

P time-scale

Gary Shenk

CBPO

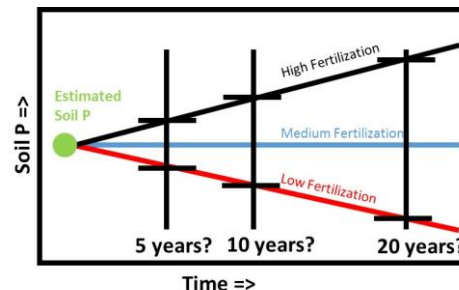
8/3/2017

Meaning of Scenarios

- If management was constant through time what would be the long term loading rate?

Meaning of the WIPs

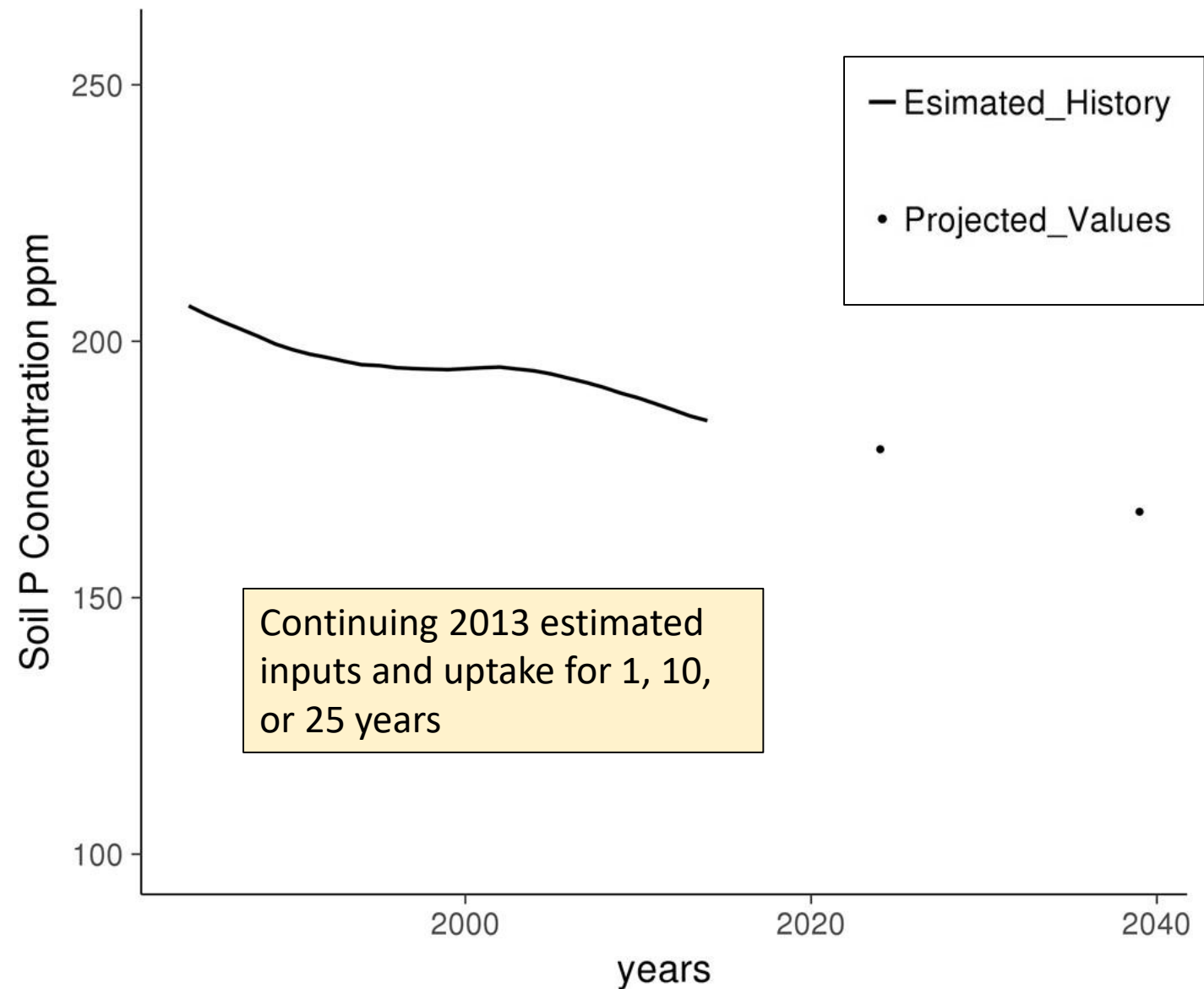
- Necessary implementation to ***eventually*** meet water quality standards



