

Potential Impact of Climate Change on Subsurface Drainage in Iowa's Subsurface Drained Landscapes

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Perry, Iowa

- 24-32% increase in annual precipitation
- 2.3-2.7°C increase in temperature
- Increase tile drainage flows
- Change distribution of flows within the calendar year

Hypoxia, Aquatic Life



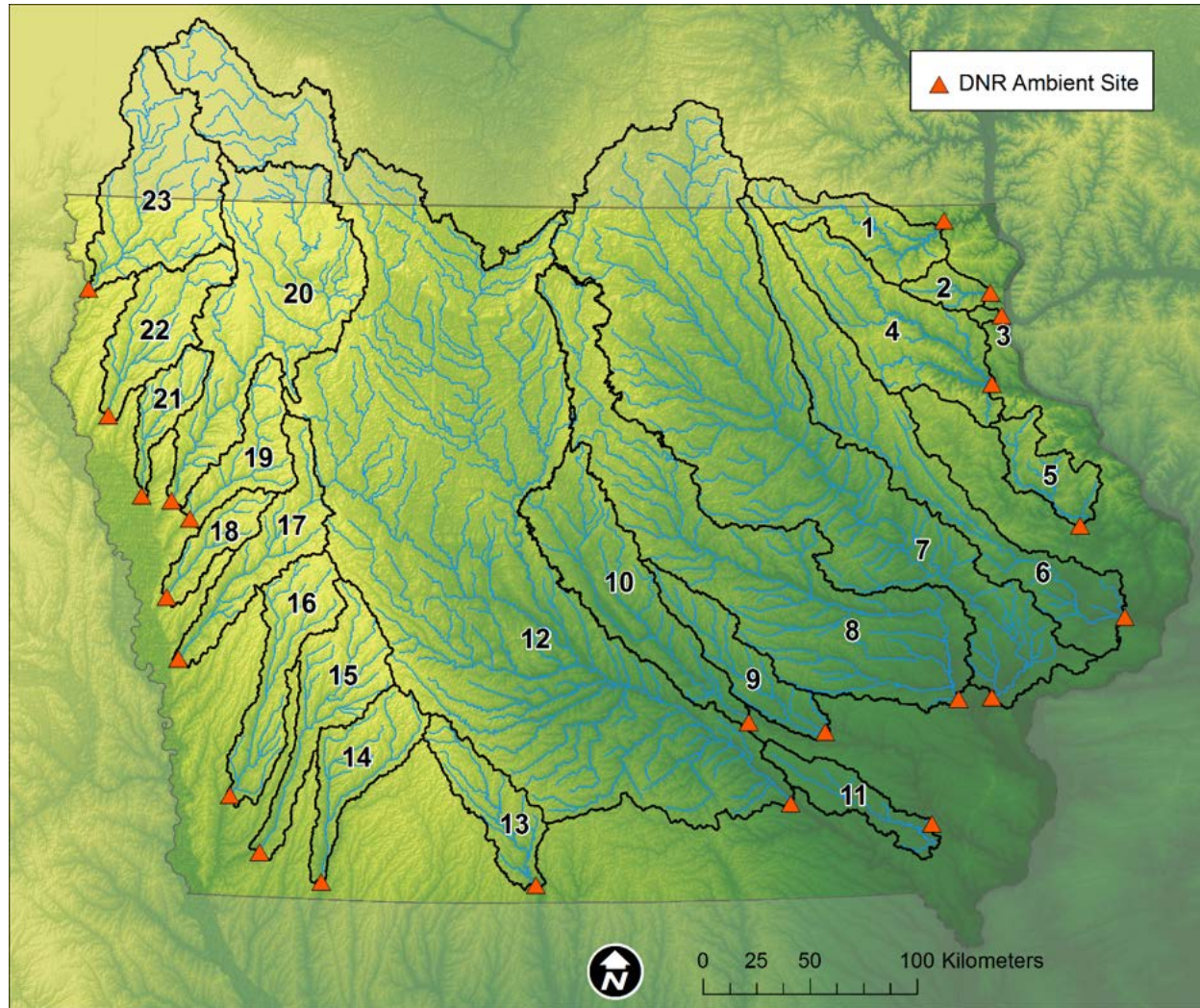
