

Analysis of Visibility Trends 2000-2013

NESCAUM & MARAMA Regional Haze SIP Training
Albany, New York
April 21, 2015



Best / Worst Visibility Days

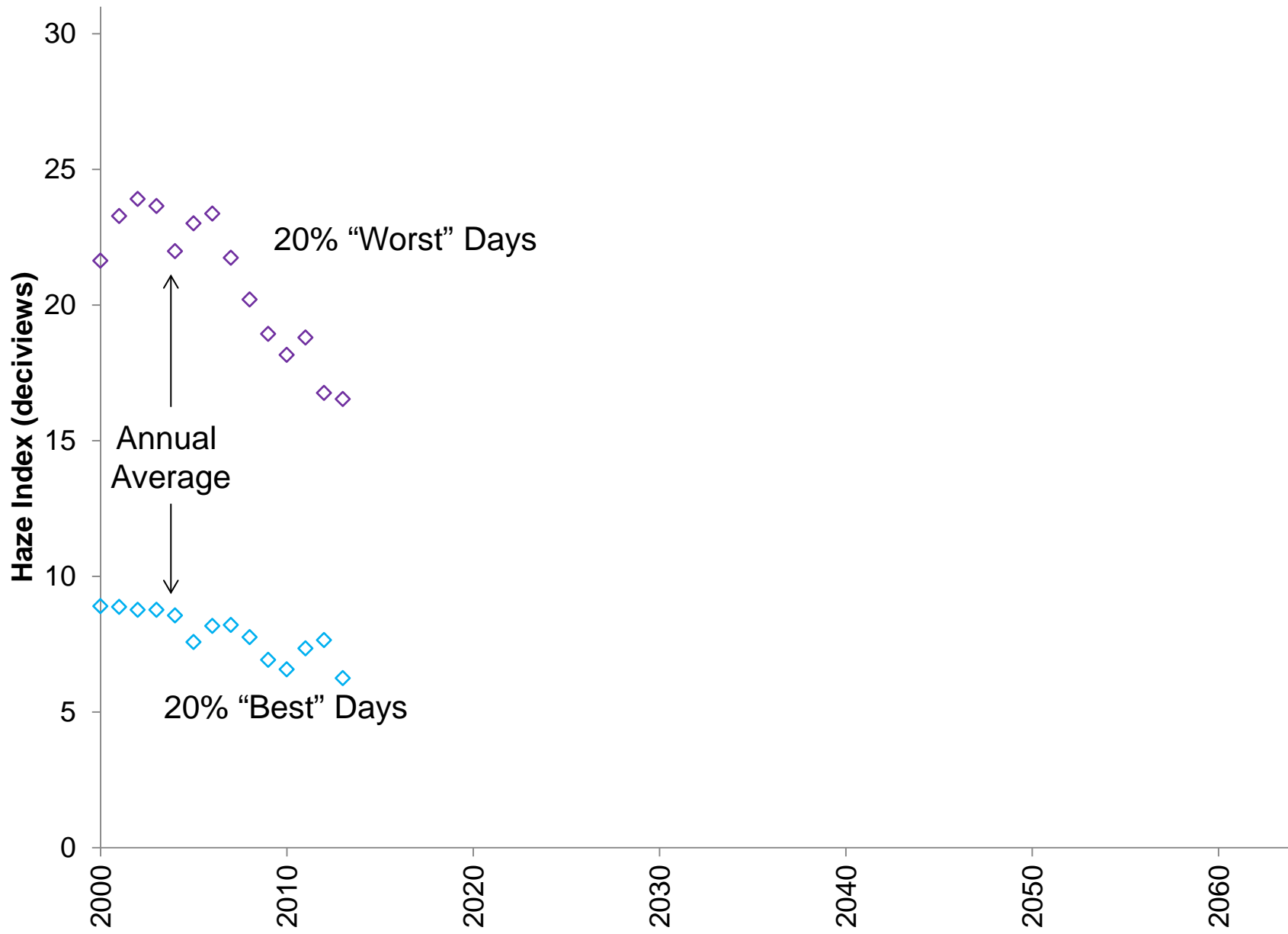
Acadia National Park, Maine



February 21, 2008 9:00am

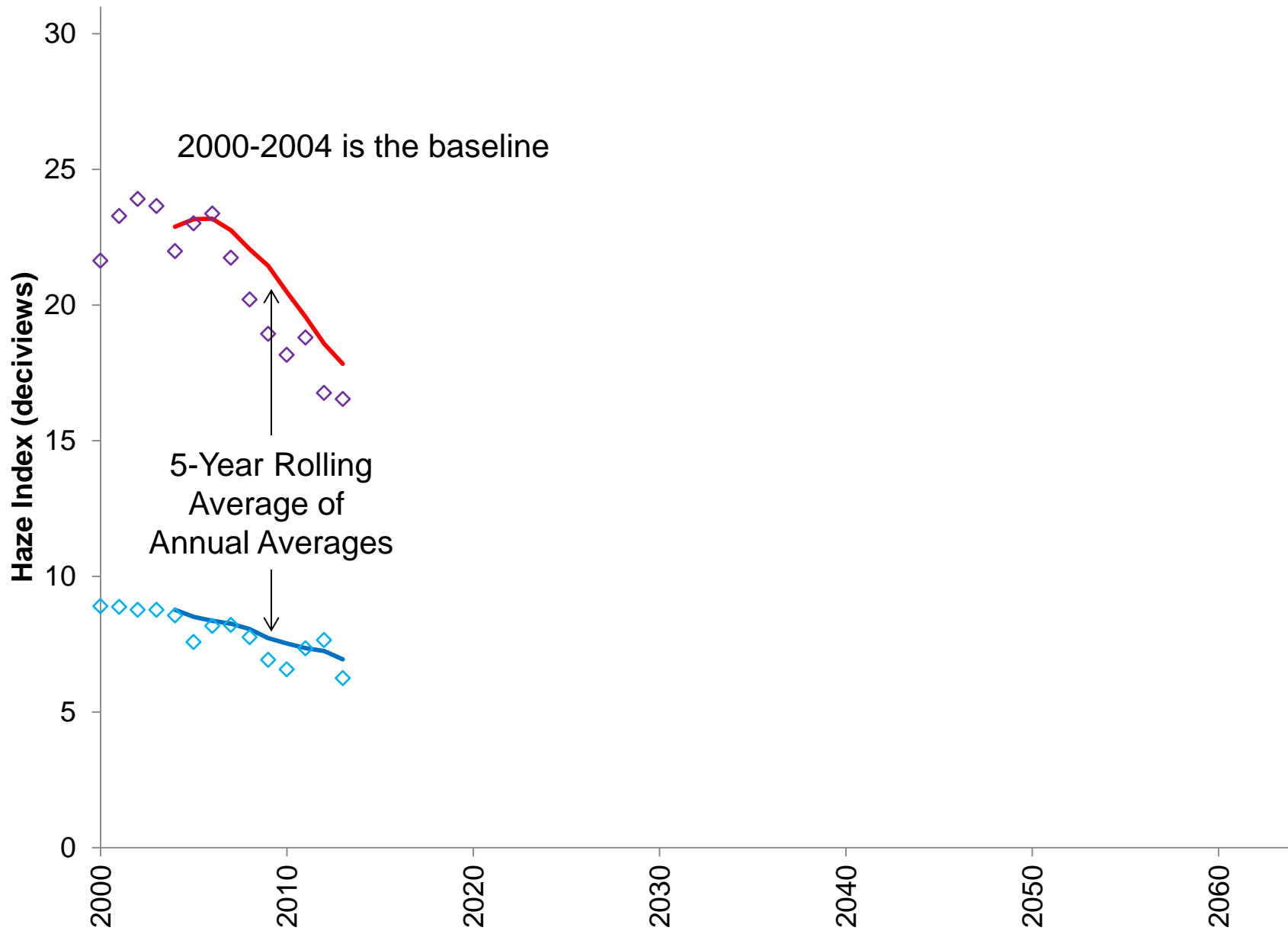


August 17, 2009 4:00pm



**Acadia National Park,
Maine**

Year

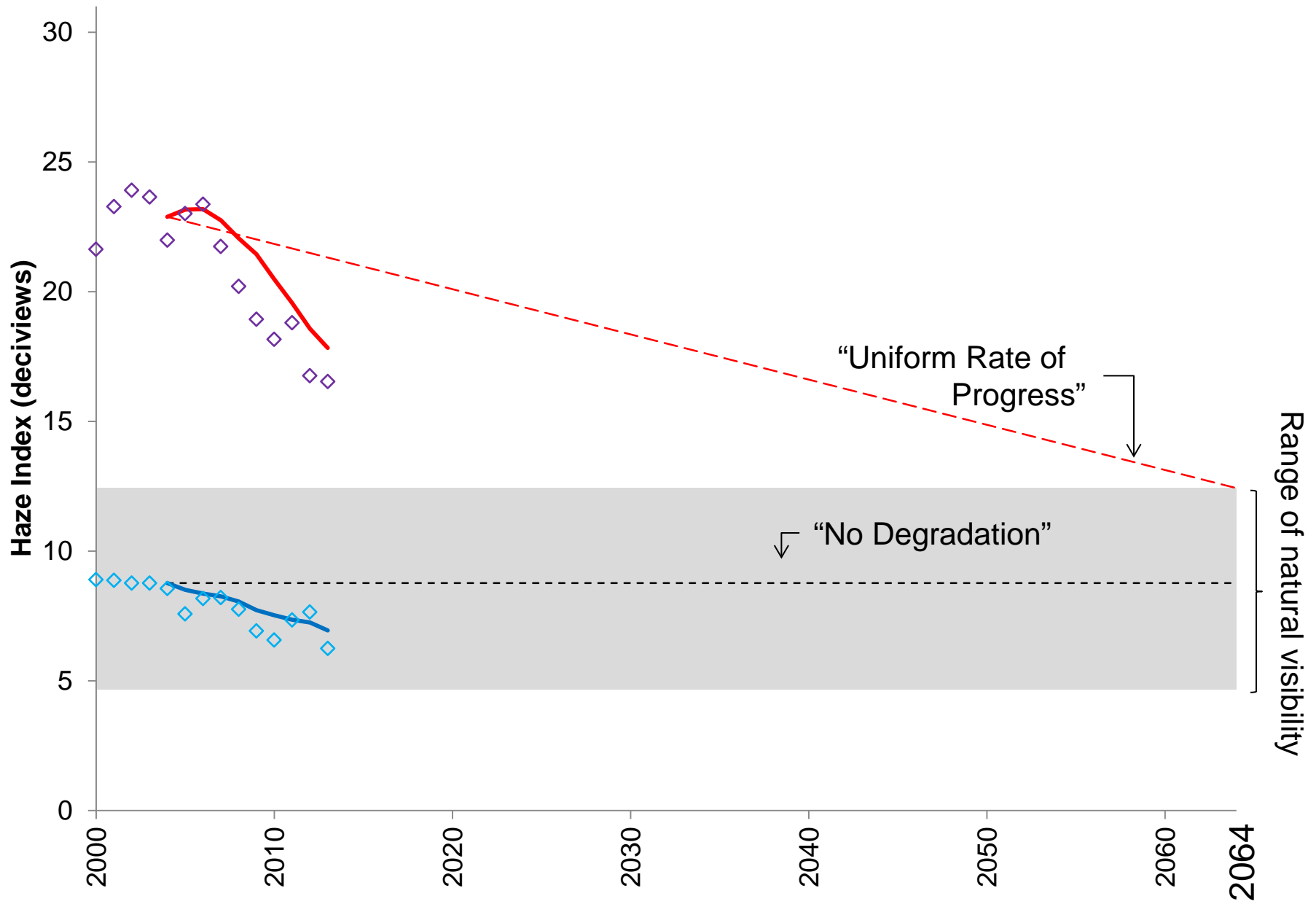


2000-2004 is the baseline

5-Year Rolling
Average of
Annual Averages

Acadia National Park,
Maine

Year



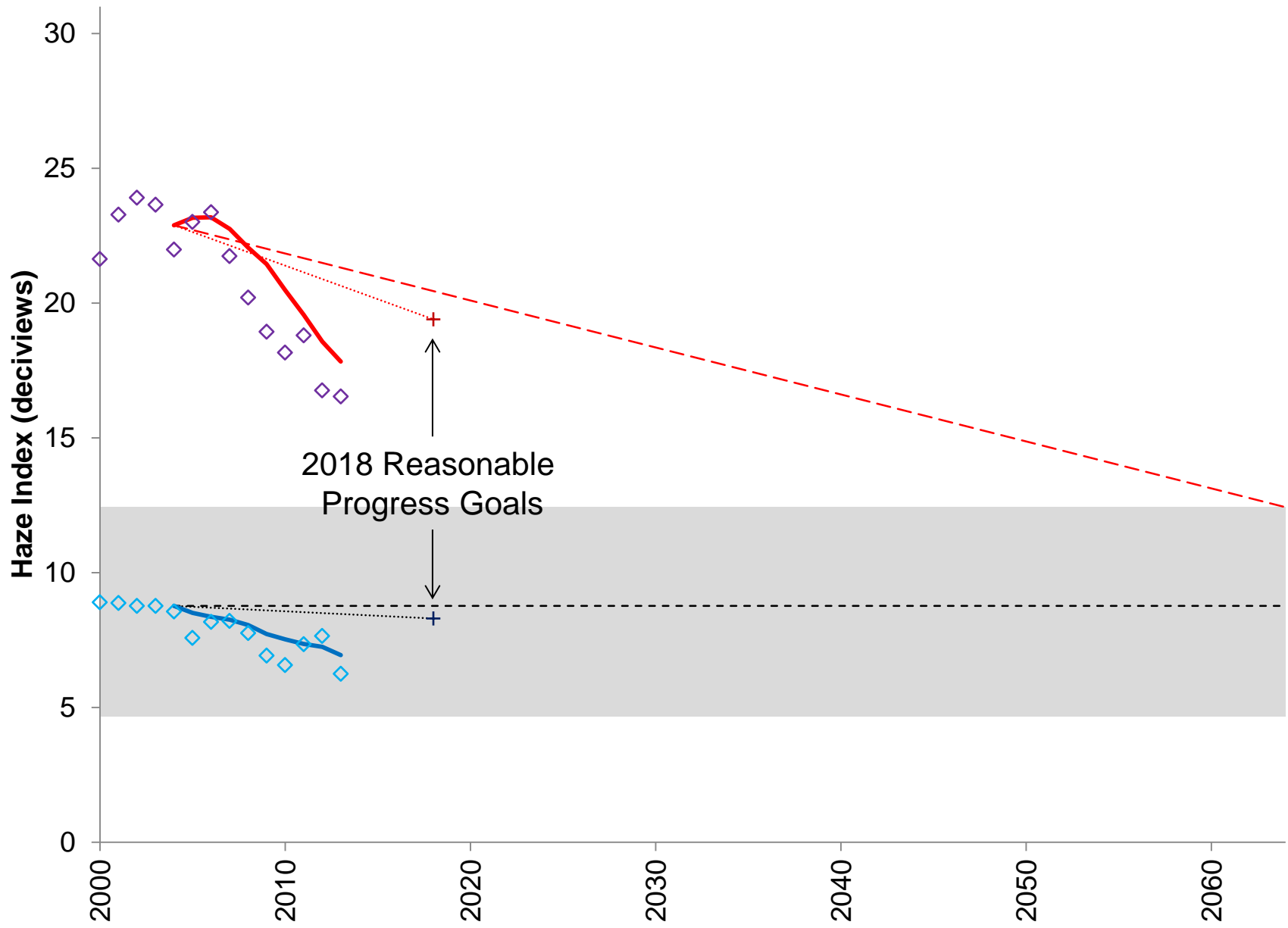
**Acadia National Park,
Maine**

Year

“Uniform Rate of
Progress”

“No Degradation”

