

**Missouri Nutrient Criteria Meeting
April 5, 2012**

Primary Lake Fish Kill Data & Alternative Lines of Evidence

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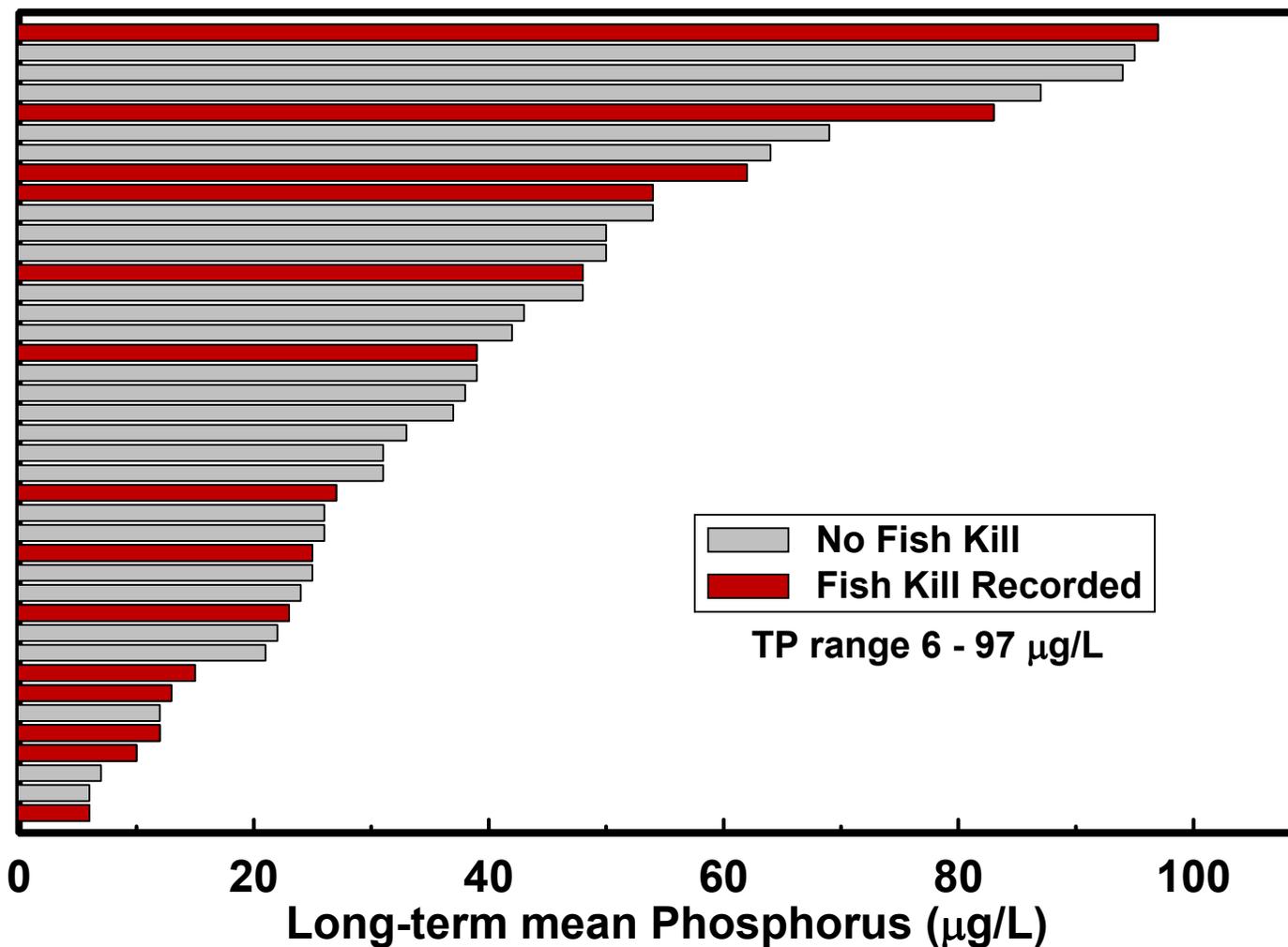
The Missouri Department of Natural Resources