Drinking Water



Toledo, OH



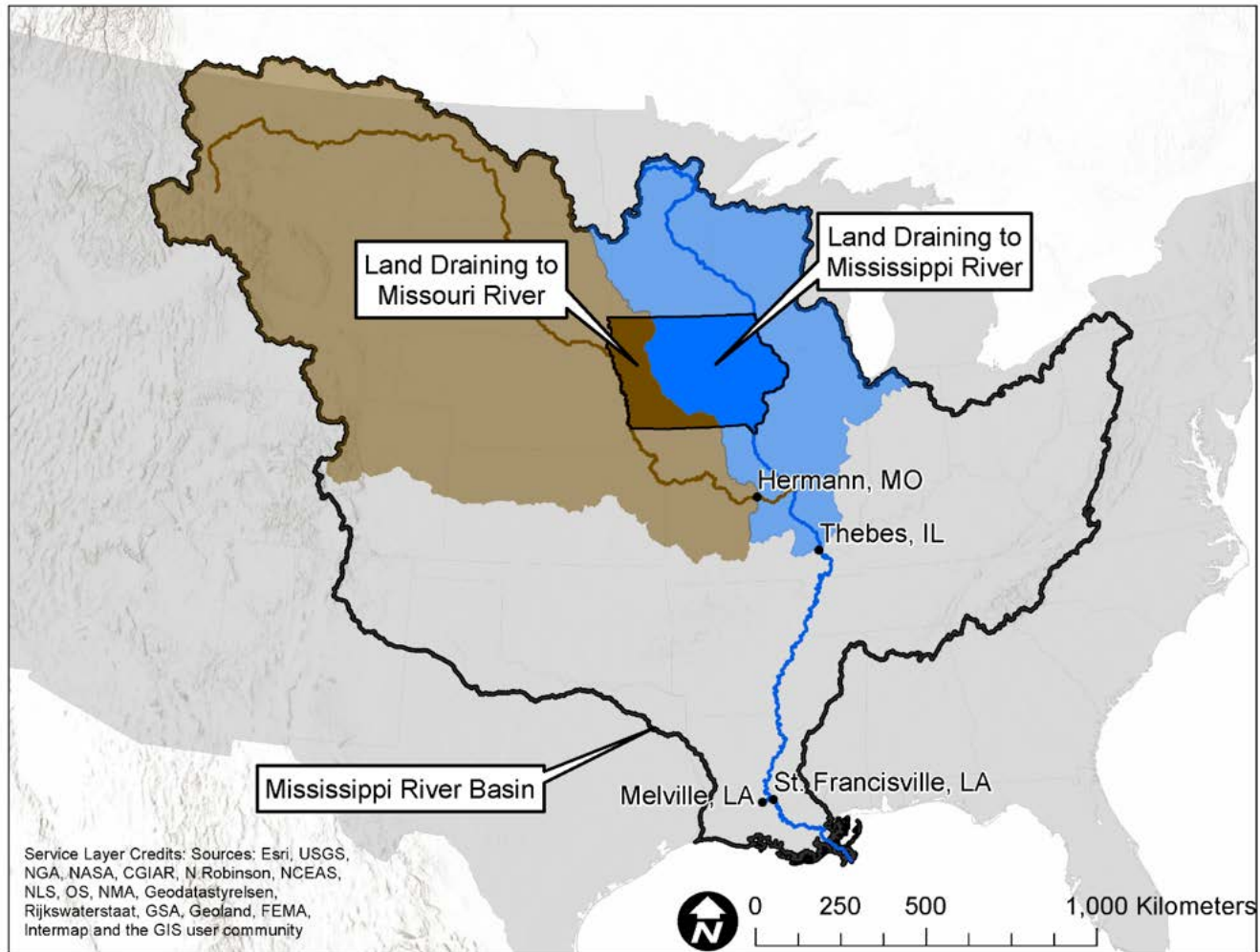
Des Moines, IA



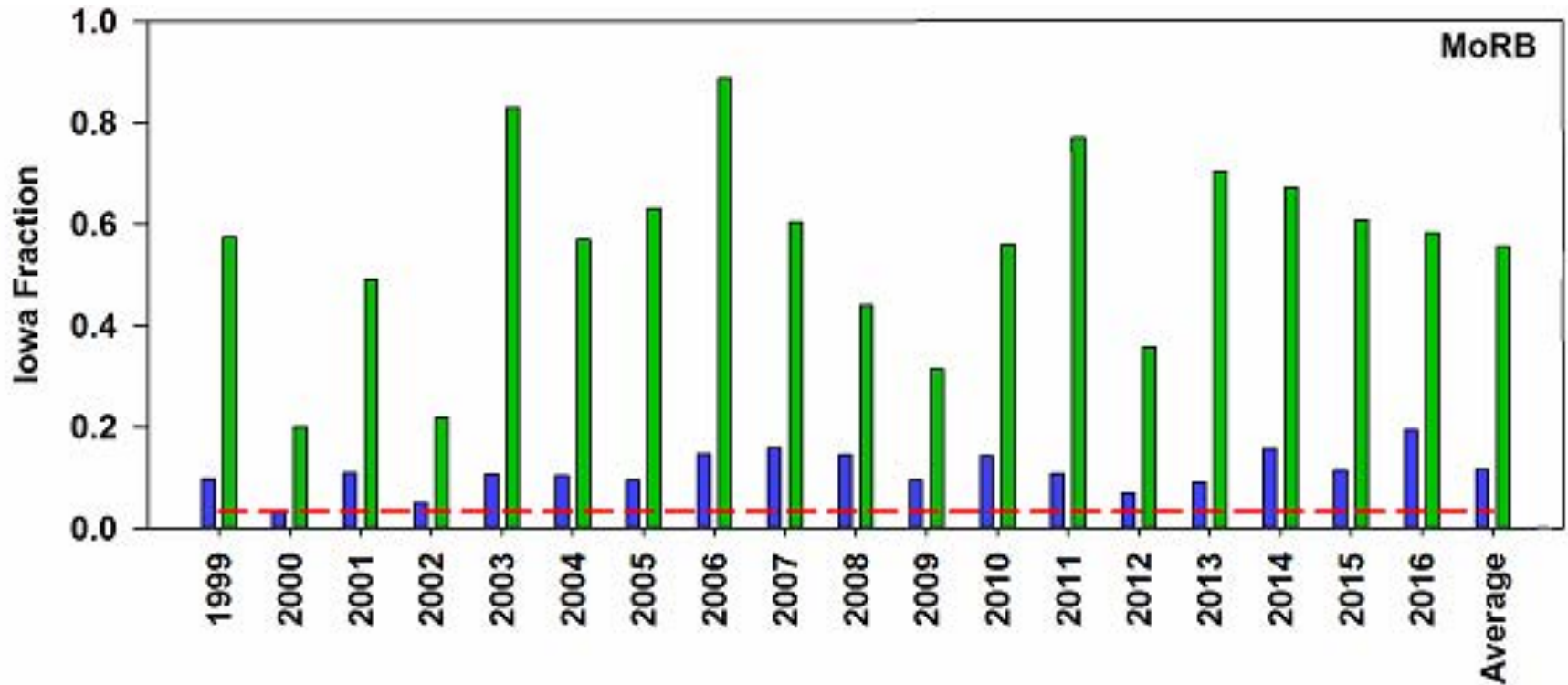
DNR Ambient Water Monitoring Data: 1999-2016

