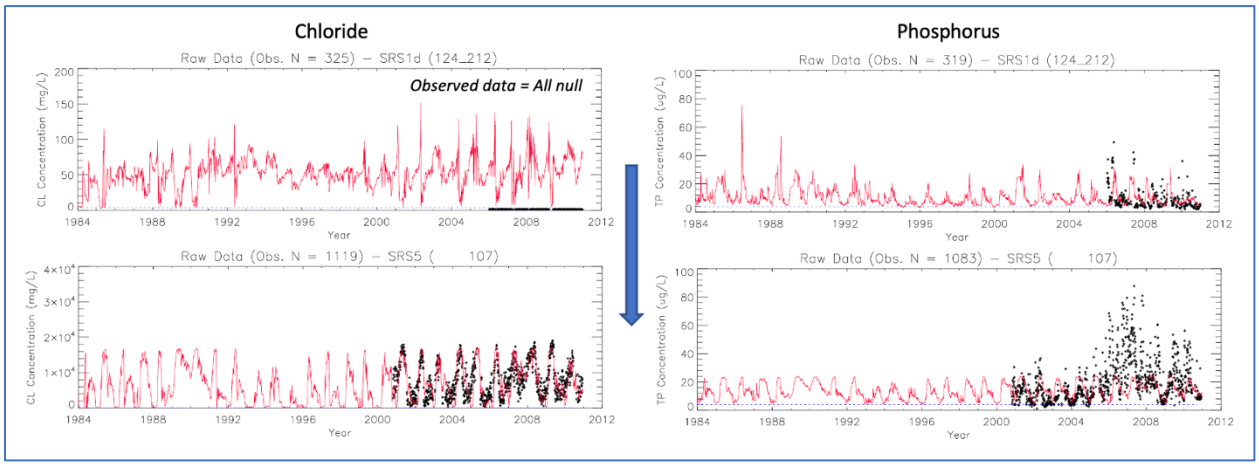
Refinements to the Everglades Landscape Model: ELM v3.2.1

LTER: Coastal Oligotrophic Ecosystem Research - Integrated Modeling

Consulting Agreement No. 000418, Year 1 Final



ELM
ECOLANDMOD, INC.

http://www.ecolandmod.com

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Purpose of this document: while this document shares some topics and attributes of ELM documentation reports for model releases, the current v.3.2.1 is an interim version, not intended for formal application at this time

Overview

For EcoLandMod's Florida Coastal Everglades (FCE) LTER subcontract, this document describes the progress in updating hydro-ecological performance of the Everglades Landscape Model (ELM) from v2.9 to v3.2. For this major upgrade to ELM, our goal is to:

- extend the historical calibration-validation performance assessments from ending in 12/2000 to ending in 12/2010 (and through 12/2016, pending data availability),
- renew more focus on the southern Everglades region associated with the FCE LTER,
- integrate more of the FCE (and other) research results into algorithm and parameter modifications to enhance model ecological performance capabilities, and
- apply these advances into additional integrated model scenario applications that address future changes to south Florida

Understanding long term, cumulative interactions of ecosystem processes is fundamental to LTER goals, and we continued to advance a unique simulation tool for use in addressing integrative ecosystem dynamics across a heterogenous landscape: we extended the multi-decadal hindcasting simulation period of the ELM. This is a spatial model that explicitly integrates dynamic modules of 3D raster-vector hydrology with dynamic modules of biogeochemistry (TP, Cl, SO_4), plant biology (growth/mortality of macrophytes and periphyton), soil processes (organic carbon accumulation/loss), and habitat succession. As described in multiple publications (1999-present, see http://www.ecolandmod.com), the ELM has been used in evaluating CERP planning projects and in exploring various research hypotheses. Most recently Flower et al. (2019) investigated ~4-decade Everglades soil biogeochemical responses to future climate change and sea level rise. One of the primary integrative model metrics was peat accumulation, which responded to the dynamic ecosystem drivers of water depths and associated TP and Cl concentrations. We updated the assessment of ELM history-matching performance for those ecosystem drivers, over several decades in a million-ha spatial domain.

While we are starting to explore revisions to code modules, and assimilate more recent FCE research results into that model-research process, here we primarily summarize the advances made in extending the ELM historical (hindcasting) simulation period through 2010, including additional monitoring sites. Prior to this effort (ELM v2.5-v2.9), we simulated the historical period that ended in 12/2000, and thus did not directly use (post-2000) FCE hydro-ecological data in model performance assessments.

This update remains a work-in-progress, and the results are not final. The regional (northern to southern Everglades) model performance of the updated model is effectively the same as prior versions, but with multiple enhancements of capabilities in the southern Everglades. In summary, the regional ELM v3.2.1 assessment of 27-yr daily simulated vs. observed stage (86 sites) had a median bias of -1 cm (overprediction) and Nash-Sutcliff Efficiency of 0.53, compared to 0 cm and 0.60 NS-Eff for ELM v2.8 (20 yr, 82 sites). Regional ELM v3.2.1 comparisons of simulated and observed surface water seasonal (wet and dry) mean TP concentrations had median biases of 0 ug/L and RMSE of 6-7 ug/L in both ELM v3.2.1 (94

marsh sites) and v2.8 (78 marsh sites). Cl predictions in v3.2.1 had a median 4 mg l^{-1} bias (10 mg l^{-1} in v2.8) and median 30 mg l^{-1} RMSE (26 mg l^{-1} in v2.8).

FCE research is focused on the southern Everglades (about half the ELM domain), with the Shark River Slough (SRS) and Taylor Slough/Panhandle (TS/Ph) flow and nutrient gradients effectively captured by the ELM simulation. Figure 1 shows the use of both a ~decade of FCE water quality data (Gaiser and Childers 2021, Troxler 2021a, Troxler 2021b) and other multi-decadal, multi-agency monitoring data (DBHYDRO 2021). The model (and observed) data reflect the dynamic drydowns that are more prevalent in TS/Ph than in SRS, along with the variable and higher TP concentrations in some sites in the 1980s-1990s.

As we further refine the ELM algorithms and parameters, we are exploring various aspects of model performance and utilizing new research information. One example is an investigation of slight localized bias water column TP, and applying a range of parameter modifications that affect periphyton turnover. Overall, this simple sensitivity test involving periphyton rate parameters demonstrated how biology (periphyton turnover) impacts biogeochemistry (P cycling), which impacts other-biology (soil accretion), which impacts hydrology (water depth). That hydrologic response, in turn, further impacts the biology.

As stated above, we have previously applied the model to better understand potential ecosystem responses to future climate and seal level rise. More recently (Fitz et al. 2021) we applied the ELM (v2.9) under more realistic future climate scenarios using downscaled General Circulation Model ensembles, exploring the spatial variability in optimal "Goldilocks" range of peat/carbon accumulation. This collaboration with Everglades Foundation scientists may expand to include sea level rise responses, using likely refinements in ELM v3.2.x.

While we will continue to explore various model algorithm/parameter improvements, the tool was again shown to have useful performance characteristics for research and application. The extended (through 2010) historical time period is allowing us to directly use a range of FCE-specific research experiments, and provides FCE researchers with additional understanding of this model's truly integrated hydro-ecological capabilities for applications that address FCE questions.

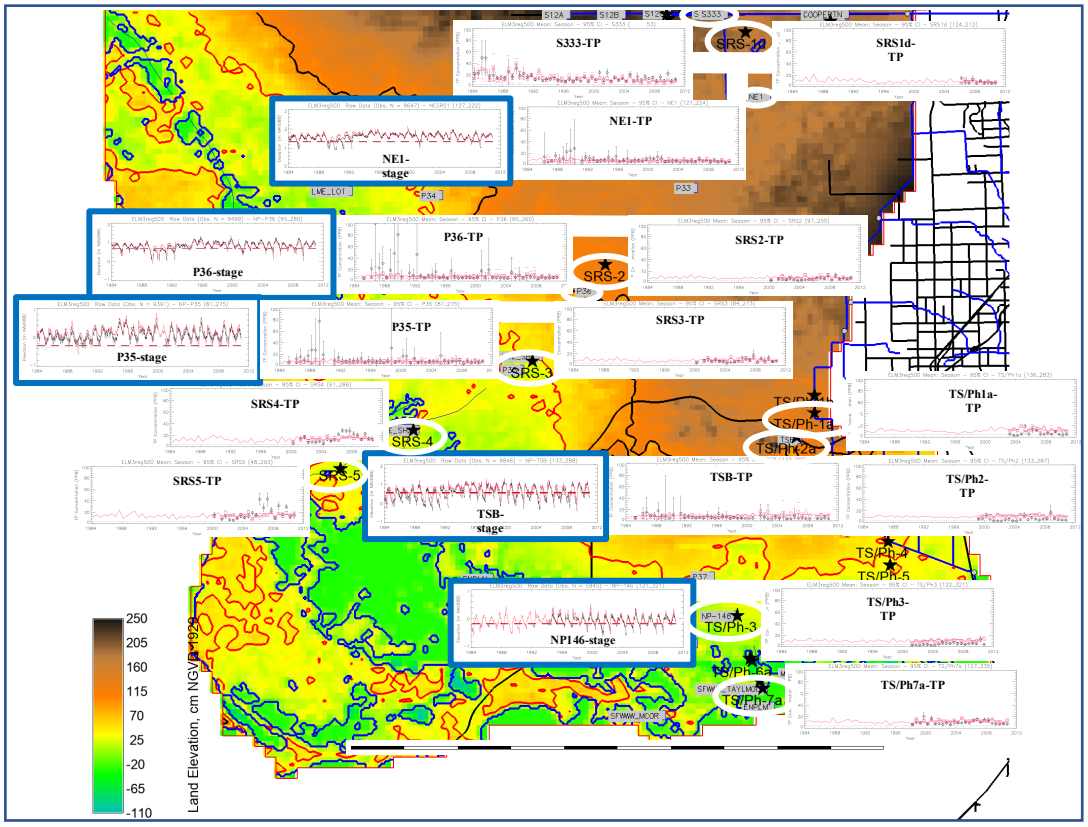


Figure 1. Plots of a suite of sites of 27-year simulated vs observed data along the SRS and TS/Ph transect gradients, superimposed over the background map of land surface elevation. Plots show observed (black dots/lines/symbols) and simulated (red dots/lines/symbols) data, during the historical time domain of 1/1/1984 - 12/31/2010, for representative sites in the transects.

- Some FCE sites were monitored prior to the FCE project, and thus have a longer period of record than available from FCE-specific research. In using these extended data, the following pairs (or triplets) of sites (~linked on the map) are either directly, or closely, related spatially: SRS1d-NE1-S333; SRS2-P36; SRS3-P35; TS/Ph2a-TSB; TS/Ph3-NP146.
- The plot examples of surface water TP concentrations show the (wet & dry) seasonal mean bins of observed and simulated values, including the 95% Confidence Interval (CI) of their paired means (shown within the "—" symbols). All plots use a Y-axis range of 0-100 ug/L (PPB) TP concentration.
- The plot examples of hydrologic stage show the daily data of observed and simulated values. The straight-horizontal red dashed line shows each site's land surface elevation, and is actually a dynamic simulated variable, but the millimeters to centimeter(s) of change across several decades are not visible at these graphical scales). The Y-axis scale encompasses a range of 3.0 m (NE1, P36, TSB) or 2.0 m (P35, NP146), with absolute values in the NAVD 1988 vertical datum.

Model Performance - Hydro-ecological Drivers

Regional stage

The historical period of simulation used in performance assessments has been extended through the end of 2010 (1984-2010, vs. old v2.5-v2.9 1981-2000). Newly acquired hydrologic data used for ELM v3.2.1 boundary conditions include:

- new daily rainfall (1914-2016) spatial time series data (SFWMD)

- new daily pET (1948-2016) spatial time series data (SFWMD)
- new daily stage (1984-2010) spatial time series data from SFWMM v7.0 calibration run (used only as ELM periphery stage boundary condition, i.e., just outside ELM domain)
- new daily (1980-2018) water control structure flow data (although the old 1980-2000 flow data matches, with a few exceptions, the newly acquired data during the same dates)
- new tidal stage boundary condition stage values for all tidal inputs associated with either Gulf of Mexico (using Shark River mouth, ENPSR) or Florida Bay (using Little Madeira mouth, ENPLM), determining 12 monthly mean tidal stage values, interpolated to daily values, and repeating the same 12 month data every year of simulation (same method in ELM v2.5-v2.9)

Standard statistical and graphical performance assessments were conducted, with the same methods used for all of v2.5-2.9 assessments (see above ELM documentation url). Moreover, we made comparisons for 5 additional sites in the most southern of the southern Everglades (ENPTE, NP-OL, NP-146, ENPLN, NP-CHP).

The 86 marsh stage monitoring locations used in evaluating the regional model performance are mapped in Figure 2. Table 1 shows the statistical performance metrics for the simulated vs. observed daily stage data at each location during the 1984-2010 historical simulation period. The median bias of predicted stages was -1 cm (over-prediction), with a median RSME of 17 cm. The median Nash- Sutcliffe Efficiency statistic was 0.53 for the simulation.

Visualizations of the temporal trends in simulated and observed data are an important component of understanding the model performance, particularly with respect to recognizing any unique aspects of the data dynamics at a particular site, during 27 years of meteorological and water management variability. Figure 3 shows an example of the daily time series of stage hydrographs in short and in long hydroperiod areas. The model effectively captured the spatial differences between a Taylor Slough site with frequent drydowns, and a Shark River Slough location that is usually inundated with comparatively deep surface water.

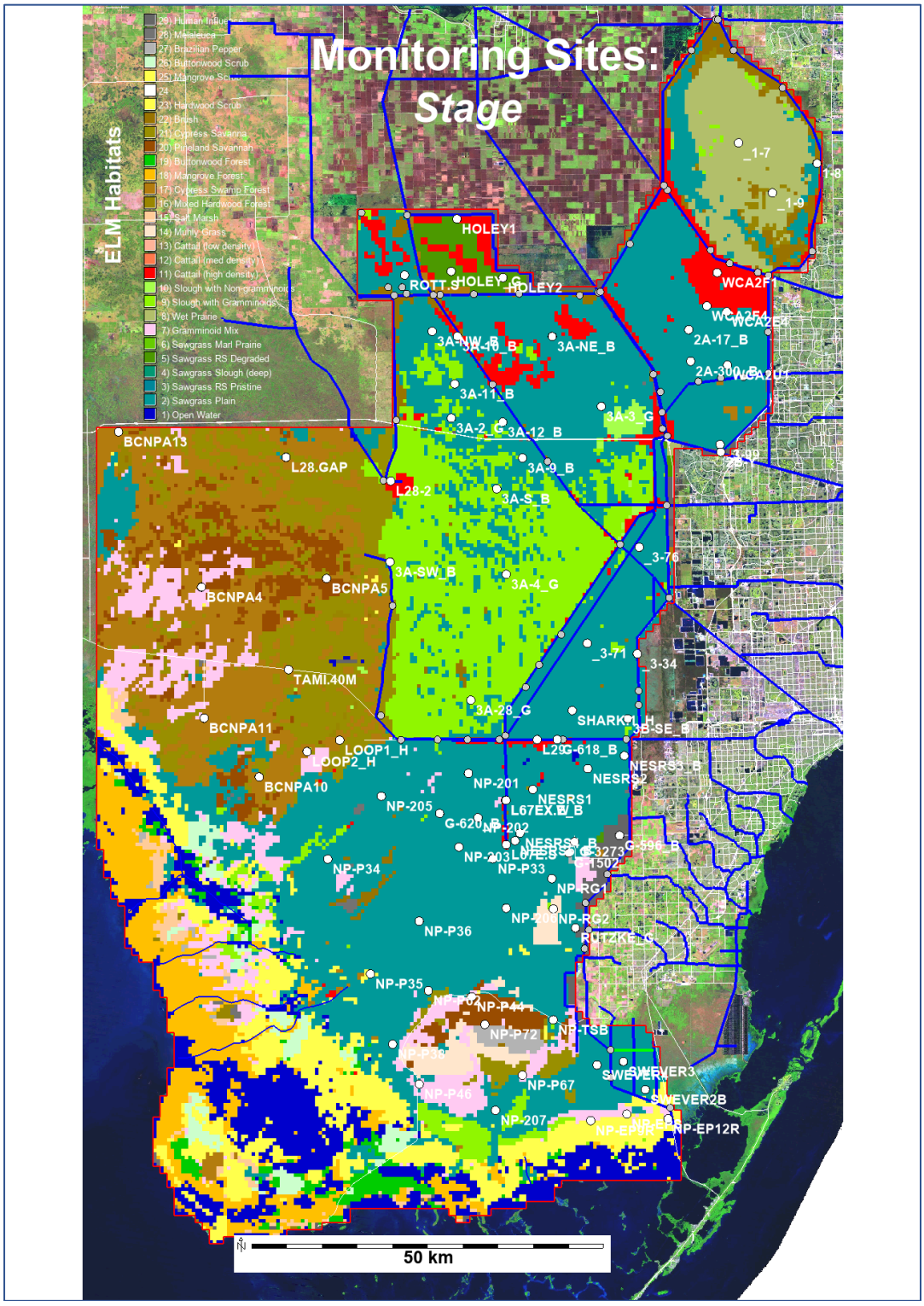


Figure 2. Map of stage monitoring site locations within the regional domain of ELM. The background shows the ca. 1995/2004 (location dependent) habitat types used in the model.

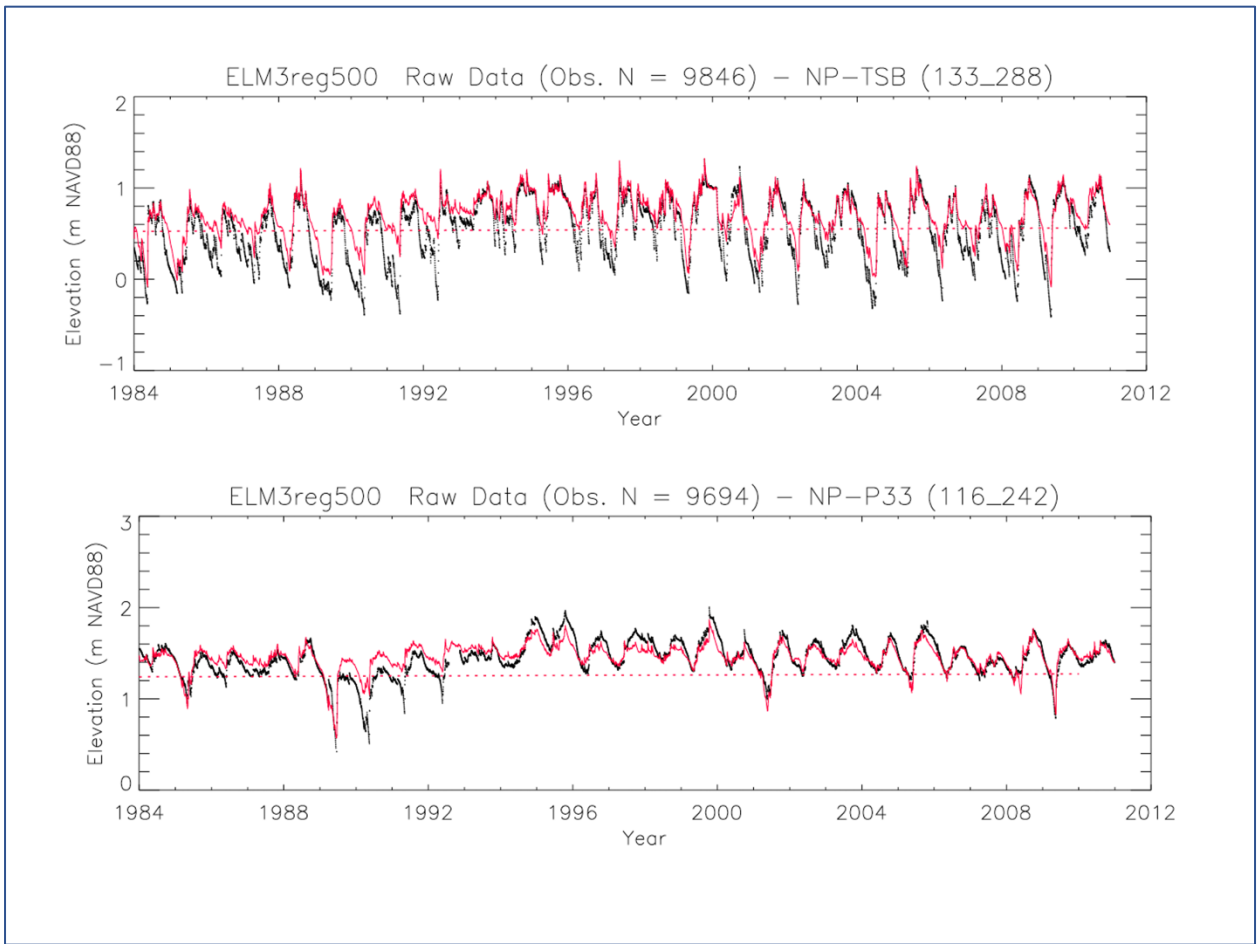


Figure 3. Example plots of 27-year simulated vs observed daily stage elevation data along the transects of TS/Ph (Taylor Slough Bridge site, top) and SRS (P-33 site, bottom). Plots show observed (black) and simulated (red) data, during the historical time domain of 1/1/1984 - 12/31/2010. The red dashed line is the simulated land surface elevation at each site.

Appendix A contains the time series graphs of simulated vs. observed data for all 86 monitoring sites. Note (as described in the overall caption) that the sites/pages are geographically ordered from NW to SE, and thus the Everglades National Park (and FCE transects) appears towards the end of the sequence.

Table 1. Statistical evaluations of (ELM v3.2.1) observed vs. simulated daily stage, 1984-2010. Bias is observed minus simulated.

		Stage 1984-2010				
Site	Basin	N	Bias (m)	RMSE (m)	R^2	NS Eff.
_1-7	WCA1	9593	0.12	0.18	0.68	-0.14
1-8T	WCA1	9501	0.08	0.19	0.66	0.28
_1-9	WCA1	9426	0.08	0.15	0.67	0.22
WCA2F1	WCA2A	5911	0.10	0.17	0.80	0.56
WCA2F4	WCA2A	5593	0.11	0.19	0.76	0.39
WCA2E4	WCA2A	5912	0.14	0.22	0.74	0.17
2A-17_B	WCA2A	9852	0.07	0.19	0.73	0.52
2A-300_B	WCA2A	9852	0.15	0.26	0.69	0.30
WCA2U1	WCA2A	5659	0.19	0.34	0.63	-0.26
3A-NW_B	WCA3A	9139	-0.18	0.24	0.63	0.08
3A-10_B	WCA3A	*new-version errors - ignoring for now*				
3A-NE_B	WCA3A	9538	-0.02	0.21	0.62	0.60
3A-11_B	WCA3A	9239	0.13	0.18	0.79	0.36
3A-3_G	WCA3A	9852	0.05	0.20	0.72	0.69
3A-2_G	WCA3A	9759	0.02	0.14	0.76	0.74
3A-12_B	WCA3A	9413	-0.05	0.20	0.61	0.30
3A-9_B	WCA3A	9852	0.07	0.17	0.73	0.63
L28-2	WCA3A	7659	0.06	0.16	0.75	0.44
3A-S_B	WCA3A	9754	0.07	0.17	0.70	0.56
3A-4_G	WCA3A	9852	0.08	0.20	0.67	0.53
3A-28_G	WCA3A	9842	-0.08	0.20	0.62	0.47
_3-99	WCA2B	*new-version errors - ignoring for now*				
2B-Y	WCA2B	9167	0.03	0.69	0.25	-0.56
_3-71	WCA3B					
_3-34	WCA3B	1633	0.07	0.10	0.93	0.75
SHARK.1_H	WCA3B	9846	0.09	0.16	0.69	0.54
3B-SE_B	WCA3B	9681	0.01	0.16	0.77	0.74
HOLEY1	Holey L.	*new-version errors - ignoring for now*				
HOLEY_G	Holey L.	*new-version errors - ignoring for now*				
HOLEY2	Holey L.	*new-version errors - ignoring for now*				
ROTT.S	Roten. T.	*new-version errors - ignoring for now*				
BCNPA13	BCNP	5575	-0.02	0.19	0.67	0.59
L28.GAP	BCNP	9765	0.08	0.18	0.56	0.43
3A-SW_B	BCNP	9600	-0.01	0.14	0.70	0.65
BCNPA5	BCNP	7222	-0.08	0.17	0.60	0.48
BCNPA4	BCNP	7253	0.15	0.29	0.54	0.23
TAMI.40M	BCNP	9852	-0.06	0.20	0.66	0.52
BCNPA11	BCNP	7201	0.08	0.23	0.53	0.39

Table 1 continued. Sites in yellow were added for ELM v3.2.

G-618_B	ENP	9671	-0.03	0.11	0.74	0.72
L29	ENP	9852	-0.01	0.14	0.55	0.45
LOOP1_H	ENP	9580	0.04	0.12	0.65	0.61
LOOP2_H	ENP	9613	0.12	0.19	0.73	0.45
NESRS3_B	ENP	9231	0.11	0.18	0.72	0.51
NESRS2	ENP	9275	-0.01	0.09	0.77	0.76
NP-201	ENP	9307	0.13	0.17	0.86	0.62
BCNPA10	ENP	7289	-0.07	0.17	0.63	0.49
NESRS1	ENP	9647	-0.04	0.10	0.72	0.65
NP-205	ENP	9728	-0.05	0.14	0.85	0.78
L67EX.W	ENP	9374	0.01	0.17	0.76	0.63
L67EX.E_B	ENP	6187	-0.09	0.16	0.67	0.44
G-620_B	ENP	9480	0.00	0.11	0.82	0.81
NP-202	ENP	9642	0.06	0.13	0.84	0.68
NESRS4_B	ENP	8506	-0.05	0.11	0.73	0.61
G-596_B	ENP	9812	-0.20	0.28	0.53	-0.48
NESRS5_B	ENP	8562	-0.03	0.09	0.78	0.68
G-3273	ENP	9789	-0.17	0.25	0.70	0.39
L67E.S	ENP	5680	0.07	0.16	0.69	0.56
NP-203	ENP	9617	0.02	0.10	0.82	0.77
G-1502	ENP	9851	-0.15	0.24	0.68	0.46
NP-P33	ENP	9694	-0.01	0.10	0.74	0.72
NP-P34	ENP	9540	0.00	0.13	0.77	0.75
NP-RG1	ENP	5195	-0.22	0.26	0.81	0.27
NP-206	ENP	9217	-0.13	0.24	0.72	0.55
NP-RG2	ENP	5154	-0.22	0.26	0.84	0.34
NP-P36	ENP	9499	0.02	0.11	0.68	0.66
RUTZKE_G	ENP	6021	-0.06	0.21	0.83	0.63
NP-P35	ENP	9391	-0.09	0.13	0.76	0.46
NP-P62	ENP	9363	0.01	0.14	0.76	0.74
NP-P44	ENP	9149	-0.27	0.36	0.77	0.25
NP-TSB	ENP	9846	-0.14	0.20	0.87	0.64
NP-P72	ENP	9780	-0.25	0.32	0.77	0.30
NP-P38	ENP	9409	0.02	0.11	0.82	0.66
SWEVER3	ENP	8967	0.10	0.16	0.76	-0.26
SWEVER4	ENP	9213	-0.04	0.17	0.77	-0.25
NP-P67	ENP	9749	-0.05	0.10	0.83	0.76
NP-P46	ENP	9151	-0.01	0.12	0.72	0.54
SWEVER2B	ENP	5488	0.02	0.08	0.81	0.73
NP-207	ENP	5736	-0.03	0.08	0.86	0.81
NP-EPS	ENP	8892	-0.04	0.09	0.82	0.34
NP-EP12R	ENP	2828	-0.11	0.13	0.82	-0.77
NP-EP9R	ENP	2608	-0.15	0.17	0.80	-0.71
ENPTE	ENP	5216	-0.12	0.17	0.46	-0.93
NP-OL	ENP	5373	-0.06	0.10	0.69	0.56
NP-146	ENP	5945	-0.05	0.08	0.85	0.68
ENPLN	ENP	5229	-0.11	0.20	0.28	-1.83
NP-CHP	ENP	9375	-0.04	0.10	0.73	0.67
	Median:	9374	-0.01	0.17	0.73	0.53

Regional surface water quality

For the extension of historical simulation through the end of 2010 (1984-2010, vs. old v2.5-v2.9 1981-2000), the newly acquired data used for ELM v3.2.1 surface water quality boundary conditions include:

- *Note that ELM uses Cl in computations; conversions to-from salinity are made as needed*
- new (1980-2018) total phosphorus (TP) and chloride (Cl) concentrations in (surface water) flows through water control structure that introduce "new" water into the model domain along its periphery; for each structure, available observations were linearly-interpolated among data points to provide continuous daily concentration estimates
- new long-term mean tidal boundary condition surface water TP and Cl concentrations were applied to all tidal inputs associated with either Gulf of Mexico (using Shark River mouth, ENPSR) or Florida Bay (using Little Madeira mouth, ENPLM); a time-invariant mean concentration of the constituents was used for each (Gulf or Bay) daily tidal input location (same method in ELM v2.5-v2.9)
- [sulfate concentrations were not updated at this point in the model updates]

Moreover, we added 16 additional sites (94 total) for model-observed comparisons in the southern Everglades, including all of the past and current FCE transect sites. For both TP and Cl, standard statistical and graphical performance assessments were conducted, with the same methods used in v2.5-2.9 (see above ELM documentation url).

The marsh and canal/river water quality monitoring sites used in evaluating the regional model performance for predicting surface water quality are mapped in Figure 4 for the northern Everglades, and in Figure 5 for the southern Everglades.

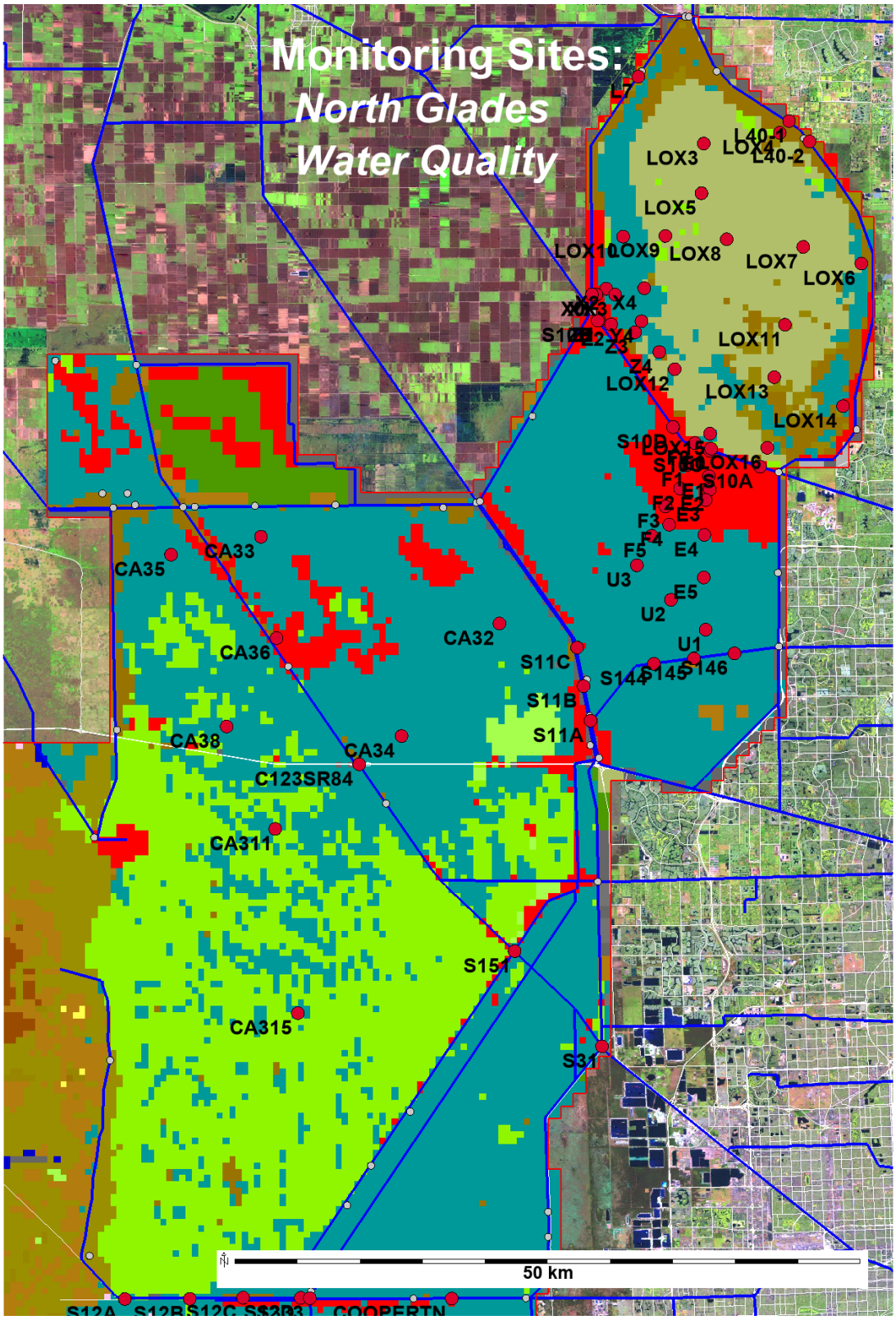


Figure 4. Map of water quality (and ecology) monitoring site locations within the northern sector of the regional domain of ELM. The background shows the ca. 1995/2004 (location dependent) habitat types used in the model (see Figure 2 for habitat legend).

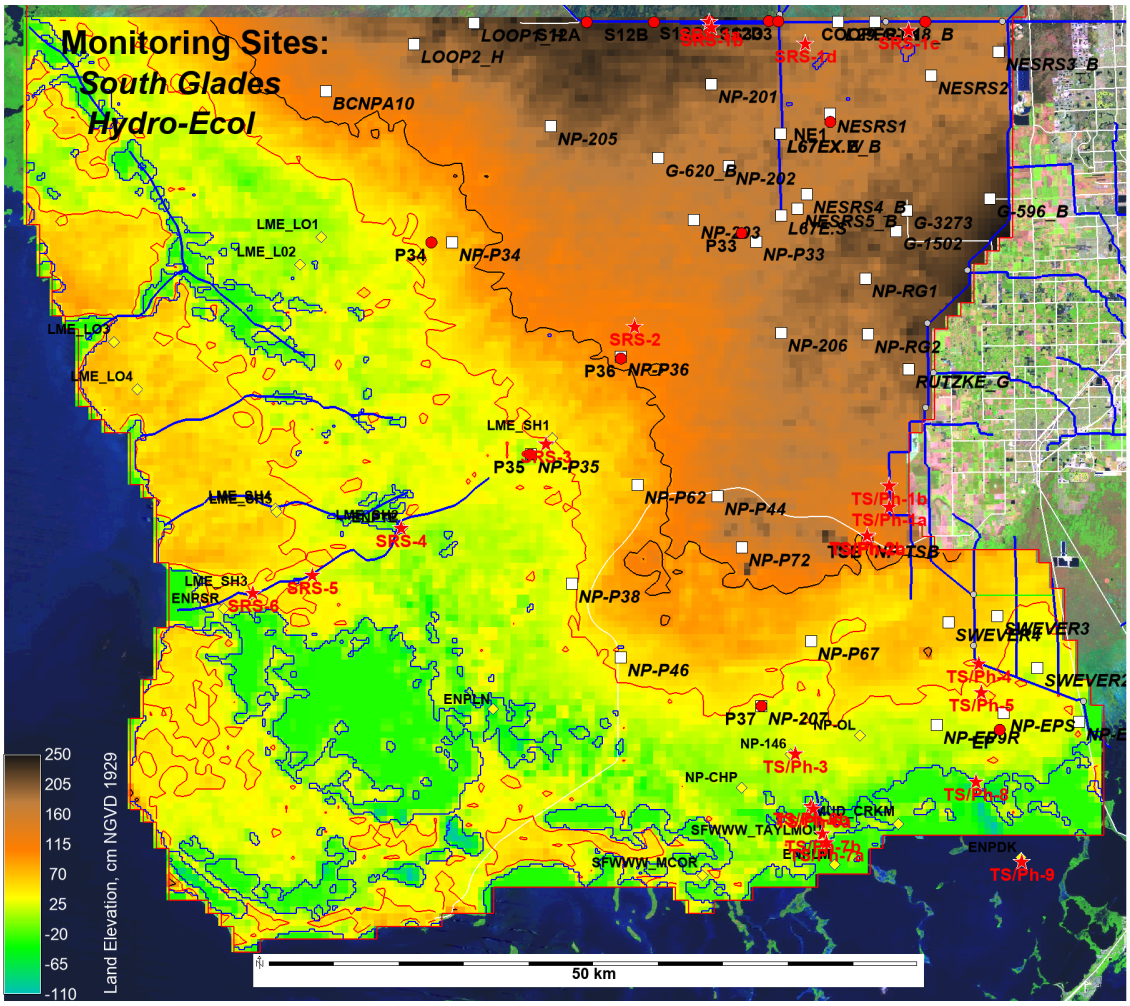


Figure 5. Map of water quality (and ecology and stage) monitoring site locations within the southern sector of the regional domain of ELM. The background shows the ca. 2003 (USGS, see ELM v2.8.0 Documentation) land surface elevation used in the model.

For surface water TP concentration performance evaluations, Table 2 shows the statistical performance metrics for the simulated vs. observed seasonal mean TP concentration data at each location during the 1984-2010 historical simulation period. The median seasonal bias of predicted TP concentrations in the marsh for the 1984-2010 period of record was 0 ug l^{-1} (ppb) in the marsh locations, and a median under-prediction of 2 ug l^{-1} in the canals. As noted in a later section regarding ongoing model research, the FCE TS/Ph freshwater sites generally had slightly greater over-prediction bias than other marsh locations.

Table 2. Statistical evaluations of (ELM v3.2.1) observed vs. simulated seasonal (wet & dry) mean surface water TP concentrations, 1984-2010. Bias (observed minus simulated) and RMSE units are ug l^{-1}. Site type refers to Marsh vs. Canal locations; for transect gradients, M. Transect refers to Marsh Transect, and may be associated with Canal-Marsh Transect (C-M. Transect) or Marsh-River Transect (M-R. Transect).

				1984-2010			
Site	Basin	Site type	N	ObsMean	RelBias	Bias	RMSE
LOX4	WCA1	Marsh	31	10	-0.23	-2	6
LOX3	WCA1	Marsh	26	10	-0.03	0	8
LOX5	WCA1	Marsh	17	9	0.03	0	4
LOX10	WCA1	Marsh	32	9	-0.18	-2	4
LOX9	WCA1	Marsh	32	8	-0.04	0	5
LOX8	WCA1	Marsh	34	9	-0.07	-1	5
LOX7	WCA1	Marsh	34	9	0.01	0	4
LOX6	WCA1	Marsh	30	7	-0.50	-3	6
X2	WCA1	M. Transect	28	16	0.12	2	8
X4	WCA1	M. Transect	26	11	0.23	3	6
X1	WCA1	M. Transect	26	41	0.44	18	28
X3	WCA1	M. Transect	27	10	-0.02	0	4
Z1	WCA1	M. Transect	26	36	0.23	8	15
Z2	WCA1	M. Transect	26	16	-0.44	-7	13
Y4	WCA1	M. Transect	28	10	0.35	3	9
LOX11	WCA1	Marsh	34	9	0.14	1	4
Z3	WCA1	M. Transect	28	11	0.29	3	5
Z4	WCA1	M. Transect	28	8	0.23	2	4
LOX12	WCA1	Marsh	34	8	0.21	2	3
LOX13	WCA1	Marsh	30	8	0.08	1	5
LOX14	WCA1	Marsh	34	8	-0.12	-1	3
LOX15	WCA1	Marsh	34	7	-2.63	-19	20
LOX16	WCA1	Marsh	33	8	-0.86	-7	8
F1	WCA2A	M. Transect	25	80	0.50	40	70
E1	WCA2A	M. Transect	29	48	0.33	16	26
F2	WCA2A	M. Transect	31	49	0.54	26	44
E2	WCA2A	M. Transect	24	44	0.29	13	22
E3	WCA2A	M. Transect	28	31	0.26	8	16
F3	WCA2A	M. Transect	29	26	0.29	7	11
F4	WCA2A	M. Transect	30	17	0.08	1	6
CA33	WCA3A	Marsh	34	12	-0.81	-10	12
F5	WCA2A	M. Transect	30	10	-0.33	-3	5
E4	WCA2A	M. Transect	30	14	-0.14	-2	5
CA35	WCA3A	Marsh	30	10	-1.83	-19	21
U3	WCA2A	M. Transect	32	9	-0.22	-2	7
E5	WCA2A	M. Transect	29	8	-0.59	-5	6
U2	WCA2A	M. Transect	30	11	0.17	2	20
CA32	WCA3A	Marsh	33	7	-0.35	-3	5
U1	WCA2A	M. Transect	30	10	-0.01	0	6
CA36	WCA3A	Marsh	31	32	0.00	0	16
CA38	WCA3A	Marsh	34	7	-1.10	-8	9
CA34	WCA3A	Marsh	33	10	-0.01	0	4
CA311	WCA3A	Marsh	34	6	-0.97	-5	7
CA315	WCA3A	Marsh	34	6	-0.28	-2	3

Table 2. Continued. Sites in yellow were added for ELM v3.2.1.

NE1	ENP	Marsh	49	9	0.22	2	6
P33	ENP	Marsh	50	7	-0.18	-1	3
P34	ENP	Marsh	41	5	-1.63	-9	9
P36	ENP	Marsh	50	13	0.44	6	18
P35	ENP	Marsh	49	11	0.41	5	12
TSB	ENP	Marsh	48	7	-0.32	-2	5
P37	ENP	Marsh	44	5	-1.02	-5	6
EP	ENP	Marsh	44	5	-0.43	-2	4
SRS1a	ENP	M. Transect	10	13	-0.46	-6	7
SRS1c	ENP	M. Transect	3	7	-0.02	0	1
SRS1d	ENP	M. Transect	10	9	-0.03	0	4
SRS2	ENP	M. Transect	21	6	-0.33	-2	3
SRS3	ENP	M. Transect	21	8	-0.07	-1	3
SRS4	ENP	M. Transect	21	16	0.06	1	6
SRS5	ENP	M-R. Transect	21	18	0.20	4	11
SRS6	ENP	M-R. Transect	18	30	0.16	5	21
TS/Ph1a	ENP	M. Transect	16	7	-0.80	-6	8
TS/Ph1b	ENP	M. Transect	7	5	-1.03	-5	6
TS/Ph2	ENP	M. Transect	24	6	-0.89	-5	6
TS/Ph3	ENP	M. Transect	20	5	-0.88	-5	6
TS/Ph4	ENP	M. Transect	18	6	0.01	0	5
TS/Ph5	ENP	M. Transect	18	4	-0.93	-4	5
TS/Ph6a	ENP	M. Transect	26	11	0.40	5	6
TS/Ph7a	ENP	M. Transect	26	10	-0.22	-2	4

Table 2. Continued.

L7	WCA1	Canal	8	118	0.12	14	57
L40-1	WCA1	Canal	20	62	-0.10	-6	30
L40-2	WCA1	Canal	20	84	0.21	17	31
S10A	WCA1	Canal	39	40	-0.71	-28	41
S10C	WCA1	Canal	40	52	-0.32	-16	32
S10D	WCA1	Canal	54	75	0.16	12	30
S10E	WCA1	Canal	31	79	0.15	12	37
X0	WCA1	Canal	26	51	-0.03	-1	18
Z0	WCA1	C-M. Transect	26	52	0.01	0	15
E0	WCA1	C-M. Transect	31	62	0.25	15	31
F0	WCA2A	C-M. Transect	30	70	0.31	21	32
S144	WCA2A	C-M. Transect	24	21	-0.94	-19	31
S145	WCA2A	Canal	50	16	-1.06	-17	24
S146	WCA2A	Canal	24	17	-1.26	-22	32
S11A	WCA2A	Canal	48	24	-0.37	-9	22
S11B	WCA2A	Canal	47	34	0.02	1	14
S11C	WCA2A	Canal	54	44	0.33	15	23
C123SR84	WCA3A	Canal	46	37	0.44	16	22
S151	WCA3A	Canal	54	23	0.23	5	14
S12A	WCA3A	Canal	54	18	0.33	6	20
S12B	WCA3A	Canal	54	14	0.11	1	13
S12C	WCA3A	Canal	54	13	-0.02	0	7
S12D	WCA3A	Canal	54	13	0.00	0	6
S333	WCA3A	Canal	54	15	0.13	2	7
COOPERTN	WCA3A	Canal	40	12	0.23	3	4
S31	WCA3B	Canal	43	18	0.33	6	11
		Median All:	30	11	-0.01	0	7
		Median Canal:	42	36	0.11	2	23
		Median Marsh:	30	9	-0.03	0	6

For surface water Cl concentration performance evaluations, Table 3 shows the statistical performance metrics for the simulated vs. observed seasonal mean Cl concentration data at each water quality monitoring site during the 1984-2010 historical simulation period. The median seasonal bias of predicted Cl concentrations in the marsh for the 1984-2010 period of record was 6 mg l^{-1} in the marsh locations, and a median under-prediction of 2 mg l^{-1} in the canals.

NOTE: For statistical evaluations, we show fewer FCE transect sites for Cl monitoring compared to TP, as the FCE sampling did not use instrumentation to capture Cl/salinity at concentrations generally associated with freshwater systems. Thus, the observed data were usually recorded as null values at FCE freshwater sites, and thus cannot be used for valid comparisons.

Table 3. Statistical evaluations of (ELM v3.2.1) observed vs. simulated seasonal (wet & dry) mean surface water Cl concentrations, 1984-2010. Bias (observed minus simulated) and RMSE units are mg l^{-1}. Site type refers to Marsh vs. Canal locations; for transect gradients, M. Transect refers to Marsh Transect, and may be associated with Canal-Marsh Transect (C-M. Transect) or Marsh-River Transect (M-R. Transect).

			1984-2010				
Site	Basin	Site type	N	ObsMean	RelBias	Bias	RMSE
LOX4	WCA1	Marsh	24	55	-0.39	-22	42
LOX3	WCA1	Marsh	17	24	0.53	13	16
LOX5	WCA1	Marsh	10	18	0.55	10	11
LOX10	WCA1	Marsh	24	28	-1.72	-48	55
LOX9	WCA1	Marsh	23	19	-0.47	-9	19
LOX8	WCA1	Marsh	26	19	0.61	11	12
LOX7	WCA1	Marsh	24	23	0.50	11	14
LOX6	WCA1	Marsh	23	39	-0.17	-6	23
X2	WCA1	M. Transect	28	83	-0.32	-26	41
X4	WCA1	M. Transect	27	40	-0.29	-12	25
X1	WCA1	M. Transect	26	112	-0.07	-8	27
X3	WCA1	M. Transect	28	64	-0.53	-34	49
Z1	WCA1	M. Transect	27	112	0.03	3	29
Z2	WCA1	M. Transect	27	90	-0.20	-18	36
Y4	WCA1	M. Transect	28	44	-0.26	-11	25
LOX11	WCA1	Marsh	24	17	0.44	8	9
Z3	WCA1	M. Transect	28	55	-0.18	-10	29
Z4	WCA1	M. Transect	28	38	-0.09	-3	14
LOX12	WCA1	Marsh	26	35	-0.34	-12	17
LOX13	WCA1	Marsh	21	16	-1.26	-20	28
LOX14	WCA1	Marsh	26	27	-0.87	-23	30
LOX15	WCA1	Marsh	26	56	-0.95	-53	58
LOX16	WCA1	Marsh	25	24	-3.18	-76	81
F1	WCA2A	M. Transect	25	160	0.34	55	68
E1	WCA2A	M. Transect	31	156	0.30	46	57
F2	WCA2A	M. Transect	31	155	0.22	34	51
E2	WCA2A	M. Transect	27	125	0.15	18	37
E3	WCA2A	M. Transect	31	128	0.15	19	36
F3	WCA2A	M. Transect	31	151	0.23	34	42
F4	WCA2A	M. Transect	31	134	0.21	28	36
CA33	WCA3A	Marsh	24	51	-0.29	-15	24
F5	WCA2A	M. Transect	31	138	0.26	36	42
E4	WCA2A	M. Transect	31	119	0.12	14	31
CA35	WCA3A	Marsh	20	40	-1.04	-41	52
U3	WCA2A	M. Transect	32	129	0.25	32	39
E5	WCA2A	M. Transect	31	111	0.14	16	30
U2	WCA2A	M. Transect	31	123	0.27	33	43
CA32	WCA3A	Marsh	25	54	0.25	13	34
U1	WCA2A	M. Transect	31	103	0.12	12	28
CA36	WCA3A	Marsh	17	69	0.10	7	12
CA38	WCA3A	Marsh	26	33	-0.31	-10	22
CA34	WCA3A	Marsh	25	52	-0.01	-1	10
CA311	WCA3A	Marsh	26	32	-0.17	-5	14
CA315	WCA3A	Marsh	26	32	0.14	5	9

Table 3. Continued. Sites in yellow were added for ELM v3.2.1.

NE1	ENP	Marsh	41	68	0.13	9	22
P33	ENP	Marsh	42	63	0.03	2	19
P34	ENP	Marsh	37	20	-1.23	-24	32
P36	ENP	Marsh	42	62	0.09	6	23
P35	ENP	Marsh	39	99	0.44	44	107
TSB	ENP	Marsh	41	36	0.16	6	14
P37	ENP	Marsh	35	26	0.32	8	14
EP	ENP	Marsh	38	113	0.37	42	159
SRS3	ENP	M. Transect	3	1024	1.12	1149	1380
SRS4	ENP	M. Transect	21	2936	-1.57	-4607	4844
SRS5	ENP	M-R. Transect	21	5139	0.62	3194	3760
SRS6	ENP	M-R. Transect	18	12189	0.98	11964	12058
TS/Ph4	ENP	M. Transect	3	554	0.97	537	537
TS/Ph5	ENP	M. Transect	2	*inadequate N for statistics, ignored*			
TS/Ph6a	ENP	M. Transect	26	5438	-0.18	-1003	2809
TS/Ph7a	ENP	M. Transect	26	8398	-0.10	-805	3222
L7	WCA1	Canal	10	226	0.27	62	117
L40-1	WCA1	Canal	18	132	0.27	36	51
L40-2	WCA1	Canal	18	80	-0.25	-20	47
S10A	WCA1	Canal	37	88	-0.35	-31	43
S10C	WCA1	Canal	40	112	-0.07	-8	41
S10D	WCA1	Canal	53	129	0.09	11	39
S10E	WCA1	Canal	23	136	0.02	3	33
X0	WCA1	C-M. Transect	28	120	-0.06	-7	27
Z0	WCA1	C-M. Transect	28	119	-0.07	-8	29
E0	WCA2A	C-M. Transect	32	123	-0.01	-1	22
F0	WCA2A	C-M. Transect	32	126	0.01	1	22
S144	WCA2A	Canal	23	127	0.14	18	35
S145	WCA2A	Canal	47	114	0.01	1	30
S146	WCA2A	Canal	24	117	0.08	10	30
S11A	WCA2A	Canal	44	115	0.13	15	26
S11B	WCA2A	Canal	47	116	0.16	18	29
S11C	WCA2A	Canal	53	116	0.14	16	25
C123SR84	WCA3A	Canal	35	68	0.10	6	15
S151	WCA3A	Canal	51	93	0.21	20	28
S12A	WCA3A	Canal	53	28	-1.24	-34	37
S12B	WCA3A	Canal	53	36	-0.70	-25	29
S12C	WCA3A	Canal	54	51	-0.22	-11	22
S12D	WCA3A	Canal	47	64	0.03	2	22
S333	WCA3A	Canal	53	72	0.11	8	22
S31	WCA3B	Canal	32	84	-0.31	-26	63
		Median All:	28	86	0.06	4	30
		Median Canal:	37	115	0.02	2	29
		Median Marsh:	26	63	0.10	6	31

As stated earlier: visualizations of the temporal trends in simulated and observed data are an important component of understanding the model performance, particularly with respect to recognizing any unique aspects of the data dynamics at a particular site, during 27 years of

meteorological and water management variability. Figure 6a and 6b shows examples of the time series of TP and Cl concentrations at upstream-downstream FCE sites in the SRS and TS/Ph transects, respectively. The model effectively captured the spatial differences along each transect, along with temporal patterns. See the above statistical tables. Note that at the downstream SRS5 (and SRS6, see Appendix B) sites, the simulated TP concentrations performed well ca. 2000-2004, but completely "missed" broad peaks ca. 2007-2008, then performed well during ca. 2009-2010. The model performance was consistently good for the Cl tracer of freshwater/estuarine flows during the entire observation period, with no equivalent major peak in observed concentrations during the 2007-2008 period. This is one of the intriguing questions for further model research exploration.

NOTE on graphs: For graphical comparisons, ELM-simulated chloride concentrations in FCE freshwater sites are associated with all-zero FCE data because of instrumentation precision/accuracy, and thus display substantial differences simply due to FCE measured data being targeted towards estuarine salinity vs. typical (orders of magnitude lower) freshwater chloride concentrations. FCE transects measured salinity (ppt/ PSU/ g/L), and we converted those data to chloride concentrations for use in ELM simulated-observed comparisons. For FCE, "salinity is measured with an YSI conductivity meter", and that did not have the low-concentration accuracy of the freshwater Cl measurements of DBHYDRO (regional monitoring) and SFWMD (WCA1 and WCA2A transect monitoring). Thus, there were observed values of 0.0 in all times at FCE fresh sites (TS/Ph1-3, SRS1-2) , in the observed data used in ELM v3.2 comparisons through 12/2010.

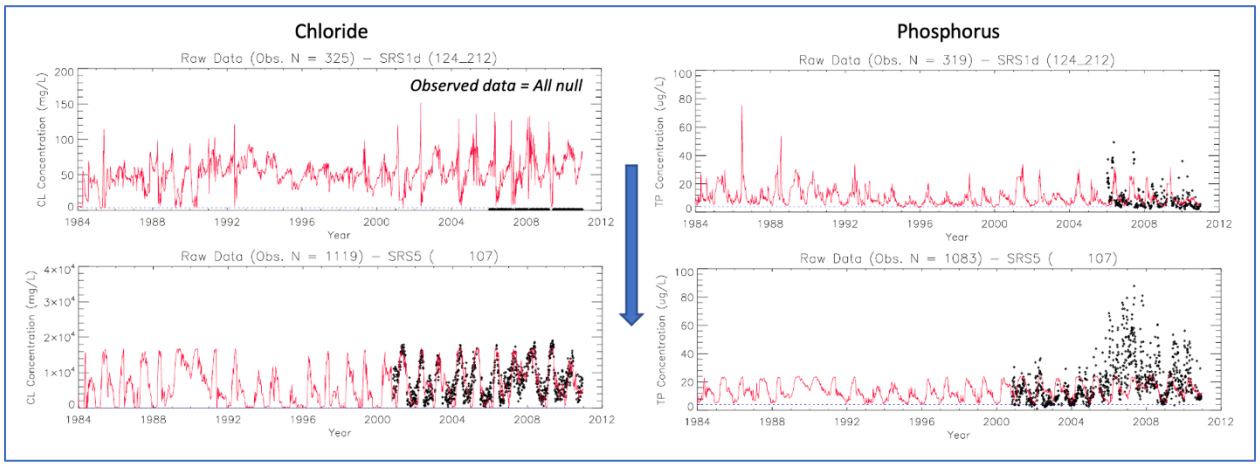


Figure 6a. Example plots of simulated vs observed Cl and TP data at two FCE sites along the SRS freshwater-estuarine transect gradient. Plots show observed (black dots) and simulated (red lines) data, during the historical time domain of 1/1/1984 - 12/31/2010. Note the several-order magnitude change in the vertical axis for Cl from upstream (SRS1d) to downstream (SRS5). See text for note on freshwater Cl observed data.

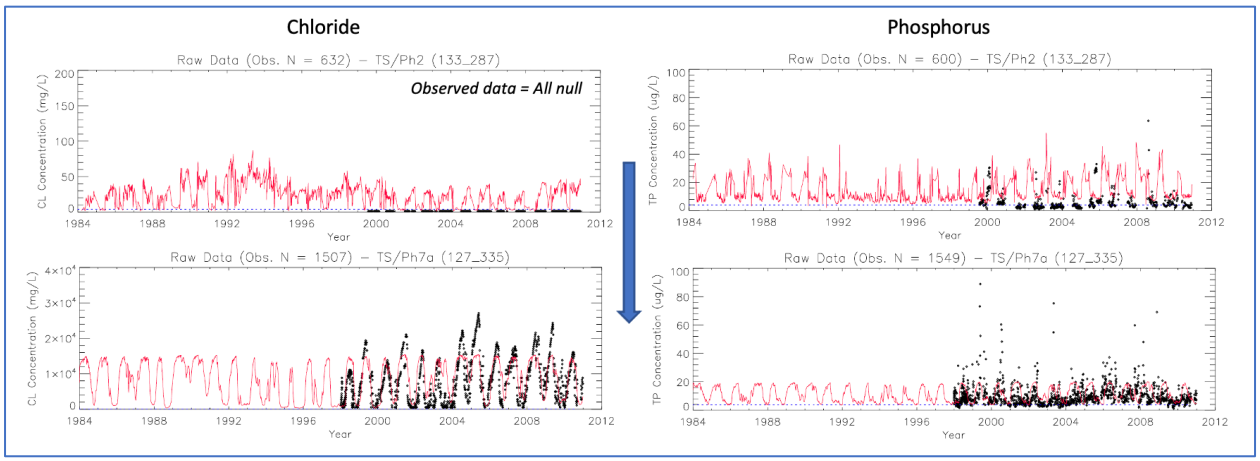


Figure 6b. Example plots of simulated vs observed Cl and TP data at two FCE sites along the TS/Ph freshwater-estuarine transect gradient. Plots show observed (black dots) and simulated (red lines) data, during the historical time domain of 1/1/1984 - 12/31/2010. Note the several-order magnitude change in the vertical axis for Cl from upstream (TS/Ph2) to downstream (TS/Ph7a). See text for note on freshwater Cl observed data.

NOTE on graphs: Above and in Appendices B and C, the Raw Data graphs (unaggregated temporally) show simulated concentration data points that may be in water depths that were too shallow for field sampling, thus sometimes showing simulated data with "flashy" and high concentrations (with no observed data on those days). The aggregated data and statistical computations only used matching data points (i.e., simulated and observed data on same day)..

NOTE on Appendix B&C graphs: In the Appendices B and C graphs for canal monitoring points, some sets of canal-based monitoring sites reference a single ELM-canal reach for multiple sites (e.g., S10's, S11's, S12's); an ELM canal reach (identified by the single integer in parentheses following the site name in the graph headings) is homogenous in all characteristics, including constituent concentrations. For example, while the observed TP concentrations at the S12A site are significantly different from those at S12D, the ELM has a single concentration for the Reach ID number 53.

Appendices B and C contain the time series graphs of simulated vs. observed data for surface water TP and for surface water Cl, respectively, for the 94 water quality monitoring sites. Note (as described in the overall caption) that the sites/pages are geographically ordered from NW to SE, and thus the Everglades National Park (and FCE transects) appears towards the end of the sequence.

Sensitivity of Ecological Interactions

When working with models that truly integrate across the major components of ecosystem structure and function, it becomes clear how ecosystem interactions of carbon and phosphorus flow are, truly, finely tuned. Improvements to one system variable can lead to another variable (or variables) behaving beyond observed or expected behaviors. The natural system is indeed a well-balanced "machine", and an integrated ecosystem model must approximate that balance.

In (v.1 - v.2.5) developing the algorithms, conducting formal sensitivity analyses, and determining the most appropriate parameterization of ELM, we achieved a relatively robust balance that provided realistic spatio-temporal performance in water depths & flows, water column and porewater P, periphyton biomass and productivity, macrophyte biomass and productivity, and soil/floc P & peat accretion - among multiple other response variables and processes (e.g., see ELM v.1 in Fitz and Sklar 1999). The development and "tuning" of a model for which most variables directly or indirectly affect others is a complex and challenging task - yet rewarding via its broad applicability-reliability under a range of forcings.

In order to maintain a (well-reviewed) consistent model platform for applications, for the past ~15 years we have not fundamentally modified the ELM v2.5 algorithms and associated parameters. However, we improved its capabilities by actions such as increasing the regional application resolution from 1 km^2 to 0.25 km^2, adding modules such as very simple wading bird and diatom dynamics, and adding new output variables and evaluation methods, etc. All of the changes are described in documentation reports at http://www.ecolandmod.com/publications/.

As we advance in this major update (v.2 to v.3), we are considering what processes and/or variables may need to be added or modified in order to best meet the landscape model objectives during the next decade. One example. Processes such as peat responses to multiple interacting drivers are addressed at a simple level in ELM, and we do not consider inorganic $CaCO_3$ contributions to soils or P cycling. What, if any, improvements are needed to advance our decadal-scale understanding of integrative landscape dynamics? These? Others?

Taylor Slough & TP bias

The ELM-simulated surface water TP predictions have been well reviewed for application, with model performance that is very good at low and at high concentrations, whether in marshes or canals (see above statistics and Appendix B graphs). However, there appeared to be somewhat of a trend of model overprediction (ca. 5 ug l^{-1}) when considering the newly-available (newly-used) FCE data in the freshwater Taylor Slough component of the TS/Ph transect. (Because of the all-null-concentration Cl data for freshwater FCE sites, we don't have the type of Cl flow tracer information that is useful in parallel evaluations of nutrient dynamics). While some of the graphical visualization of this local TP bias (see Appendix B) may be simply due to model output during days of very low surface water depths with no associated field sample (see above *NOTE*), the statistical evaluation appeared to indicate a trend in bias within this local region that is not apparent elsewhere.

This ~4-5 ug l^{-1} bias may be considered somewhat minor, but it was instructive to explore its potential cause(s). For the initial steps in evaluating this issue, we considered whether local hydrology could be (partially) responsible. As seen in stage hydrographs for Taylor Slough, Shark Slough, and many other sites in the southern Everglades (Appendix A), the freshwater Taylor Slough sites generally have shorter hydroperiods and shallower surface depths than the freshwater Shark River Slough sites. But, given similar hydrology in similar oligotrophic sites, hydrology-alone did not appear to be responsible for the bias (i.e., potentially due to shallow

water evaporation and TP concentration effects, increased soil/floc decomposition during drydowns, etc.).

Periphyton generally have fast turnover times, and rapidly remove P from surface water. We explored the effects of modifying various intrinsic rates that define periphyton dynamics in the model, to decrease the simulated turnover times and potentially modify the water column P. See this documentation page

http://www.ecolandmod.com/models/algorithms_ELM/PeriphytonModule.html

for the conceptual model and basic algorithms that are defined in the model.

We initiated a series of simple sensitivity analyses on several periphyton rate parameters (which are global, not habitat-specific). The baseline run was the ELM v3.2.1 described in this document, and named "calib_v3.2.1b". The runs named "testALGparm4" and "testALGparm3" had modifications to the maximum specific rates of production, respiration, baseline mortality, and dry-down mortality. Results were evaluated for stage statistics at the point location of NP-146 (Table 4, graphically in Figure 7a), and surface water TP concentration at the adjacent TS/Ph3 site (Figure 7b).

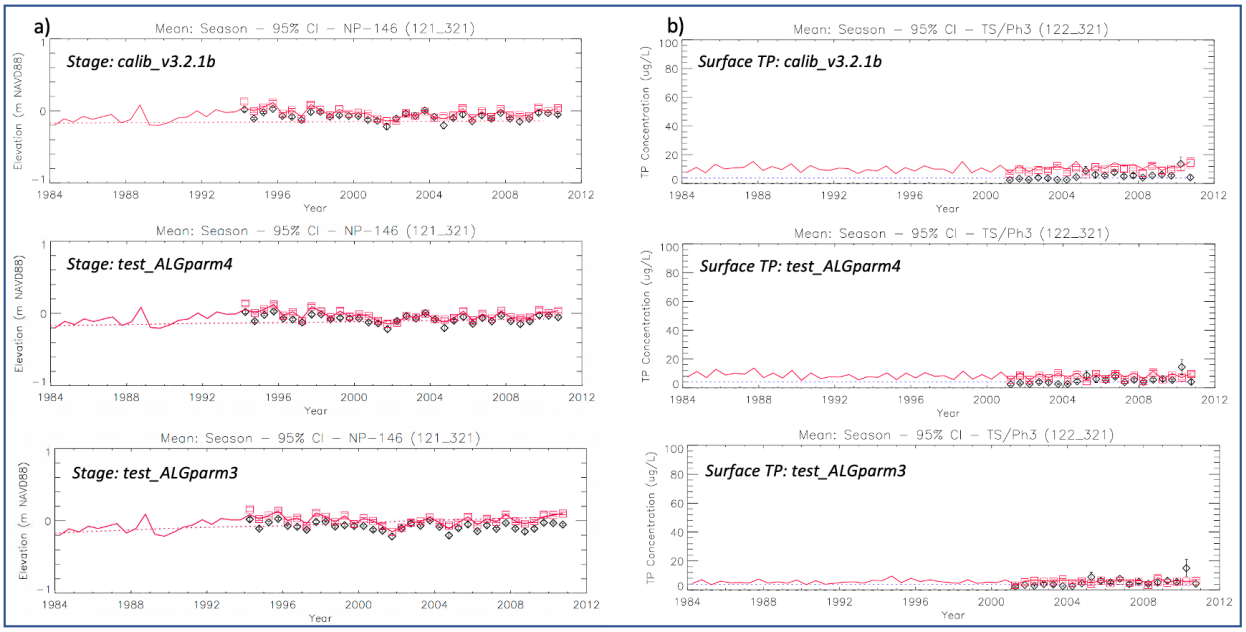


Figure 7. Partial results from three sensitivity runs, showing time series plots of 1984-2010 a) stage elevation and b) surface water TP concentration. Plots show observed (black) and simulated (red, different among runs) data. The red dotted line in a) is the simulated land surface elevation (different among runs). See Appendix A (stage performance graphs) and Appendix B (surface water TP graphs) captions for detailed information on statistical methods used in symbology.

Our testing-modifications of the periphyton growth-respiration-mortality parameters led to a lower, near-zero, surface water TP bias (seen above), and also changed the ranges of periphyton biomass and floc P concentration. Selected ecological variables were summarized for ELM Basin/Indicator Region groups of cells: a 4-cell ELM Basin/Indicator Region #77 encompasses NP-146 and FCE's TS/Ph 3; and BIR #76 encompasses 3 cells including FCE's TS/Ph 2. The parallel trends in surface-unsaturated water depths, TP in surface water, TP in floc, periphyton carbon biomass, and peat accretion are displayed for comparison among the three sensitivity runs

in Figures 8a - 8c. Of particular note, the decrease in TP concentration bias with different parameter sets was associated with significant increases in peat accretion (single-value rate across 27 yr), with values considered beyond expectations for this nutrient regime.

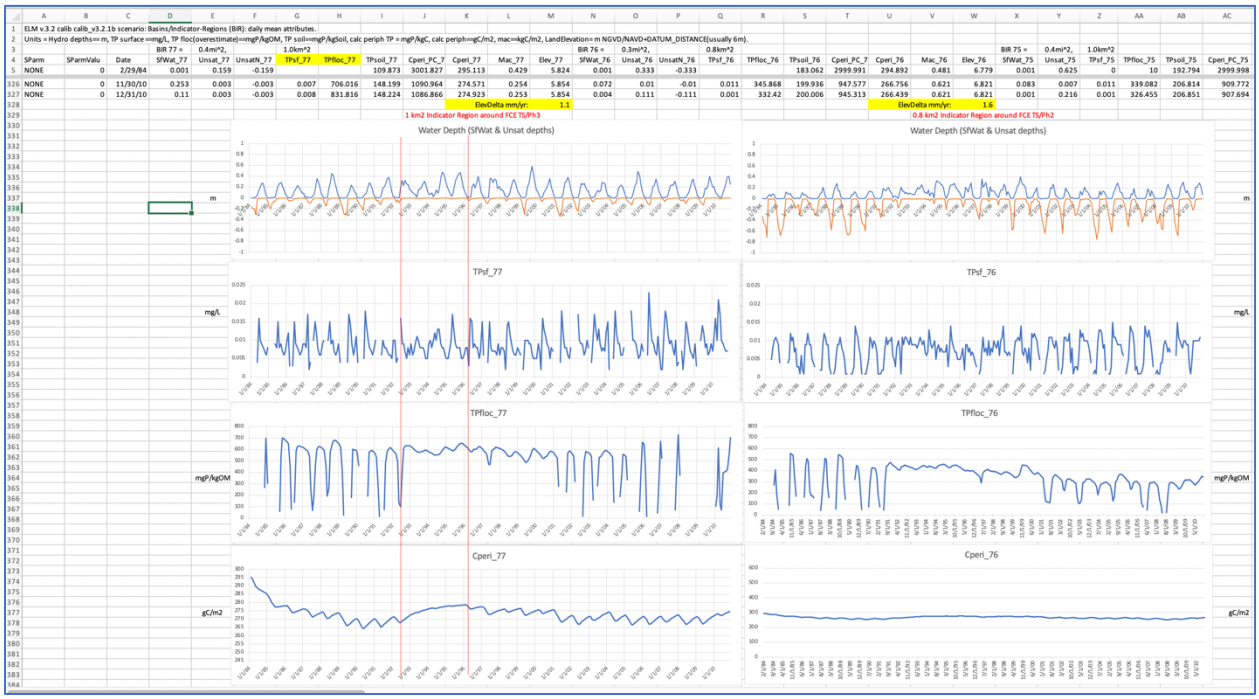


Figure 8a. Sensitivity, calib_v3.2.1b run. MS Excel screen-shot of two sets of ELM Basin/Indicator Regions (BIRs) that encompass FCE TS/Ph 3 (BIR 77) and TS/Ph 2 (BIR 76): time series plots of simulated monthly mean values of: a) Surface water depth & Unsaturated water depth; Surface water TP concentration; Floc TP concentration; and Periphyton biomass. Mean 27 yr peat accretion rates for each BIR shown in yellow (1.1 mm/yr for BIR 77, 1.6 mm/yr for BIR 76).

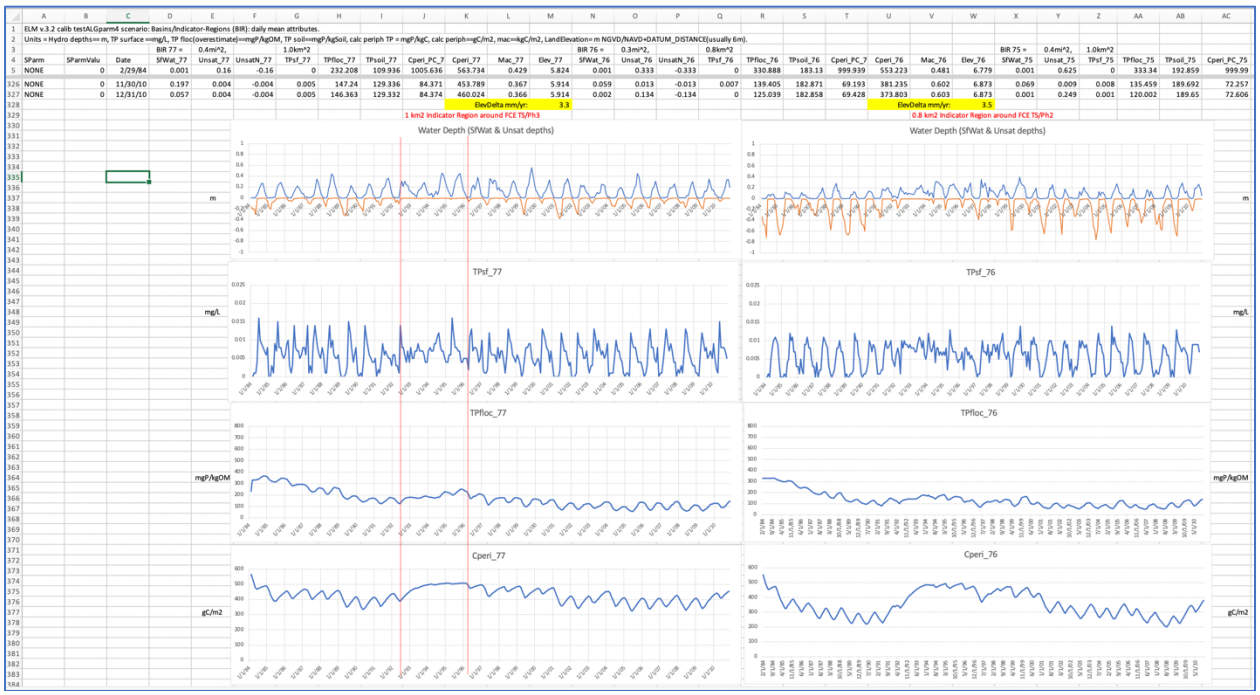


Figure 8b. Sensitivity, testALGparm4 run. See Figure 7a for full description. Mean 27 yr peat accretion rates for each BIR shown in yellow (3.3 mm/yr for BIR 77, 3.5 mm/yr for BIR 76).

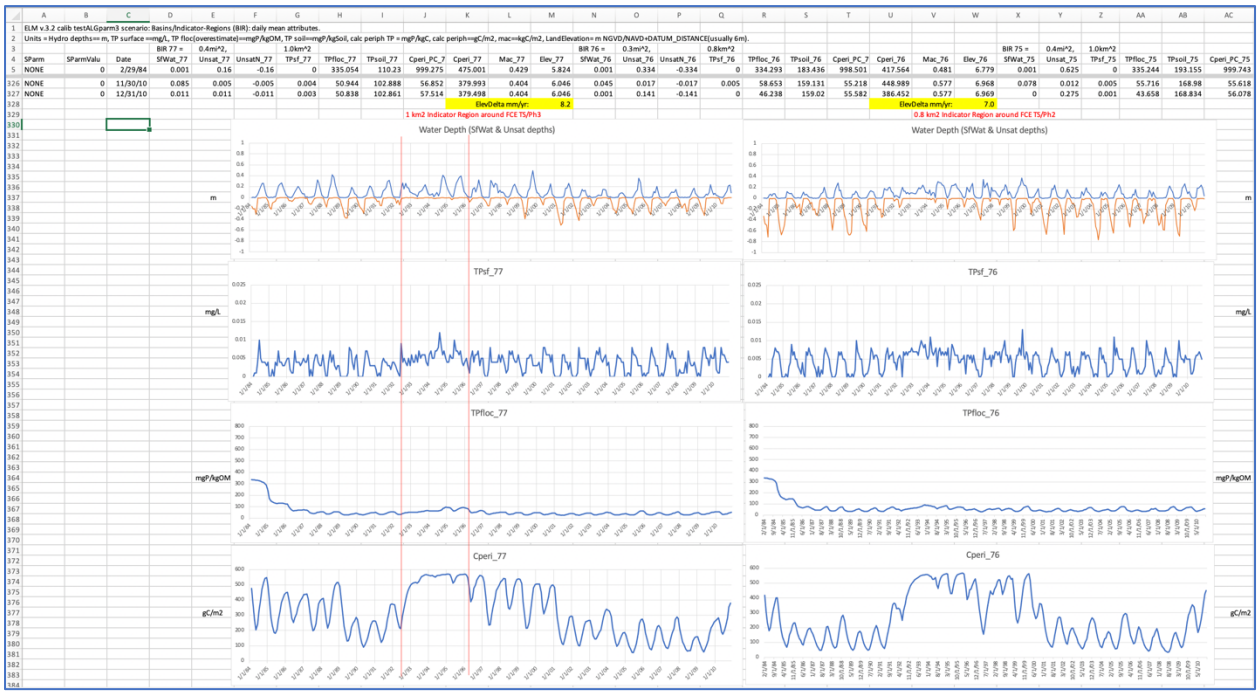


Figure 8c. Sensitivity, testALGparm3 run. See Figure 7a for full description. Mean 27 yr peat accretion rates for each BIR shown in yellow (8.2 mm/yr for BIR 77, 7.0 mm/yr for BIR 76).

TS/Ph 3: Stats for NP-146 , EcoSum for BIR_77

RunName	HydroStat NS Eff	HydroStat Bias (m)	EcoSum PeatAccret (mm/yr)
calib_v3.2.1b	0.68	-0.05	1.1
testALGparm4	0.67	-0.05	3.3
testALGparm3	0.45	-0.09	8.2

Table 4. For each sensitivity RunName, 27-yr model-observed hydrologic comparison statistics (NS Efficiency and Bias), and simulated 27-yr peat accretion rates, at FCE TS/Ph 3 site (== NP-146, BIR_77).

These periphyton-induced simulated changes to land elevation (most extreme in the testALGparm3 run) resulted in altered statistics for hydrologic assessments, as shown in Table 4. ***Overall, this simple sensitivity test involving periphyton rate parameters demonstrated how biology (periphyton turnover) impacts biogeochemistry (P cycling), which impacts other-biology (soil accretion), which impacts hydrology (water depth). That hydrologic response, in turn, further impacts the biology. All at varying time scales, via integrative ecosystem dynamics...***

Future Plans

While we will continue to explore various model algorithm/parameter improvements, the updated ELM was again shown to have useful performance characteristics for research and application. The extended (-2010) historical time period is allowing us to directly use a range of FCE-specific research experiments, and provides FCE researchers with additional understanding of this model's truly integrated hydro-ecological capabilities for applications that address FCE questions.

For future years of this collaboration, one of our primary priorities remains to best capture spatio-temporal trends in the relationships among fast-scale P pools (surface/pore water, floc, periphyton), and slower-scale pools (macrophytes, consolidated soils), including salinity and phosphorus interactive effects on soil decomposition. We will (continue to) add or improve modules of interactions between P availability and assemblages of fish, periphyton, and diatoms. The net C flux data from tower arrays across the region will (likely) be an integral component of the ongoing refinement of ecosystem-level model fluxes. Finally, we will strive to advance additional future scenarios evaluations using the updated ELM, likely driven with half-century scale (downscaled) GCM ensembles and sea level rise.

References

DBHYDRO. 2021. South Florida Water Management District's Environmental database. https://www.sfwmd.gov/science-data/dbhydro Accessed October 2021.

Fitz, H.C., and F.H. Sklar. 1999. Ecosystem analysis of phosphorus impacts and altered hydrology in the Everglades: a landscape modeling approach. *In:* K. R. Reddy, G. A. O'Connor, and C. L. Schelske (Eds.), Phosphorus Biogeochemistry in Subtropical Ecosystems. Lewis Publishers, Boca Raton, FL. pp. 585-620.

Fitz, C., R. Paudel, Y. Khare, and T. Van Lent. 2021. Landscape Soil Carbon Sequestration Under Scenarios of Climate Change and CERP. 2021 Greater Everglades Ecosystem Restoration Science Conference. Virtual Conference via Zoom, April 2021.

Flower, H., M. Rains, C. Fitz, W. Orem, S. Newman, T. Osborne, K. Reddy, and J. Obeysekera. 2019. Shifting ground: Landscape-scale modeling of biogeochemical processes under climate change in the Florida Everglades. Environmental Management 64:416-435. doi: 10.1007/s00267-019-01200-8

Gaiser, E., D. Childers. 2021. Water Quality Data (Extensive) from the Shark River Slough, Everglades National Park (FCE LTER), from October 2000 to Present. Environmental Data Initiative. https://doi.org/10.6073/pasta/c0e834e8e1bf4050db6a9967ec99b4b7.

Troxler, T. 2021a. Water Quality Data (Extensive) from the Taylor Slough, Everglades National Park (FCE LTER), from April 1996 to Present. Environmental Data Initiative. https://doi.org/10.6073/pasta/c72b8eaeb519914fdba14fa4bfbb0228.

Troxler, T. 2021b. Water Quality Data (Extensive) from the Taylor Slough, Everglades National Park (FCE LTER), South Florida from July 1999 to Present. Environmental Data Initiative. https://doi.org/10.6073/pasta/c142808f3d583c826e7b1f0c123a8cb9.

Appendix A, Figures A.1 – A.86. Plots of stage hydrographs and their associated Cumulative Frequency Distributions (CFD) for the period of record 1984-2010 at each monitoring location. The sequence of the figures is based on geographic location of each monitoring site-page, starting in the northwest, moving towards the southeast. A map of all sites is provided in Figure 2.

The red dashed line in the stage hydrographs is the model grid cell's land surface elevation, which is a time-varying output variable of the model. The model grid cell column and row locations are shown in parentheses (col_row) of each plot's title.

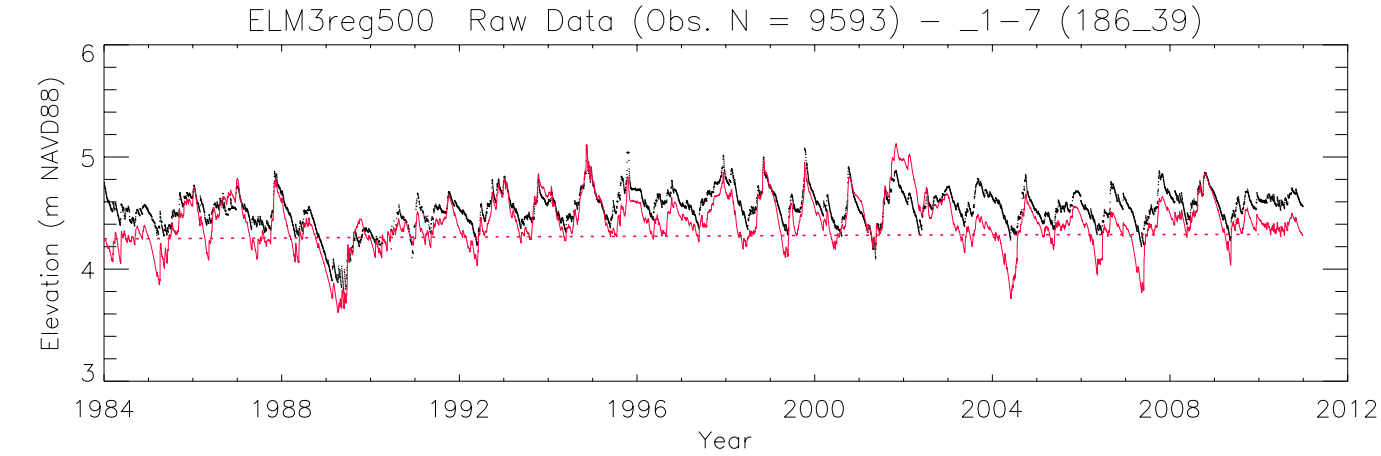
Each site-page has four figures:

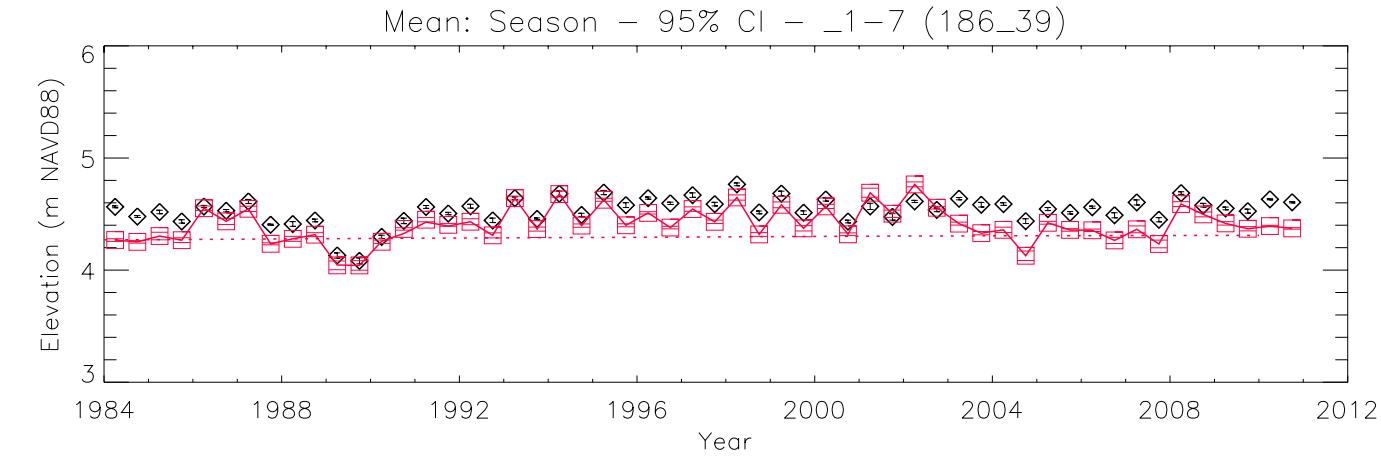
a) All data, with no temporal aggregation, of daily observations (black dots) and model results (red line).

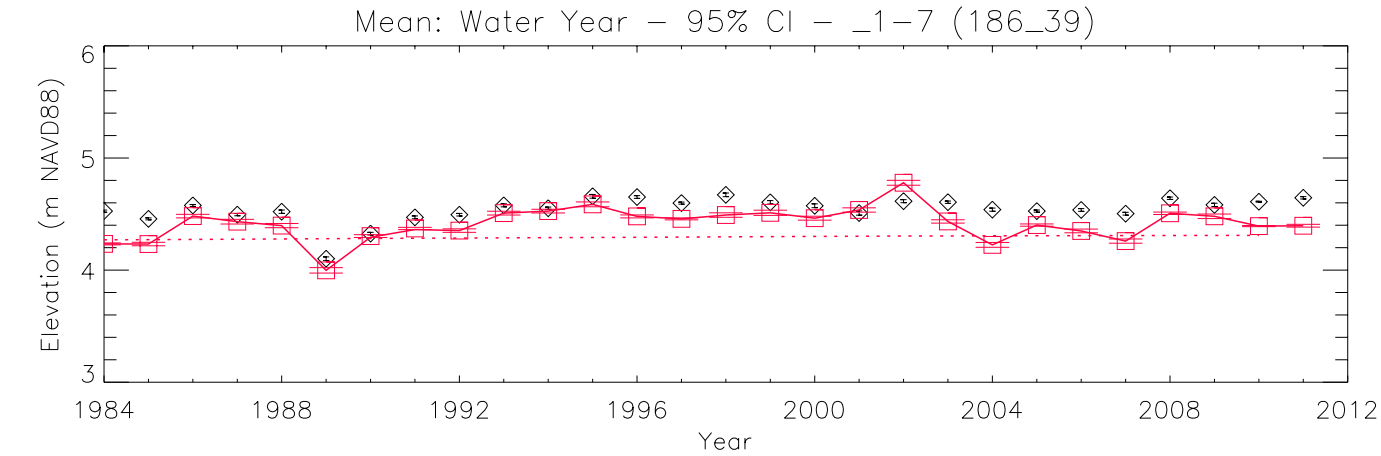
b) All data were aggregated into arithmetic mean values by wet and dry seasons within water years; the continuous lines pass through mean of all daily data points for each season; the mean of paired simulated & observed values are shown in red boxes and black diamonds, respectively; the 95% Confidence Interval (CI) of the paired means are shown by the "__" symbols in the red for the model and black for the observed data.

c) All data aggregated into arithmetic mean values by water year, with the same treatment as in plot b).

d) The cumulative frequency distributions of the simulated and observed (raw, un-aggregated) data; the 95% confidence interval for observed data is shown in the dashed black lines. Note that only paired simulated and observed data points are used.


ELM3reg500 Raw Data (Obs. N = 9593) – _1–7 (186_39)
Elevation (m NAVD88)
6
5
4
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – _1–7 (186_39)
Elevation (m NAVD88)
6
5
4
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – _1–7 (186_39)
Elevation (m NAVD88)
6
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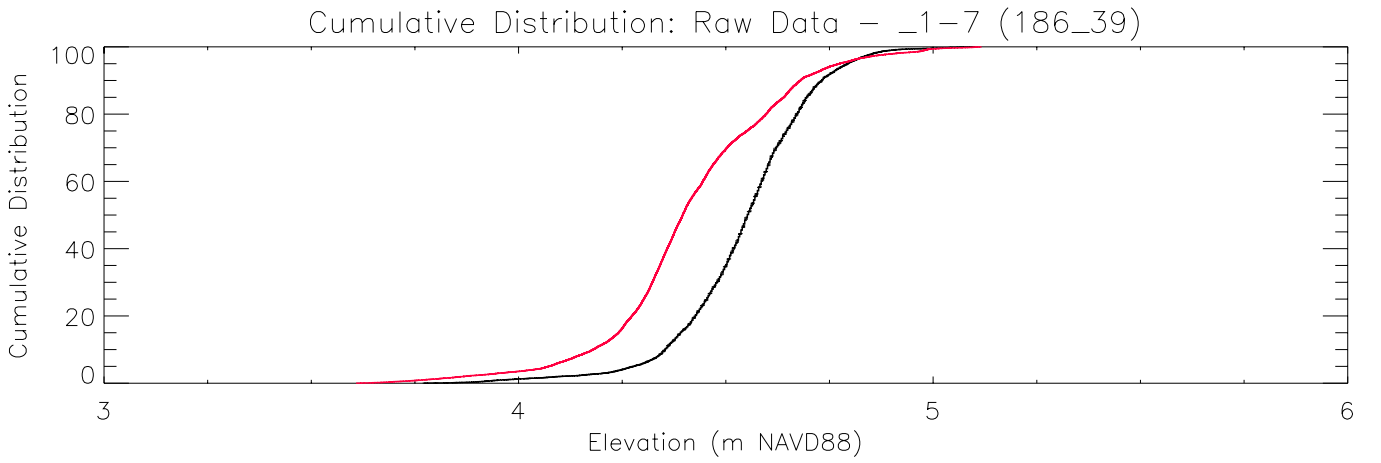
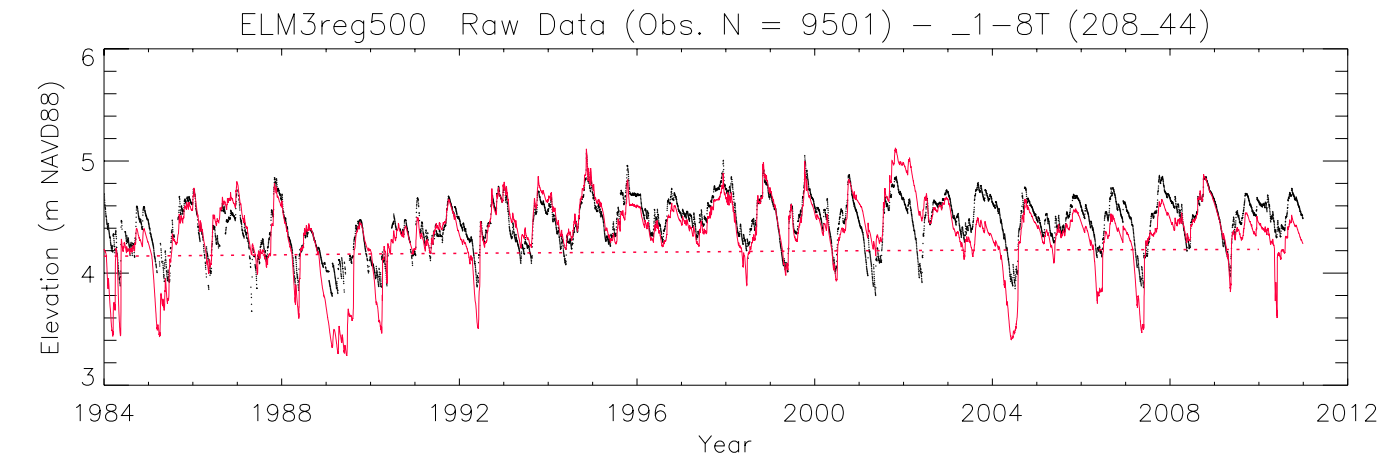
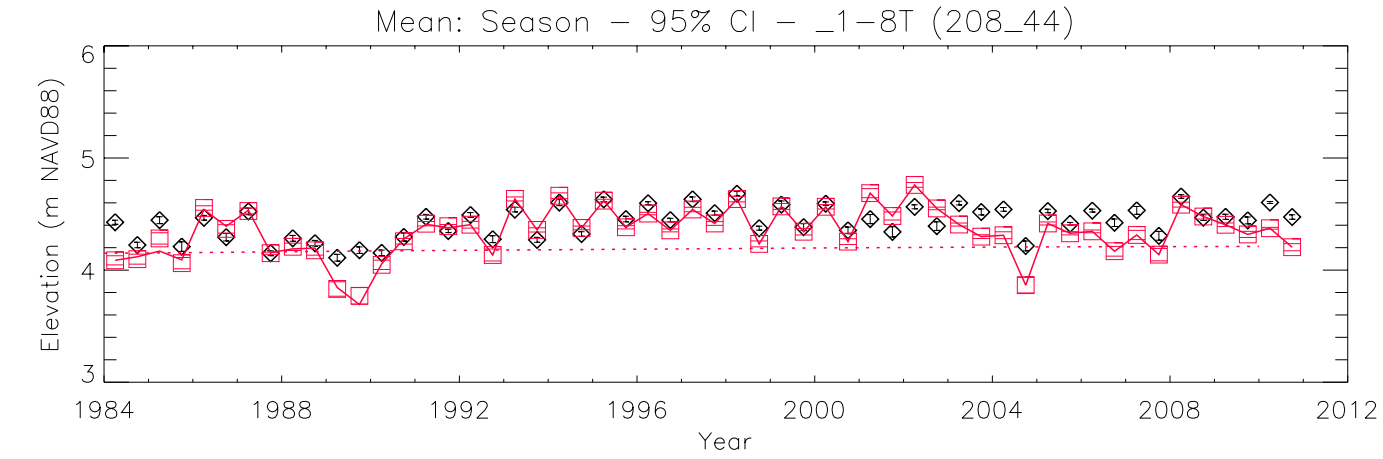
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – _1–7 (186_39)
Cumulative Distribution
100
80
60
40
20
0
3
4
5
6
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9501) – _1–8T (208_44)
Elevation (m NAVD88)
Year
1984
1988
1992
1996
2000
2004
2008
2012
3
4
5
6


Mean: Season – 95% CI – _1–8T (208_44)
Elevation (m NAVD88)
Year
1984
1988
1992
1996
2000
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2008
2012
3
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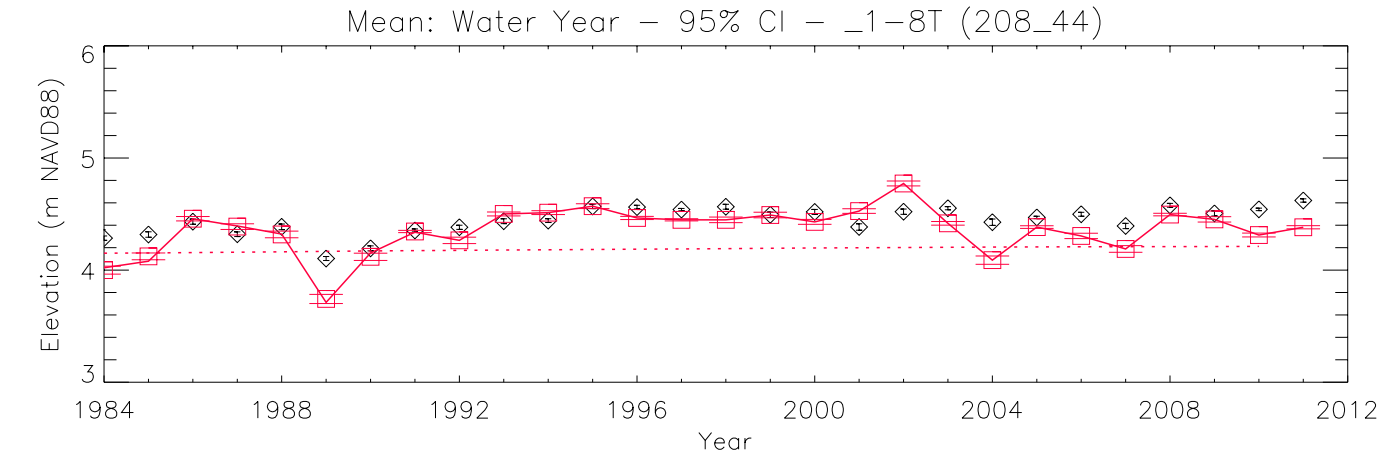
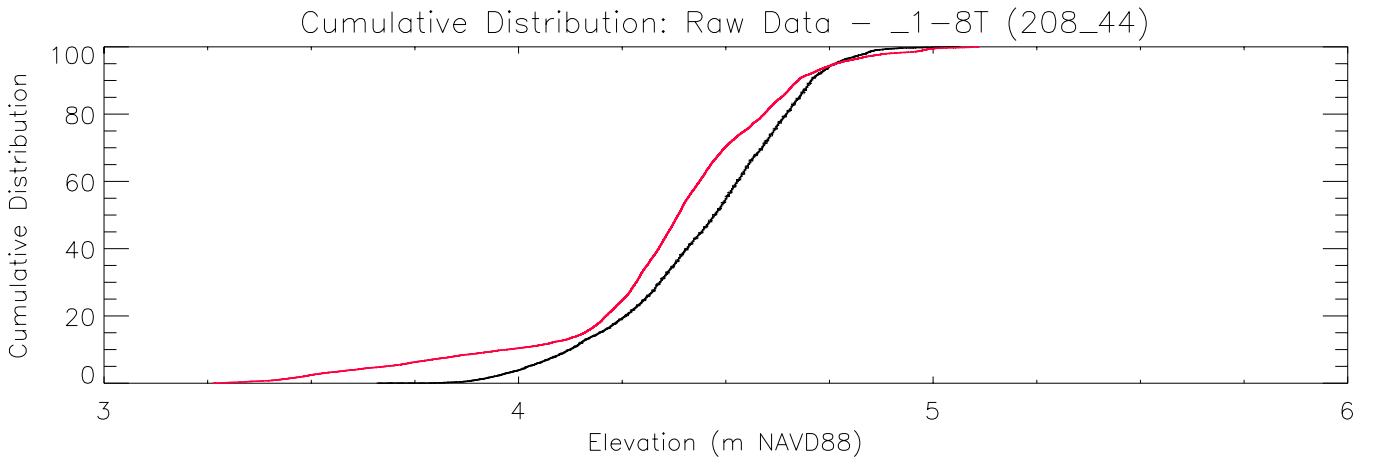
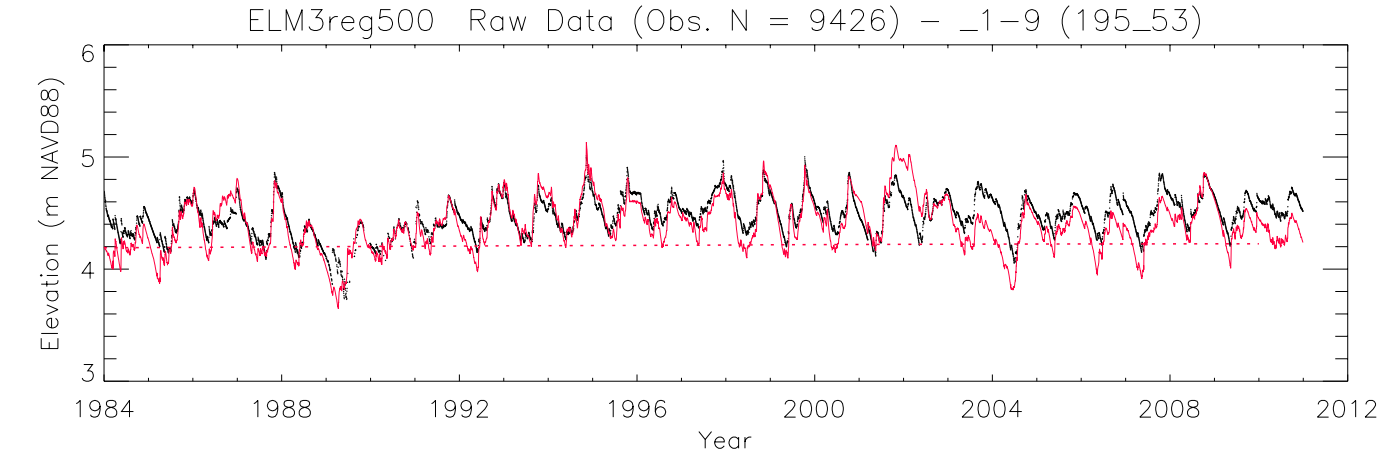

Mean: Water Year – 95% CI – _1–8T (208_44)
Elevation (m NAVD88)
Year
1984
1988
1992
1996
2000
2004
2008
2012
3
4
5
6


Cumulative Distribution: Raw Data – _1–8T (208_44)
Cumulative Distribution
Elevation (m NAVD88)
0
20
40
60
80
100
3
4
5
6


ELM3reg500 Raw Data (Obs. N = 9426) – _1–9 (195_53)
Elevation (m NAVD88)
6
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1984
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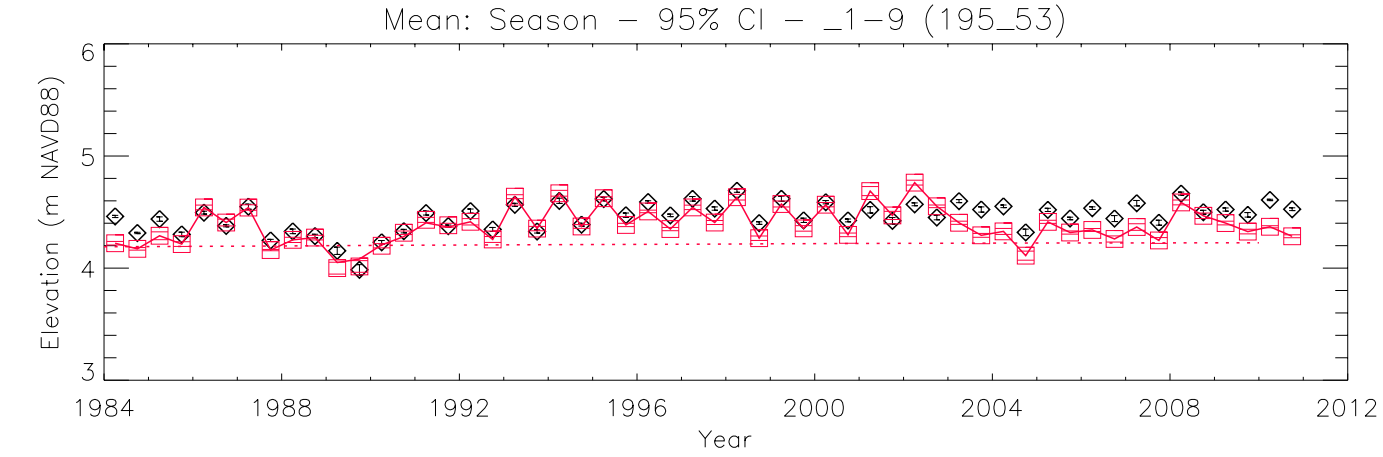
2004
2008
2012
Year


Mean: Season – 95% CI – _1–9 (195_53)
Elevation (m NAVD88)
6
5
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1984
1988
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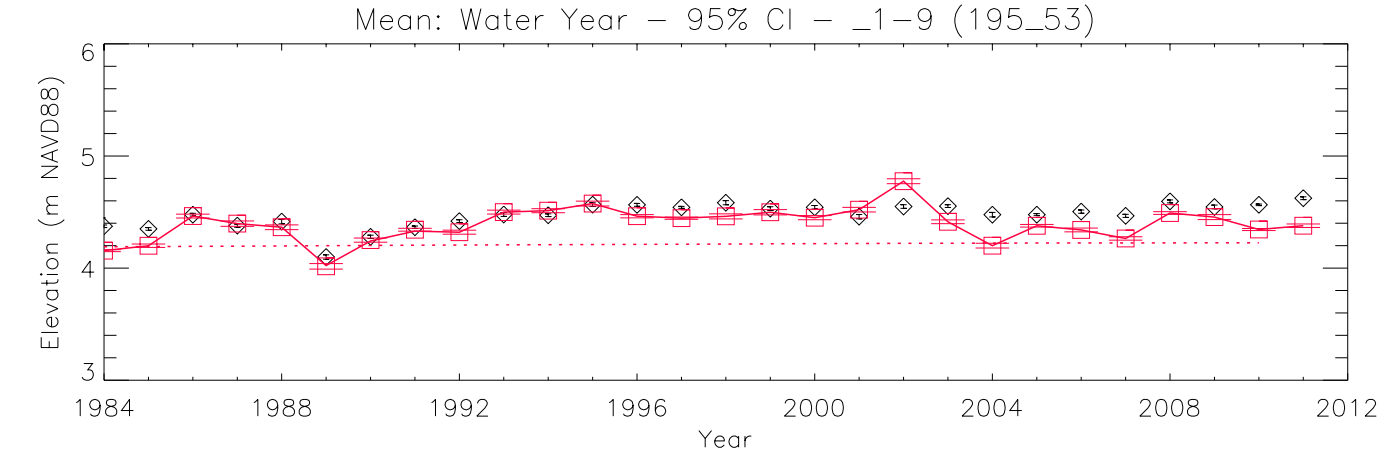
2004
2008
2012
Year


Mean: Water Year – 95% CI – _1–9 (195_53)
Elevation (m NAVD88)
6
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1984
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1996
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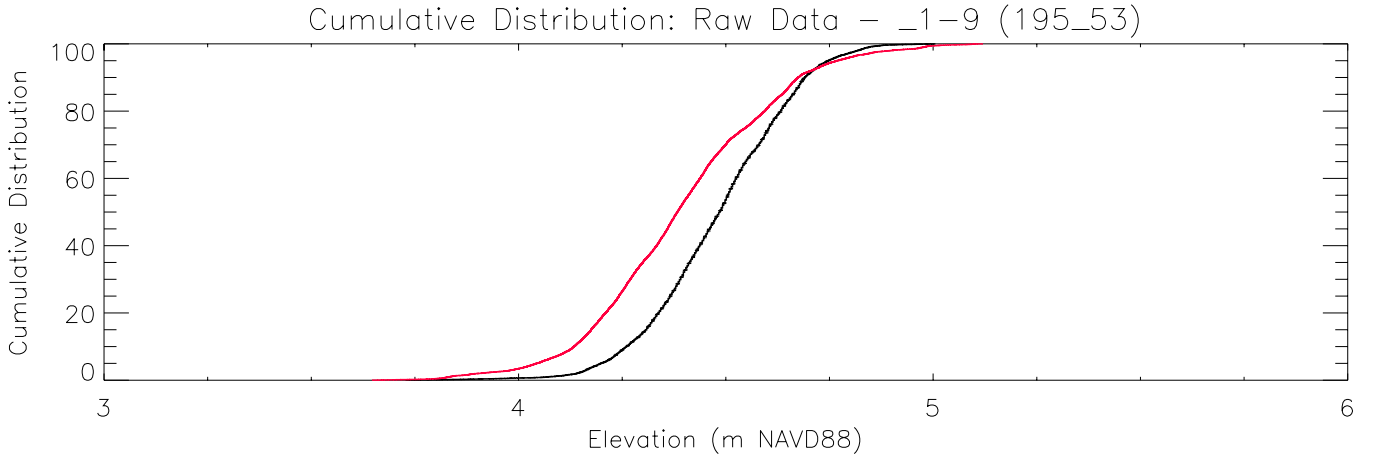
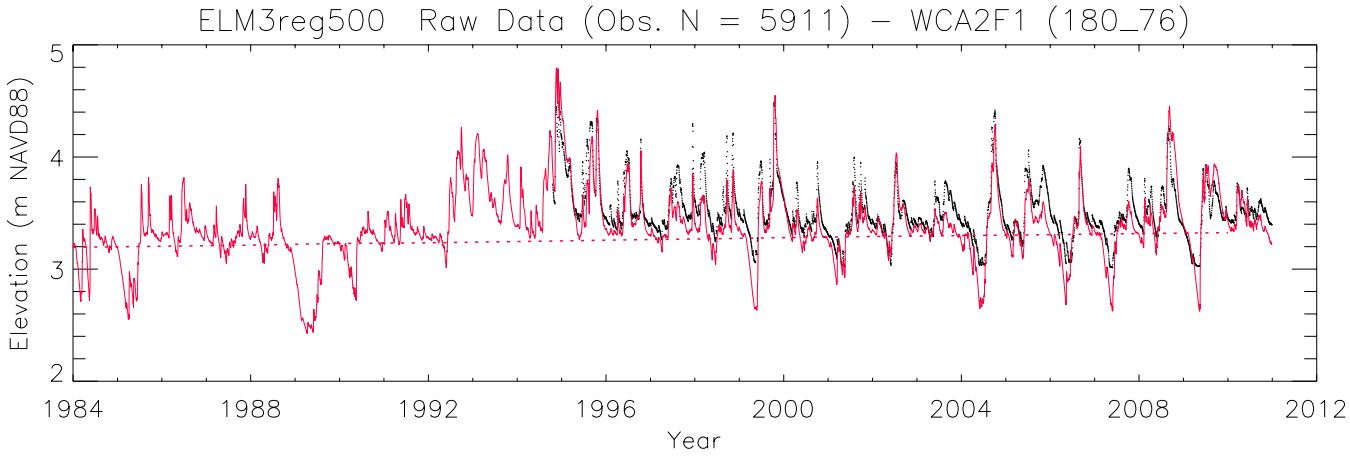
2004
2008
2012
Year


Cumulative Distribution: Raw Data – _1–9 (195_53)
Cumulative Distribution
100
80
60
40
20
0
3
4
5
6
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 5911) – WCA2F1 (180_76)
Elevation (m NAVD88)
5
4
3
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1984
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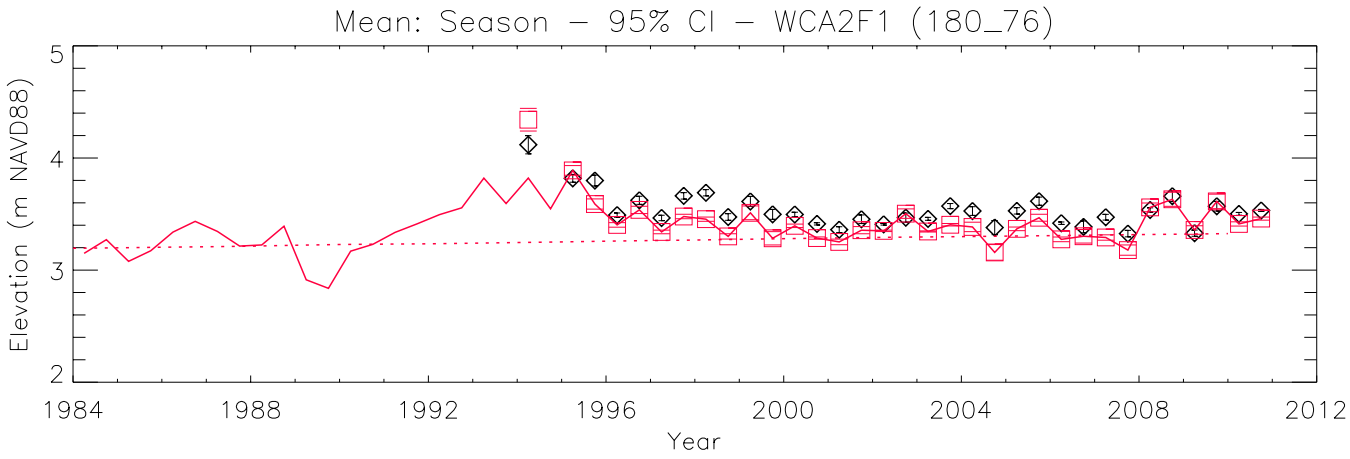
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – WCA2F1 (180_76)
Elevation (m NAVD88)
5
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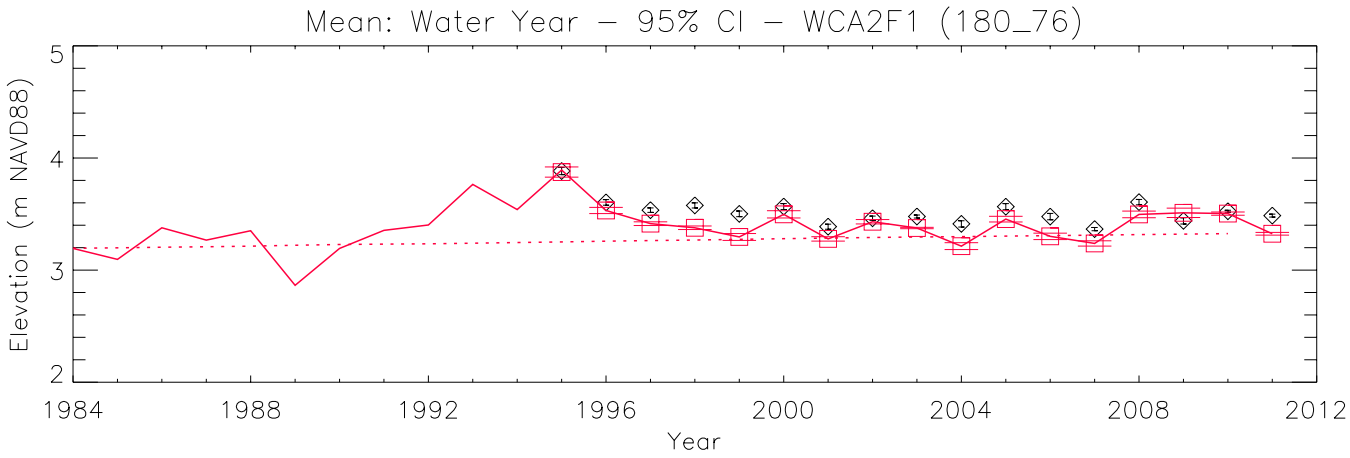
Year


Mean: Water Year – 95% CI – WCA2F1 (180_76)
Elevation (m NAVD88)
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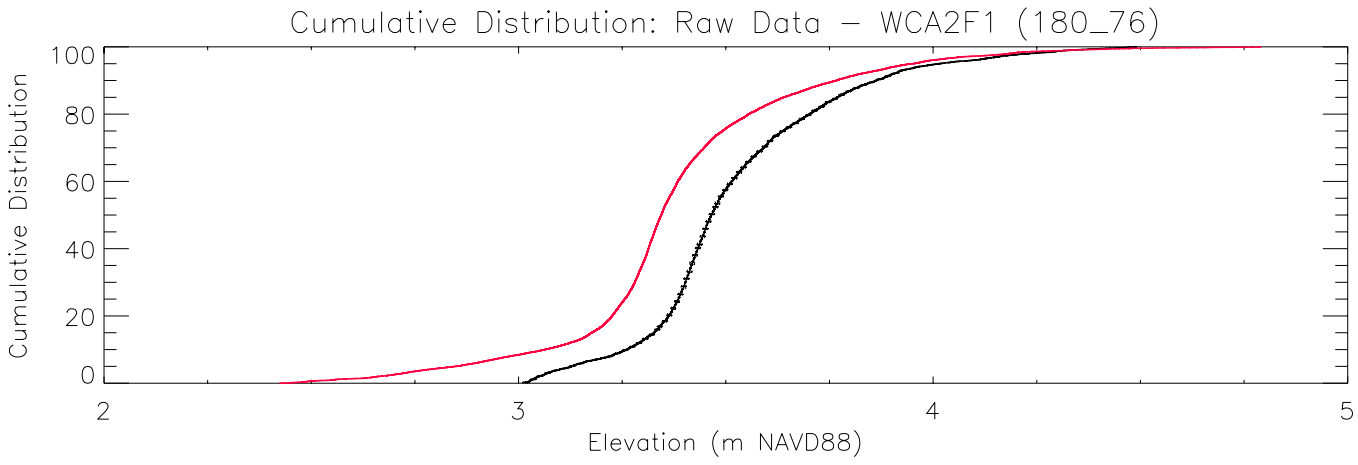
2004
2008
2012
Year


Cumulative Distribution: Raw Data – WCA2F1 (180_76)
Cumulative Distribution
100
80
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0
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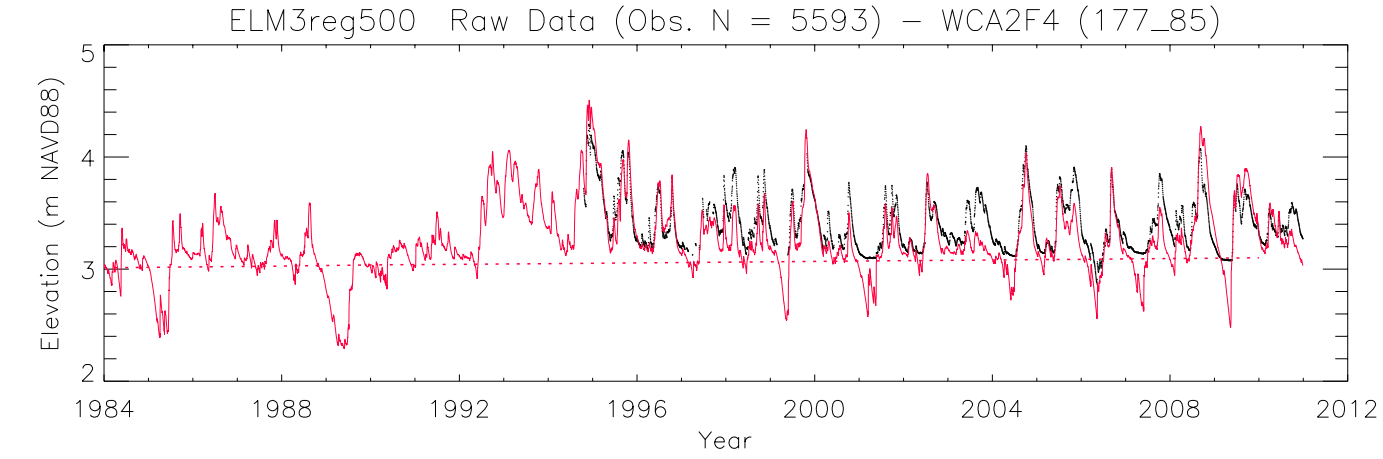
5
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 5593) – WCA2F4 (177_85)
Elevation (m NAVD88)
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4
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1988
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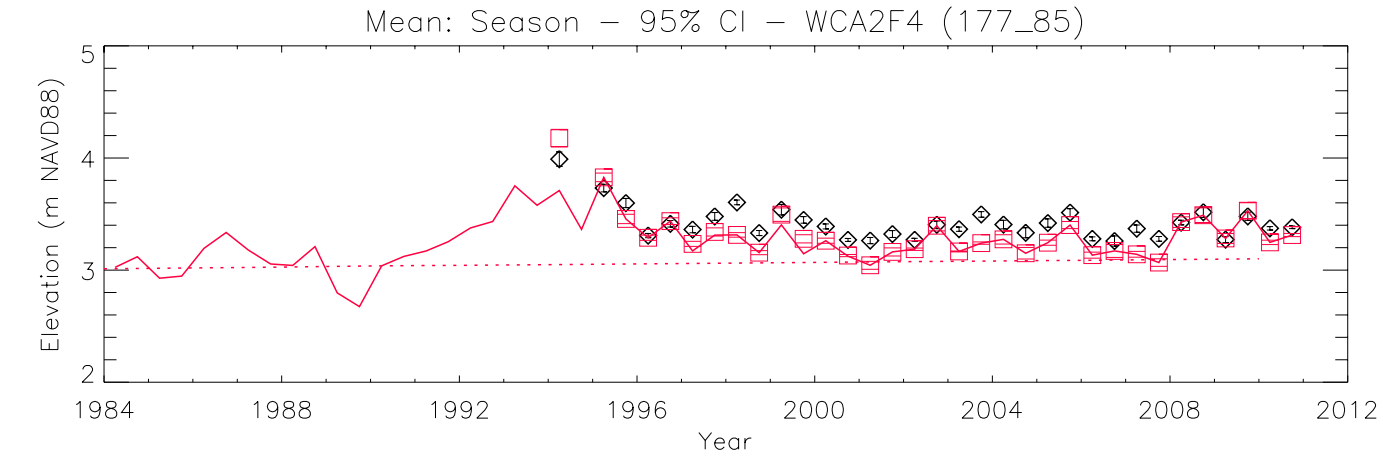
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – WCA2F4 (177_85)
Elevation (m NAVD88)
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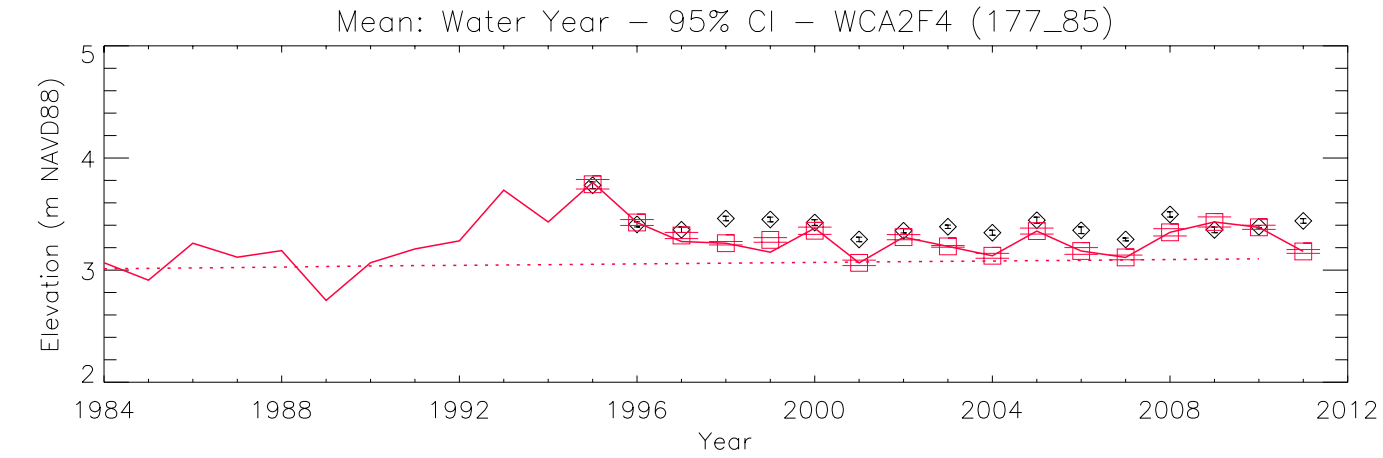
2008
2012
Year


Mean: Water Year – 95% CI – WCA2F4 (177_85)
Elevation (m NAVD88)
5
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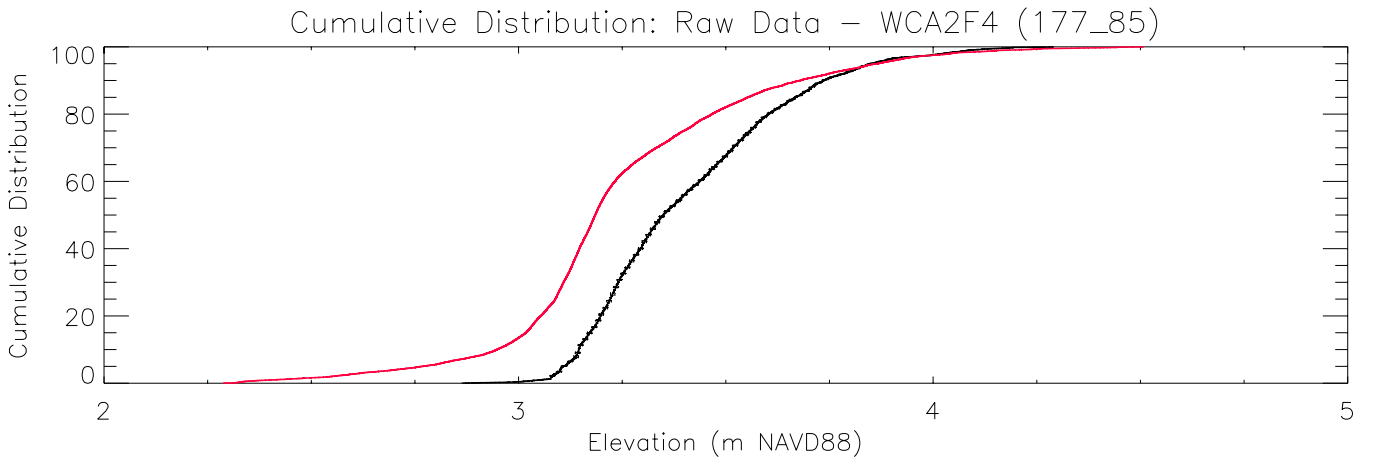
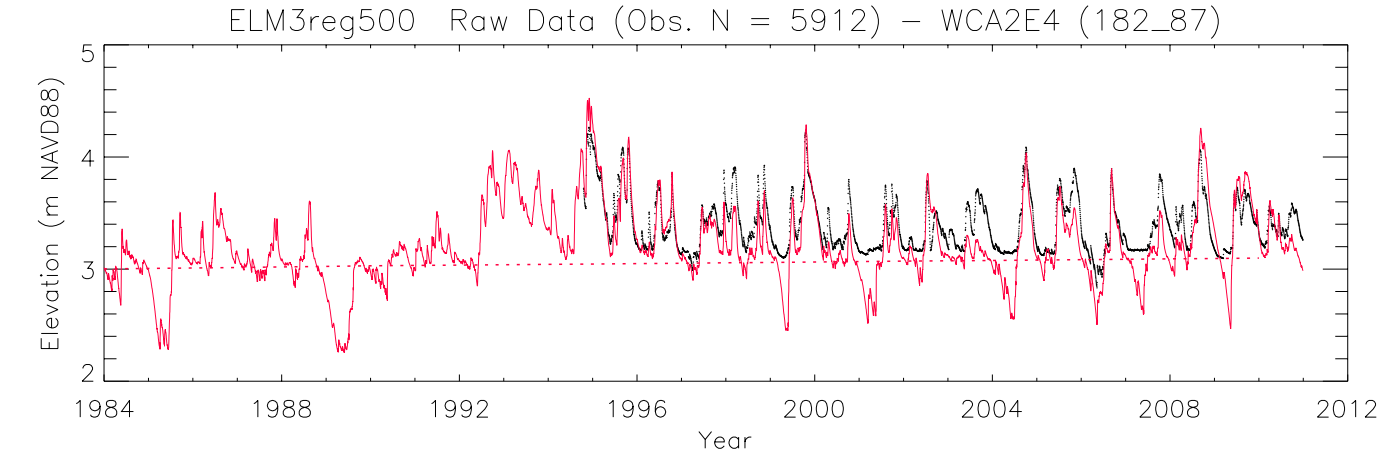
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – WCA2F4 (177_85)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 5912) – WCA2E4 (182_87)
Elevation (m NAVD88)
5
4
3
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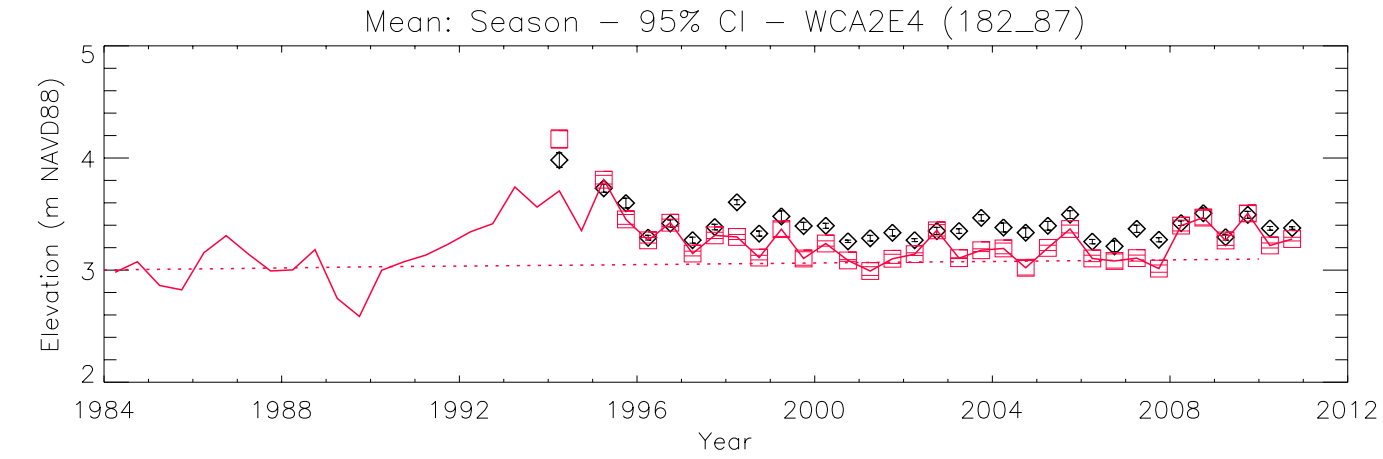
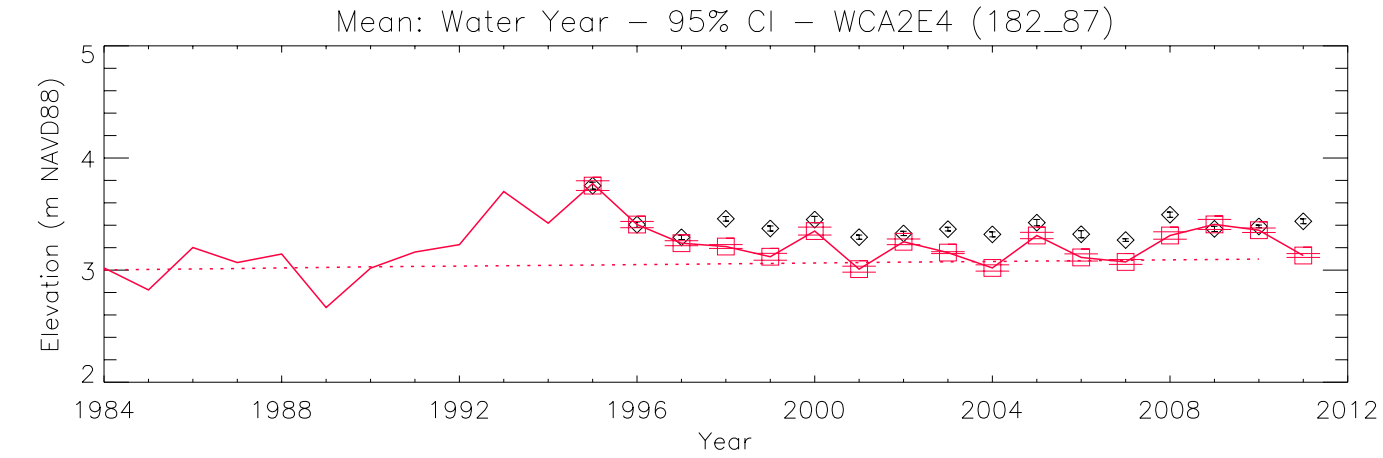
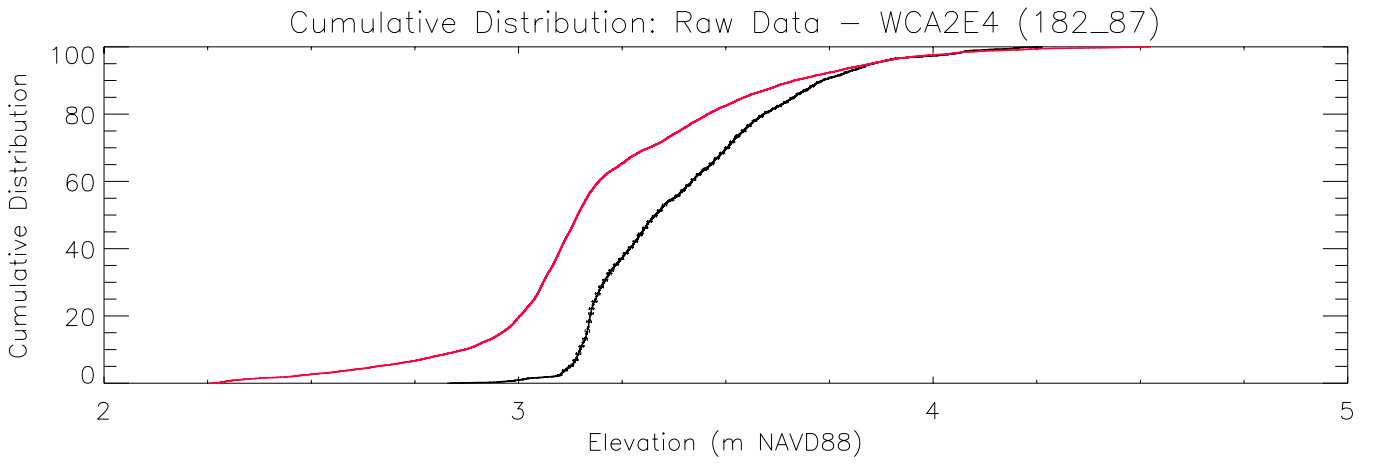
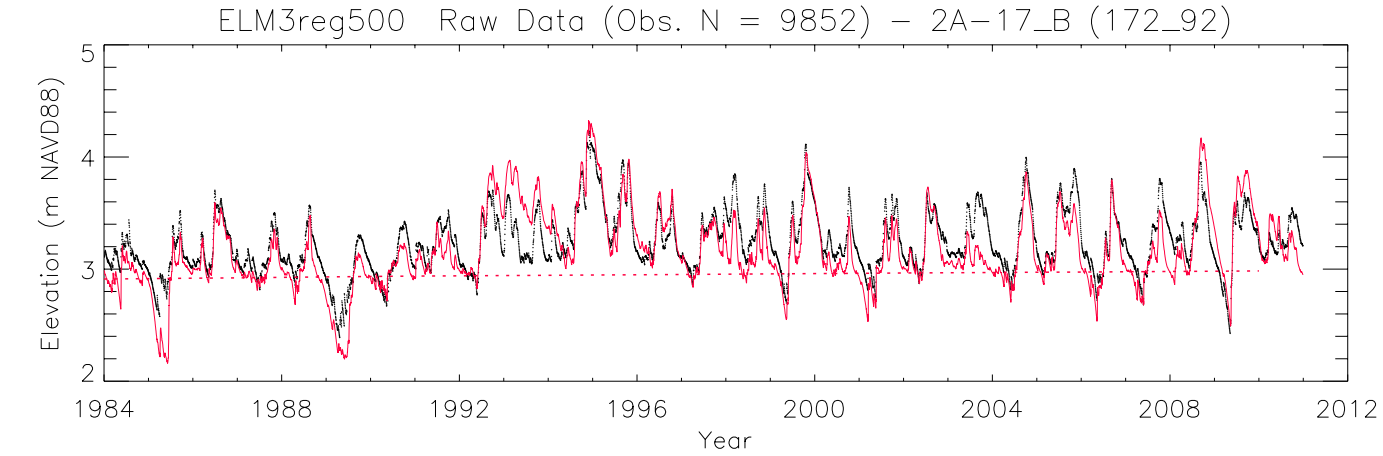
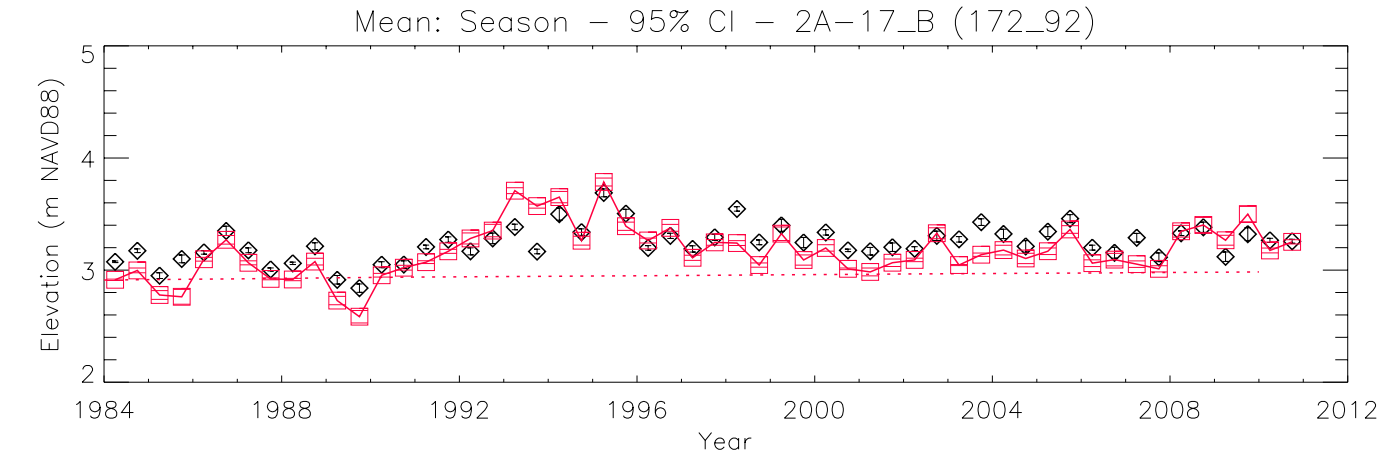
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – WCA2E4 (182_87)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – WCA2E4 (182_87)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – WCA2E4 (182_87)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9852) – 2A–17_B (172_92)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – 2A–17_B (172_92)
Elevation (m NAVD88)
5
4
3
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1984
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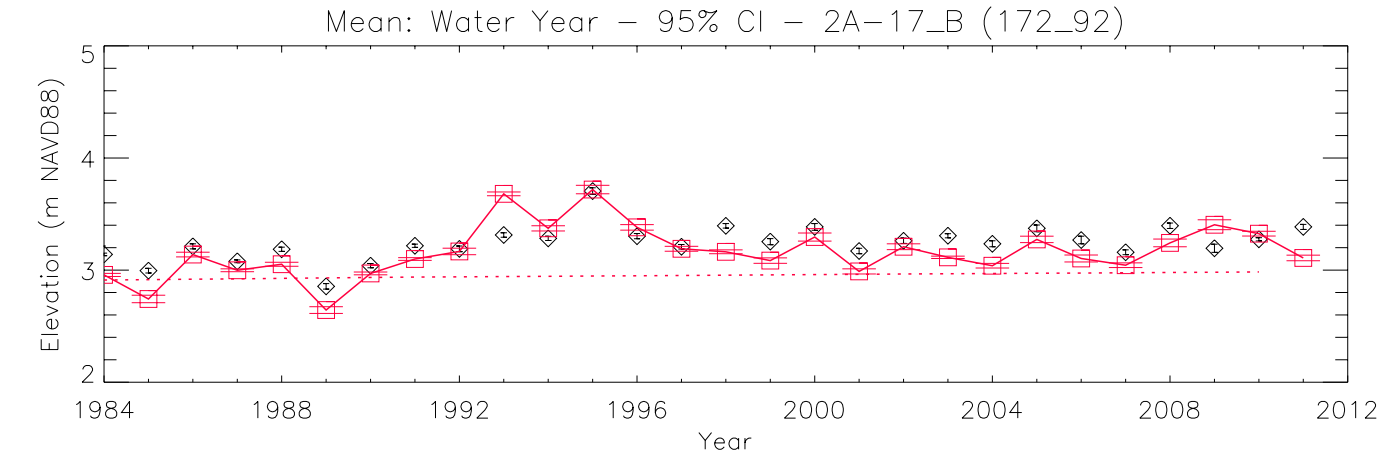
2004
2008
2012
Year


Mean: Water Year – 95% CI – 2A–17_B (172_92)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
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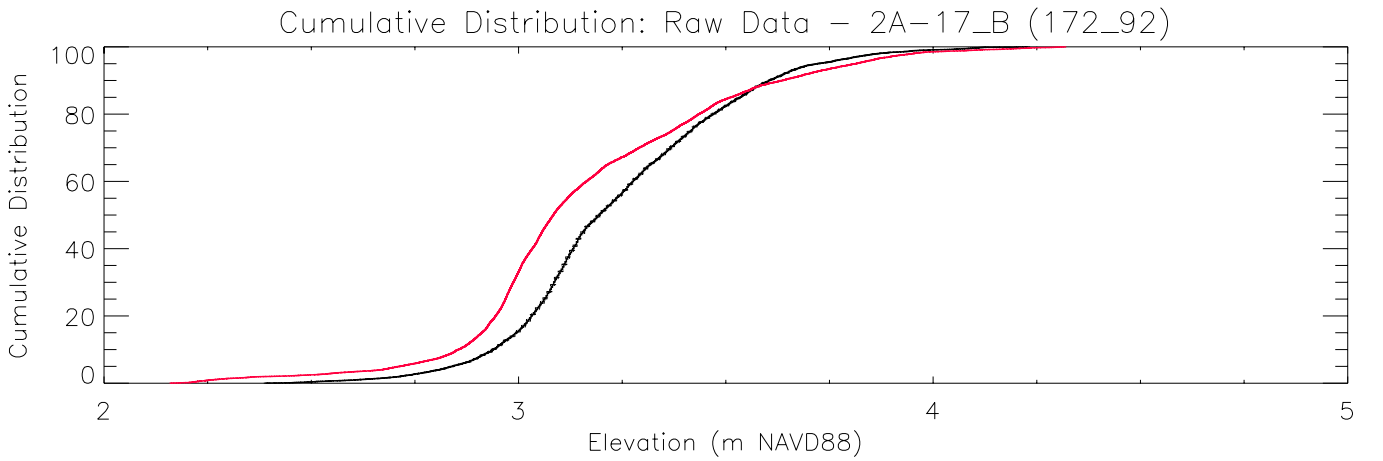
2004
2008
2012
Year


Cumulative Distribution: Raw Data – 2A–17_B (172_92)
Cumulative Distribution
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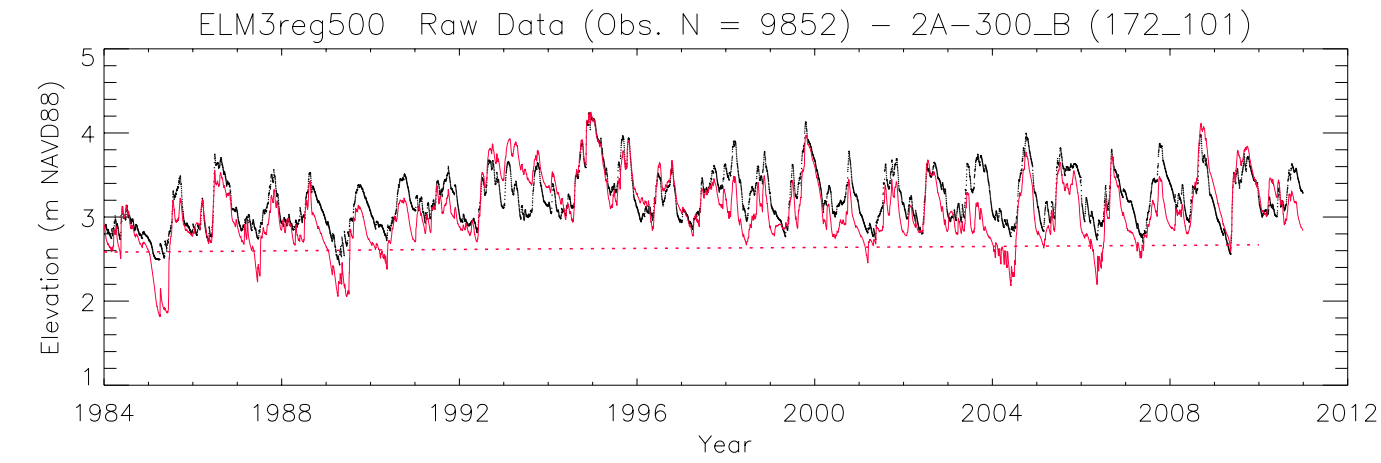
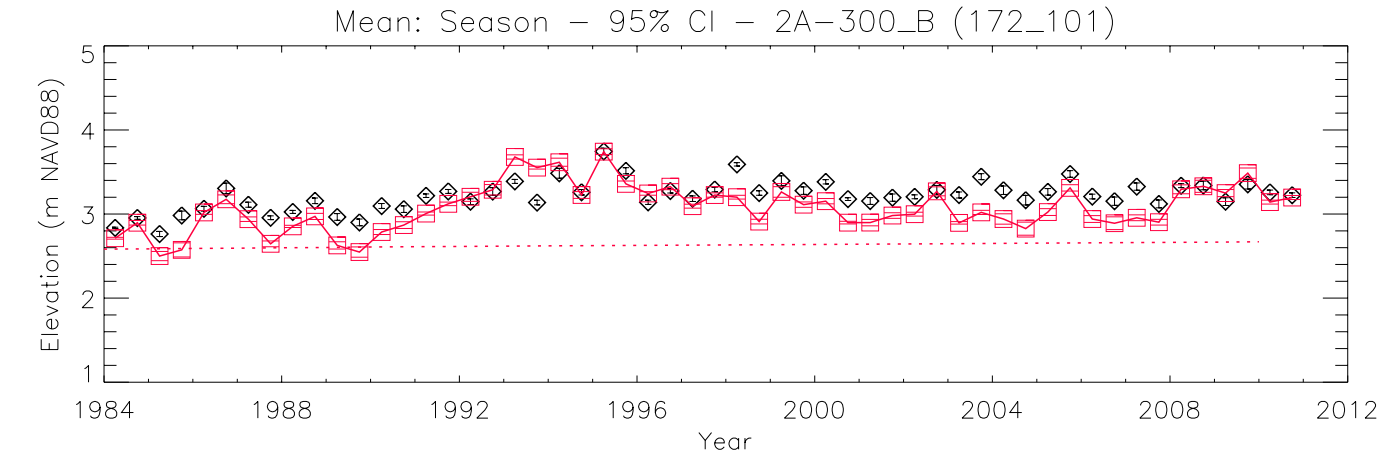
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9852) – 2A–300_B (172_101)
Elevation (m NAVD88)
Year
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012


Mean: Season – 95% CI – 2A–300_B (172_101)
Elevation (m NAVD88)
Year
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1984
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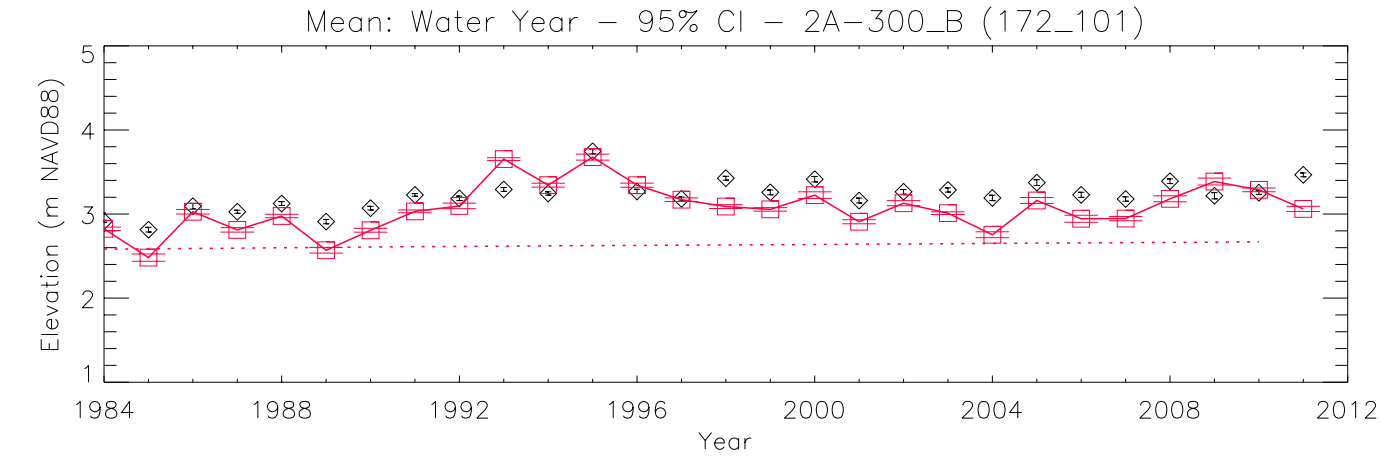
2008
2012


Mean: Water Year – 95% CI – 2A–300_B (172_101)
Elevation (m NAVD88)
Year
1
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4
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1984
1988
1992
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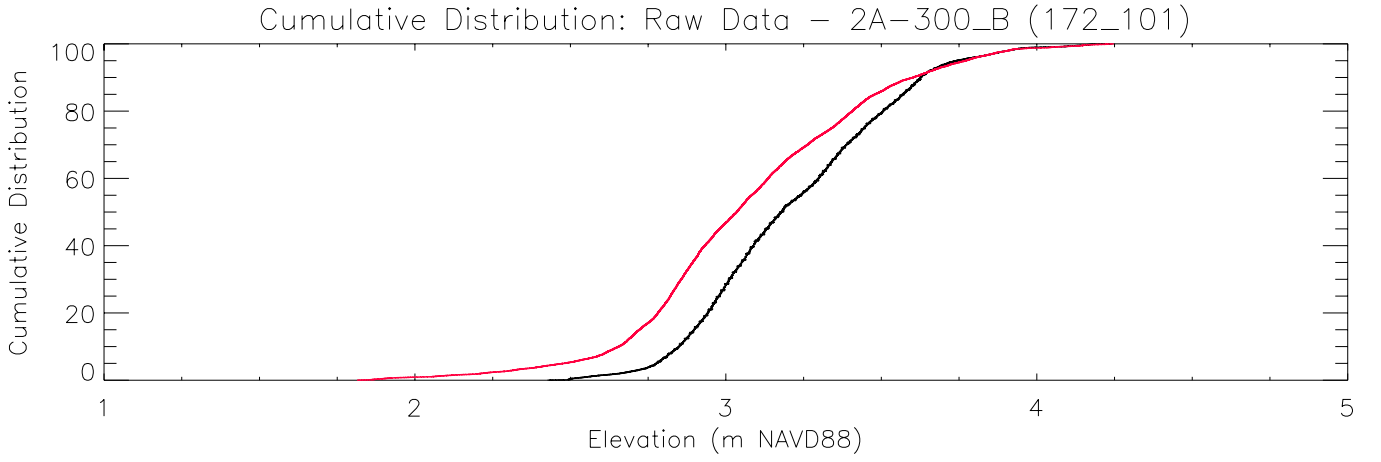
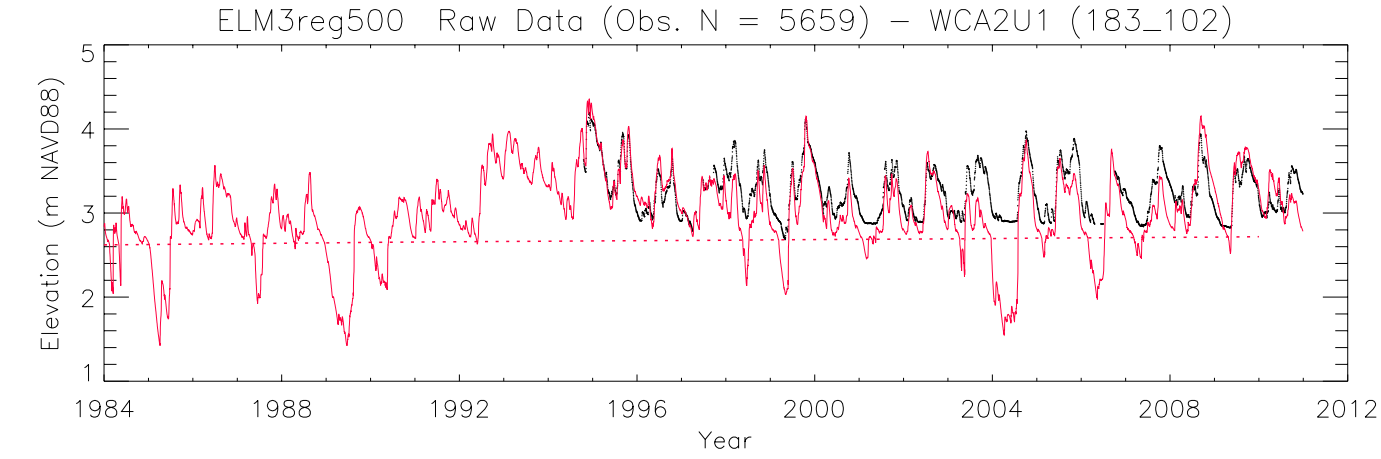
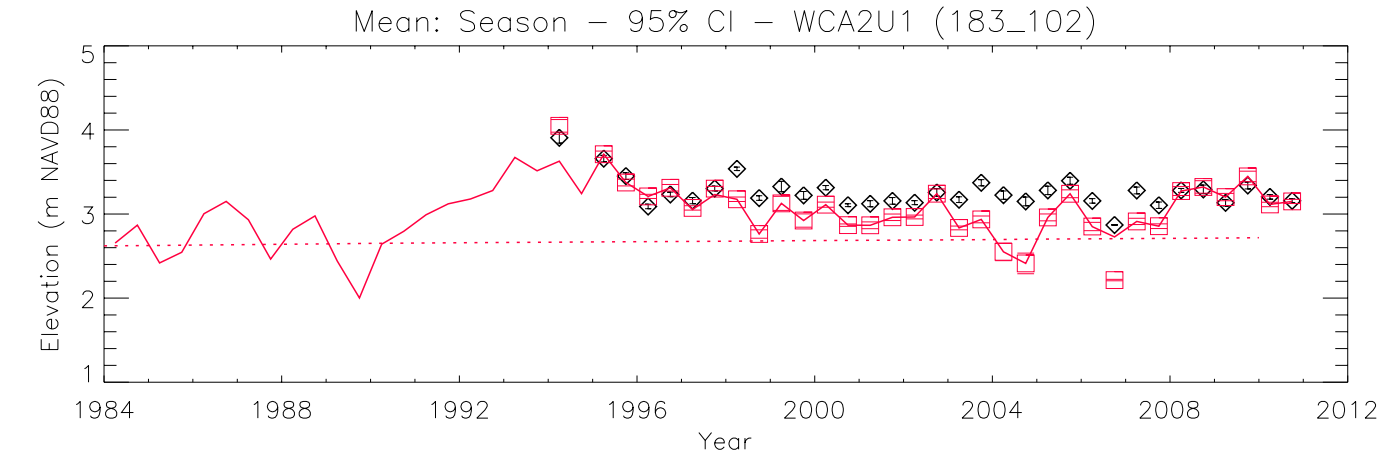
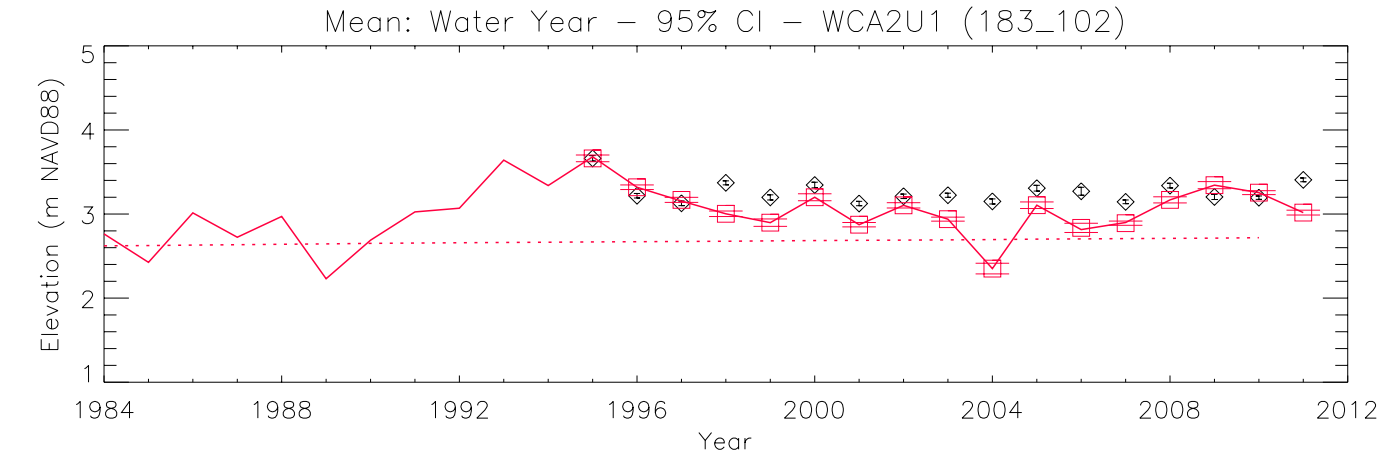
2000
2004
2008
2012


Cumulative Distribution: Raw Data – 2A–300_B (172_101)
Cumulative Distribution
Elevation (m NAVD88)
0
20
40
60
80
100
1
2
3
4
5