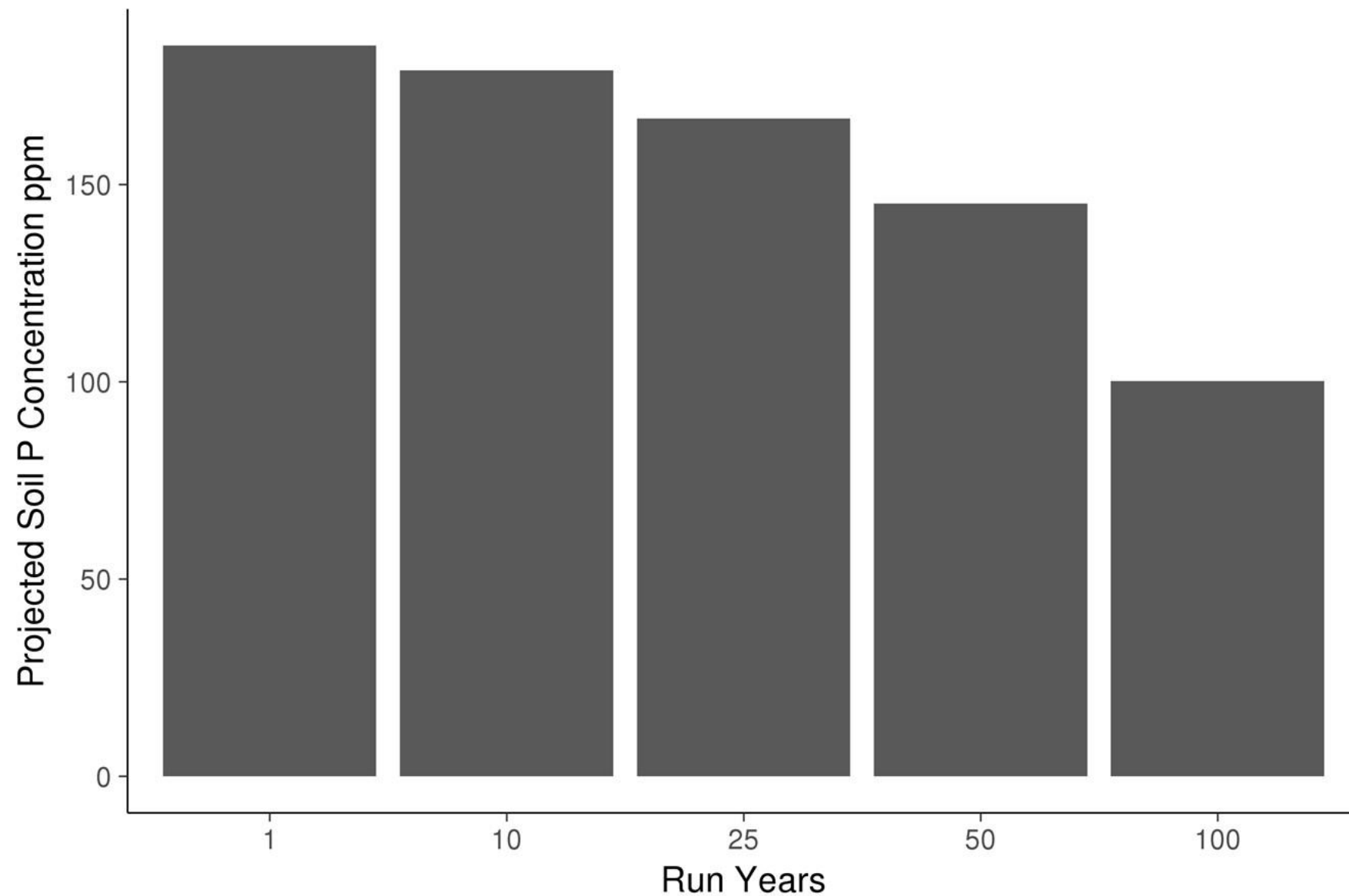
Options for Eventually

- 1 Year
 - Applications could change significantly with very, very minimal change in P soil, and thus P runoff.
 - Wastewater progress is measured in “current year” format.
 - Low uncertainty, low effect
- 10 Years
 - Most common credit duration for BMPs
 - Similar time period to nitrogen load.
- 25 Years
 - P drawdown study on Mid-Atlantic Coastal Plain estimated P could be drawn down from 200 ppm to 100 ppm Mehlich 3 in 25 years with zero additional inputs.
 - High effect, high uncertainty
- Something Else?

