



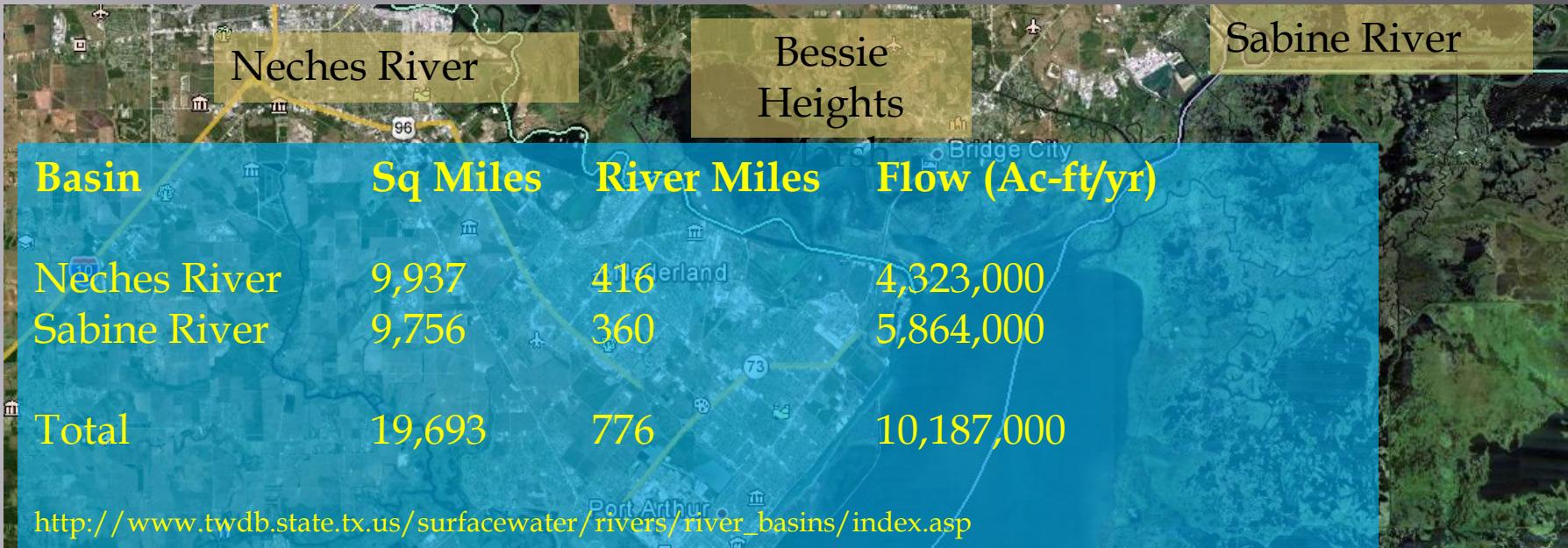
Salinities of Lake Sabine And Associated Gulf Waters

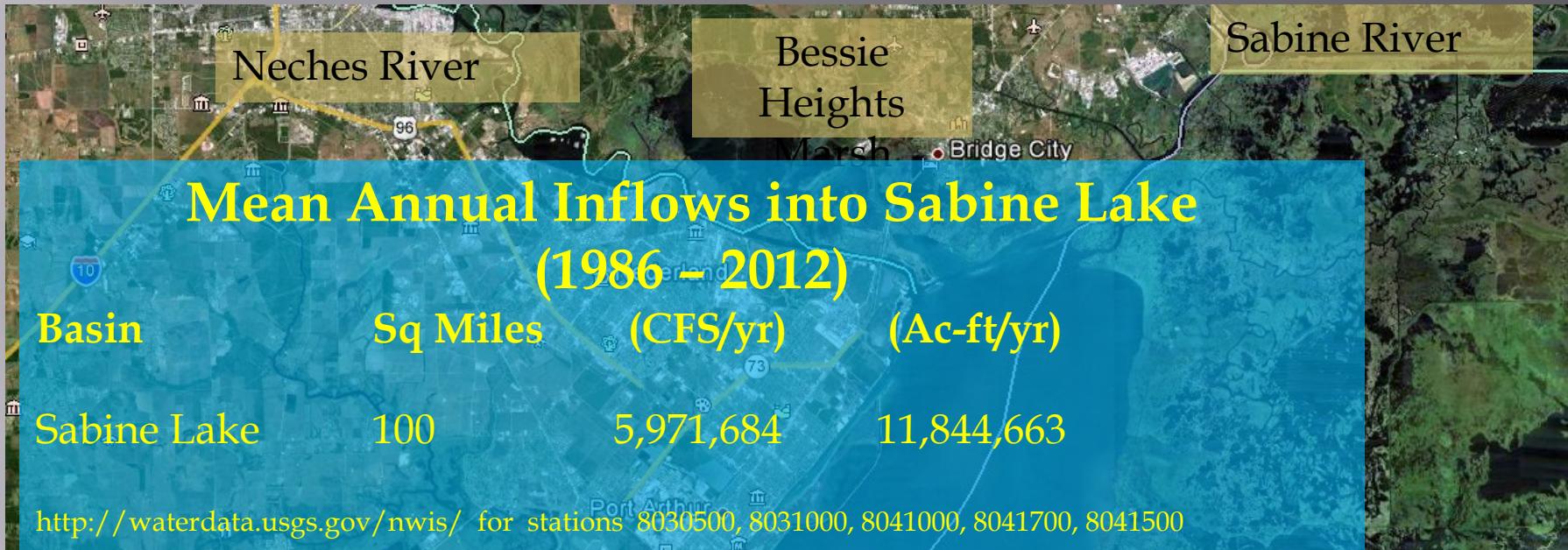
Terry D. Stelly
Ecosystem Biologist

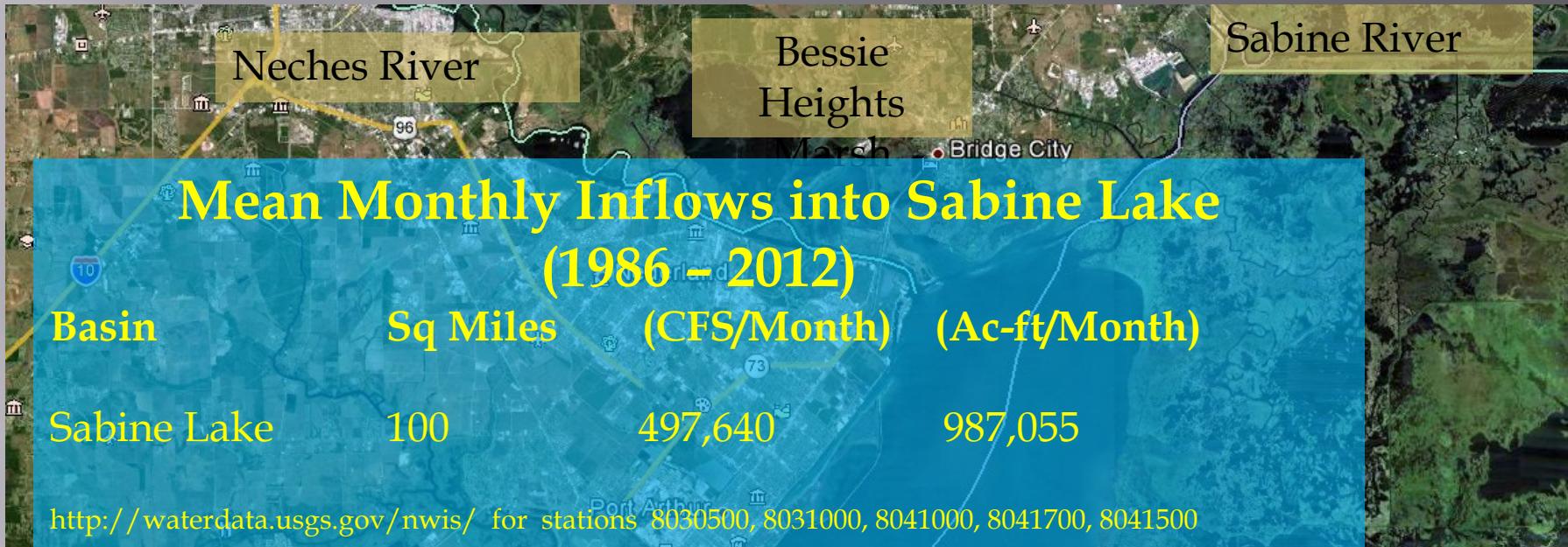
Texas Parks and Wildlife Department – Coastal Fisheries
601 Channelview
Port Arthur, Texas 77640
409-983-1104 ext 224
Terry.Stelly@tpwd.state.tx.us