ELM3reg500 Raw Data (Obs. N = 5659) – WCA2U1 (183_102)
Elevation (m NAVD88)
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – WCA2U1 (183_102)
Elevation (m NAVD88)
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – WCA2U1 (183_102)
Elevation (m NAVD88)
1
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4
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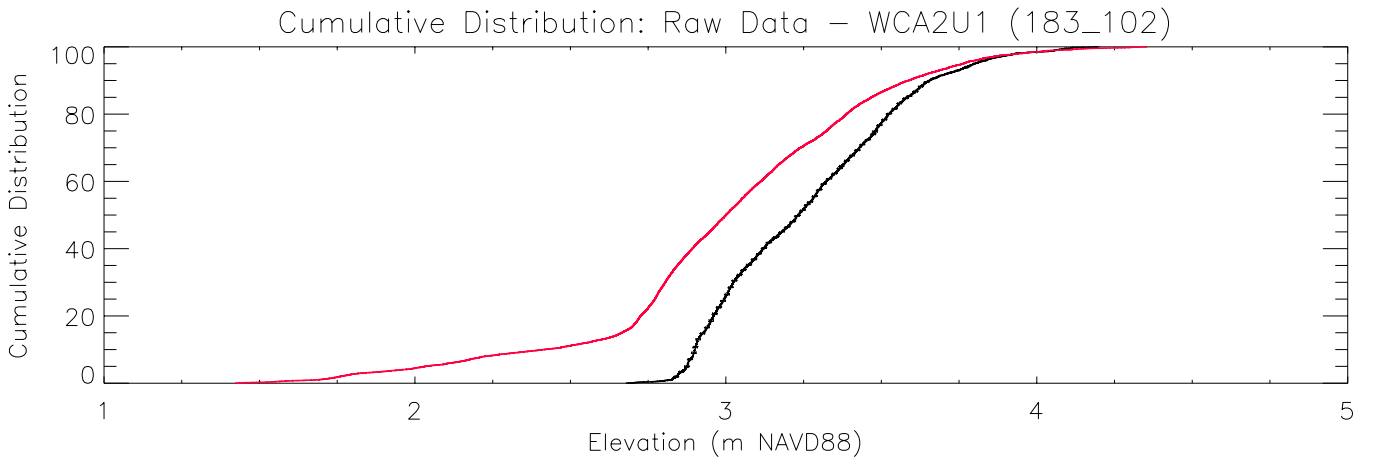
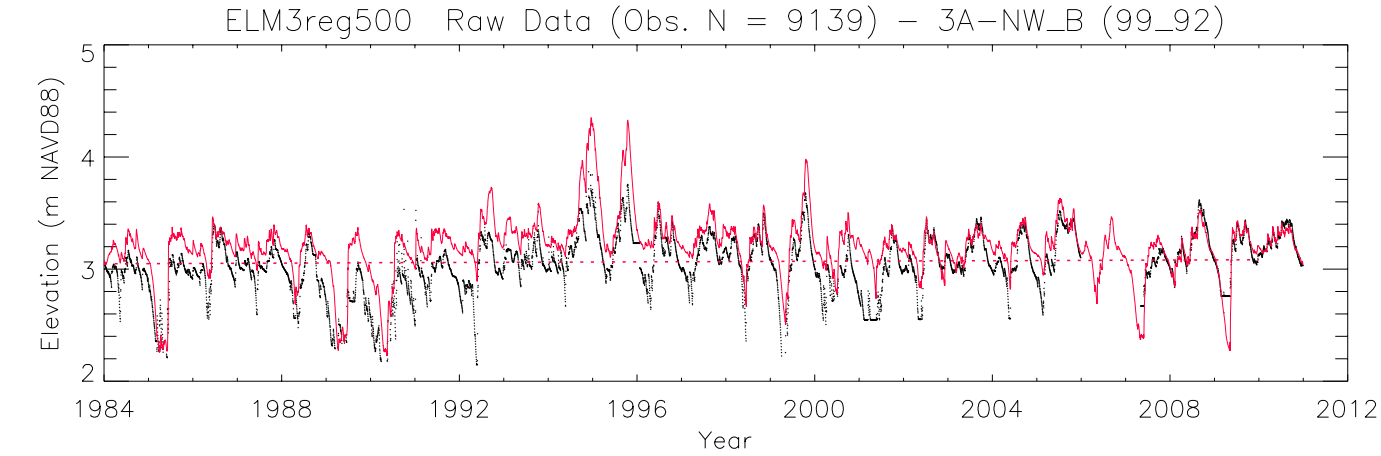
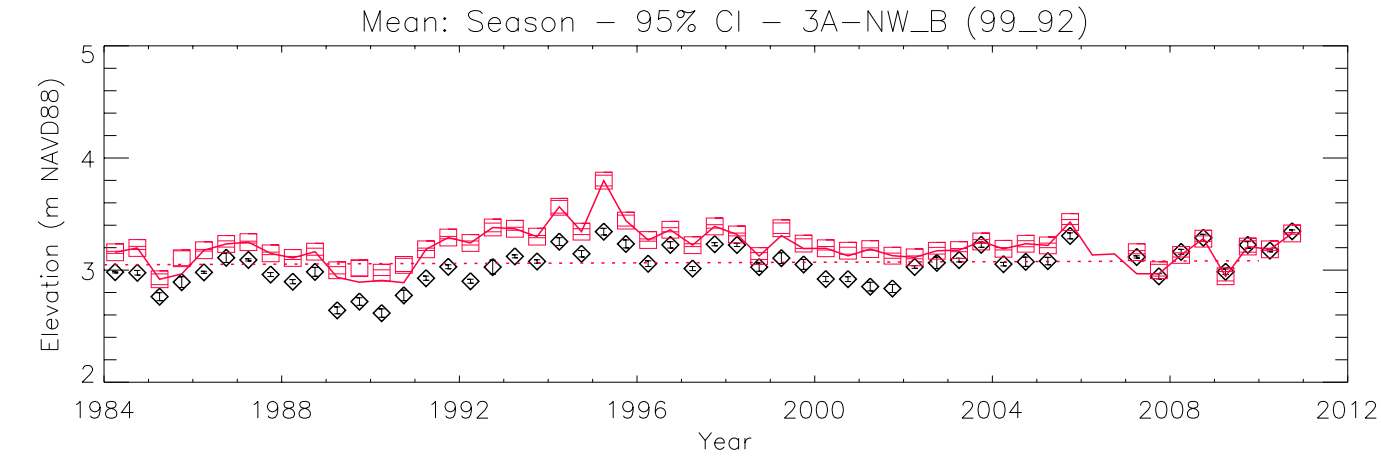
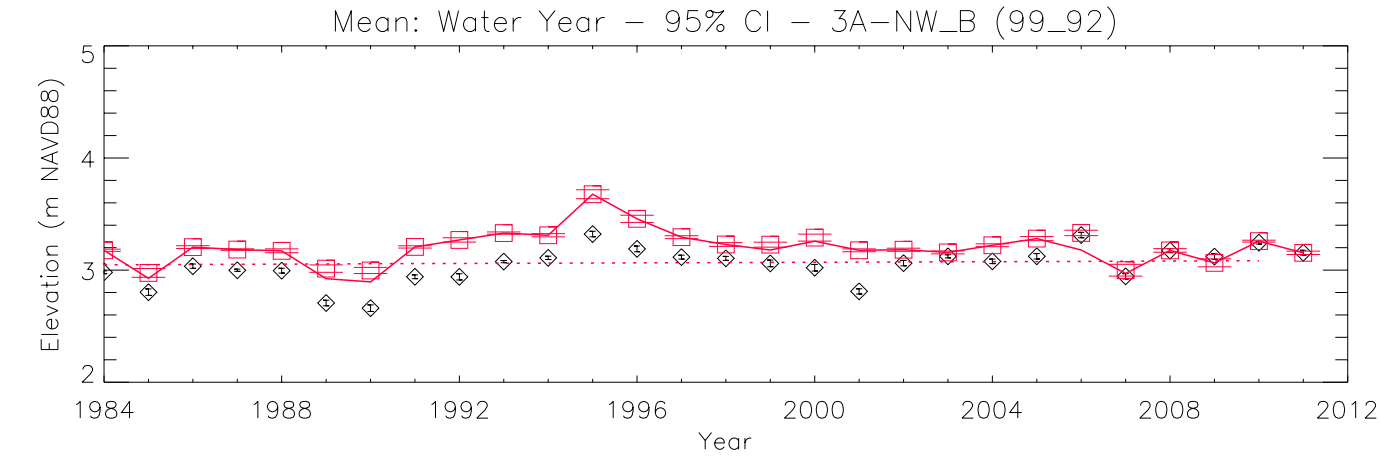
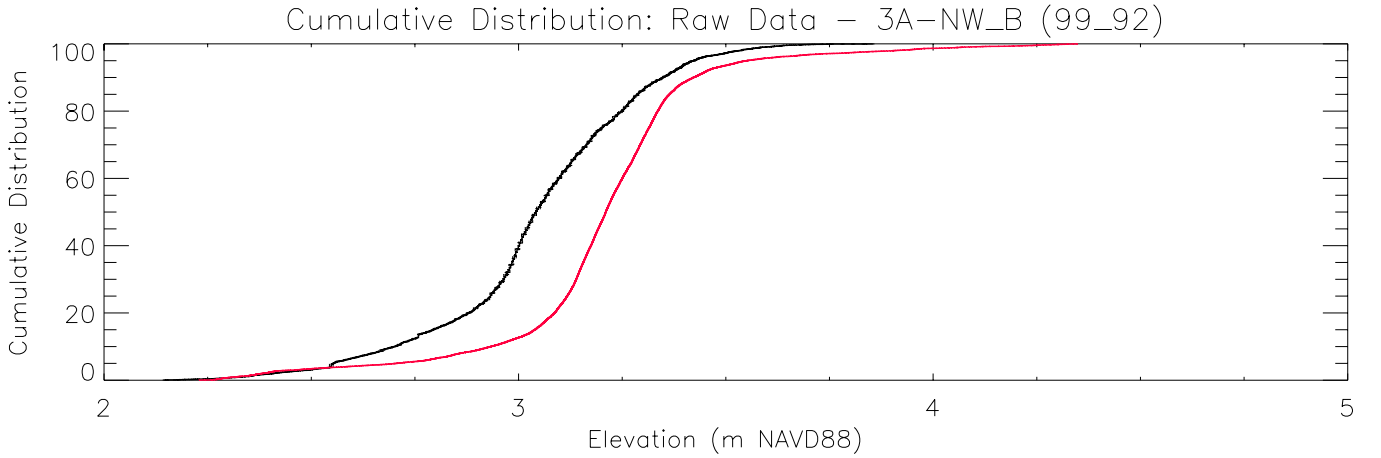
1984
1988
1992
1996
2000
2004
2008
2012
Year

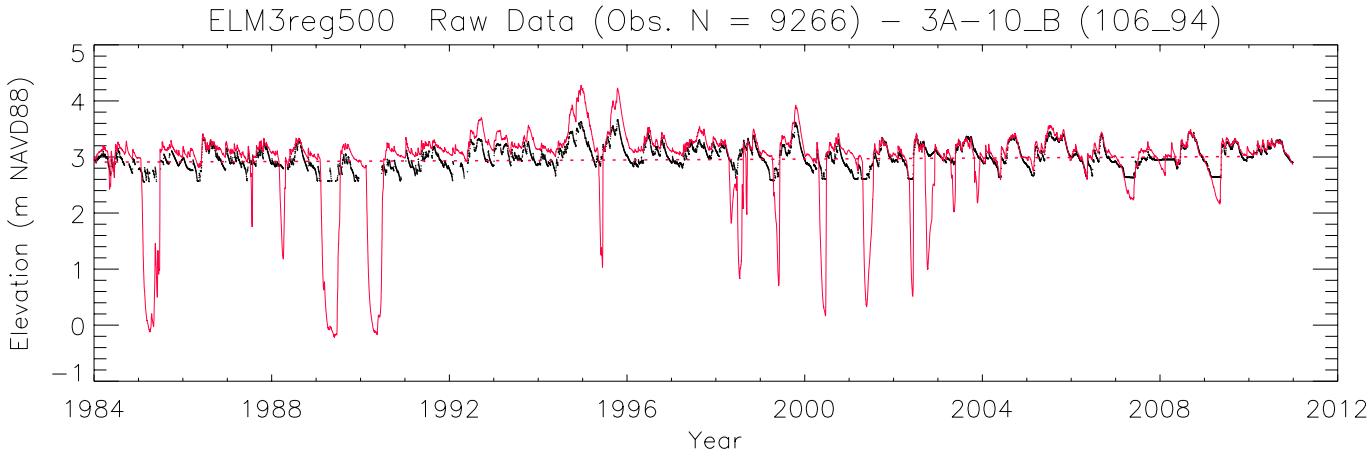

Cumulative Distribution: Raw Data – WCA2U1 (183_102)
Cumulative Distribution
0
20
40
60
80
100
1
2
3
4
5
Elevation (m NAVD88)

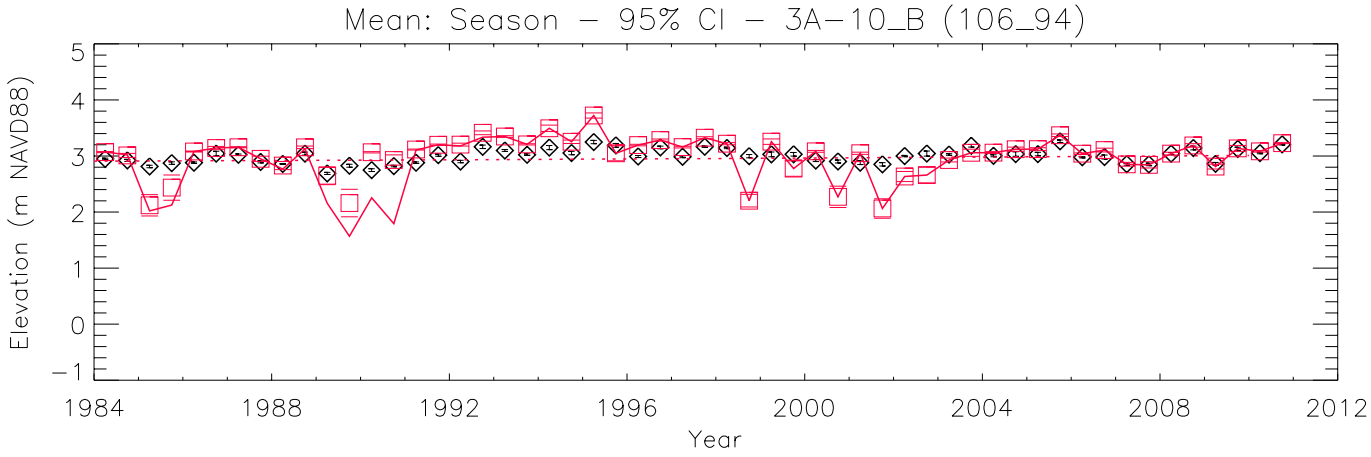

ELM3reg500 Raw Data (Obs. N = 9139) – 3A–NW_B (99_92)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

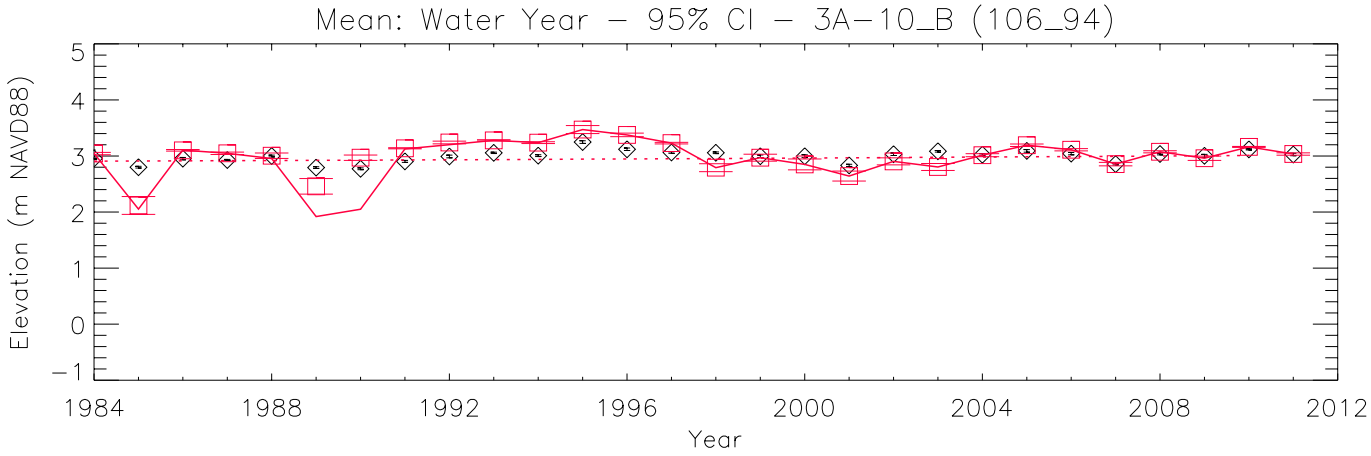

Mean: Season – 95% CI – 3A–NW_B (99_92)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

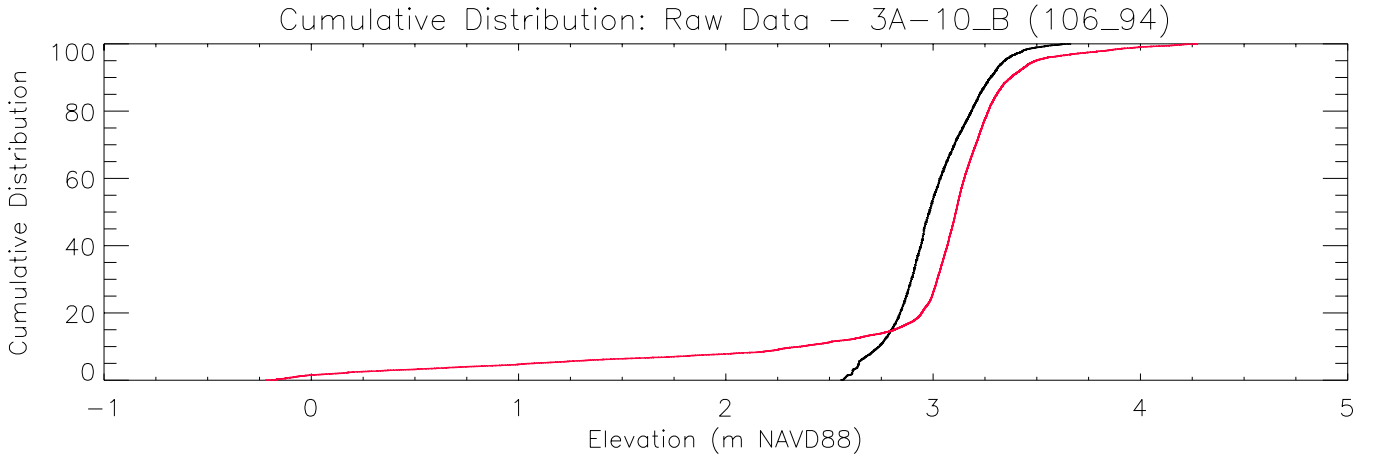

Mean: Water Year – 95% CI – 3A–NW_B (99_92)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

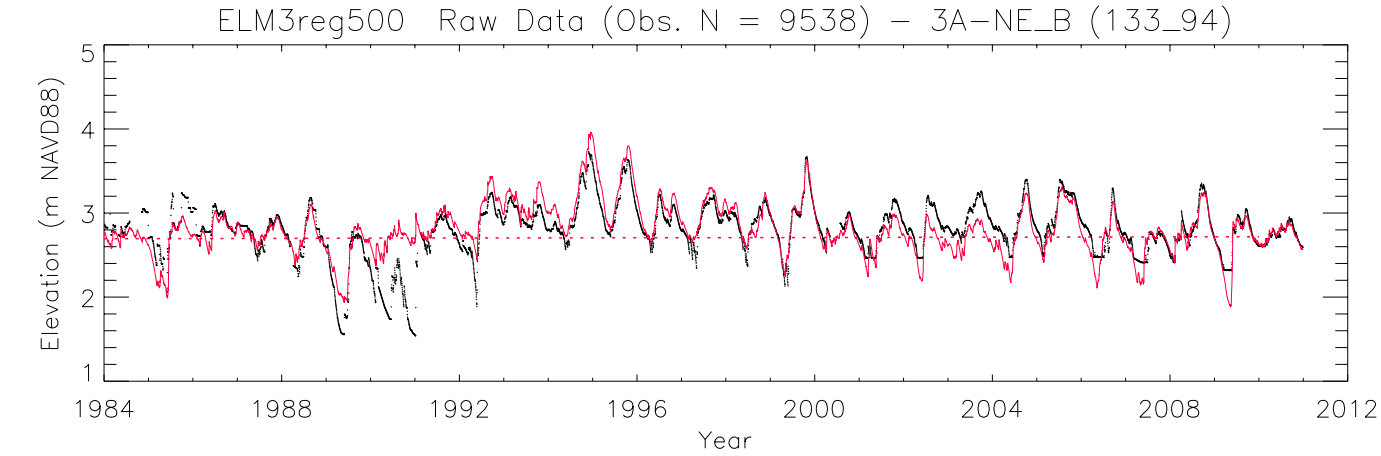

Cumulative Distribution: Raw Data – 3A–NW_B (99_92)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)

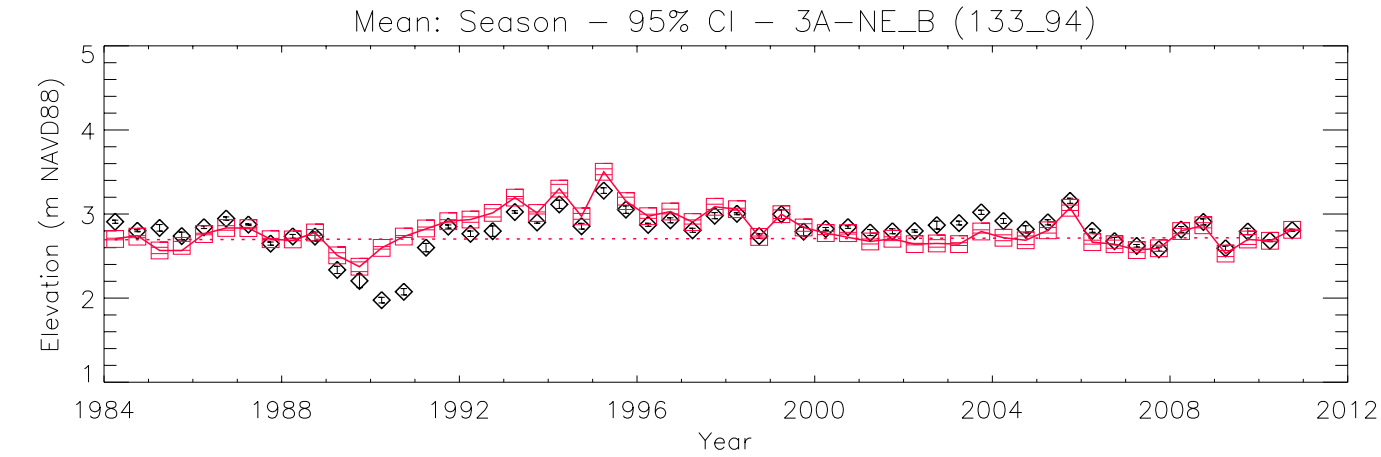

ELM3reg500 Raw Data (Obs. N = 9266) – 3A–10_B (106_94)
Elevation (m NAVD88)
5
4
3
2
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

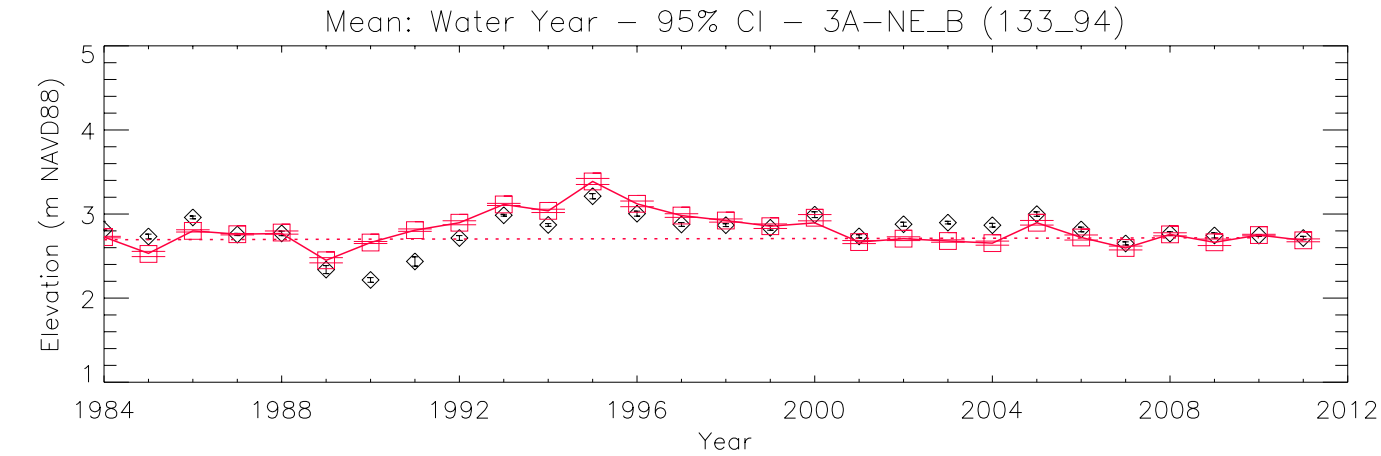

Mean: Season – 95% CI – 3A–10_B (106_94)
Elevation (m NAVD88)
5
4
3
2
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

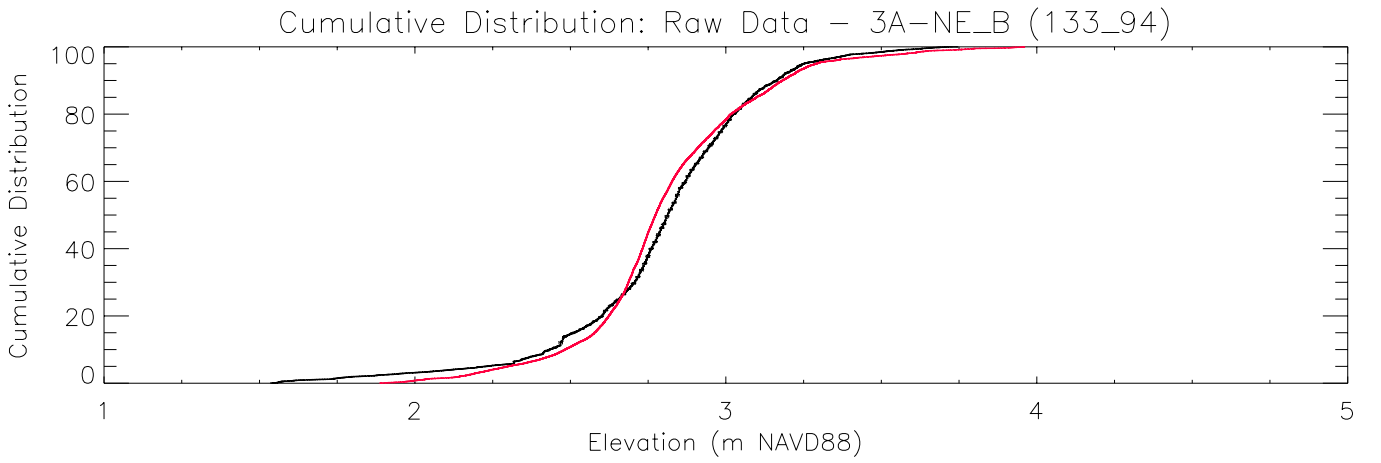

Mean: Water Year – 95% CI – 3A–10_B (106_94)
Elevation (m NAVD88)
5
4
3
2
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

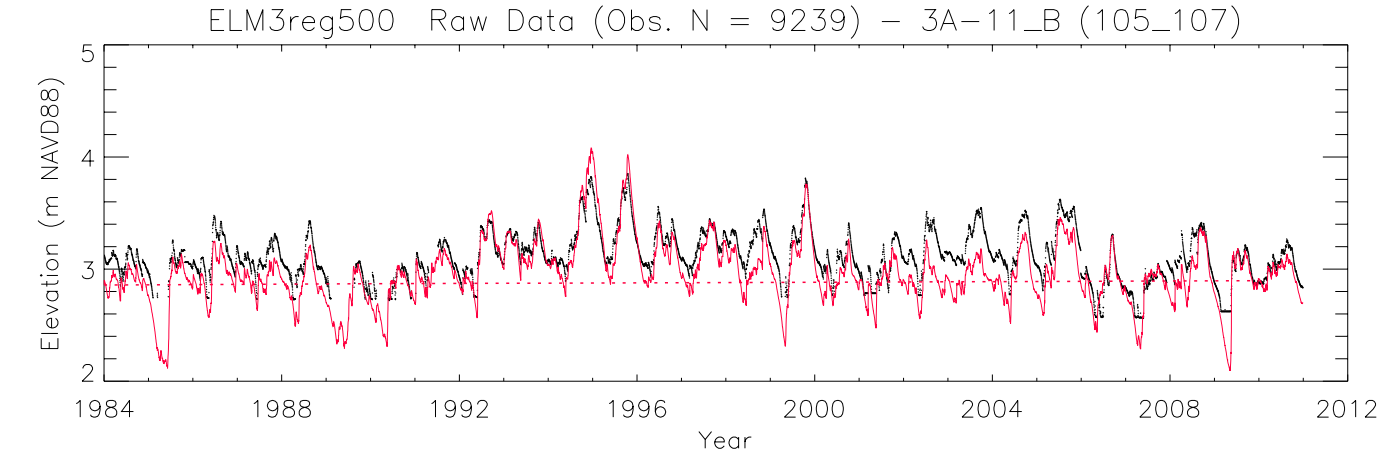

Cumulative Distribution: Raw Data – 3A–10_B (106_94)
Cumulative Distribution
100
80
60
40
20
0
–1
0
1
2
3
4
5
Elevation (m NAVD88)

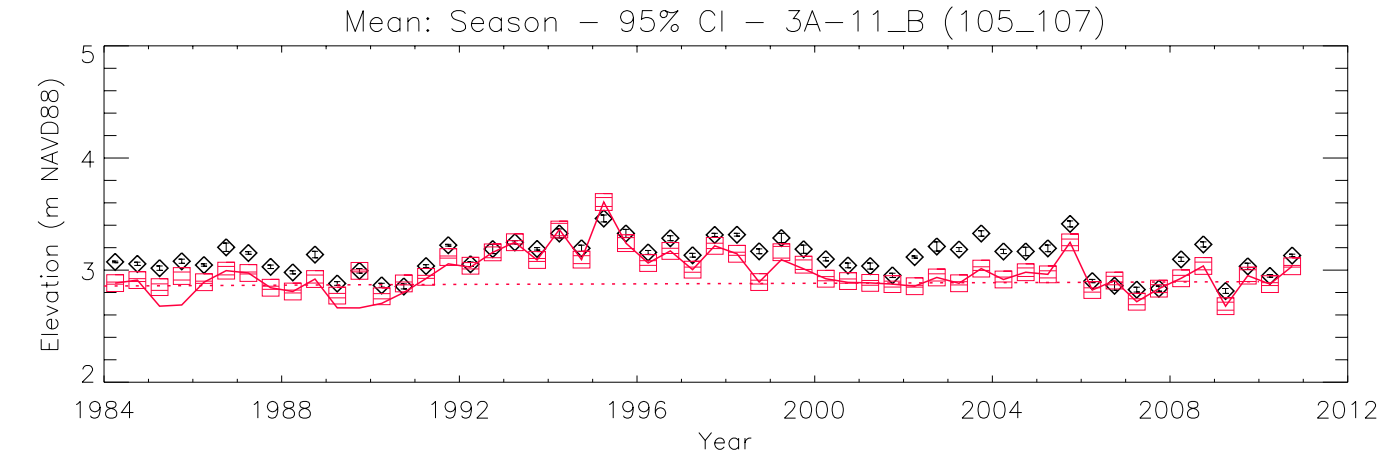

ELM3reg500 Raw Data (Obs. N = 9538) – 3A–NE_B (133_94)
Elevation (m NAVD88)
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012
Year

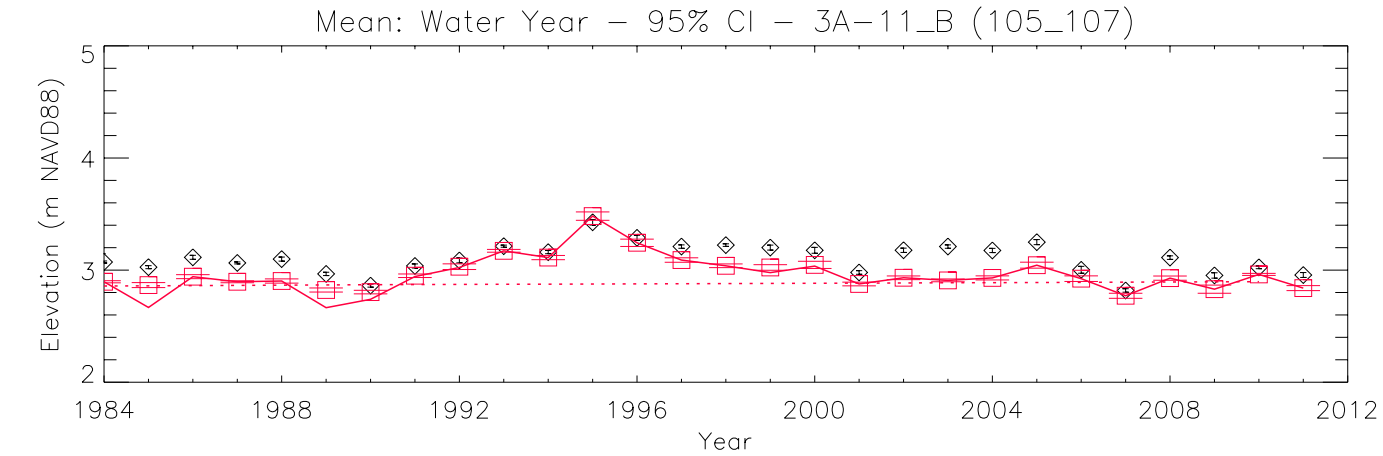

Mean: Season – 95% CI – 3A–NE_B (133_94)
Elevation (m NAVD88)
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012
Year

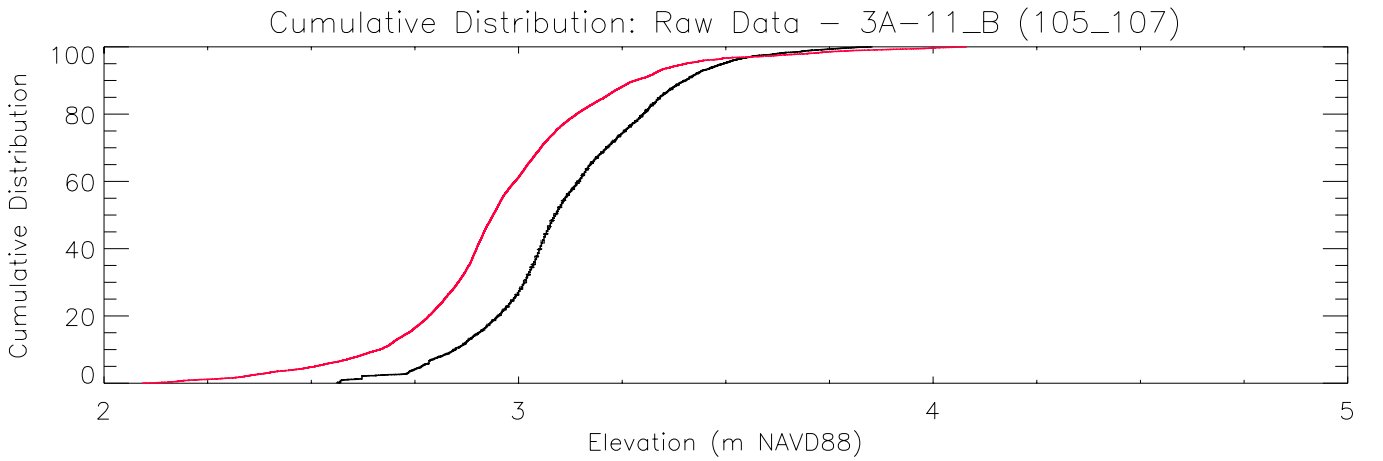

Mean: Water Year – 95% CI – 3A–NE_B (133_94)
Elevation (m NAVD88)
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012
Year

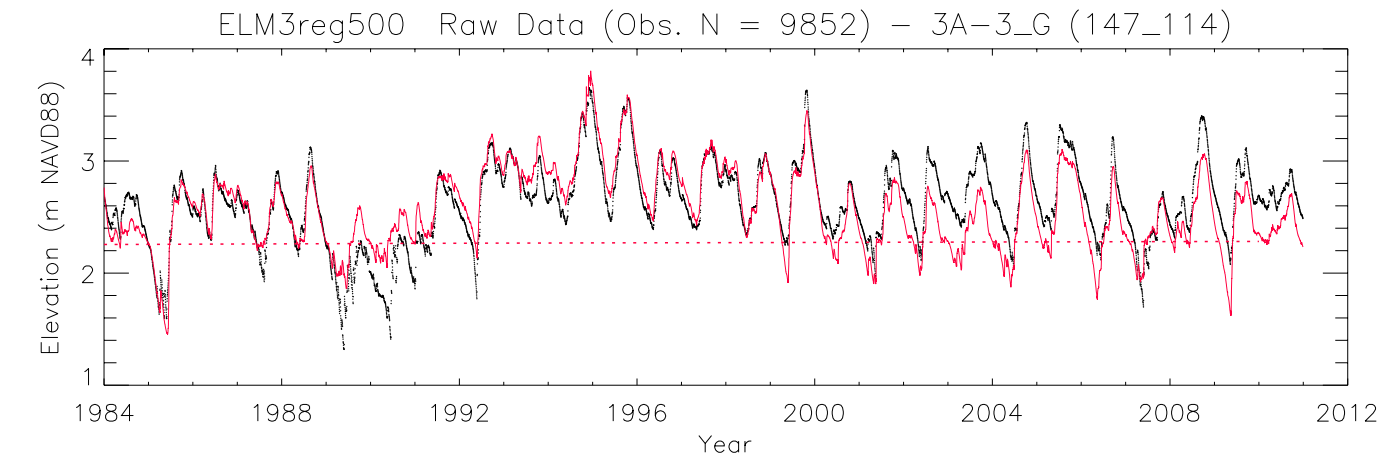

Cumulative Distribution: Raw Data – 3A–NE_B (133_94)
Cumulative Distribution
0
20
40
60
80
100
1
2
3
4
5
Elevation (m NAVD88)

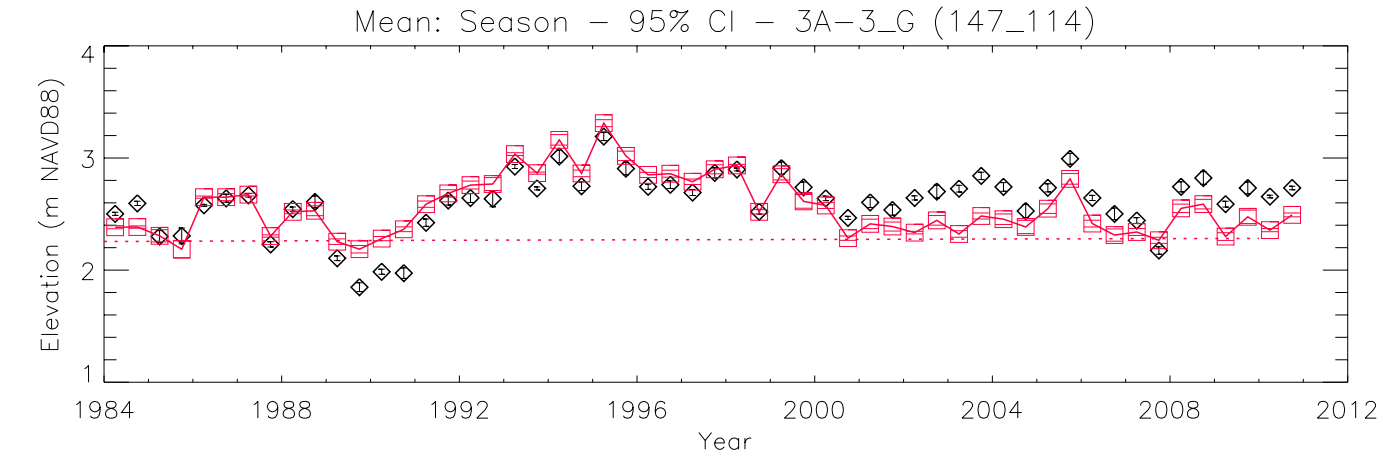

ELM3reg500 Raw Data (Obs. N = 9239) – 3A–11_B (105_107)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

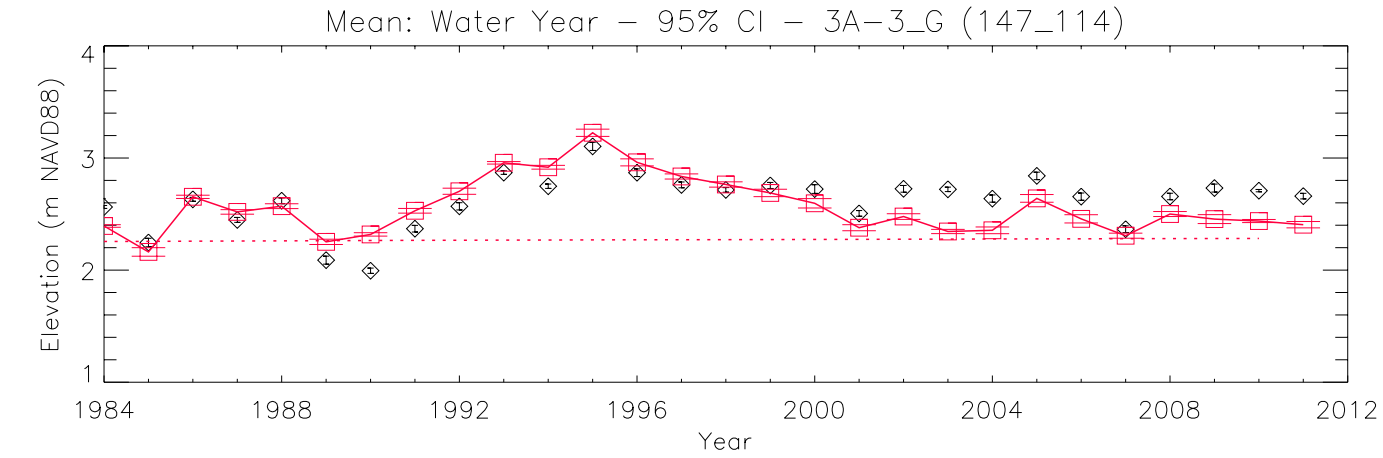

Mean: Season – 95% CI – 3A–11_B (105_107)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

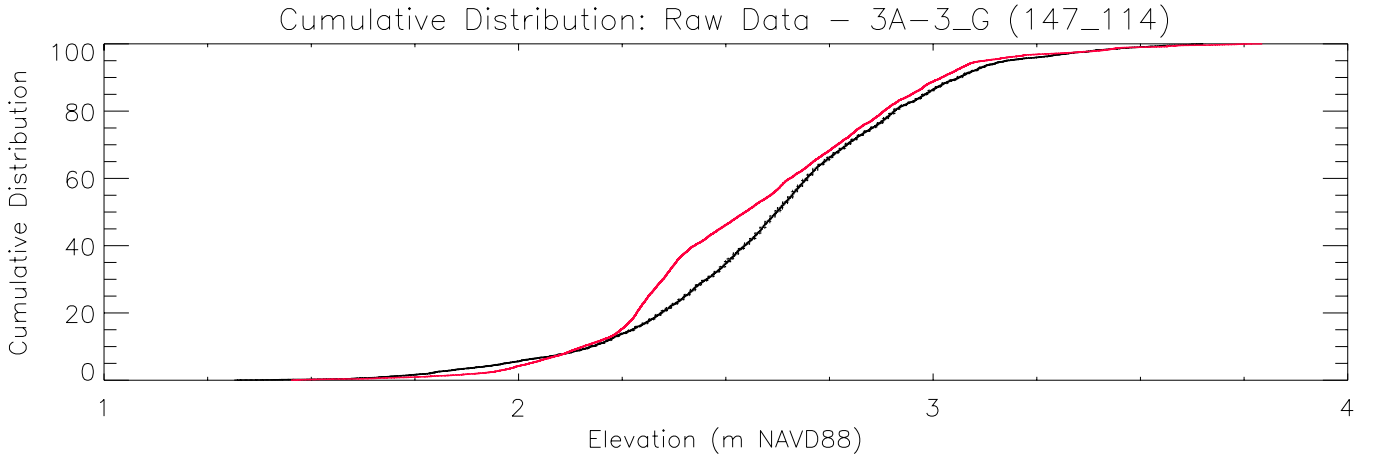

Mean: Water Year – 95% CI – 3A–11_B (105_107)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

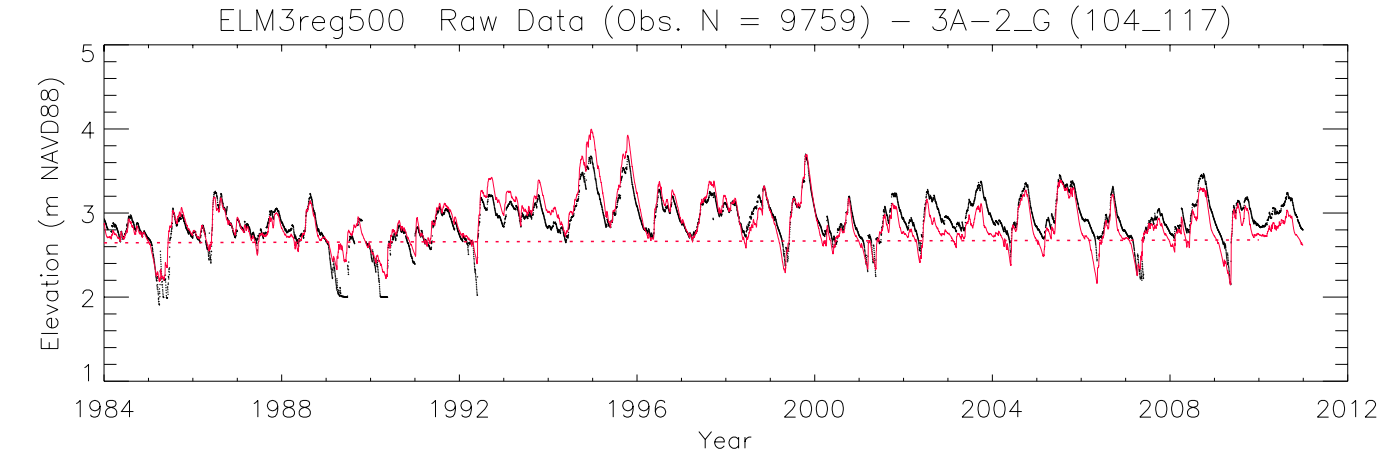

Cumulative Distribution: Raw Data – 3A–11_B (105_107)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)

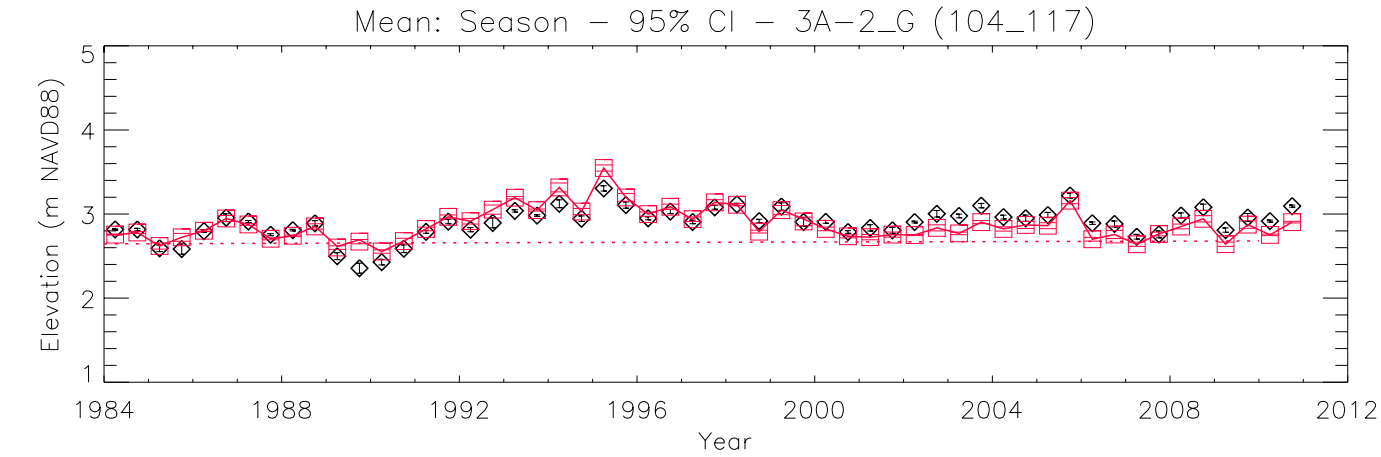

ELM3reg500 Raw Data (Obs. N = 9852) – 3A–3_G (147_114)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

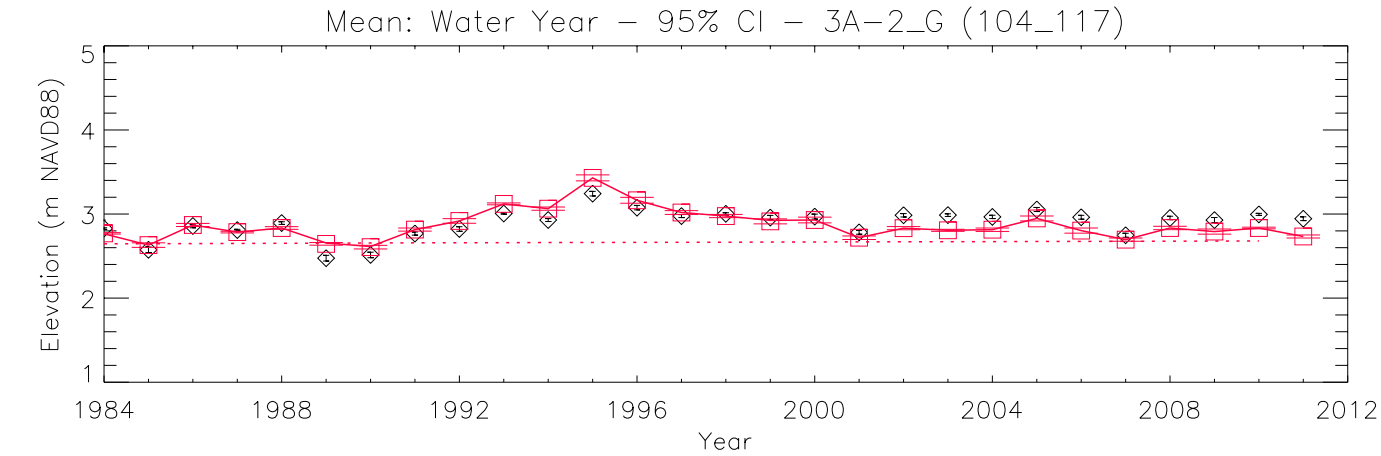

Mean: Season – 95% CI – 3A–3_G (147_114)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

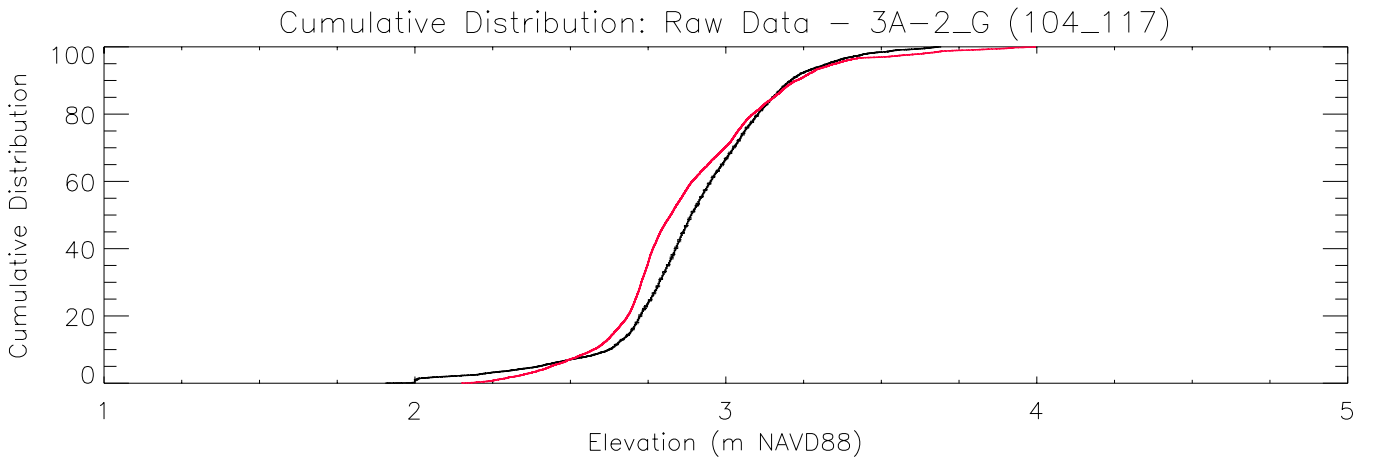

Mean: Water Year – 95% CI – 3A–3_G (147_114)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

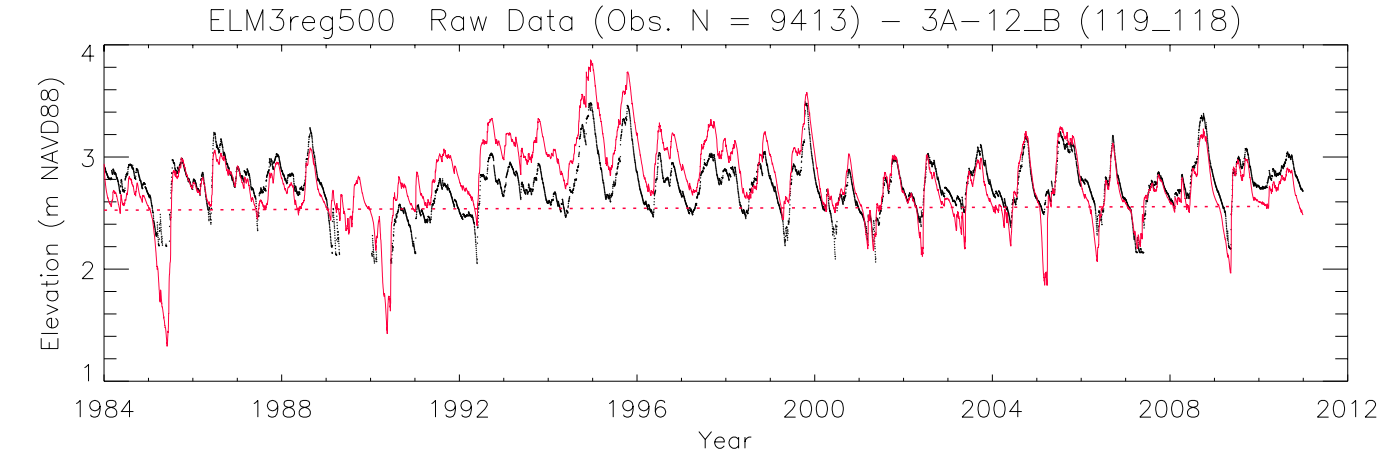

Cumulative Distribution: Raw Data – 3A–3_G (147_114)
Cumulative Distribution
Elevation (m NAVD88)
0
20
40
60
80
100
1
2
3
4

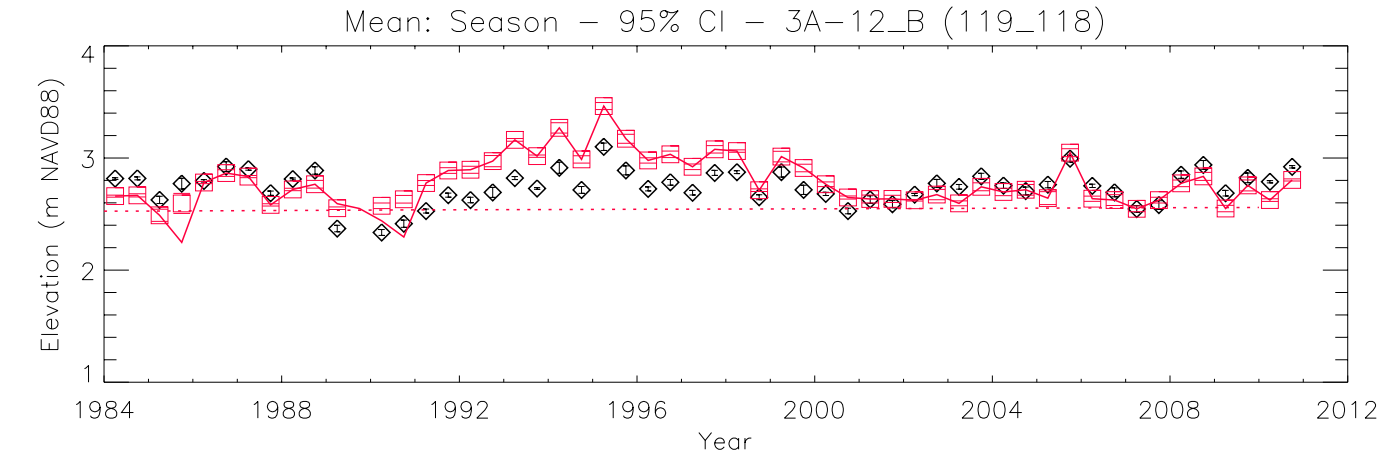

ELM3reg500 Raw Data (Obs. N = 9759) – 3A–2_G (104_117)
Elevation (m NAVD88)
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012
Year

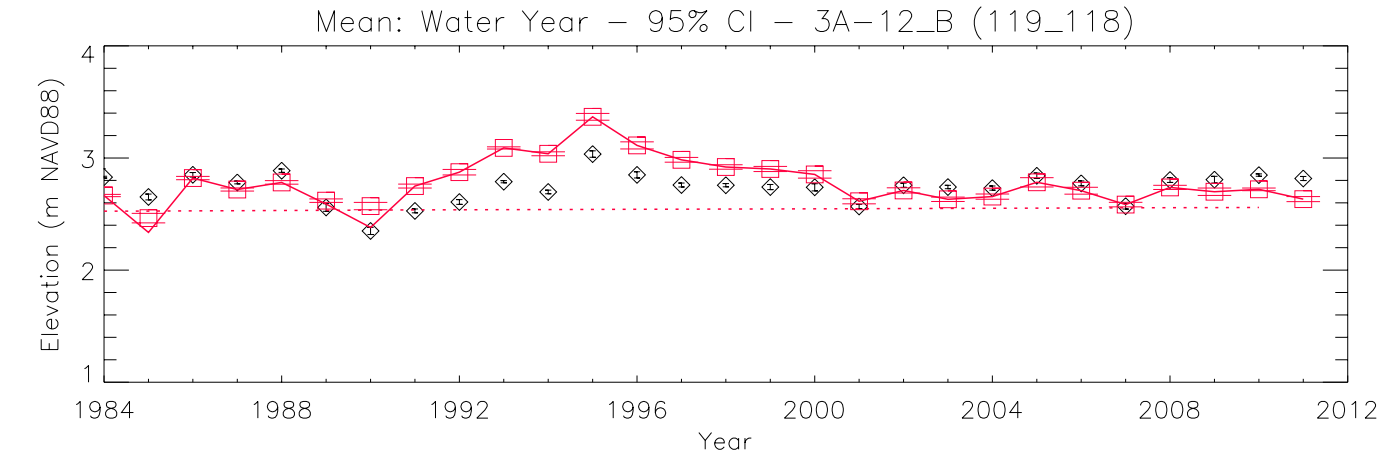

Mean: Season – 95% CI – 3A–2_G (104_117)
Elevation (m NAVD88)
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012
Year

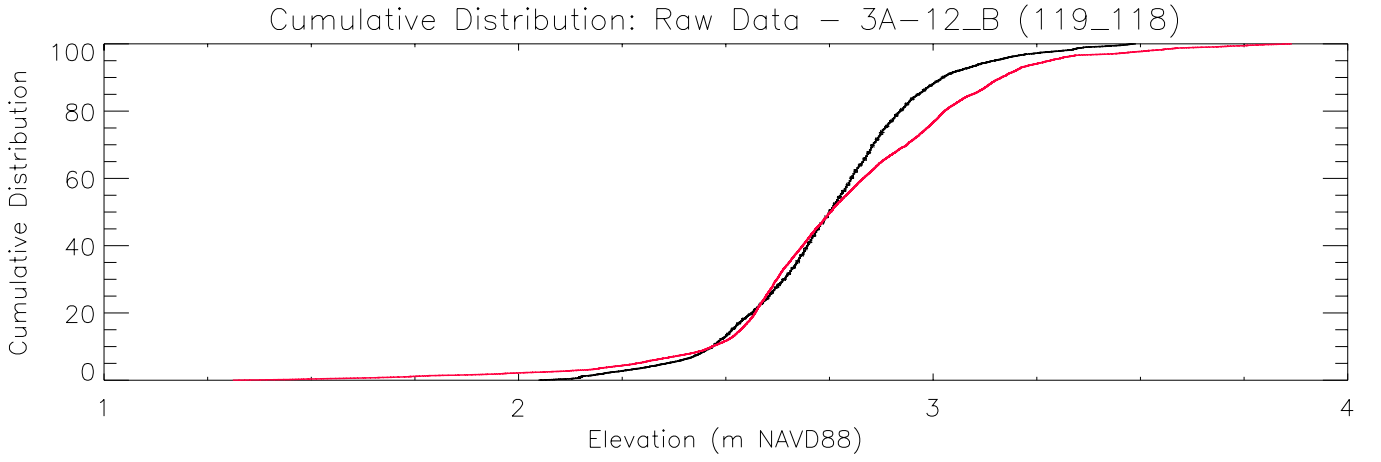

Mean: Water Year – 95% CI – 3A–2_G (104_117)
Elevation (m NAVD88)
1
2
3
4
5
1984
1988
1992
1996
2000
2004
2008
2012
Year

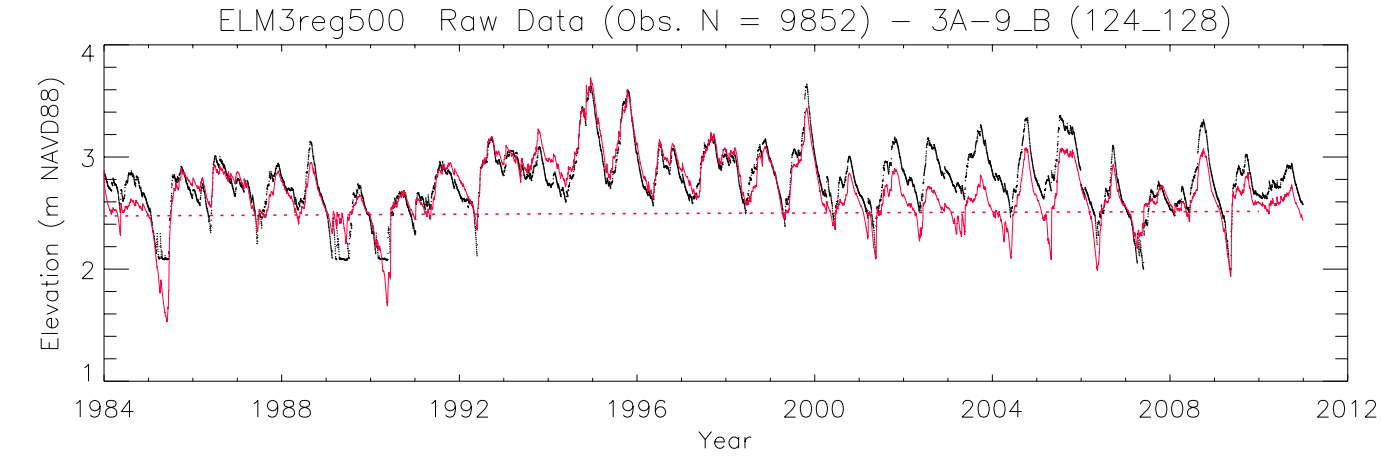

Cumulative Distribution: Raw Data – 3A–2_G (104_117)
Cumulative Distribution
0
20
40
60
80
100
1
2
3
4
5
Elevation (m NAVD88)

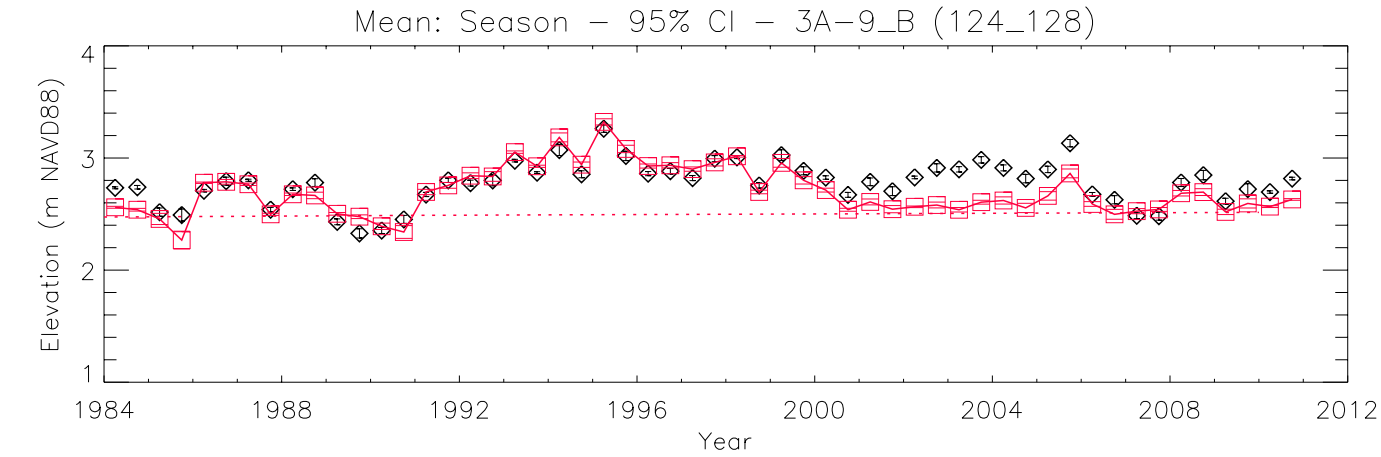

ELM3reg500 Raw Data (Obs. N = 9413) – 3A–12_B (119_118)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

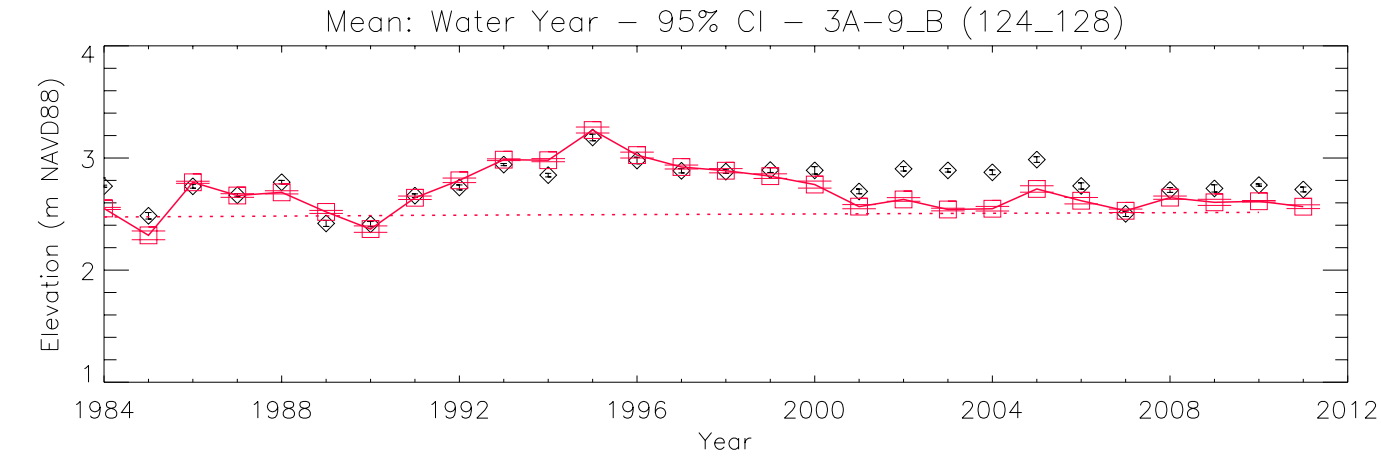

Mean: Season – 95% CI – 3A–12_B (119_118)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

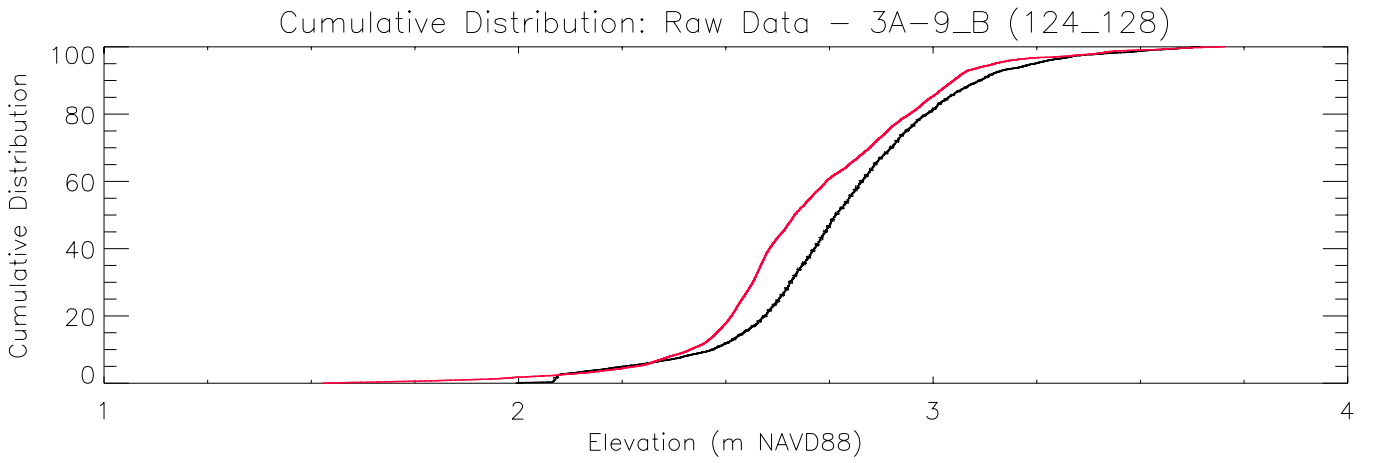

Mean: Water Year – 95% CI – 3A–12_B (119_118)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

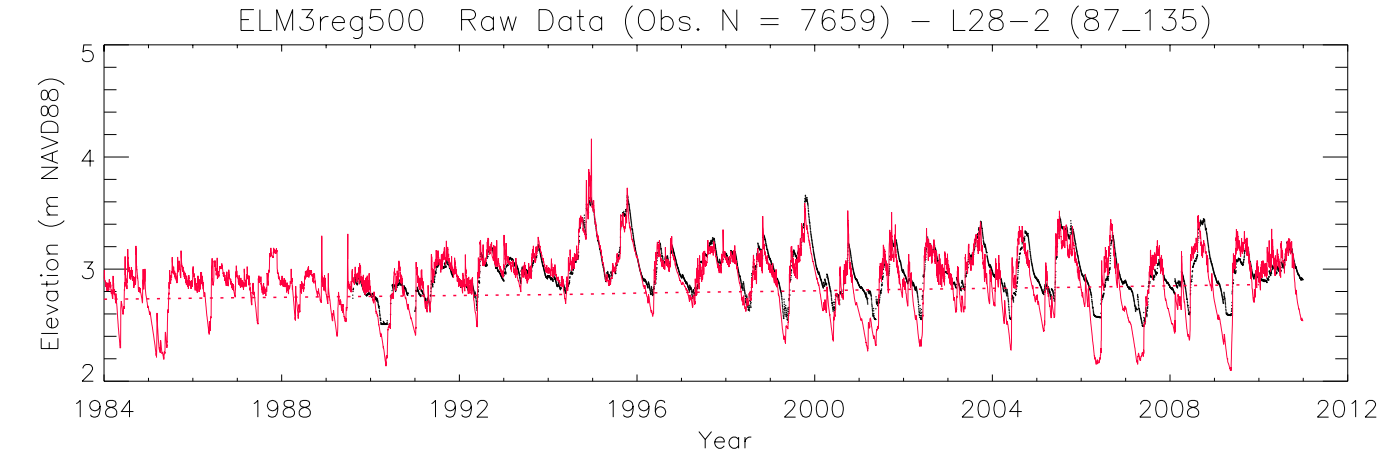

Cumulative Distribution: Raw Data – 3A–12_B (119_118)
Cumulative Distribution
Elevation (m NAVD88)
0
20
40
60
80
100
1
2
3
4

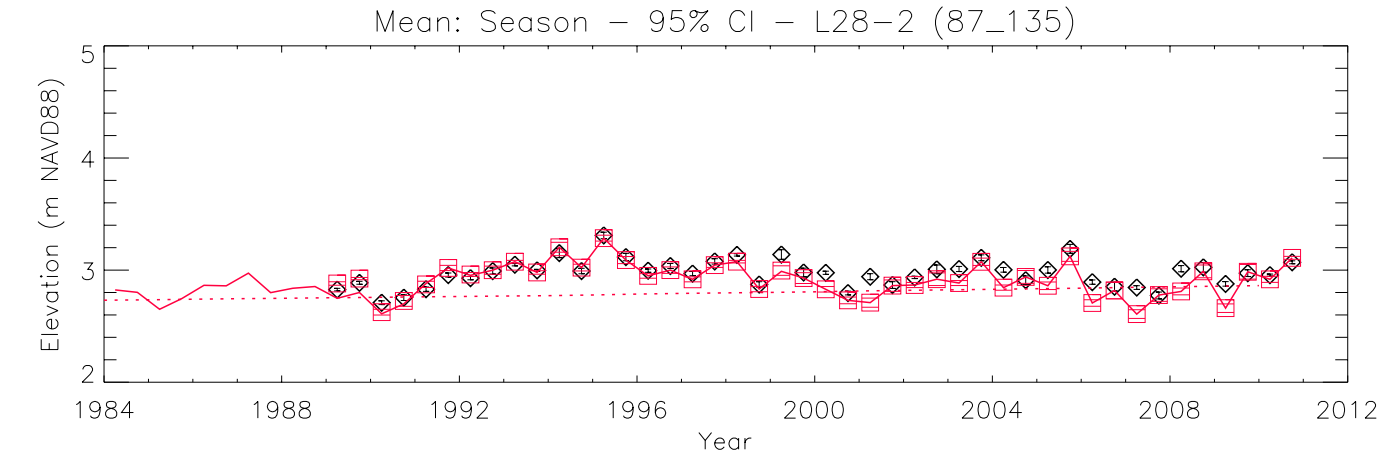

ELM3reg500 Raw Data (Obs. N = 9852) – 3A–9_B (124_128)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

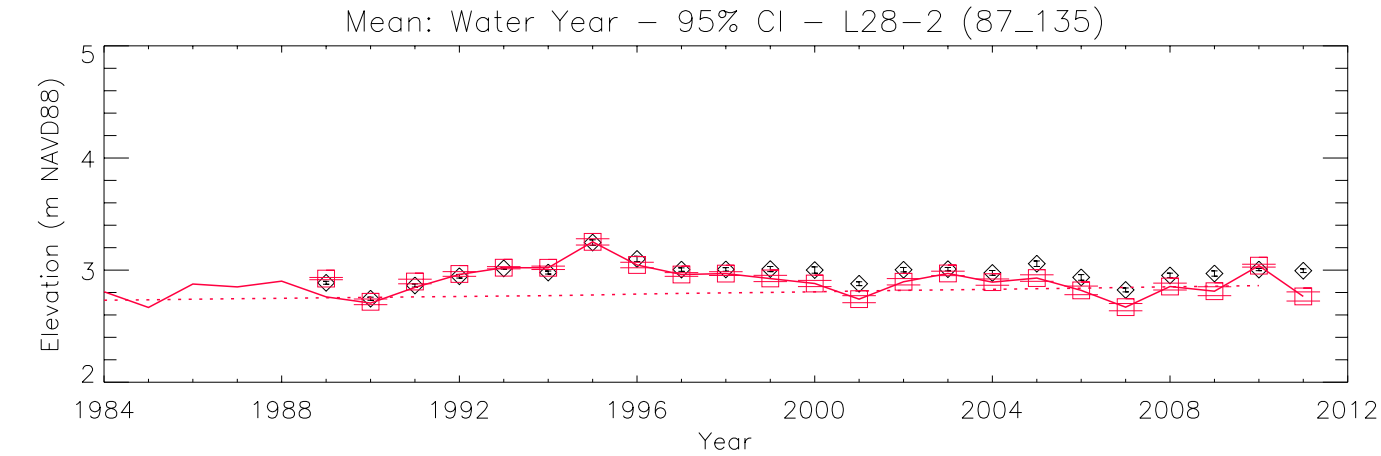

Mean: Season – 95% CI – 3A–9_B (124_128)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

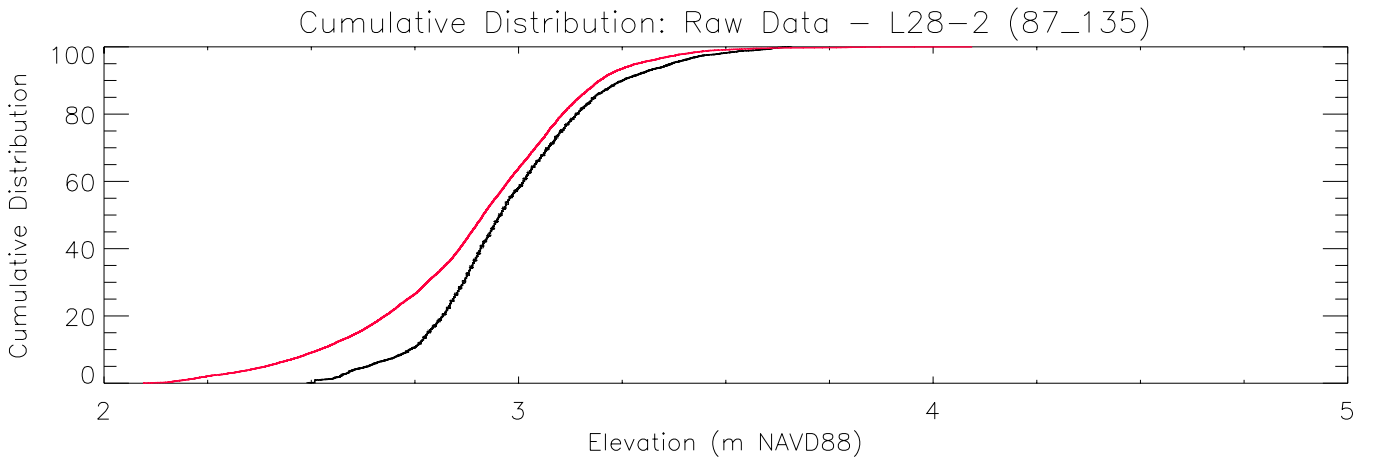

Mean: Water Year – 95% CI – 3A–9_B (124_128)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

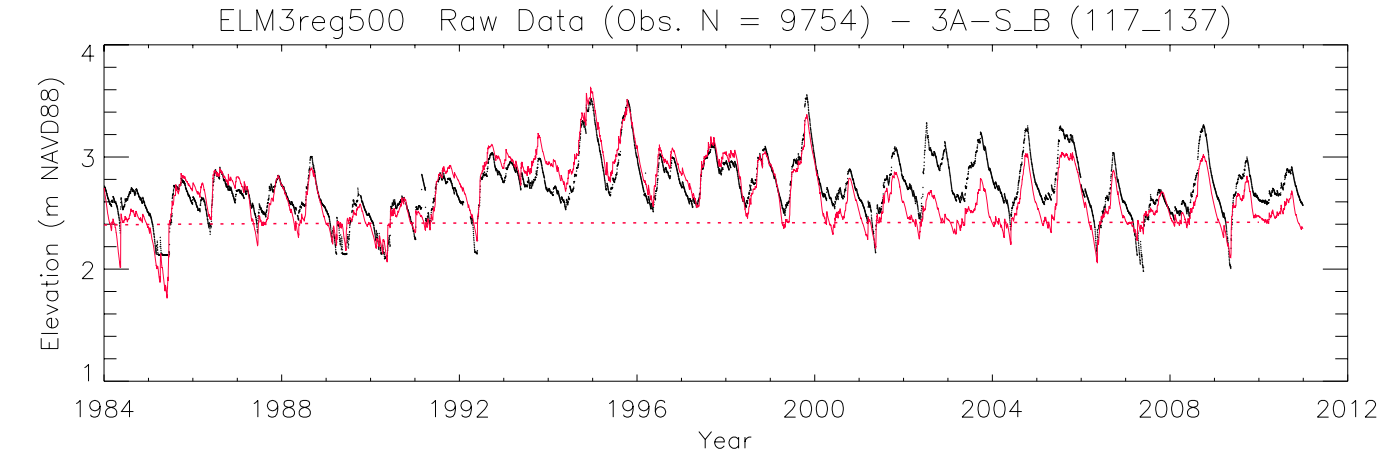

Cumulative Distribution: Raw Data – 3A–9_B (124_128)
Cumulative Distribution
0
20
40
60
80
100
1
2
3
4
Elevation (m NAVD88)

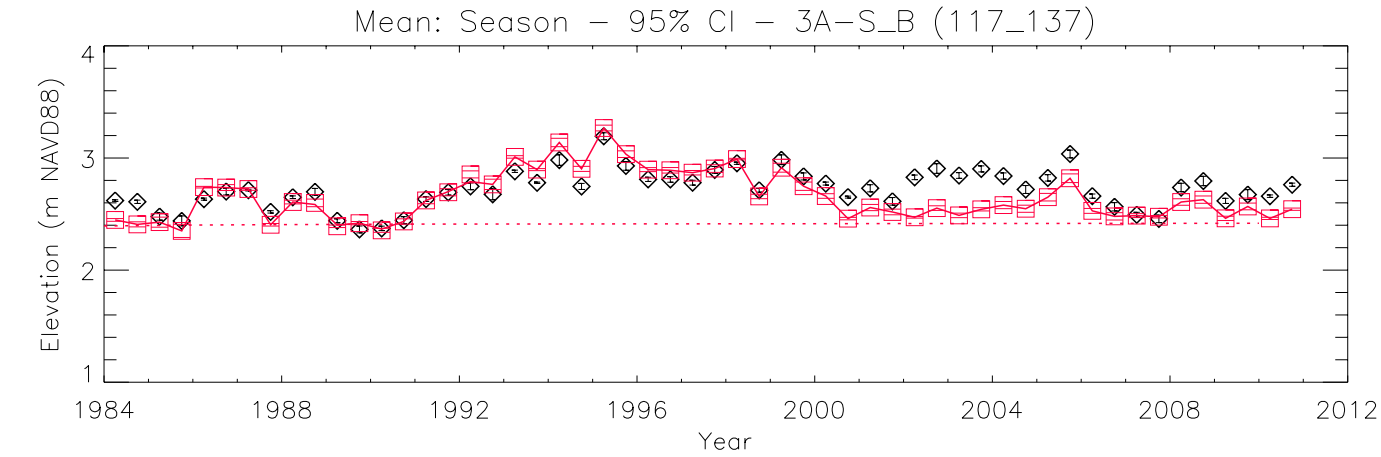

ELM3reg500 Raw Data (Obs. N = 7659) – L28–2 (87_135)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

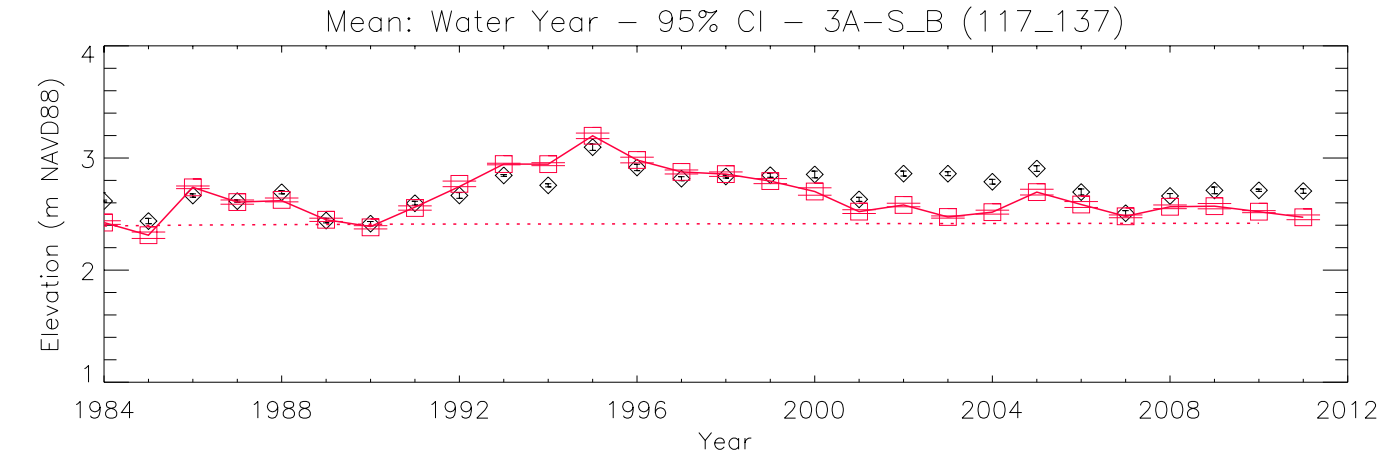

Mean: Season – 95% CI – L28–2 (87_135)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

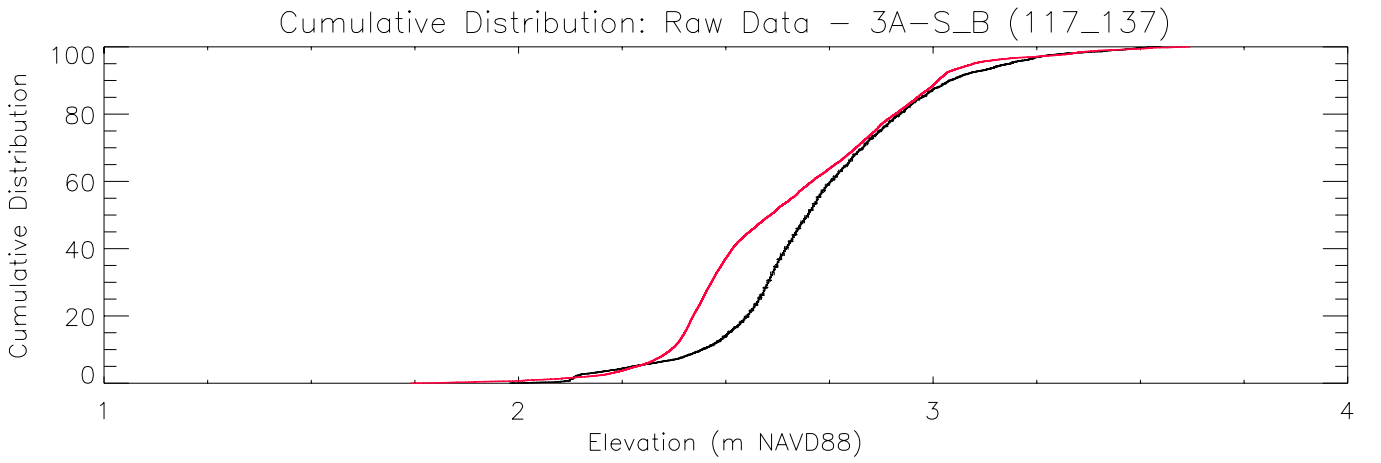

Mean: Water Year – 95% CI – L28–2 (87_135)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

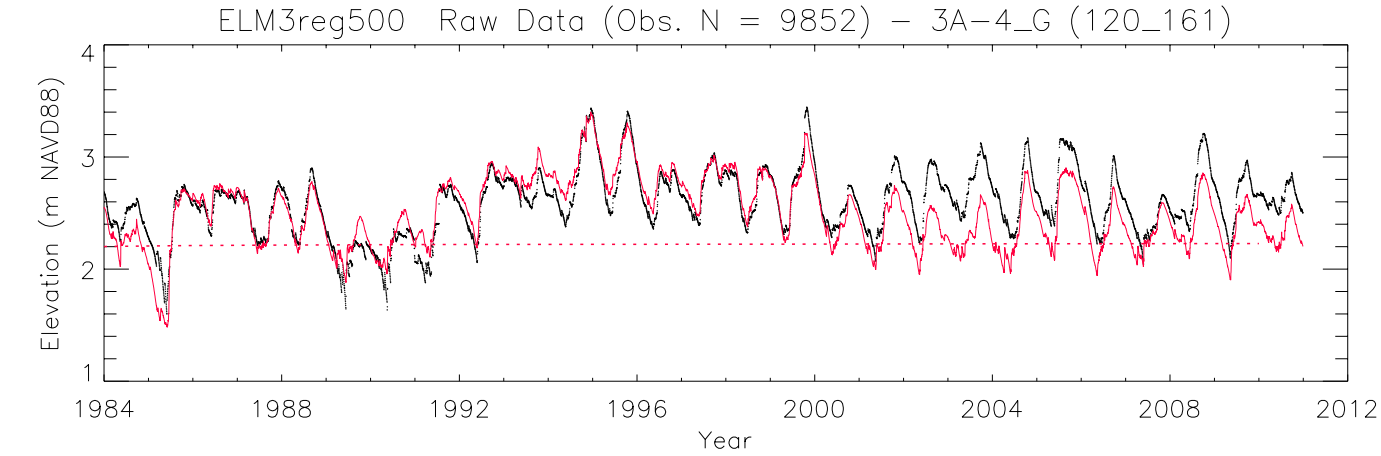

Cumulative Distribution: Raw Data – L28–2 (87_135)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)

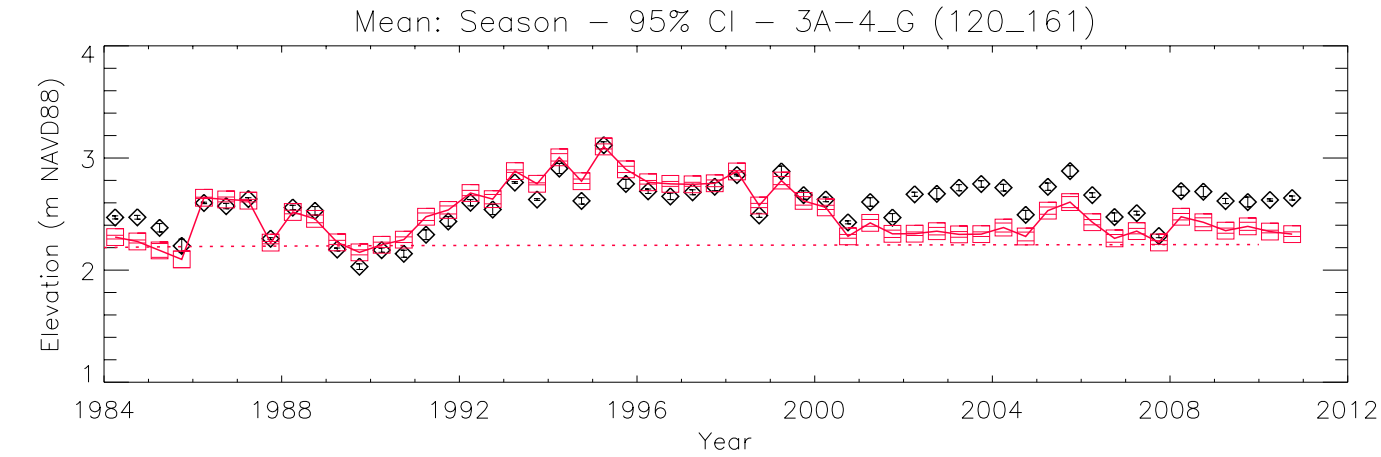

ELM3reg500 Raw Data (Obs. N = 9754) – 3A–S_B (117_137)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

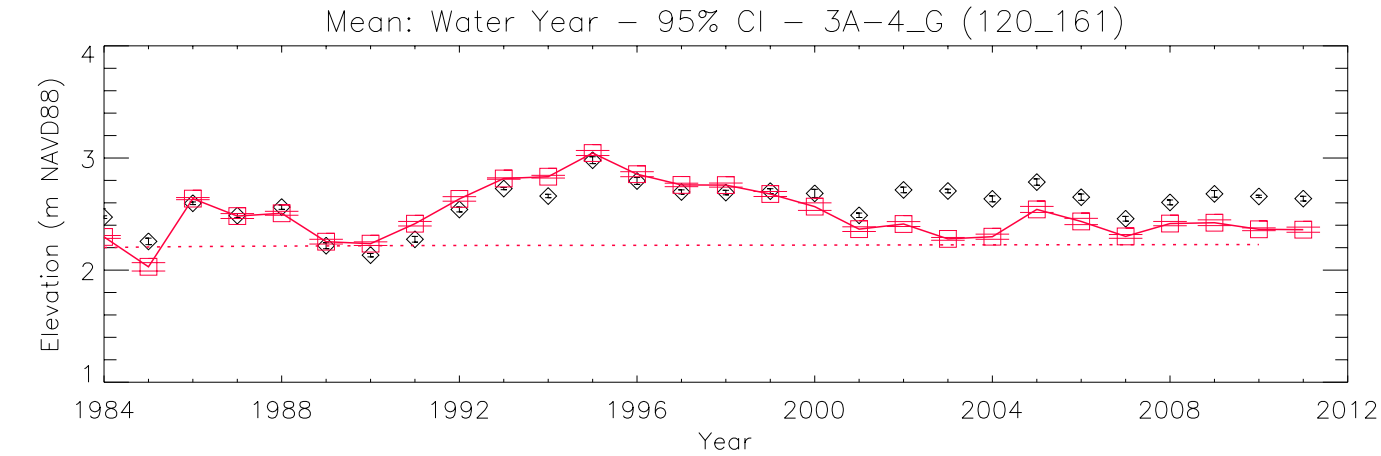

Mean: Season – 95% CI – 3A–S_B (117_137)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

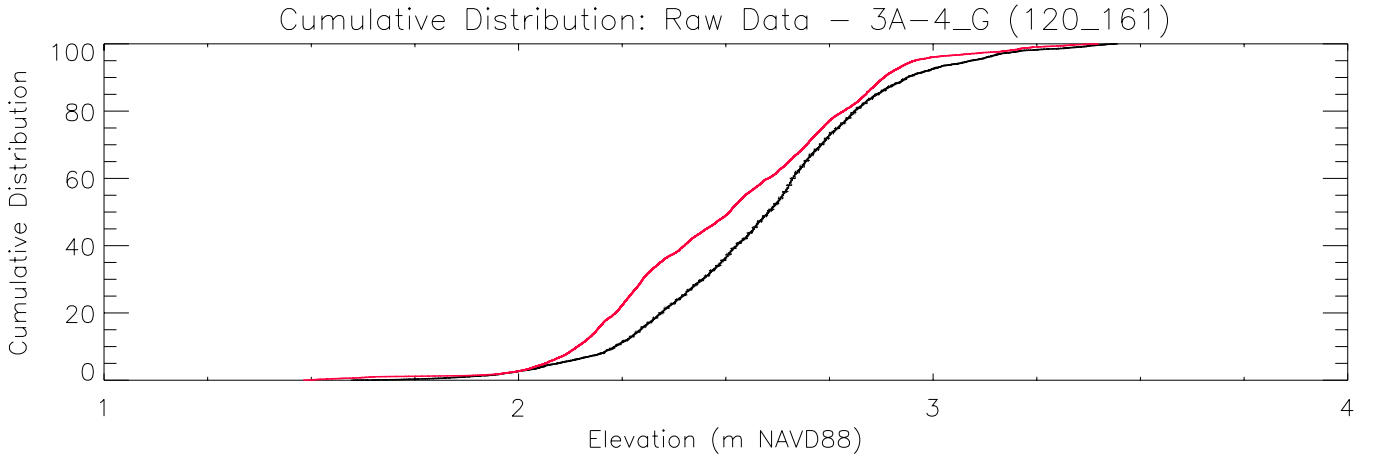

Mean: Water Year – 95% CI – 3A–S_B (117_137)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

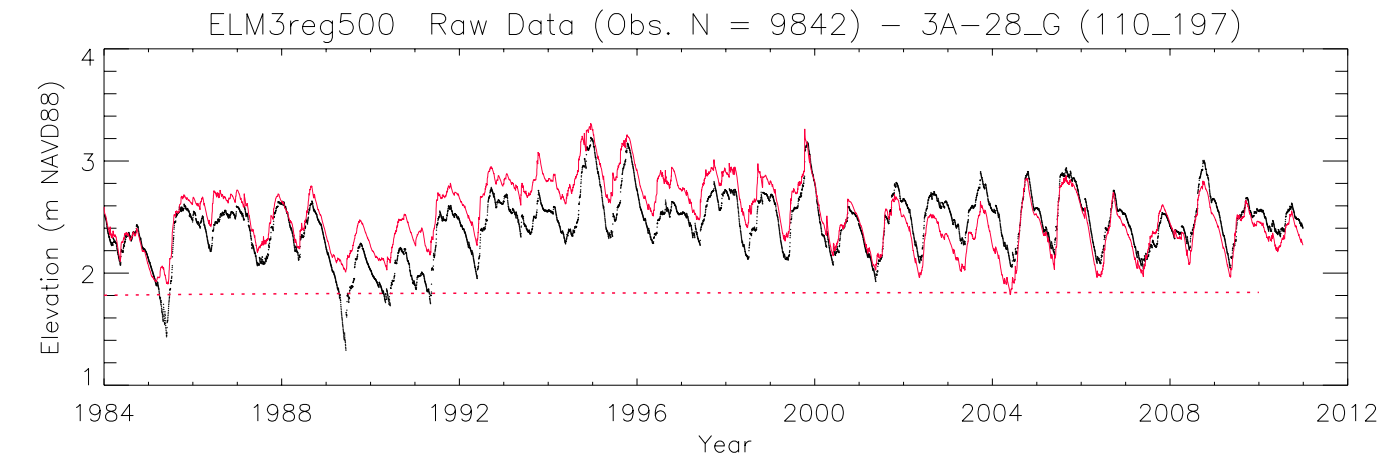

Cumulative Distribution: Raw Data – 3A–S_B (117_137)
Cumulative Distribution
0
20
40
60
80
100
1
2
3
4
Elevation (m NAVD88)

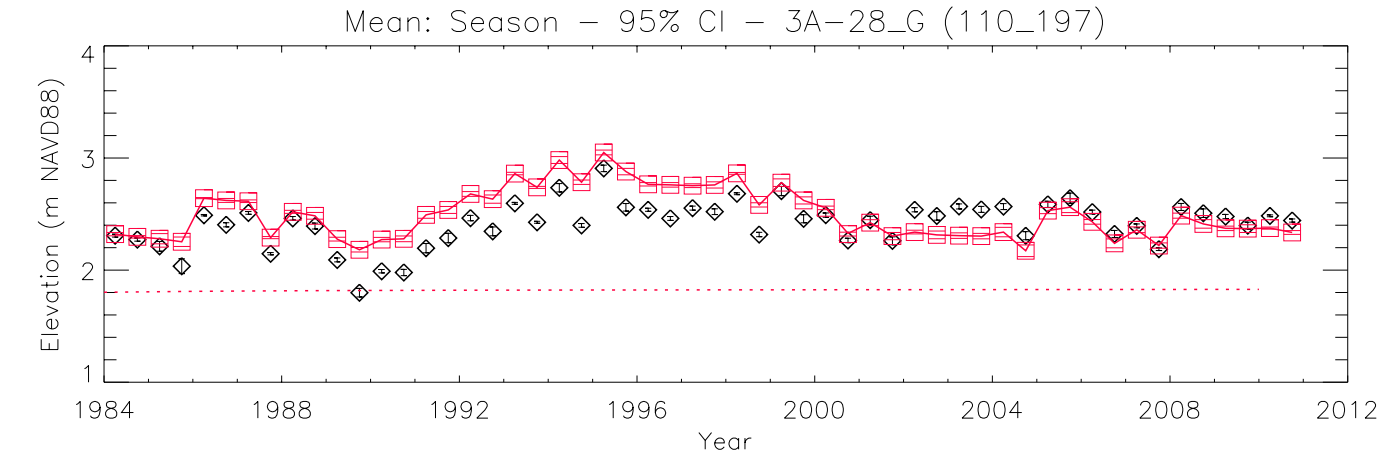

ELM3reg500 Raw Data (Obs. N = 9852) – 3A–4_G (120_161)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

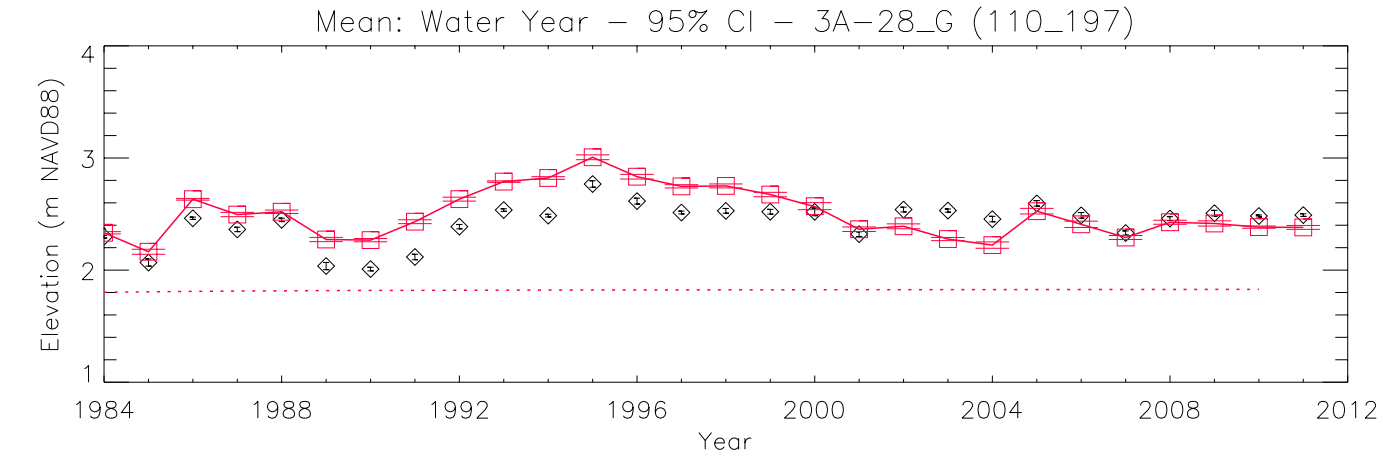

Mean: Season – 95% CI – 3A–4_G (120_161)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

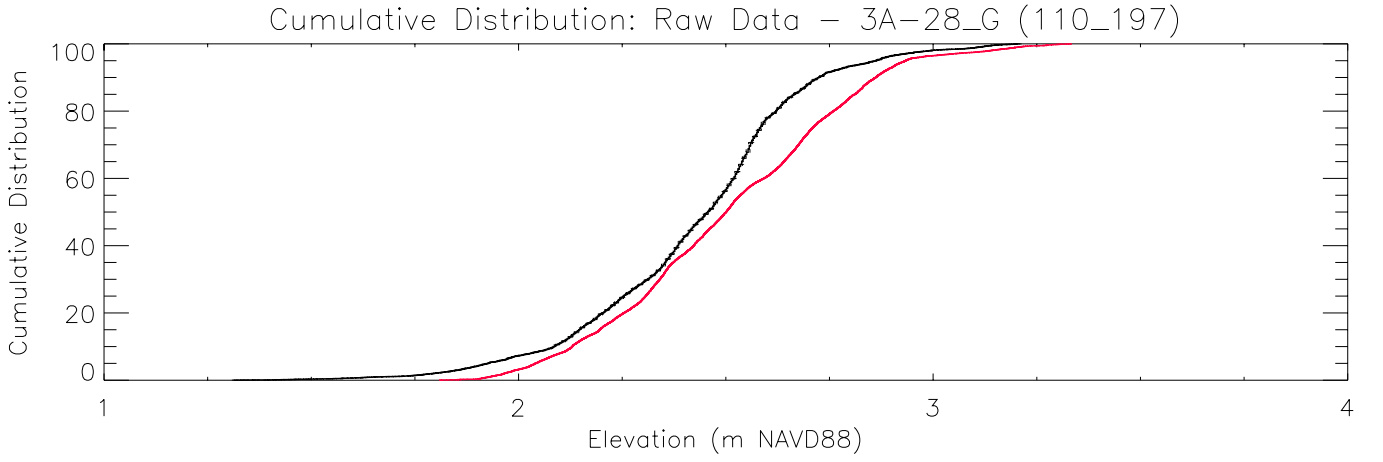

Mean: Water Year – 95% CI – 3A–4_G (120_161)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

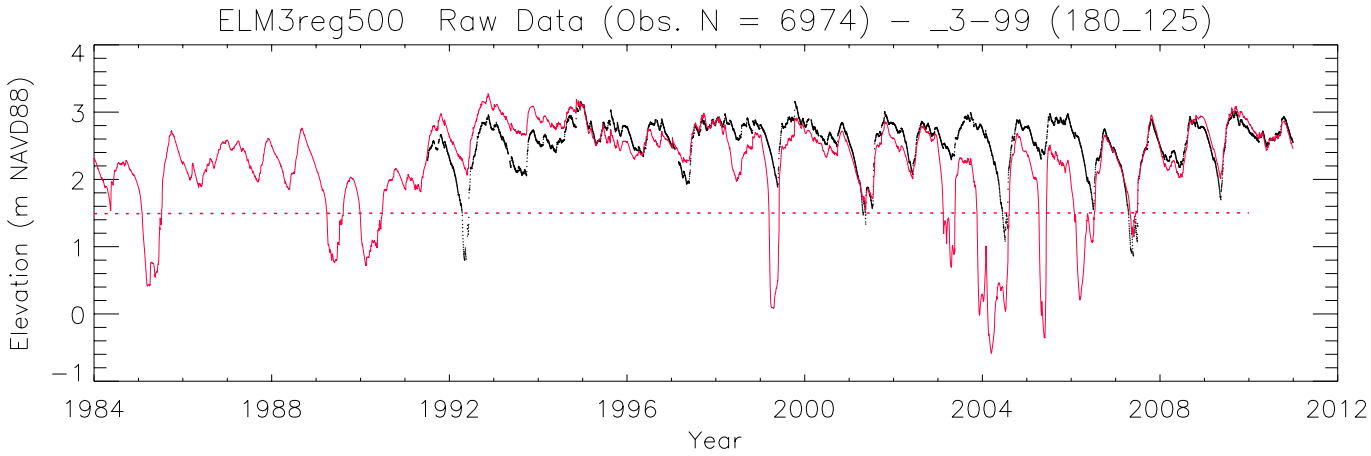

Cumulative Distribution: Raw Data – 3A–4_G (120_161)
Cumulative Distribution
Elevation (m NAVD88)
0
20
40
60
80
100
1
2
3
4

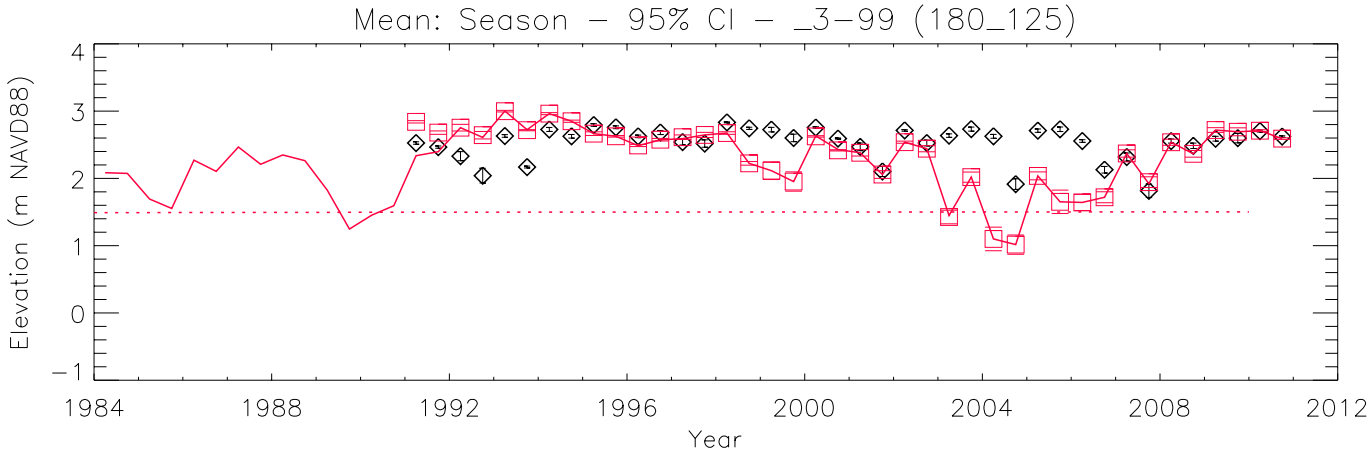

ELM3reg500 Raw Data (Obs. N = 9842) – 3A–28_G (110_197)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

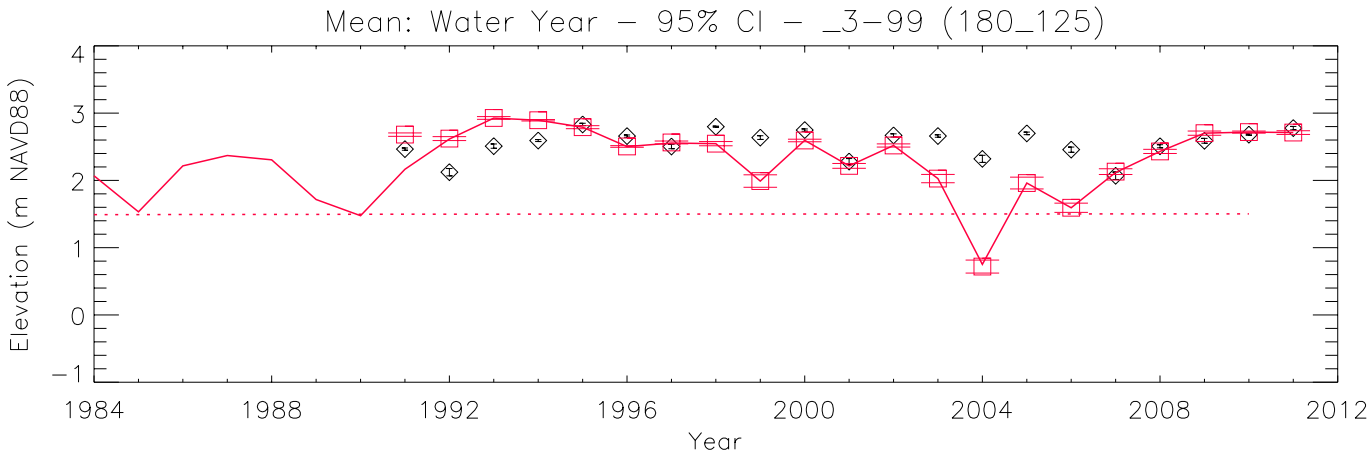

Mean: Season – 95% CI – 3A–28_G (110_197)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

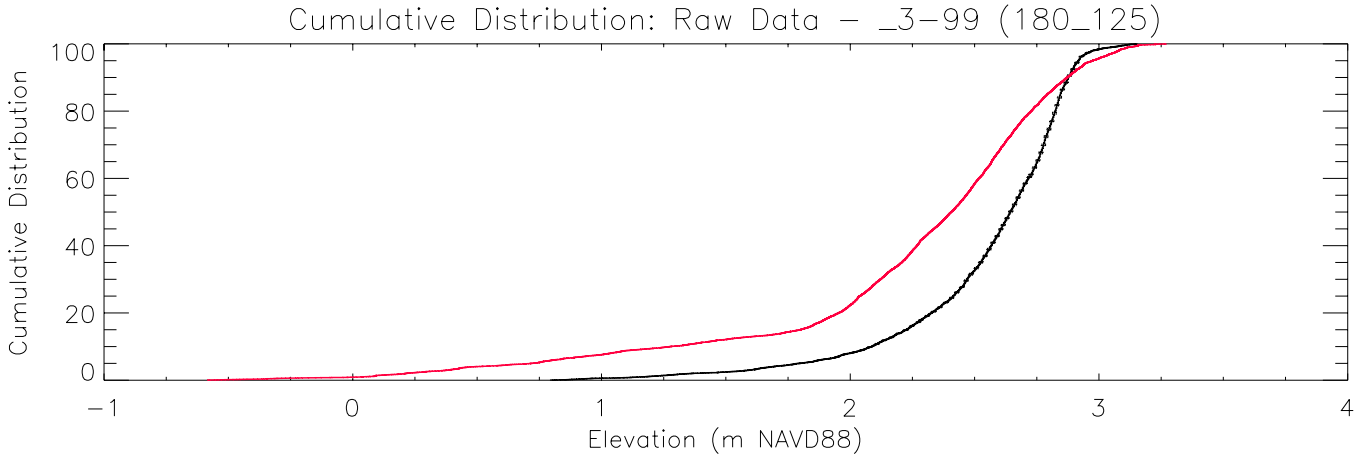

Mean: Water Year – 95% CI – 3A–28_G (110_197)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

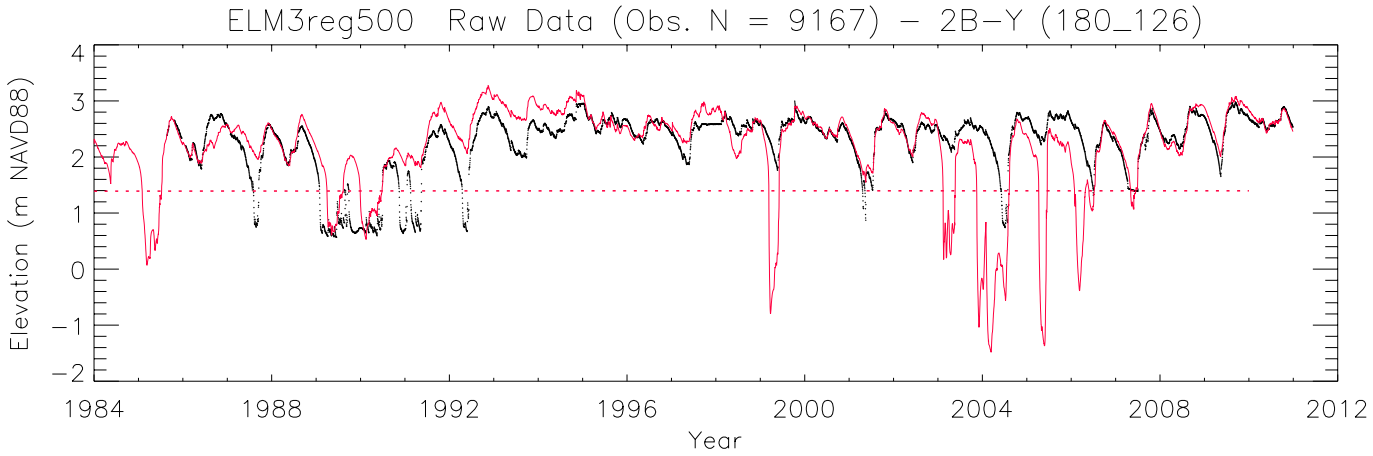

Cumulative Distribution: Raw Data – 3A–28_G (110_197)
Cumulative Distribution
Elevation (m NAVD88)
0
20
40
60
80
100
1
2
3
4

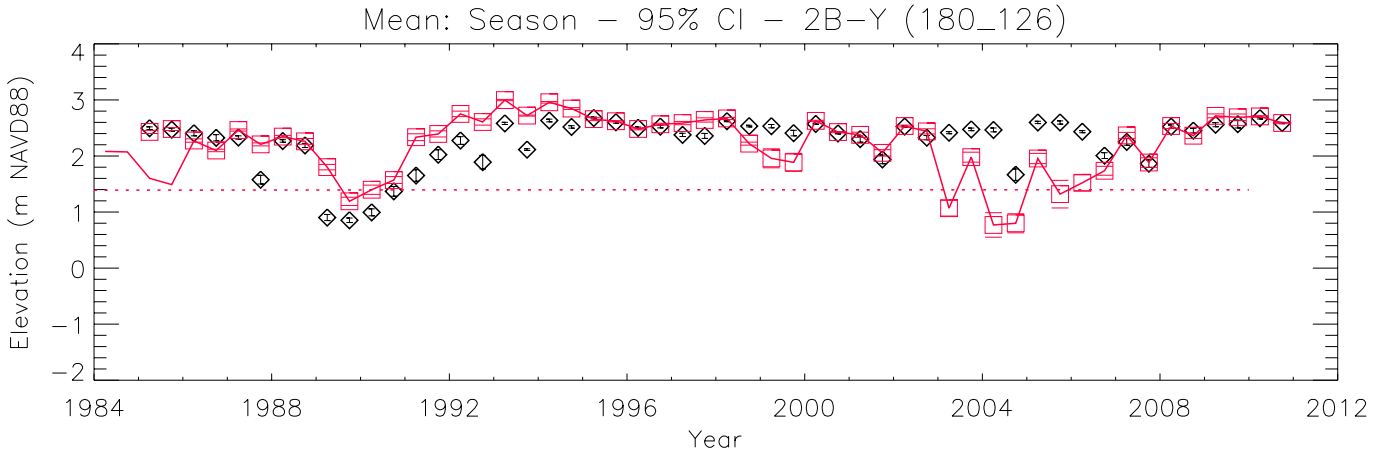

ELM3reg500 Raw Data (Obs. N = 6974) – _3–99 (180_125)
Elevation (m NAVD88)
Year

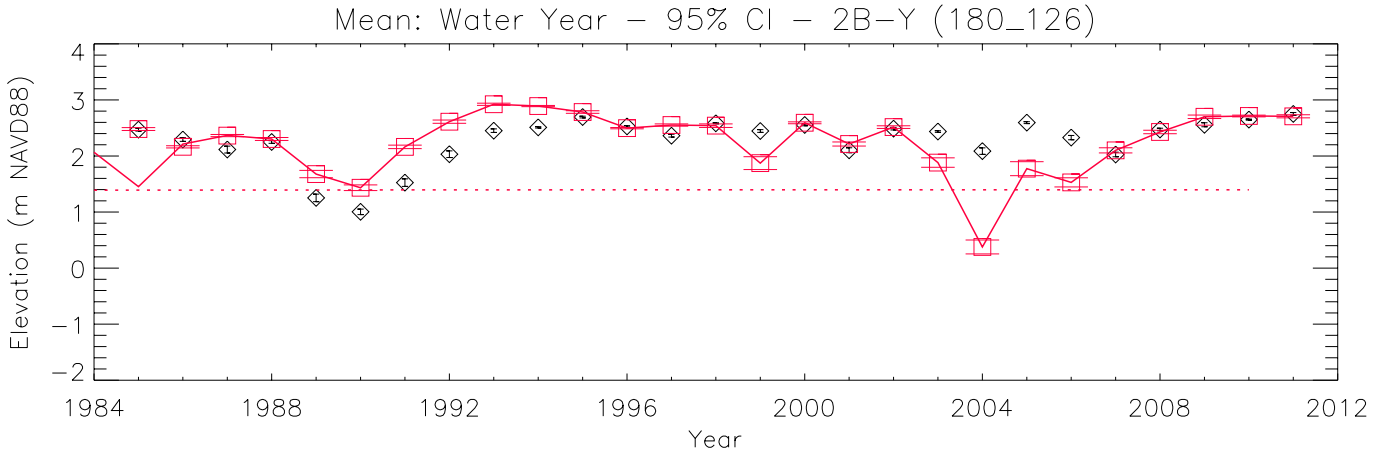

Mean: Season – 95% CI – _3–99 (180_125)
Elevation (m NAVD88)
Year

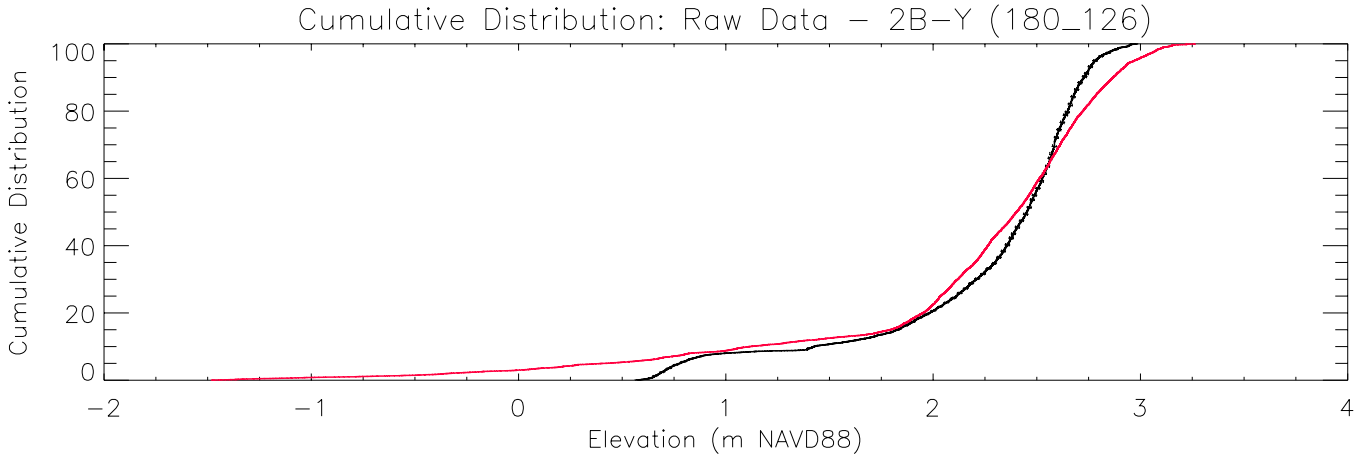

Mean: Water Year – 95% CI – _3–99 (180_125)
Elevation (m NAVD88)
Year

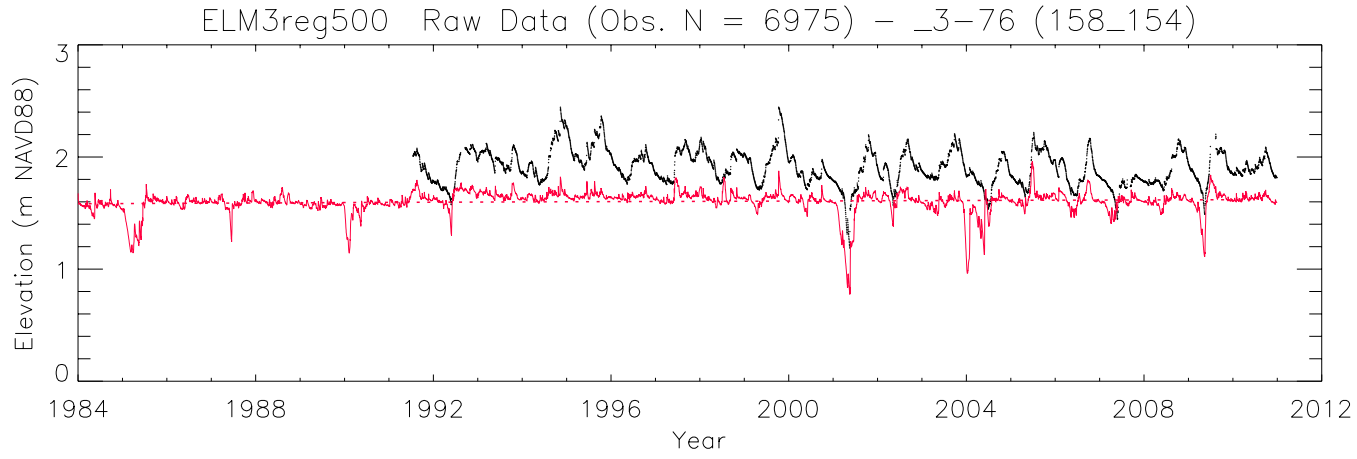

Cumulative Distribution: Raw Data – _3–99 (180_125)
Cumulative Distribution
Elevation (m NAVD88)

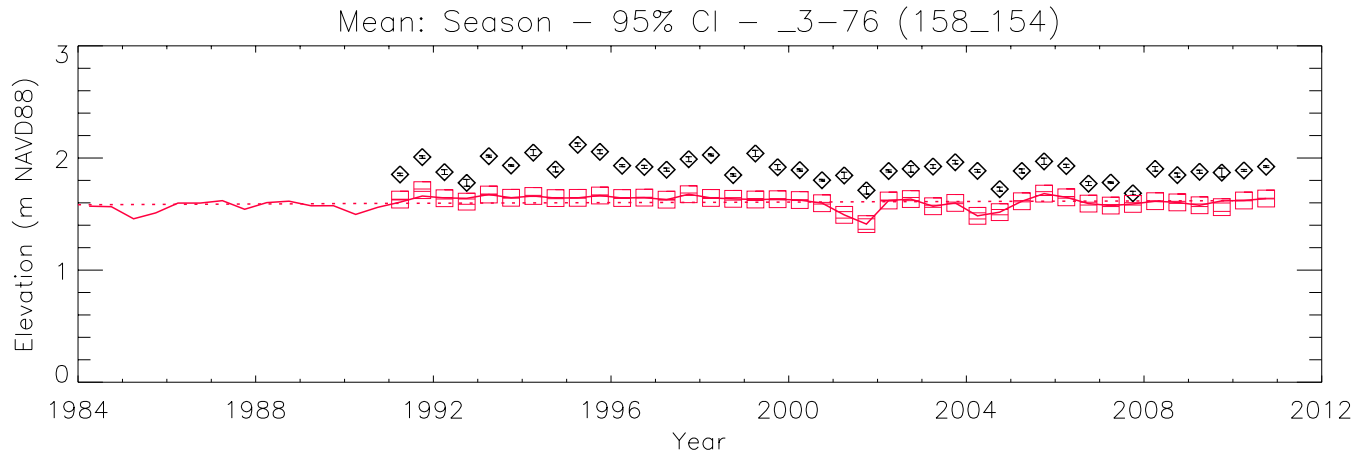

ELM3reg500 Raw Data (Obs. N = 9167) – 2B–Y (180_126)
Elevation (m NAVD88)
Year

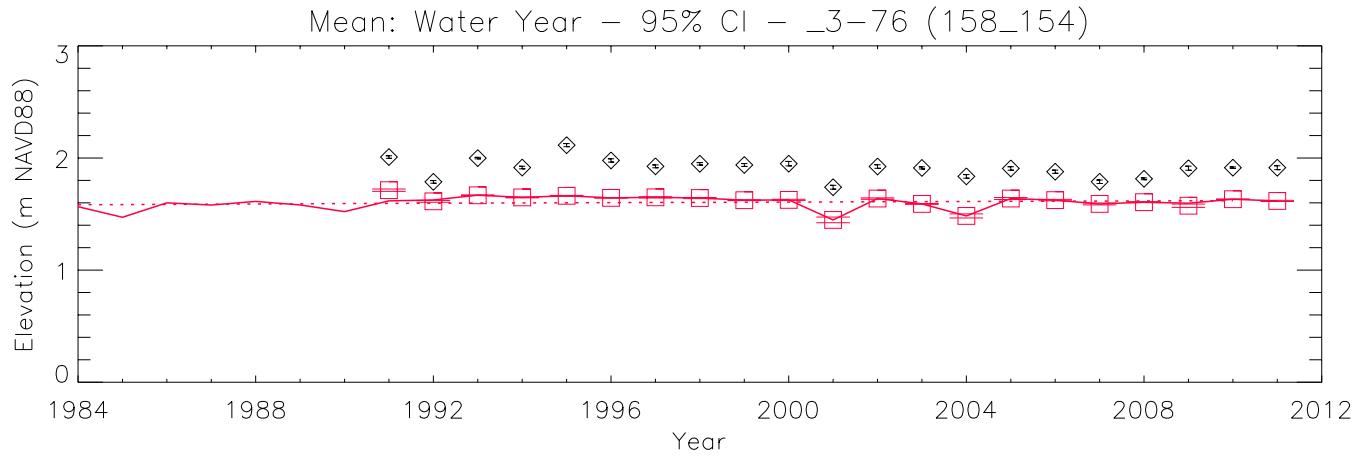

Mean: Season – 95% CI – 2B–Y (180_126)
Elevation (m NAVD88)
Year

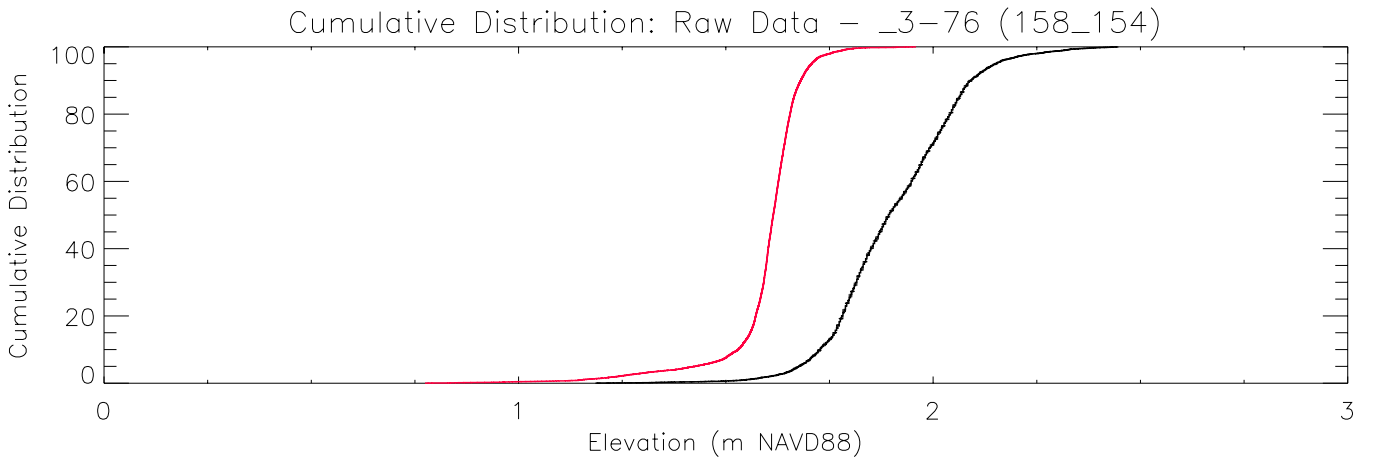

Mean: Water Year – 95% CI – 2B–Y (180_126)
Elevation (m NAVD88)
Year

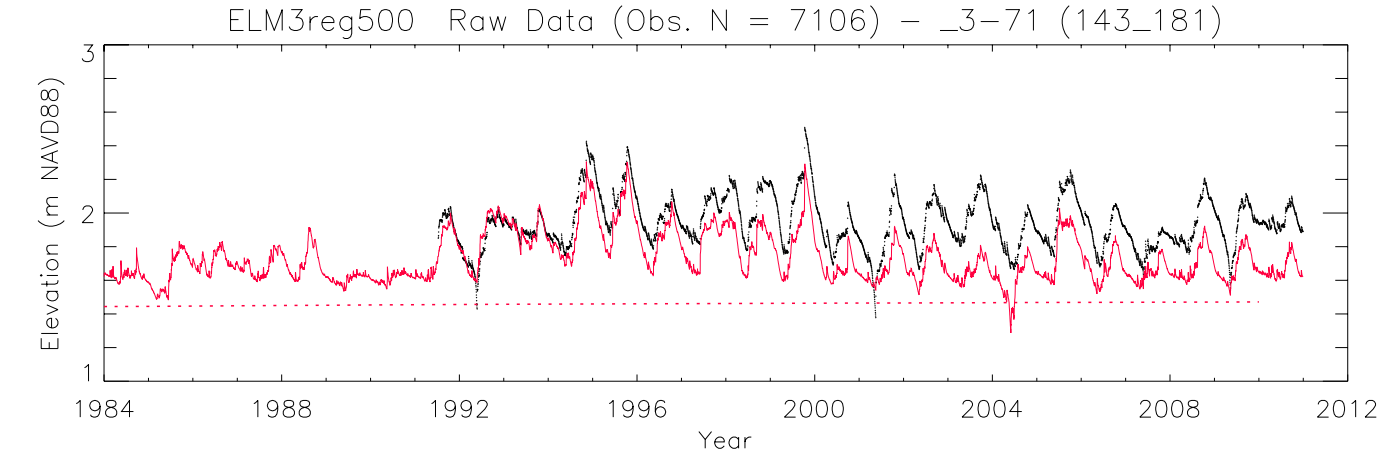

Cumulative Distribution: Raw Data – 2B–Y (180_126)
Cumulative Distribution
Elevation (m NAVD88)

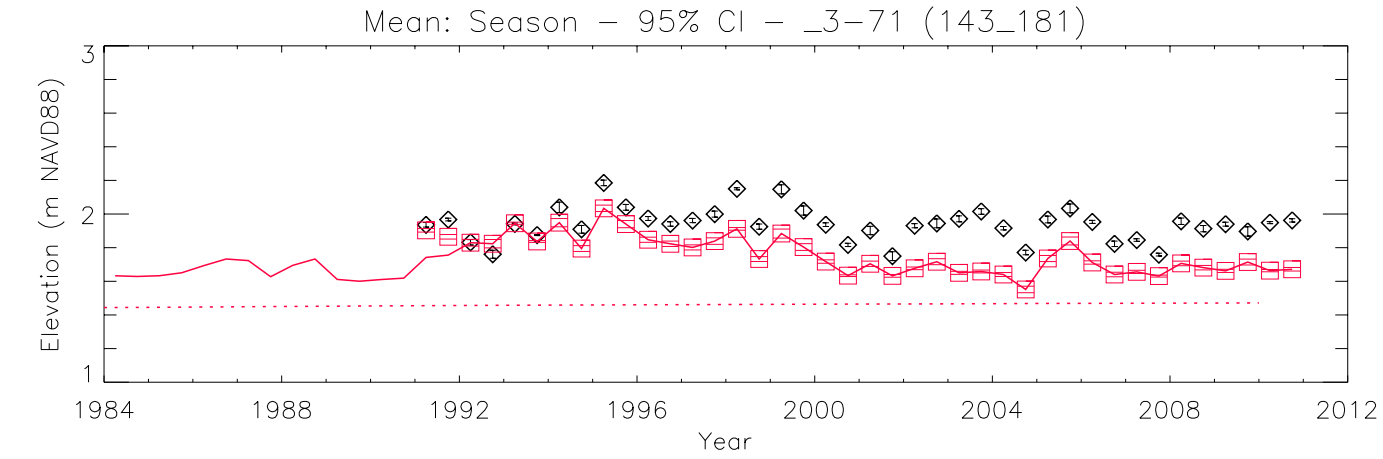

ELM3reg500 Raw Data (Obs. N = 6975) – _3–76 (158_154)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

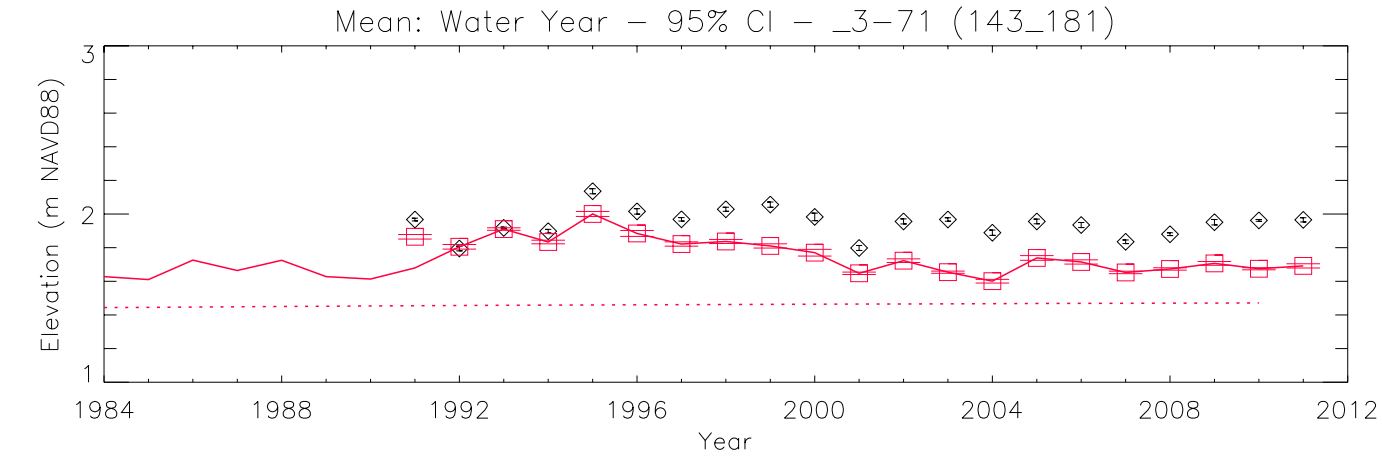

Mean: Season – 95% CI – _3–76 (158_154)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

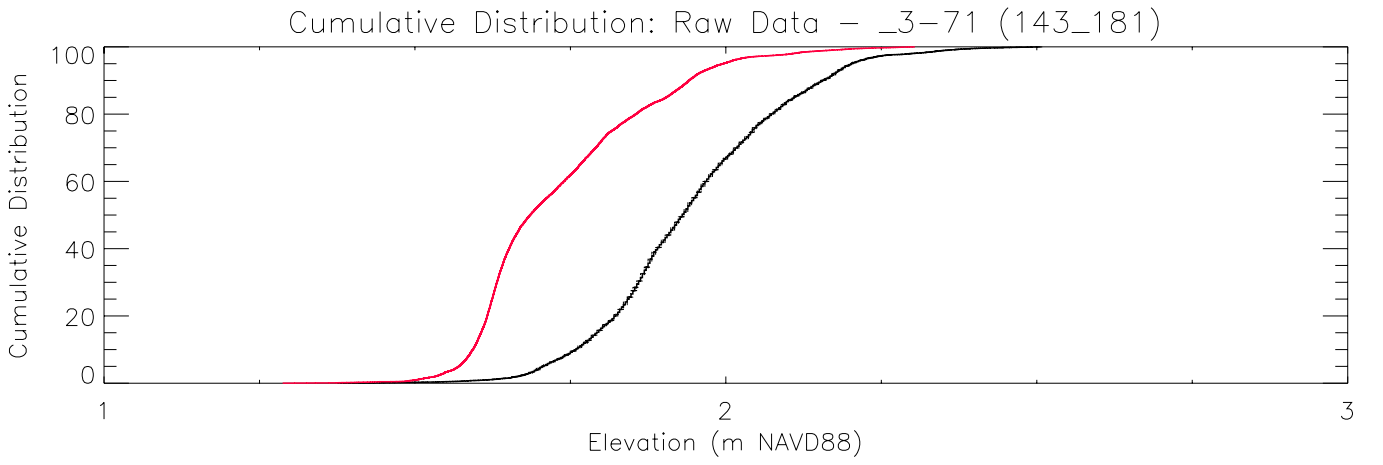

Mean: Water Year – 95% CI – _3–76 (158_154)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

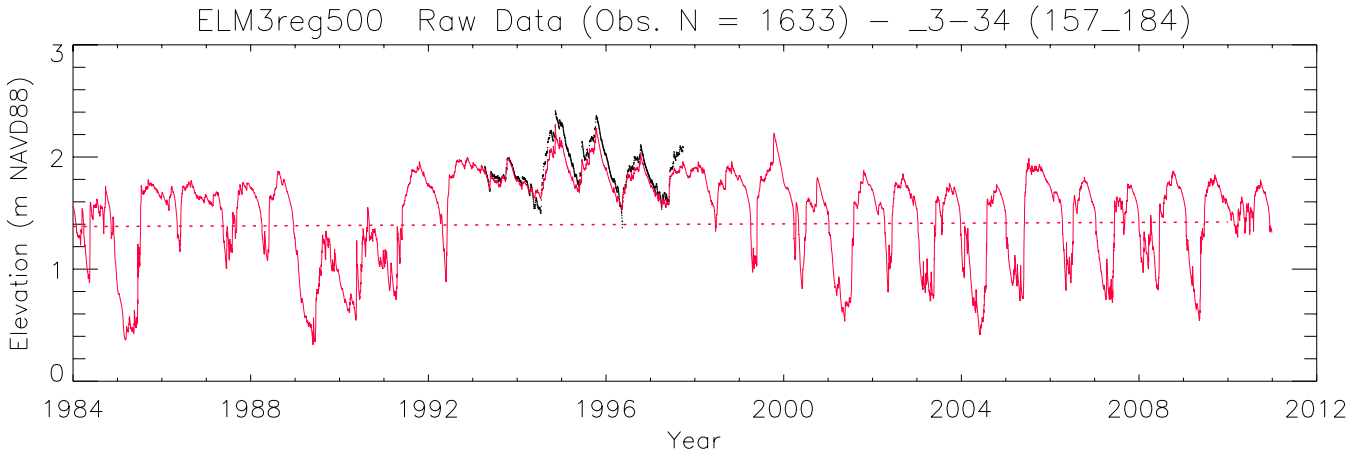

Cumulative Distribution: Raw Data – _3–76 (158_154)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

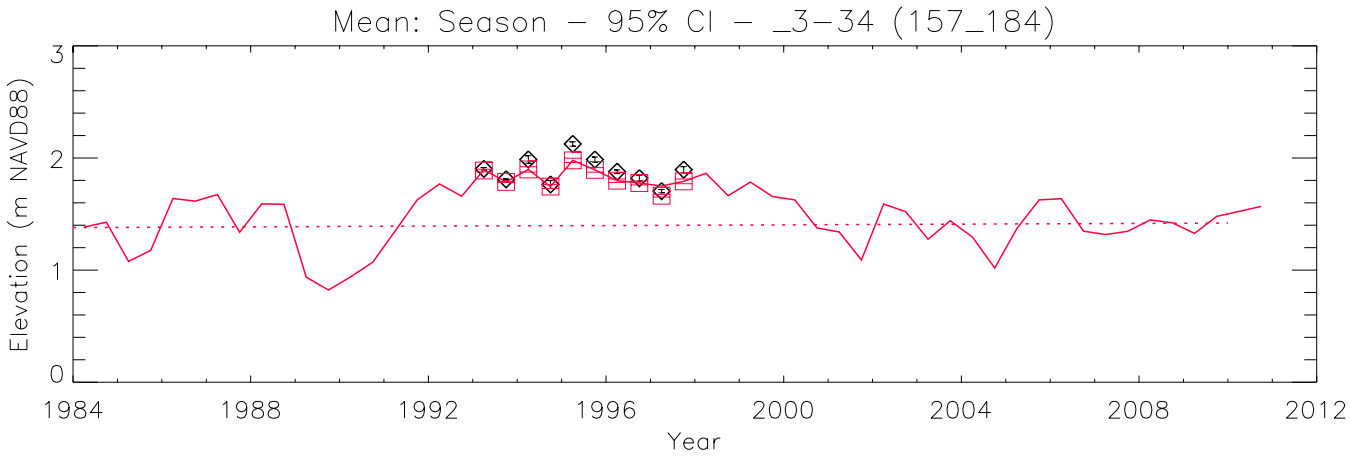

ELM3reg500 Raw Data (Obs. N = 7106) – _3–71 (143_181)
Elevation (m NAVD88)
3
2
1
1984
1988
1992
1996
2000
2004
2008
2012
Year

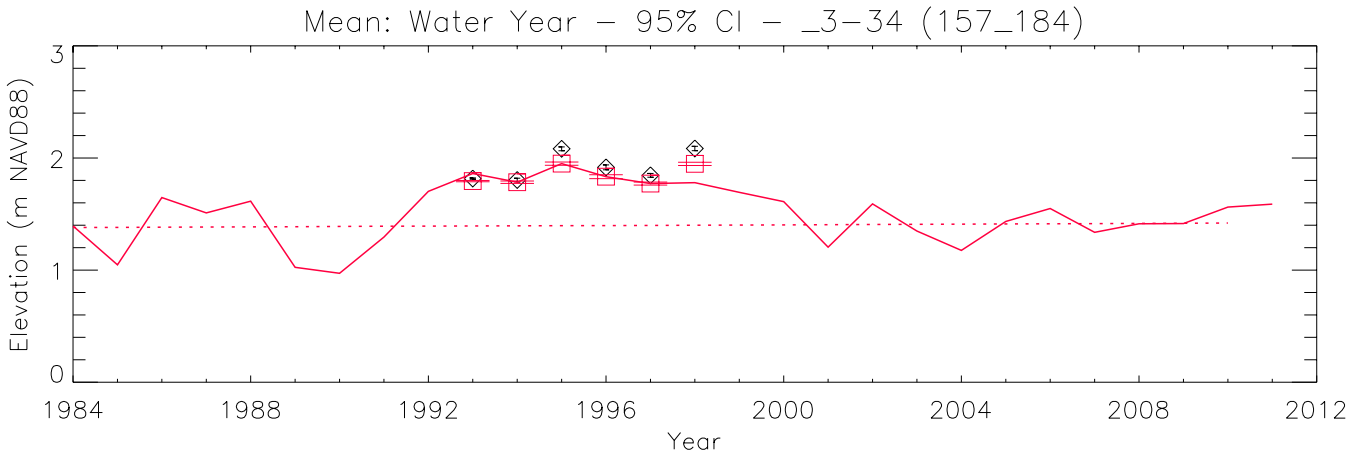

Mean: Season – 95% CI – _3–71 (143_181)
Elevation (m NAVD88)
3
2
1
1984
1988
1992
1996
2000
2004
2008
2012
Year

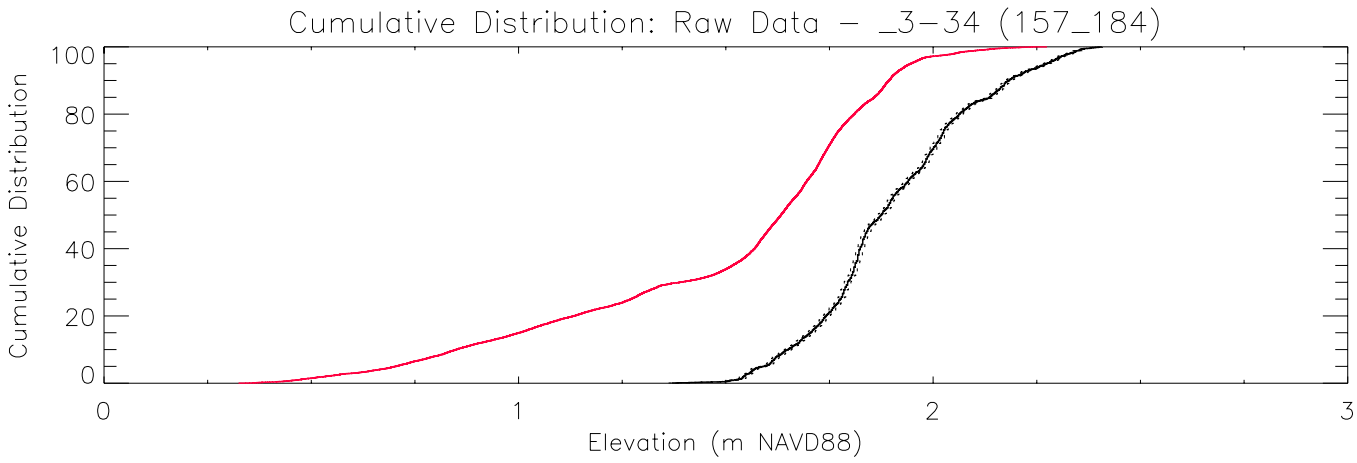

Mean: Water Year – 95% CI – _3–71 (143_181)
Elevation (m NAVD88)
3
2
1
1984
1988
1992
1996
2000
2004
2008
2012
Year

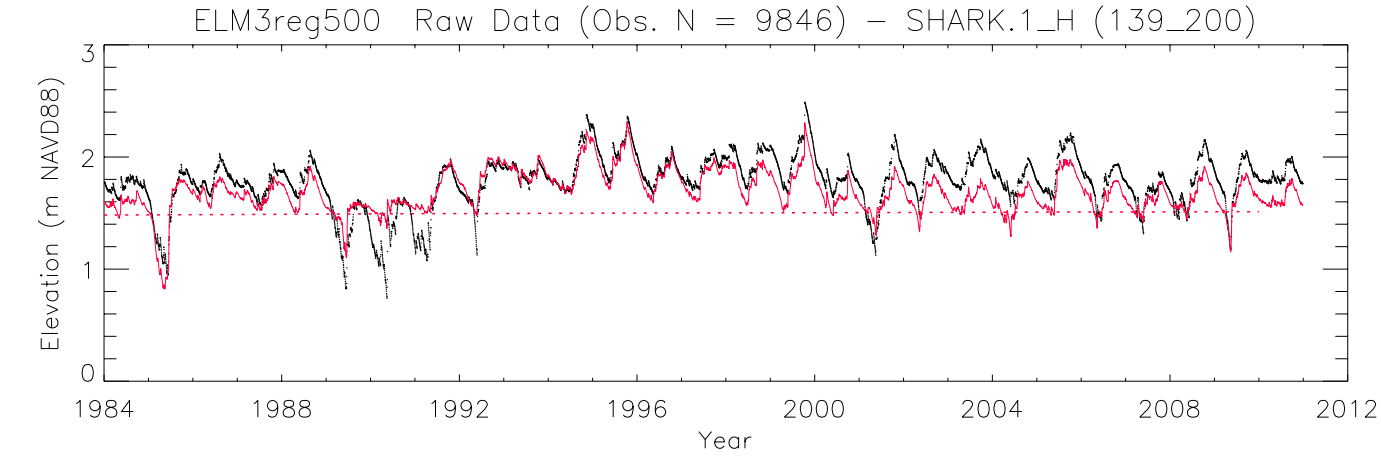

Cumulative Distribution: Raw Data – _3–71 (143_181)
Cumulative Distribution
100
80
60
40
20
0
1
2
3
Elevation (m NAVD88)

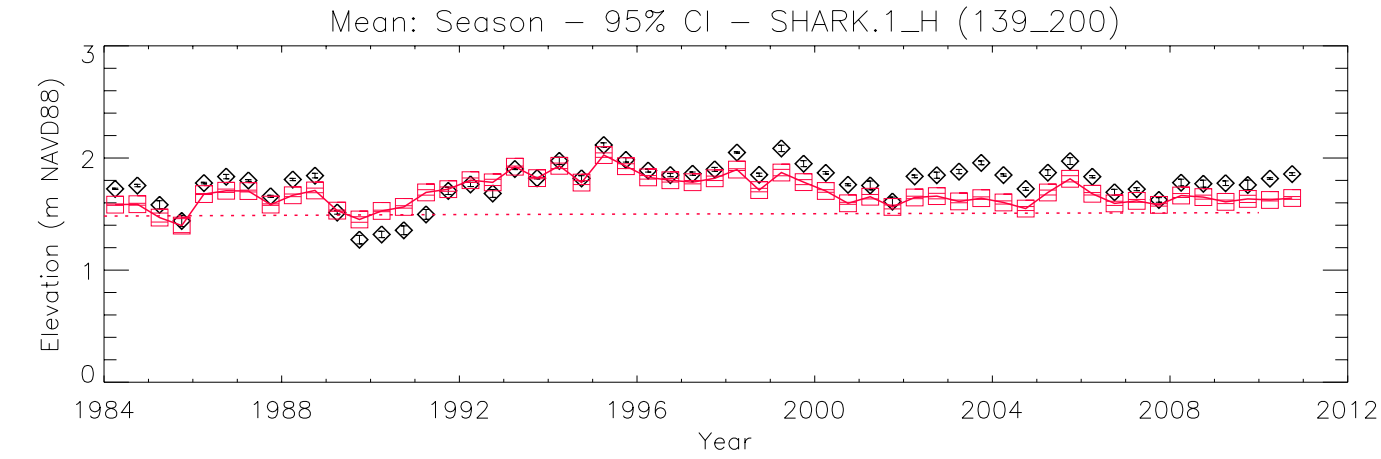

ELM3reg500 Raw Data (Obs. N = 1633) – _3–34 (157_184)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

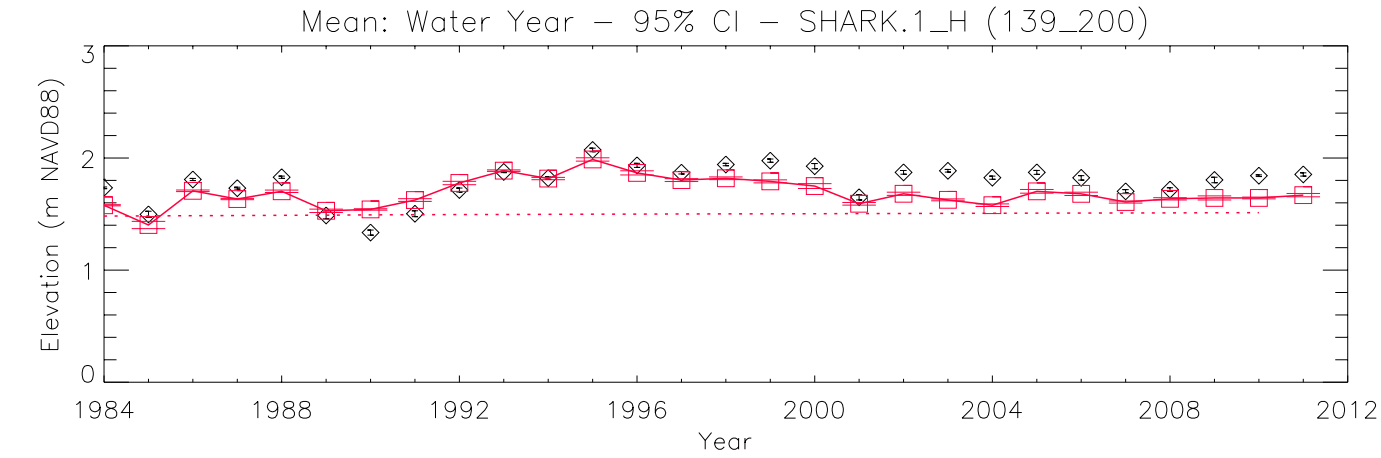

Mean: Season – 95% CI – _3–34 (157_184)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

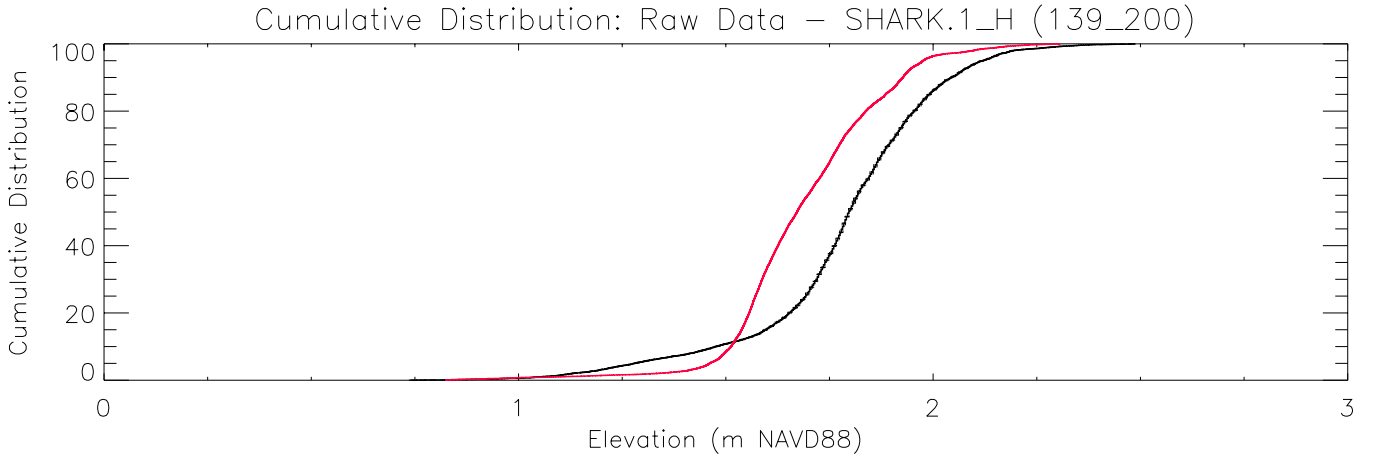

Mean: Water Year – 95% CI – _3–34 (157_184)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

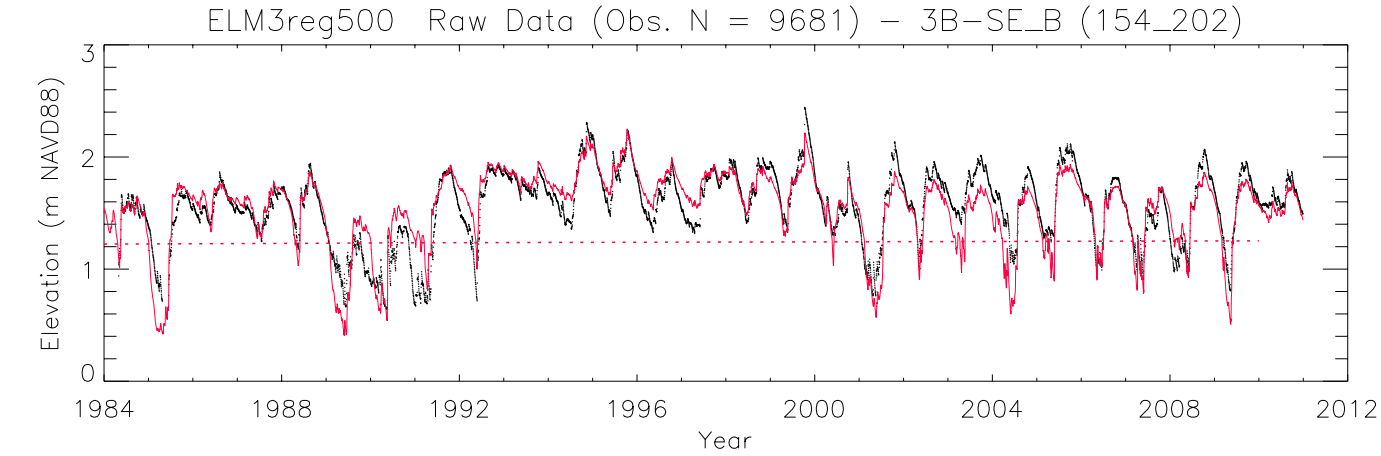

Cumulative Distribution: Raw Data – _3–34 (157_184)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

