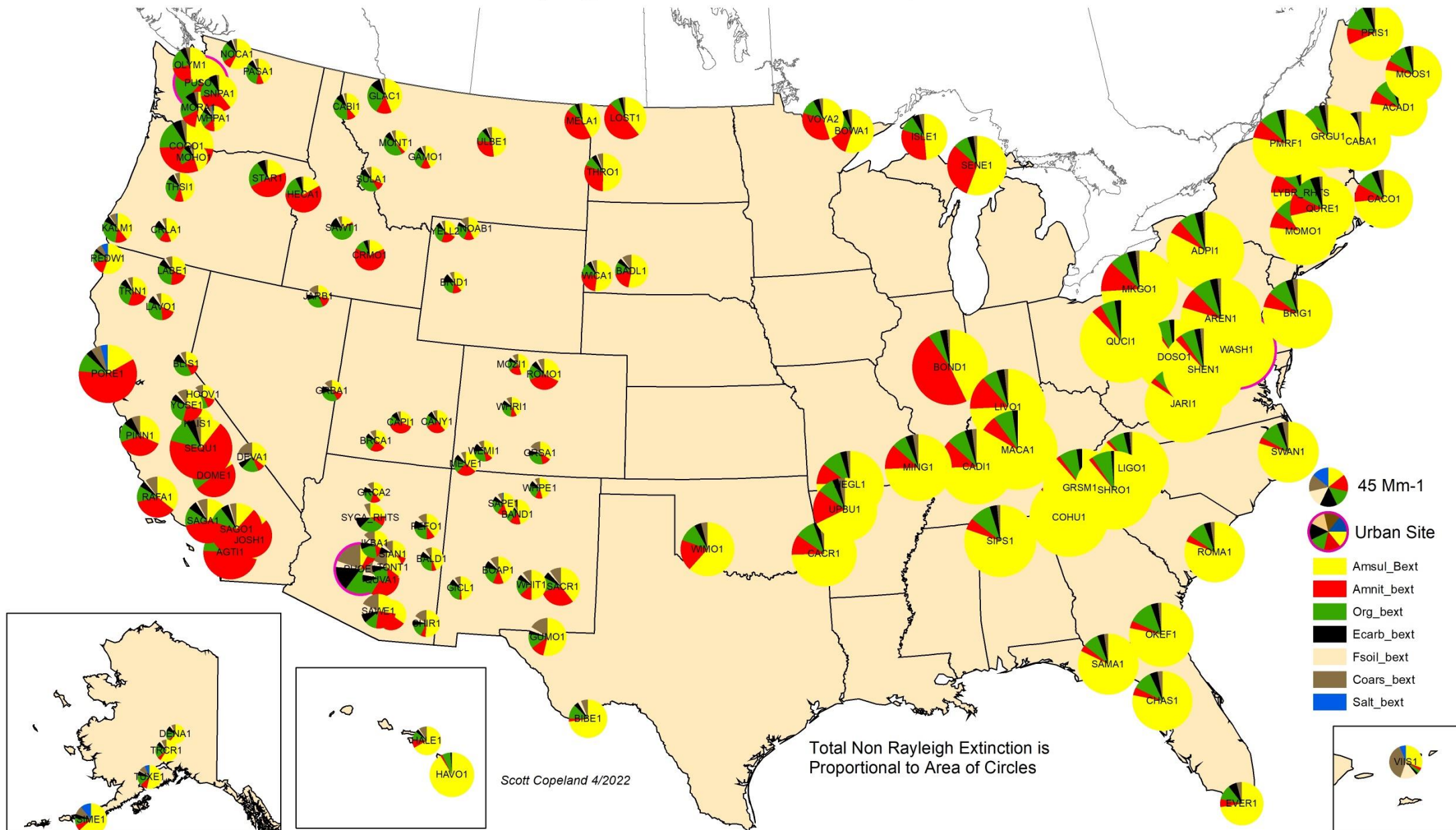
- Relocated GAMO1 to
- MAPA1.
- 7700' -> 7100'
- MONT1 is ~4100'

Sites with clearest ever MID dv in 2023

site	n_yr	MID dv	Default 2064 EP dv		site	n_yr	MID dv	Default 2064 EP dv	
ACAD1	34	12.1	10.4	1.7	SIME1	22	12.1	8.5	3.6
PINN1	33	12.7	6.9	5.7	SWAN1	22	14.6	10.0	4.6
PORE1	31	14.3	9.7	4.5	CACO1	21	13.7		
MACA1	30	17.5	9.8	7.7	GRGU1	21	10.6	9.8	0.8
MOOS1	28	11.3	10.0	1.3	MING1	20	17.6	9.2	8.4
SHRO1	24	13.3	10.2	3.0	PHOE1	19	18.9		
SIPS1	24	15.7	9.6	6.1	PUSO1	19	17.7		
BOND1	22	20.6			FRES1	18	23.9		
CABA1	22	13.2			PENO1	17	14.1		
HEGL1	22	16.2	9.3	6.9	LOND1	13	14.1		
PRIS1	22	13.3			CAVE1	5	13.0		
QUCI1	22	16.6			TOOL1	5	7.6		
SAWE1	22	11.3							