January 30, 2013

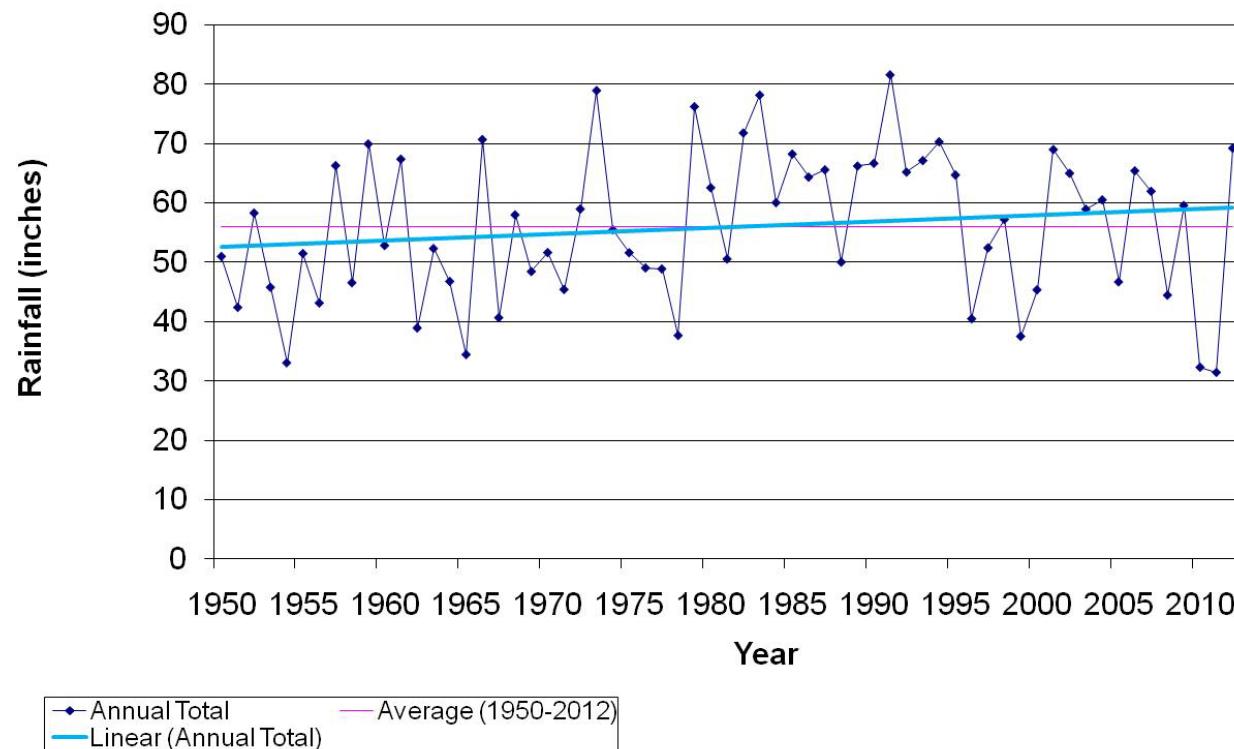




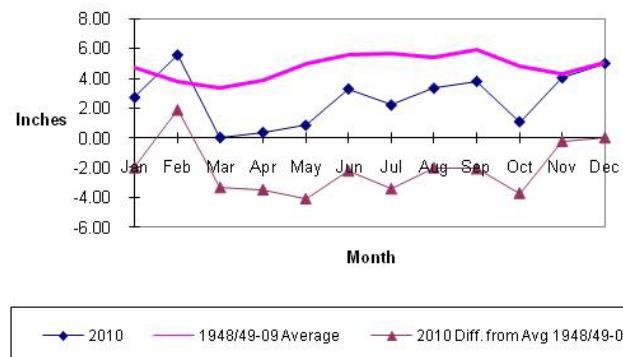




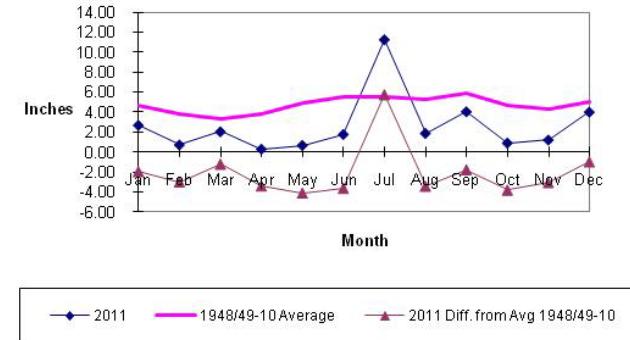
Annual Rainfall at Jack Brooks Regional Airport (1950 - 2012) Beaumont - Port Arthur



2010 Rainfall Summary for Southeast Texas Regional (Jefferson County) Airport



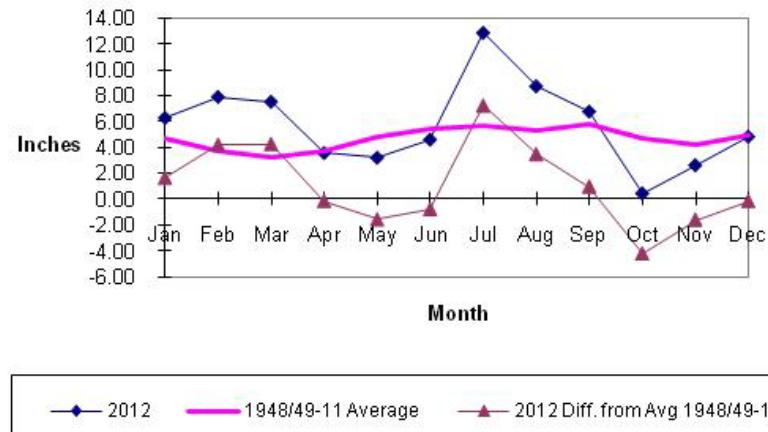
2011 Rainfall Summary for Jack Brooks Regional (Jefferson County) Airport



Source: <http://www.weather.gov/climate/index.php?wfo=lch>

Select Preliminary Monthly Climate Data (CF6) at Southeast Texas Regional Airport

2012 Monthly Rainfall Summary for Jack Brooks Regional (Jefferson County) Airport



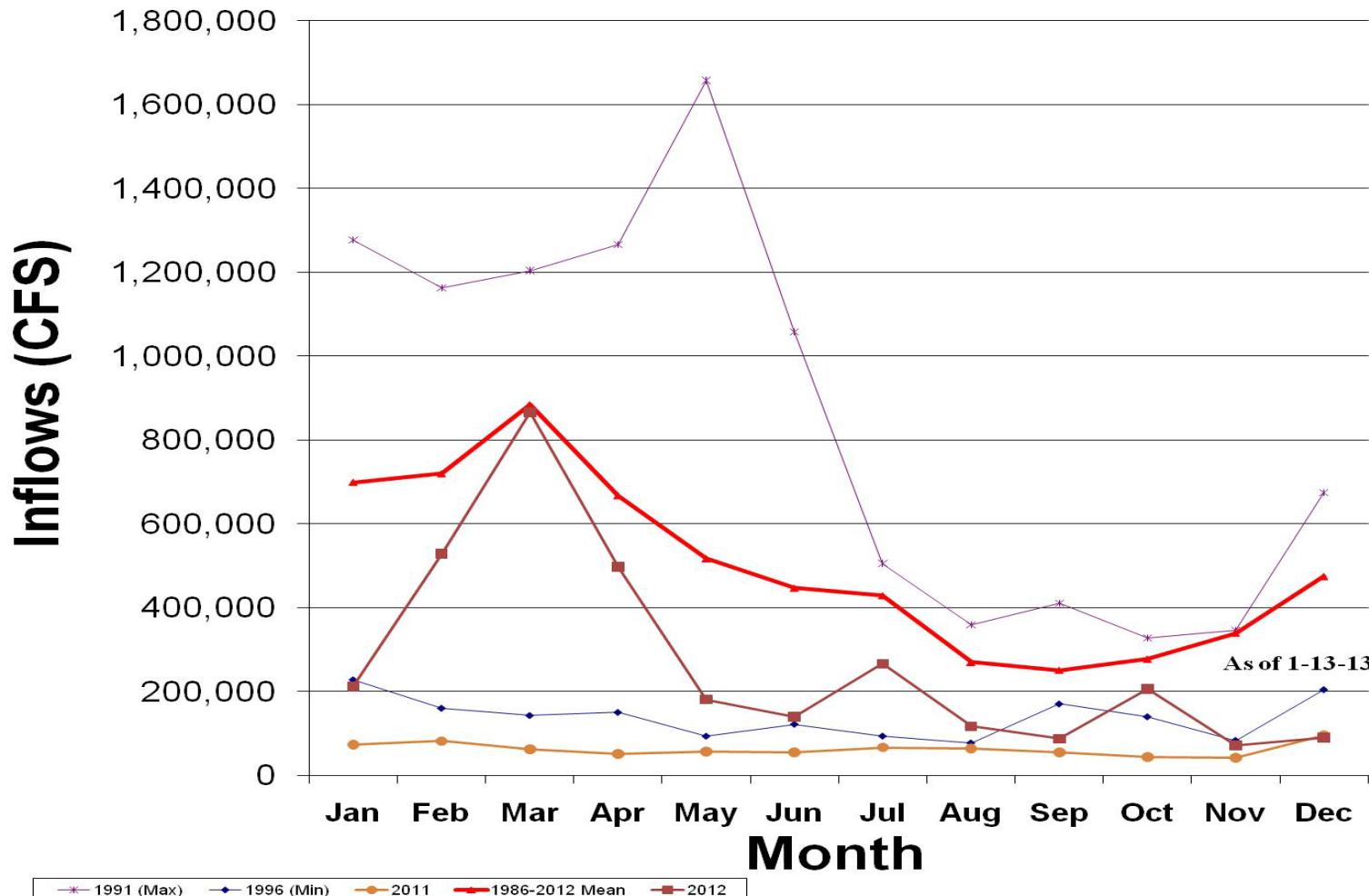
Source: <http://www.weather.gov/climate/index.php?wfo=lch>

