

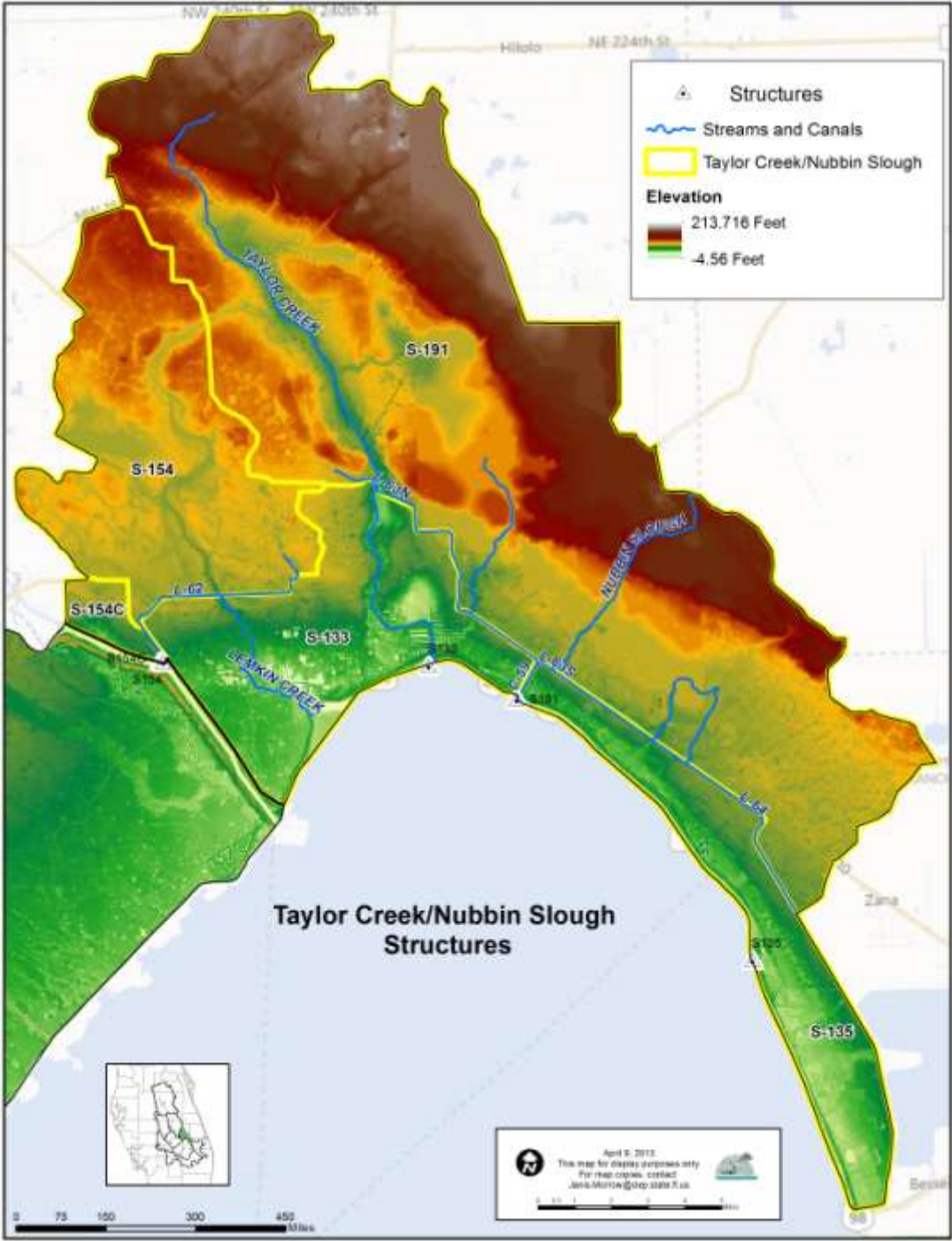
Lake Okeechobee BMAP Technical Overview

Frank Nearhoof
April 16, 2013

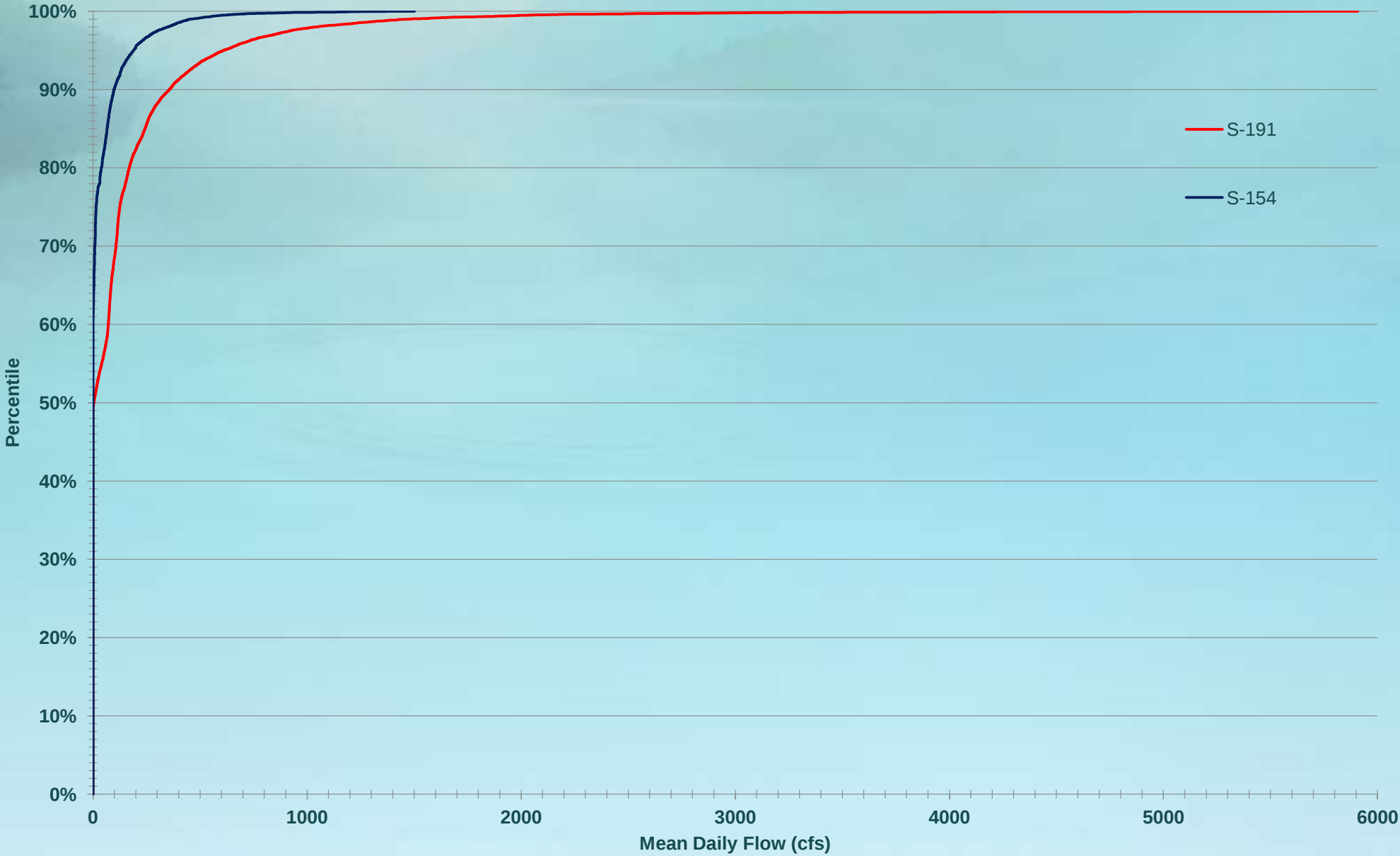
And today's theme is:
Interesting Signs



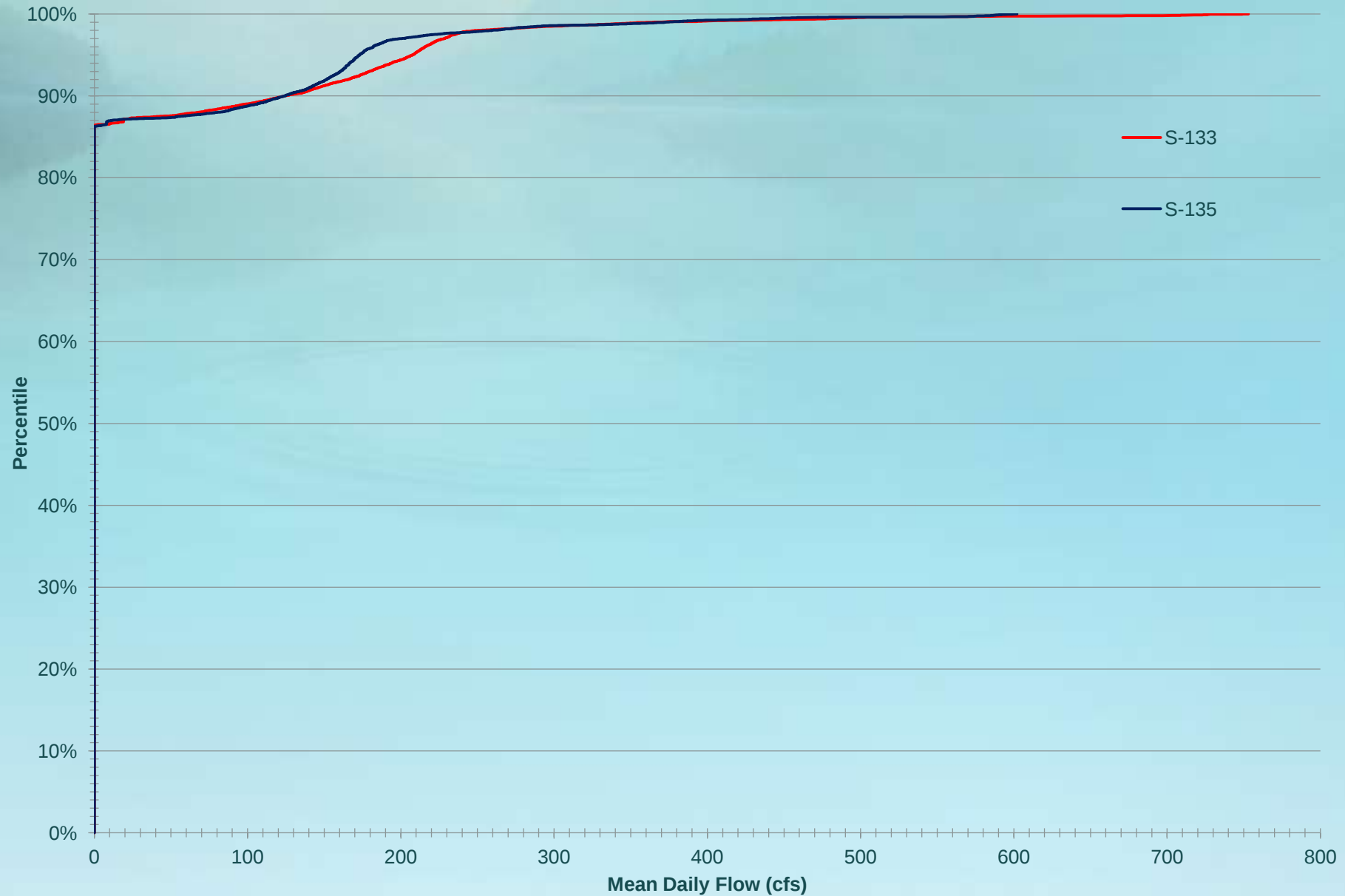
Summary Basin	Discharge Structure	Capacity (cfs)	Acres
S-133	Five unit pump station	625	25,626
S-135	Four unit pump station	500	17,756
S-154	Reinforced concrete box culvert, 2 barrels, sluice gate	1,000	31,815
S-191	Gated spillway - 3 cable operated vertical lift gates	7,440	119,402
S-154C	Concrete pipe culvert, single barrel		2,134



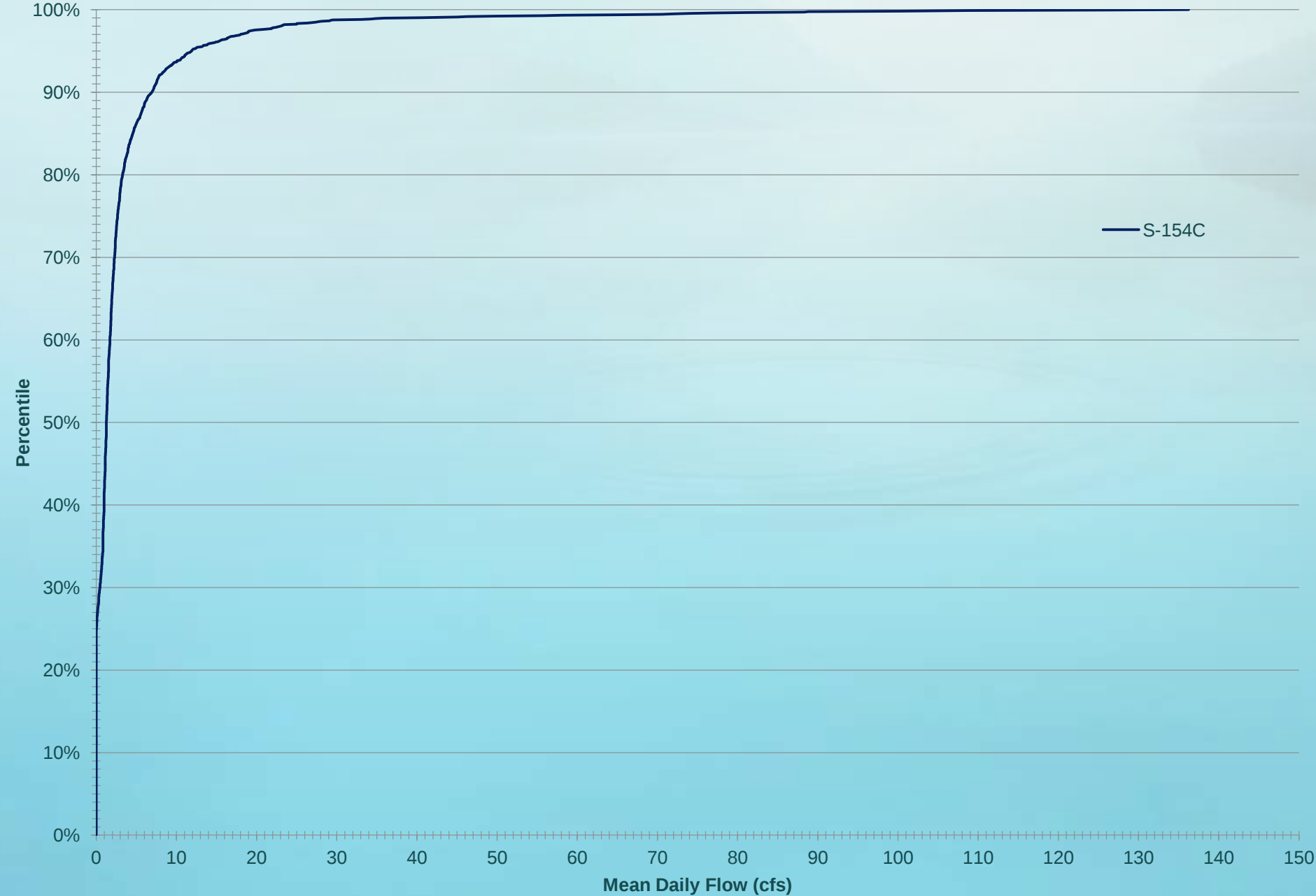
Taylor Creek/Nubbin Slough Structure Flows (1972-2012)