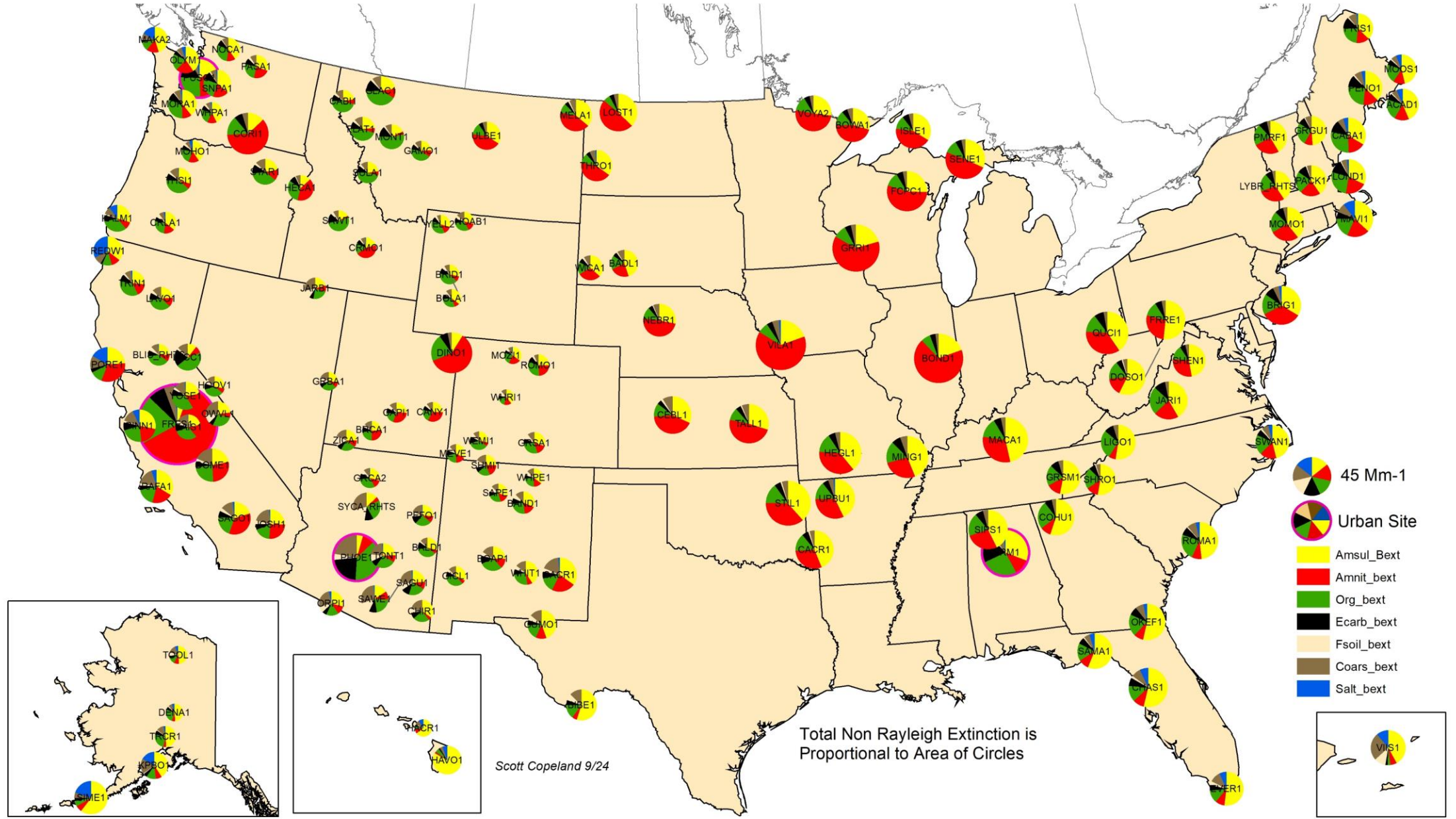
IMPROVE Data - 2002 Second IMPROVE Algorithm