Select Preliminary Monthly Climate Data (CF6) at Southeast Texas Regional Airport

Sabine Lake Monthly Combine Inflows (Daily Means, USGS) 1986-2012

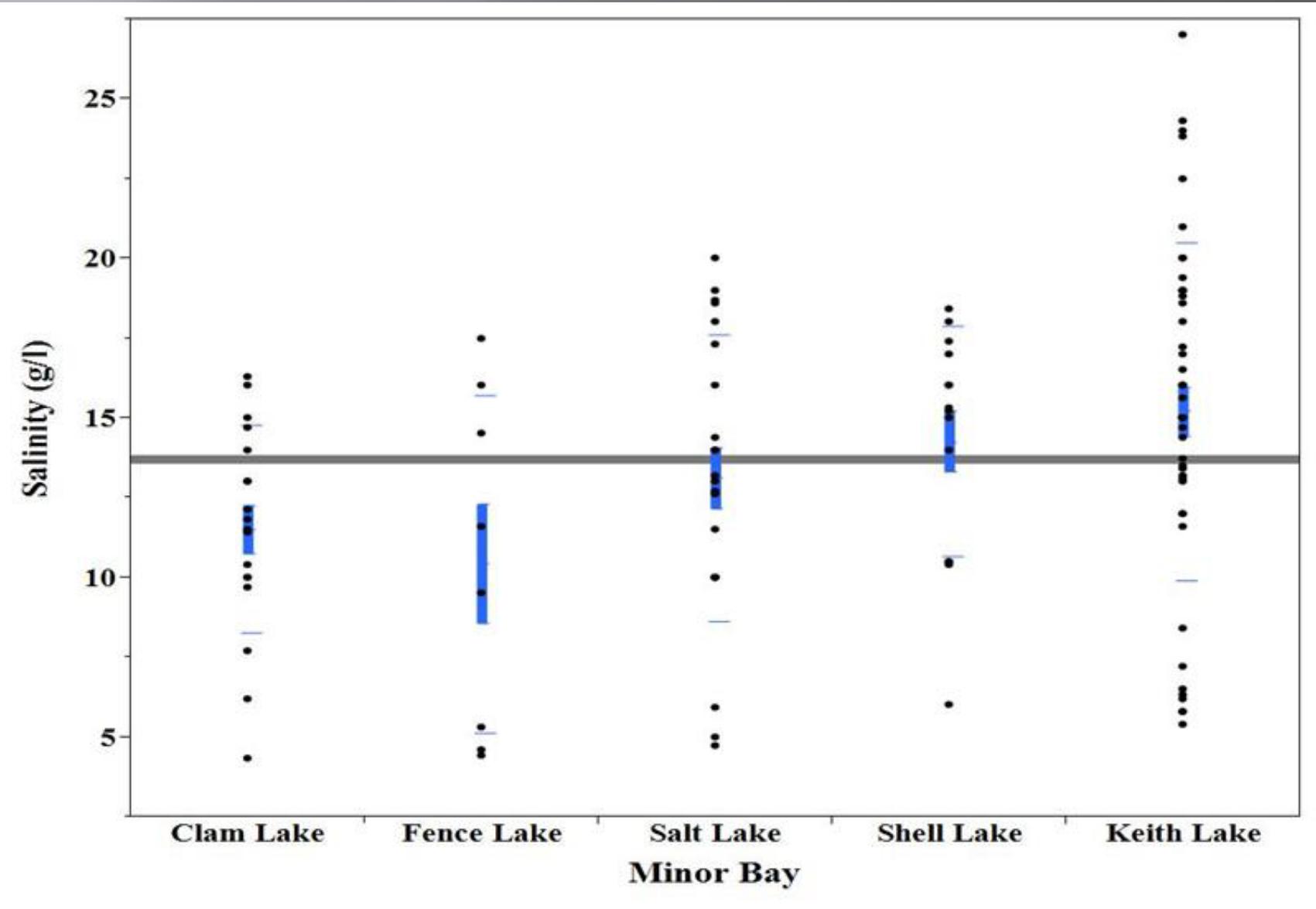
Flow Years: Mean, Min, Max, and Current Year

(Sabine R., Cow Bayou, Neches R., Village Cr., Pine Island Bayou)

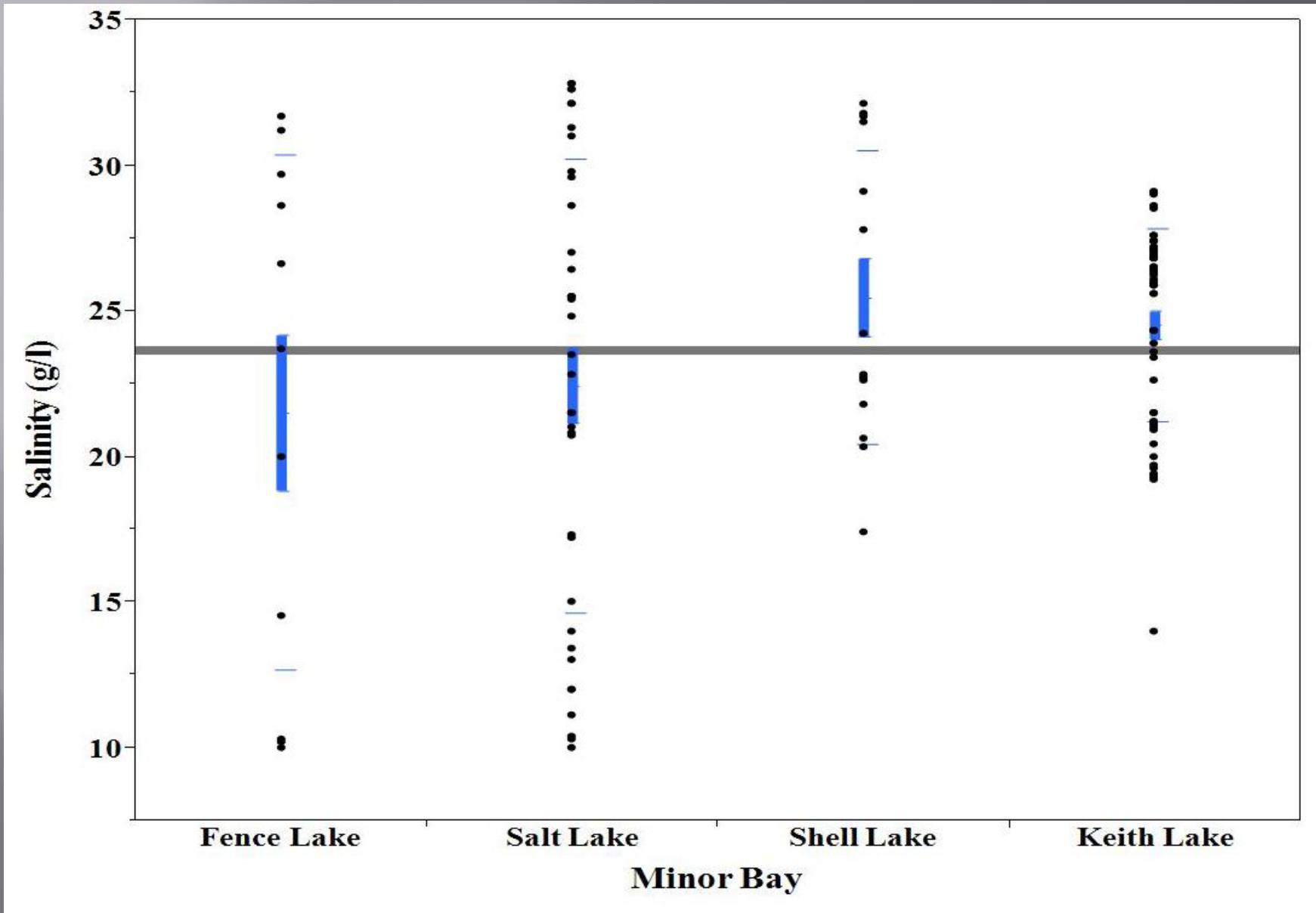


Source: Gage Site Numbers used 08030500, 08031000, 08041000, 08041500, 08041700
http://waterdata.usgs.gov/nwis/dv?cb_00060=on&cb_00065=on&format=rdb&begin_date=1900-01-01&end_date=2011-01-13&site_no=08030500&referred_module=sw