DNR IOWA DEPARTMENT OF
NATURAL RESOURCES



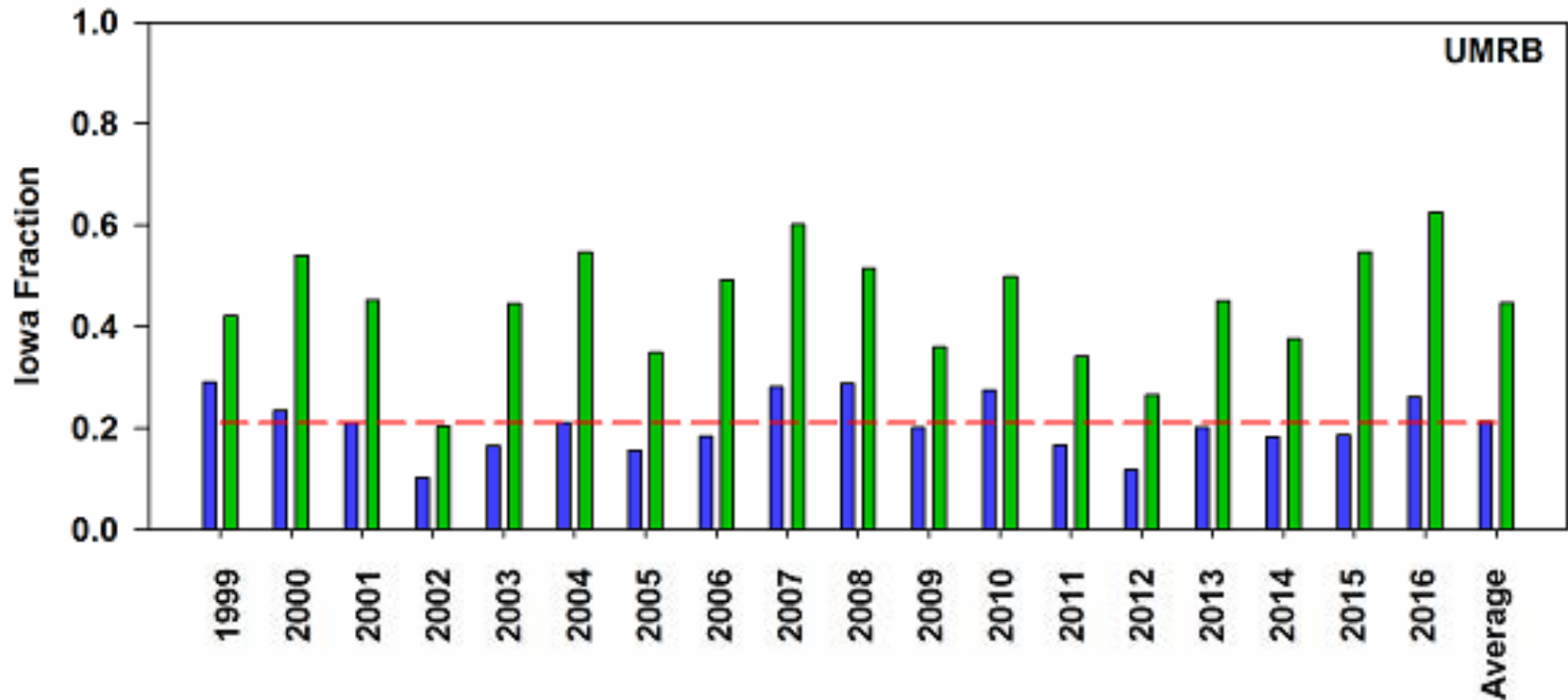


Missouri