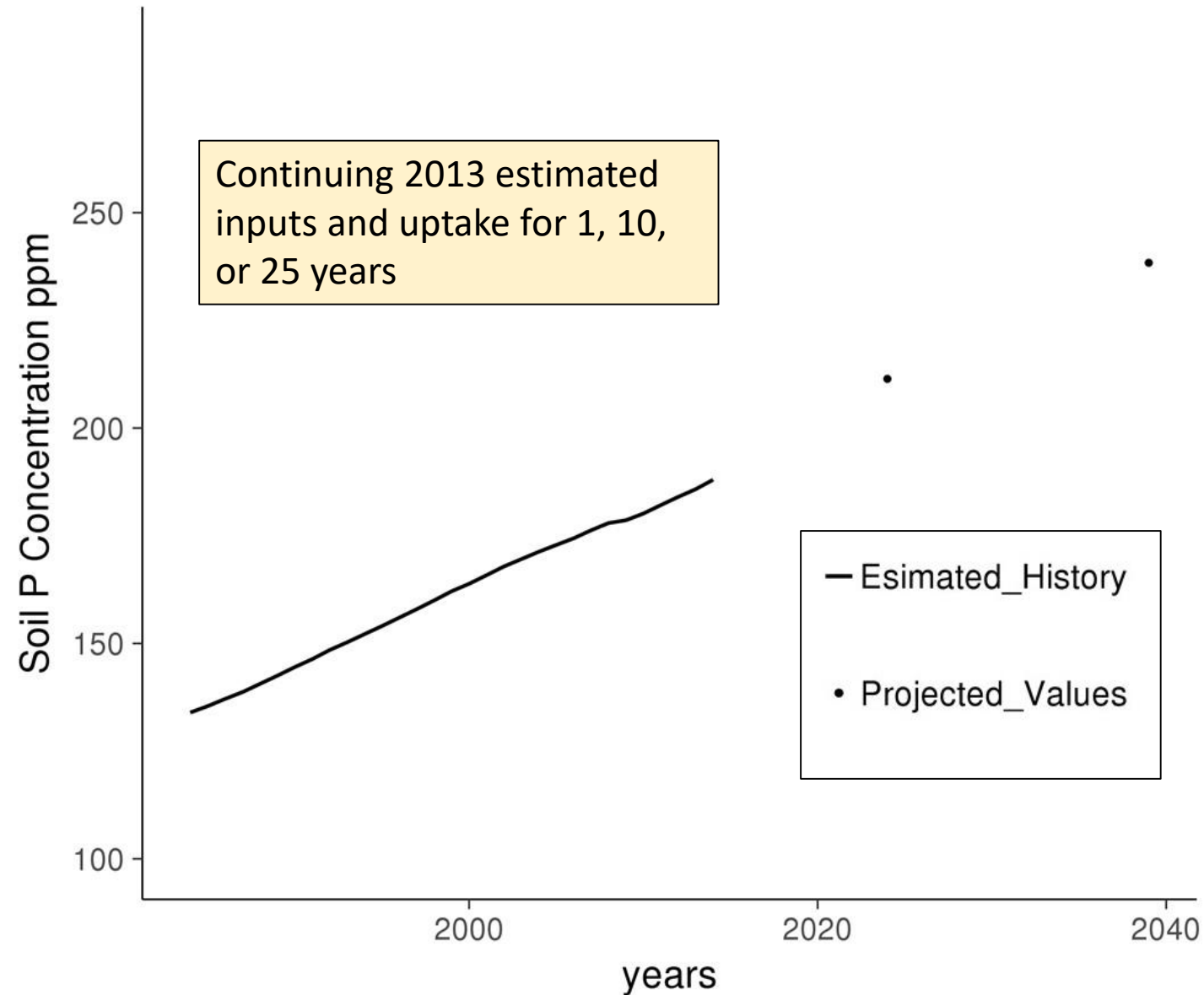
Sussex County, DE



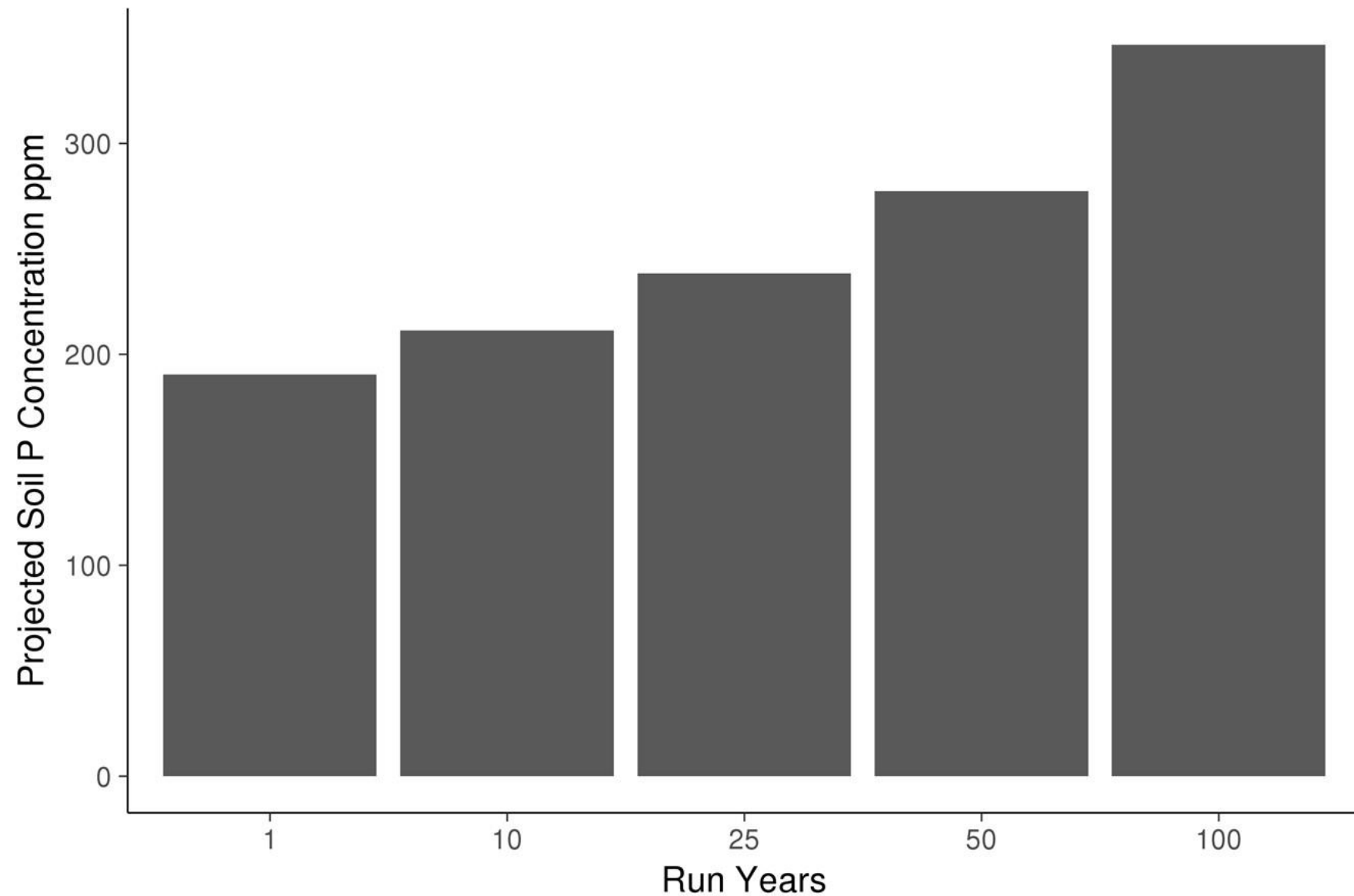
Sussex County, DE



Somerset County, MD



Somerset County, MD





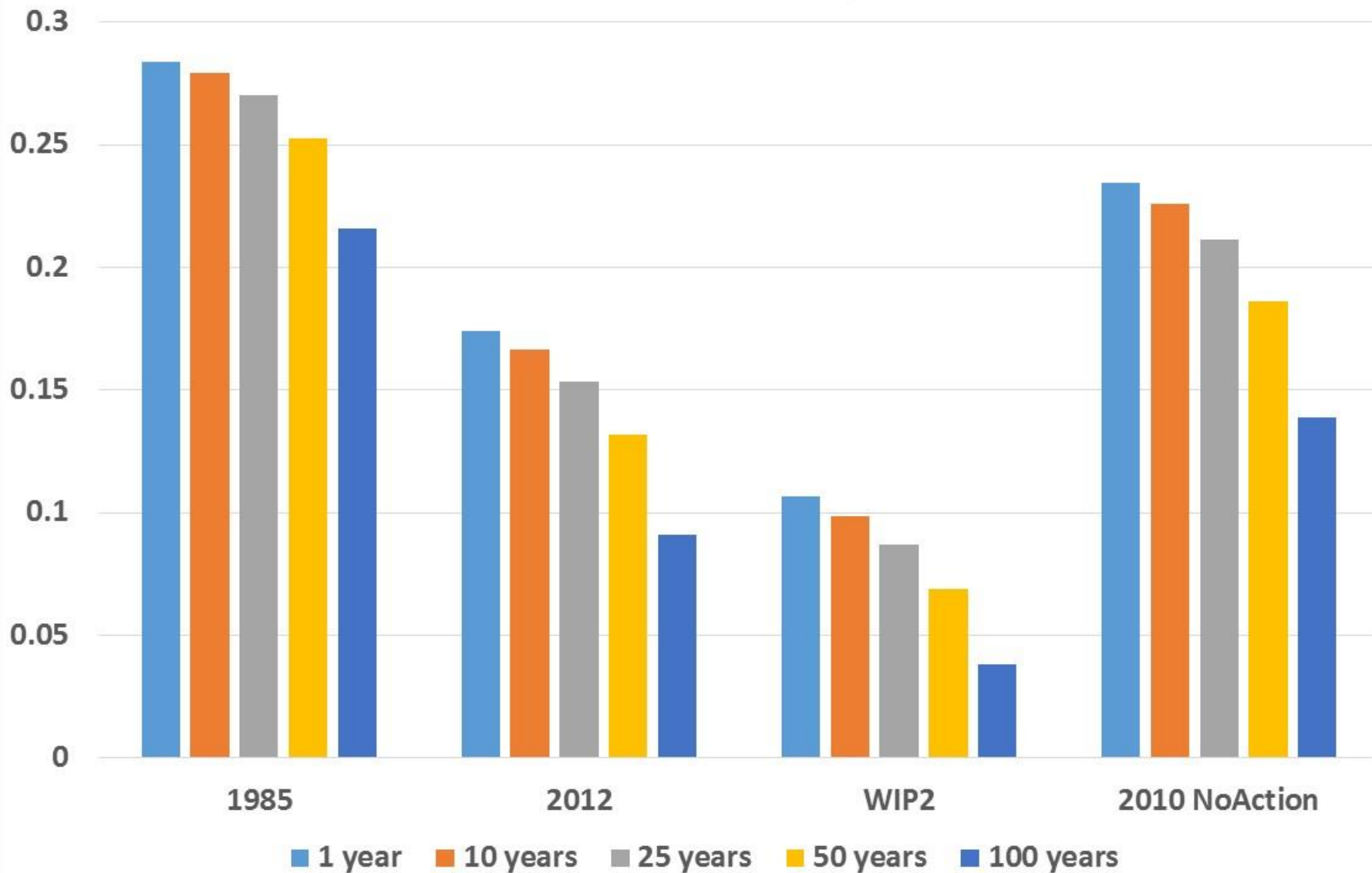
Average Load + Δ Inputs * Sensitivity

P Load from grain without manure =
1.87 + 0.013 * (Mehlich – 98.2) ppm
+ 0.144 * (storm runoff - 6.73) inches
+ 0.049 * (sediment loss - 4.75) tons
+ 0.015 * (WEP – 14.3) lbs