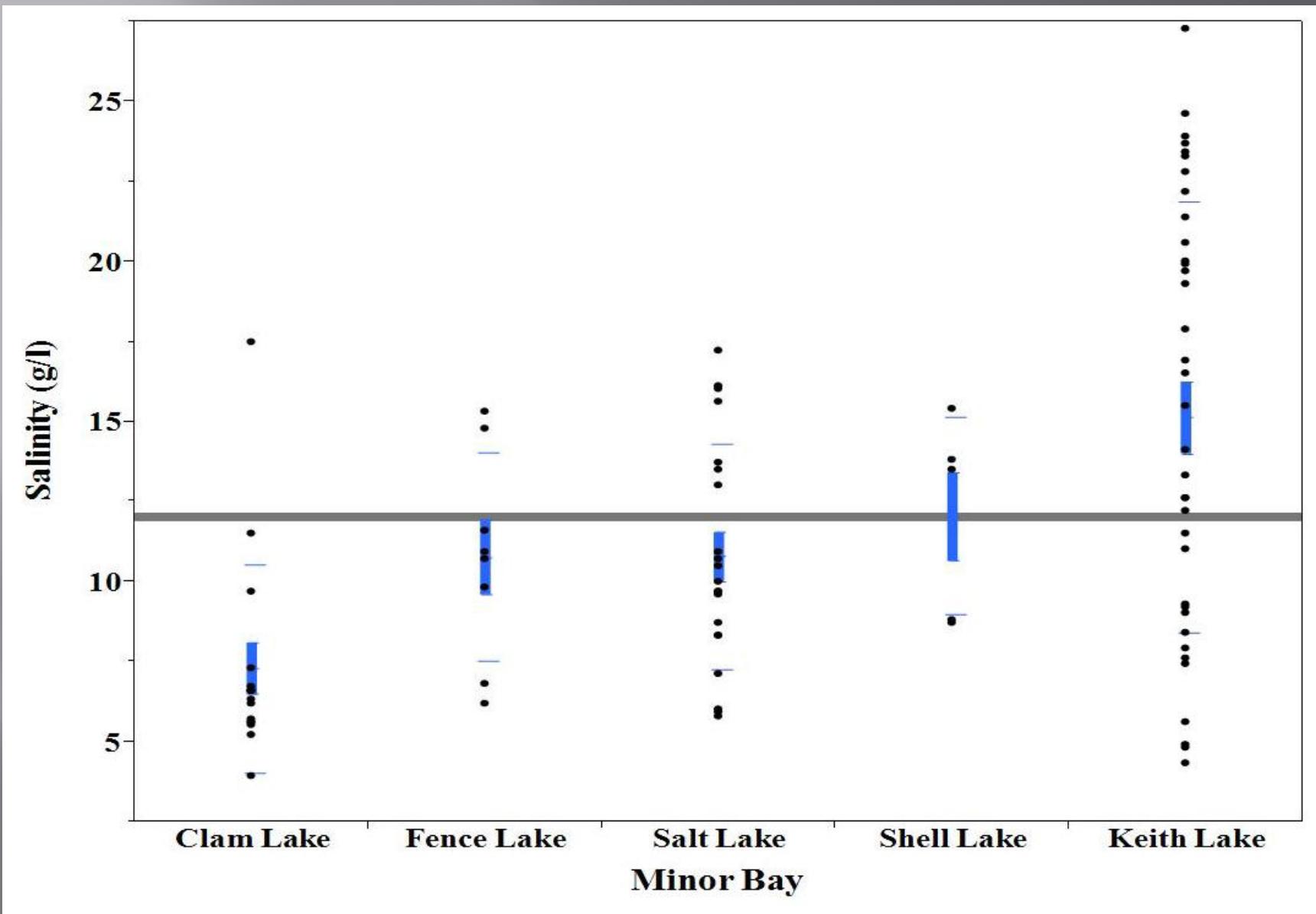
2010 Annual Salinities for the Keith Lake/Salt Bayou Marsh



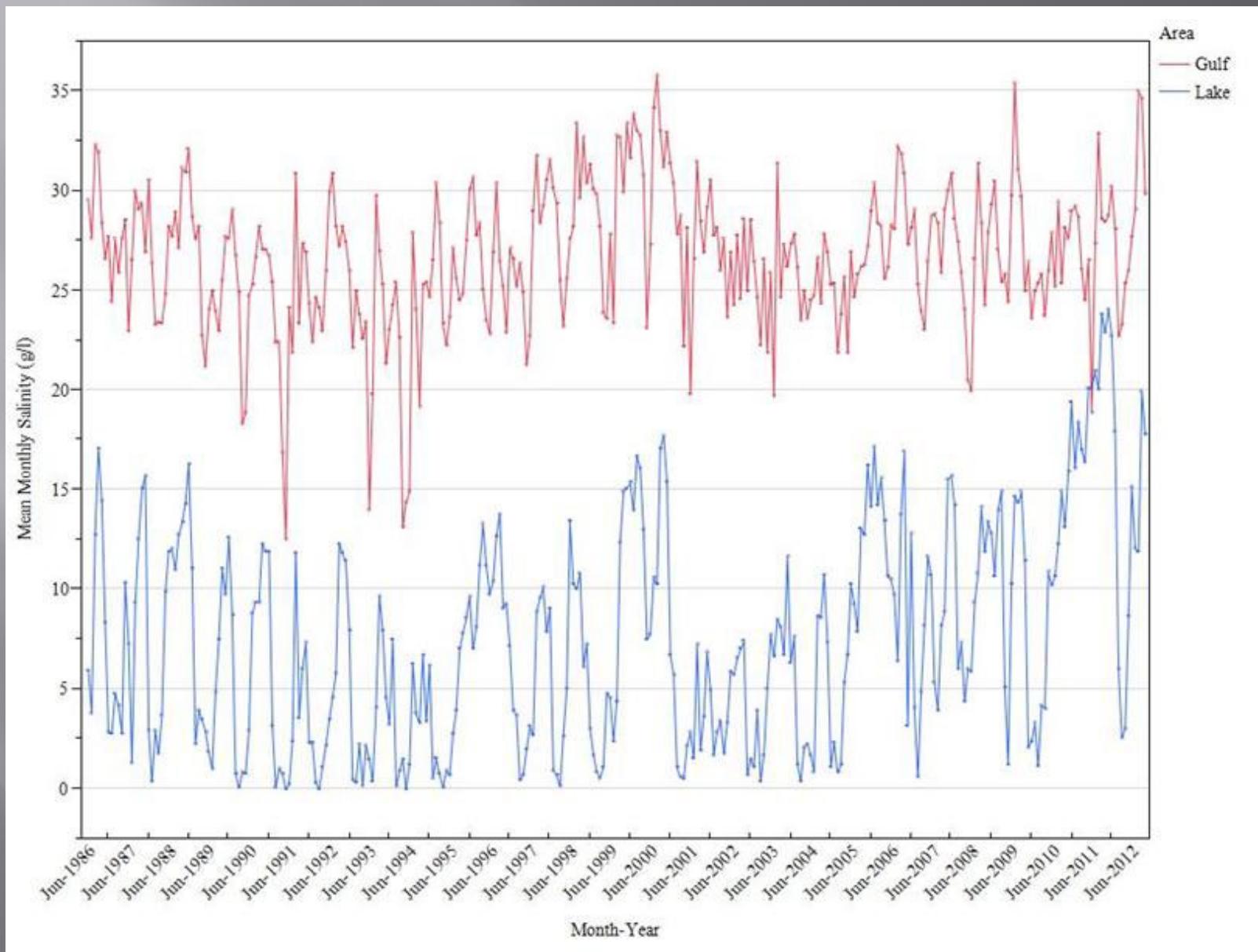
2011 Annual Salinities for the Keith Lake/Salt Bayou Marsh



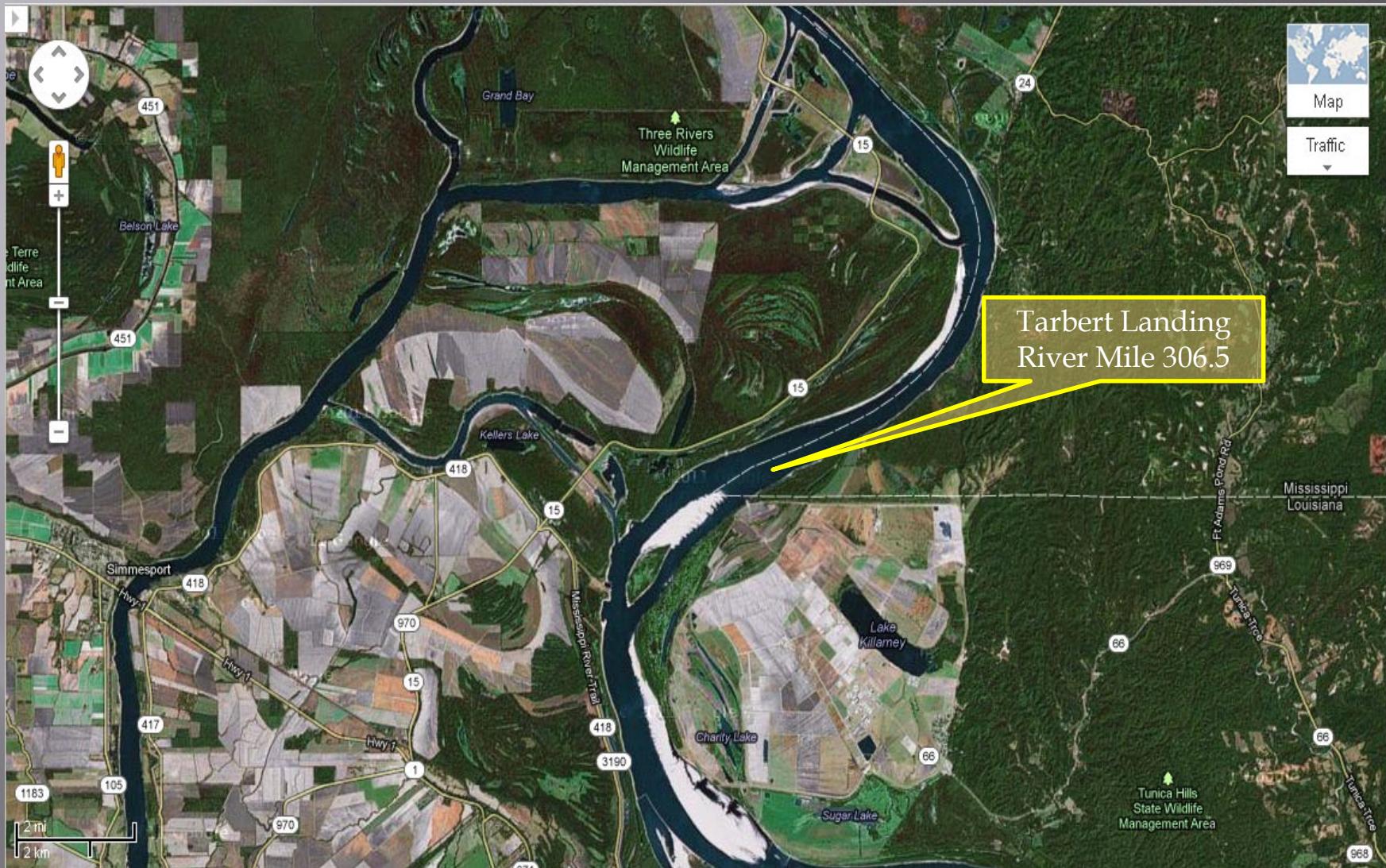
2012 Annual Salinities for the Keith Lake/Salt Bayou Marsh