Non Rayleigh Mean of 20% Most Impaired



IMPROVE Data - 2021 Second IMPROVE Algorithm

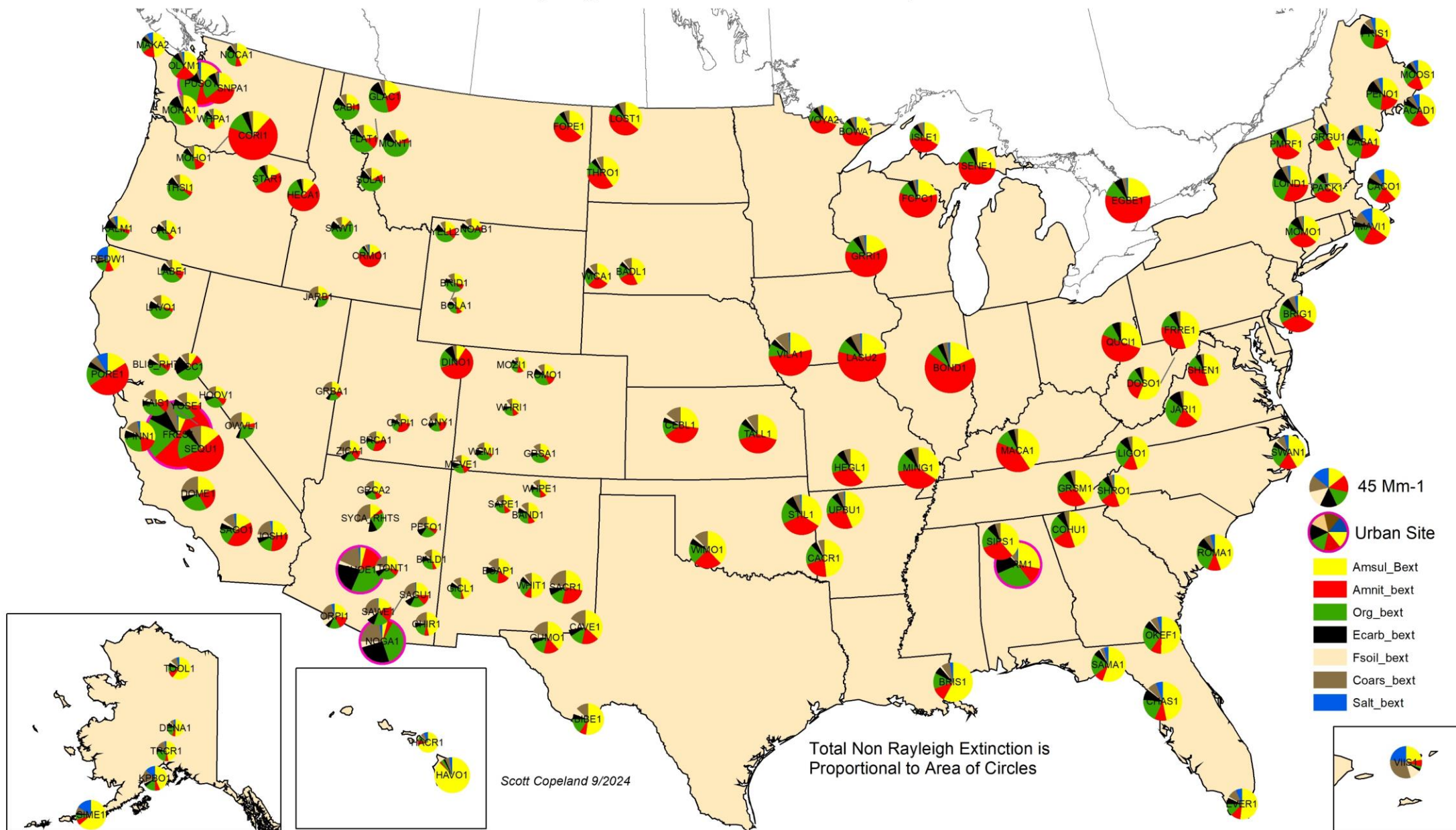
Non Rayleigh Mean of 20% Most Impaired



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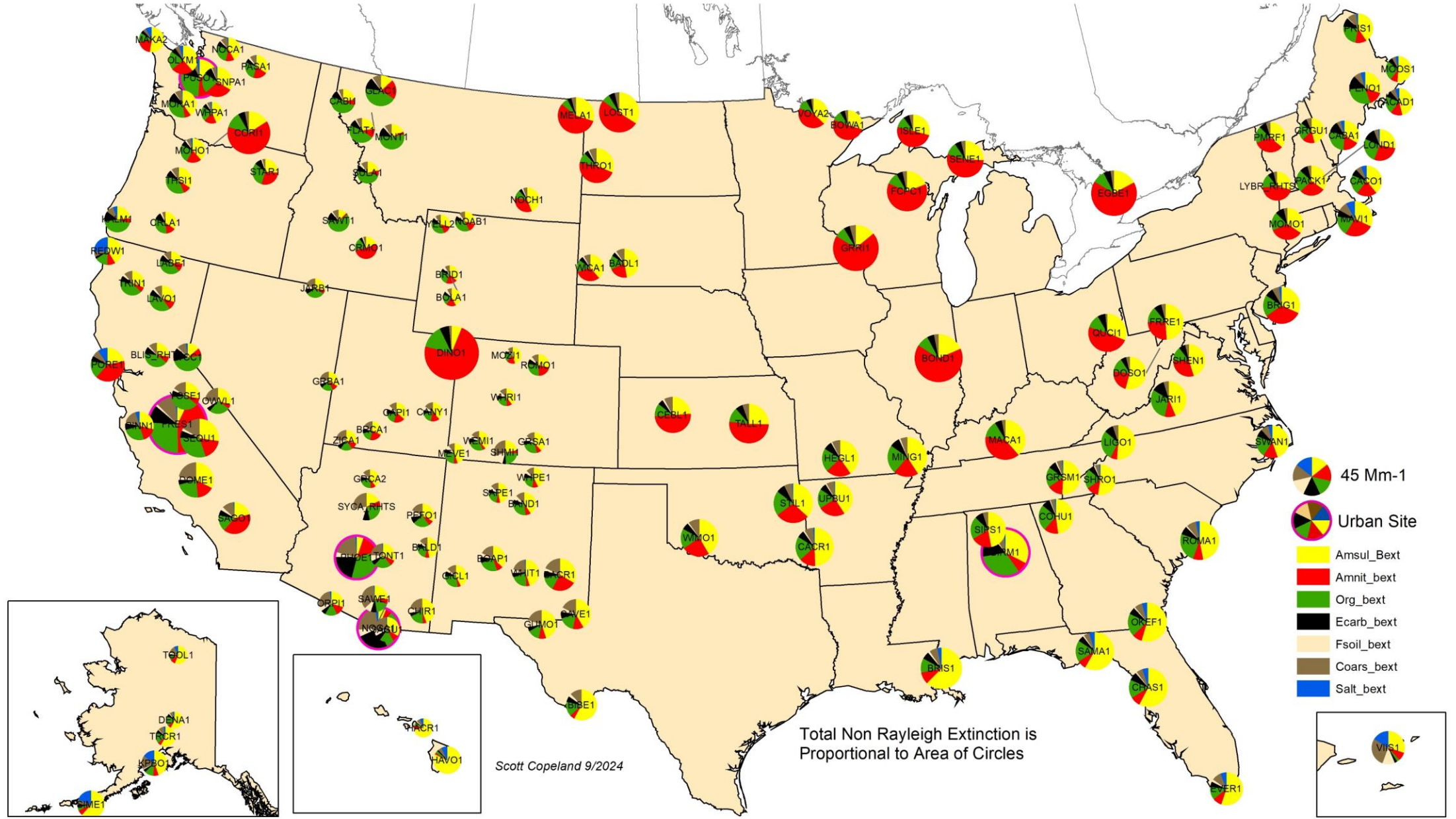
IMPROVE Data - 2022 Second IMPROVE Algorithm