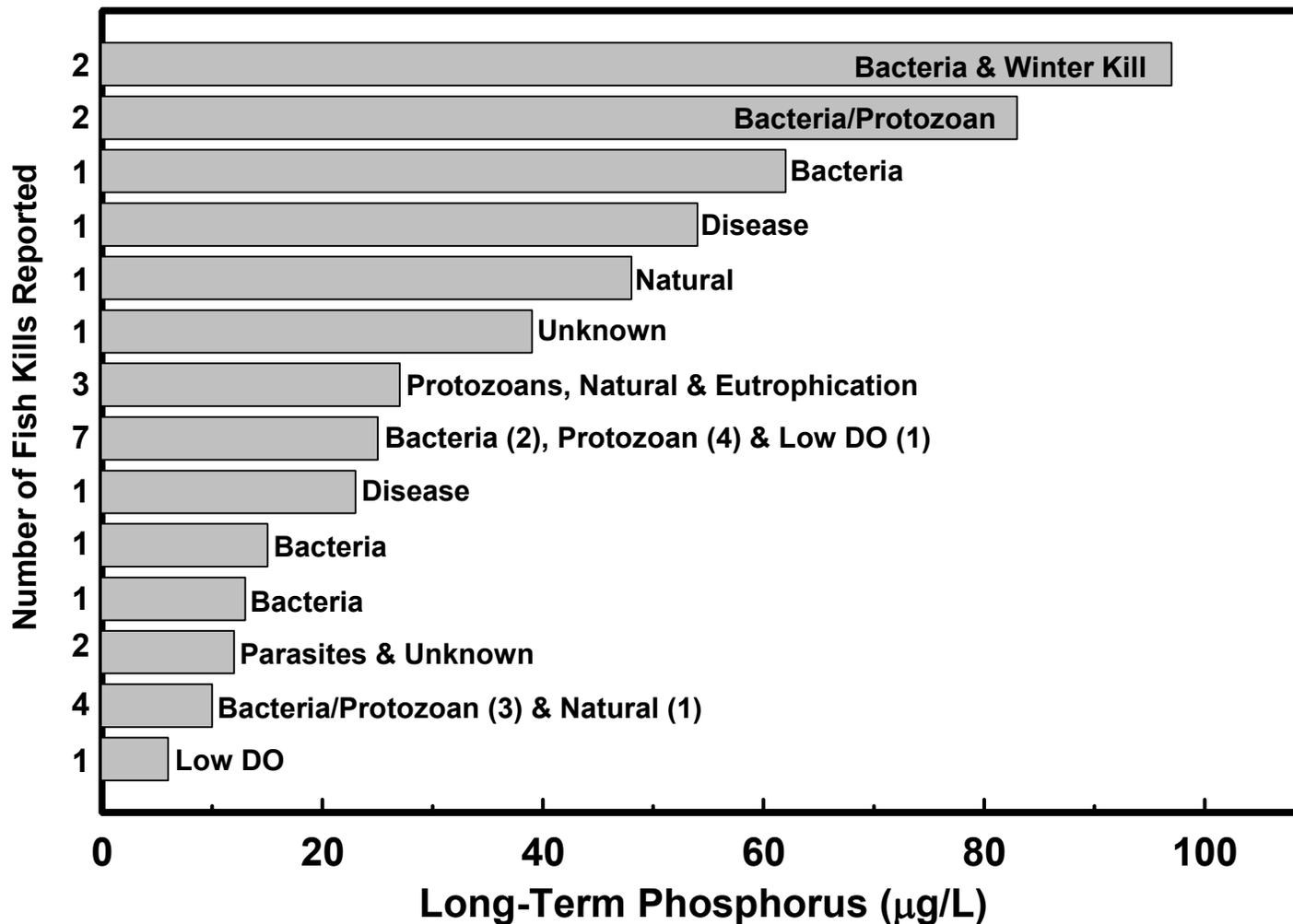
Region VII, US Environmental Protection Agency, through the Missouri Department of Natural Resources, has provided partial funding for this project under Section 319 of the Clean Water Act

Some of the data in this presentation were generated through a project supported by a grant from the Missouri Department of Natural Resources.