Mean Monthly Salinities For Sabine Lake Bay and Gulf Trawl Samples (June 1986 – October 2012)

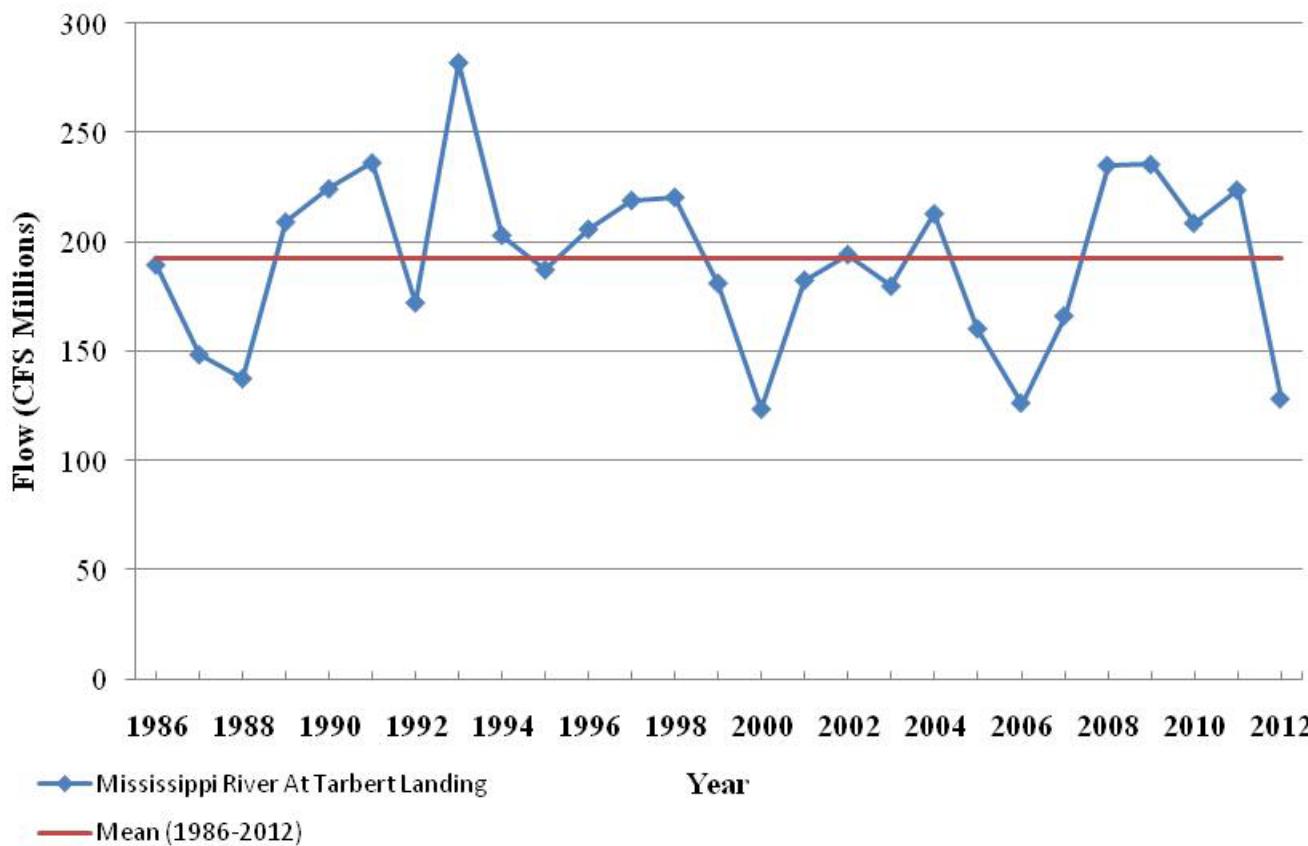


Mississippi River Annual Flows at Tarbert Landing, Mississippi

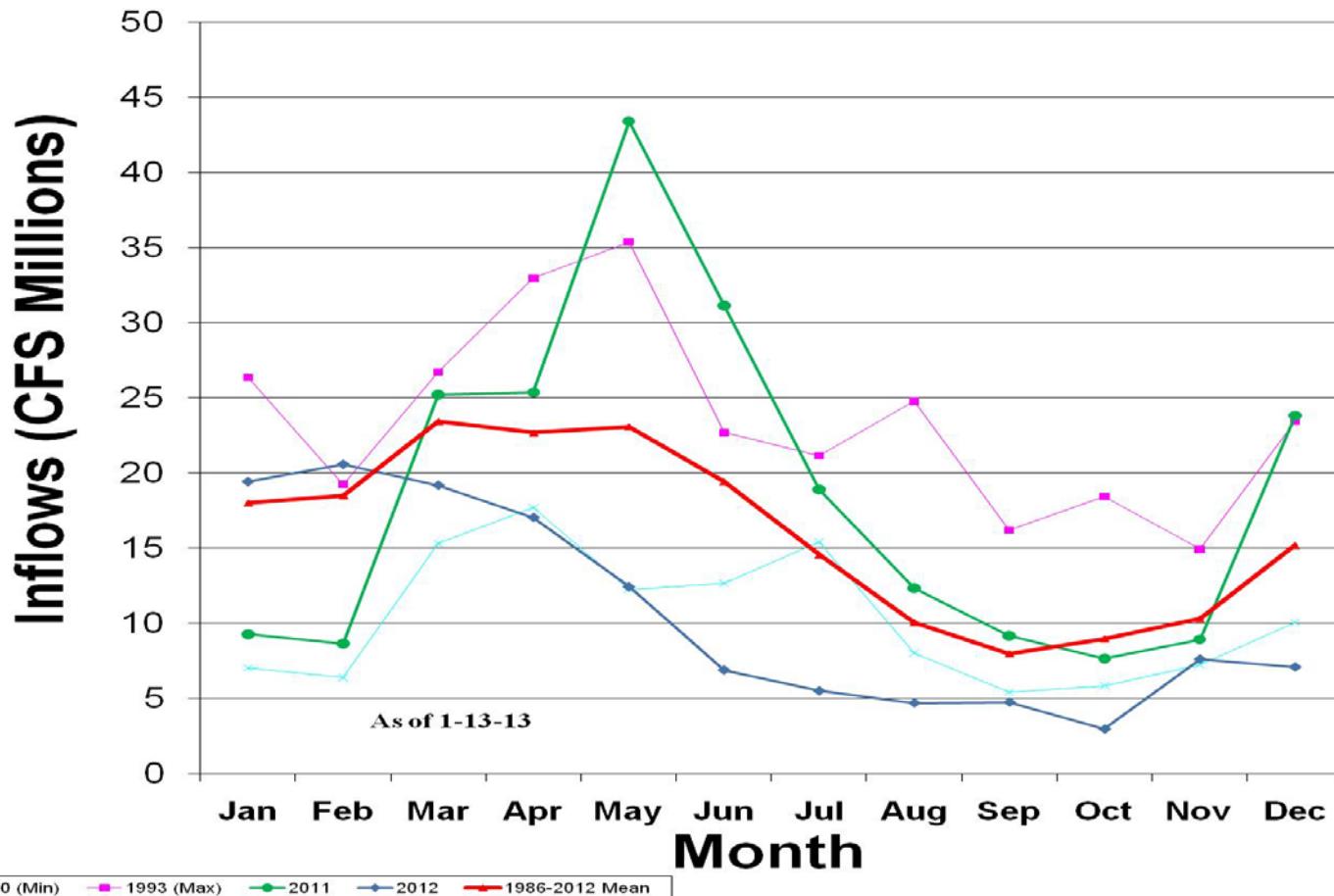


Mississippi River Annual Flows at Tarbert Landing, Mississippi

Annual Flow for Mississippi River At Tarbert Landing, Mississippi (1986- 2012)