Range of natural visibility

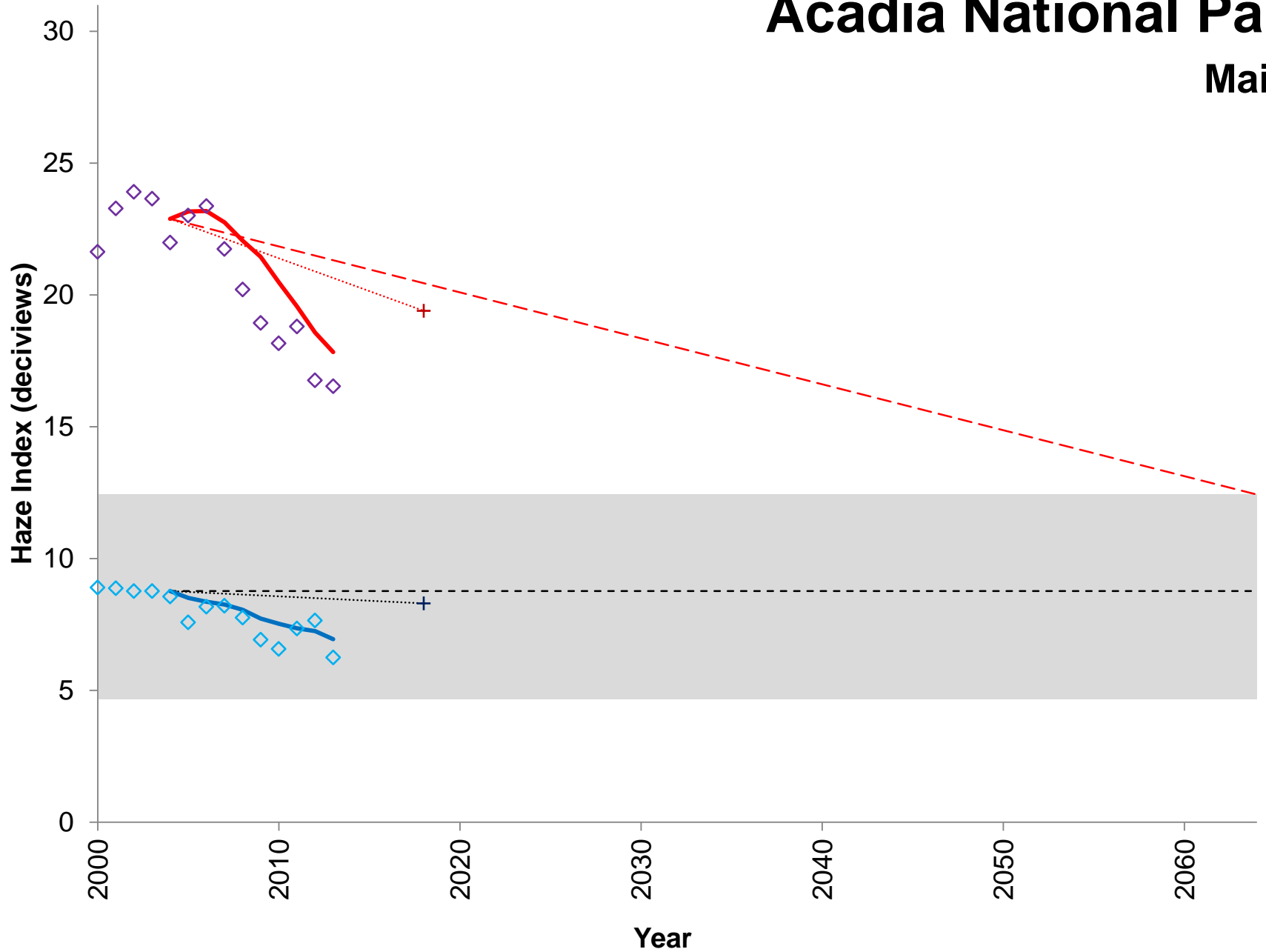


**Acadia National Park,
Maine**

Year

Acadia National Park

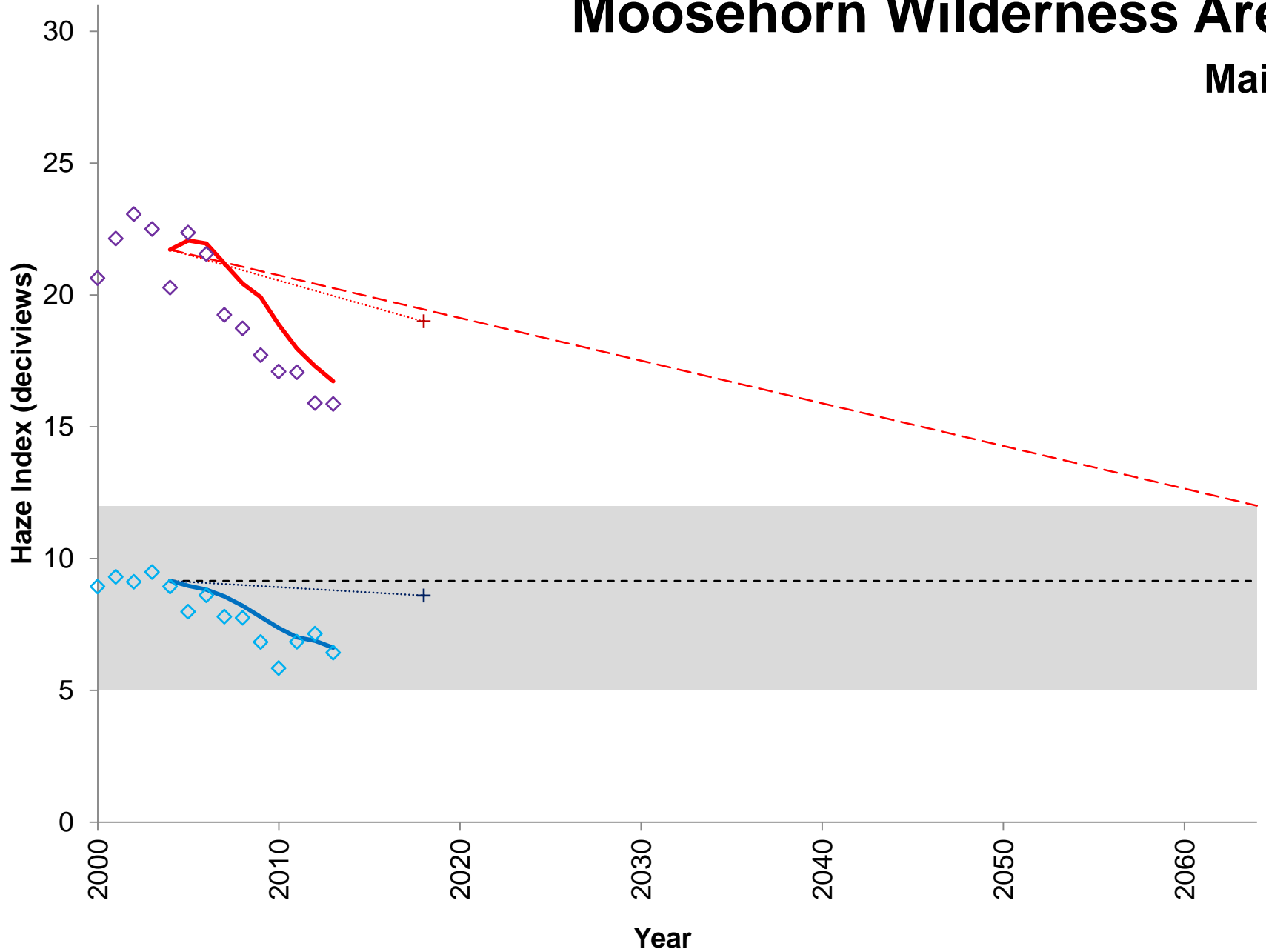
Maine





Moosehorn Wilderness Area

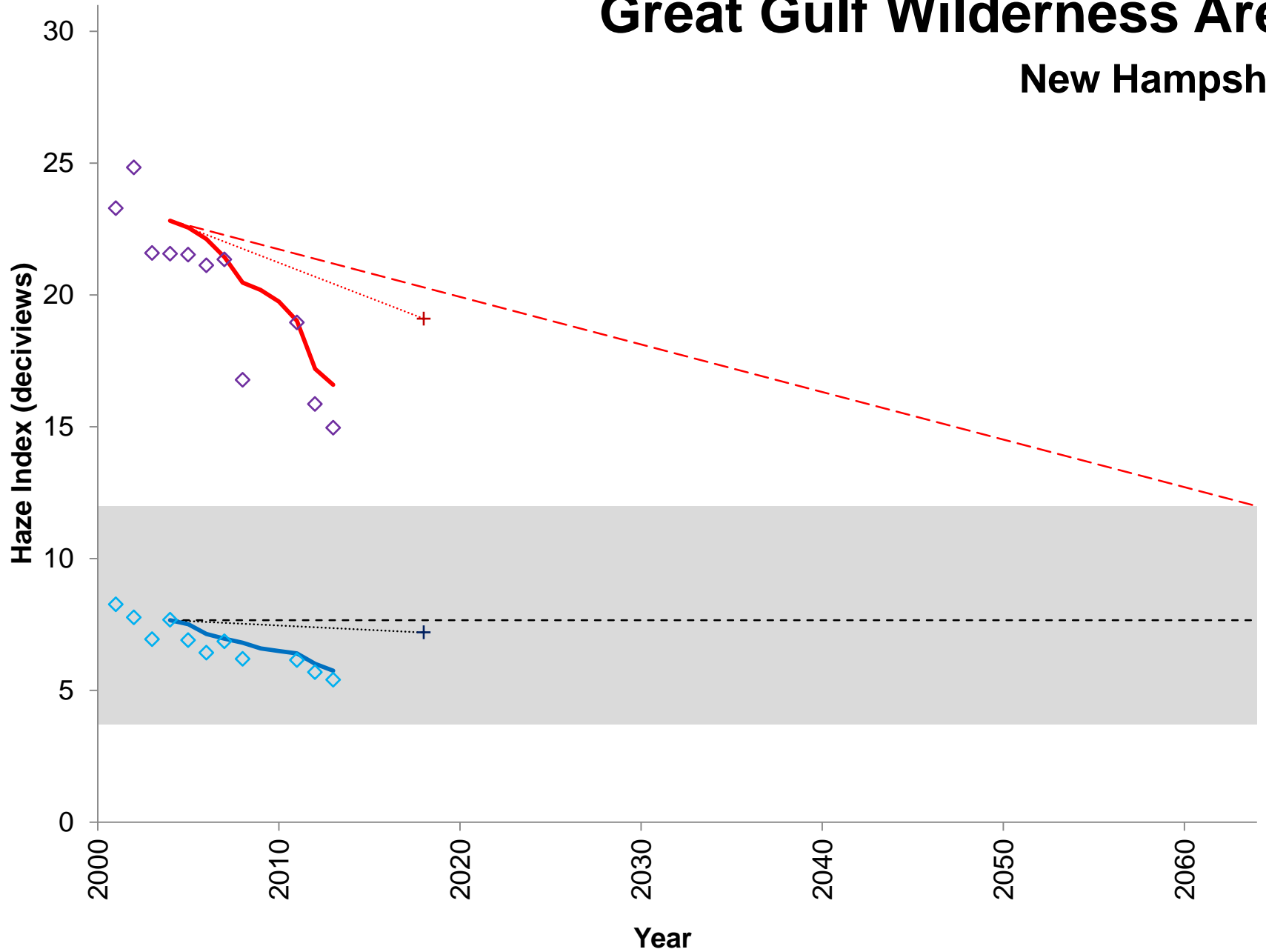