Reservoirs Ranked by TP

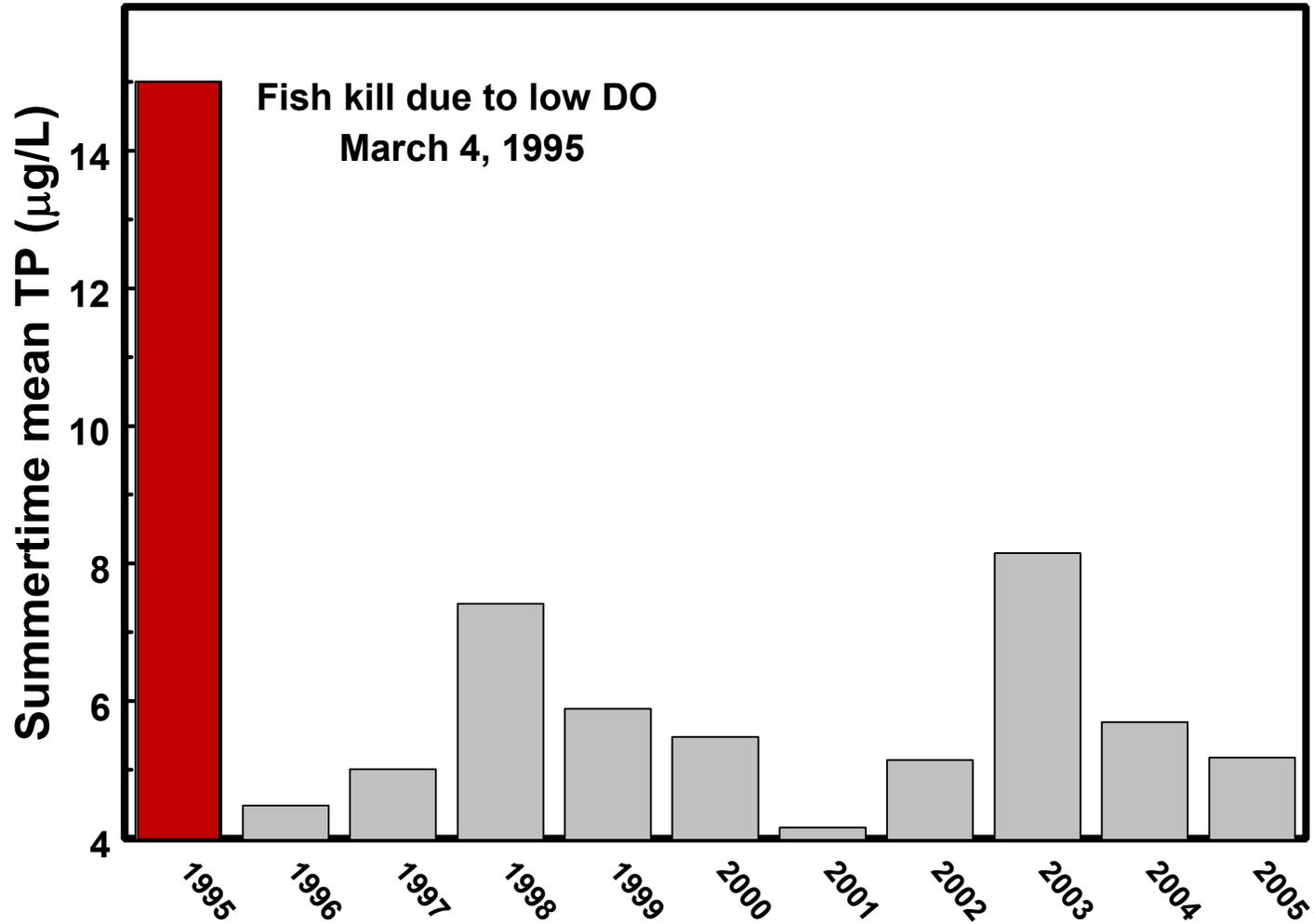


Long-term phosphorus data are from 40 Missouri lakes monitored every summer through MU's Statewide Lake Assessment Program. Fish kill information is from MDC and represent "natural" kills that occurred 1995-2005.



