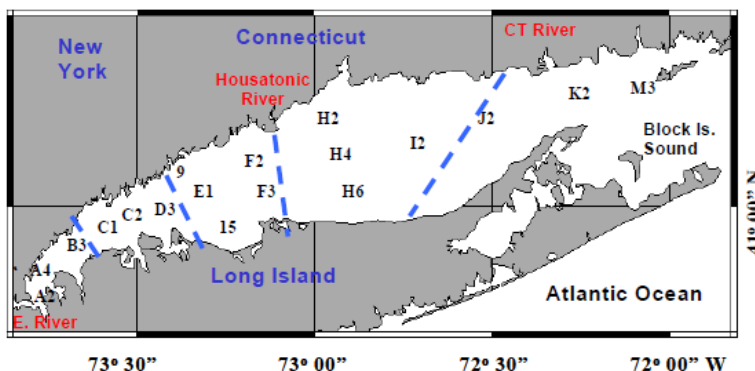


Responses to MEG Comments

Data Availability:

Water quality chemistry data are available on approximately a monthly basis from CTDEP for Oct. 1988-Sept. 1989, Oct. 1994-Sept. 1995, and yearly for calendar years 1999-2002. These data are supplemented by the SWEM data set, collected by Battelle Duxbury for Oct. 1994-Sept. 1995 (approximately monthly). The following water quality parameters are available:

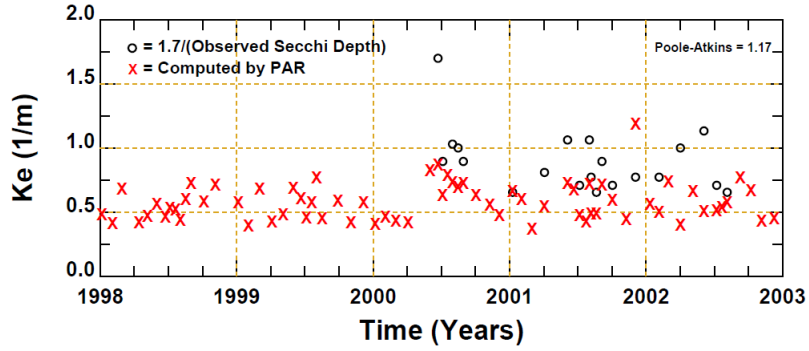
LISS	CT DEP
Cruise	Cruise
YD	YD
lat	Lat
lon	Lon
station	Station
Depth Code	Depth Code
depth	Depth
DO Titra	DO Titra
PH Titra	PH Titra
TEM	Temp
SAL	Sal
	Fluor
Chla	CHLA
NH4	NH#-LC
NO23	NOX-LC
DON+NH4+NO23	TDN-LC
TN-(DON+NH4+NO23)	PN
DON	TDN-NOX-NH#
TON	
TN	PN+TDN
DOC	DOC
POC	PC
TOC	
DSi	SiO2-LC
PSi	BIOSI-LC
BOD	BOD
PO4	DIP
DOP	TDP-DIP
PO4+DOP	TDP
TPP	PP-LC
TP	PP+TDP
	TSS



There is limited information concerning primary production. Goebel et al. (2006) estimated the net primary production rate using oxygen-based photosynthetic-irradiance incubations at 8 stations in central and western LIS during summer and fall of 2002 and spring, summer and fall of 2003. Assumptions were used to estimate algal respiration, and thus net primary production, from gross primary production and to account for partial year measurements (Goebel et al., 2006). Collins et al. (2002) make estimates of total productivity in central LIS from in situ measurements of nitrate and DO.