Non Rayleigh Mean of 20% Most Impaired



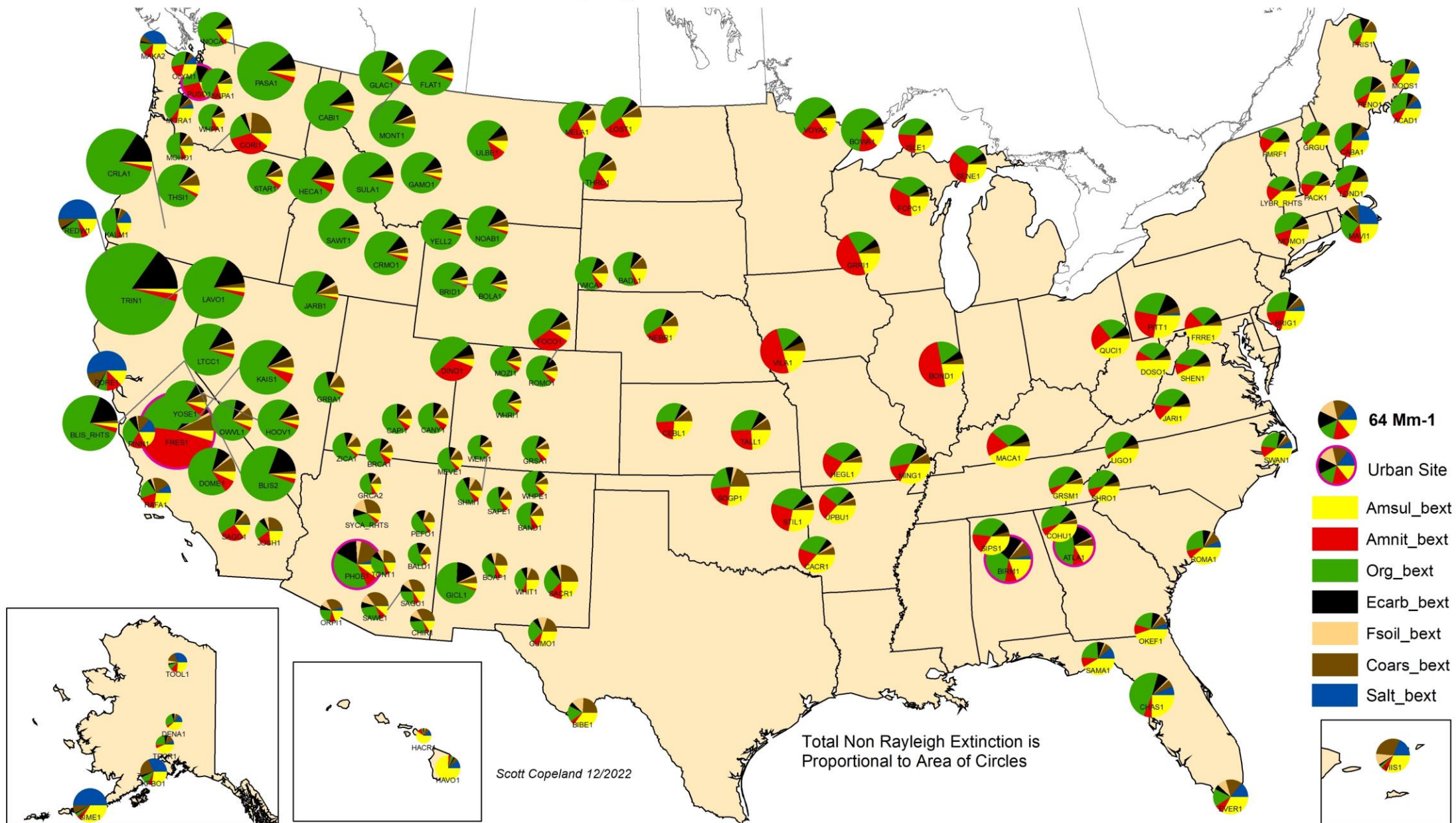
IMPROVE Data - 2023 Second IMPROVE Algorithm