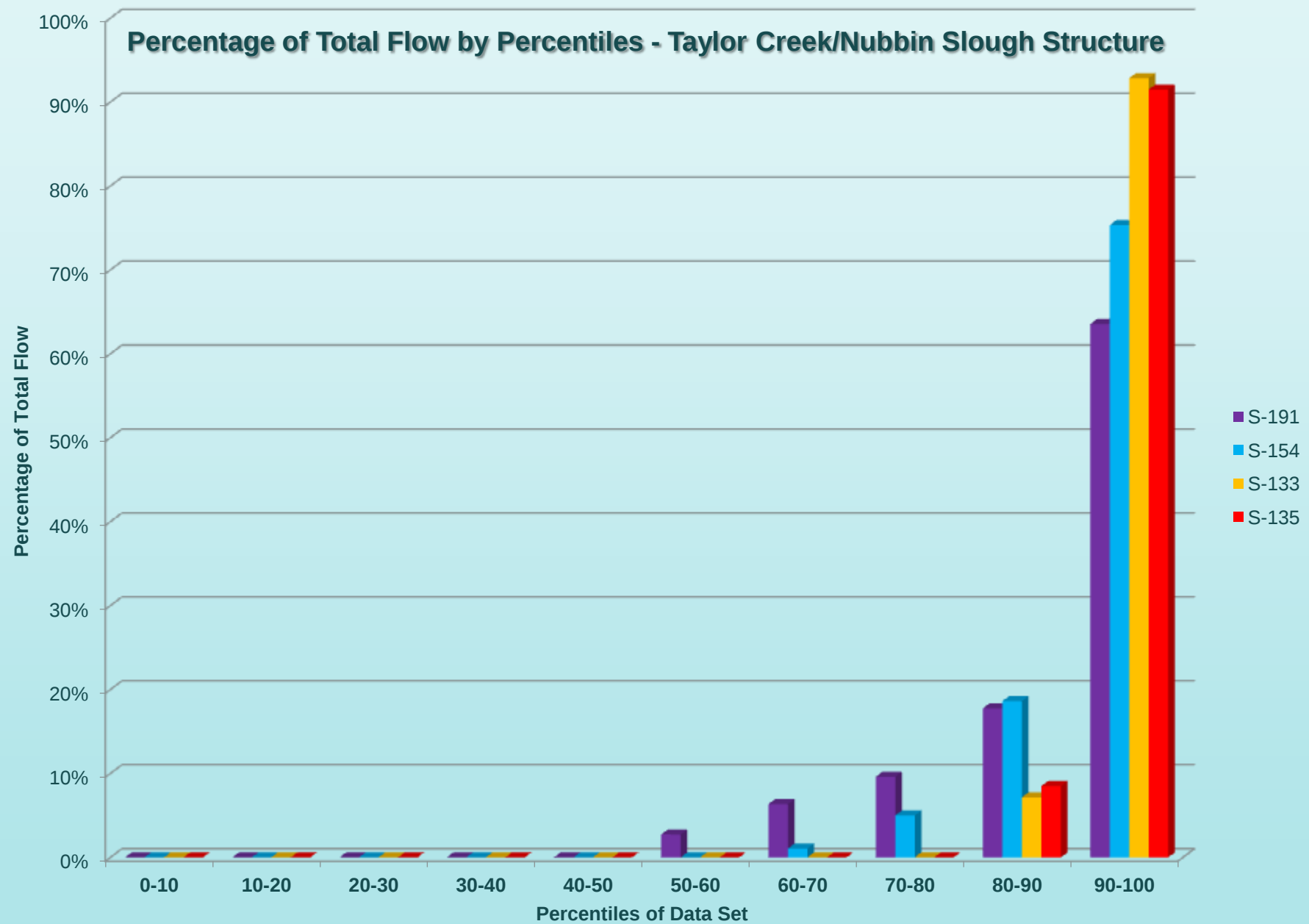


Taylor Creek/Nubbin Slough Structure Flows (1972-2012)

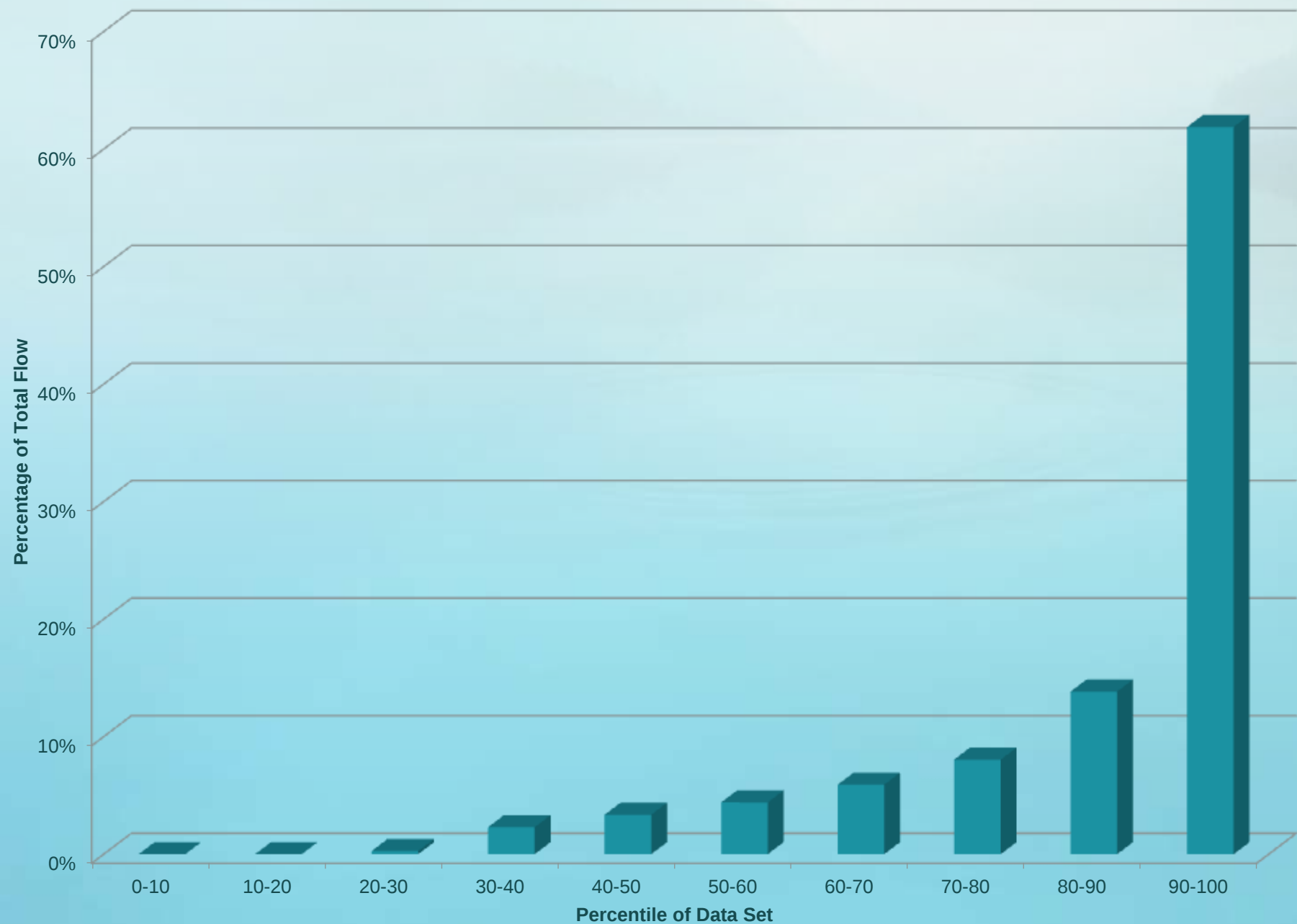


Taylor Creek/Nubbin Slough Structure Flows (1972-2012)





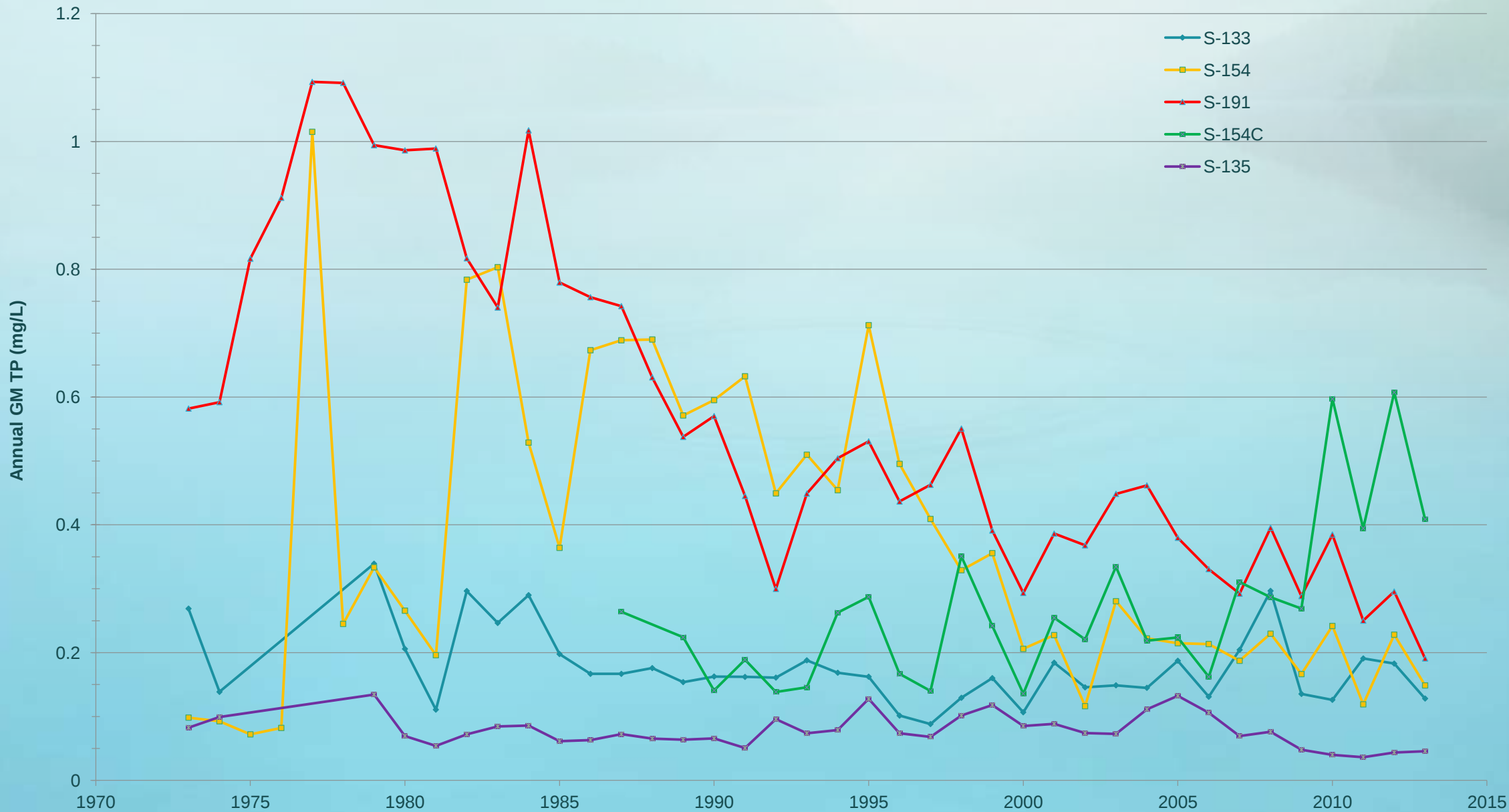
Percentage of Total Flow by Percentile – S-254C Culvert