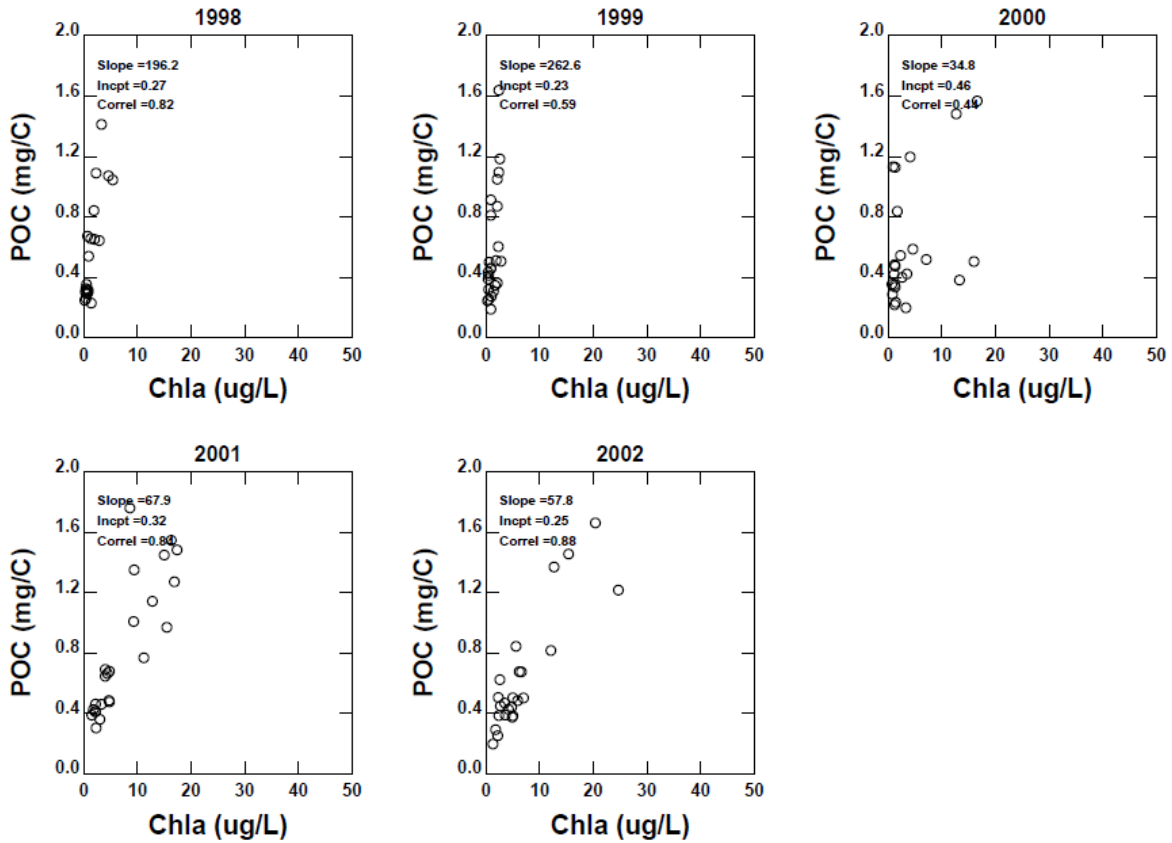
Light Attenuation

Early light attenuation coefficients were estimated from secchi disk data $\rightarrow K_e = 1.7 \text{ S.D.}$ and then "corrected" to a "base" value by subtracting the observed Chl-a $\rightarrow K_{e\text{base}} = K_e - 0.017 * \text{Chl-a}$. The 1999-2002 data include secchi disk data, as well as, estimated from CTD measurements of PAR.



Carbon to Chl-a Ratio Revisited

As recommended by the MEG, we performed regressions on the raw data by station and across stations.