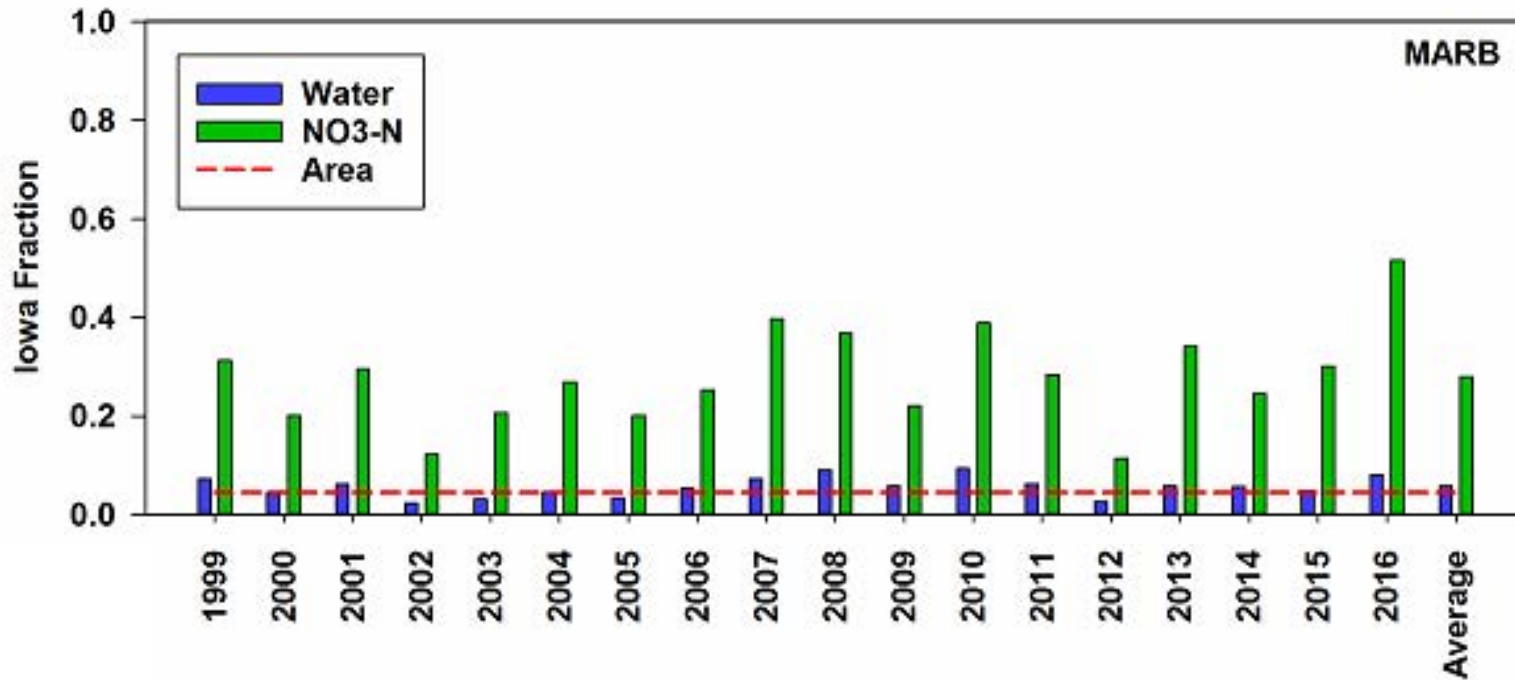
3.3% of the land
12% of the water
55% of the nitrate