Mississippi River Monthly Inflows (Daily Means, USACOE 01100) 1986-2012
Flow Years: Min, Max, Last Year
(Mississippi River at Tarbert Landing, MS)

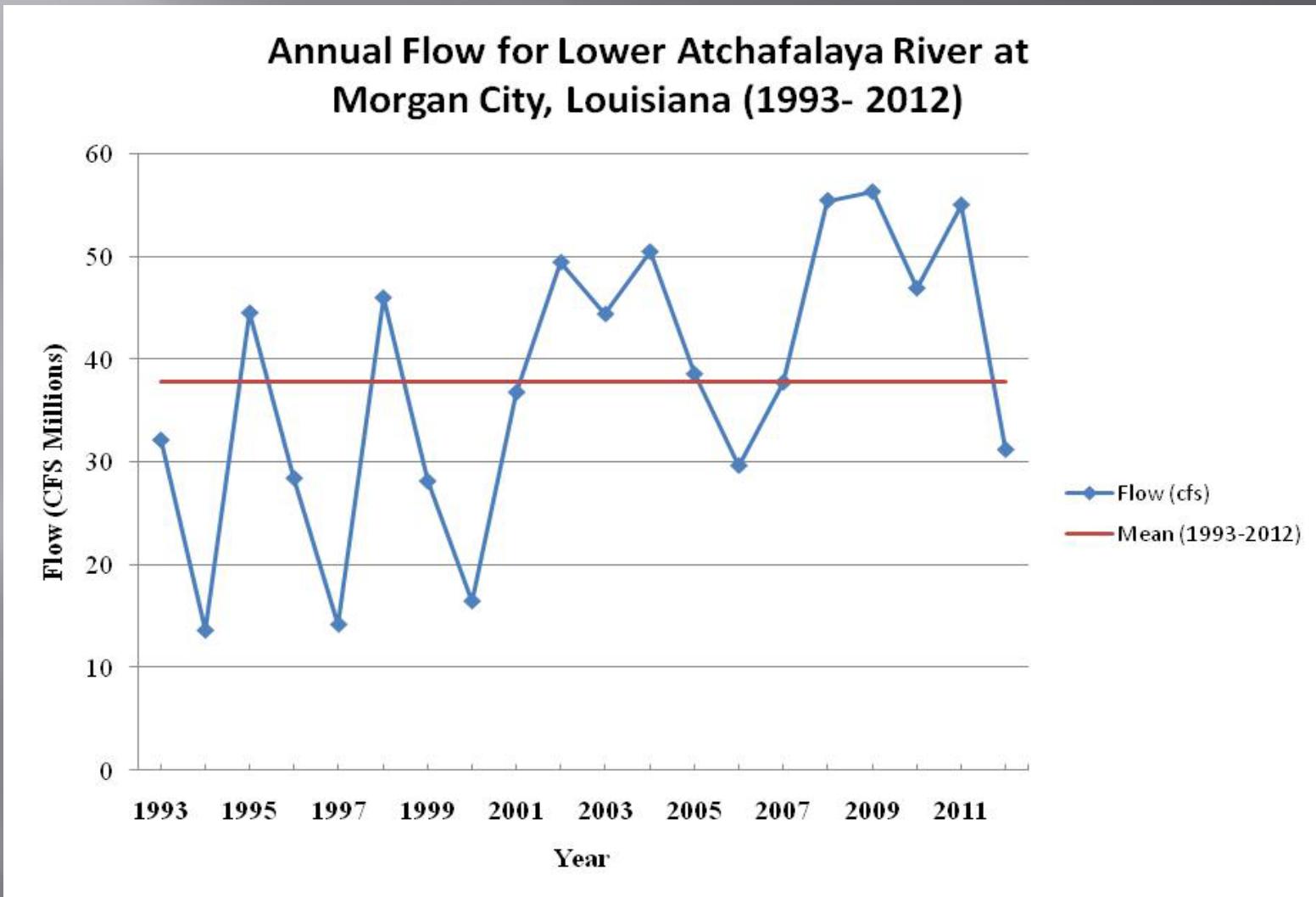


Source:
http://waterdata.usgs.gov/la/nwis/dv?cb_00065=on&cb_00060=on&format=rdb&begin_date=1993-06-05&end_date=2011-07-13&site_no=07381600&referree_module=sw

Atchafalaya River Annual Flows at Morgan City, Louisiana

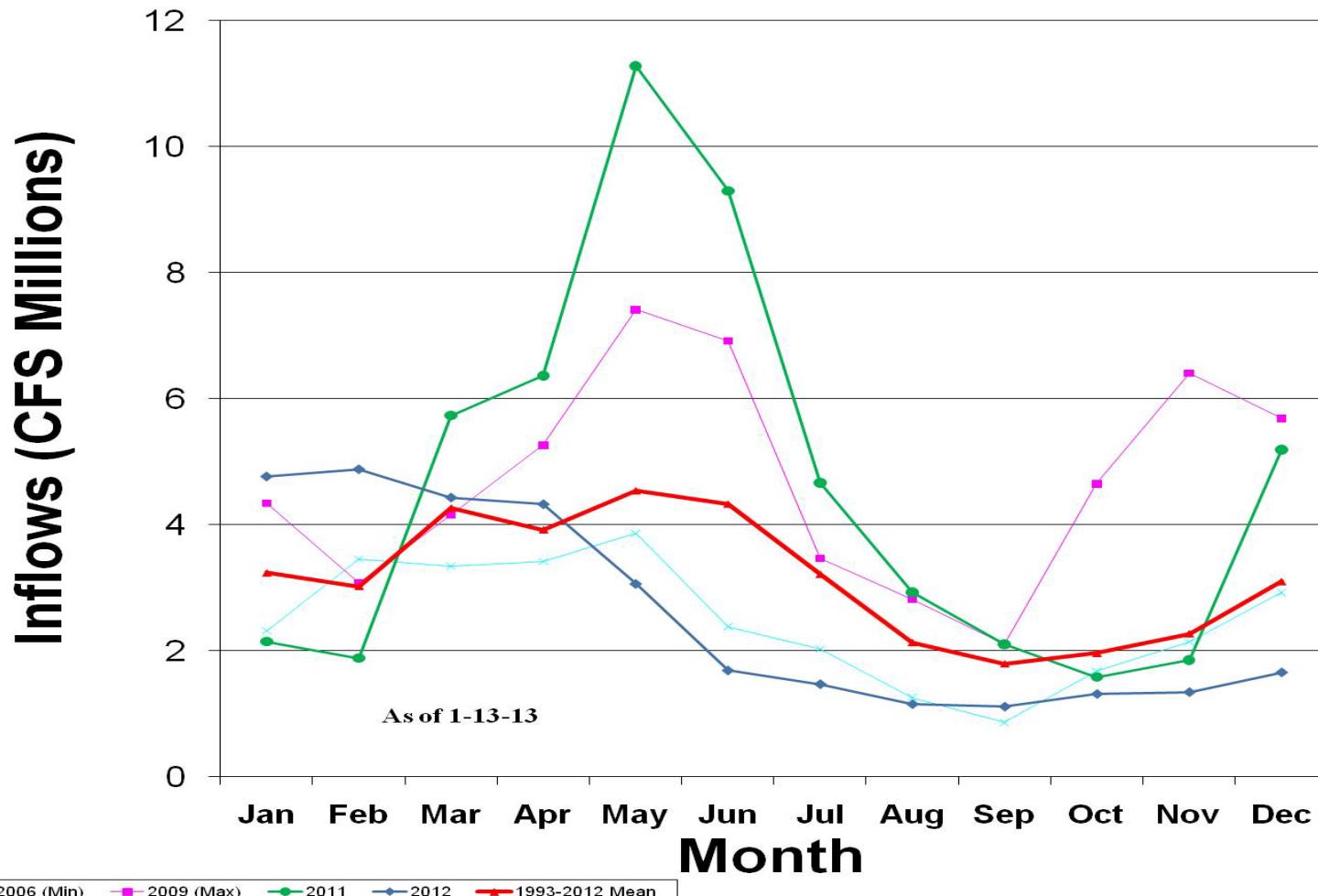


Atchafalaya River Annual Flows at Morgan City, Louisiana



Atchafalaya River Monthly Inflows (Daily Means, USGS 7381600) 1993-2012

Flow Years: Min, Max, Last Year
(Lower Atchafalaya River at Morgan City, LA)



Source:

http://waterdata.usgs.gov/la/nwis/dv?cb_00065=on&cb_00060=on&format=rdb&begin_date=1993-06-05&end_date=2011-07-13&site_no=07381600&referred_module=sw

In Summary

Low rainfall and inflows provide little control in flushing higher salinity water from the back marshes of the Sabine Lake system.

Drought conditions alone may not always lead to maintaining higher salinities.