Non Rayleigh Mean of 20% Most Impaired



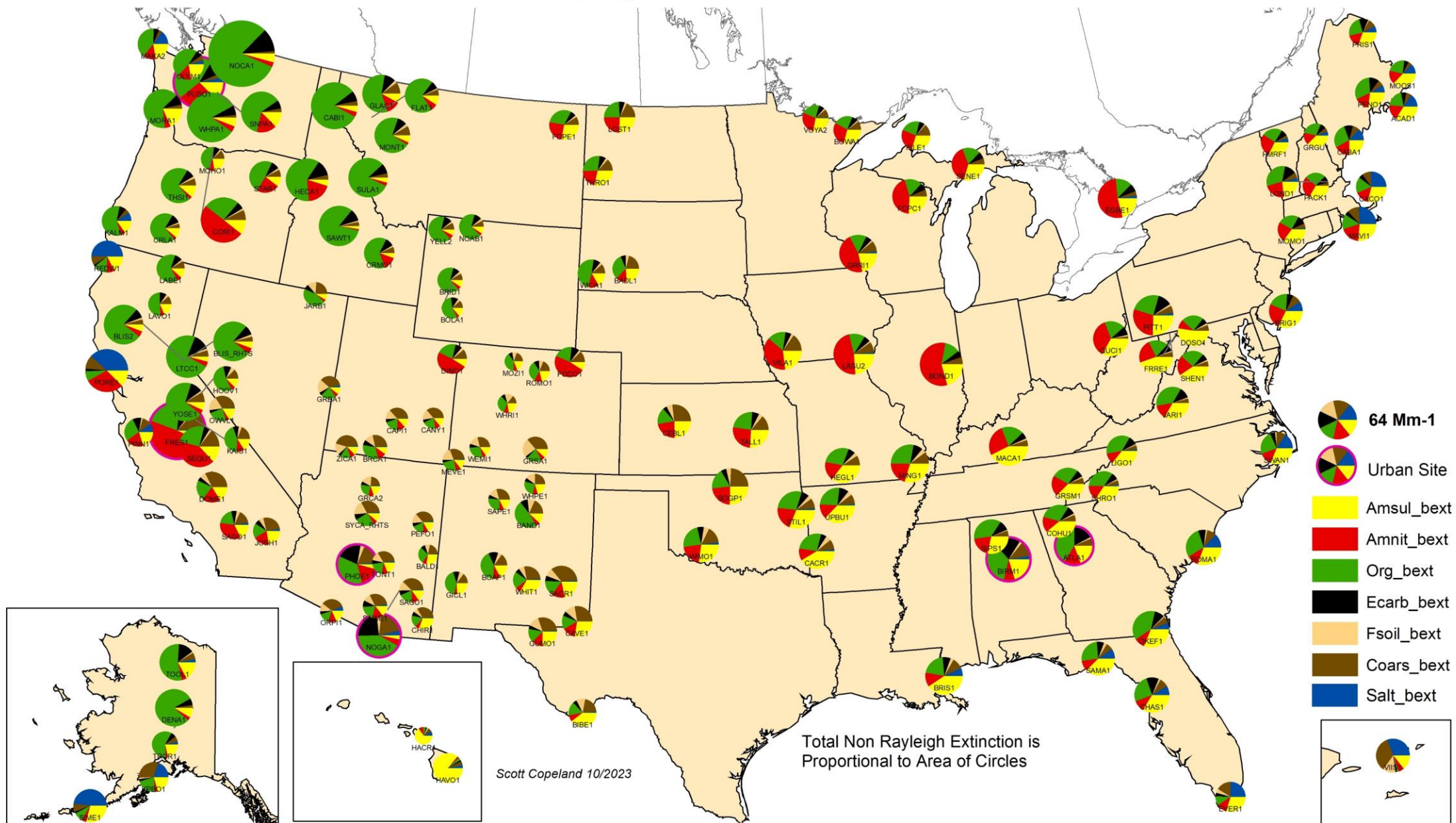
IMPROVE Data - 2021 Second IMPROVE Algorithm