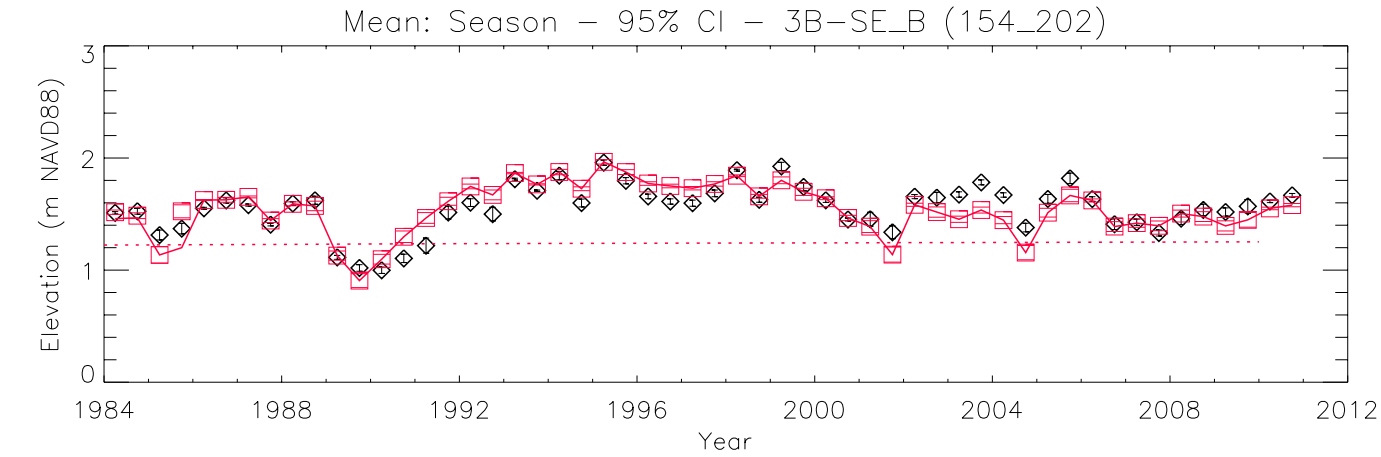

ELM3reg500 Raw Data (Obs. N = 9846) – SHARK.1_H (139_200)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

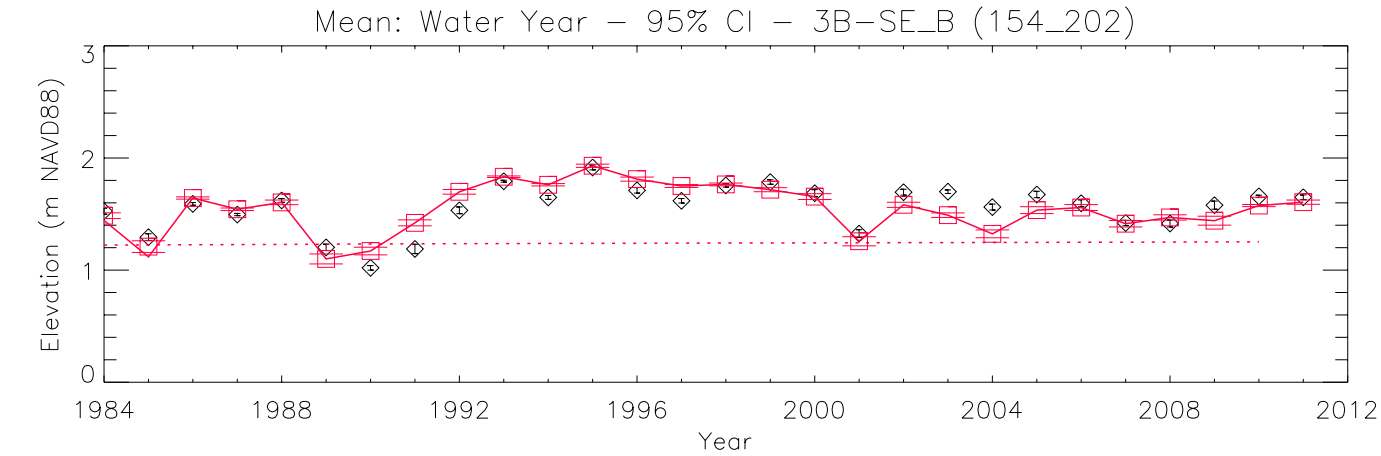

Mean: Season – 95% CI – SHARK.1_H (139_200)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

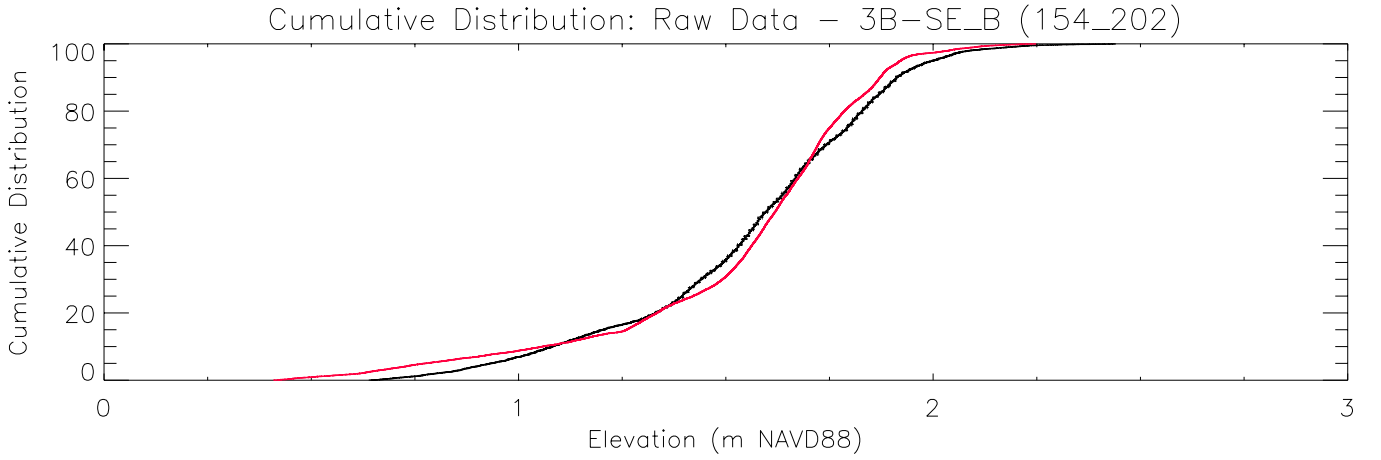

Mean: Water Year – 95% CI – SHARK.1_H (139_200)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

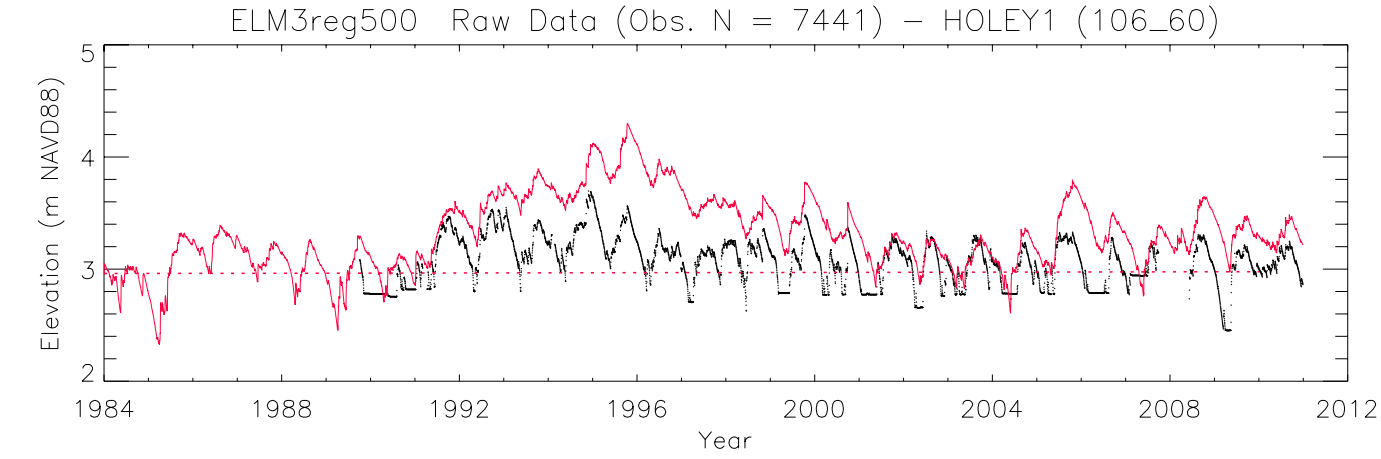

Cumulative Distribution: Raw Data – SHARK.1_H (139_200)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

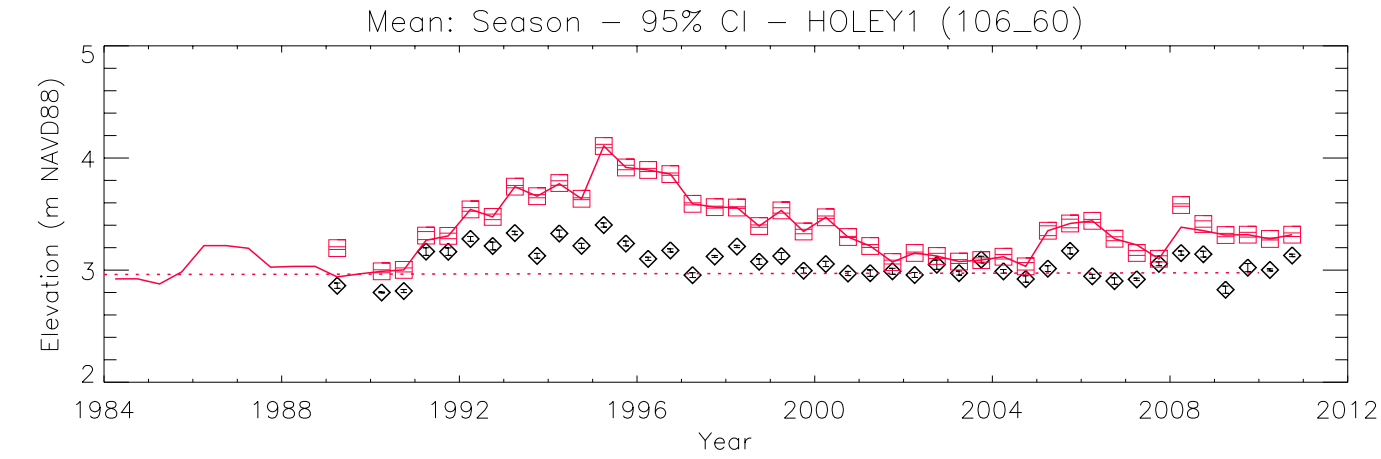

ELM3reg500 Raw Data (Obs. N = 9681) – 3B–SE_B (154_202)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

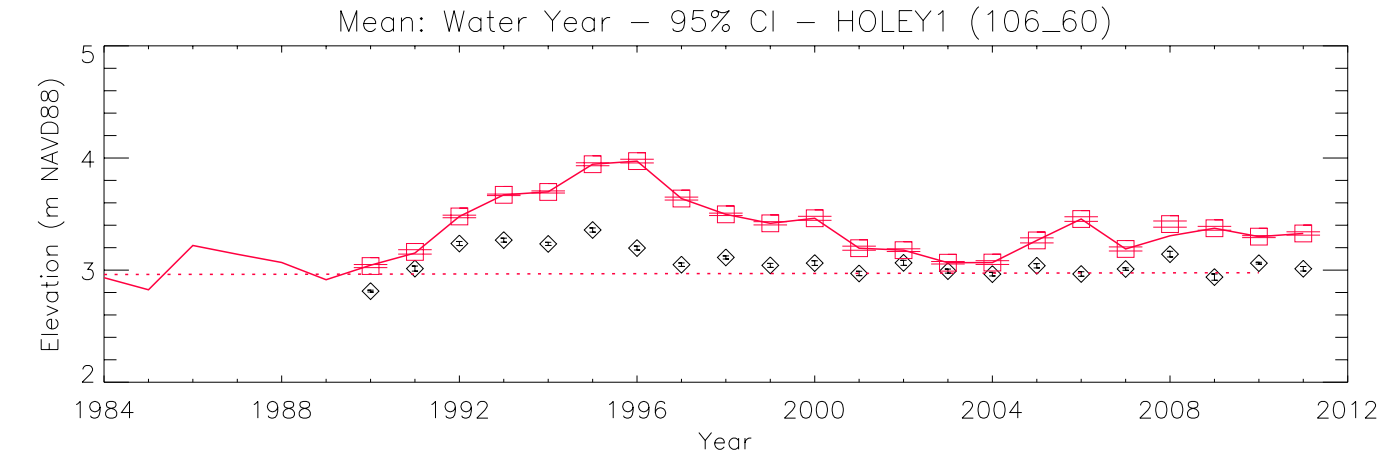

Mean: Season – 95% CI – 3B–SE_B (154_202)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

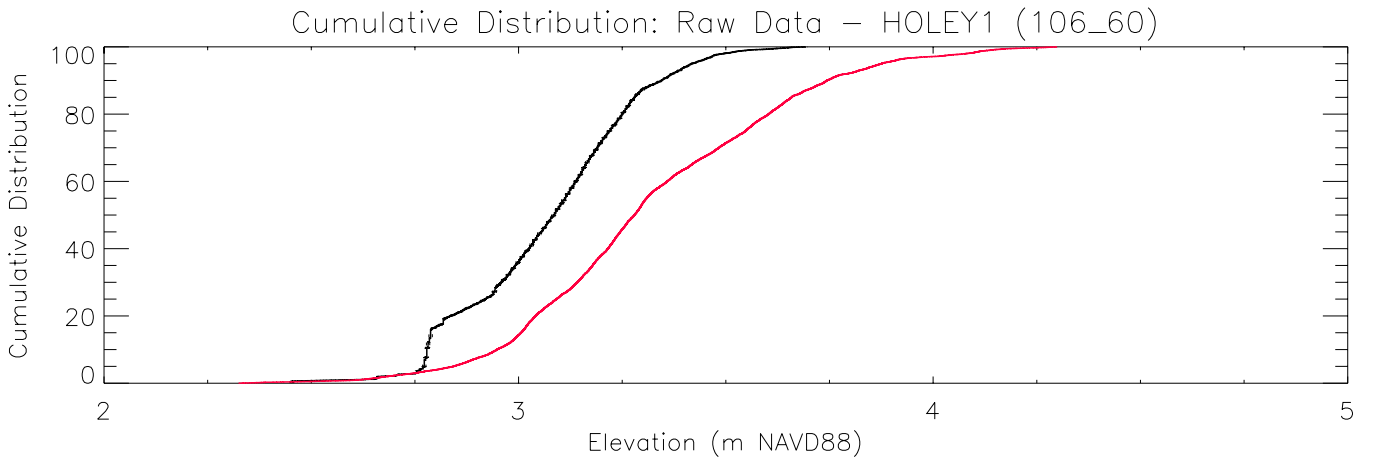

Mean: Water Year – 95% CI – 3B–SE_B (154_202)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

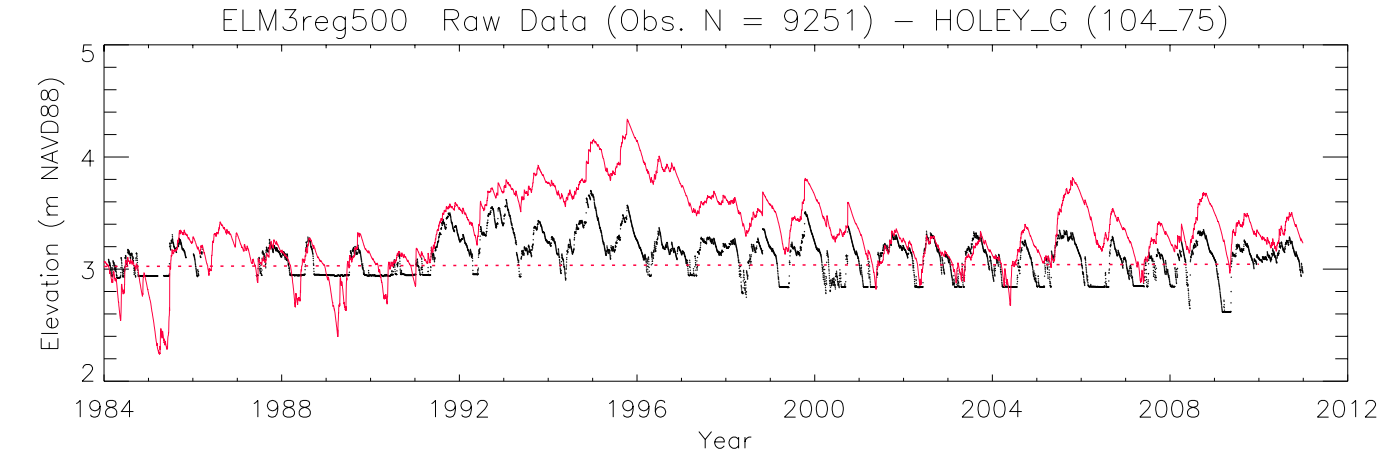

Cumulative Distribution: Raw Data – 3B–SE_B (154_202)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

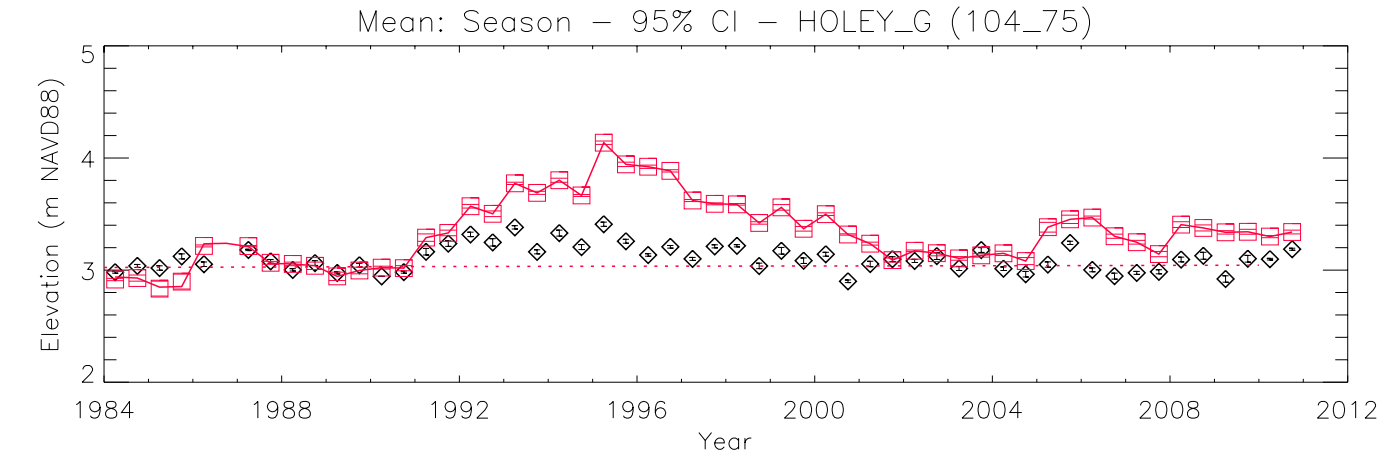

ELM3reg500 Raw Data (Obs. N = 7441) – HOLEY1 (106_60)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

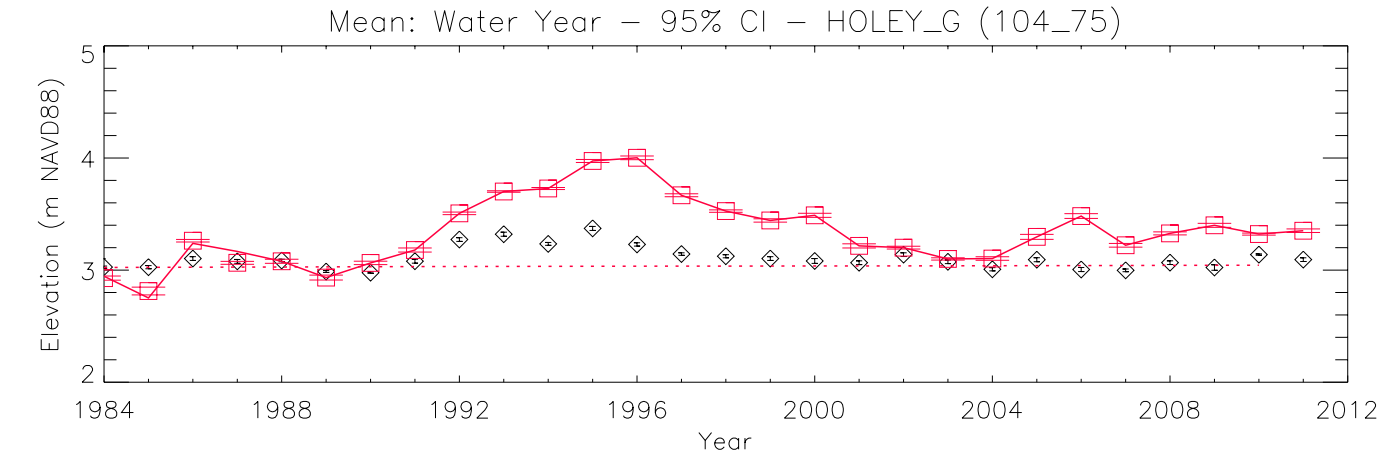

Mean: Season – 95% CI – HOLEY1 (106_60)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

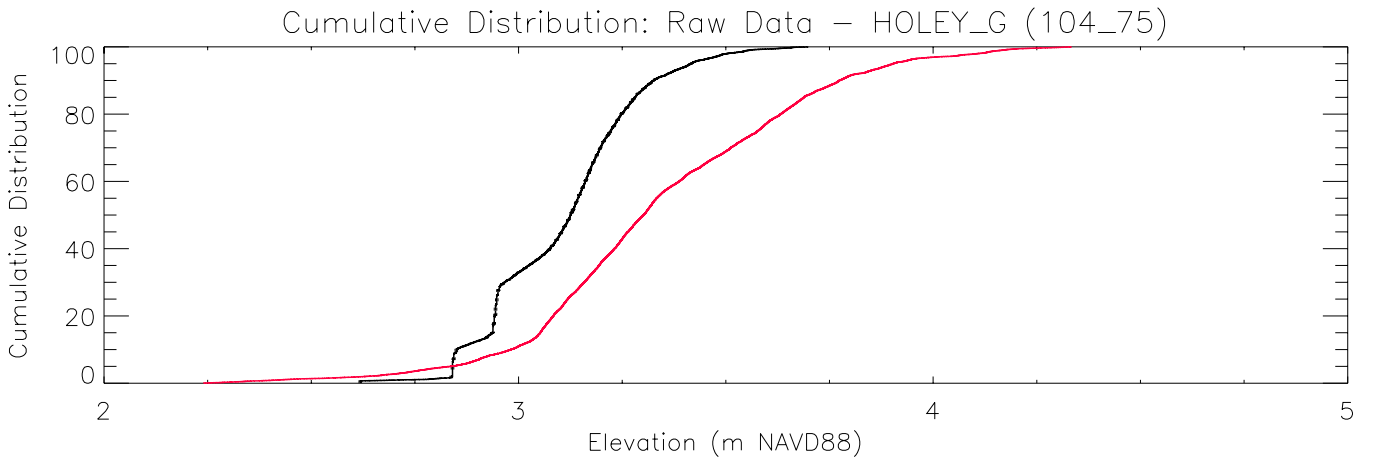

Mean: Water Year – 95% CI – HOLEY1 (106_60)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

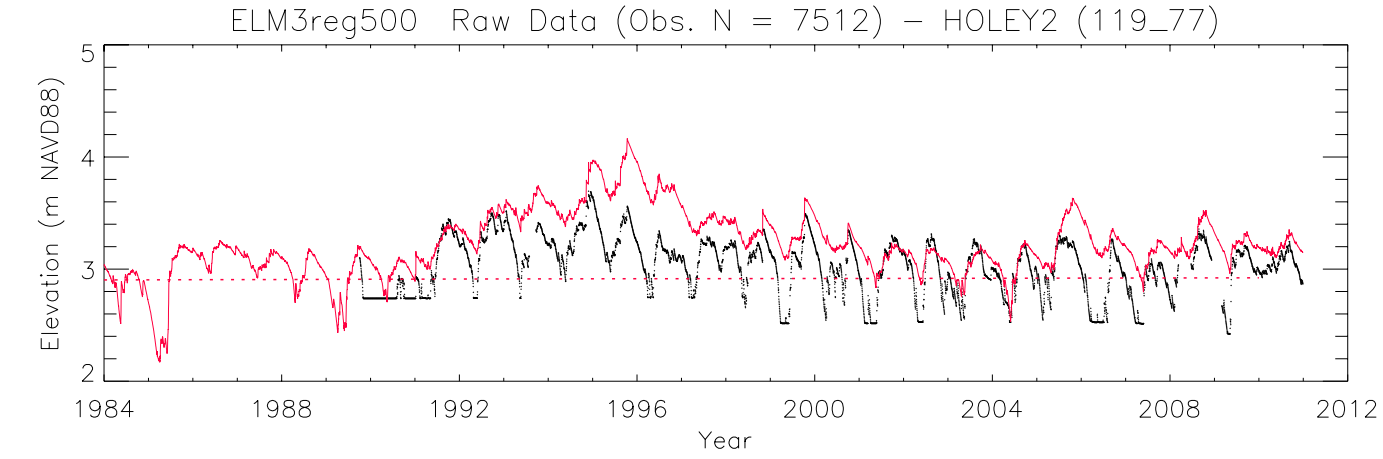

Cumulative Distribution: Raw Data – HOLEY1 (106_60)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)

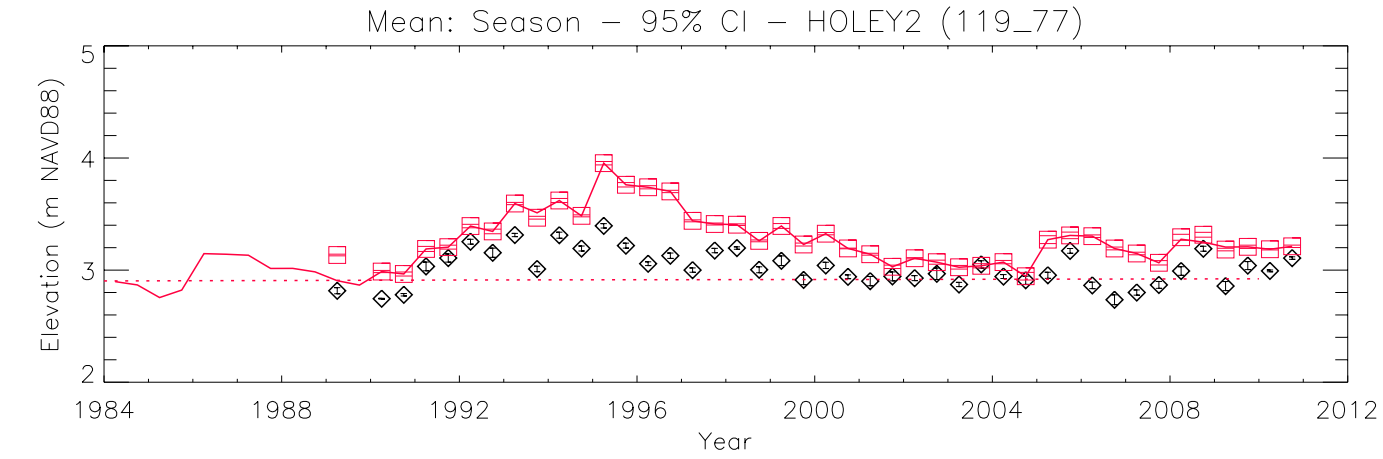

ELM3reg500 Raw Data (Obs. N = 9251) – HOLEY_G (104_75)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

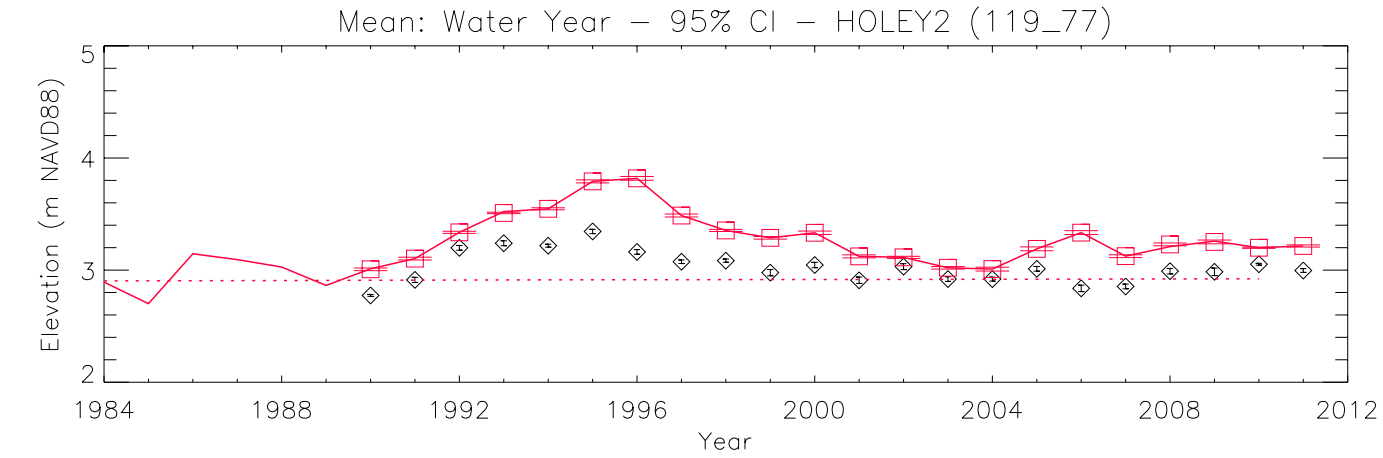

Mean: Season – 95% CI – HOLEY_G (104_75)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

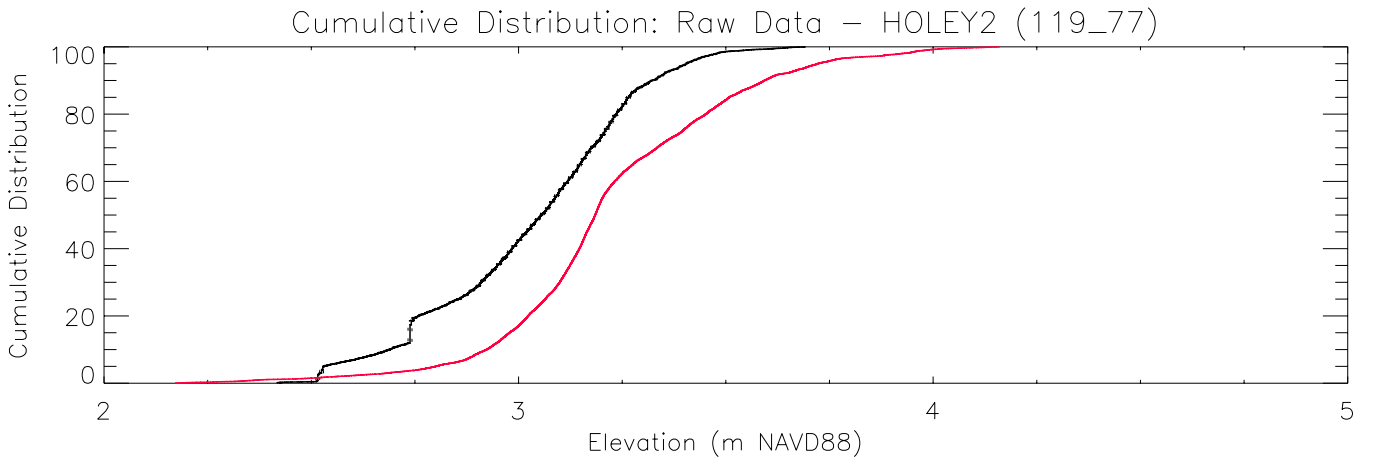

Mean: Water Year – 95% CI – HOLEY_G (104_75)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

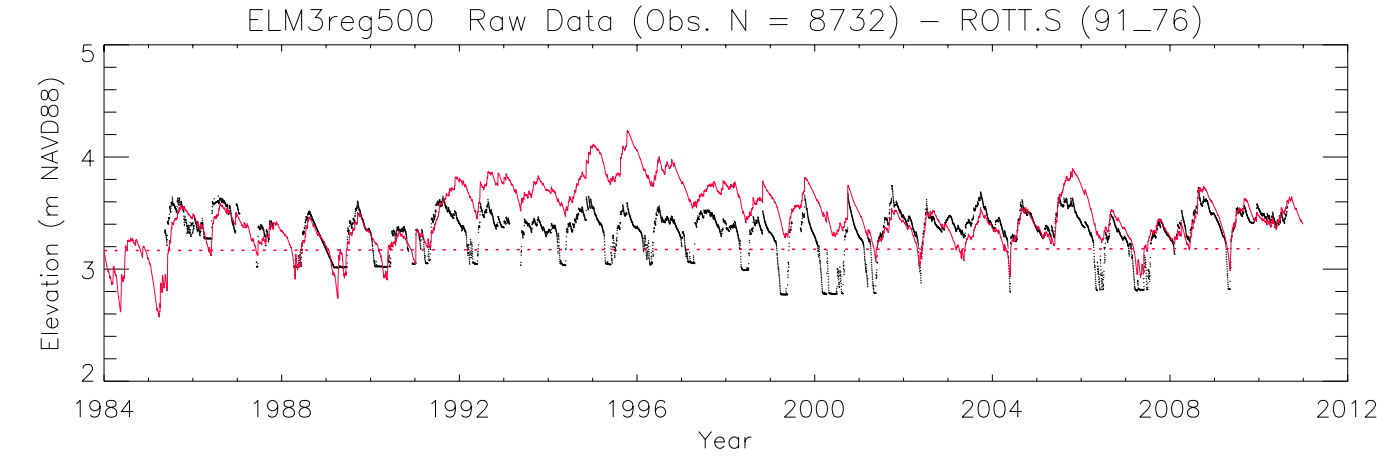

Cumulative Distribution: Raw Data – HOLEY_G (104_75)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)

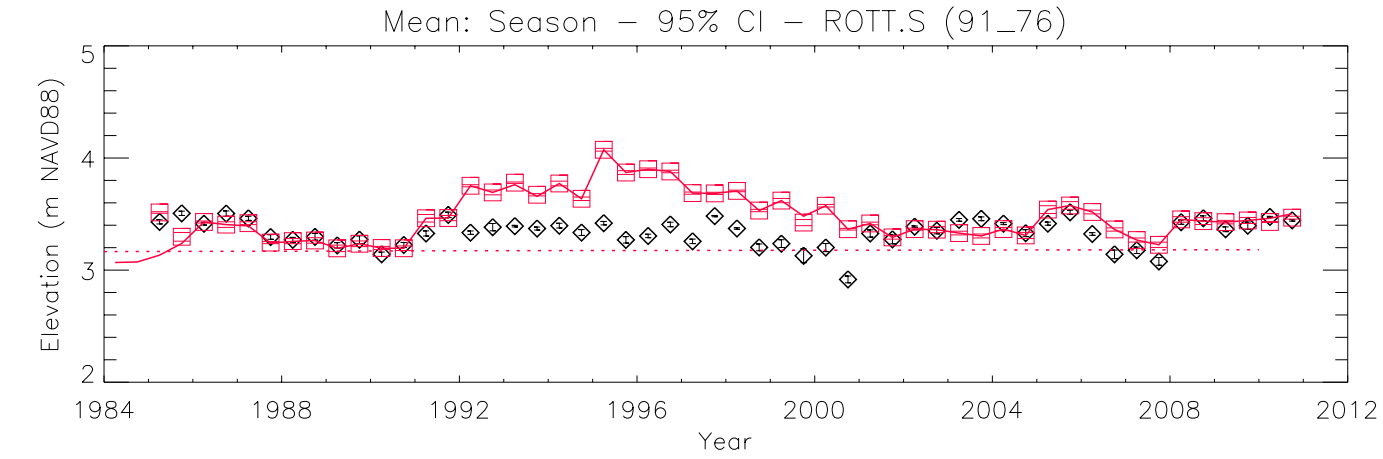

ELM3reg500 Raw Data (Obs. N = 7512) – HOLEY2 (119_77)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

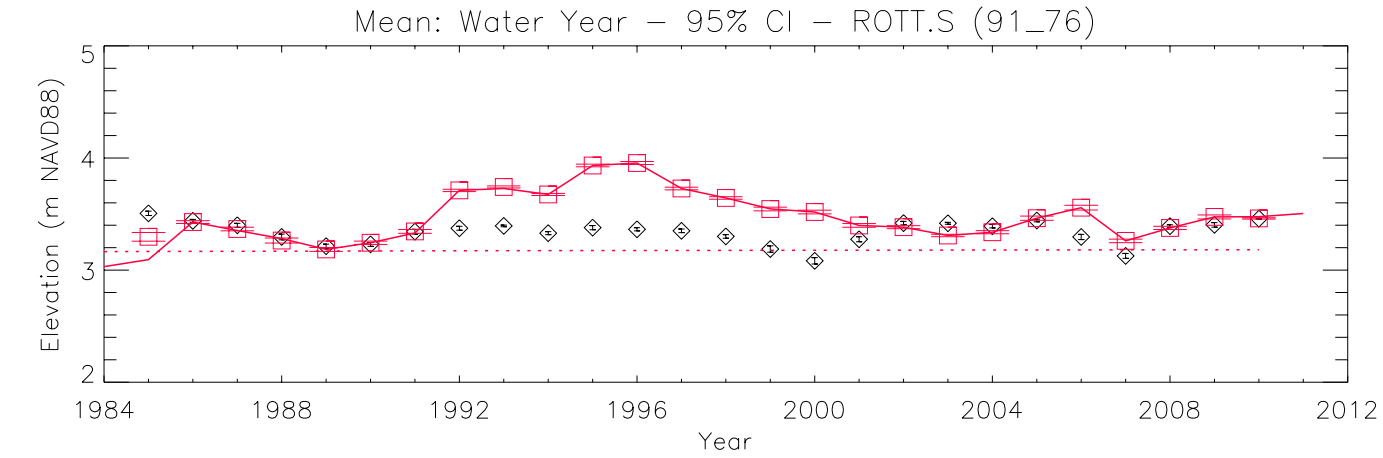

Mean: Season – 95% CI – HOLEY2 (119_77)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

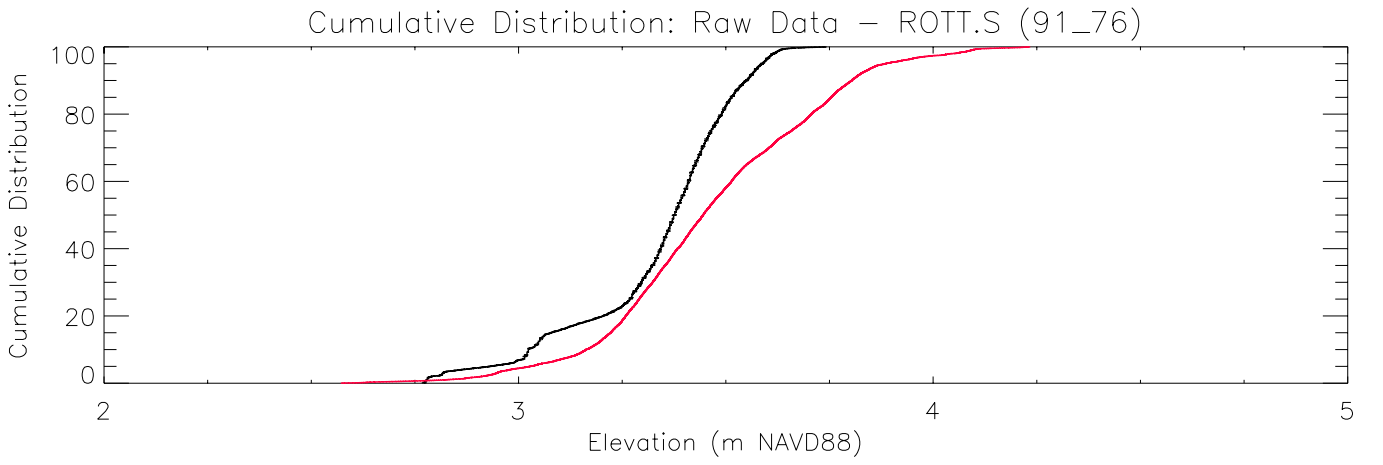

Mean: Water Year – 95% CI – HOLEY2 (119_77)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

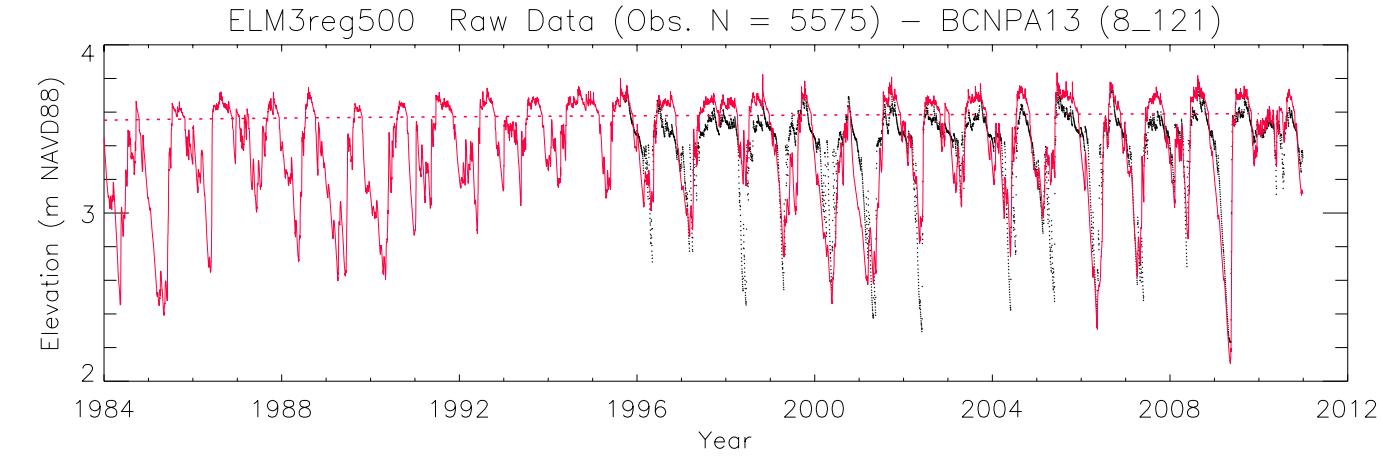

Cumulative Distribution: Raw Data – HOLEY2 (119_77)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)

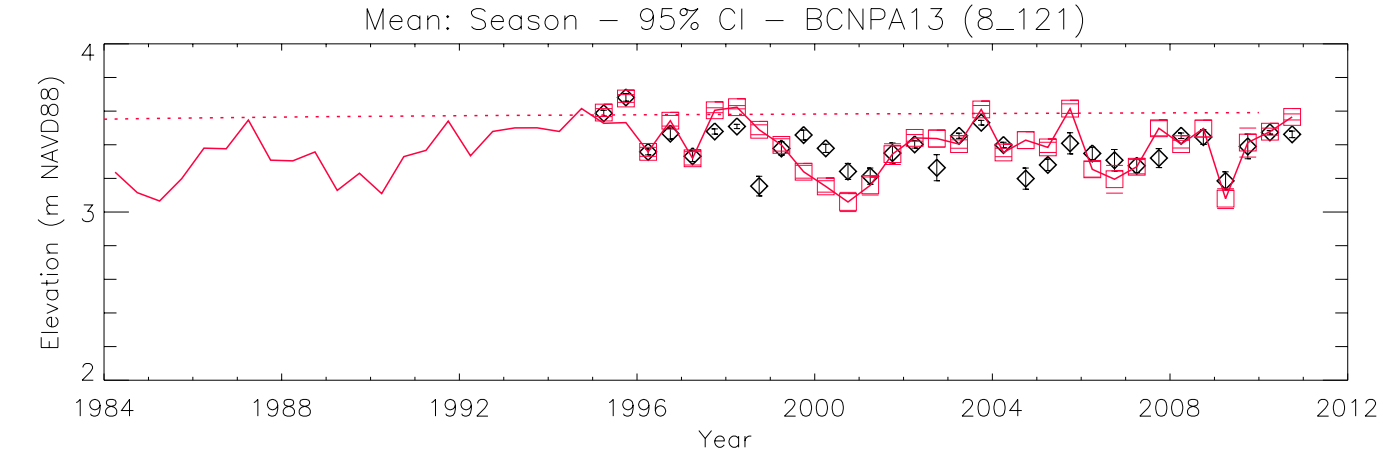

ELM3reg500 Raw Data (Obs. N = 8732) – ROTT.S (91_76)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

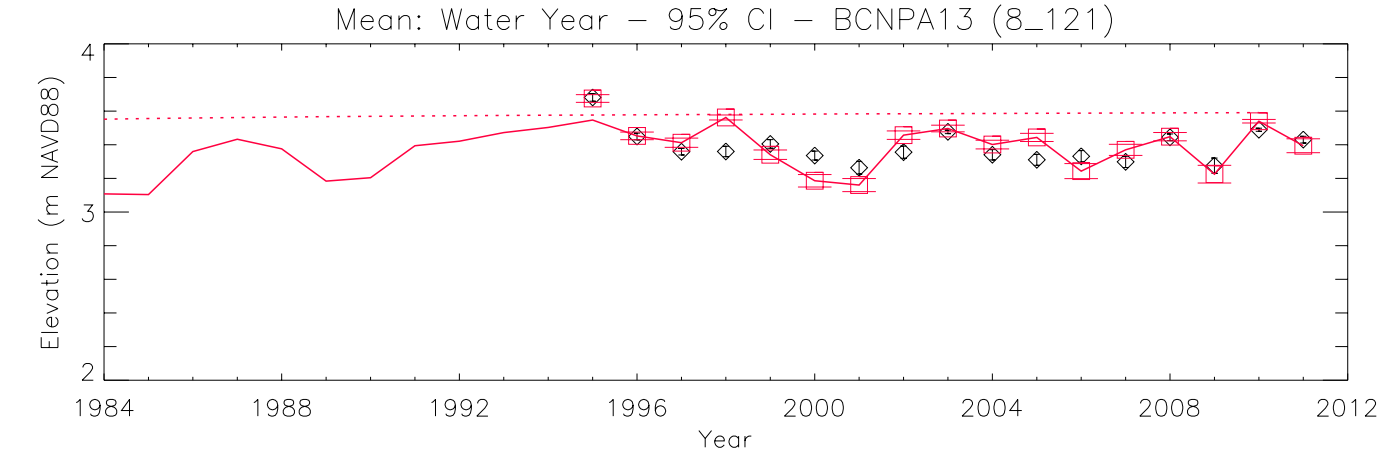

Mean: Season – 95% CI – ROTT.S (91_76)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

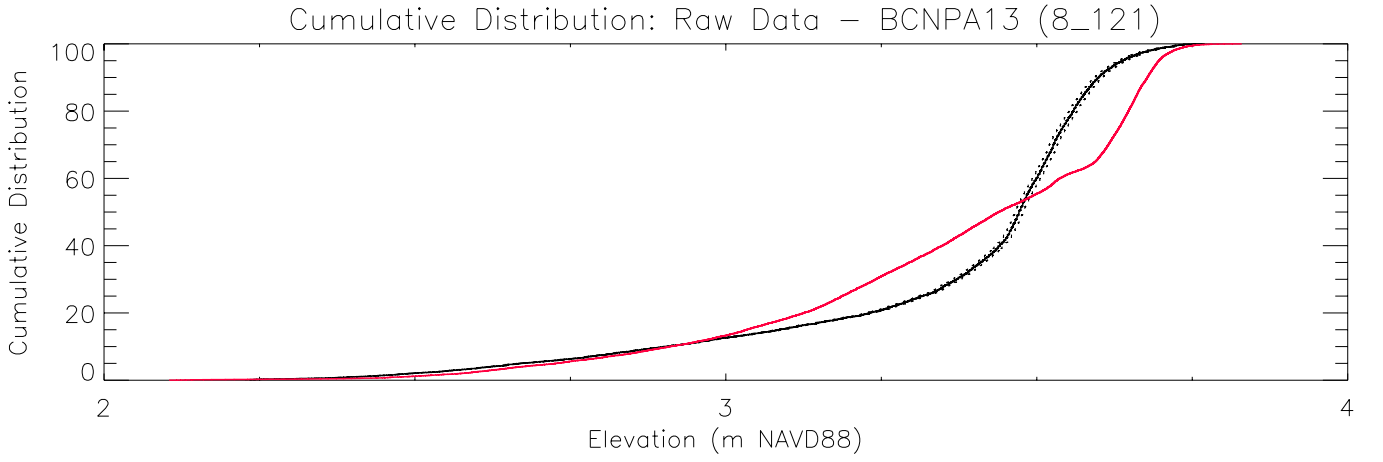

Mean: Water Year – 95% CI – ROTT.S (91_76)
Elevation (m NAVD88)
5
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

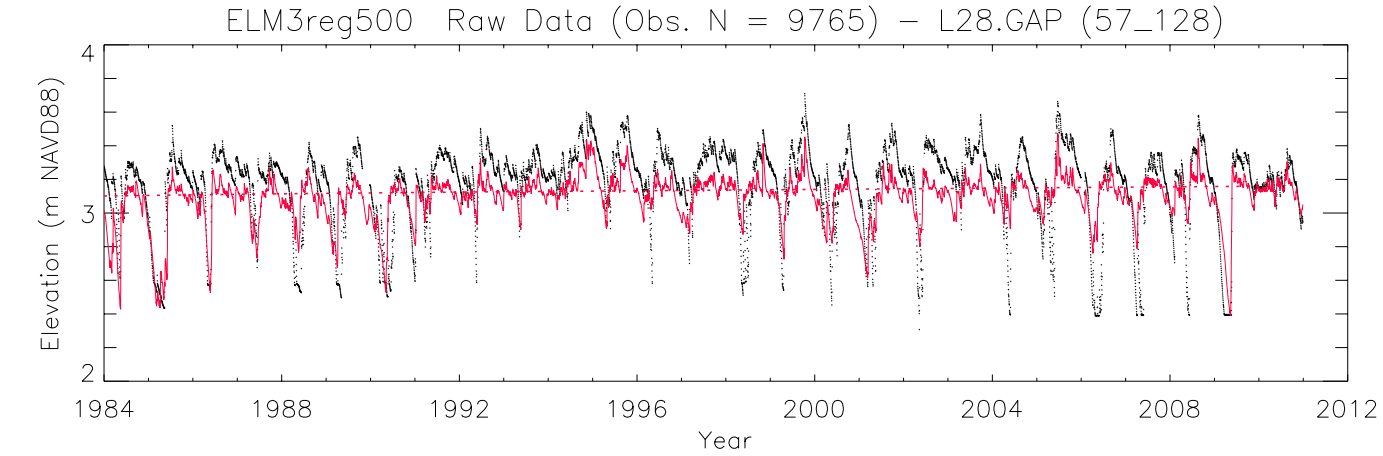

Cumulative Distribution: Raw Data – ROTT.S (91_76)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
5
Elevation (m NAVD88)

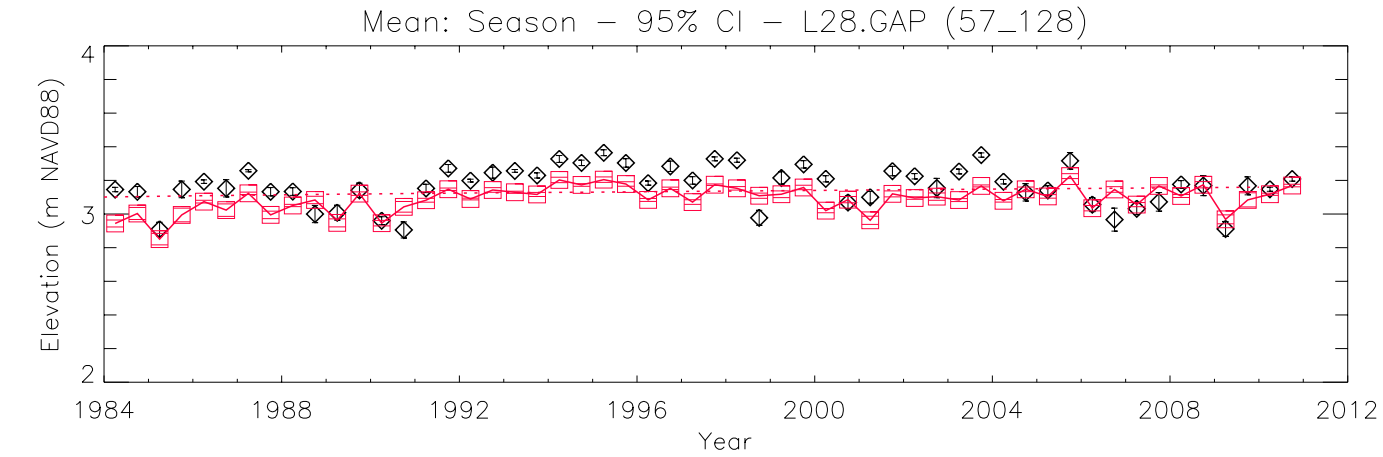

ELM3reg500 Raw Data (Obs. N = 5575) – BCNPA13 (8_121)
Elevation (m NAVD88)
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

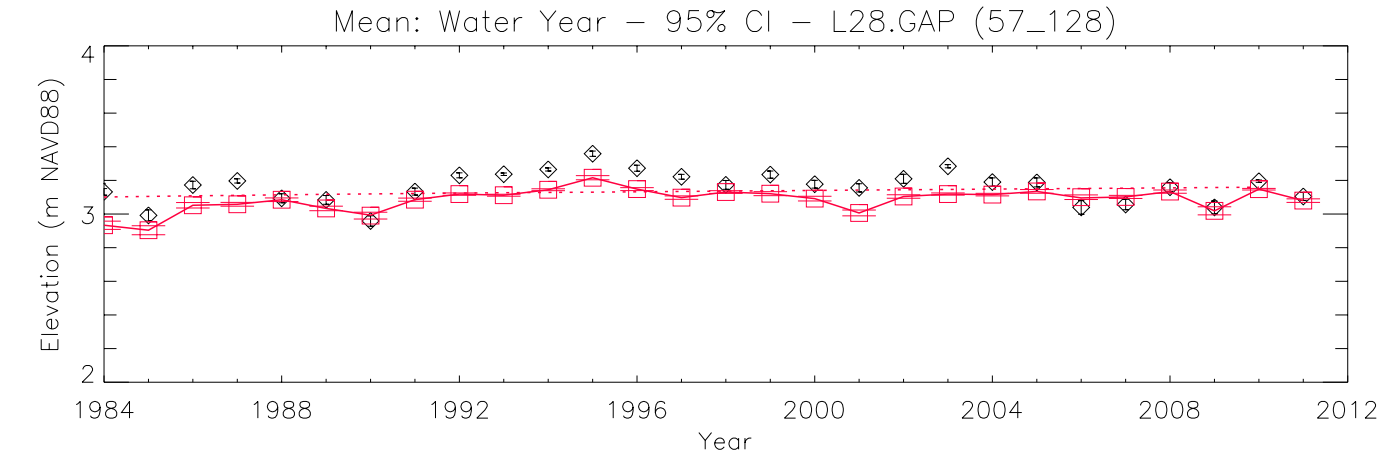

Mean: Season – 95% CI – BCNPA13 (8_121)
Elevation (m NAVD88)
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

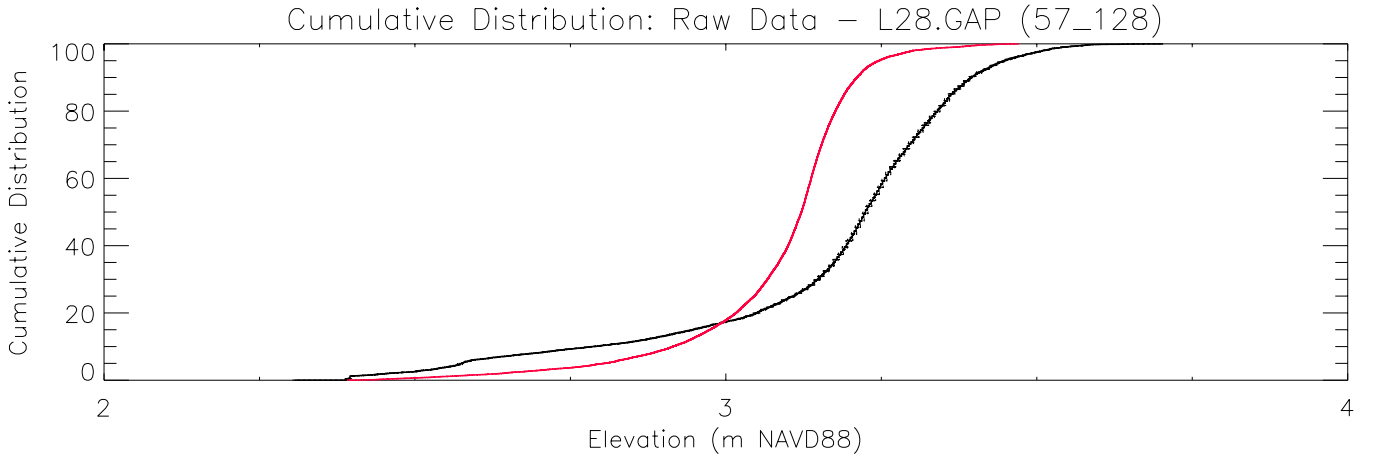

Mean: Water Year – 95% CI – BCNPA13 (8_121)
Elevation (m NAVD88)
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

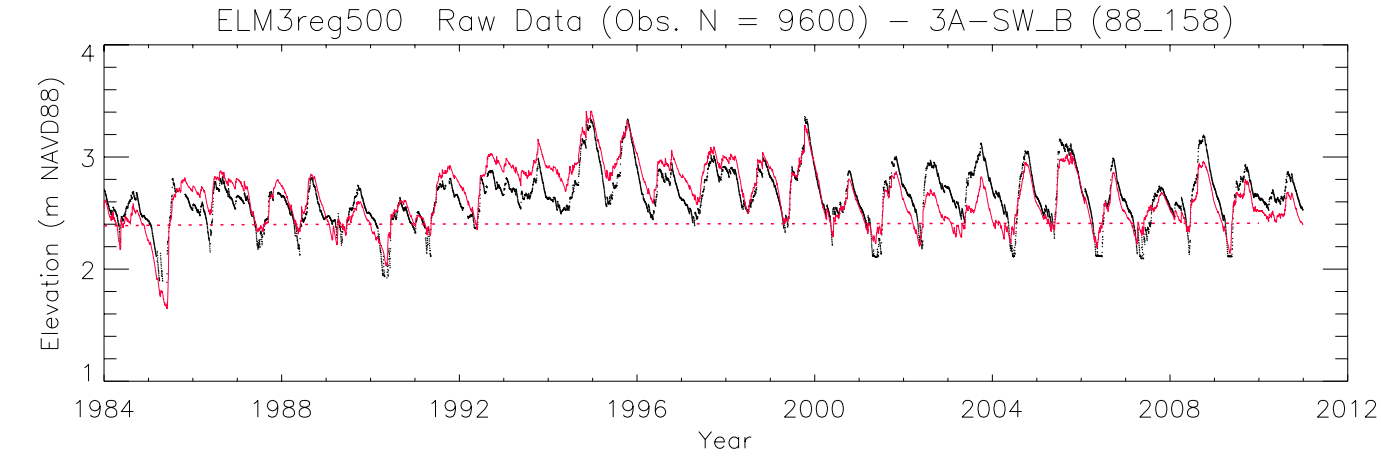

Cumulative Distribution: Raw Data – BCNPA13 (8_121)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
Elevation (m NAVD88)

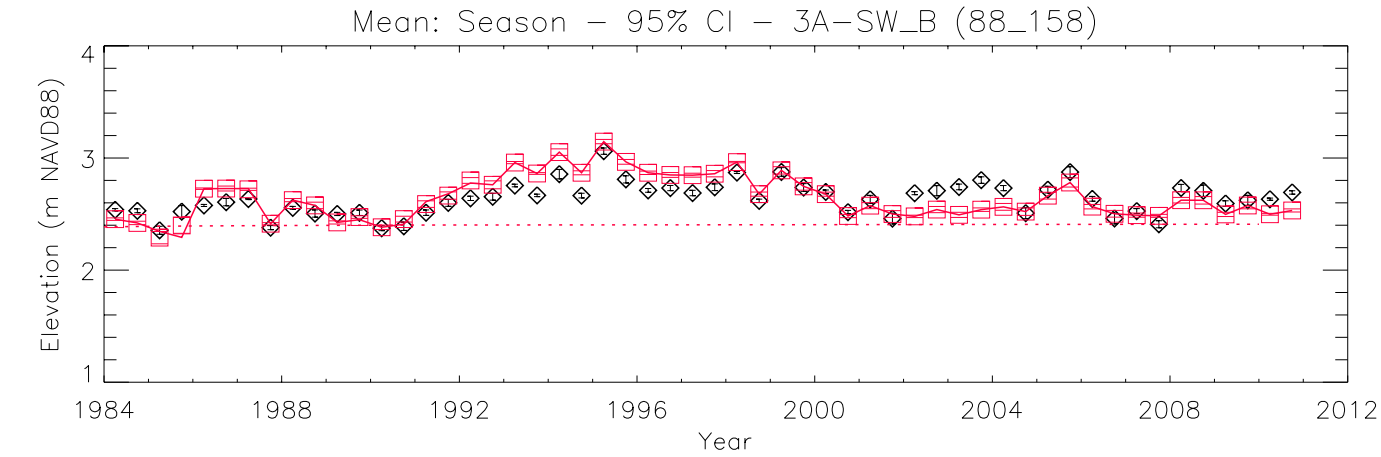

ELM3reg500 Raw Data (Obs. N = 9765) – L28.GAP (57_128)
Elevation (m NAVD88)
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

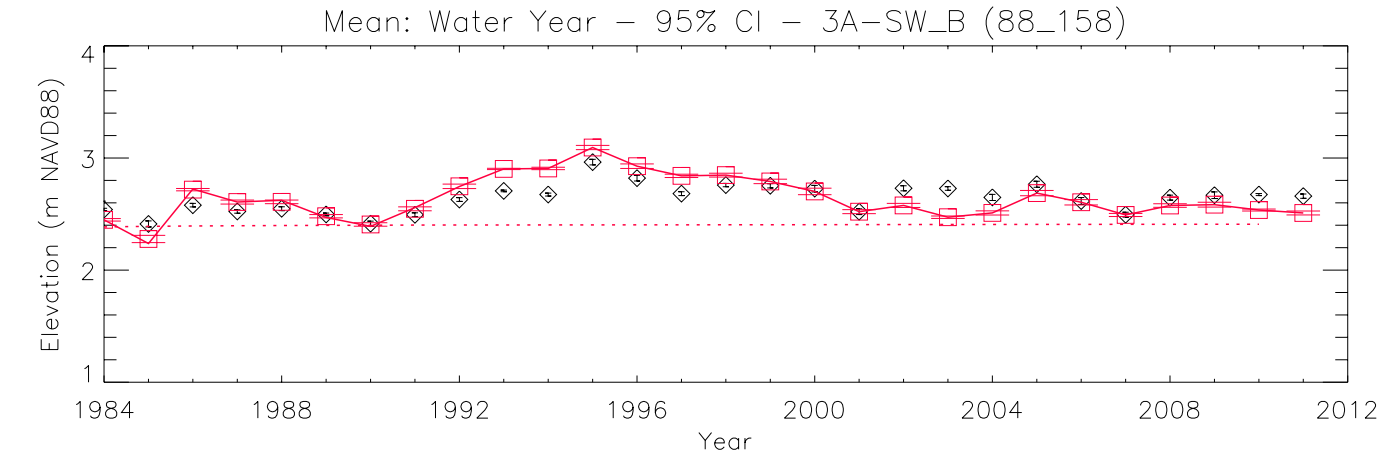

Mean: Season – 95% CI – L28.GAP (57_128)
Elevation (m NAVD88)
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

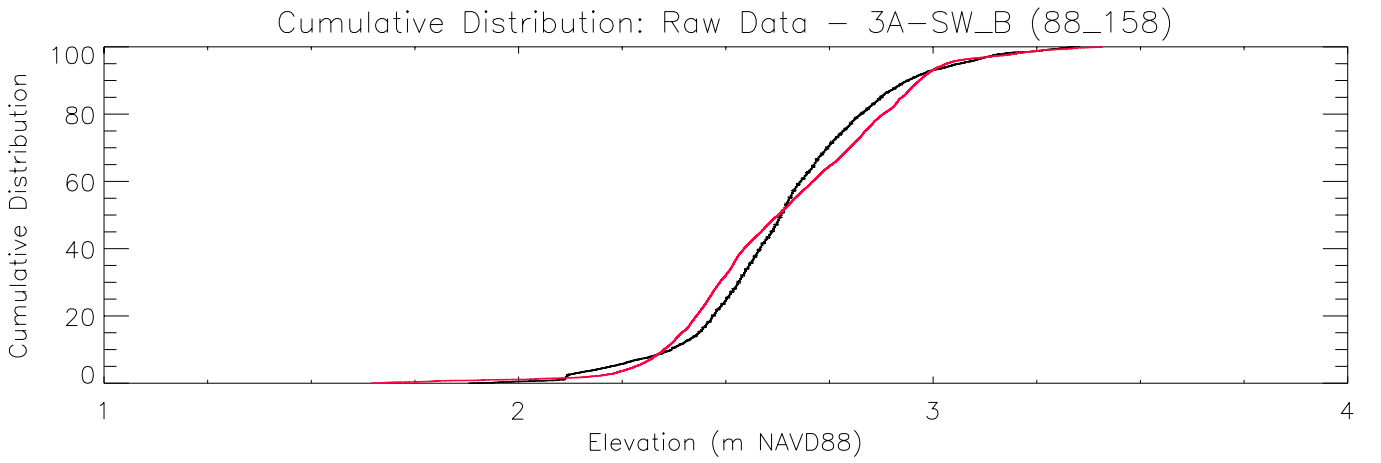

Mean: Water Year – 95% CI – L28.GAP (57_128)
Elevation (m NAVD88)
4
3
2
1984
1988
1992
1996
2000
2004
2008
2012
Year

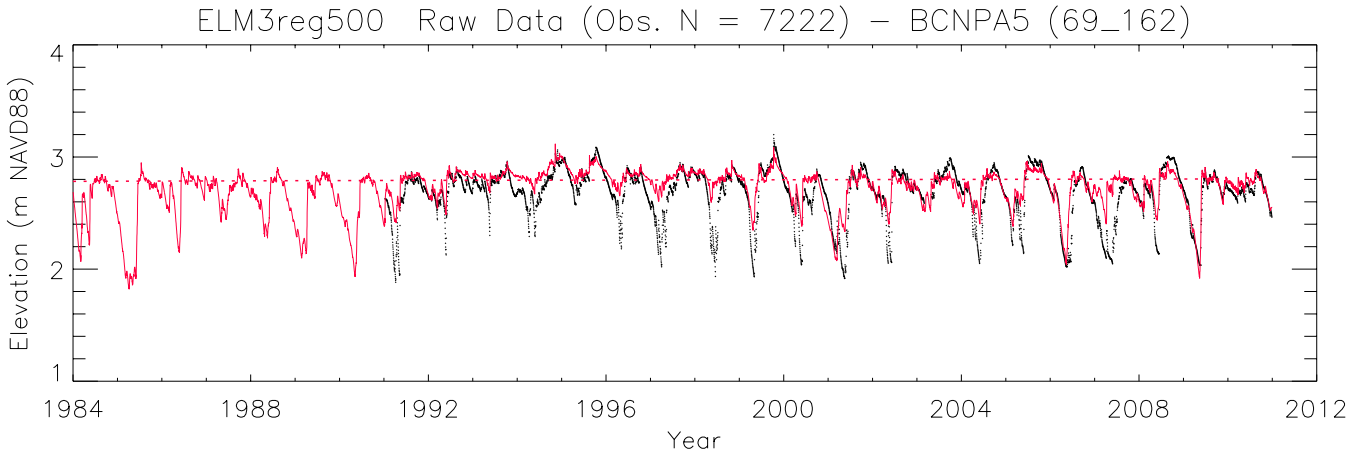

Cumulative Distribution: Raw Data – L28.GAP (57_128)
Cumulative Distribution
100
80
60
40
20
0
2
3
4
Elevation (m NAVD88)

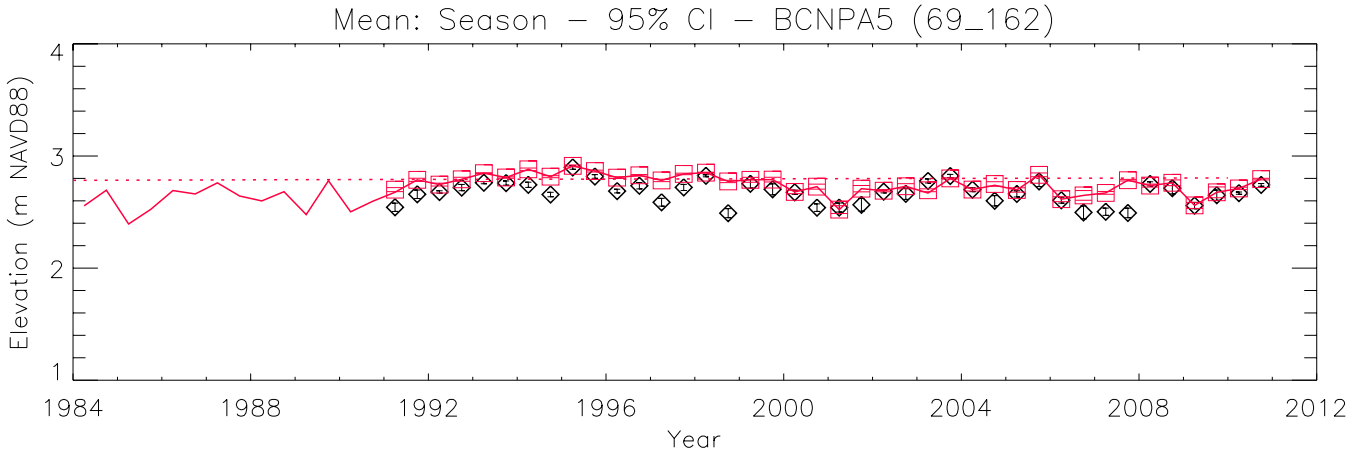

ELM3reg500 Raw Data (Obs. N = 9600) – 3A–SW_B (88_158)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

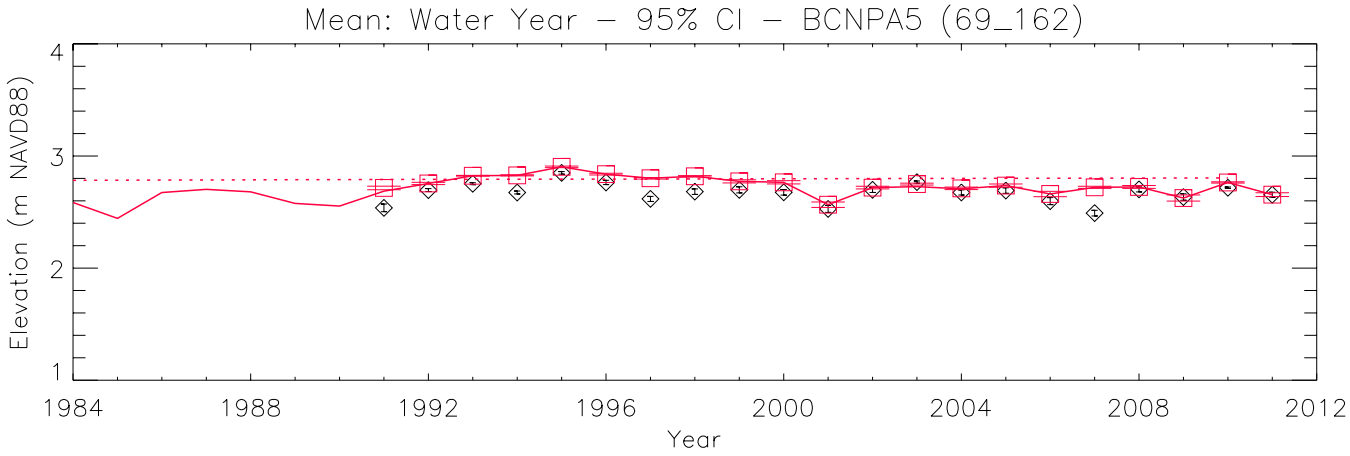

Mean: Season – 95% CI – 3A–SW_B (88_158)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

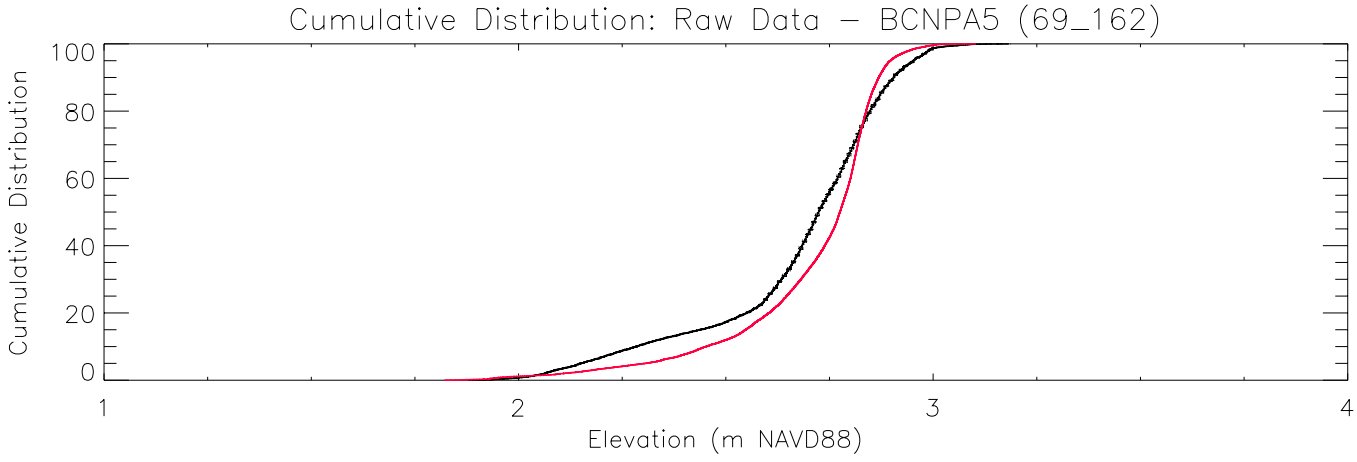

Mean: Water Year – 95% CI – 3A–SW_B (88_158)
Elevation (m NAVD88)
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012
Year

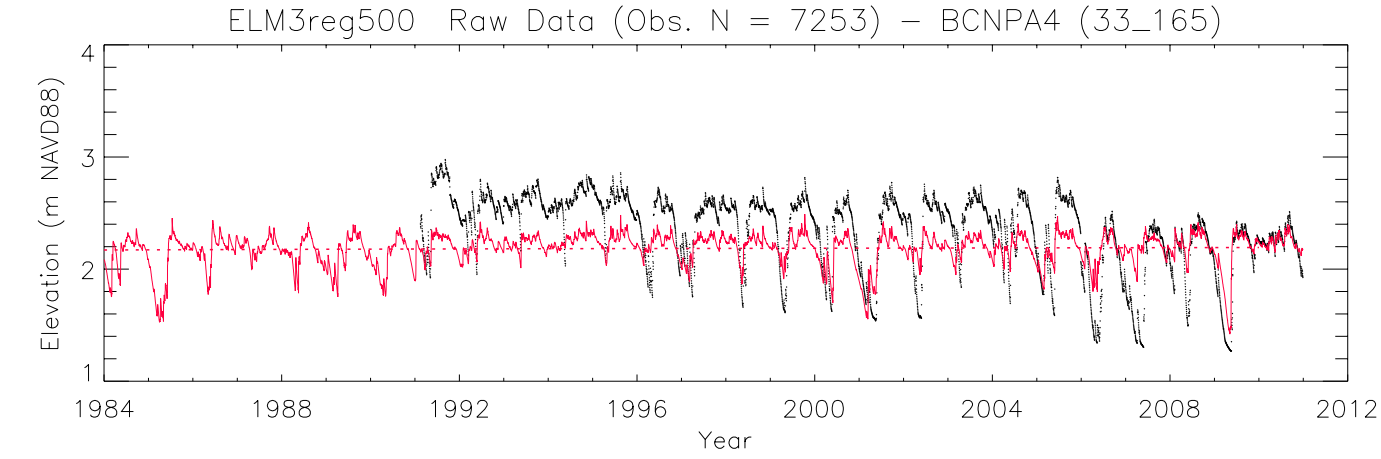

Cumulative Distribution: Raw Data – 3A–SW_B (88_158)
Cumulative Distribution
0
20
40
60
80
100
1
2
3
4
Elevation (m NAVD88)

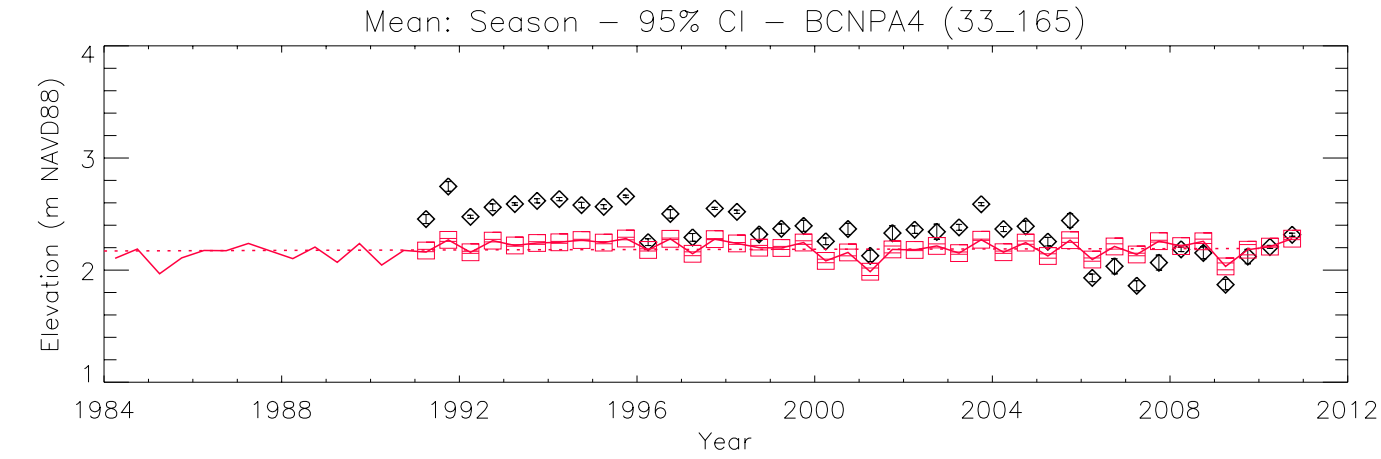

ELM3reg500 Raw Data (Obs. N = 7222) – BCNPA5 (69_162)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

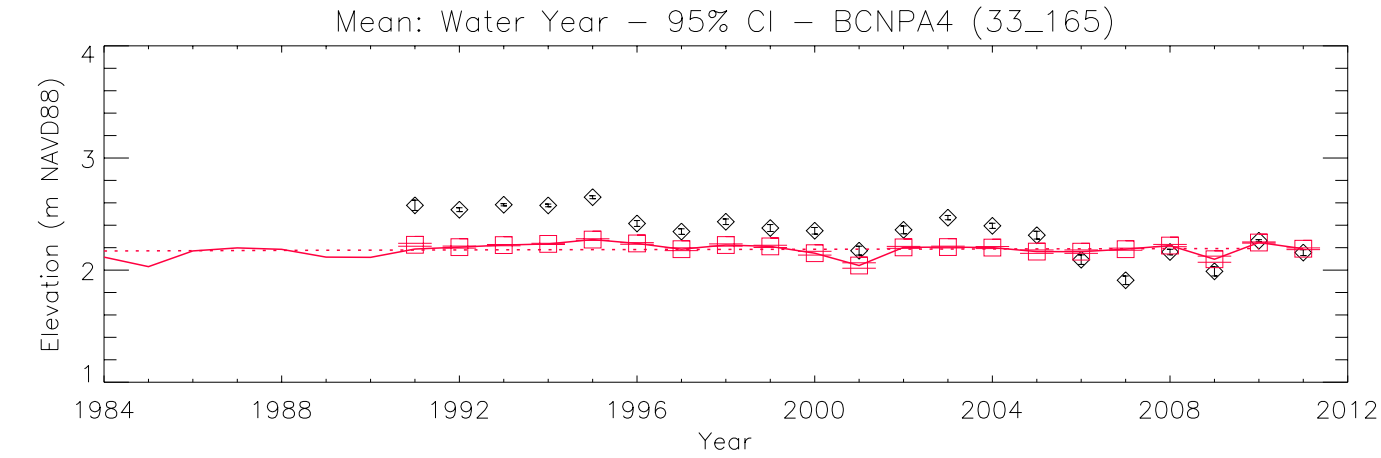

Mean: Season – 95% CI – BCNPA5 (69_162)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

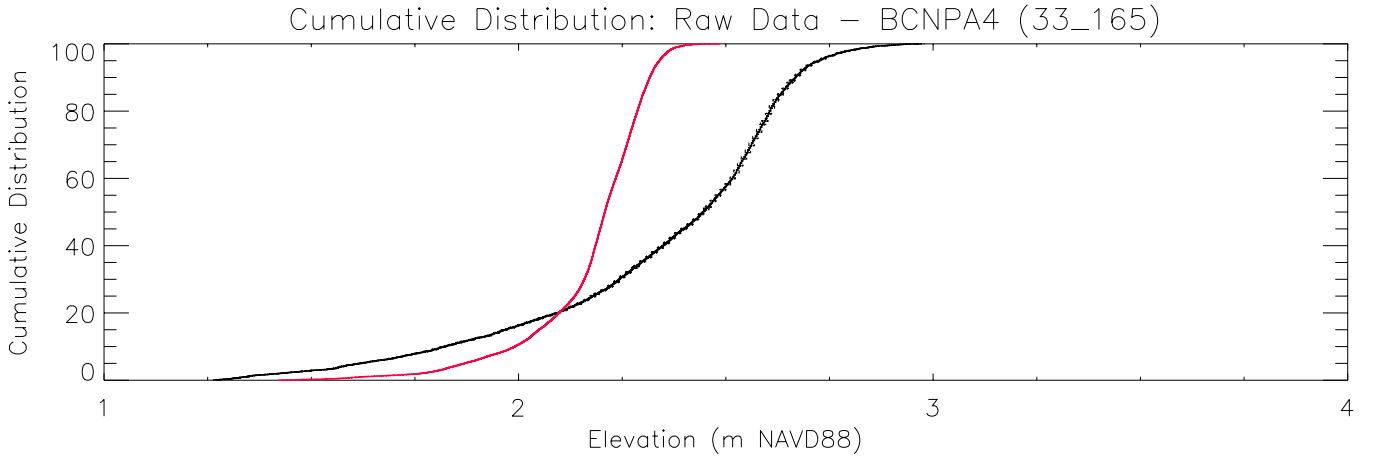

Mean: Water Year – 95% CI – BCNPA5 (69_162)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

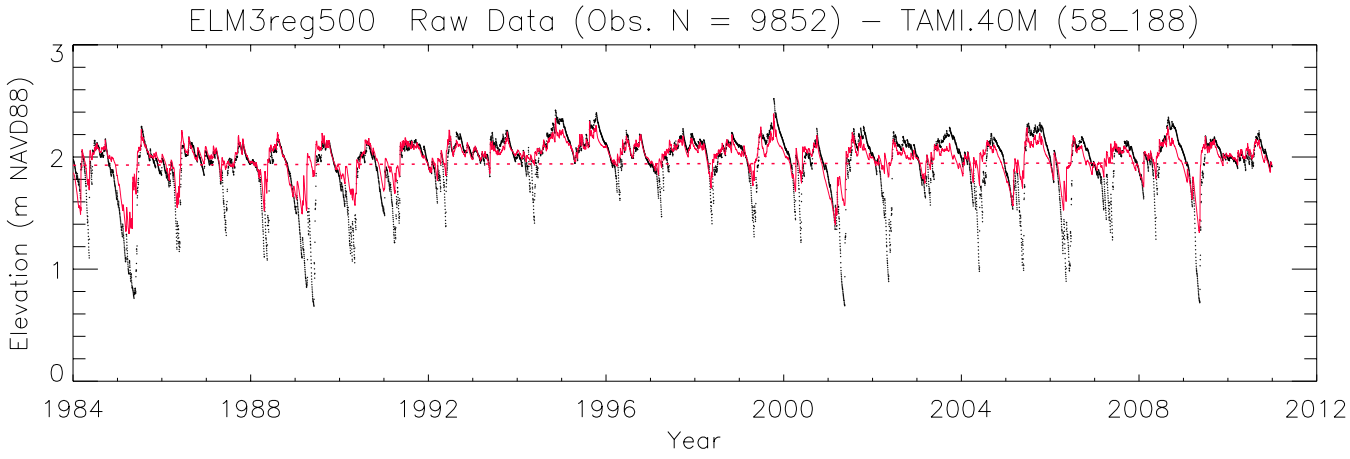

Cumulative Distribution: Raw Data – BCNPA5 (69_162)
Cumulative Distribution
Elevation (m NAVD88)
0
20
40
60
80
100
1
2
3
4

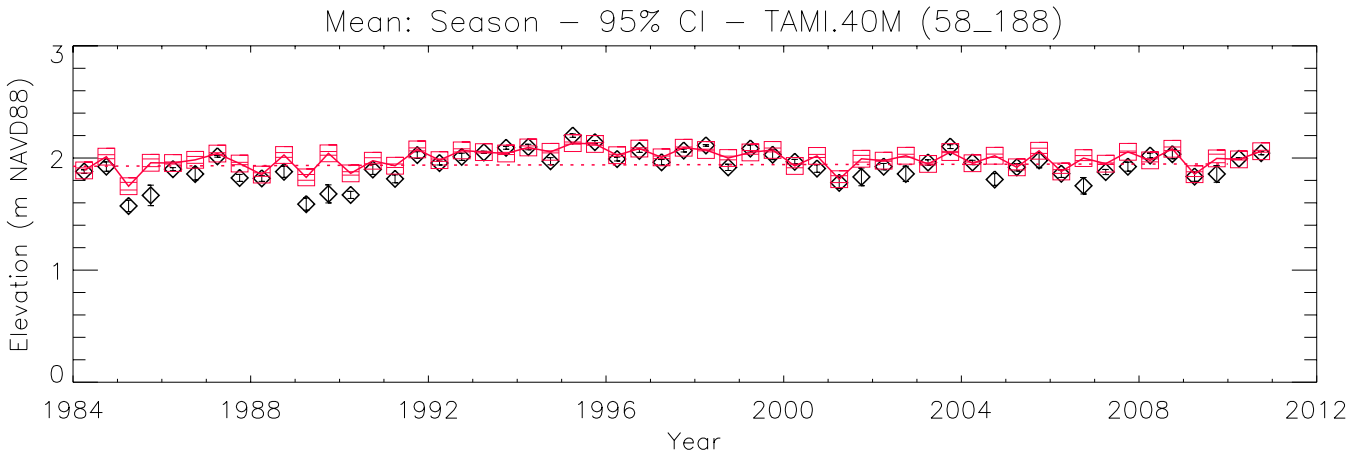

ELM3reg500 Raw Data (Obs. N = 7253) – BCNPA4 (33_165)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

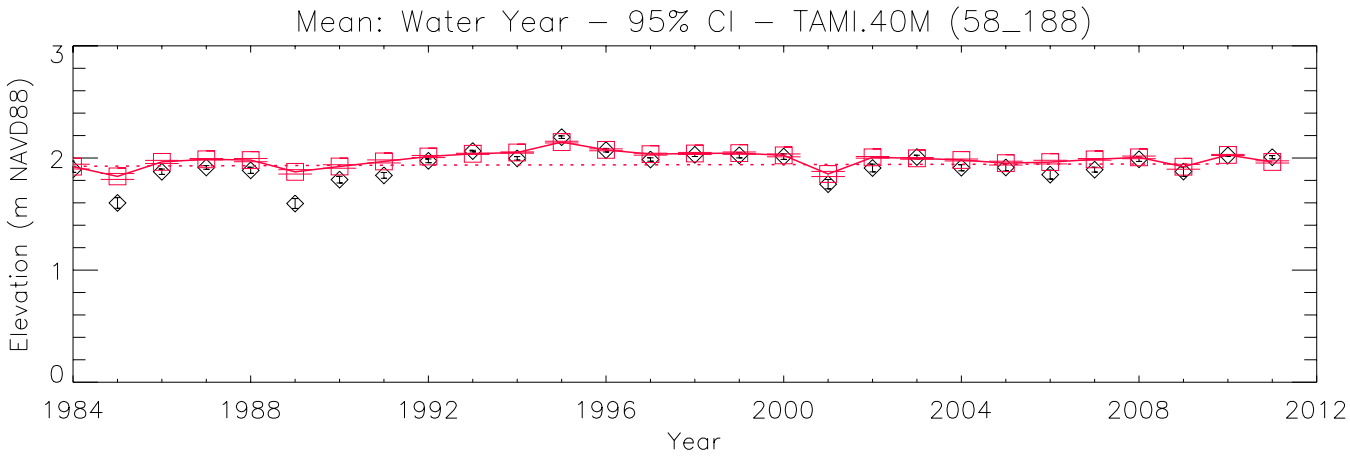

Mean: Season – 95% CI – BCNPA4 (33_165)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

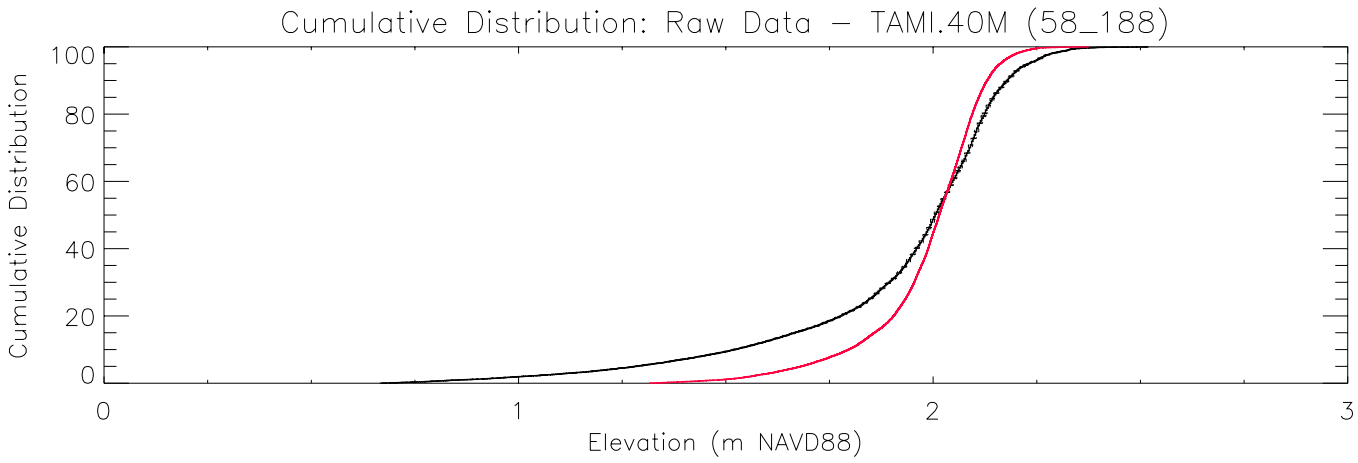

Mean: Water Year – 95% CI – BCNPA4 (33_165)
Elevation (m NAVD88)
Year
1
2
3
4
1984
1988
1992
1996
2000
2004
2008
2012

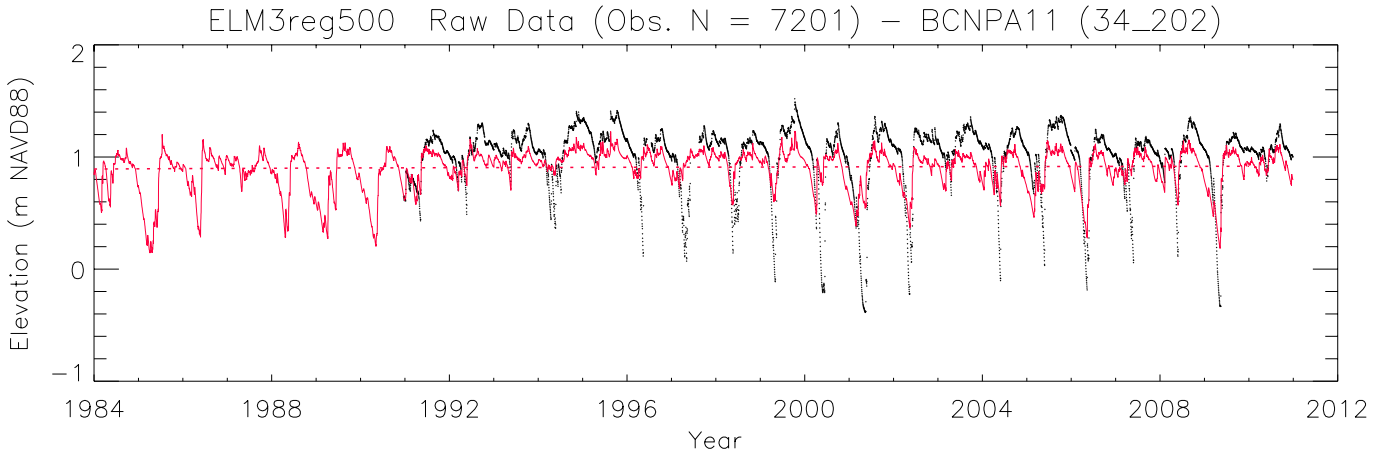

Cumulative Distribution: Raw Data – BCNPA4 (33_165)
Cumulative Distribution
Elevation (m NAVD88)
0
20
40
60
80
100
1
2
3
4

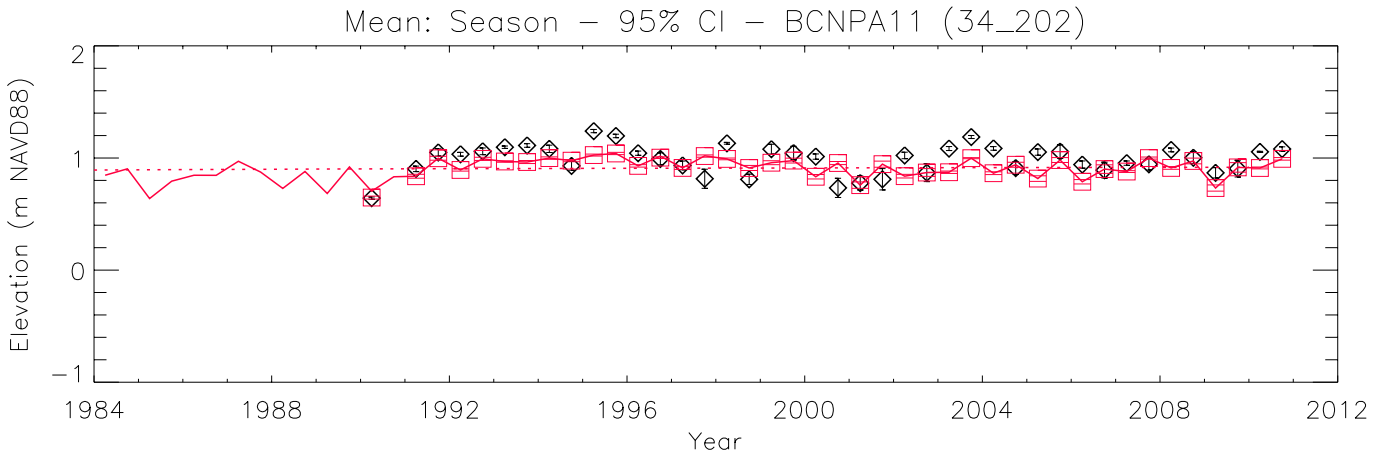

ELM3reg500 Raw Data (Obs. N = 9852) – TAMI.40M (58_188)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

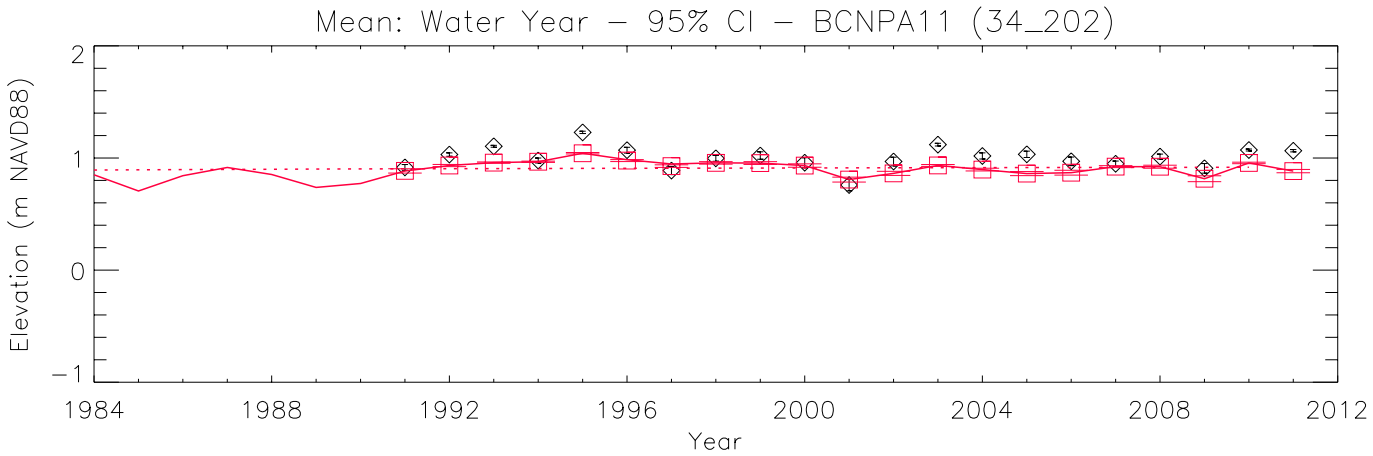

Mean: Season – 95% CI – TAMI.40M (58_188)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

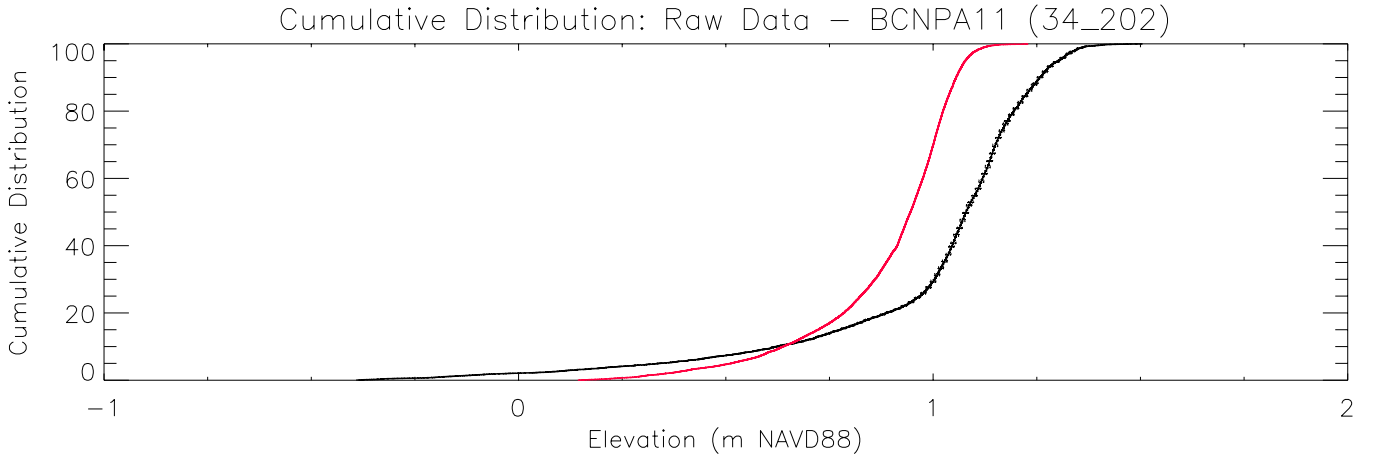

Mean: Water Year – 95% CI – TAMI.40M (58_188)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

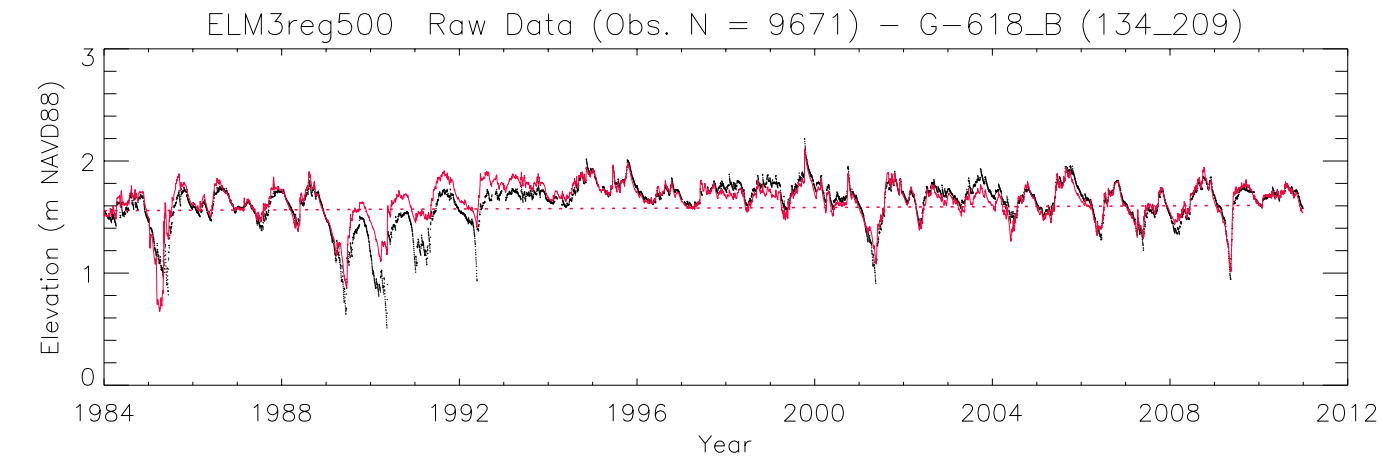

Cumulative Distribution: Raw Data – TAMI.40M (58_188)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

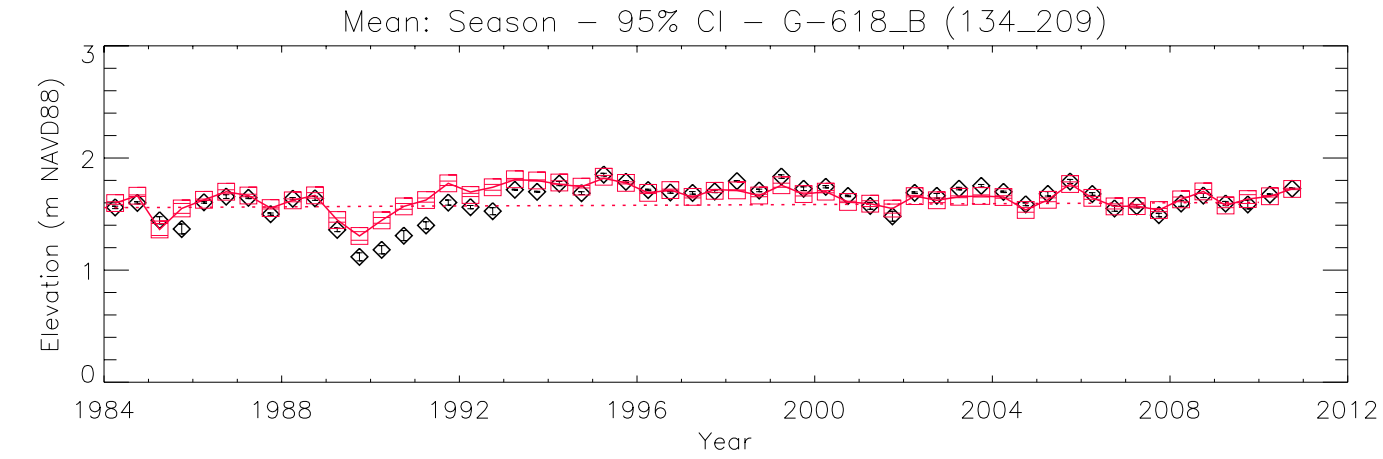

ELM3reg500 Raw Data (Obs. N = 7201) – BCNPA11 (34_202)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

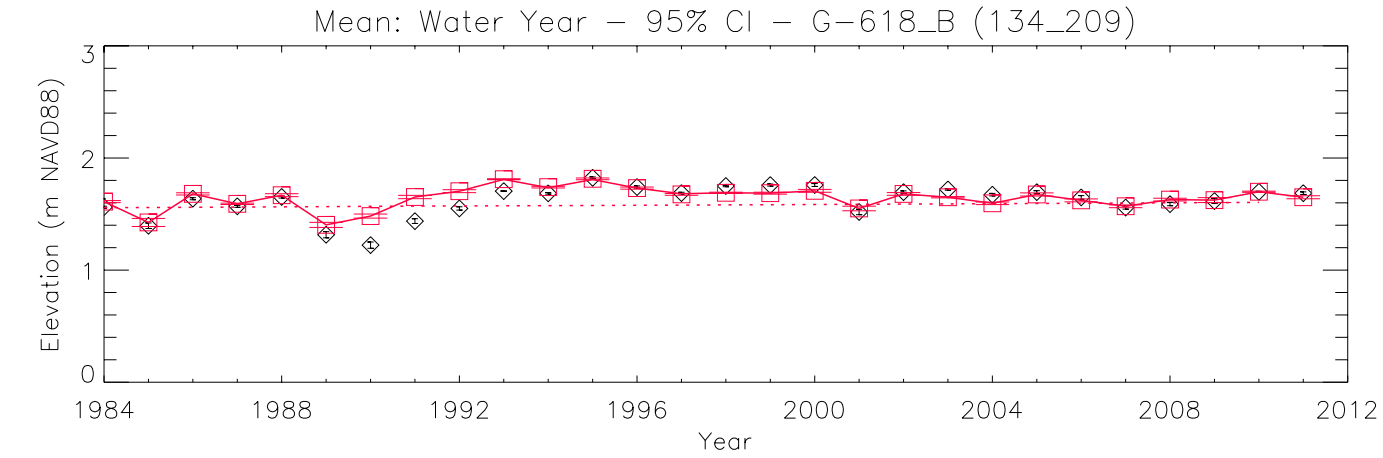

Mean: Season – 95% CI – BCNPA11 (34_202)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

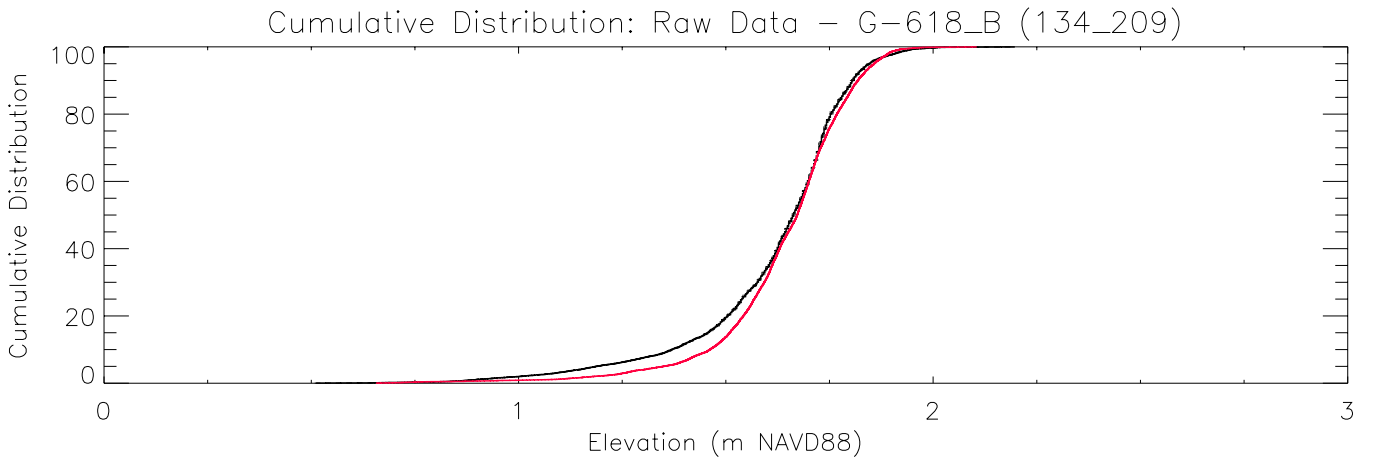

Mean: Water Year – 95% CI – BCNPA11 (34_202)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

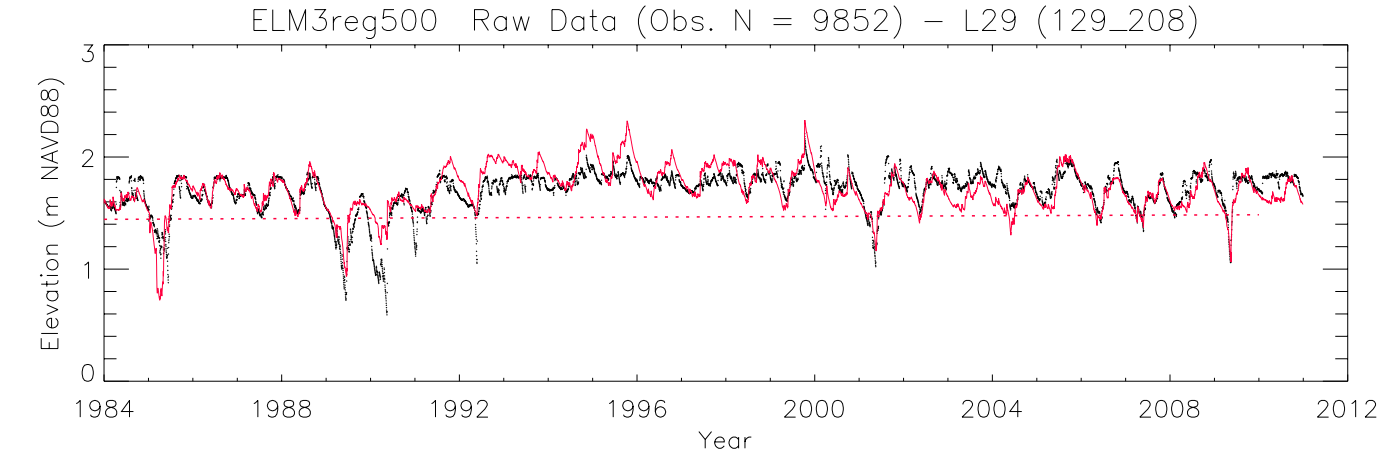

Cumulative Distribution: Raw Data – BCNPA11 (34_202)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

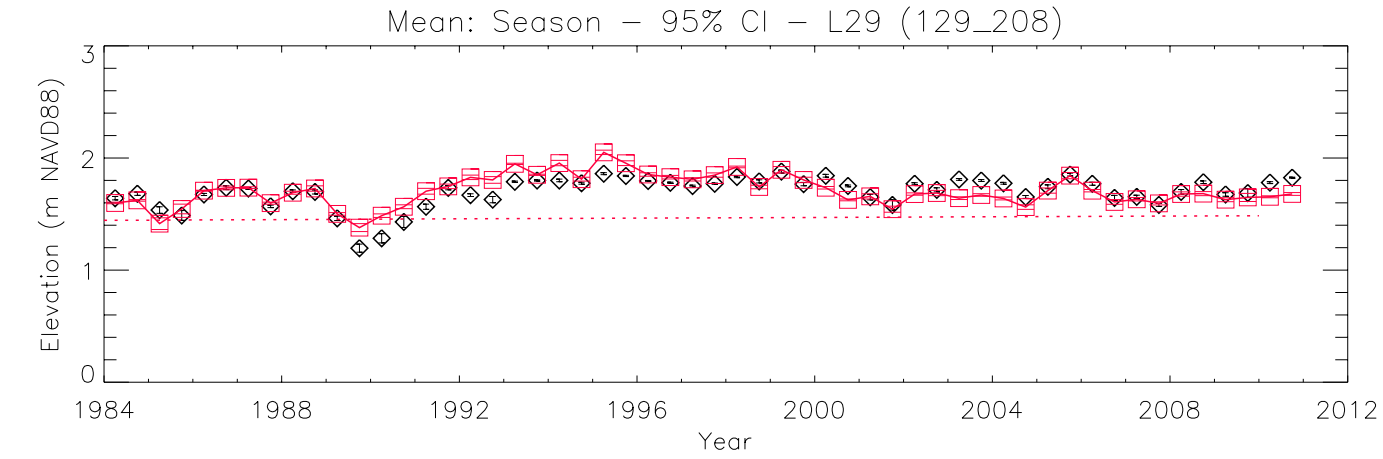

ELM3reg500 Raw Data (Obs. N = 9671) – G–618_B (134_209)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

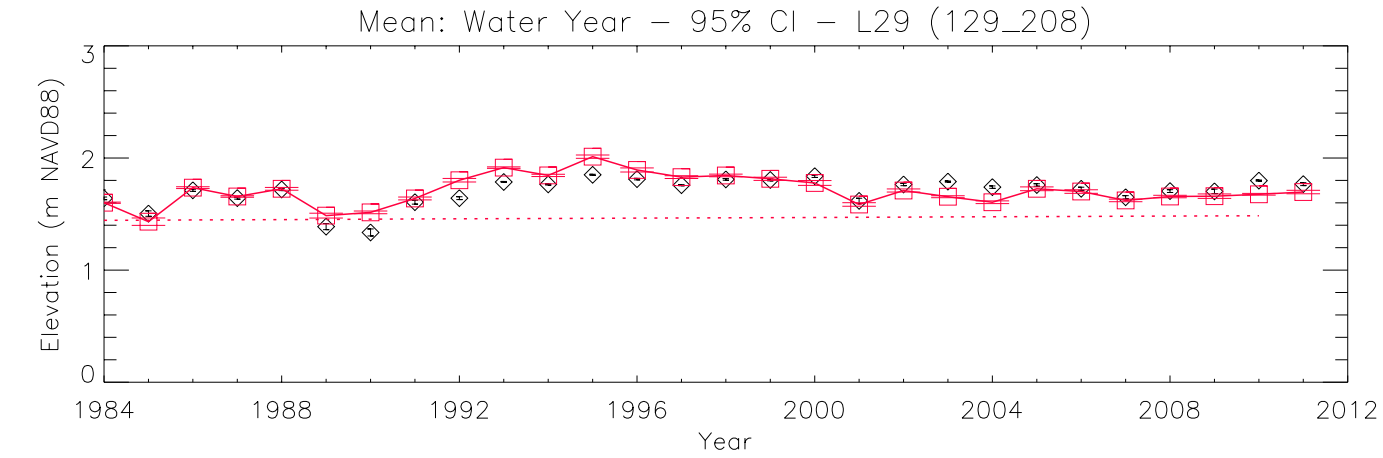

Mean: Season – 95% CI – G–618_B (134_209)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

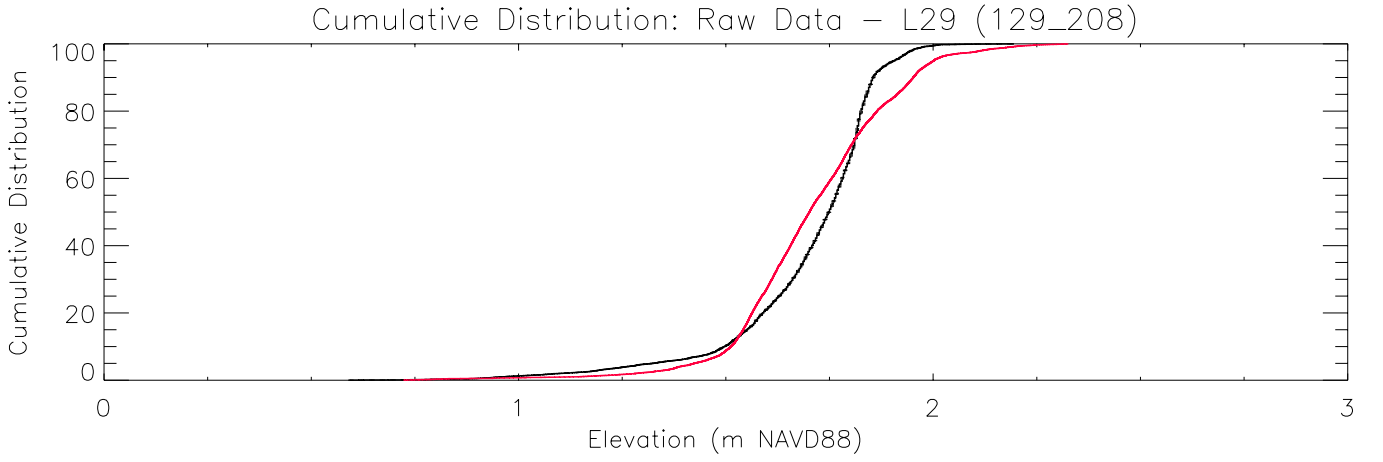

Mean: Water Year – 95% CI – G–618_B (134_209)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

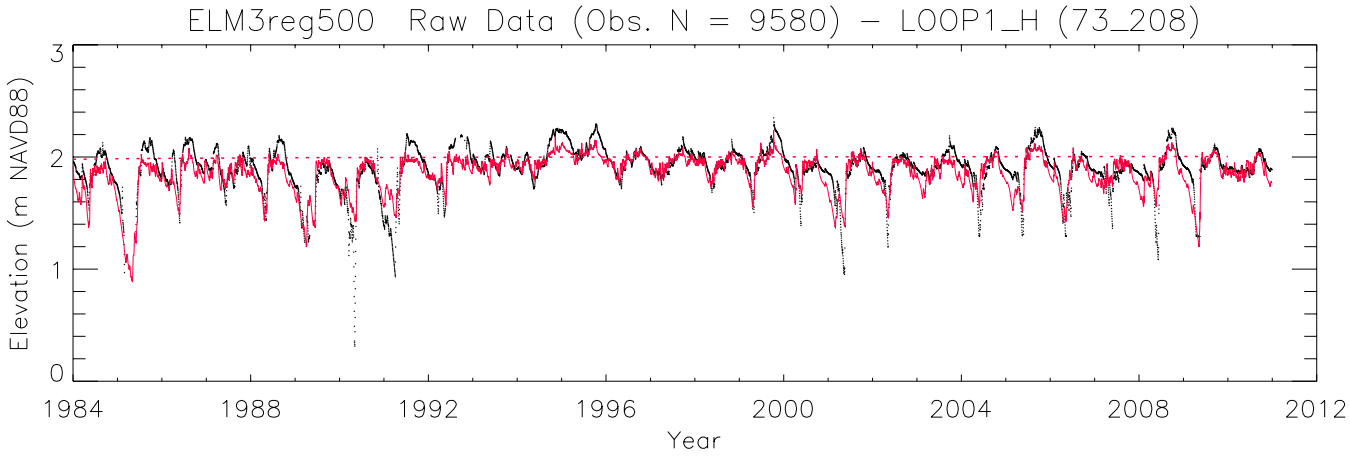

Cumulative Distribution: Raw Data – G–618_B (134_209)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

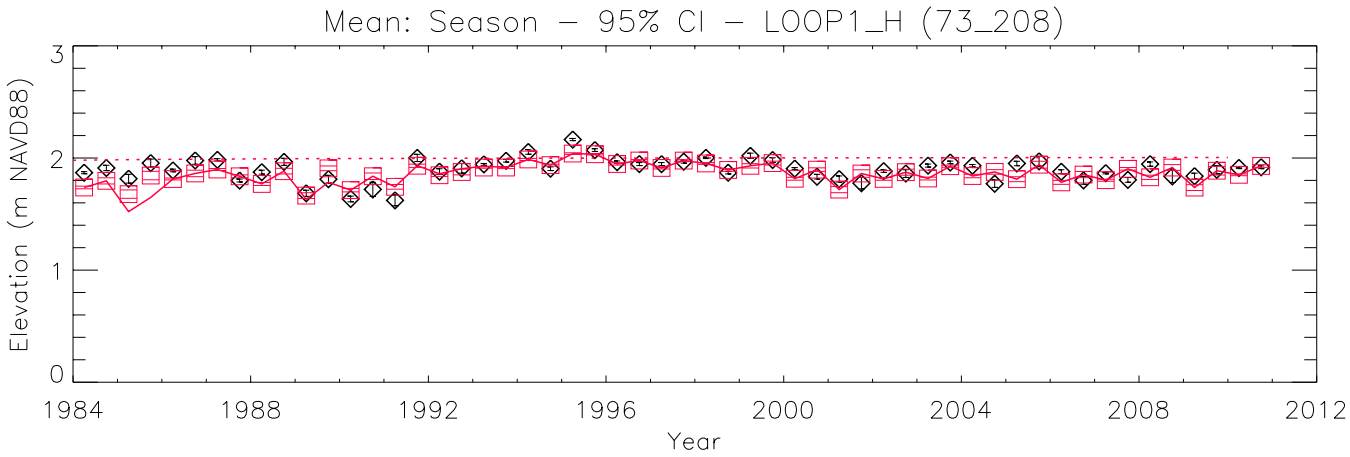

ELM3reg500 Raw Data (Obs. N = 9852) – L29 (129_208)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

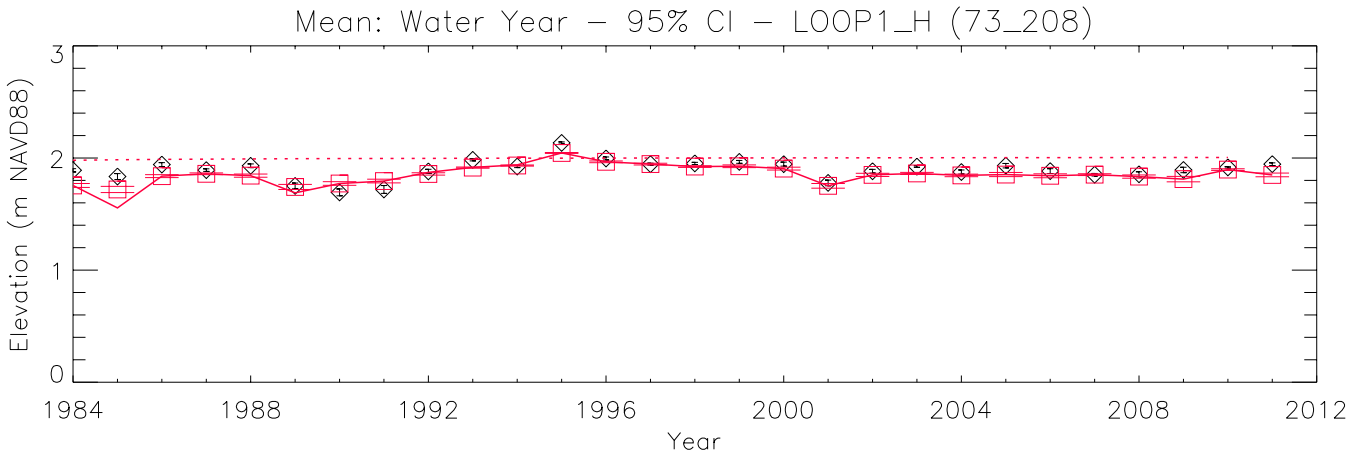

Mean: Season – 95% CI – L29 (129_208)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

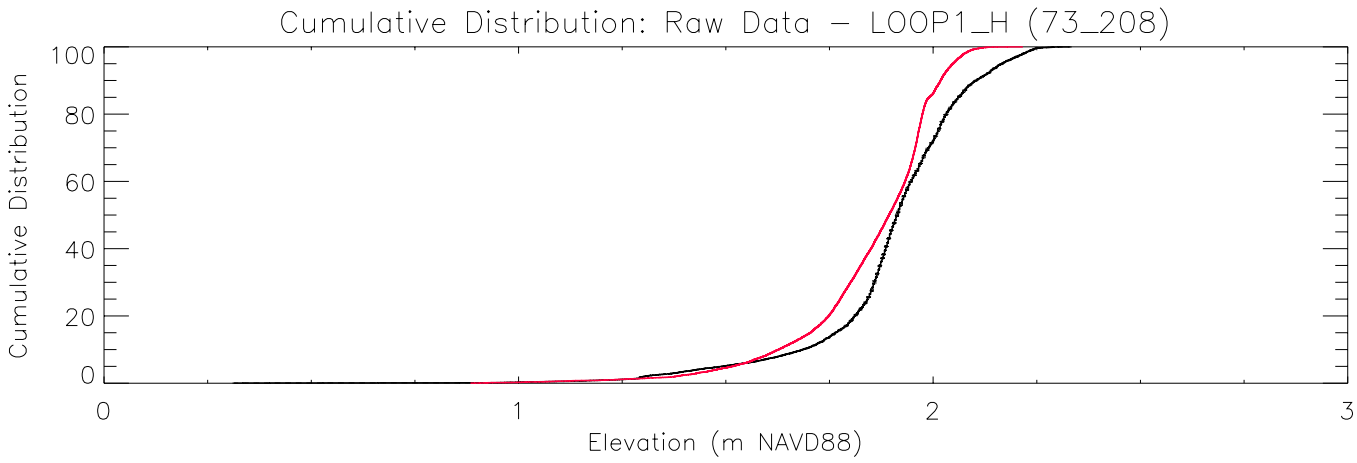

Mean: Water Year – 95% CI – L29 (129_208)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

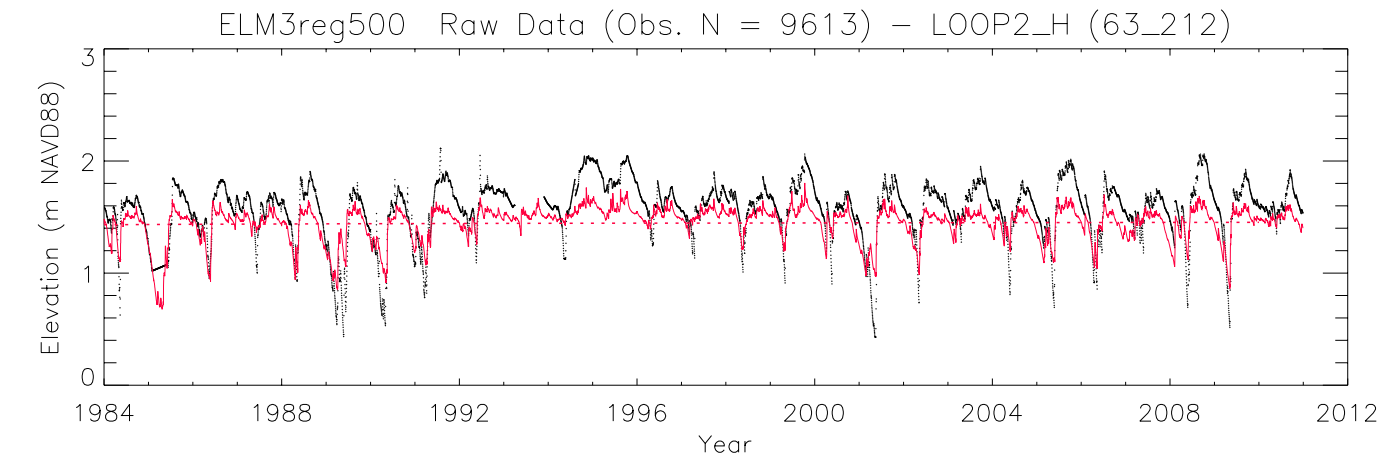

Cumulative Distribution: Raw Data – L29 (129_208)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

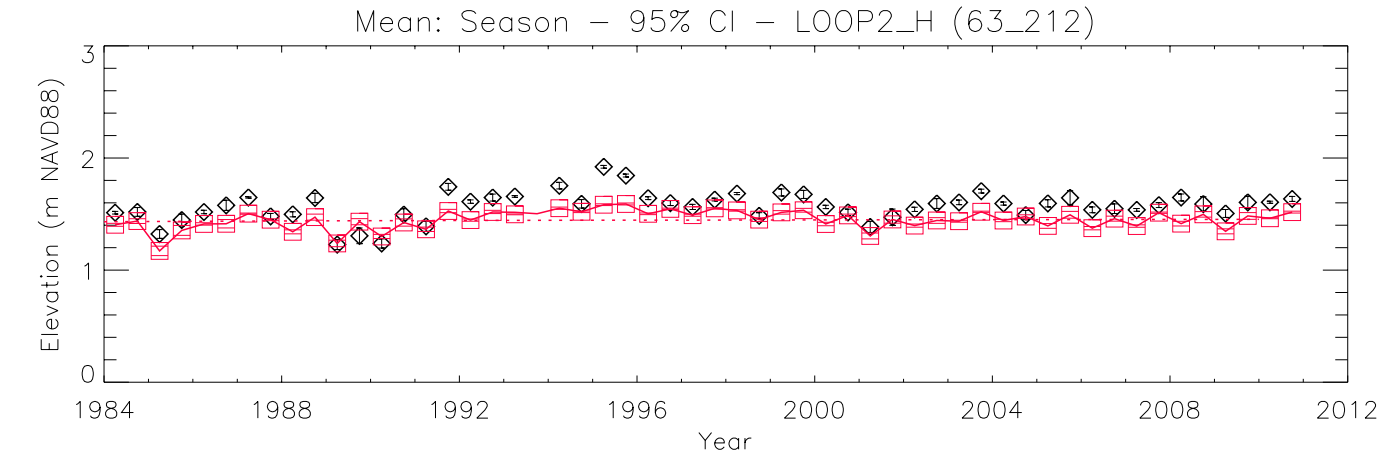

ELM3reg500 Raw Data (Obs. N = 9580) – LOOP1_H (73_208)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

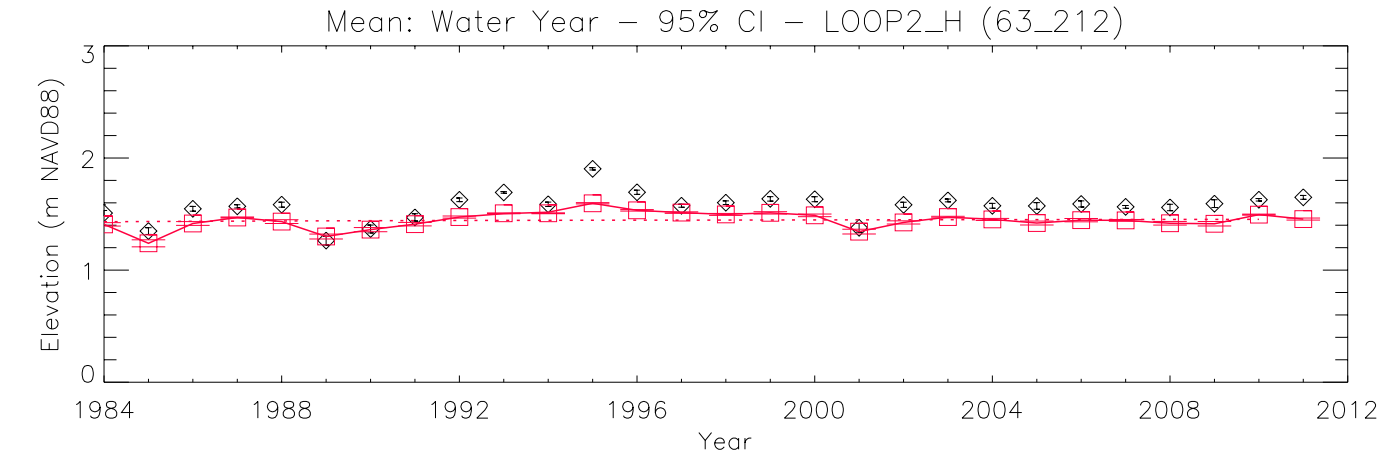

Mean: Season – 95% CI – LOOP1_H (73_208)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

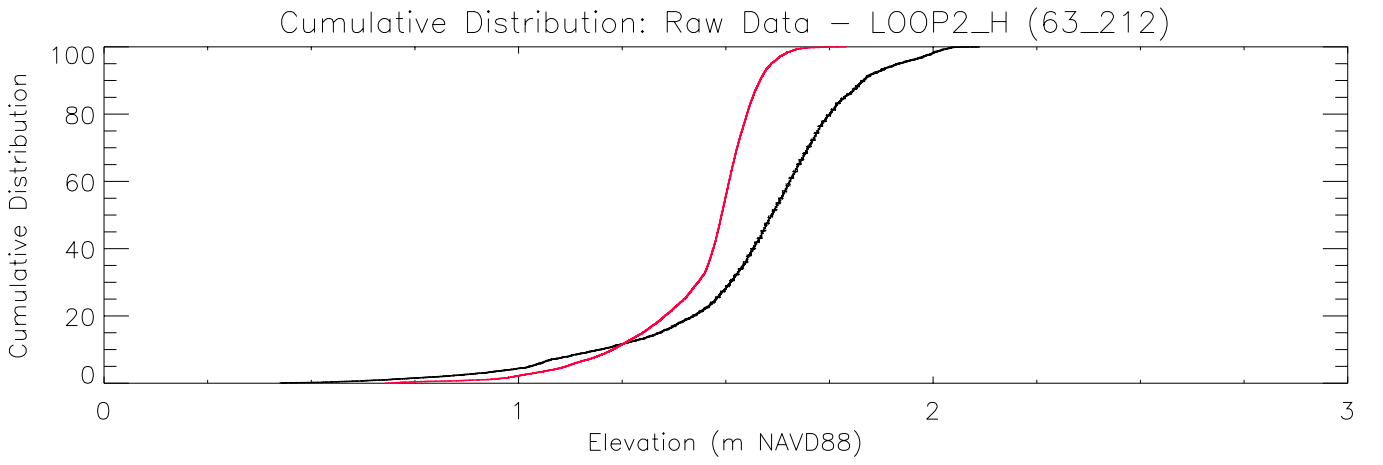

Mean: Water Year – 95% CI – LOOP1_H (73_208)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

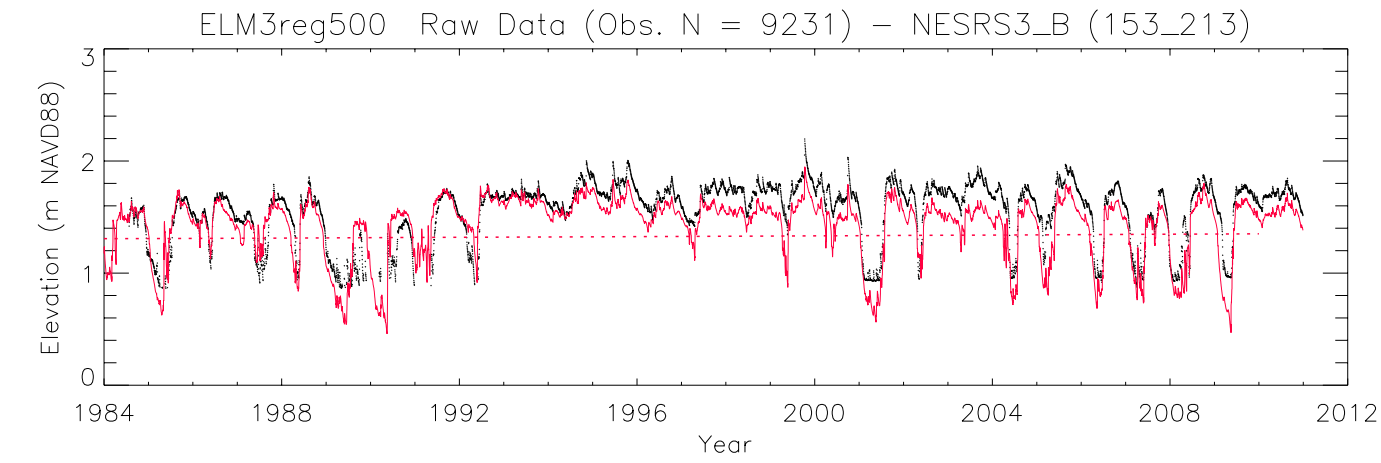

Cumulative Distribution: Raw Data – LOOP1_H (73_208)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

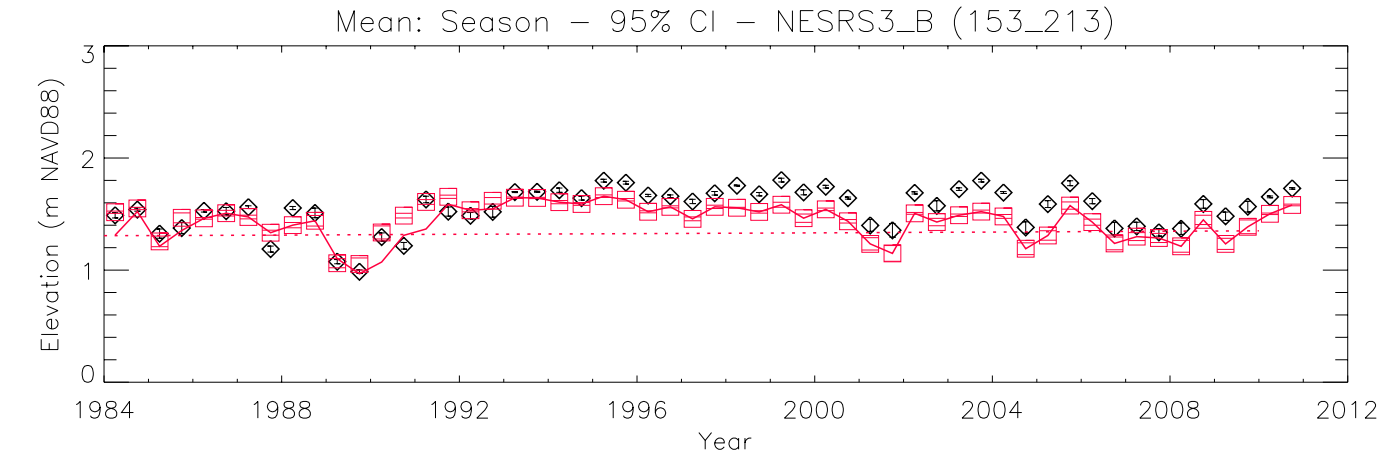

ELM3reg500 Raw Data (Obs. N = 9613) – LOOP2_H (63_212)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

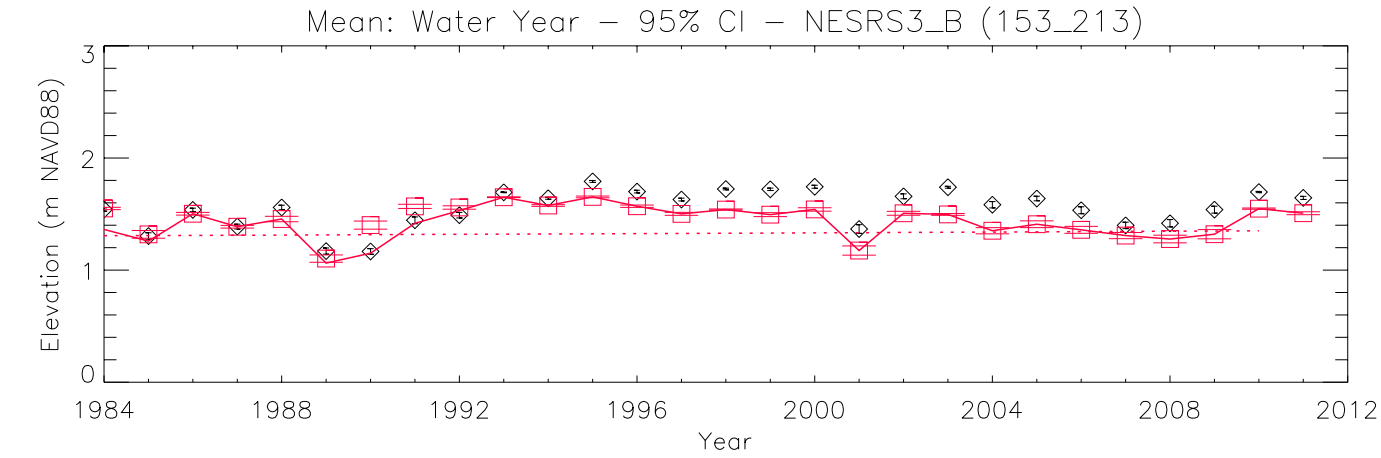

Mean: Season – 95% CI – LOOP2_H (63_212)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

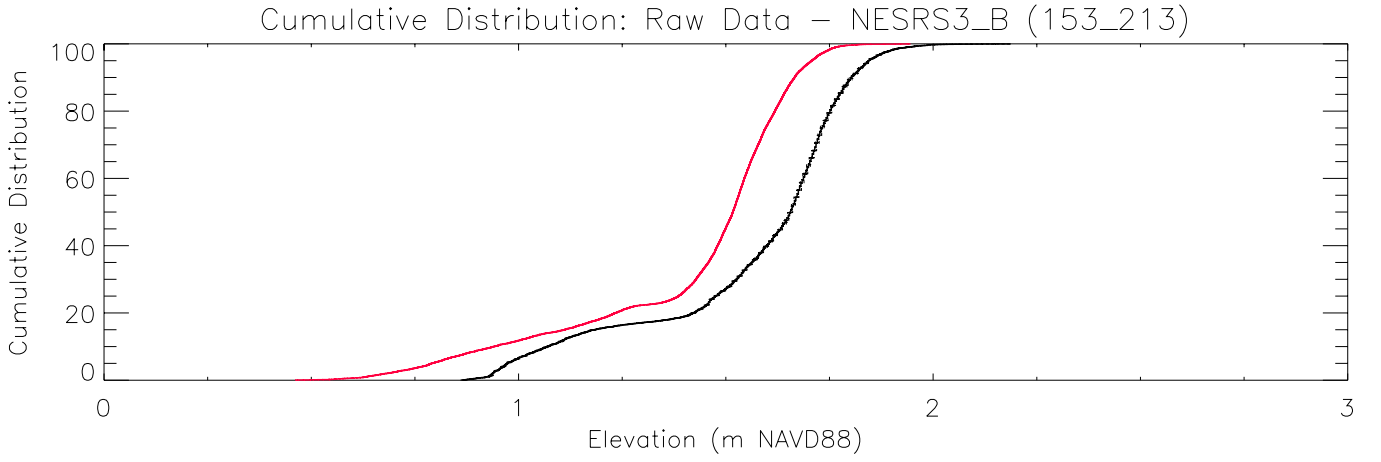

Mean: Water Year – 95% CI – LOOP2_H (63_212)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

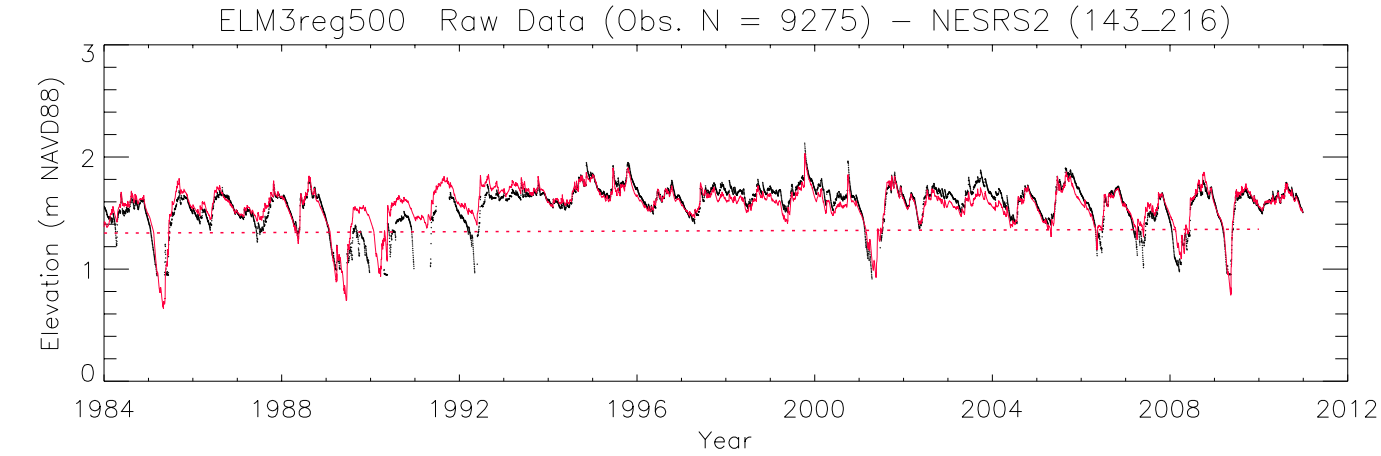

Cumulative Distribution: Raw Data – LOOP2_H (63_212)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

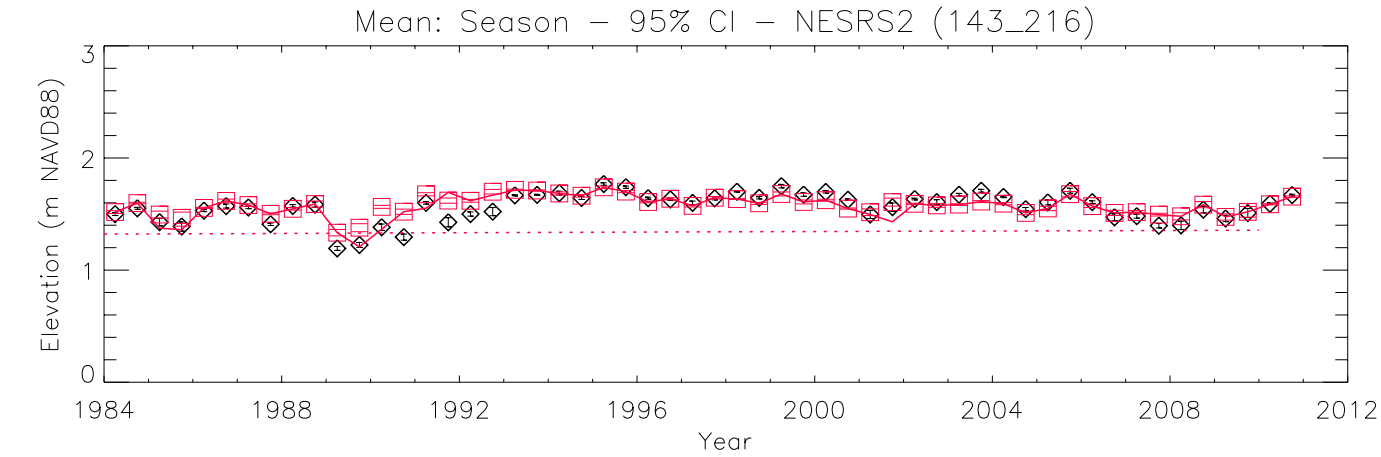

ELM3reg500 Raw Data (Obs. N = 9231) – NESRS3_B (153_213)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

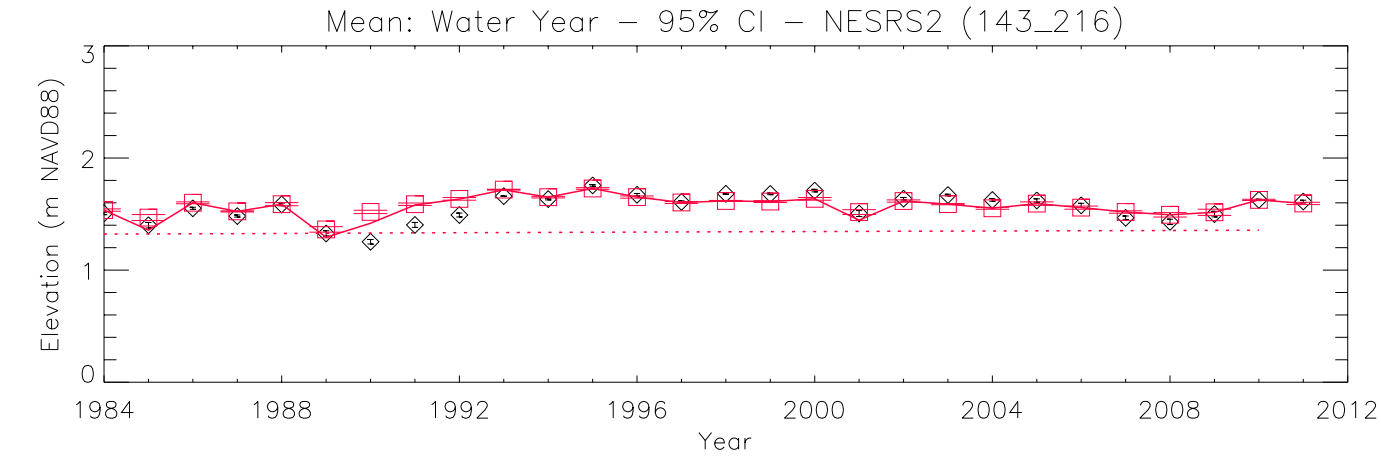

Mean: Season – 95% CI – NESRS3_B (153_213)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

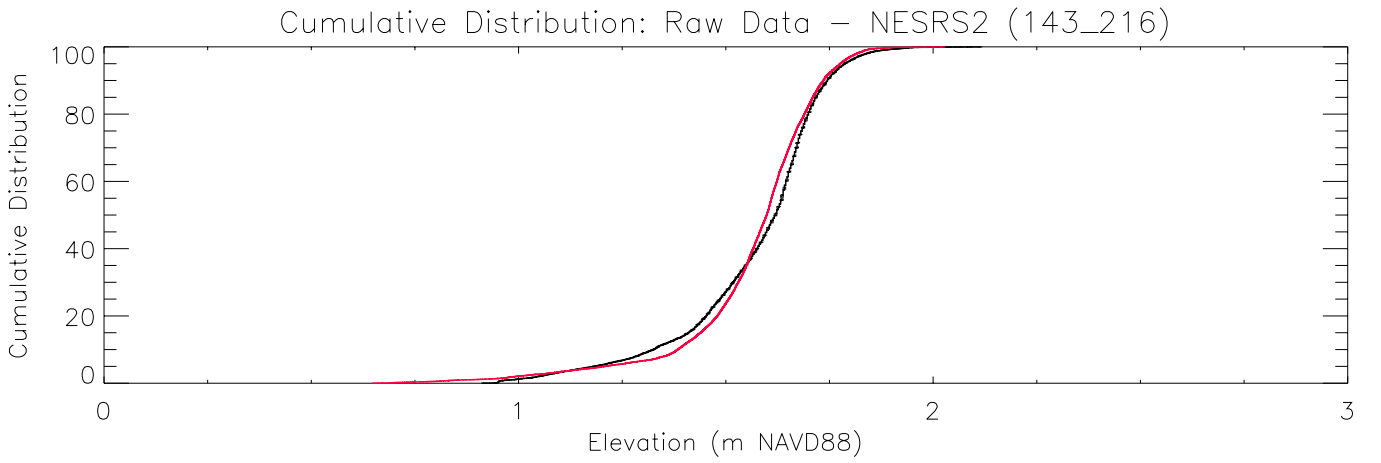

Mean: Water Year – 95% CI – NESRS3_B (153_213)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

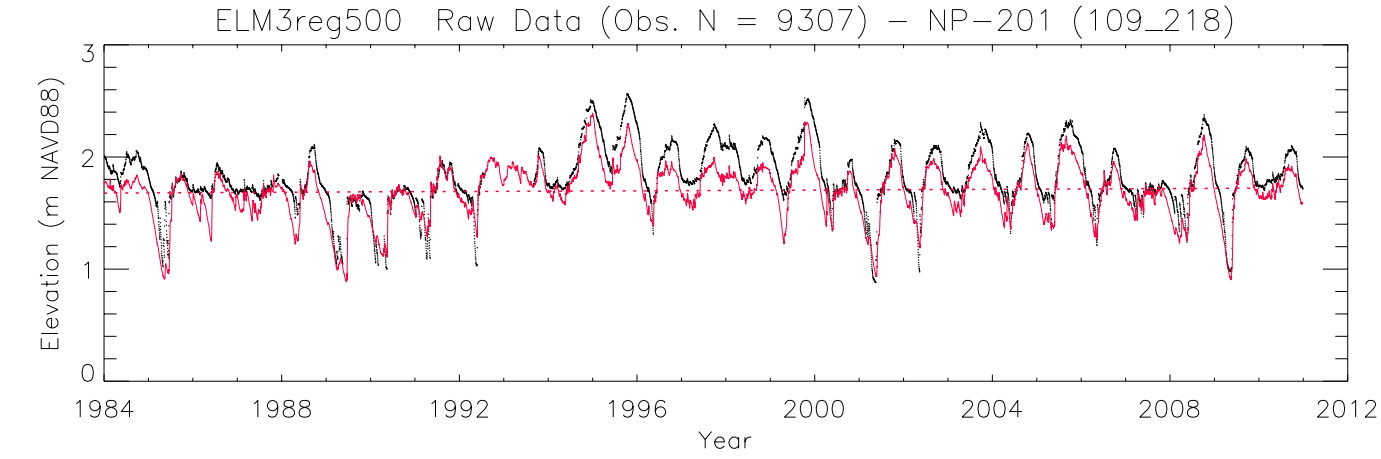

Cumulative Distribution: Raw Data – NESRS3_B (153_213)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

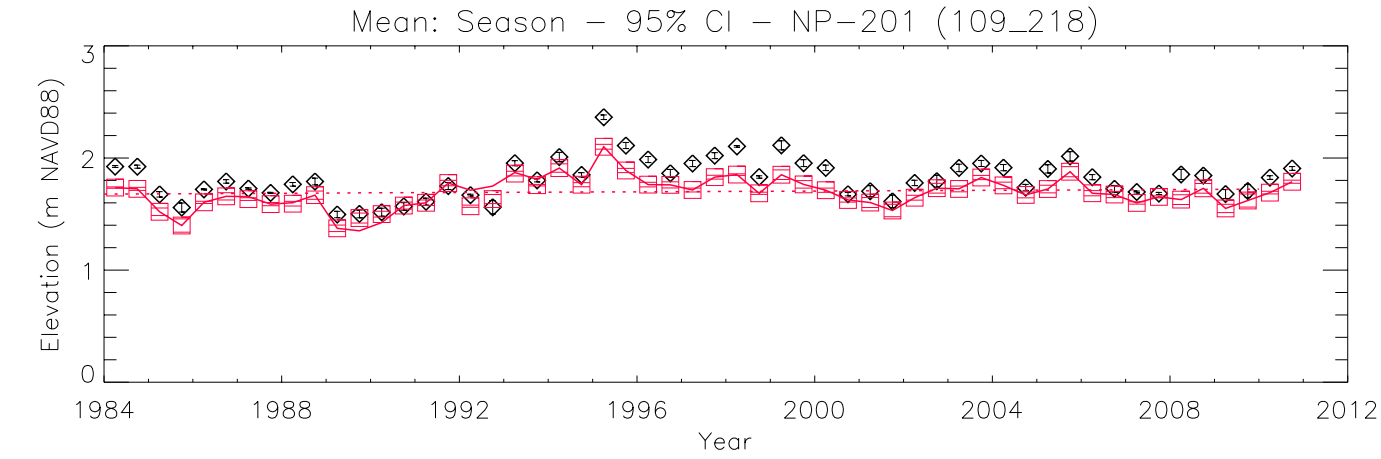

ELM3reg500 Raw Data (Obs. N = 9275) – NESRS2 (143_216)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

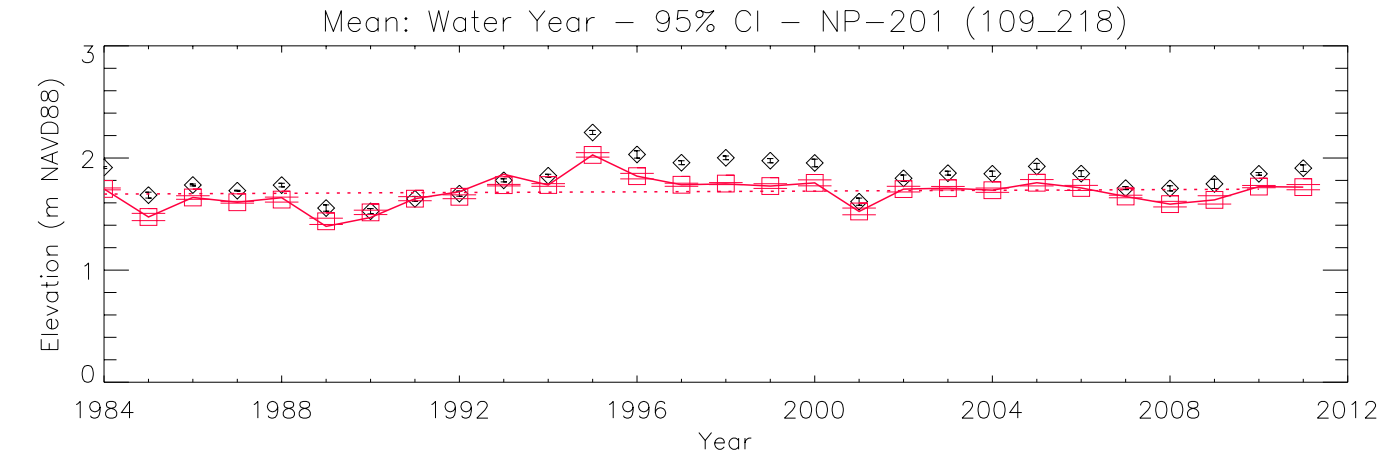

Mean: Season – 95% CI – NESRS2 (143_216)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