Mississippi River's record spring freshwater inflows lowered Gulf salinities which appeared to maintain higher salinity waters in the Sabine Lake system during the extended drought conditions.

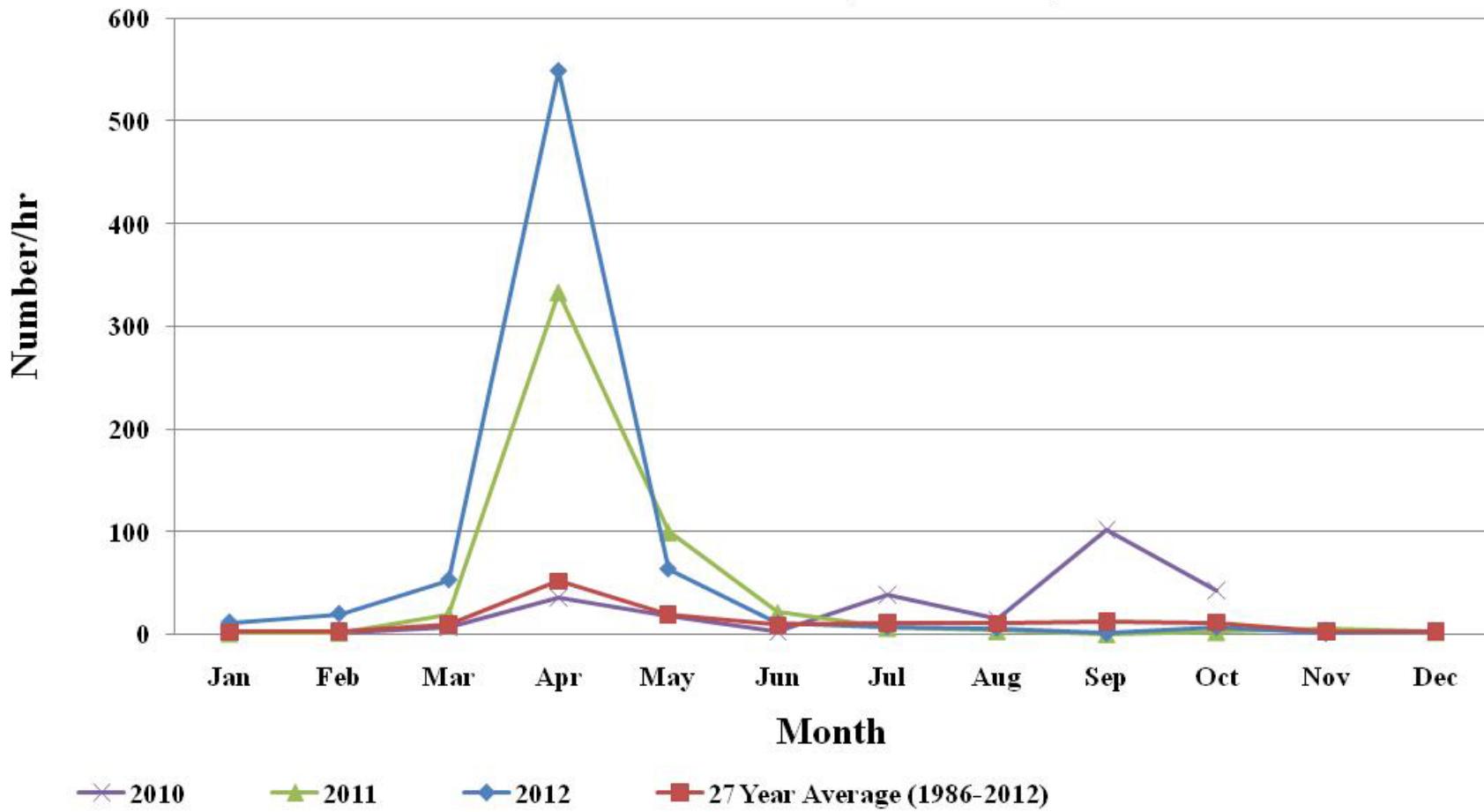
Conditions for maintaining the higher salinities appeared to remain for a relatively short period, a month or more.

Some estuarine dependent organisms may take advantage of the increased salinities.



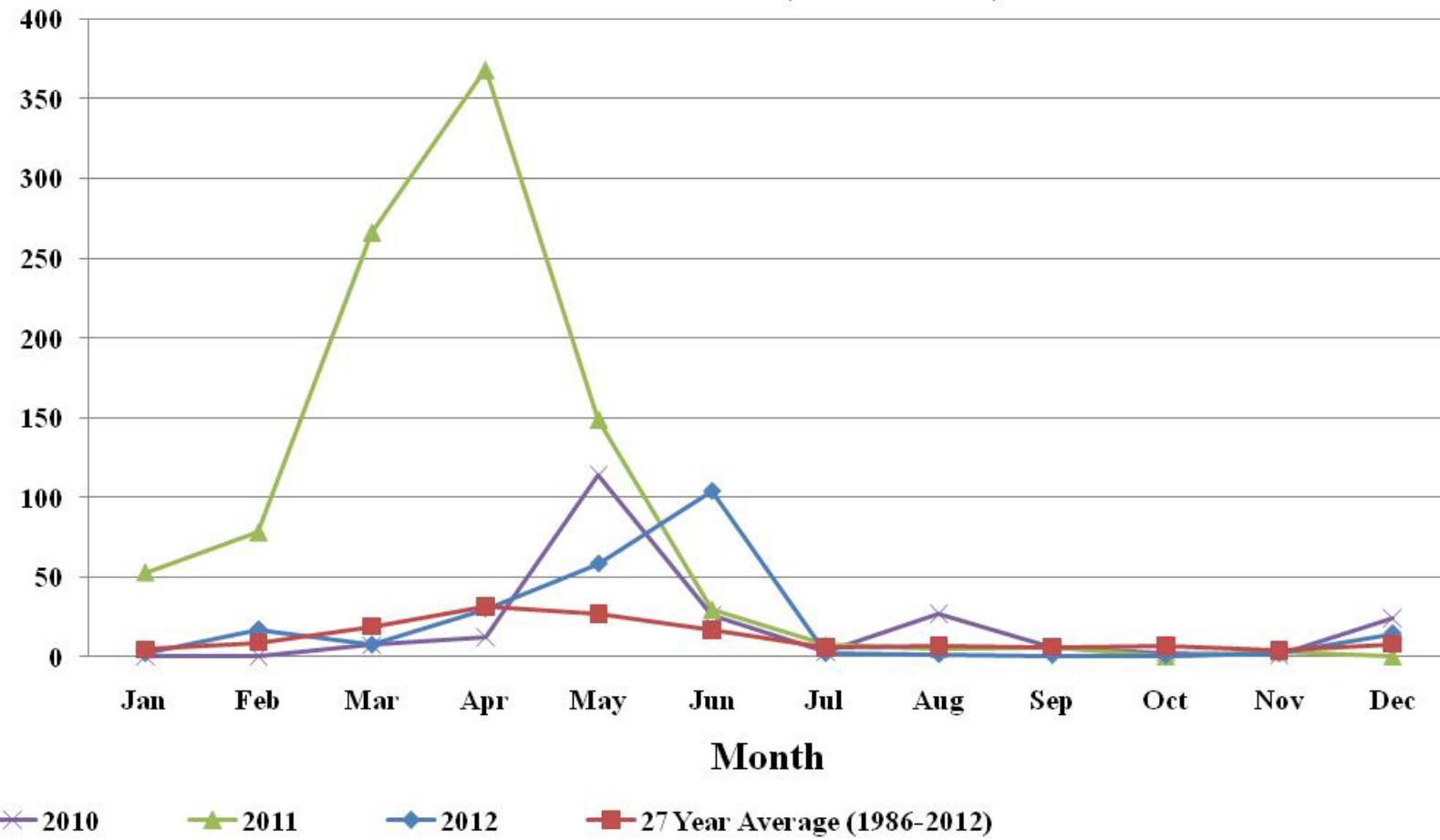
After continuous rains for several days (weeks) water flows over plug across ditch receiving flow from Texas Bayou. Photo taken from road leading to old Pilot Station in Sabine Pass, Texas.
1-11-13

Sabine Lake Gulf Trawl Catch Rates Gulf Menhaden (1986 -2012)