The clear winner in the “goes without saying” category

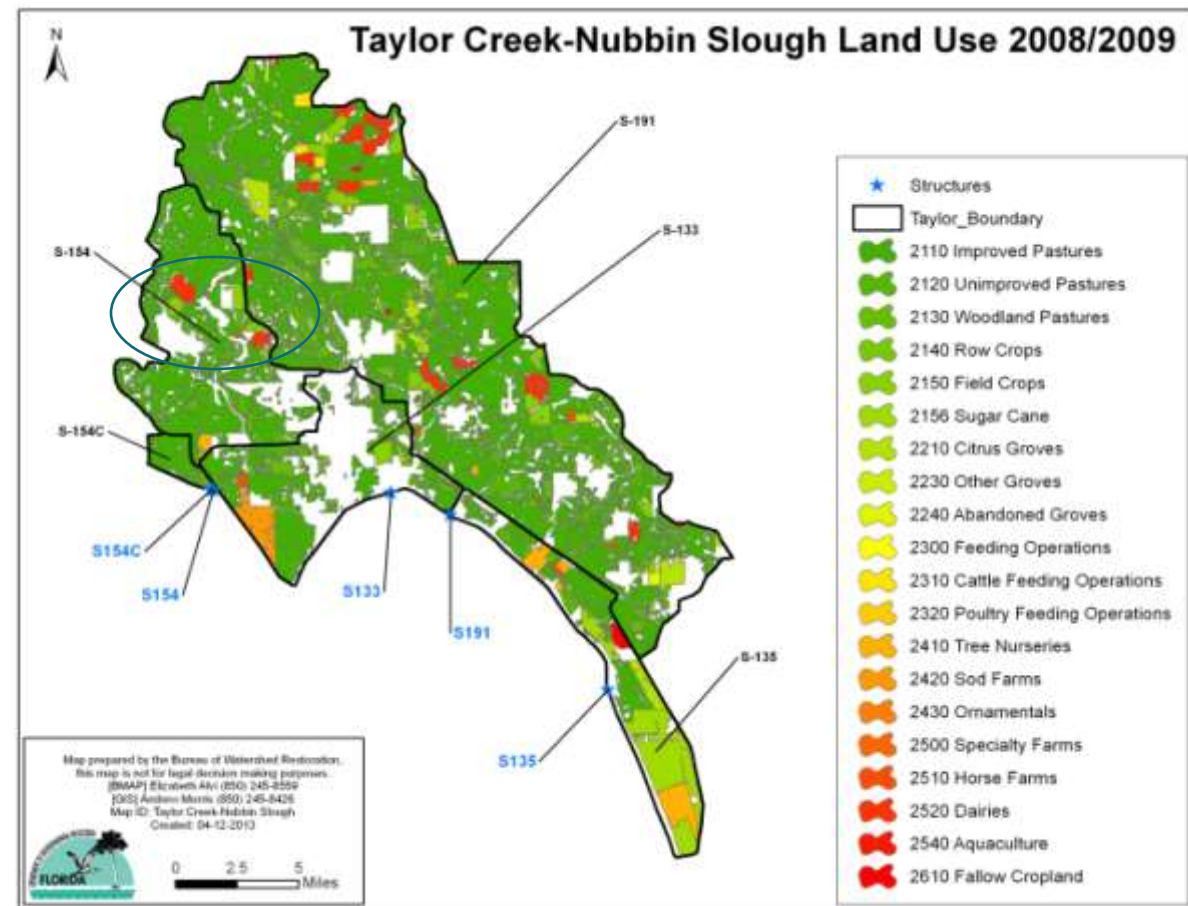
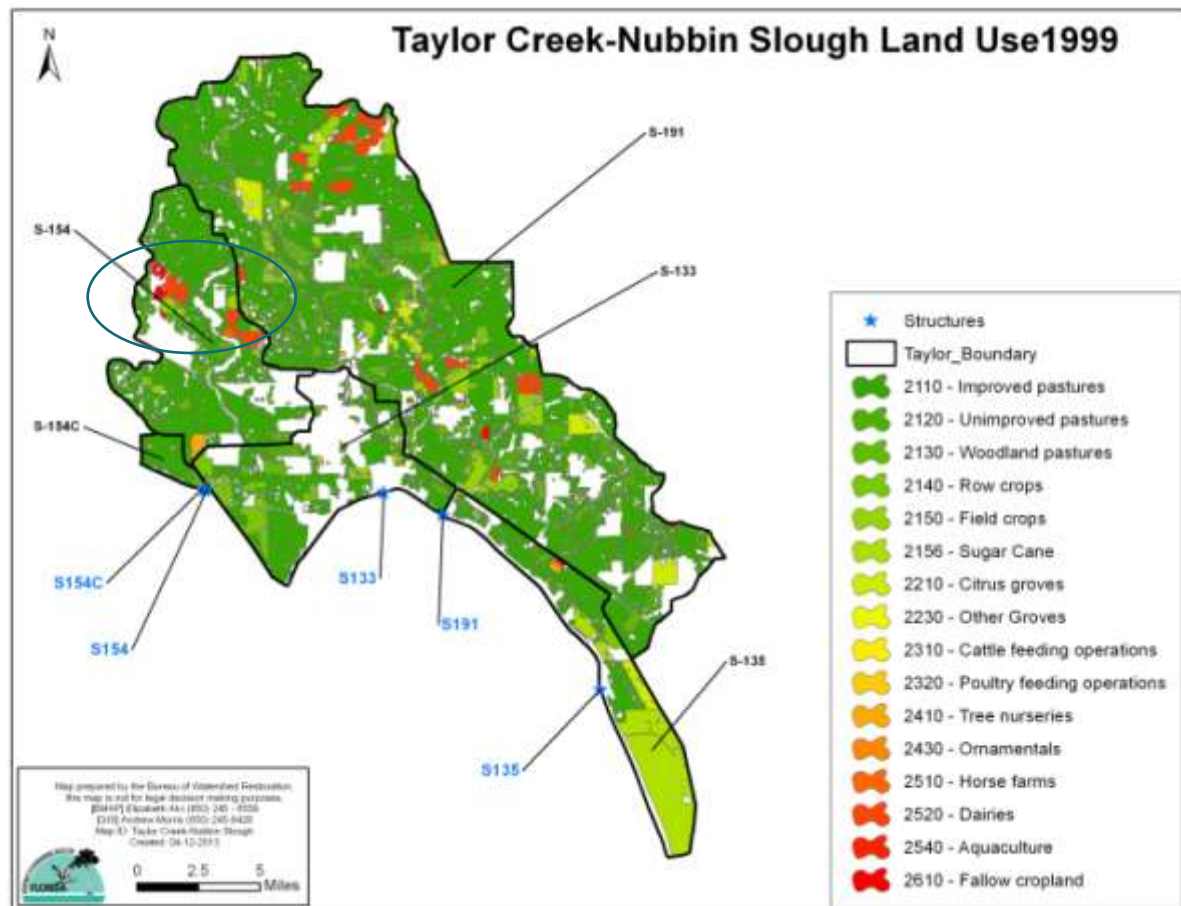


Taylor Creek/Nubbins Slough Sub-Basins GM Total Phosphorus

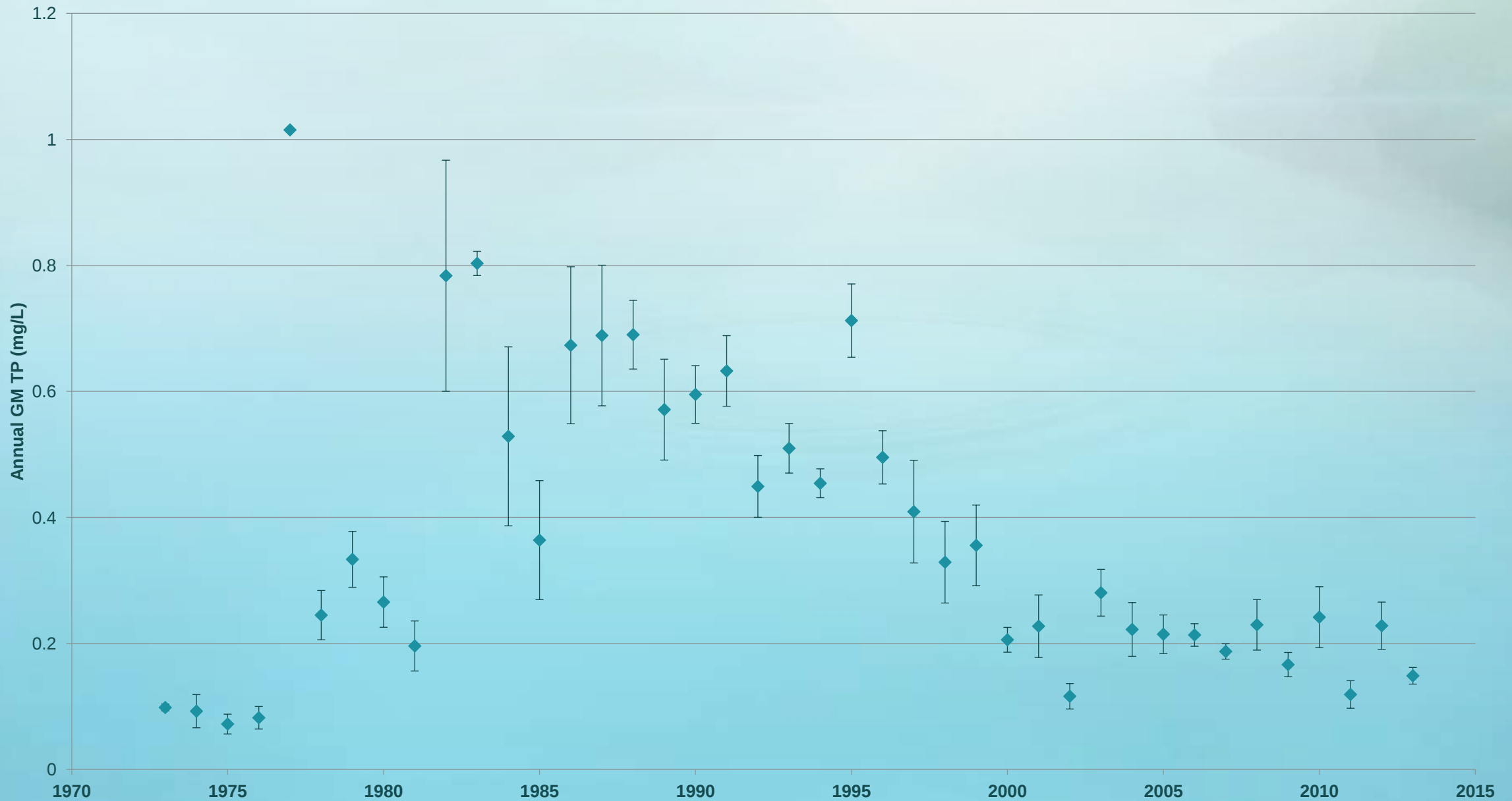


Land Use Comparison Example

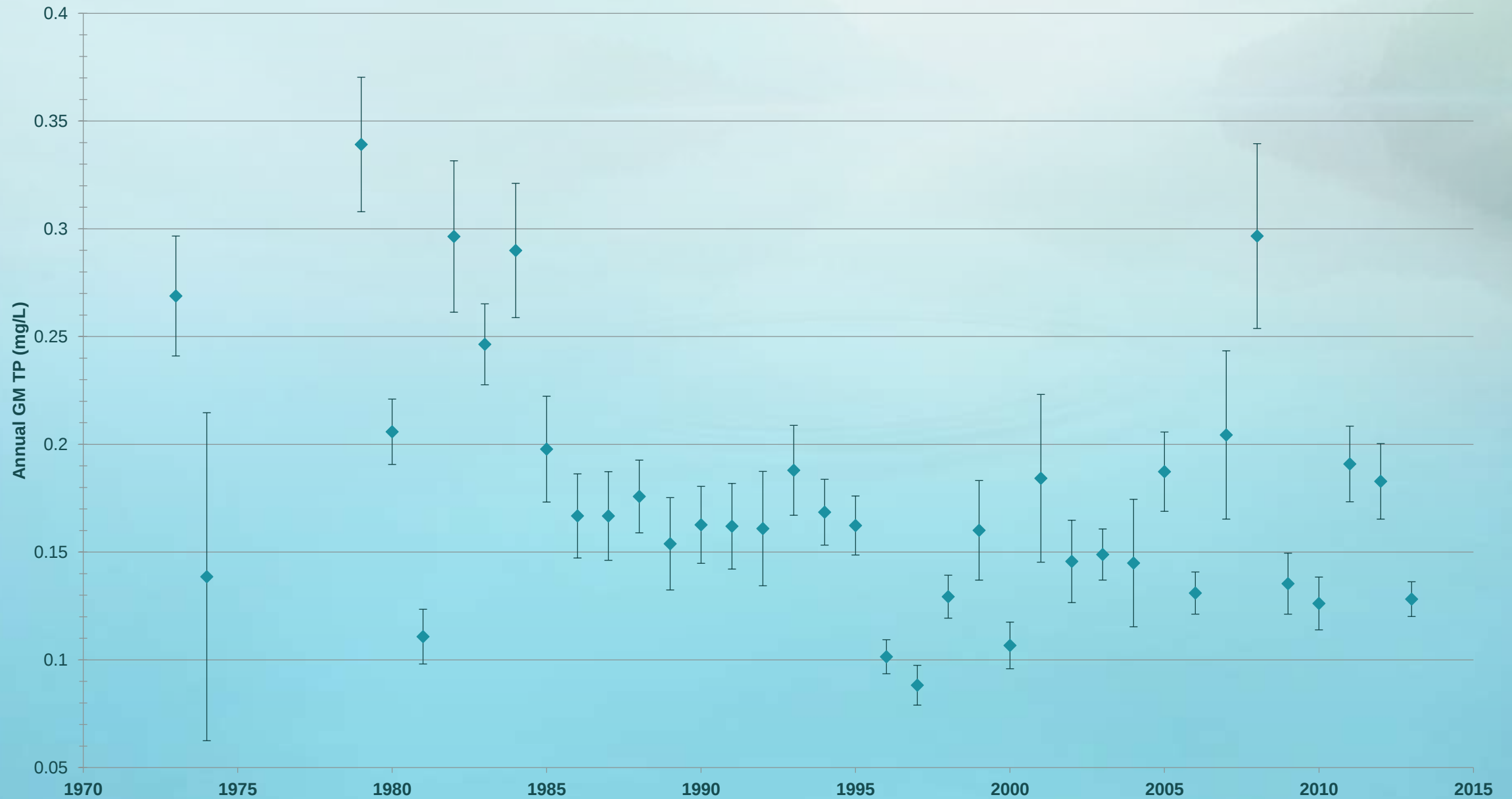
1999 LU/LC		2009 LU/LC		
Landuse Description	Land Cover Description	Landuse Description	Land Cover Description	ac
2156 - Sugar Cane	2156 - Sugar Cane	2410 Tree Nurseries	2410 Tree Nurseries	1229
2140 - Row crops	2140 - Row crops	2110 Improved Pastures	2110 Improved Pastures	855
2130 - Woodland pastures	2130 - Woodland pastures	2130 Woodland Pastures	4200 Upland Hardwood Forests	841
2140 - Row crops	2140 - Row crops	2420 Sod Farms	2420 Sod Farms	834
2150 - Field crops	2150 - Field crops	2110 Improved Pastures	2110 Improved Pastures	753
2130 - Woodland pastures	2130 - Woodland pastures	2130 Woodland Pastures	4340 Upland Mixed Coniferous / Hardwood	698
2150 - Field crops	2150 - Field crops	2110 Improved Pastures	2110 Improved Pastures	591
2110 - Improved pastures	2110 - Improved pastures	2120 Unimproved Pastures	2120 Unimproved Pastures	542