Maine





Great Gulf Wilderness Area

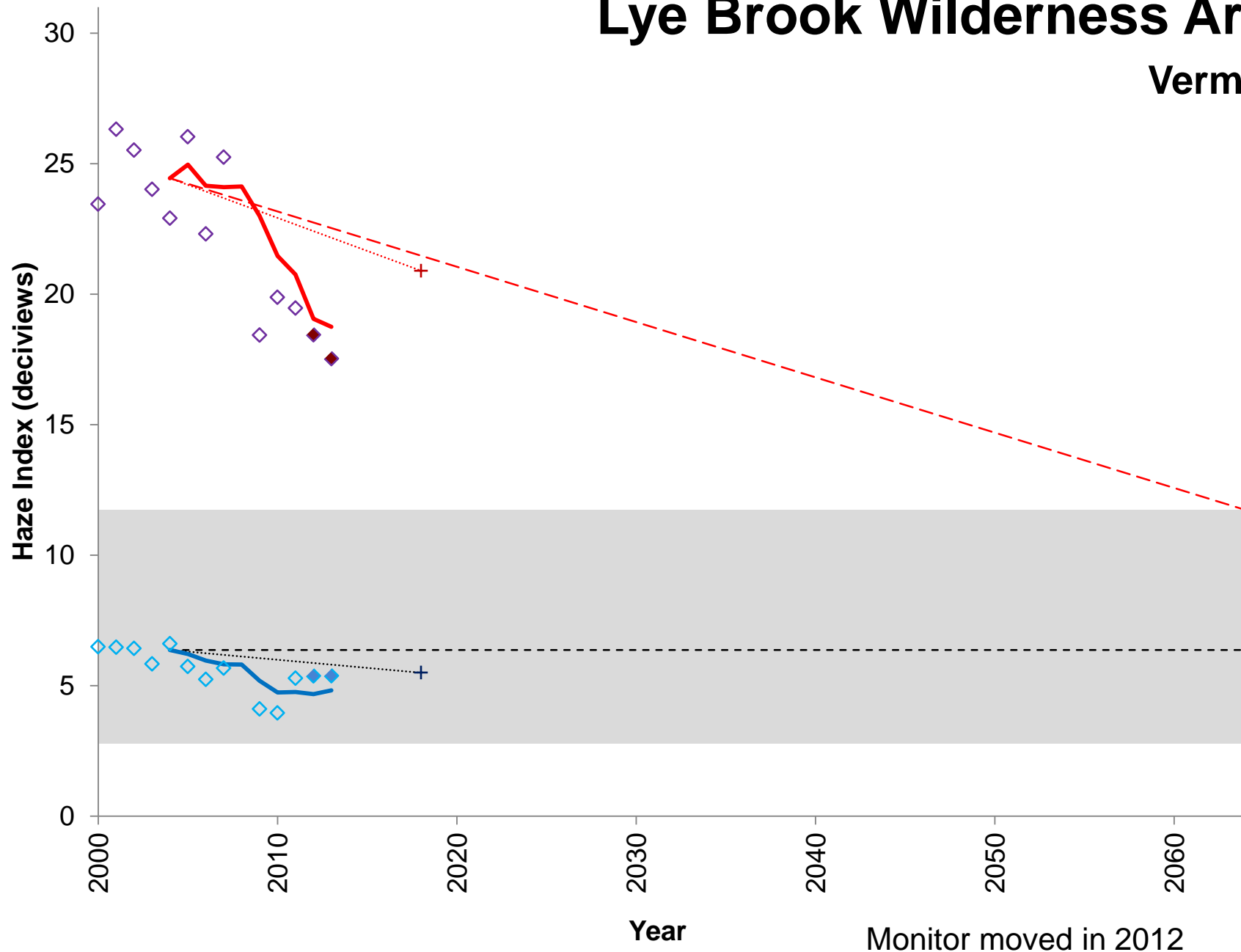
New Hampshire





Lye Brook Wilderness Area

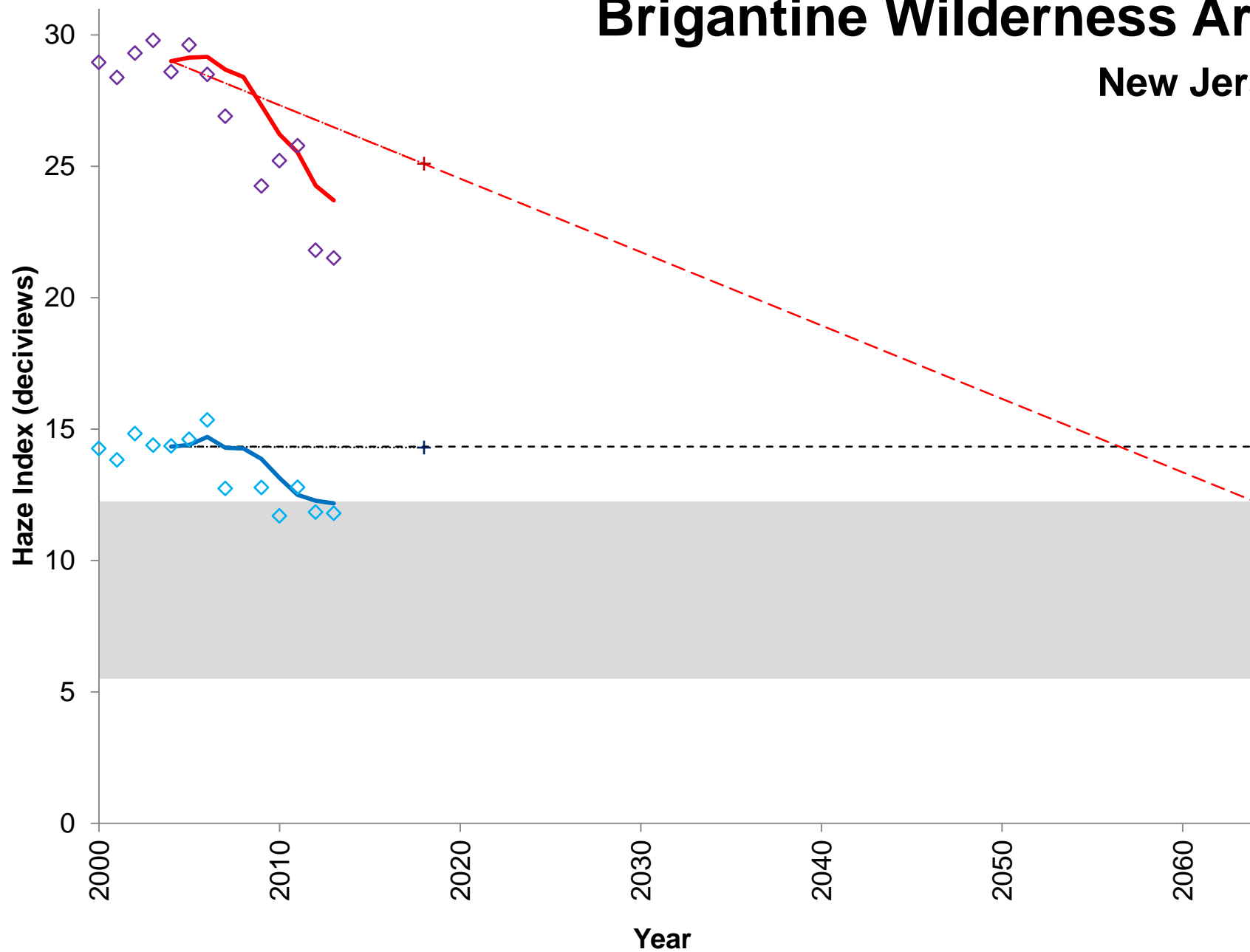
Vermont





Brigantine Wilderness Area

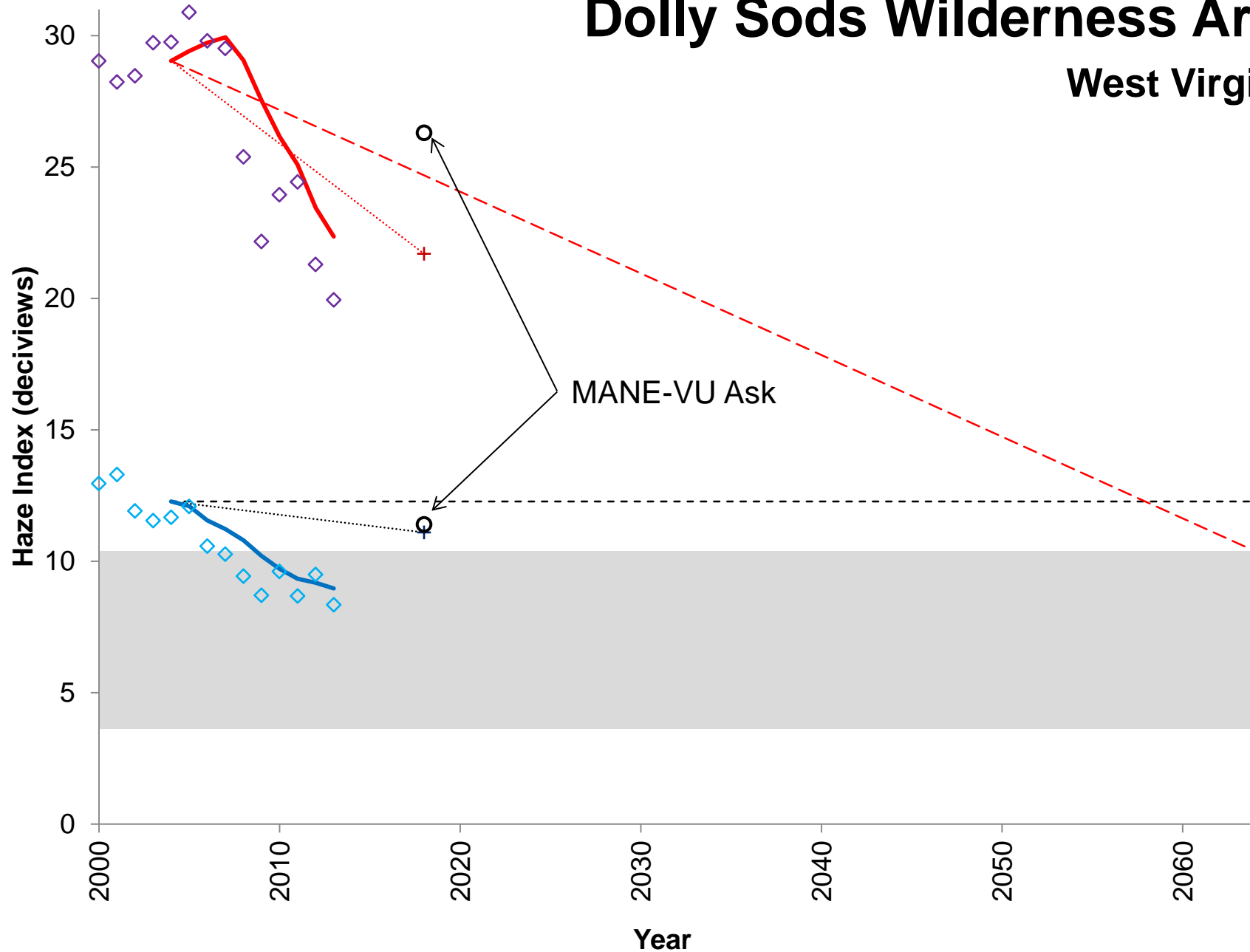
New Jersey