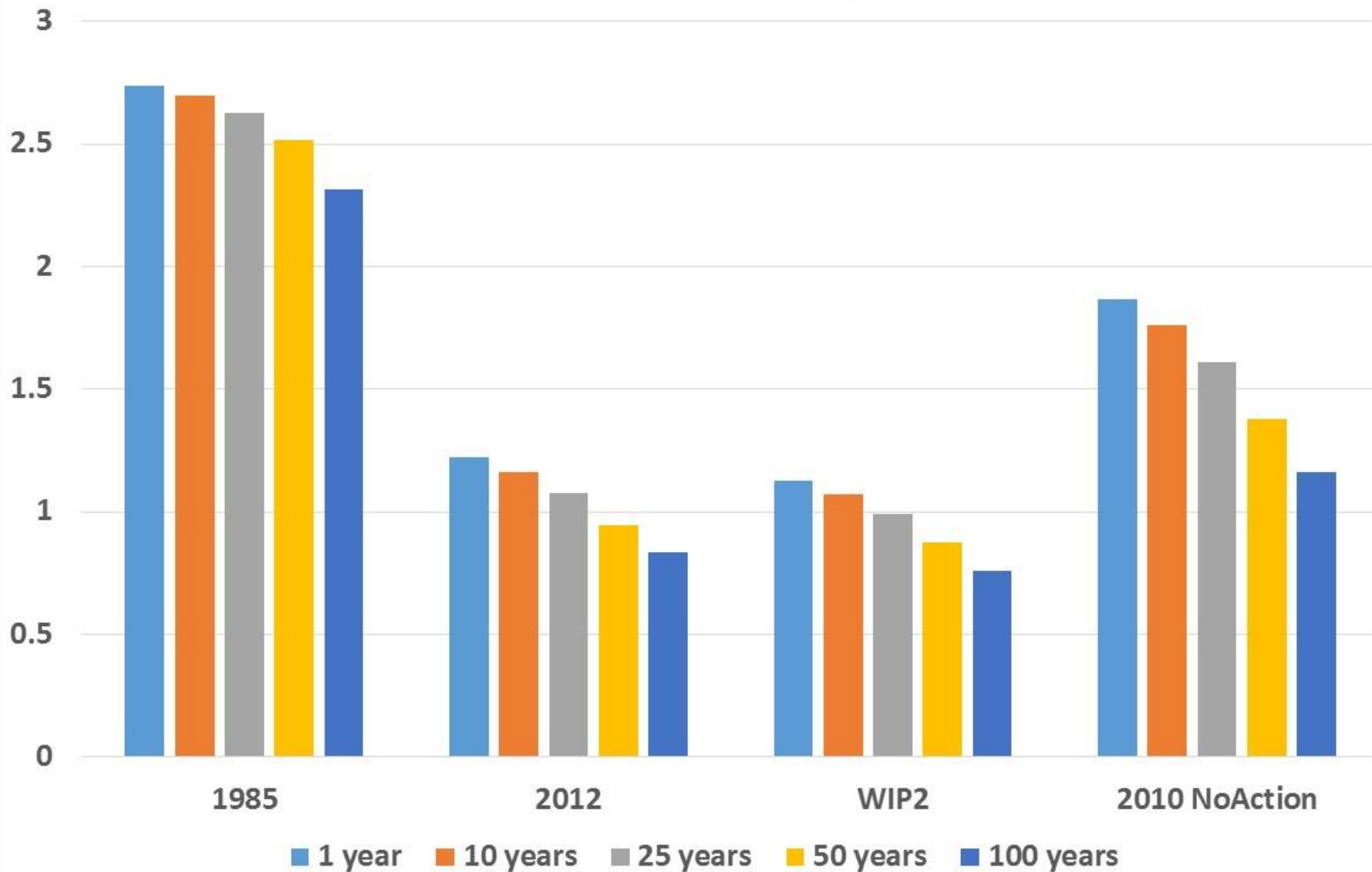
Preliminary Information-Subject to Revision.

Not for Citation or Distribution

Agricultural P Loads (Million Pounds) - DE
Different P soil time scales - CAST July 2017