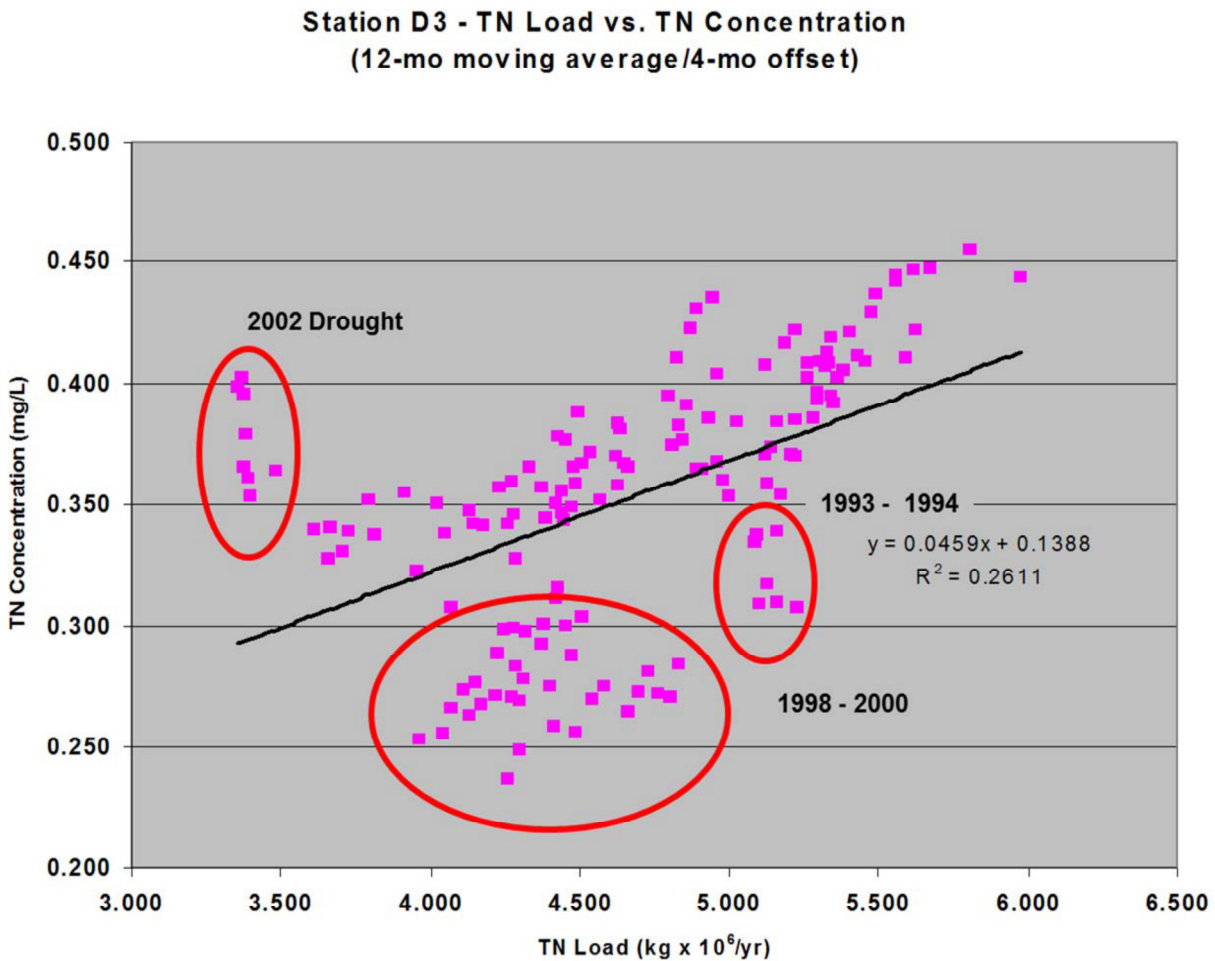


Station B3 in Western Sound

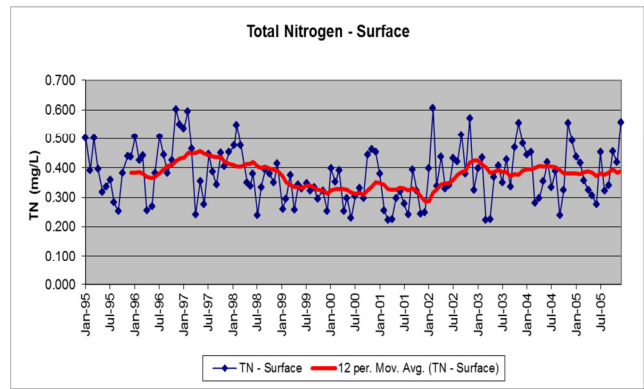
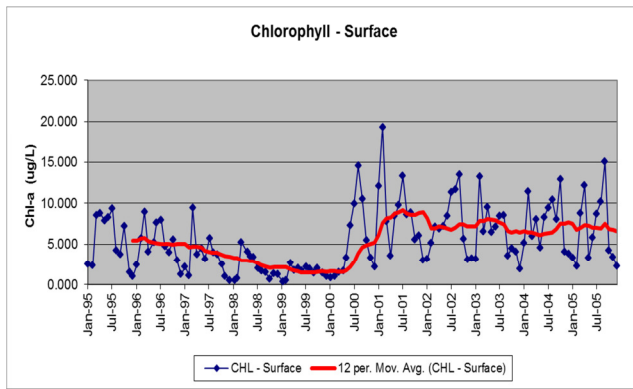
See other figures in attachment for additional analysis.

Thoughts on Paul Stacey's Analysis

Paul laid out a nice analysis, which suggest that although 1998-2000 was anomolus that it was real.



Interesting though that decline in Chl-a seems to slightly precede the decrease in TN and that the increase slightly precedes the increase in TN.



Total Inorganic Nitrogen - Surface