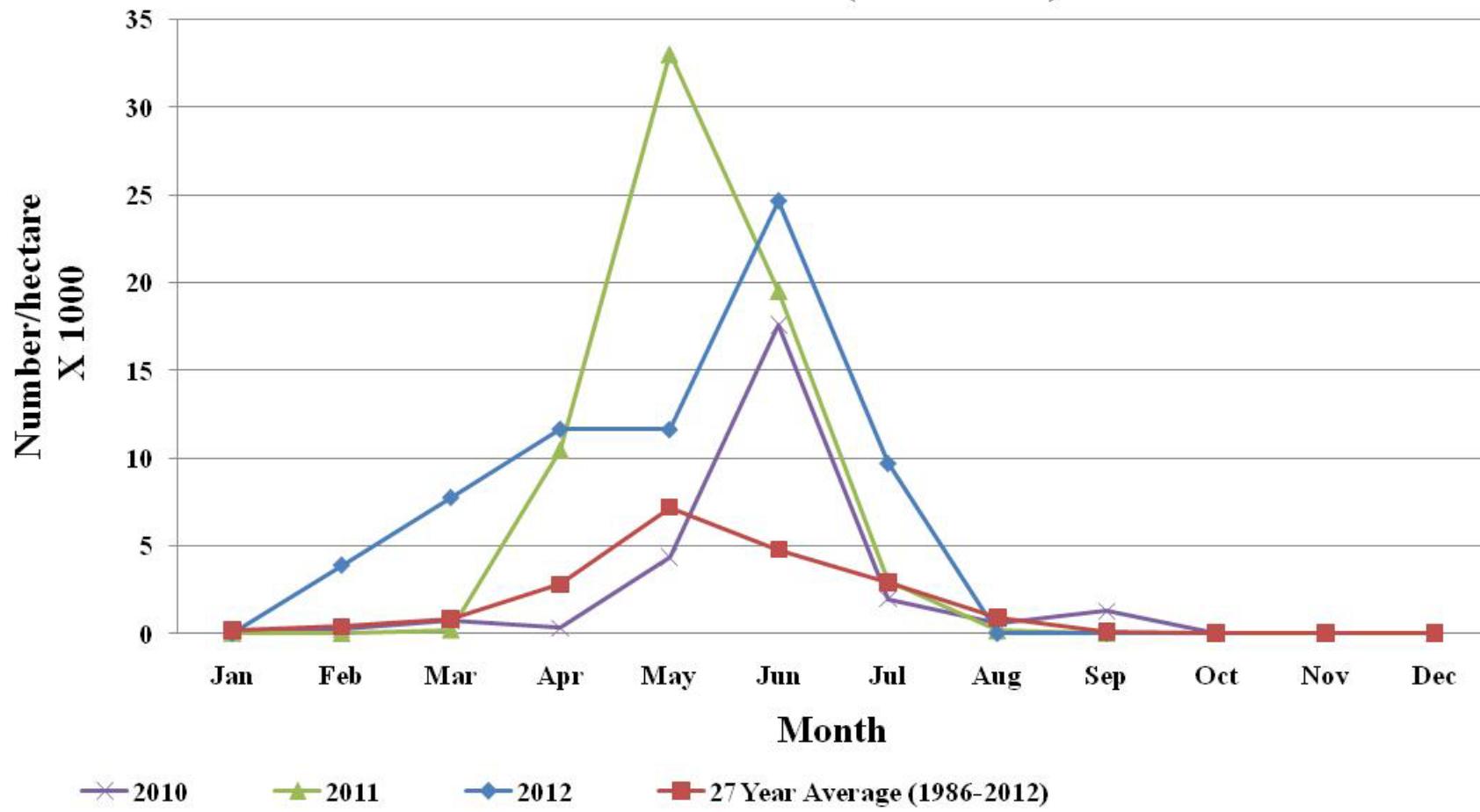


Sabine Lake Bay Trawl Catch Rates Gulf Menhaden (1986 -2012)

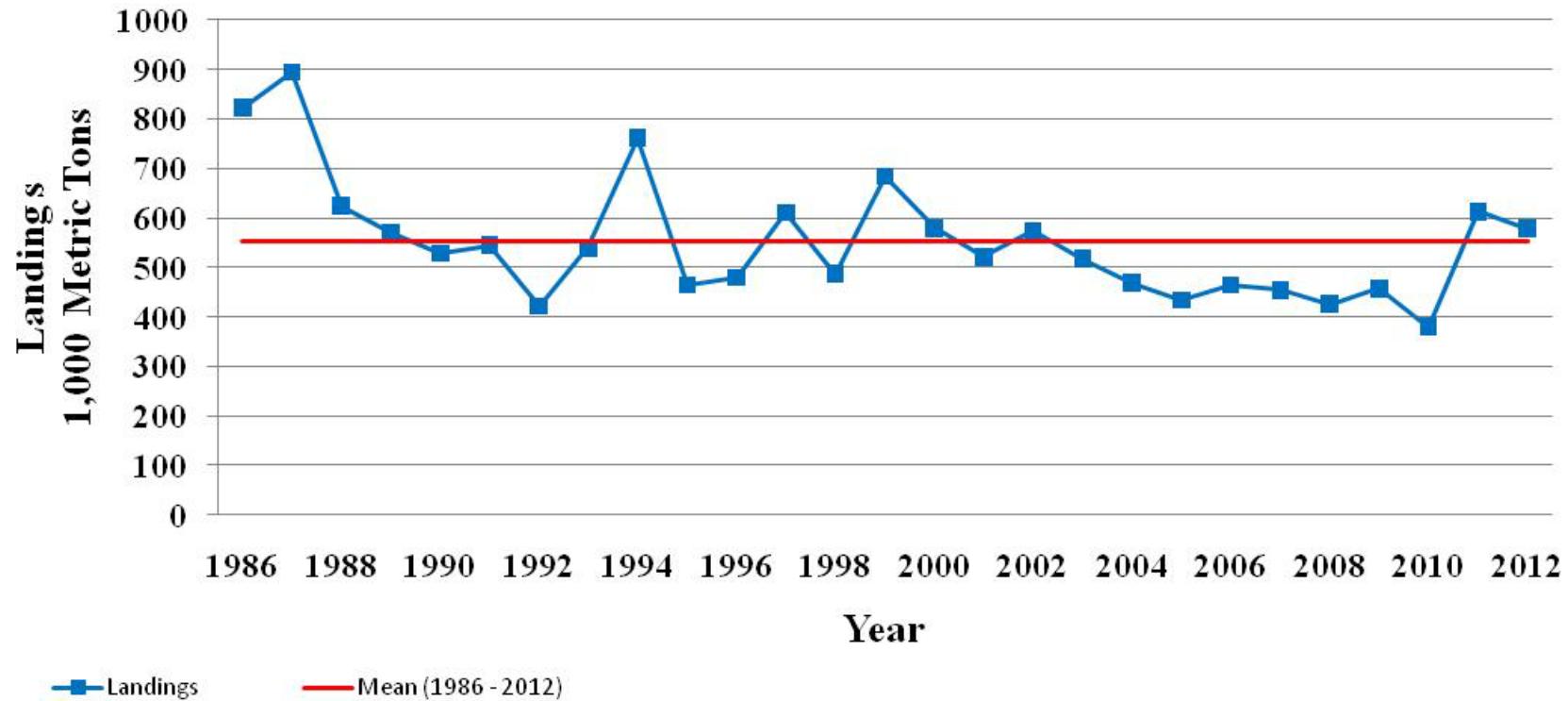
Number/hr



Sabine Lake Bag Seine Catch Rates Gulf Menhaden (1986 -2012)



Landings in the Gulf Menhaden Purse-Seine Fishery 1986-2012



NOAA Fisheries. 2012. Status of the gulf menhaden fishery - A report of the Gulf Menhaden Advisory Committee at Point Clear, AL, on October 16, 2012. Sustainable Fisheries Branch. Beaufort, North Carolina.

Smith, J. 2013. Status purse-seine landings of gulf and Atlantic Menhaden for the 2012 fishing season. NOAA Beaufort Laboratory. Beaufort, North Carolina. http://www.st.nmfs.noaa.gov/st1/market_news/doc77.txt



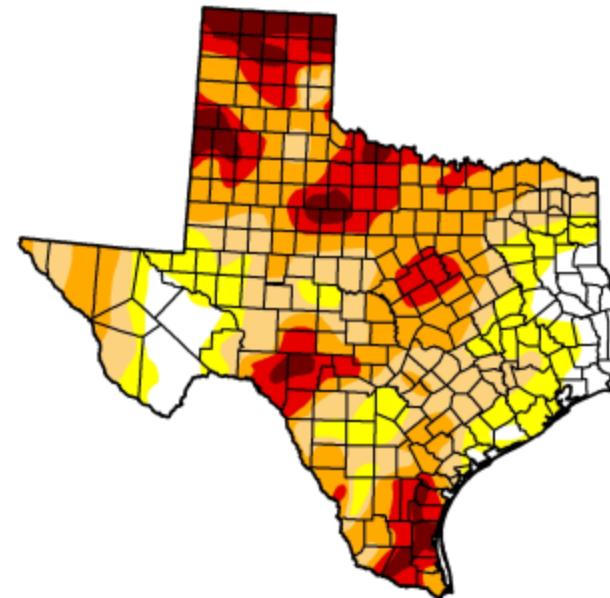
U.S. Drought Monitor

Texas

January 22, 2013
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	9.48	90.52	74.01	50.49	21.22	6.72
Last Week (01/15/2013 map)	9.48	90.52	74.01	50.49	20.84	6.72
3 Months Ago (10/23/2012 map)	14.09	85.91	61.57	31.27	15.70	3.20
Start of Calendar Year (01/01/2013 map)	3.04	96.96	87.00	65.39	35.03	11.96
Start of Water Year (09/25/2012 map)	9.13	90.87	78.73	57.41	24.91	5.18
One Year Ago (01/17/2012 map)	0.52	99.48	95.08	82.60	62.47	25.27

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



Released Thursday, January 24, 2013
Mark Svoboda, National Drought Mitigation Center

http://droughtmonitor.unl.edu/DM_state.htm?TX,S