Upper Mississippi



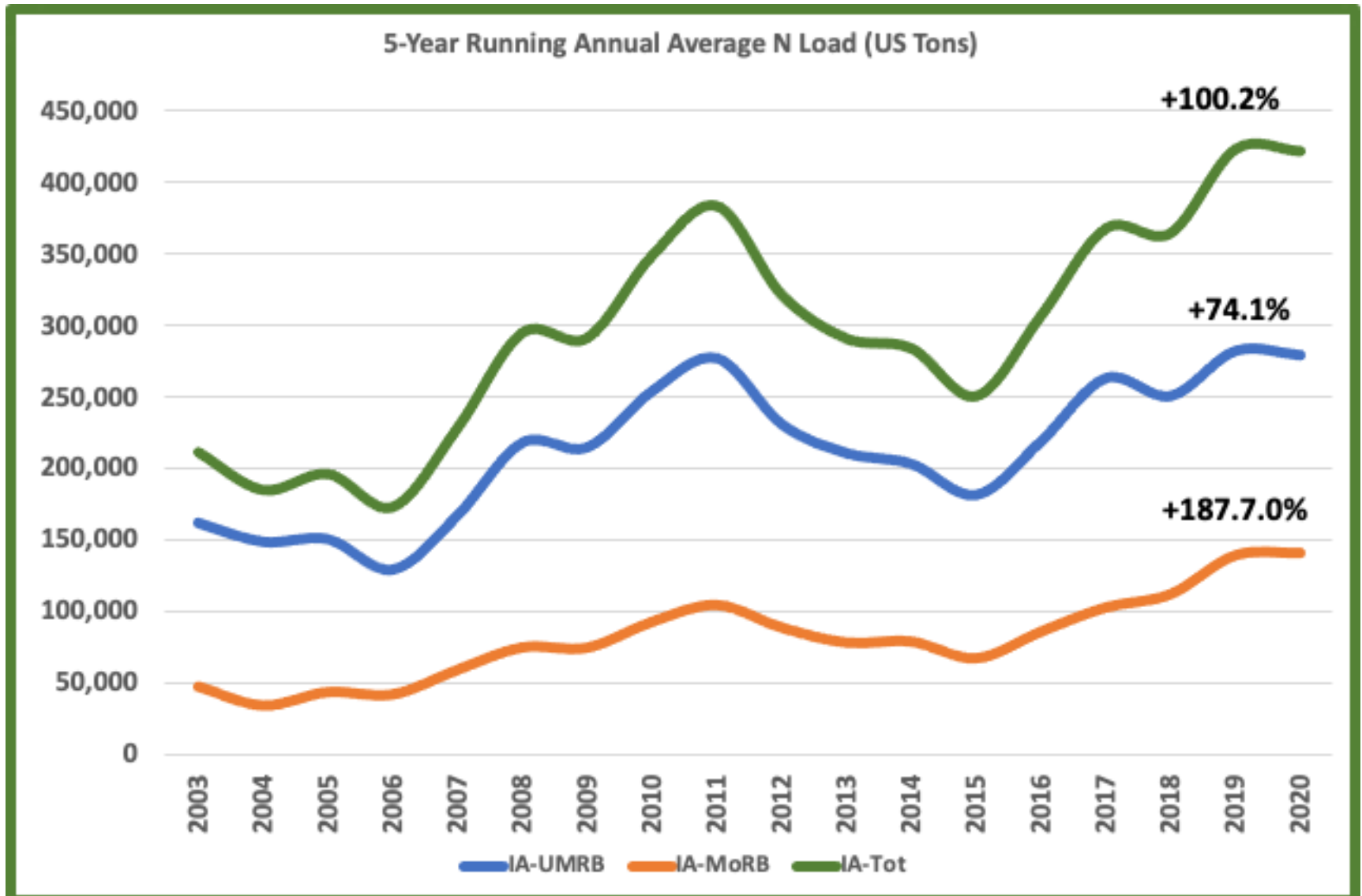
21% of the land
21% of the water
45% of the nitrate