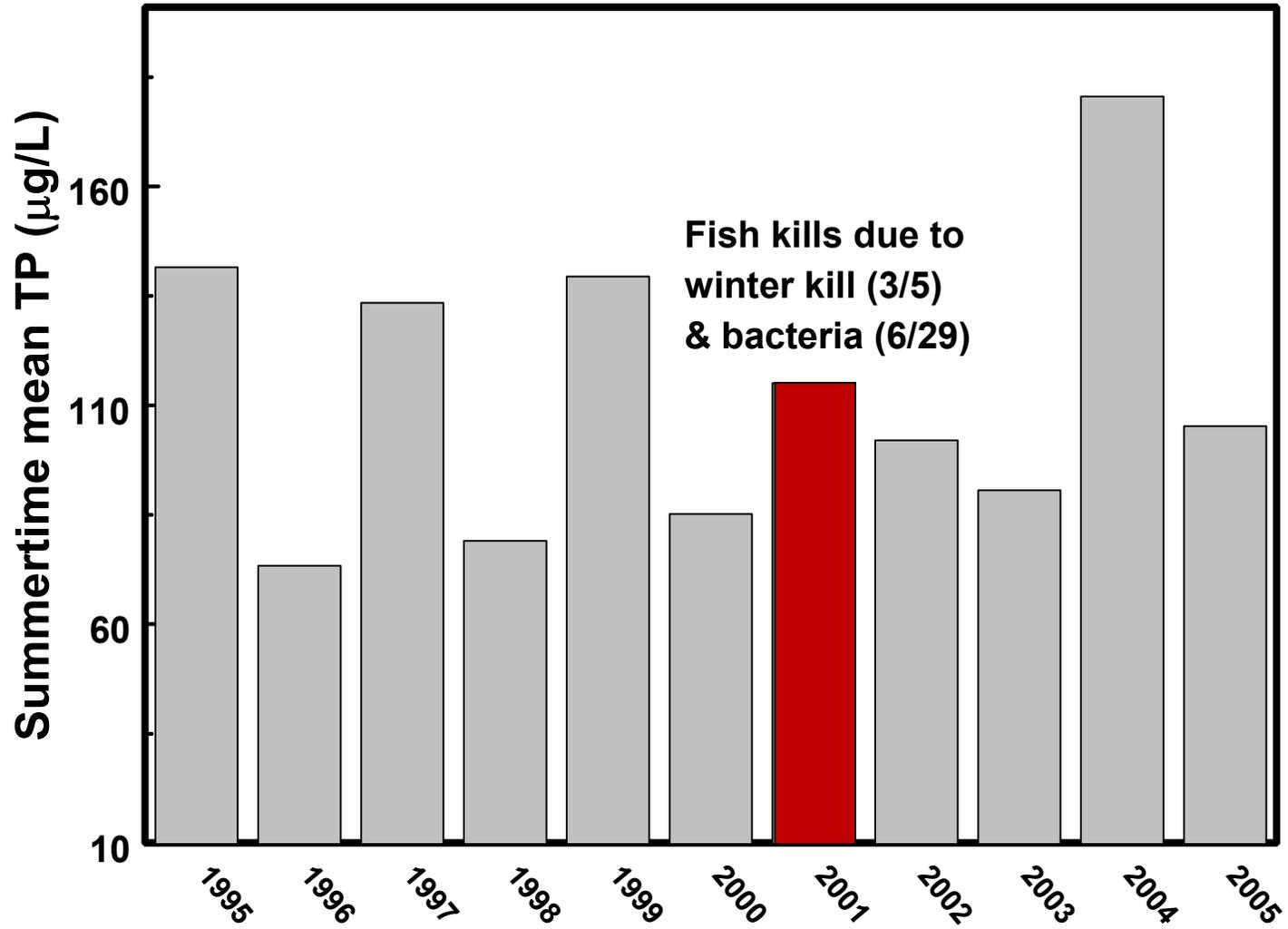
The 14 lakes in which at least one fish kill occurred sorted by long-term phosphorus concentrations. The number of fish kills is listed on the left side of the graphic, with the recorded causes listed.