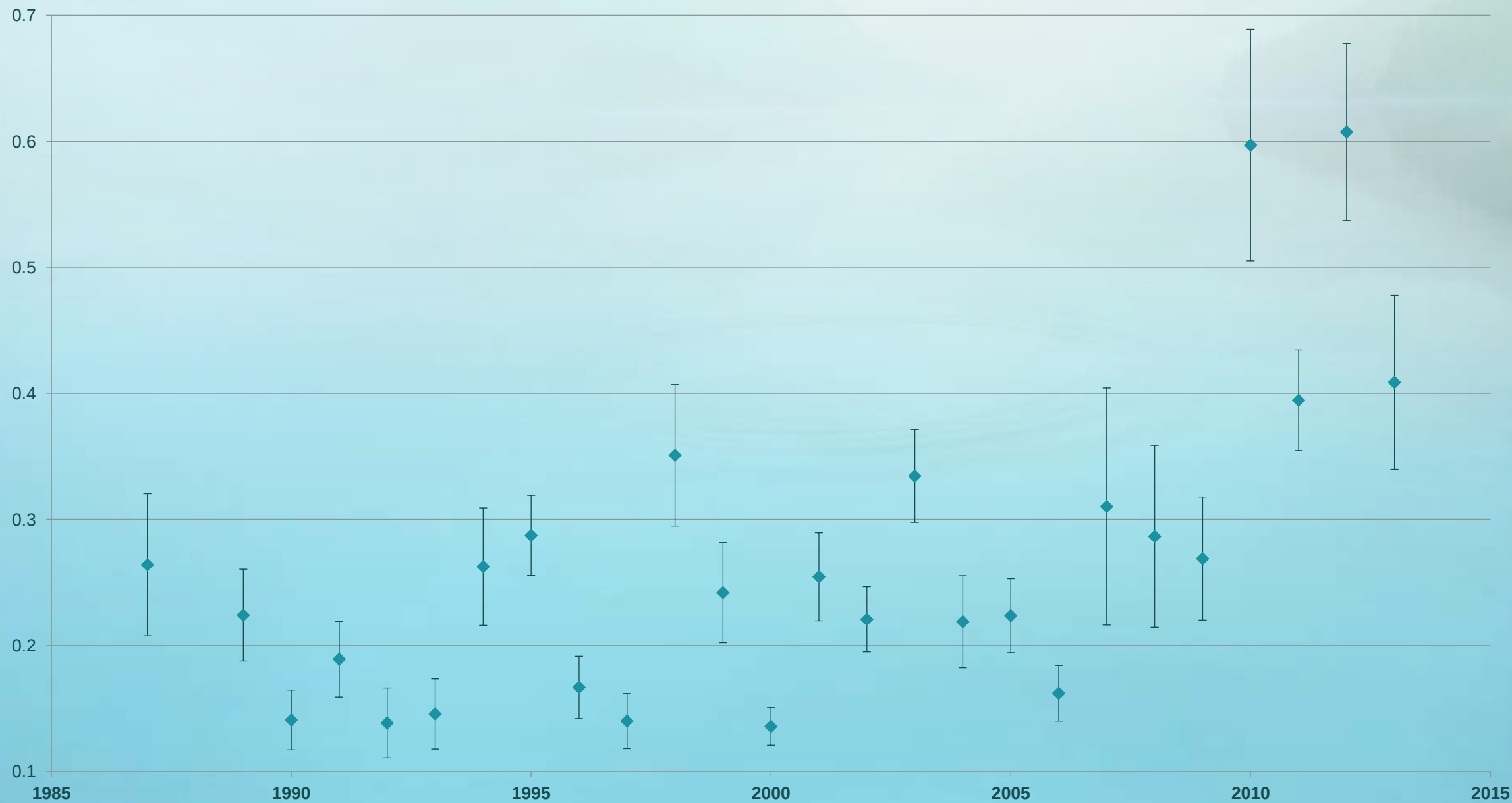
S-154 GM Total Phosphorus (+/- SE)



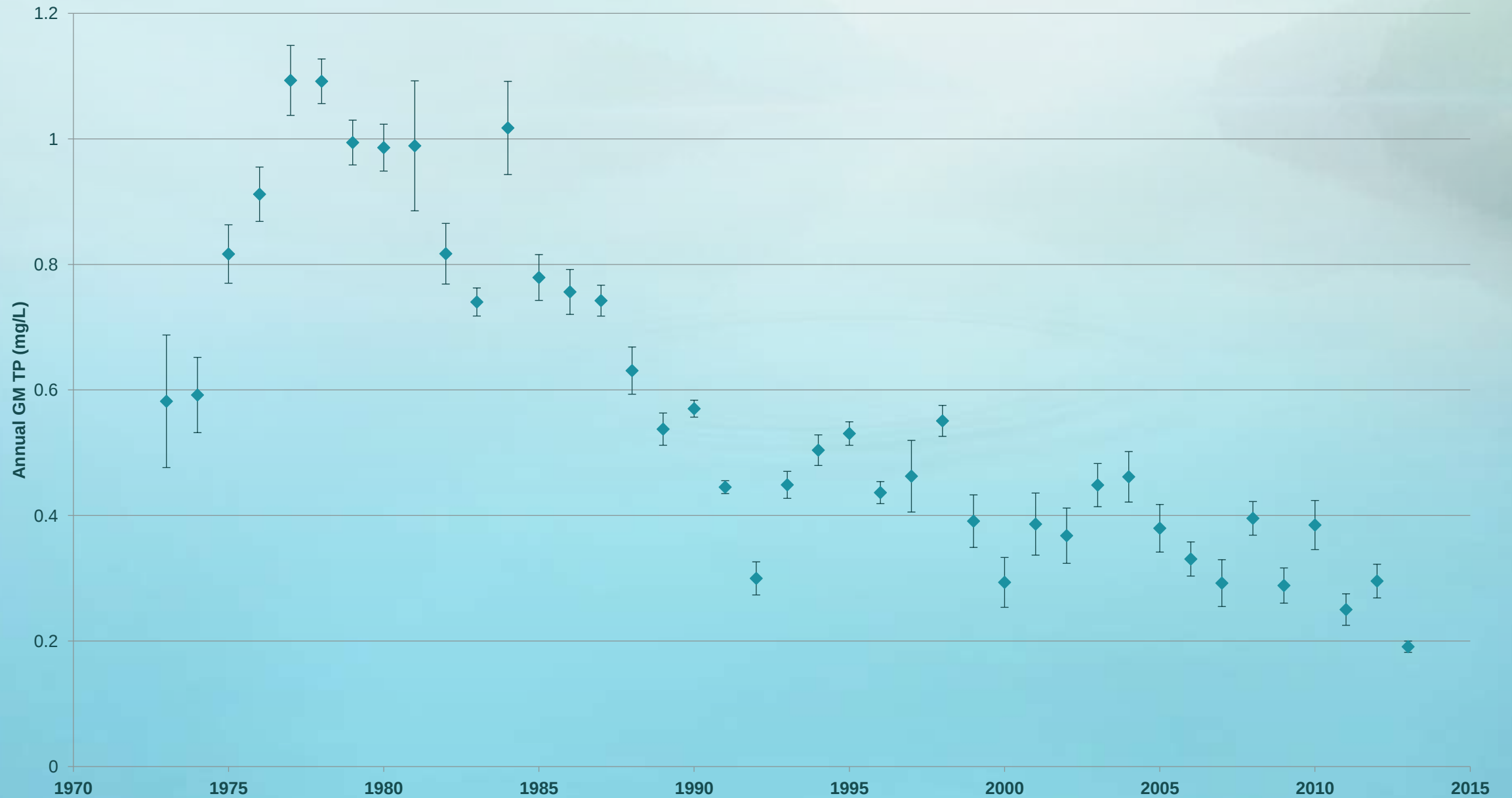
S-133 GM Total Phosphorus (+/- SE)



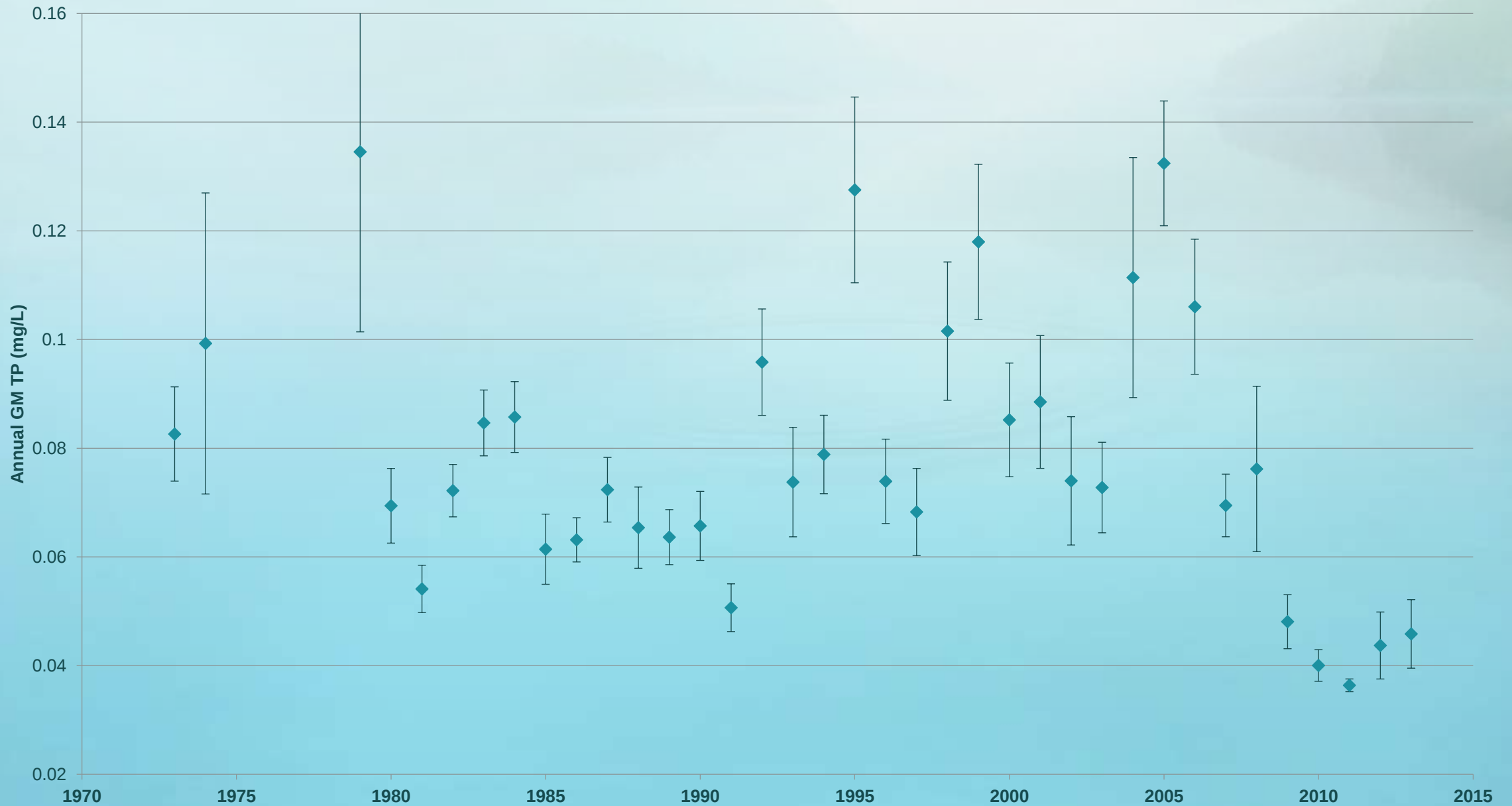
S-154C GM Total Phosphorus (+/- SE)



S-191 GM Total Phosphorus (+/- SE)



S-135 GM Total Phosphorus (+/- SE)