Non Rayleigh Mean of Hazeiest 20%



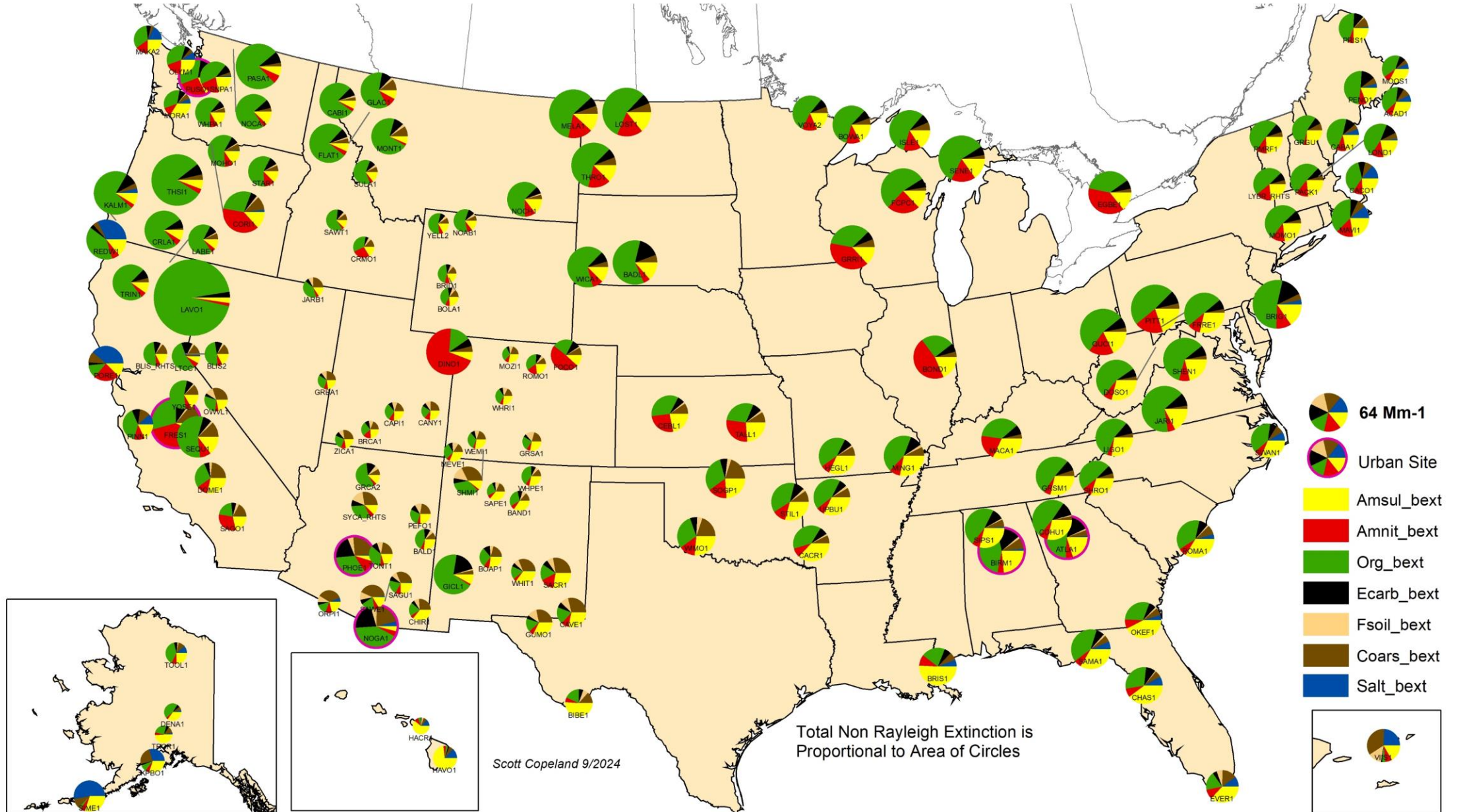
IMPROVE Data - 2022 Second IMPROVE Algorithm

Non Rayleigh Mean of Hazeiest 20%



IMPROVE Data - 2023 Second IMPROVE Algorithm

Non Rayleigh Mean of Haziest 20%



Regional Haze Maps and Metrics

- Impairment metrics here:

<https://drive.google.com/drive/folders/0Bxfj1vyyXeDYWVpfeUo4NEYtTU0?resourcekey=0-d0Bn5HHHEkgbiHZvIQWaLQ&usp=sharing>

- Haziest Day metrics here:

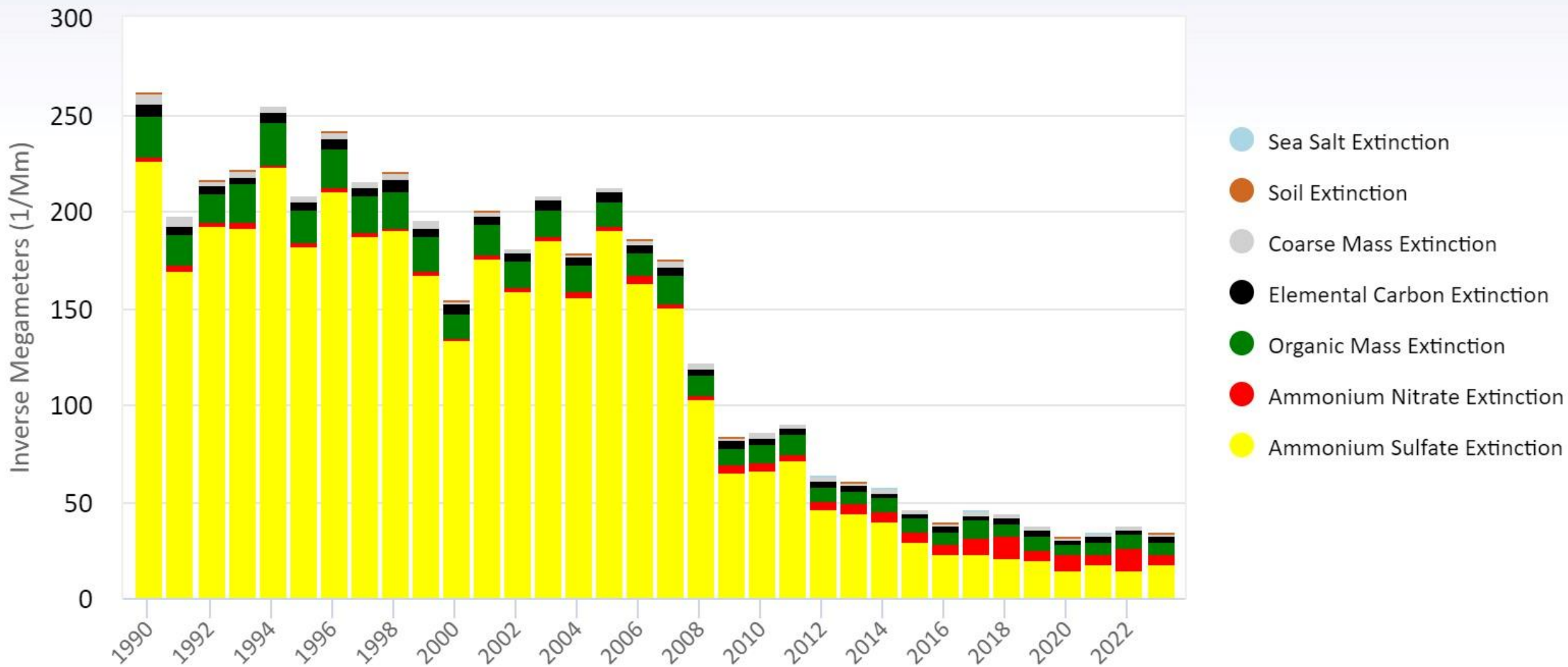
<https://drive.google.com/drive/folders/0Bxfj1vyyXeDYTjNLeIwUUX0TTg?resourcekey=0-yt0EY9maDLhRmcE8s5tC6A&usp=sharing>

- History of RHR metric changes since 10/2019.

https://docs.google.com/presentation/d/16i5fwc6aVAjqNQRvhd5jllxeiyfCsQQ/edit?usp=drive_link&oid=116534812255078445612&rtpof=true&sd=true

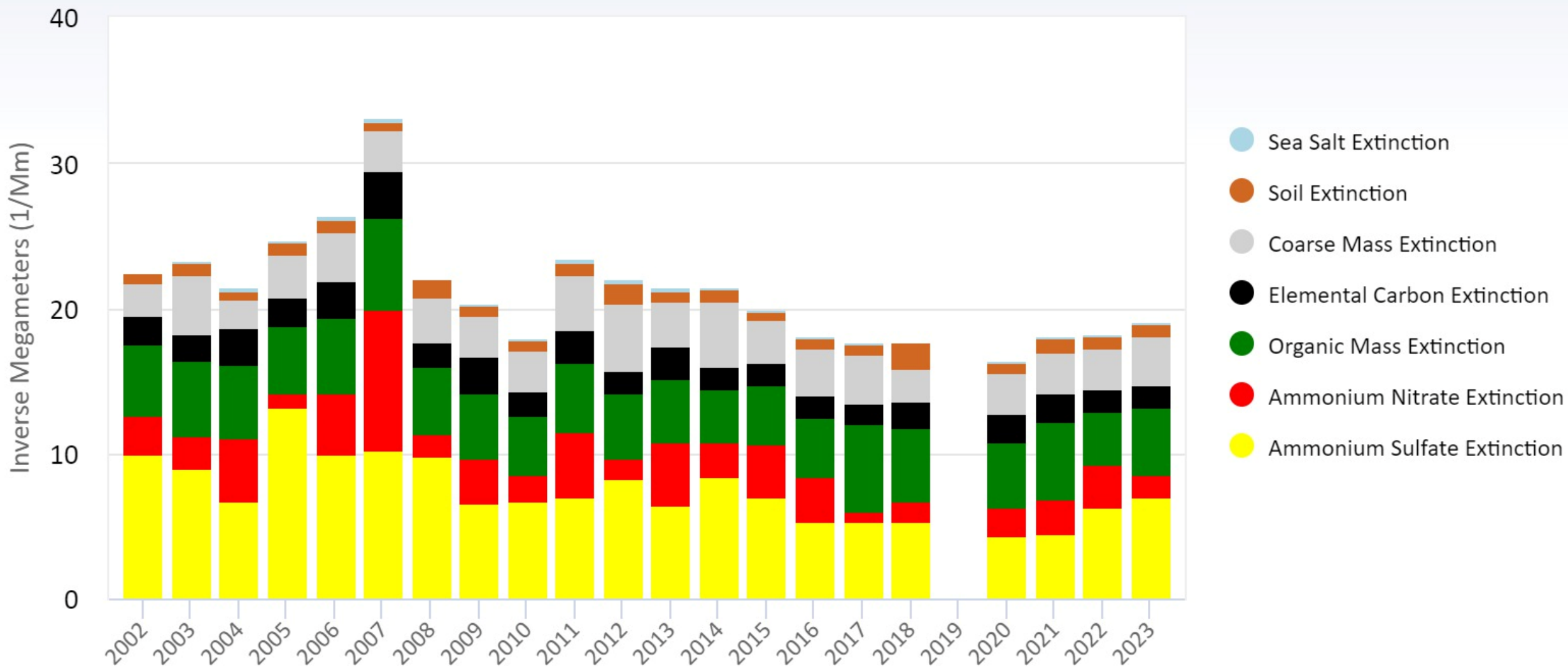
Annual Extinction Composition on the Most Impaired Days - Great Smoky Mountains NP