Shayne



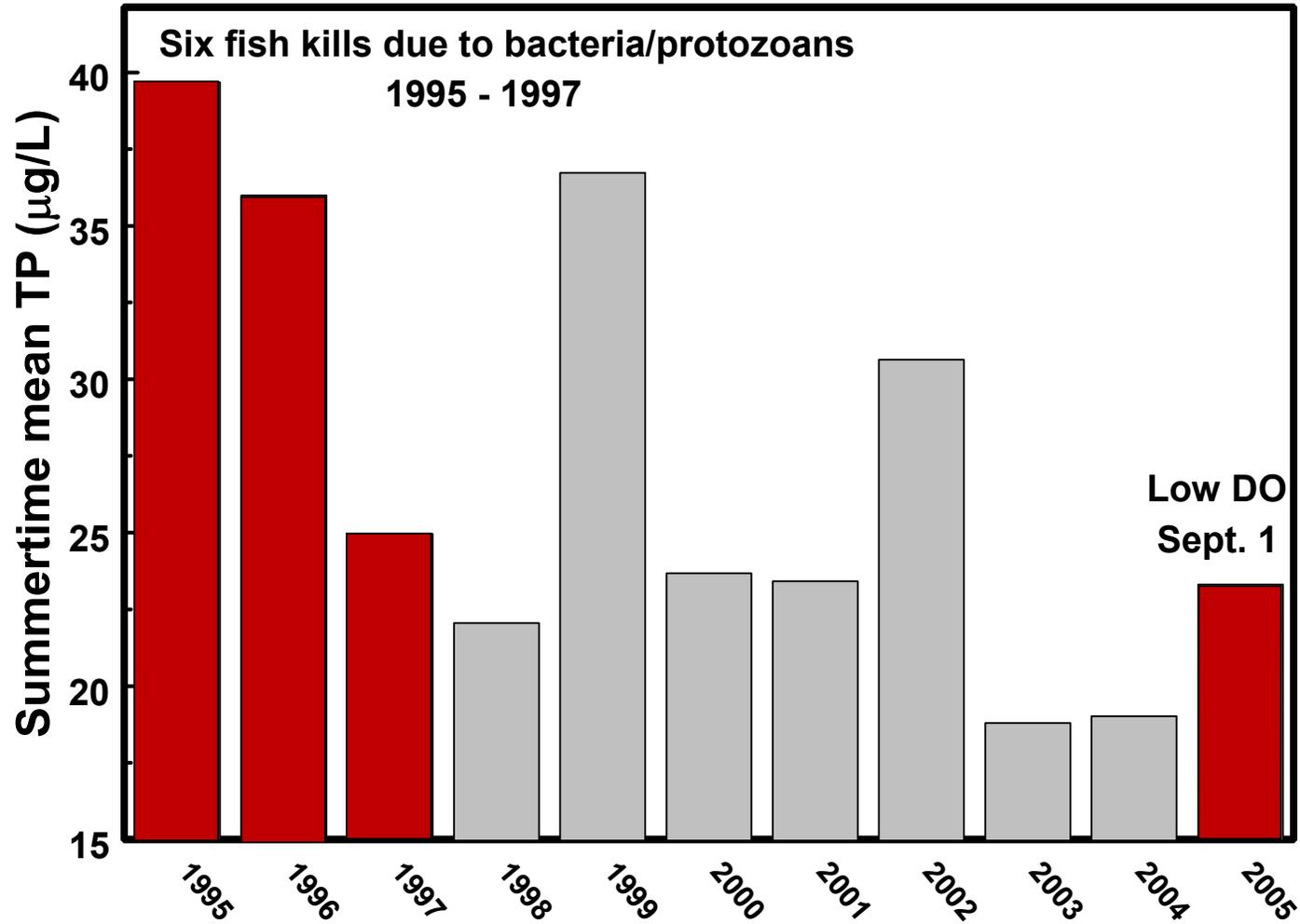
Summertime mean phosphorus values in Lake Shayne. The red bar indicates the year in which a fish kill was recorded.