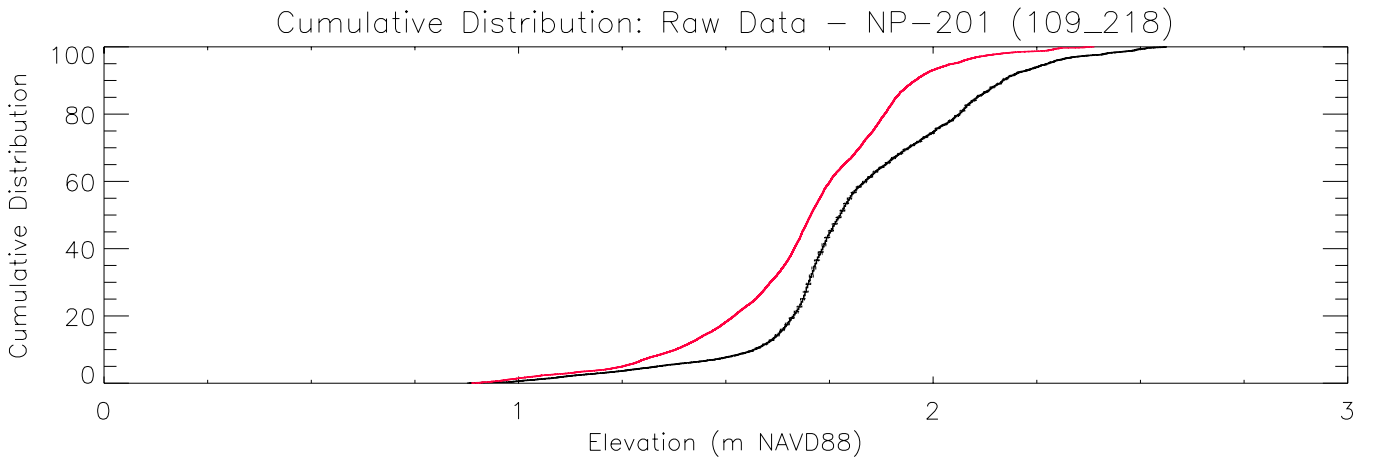

Mean: Water Year – 95% CI – NESRS2 (143_216)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

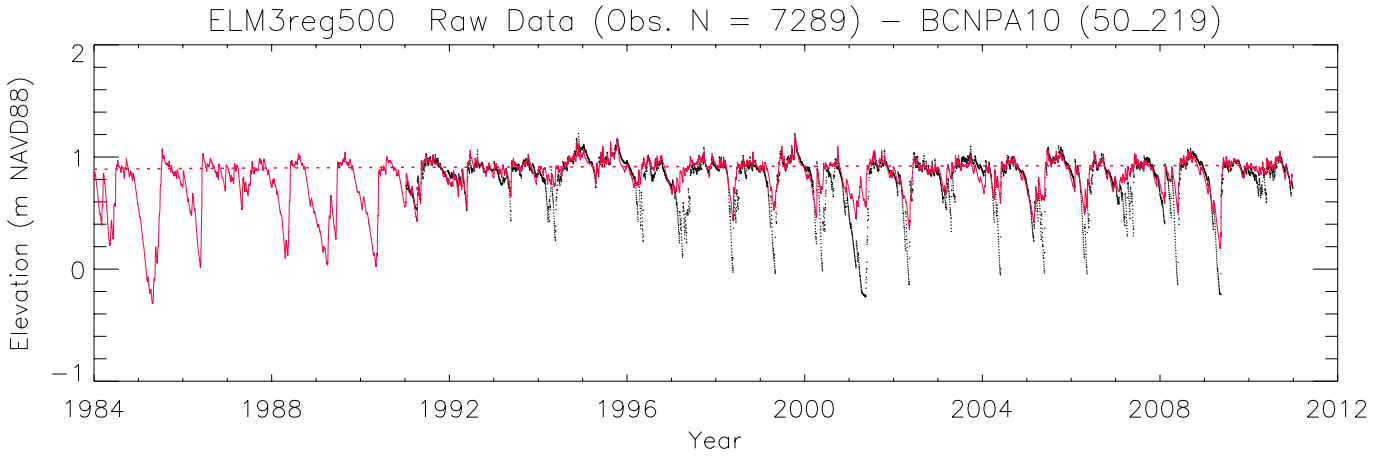

Cumulative Distribution: Raw Data – NESRS2 (143_216)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

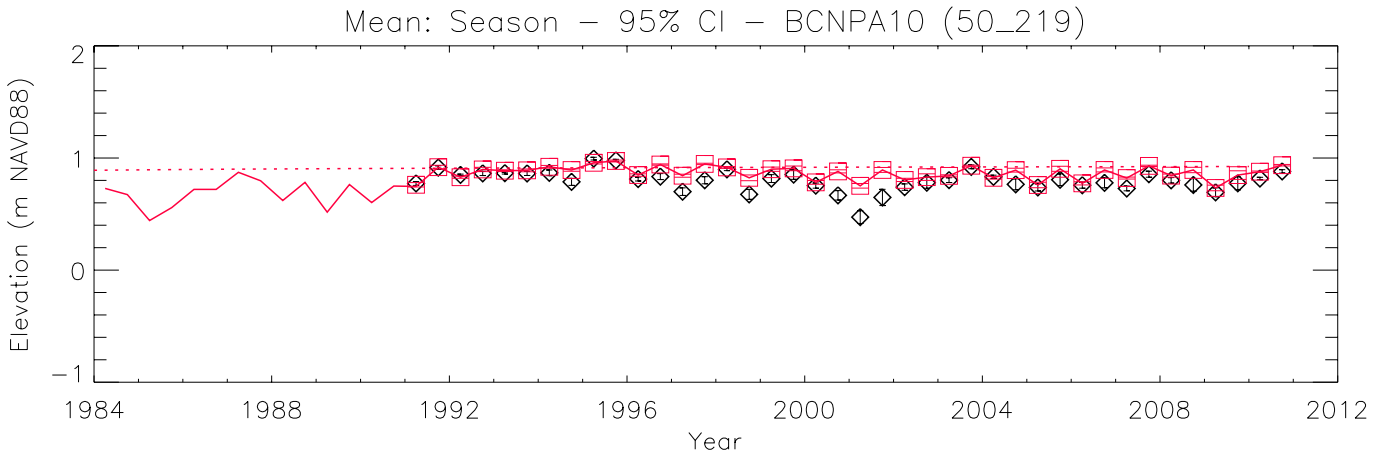

ELM3reg500 Raw Data (Obs. N = 9307) – NP–201 (109_218)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

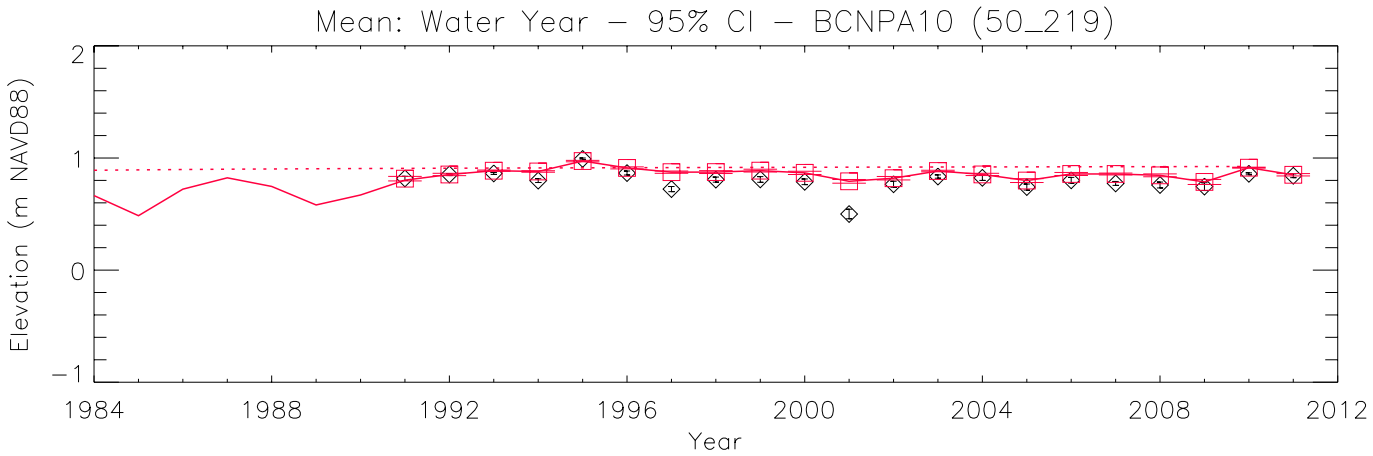

Mean: Season – 95% CI – NP–201 (109_218)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

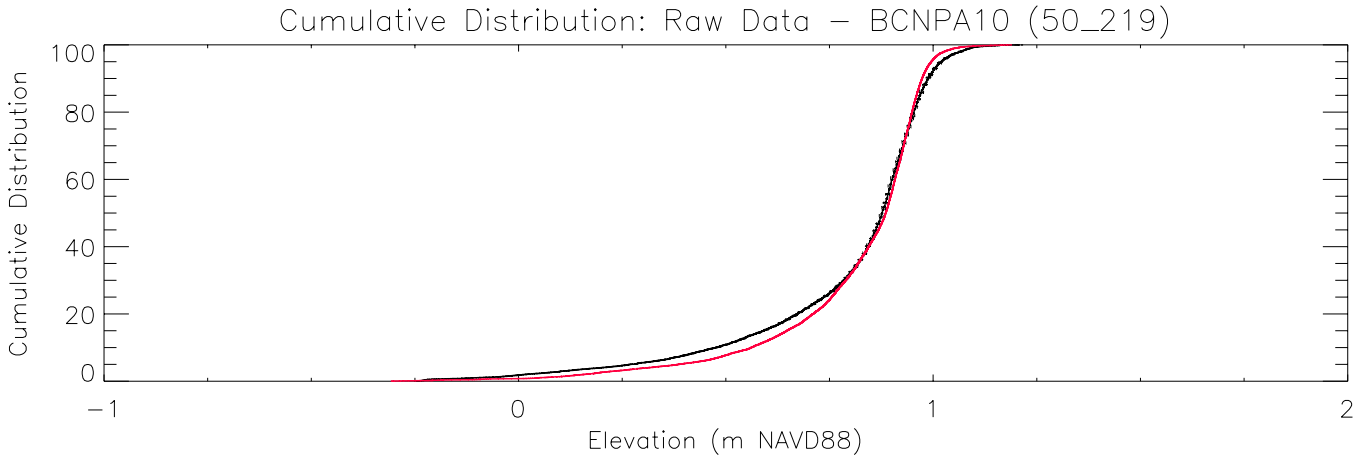

Mean: Water Year – 95% CI – NP–201 (109_218)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

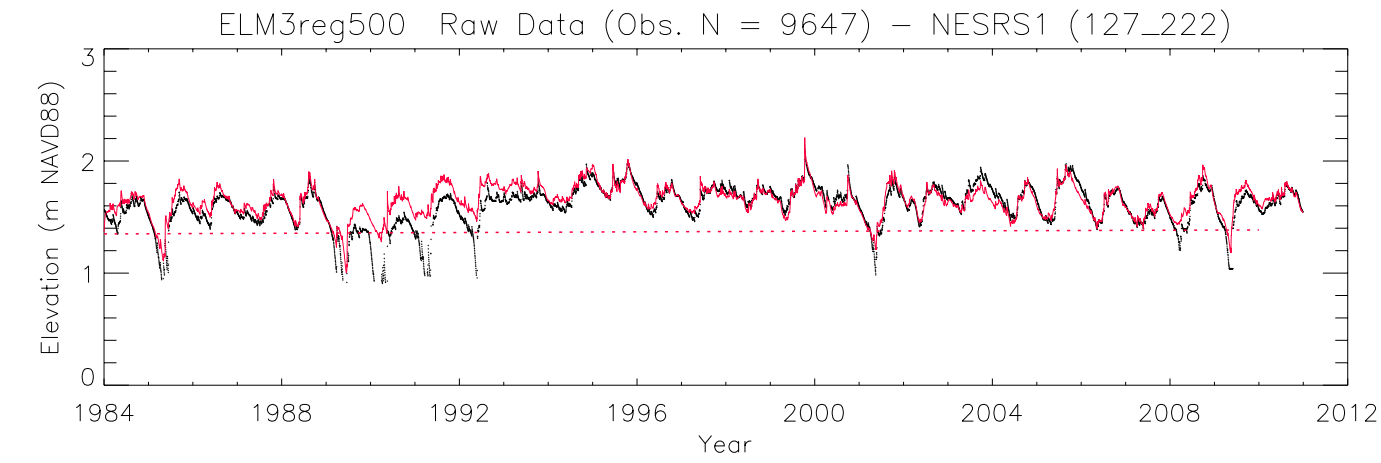

Cumulative Distribution: Raw Data – NP–201 (109_218)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

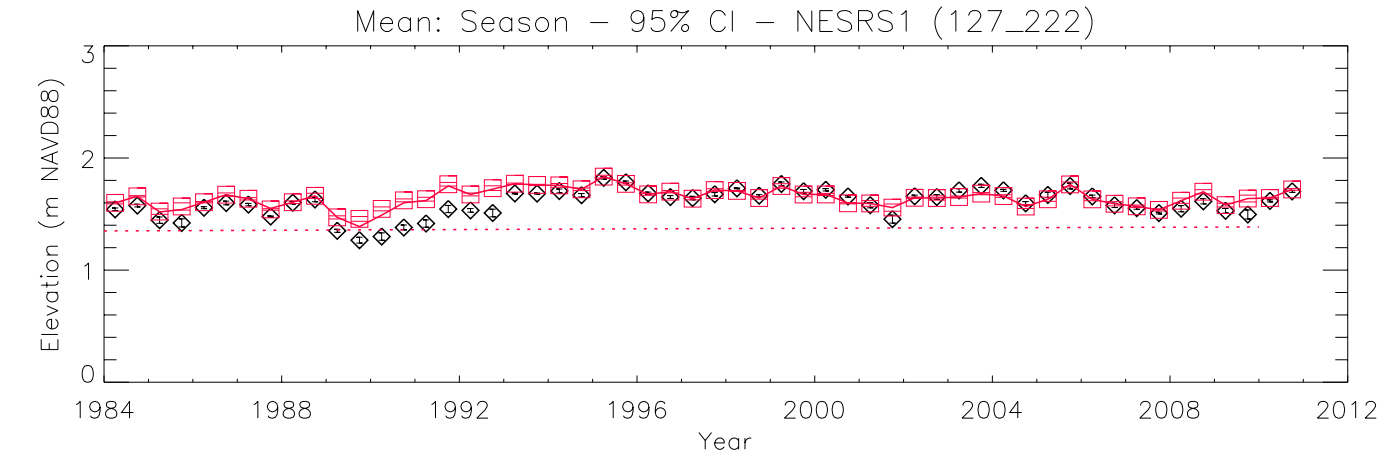

ELM3reg500 Raw Data (Obs. N = 7289) – BCNPA10 (50_219)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

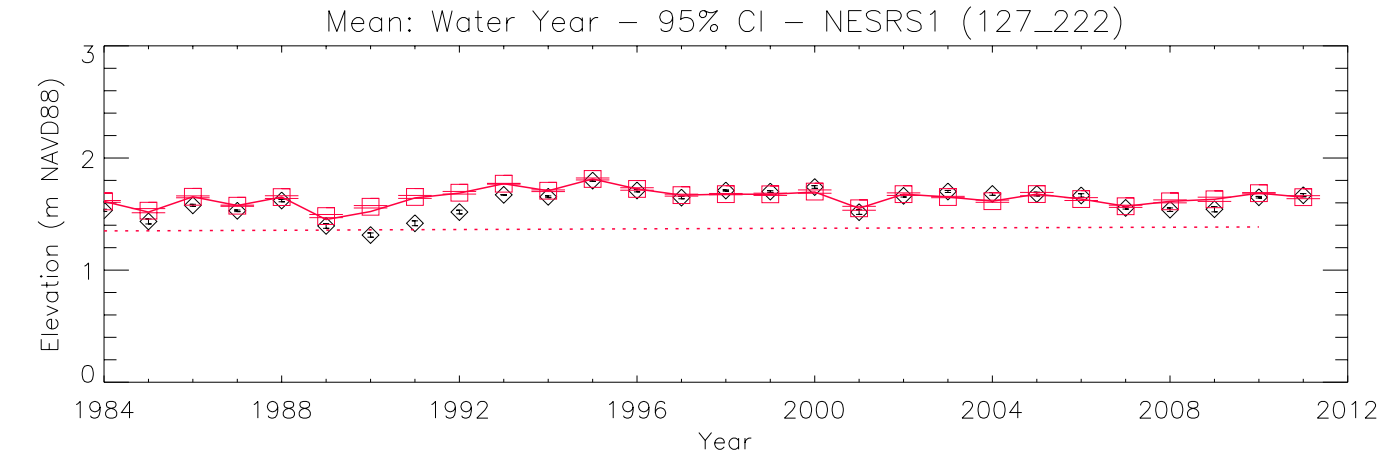

Mean: Season – 95% CI – BCNPA10 (50_219)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

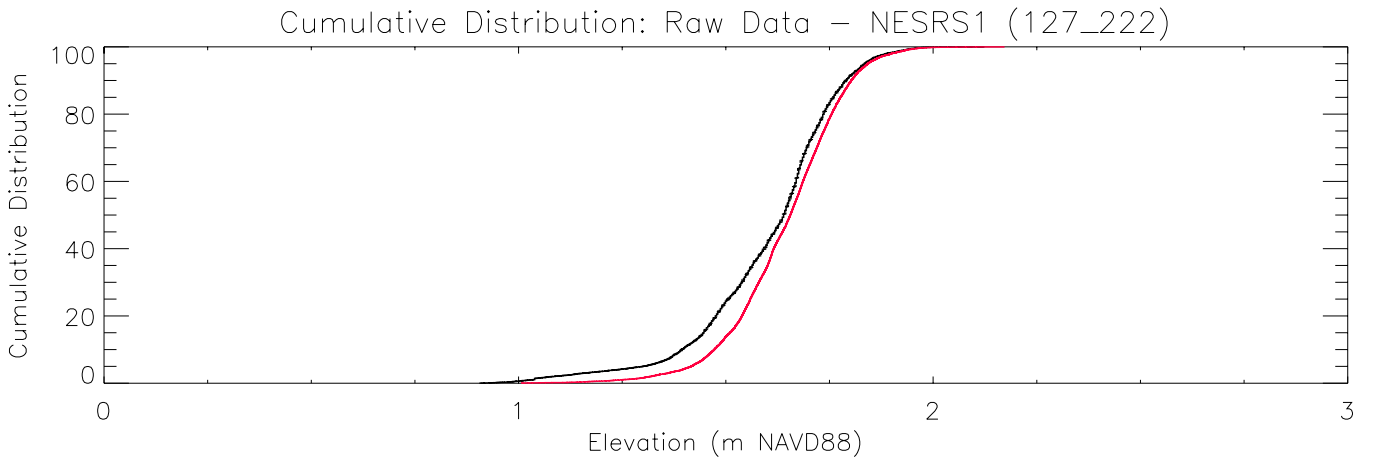

Mean: Water Year – 95% CI – BCNPA10 (50_219)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

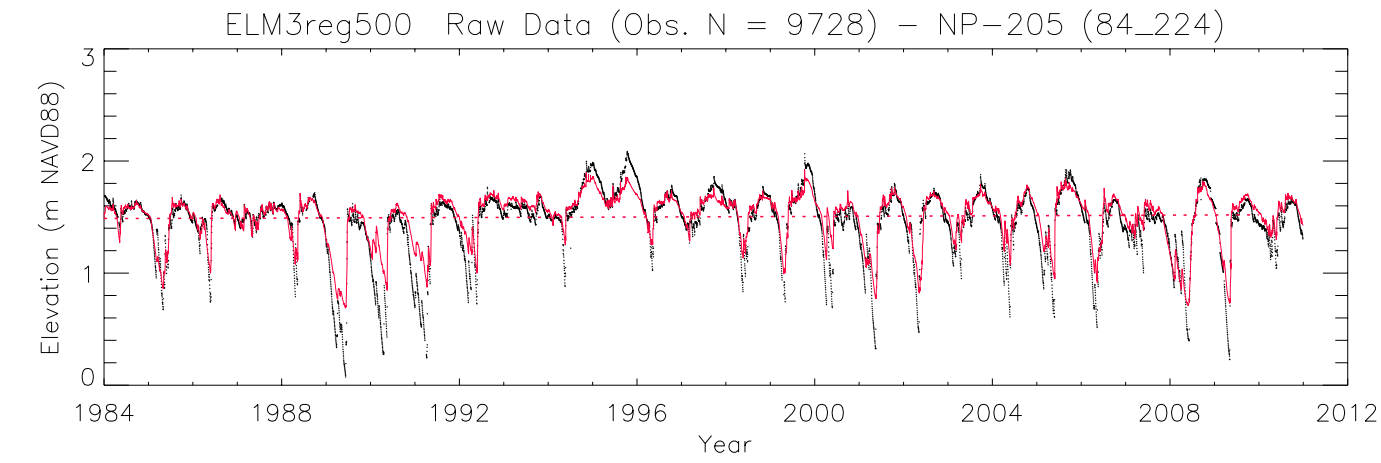

Cumulative Distribution: Raw Data – BCNPA10 (50_219)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

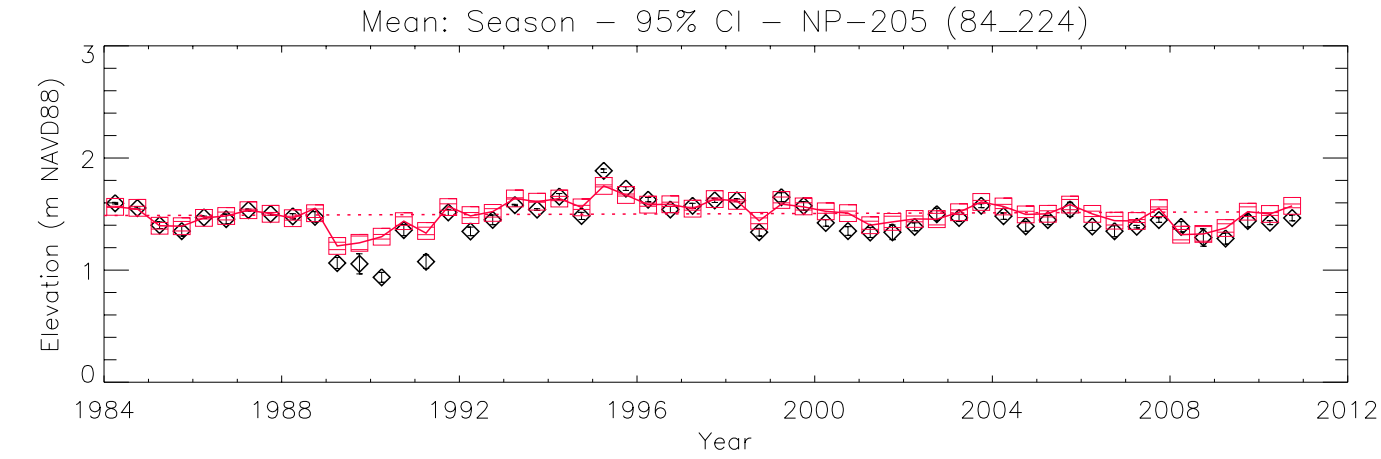

ELM3reg500 Raw Data (Obs. N = 9647) – NESRS1 (127_222)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

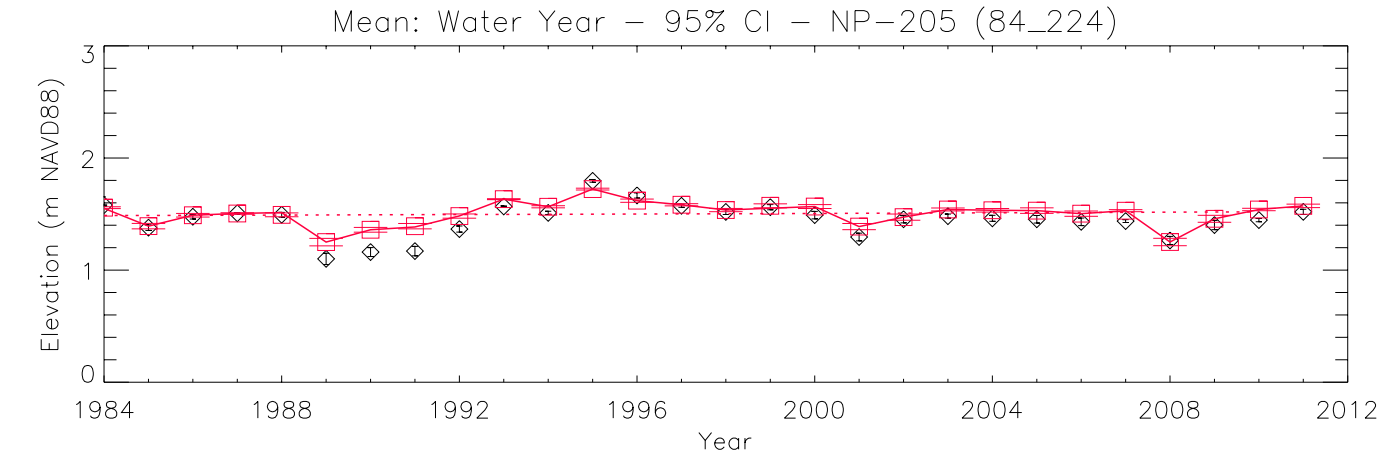

Mean: Season – 95% CI – NESRS1 (127_222)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

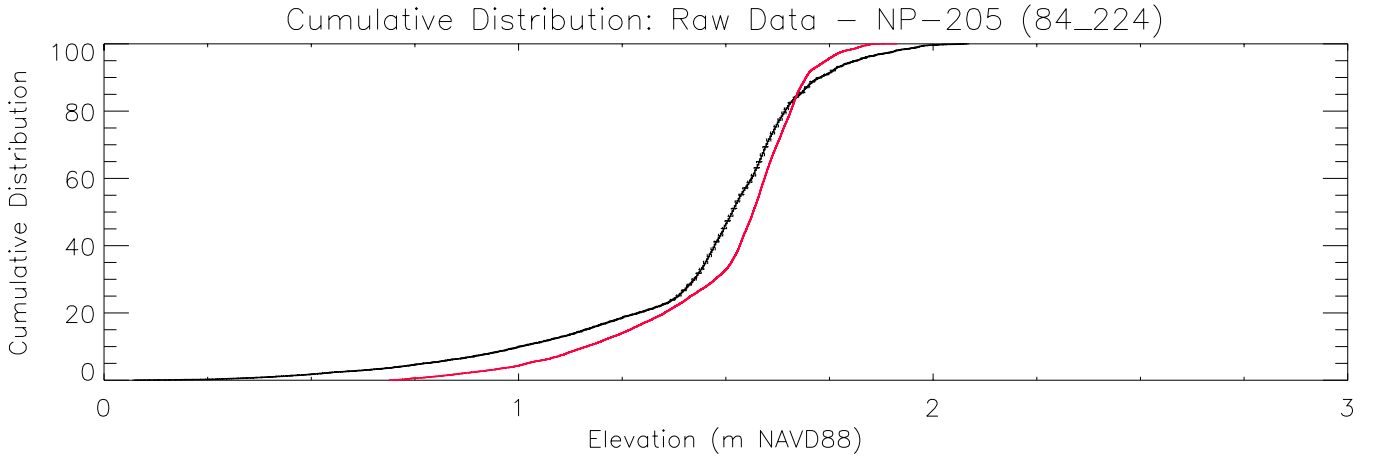

Mean: Water Year – 95% CI – NESRS1 (127_222)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

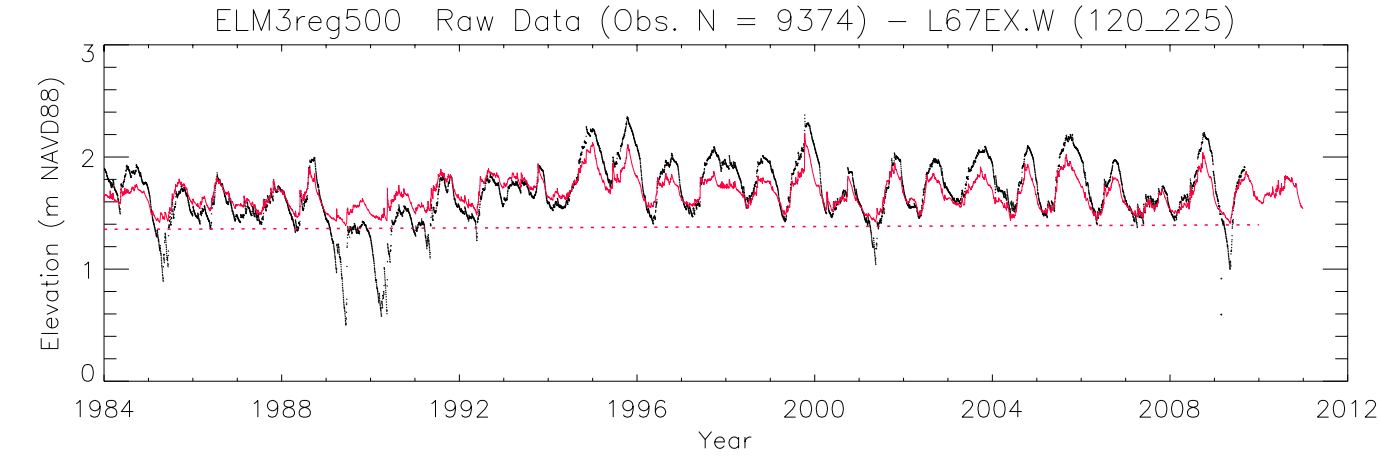

Cumulative Distribution: Raw Data – NESRS1 (127_222)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

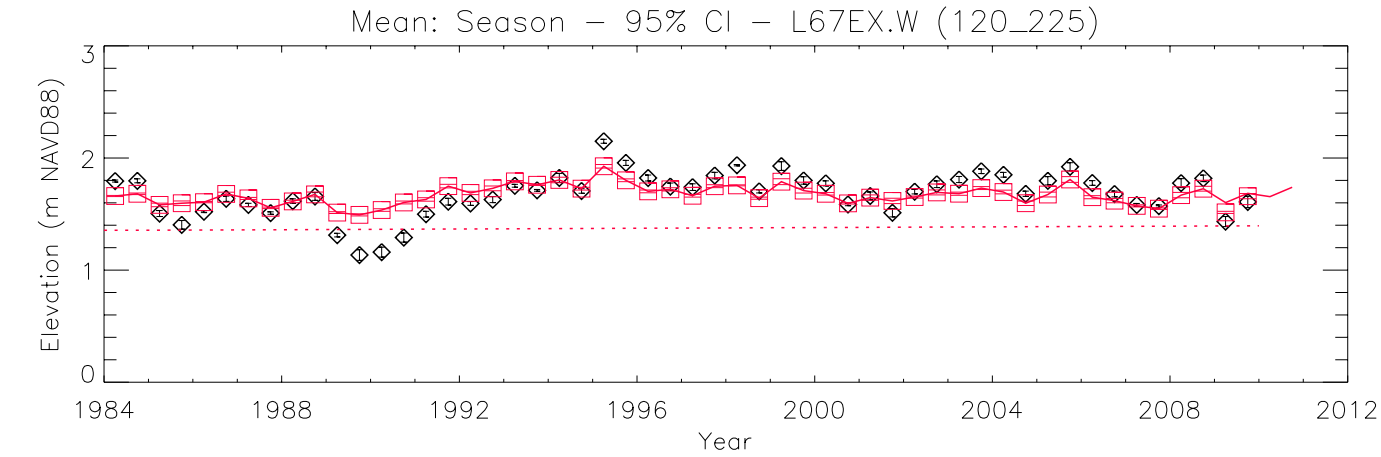

ELM3reg500 Raw Data (Obs. N = 9728) – NP–205 (84_224)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

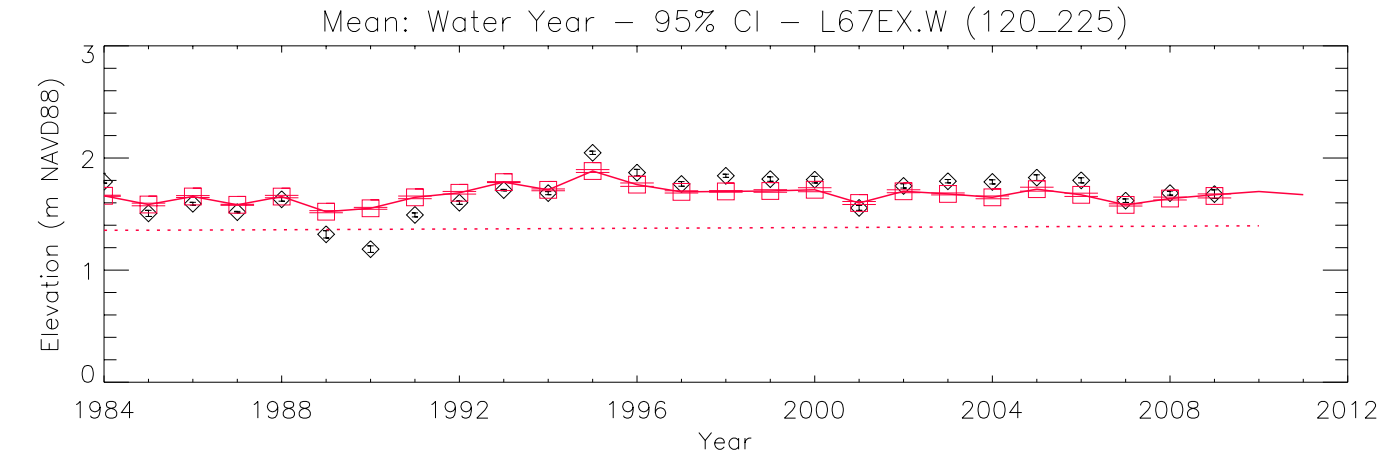

Mean: Season – 95% CI – NP–205 (84_224)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

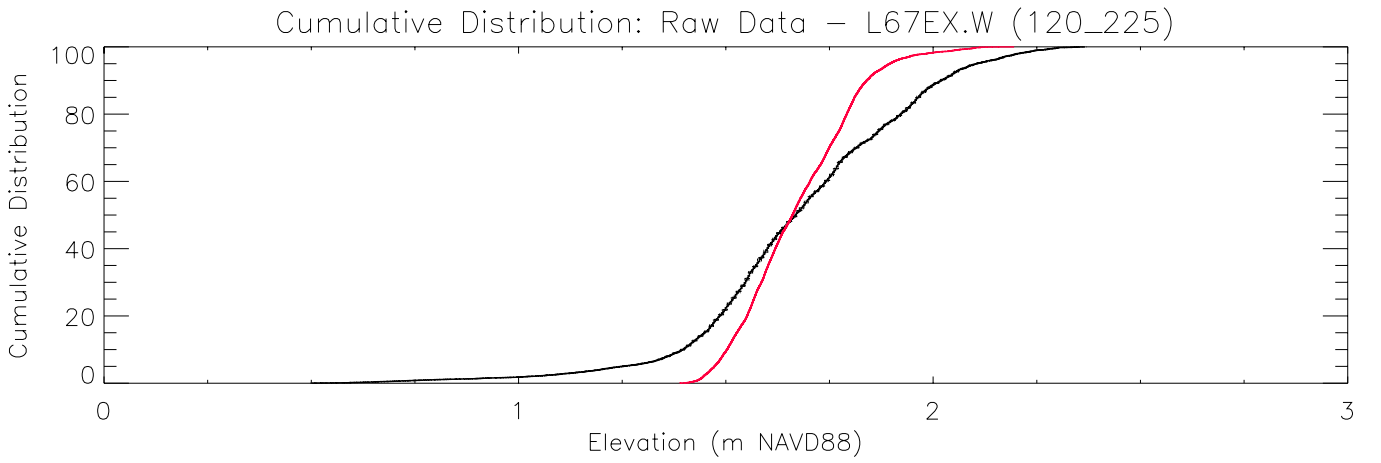

Mean: Water Year – 95% CI – NP–205 (84_224)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

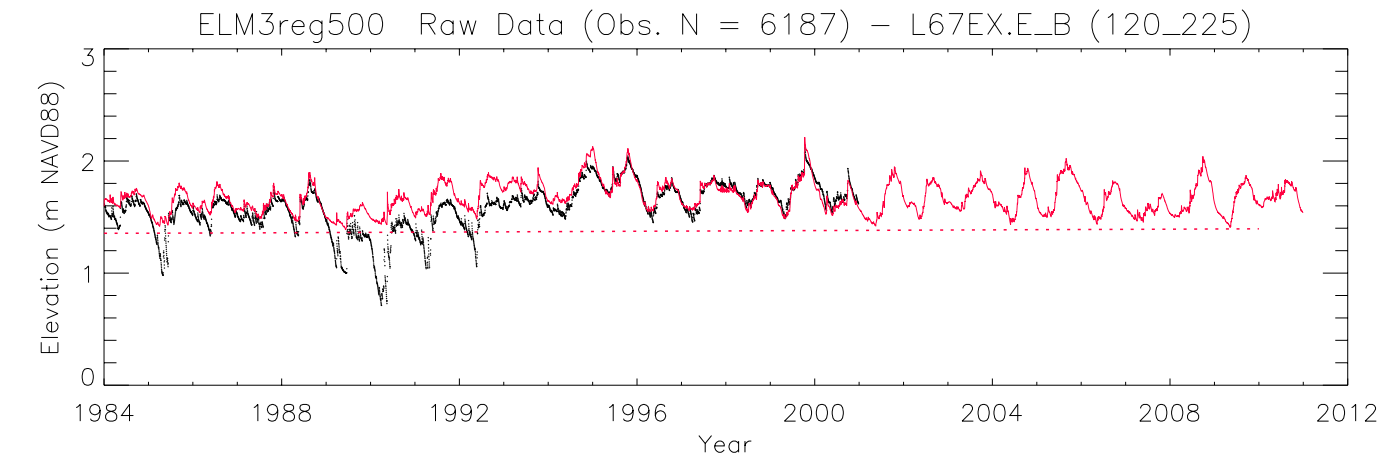

Cumulative Distribution: Raw Data – NP–205 (84_224)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

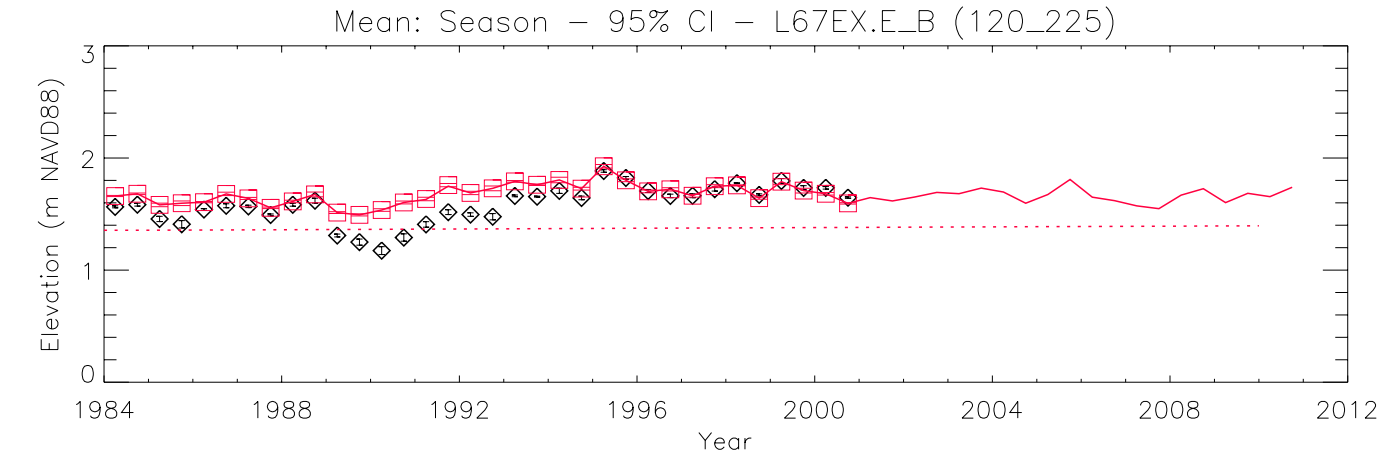

ELM3reg500 Raw Data (Obs. N = 9374) – L67EX.W (120_225)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

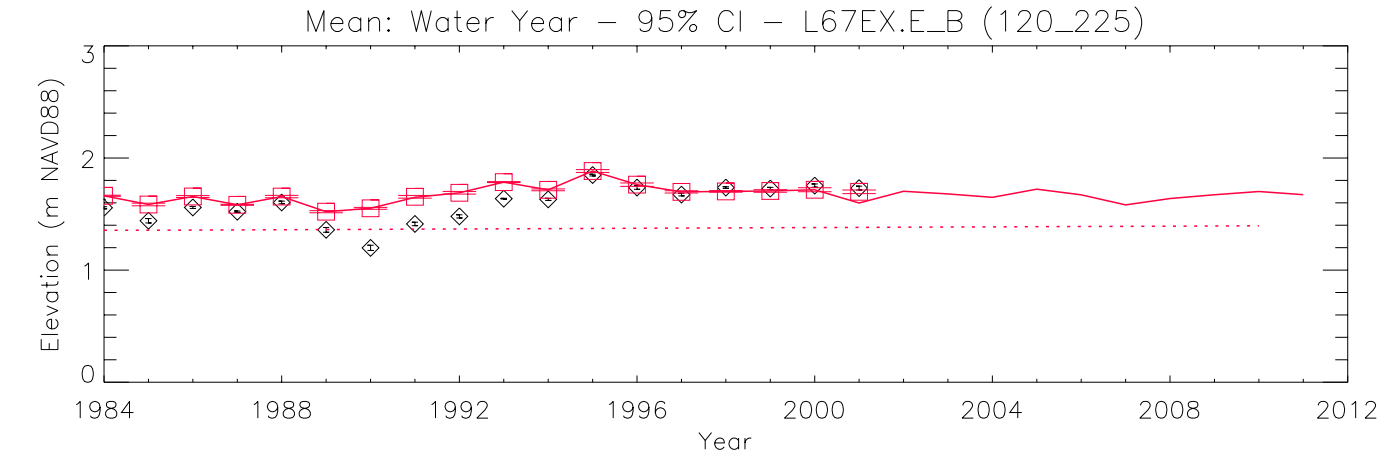

Mean: Season – 95% CI – L67EX.W (120_225)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

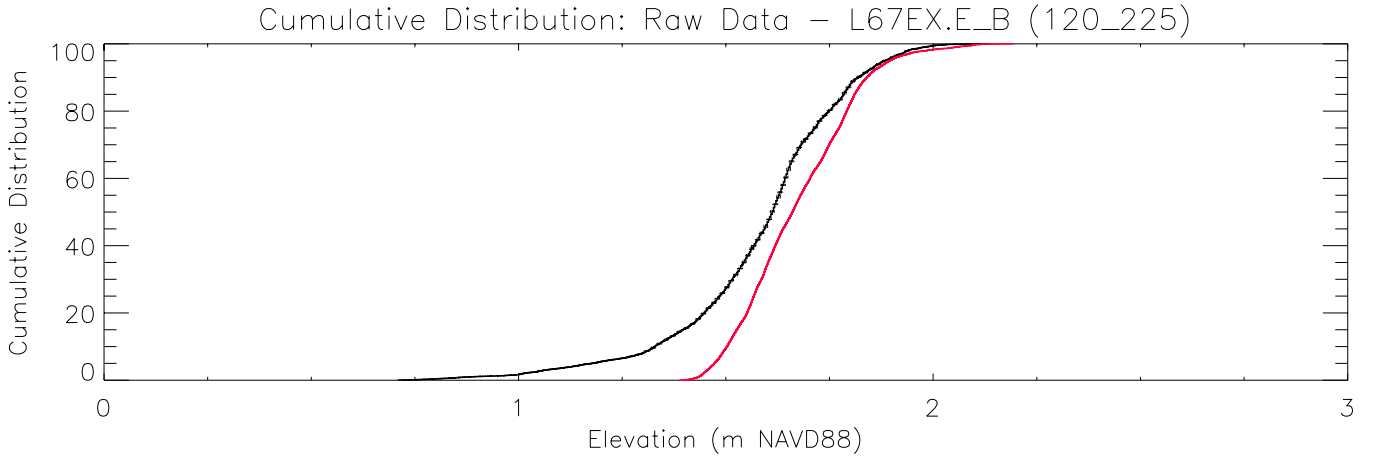

Mean: Water Year – 95% CI – L67EX.W (120_225)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – L67EX.W (120_225)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 6187) – L67EX.E_B (120_225)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – L67EX.E_B (120_225)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – L67EX.E_B (120_225)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – L67EX.E_B (120_225)
Cumulative Distribution
0
20
40
60
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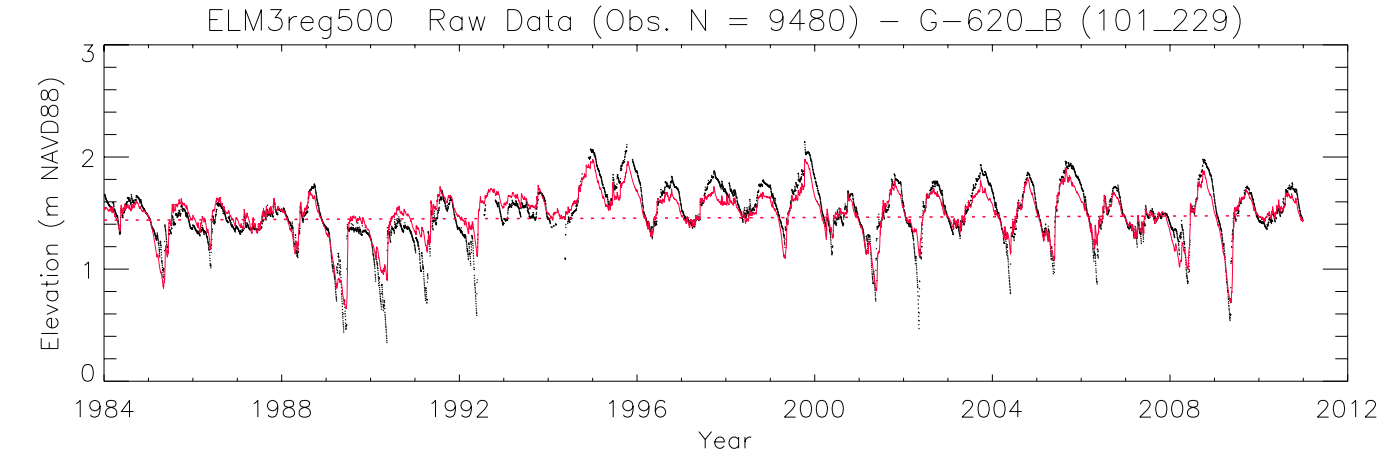
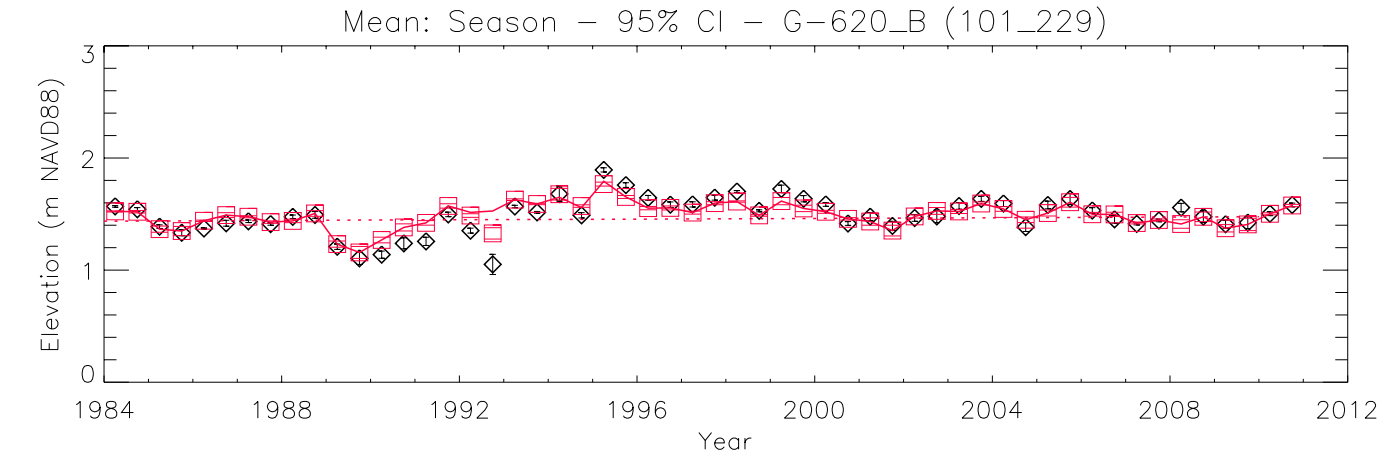
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9480) – G–620_B (101_229)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – G–620_B (101_229)
Elevation (m NAVD88)
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1
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3
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1988
1992
1996
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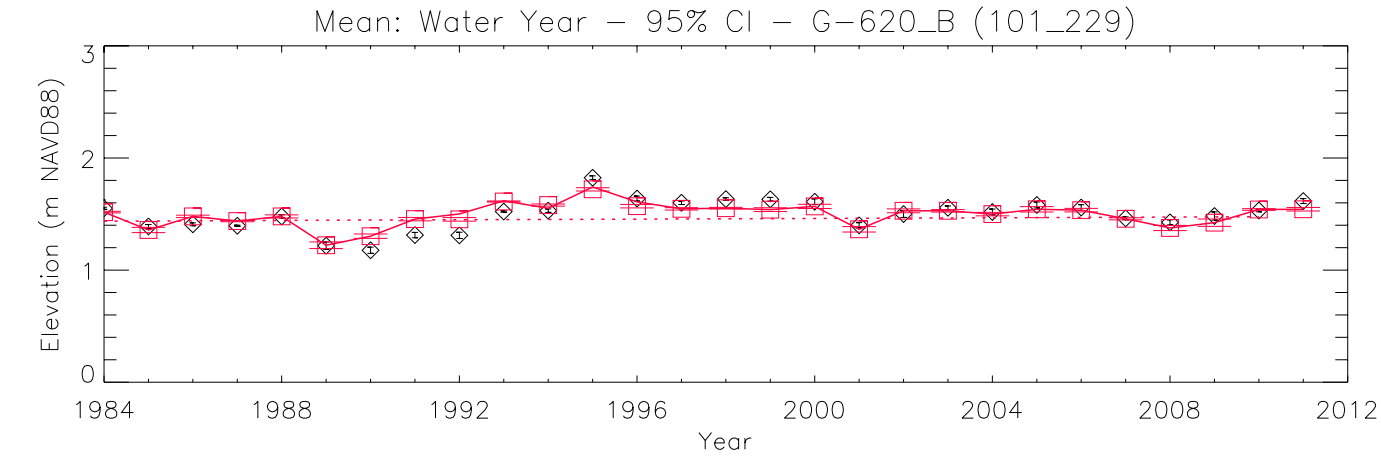
2004
2008
2012
Year


Mean: Water Year – 95% CI – G–620_B (101_229)
Elevation (m NAVD88)
0
1
2
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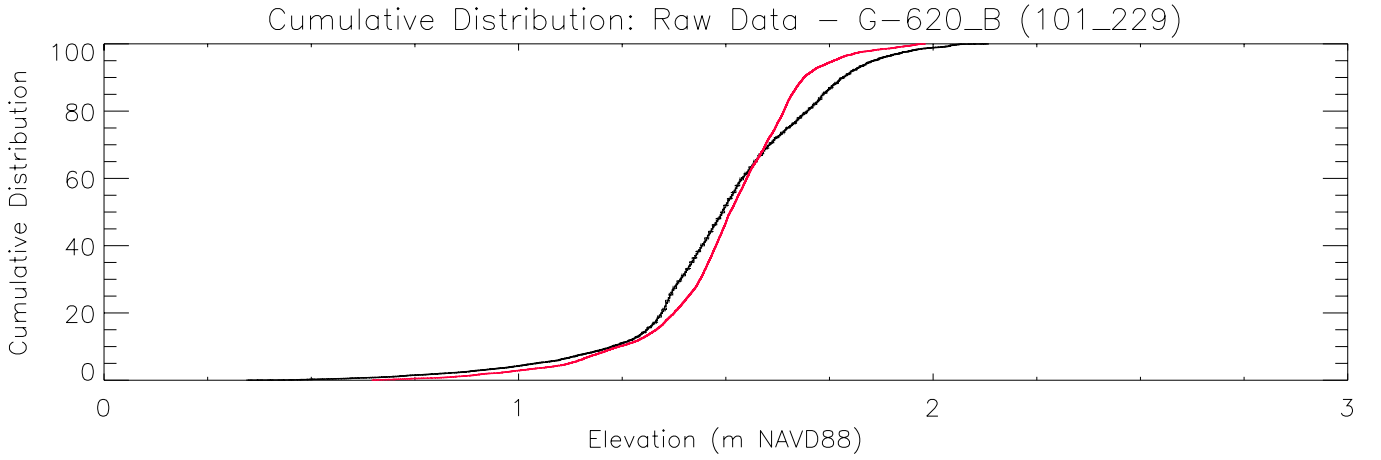
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – G–620_B (101_229)
Cumulative Distribution
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60
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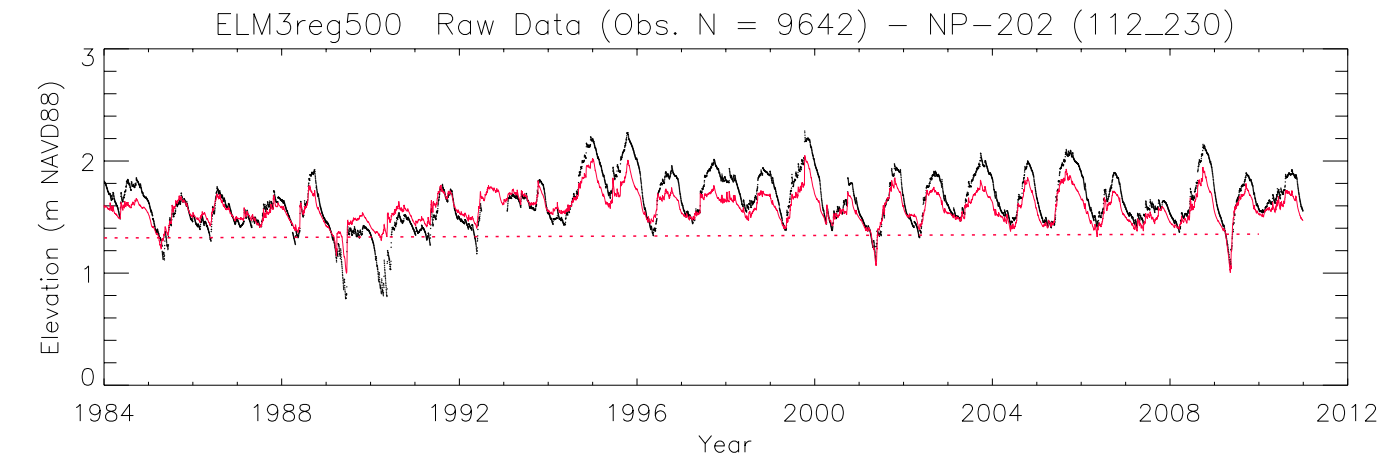
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9642) – NP–202 (112_230)
Elevation (m NAVD88)
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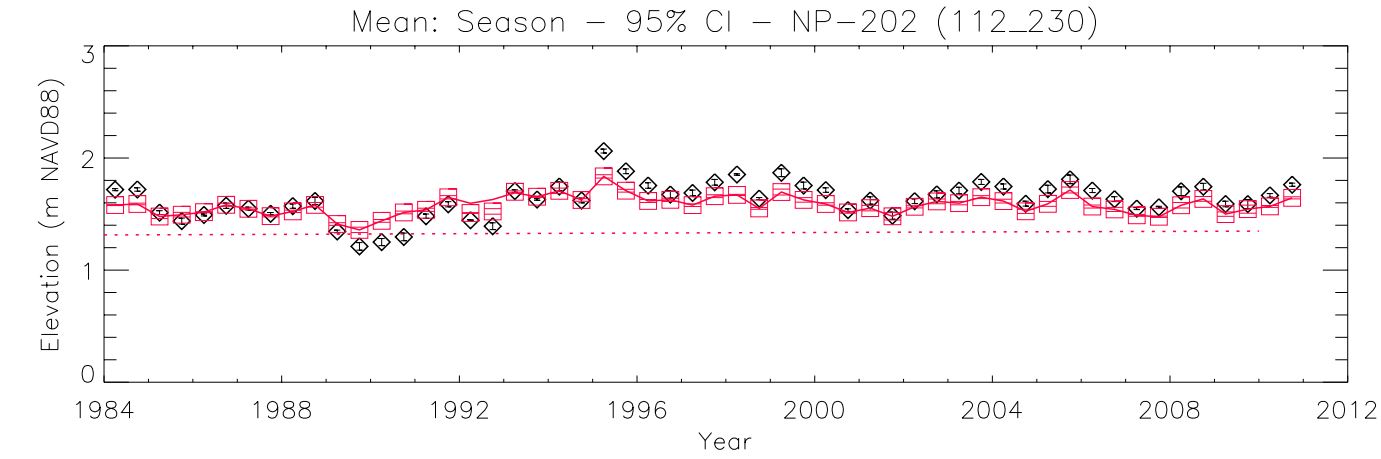
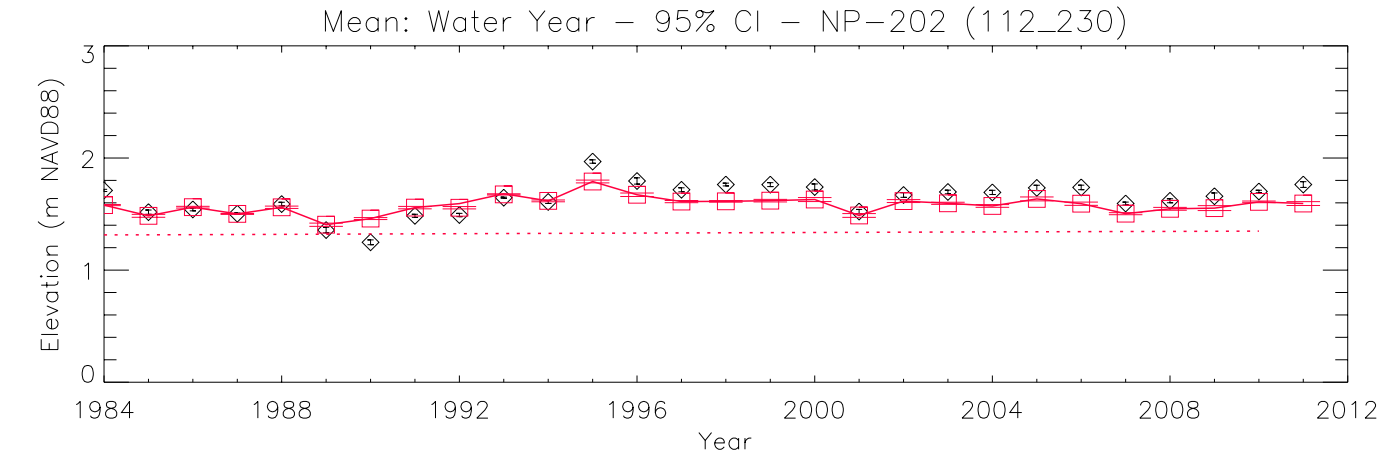
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – NP–202 (112_230)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – NP–202 (112_230)
Elevation (m NAVD88)
0
1
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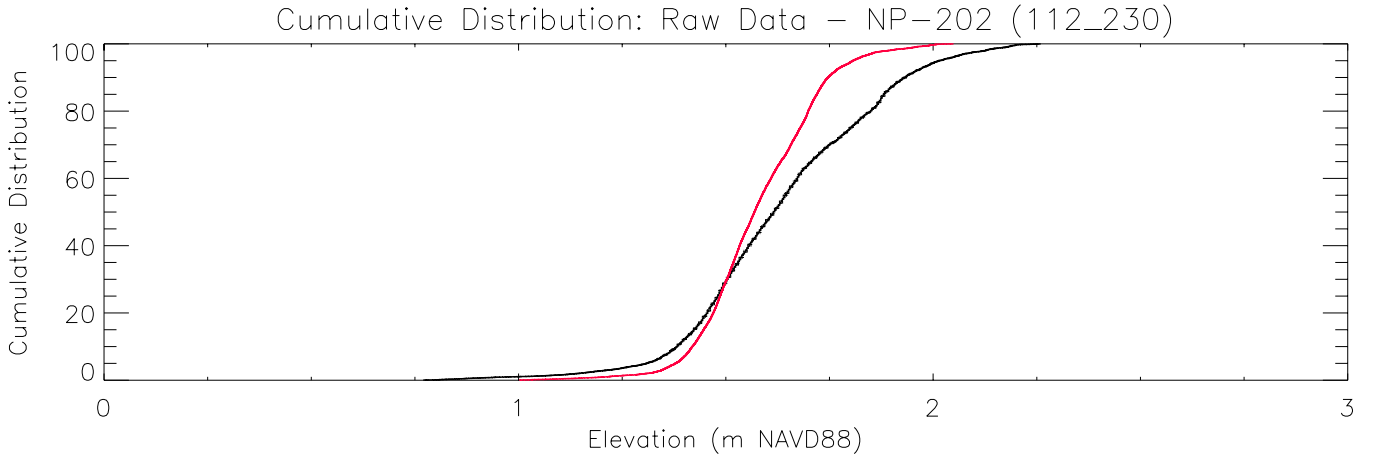
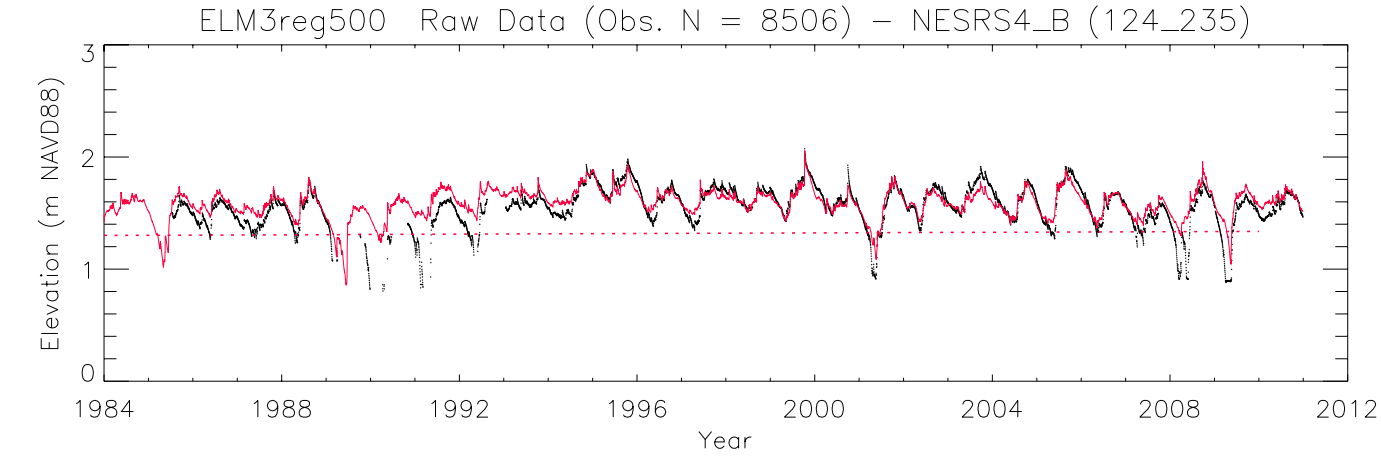
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – NP–202 (112_230)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 8506) – NESRS4_B (124_235)
Elevation (m NAVD88)
0
1
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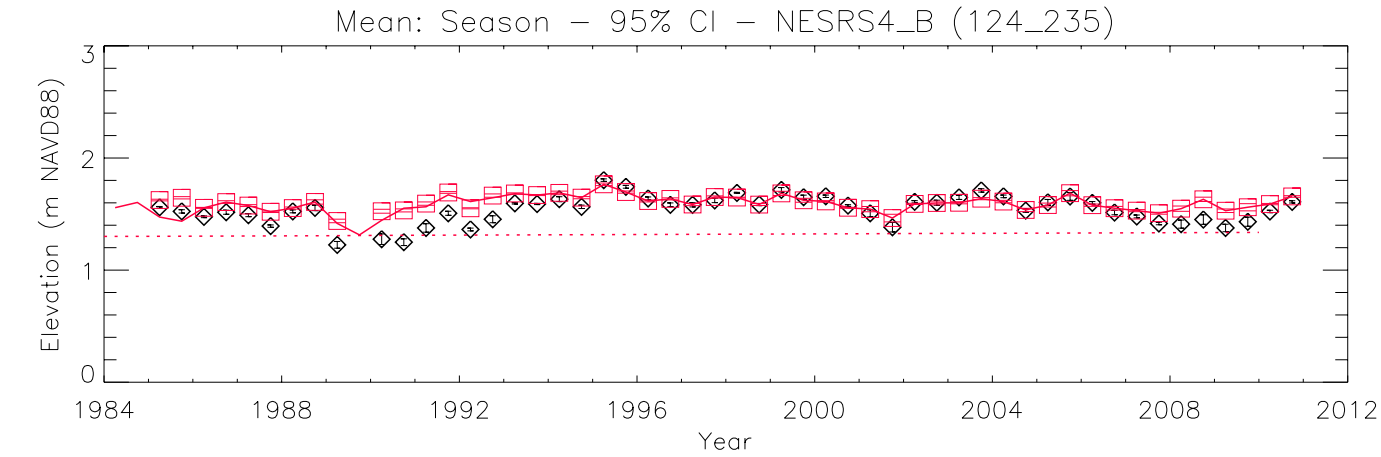
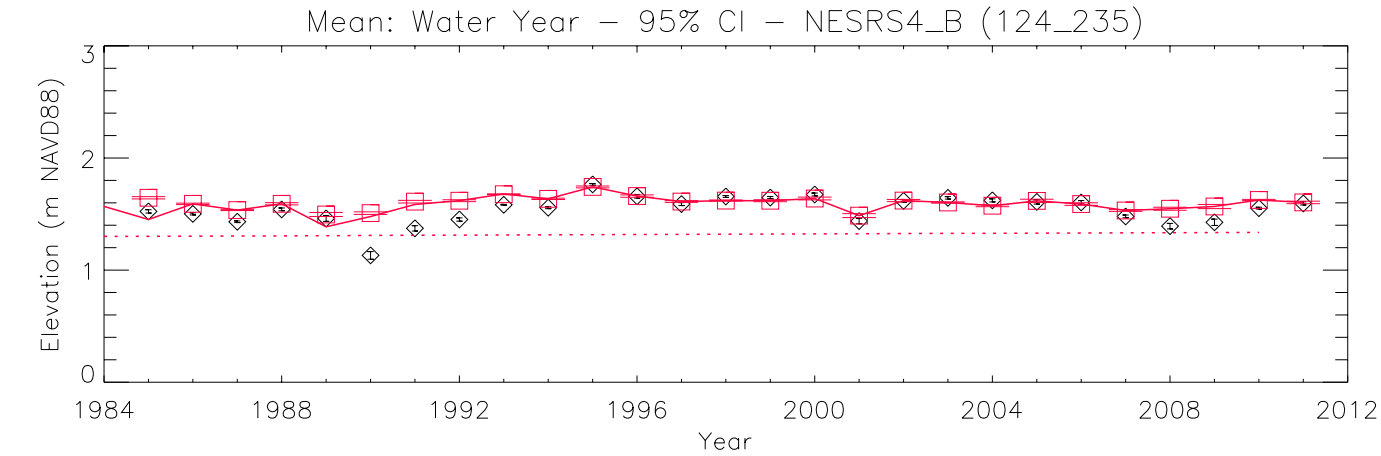
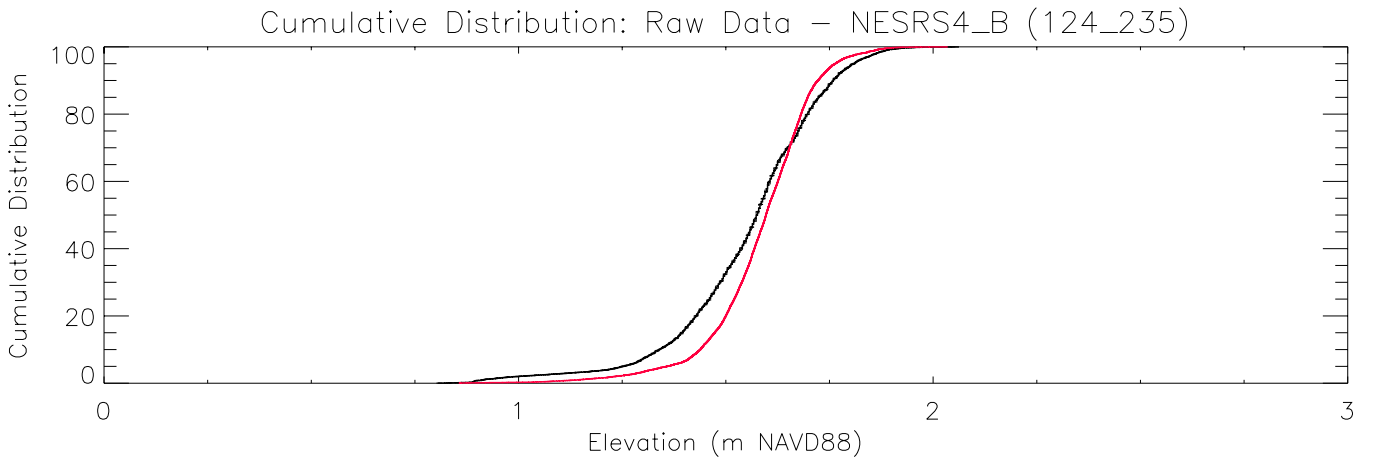
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – NESRS4_B (124_235)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – NESRS4_B (124_235)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – NESRS4_B (124_235)
Cumulative Distribution
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20
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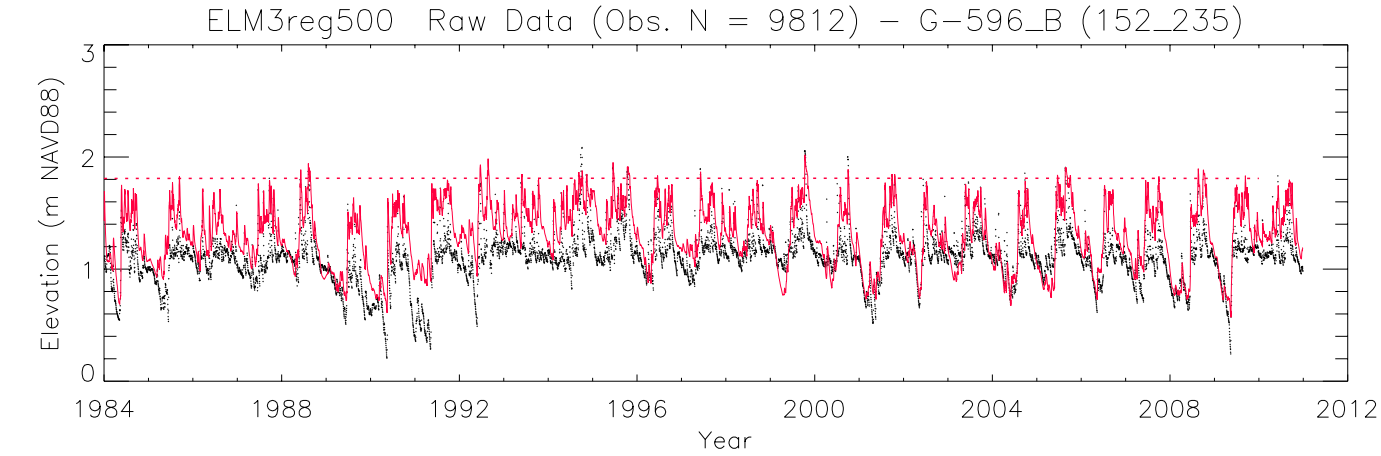
60
80
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9812) – G–596_B (152_235)
Elevation (m NAVD88)
0
1
2
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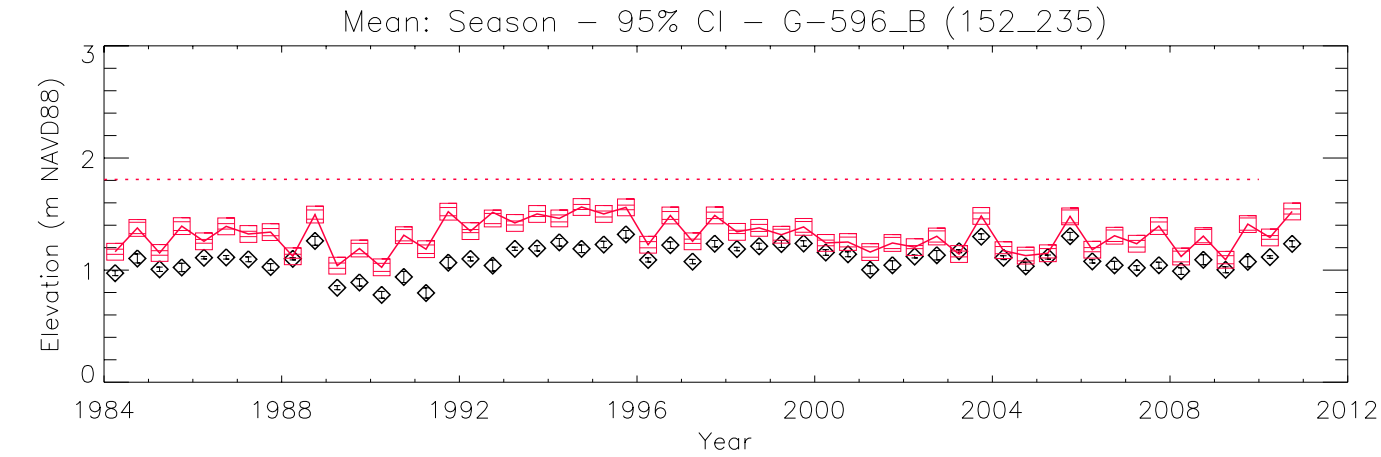
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – G–596_B (152_235)
Elevation (m NAVD88)
0
1
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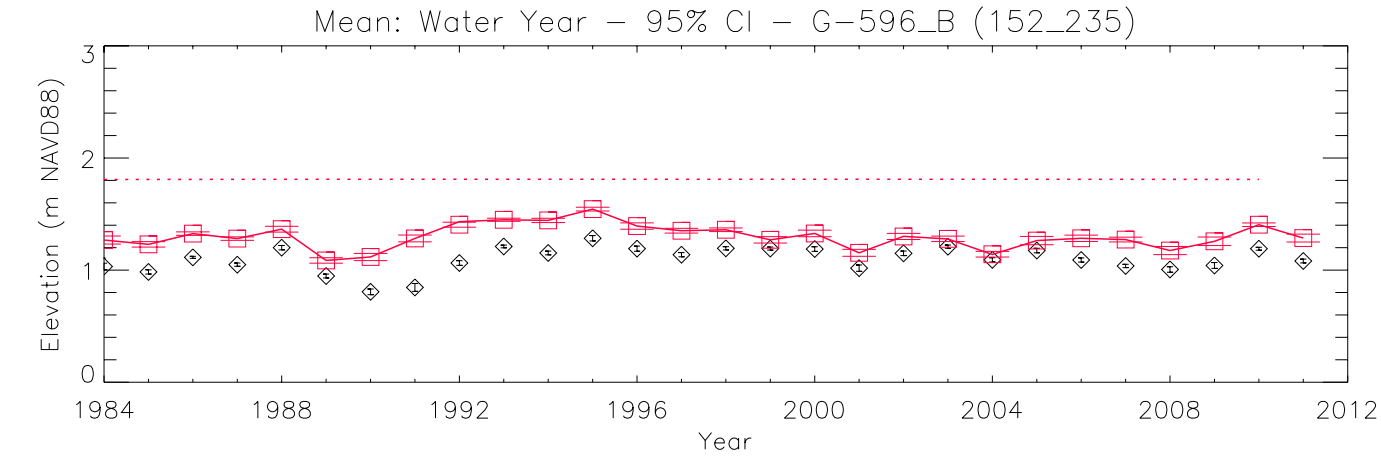
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – G–596_B (152_235)
Elevation (m NAVD88)
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1
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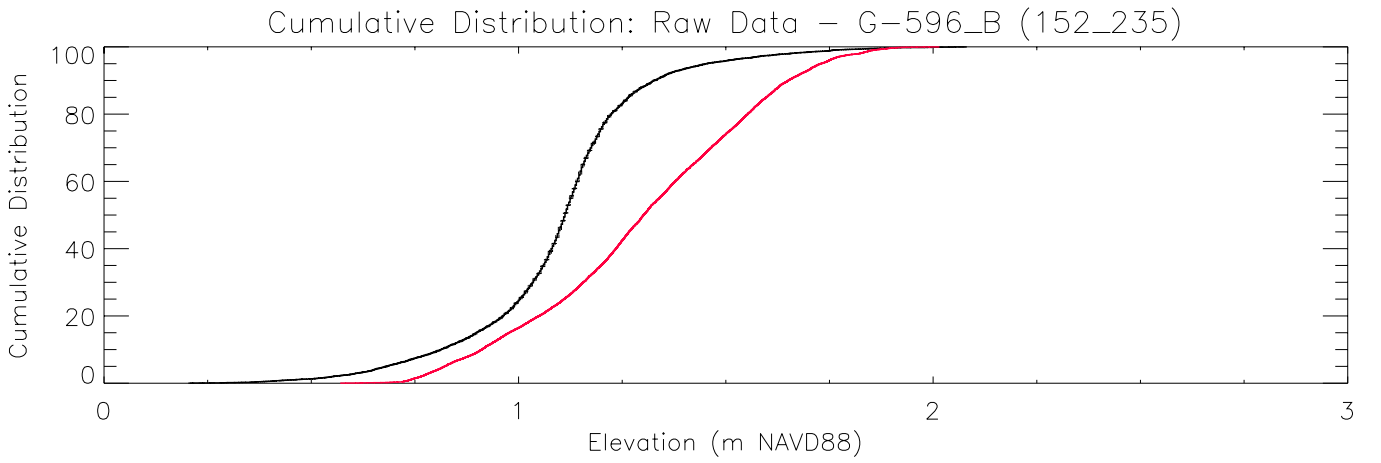
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – G–596_B (152_235)
Cumulative Distribution
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20
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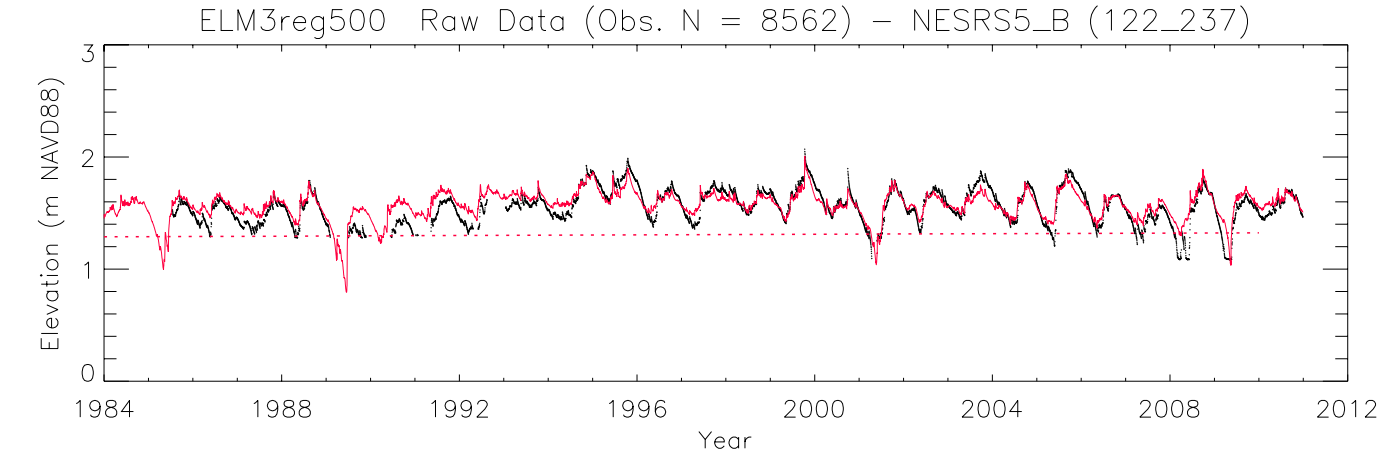
60
80
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 8562) – NESRS5_B (122_237)
Elevation (m NAVD88)
0
1
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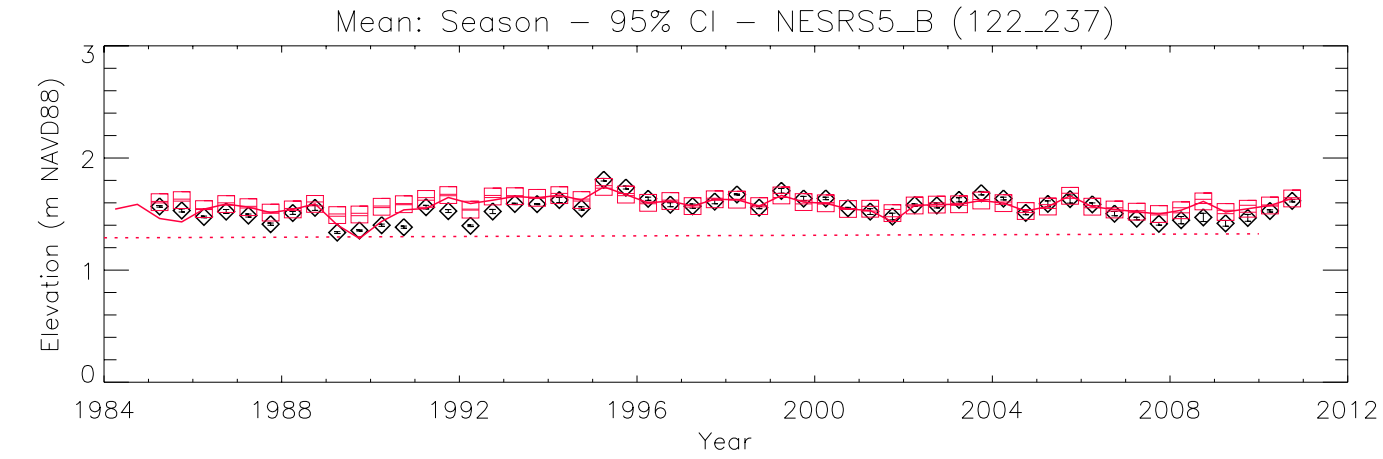
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – NESRS5_B (122_237)
Elevation (m NAVD88)
0
1
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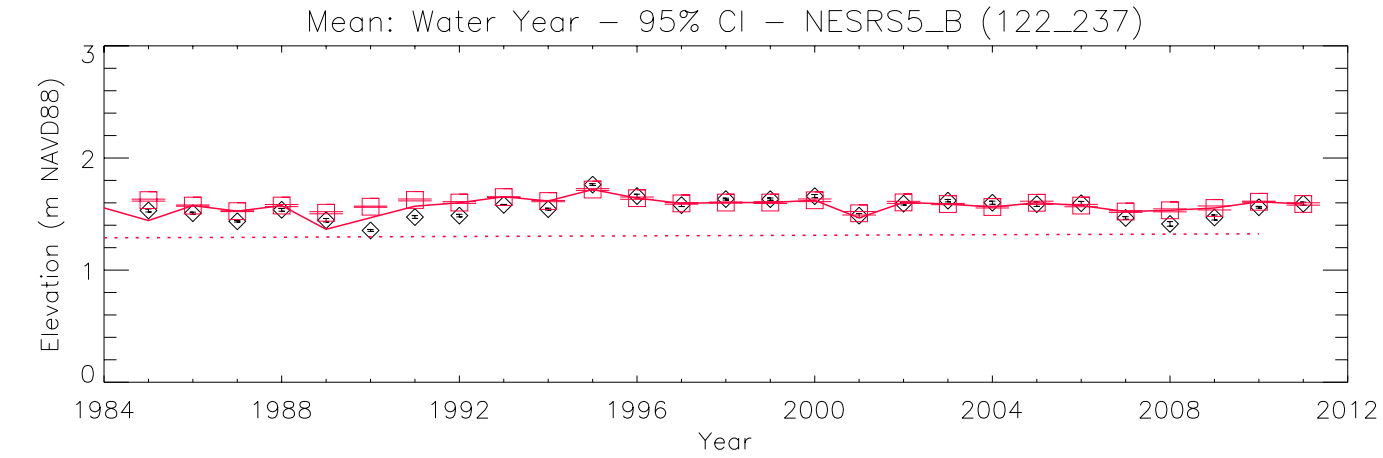
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – NESRS5_B (122_237)
Elevation (m NAVD88)
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1
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3
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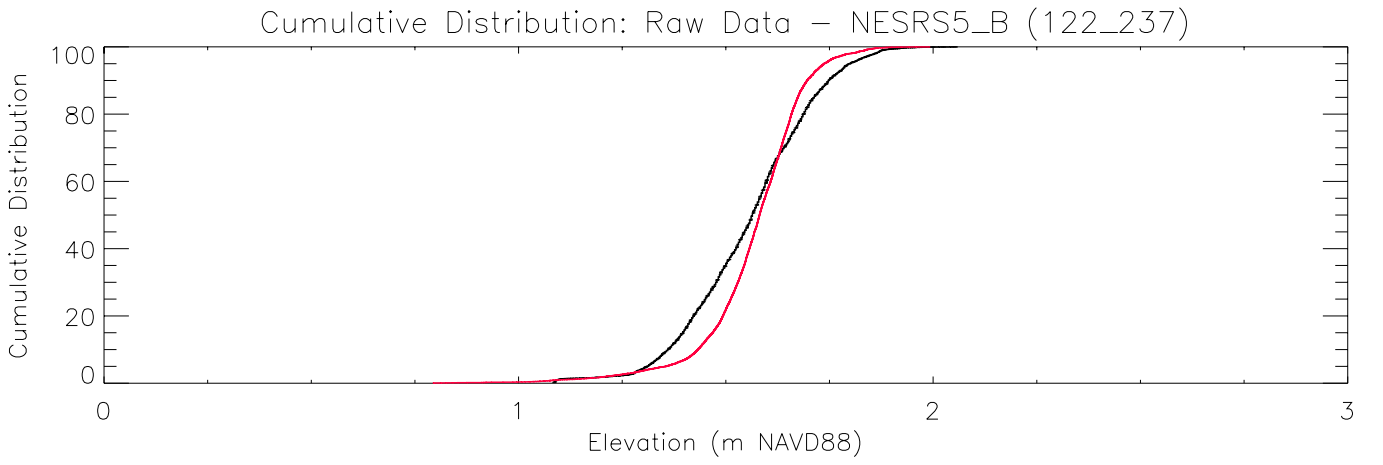
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – NESRS5_B (122_237)
Cumulative Distribution
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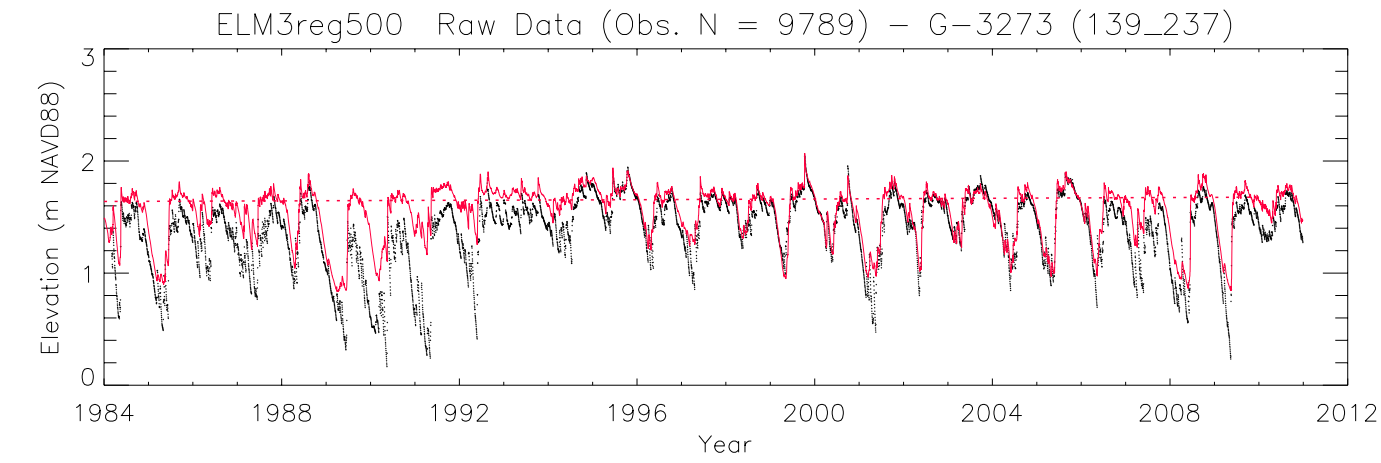
60
80
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9789) – G–3273 (139_237)
Elevation (m NAVD88)
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1
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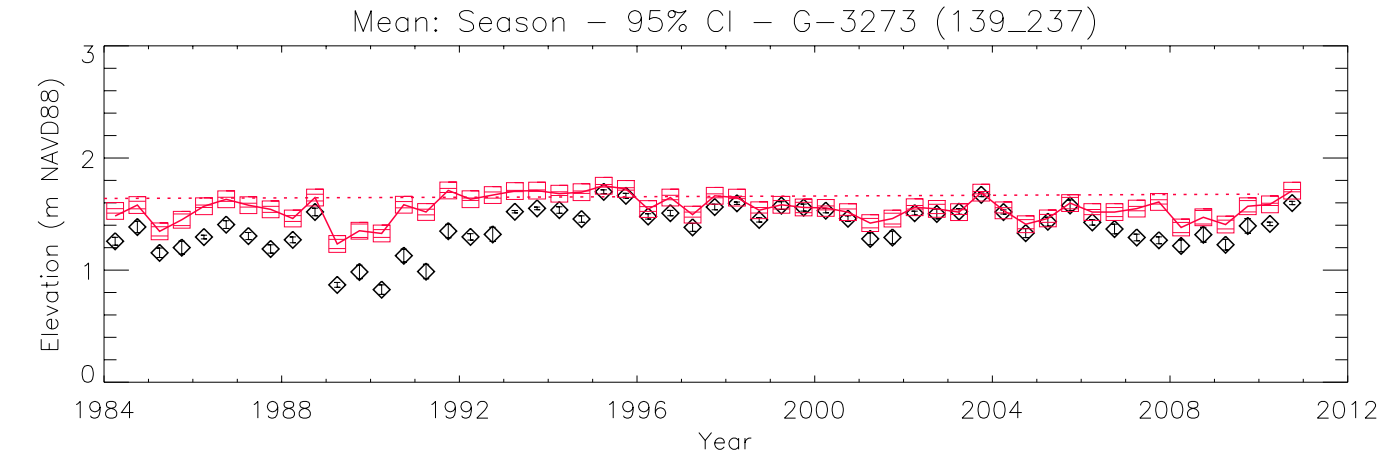
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – G–3273 (139_237)
Elevation (m NAVD88)
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3
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1988
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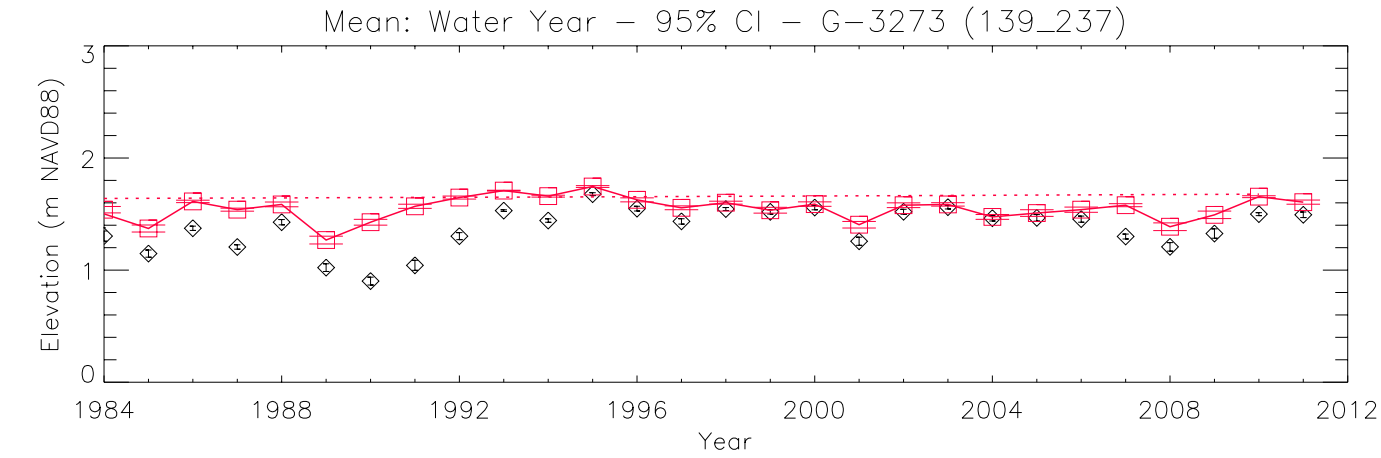
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – G–3273 (139_237)
Elevation (m NAVD88)
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1
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3
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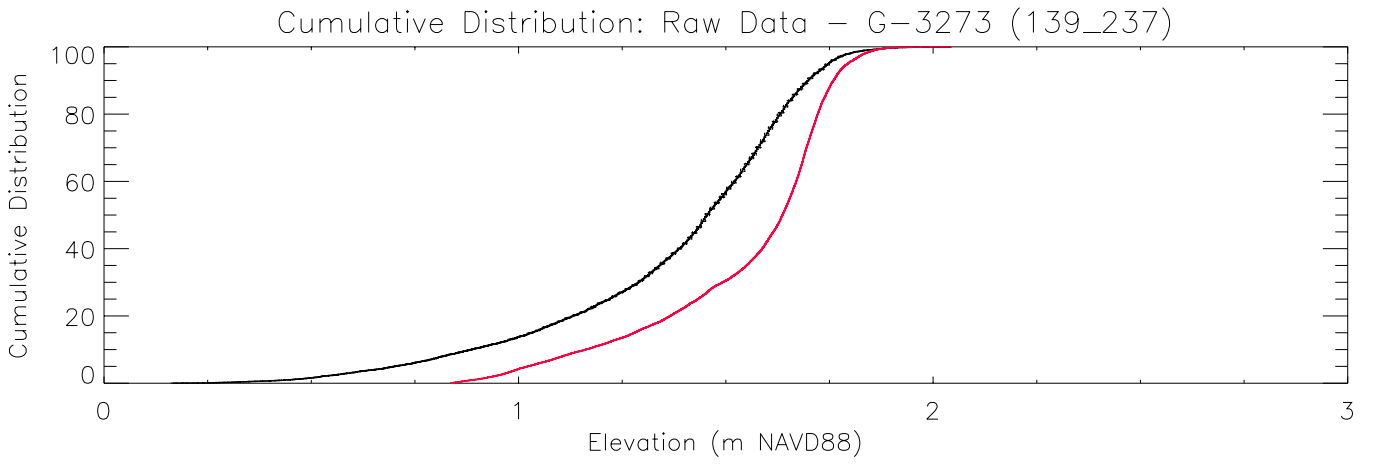
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – G–3273 (139_237)
Cumulative Distribution
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60
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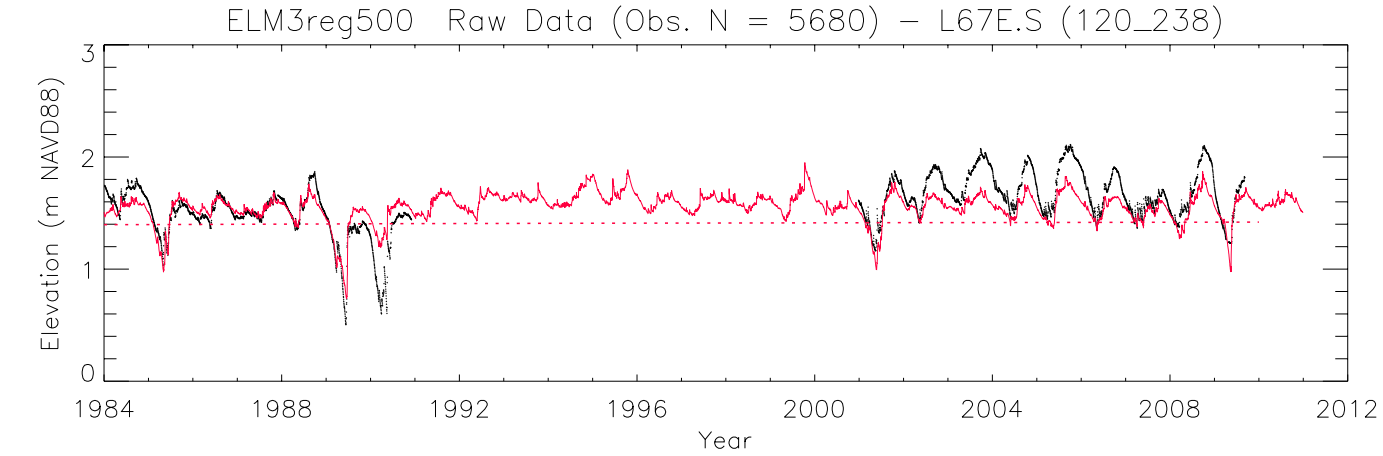
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 5680) – L67E.S (120_238)
Elevation (m NAVD88)
0
1
2
3
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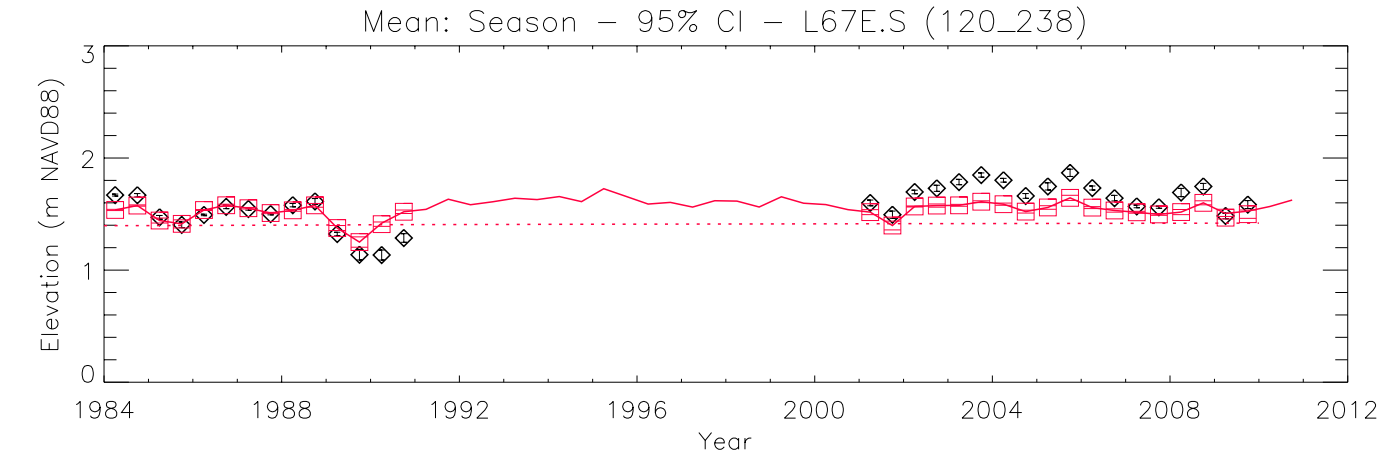
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – L67E.S (120_238)
Elevation (m NAVD88)
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1
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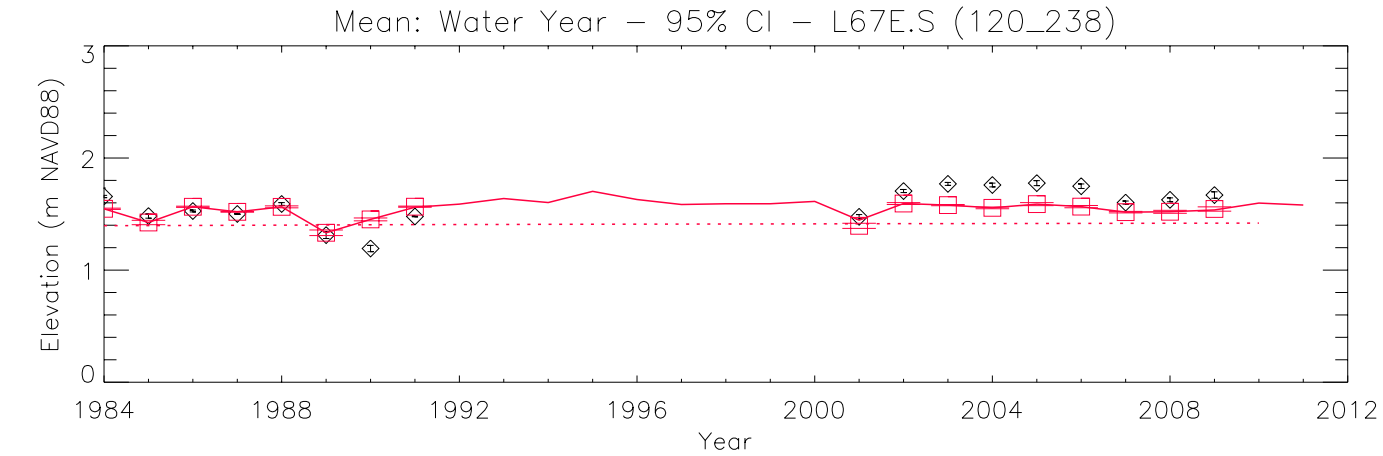
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – L67E.S (120_238)
Elevation (m NAVD88)
0
1
2
3
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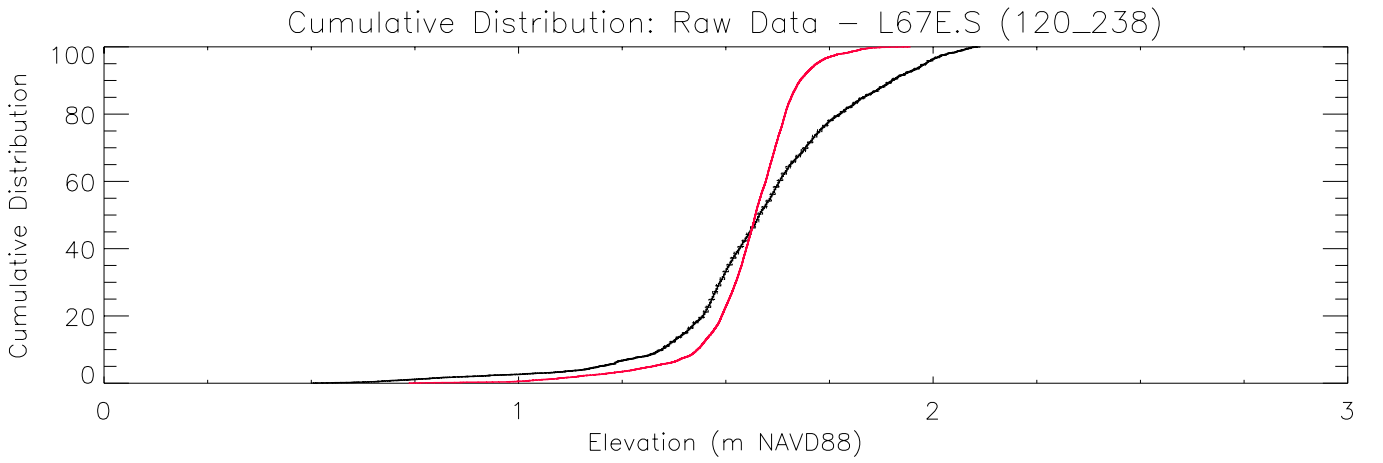
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – L67E.S (120_238)
Cumulative Distribution
0
20
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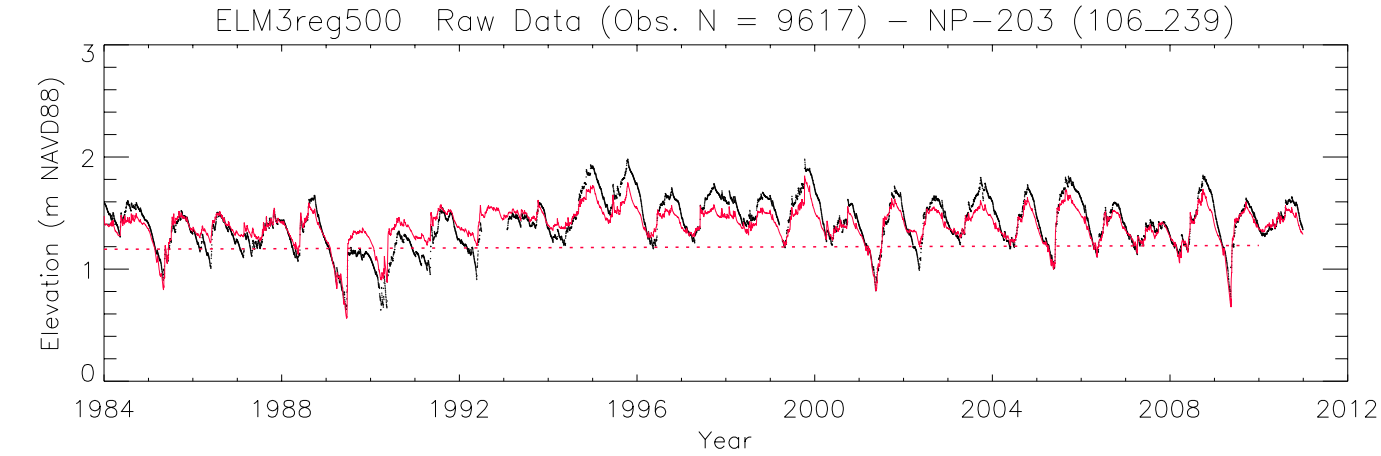
60
80
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9617) – NP–203 (106_239)
Elevation (m NAVD88)
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1
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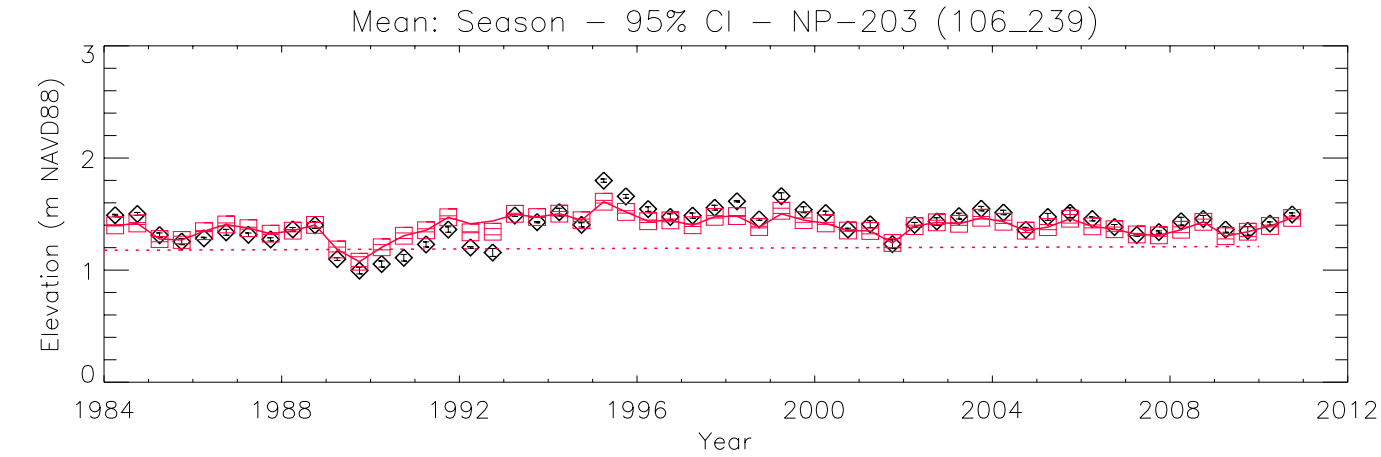
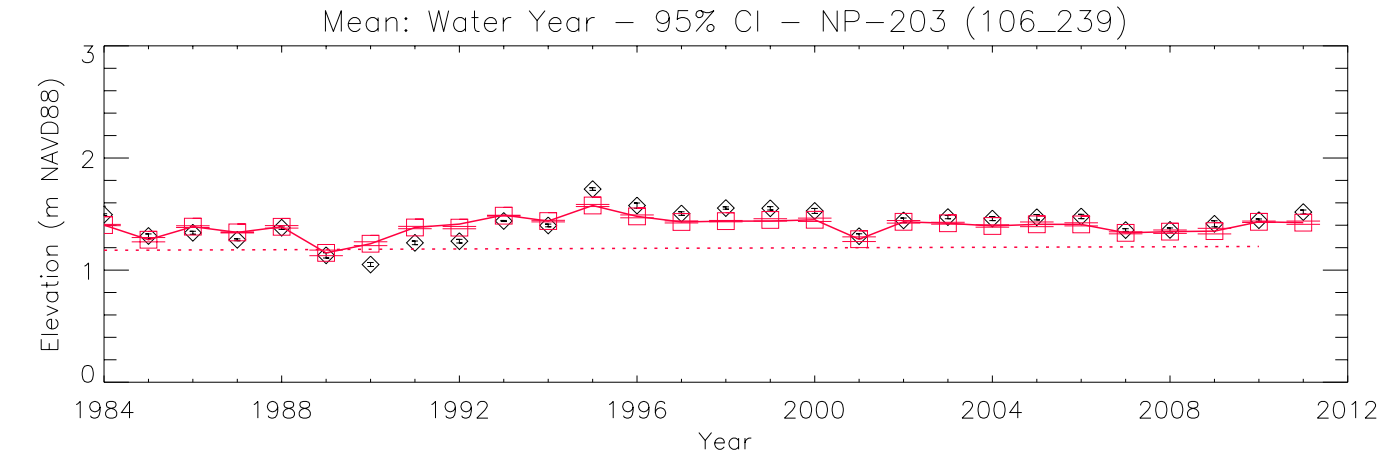
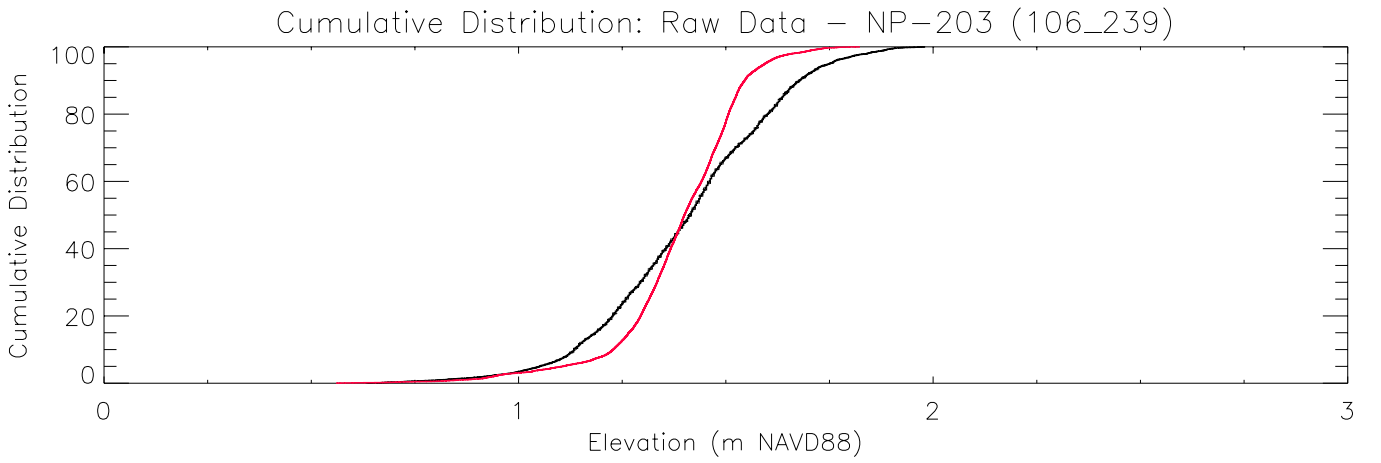
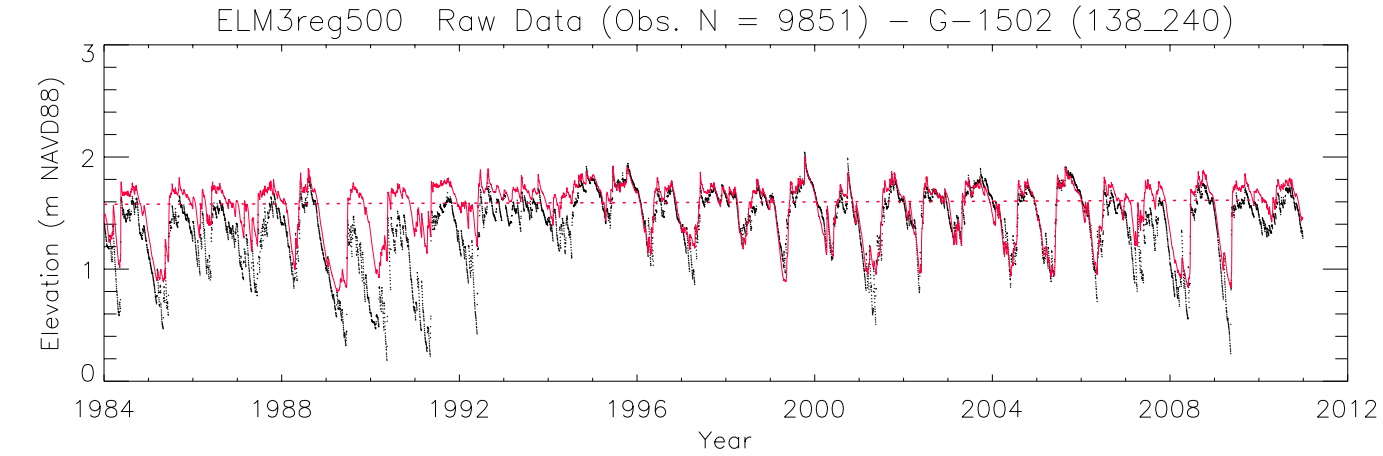
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – NP–203 (106_239)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – NP–203 (106_239)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – NP–203 (106_239)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9851) – G–1502 (138_240)
Elevation (m NAVD88)
0
1
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1984
1988
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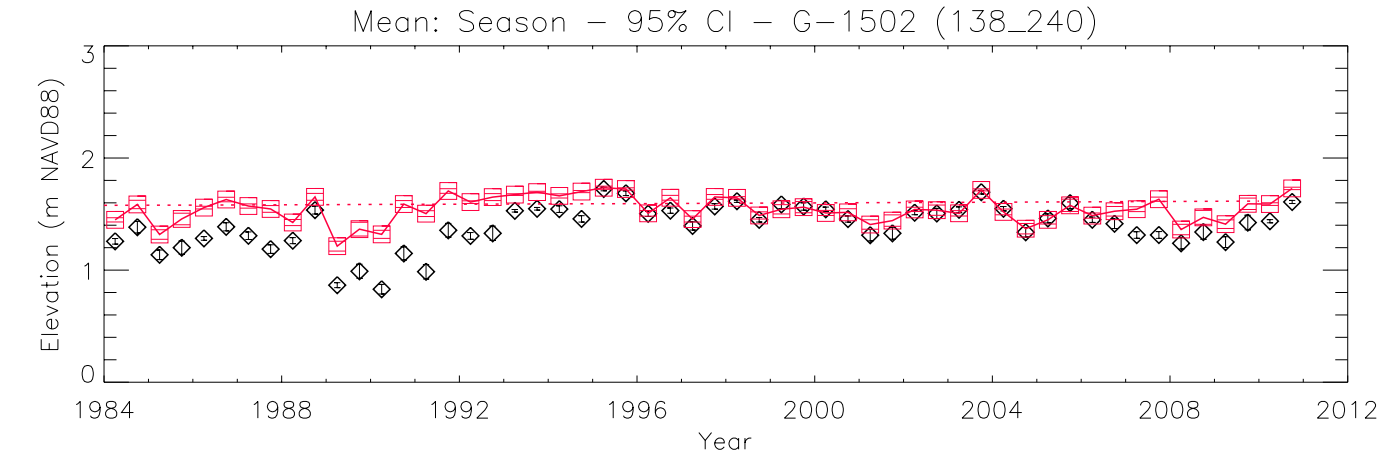
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – G–1502 (138_240)
Elevation (m NAVD88)
0
1
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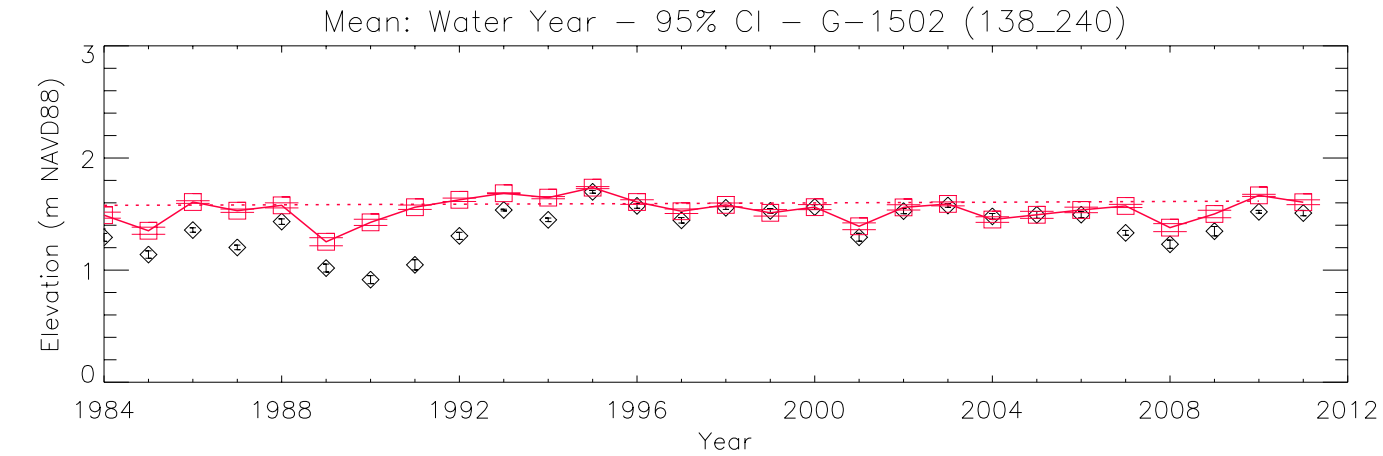
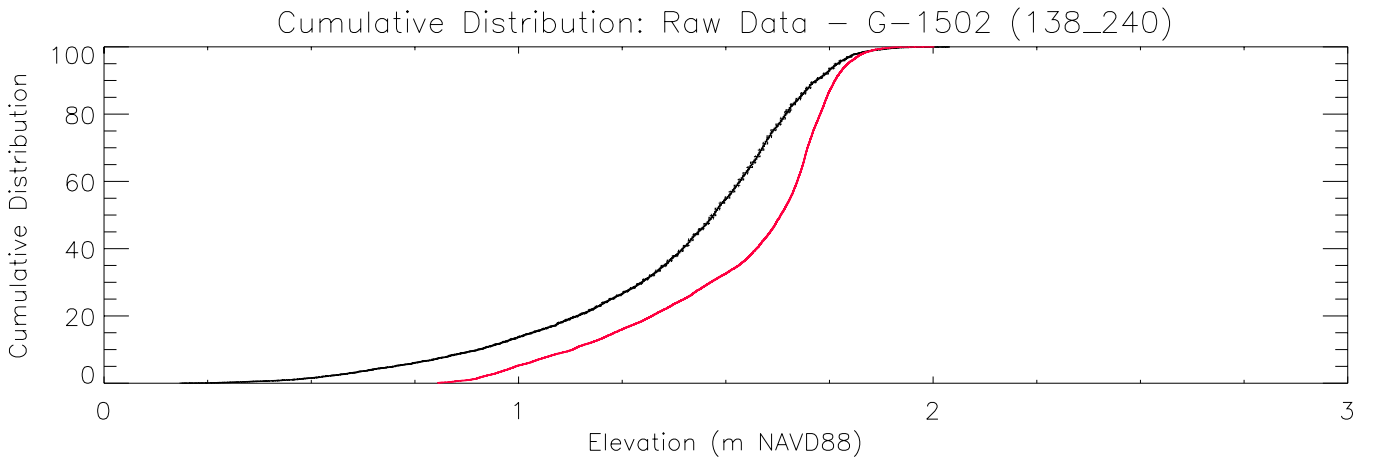
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – G–1502 (138_240)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – G–1502 (138_240)
Cumulative Distribution
0
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60
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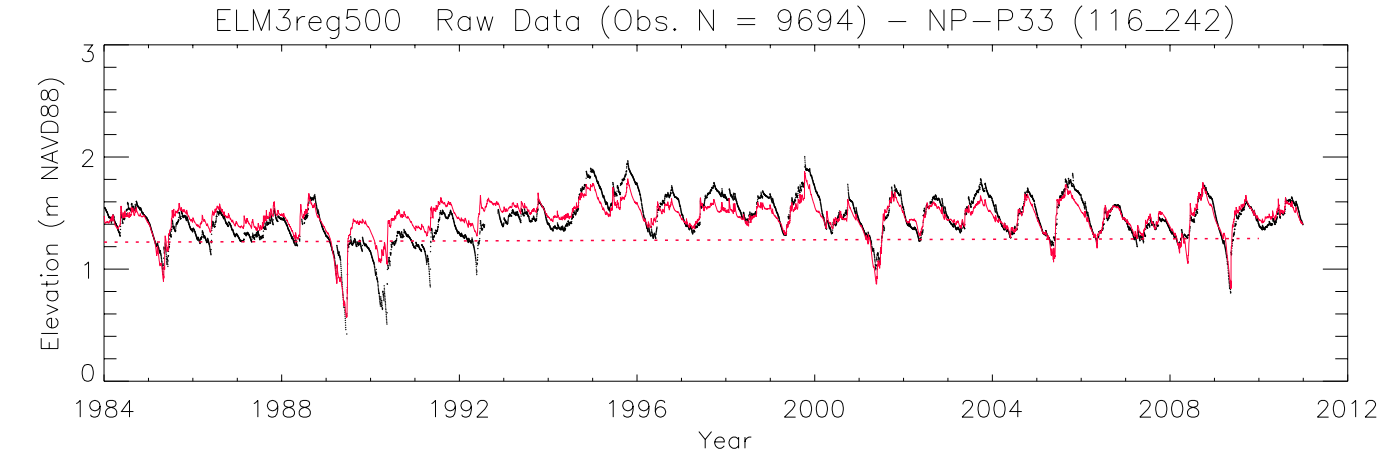
100
0
1
2
3
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9694) – NP–P33 (116_242)
Elevation (m NAVD88)
0
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2
3
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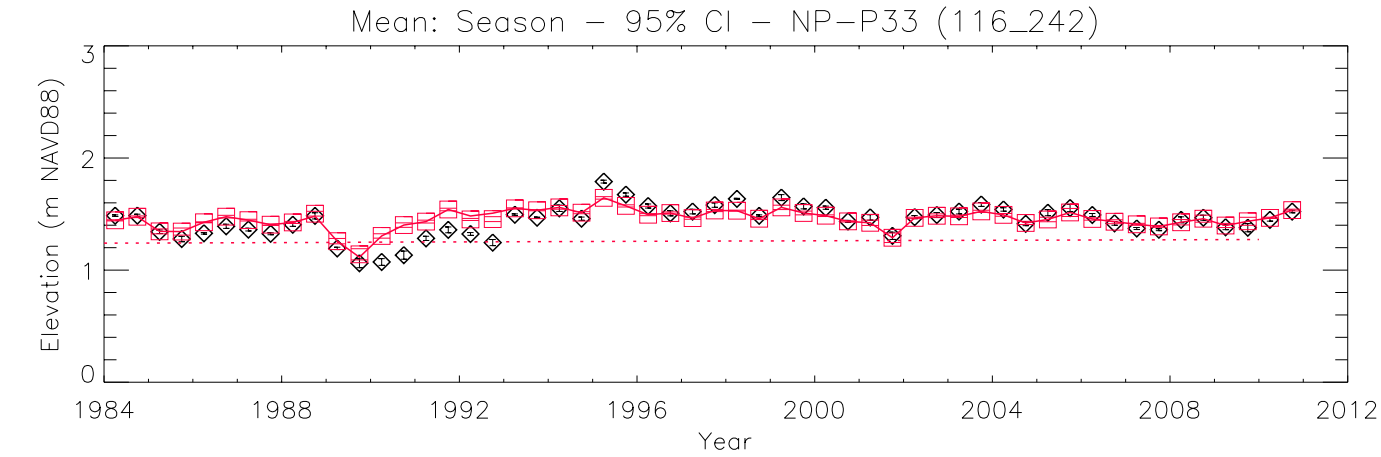
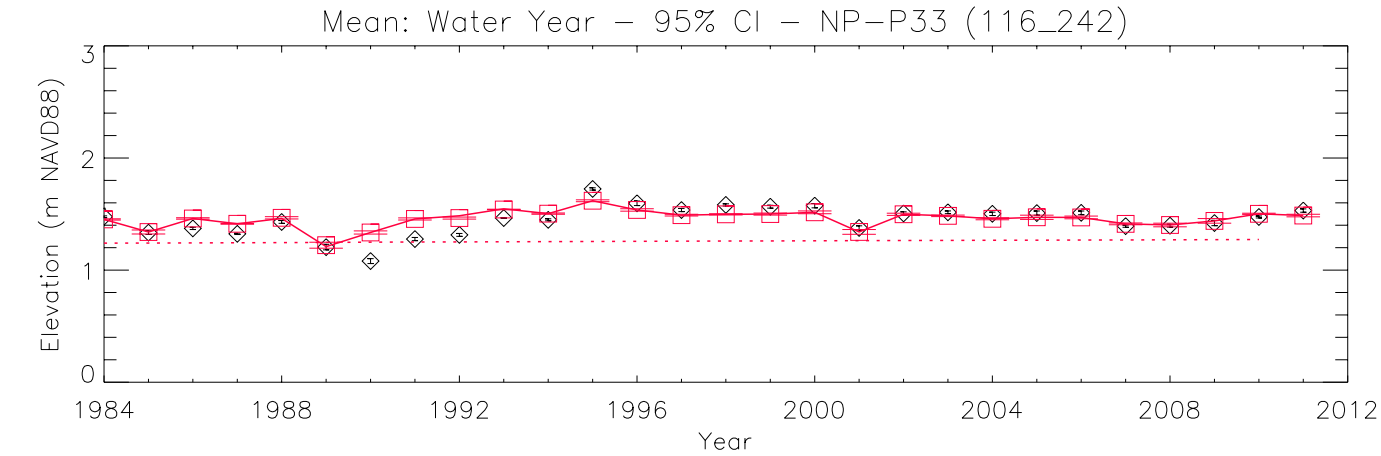
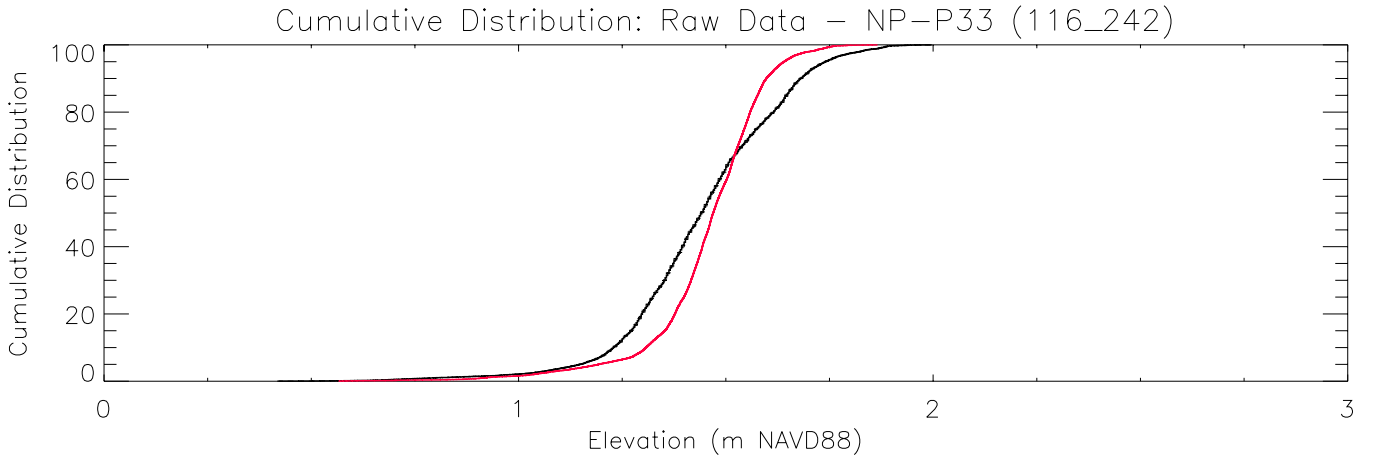
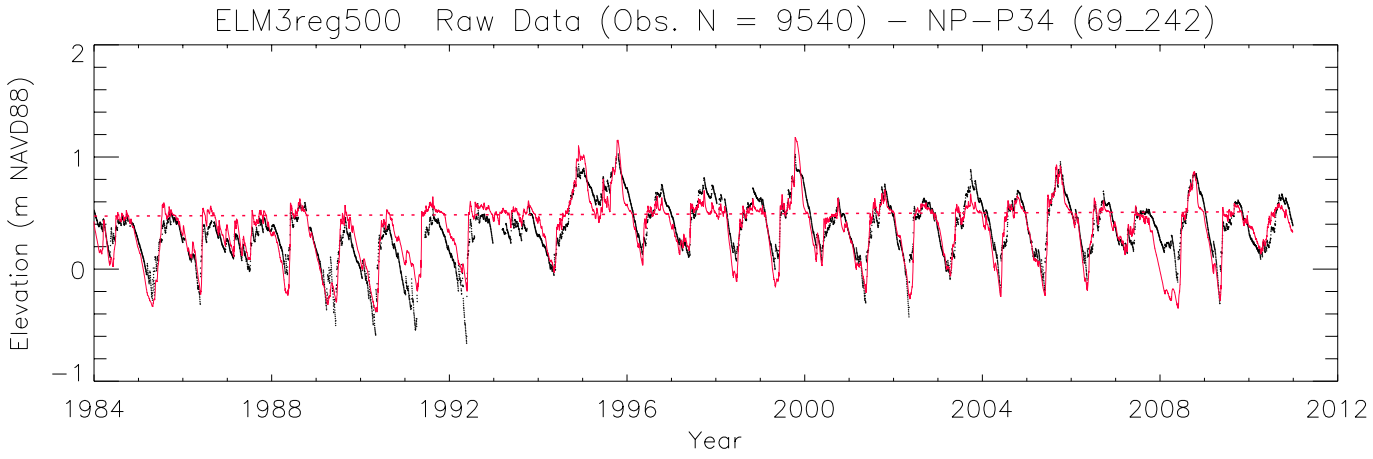
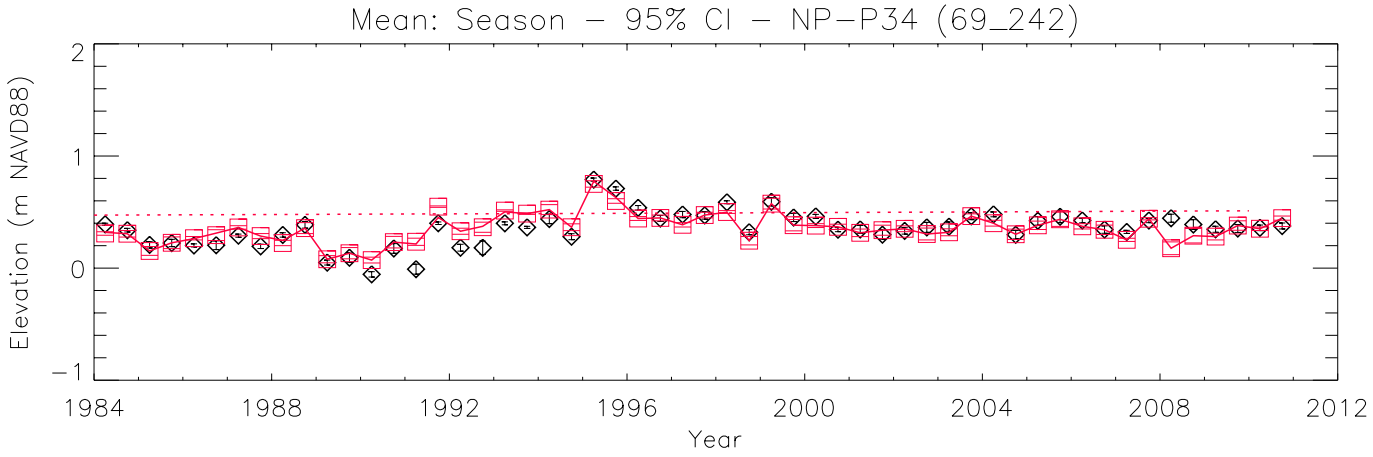
1992
1996
2000
2004
2008
2012
Year

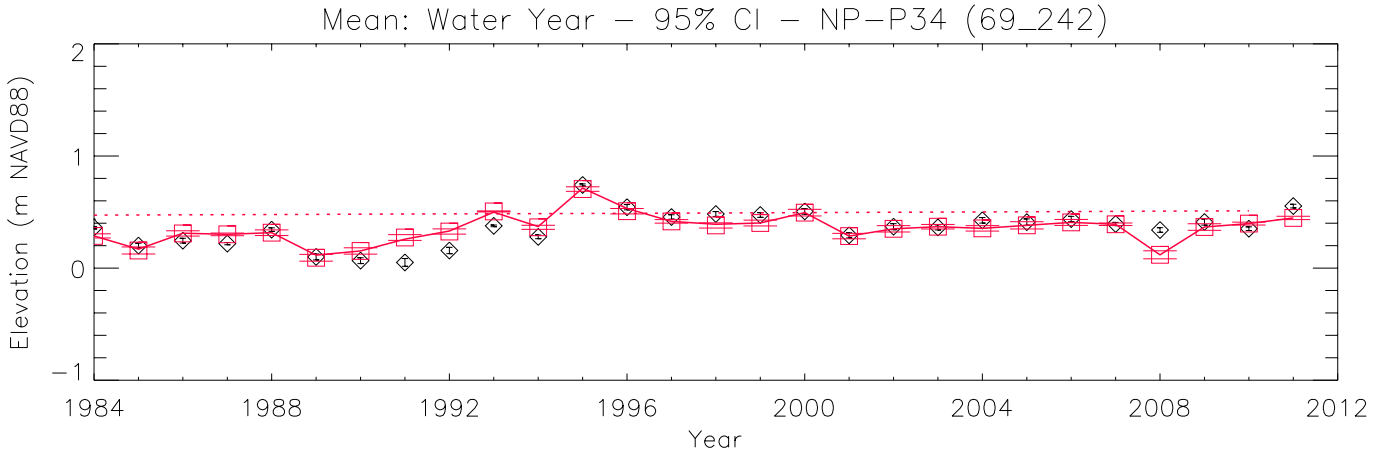

Mean: Season – 95% CI – NP–P33 (116_242)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

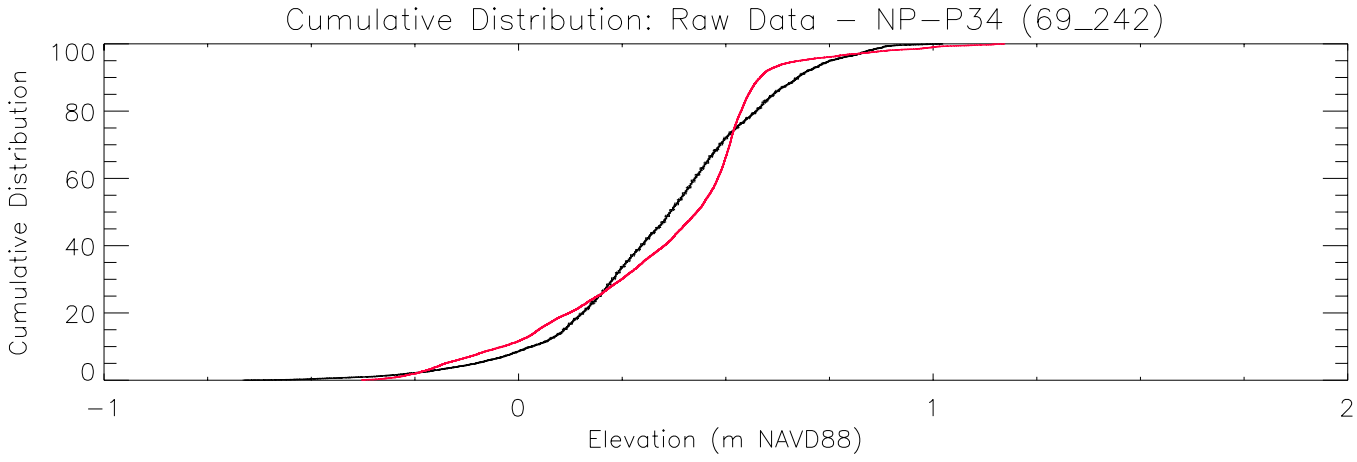

Mean: Water Year – 95% CI – NP–P33 (116_242)
Elevation (m NAVD88)
0
1
2
3
1984
1988
1992
1996
2000
2004
2008
2012
Year

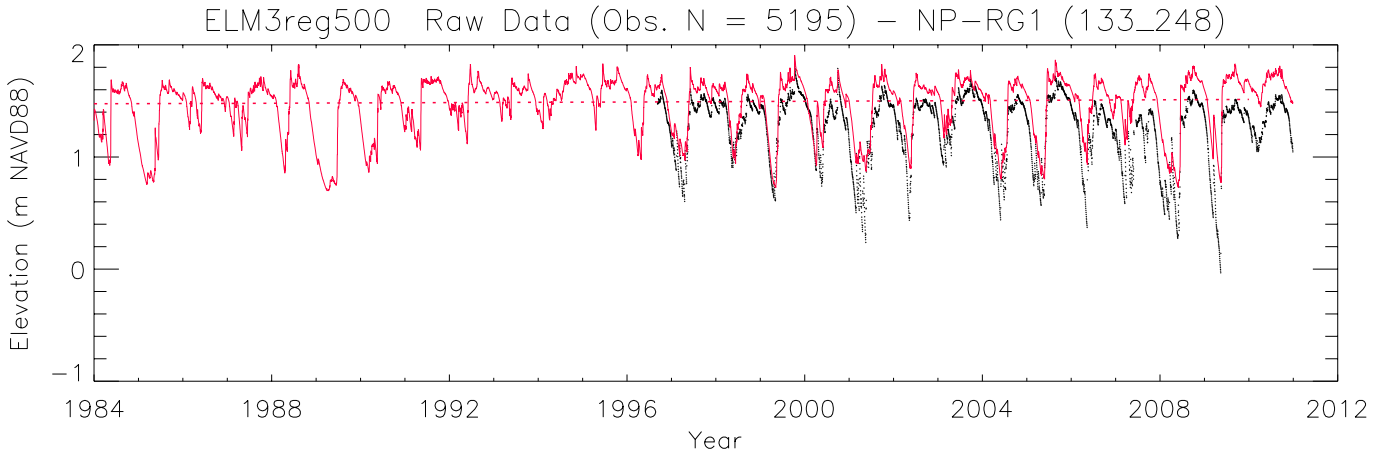

Cumulative Distribution: Raw Data – NP–P33 (116_242)
Cumulative Distribution
0
20
40
60
80
100
0
1
2
3
Elevation (m NAVD88)

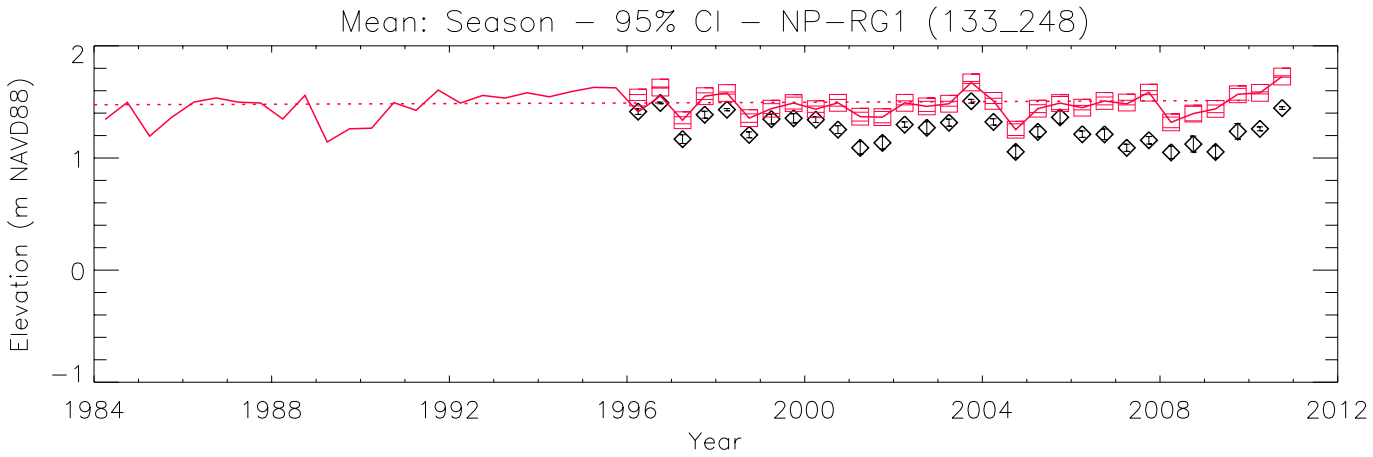

ELM3reg500 Raw Data (Obs. N = 9540) – NP–P34 (69_242)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

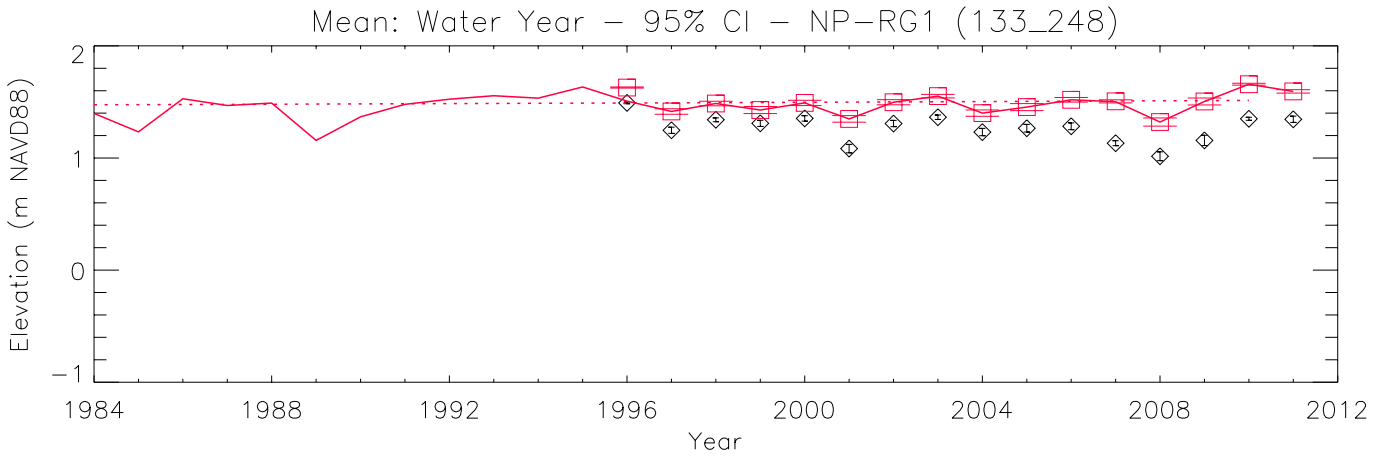

Mean: Season – 95% CI – NP–P34 (69_242)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

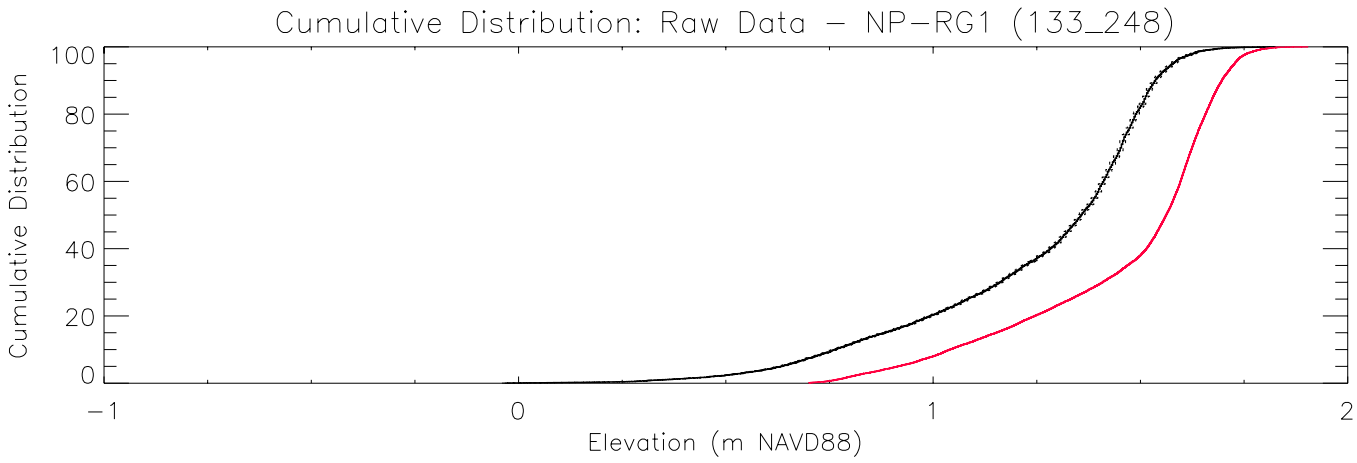

Mean: Water Year – 95% CI – NP–P34 (69_242)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

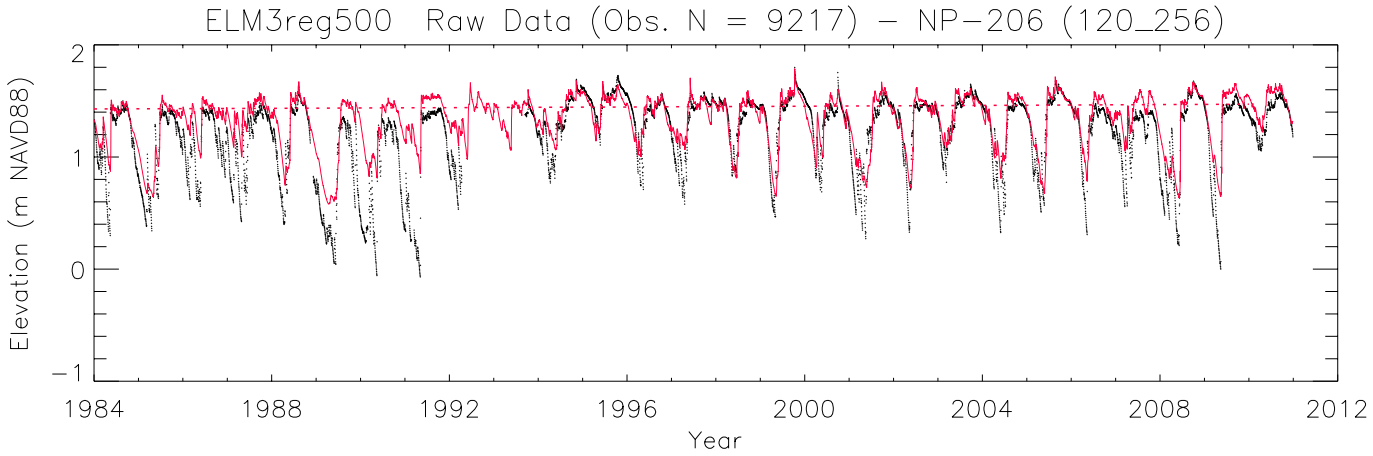

Cumulative Distribution: Raw Data – NP–P34 (69_242)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

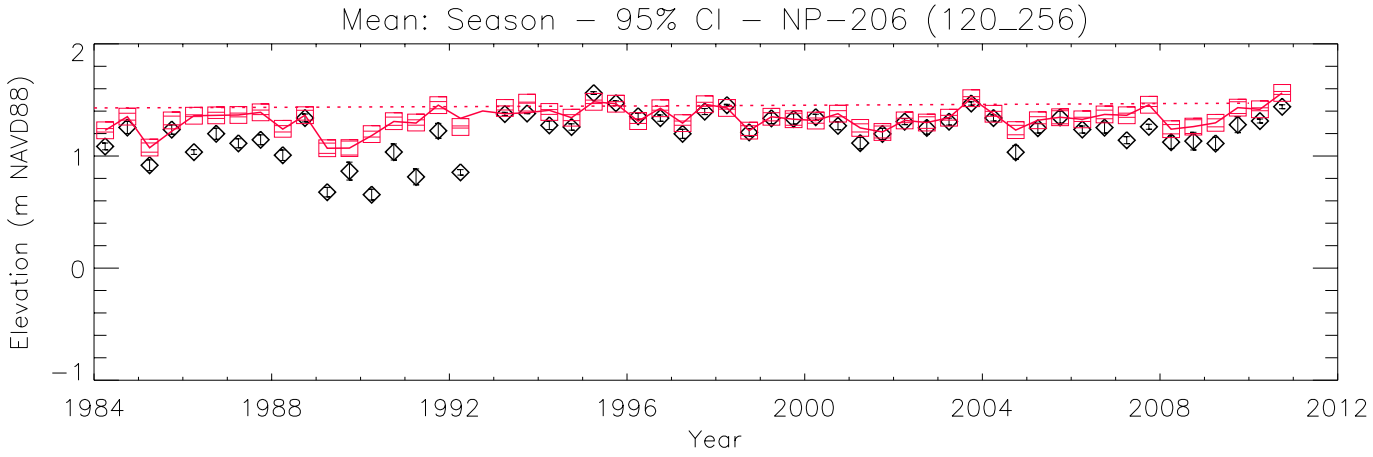

ELM3reg500 Raw Data (Obs. N = 5195) – NP–RG1 (133_248)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

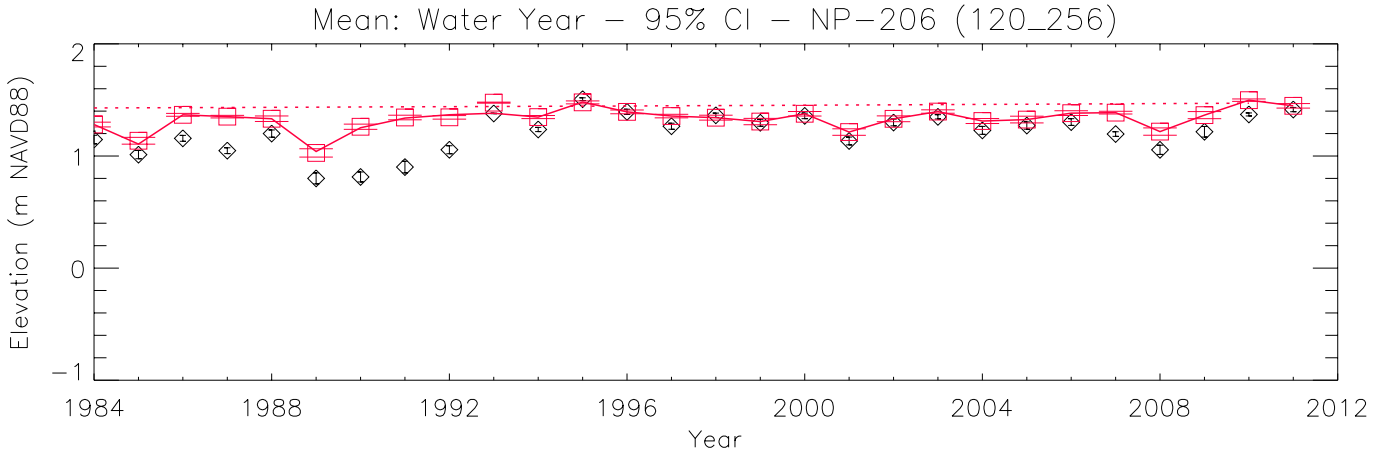

Mean: Season – 95% CI – NP–RG1 (133_248)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

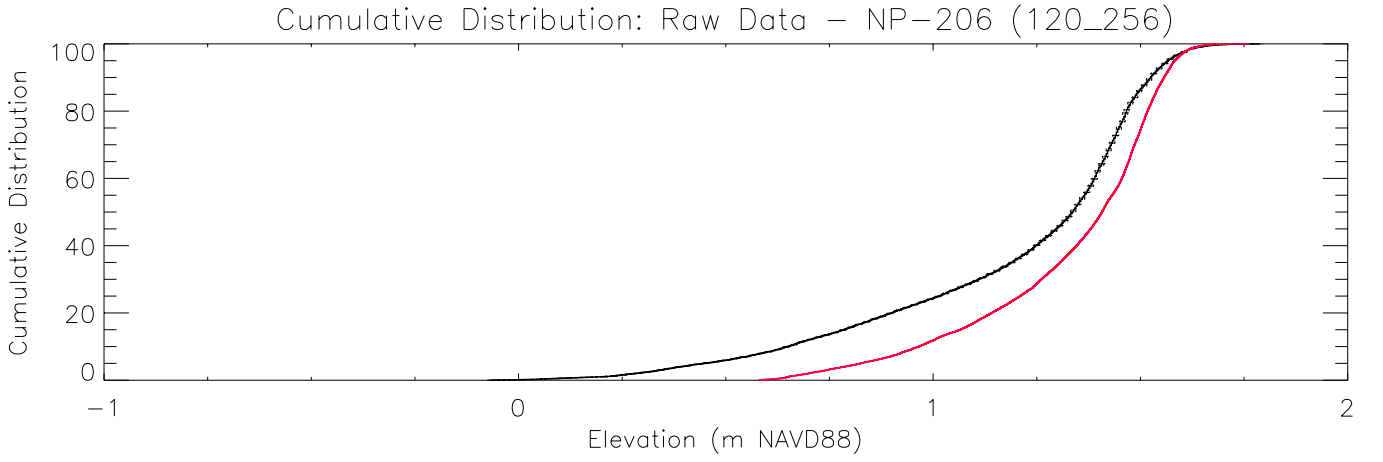

Mean: Water Year – 95% CI – NP–RG1 (133_248)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

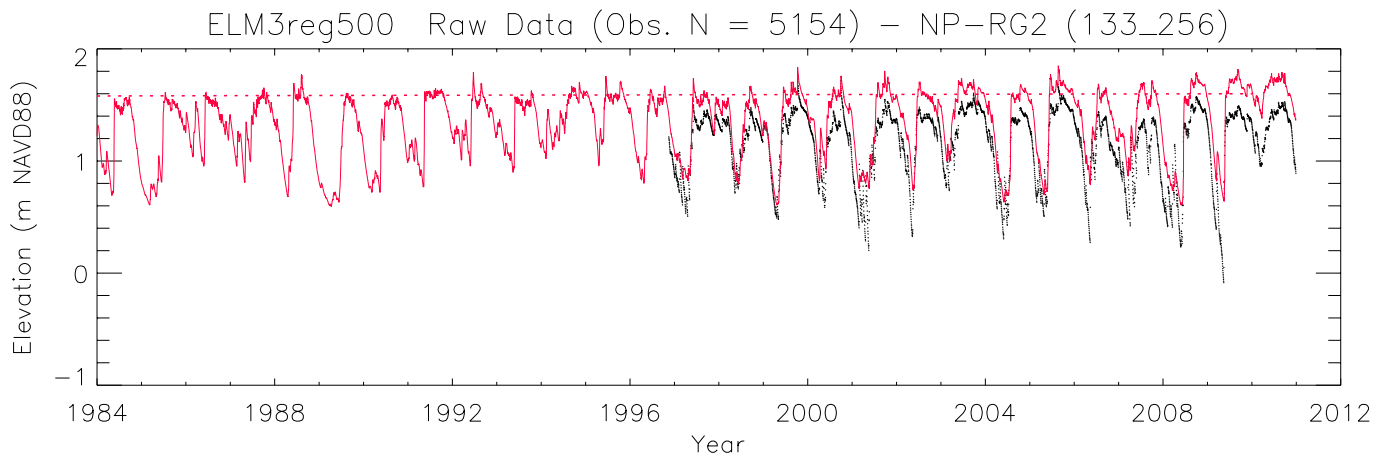

Cumulative Distribution: Raw Data – NP–RG1 (133_248)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