1990 - 2023



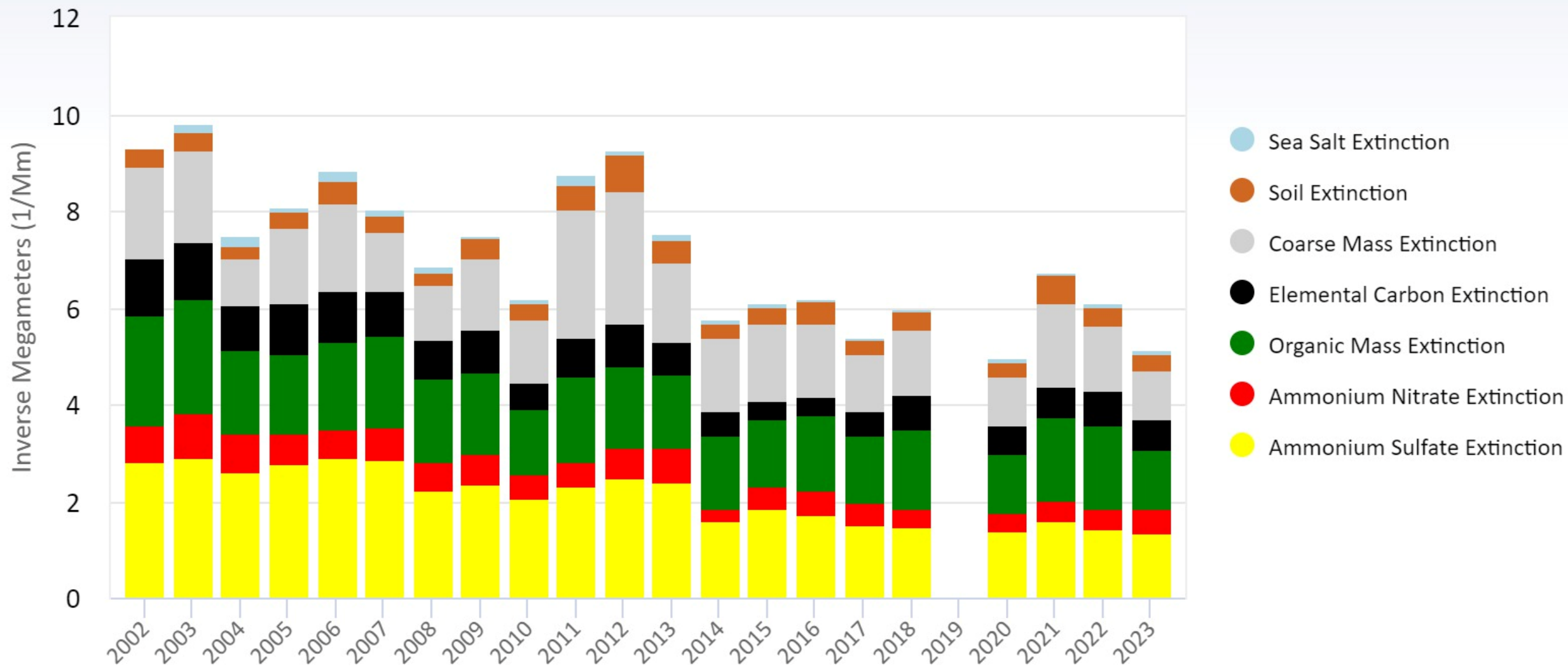
Annual Extinction Composition on the Most Impaired Days - Bosque del Apache

2002 - 2023



Annual Extinction Composition on the Clearest Days - Bosque del Apache

2002 - 2023



IMPROVE Monitor: Bosque del Apache (BOAP1)