Sample Types – S-191 Data

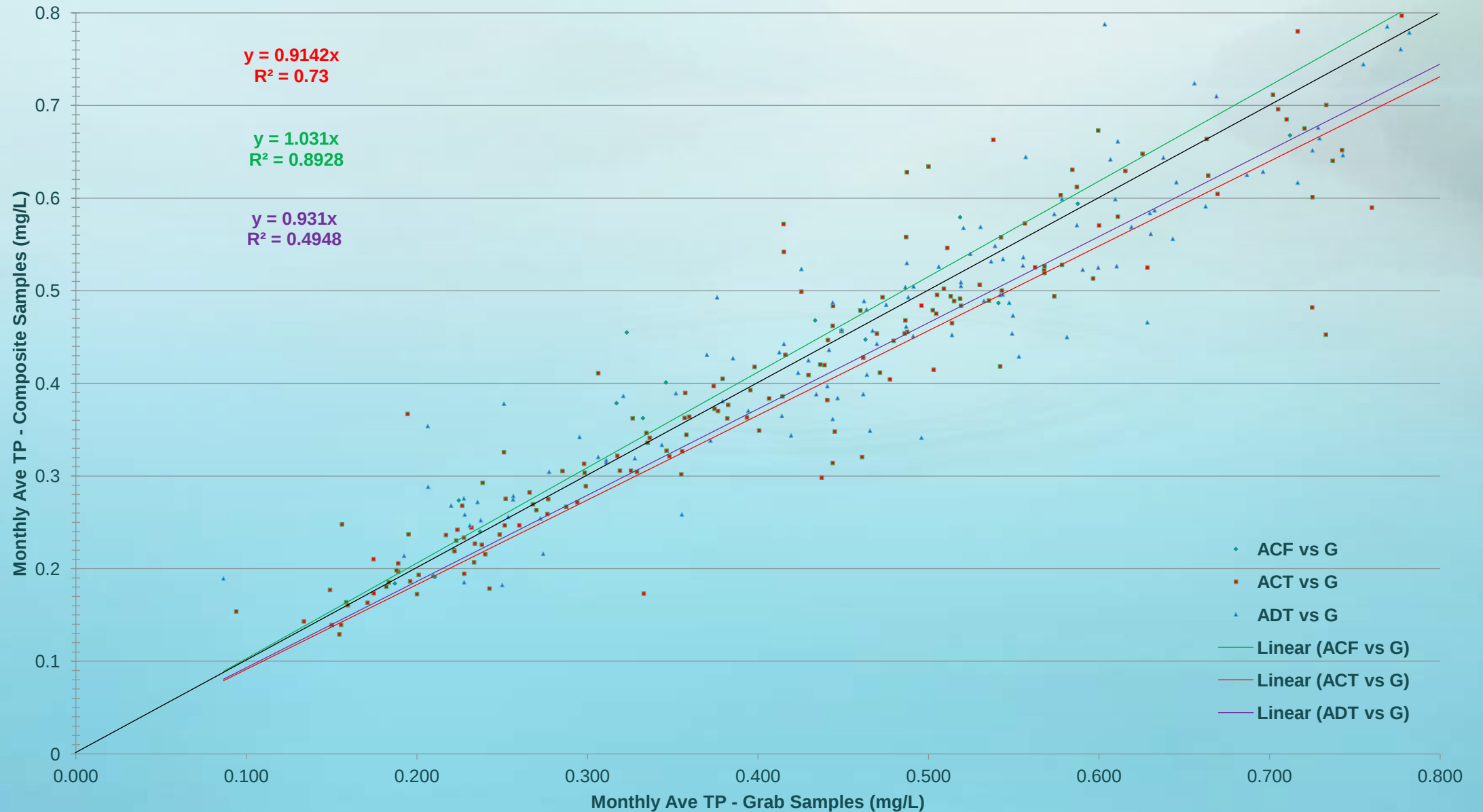
ACF= Auto Sampler Composite Flow Proportional

ACT= Auto Sampler Composite Time Proportional

ADT= Auto Sampler Discrete Time Proportional

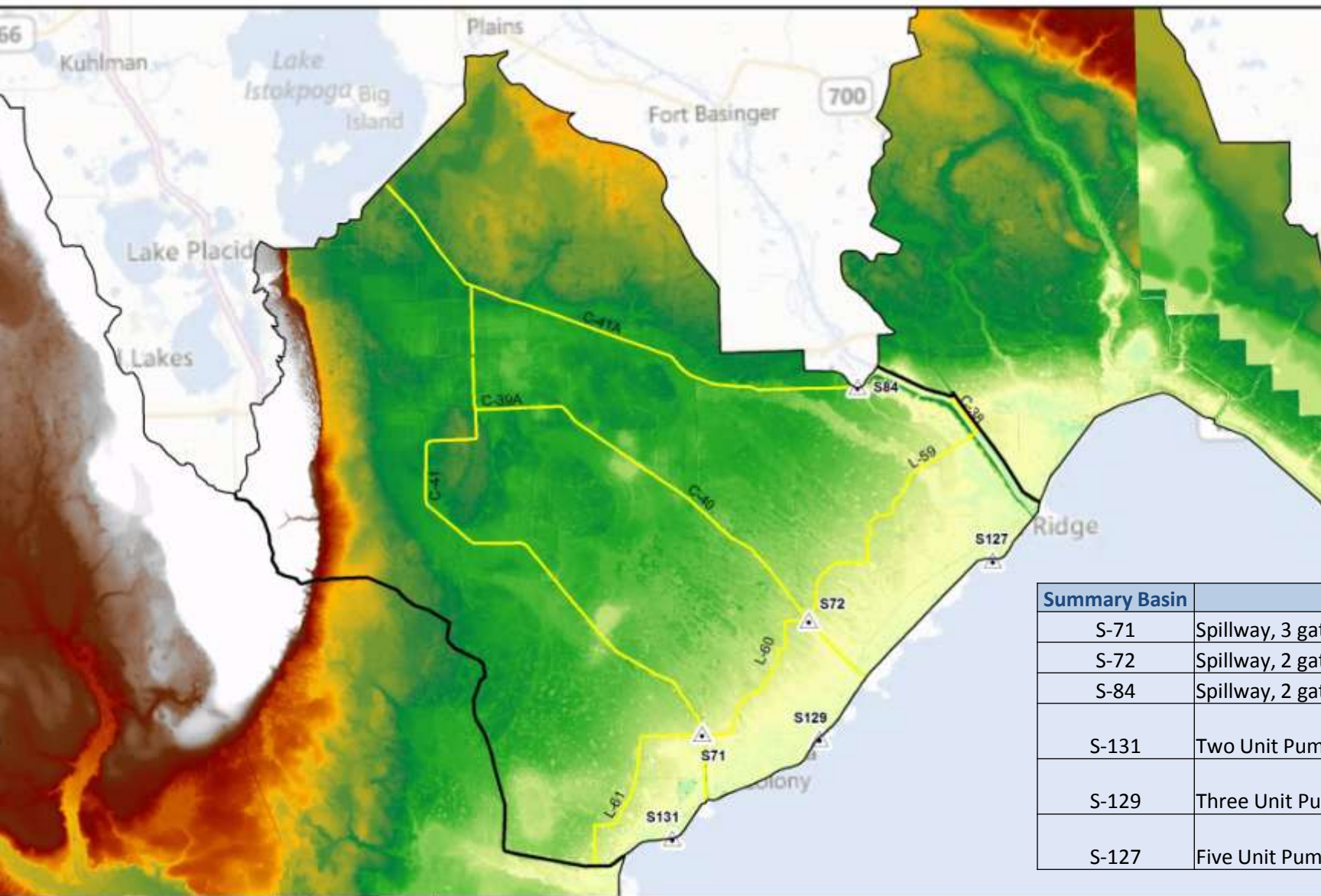
	Grab	ACT	ADT	ACF
1973				
1974				
1975				
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1985				
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2009				
2010				
2011				
2012				
2013				

S-191 Pump Station - Composite vs Grab Data

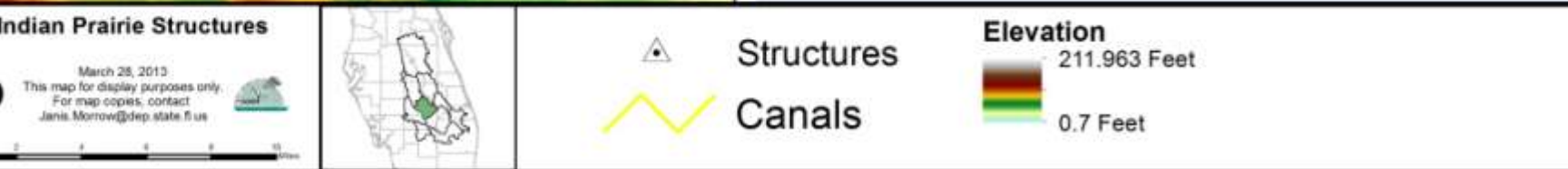


This would definitely encourage praying that no vehicles approach!