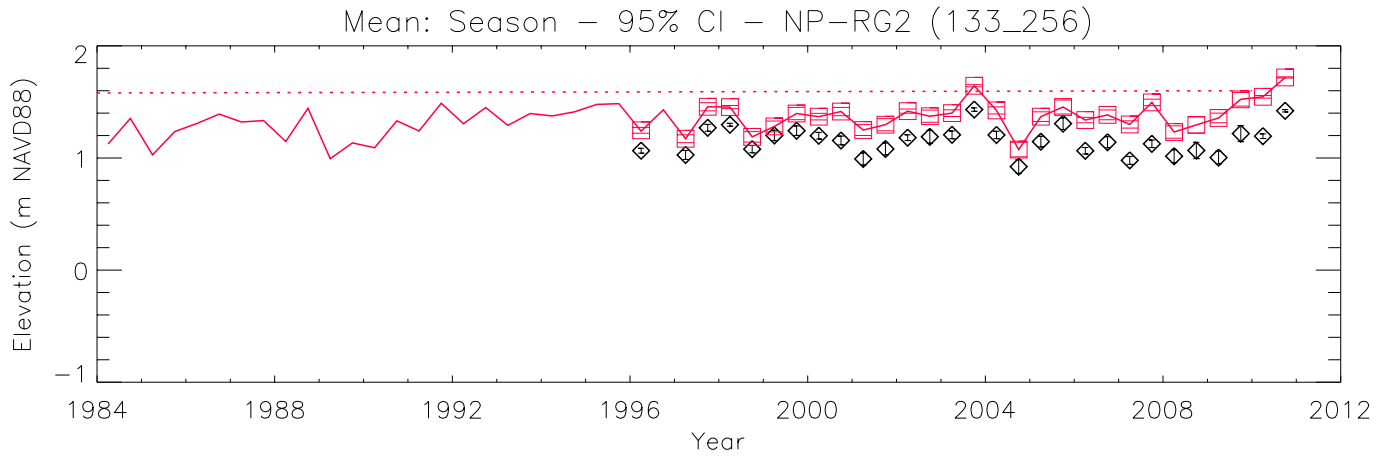

ELM3reg500 Raw Data (Obs. N = 9217) – NP–206 (120_256)
Elevation (m NAVD88)
2
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

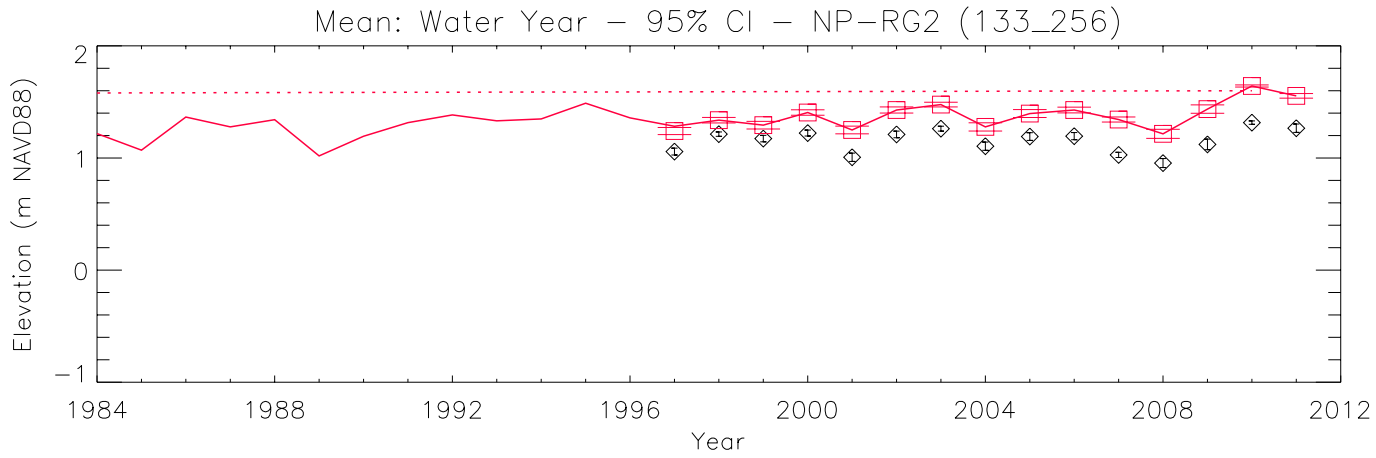

Mean: Season – 95% CI – NP–206 (120_256)
Elevation (m NAVD88)
2
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

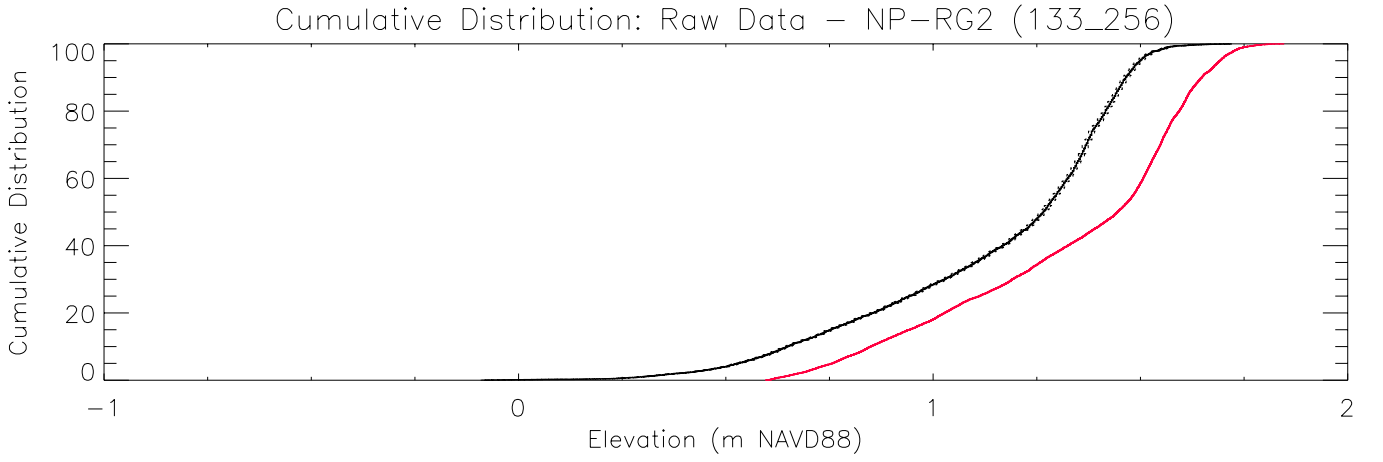

Mean: Water Year – 95% CI – NP–206 (120_256)
Elevation (m NAVD88)
2
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

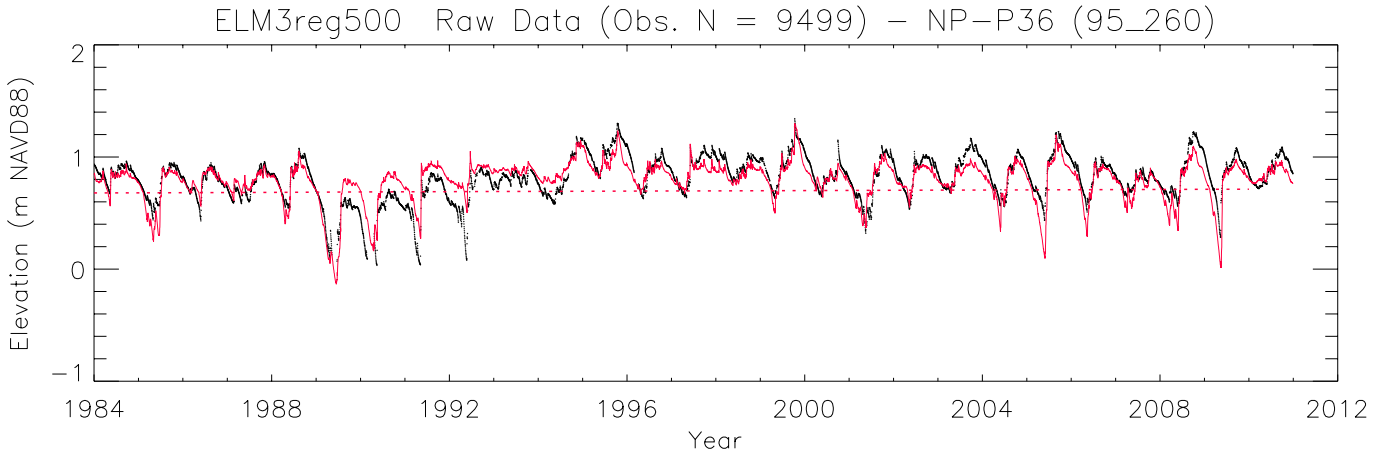

Cumulative Distribution: Raw Data – NP–206 (120_256)
Cumulative Distribution
100
80
60
40
20
0
–1
0
1
2
Elevation (m NAVD88)

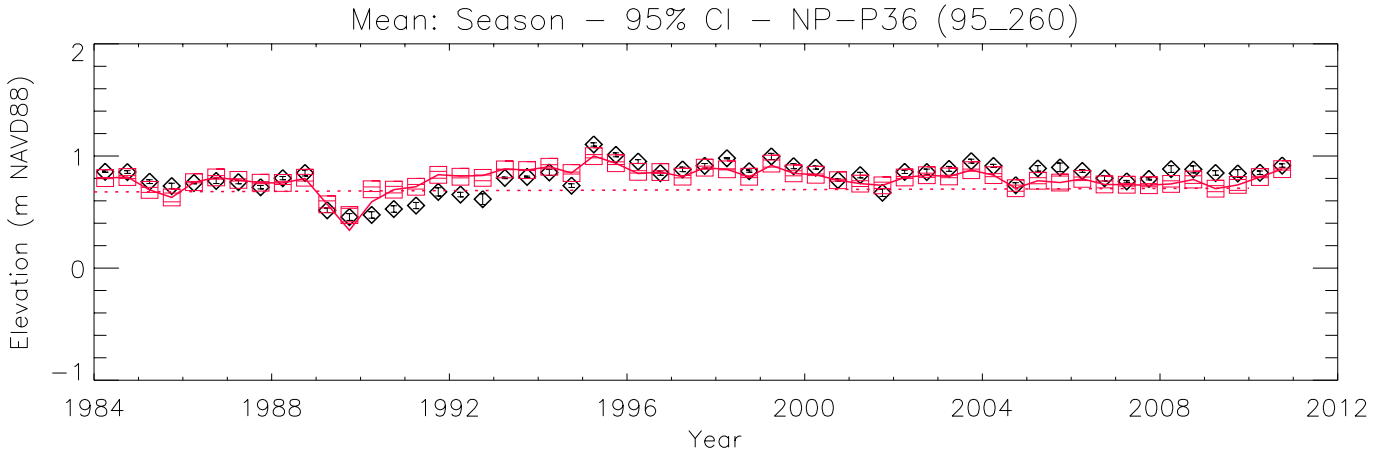

ELM3reg500 Raw Data (Obs. N = 5154) – NP–RG2 (133_256)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

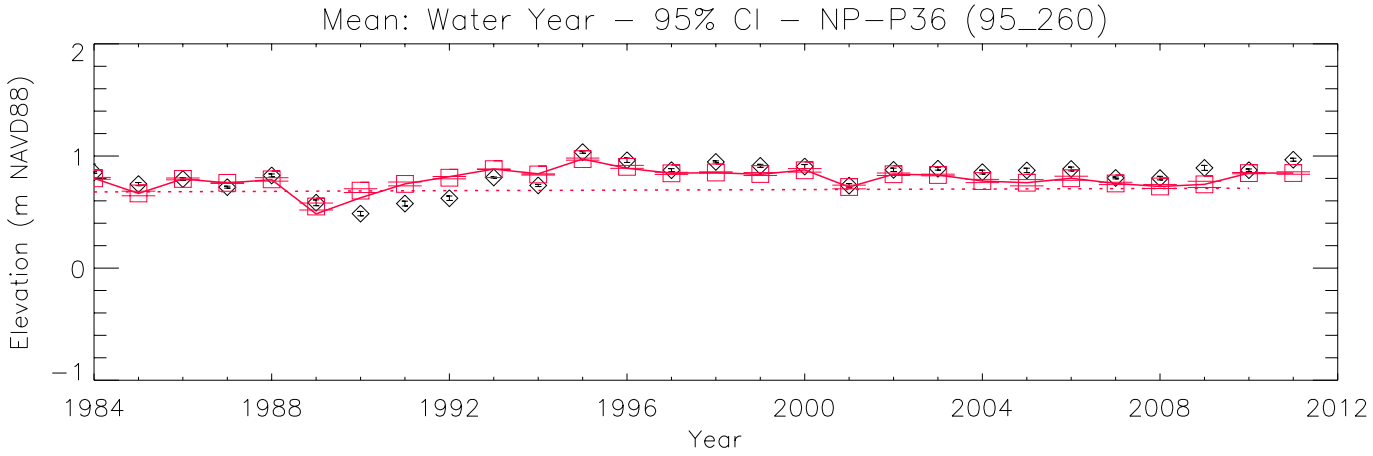

Mean: Season – 95% CI – NP–RG2 (133_256)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

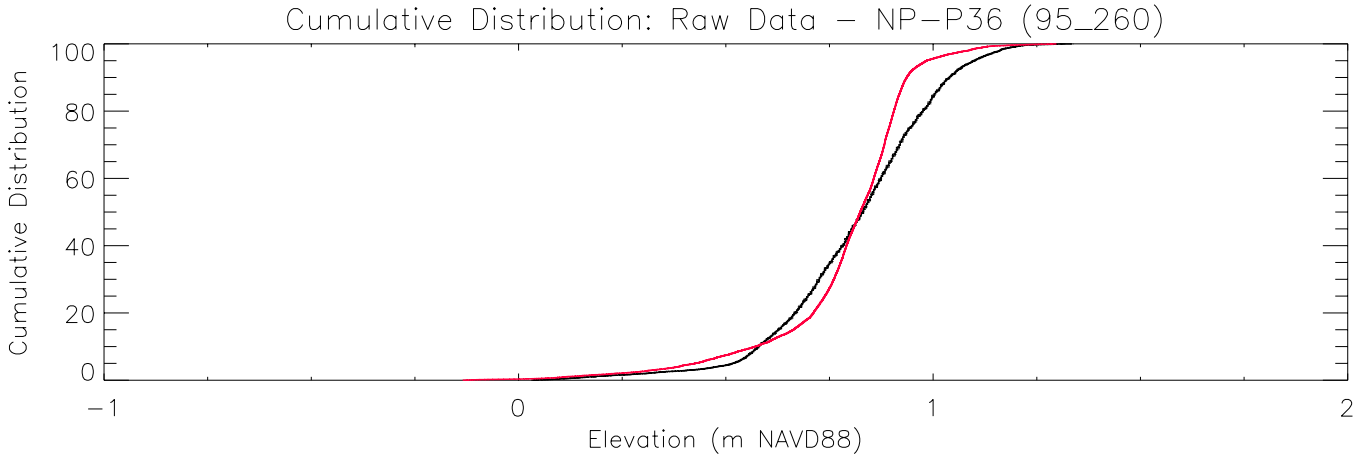

Mean: Water Year – 95% CI – NP–RG2 (133_256)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

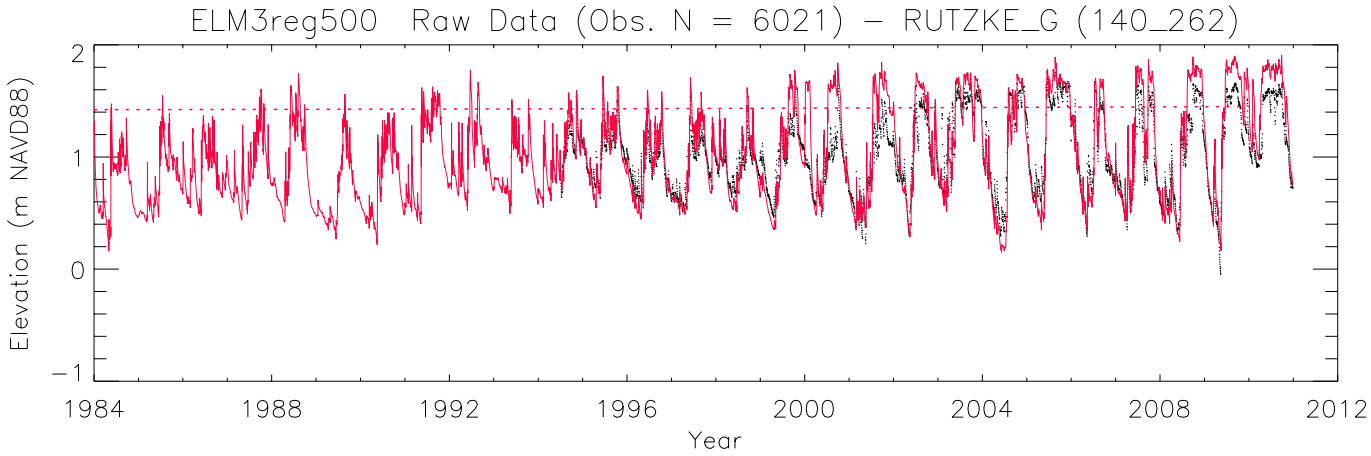

Cumulative Distribution: Raw Data – NP–RG2 (133_256)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

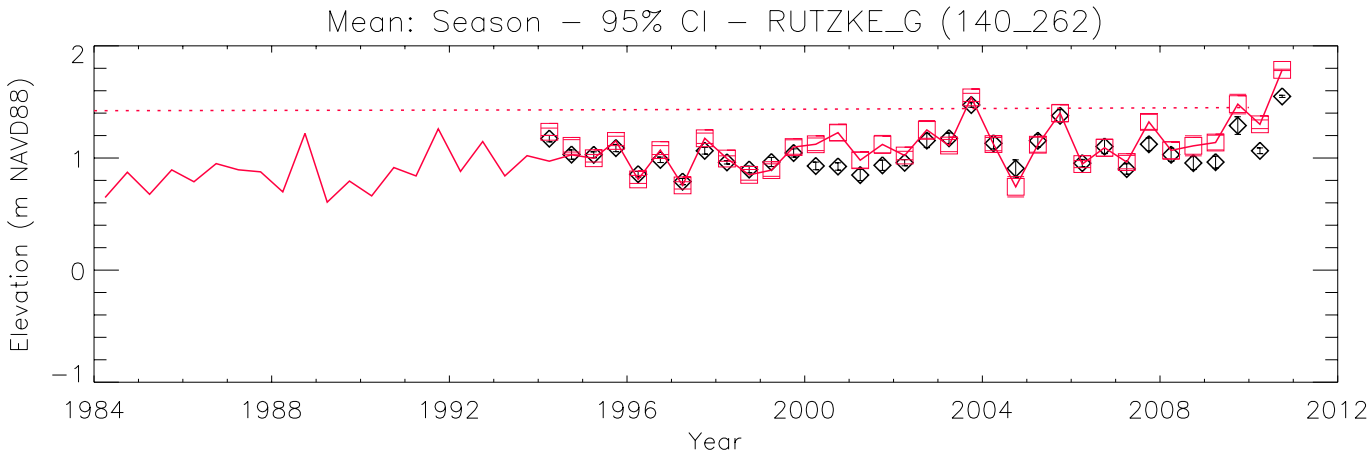

ELM3reg500 Raw Data (Obs. N = 9499) – NP–P36 (95_260)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

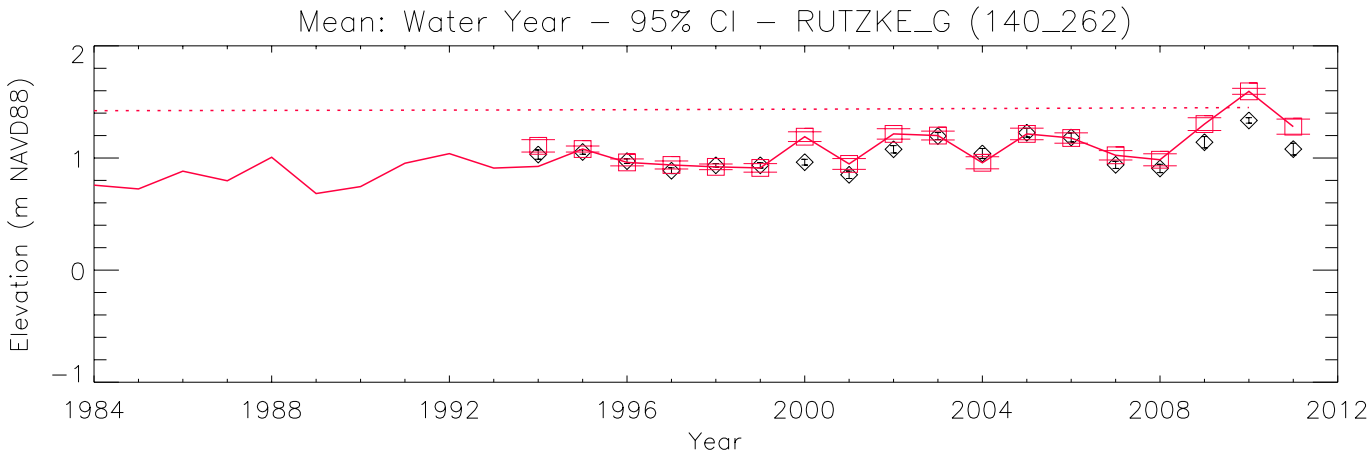

Mean: Season – 95% CI – NP–P36 (95_260)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

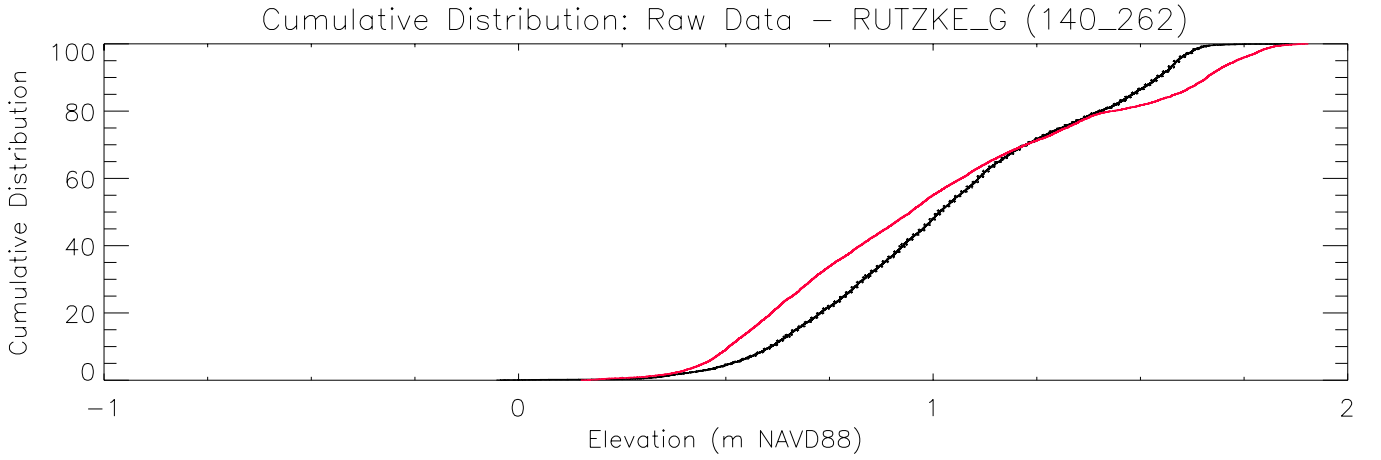

Mean: Water Year – 95% CI – NP–P36 (95_260)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

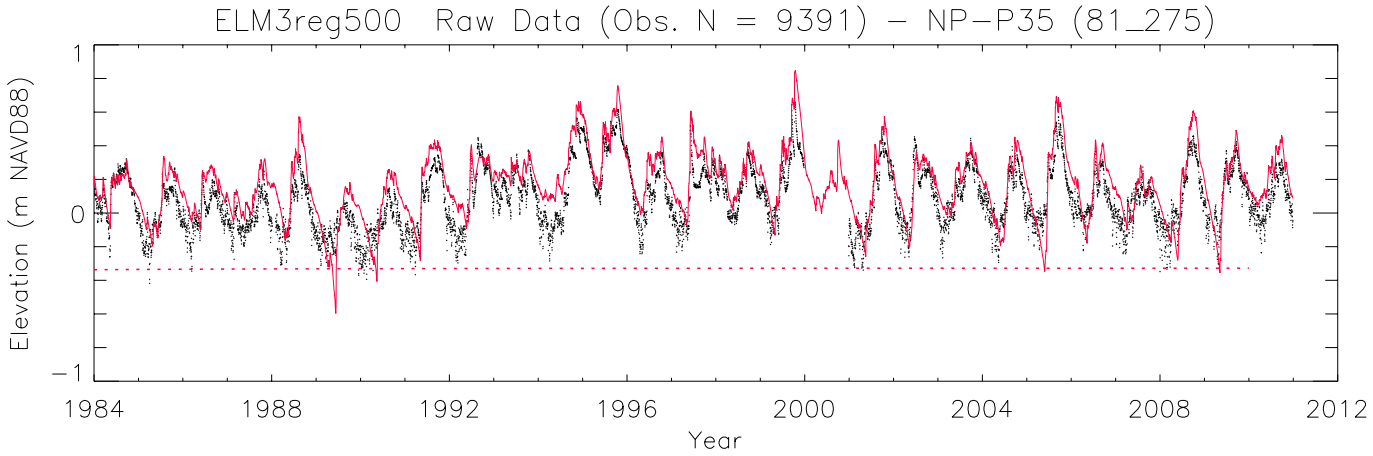

Cumulative Distribution: Raw Data – NP–P36 (95_260)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

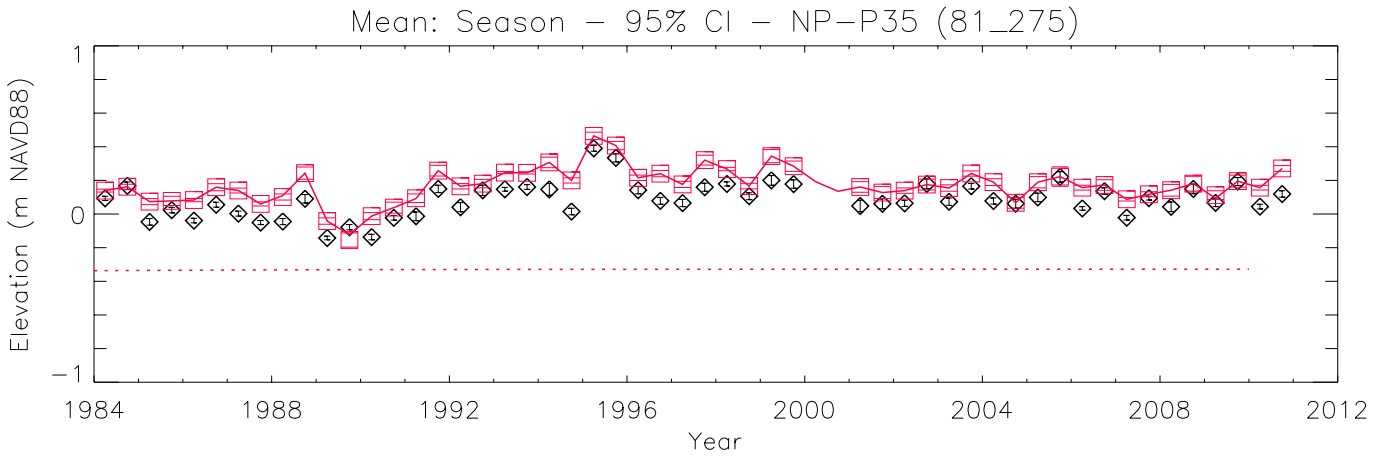

ELM3reg500 Raw Data (Obs. N = 6021) – RUTZKE_G (140_262)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

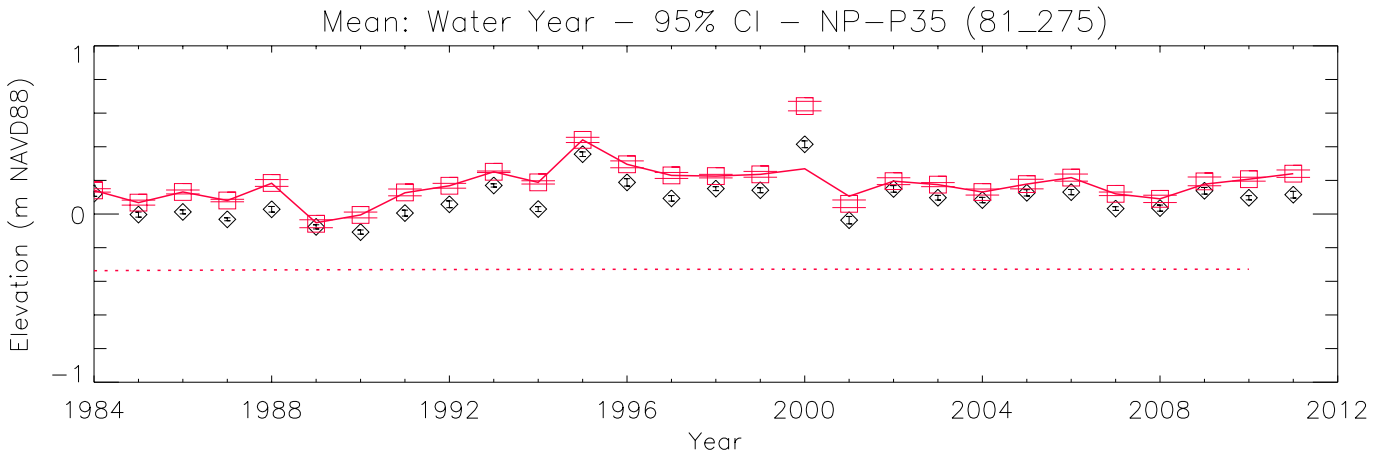

Mean: Season – 95% CI – RUTZKE_G (140_262)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

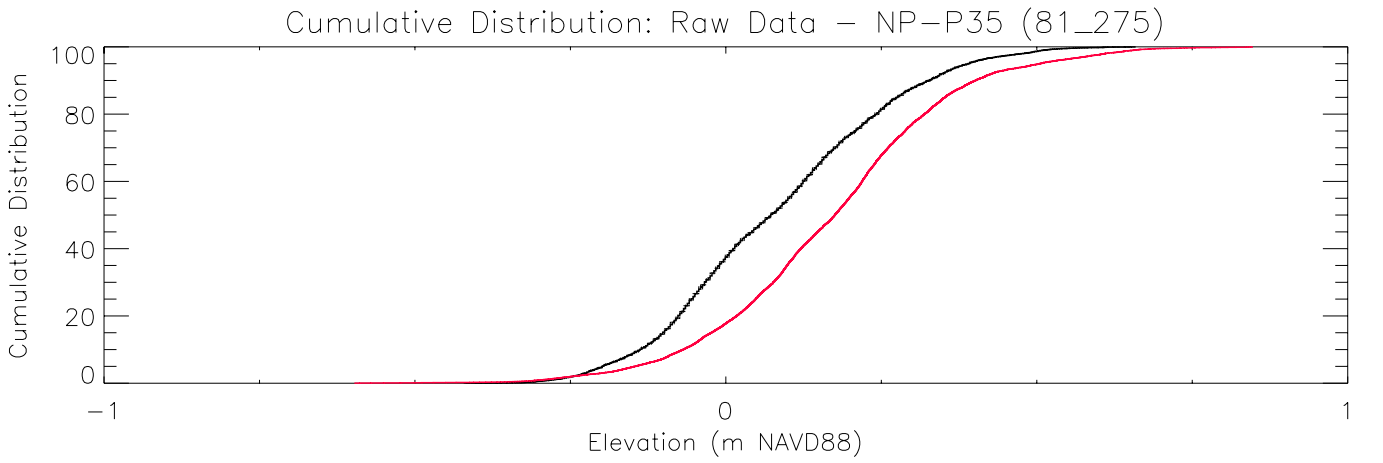

Mean: Water Year – 95% CI – RUTZKE_G (140_262)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

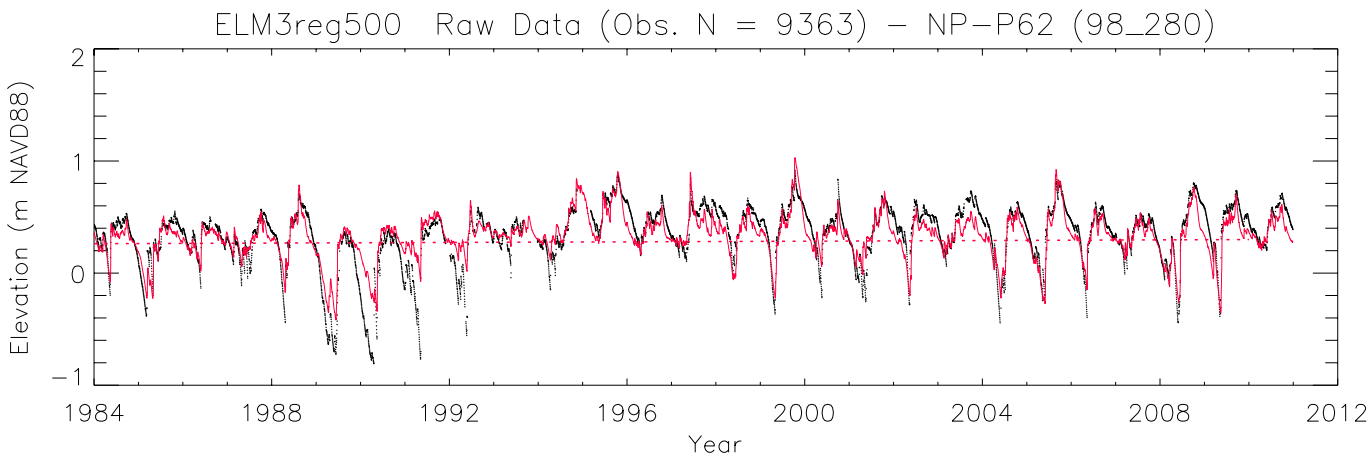

Cumulative Distribution: Raw Data – RUTZKE_G (140_262)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

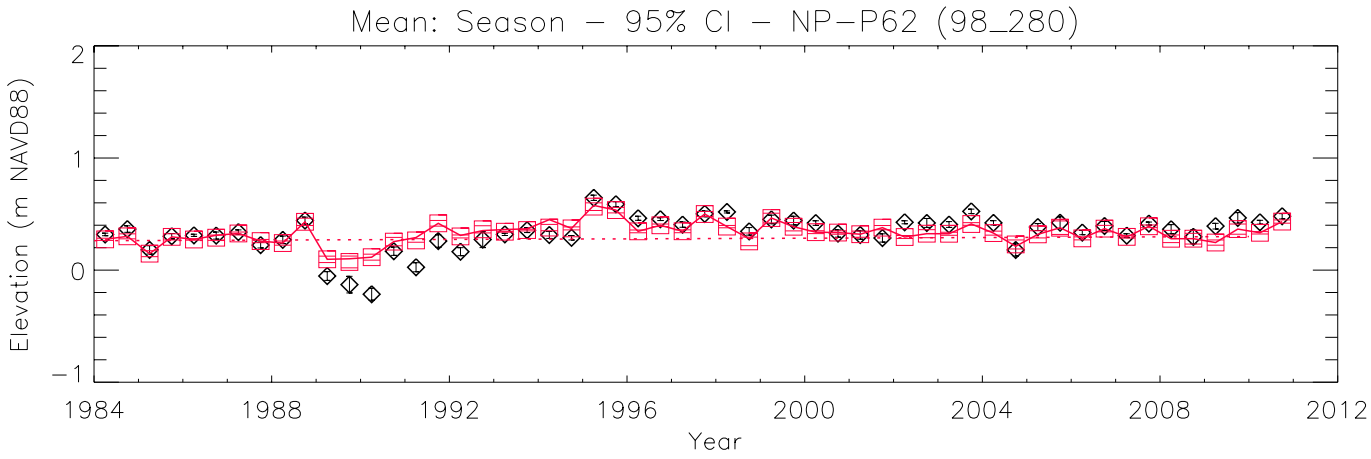

ELM3reg500 Raw Data (Obs. N = 9391) – NP–P35 (81_275)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

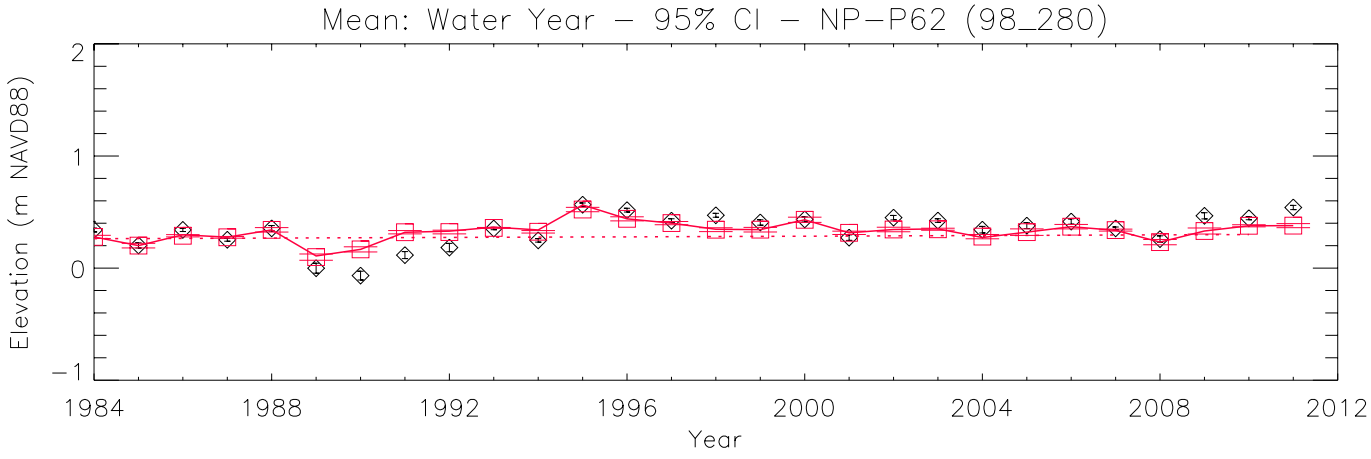

Mean: Season – 95% CI – NP–P35 (81_275)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – NP–P35 (81_275)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – NP–P35 (81_275)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9363) – NP–P62 (98_280)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – NP–P62 (98_280)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – NP–P62 (98_280)
Elevation (m NAVD88)
2
1
0
−1
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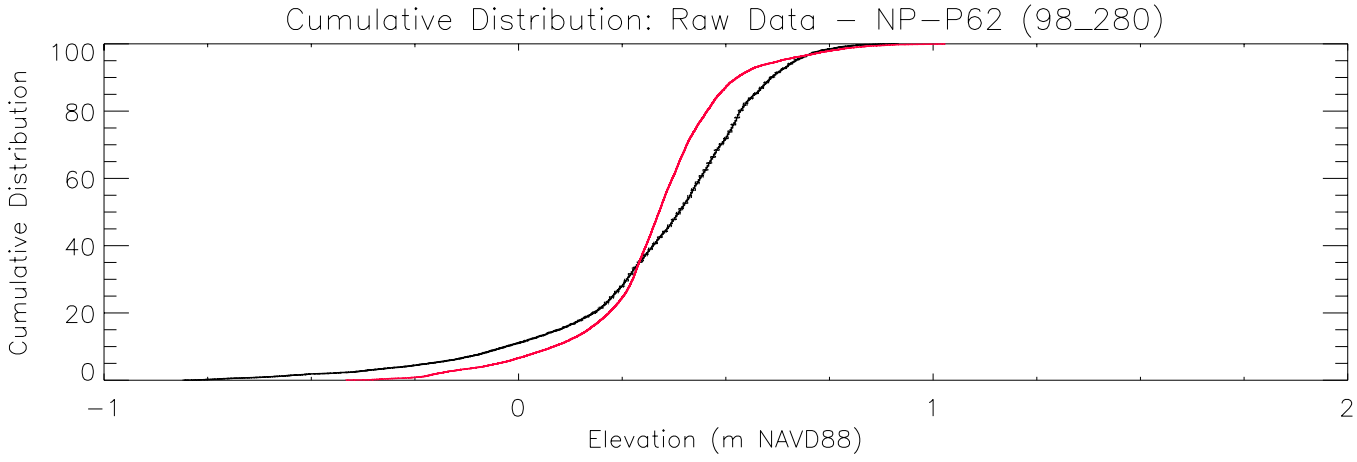
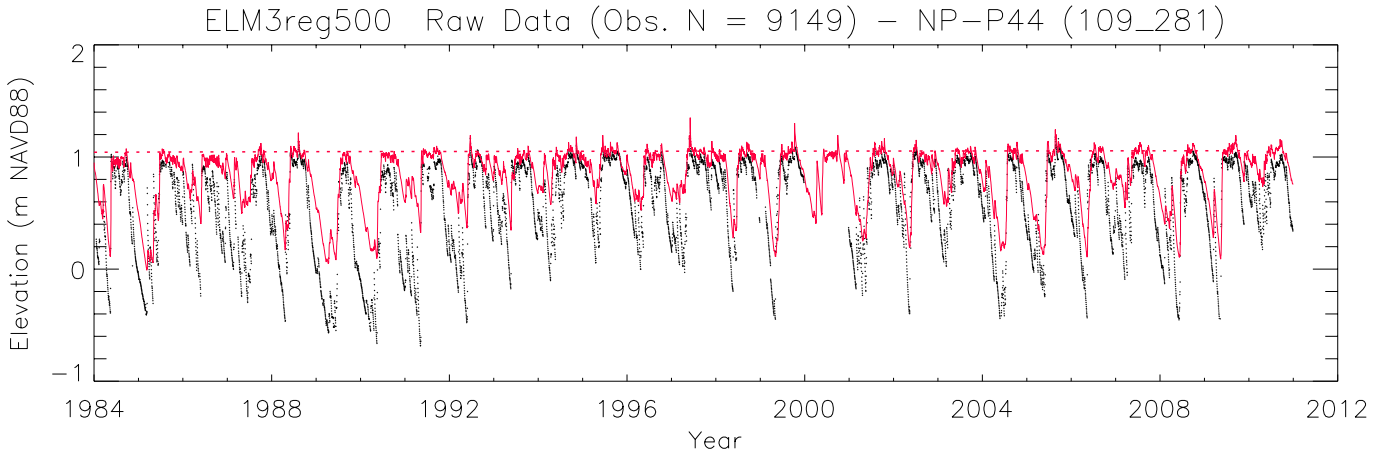
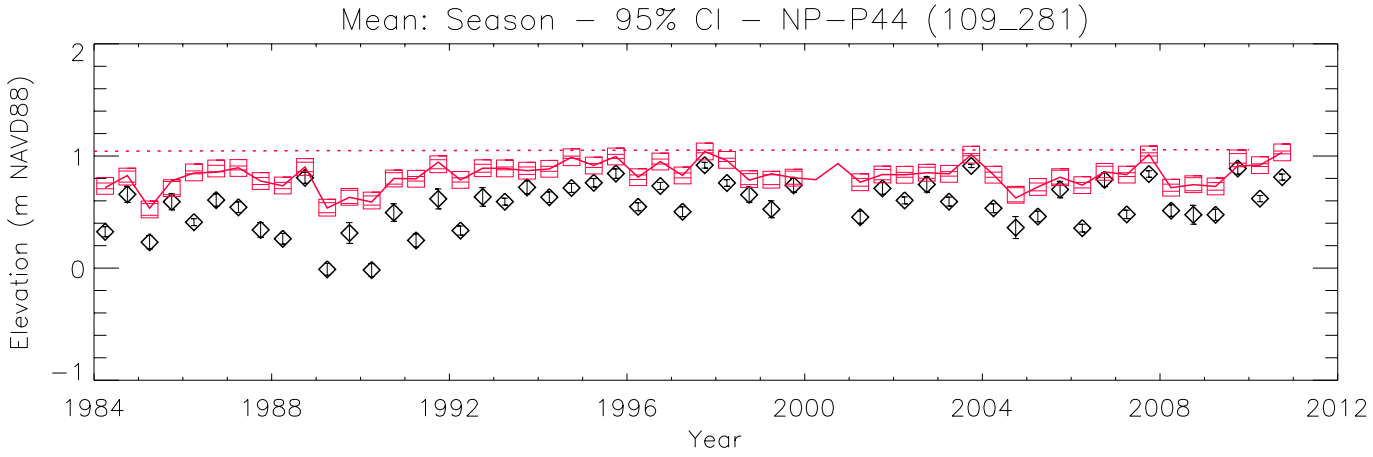
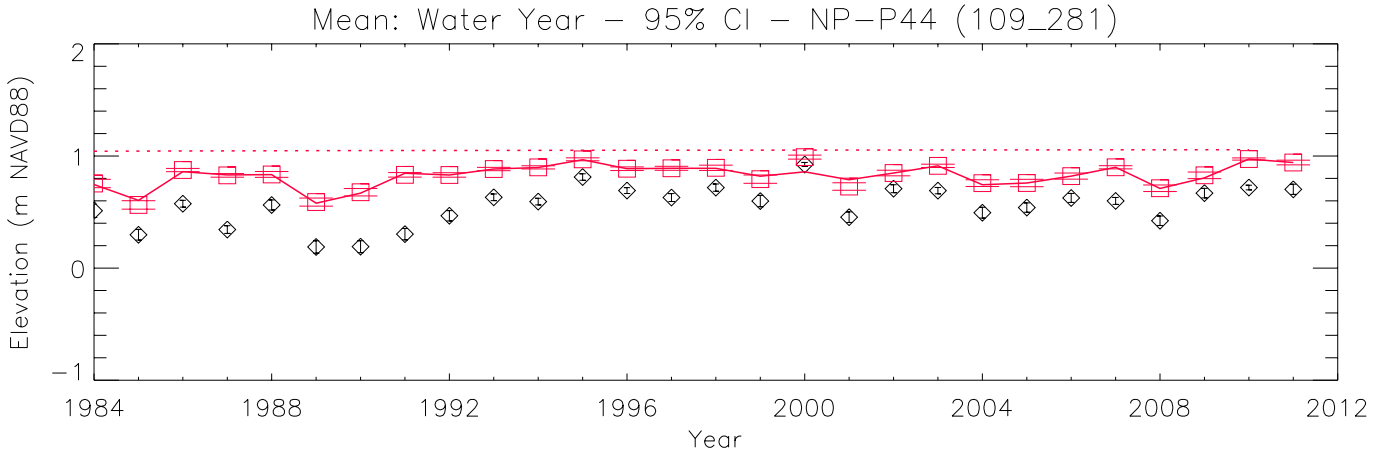
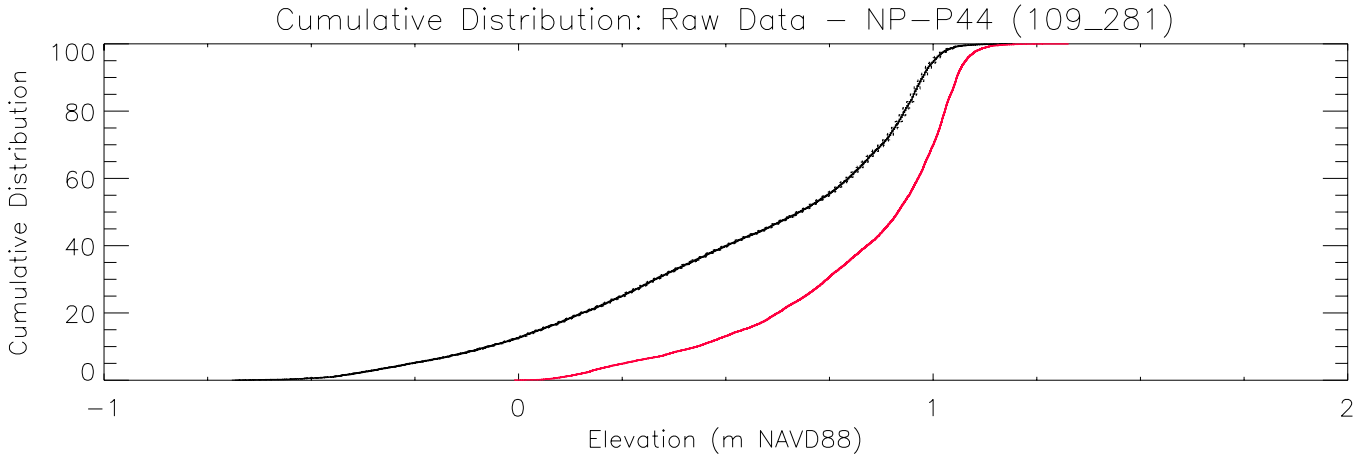
1988
1992
1996
2000
2004
2008
2012
Year

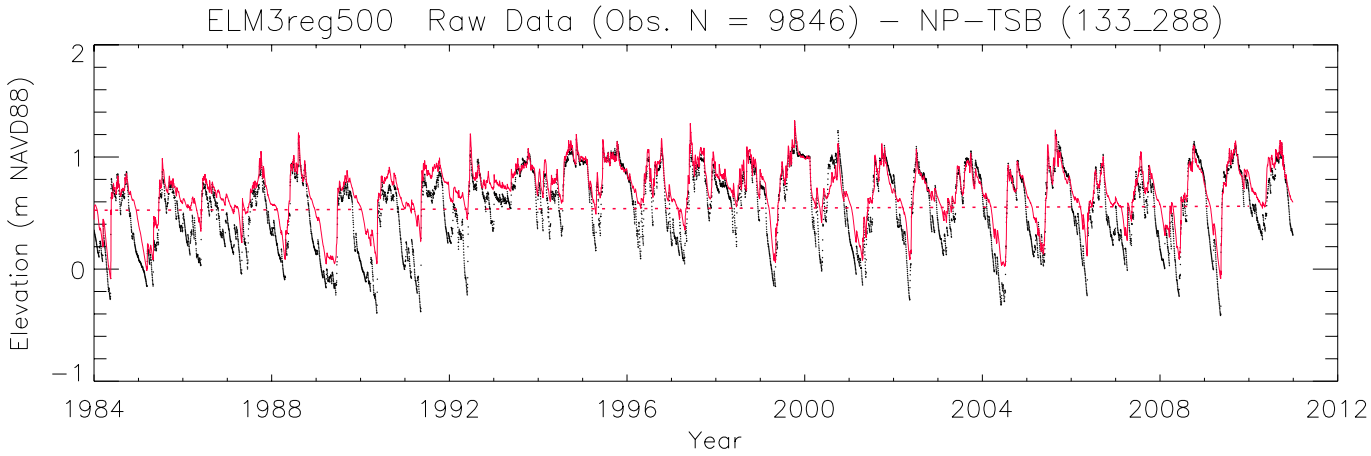

Cumulative Distribution: Raw Data – NP–P62 (98_280)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

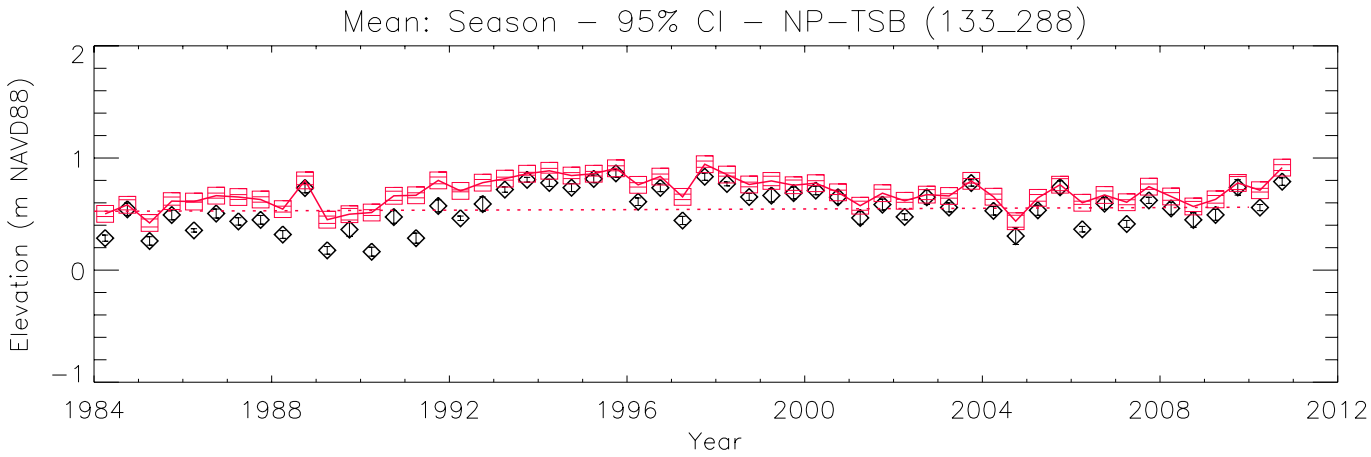

ELM3reg500 Raw Data (Obs. N = 9149) – NP–P44 (109_281)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

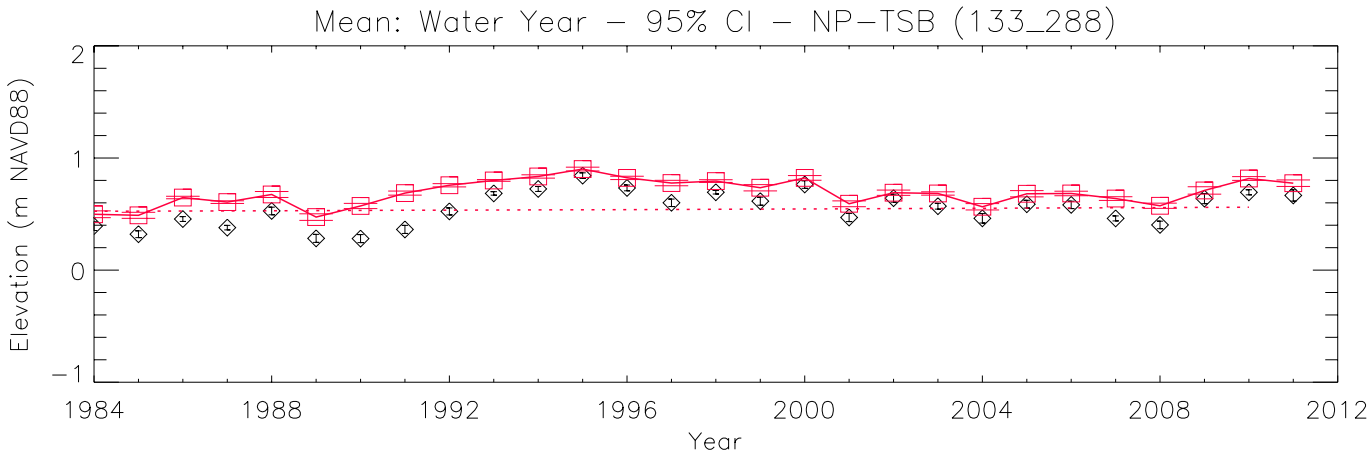

Mean: Season – 95% CI – NP–P44 (109_281)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

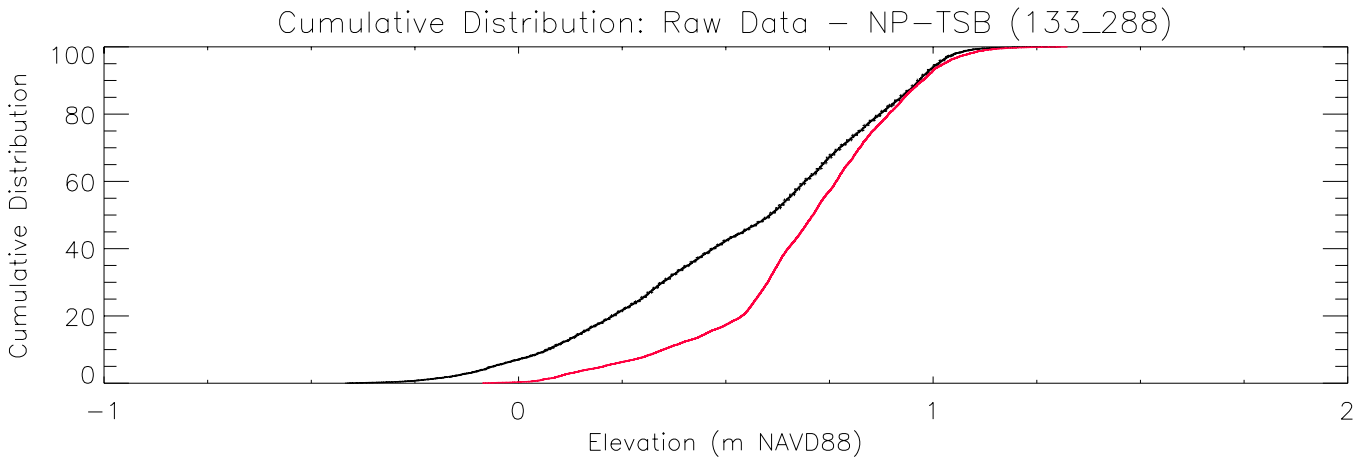

Mean: Water Year – 95% CI – NP–P44 (109_281)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

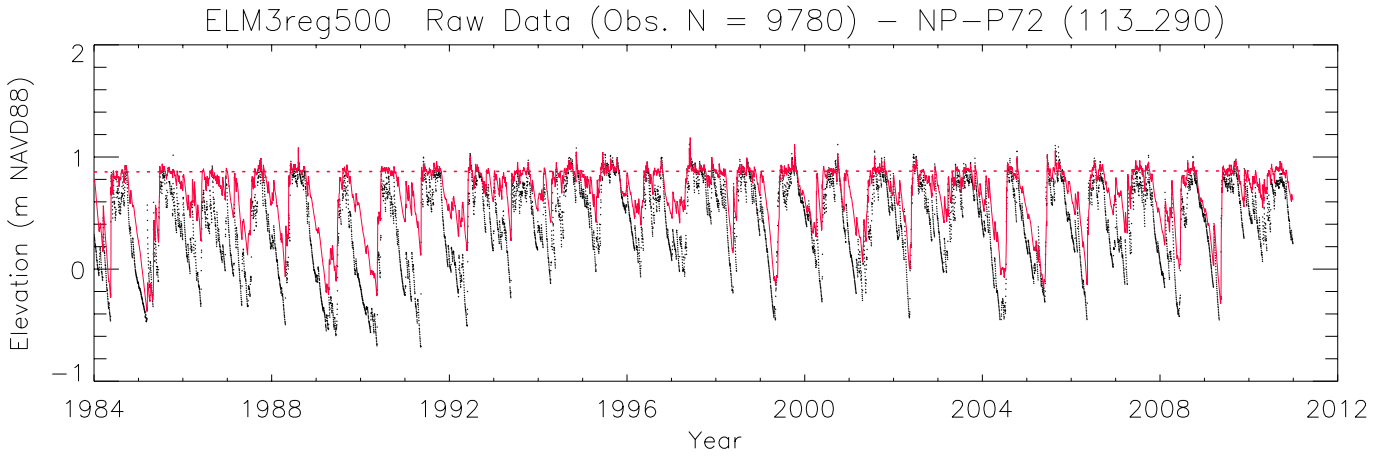

Cumulative Distribution: Raw Data – NP–P44 (109_281)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

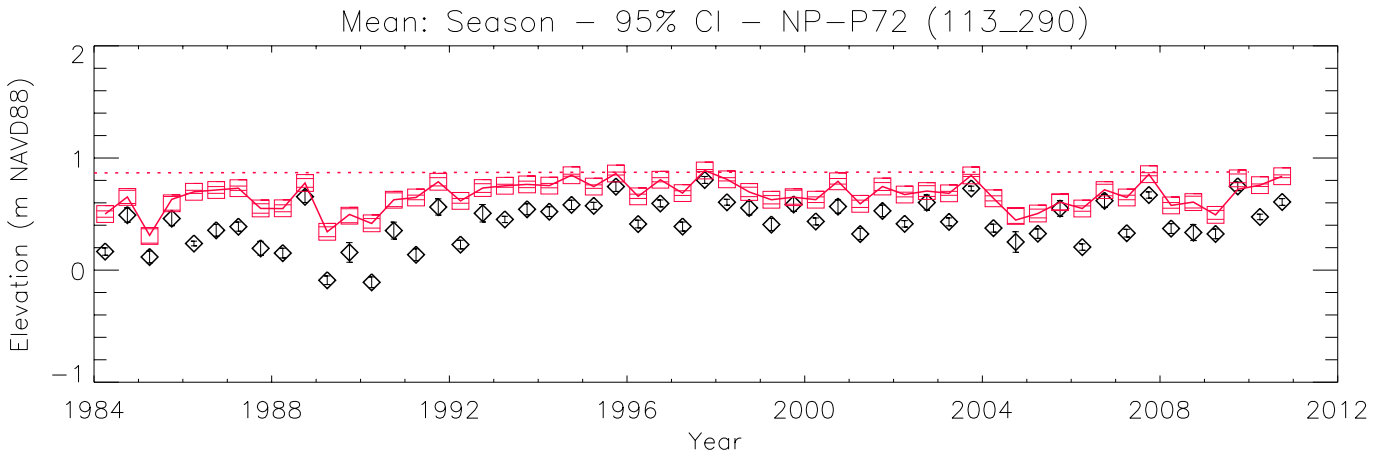

ELM3reg500 Raw Data (Obs. N = 9846) – NP–TSB (133_288)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

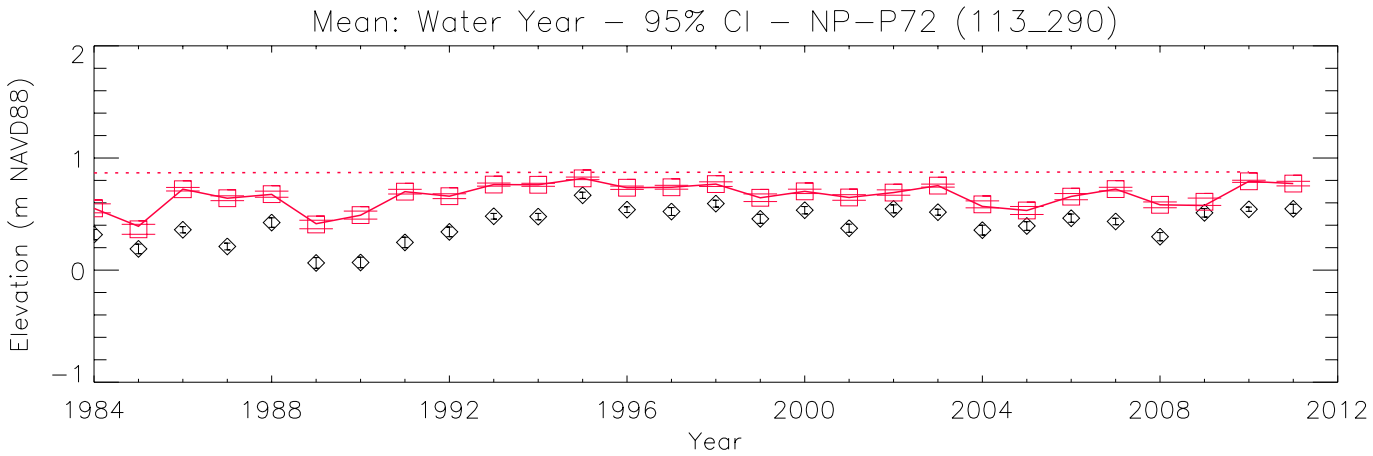

Mean: Season – 95% CI – NP–TSB (133_288)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

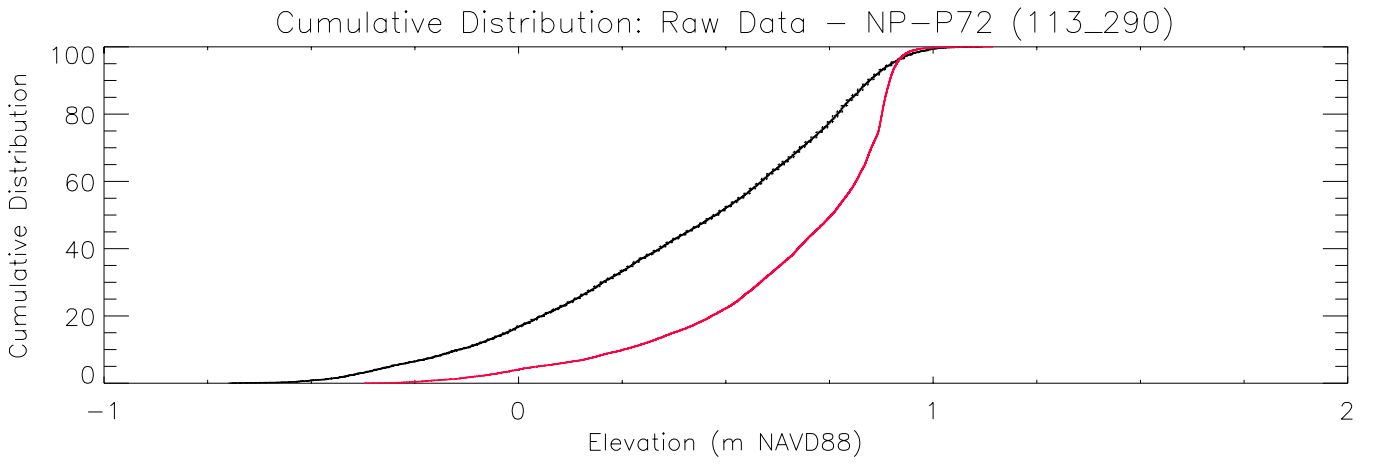

Mean: Water Year – 95% CI – NP–TSB (133_288)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

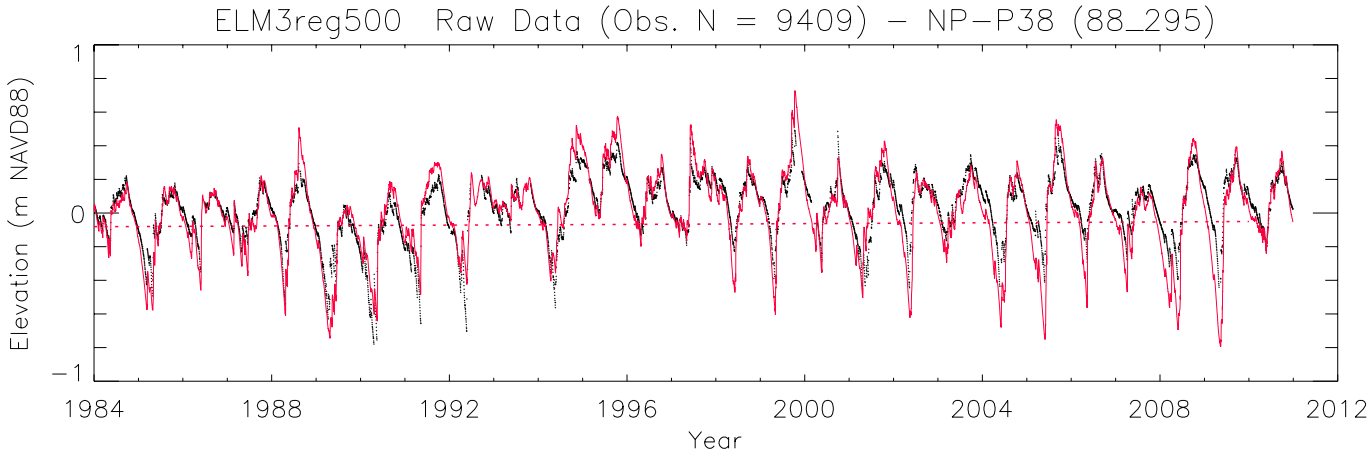

Cumulative Distribution: Raw Data – NP–TSB (133_288)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

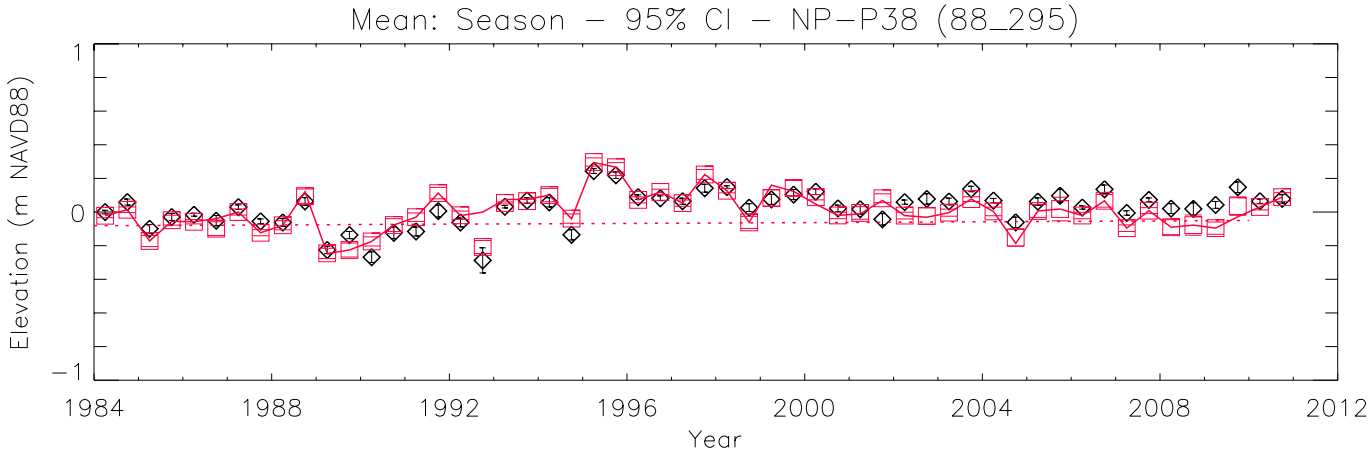

ELM3reg500 Raw Data (Obs. N = 9780) – NP–P72 (113_290)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

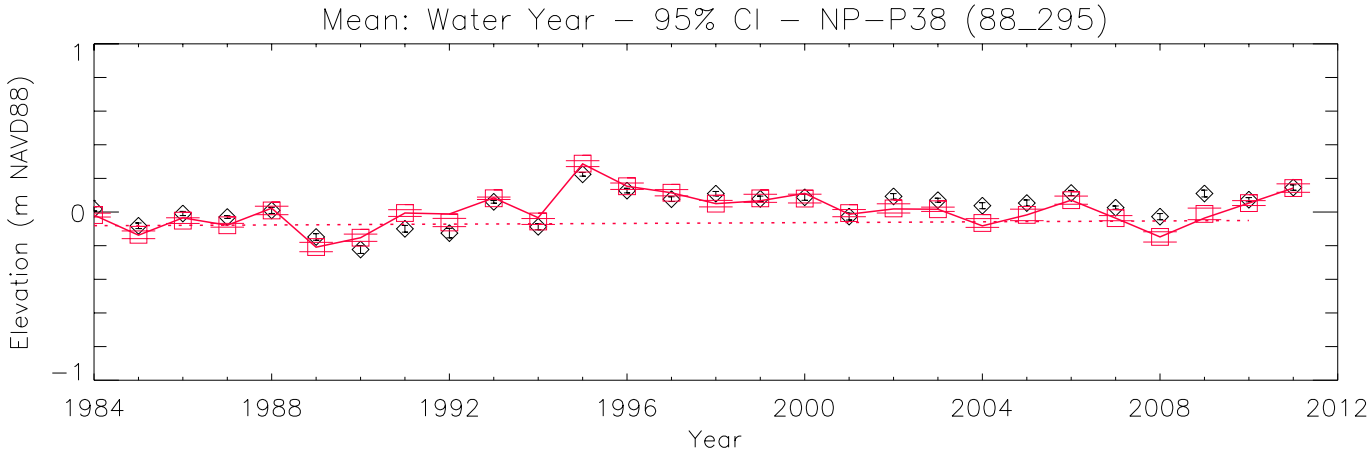

Mean: Season – 95% CI – NP–P72 (113_290)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

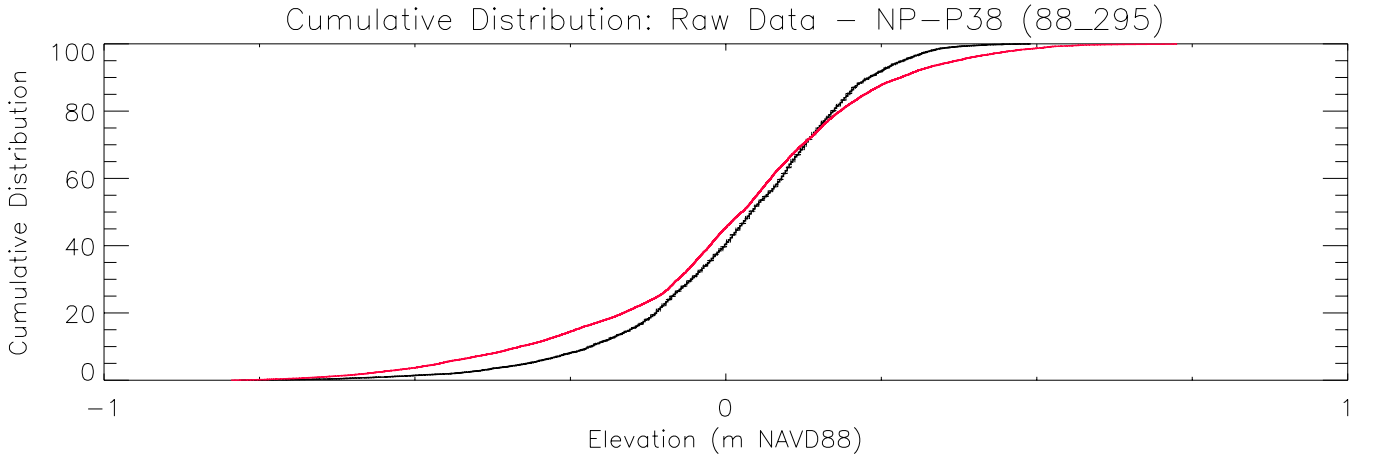

Mean: Water Year – 95% CI – NP–P72 (113_290)
Elevation (m NAVD88)
2
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

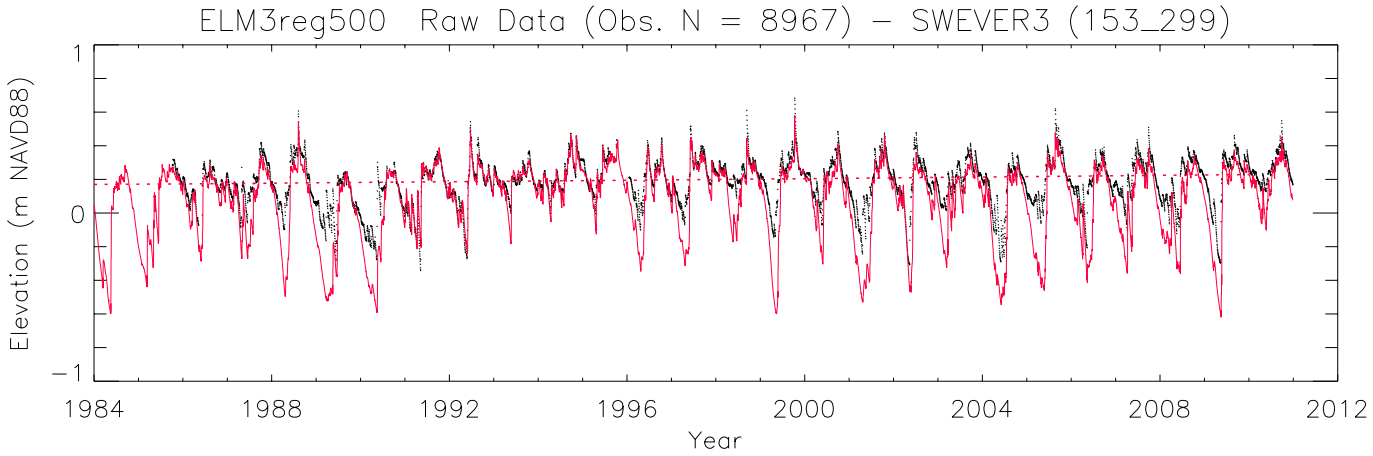

Cumulative Distribution: Raw Data – NP–P72 (113_290)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
2
Elevation (m NAVD88)

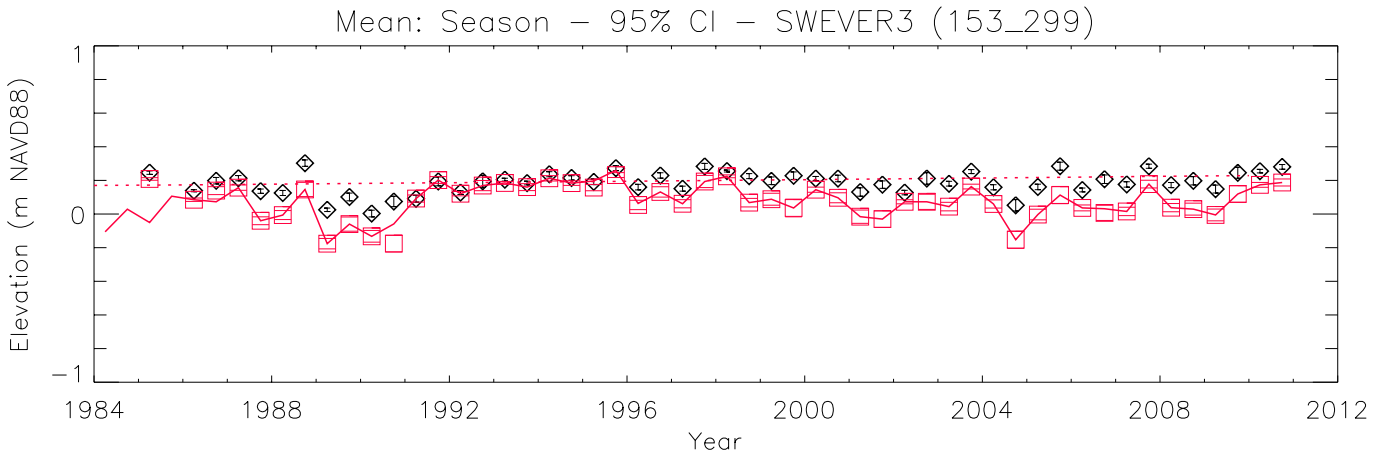

ELM3reg500 Raw Data (Obs. N = 9409) – NP–P38 (88_295)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

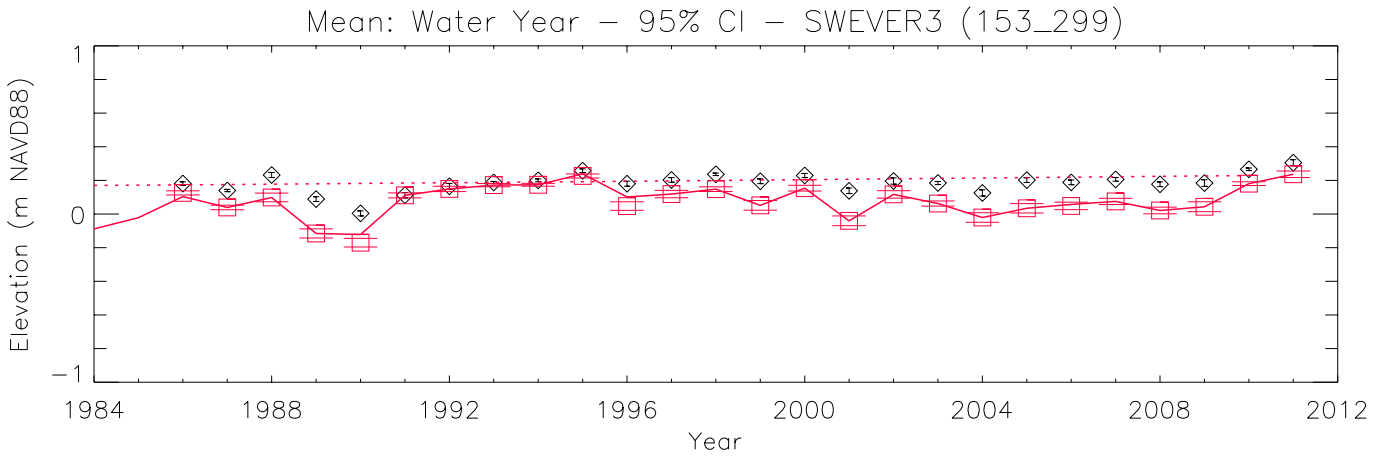

Mean: Season – 95% CI – NP–P38 (88_295)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

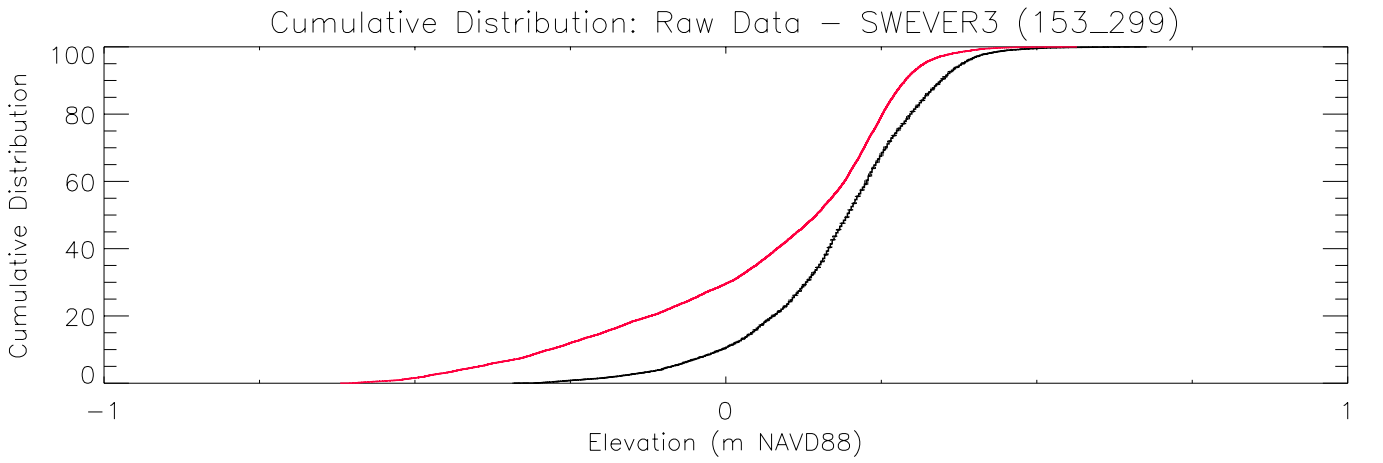

Mean: Water Year – 95% CI – NP–P38 (88_295)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

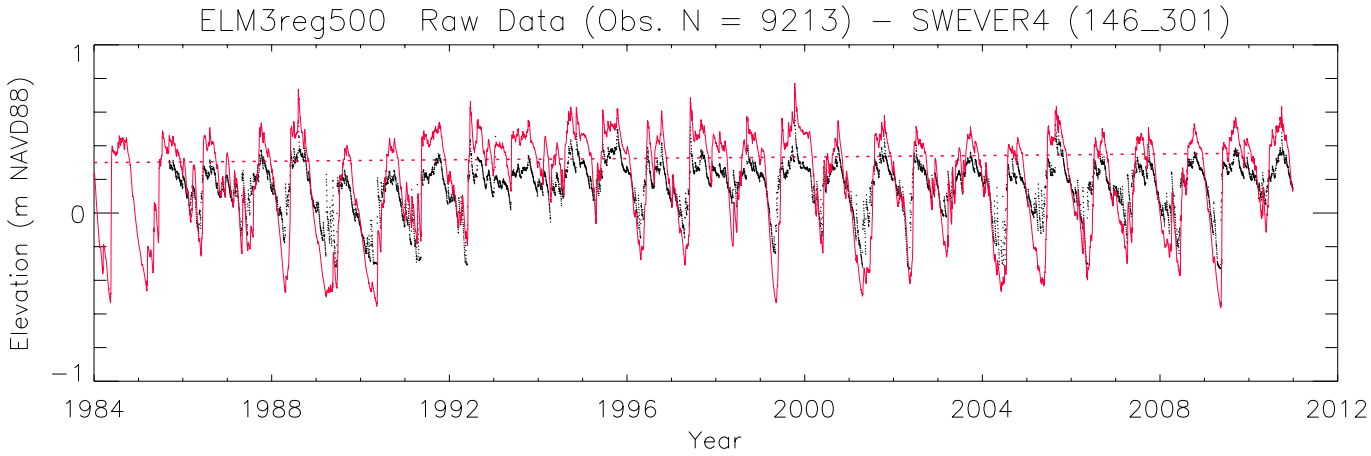

Cumulative Distribution: Raw Data – NP–P38 (88_295)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)

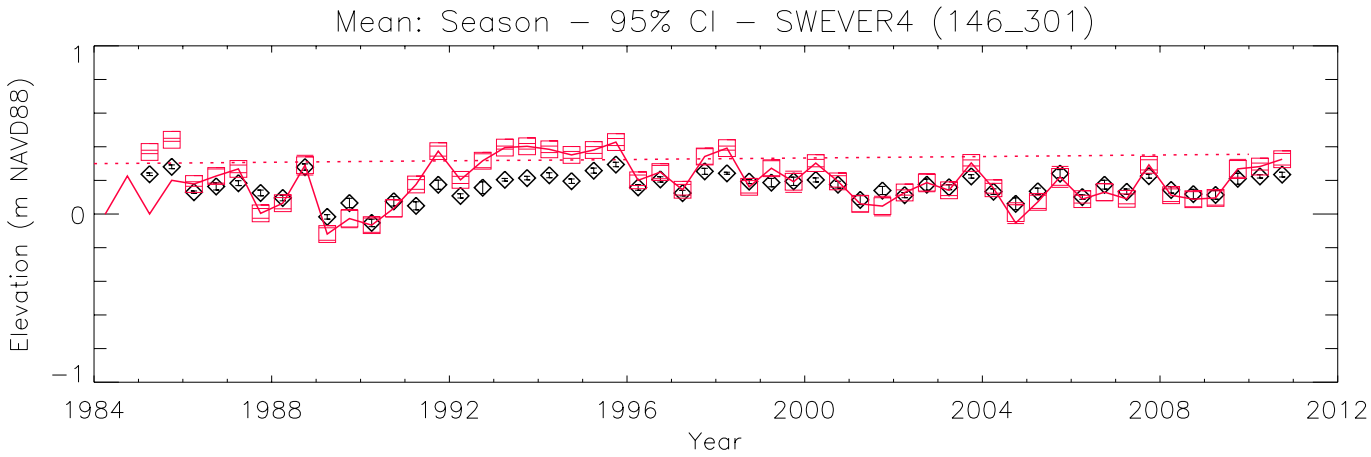

ELM3reg500 Raw Data (Obs. N = 8967) – SWEVER3 (153_299)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

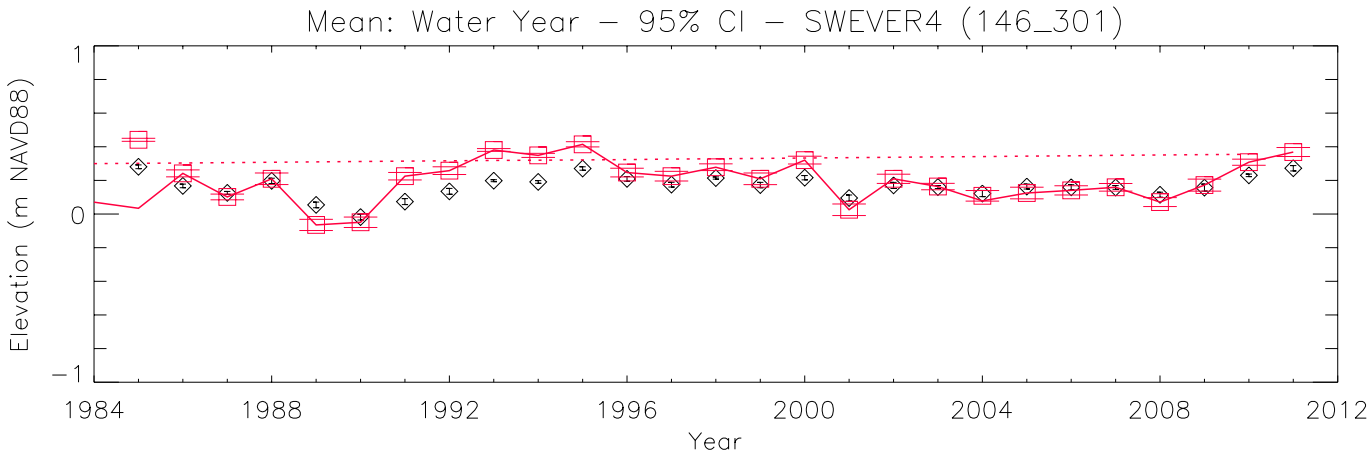

Mean: Season – 95% CI – SWEVER3 (153_299)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

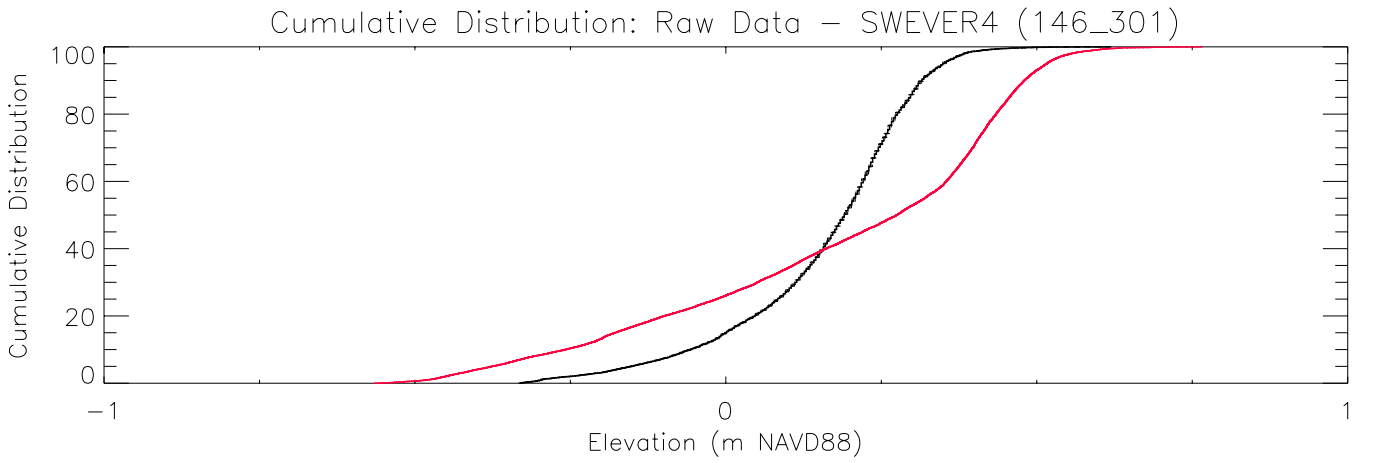

Mean: Water Year – 95% CI – SWEVER3 (153_299)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

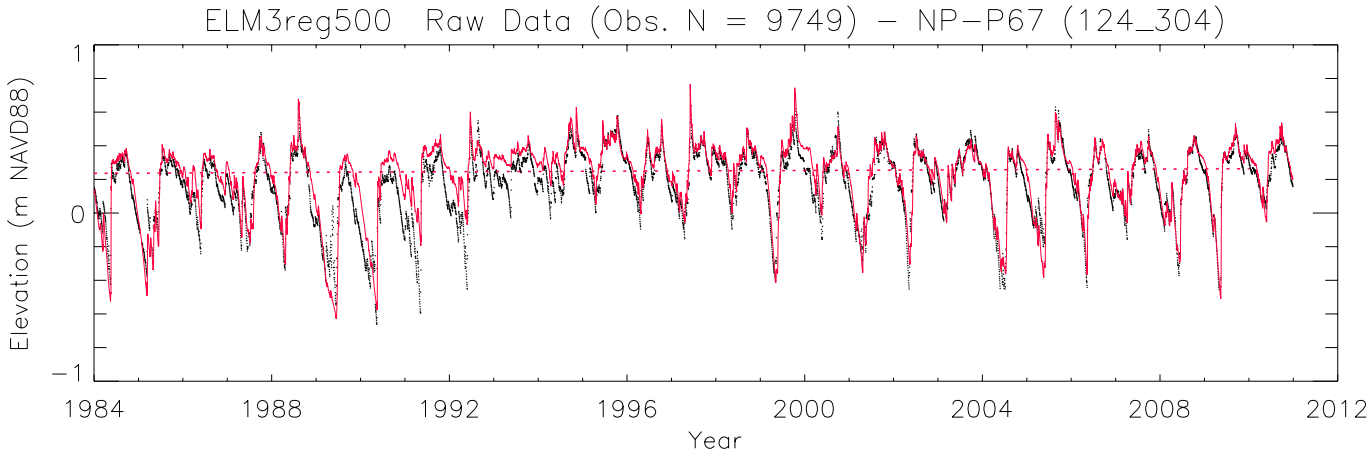

Cumulative Distribution: Raw Data – SWEVER3 (153_299)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)

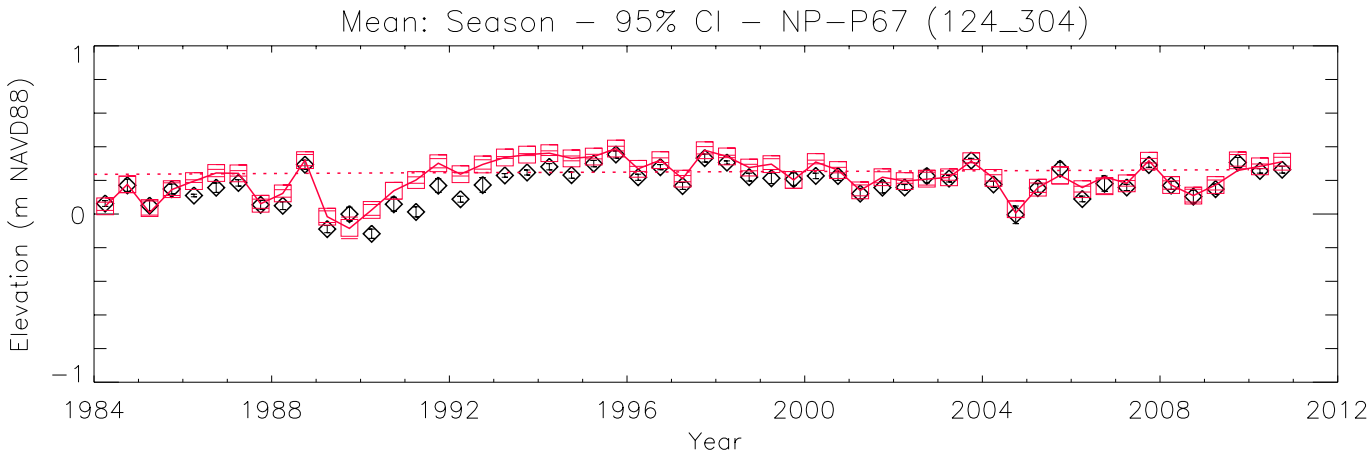

ELM3reg500 Raw Data (Obs. N = 9213) – SWEVER4 (146_301)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

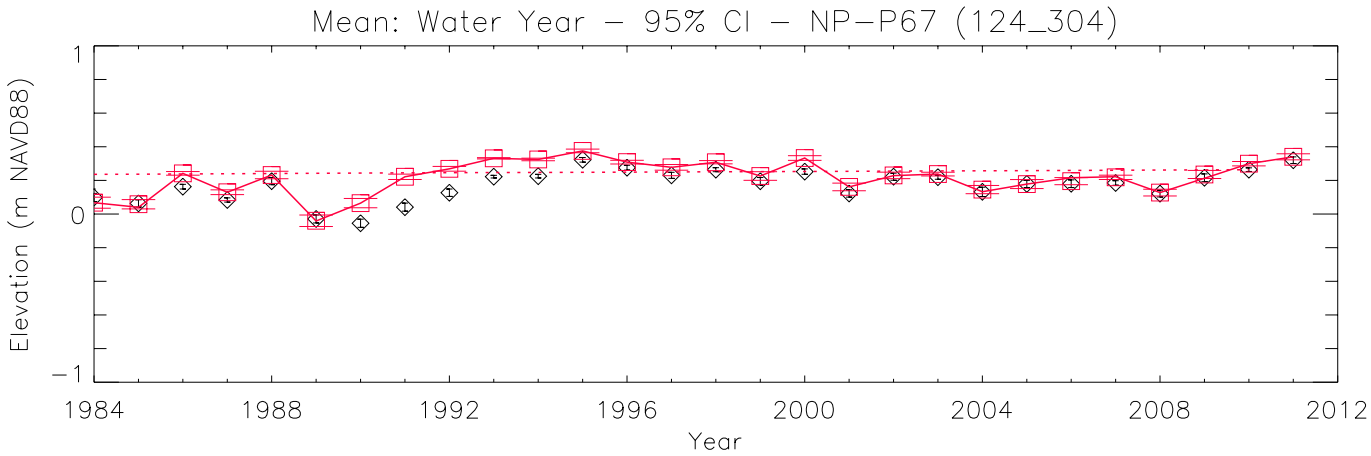

Mean: Season – 95% CI – SWEVER4 (146_301)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

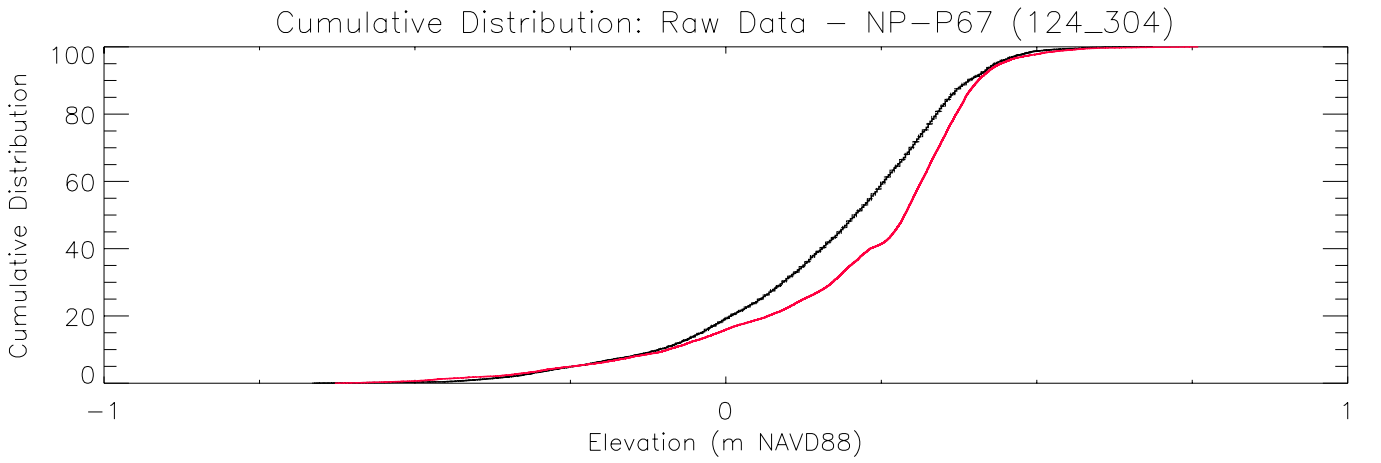

Mean: Water Year – 95% CI – SWEVER4 (146_301)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

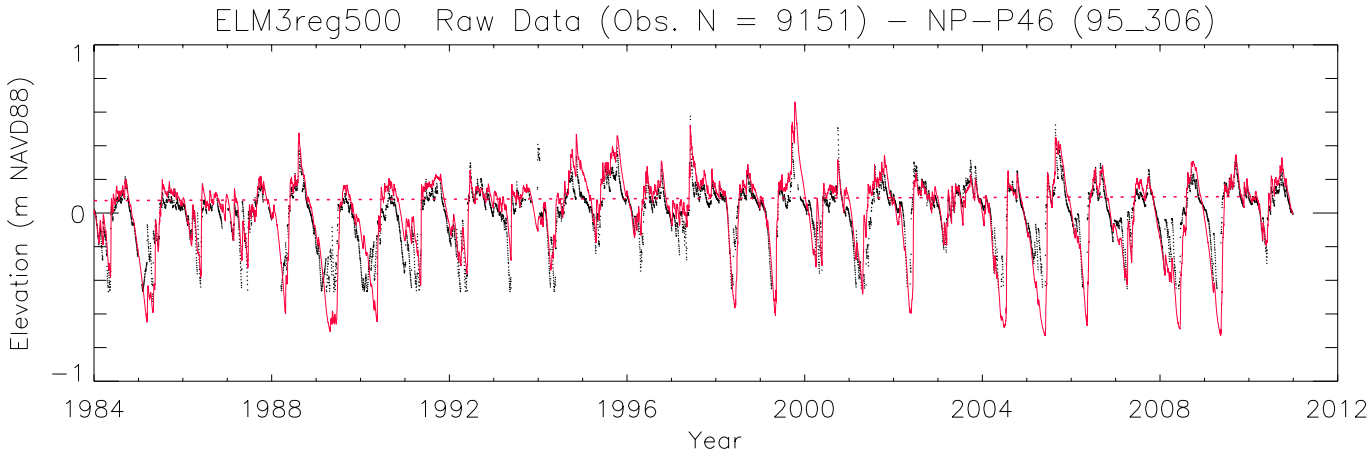

Cumulative Distribution: Raw Data – SWEVER4 (146_301)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)

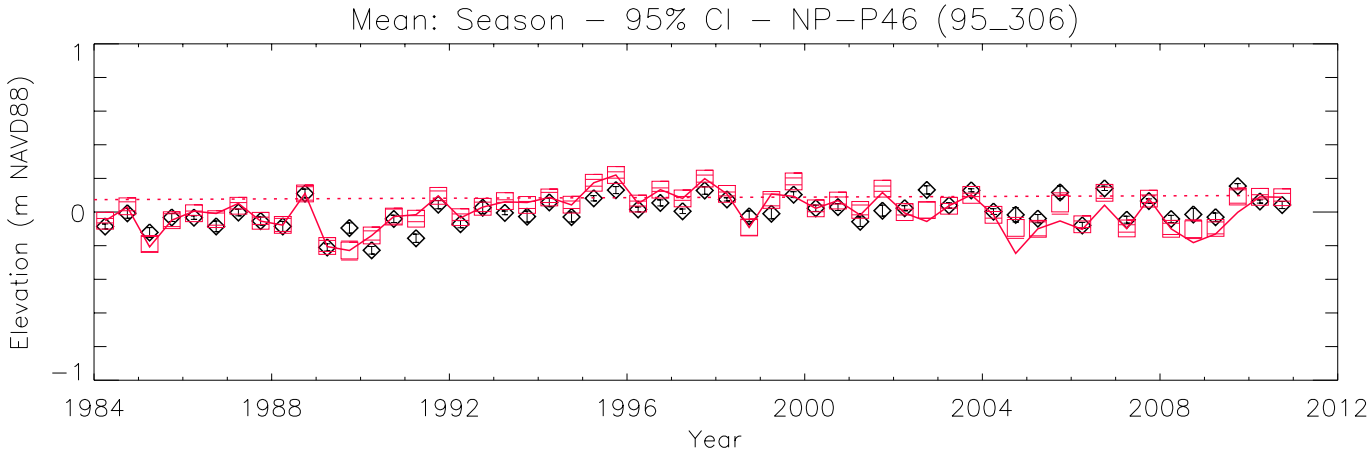

ELM3reg500 Raw Data (Obs. N = 9749) – NP–P67 (124_304)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

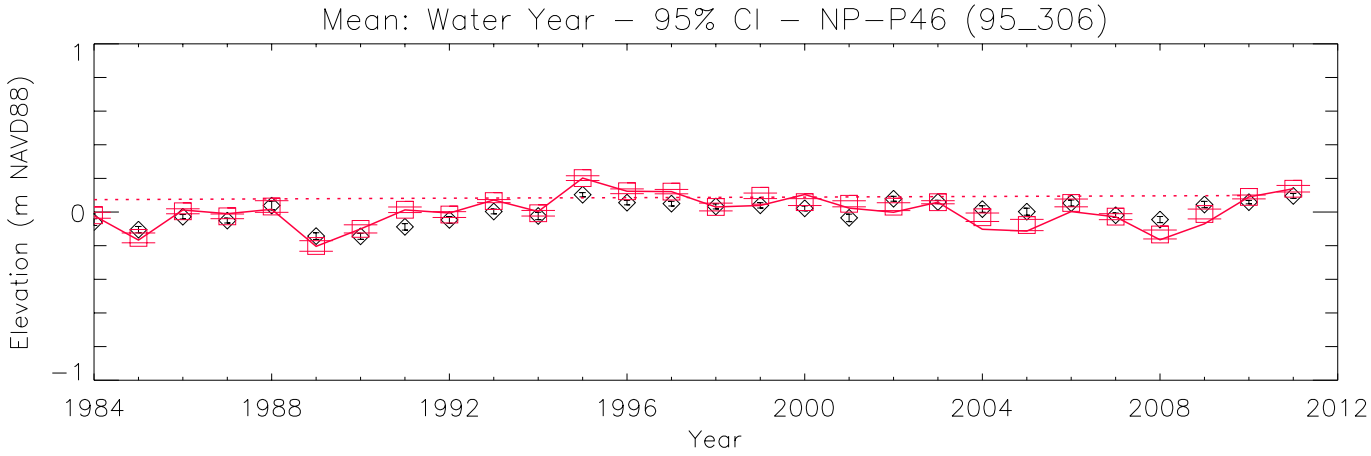

Mean: Season – 95% CI – NP–P67 (124_304)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

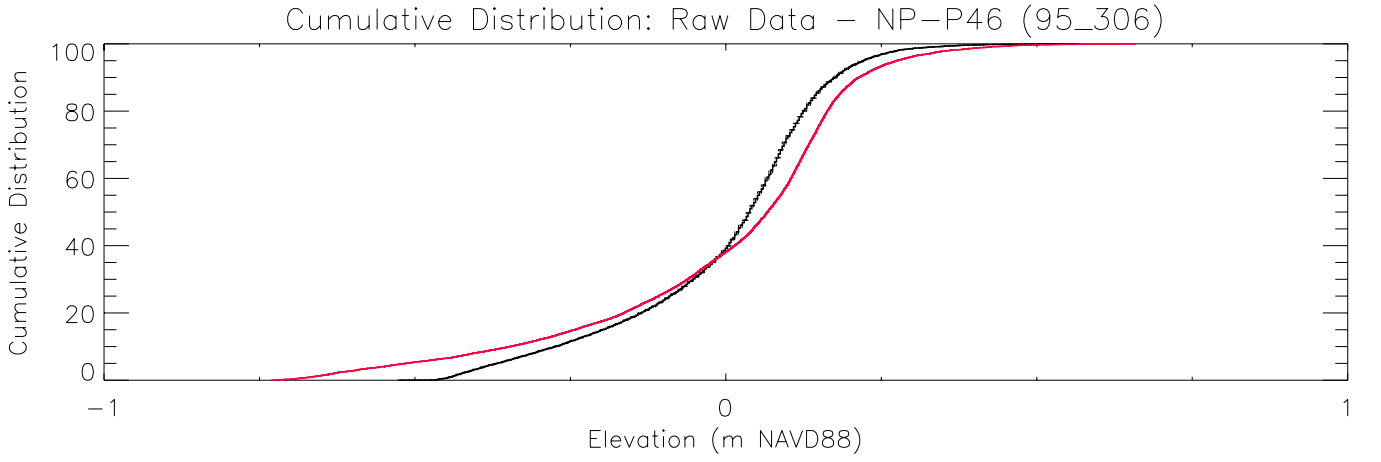

Mean: Water Year – 95% CI – NP–P67 (124_304)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

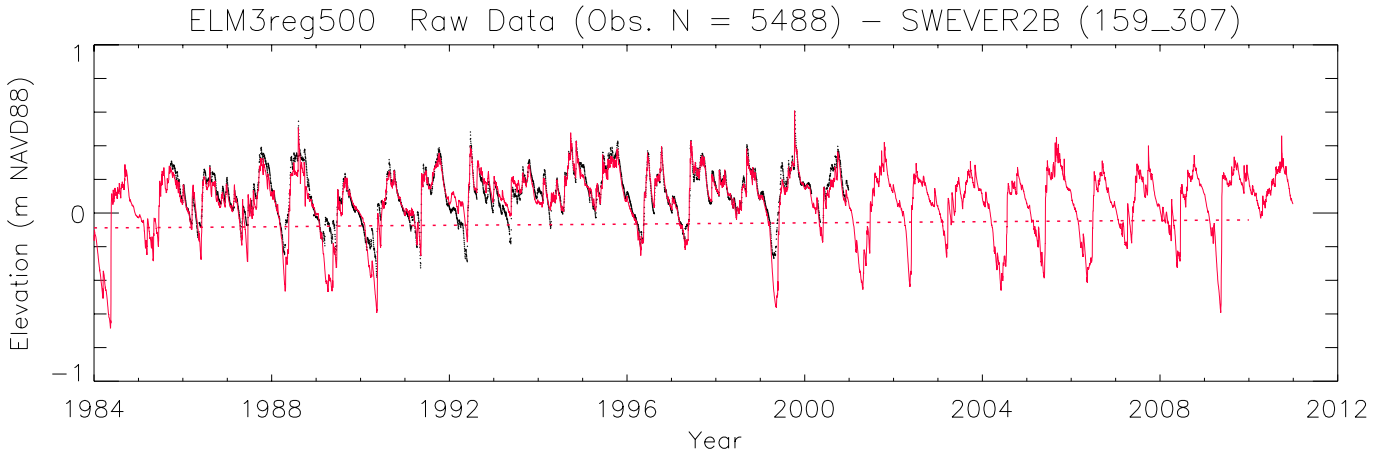

Cumulative Distribution: Raw Data – NP–P67 (124_304)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)

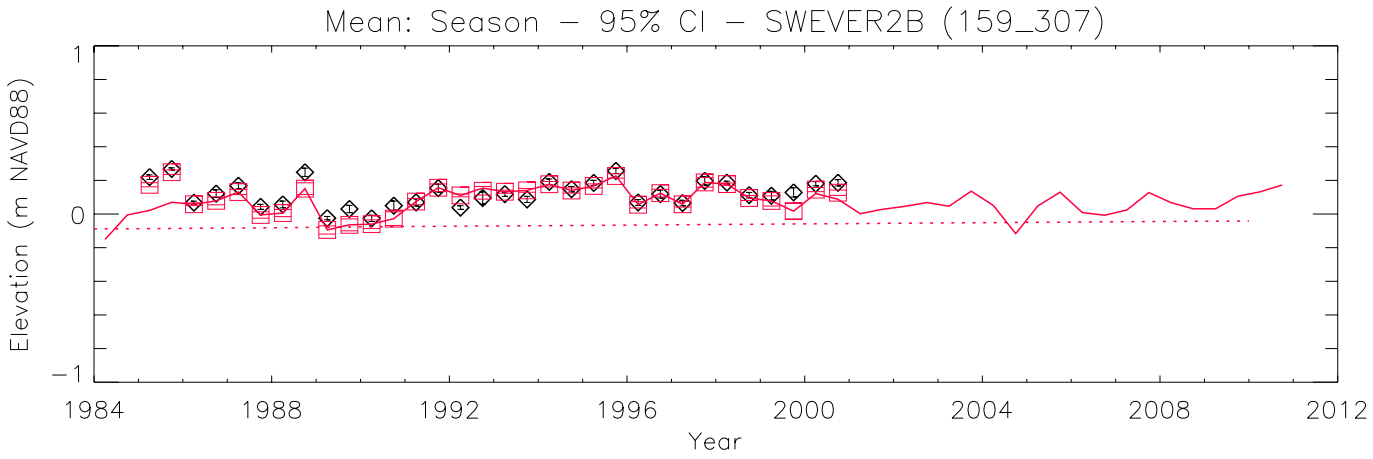

ELM3reg500 Raw Data (Obs. N = 9151) – NP–P46 (95_306)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

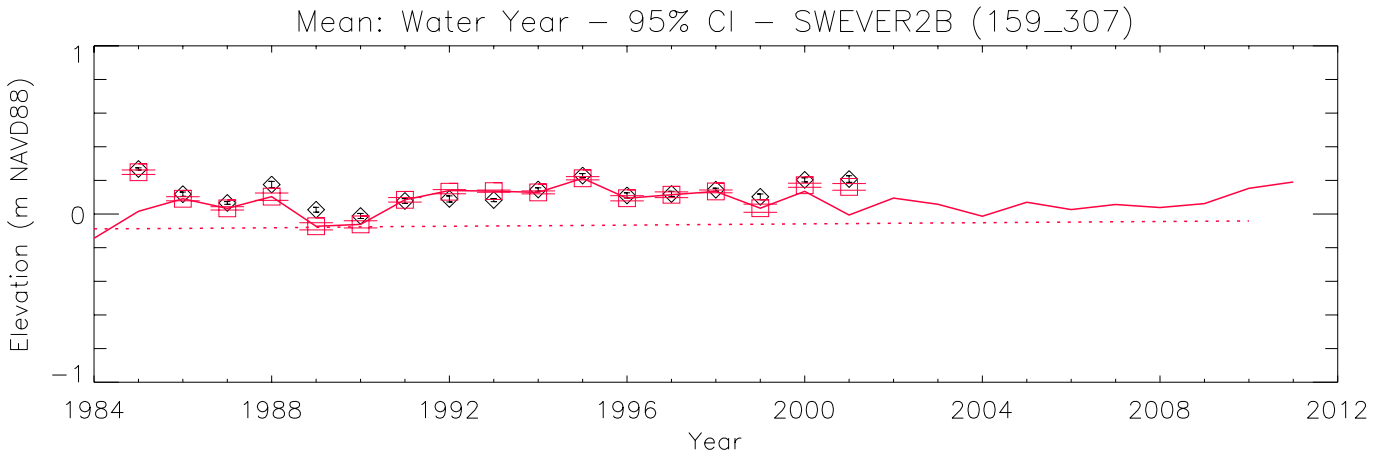

Mean: Season – 95% CI – NP–P46 (95_306)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

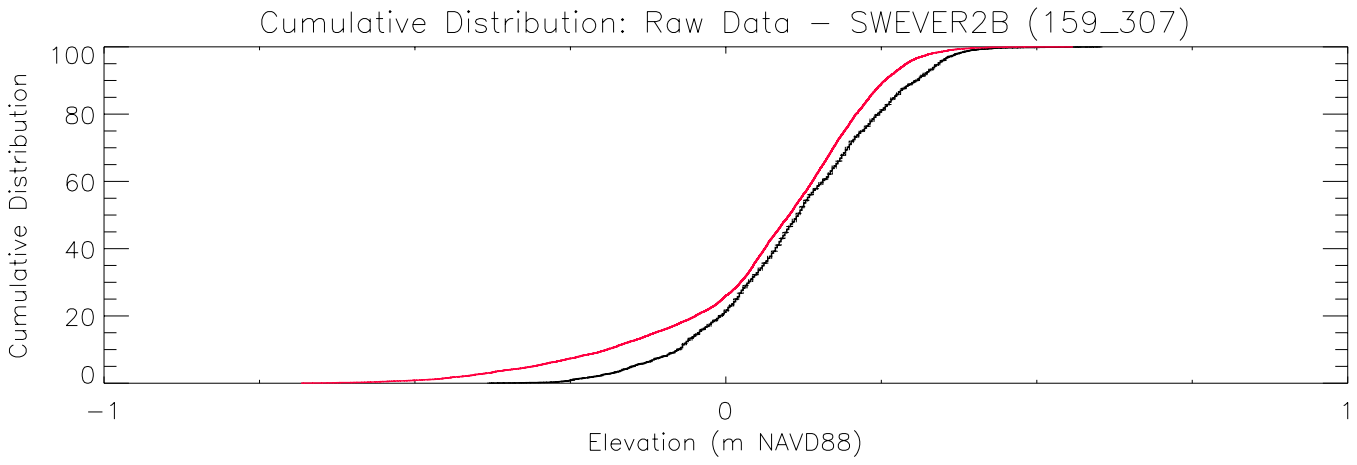

Mean: Water Year – 95% CI – NP–P46 (95_306)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

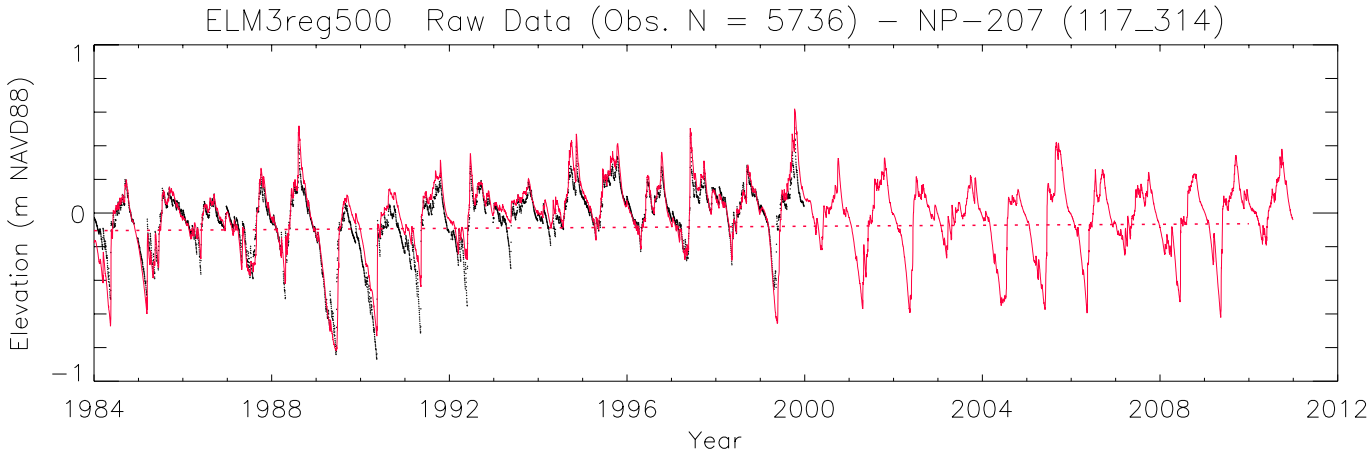

Cumulative Distribution: Raw Data – NP–P46 (95_306)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)

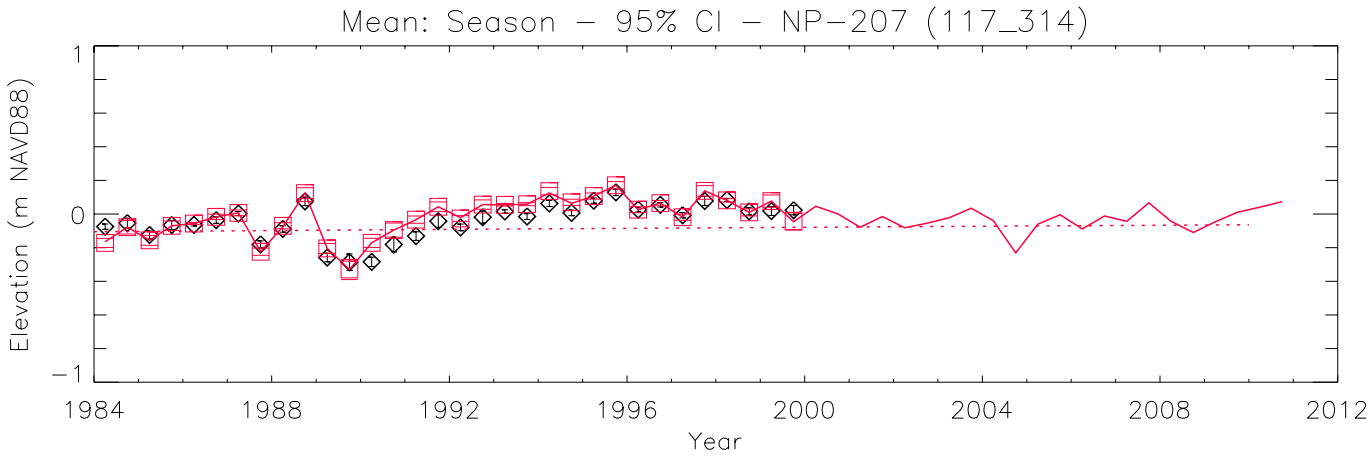

ELM3reg500 Raw Data (Obs. N = 5488) – SWEVER2B (159_307)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

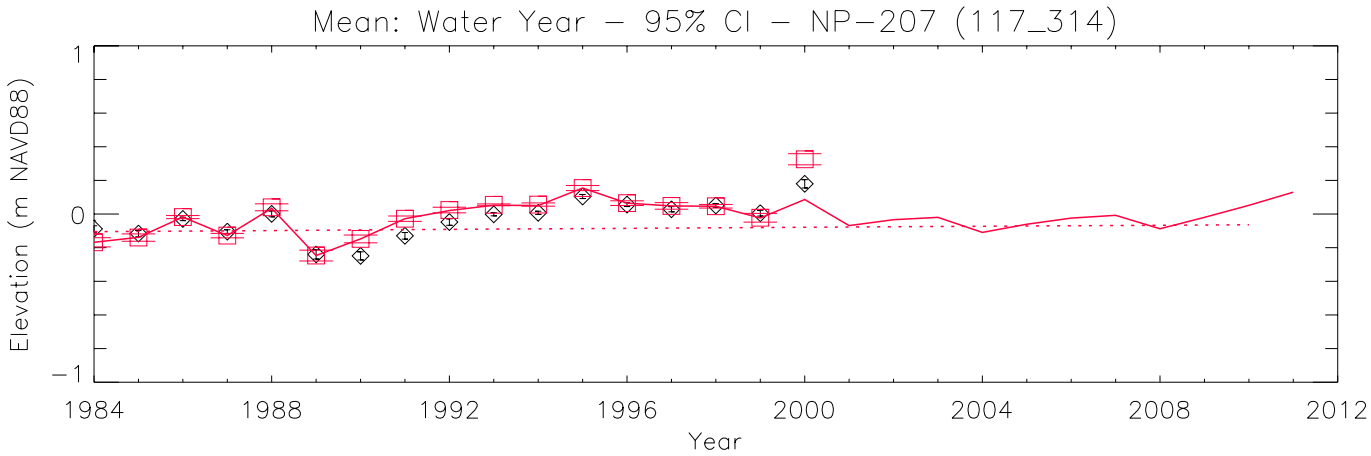

Mean: Season – 95% CI – SWEVER2B (159_307)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

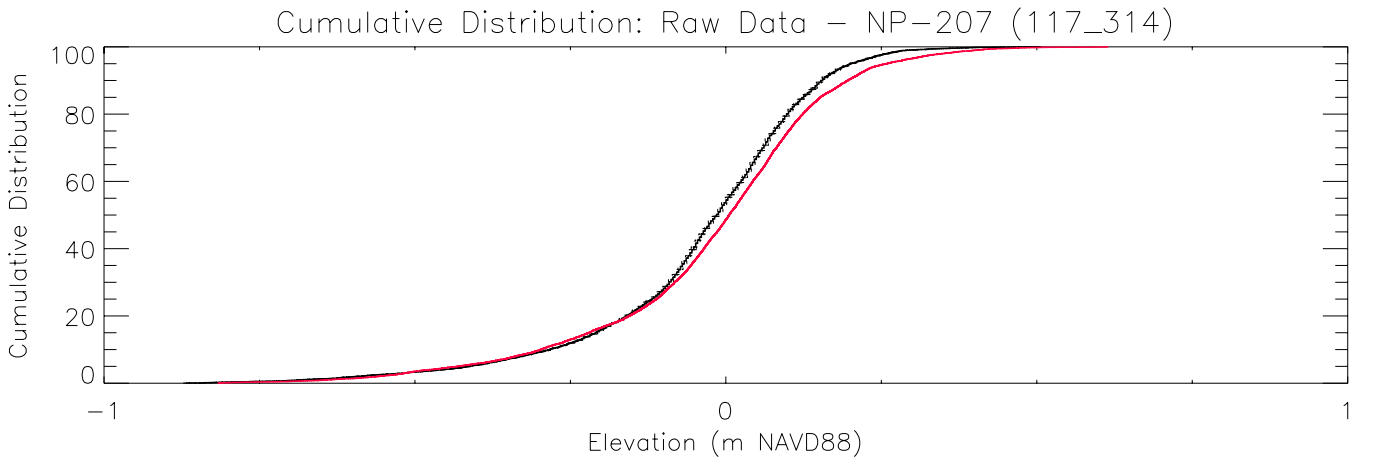

Mean: Water Year – 95% CI – SWEVER2B (159_307)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

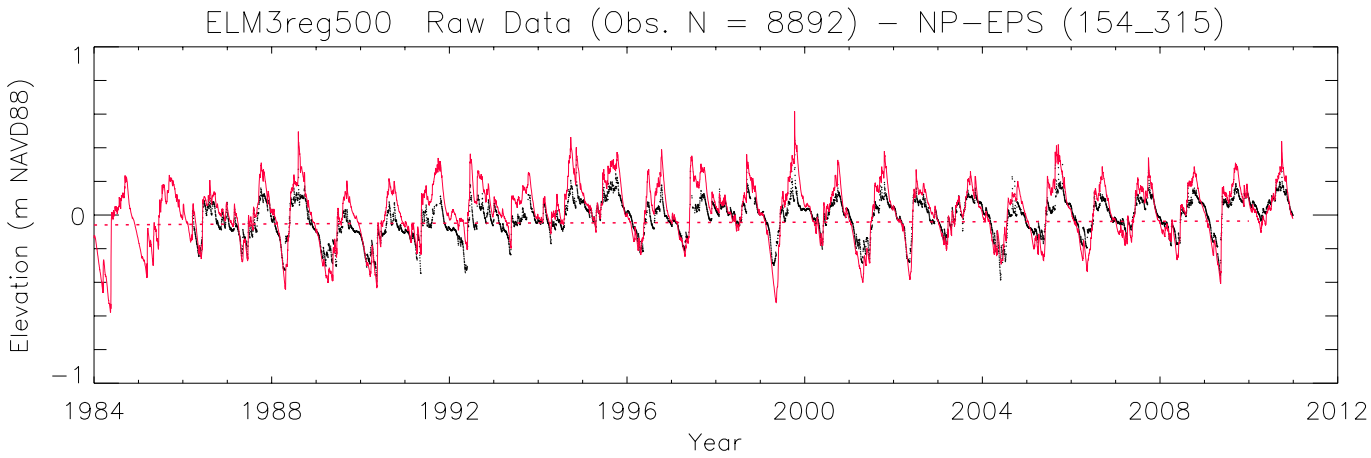

Cumulative Distribution: Raw Data – SWEVER2B (159_307)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)

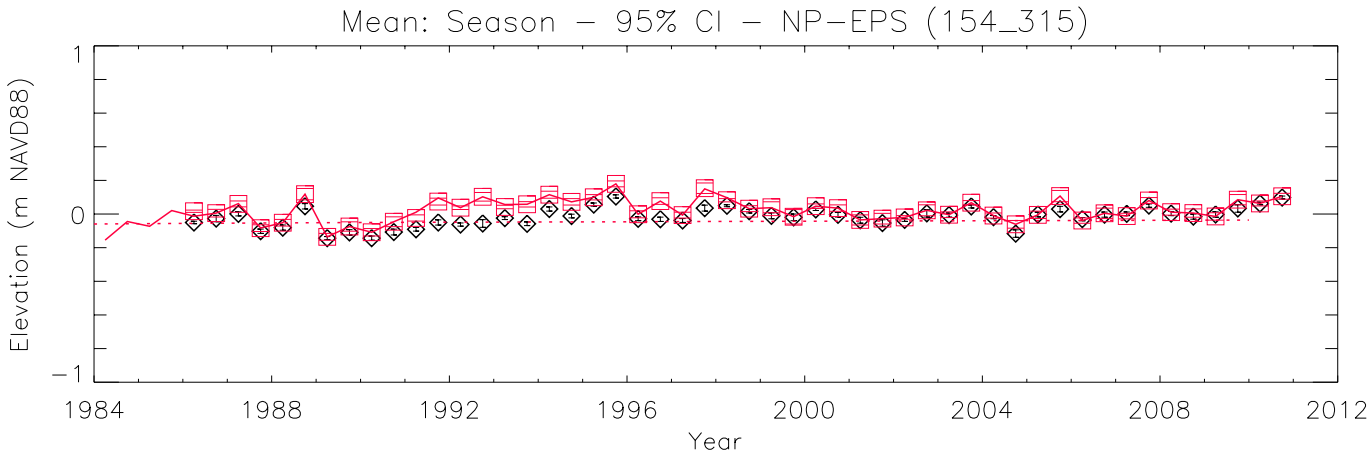

ELM3reg500 Raw Data (Obs. N = 5736) – NP–207 (117_314)
Elevation (m NAVD88)
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

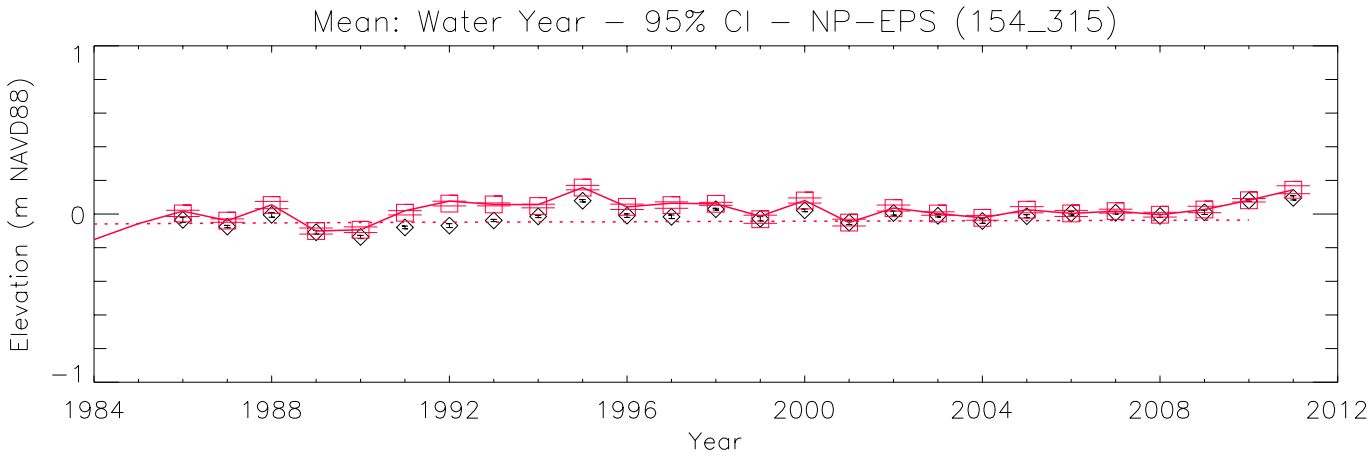

Mean: Season – 95% CI – NP–207 (117_314)
Elevation (m NAVD88)
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

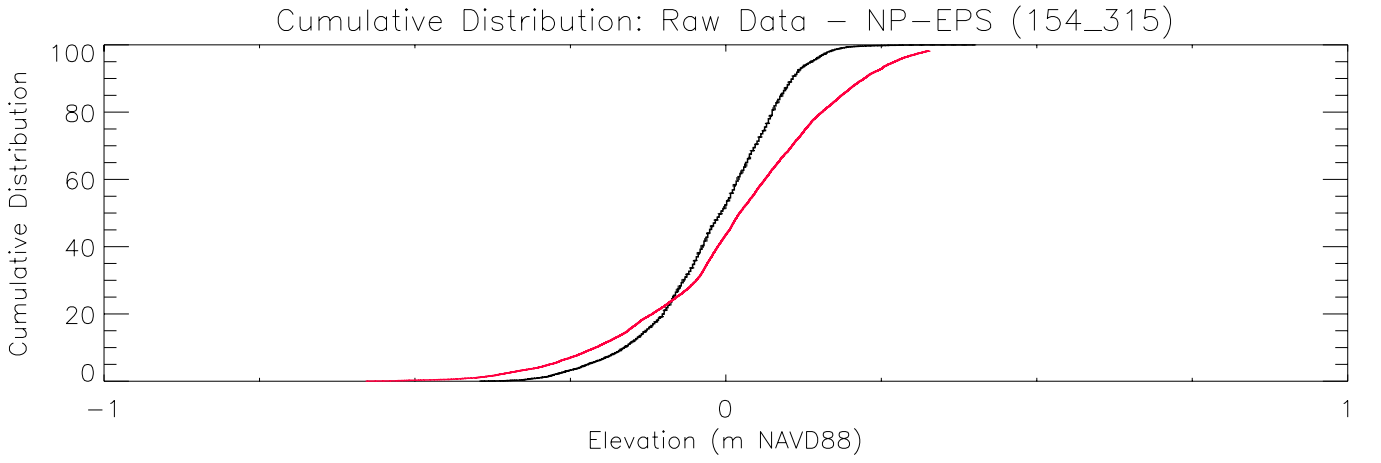

Mean: Water Year – 95% CI – NP–207 (117_314)
Elevation (m NAVD88)
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

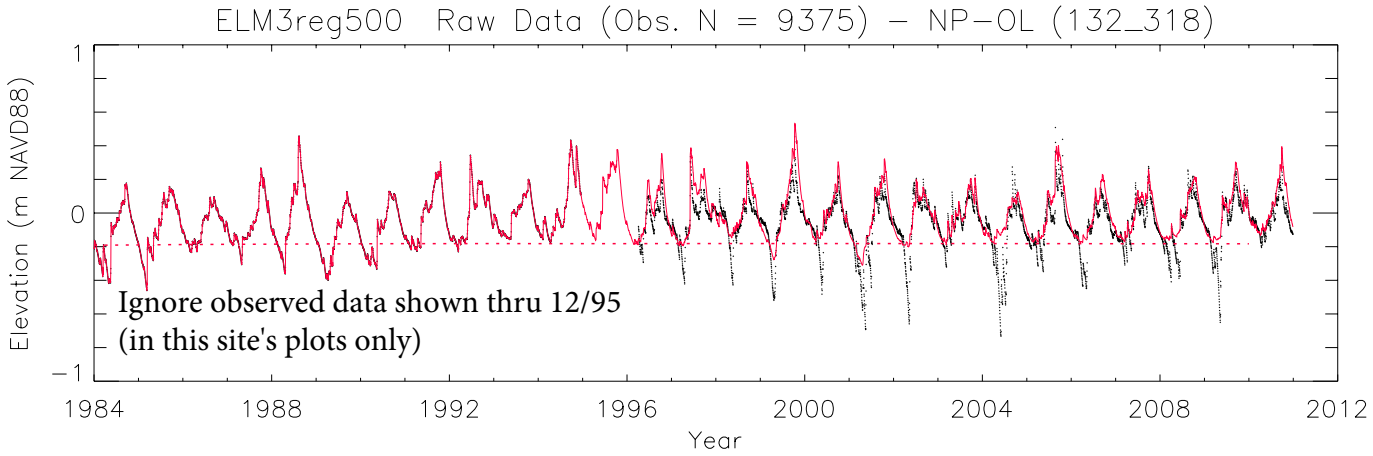

Cumulative Distribution: Raw Data – NP–207 (117_314)
Cumulative Distribution
100
80
60
40
20
0
–1
0
1
Elevation (m NAVD88)

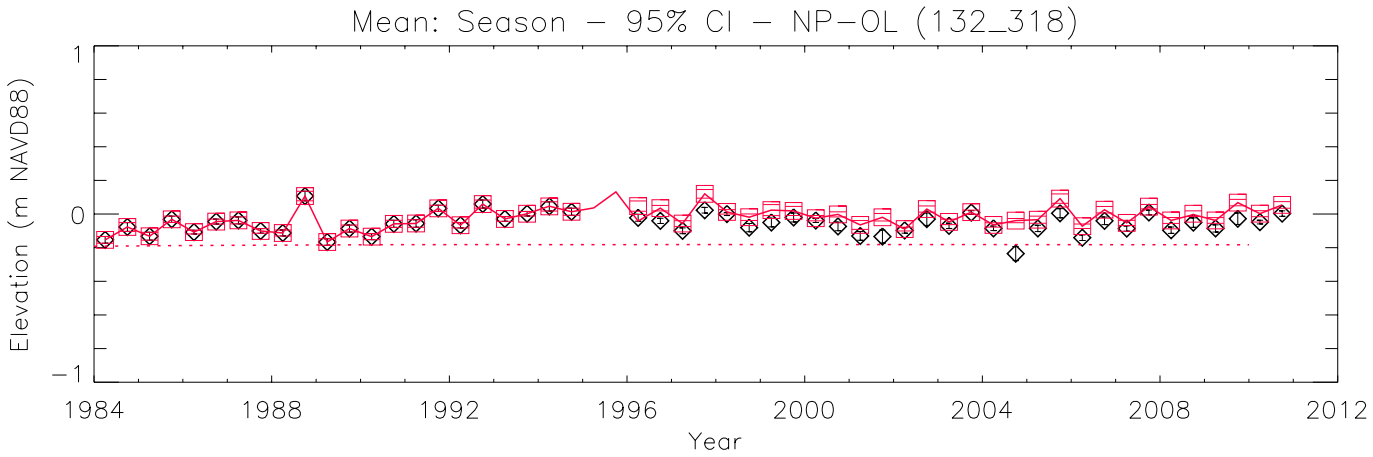

ELM3reg500 Raw Data (Obs. N = 8892) – NP–EPS (154_315)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

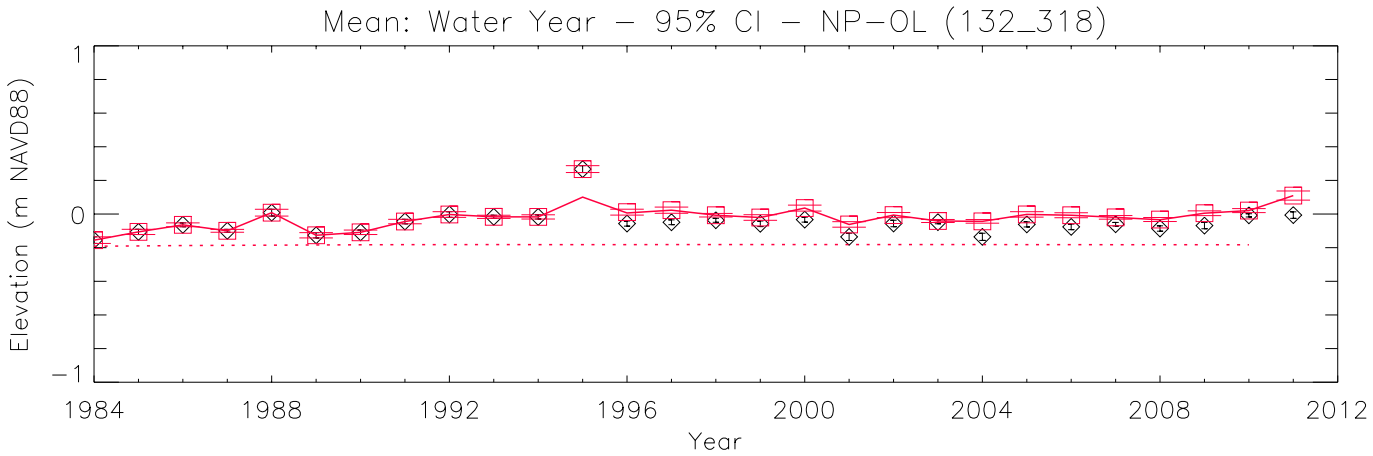

Mean: Season – 95% CI – NP–EPS (154_315)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

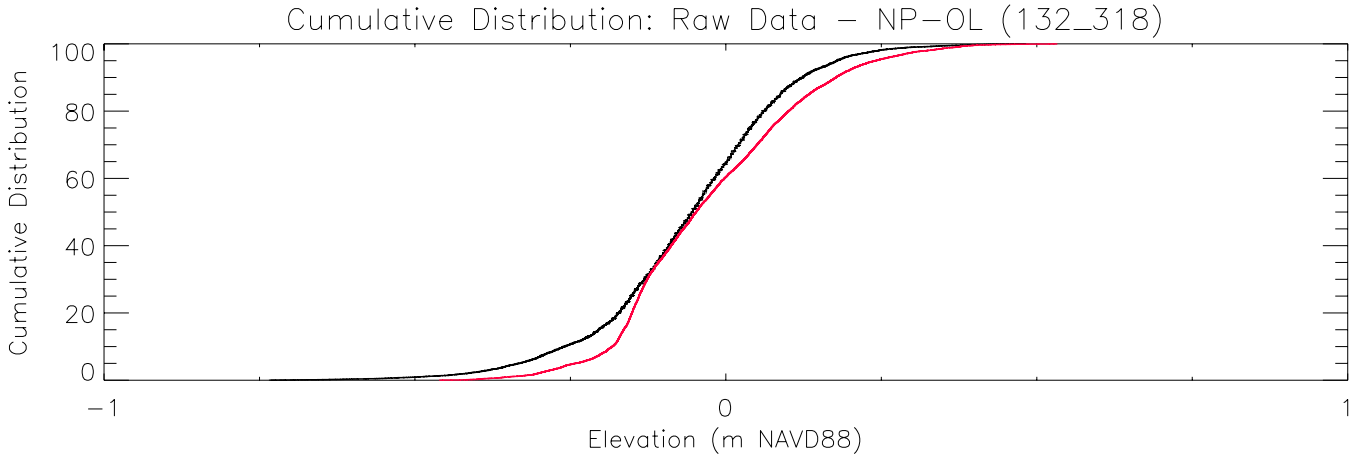

Mean: Water Year – 95% CI – NP–EPS (154_315)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year

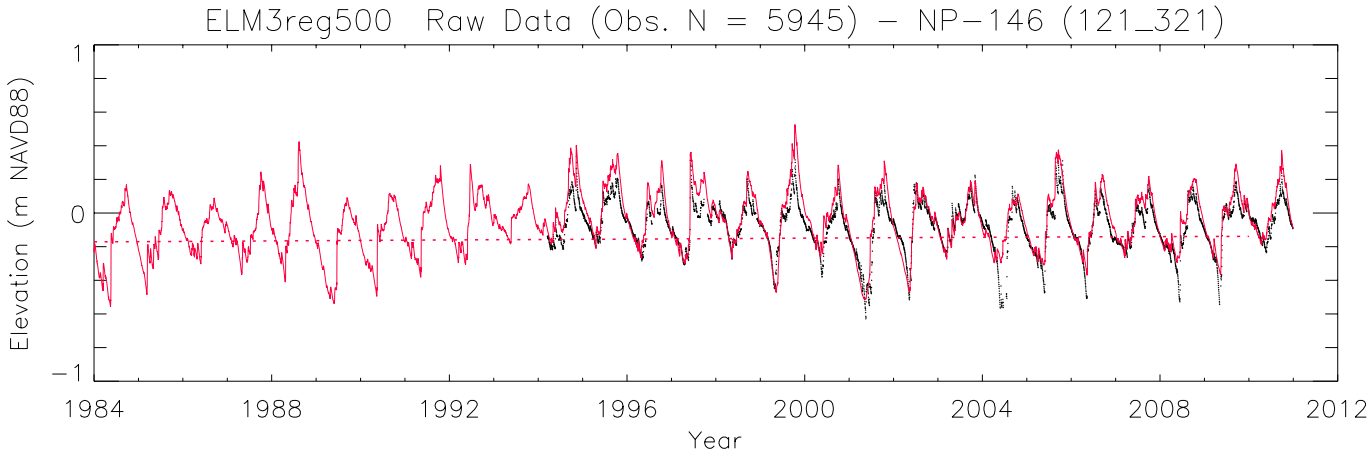

Cumulative Distribution: Raw Data – NP–EPS (154_315)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)

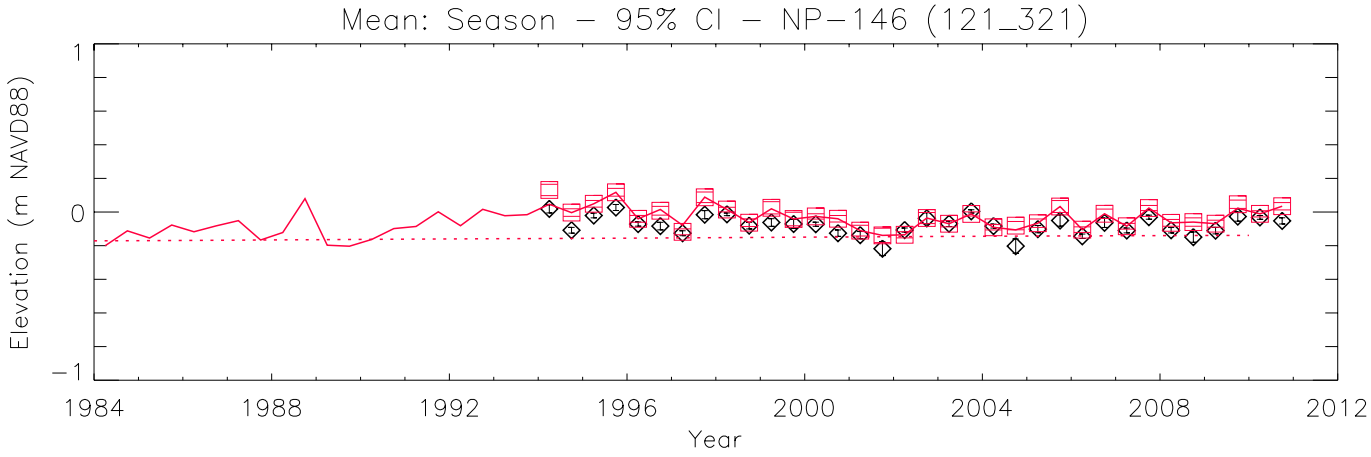

ELM3reg500 Raw Data (Obs. N = 9375) – NP–OL (132_318)
Elevation (m NAVD88)
Year
Ignore observed data shown thru 12/95
(in this site's plots only)

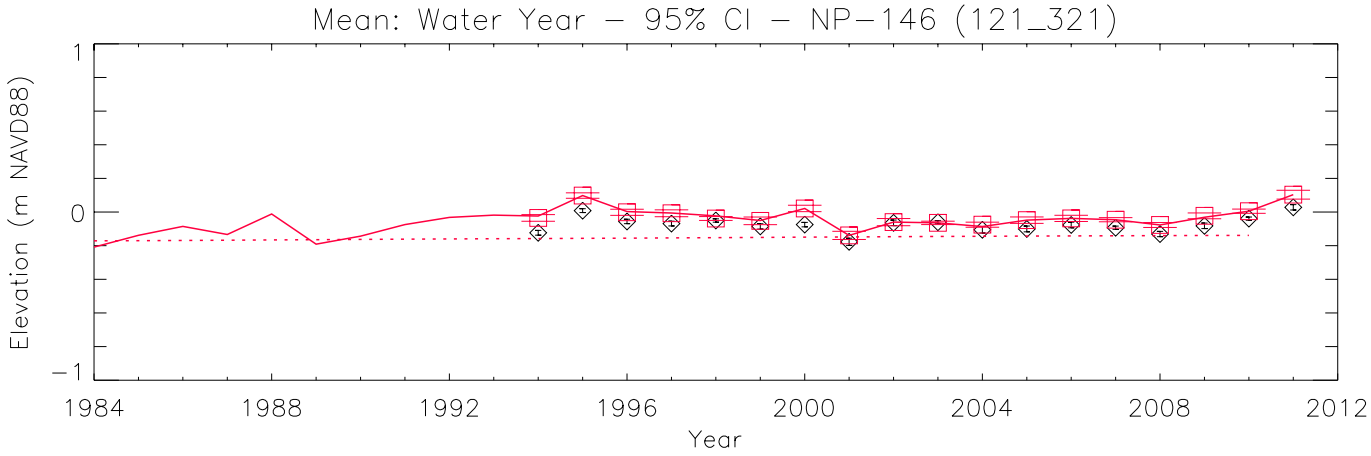

Mean: Season – 95% CI – NP–OL (132_318)
Elevation (m NAVD88)
Year

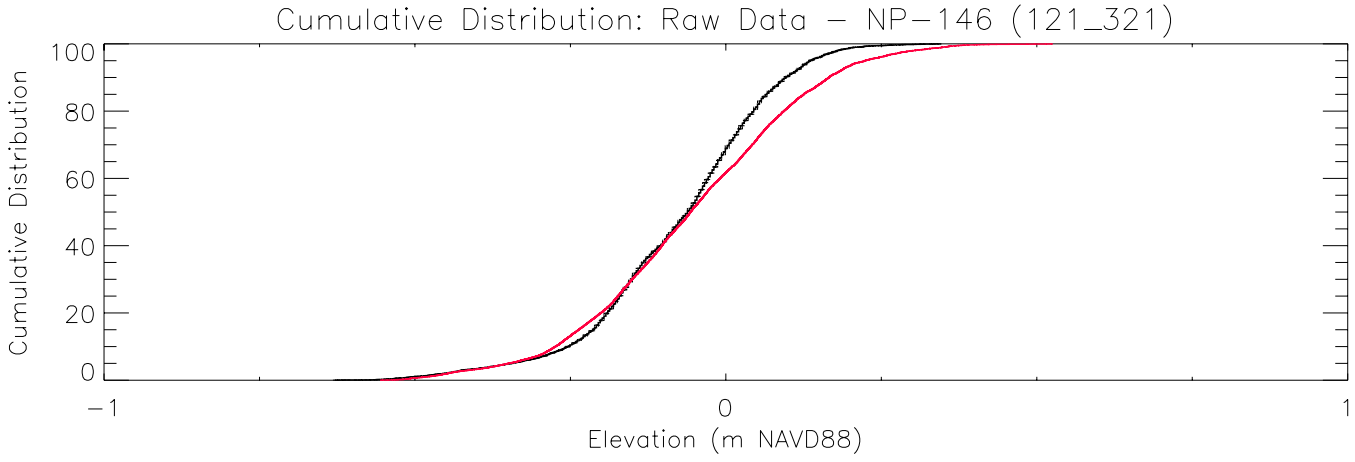

Mean: Water Year – 95% CI – NP–OL (132_318)
Elevation (m NAVD88)
Year

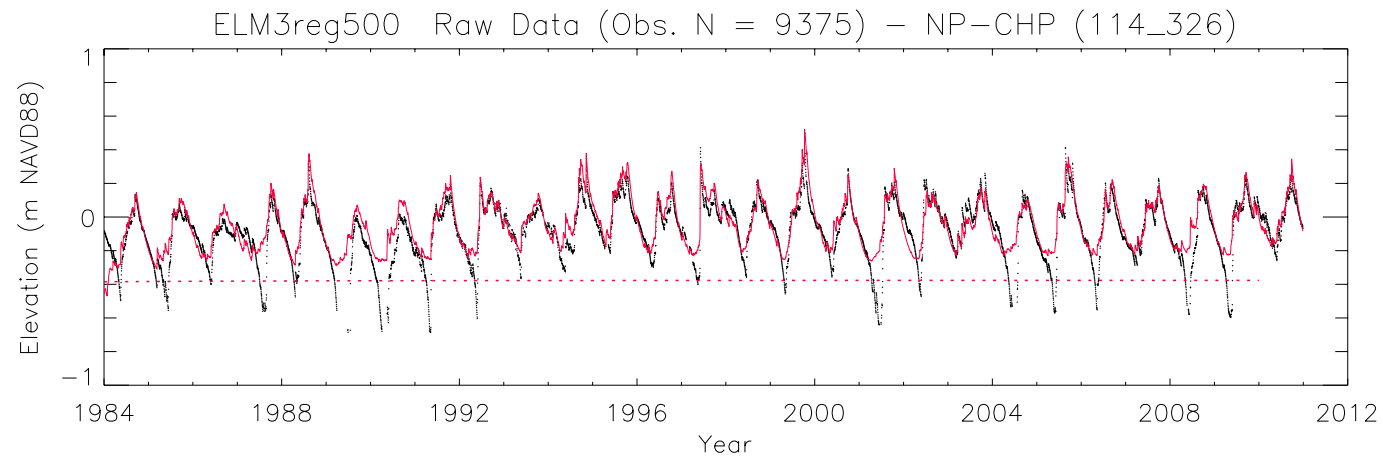

Cumulative Distribution: Raw Data – NP–OL (132_318)
Cumulative Distribution
Elevation (m NAVD88)

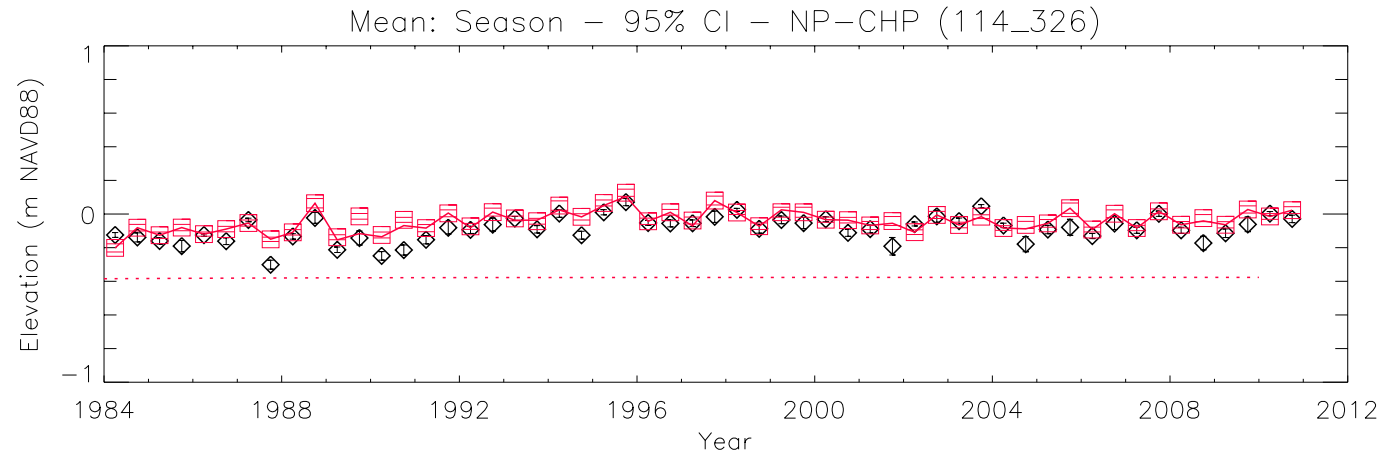

ELM3reg500 Raw Data (Obs. N = 5945) – NP–146 (121_321)
Elevation (m NAVD88)
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

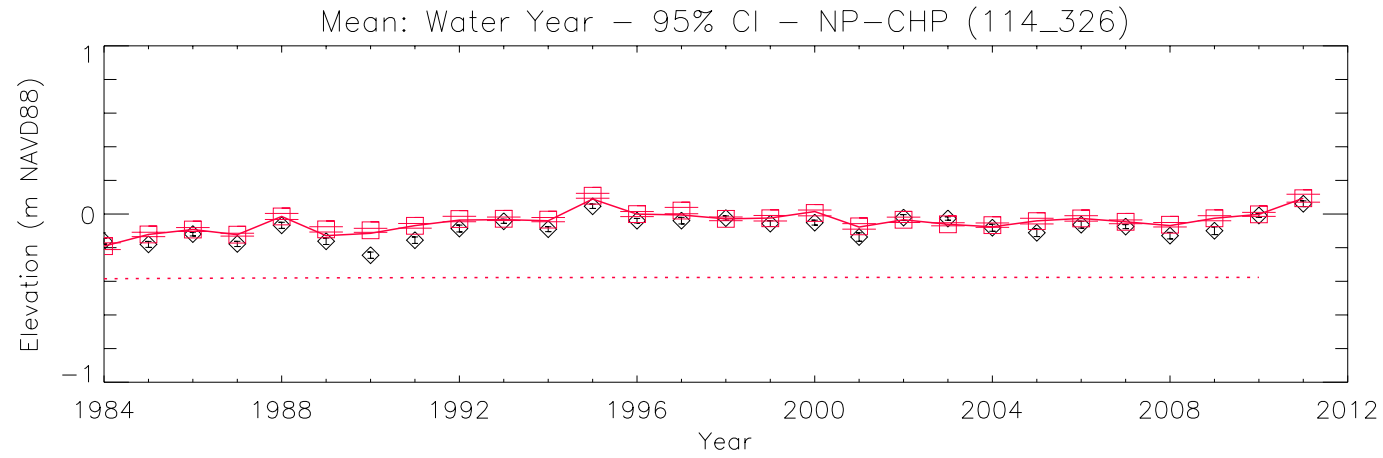

Mean: Season – 95% CI – NP–146 (121_321)
Elevation (m NAVD88)
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year

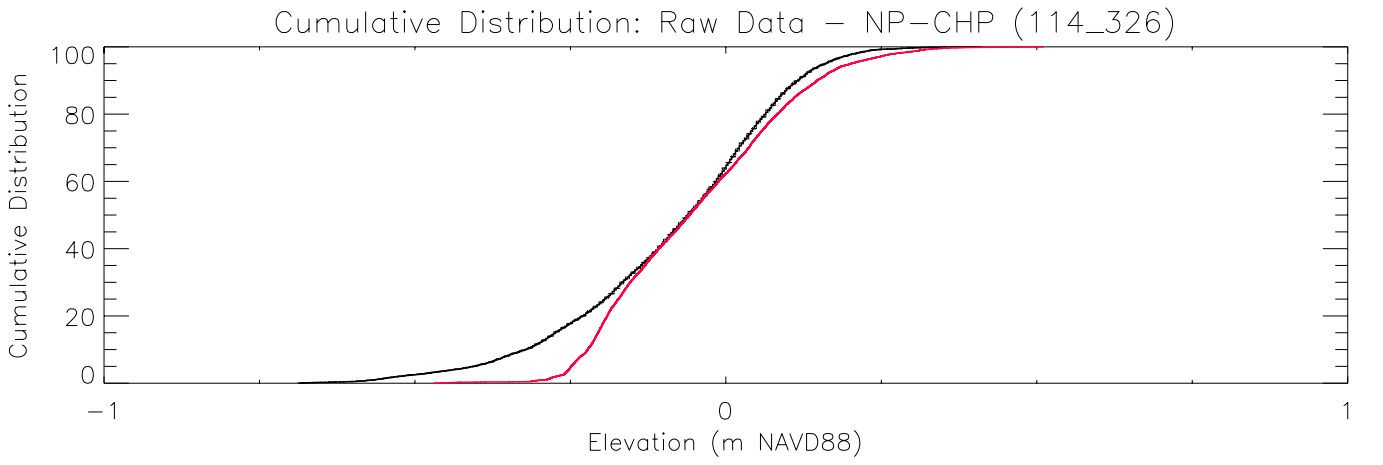

Mean: Water Year – 95% CI – NP–146 (121_321)
Elevation (m NAVD88)
1
0
–1
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – NP–146 (121_321)
Cumulative Distribution
100
80
60
40
20
0
–1
0
1
Elevation (m NAVD88)


ELM3reg500 Raw Data (Obs. N = 9375) – NP–CHP (114_326)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – NP–CHP (114_326)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – NP–CHP (114_326)
Elevation (m NAVD88)
1
0
−1
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – NP–CHP (114_326)
Cumulative Distribution
100
80
60
40
20
0
−1
0
1
Elevation (m NAVD88)

Appendix B, Figures B.1 – B.94. Time series plots of water column total phosphorus (TP) concentration and their associated Cumulative Frequency Distributions (CFD) for the period of record 1984-2010 at each monitoring location. The sequence of the figures is based on geographic location of marsh sites, starting in northwest, moving towards the southeast; following the set of plots of all marsh sites, the canal monitoring sites are similarly sequenced. A map of water quality monitoring sites in the northern Everglades is shown in Figure 4, with the southern Everglades sites shown in Figure 5.

