

# Mercury Trends in Fish from Rivers and Lakes in the United States, 1969-2005

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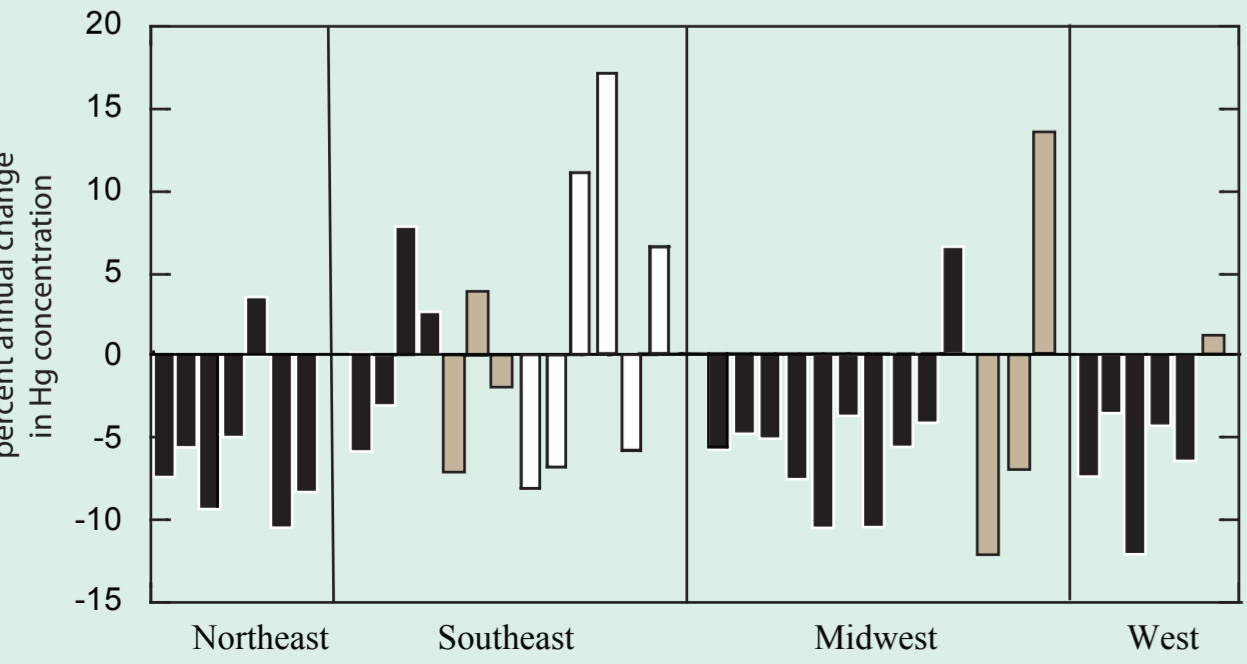
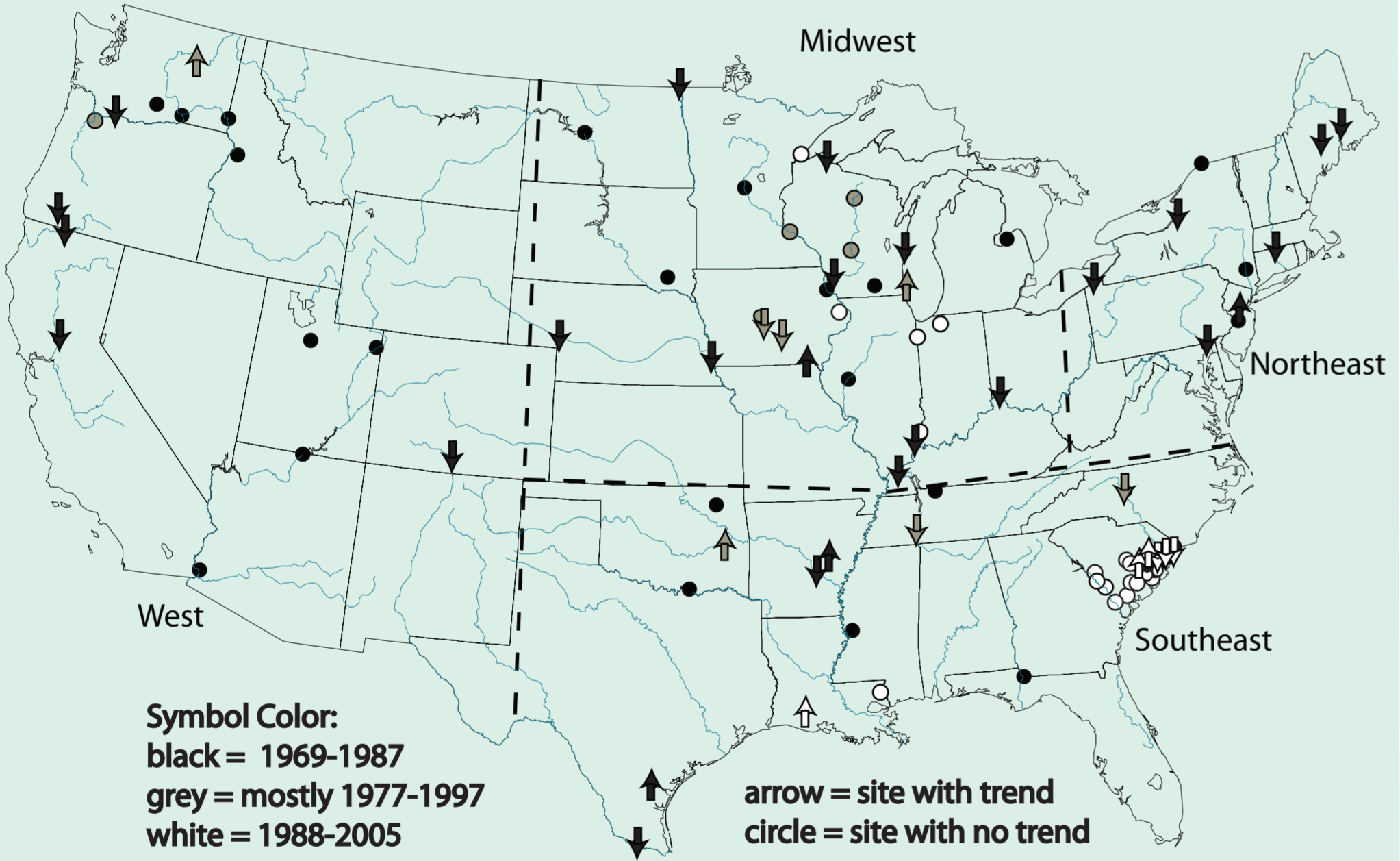
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## Methods