North Lake



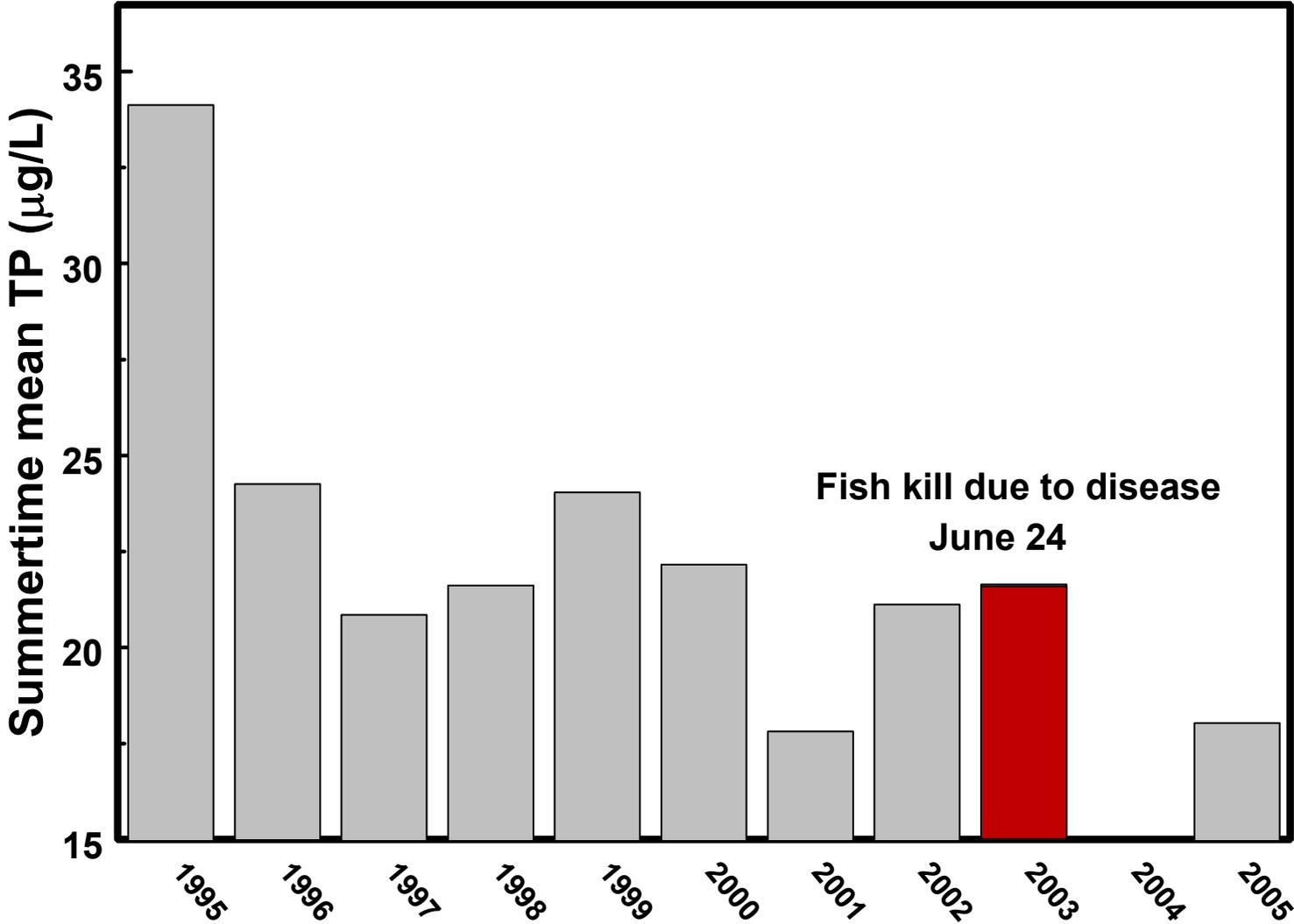
Summertime mean phosphorus values in North Lake. The red bar indicates the year in which a fish kill was recorded.