The constant dashed line indicates the usual TP field sampling Detection Limit (DL = 4 ug l^{-1} for most of the model period of record). The model grid cell column and row locations (col_row) or canal reach identifier (single integer) are shown in parentheses of each plot's title.

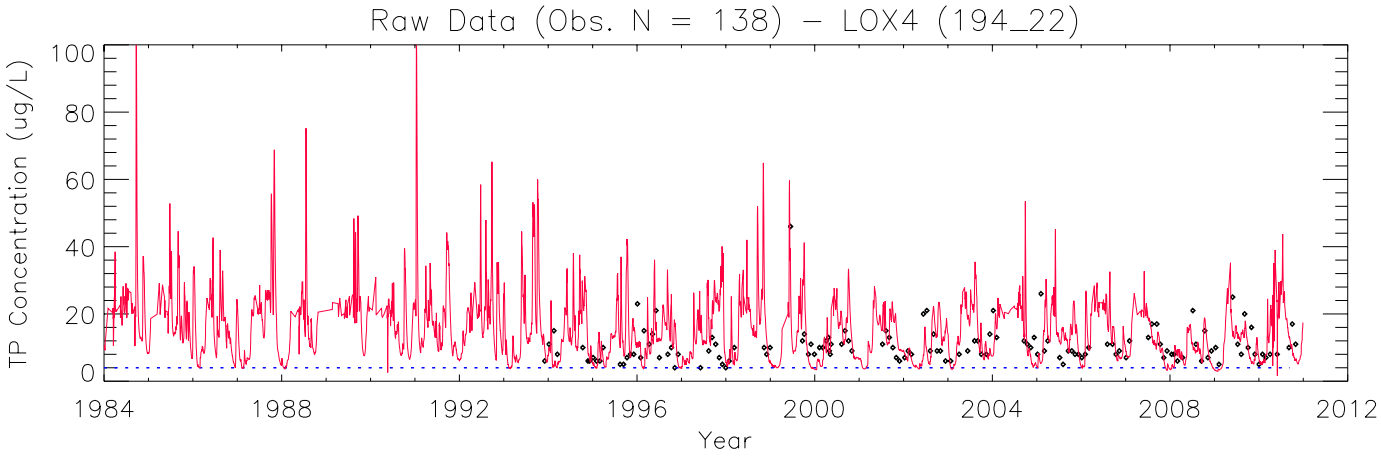
Each site-page has four figures:

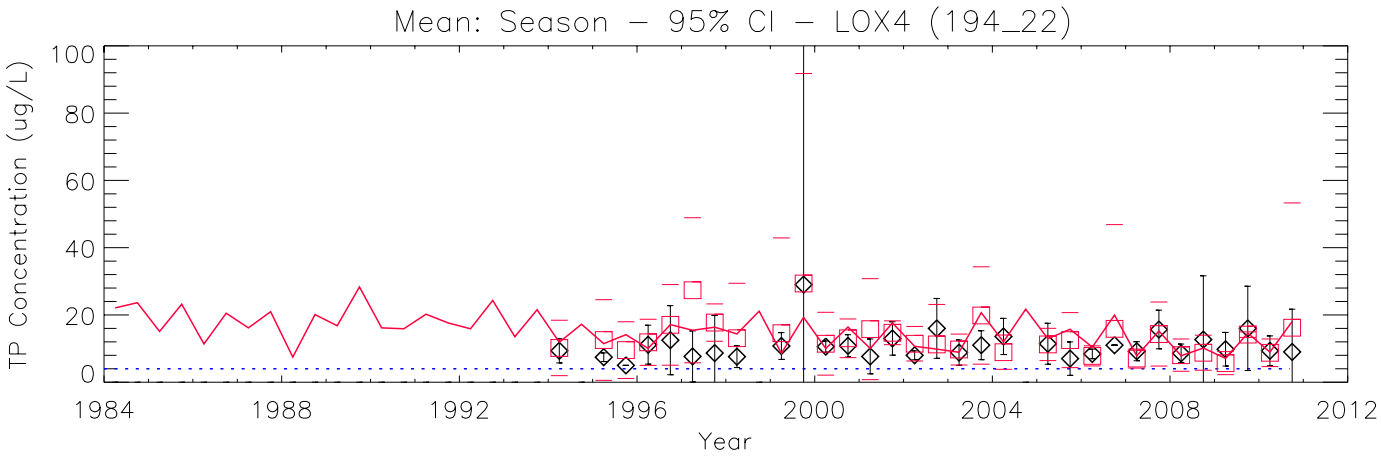
a) All data, with no temporal aggregation, of daily observations (black dots) and model results (red line).

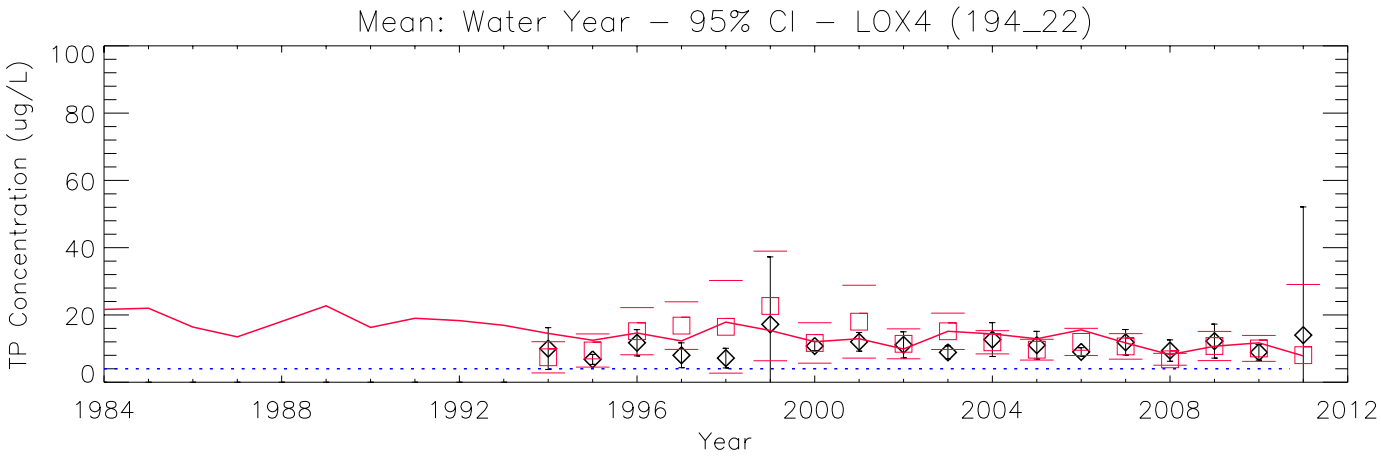
b) All data were aggregated into arithmetic mean values by wet and dry seasons within water years; the continuous lines pass through mean of all daily data points for each season; the mean of paired simulated & observed values are shown in red boxes and black diamonds, respectively; the 95% Confidence Interval (CI) of the paired means are shown by the "__" symbols in the red for the model and black for the observed data.

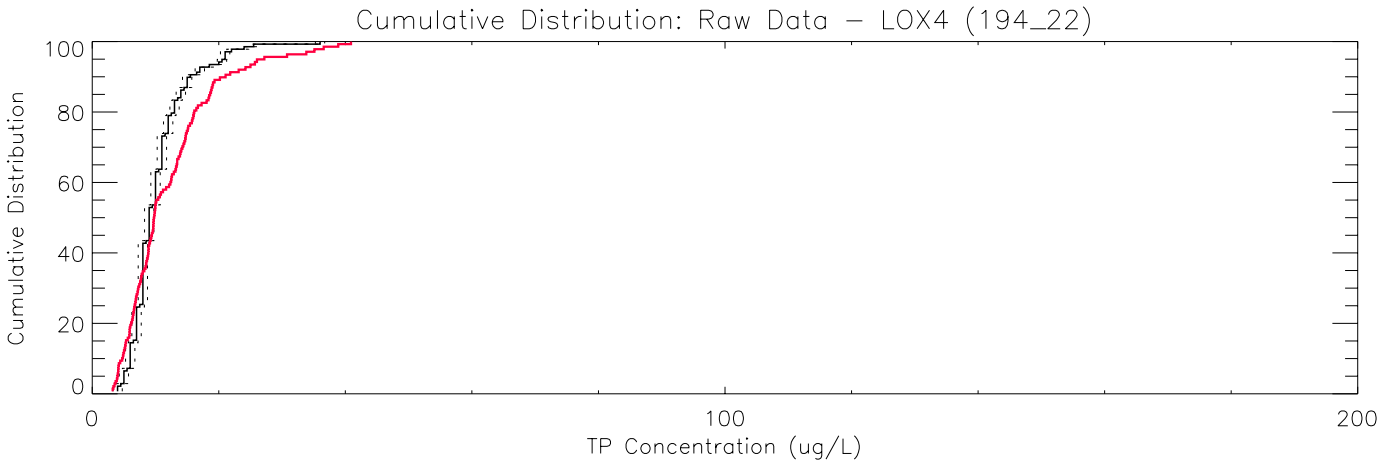
c) All data aggregated into arithmetic mean values by water year, with the same treatment as in plot b).

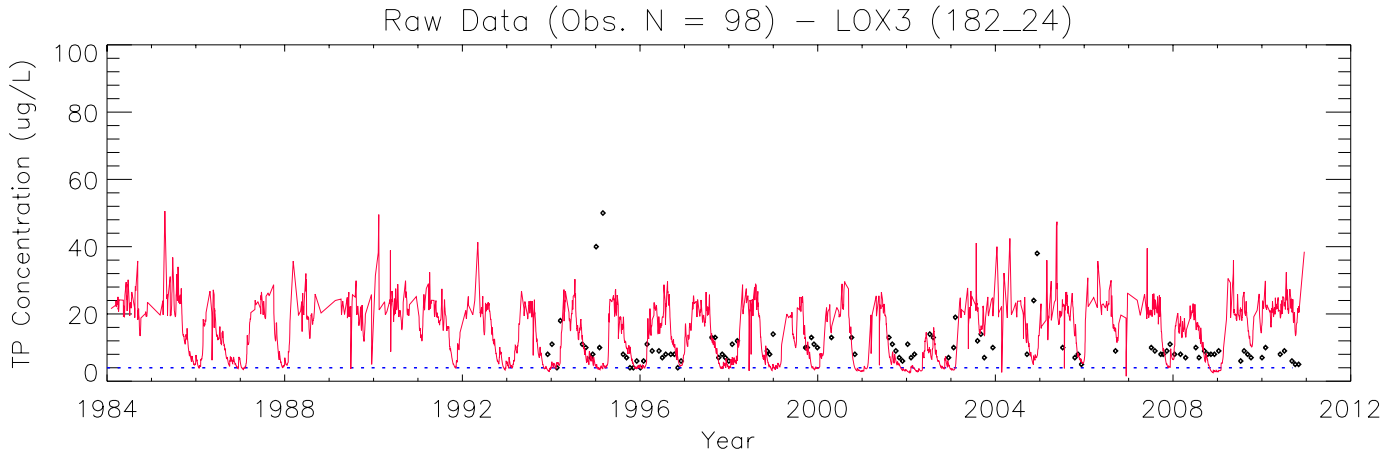
d) The cumulative frequency distributions of the simulated and observed (raw, un-aggregated) data; the 95% confidence interval for observed data is shown in the dashed black lines. Note that only paired simulated and observed data points are used.

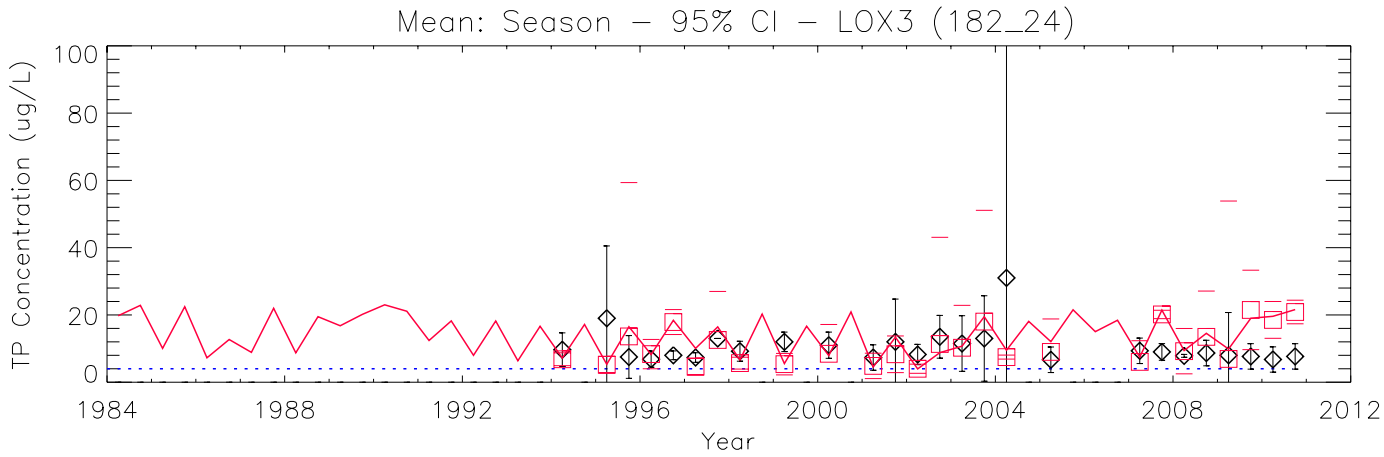

Raw Data (Obs. N = 138) – LOX4 (194_22)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

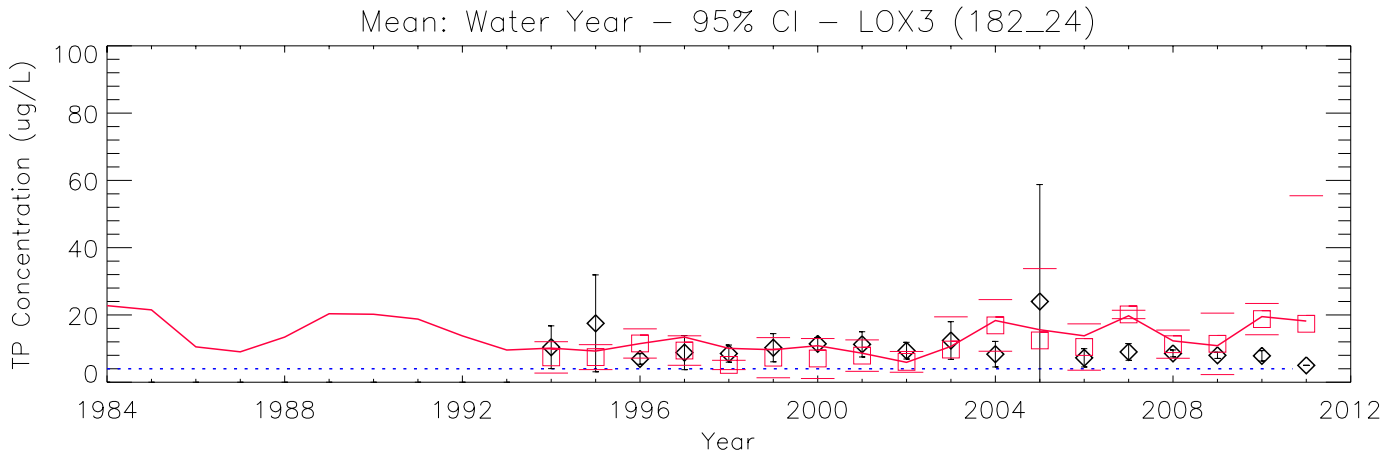

Mean: Season – 95% CI – LOX4 (194_22)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

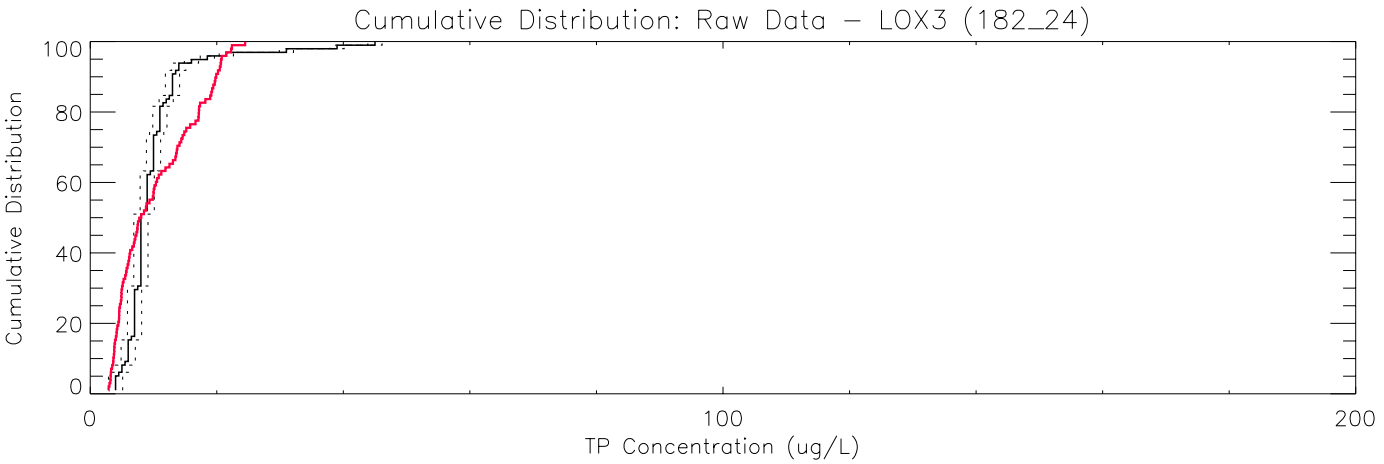

Mean: Water Year – 95% CI – LOX4 (194_22)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

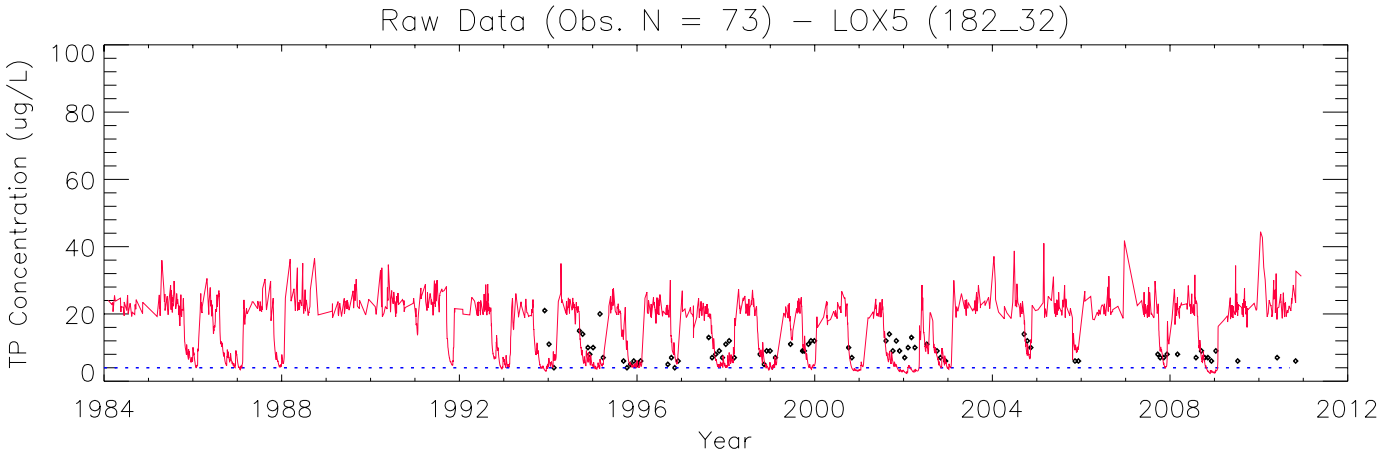

Cumulative Distribution: Raw Data – LOX4 (194_22)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

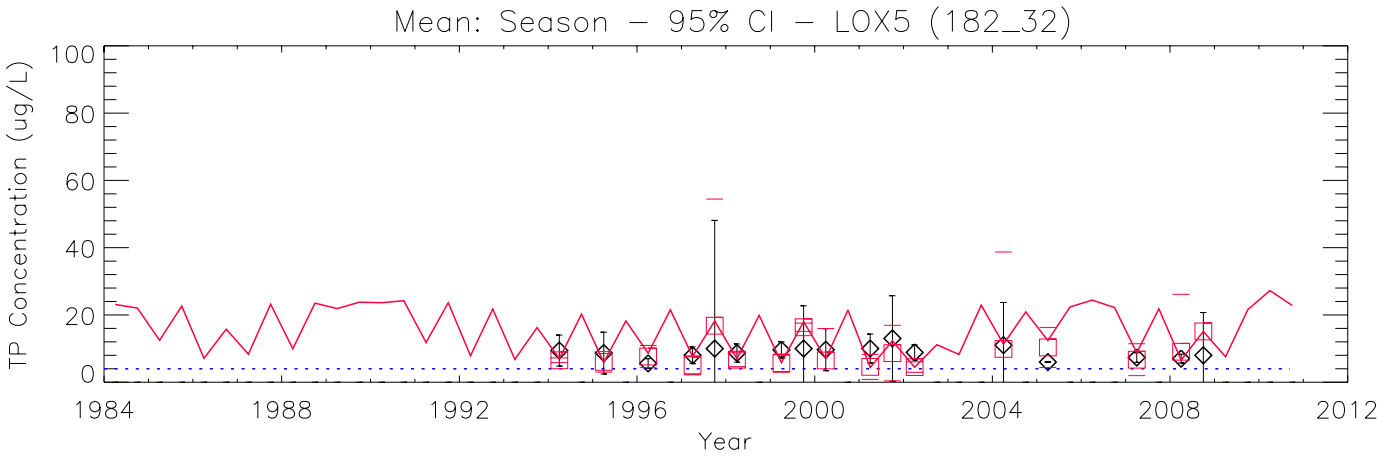

Raw Data (Obs. N = 98) – LOX3 (182_24)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

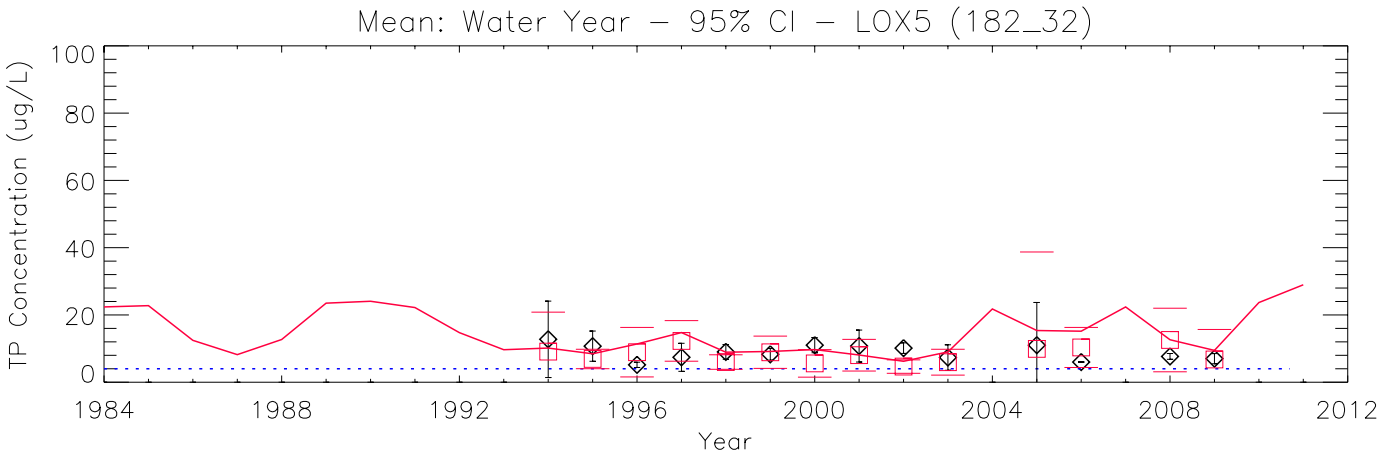

Mean: Season – 95% CI – LOX3 (182_24)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

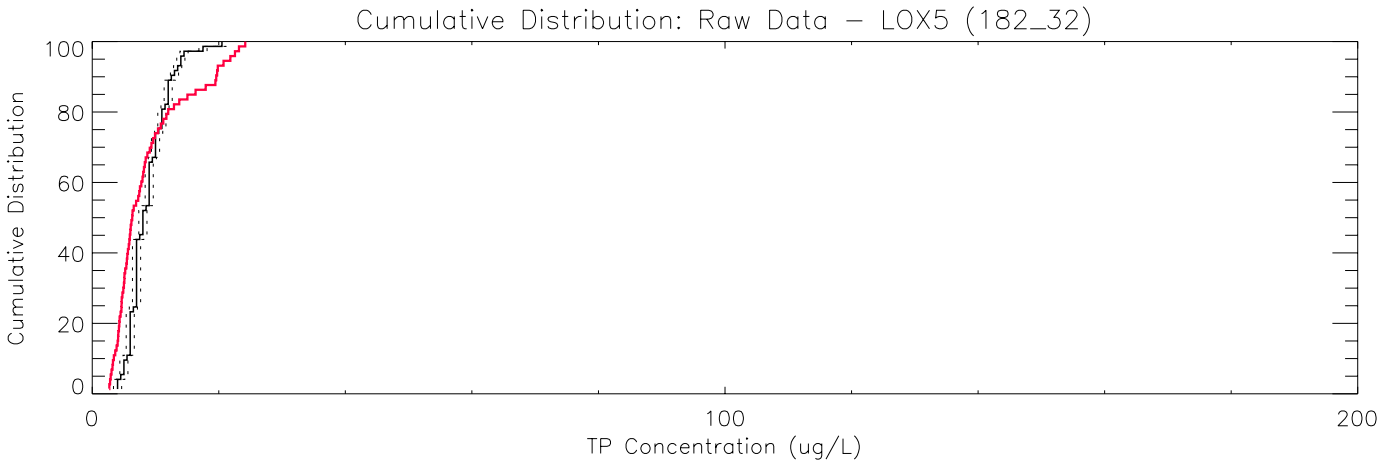

Mean: Water Year – 95% CI – LOX3 (182_24)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

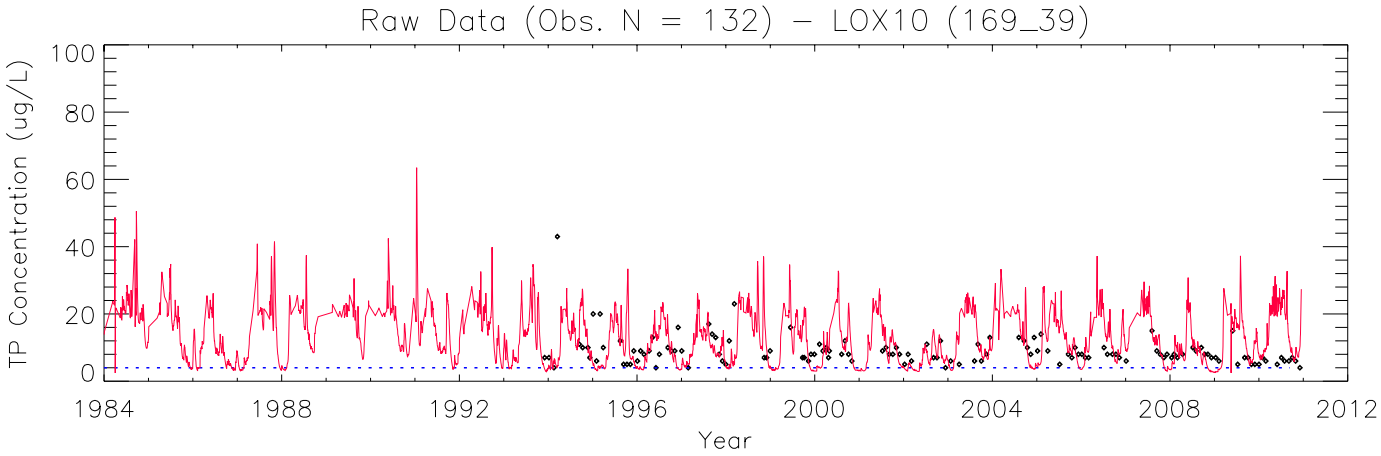

Cumulative Distribution: Raw Data – LOX3 (182_24)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

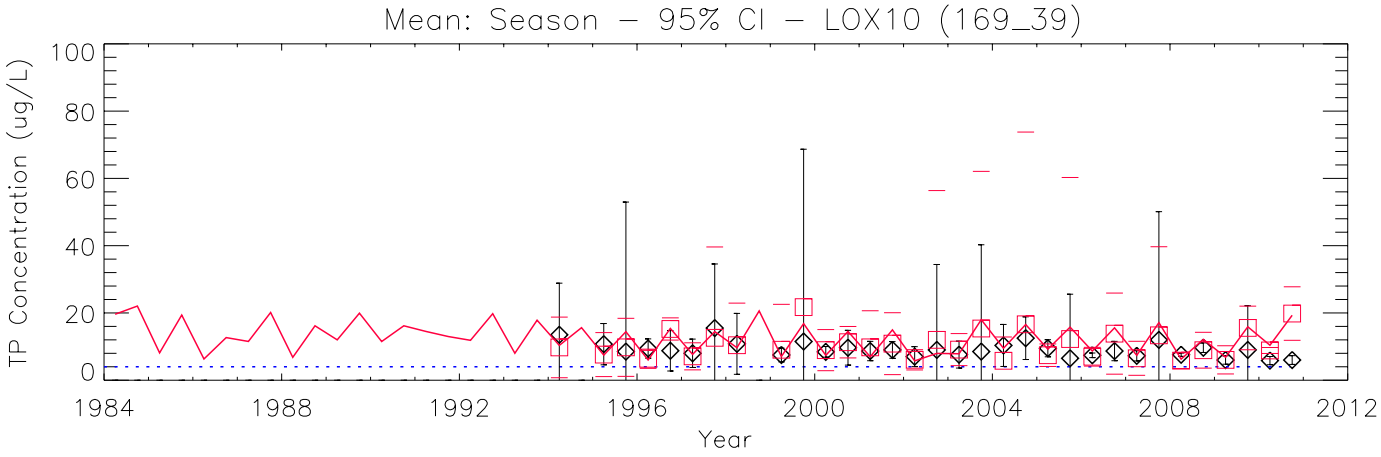

Raw Data (Obs. N = 73) – LOX5 (182_32)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

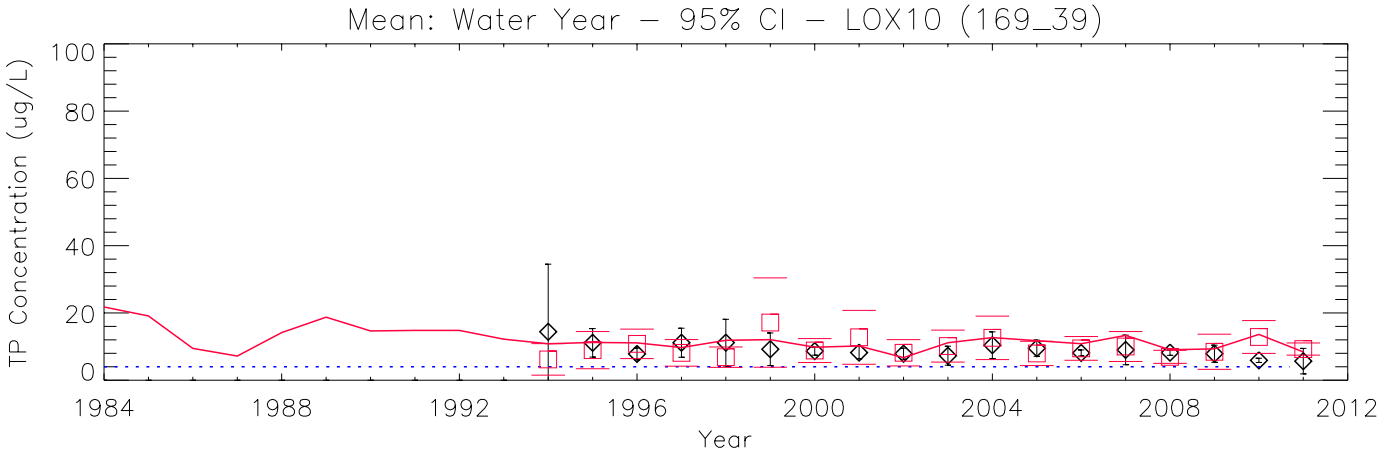

Mean: Season – 95% CI – LOX5 (182_32)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

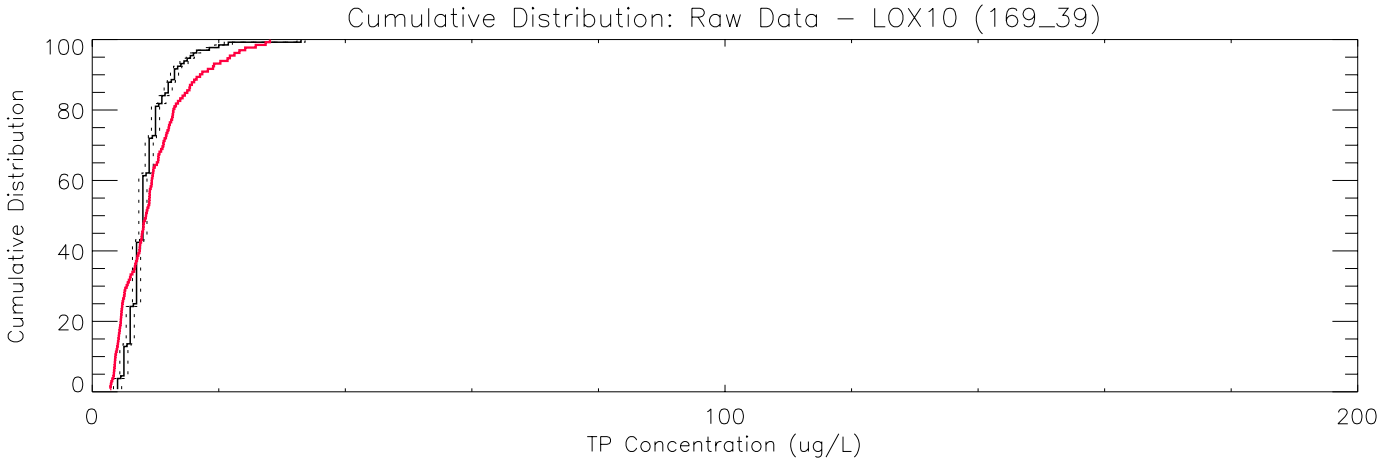

Mean: Water Year – 95% CI – LOX5 (182_32)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

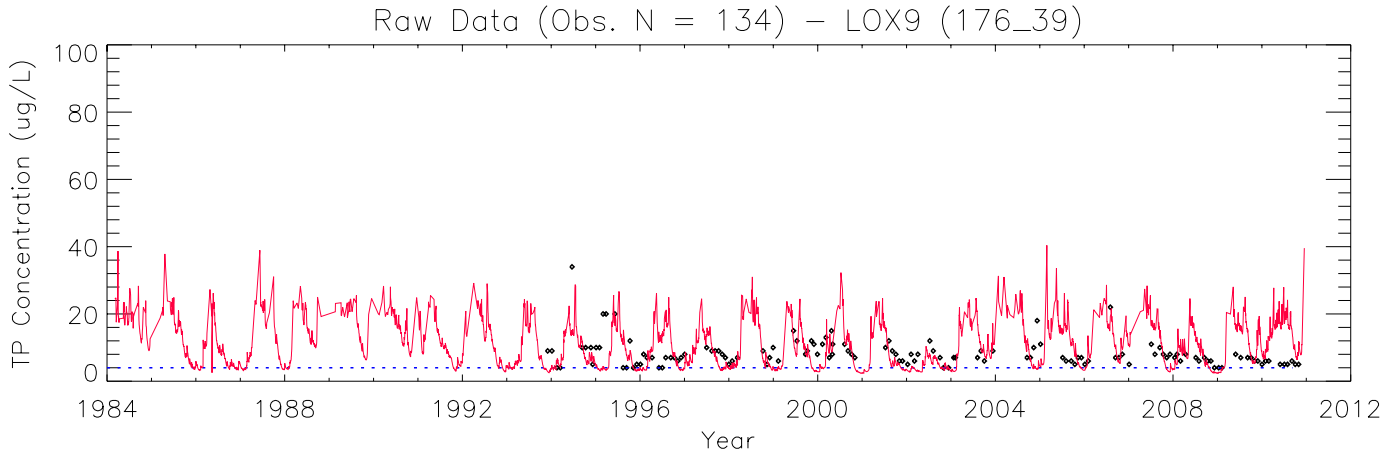

Cumulative Distribution: Raw Data – LOX5 (182_32)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

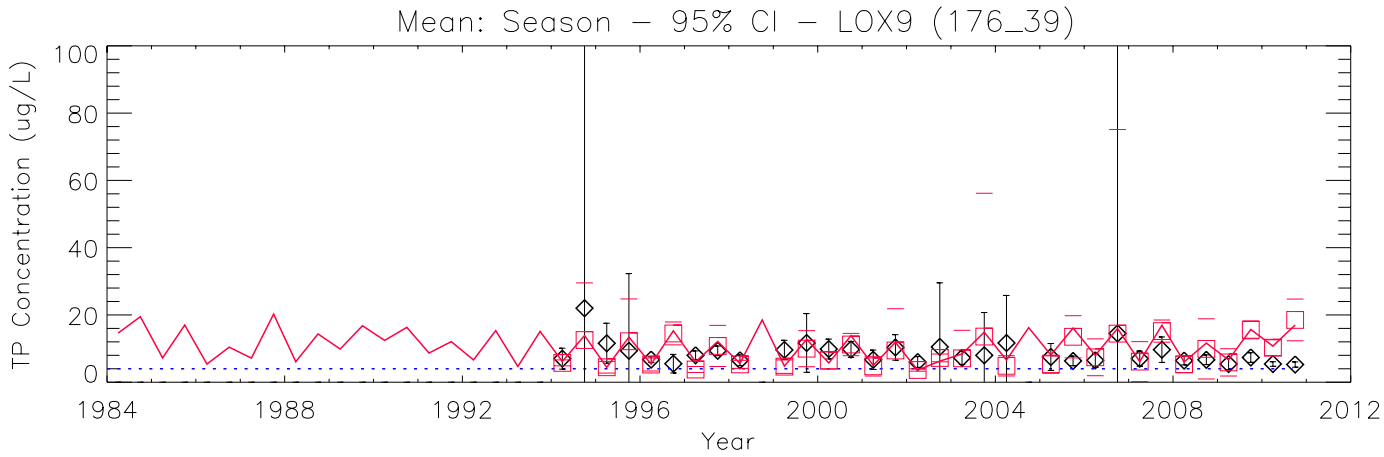

Raw Data (Obs. N = 132) – LOX10 (169_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

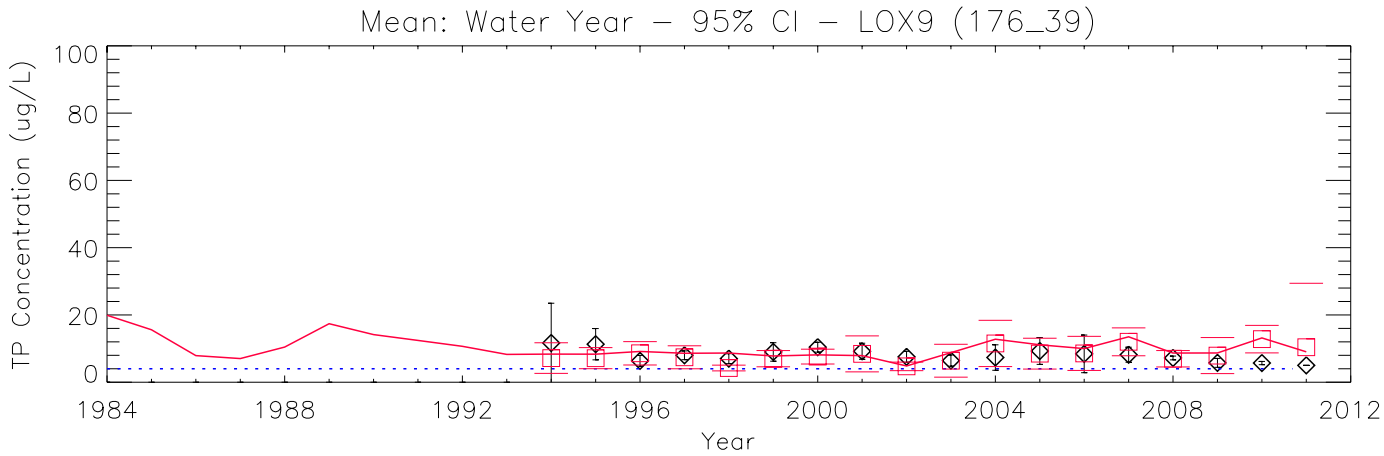

Mean: Season – 95% CI – LOX10 (169_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

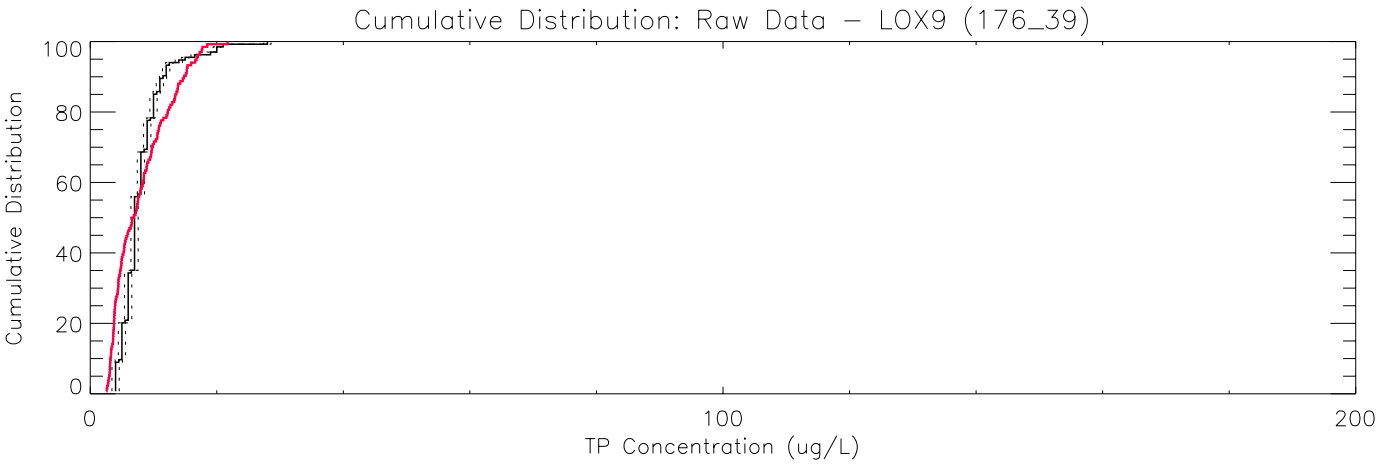

Mean: Water Year – 95% CI – LOX10 (169_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

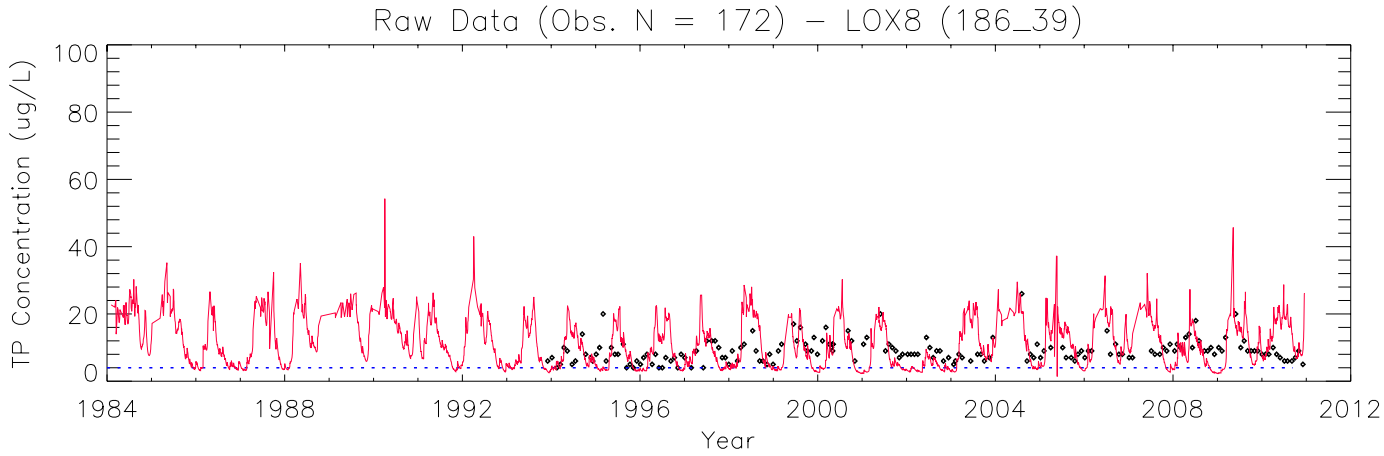

Cumulative Distribution: Raw Data – LOX10 (169_39)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

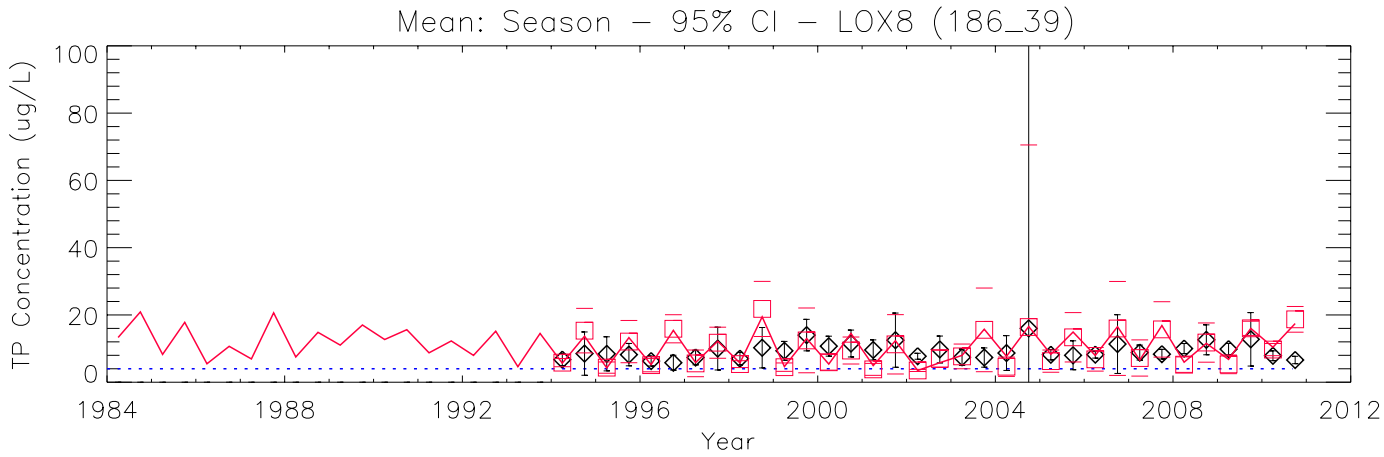

Raw Data (Obs. N = 134) – LOX9 (176_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

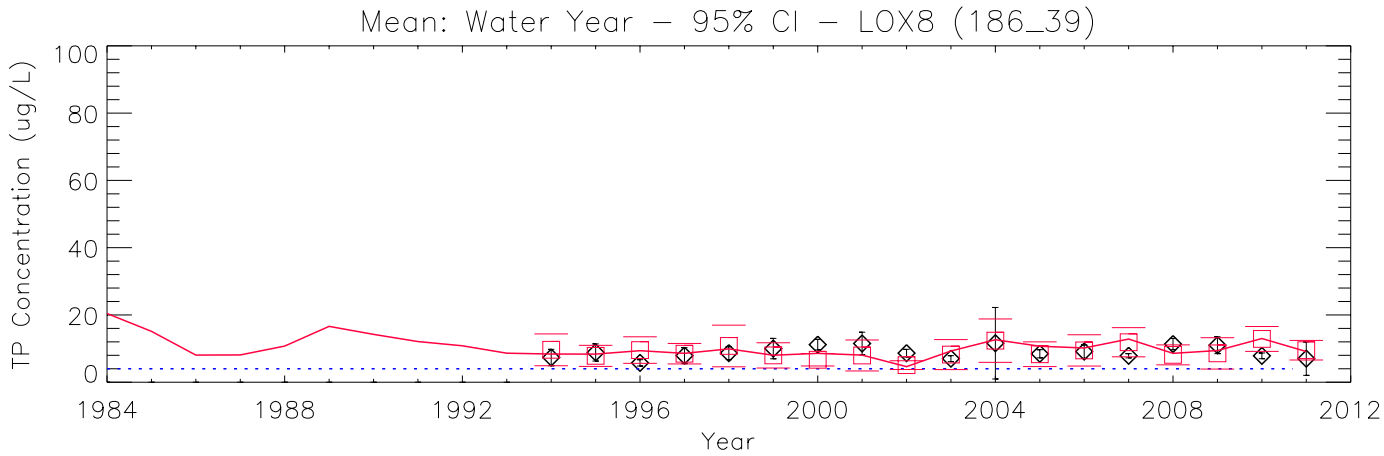

Mean: Season – 95% CI – LOX9 (176_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

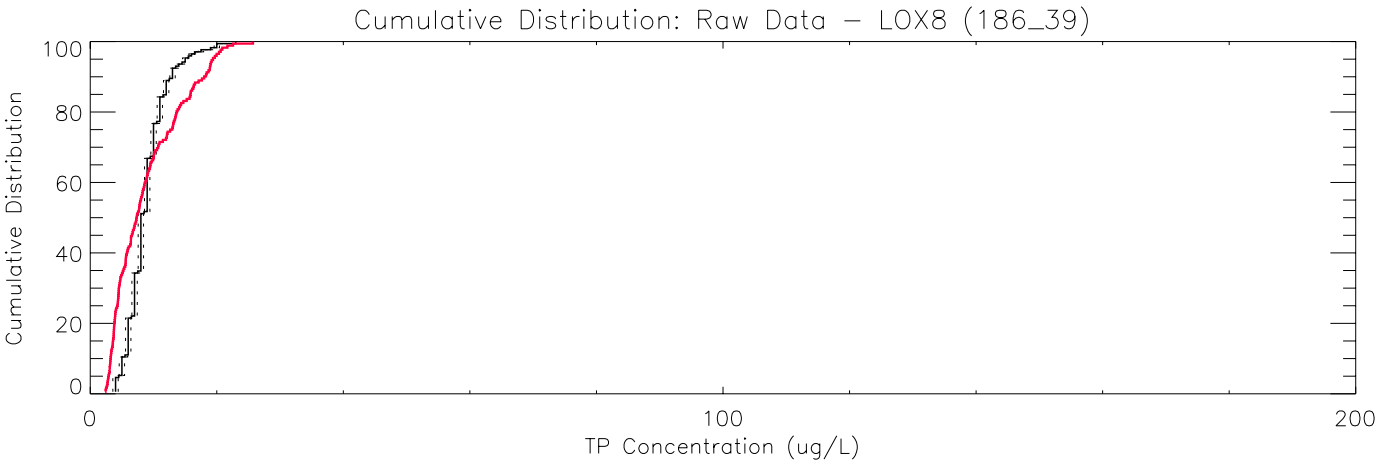

Mean: Water Year – 95% CI – LOX9 (176_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

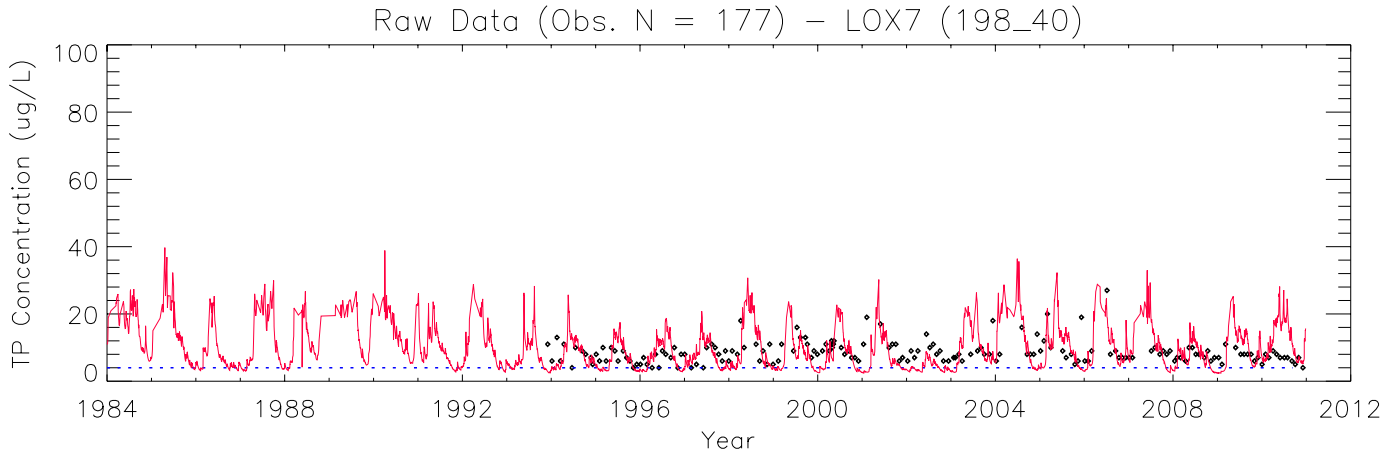

Cumulative Distribution: Raw Data – LOX9 (176_39)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

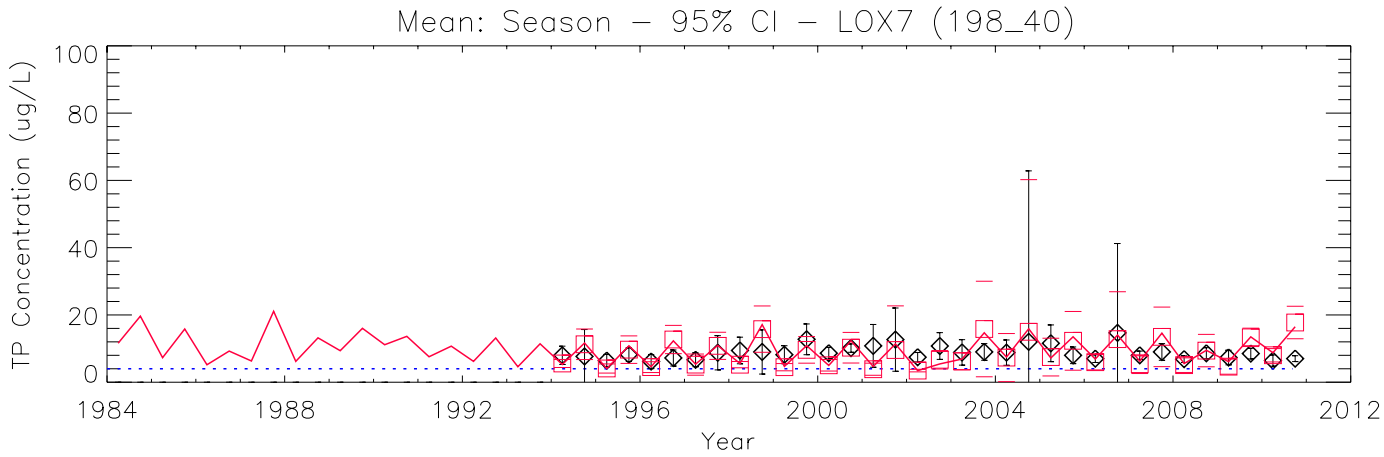

Raw Data (Obs. N = 172) – LOX8 (186_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

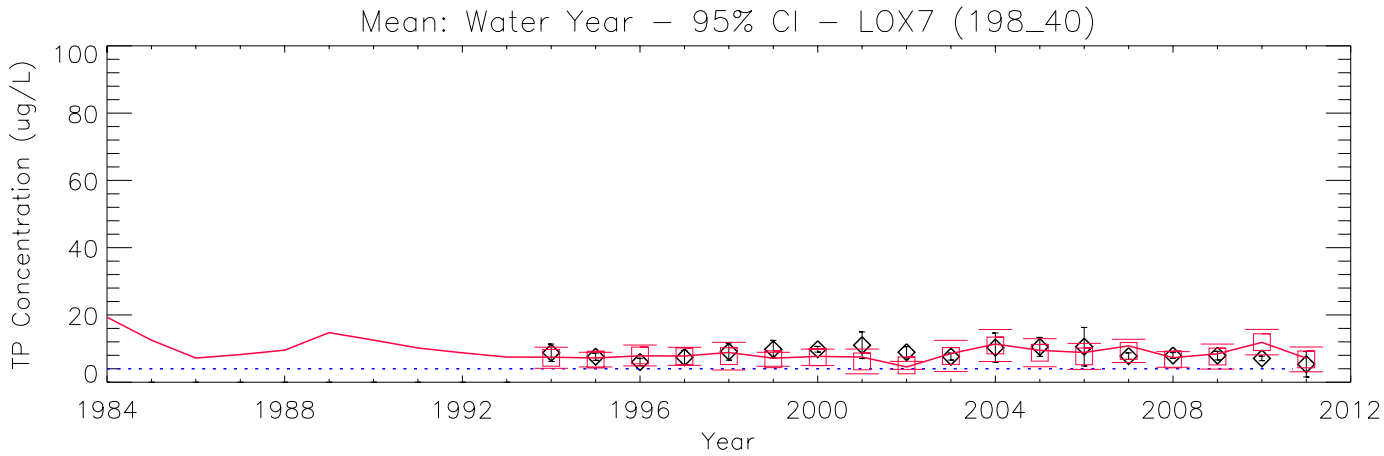

Mean: Season – 95% CI – LOX8 (186_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

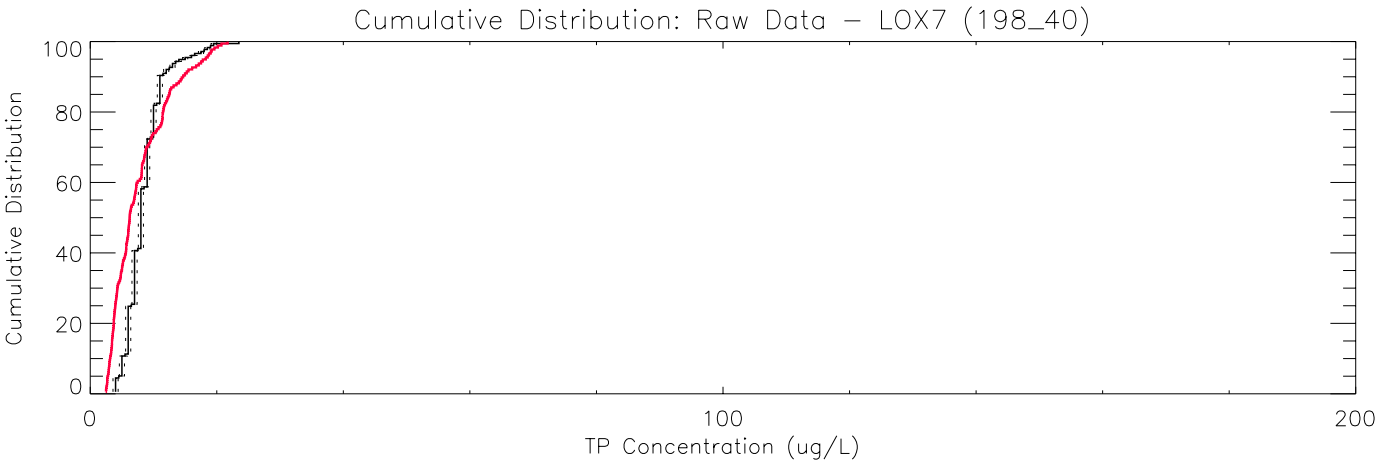

Mean: Water Year – 95% CI – LOX8 (186_39)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

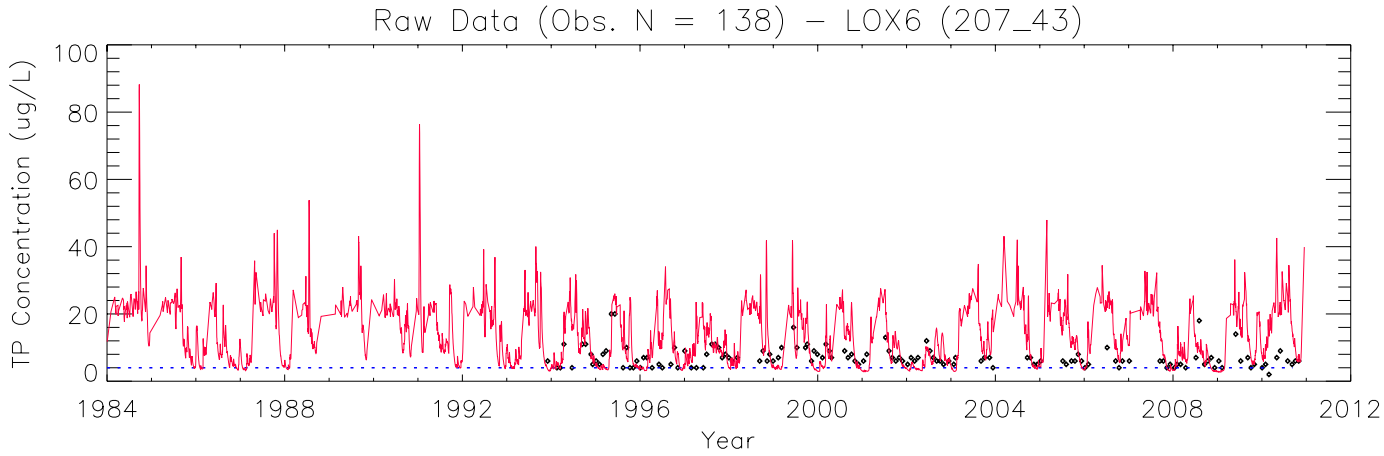

Cumulative Distribution: Raw Data – LOX8 (186_39)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

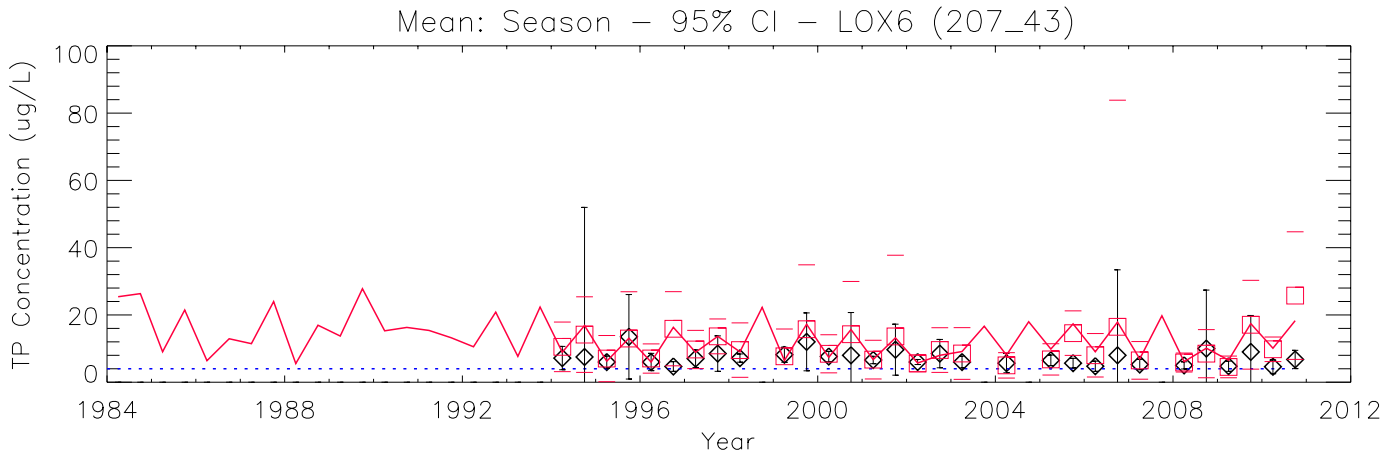

Raw Data (Obs. N = 177) – LOX7 (198_40)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

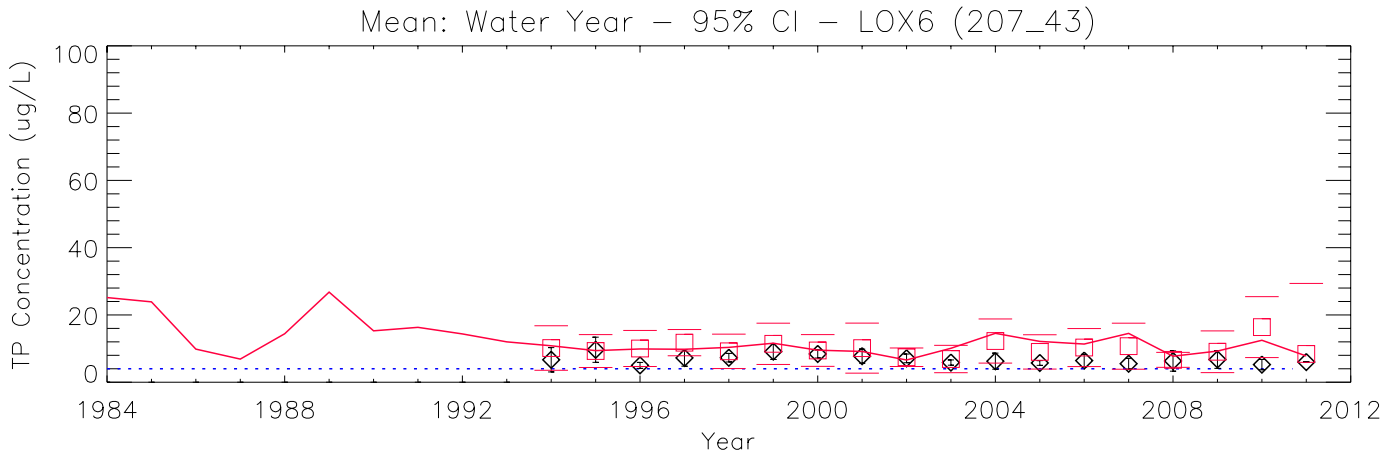

Mean: Season – 95% CI – LOX7 (198_40)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

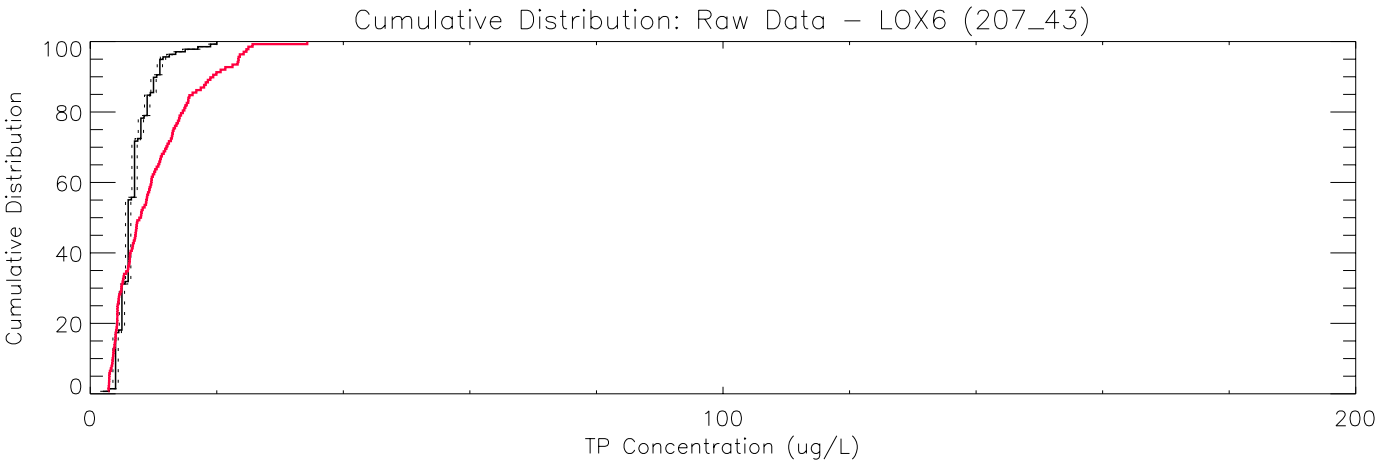

Mean: Water Year – 95% CI – LOX7 (198_40)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

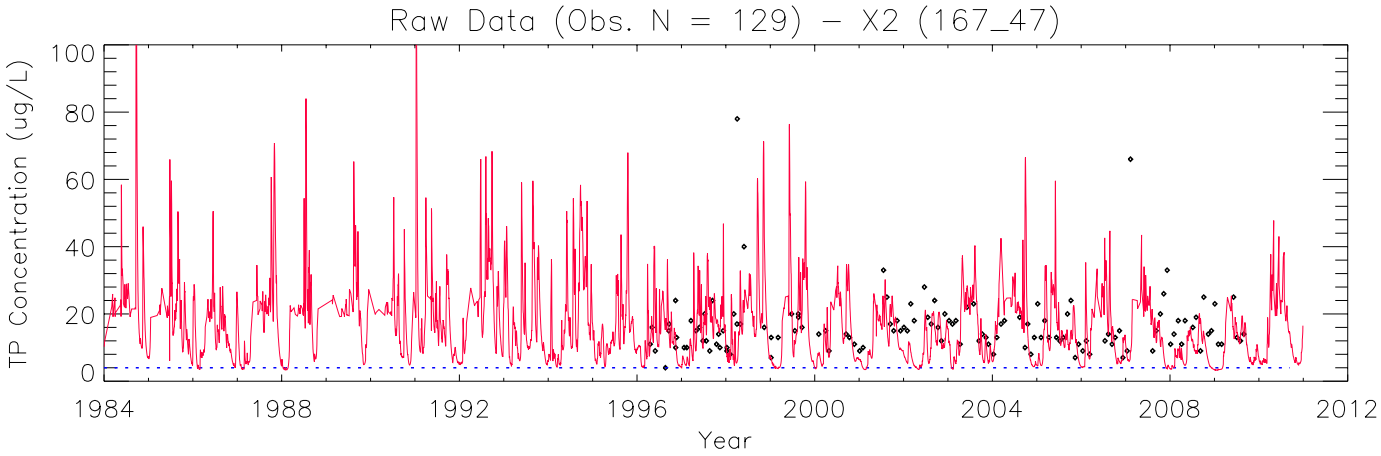

Cumulative Distribution: Raw Data – LOX7 (198_40)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

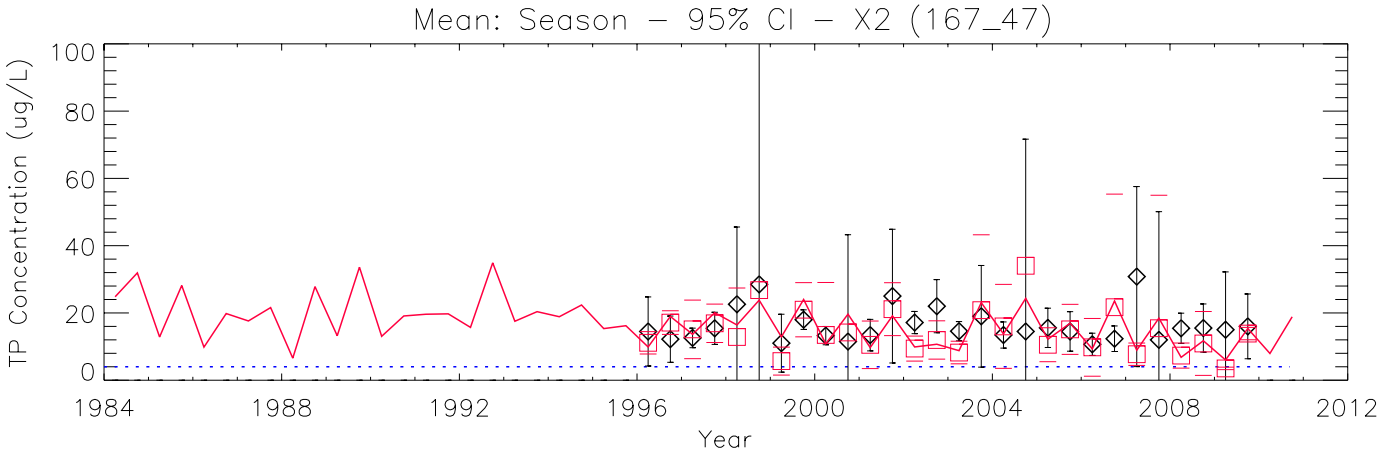

Raw Data (Obs. N = 138) – LOX6 (207_43)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

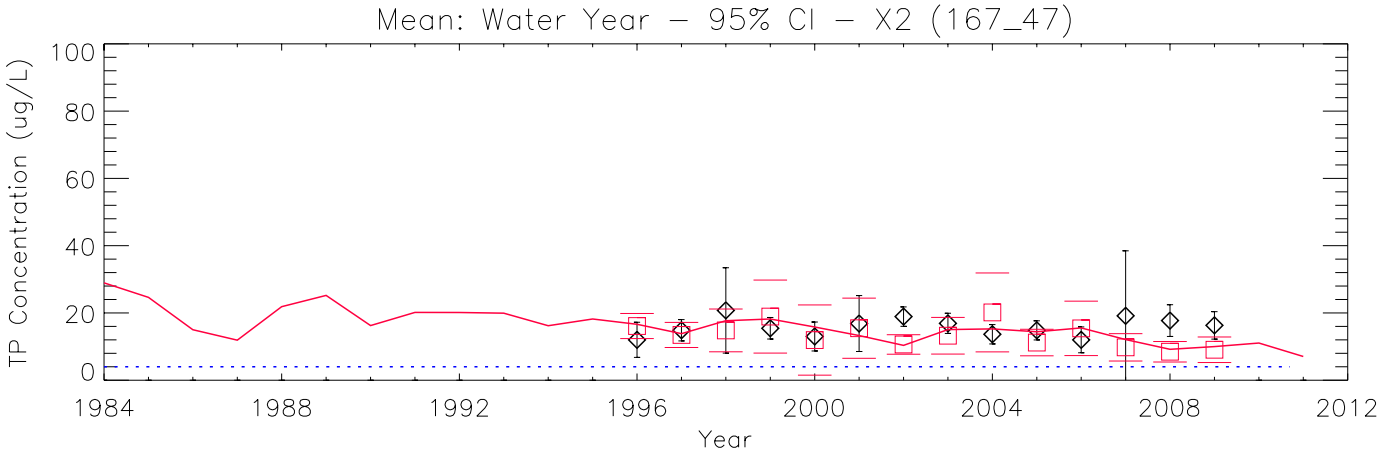

Mean: Season – 95% CI – LOX6 (207_43)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – LOX6 (207_43)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – LOX6 (207_43)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 129) – X2 (167_47)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – X2 (167_47)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – X2 (167_47)
TP Concentration (ug/L)
0
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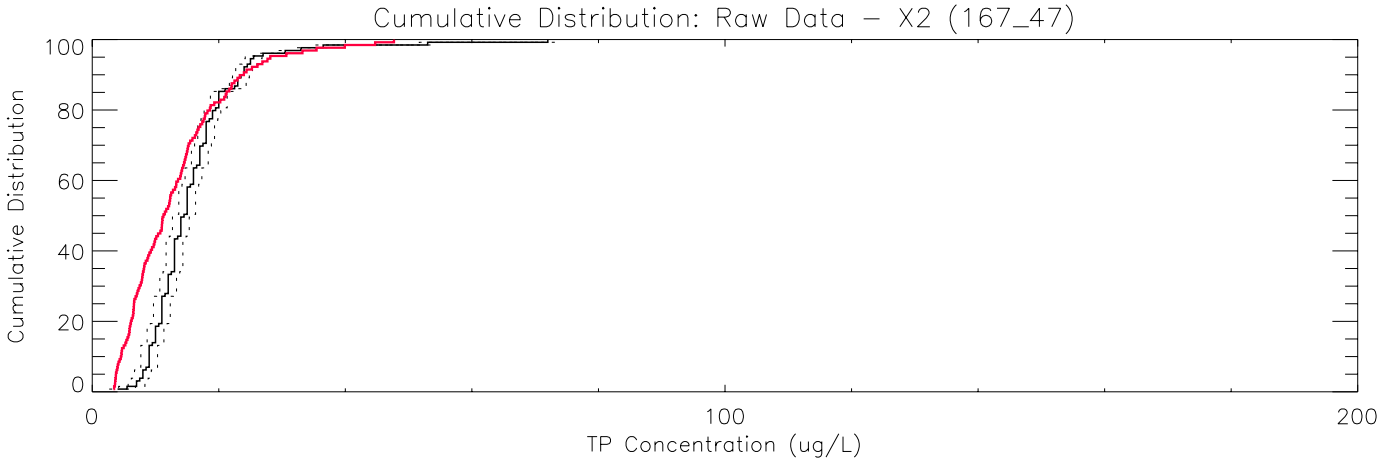
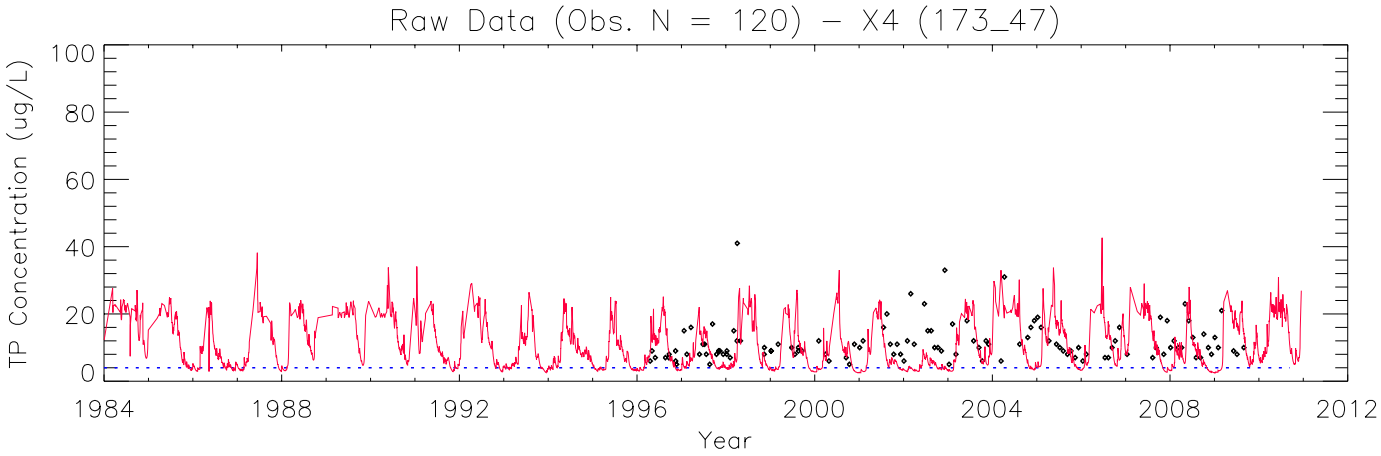
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – X2 (167_47)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 120) – X4 (173_47)
TP Concentration (ug/L)
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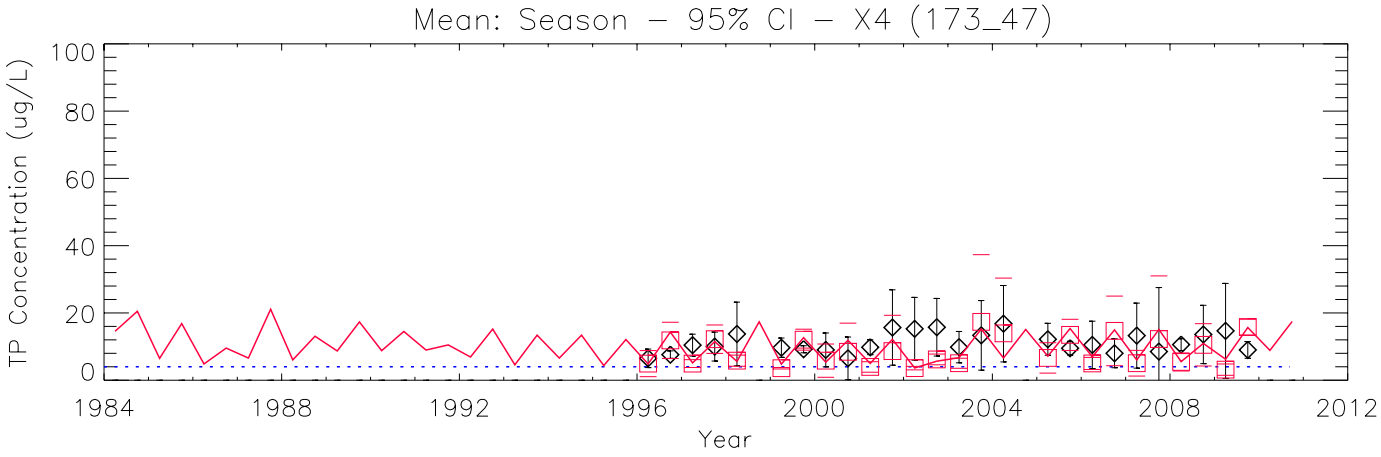
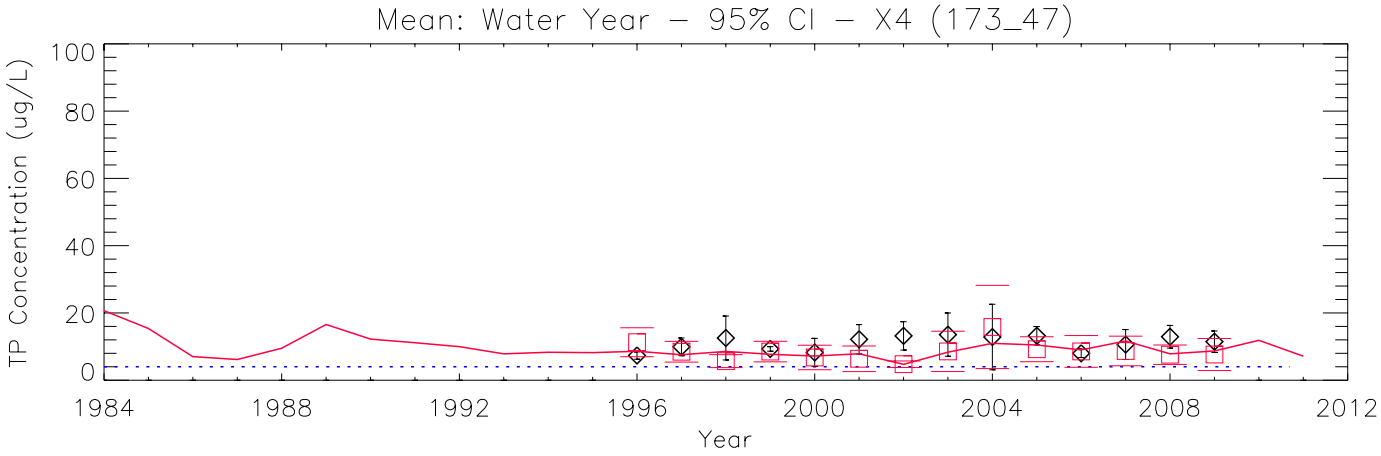
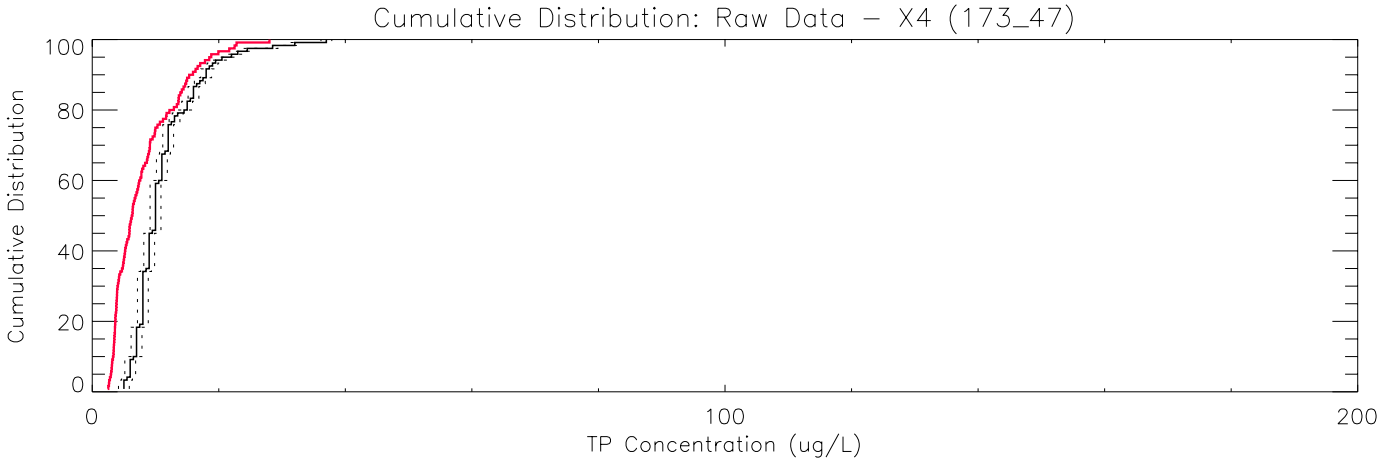
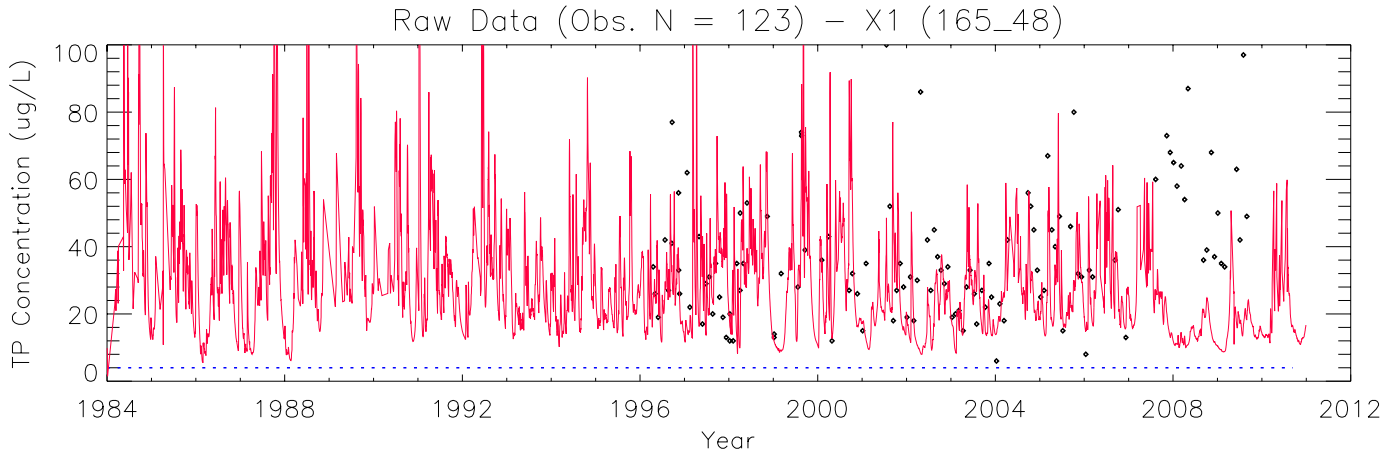
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – X4 (173_47)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – X4 (173_47)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – X4 (173_47)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 123) – X1 (165_48)
TP Concentration (ug/L)
0
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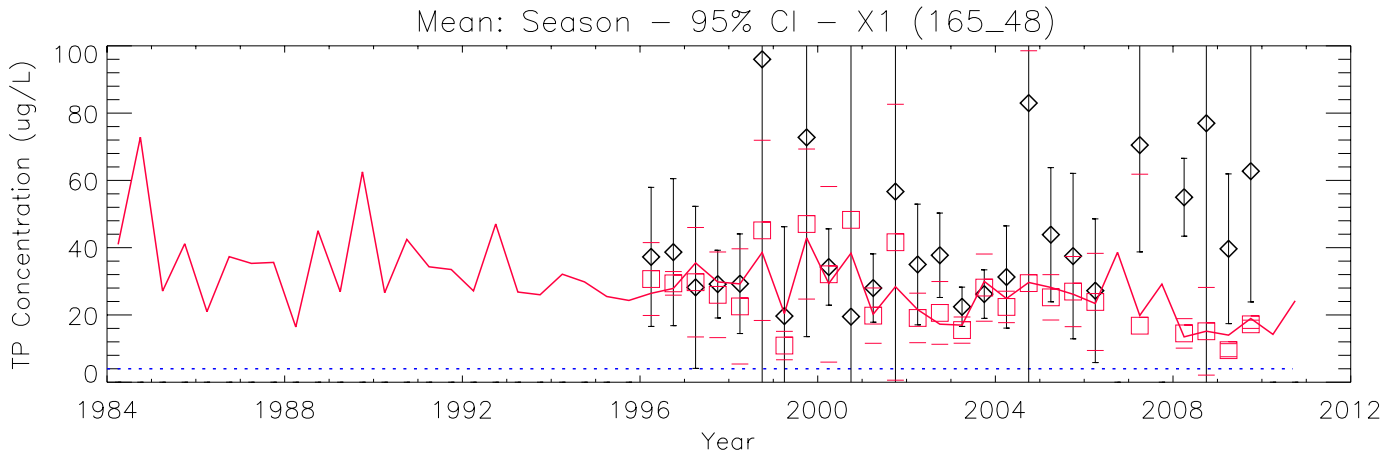
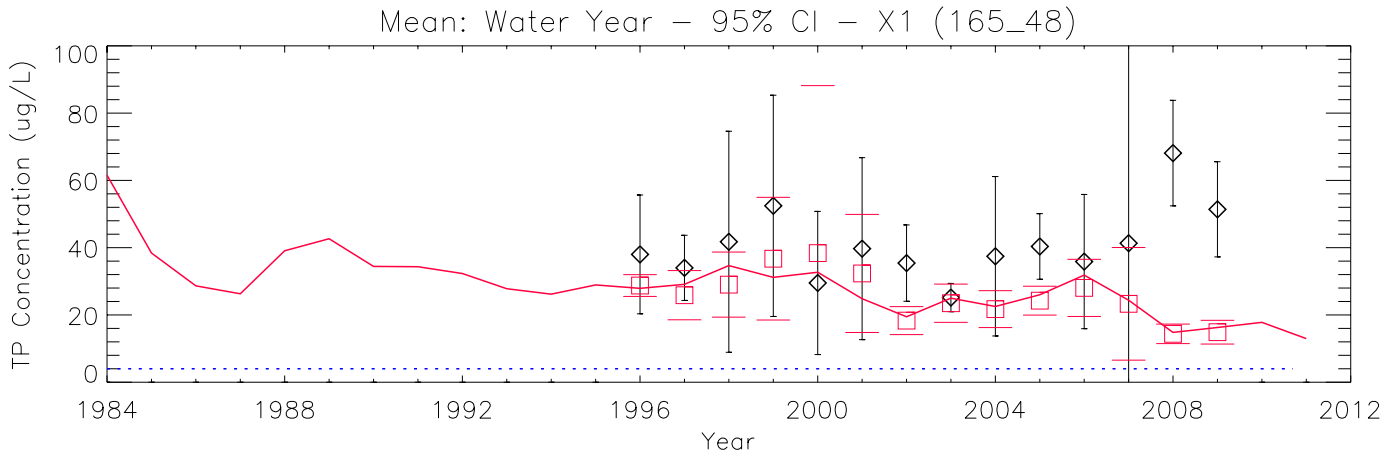
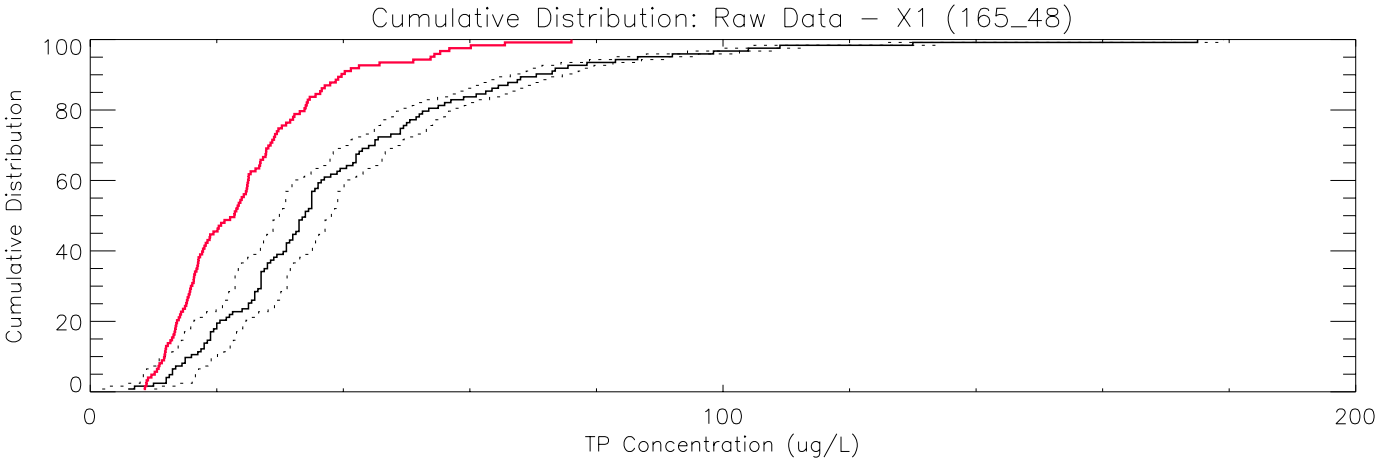
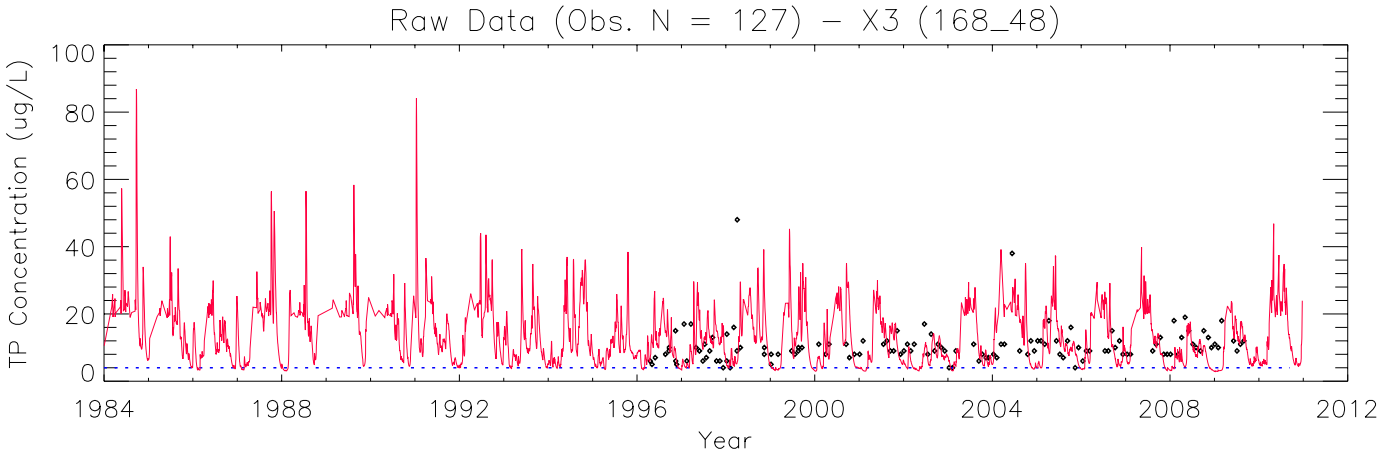
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – X1 (165_48)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – X1 (165_48)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – X1 (165_48)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 127) – X3 (168_48)
TP Concentration (ug/L)
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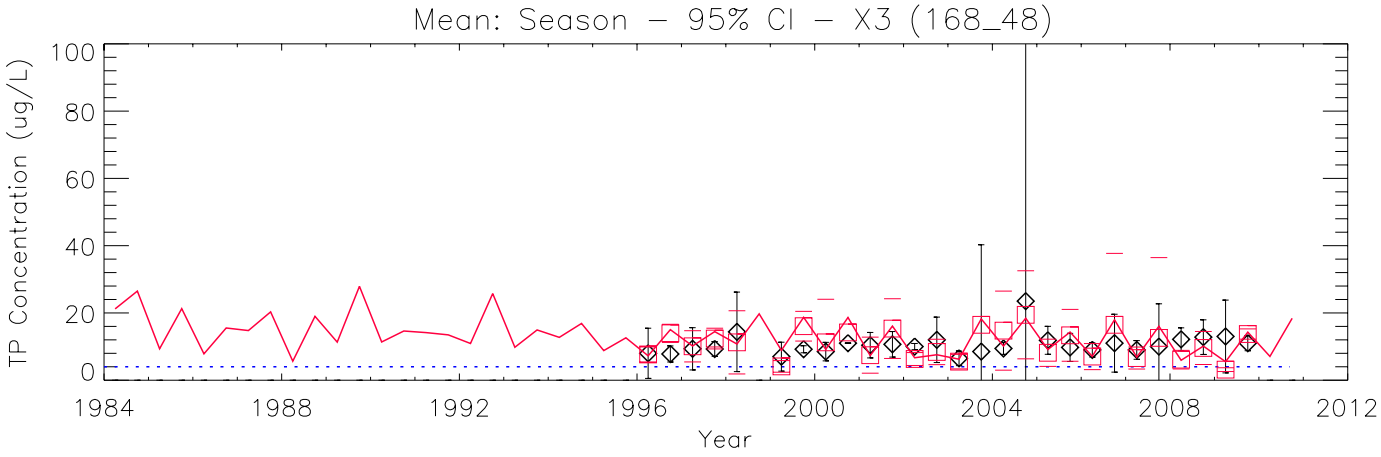
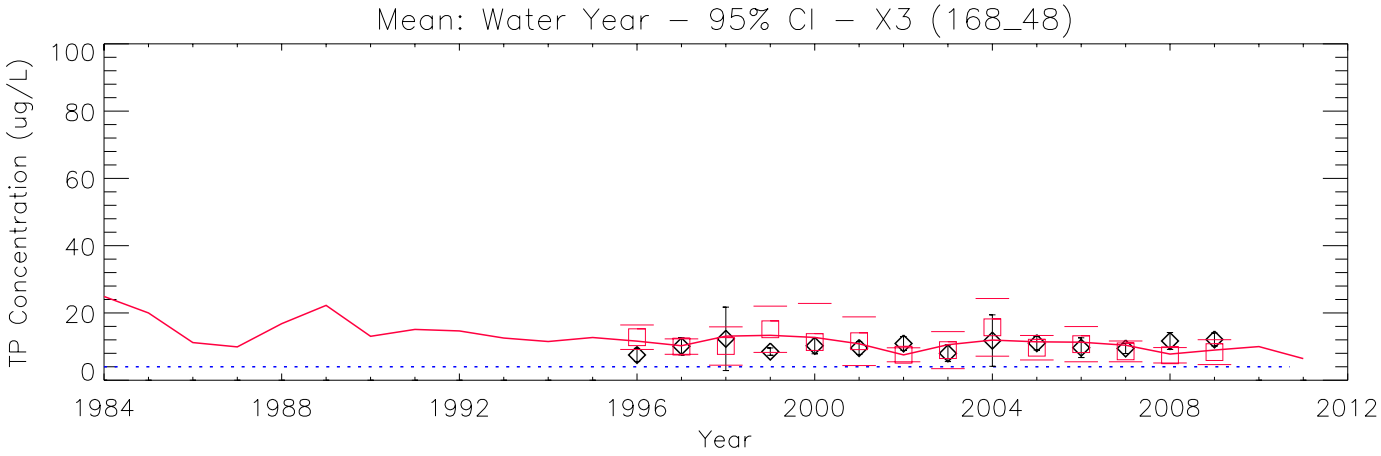
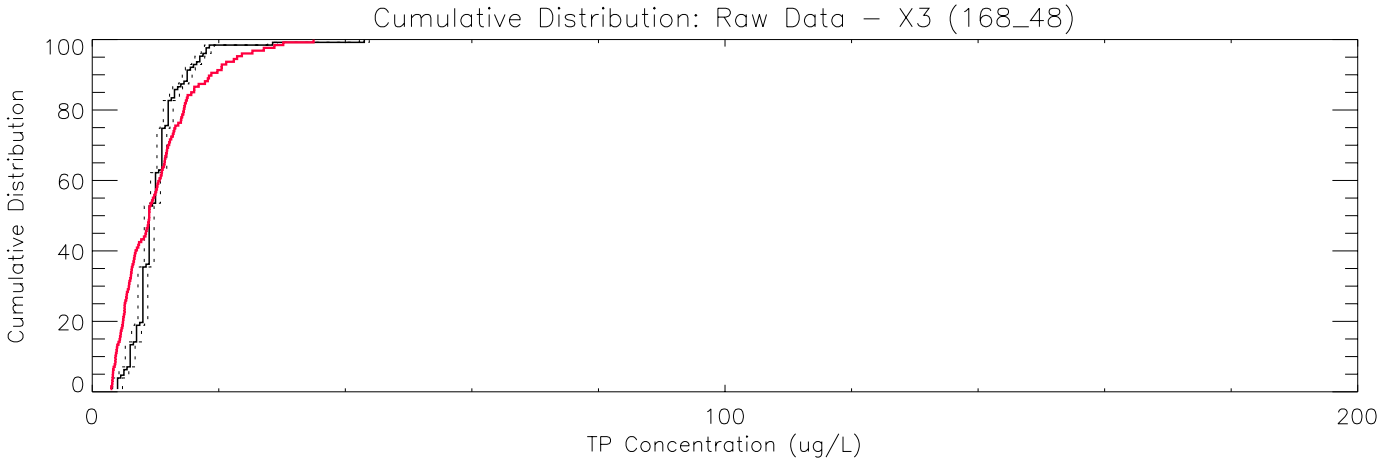
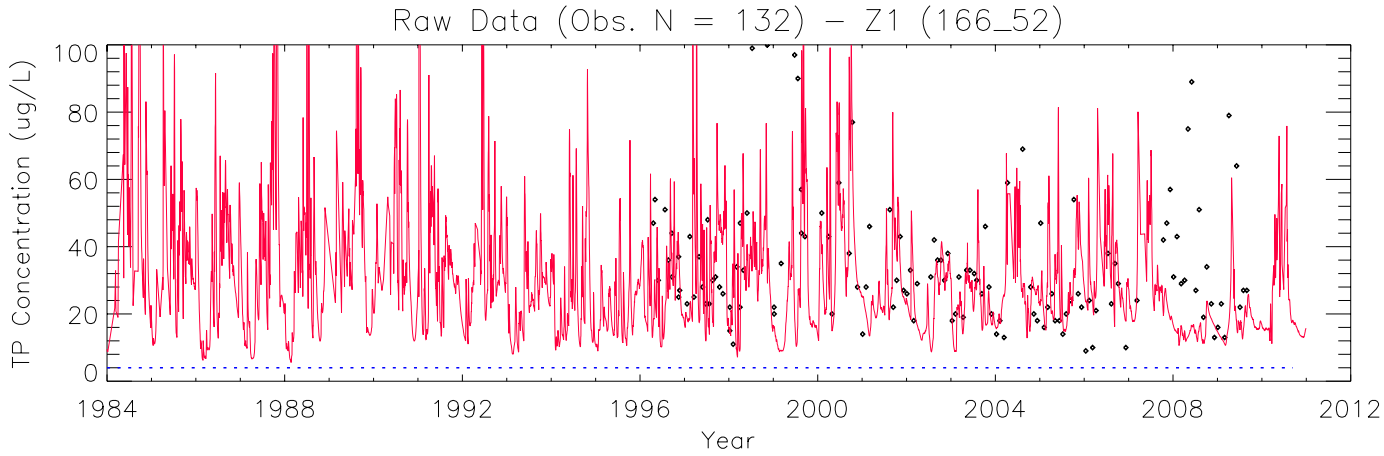
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – X3 (168_48)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – X3 (168_48)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – X3 (168_48)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 132) – Z1 (166_52)
TP Concentration (ug/L)
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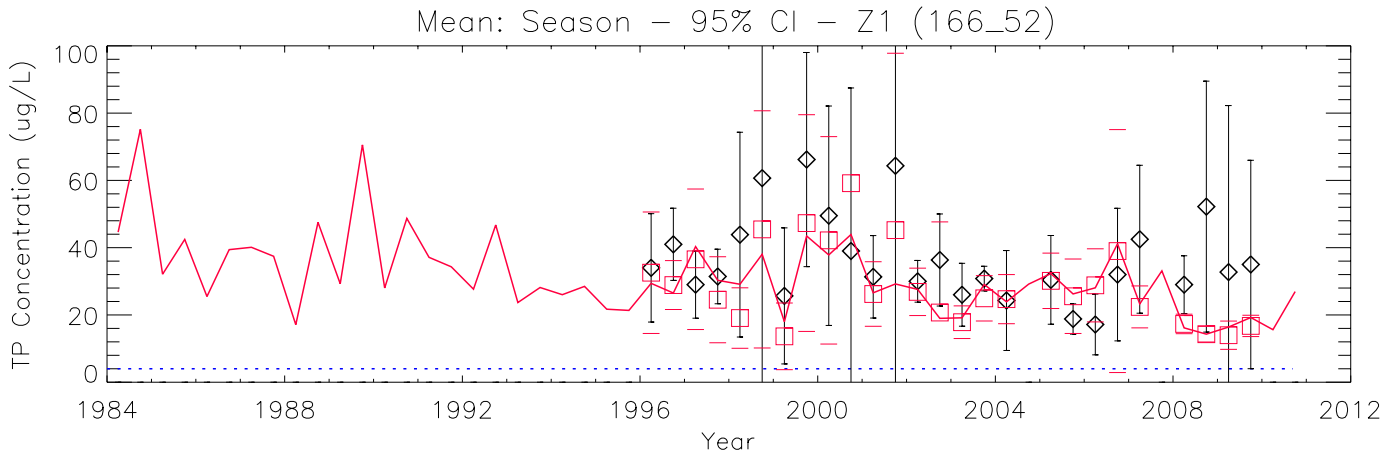
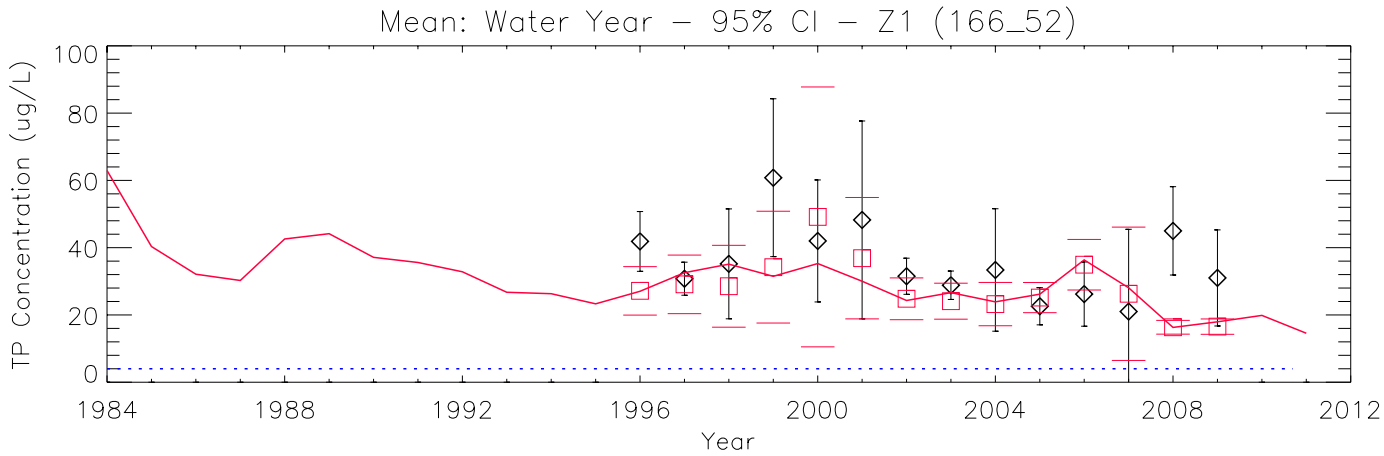
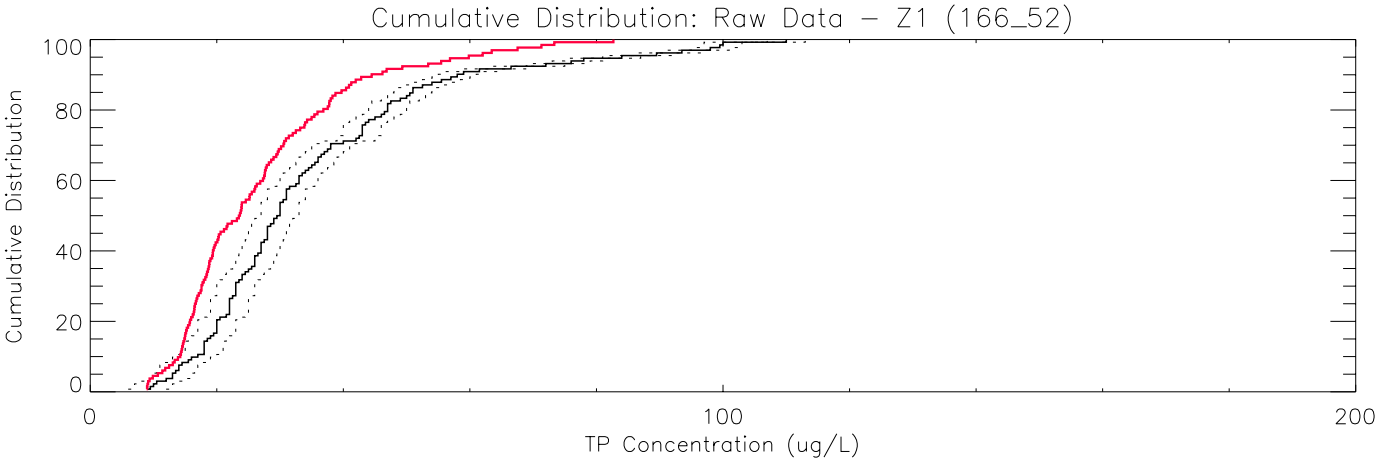
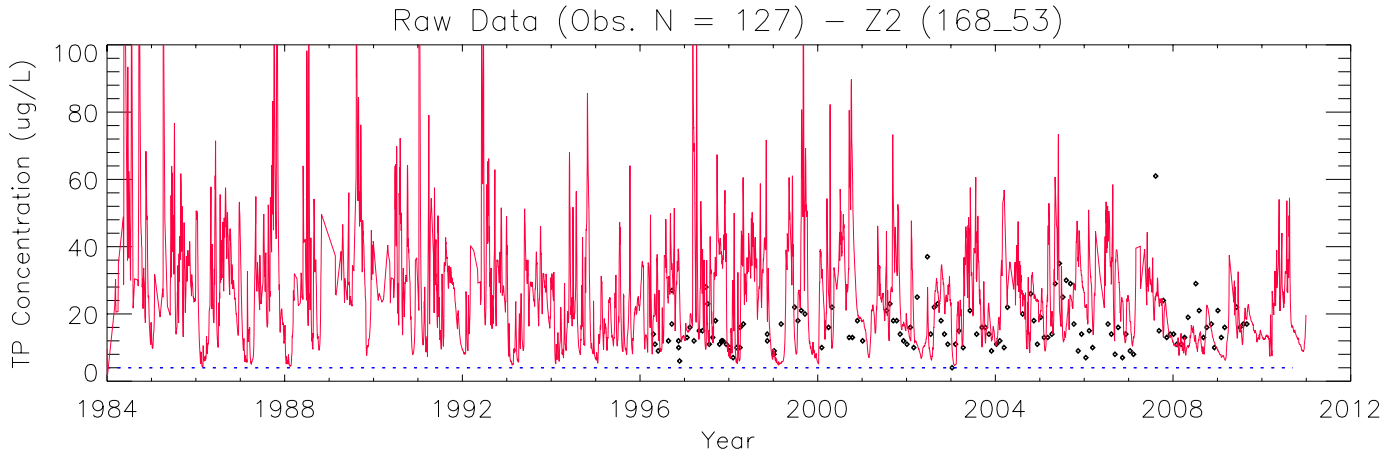
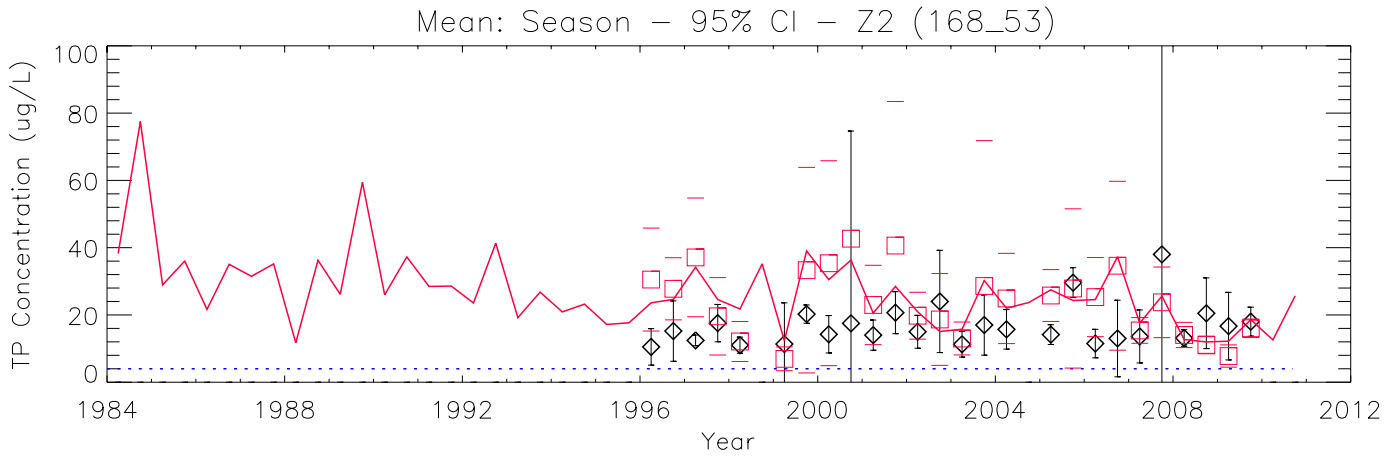
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – Z1 (166_52)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – Z1 (166_52)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – Z1 (166_52)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 127) – Z2 (168_53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – Z2 (168_53)
TP Concentration (ug/L)
0
20
40
60
80
100
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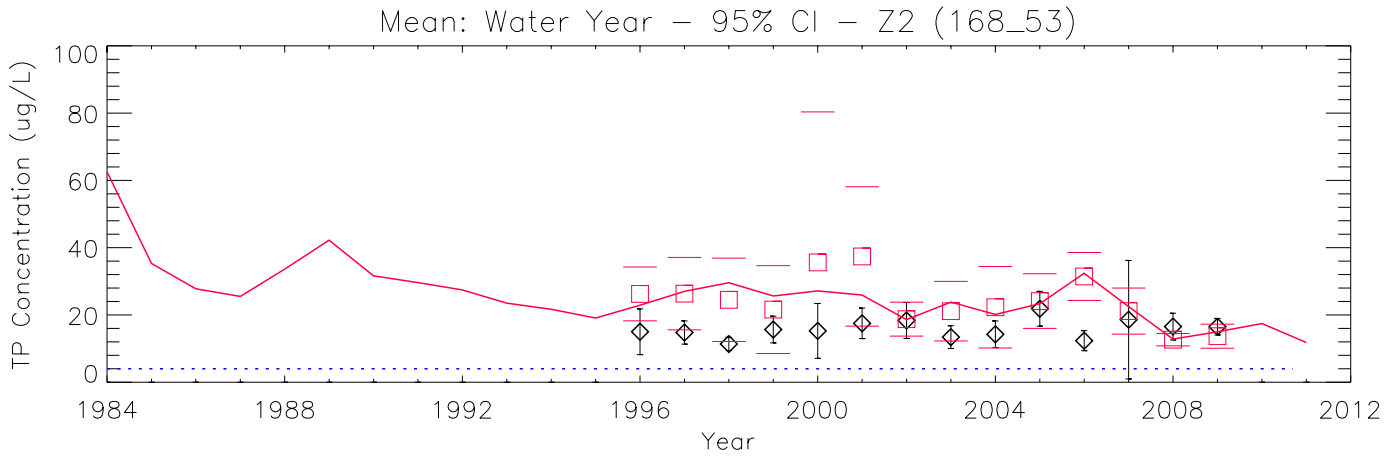
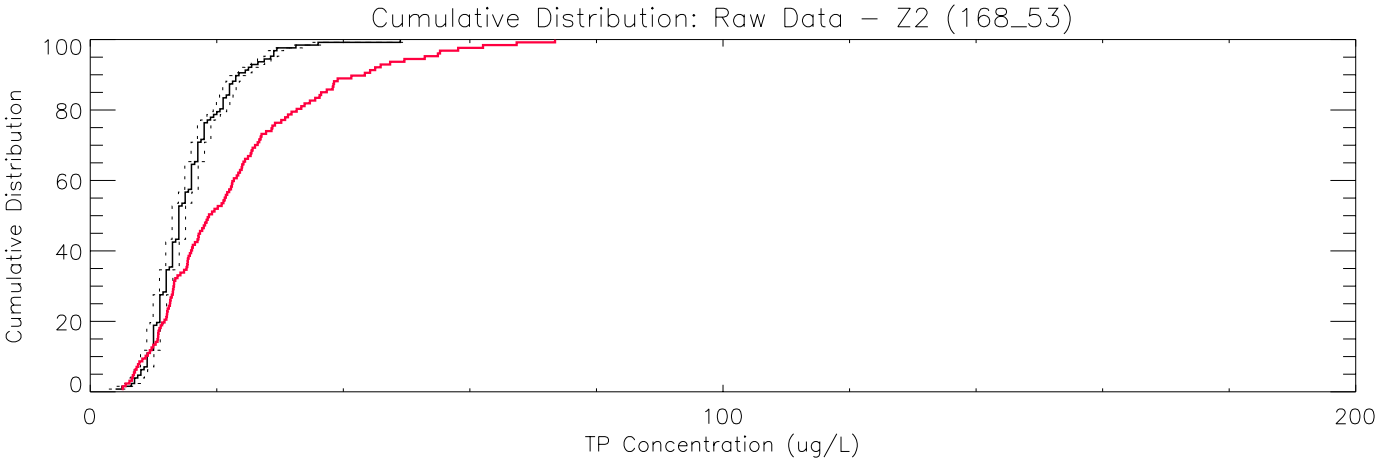
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – Z2 (168_53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – Z2 (168_53)
Cumulative Distribution
0
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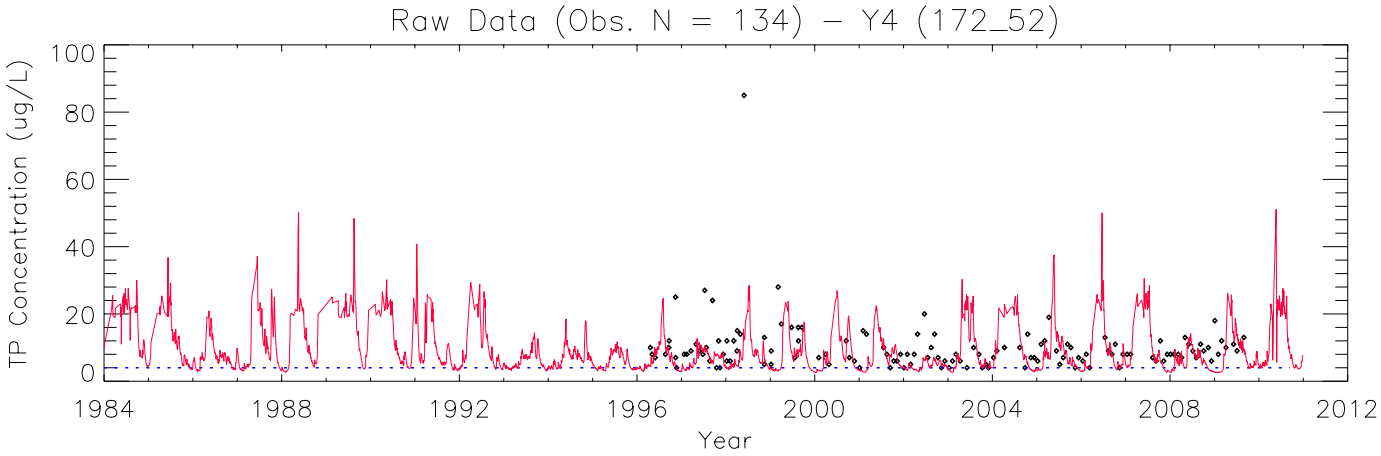
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 134) – Y4 (172_52)
TP Concentration (ug/L)
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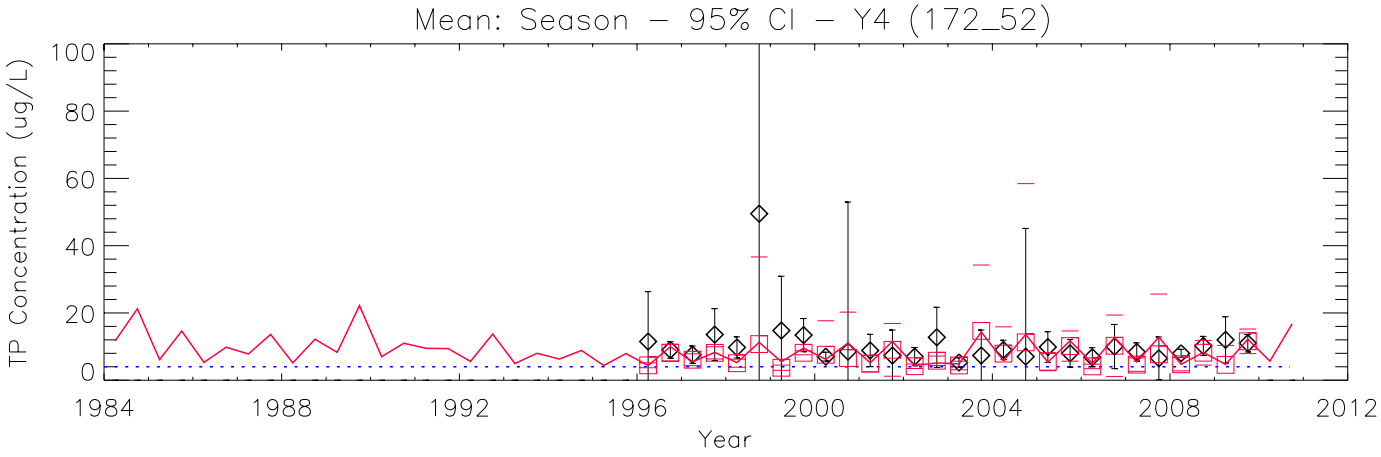
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – Y4 (172_52)
TP Concentration (ug/L)
0
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40
60
80
100
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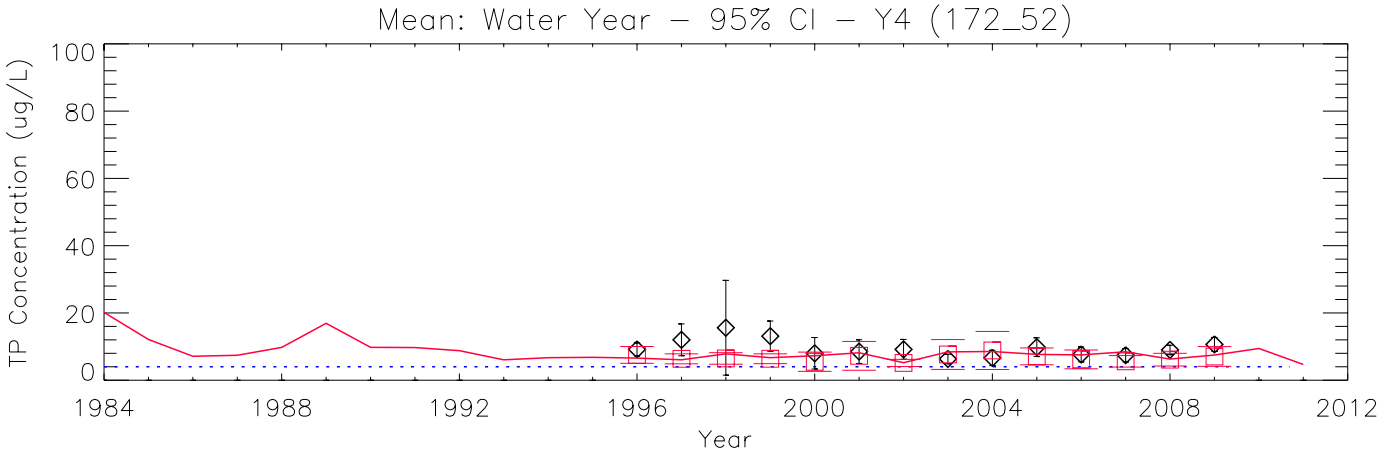
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – Y4 (172_52)
TP Concentration (ug/L)
0
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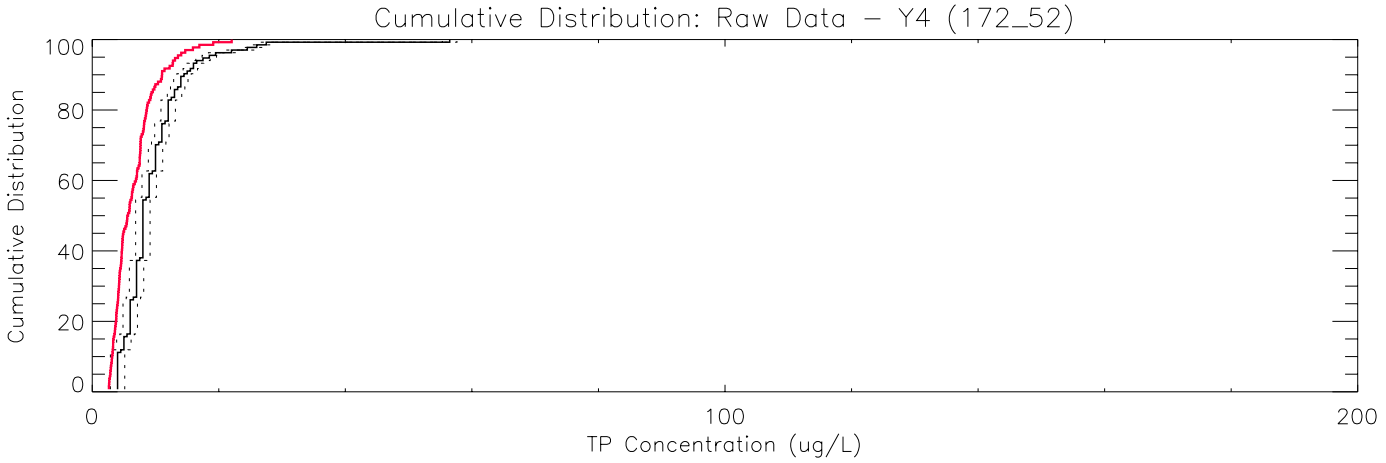
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – Y4 (172_52)
Cumulative Distribution
0
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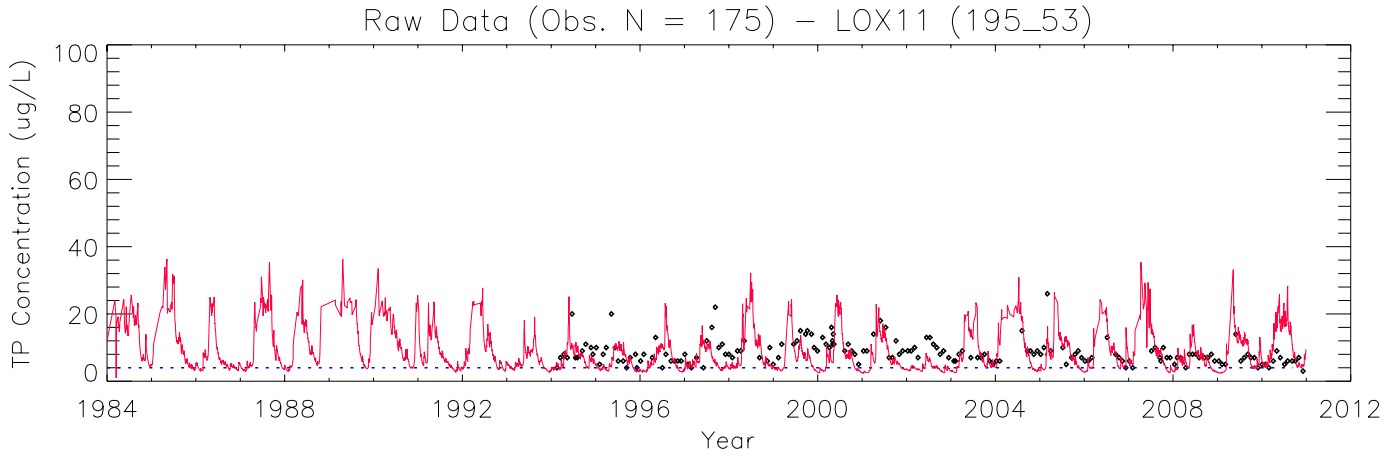
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 175) – LOX11 (195_53)
TP Concentration (ug/L)
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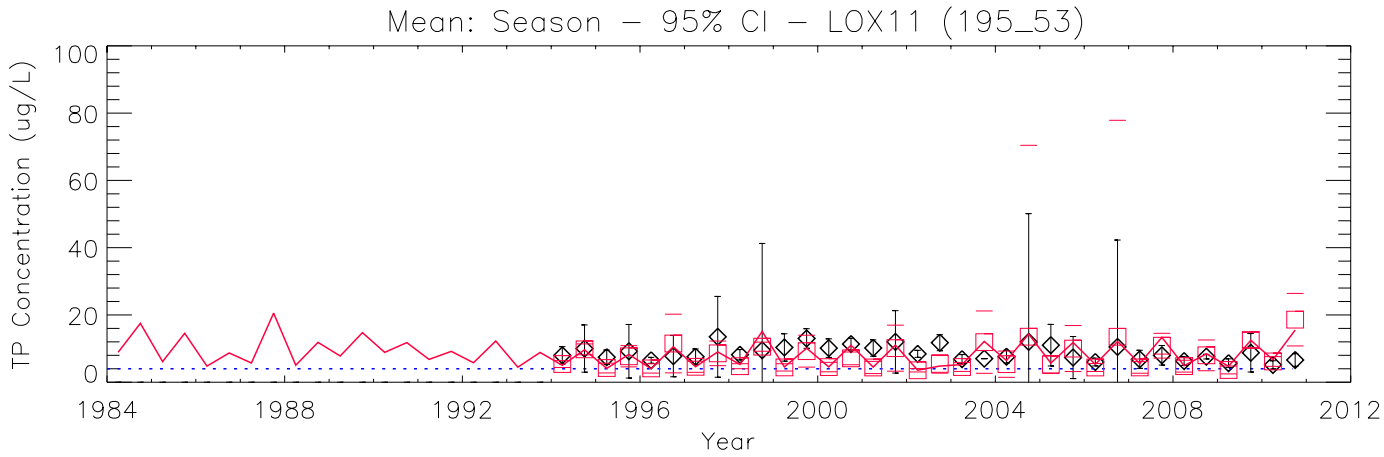
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – LOX11 (195_53)
TP Concentration (ug/L)
0
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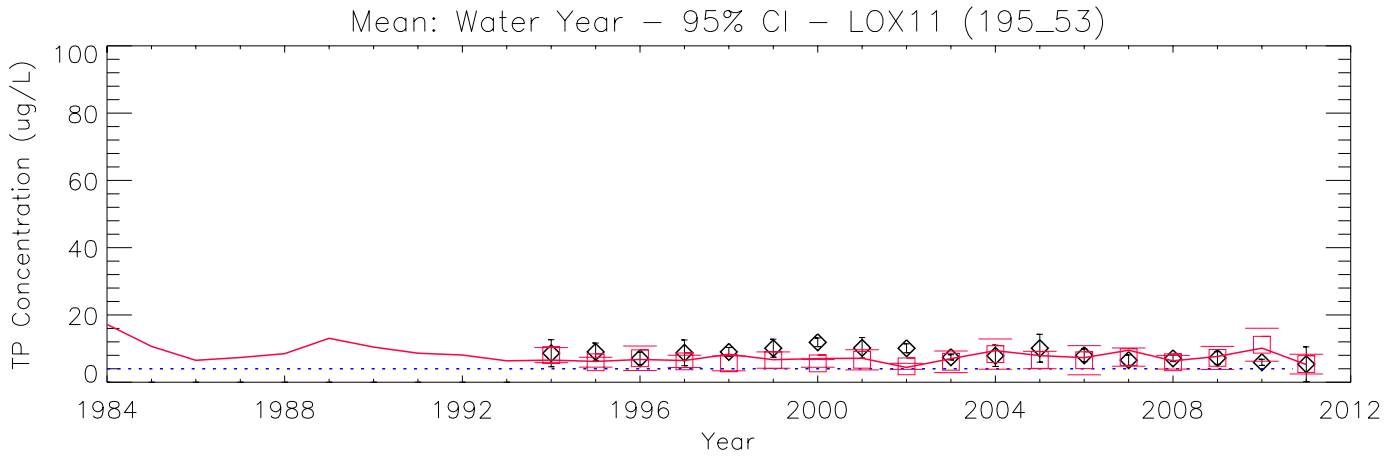
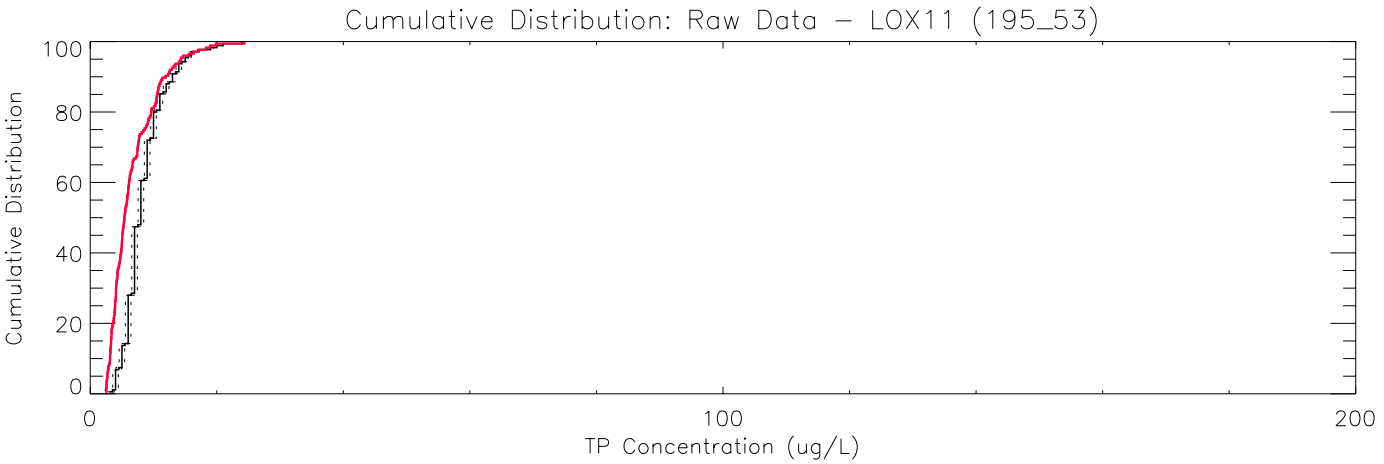
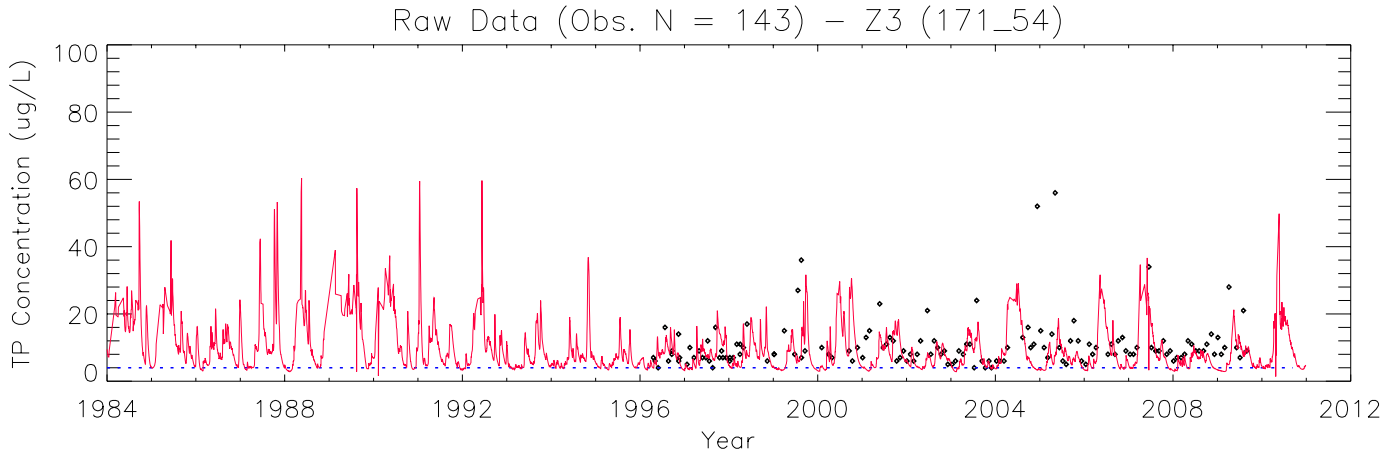
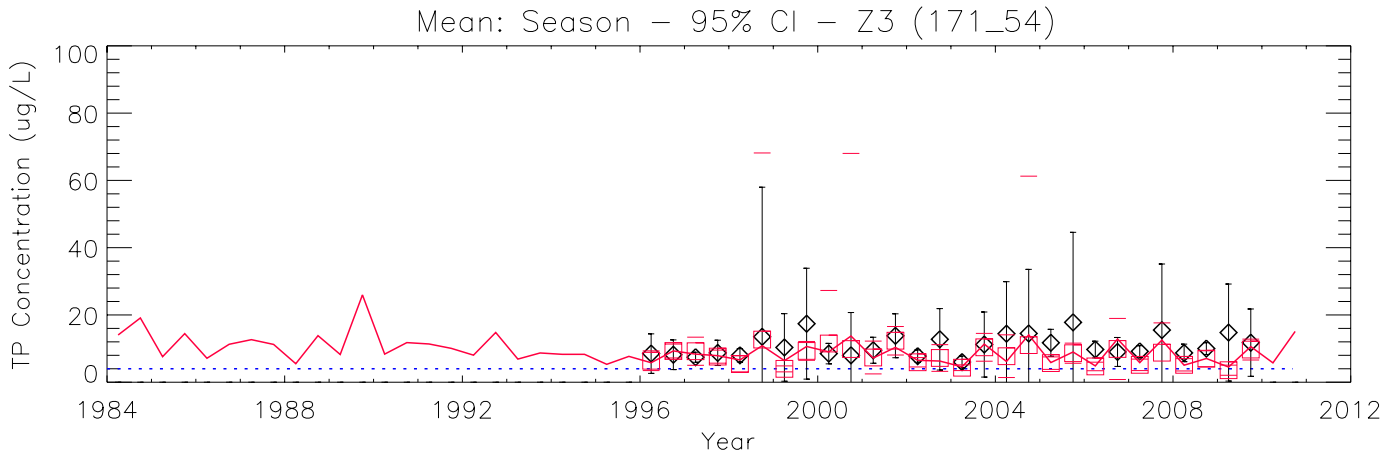
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – LOX11 (195_53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – LOX11 (195_53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 143) – Z3 (171_54)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – Z3 (171_54)
TP Concentration (ug/L)
0
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60
80
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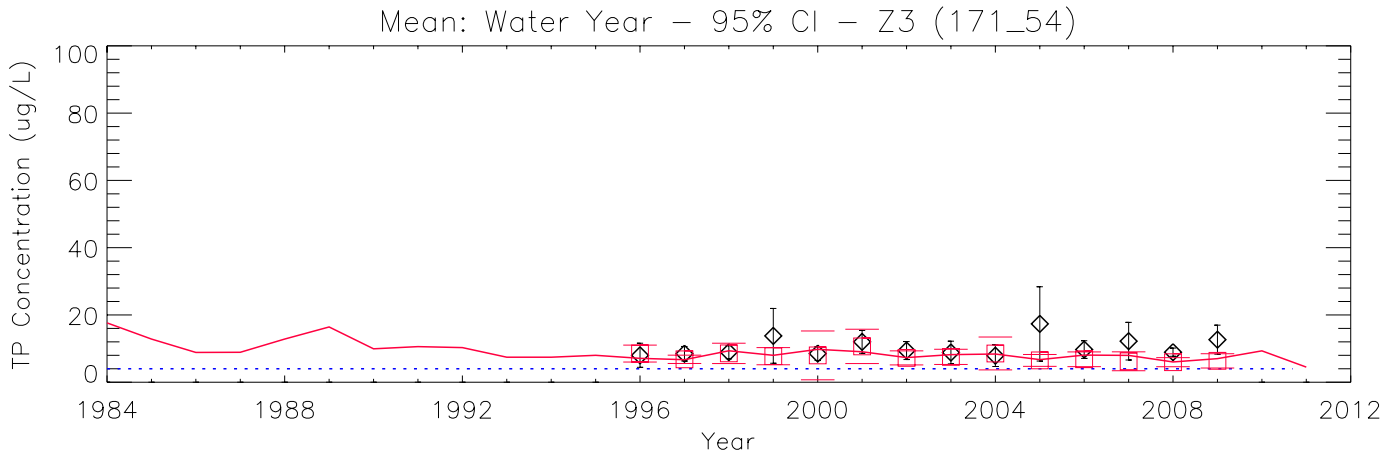
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – Z3 (171_54)
TP Concentration (ug/L)
0
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60
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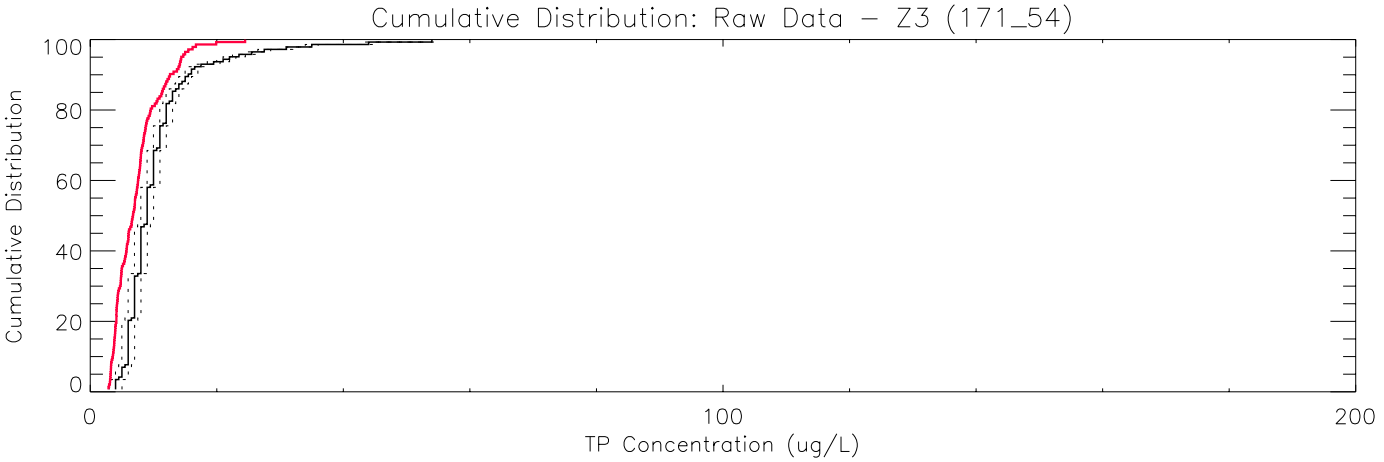
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – Z3 (171_54)
Cumulative Distribution
0
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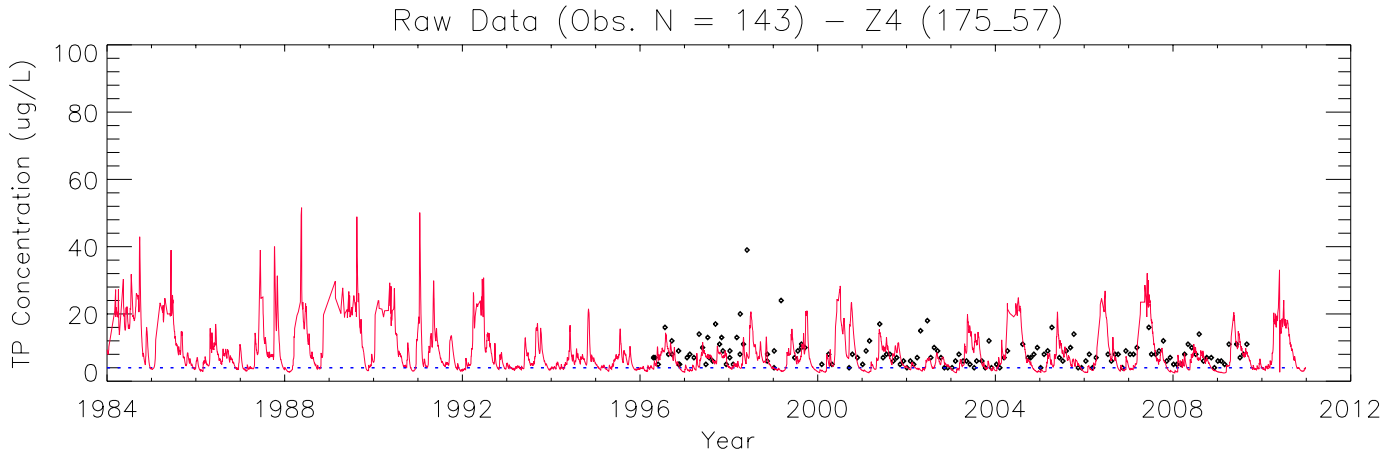
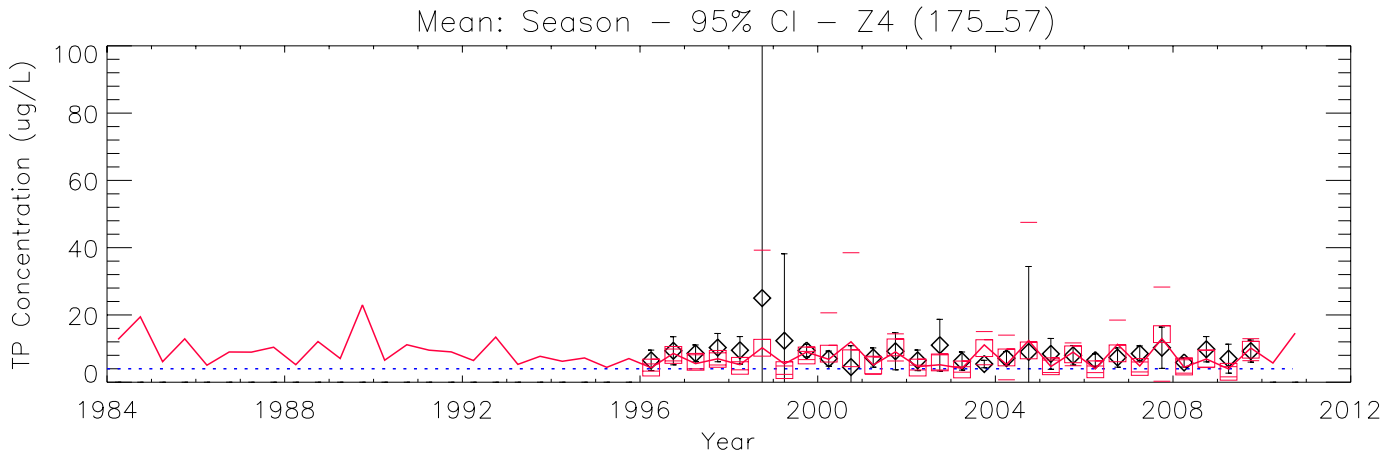
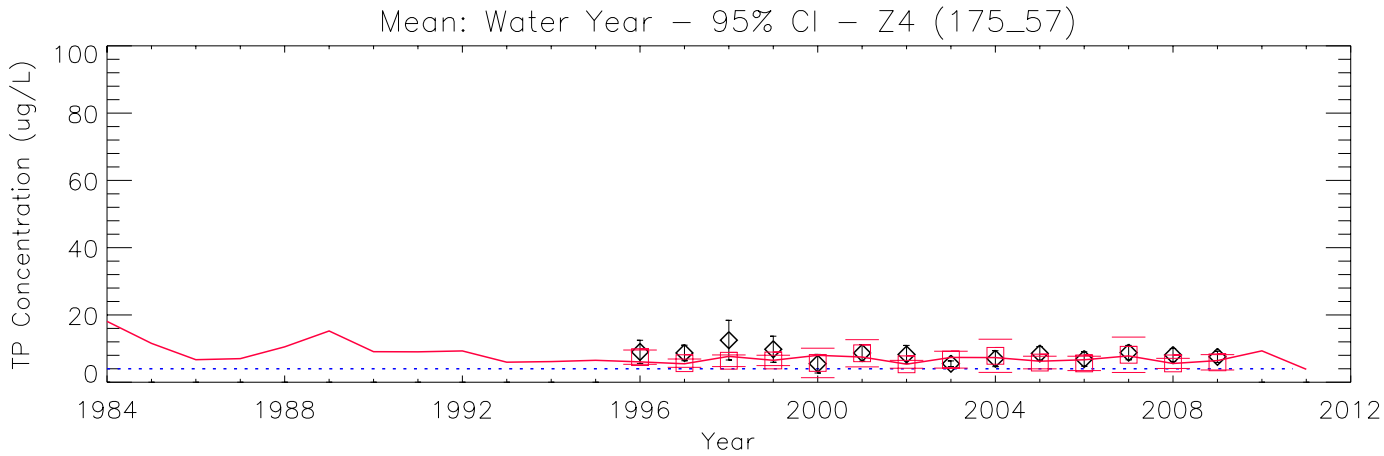
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 143) – Z4 (175_57)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – Z4 (175_57)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – Z4 (175_57)
TP Concentration (ug/L)
0
20
40
60
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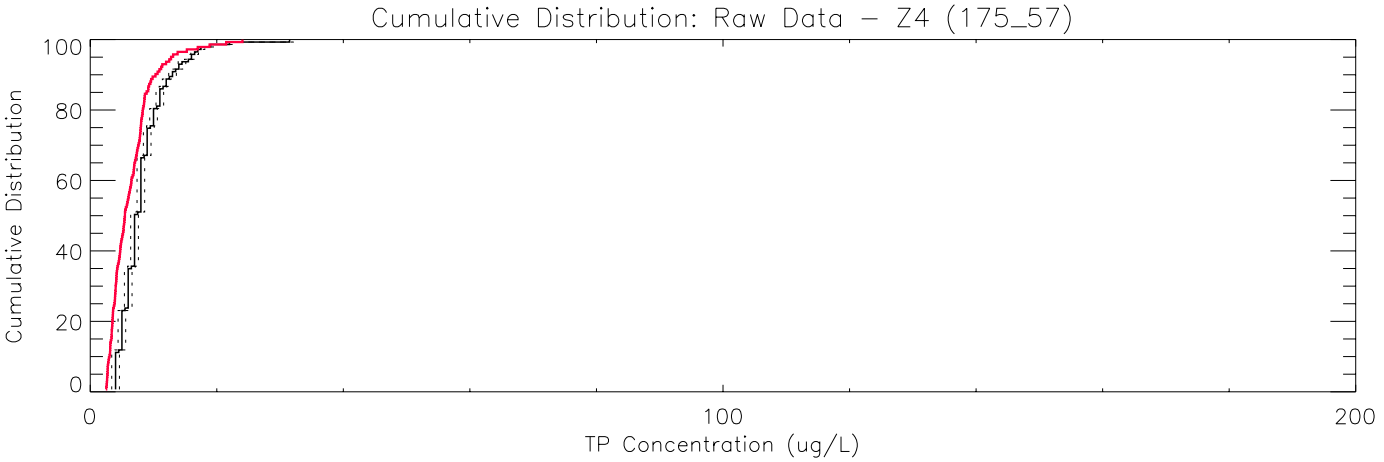
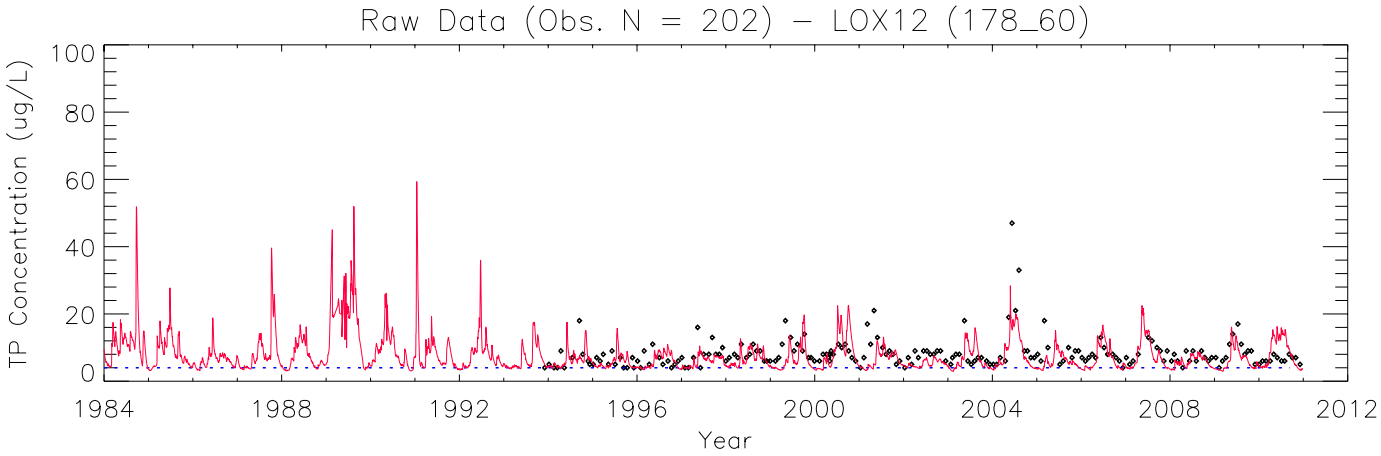
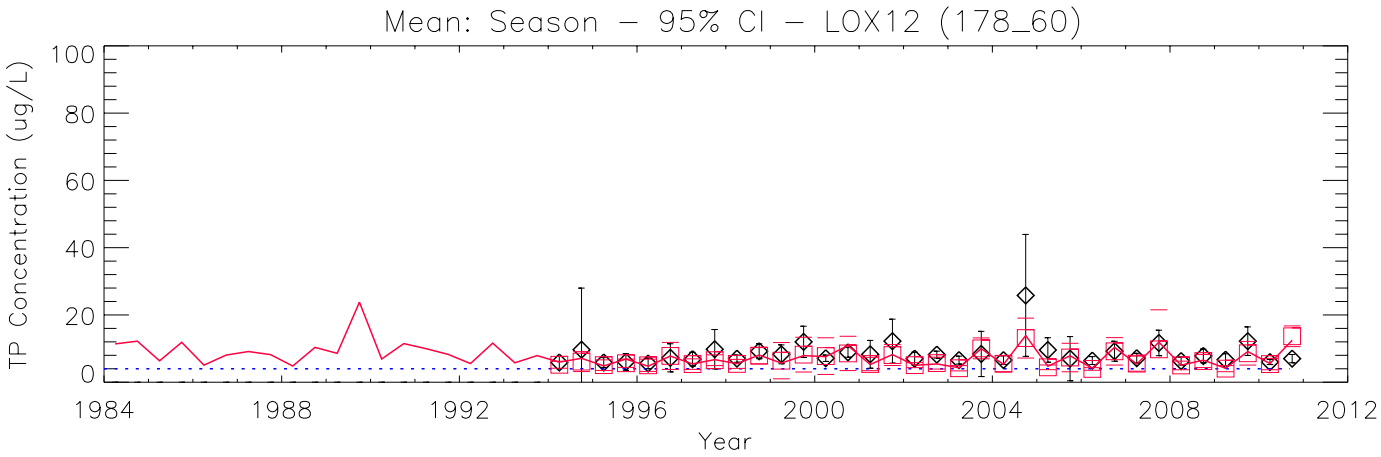
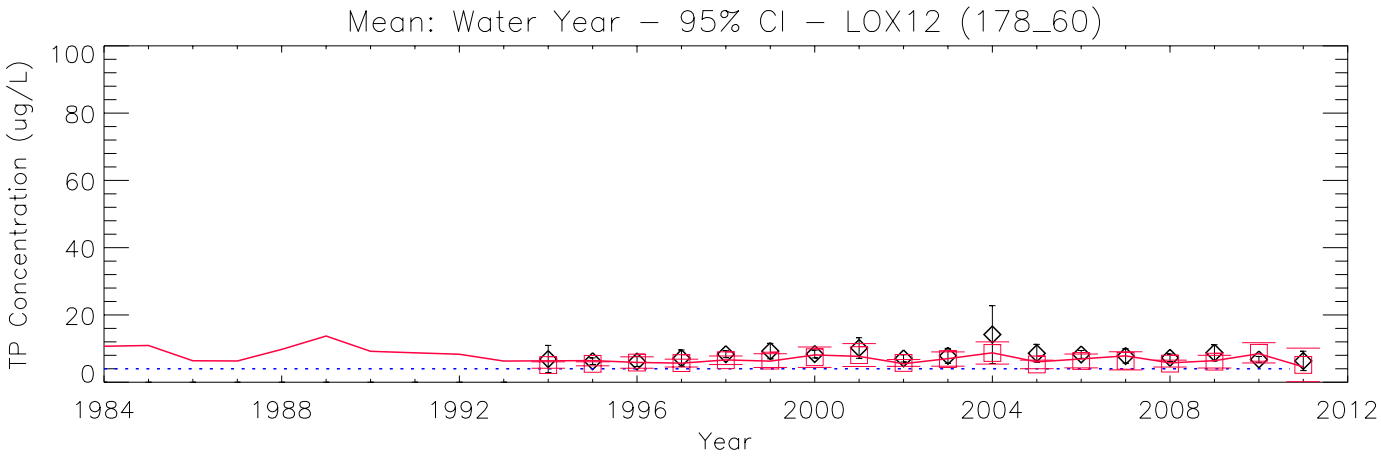
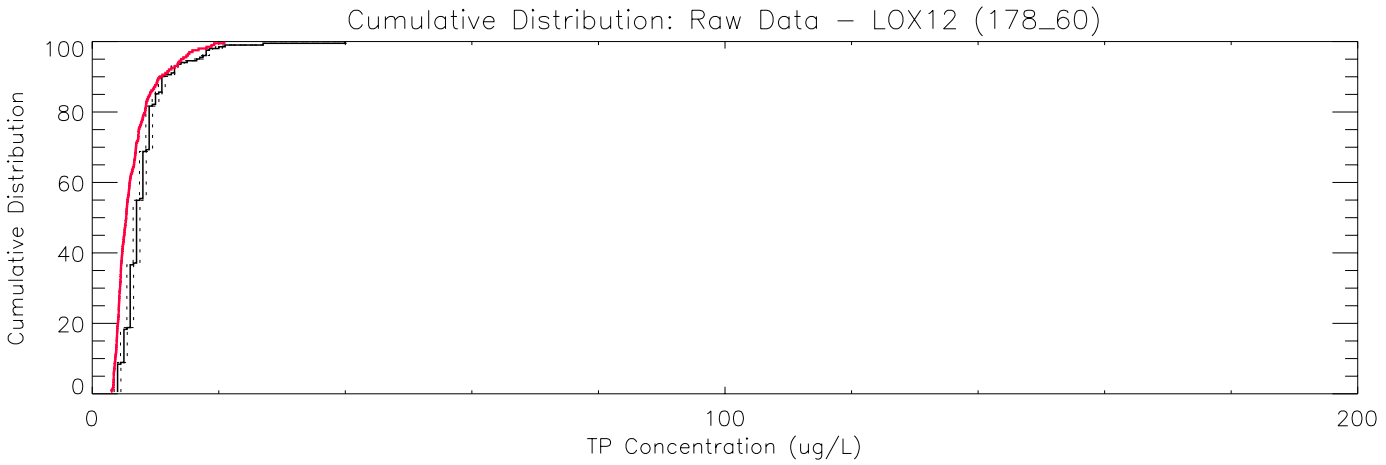
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