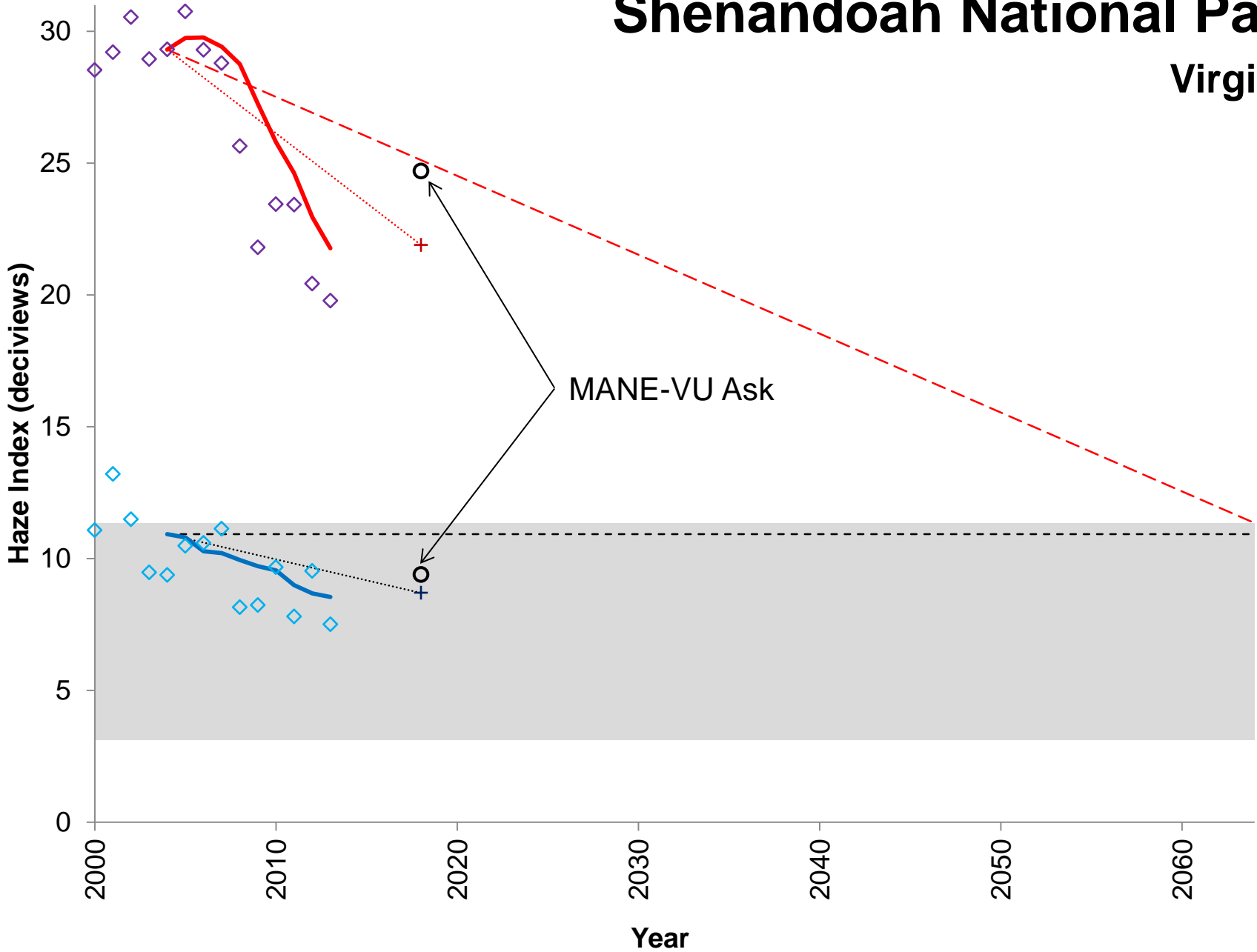
Dolly Sods Wilderness Area

West Virginia

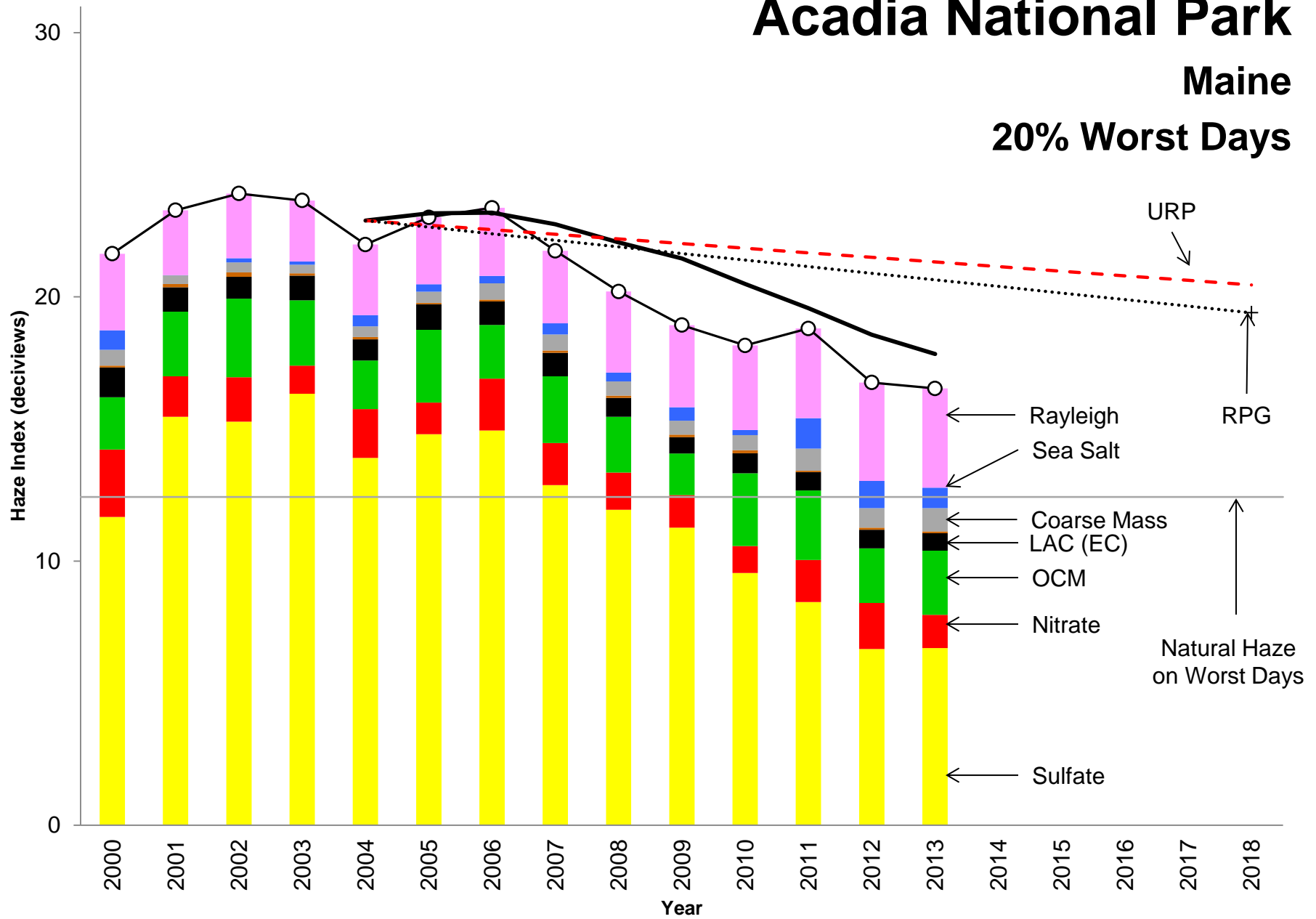


Shenandoah National Park

Virginia



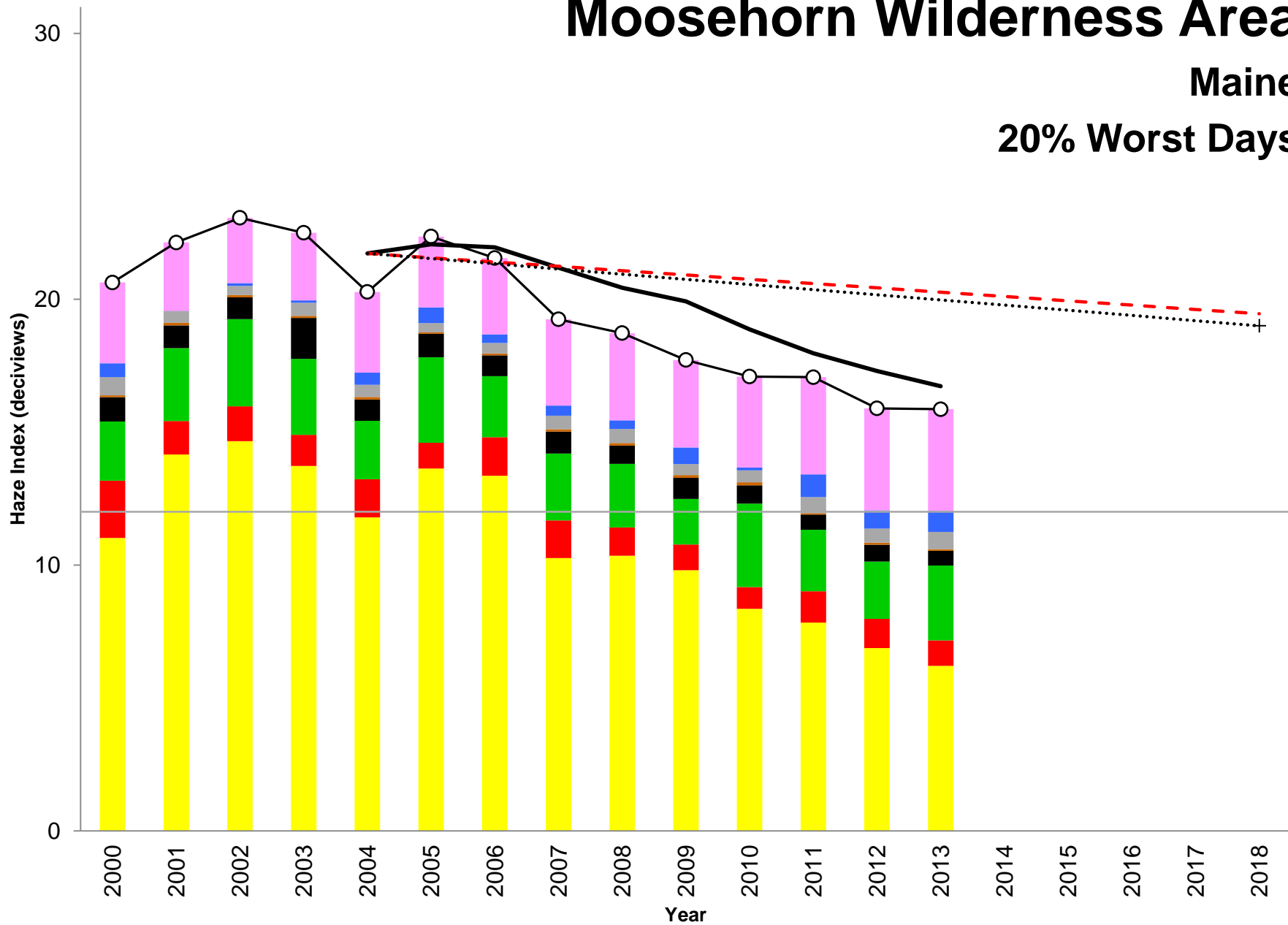
Acadia National Park Maine 20% Worst Days