Pomme de Terre



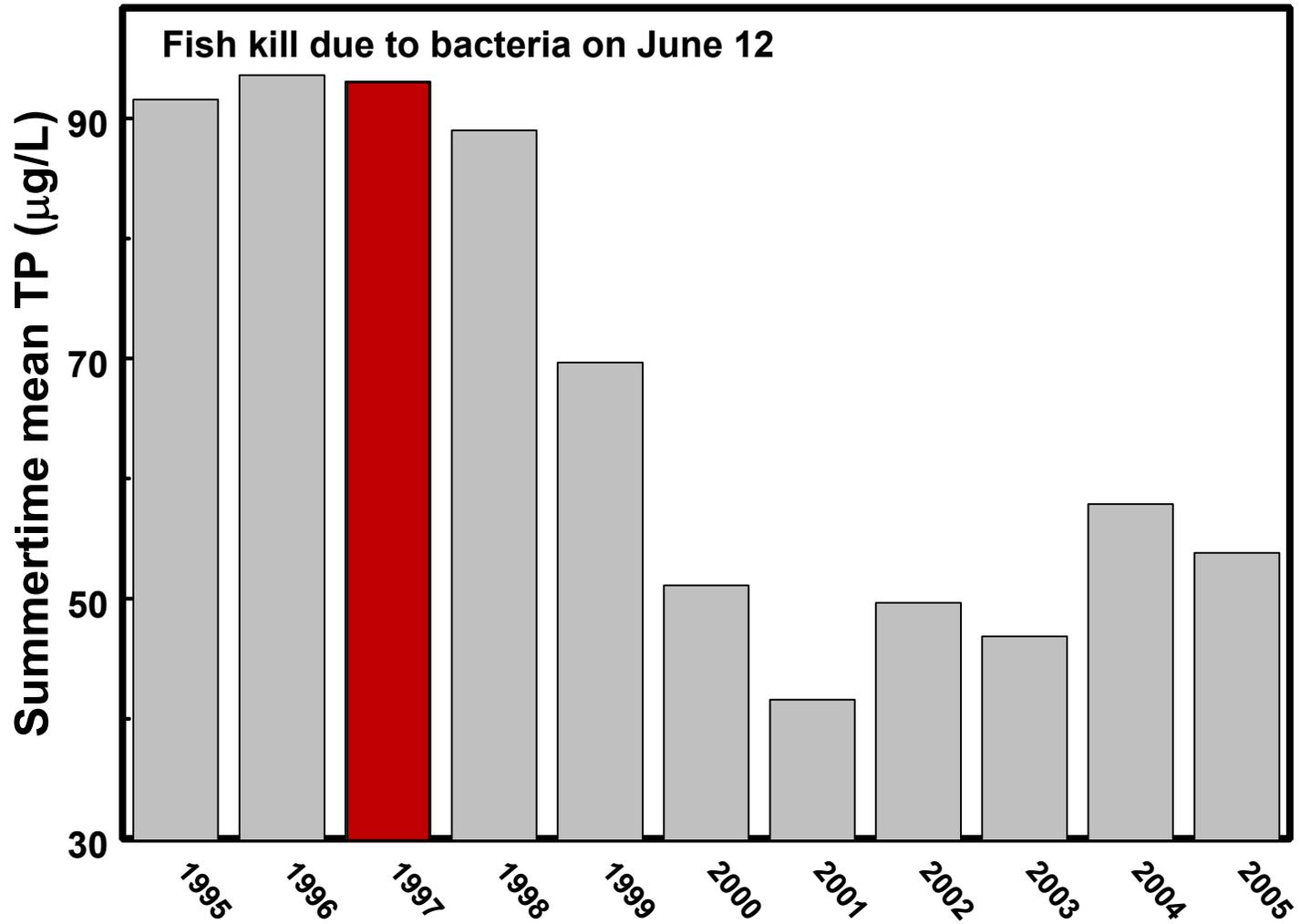
Summertime mean phosphorus values in Pomme de Terre Lake. The red bars indicate the years in which a fish kill was recorded.

Brookfield Lake



Summertime mean phosphorus values in Brookfield Lake. The red bar indicates the year in which a fish kill was recorded.

Little Dixie



Summertime mean phosphorus values in Little Dixie Lake. The red bar indicates the year in which a fish kill was recorded.

Alternative Lines of Evidence Results from EPA's National Lake Assessment

	Ozark Highlands			Plains		
	TP	TN	CHL	TP	TN	CHL
% of lakes rated as POOR in NLA	13	12	22	30	40	29
Corresponding concentrations for MO	64	945	23.5	69	914	30.3

Results from the National Lake Assessment can be found on EPA's web site. Total Phosphorus (TP), Total Nitrogen (TN) and Chlorophyll (CHL) data are from MU's Statewide Lake Assessment Program. Units are micrograms per liter.

	Ozark Highland			Plains		
	TP μg/L	TN mg/L	CHL μg/L	TP μg/L	TN mg/L	CHL μg/L
Illinois				50		
Georgia		4	5-10		3-4	2-27
Minnesota				65/90		22/30
S. Carolina				60	1.5	40
Virginia	10-40		10-35	20-40		25-60
W. Virginia	40		20			

EPA approved nutrient criteria in states that share an Ecoregion with Missouri. Data can be found on EPA's website.