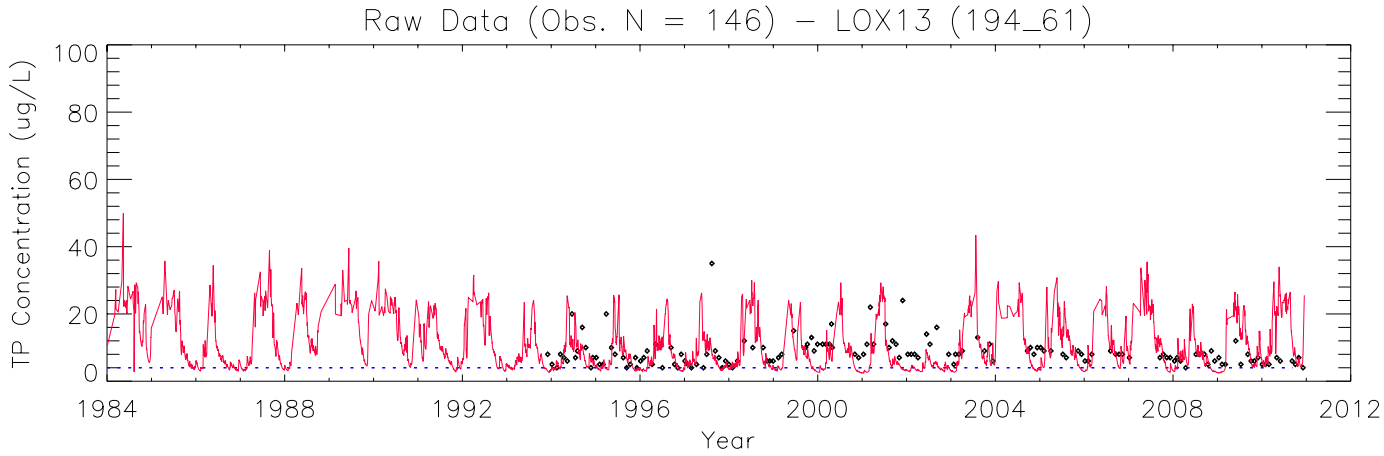

Cumulative Distribution: Raw Data – Z4 (175_57)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

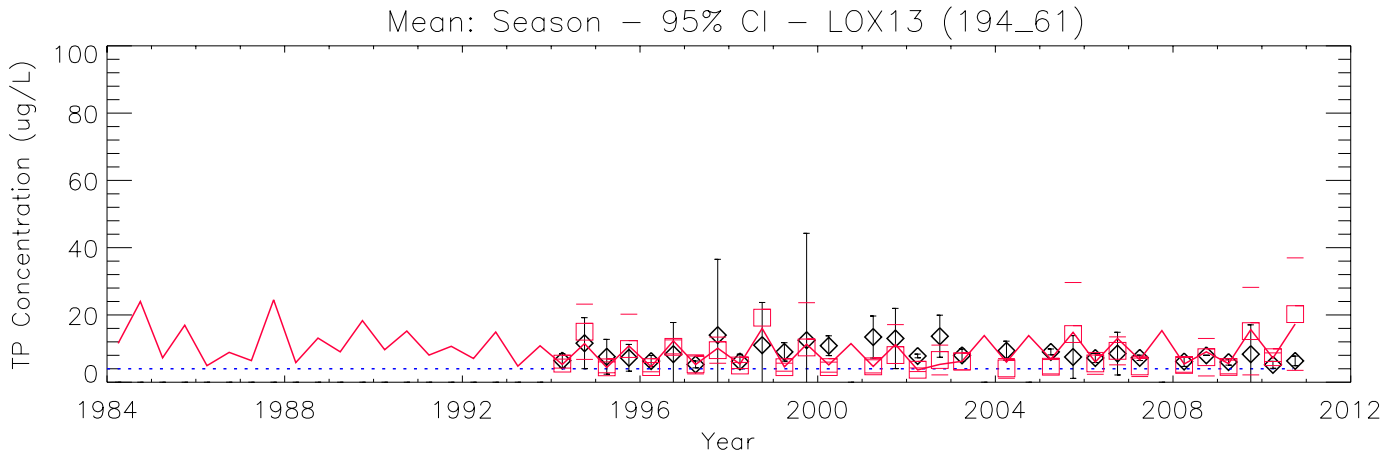

Raw Data (Obs. N = 202) – LOX12 (178_60)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

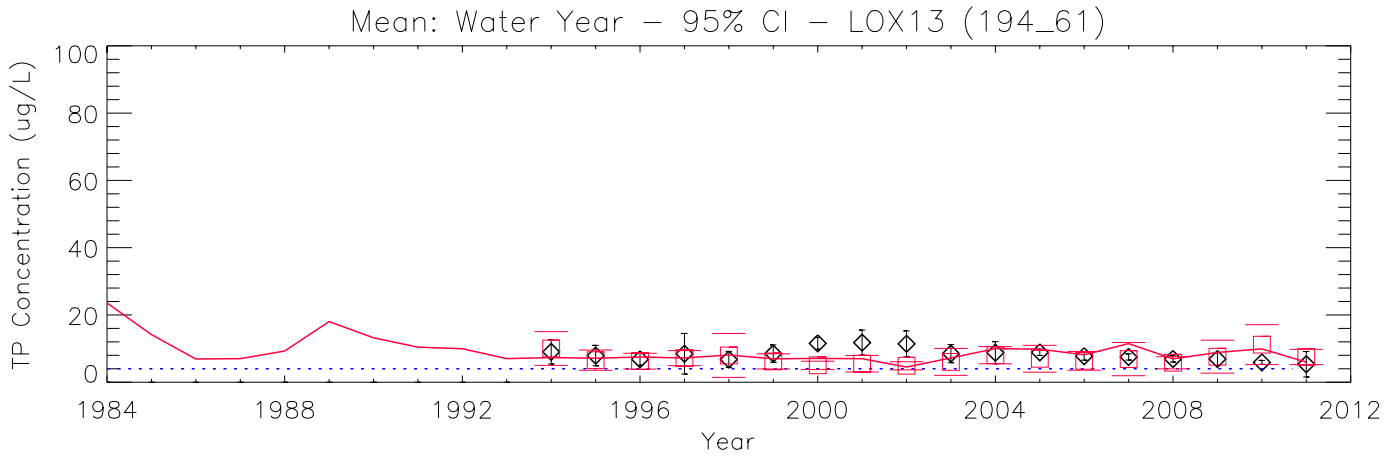

Mean: Season – 95% CI – LOX12 (178_60)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

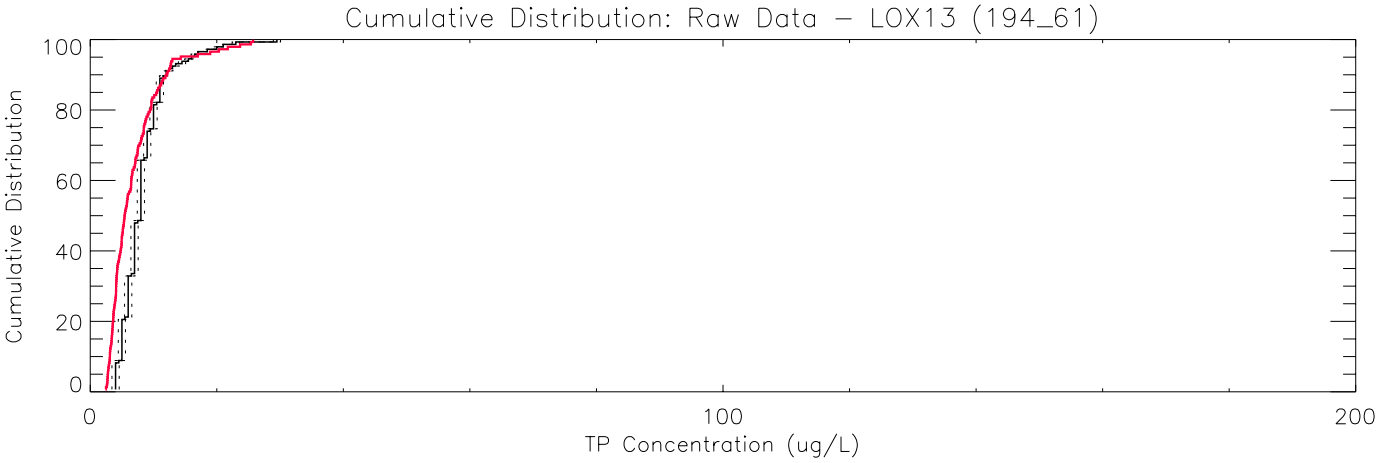

Mean: Water Year – 95% CI – LOX12 (178_60)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

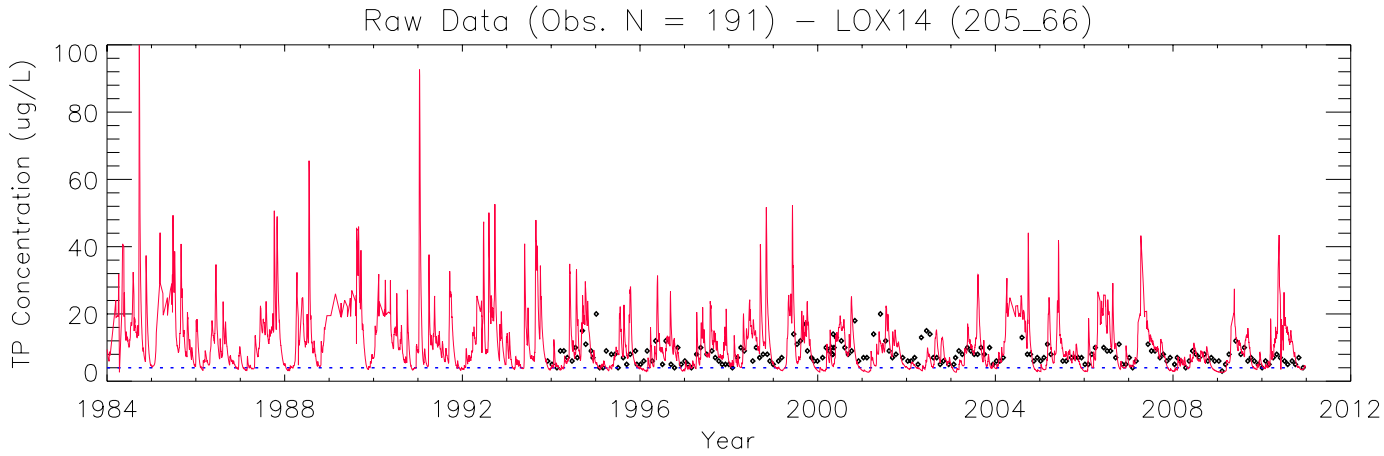

Cumulative Distribution: Raw Data – LOX12 (178_60)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

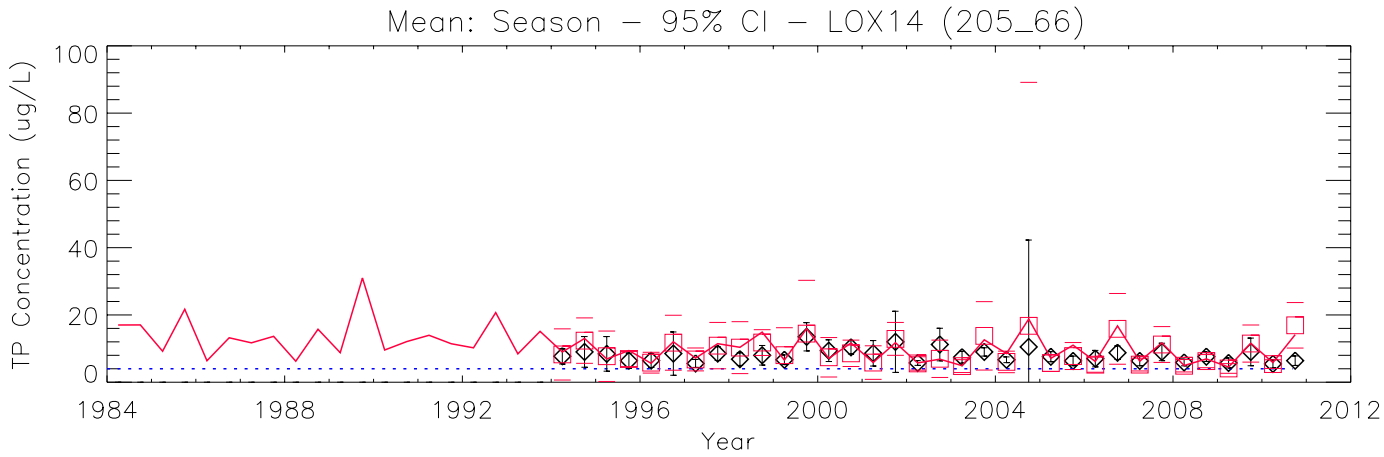

Raw Data (Obs. N = 146) – LOX13 (194_61)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

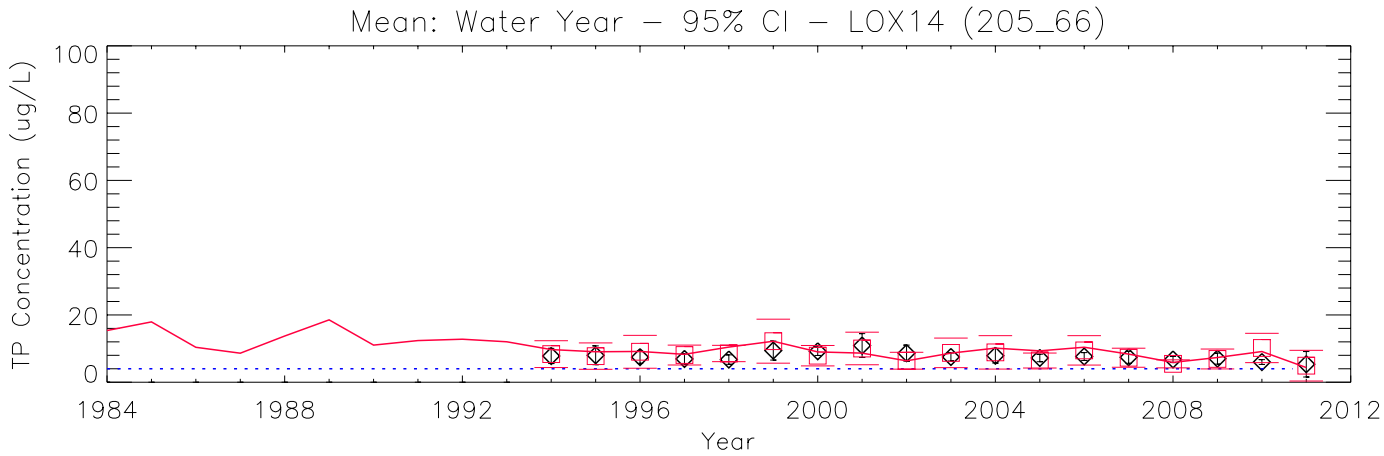

Mean: Season – 95% CI – LOX13 (194_61)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

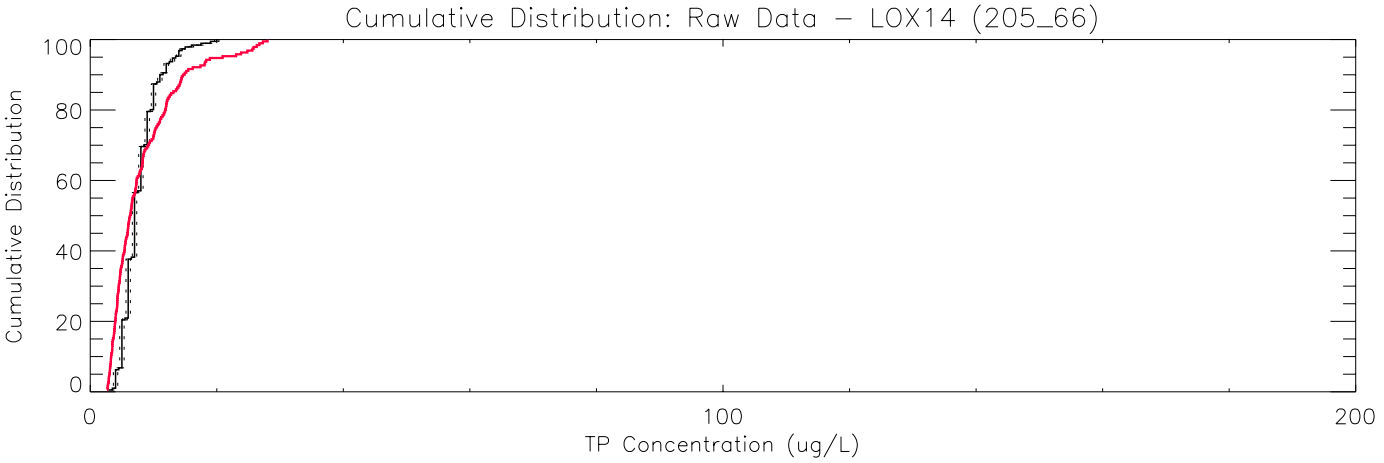

Mean: Water Year – 95% CI – LOX13 (194_61)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

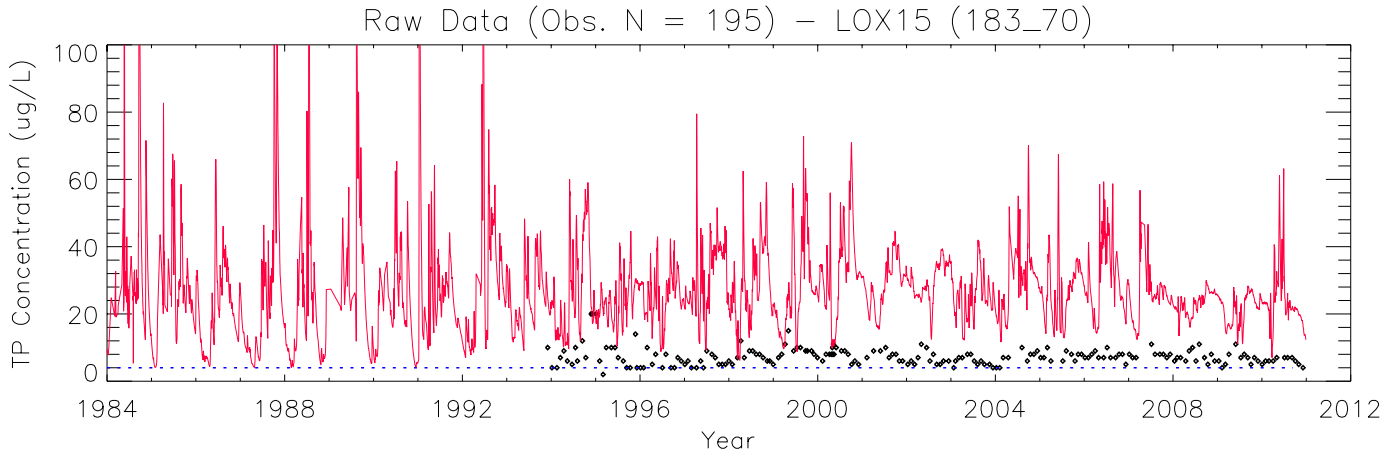

Cumulative Distribution: Raw Data – LOX13 (194_61)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

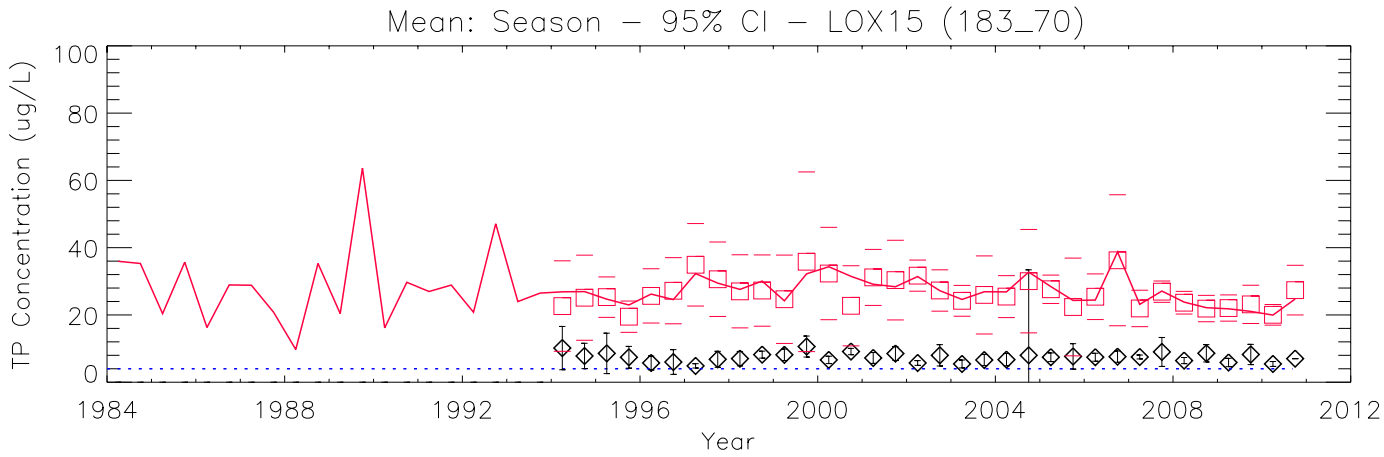

Raw Data (Obs. N = 191) – LOX14 (205_66)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

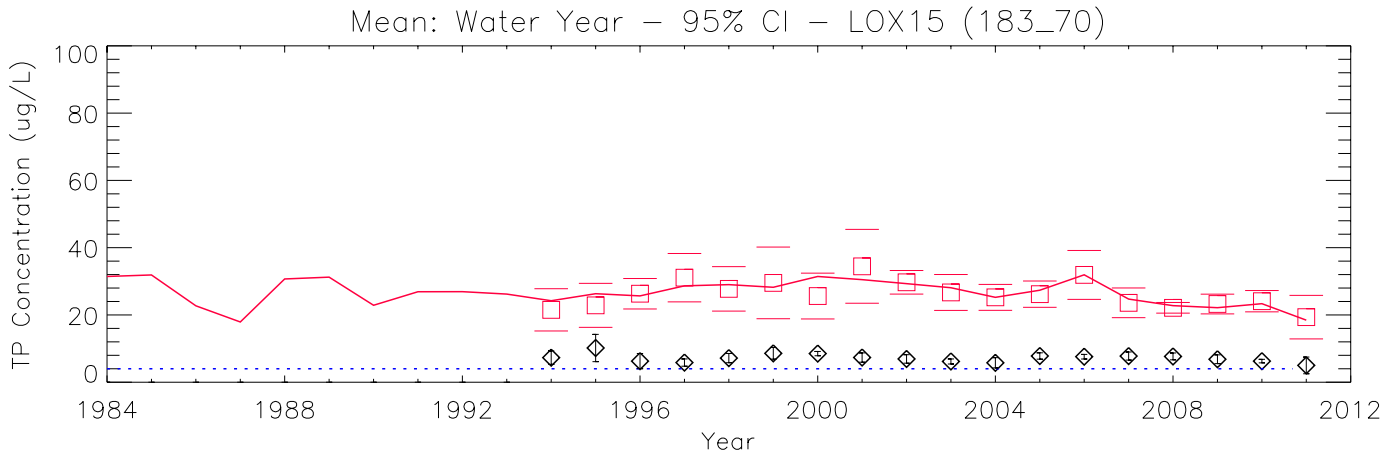

Mean: Season – 95% CI – LOX14 (205_66)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

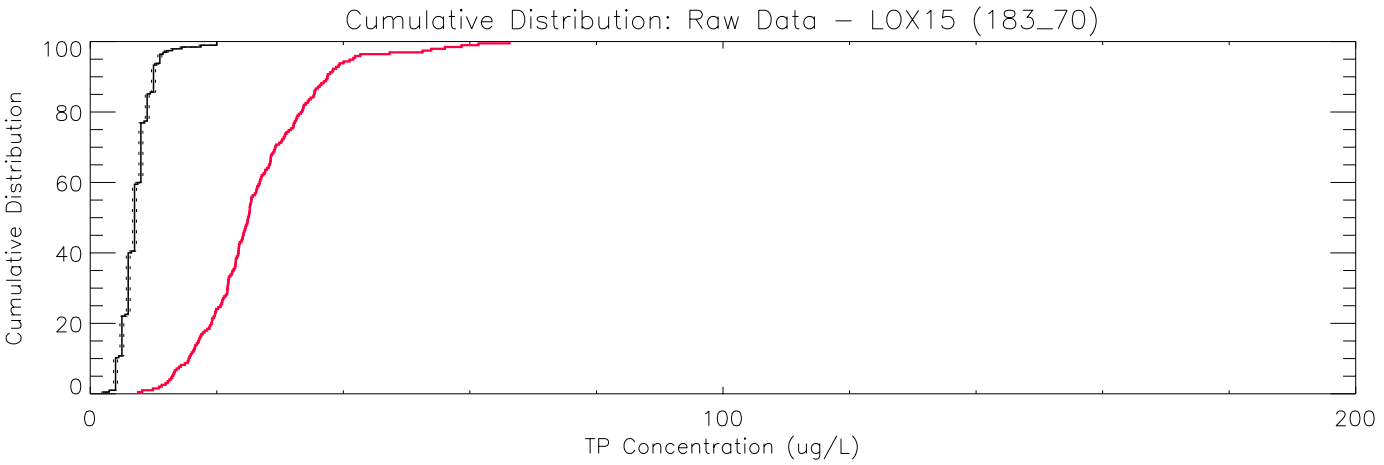

Mean: Water Year – 95% CI – LOX14 (205_66)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

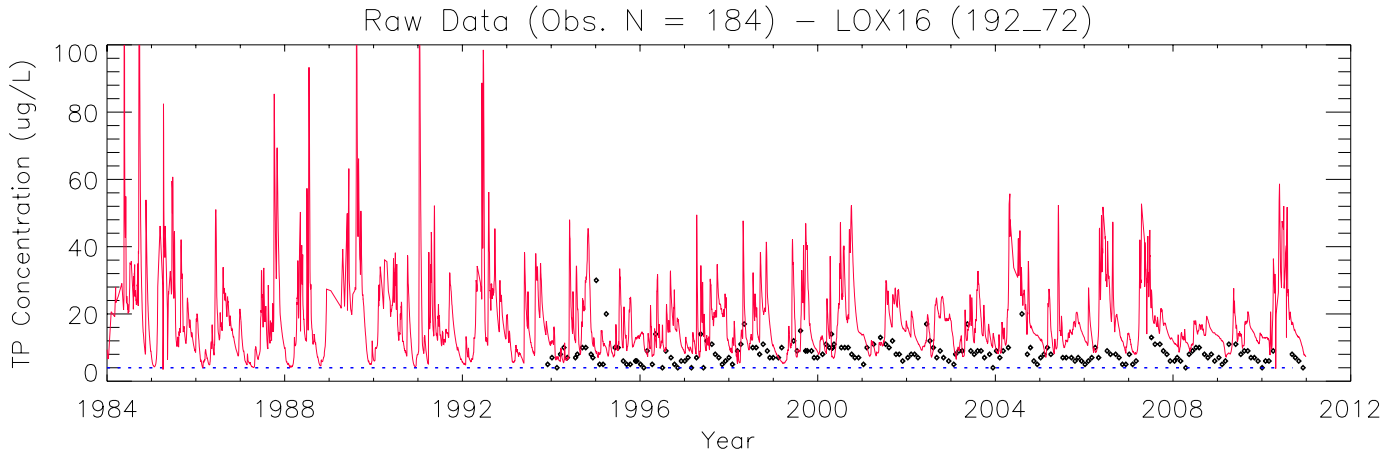

Cumulative Distribution: Raw Data – LOX14 (205_66)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

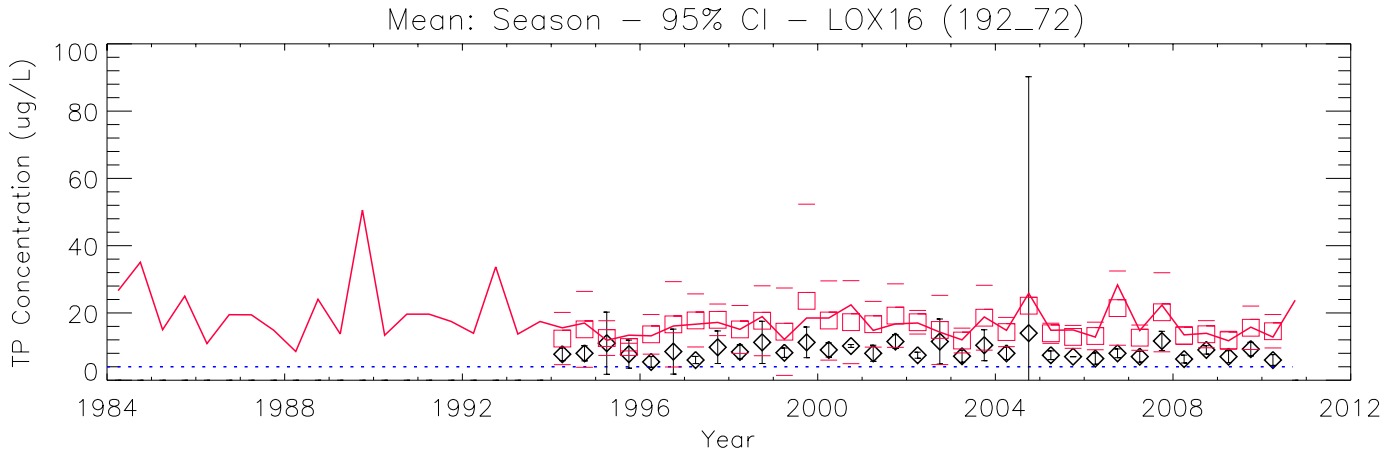

Raw Data (Obs. N = 195) – LOX15 (183_70)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

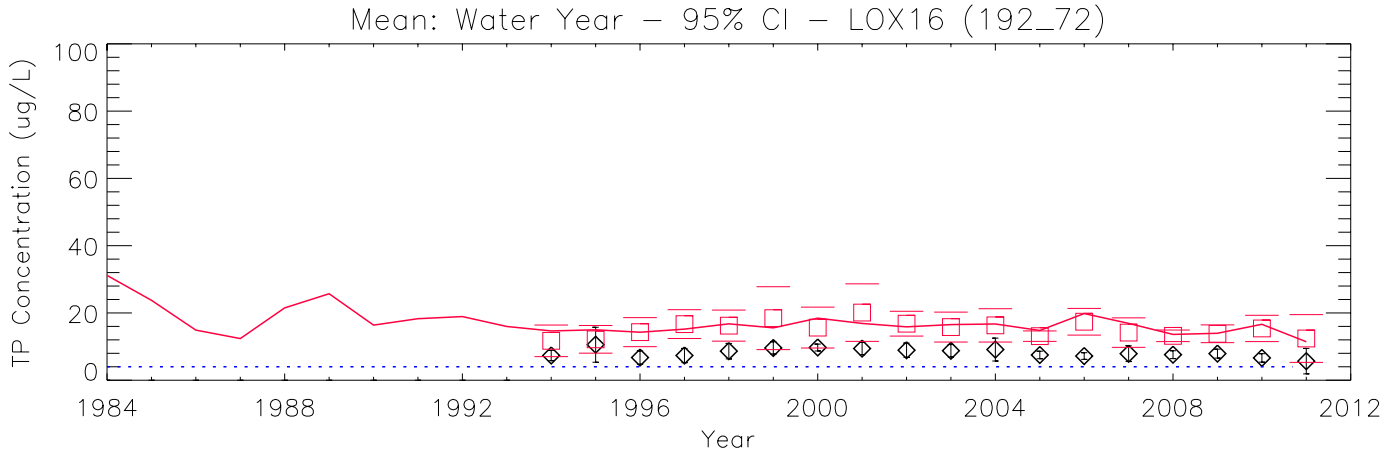

Mean: Season – 95% CI – LOX15 (183_70)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

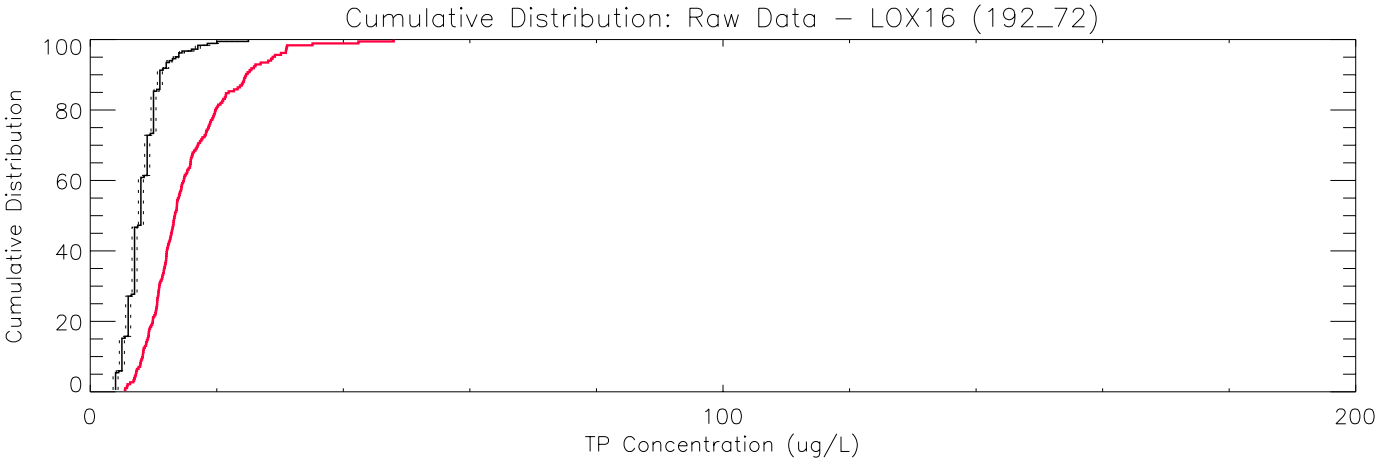

Mean: Water Year – 95% CI – LOX15 (183_70)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

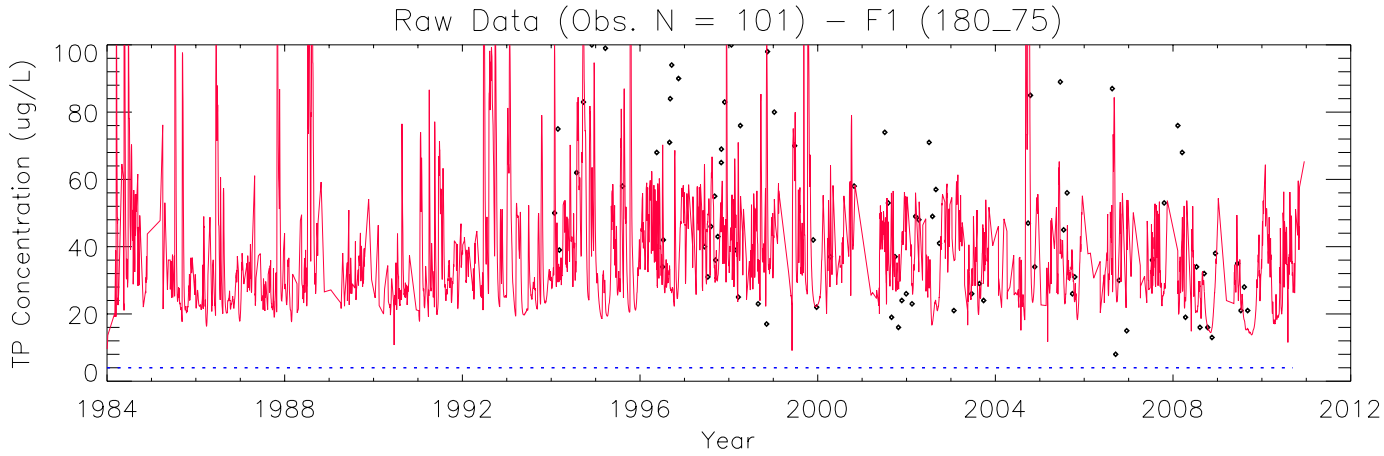

Cumulative Distribution: Raw Data – LOX15 (183_70)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

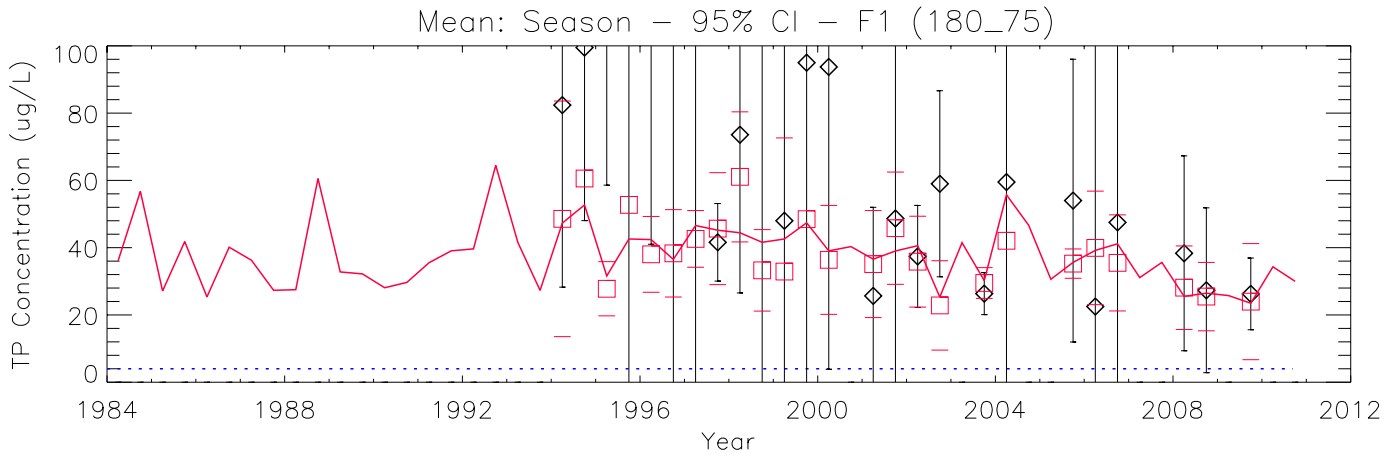

Raw Data (Obs. N = 184) – LOX16 (192_72)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

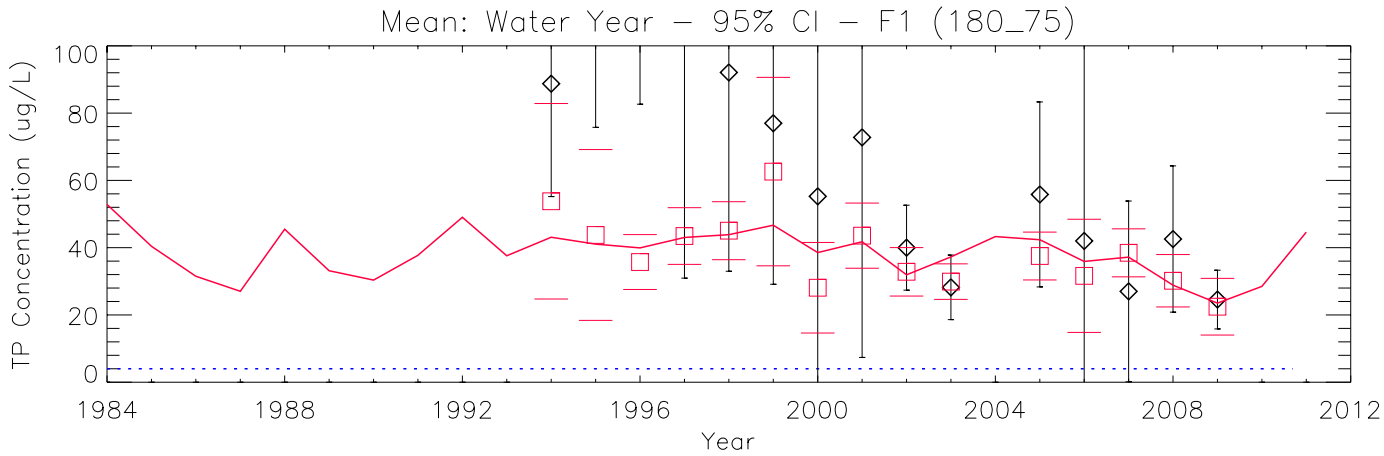

Mean: Season – 95% CI – LOX16 (192_72)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

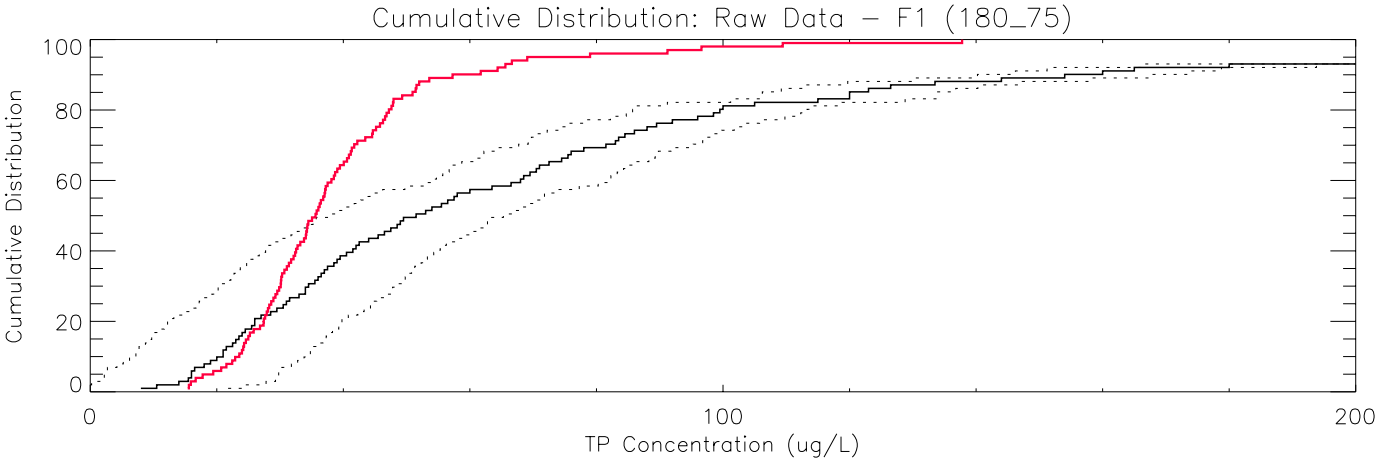

Mean: Water Year – 95% CI – LOX16 (192_72)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

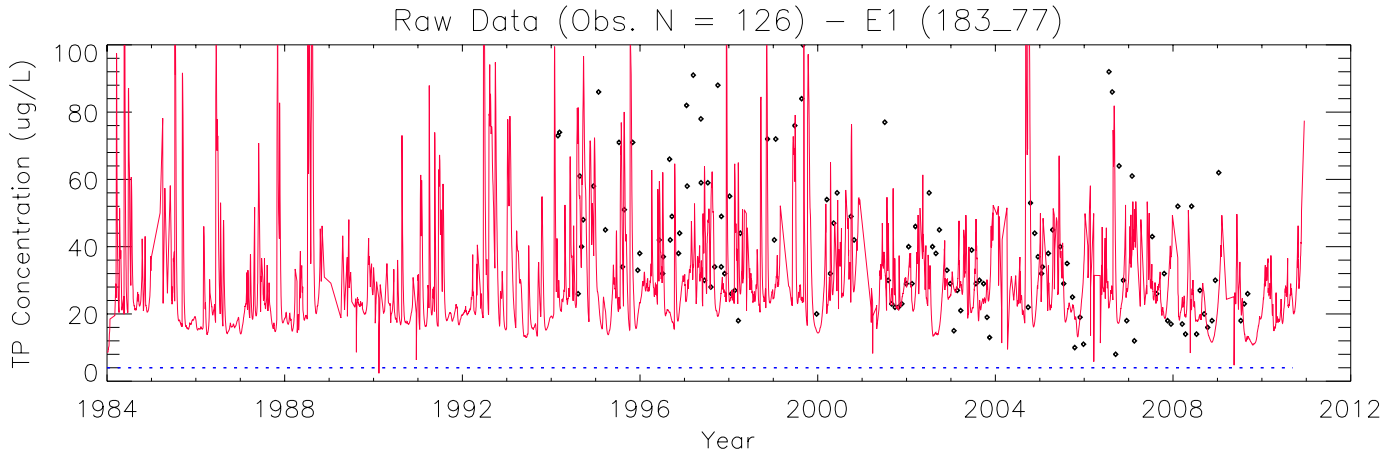

Cumulative Distribution: Raw Data – LOX16 (192_72)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

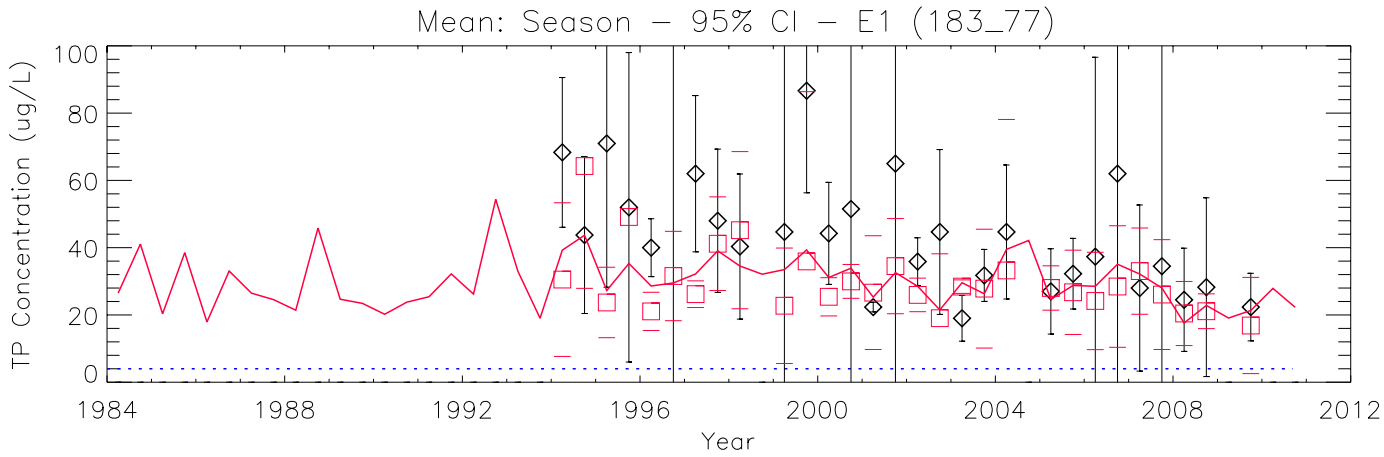

Raw Data (Obs. N = 101) – F1 (180_75)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

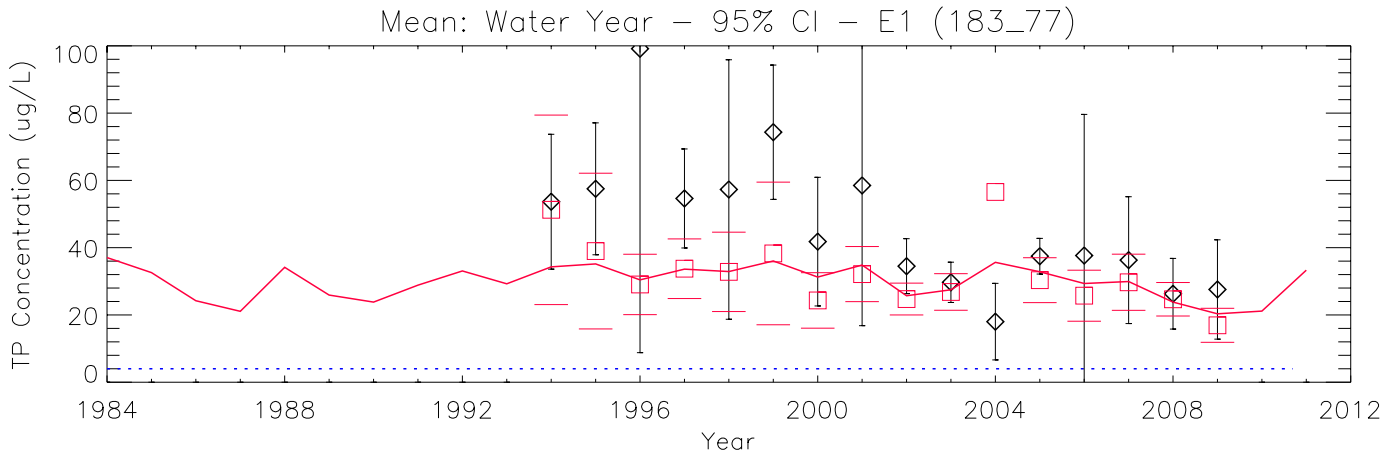

Mean: Season – 95% CI – F1 (180_75)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

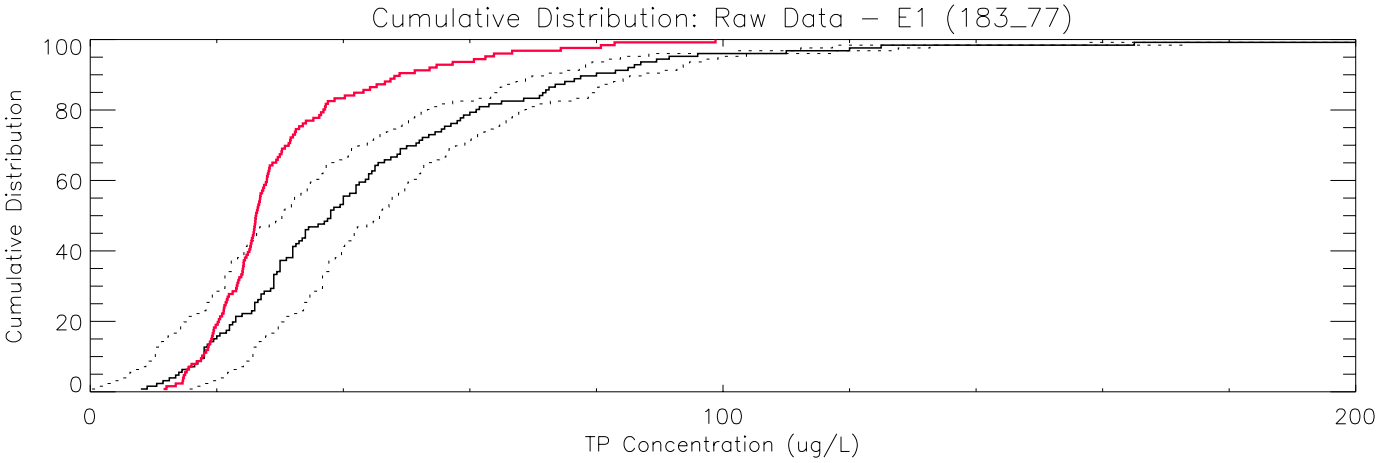

Mean: Water Year – 95% CI – F1 (180_75)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

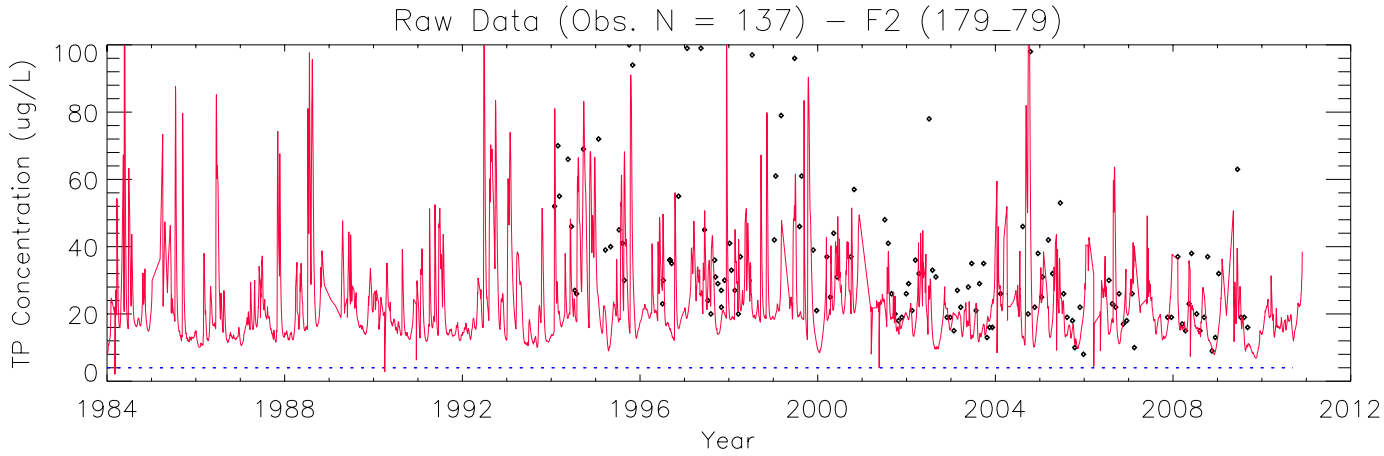

Cumulative Distribution: Raw Data – F1 (180_75)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 126) – E1 (183_77)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – E1 (183_77)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – E1 (183_77)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – E1 (183_77)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 137) – F2 (179_79)
TP Concentration (ug/L)
0
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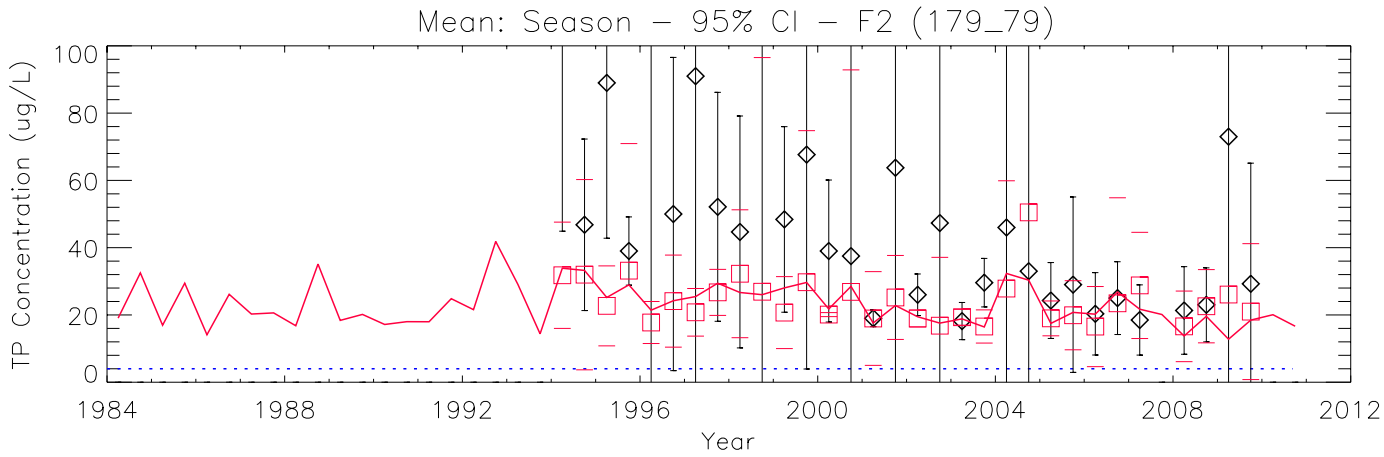
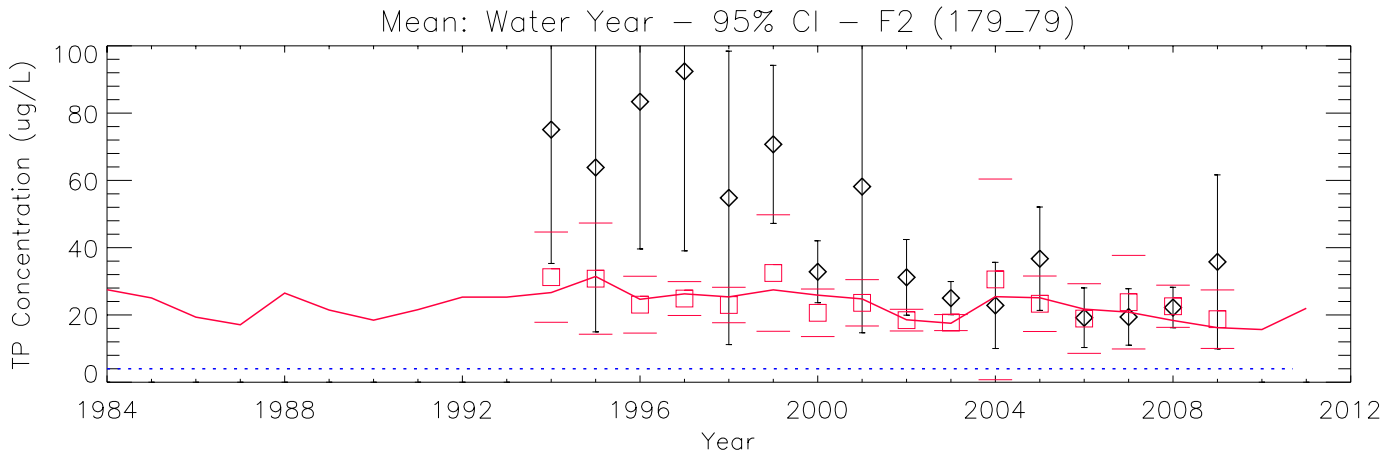
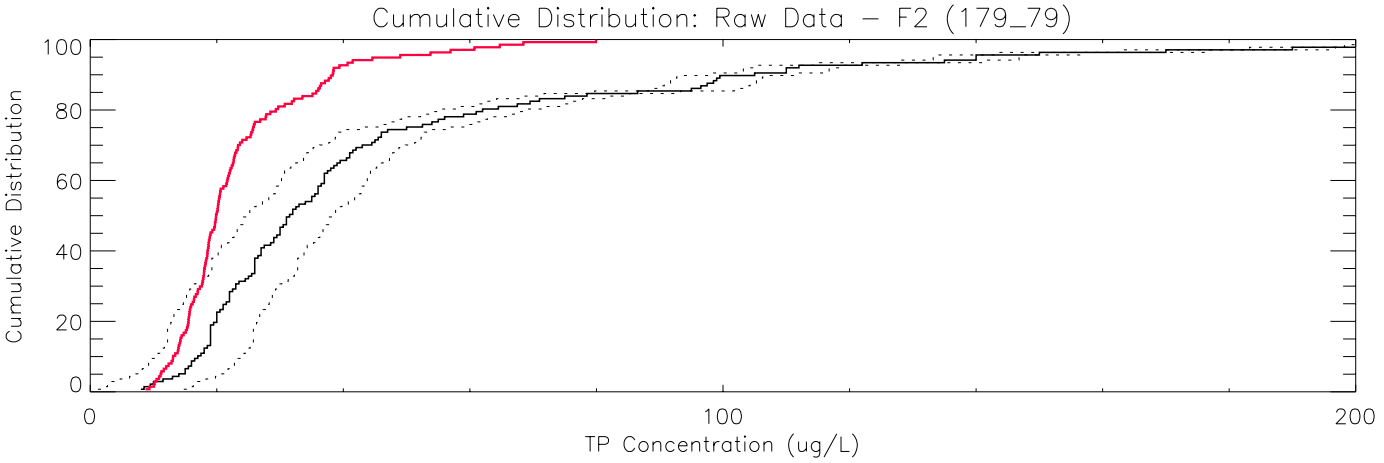
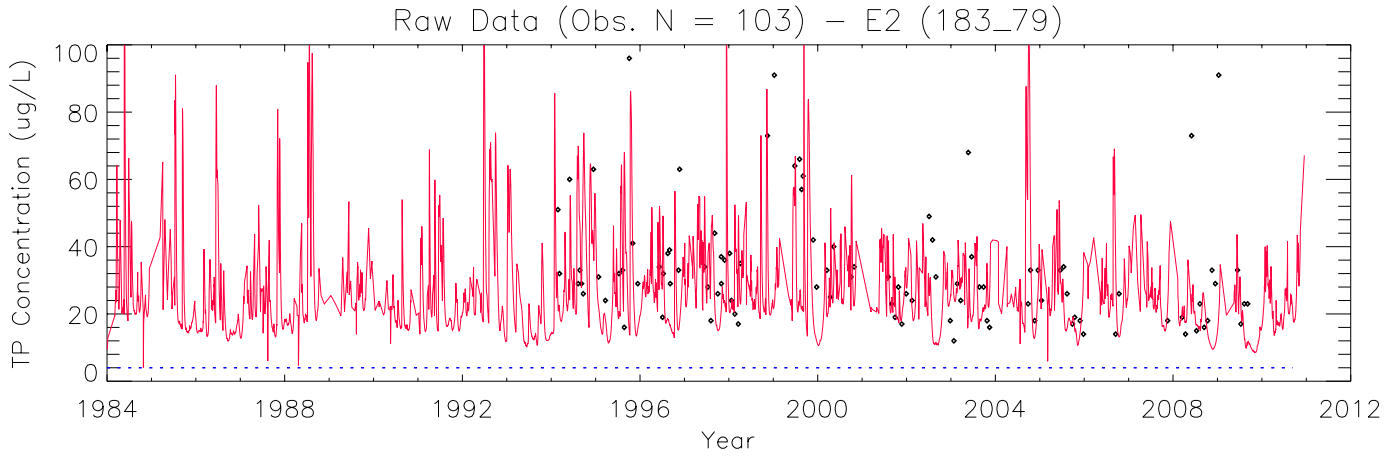
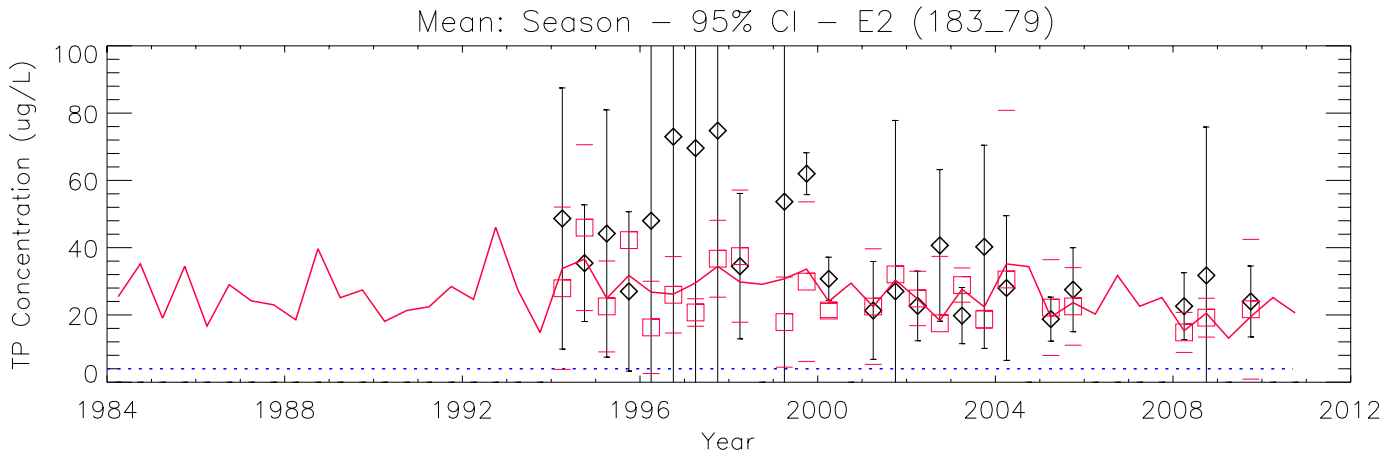
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

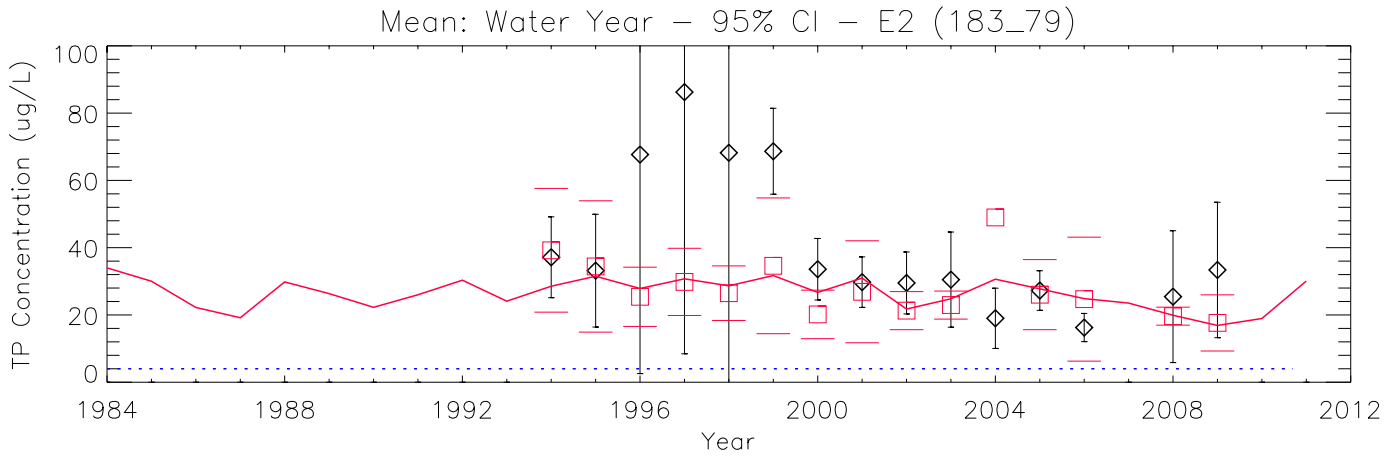

Mean: Season – 95% CI – F2 (179_79)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

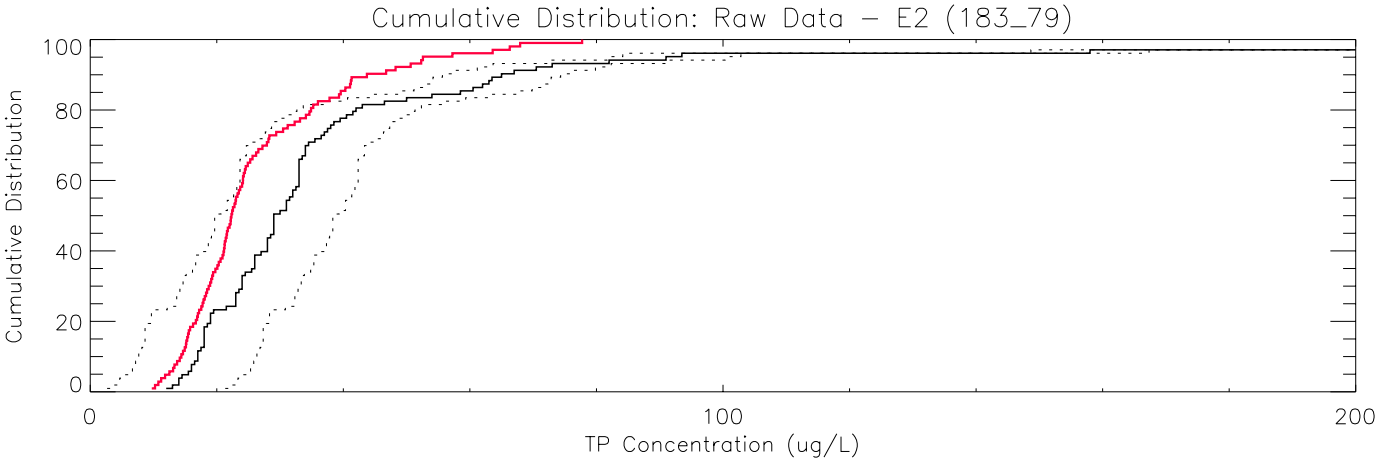

Mean: Water Year – 95% CI – F2 (179_79)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

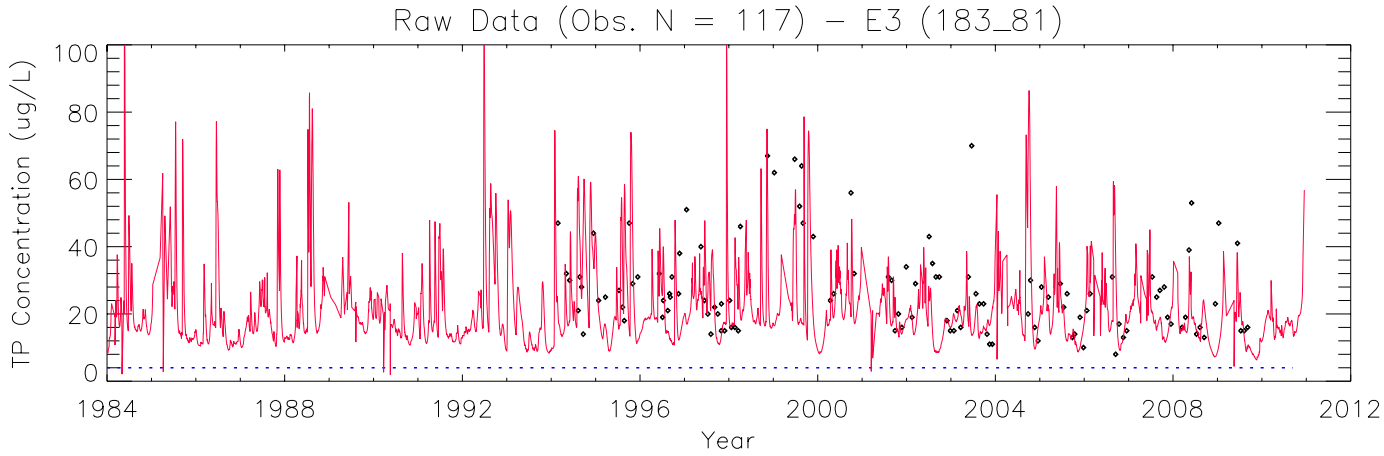

Cumulative Distribution: Raw Data – F2 (179_79)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

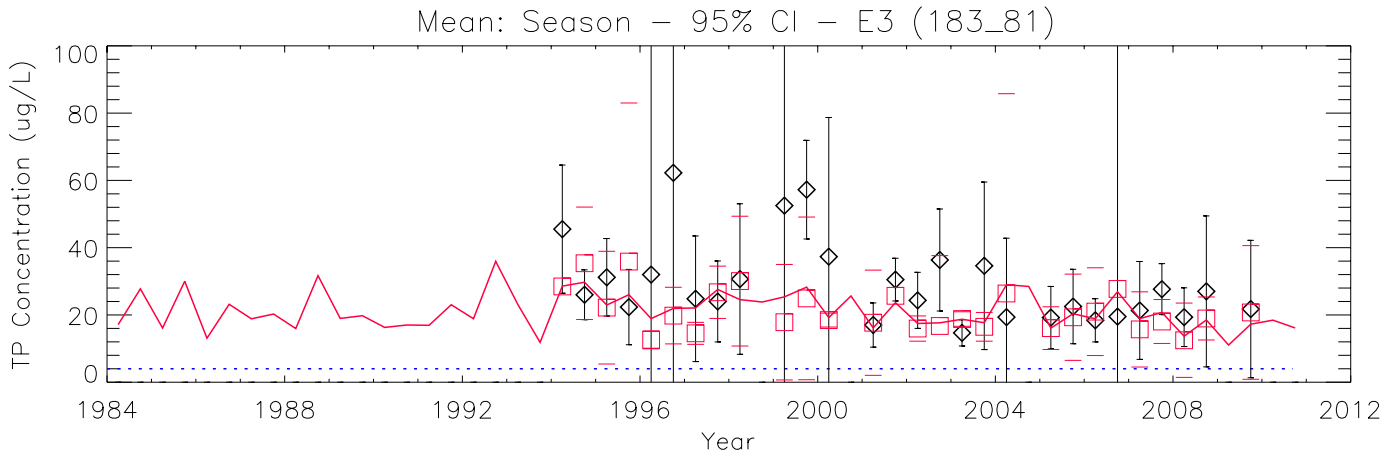

Raw Data (Obs. N = 103) – E2 (183_79)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

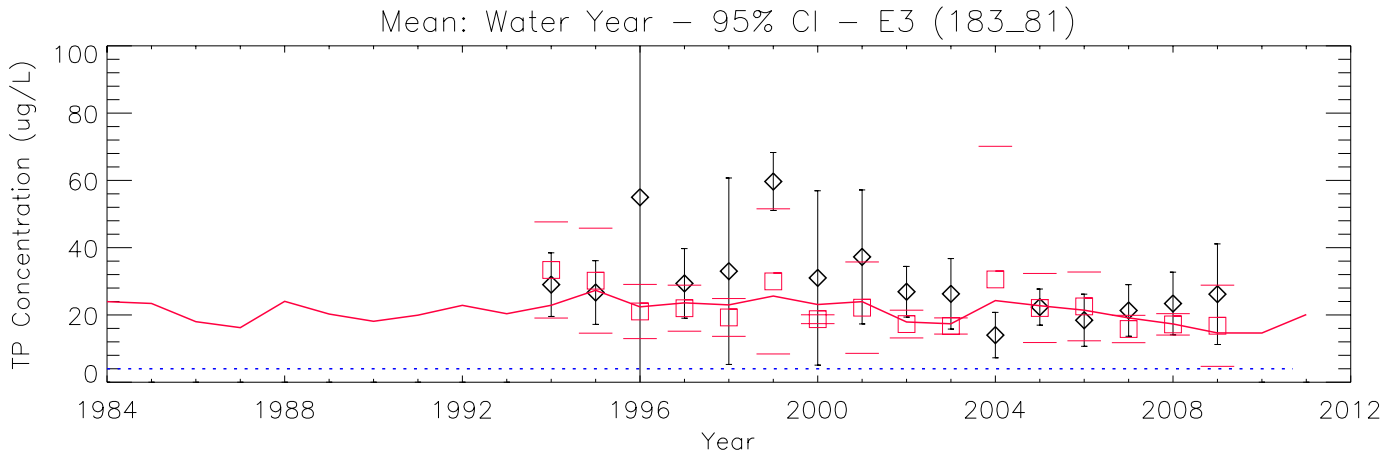

Mean: Season – 95% CI – E2 (183_79)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

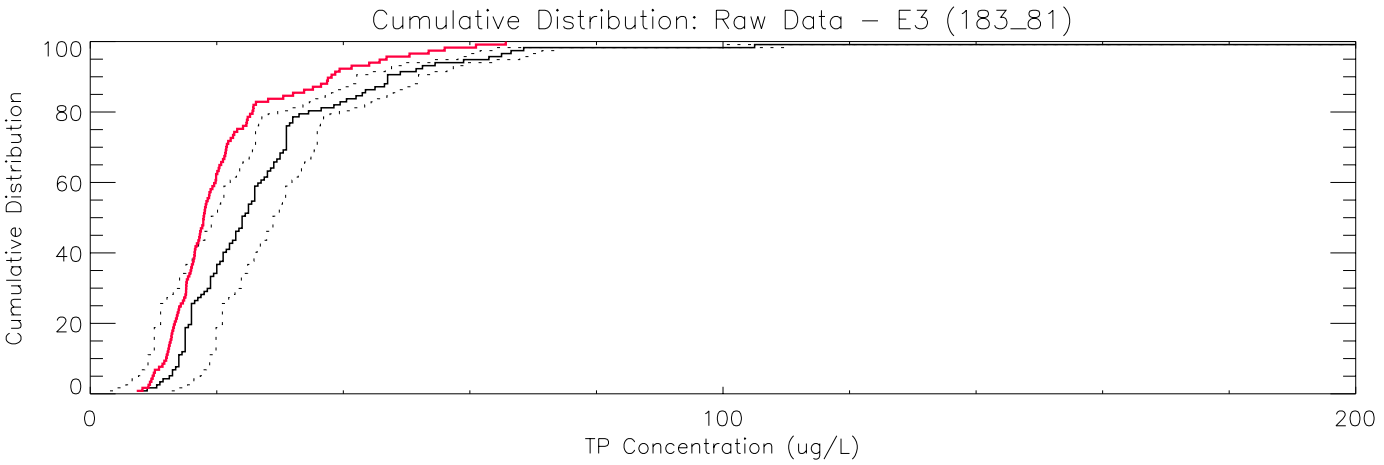

Mean: Water Year – 95% CI – E2 (183_79)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

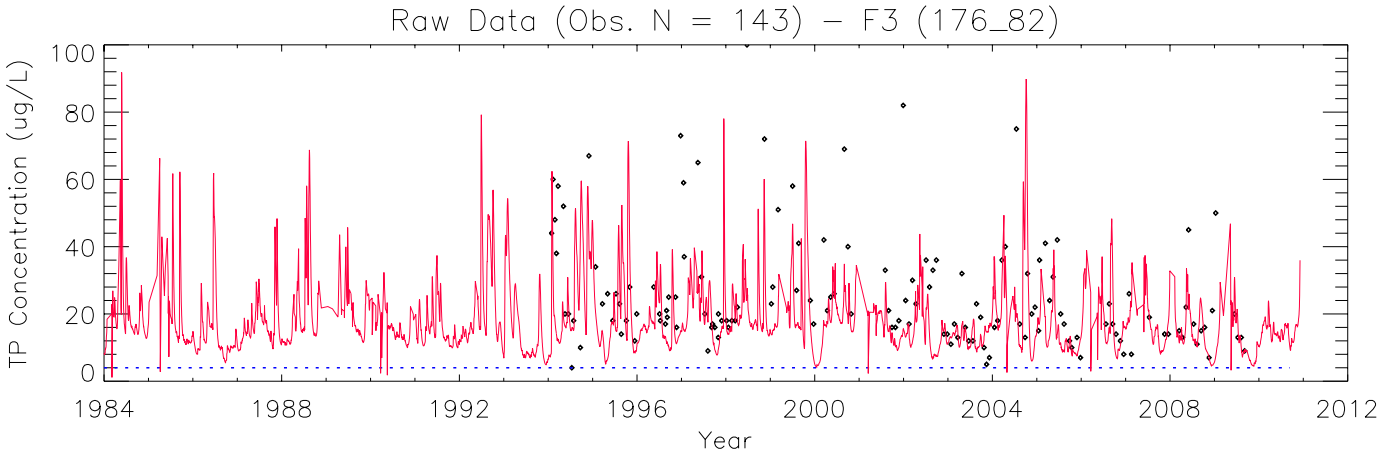

Cumulative Distribution: Raw Data – E2 (183_79)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

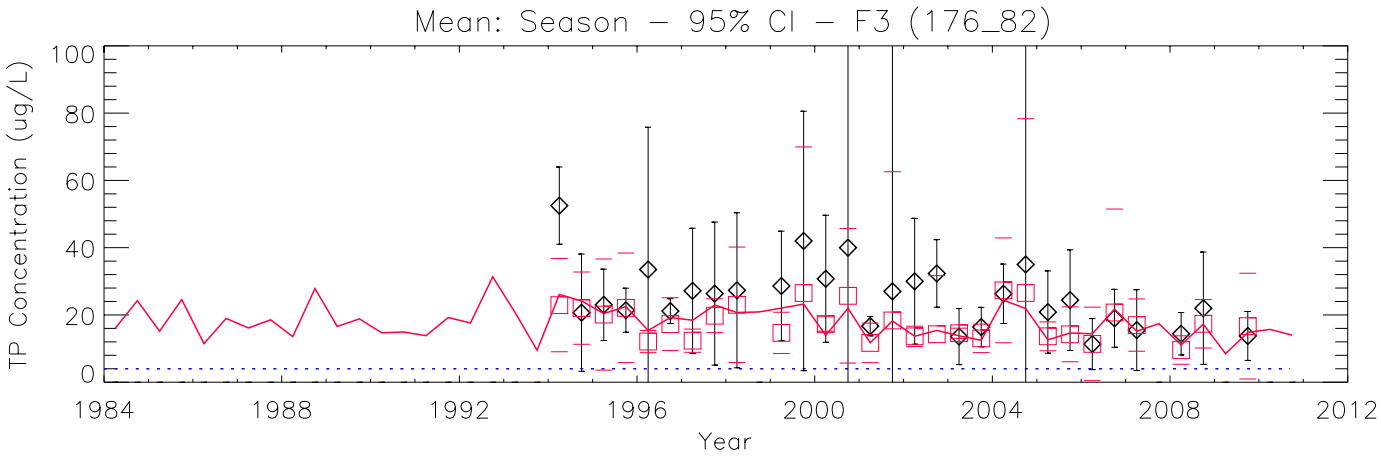

Raw Data (Obs. N = 117) – E3 (183_81)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

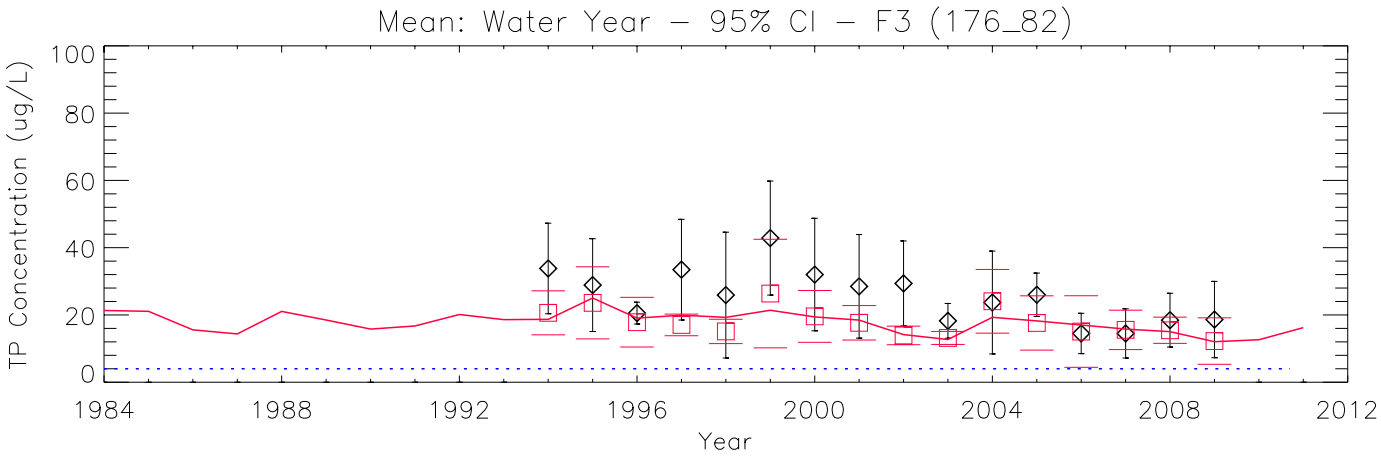

Mean: Season – 95% CI – E3 (183_81)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

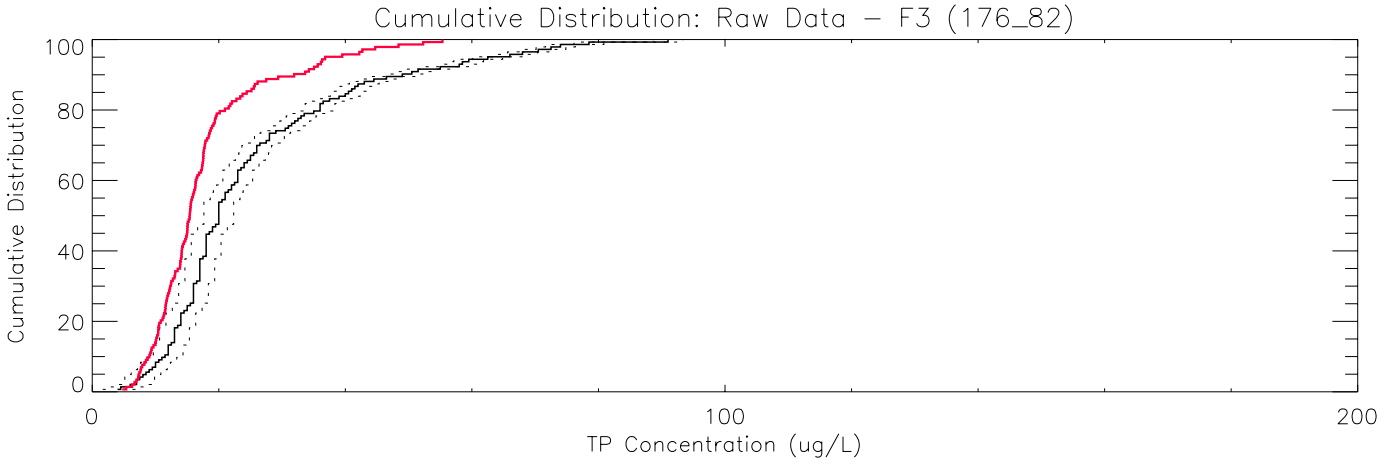

Mean: Water Year – 95% CI – E3 (183_81)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

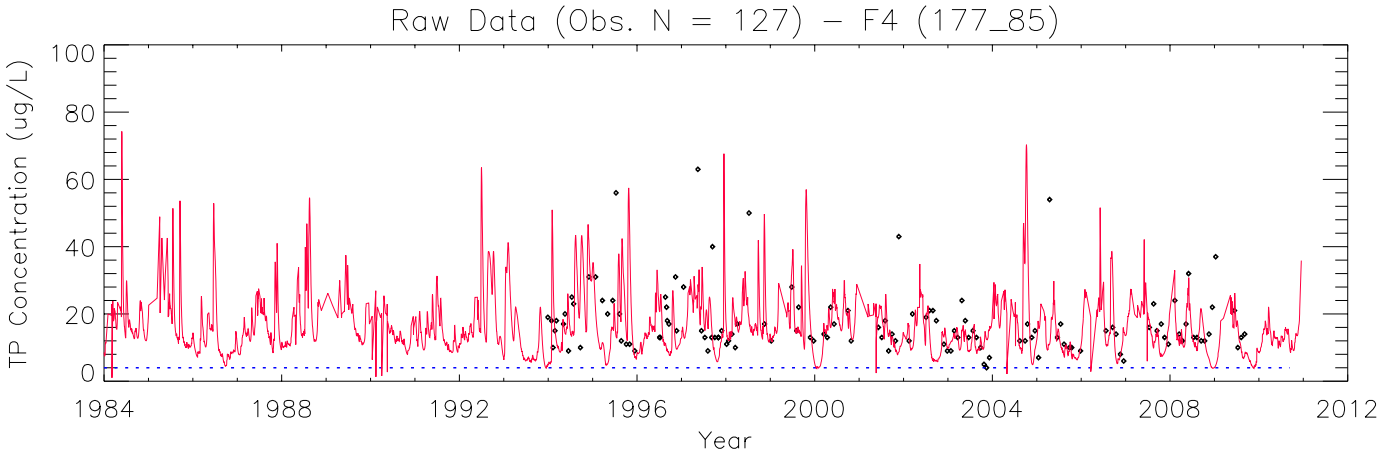

Cumulative Distribution: Raw Data – E3 (183_81)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 143) – F3 (176_82)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – F3 (176_82)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – F3 (176_82)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – F3 (176_82)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 127) – F4 (177_85)
TP Concentration (ug/L)
0
20
40
60
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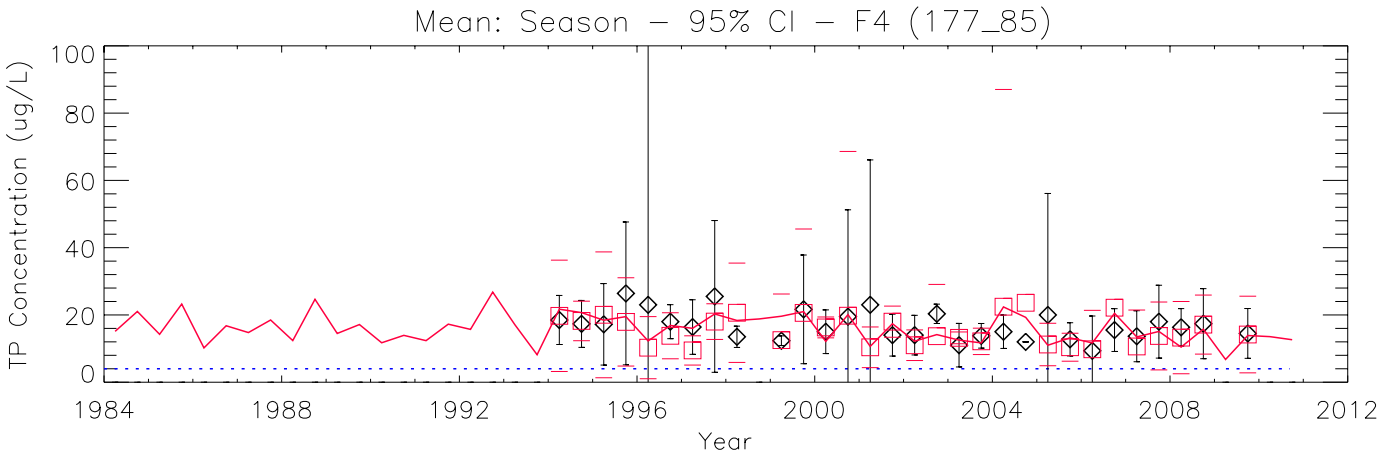
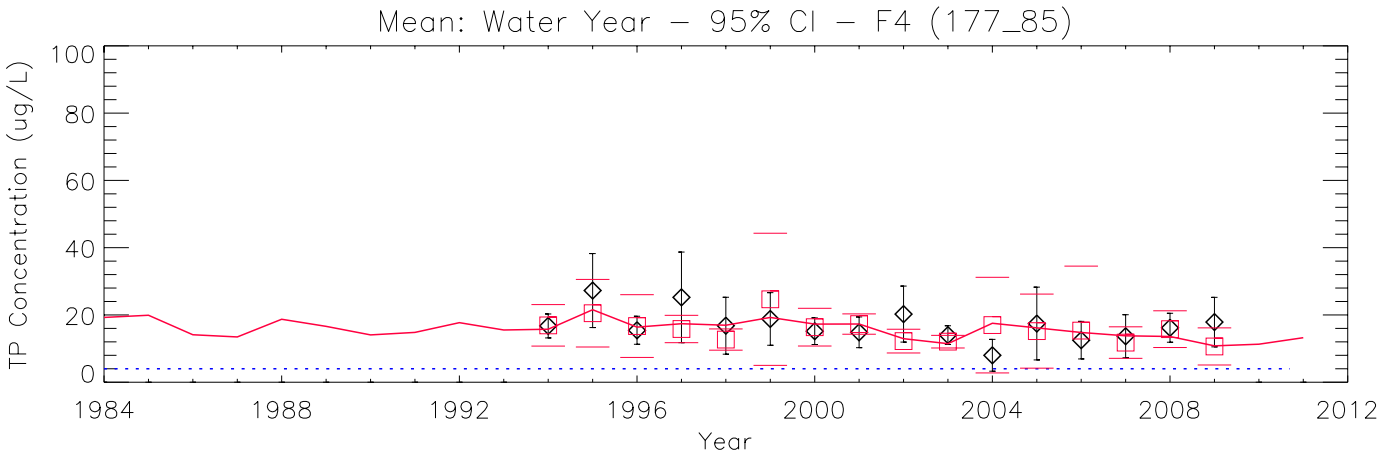
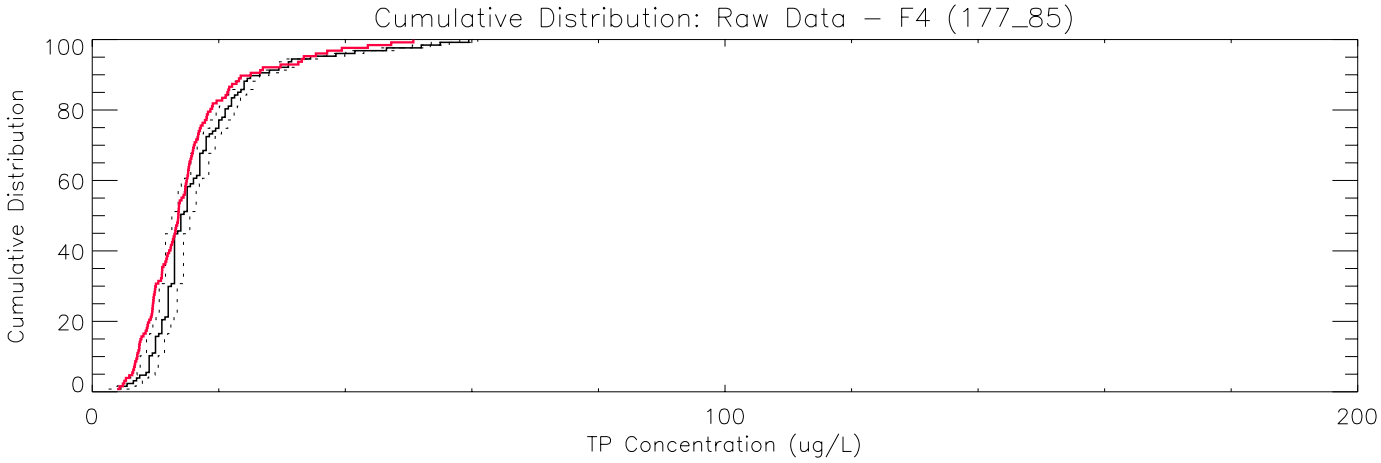
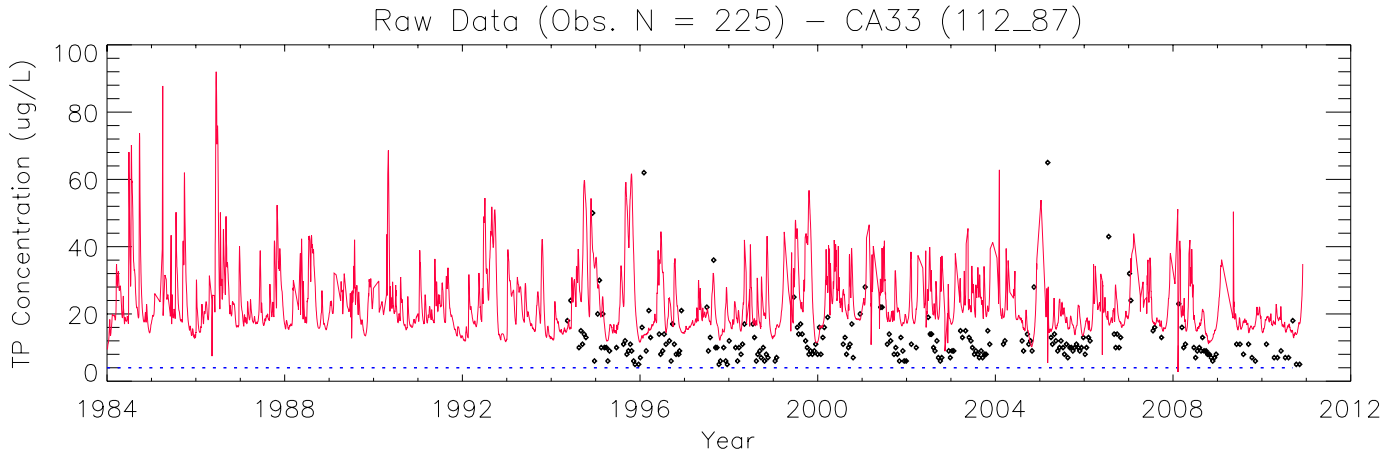
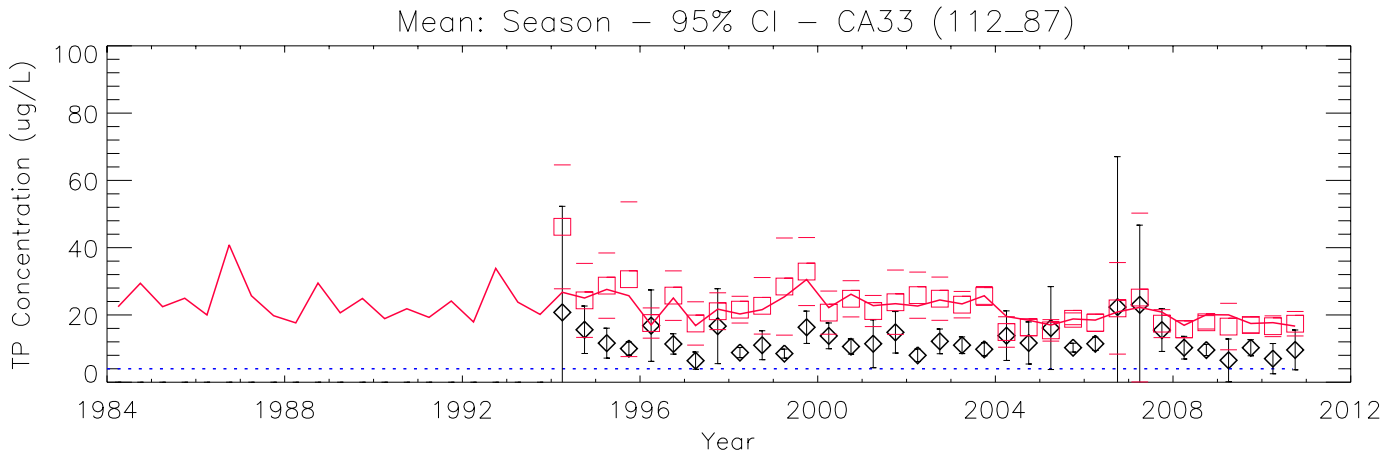
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

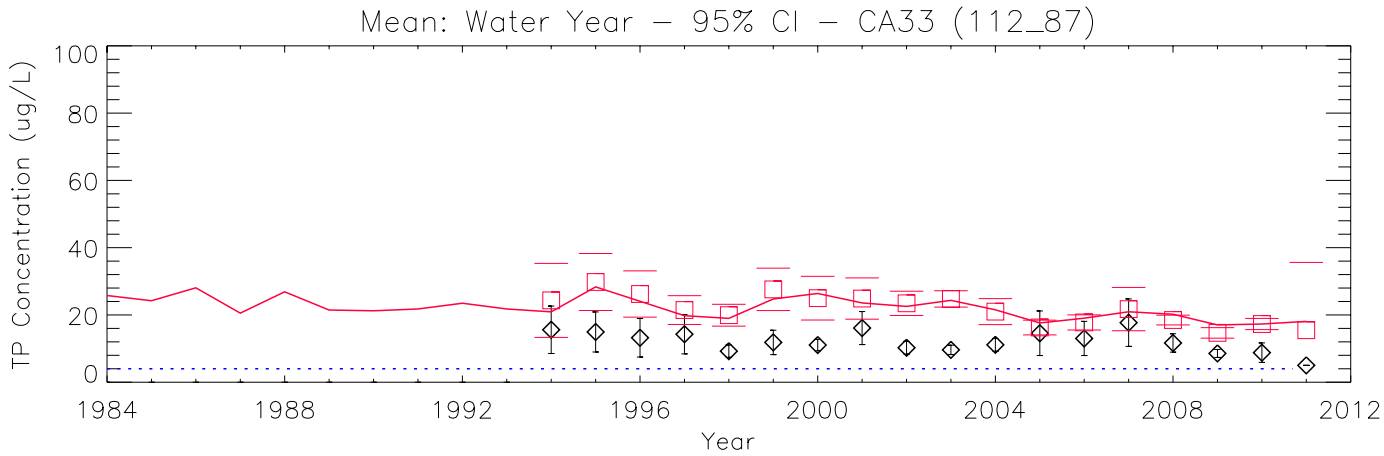

Mean: Season – 95% CI – F4 (177_85)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

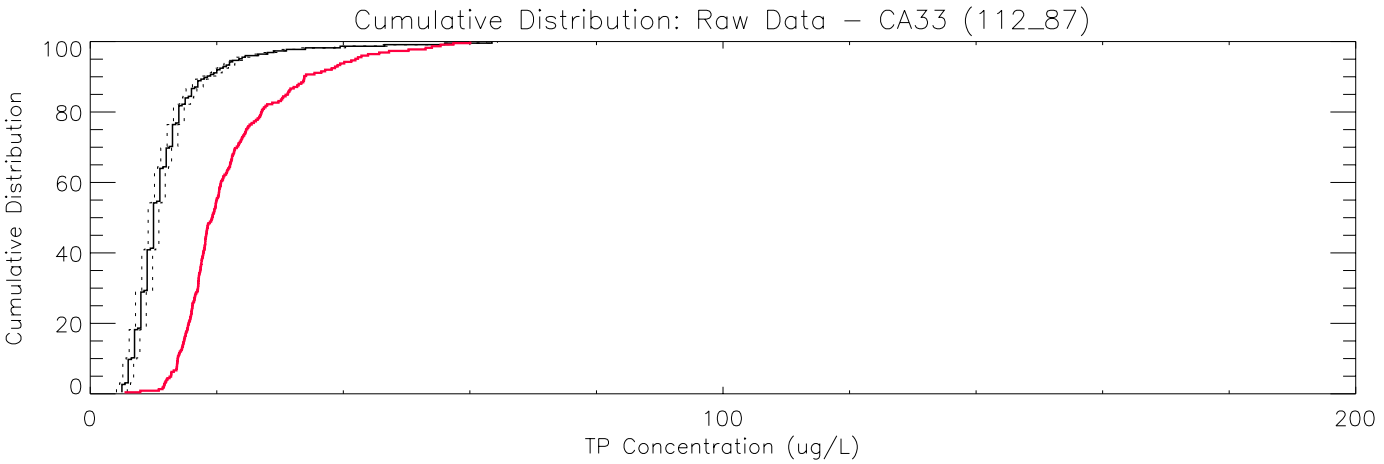

Mean: Water Year – 95% CI – F4 (177_85)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

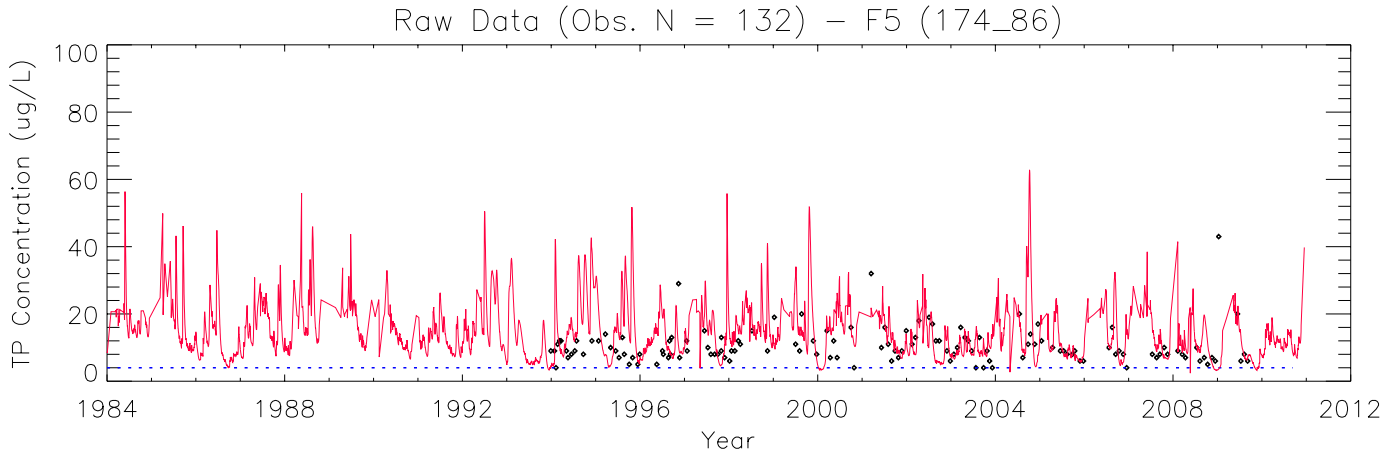

Cumulative Distribution: Raw Data – F4 (177_85)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

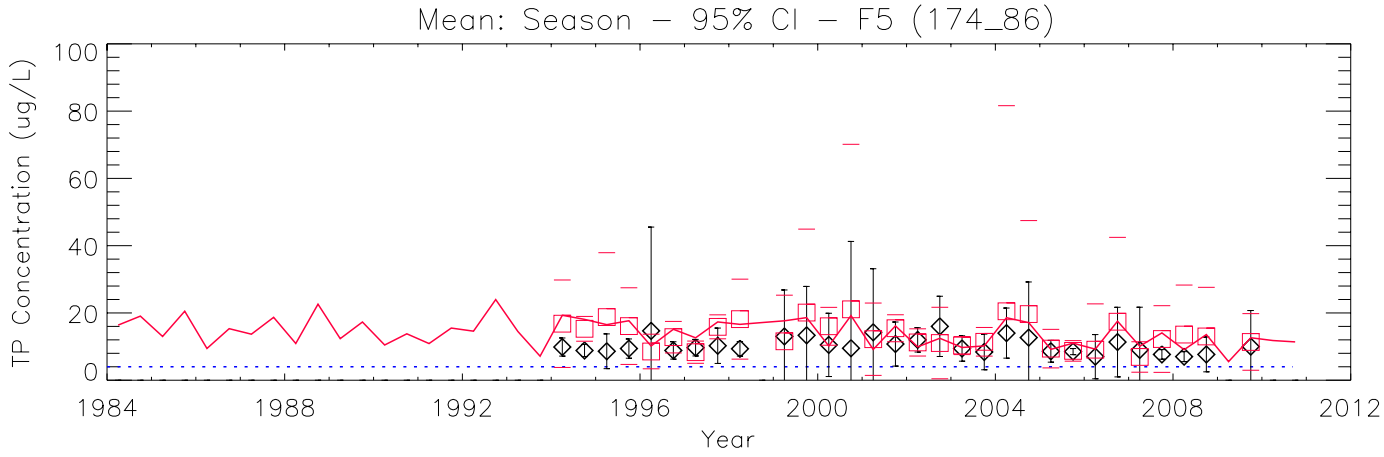

Raw Data (Obs. N = 225) – CA33 (112_87)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

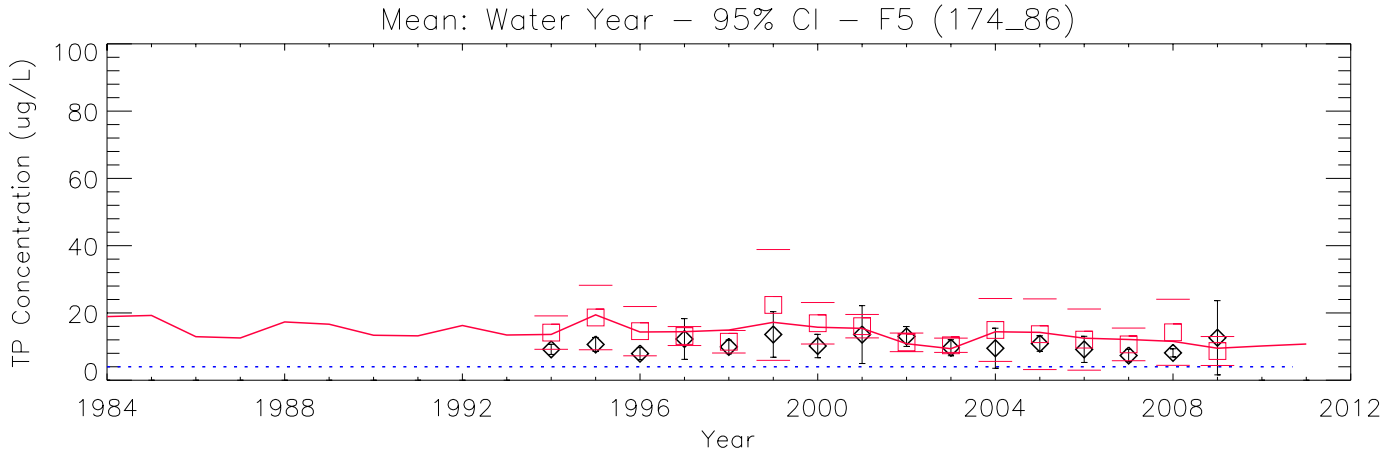

Mean: Season – 95% CI – CA33 (112_87)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

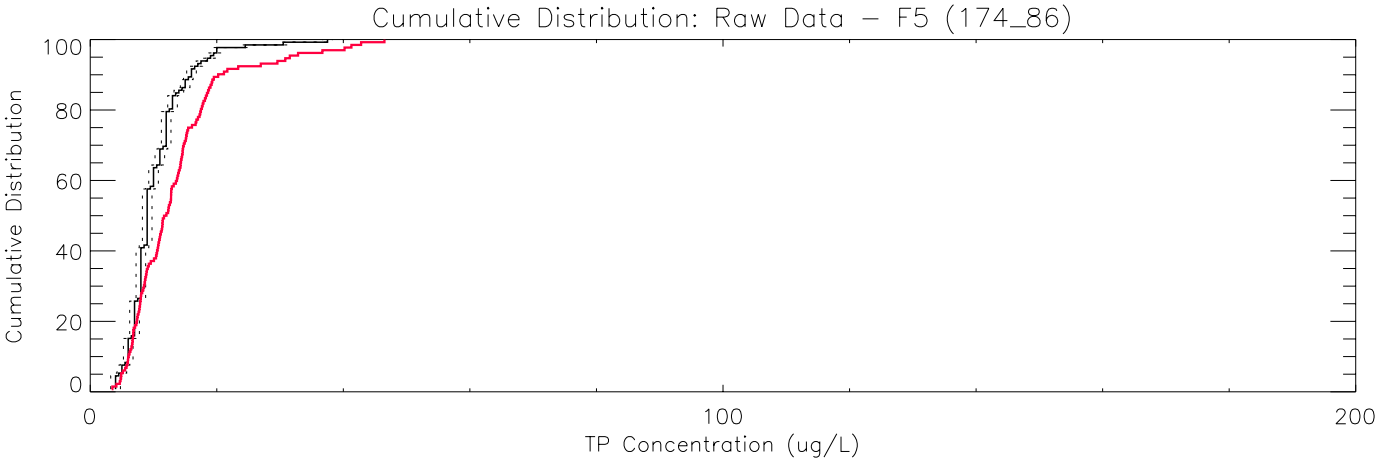

Mean: Water Year – 95% CI – CA33 (112_87)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

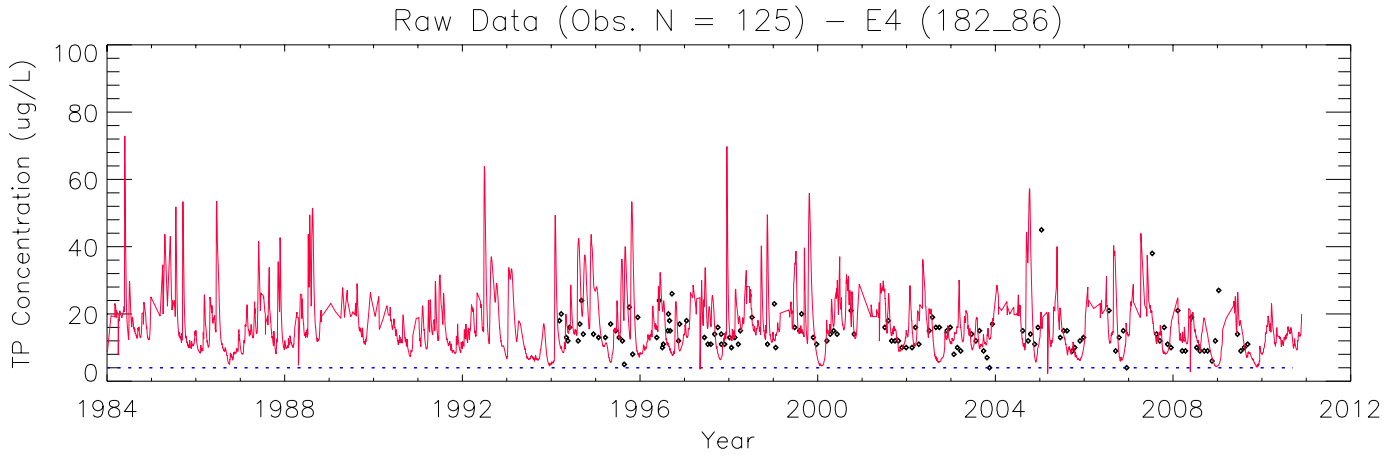

Cumulative Distribution: Raw Data – CA33 (112_87)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

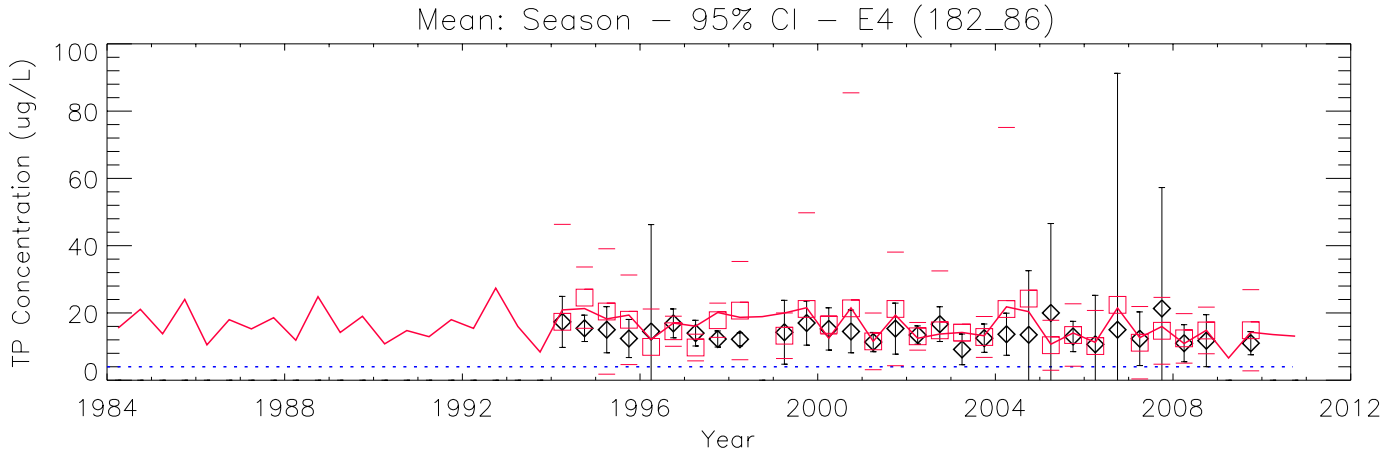

Raw Data (Obs. N = 132) – F5 (174_86)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

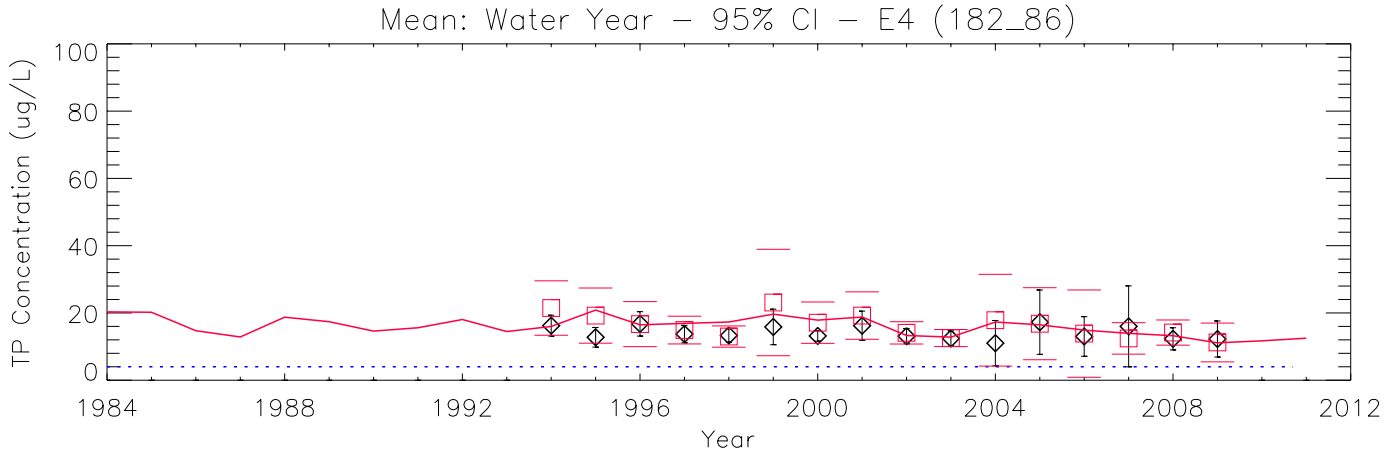

Mean: Season – 95% CI – F5 (174_86)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

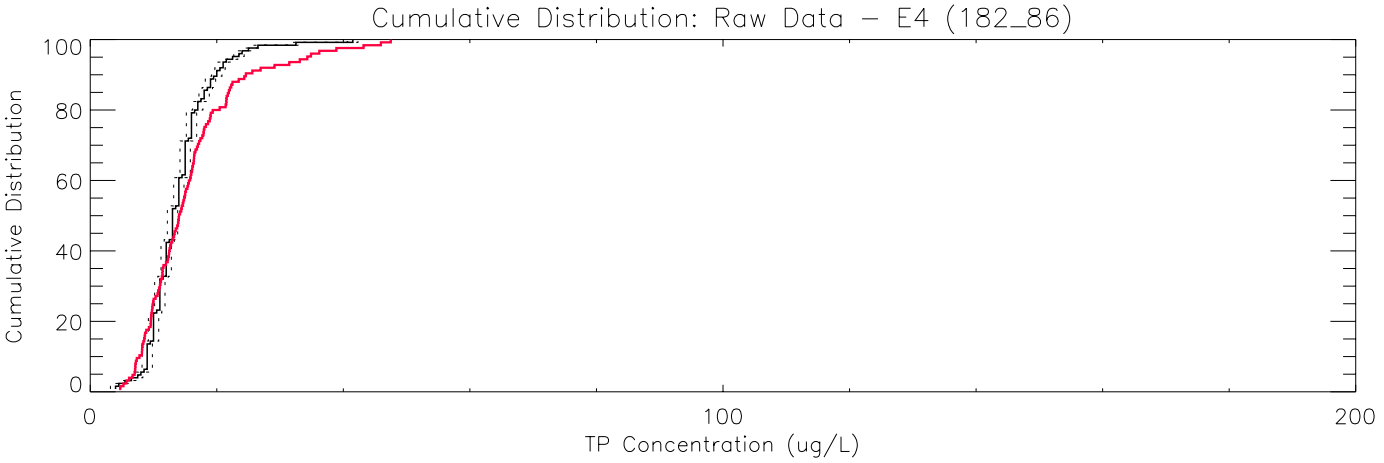

Mean: Water Year – 95% CI – F5 (174_86)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

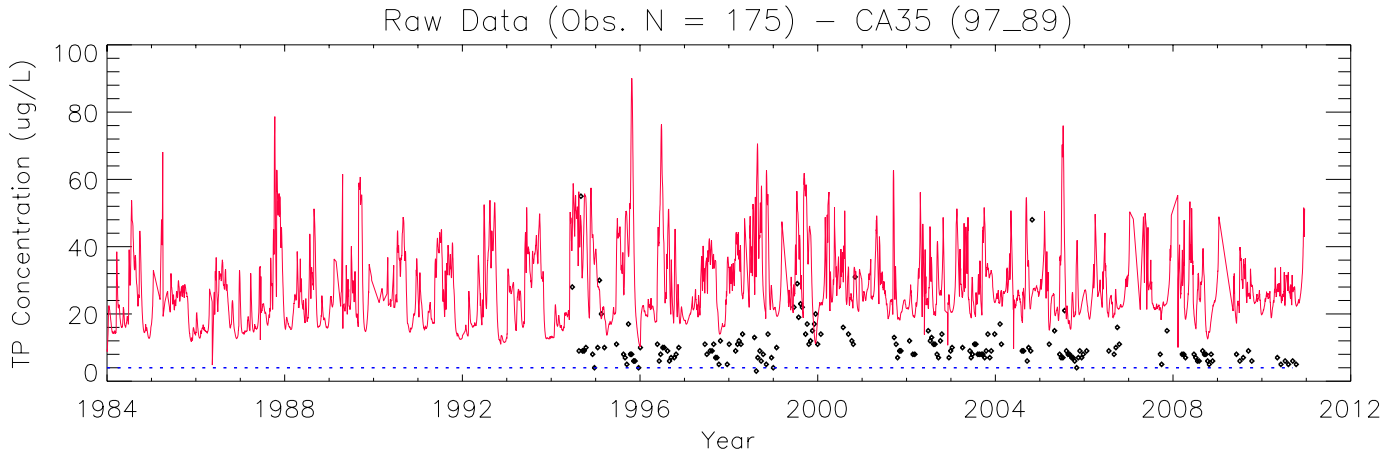

Cumulative Distribution: Raw Data – F5 (174_86)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

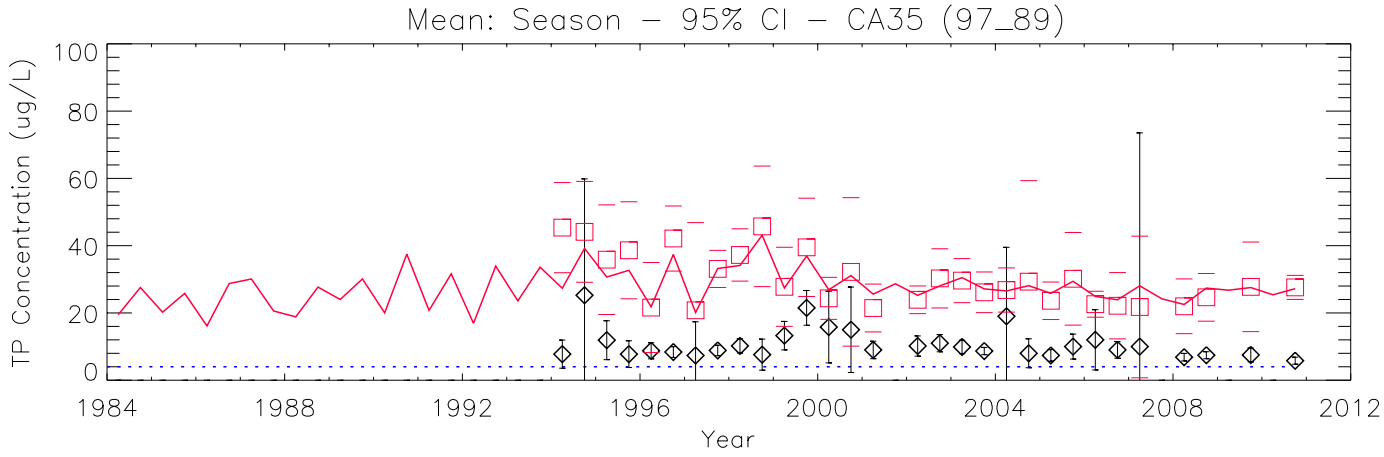

Raw Data (Obs. N = 125) – E4 (182_86)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

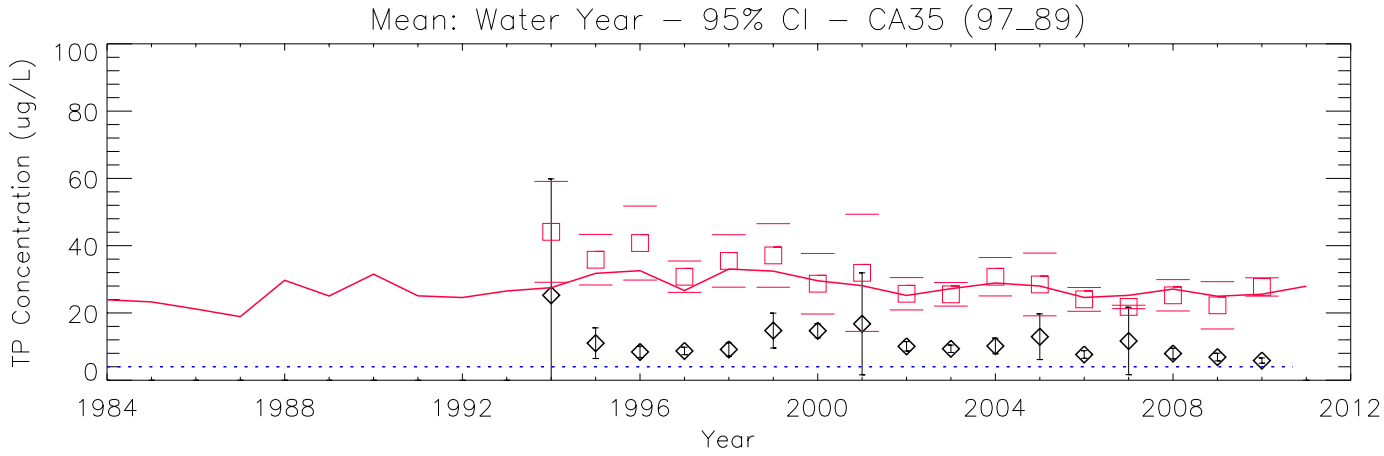

Mean: Season – 95% CI – E4 (182_86)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

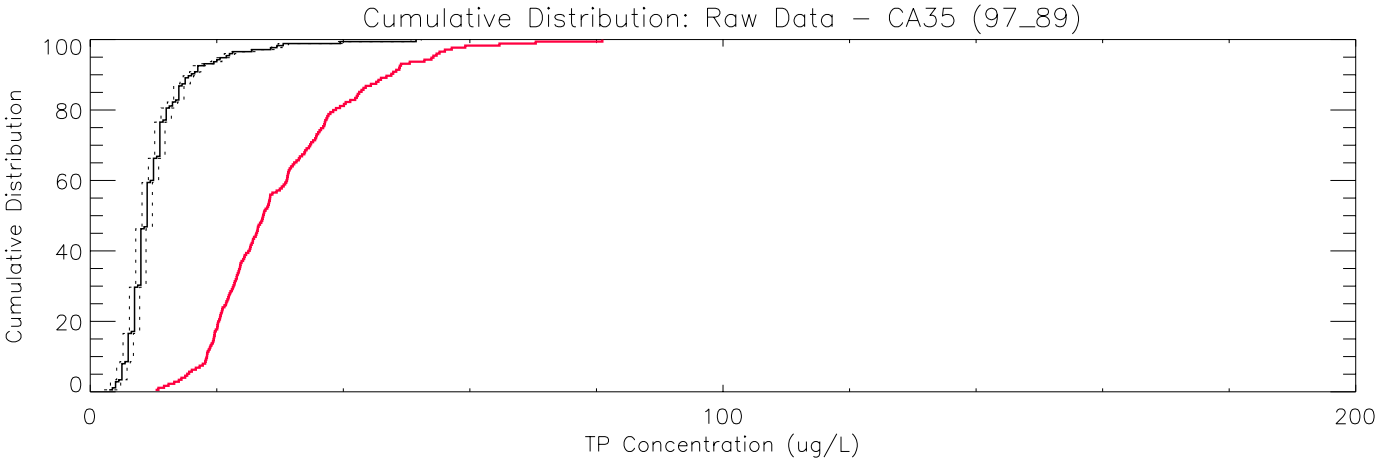

Mean: Water Year – 95% CI – E4 (182_86)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

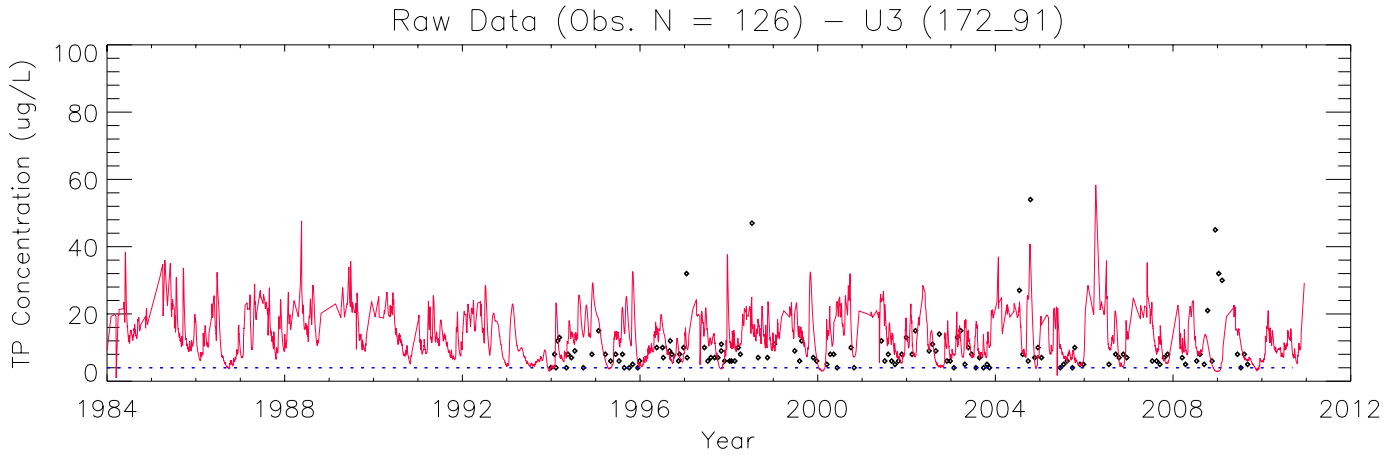

Cumulative Distribution: Raw Data – E4 (182_86)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

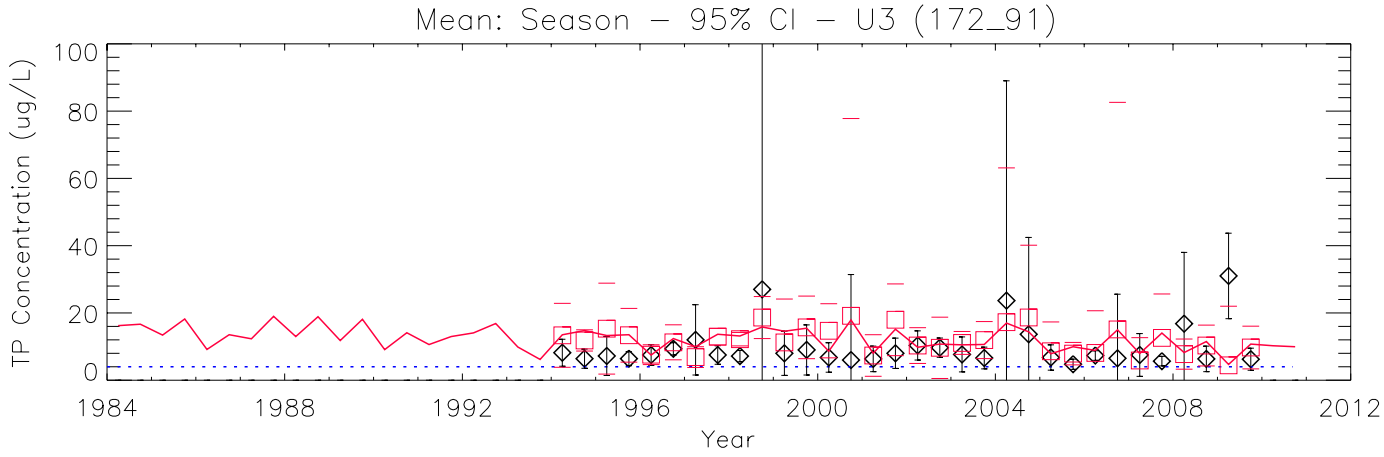

Raw Data (Obs. N = 175) – CA35 (97_89)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

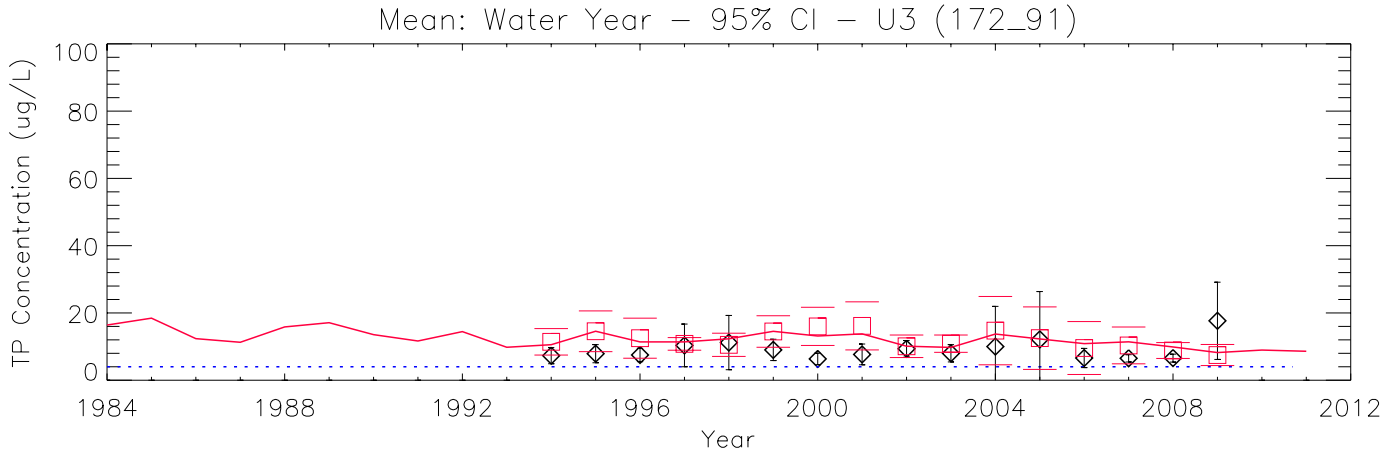

Mean: Season – 95% CI – CA35 (97_89)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – CA35 (97_89)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – CA35 (97_89)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 126) – U3 (172_91)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – U3 (172_91)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – U3 (172_91)
TP Concentration (ug/L)
0
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60
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100
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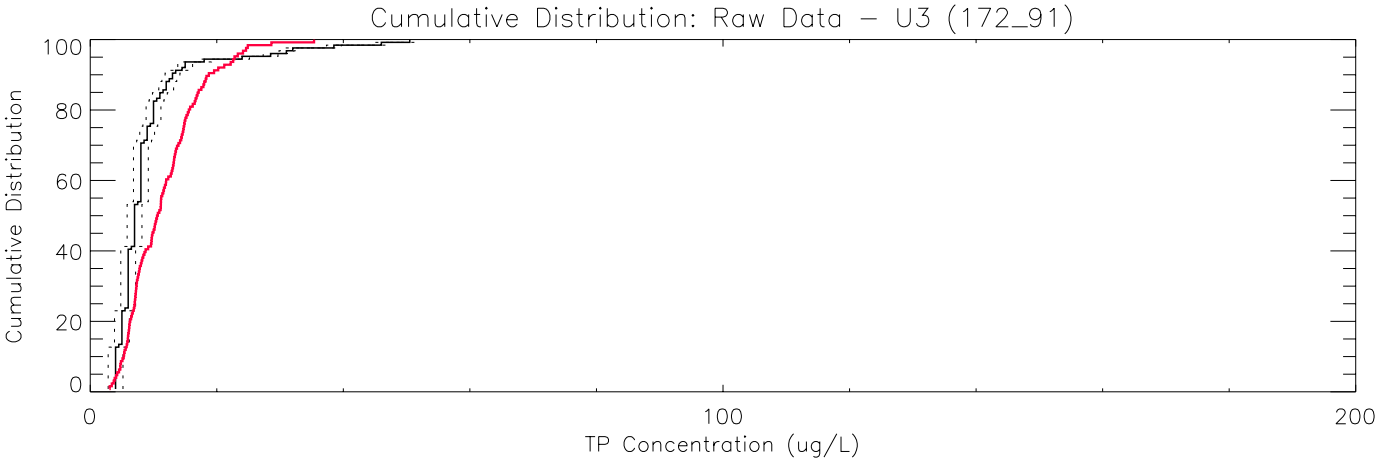
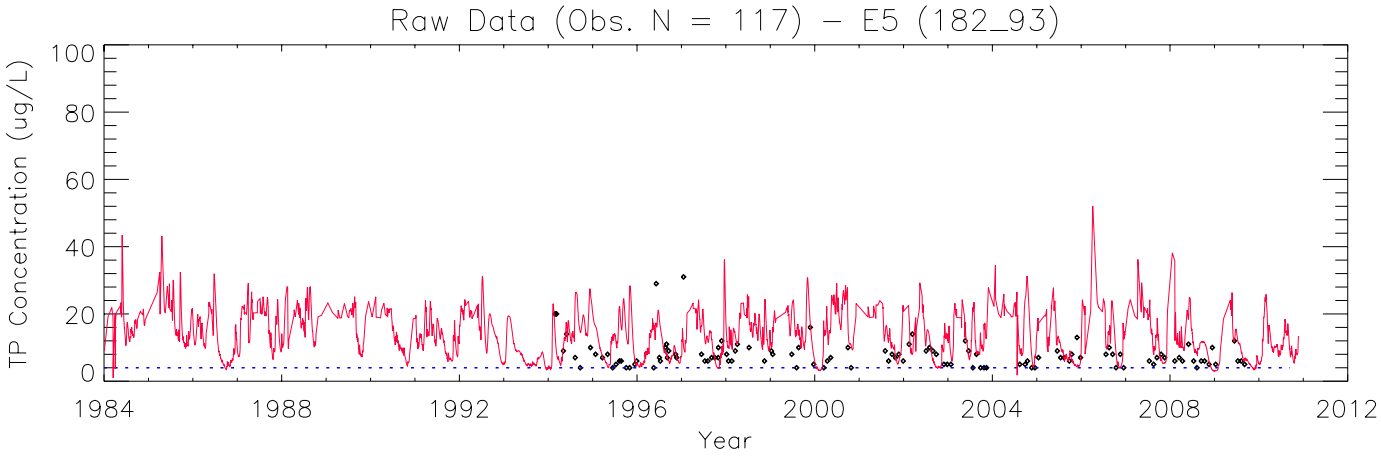
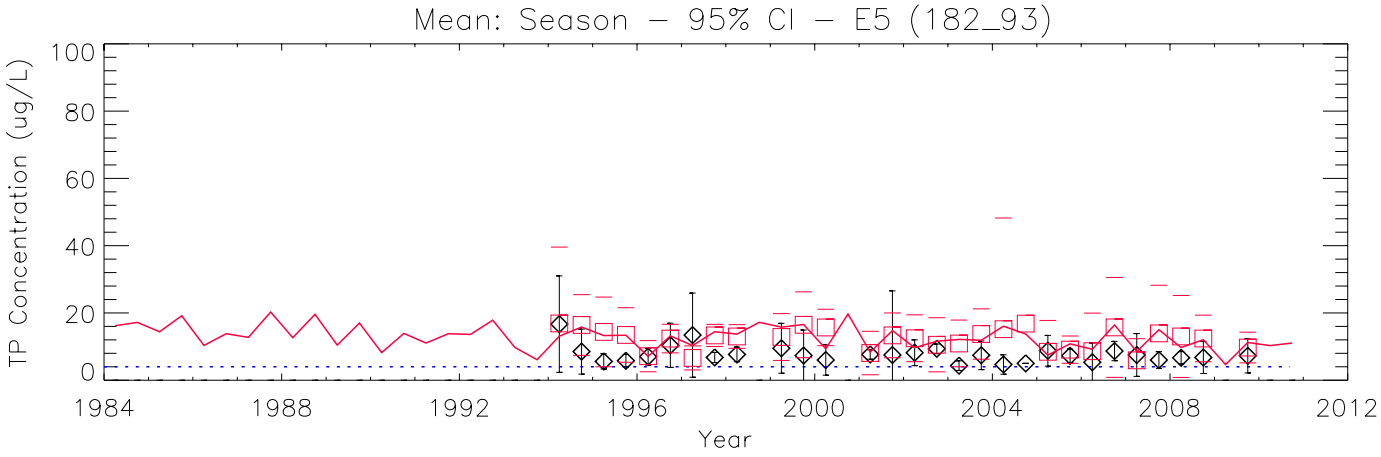
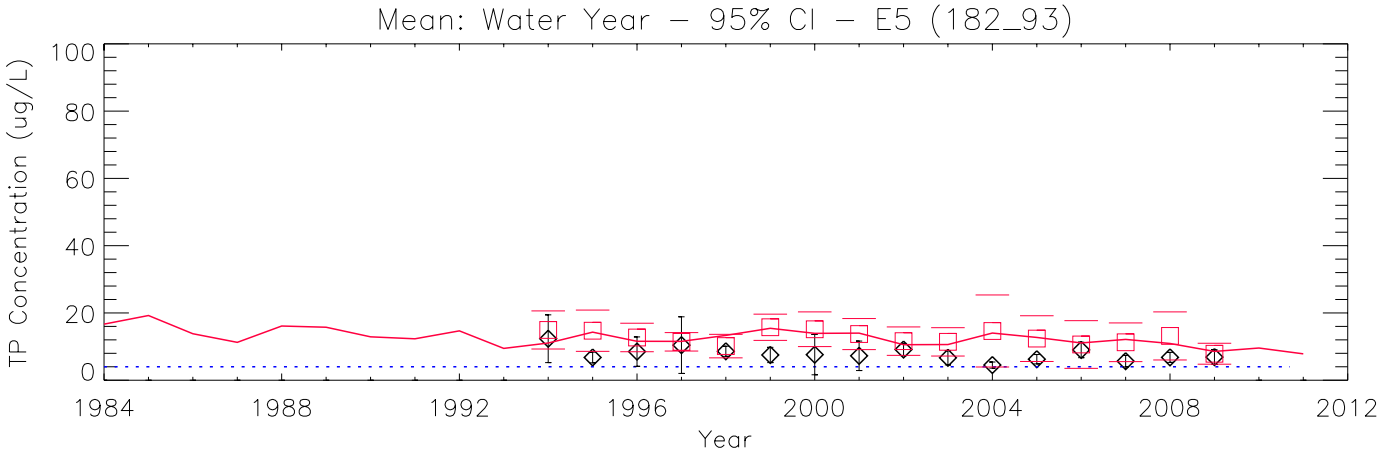
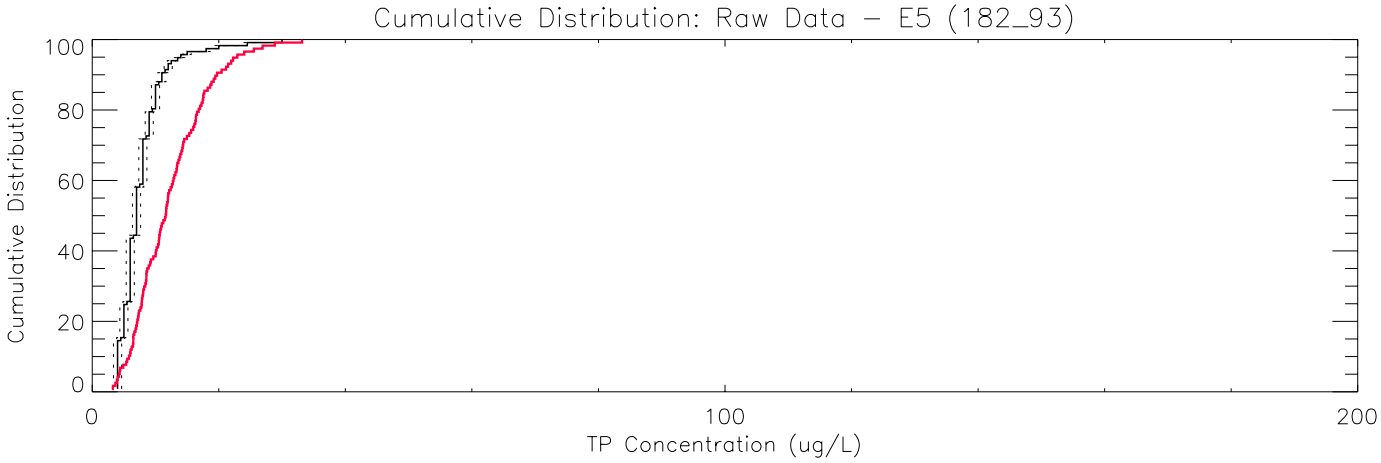
1988
1992
1996
2000
2004
2008
2012
Year

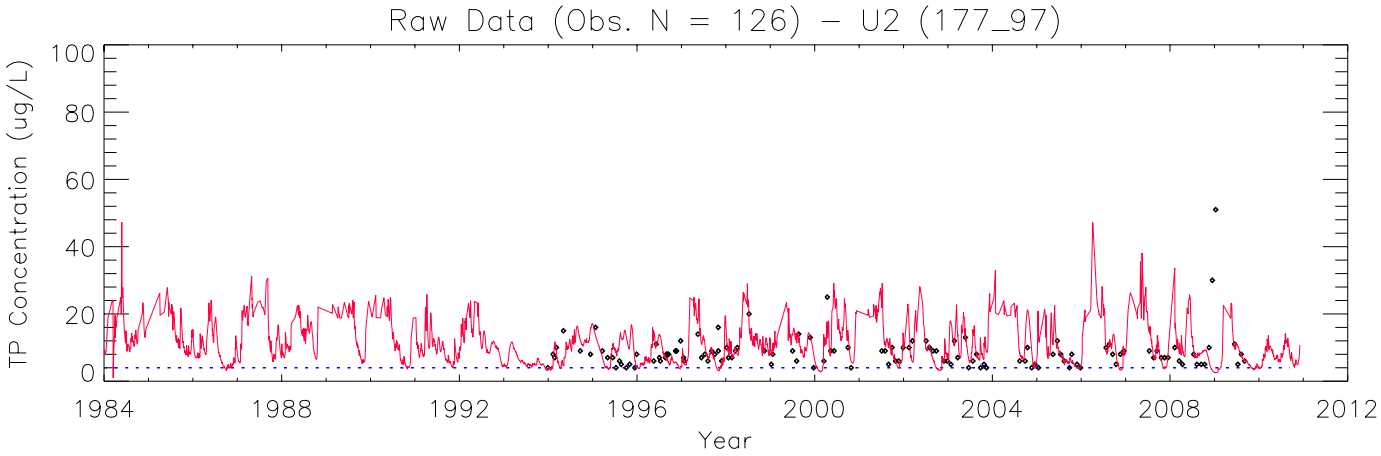

Cumulative Distribution: Raw Data – U3 (172_91)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

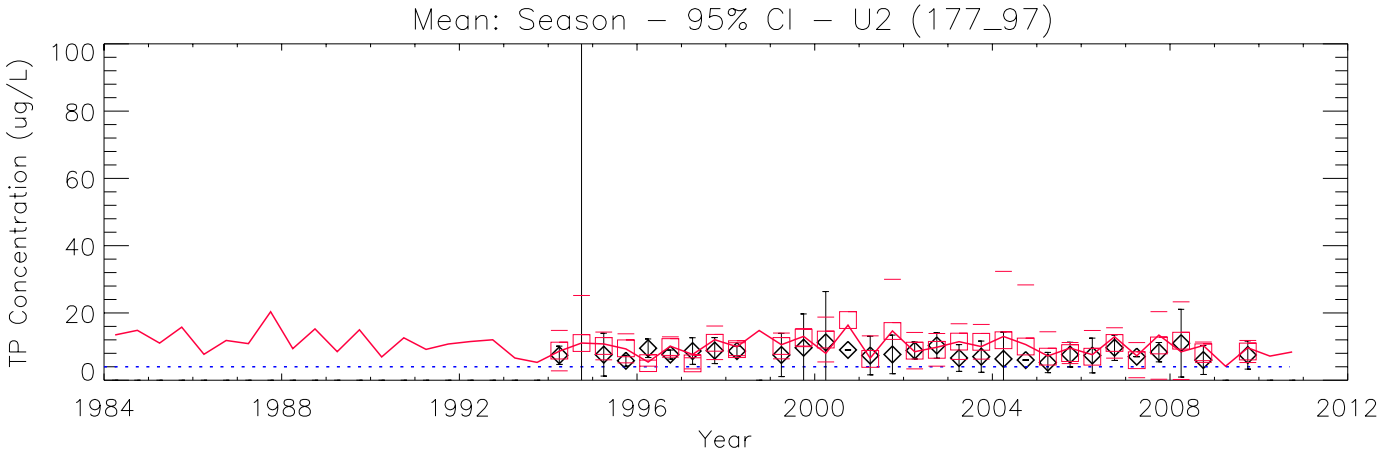

Raw Data (Obs. N = 117) – E5 (182_93)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

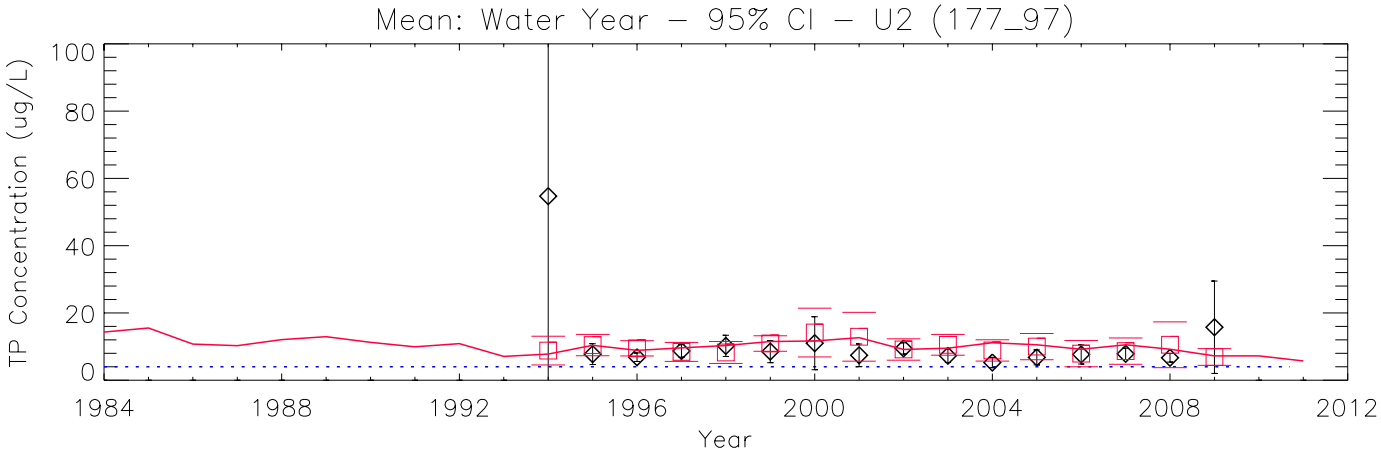

Mean: Season – 95% CI – E5 (182_93)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

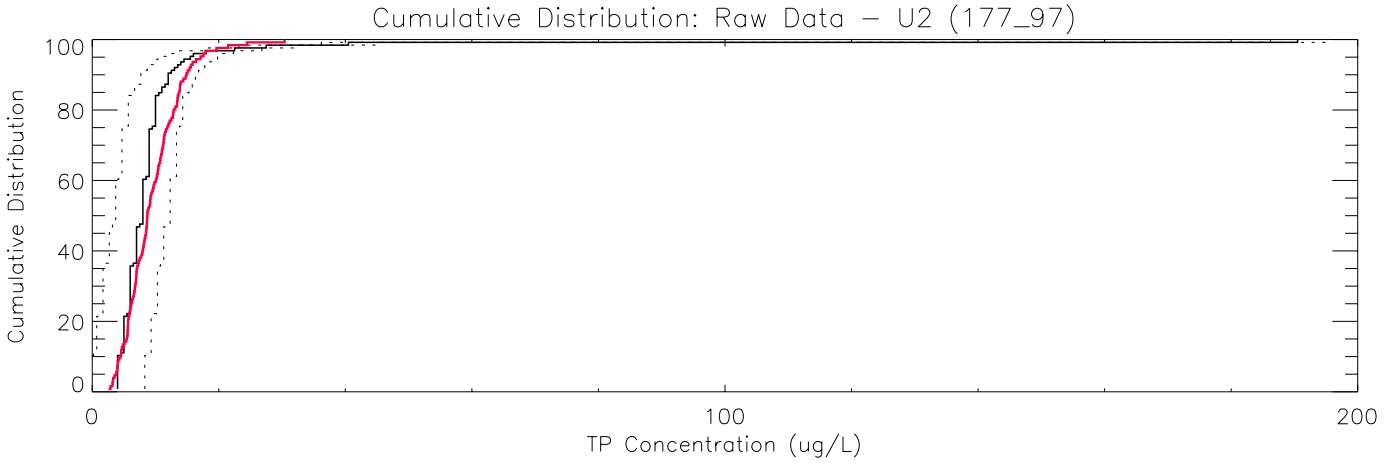

Mean: Water Year – 95% CI – E5 (182_93)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