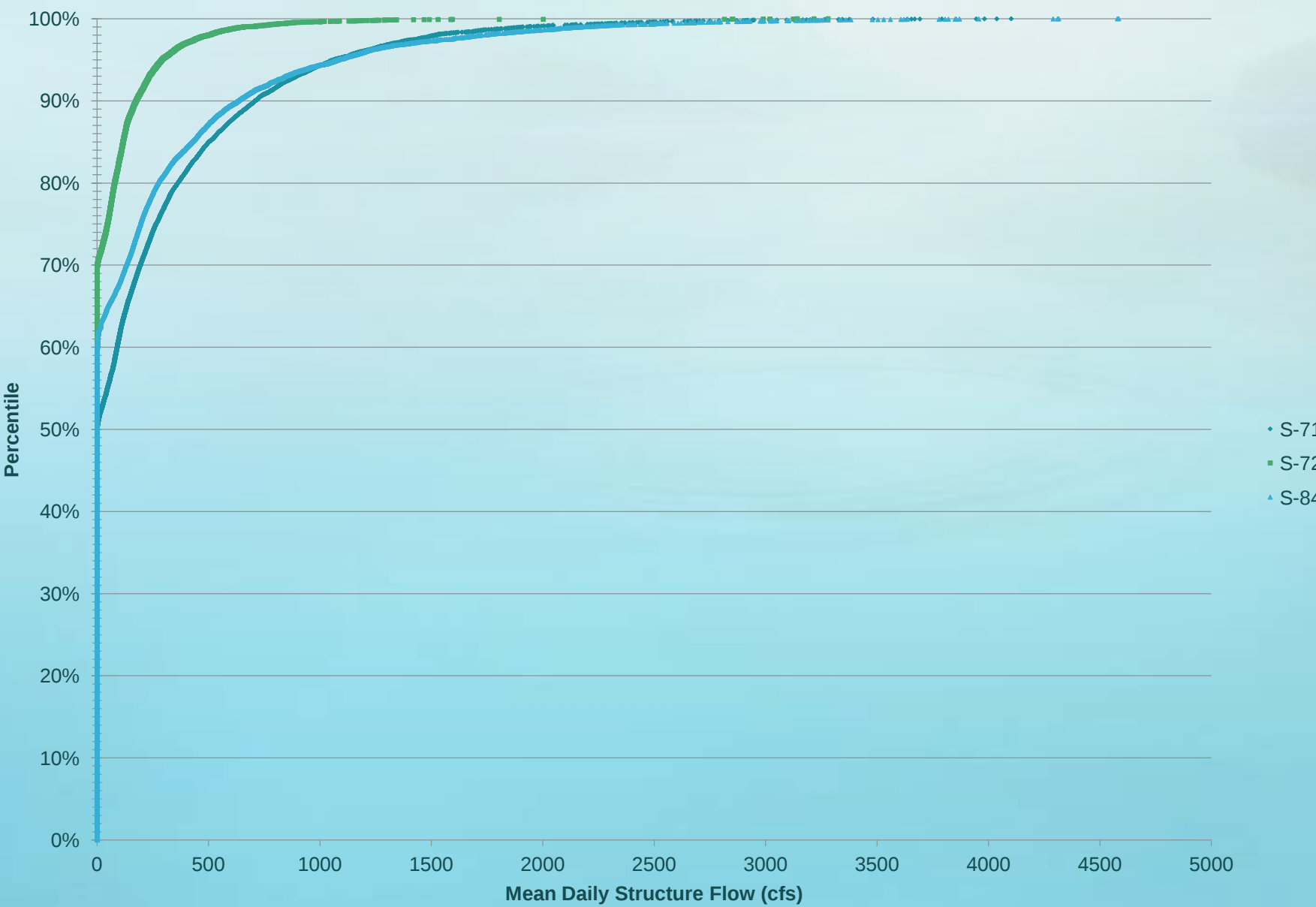




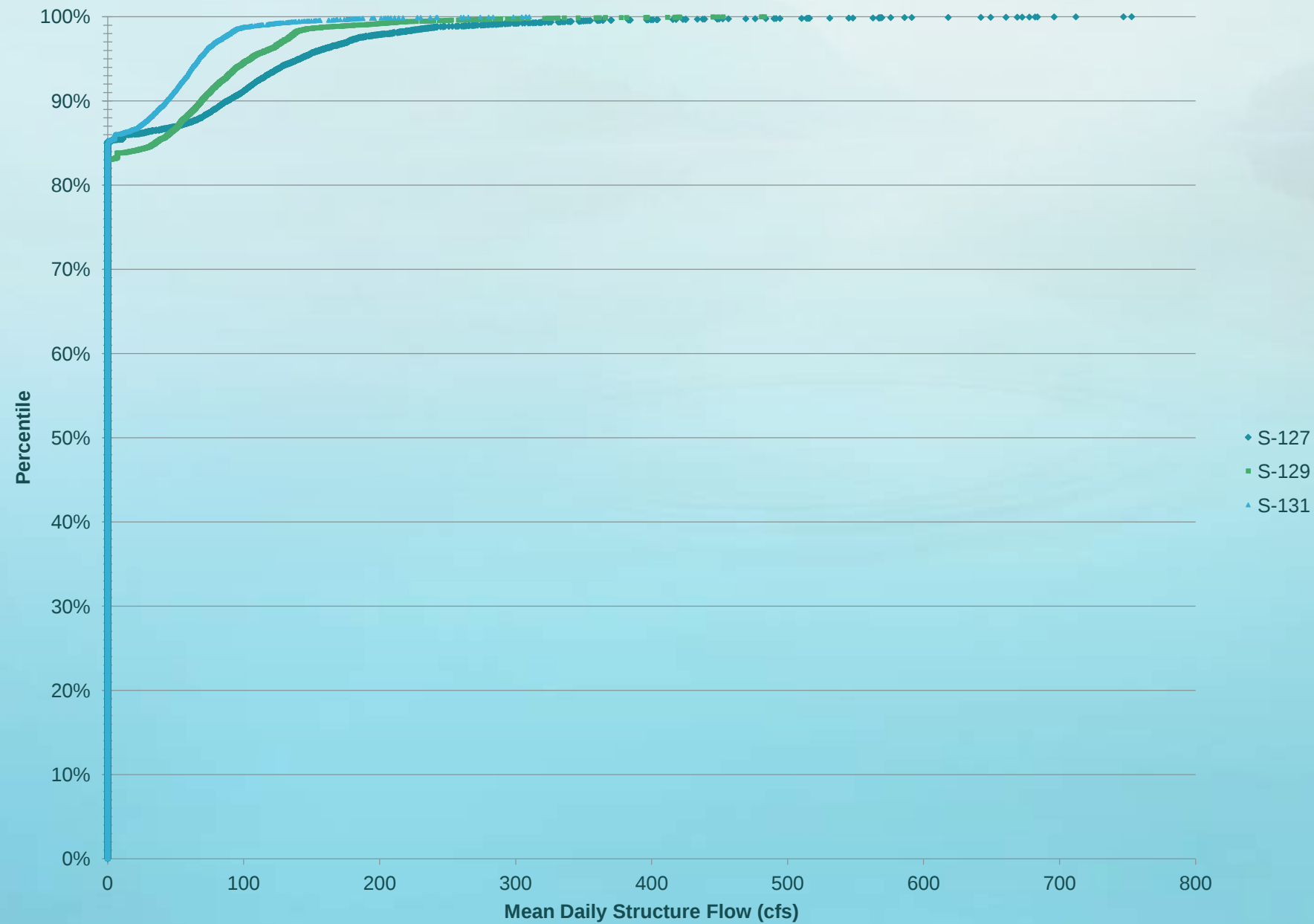
Summary Basin	Discharge Structure	Capacity (cfs)	Acres
S-71	Spillway, 3 gates	6,000	276,577
S-72	Spillway, 2 gates	3,120	
S-84	Spillway, 2 gates	2,000	
S-131	Two Unit Pump Station	230	
S-129	Three Unit Pump Station	375	
S-127	Five Unit Pump Station	630	



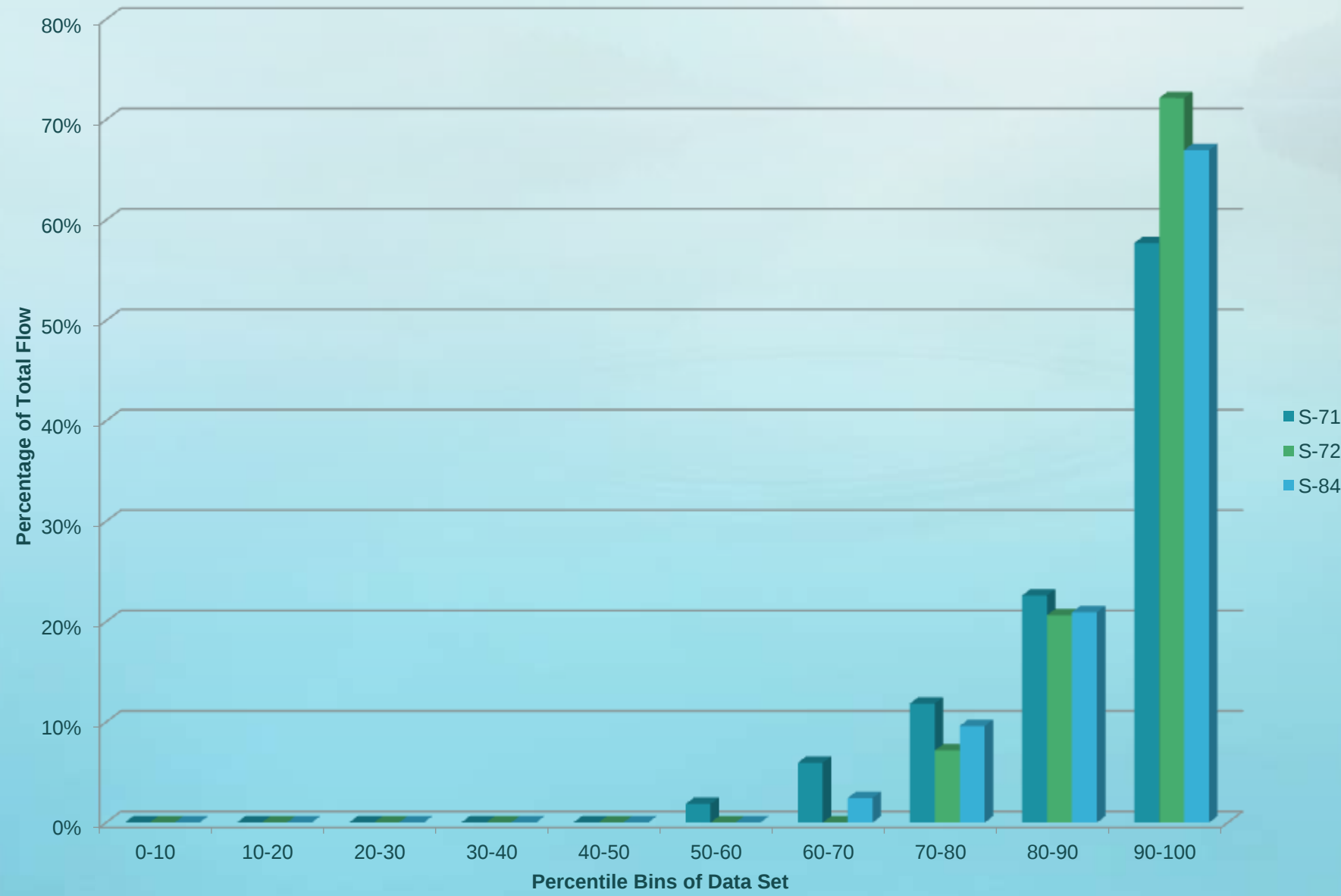
Distribution of Flows from Indian Prairie Subbasin Structures



Distribution of Flows from Indian Prairie Subbasin Pumps



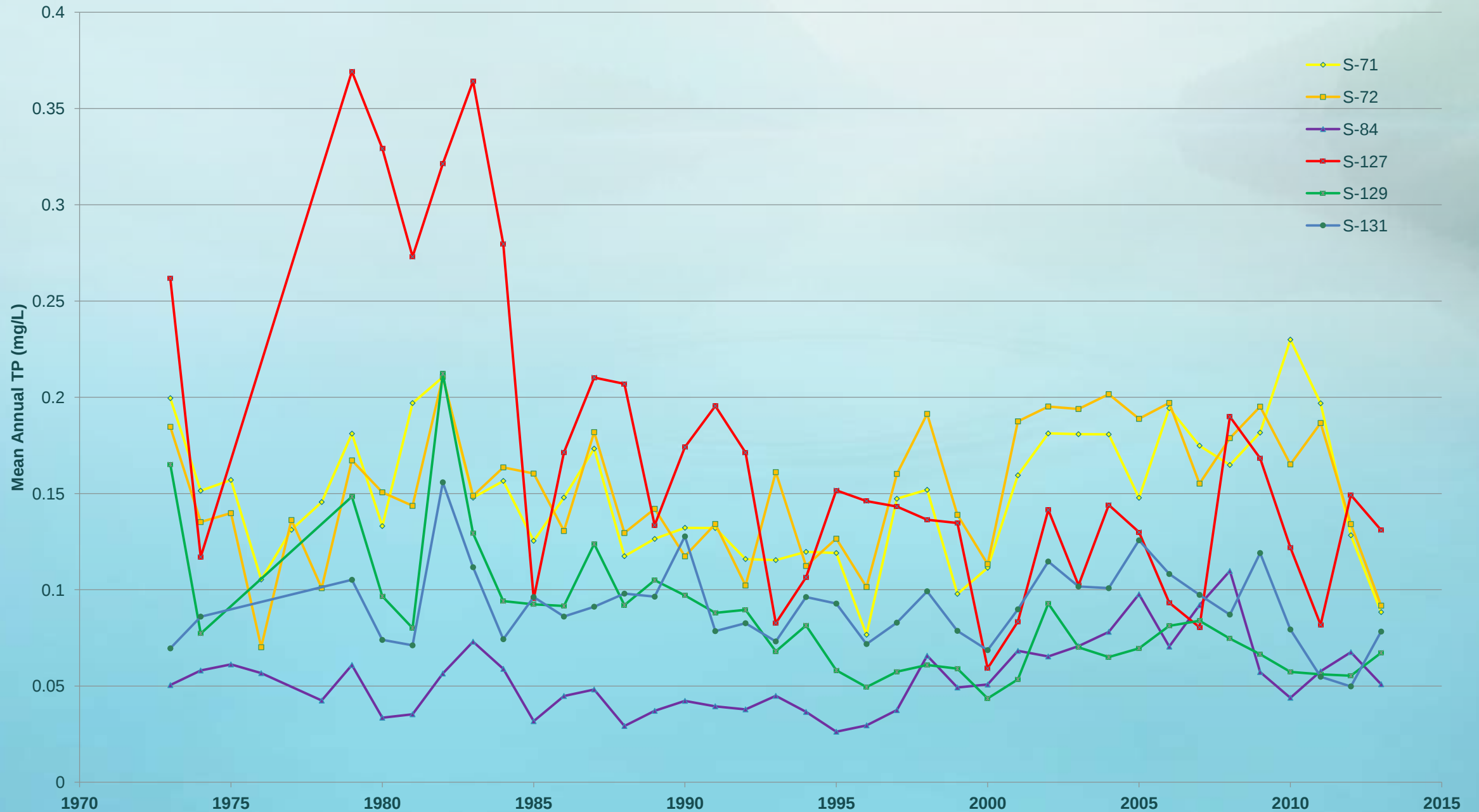
Indian Prairie Structures - Percentiles of Total Flow