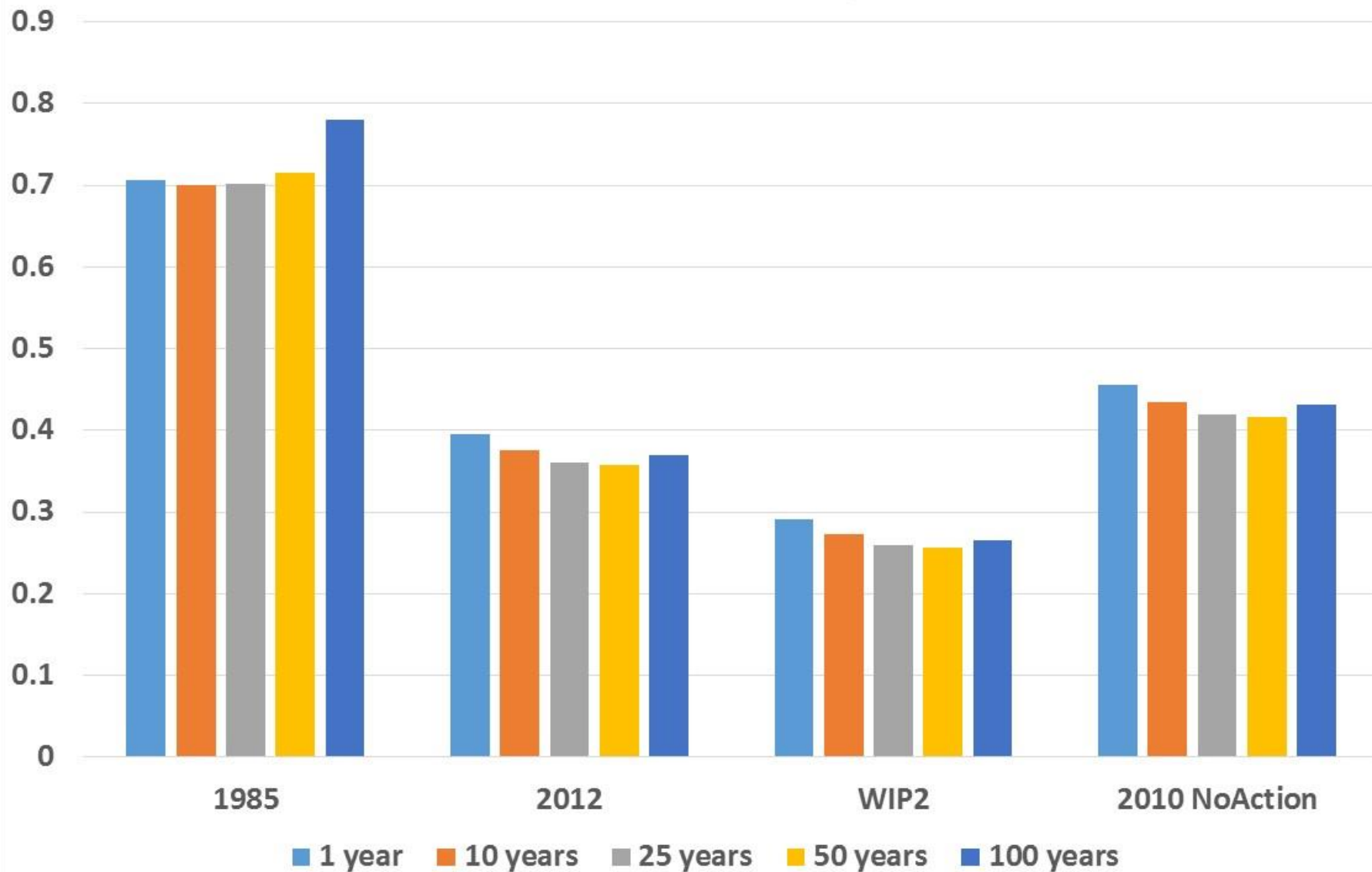


Agricultural P Loads (Million Pounds) - MD
Different P soil time scales - CAST July 2017