Mississippi-Atchafalaya-Gulf of Mexico

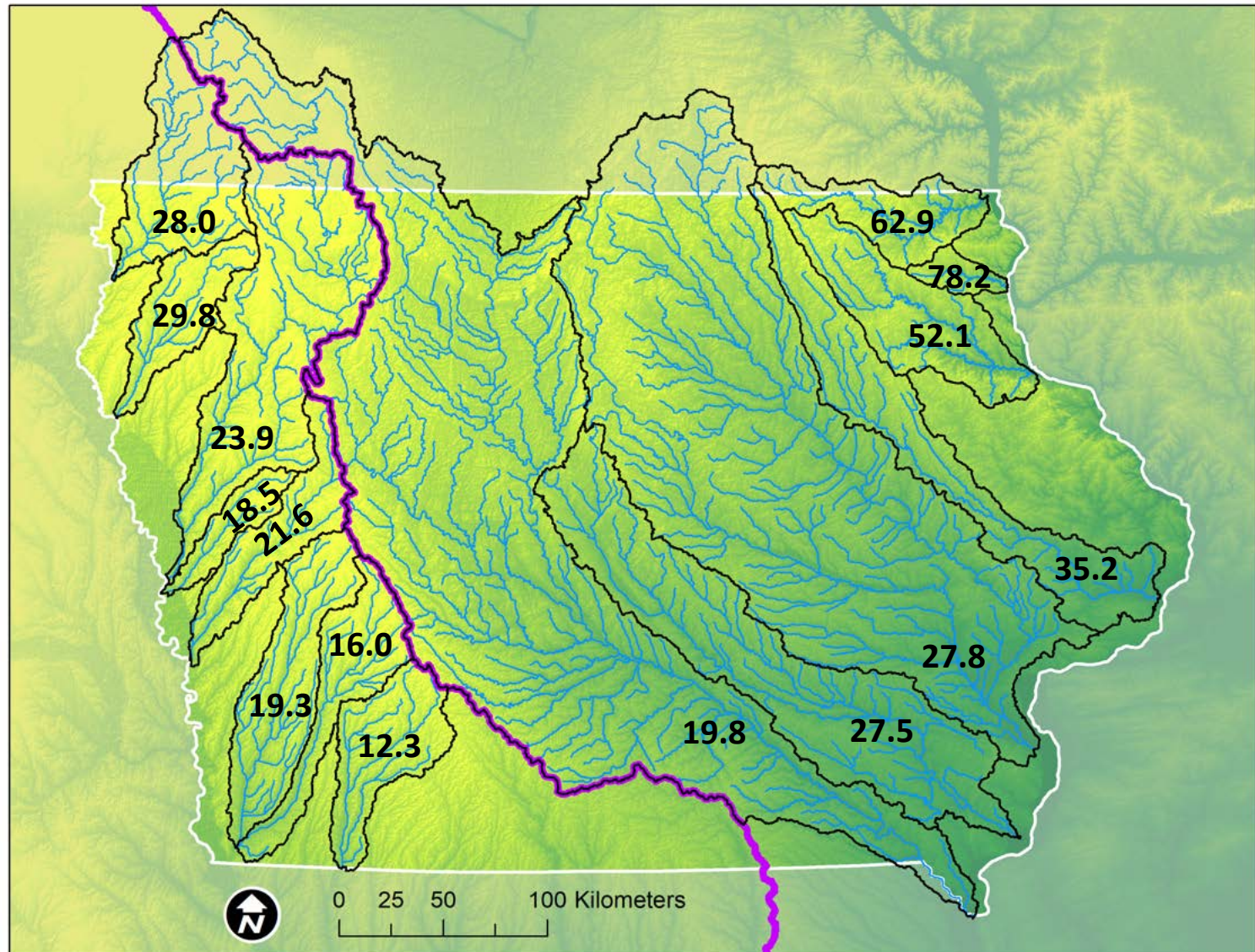


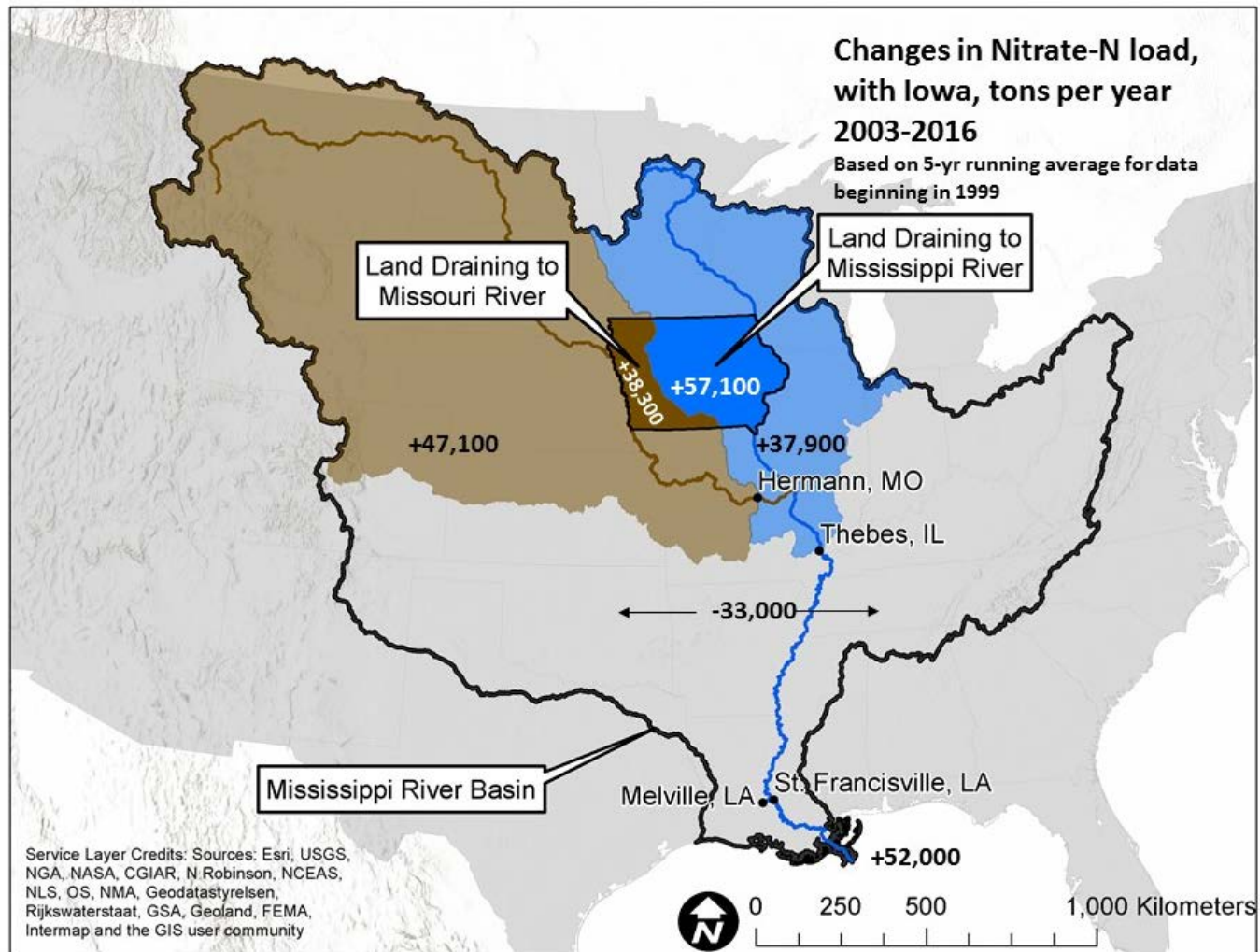
4.5% of the land
5.9% of the water
29% of the nitrate

How Much Nitrogen Leaves Iowa?



N loss per crop acre in 2020 (lbs/acre)







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RESEARCH ARTICLE

Iowa stream nitrate and the Gulf of Mexico

Christopher S. Jones , Jacob K. Nielsen , Keith E. Schilling , Larry J. Weber

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