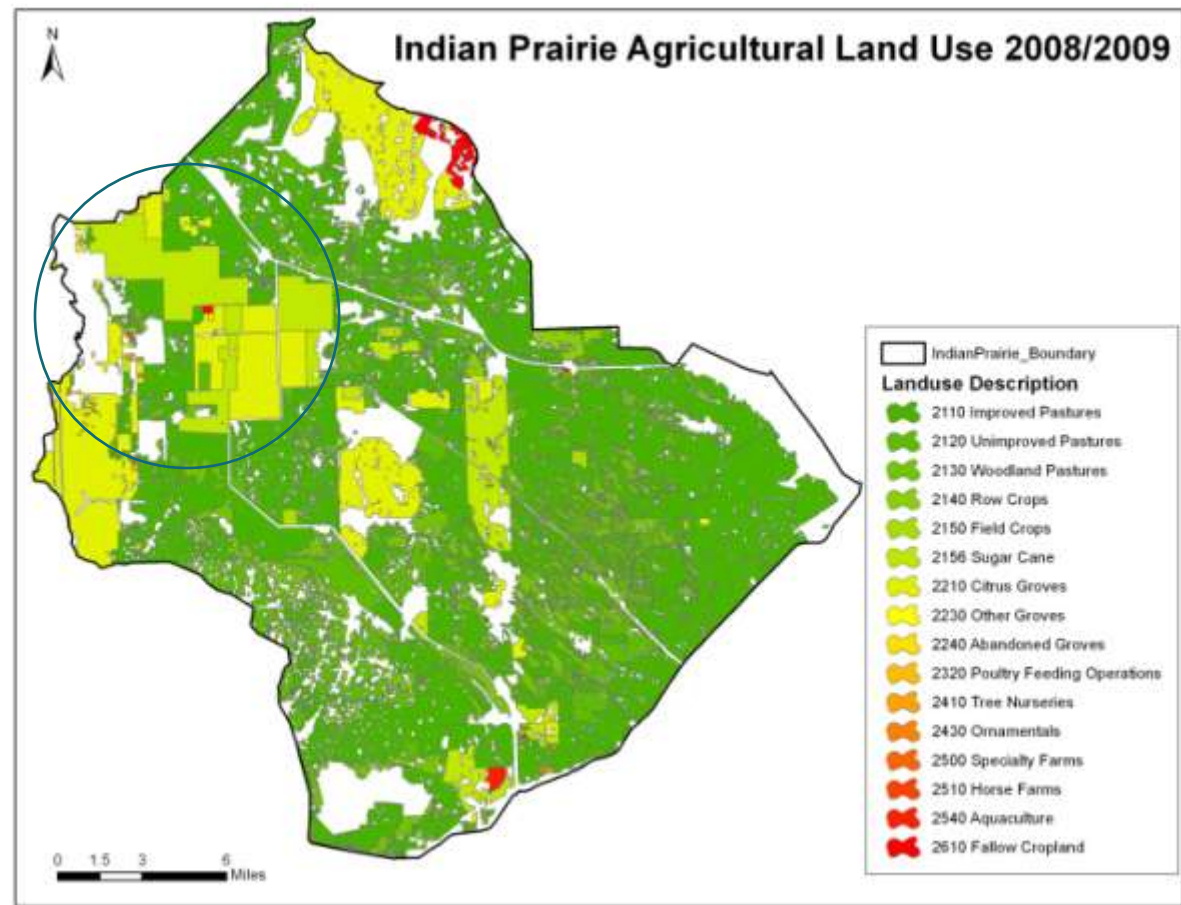
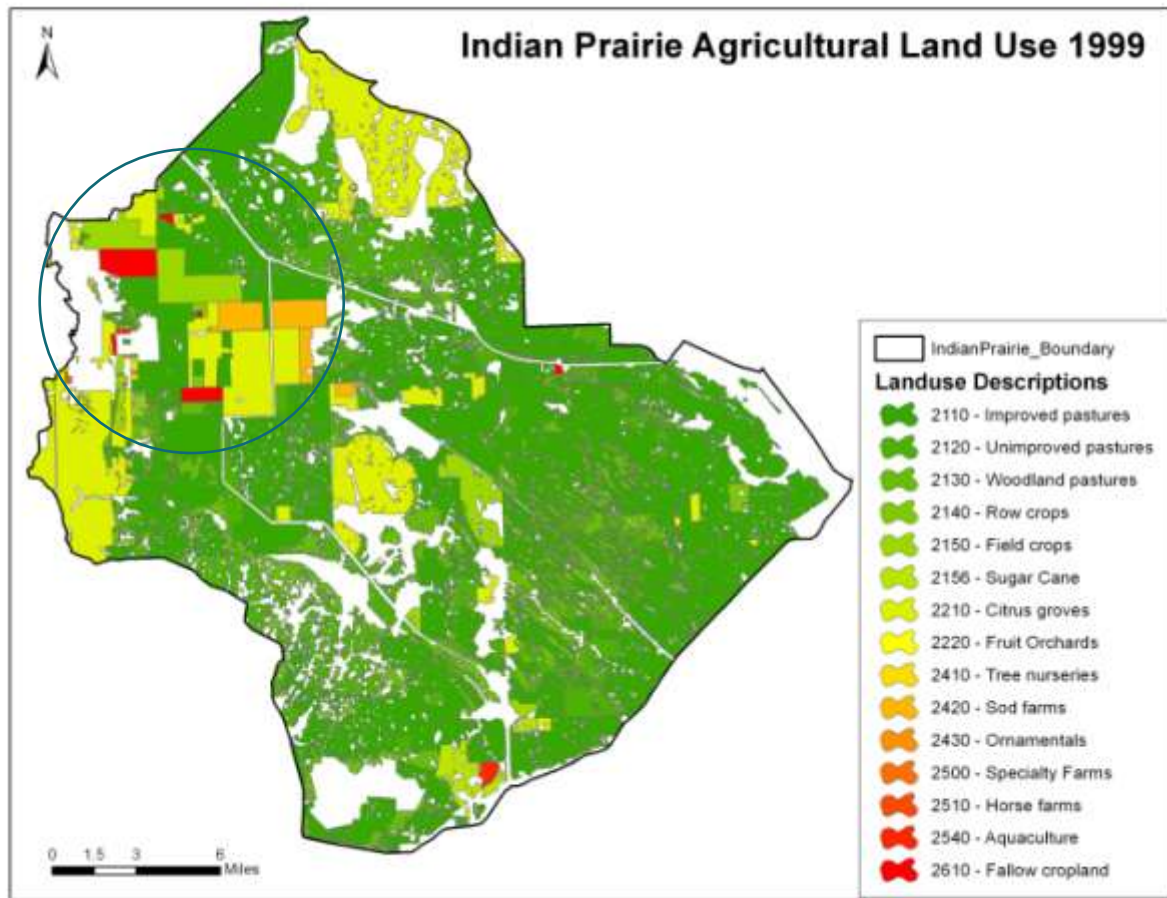


Another Seemingly Unnecessary Sign

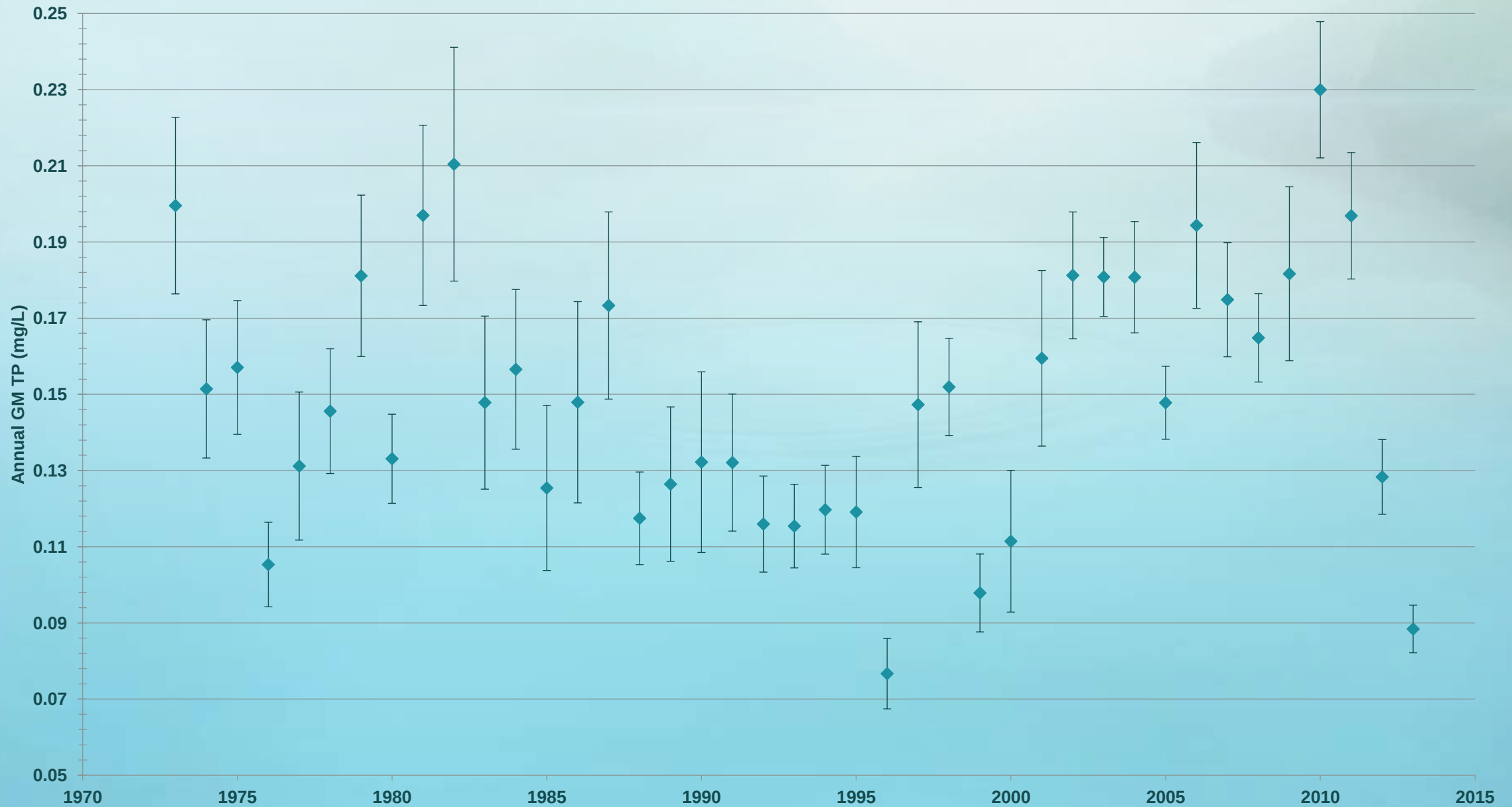


Indian Prairie Sub-Watershed Total Phosphorus

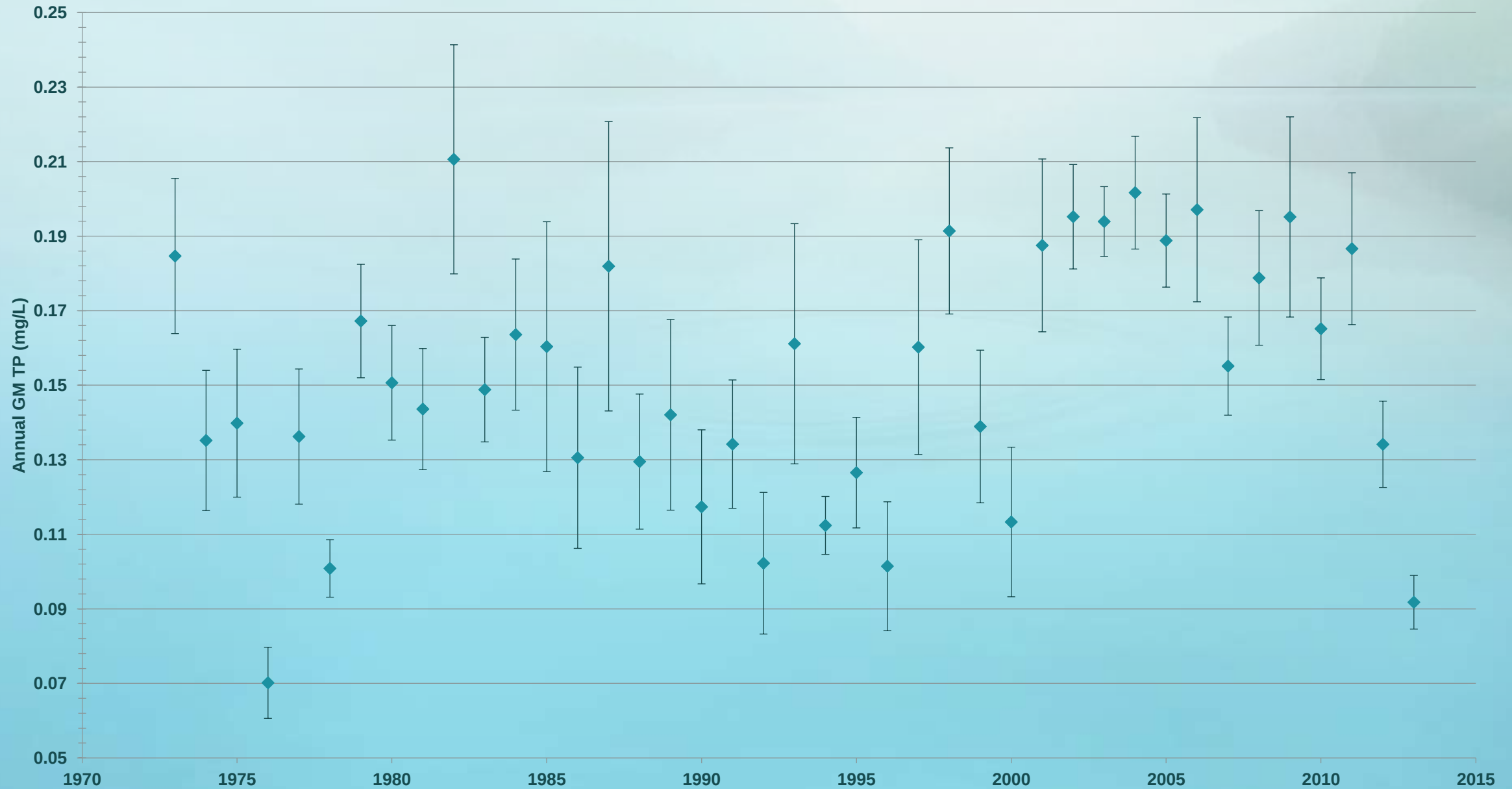




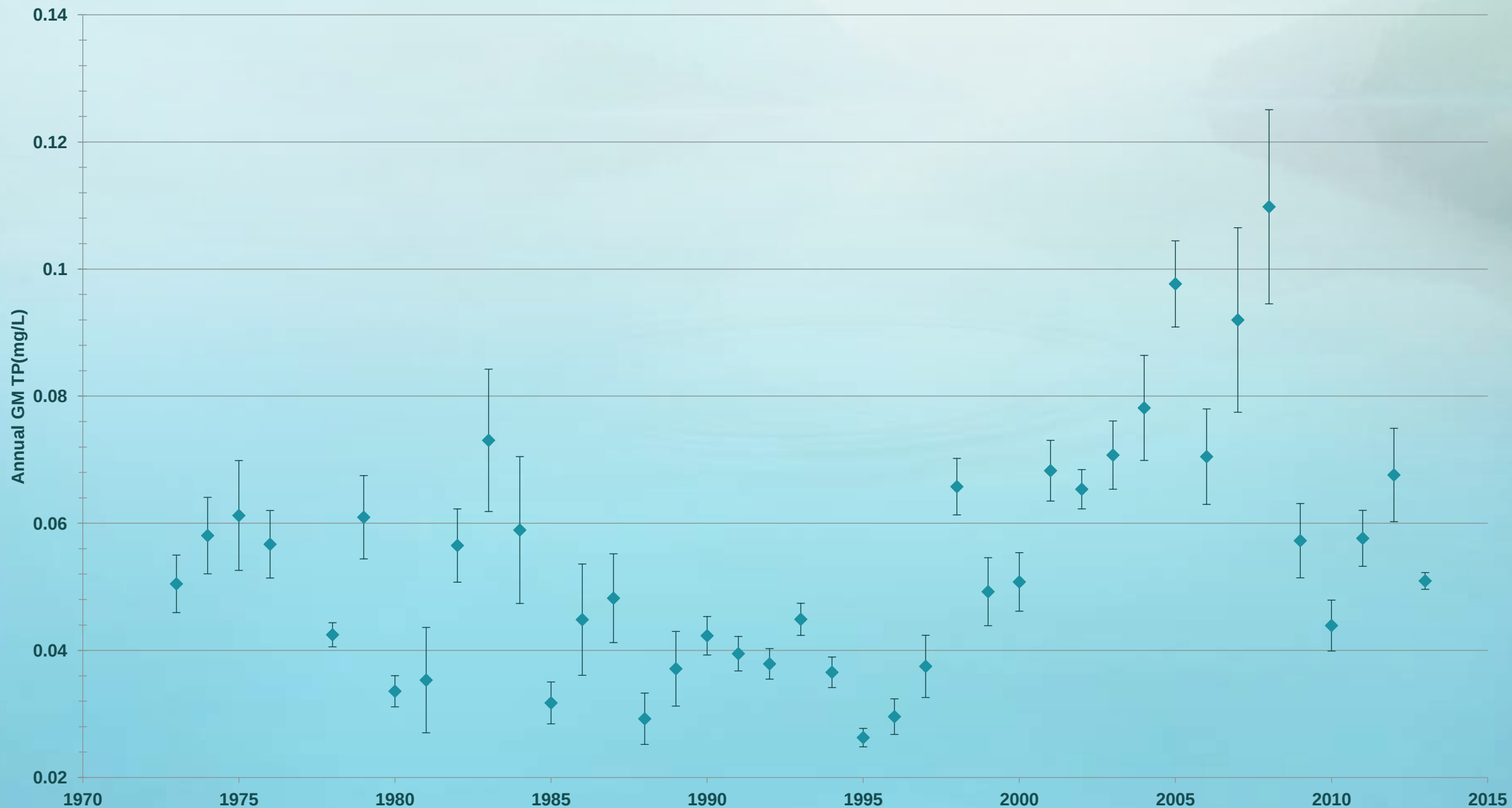
S-71 GM Total Phosphorus (+/- SE)