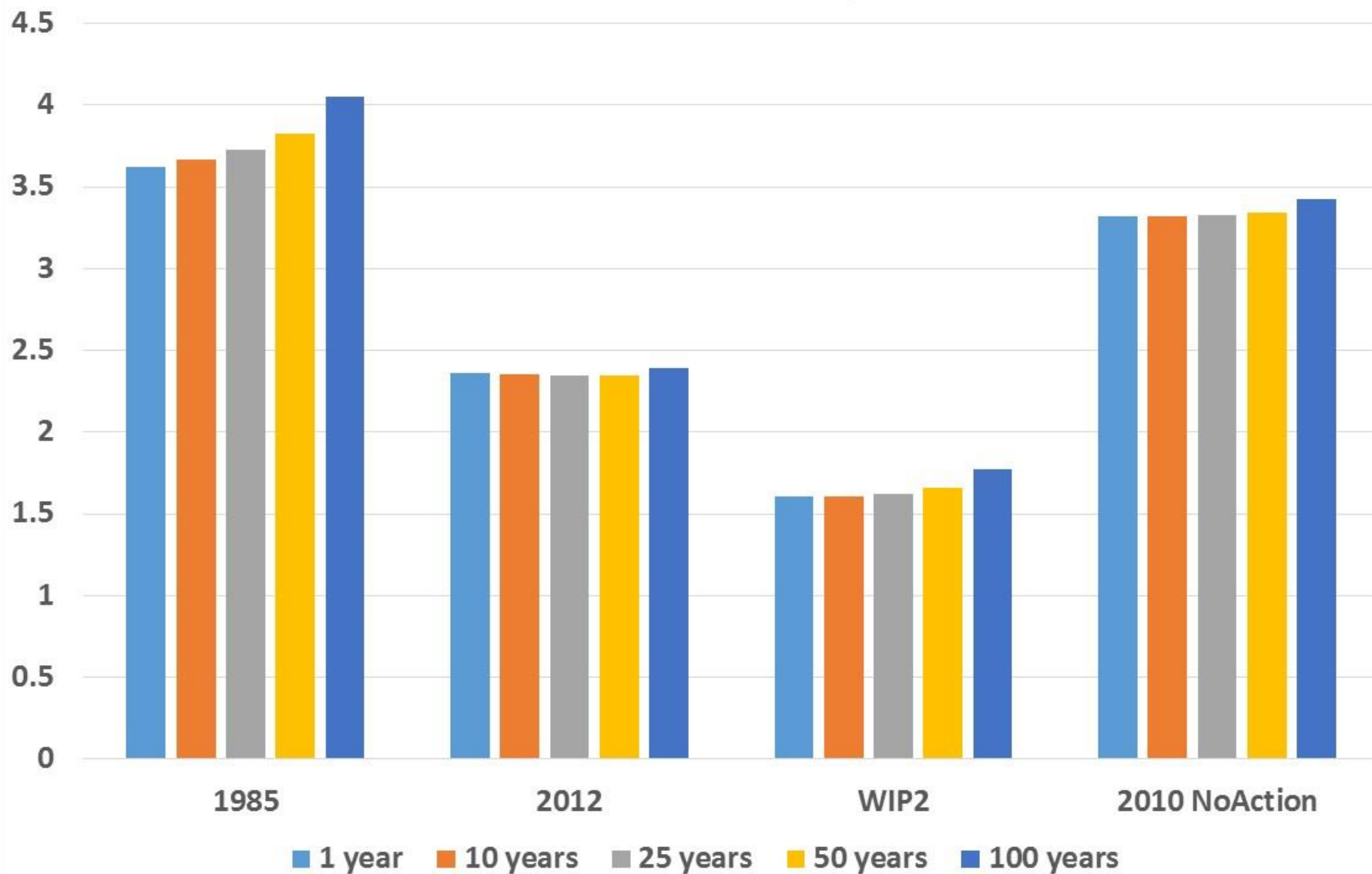


Agricultural P Loads (Million Pounds) - NY

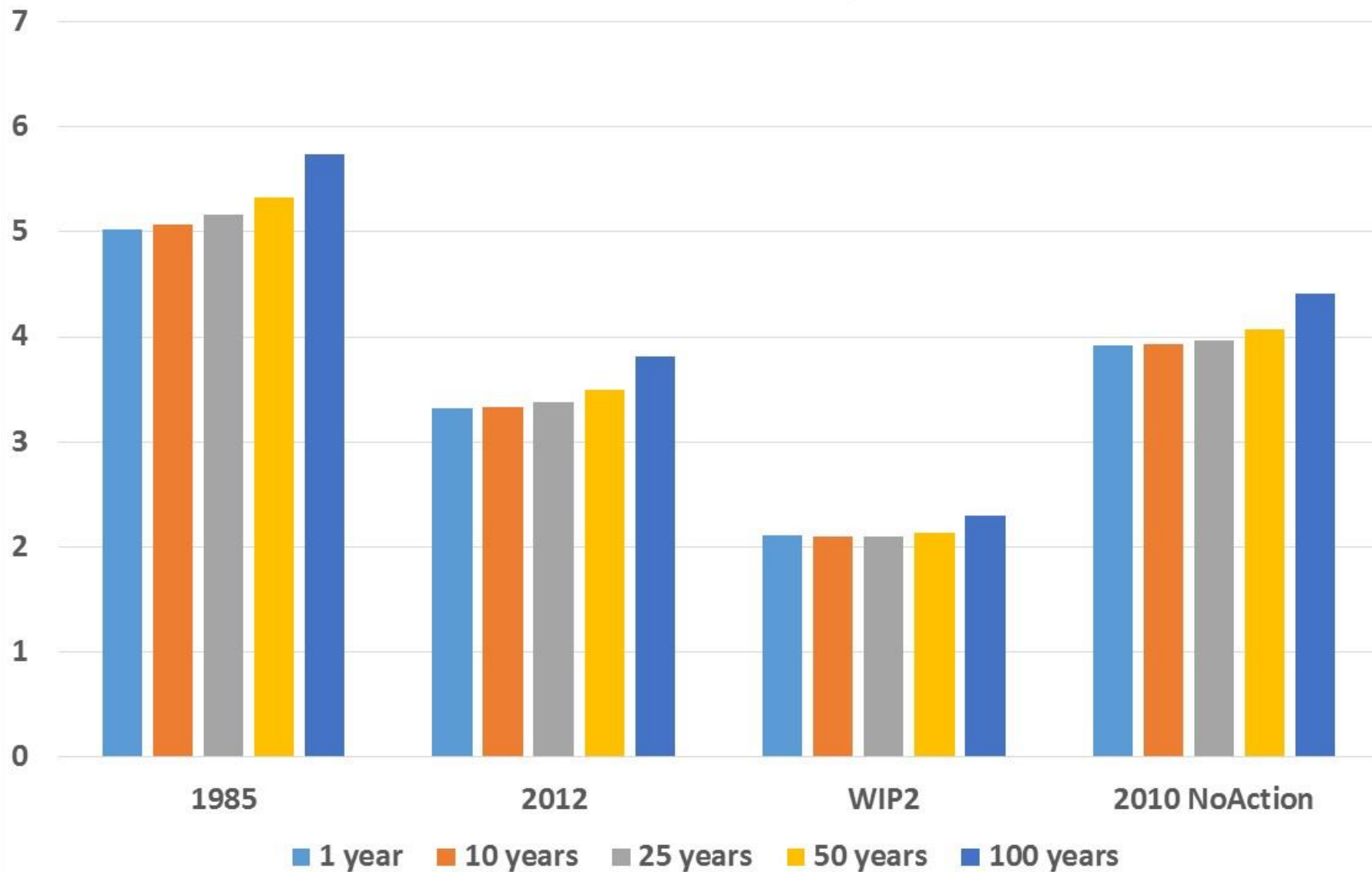
Different P soil time scales - CAST July 2017