Moosehorn Wilderness Area

Maine

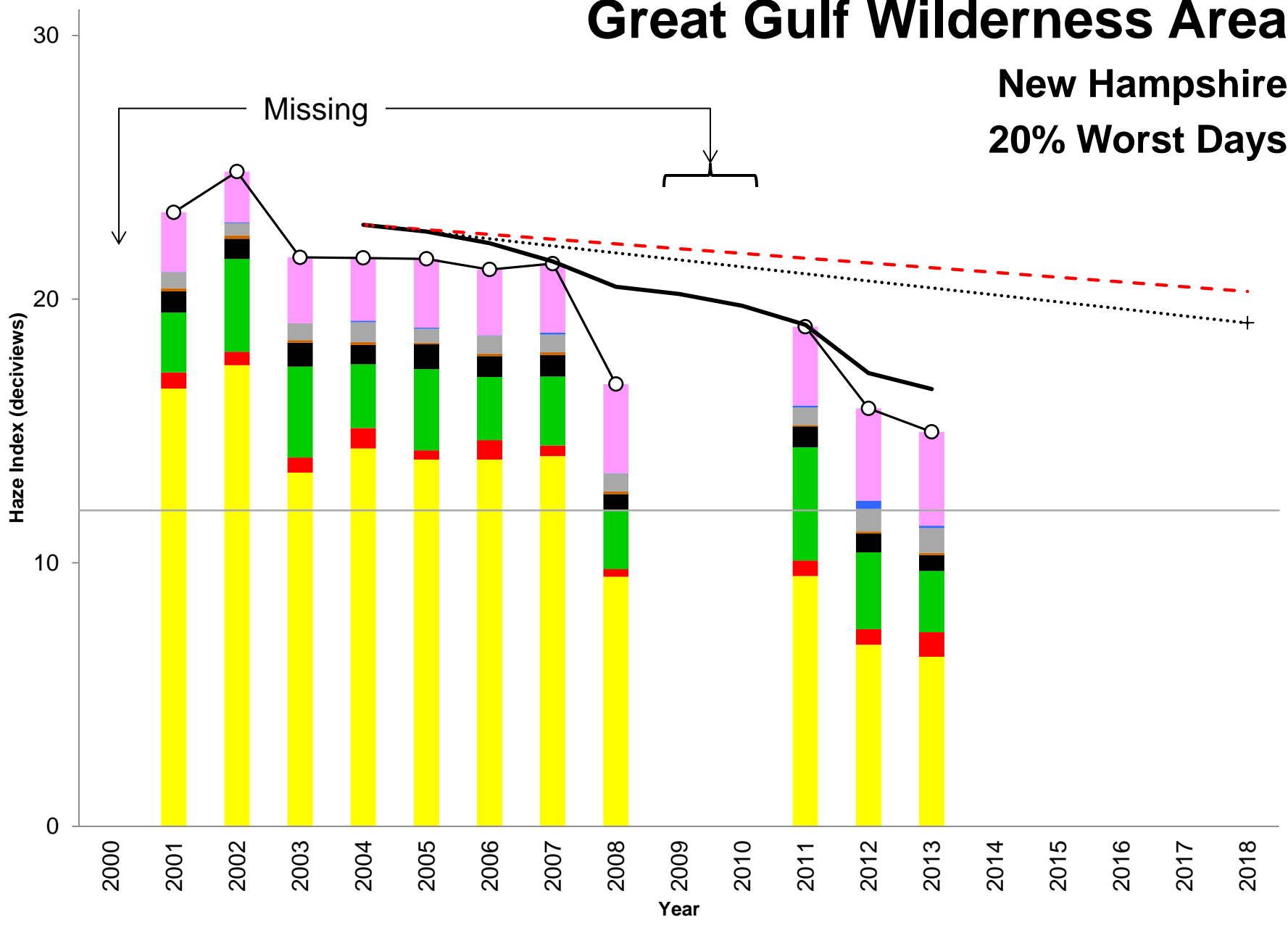
20% Worst Days





Great Gulf Wilderness Area

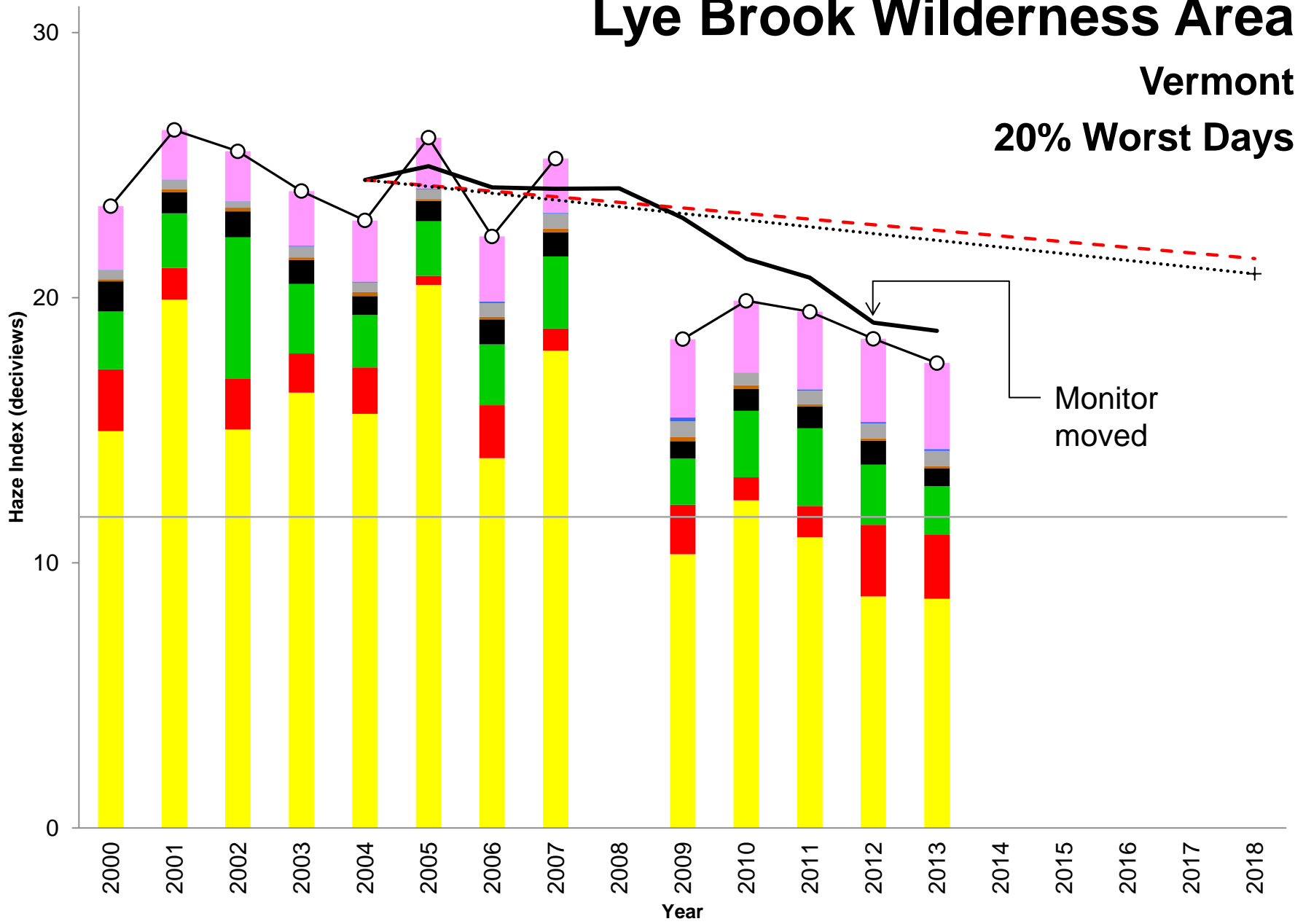
New Hampshire
20% Worst Days



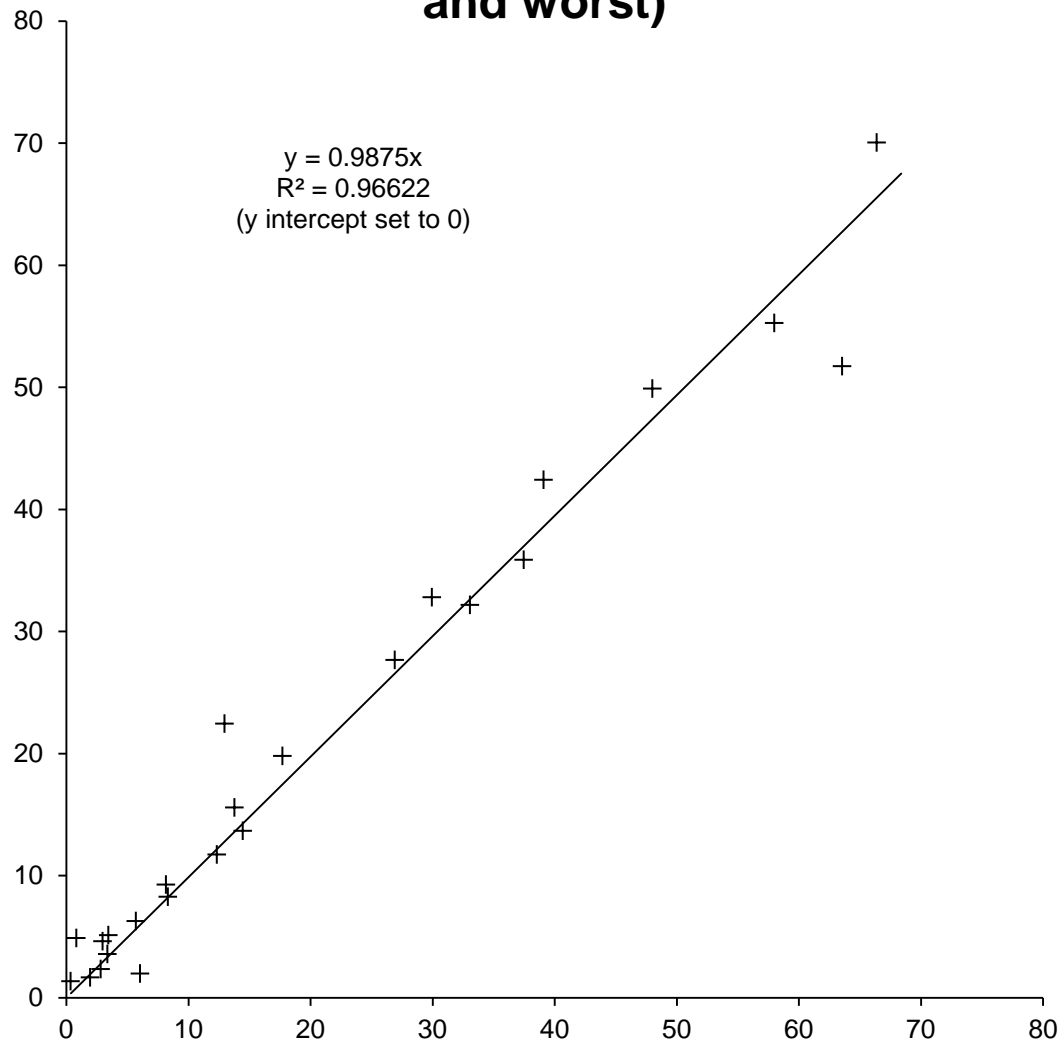
Lye Brook Wilderness Area

Vermont

20% Worst Days

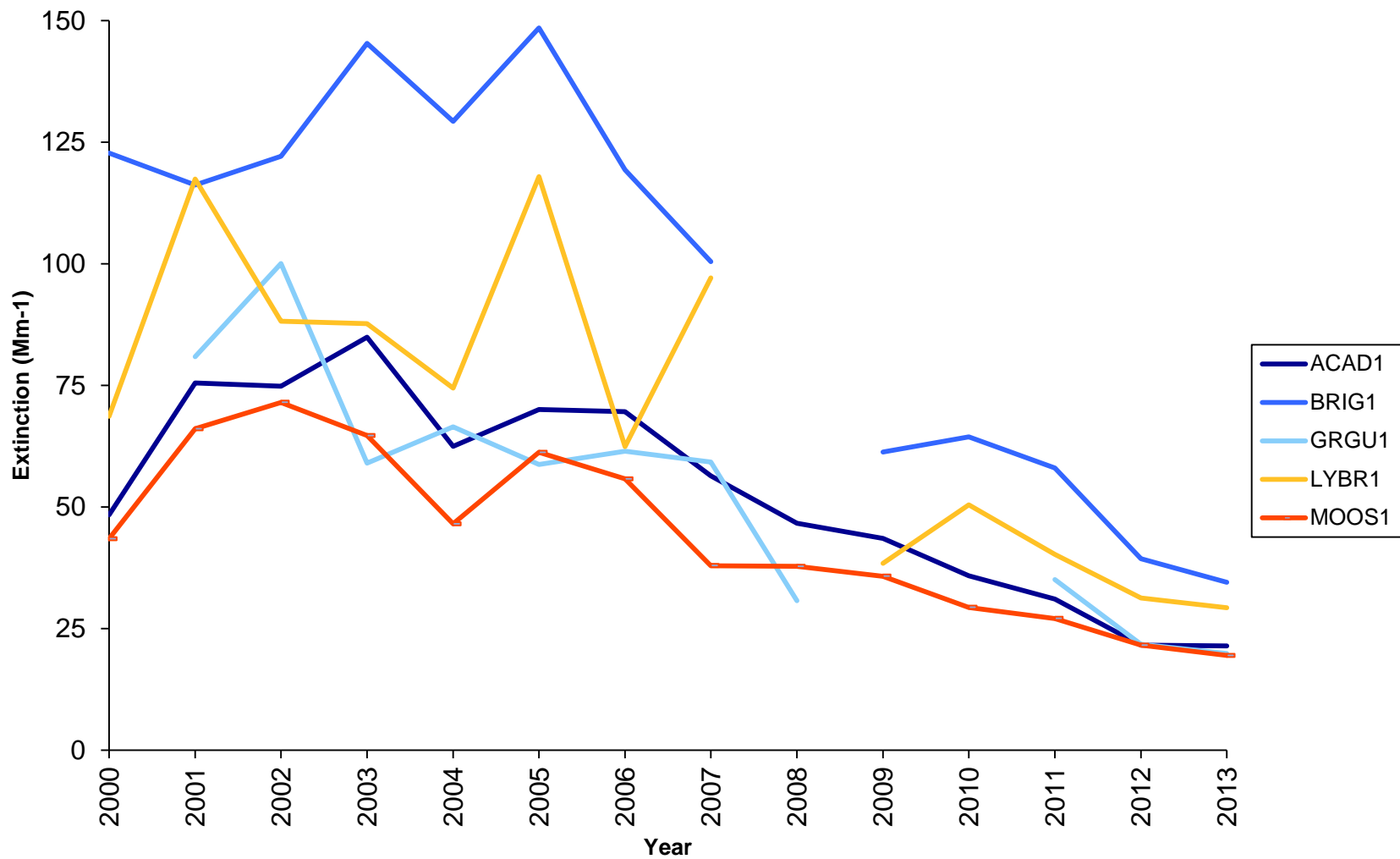


Lye Brook IMPROVE Sites Unpaired Q-Q Plot Ammonium Sulfate Extinction, Jan-Sept 2012 (only 20% best and worst)