- Fish Hg concentration data were collected by state and federal monitoring programs and compiled by the National Institute of Health Sciences and USGS
- Data were aggregated by site and by state for trend analysis
- Trend analysis was limited to: 1 fish species, 1 tissue type, with restricted fish length

## Hg trends in fish from individual sites, 1969-2005

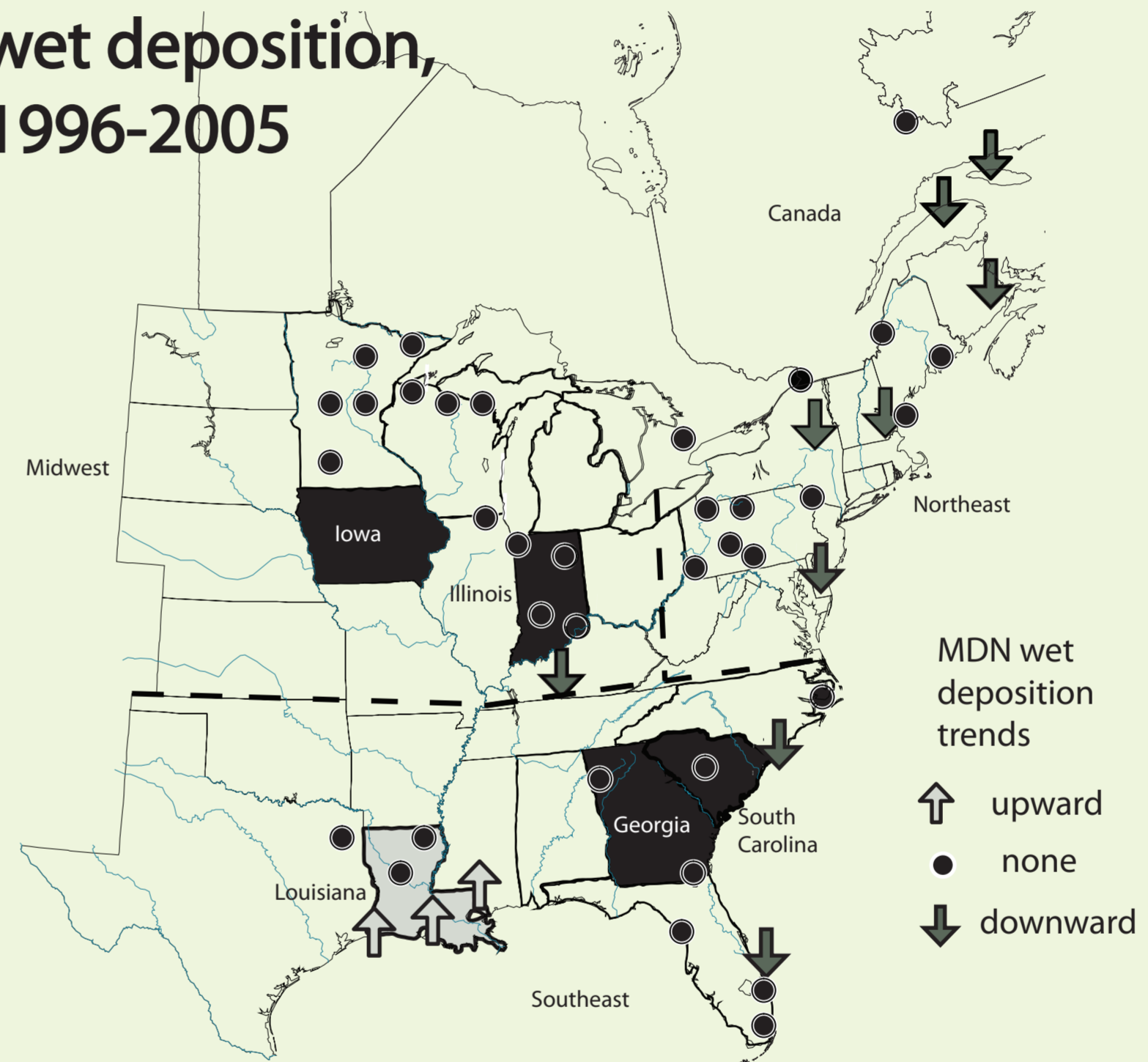
- Most trend sites were from the National Contaminant Biomonitoring Program 1969-1987
- Recent (1988-2005) trend sites were mostly in South Carolina



- Ratio of downward to upward Hg trends in fish
- Northeast = 6:1
- Southeast = 7:6
- Midwest = 11:2
- West = 5:1

Bars = sites with significant trends

## Hg trends in fish from data aggregated by state compared to NADP Mercury Deposition Network (MDN) wet deposition, 1996-2005



Hg trends in channel catfish (*Ictalurus punctatus*), light grey states = upward trend; black states = no trend; states without color = no data; no states with downward trends

- Downward trends in wet deposition mainly in the Northeast
- The Southeast was the only region in with upward trends in wet deposition
- 72% of wet deposition sites had no significant trend
- 62% of fish data had no significant trend
- The Southeast had more upward Hg trends in fish than other regions

## Conclusions

- Downward Hg trends in fish between 1969 and 1987 exceeded upward trends 6:1
- the Southeast had more upward Hg trends in both fish and wet deposition than other regions of the U.S.
- Few significant Hg trends were found in recent wet deposition or fish data

## References

Prestbo, Eric M., Gay, David A., 2009, Wet Deposition in the U.S. and Canada, 1996-2005: Results and analysis of the NADP mercury deposition network (MDN), Atmospheric Environment, 43:4223-4233