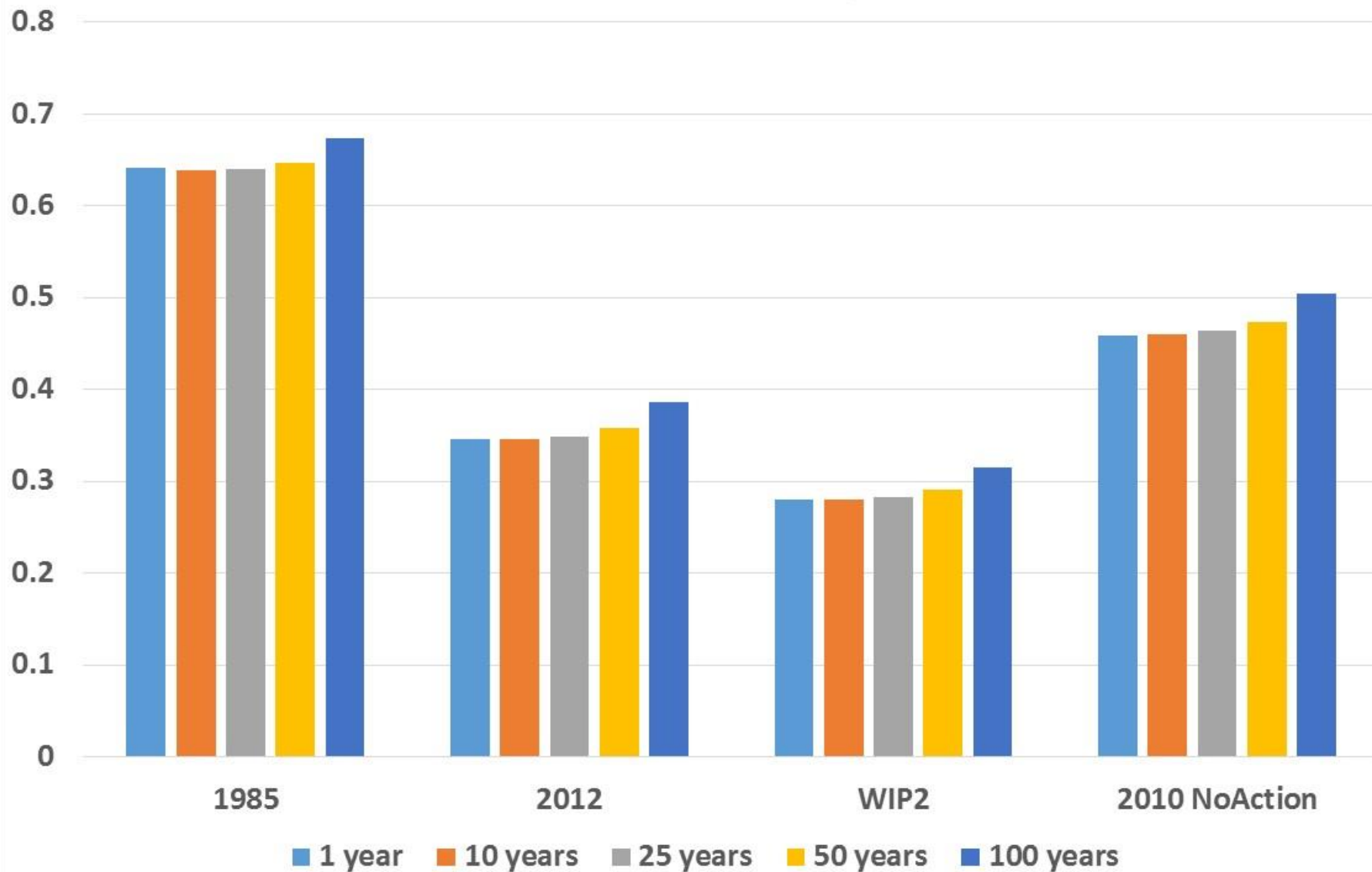
Agricultural P Loads (Million Pounds) - PA
Different P soil time scales - CAST July 2017



Agricultural P Loads (Million Pounds) - VA
Different P soil time scales - CAST July 2017



Agricultural P Loads (Million Pounds) - WV
Different P soil time scales - CAST July 2017



Agricultural P Loads (Million Pounds) - Watershed

Different P soil time scales - CAST July 2017