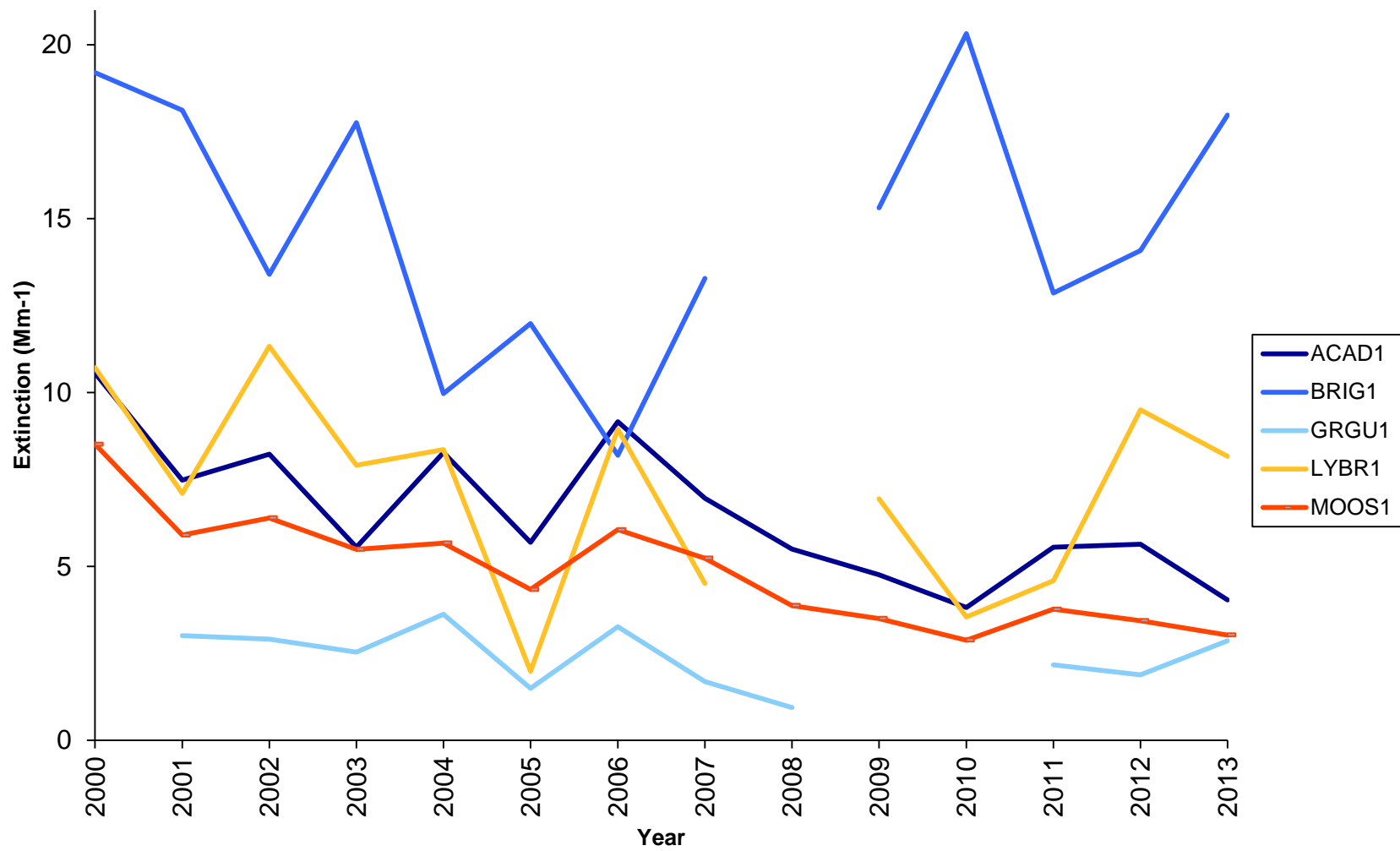


Lye Brook IMPROVE monitor moved by 17 miles in 2012. New monitor appears to be effectively equivalent to old monitor.