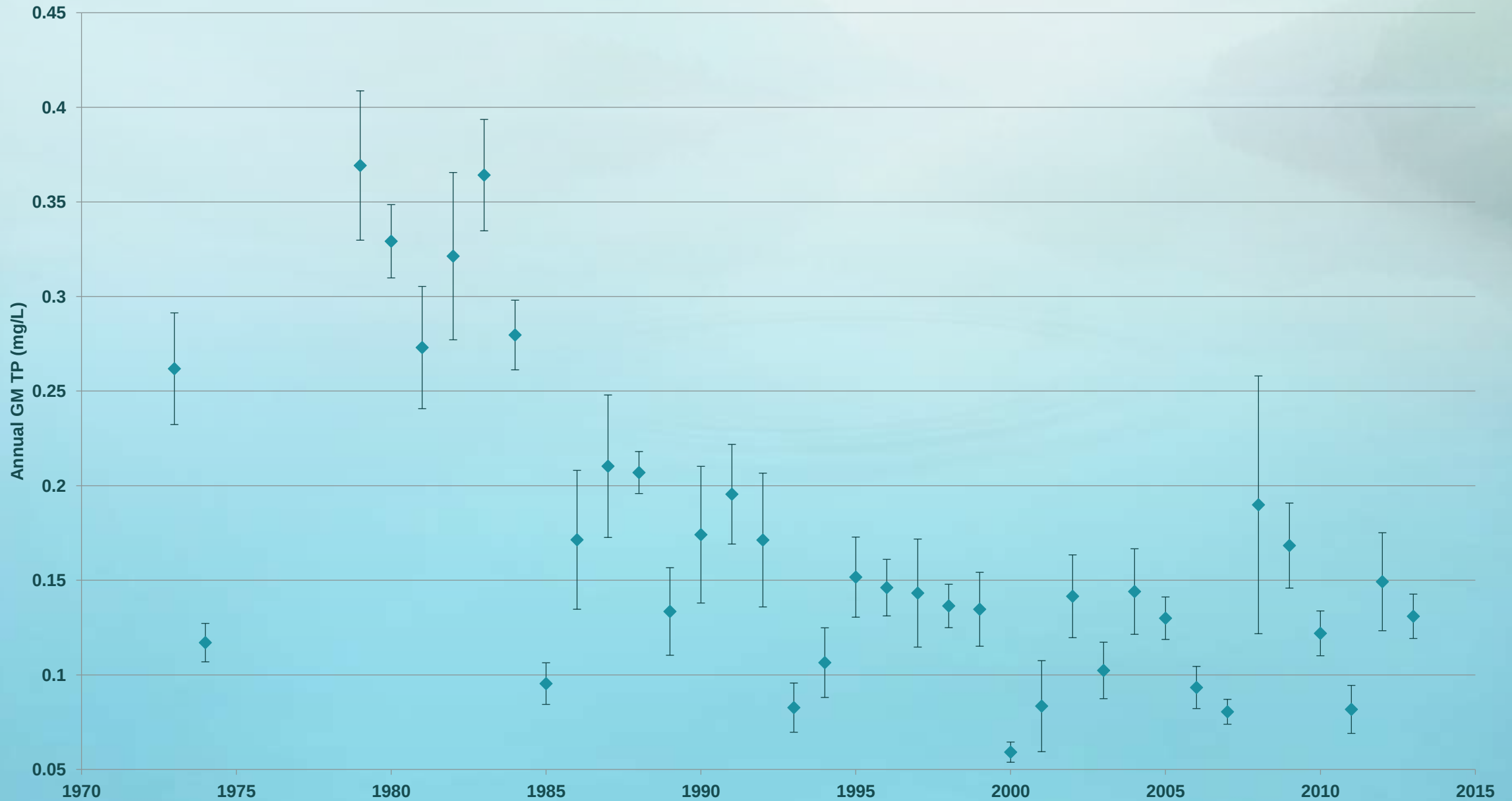
S-72 GM Total Phosphorus (+/- SE)



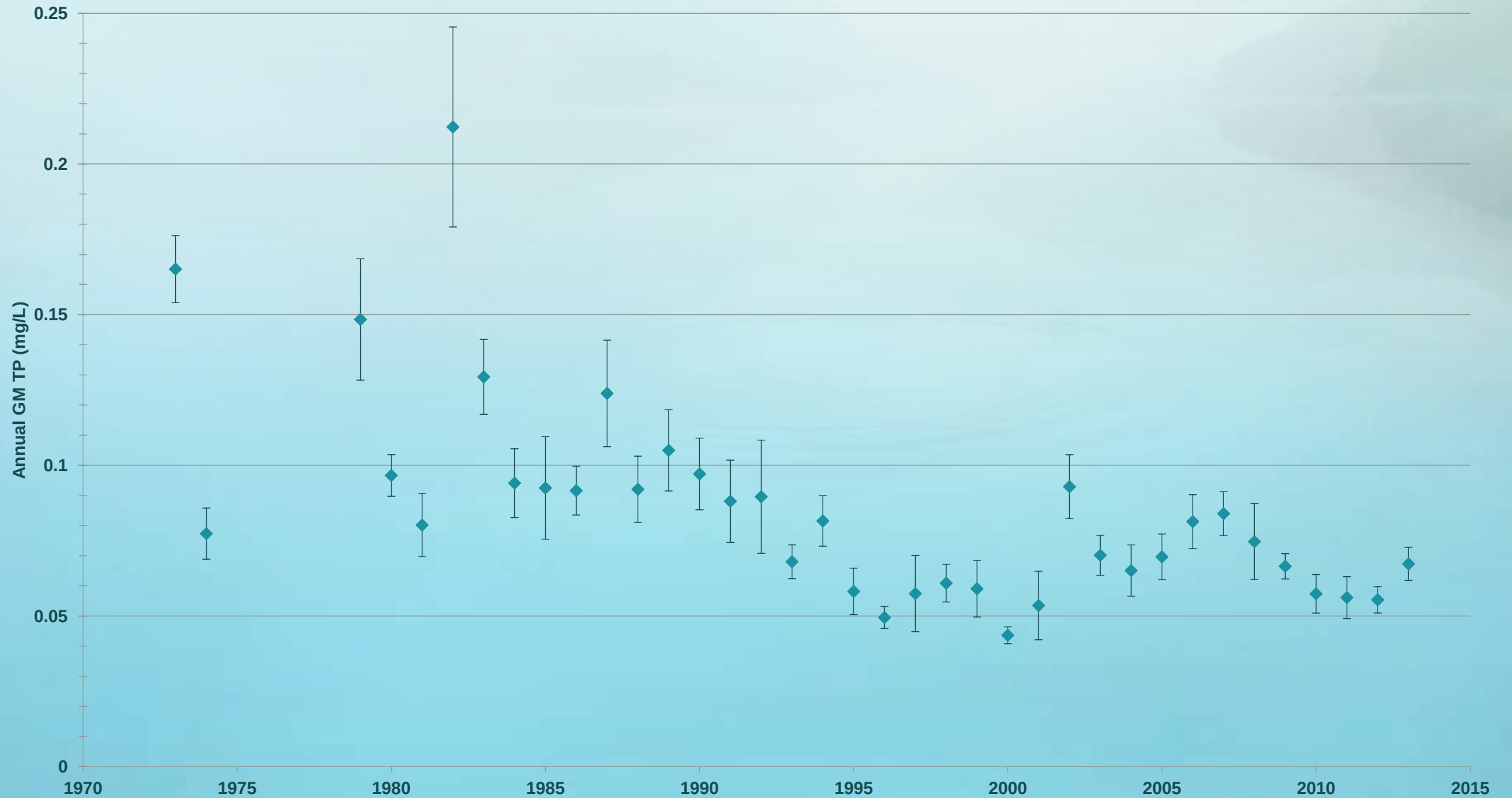
S-84 GM Total Phosphorus (+/- SE)



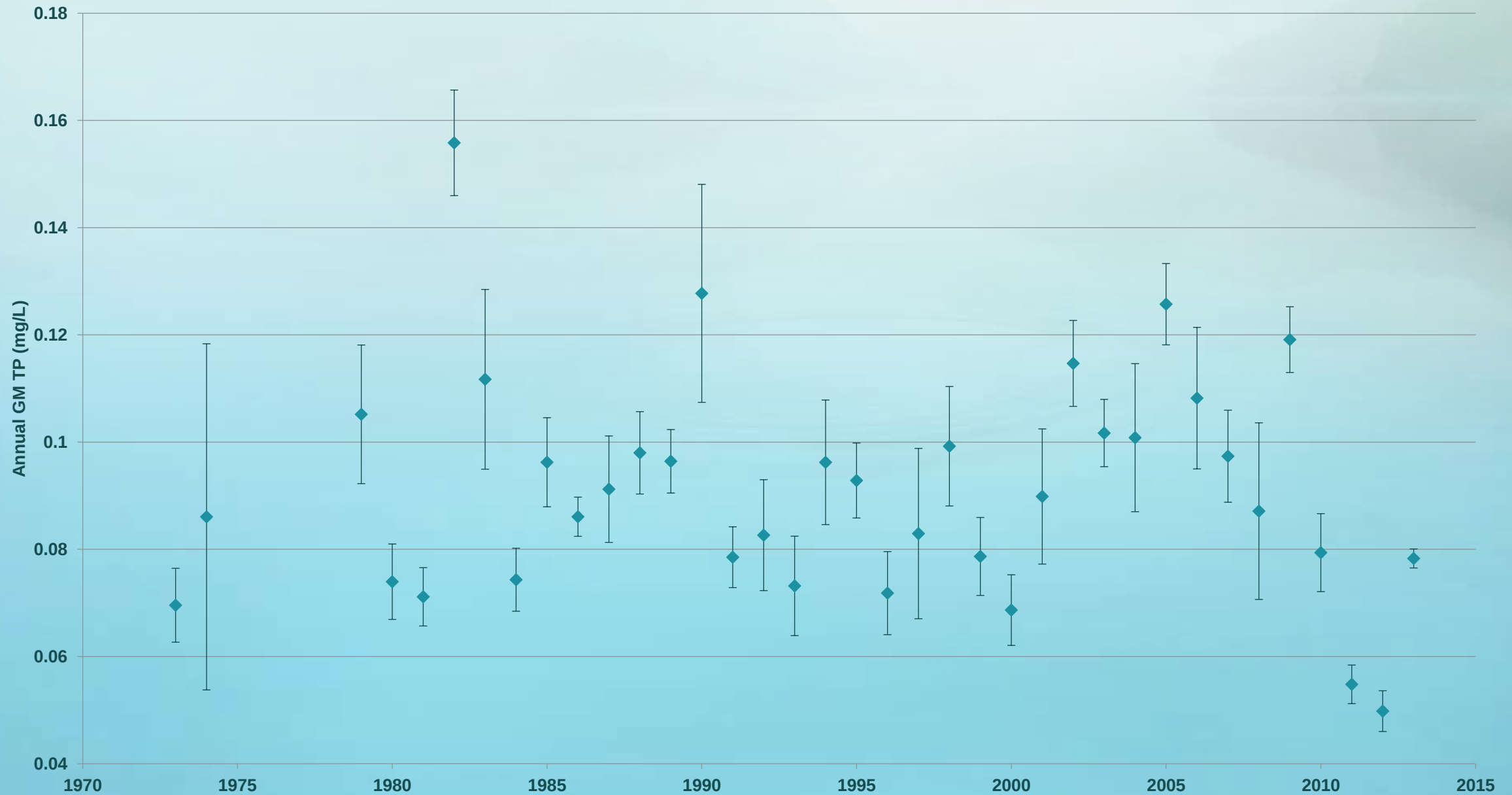
S-127 GM Total Phosphorus (+/- SE)



S-129 GM Total Phosphorus (+/- SE)



S-131 GM Total Phosphorus (+/- SE)



As someone who drives on interstates a lot, I really wish they would implement these!



Take Home Messages

- Detention of water (and associated P) within watershed is key to successful restoration
- Development of projects will depend on basin hydrologic characteristics and land use
- BMAP will work in concert with Watershed Protection Plan to continue development of collaborative Dispersed Water Management projects
- It would be helpful as this program progresses to develop a dedicated funding source

WARNING!



IF THE HELP DESK THINKS YOUR QUESTION
IS STUPID, WE WILL SET YOU ON FIRE

Next Steps

- **Technical Discussions – Teleconference.**
- **Meet with Local Governments, Agricultural and Environmental Interests.**