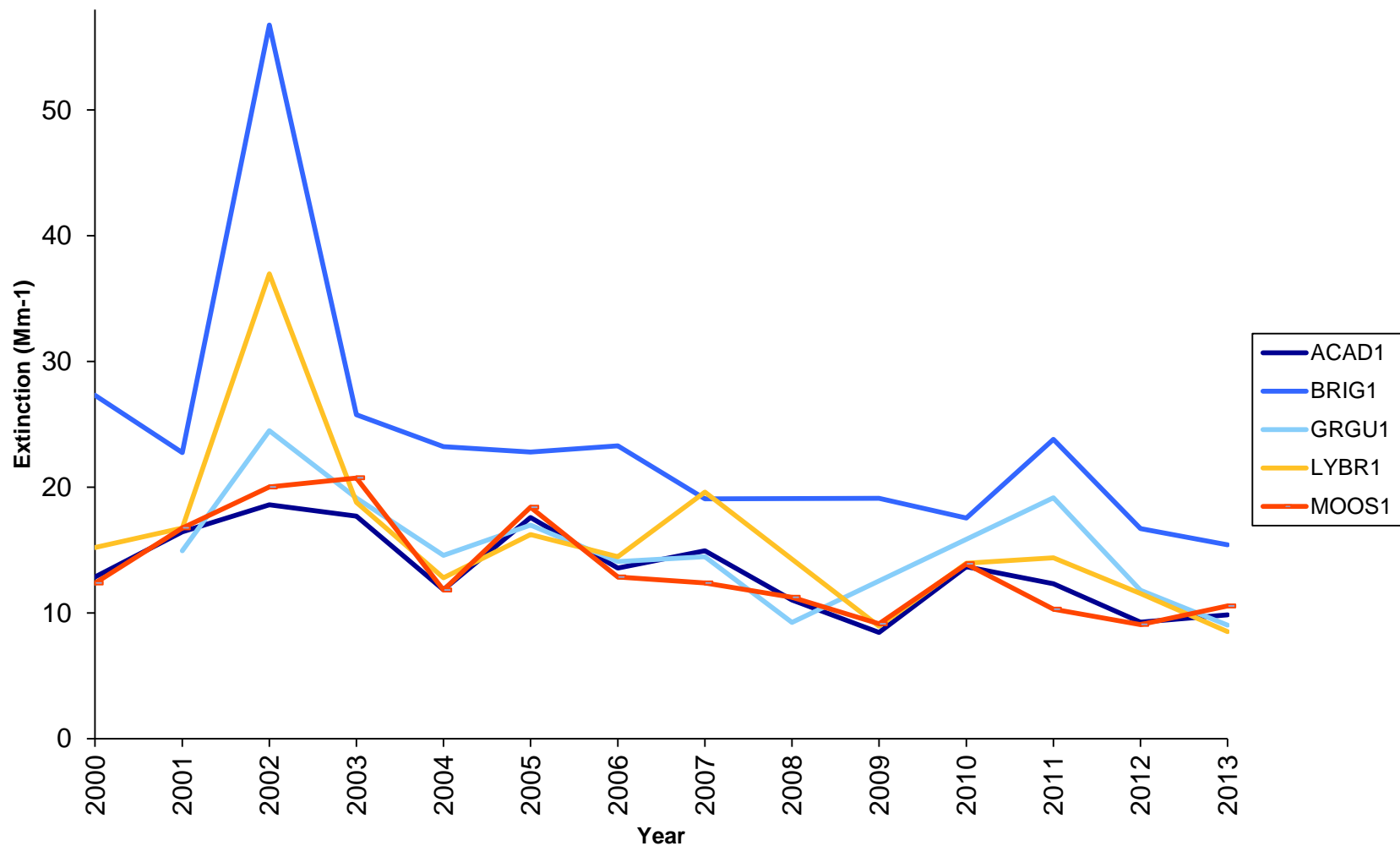
Sulfate



Nitrate

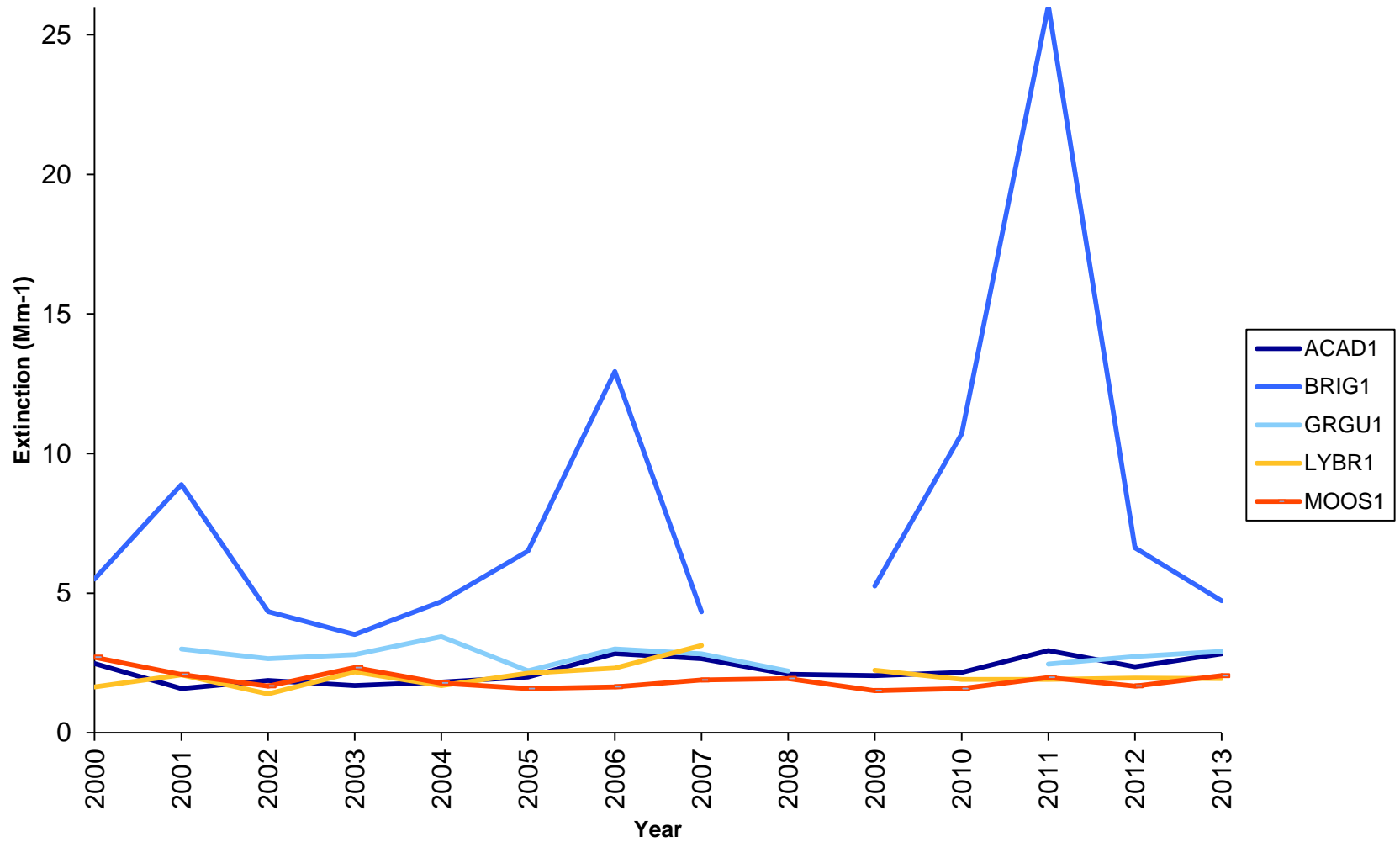


Carbonaceous Matter (OCM + LAC)



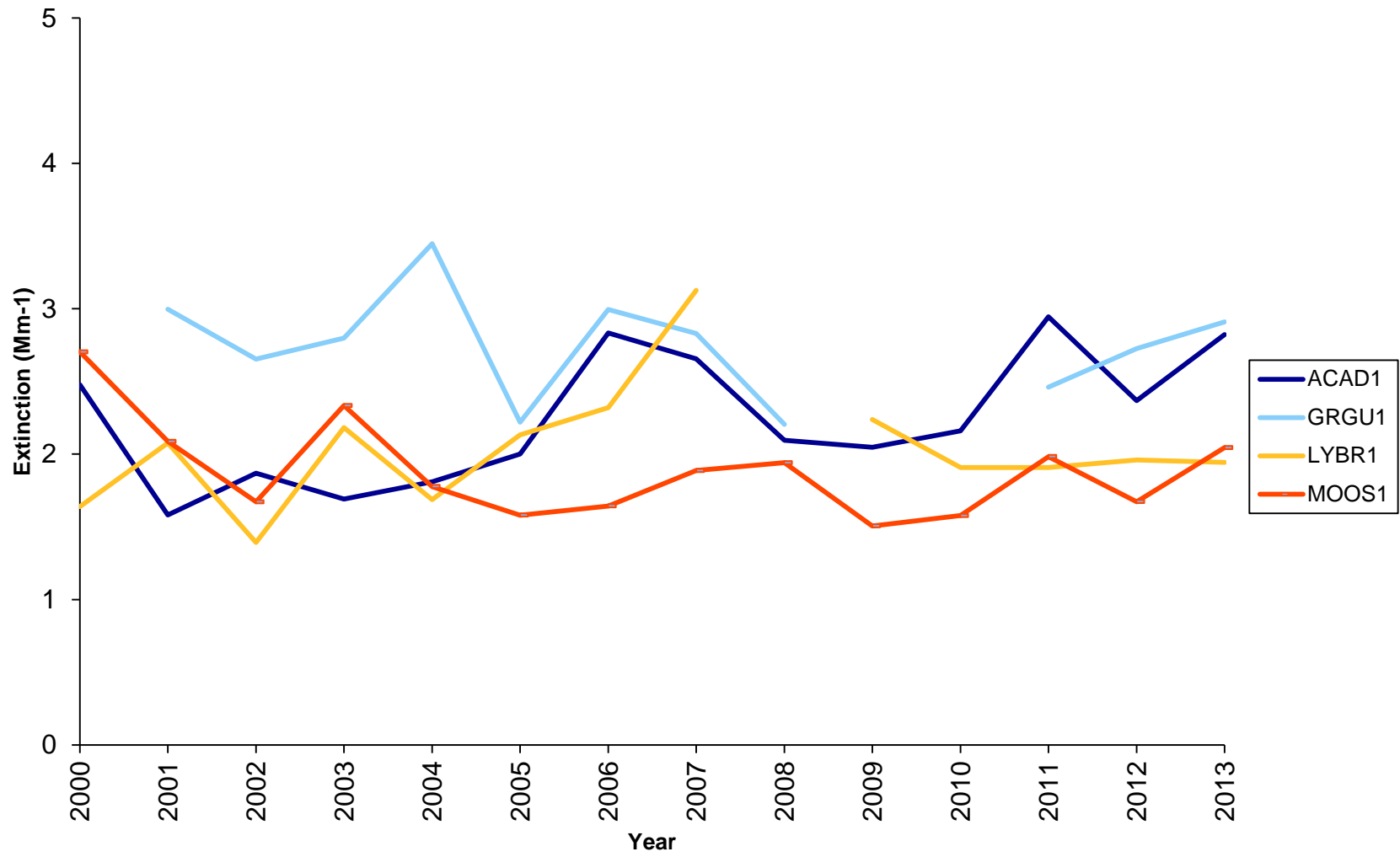
* Elevated levels of OCM occurred at all MANEVU sites in 2002

Coarse Mass





Coarse Mass (Brigantine omitted)





Summary

- * Downward trends in haze levels, mostly driven by sulfate
- * Regional drivers:
 - * NO_x and SO₂ regional emissions reductions from power plants
 - * Lower NO_x from Tier 3 implementation
- * All MANEVU Class I Areas' haze levels at or below 2018 RPGs

Thank you!

Questions?



Presidential Range-Dry River Wilderness

Great Gulf Wilderness

Lye Brook Wilderness

Brigantine Wilderness

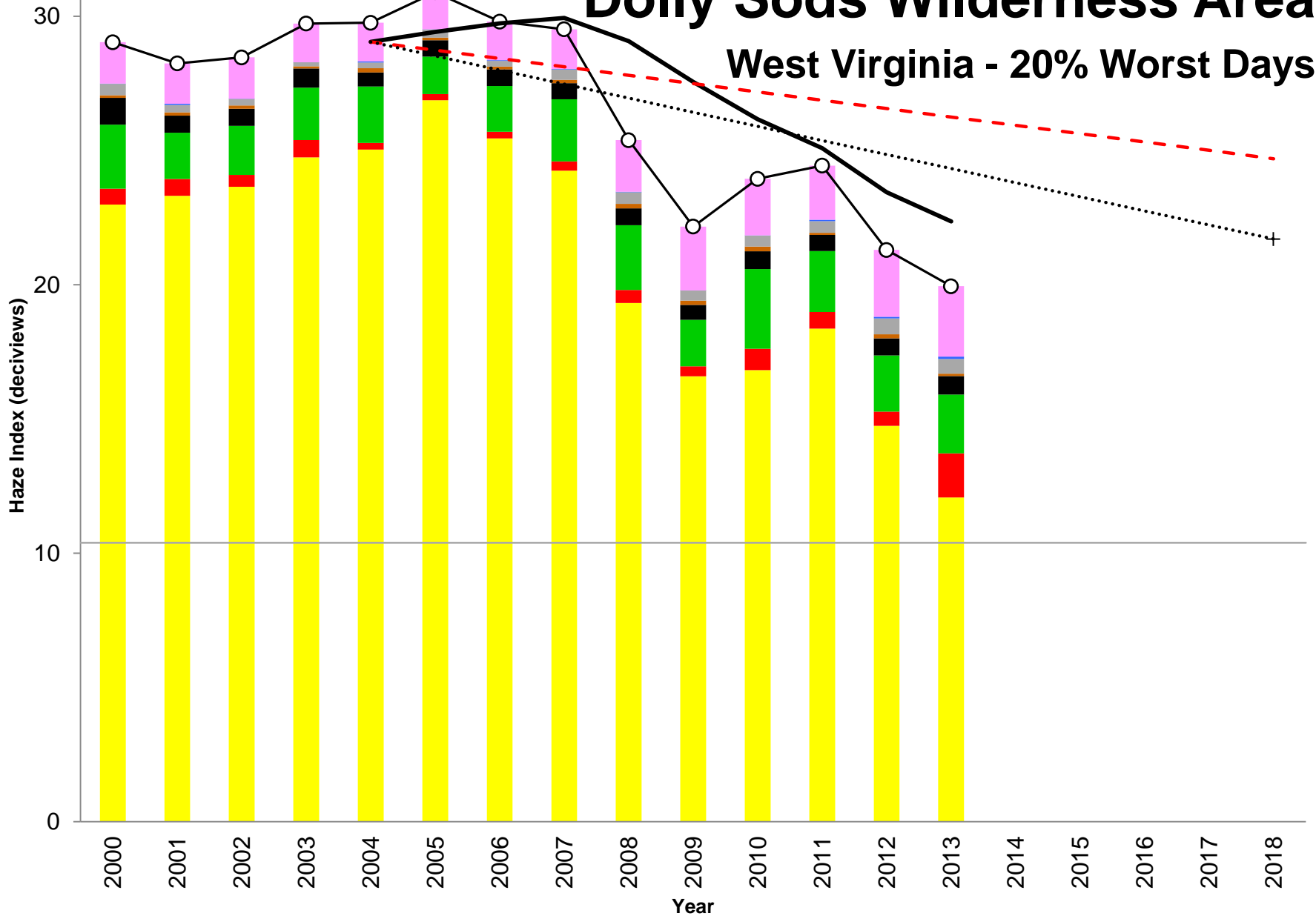
Moosehorn Wilderness BAR

Moosehorn Wilderness EDM

Acadia NP

Dolly Sods Wilderness Area

West Virginia - 20% Worst Days



Shenandoah National Park

Virginia - 20% Worst Days