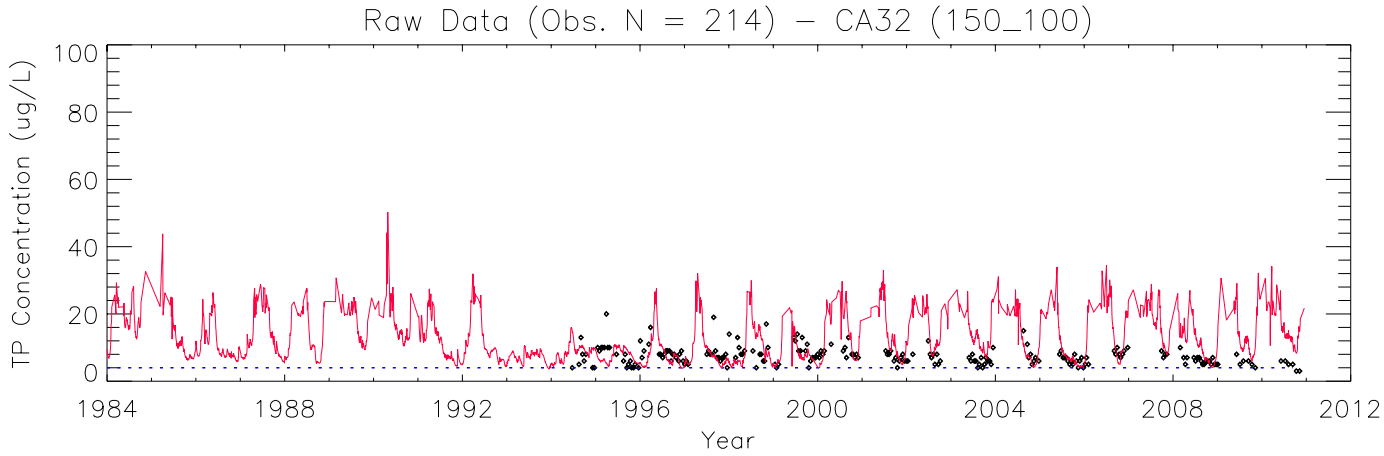

Cumulative Distribution: Raw Data – E5 (182_93)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

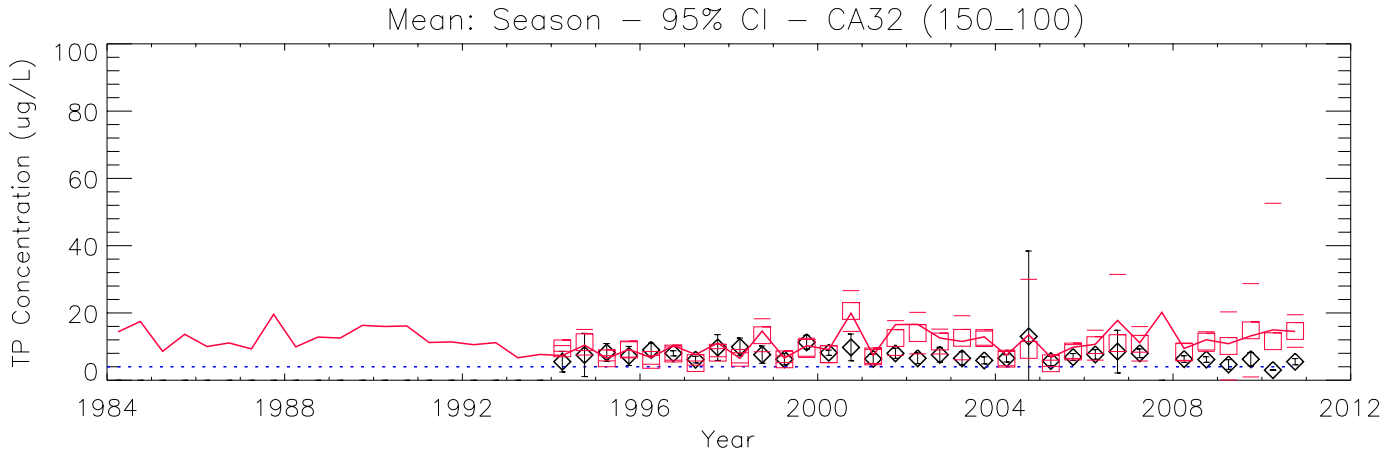

Raw Data (Obs. N = 126) – U2 (177_97)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

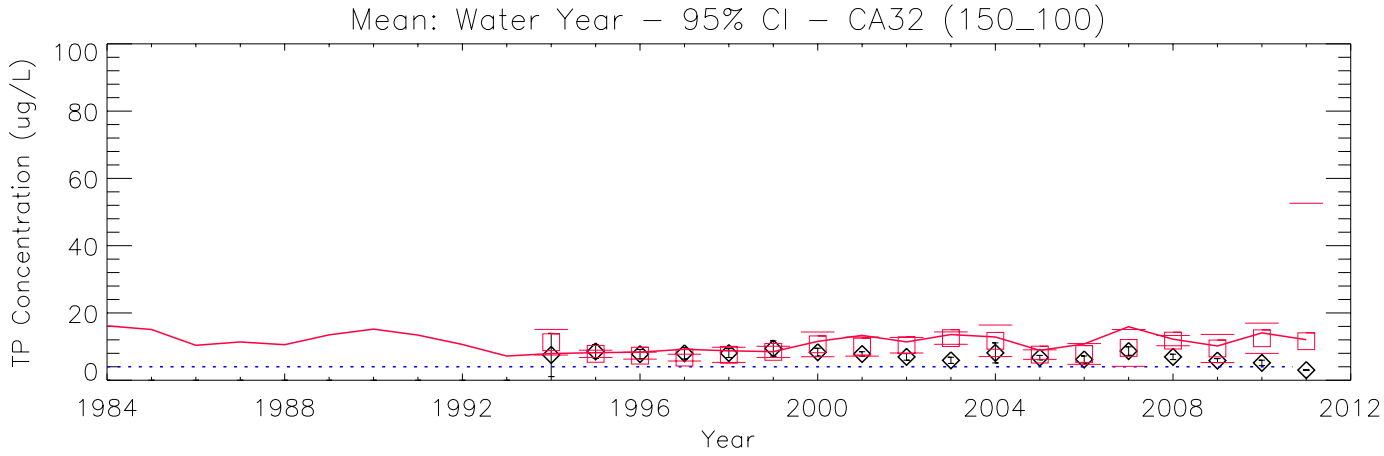

Mean: Season – 95% CI – U2 (177_97)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

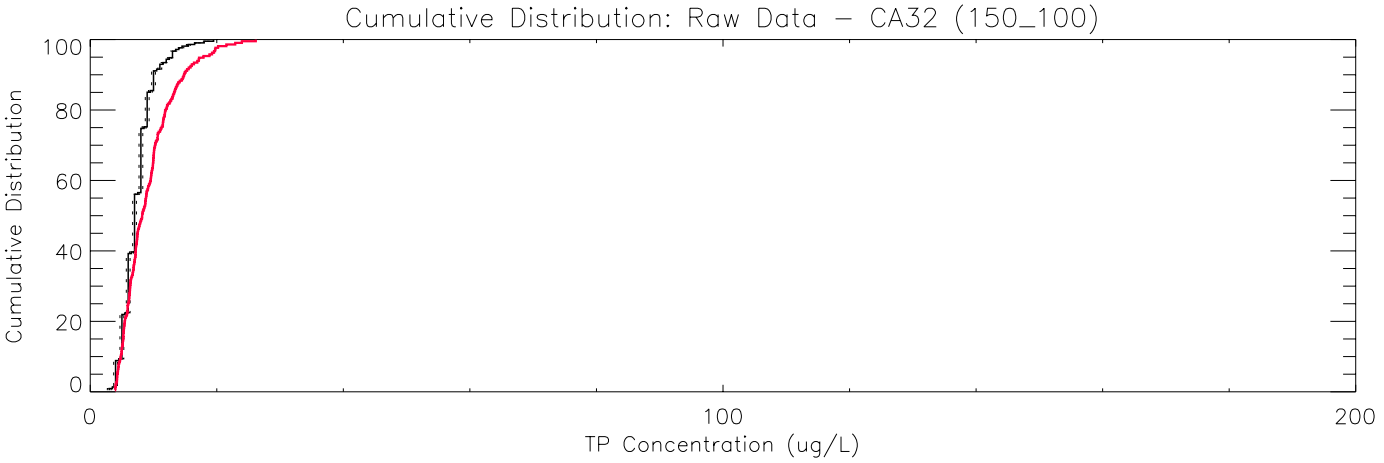

Mean: Water Year – 95% CI – U2 (177_97)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

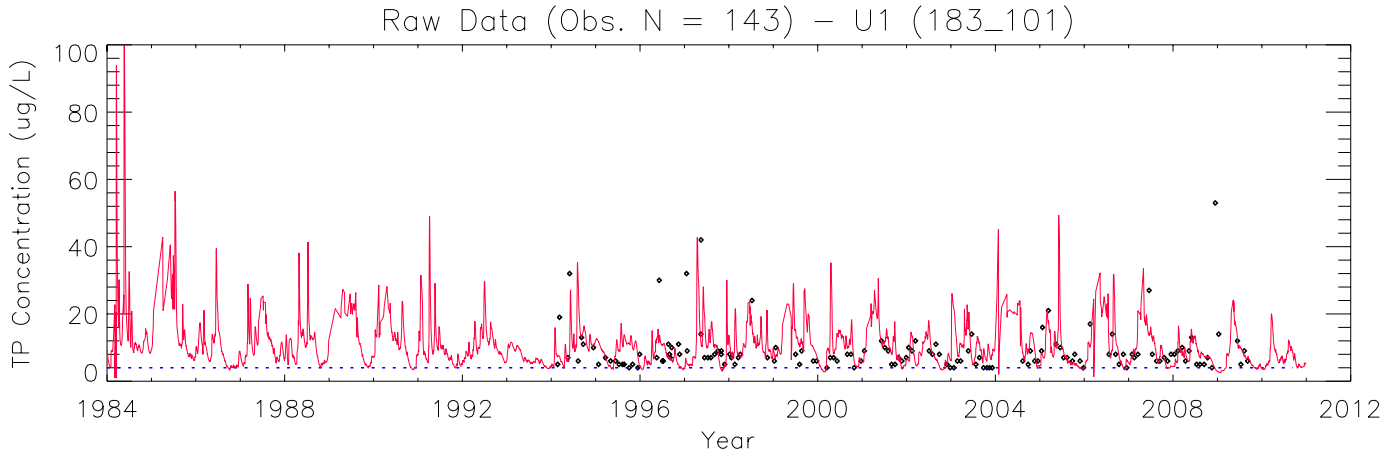

Cumulative Distribution: Raw Data – U2 (177_97)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

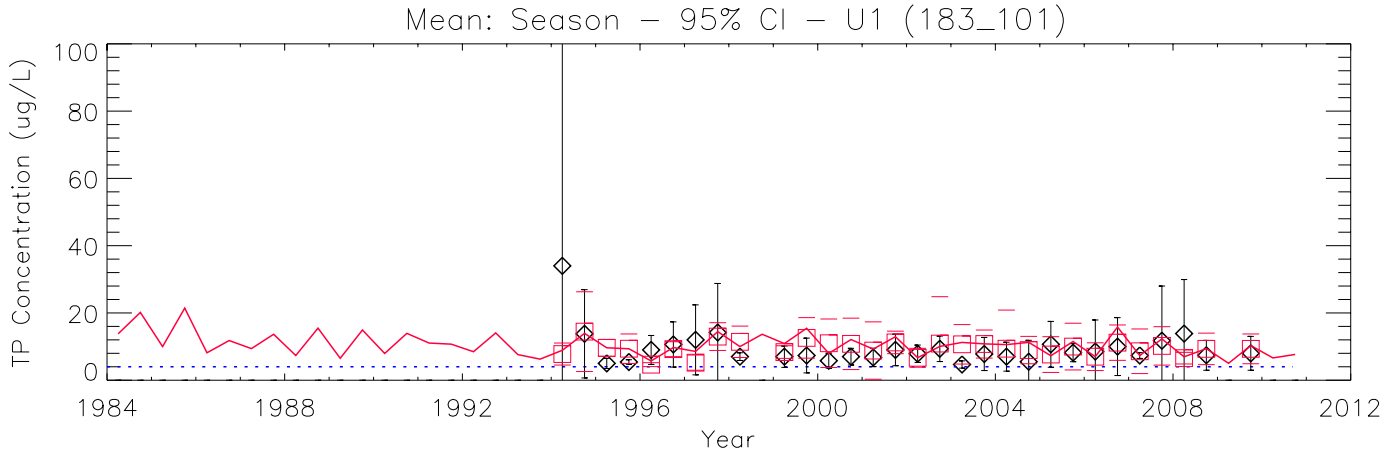

Raw Data (Obs. N = 214) – CA32 (150_100)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

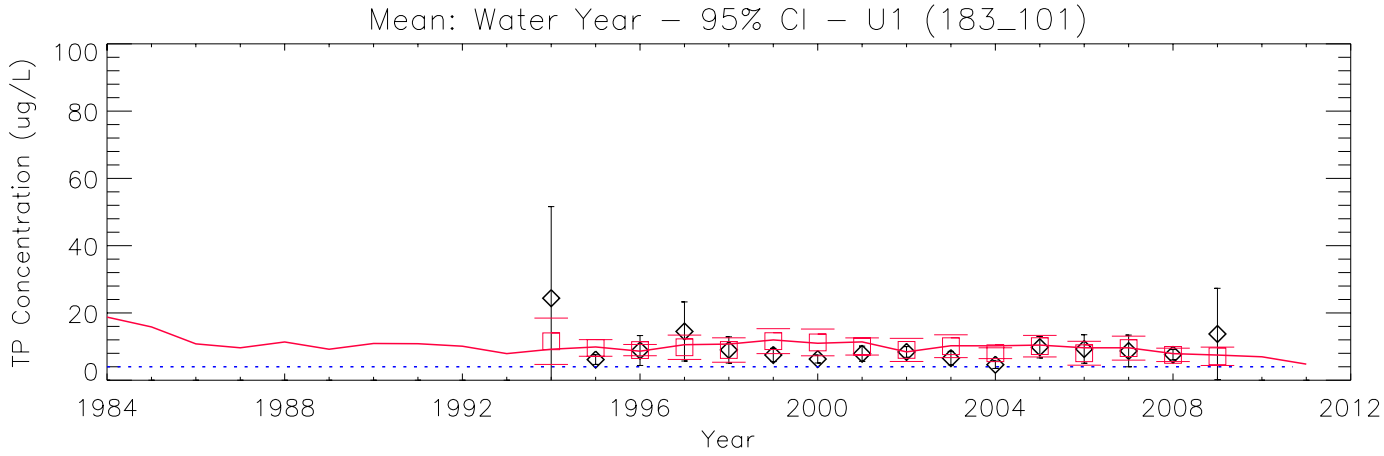

Mean: Season – 95% CI – CA32 (150_100)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

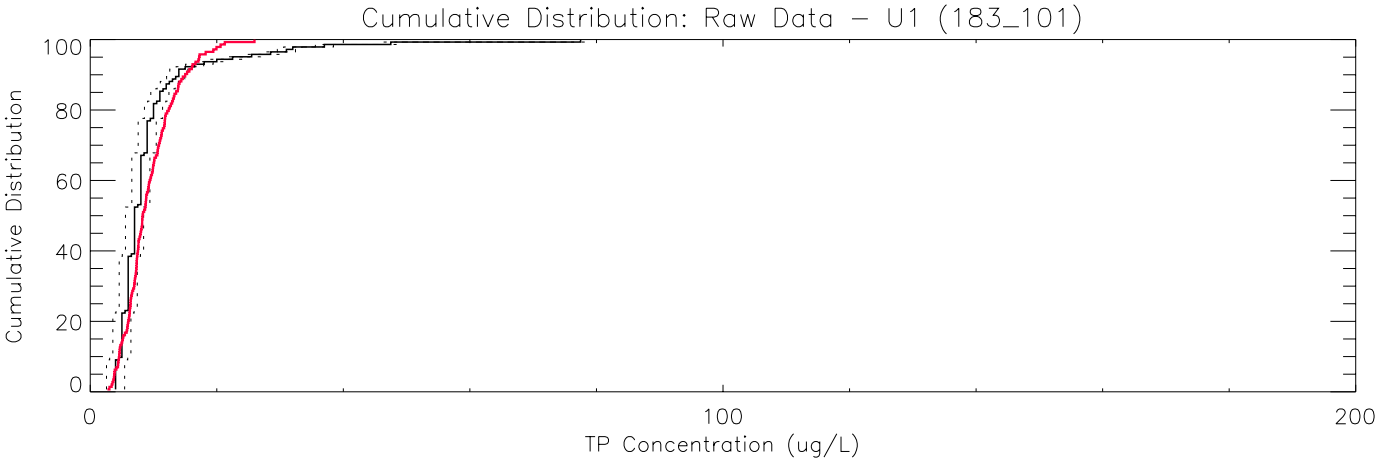

Mean: Water Year – 95% CI – CA32 (150_100)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

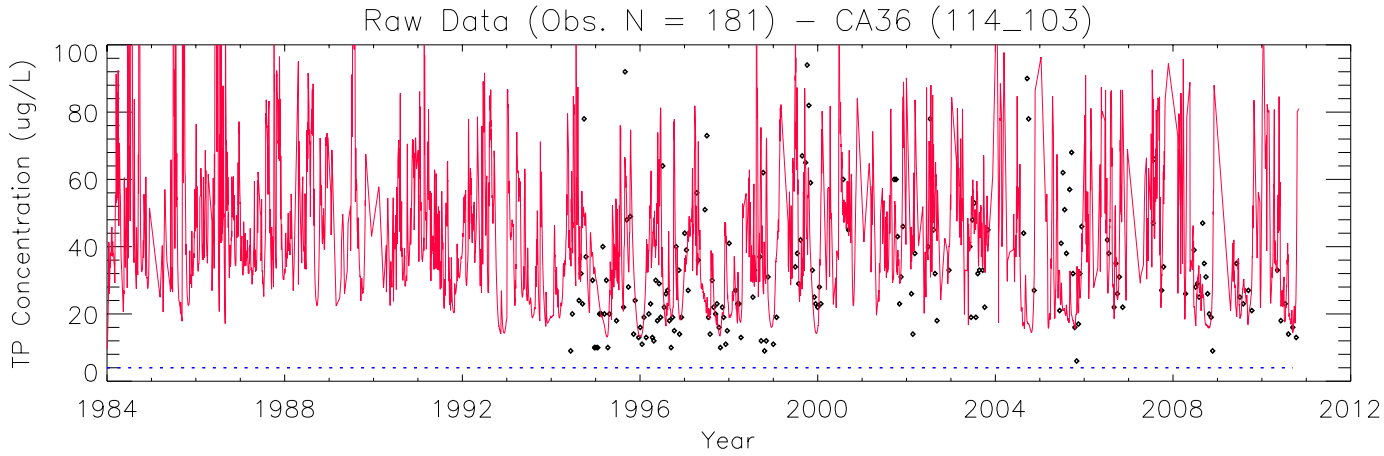

Cumulative Distribution: Raw Data – CA32 (150_100)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 143) – U1 (183_101)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – U1 (183_101)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – U1 (183_101)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – U1 (183_101)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 181) – CA36 (114_103)
TP Concentration (ug/L)
0
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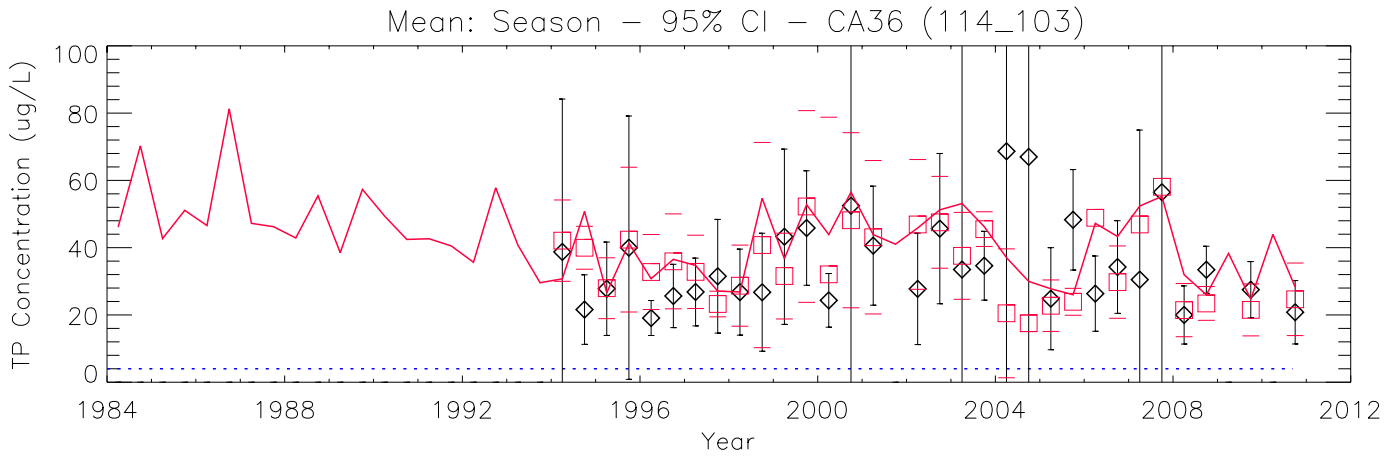
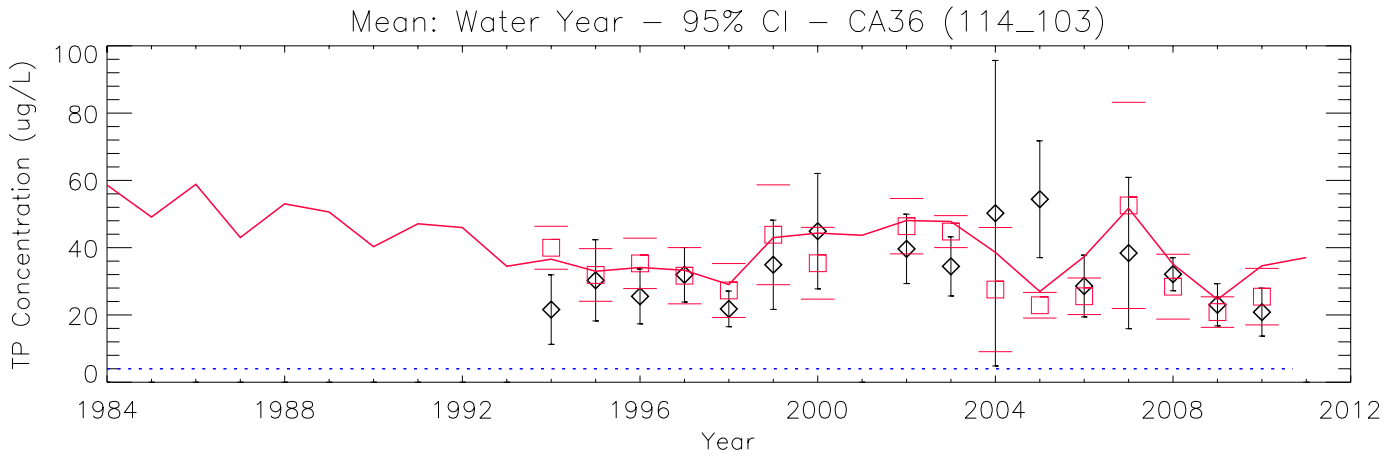
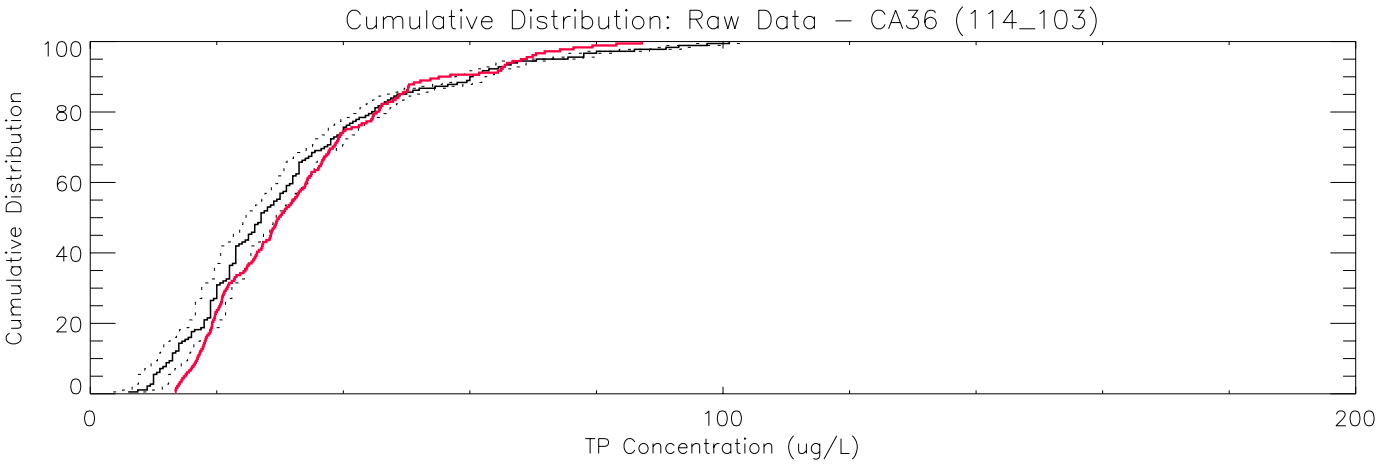
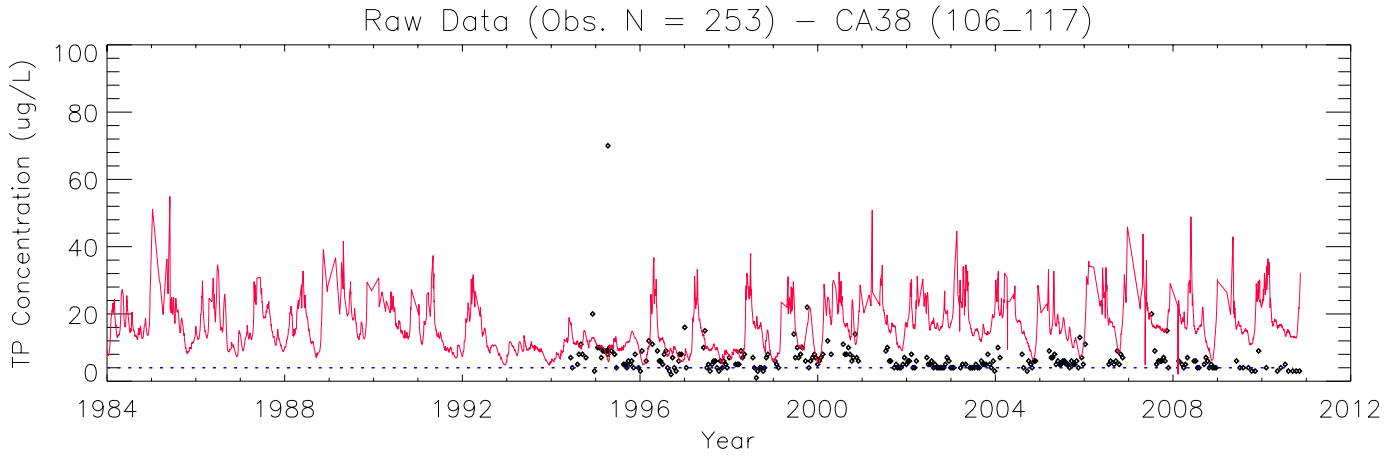
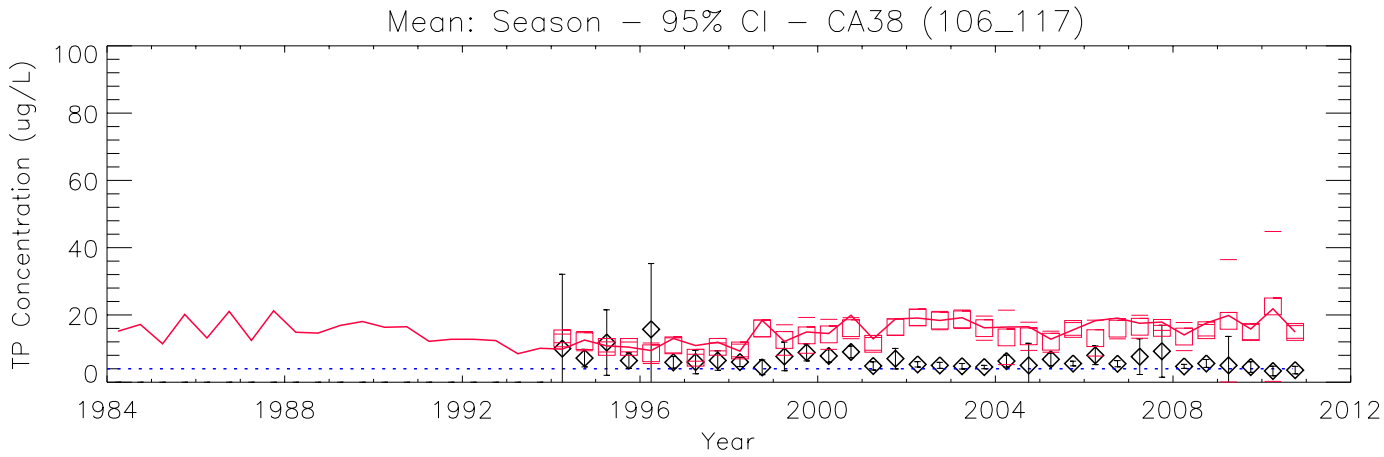
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

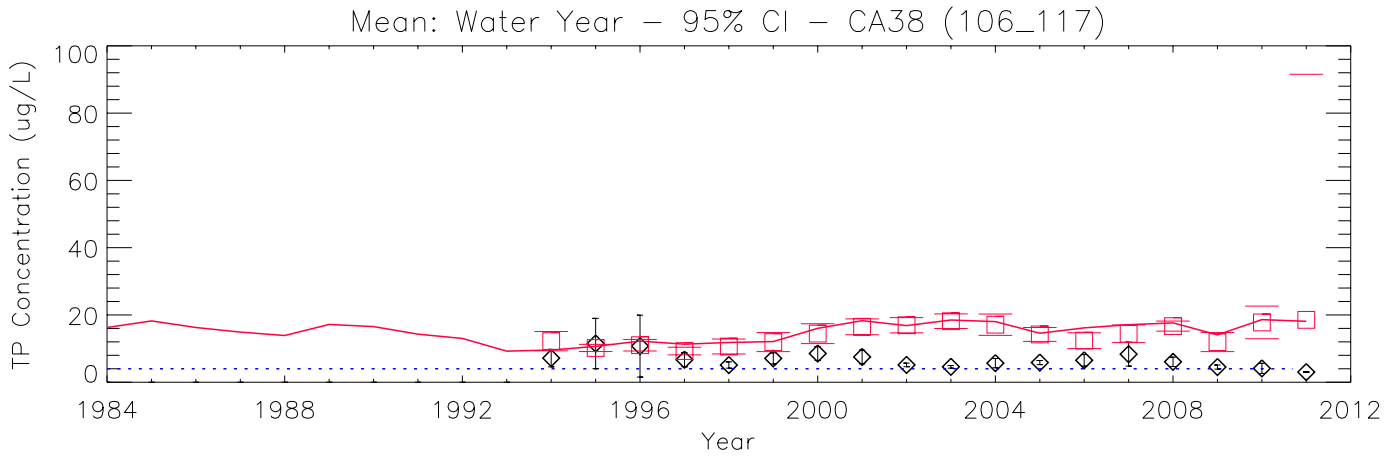

Mean: Season – 95% CI – CA36 (114_103)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

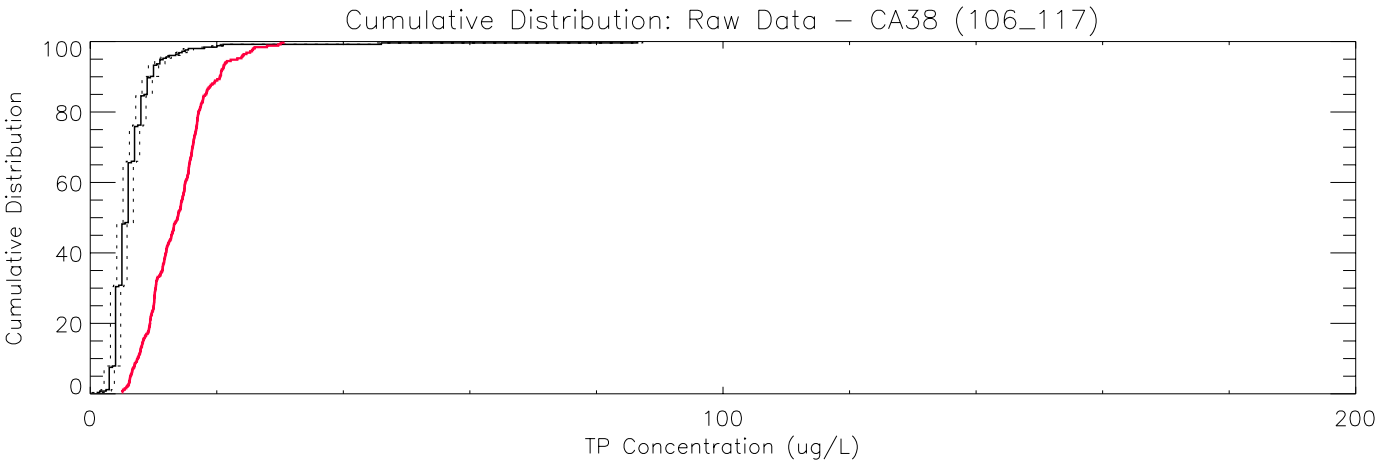

Mean: Water Year – 95% CI – CA36 (114_103)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

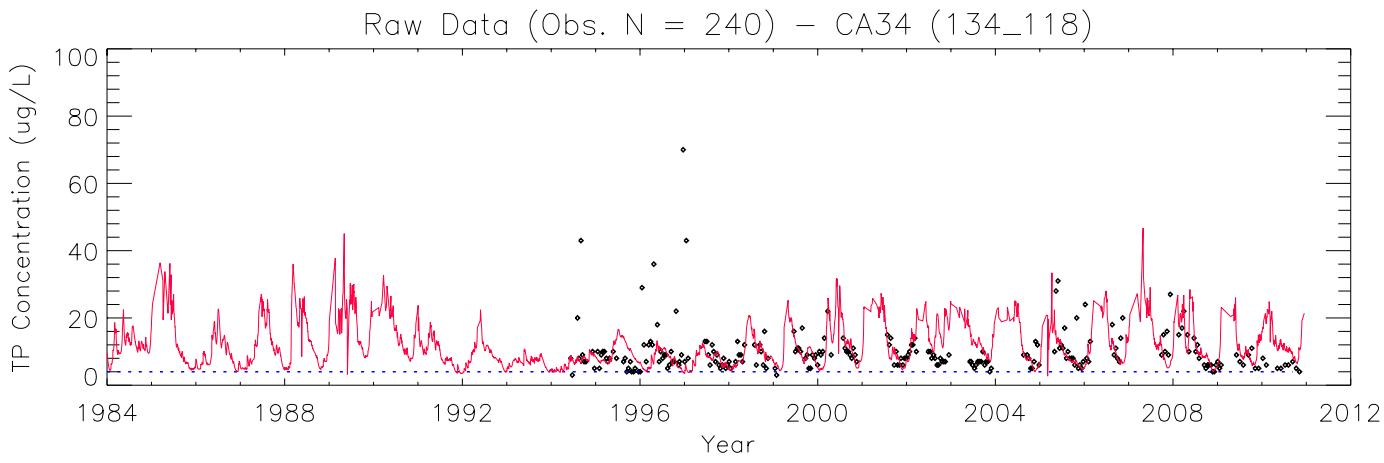

Cumulative Distribution: Raw Data – CA36 (114_103)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

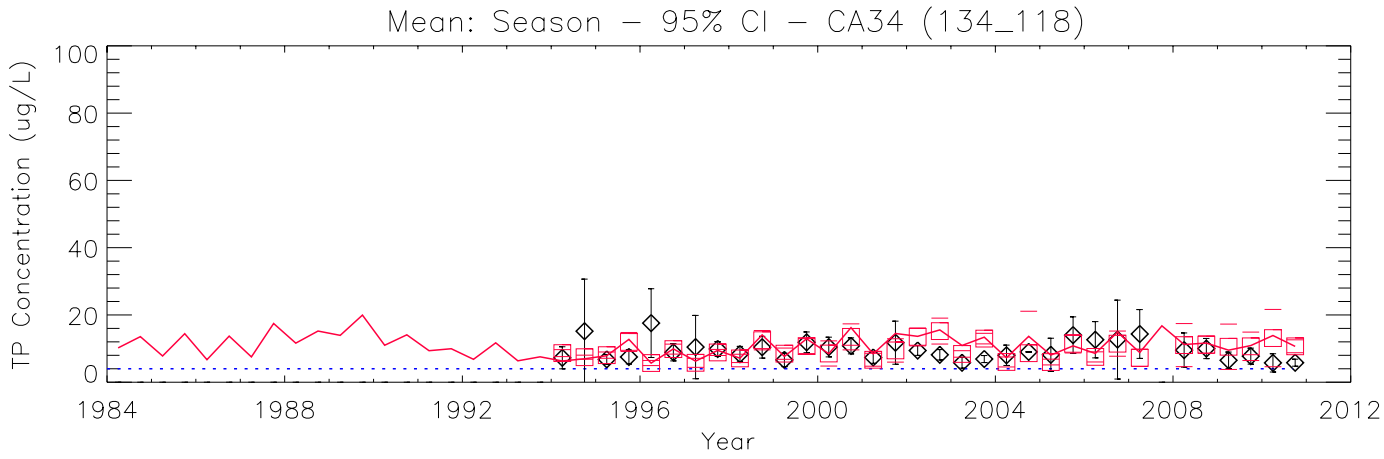

Raw Data (Obs. N = 253) – CA38 (106_117)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

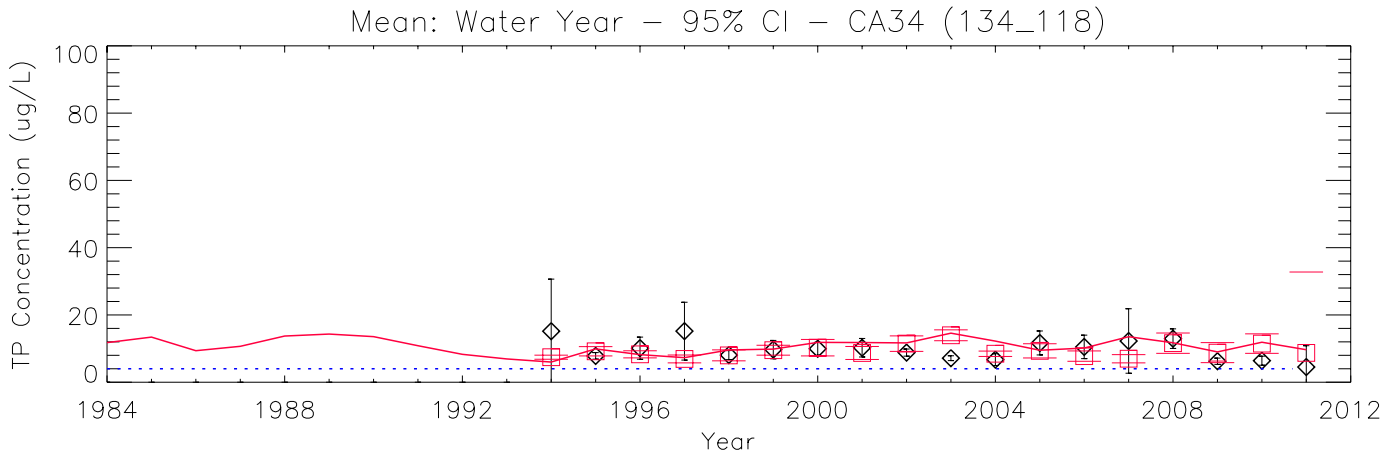

Mean: Season – 95% CI – CA38 (106_117)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

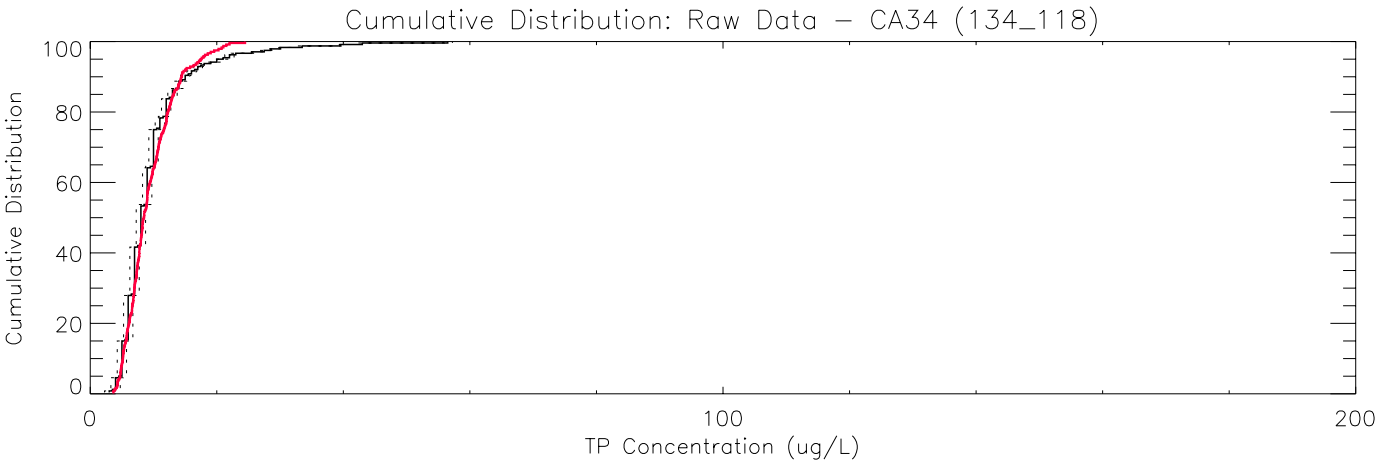

Mean: Water Year – 95% CI – CA38 (106_117)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

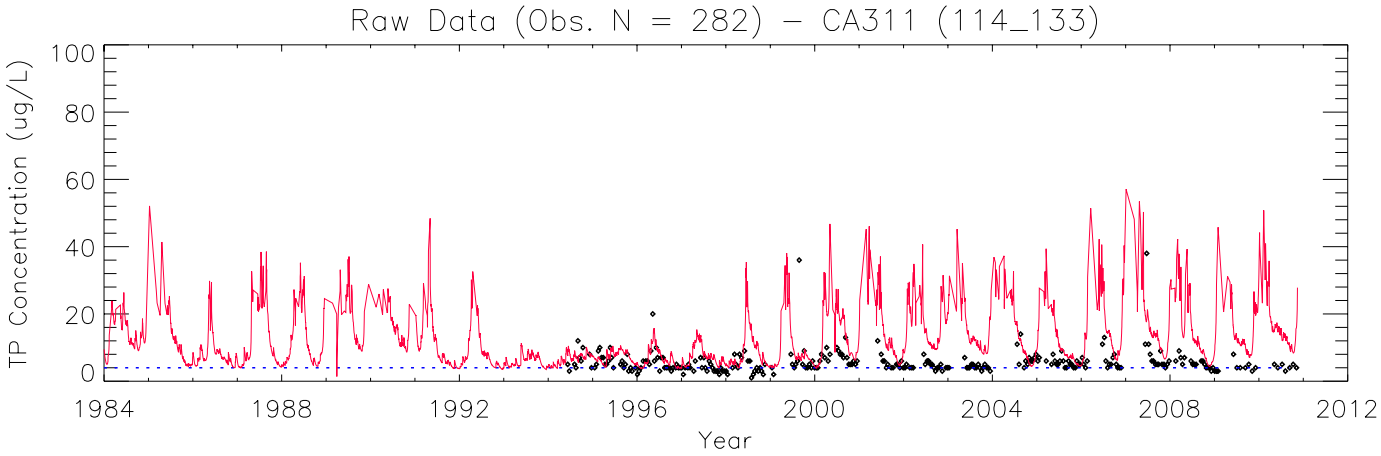

Cumulative Distribution: Raw Data – CA38 (106_117)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

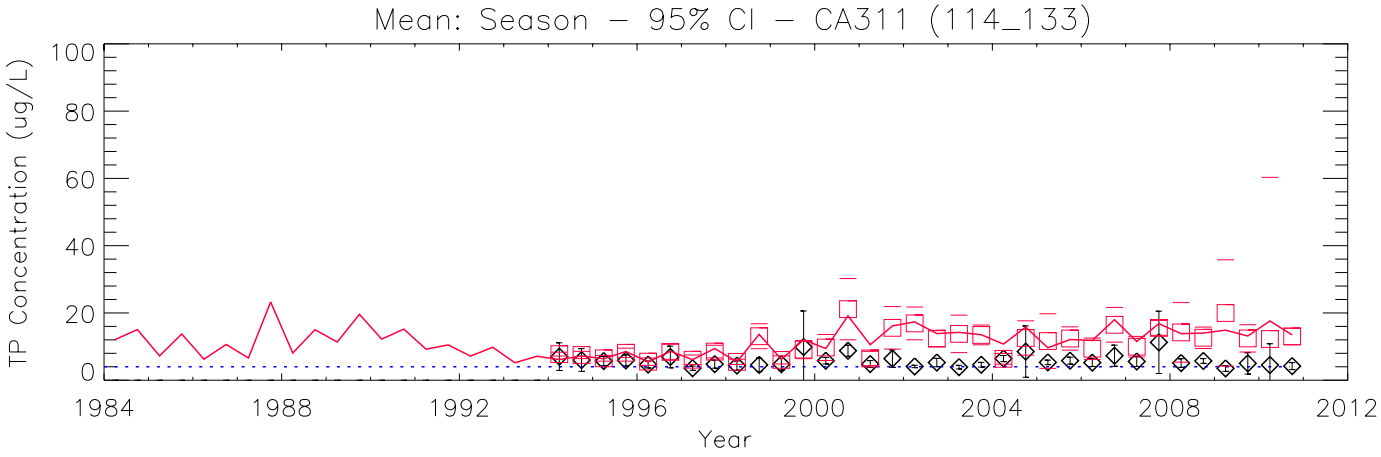

Raw Data (Obs. N = 240) – CA34 (134_118)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

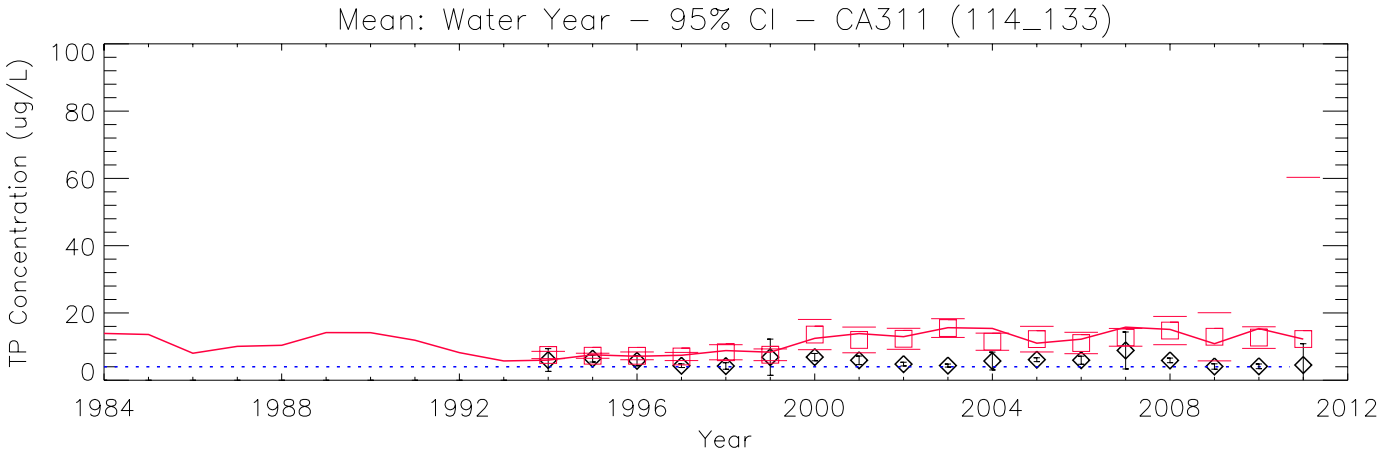

Mean: Season – 95% CI – CA34 (134_118)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

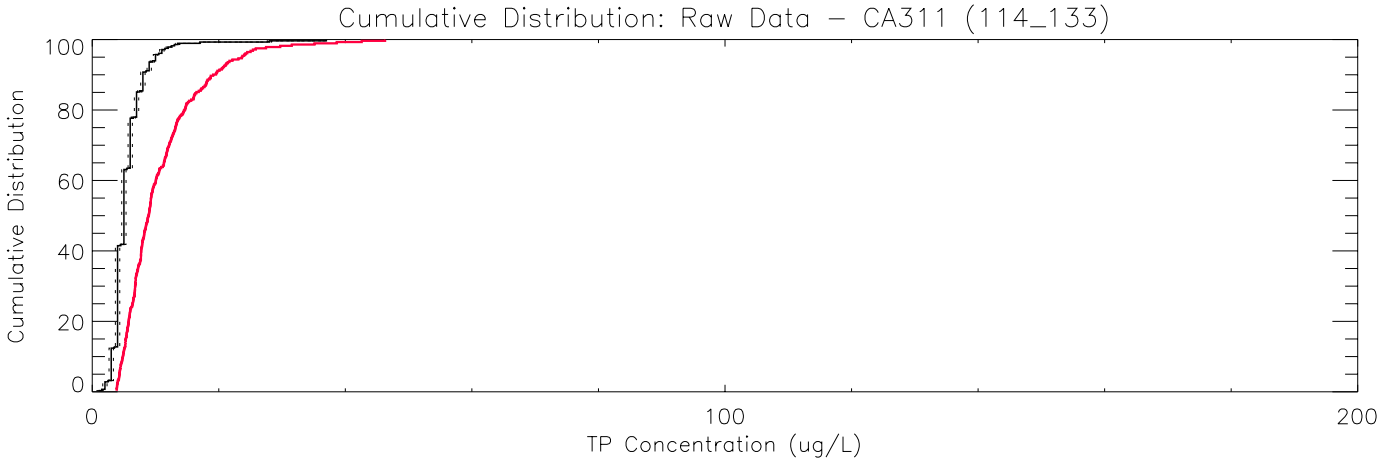

Mean: Water Year – 95% CI – CA34 (134_118)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

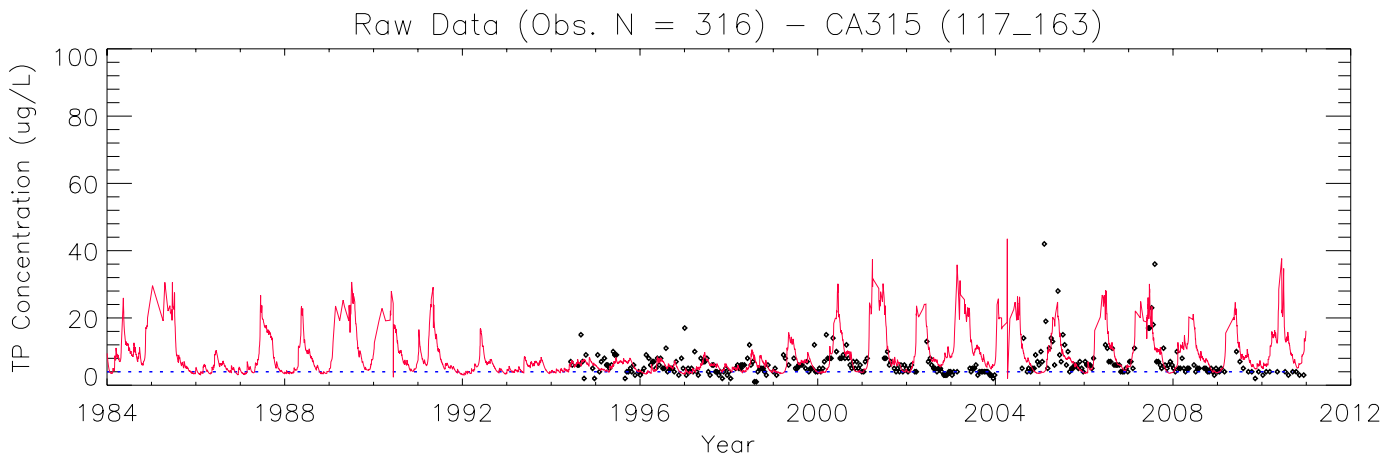

Cumulative Distribution: Raw Data – CA34 (134_118)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

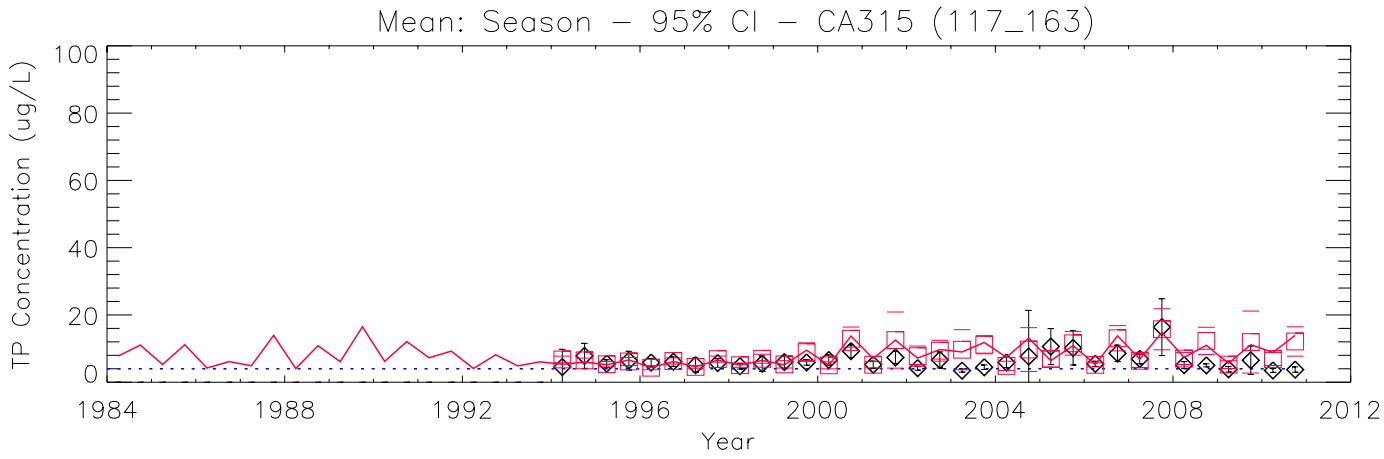

Raw Data (Obs. N = 282) – CA311 (114_133)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

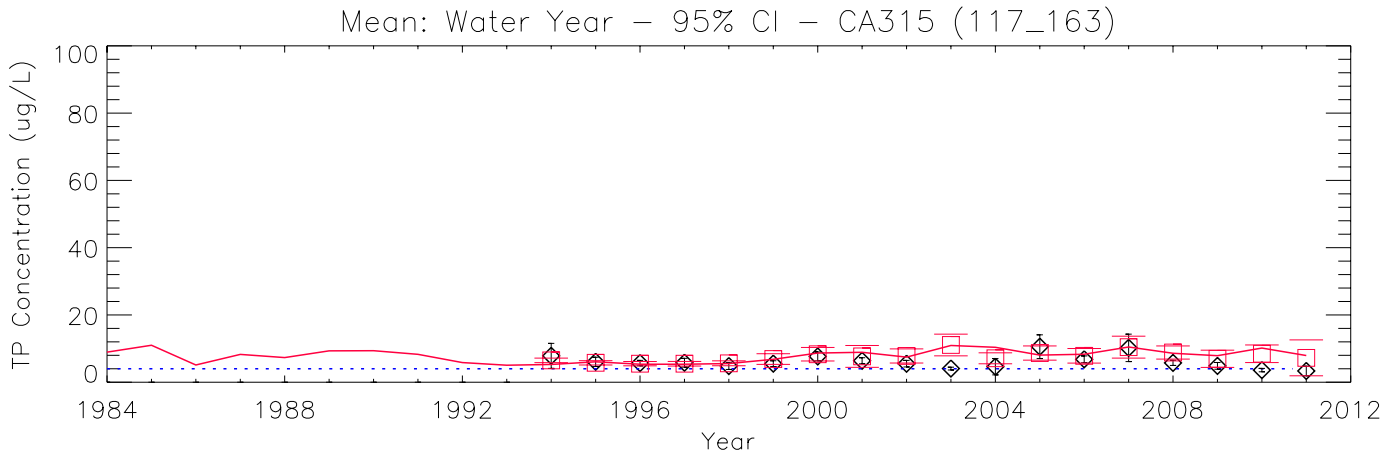

Mean: Season – 95% CI – CA311 (114_133)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

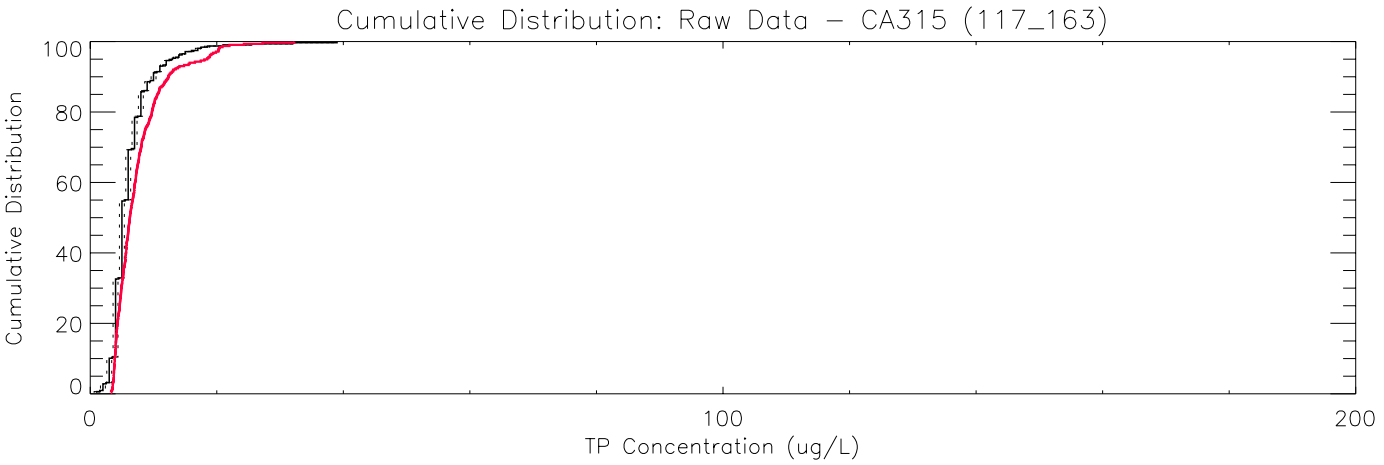

Mean: Water Year – 95% CI – CA311 (114_133)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

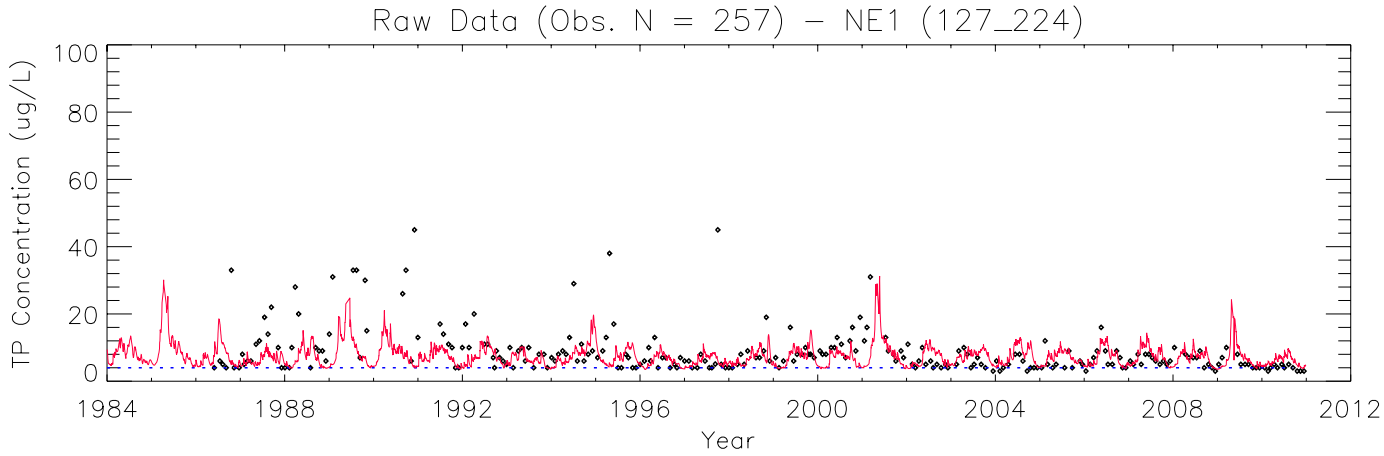

Cumulative Distribution: Raw Data – CA311 (114_133)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

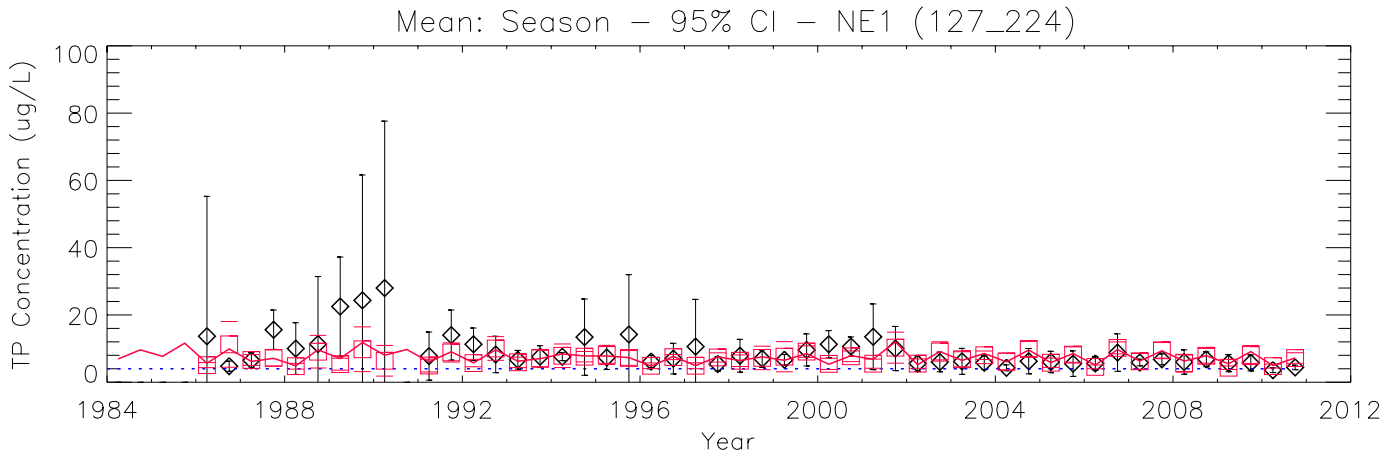

Raw Data (Obs. N = 316) – CA315 (117_163)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

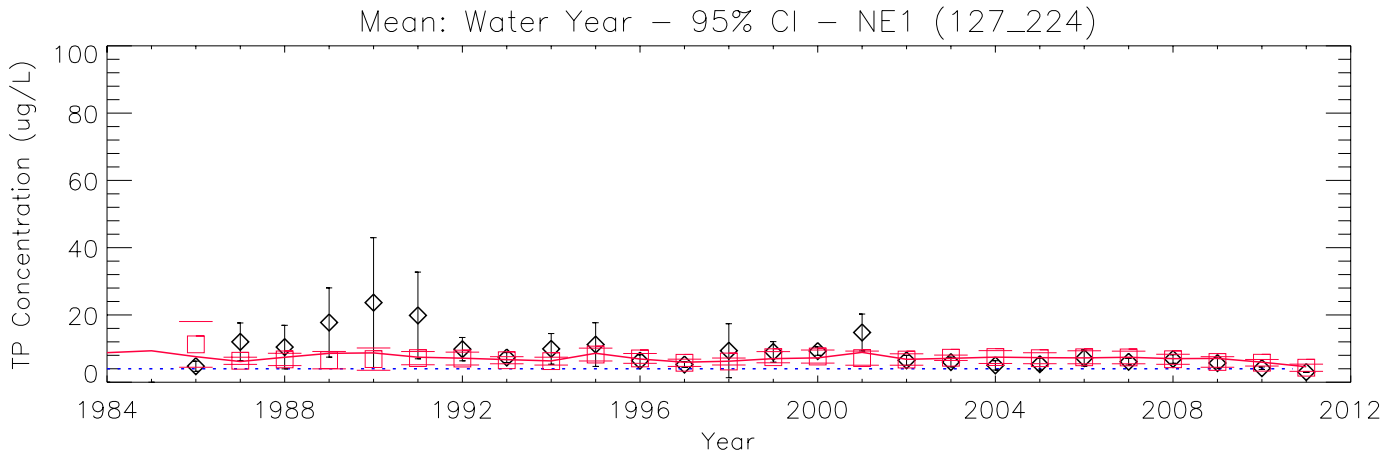

Mean: Season – 95% CI – CA315 (117_163)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

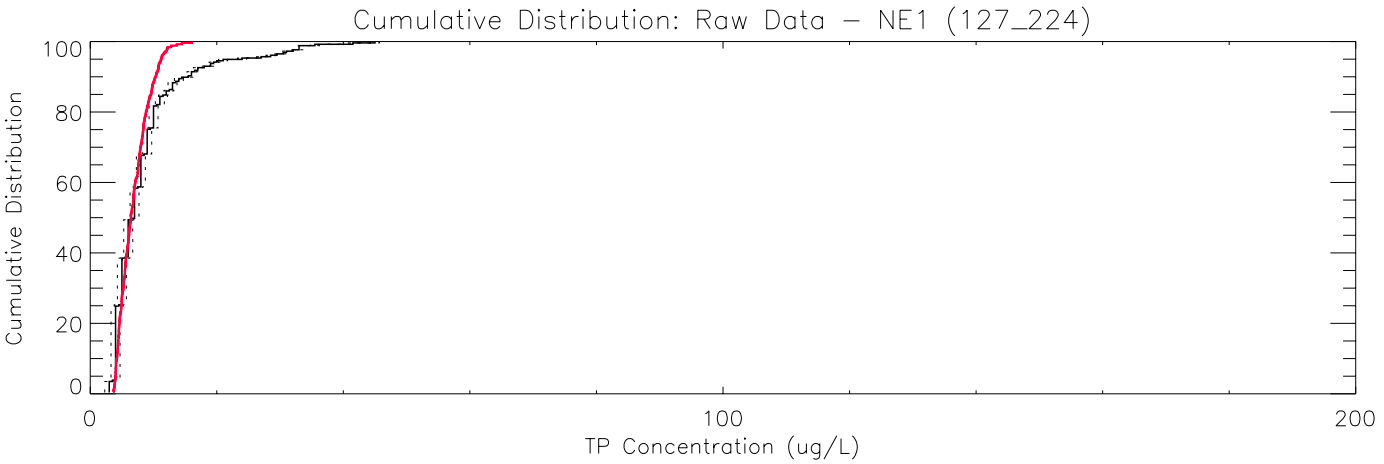

Mean: Water Year – 95% CI – CA315 (117_163)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

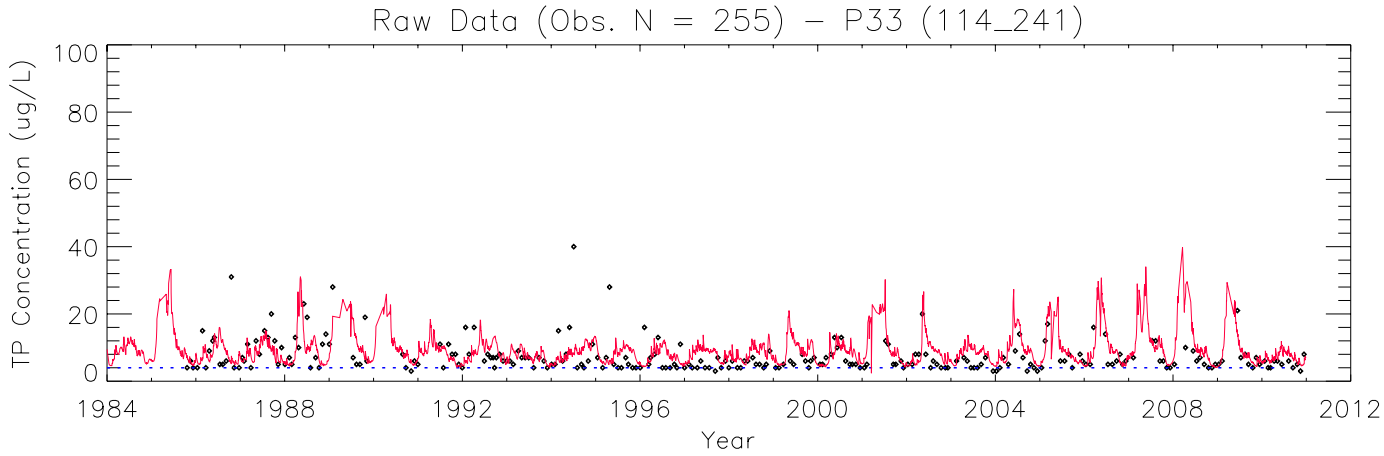

Cumulative Distribution: Raw Data – CA315 (117_163)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

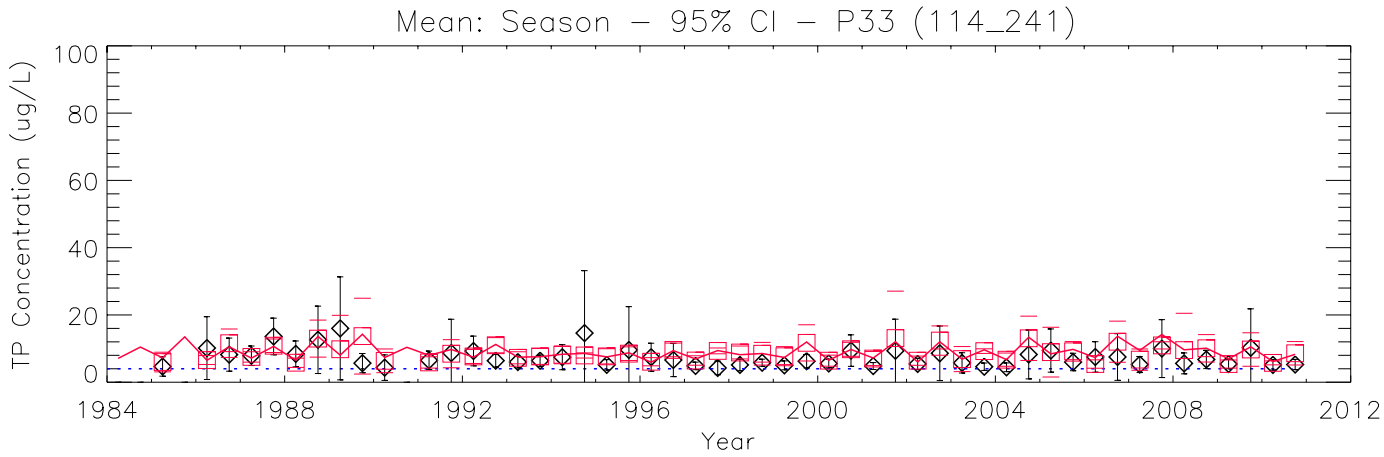

Raw Data (Obs. N = 257) – NE1 (127_224)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

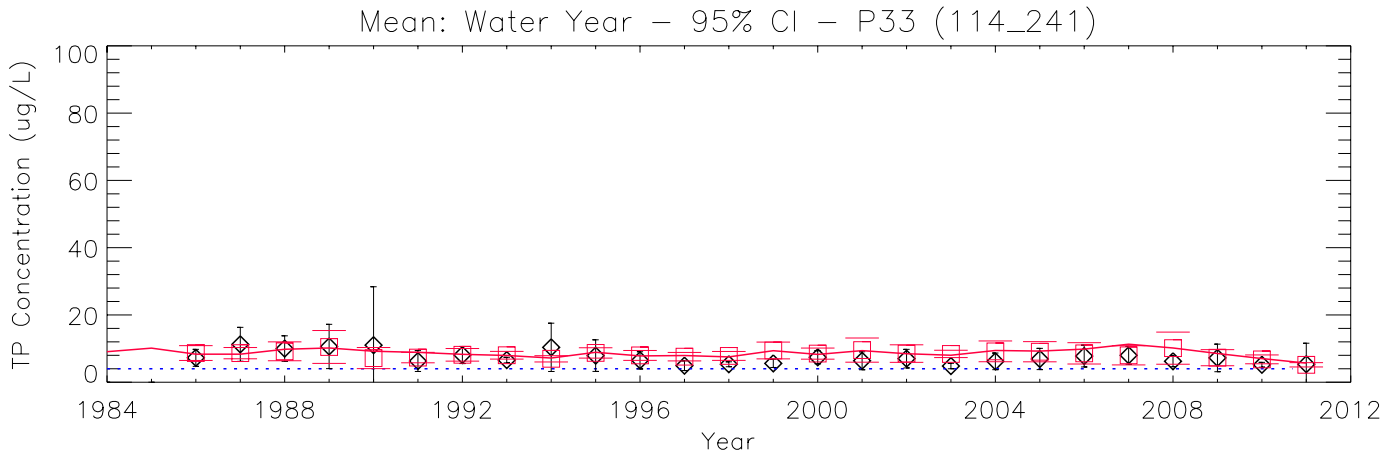

Mean: Season – 95% CI – NE1 (127_224)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

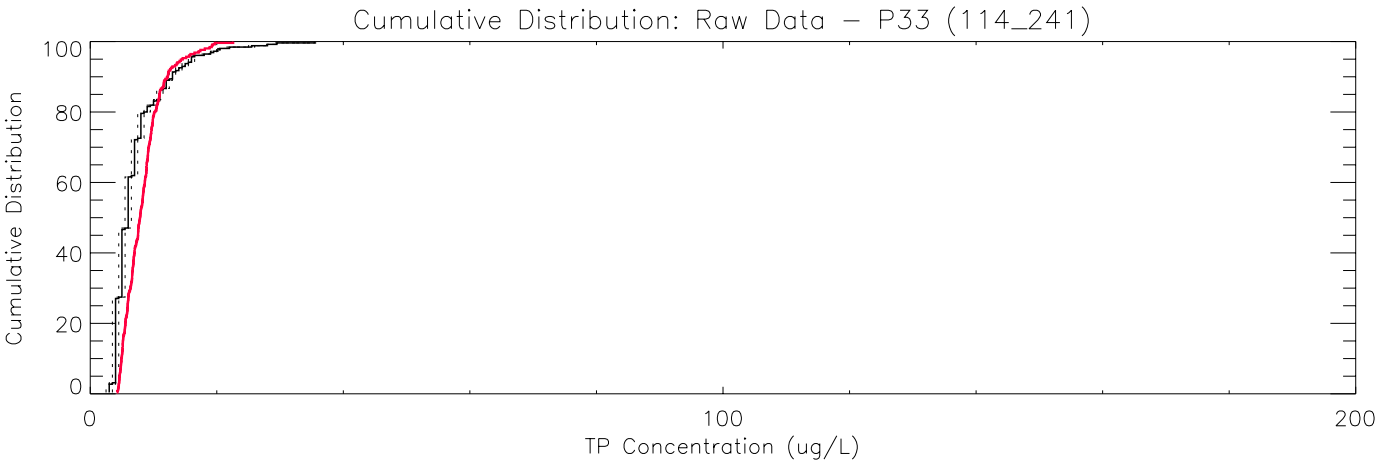

Mean: Water Year – 95% CI – NE1 (127_224)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

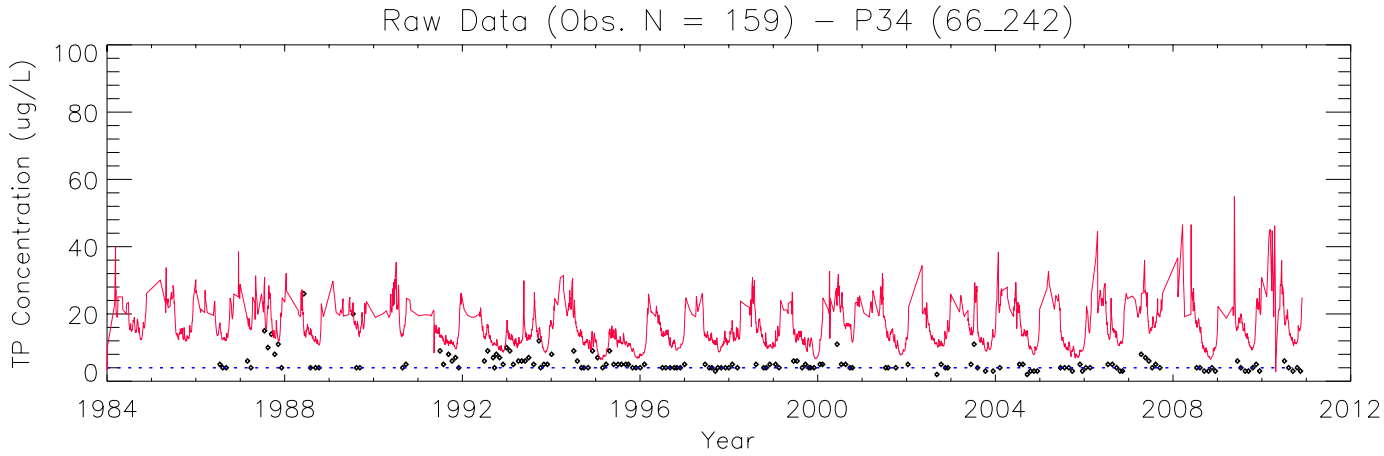

Cumulative Distribution: Raw Data – NE1 (127_224)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 255) – P33 (114_241)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – P33 (114_241)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – P33 (114_241)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – P33 (114_241)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 159) – P34 (66_242)
TP Concentration (ug/L)
0
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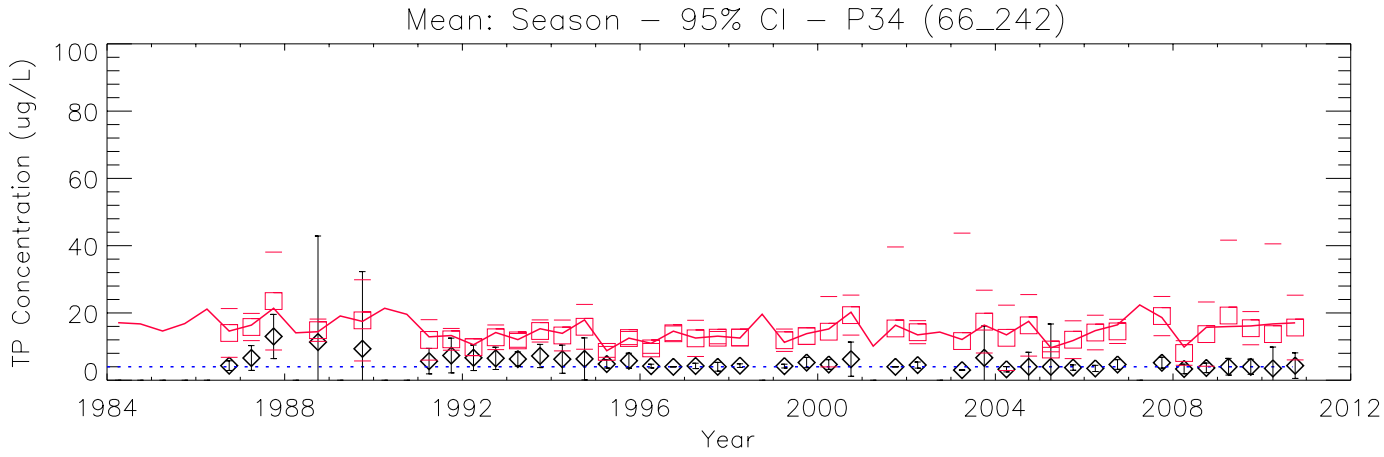
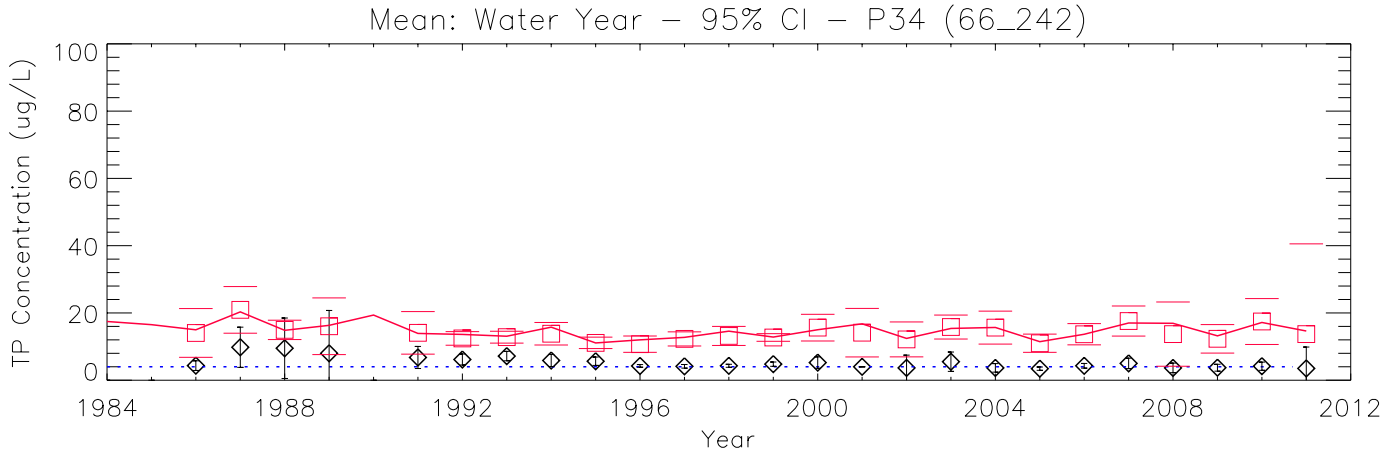
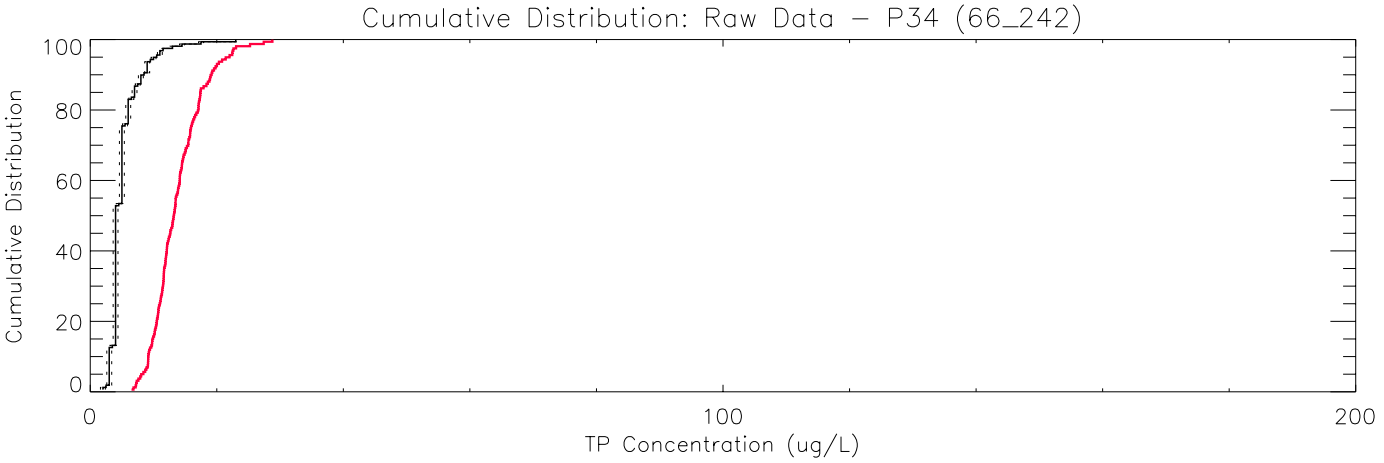
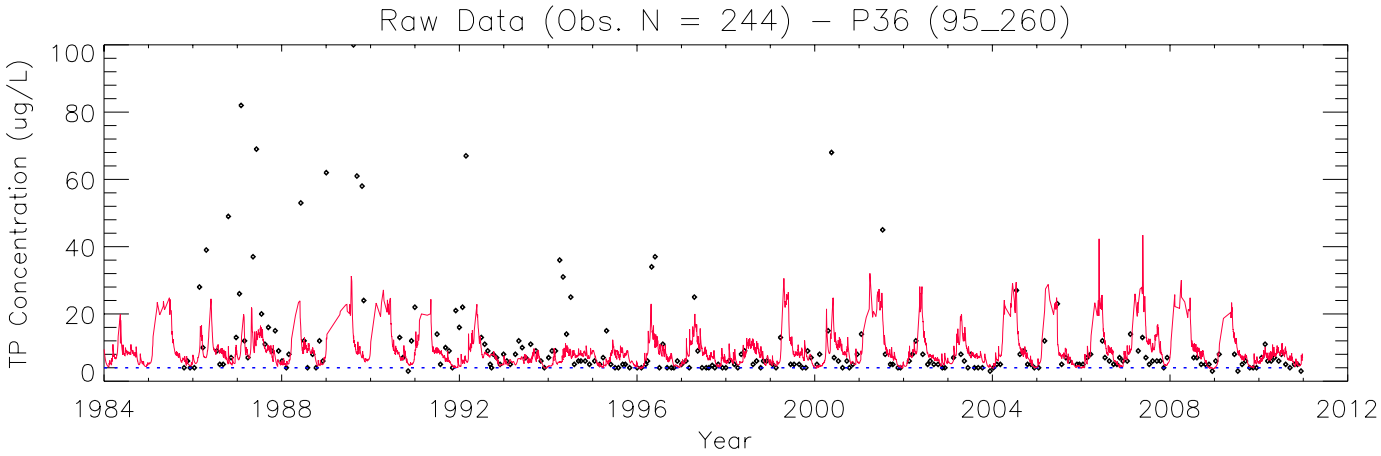
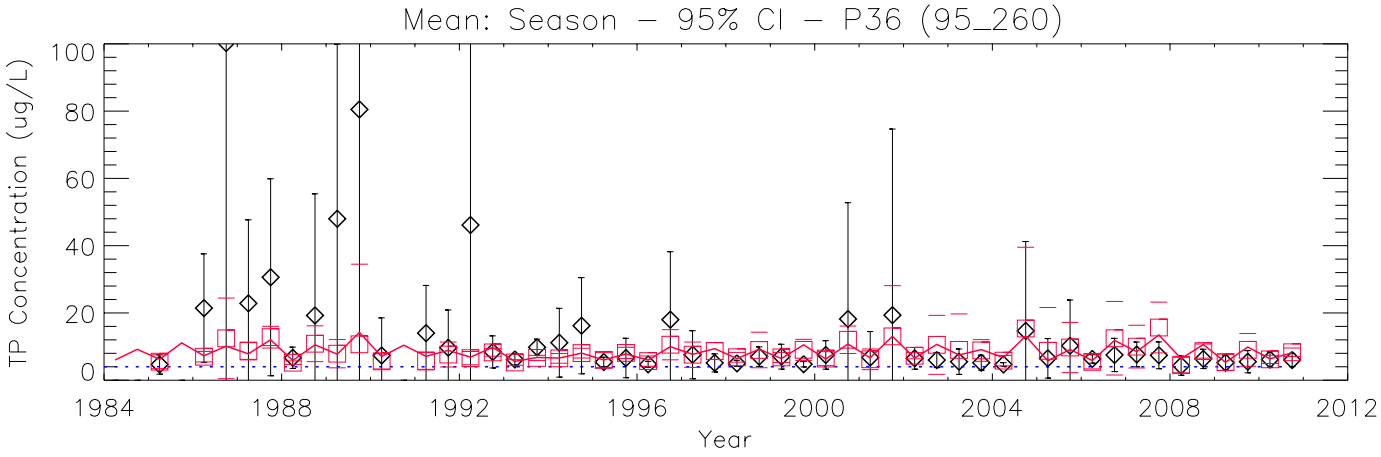
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

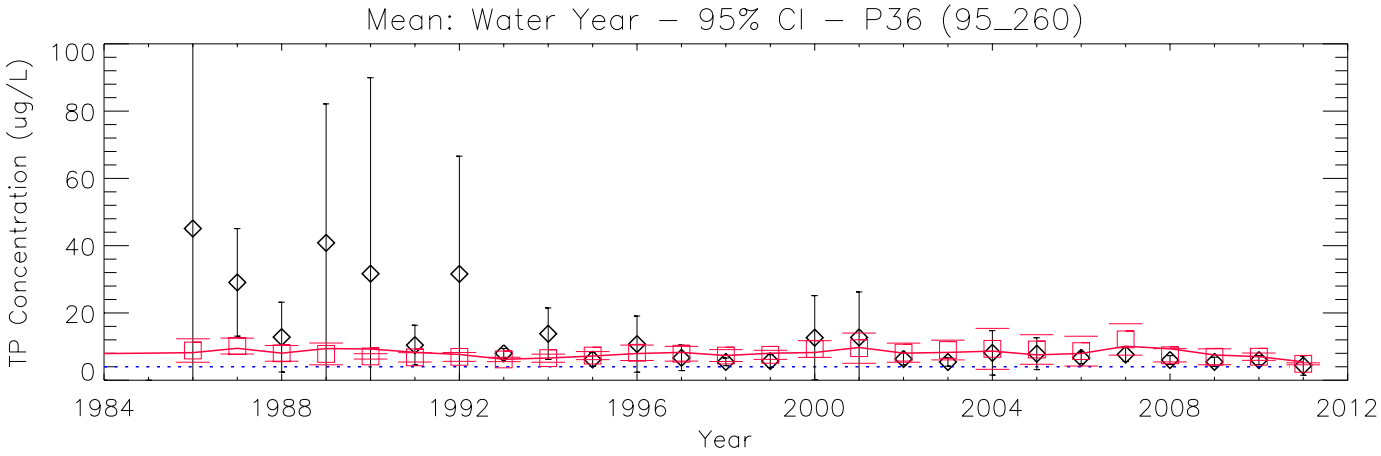

Mean: Season – 95% CI – P34 (66_242)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

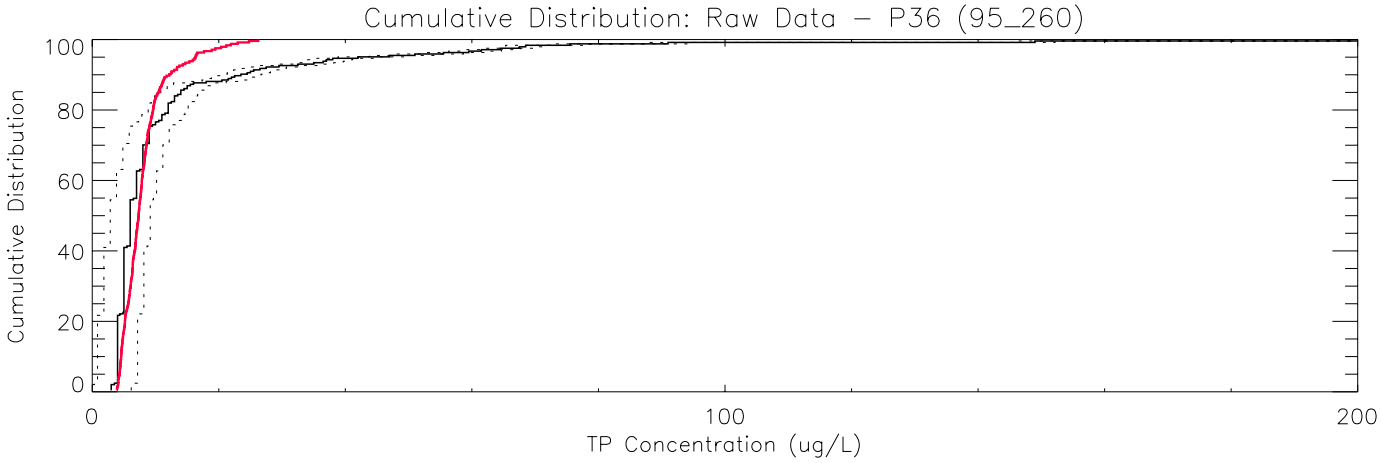

Mean: Water Year – 95% CI – P34 (66_242)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

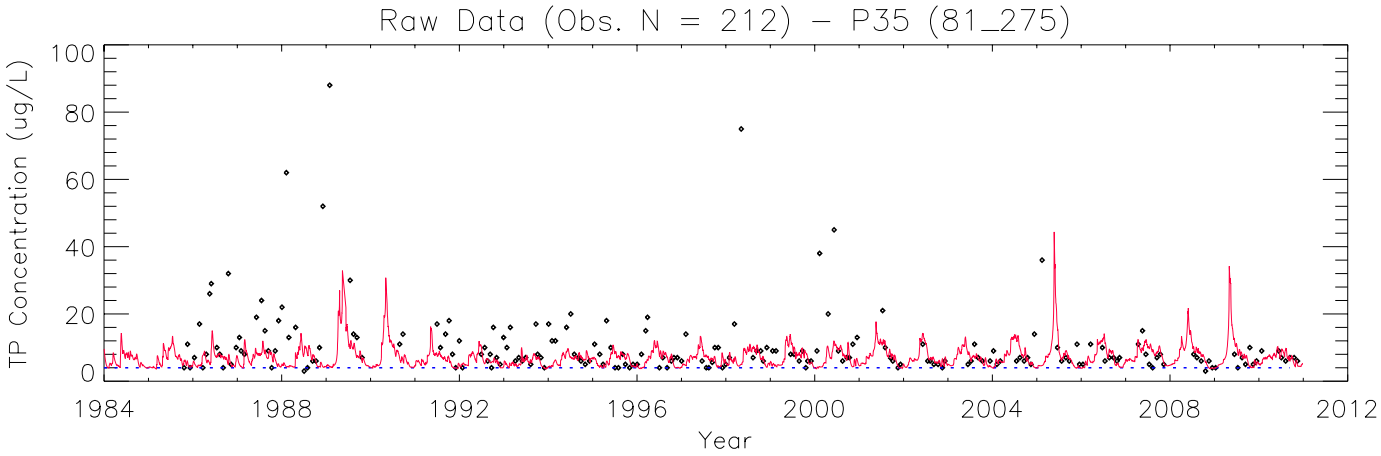

Cumulative Distribution: Raw Data – P34 (66_242)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

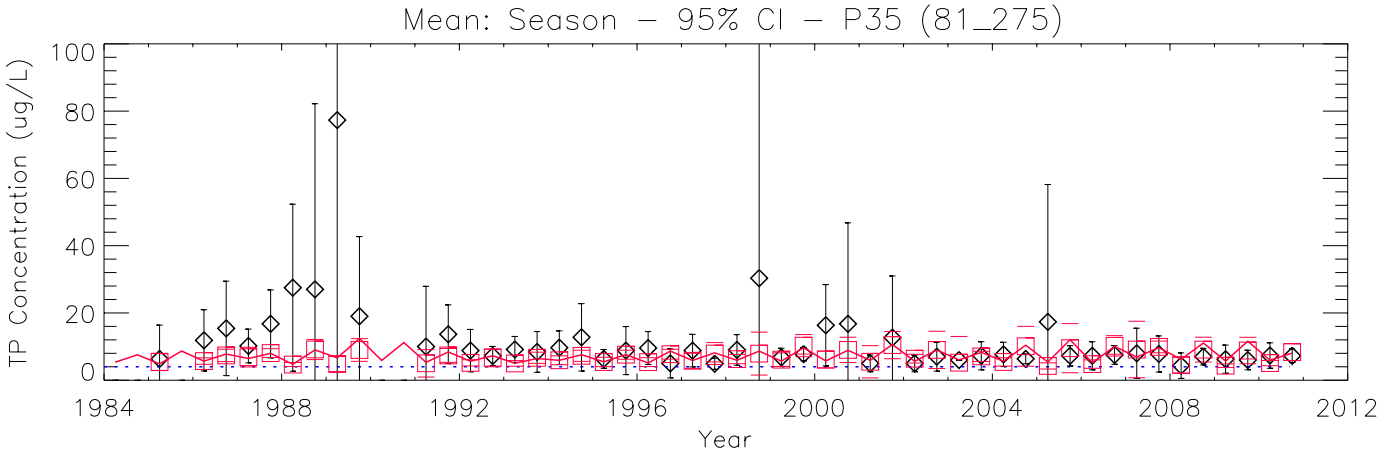

Raw Data (Obs. N = 244) – P36 (95_260)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

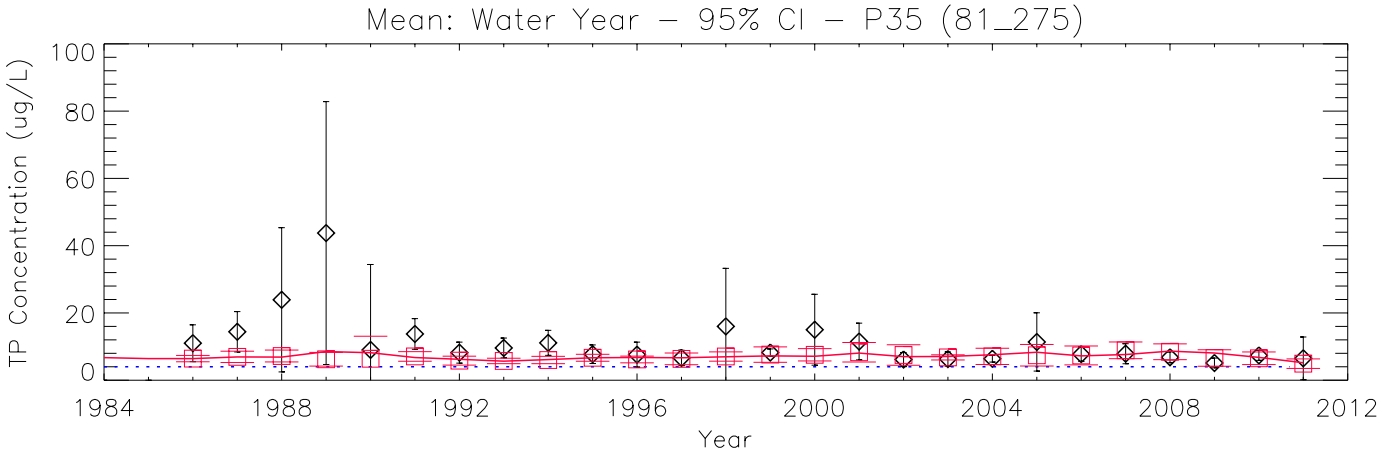

Mean: Season – 95% CI – P36 (95_260)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

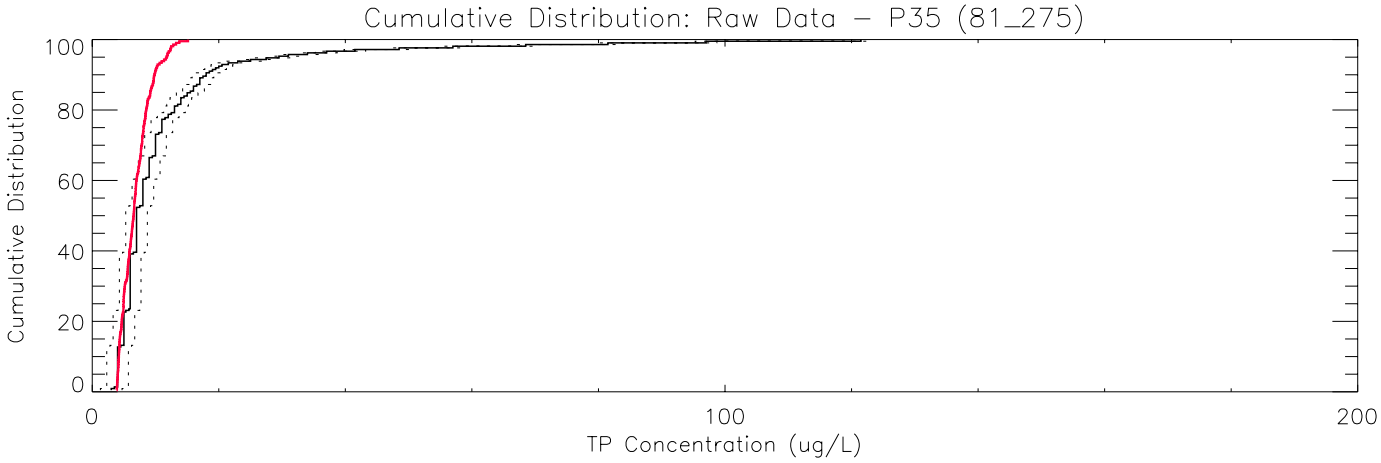

Mean: Water Year – 95% CI – P36 (95_260)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

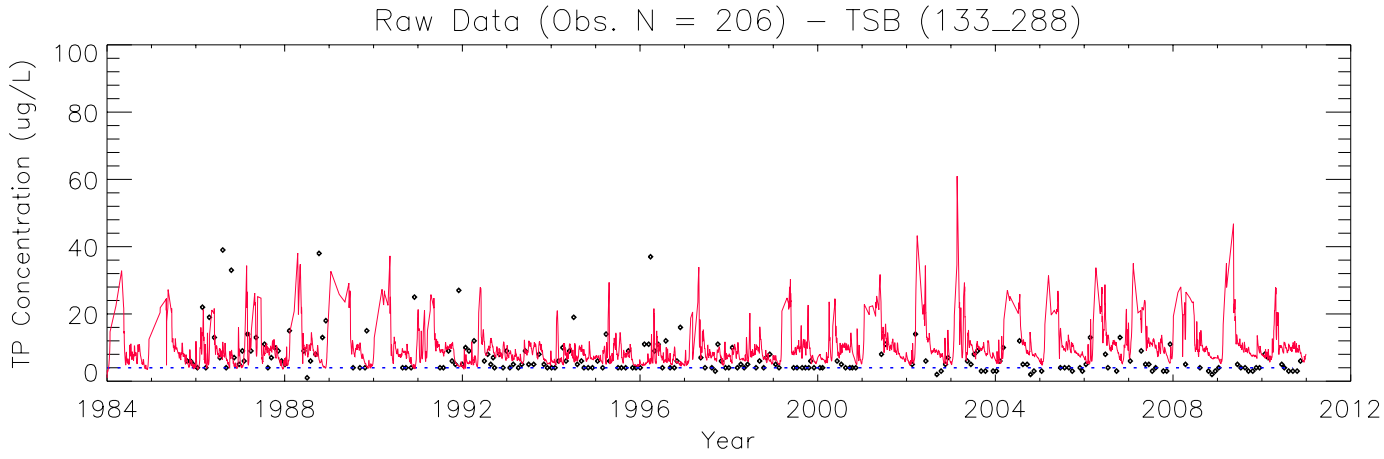

Cumulative Distribution: Raw Data – P36 (95_260)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

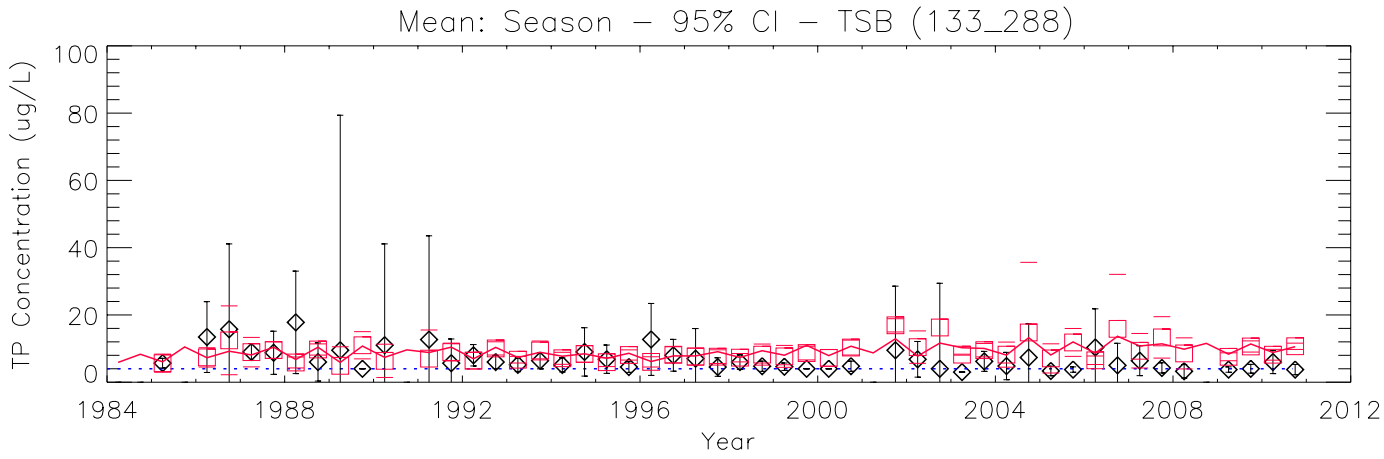

Raw Data (Obs. N = 212) – P35 (81_275)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

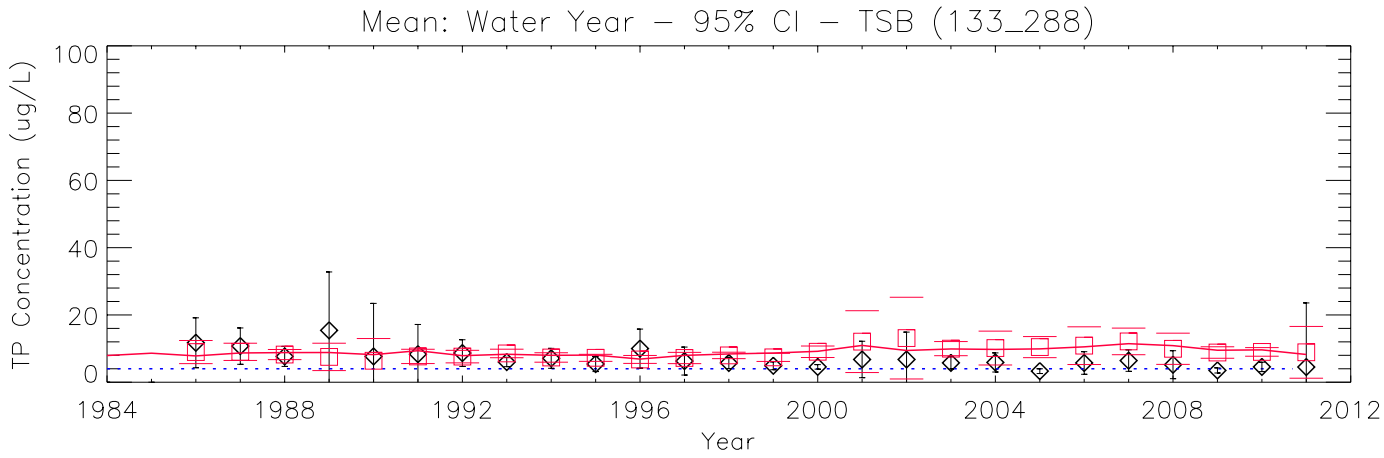

Mean: Season – 95% CI – P35 (81_275)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

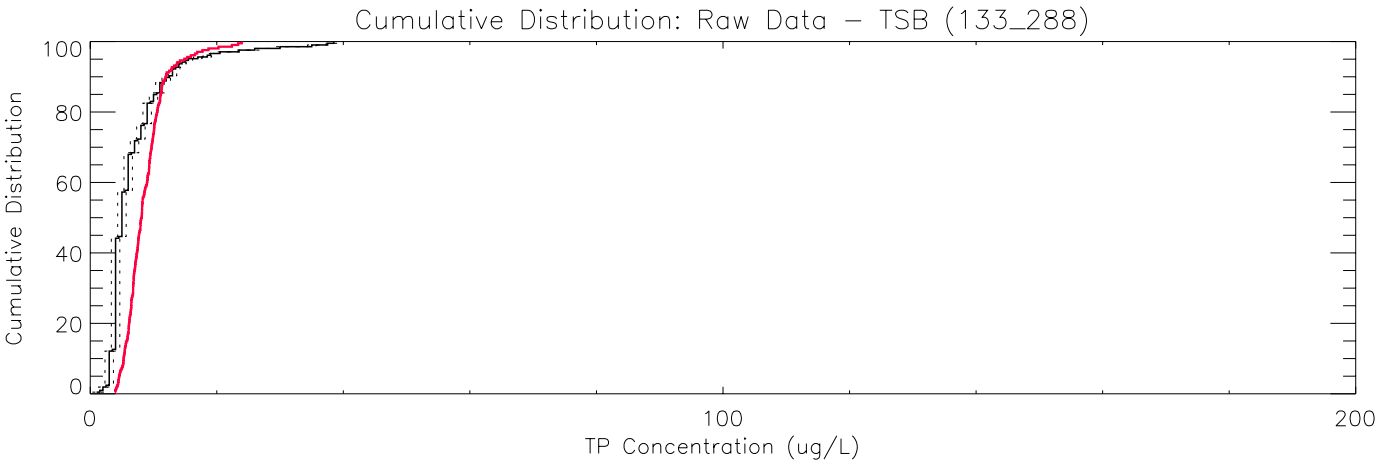

Mean: Water Year – 95% CI – P35 (81_275)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

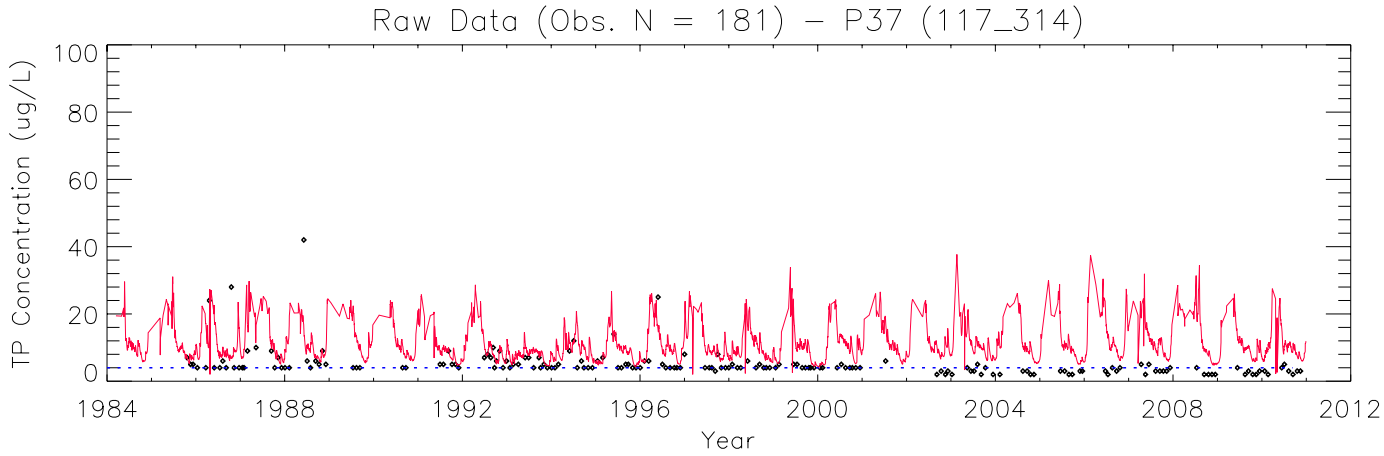

Cumulative Distribution: Raw Data – P35 (81_275)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

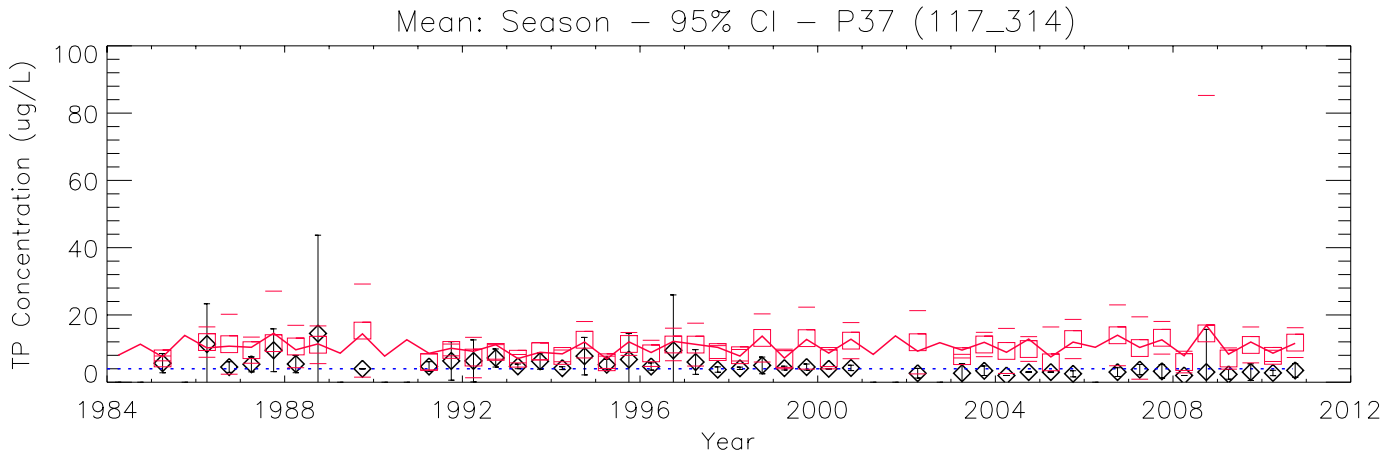

Raw Data (Obs. N = 206) – TSB (133_288)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

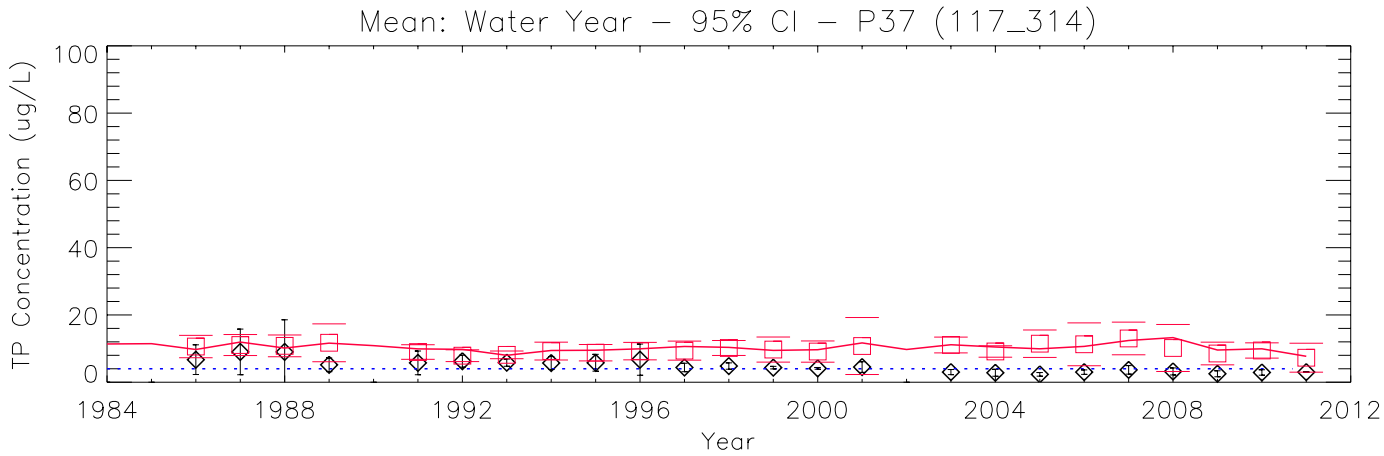

Mean: Season – 95% CI – TSB (133_288)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

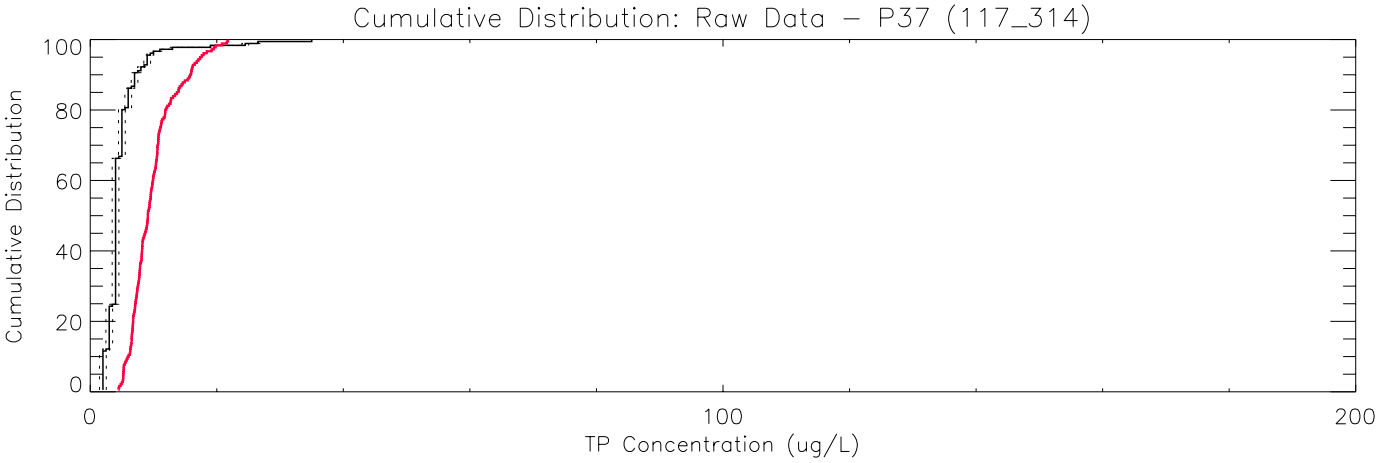

Mean: Water Year – 95% CI – TSB (133_288)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

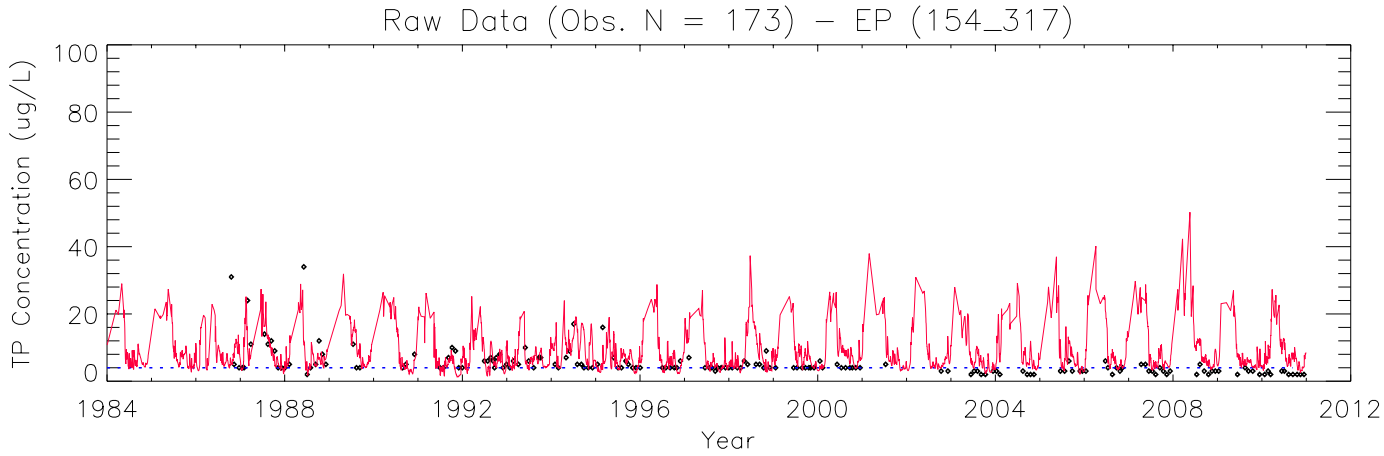

Cumulative Distribution: Raw Data – TSB (133_288)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

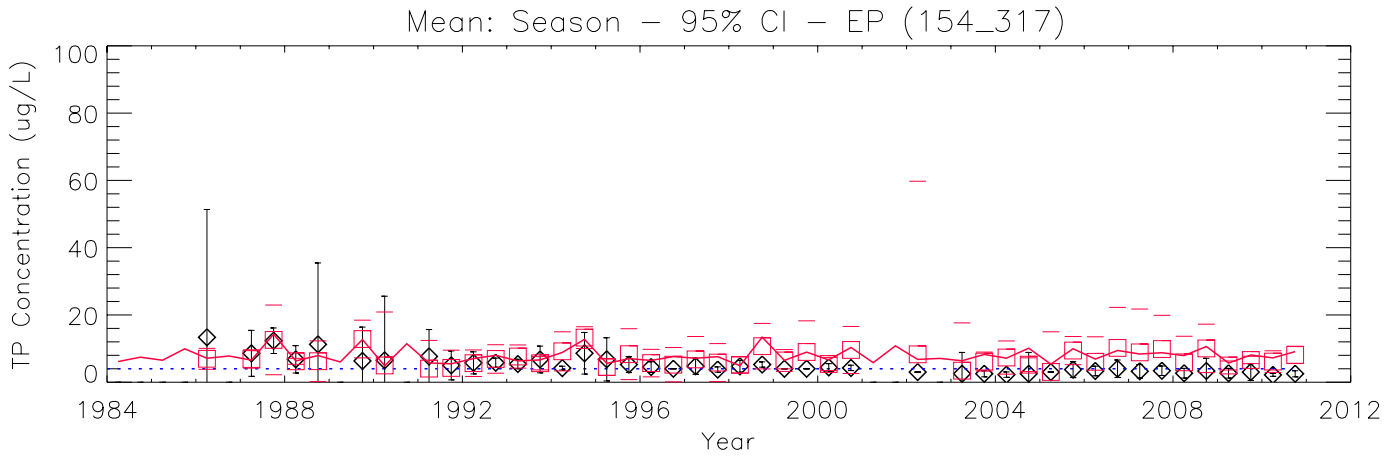

Raw Data (Obs. N = 181) – P37 (117_314)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

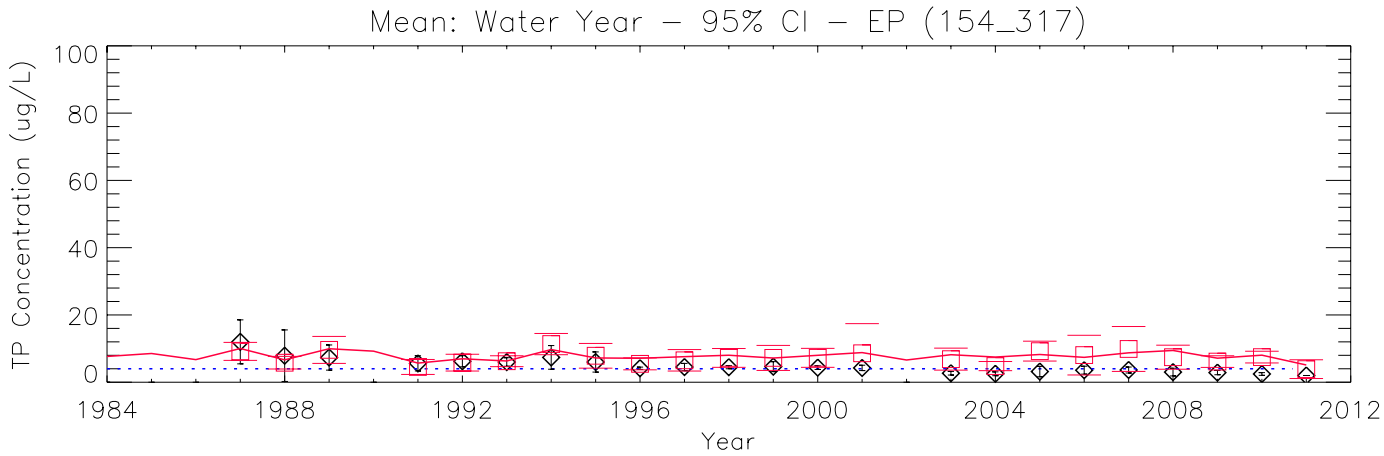

Mean: Season – 95% CI – P37 (117_314)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

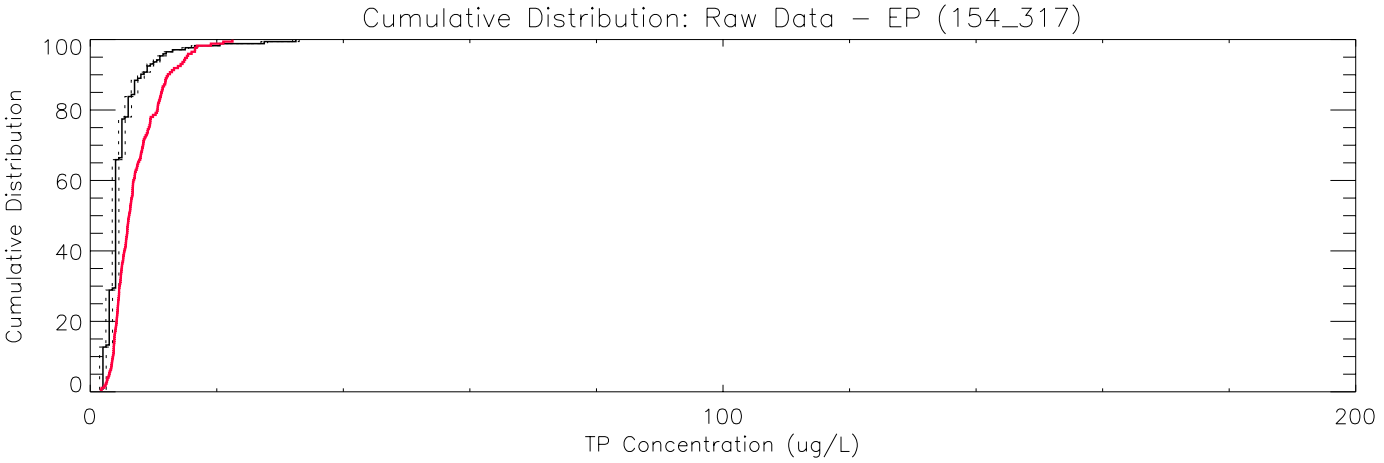

Mean: Water Year – 95% CI – P37 (117_314)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

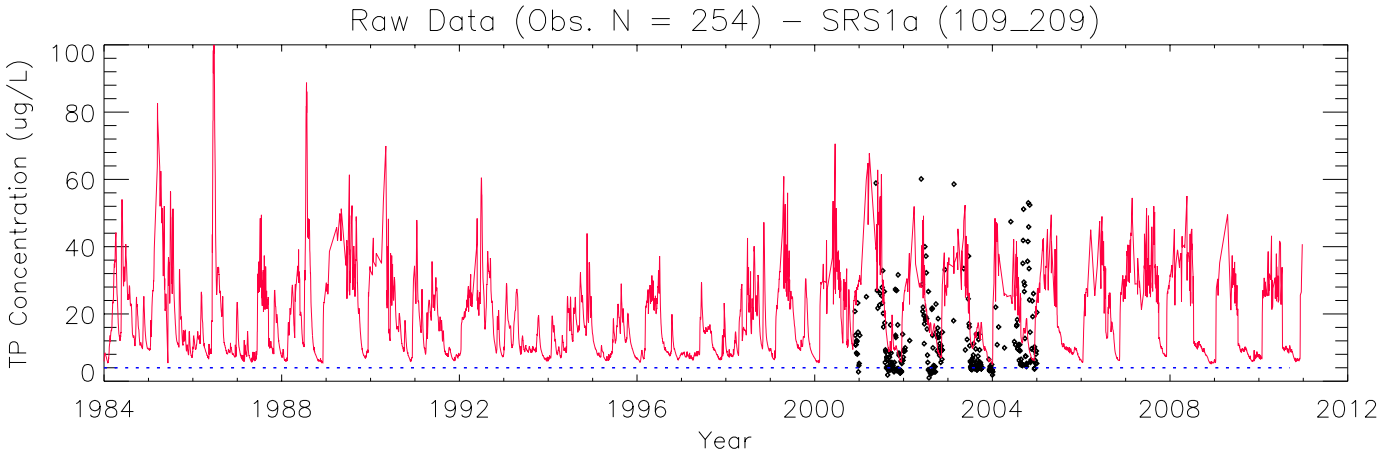

Cumulative Distribution: Raw Data – P37 (117_314)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

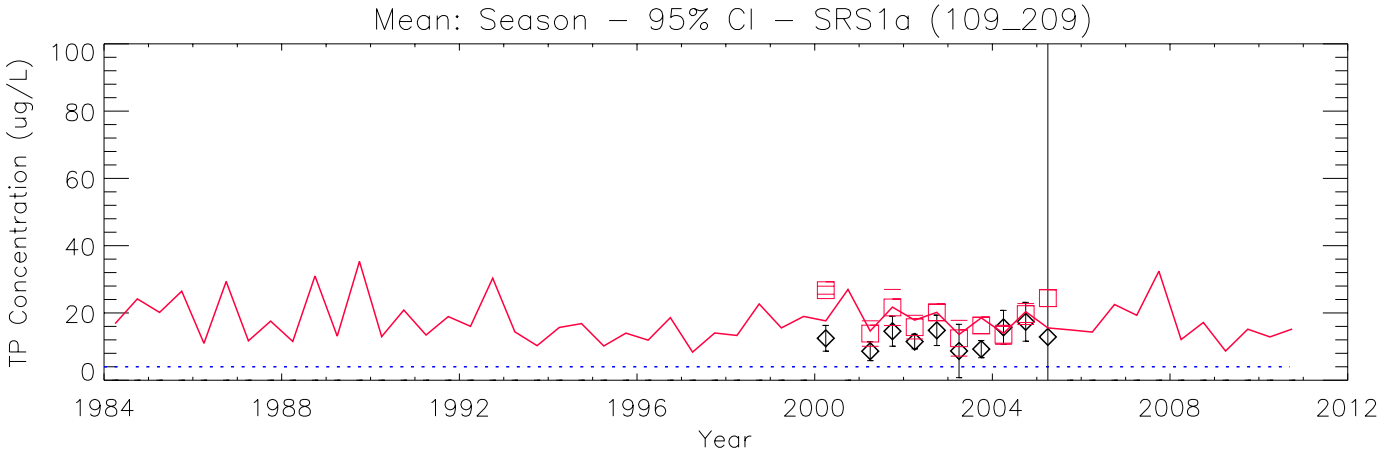

Raw Data (Obs. N = 173) – EP (154_317)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

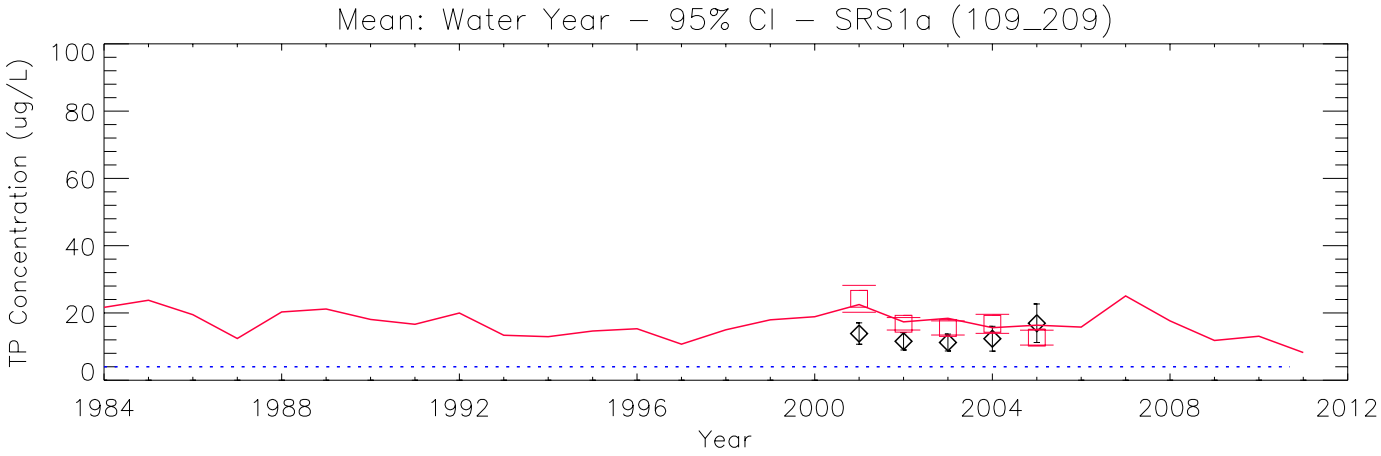

Mean: Season – 95% CI – EP (154_317)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

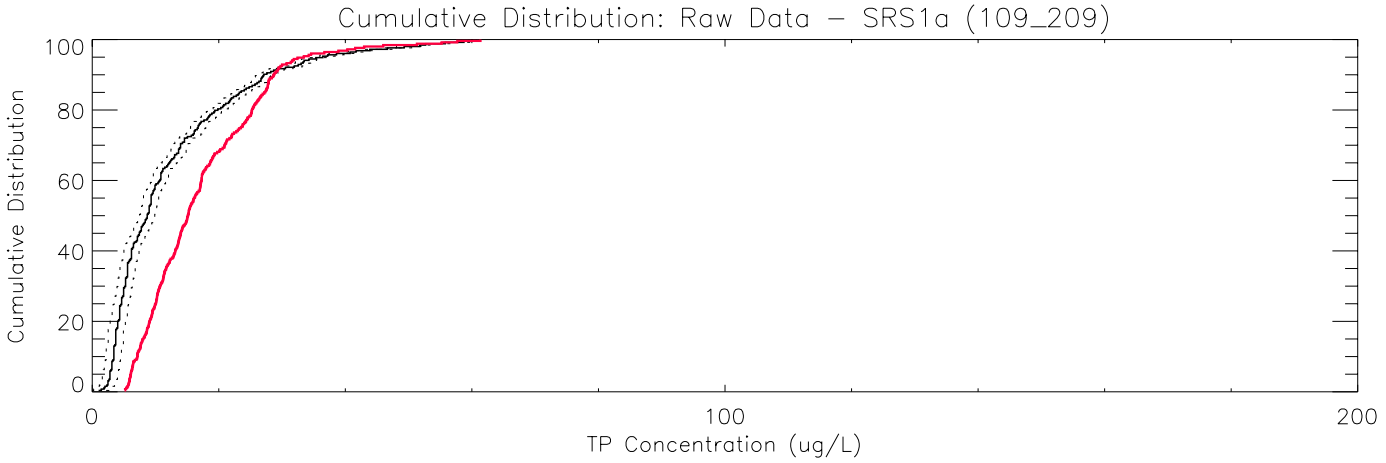

Mean: Water Year – 95% CI – EP (154_317)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

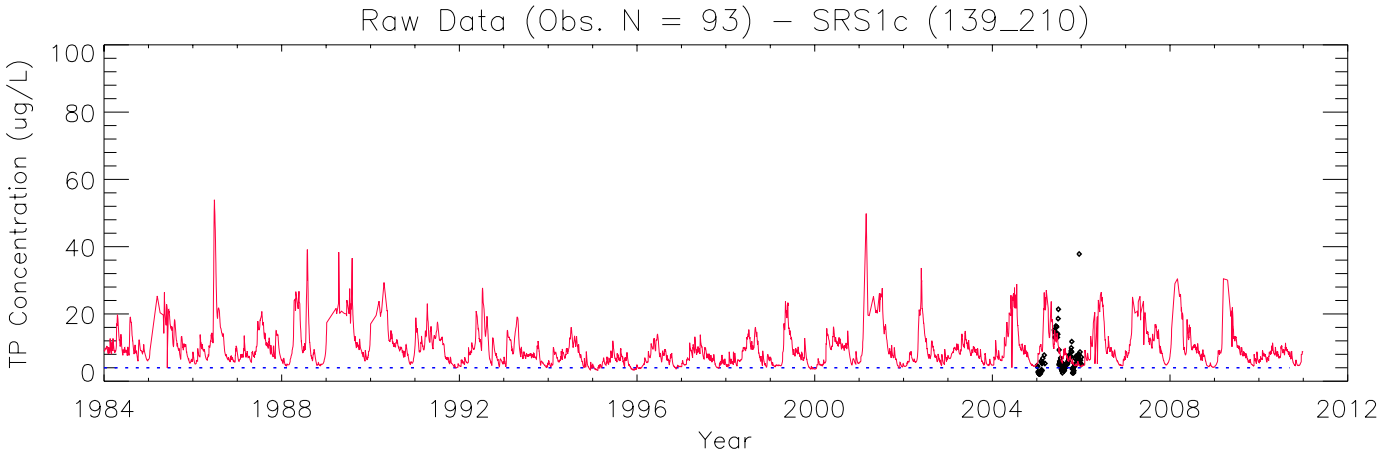

Cumulative Distribution: Raw Data – EP (154_317)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

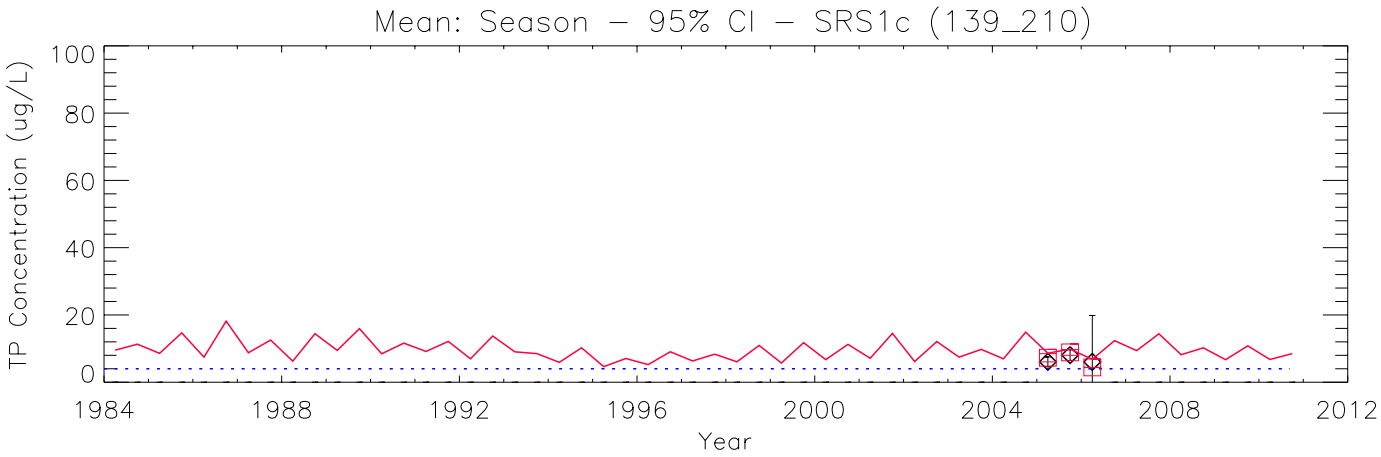

Raw Data (Obs. N = 254) – SRS1a (109_209)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

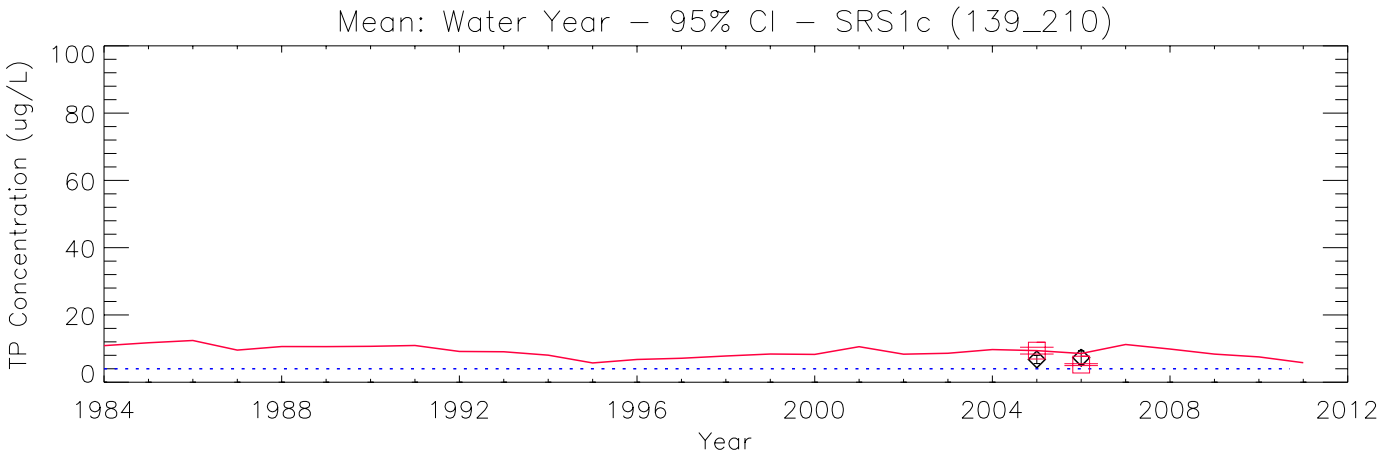

Mean: Season – 95% CI – SRS1a (109_209)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

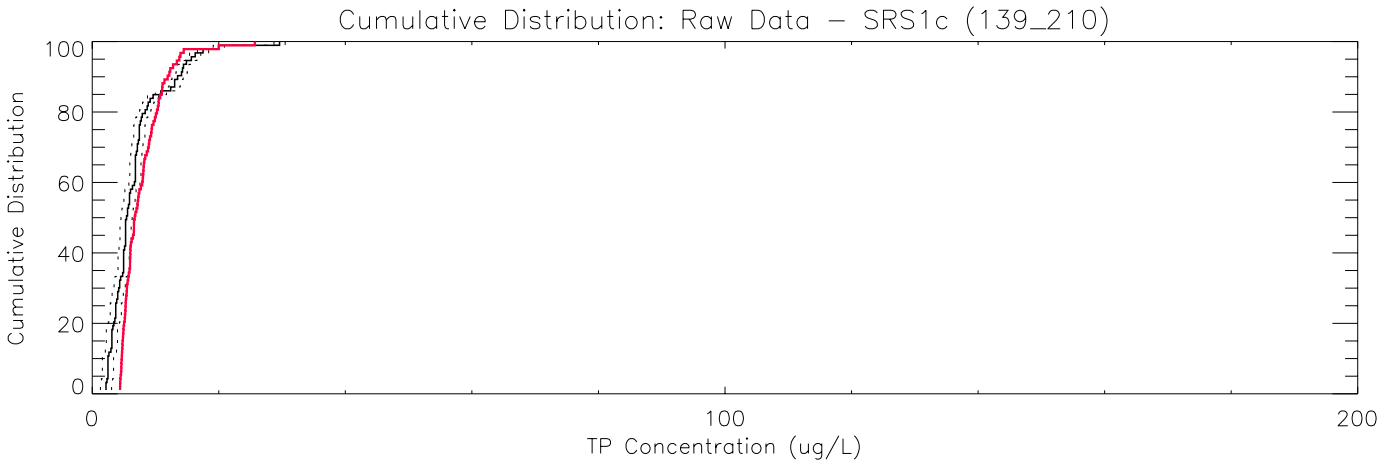

Mean: Water Year – 95% CI – SRS1a (109_209)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

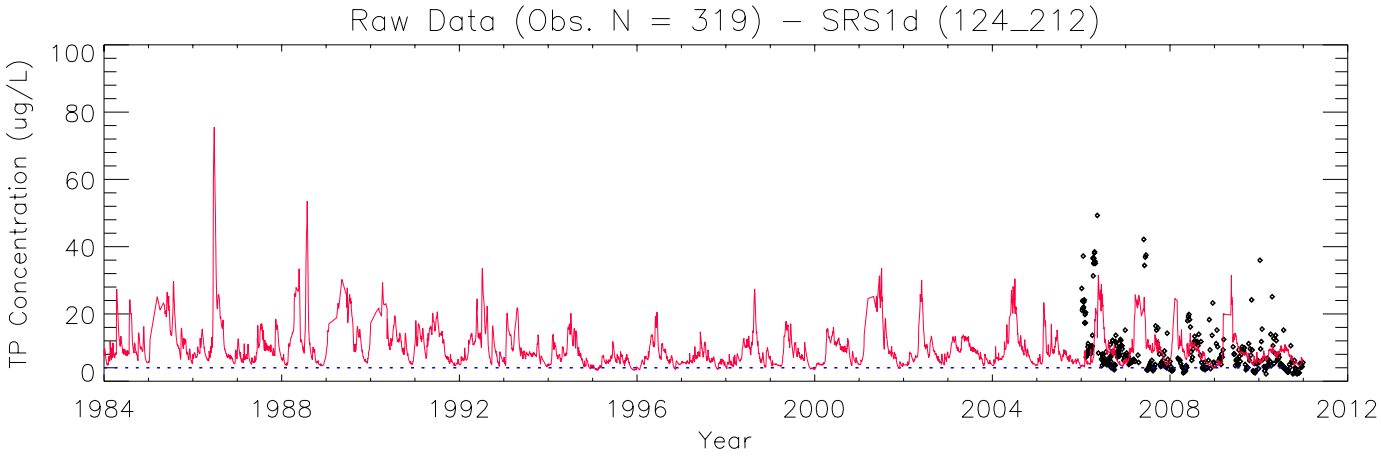

Cumulative Distribution: Raw Data – SRS1a (109_209)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

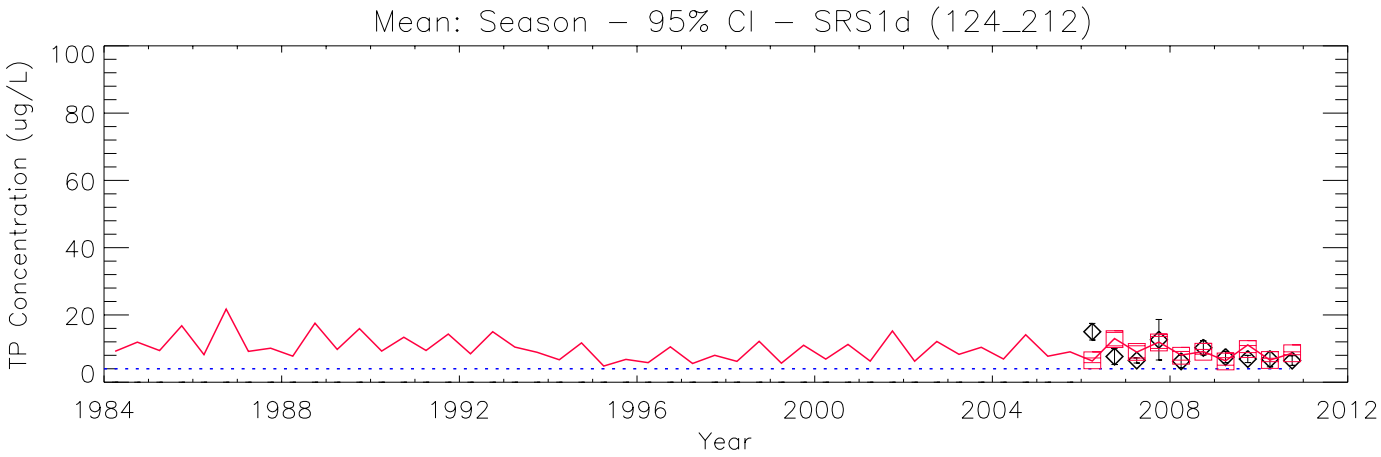

Raw Data (Obs. N = 93) – SRS1c (139_210)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

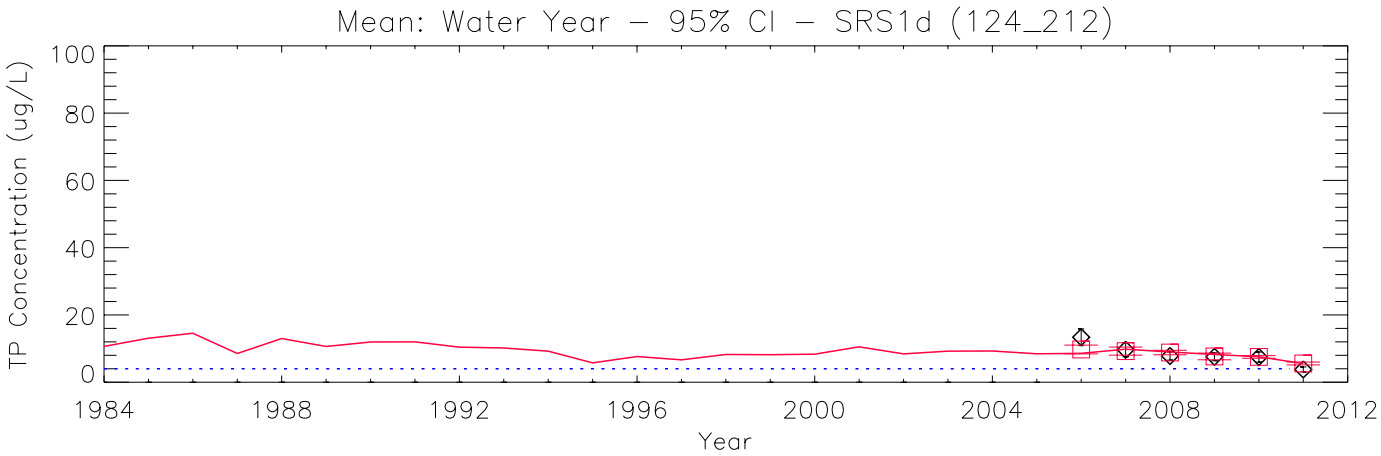

Mean: Season – 95% CI – SRS1c (139_210)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

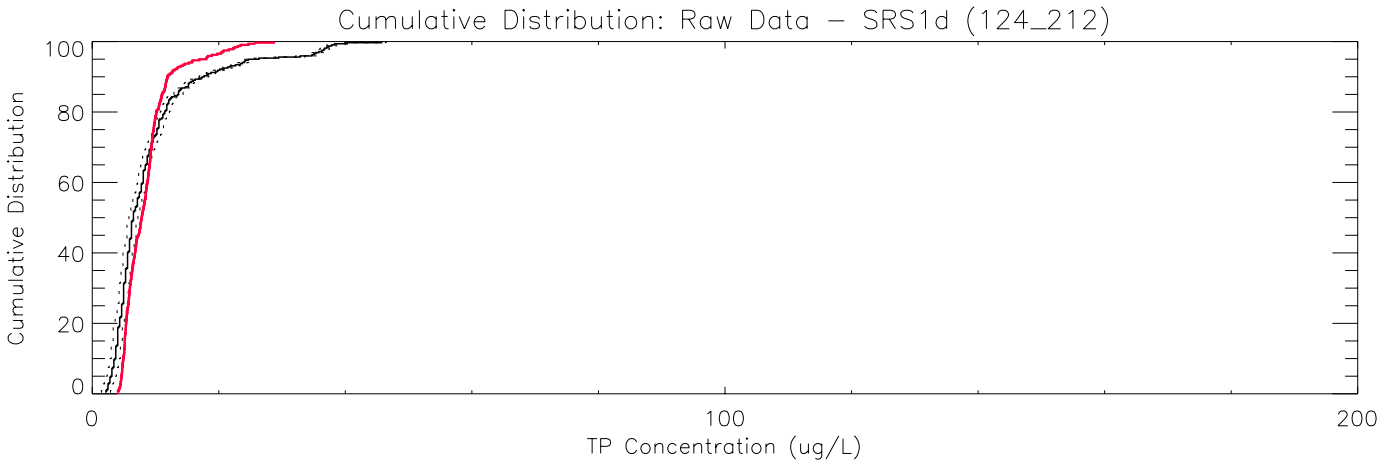

Mean: Water Year – 95% CI – SRS1c (139_210)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

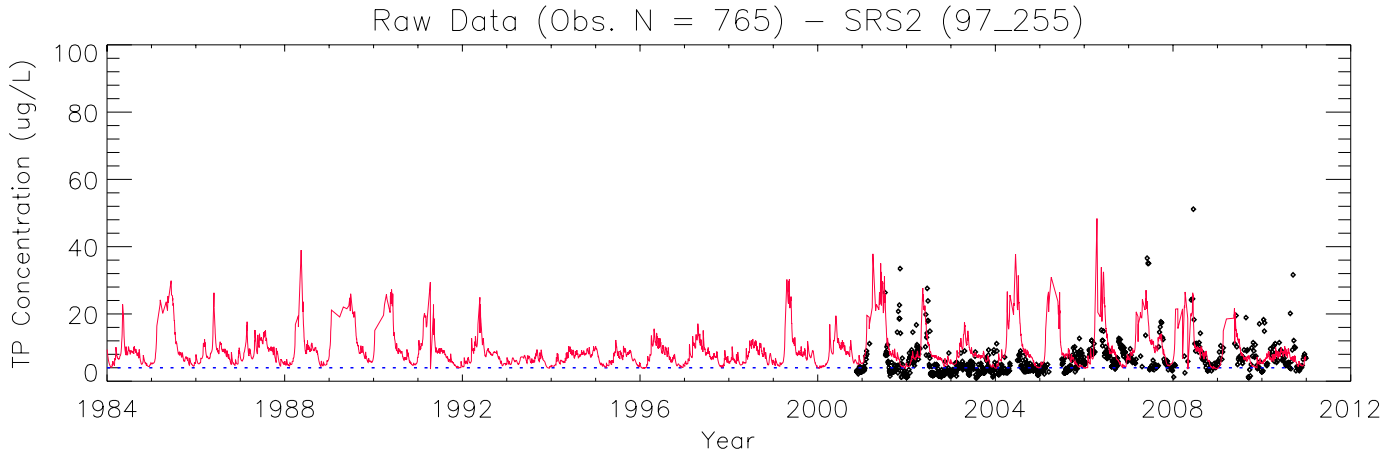

Cumulative Distribution: Raw Data – SRS1c (139_210)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

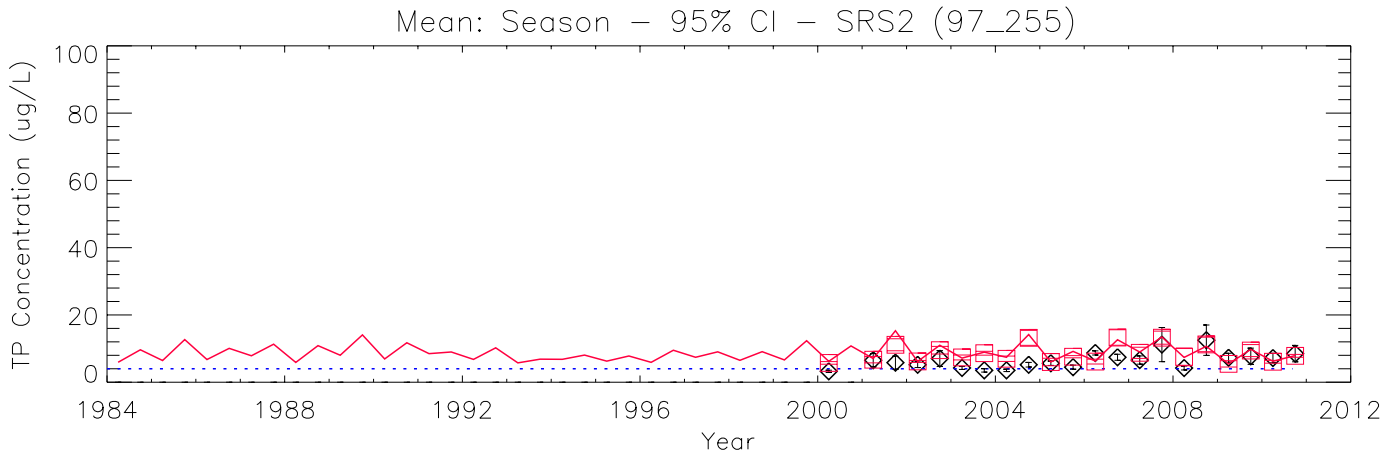

Raw Data (Obs. N = 319) – SRS1d (124_212)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – SRS1d (124_212)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – SRS1d (124_212)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – SRS1d (124_212)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 765) – SRS2 (97_255)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – SRS2 (97_255)
TP Concentration (ug/L)
0
20
40
60
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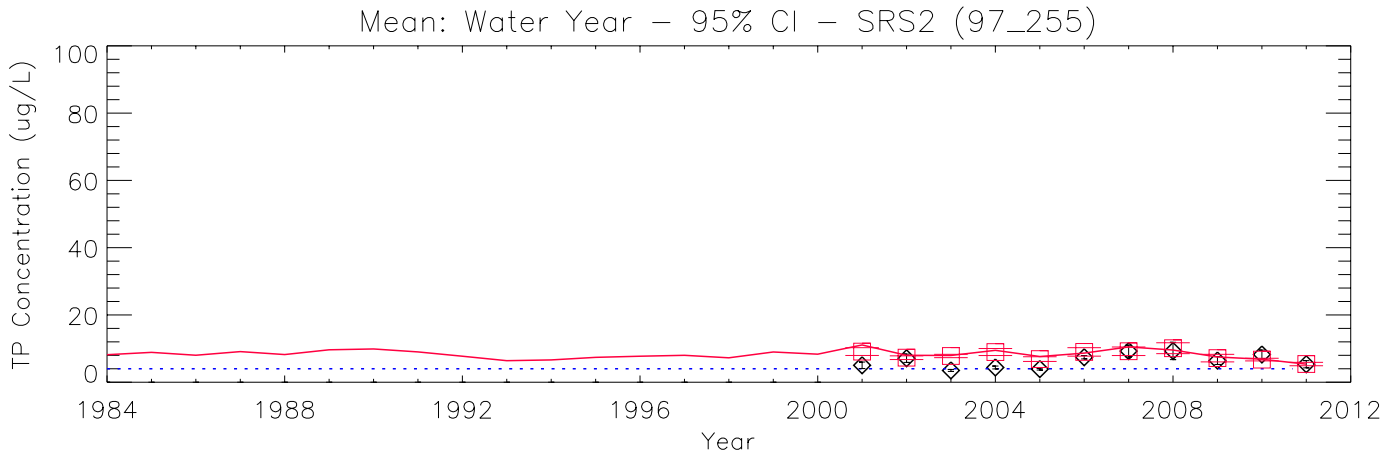
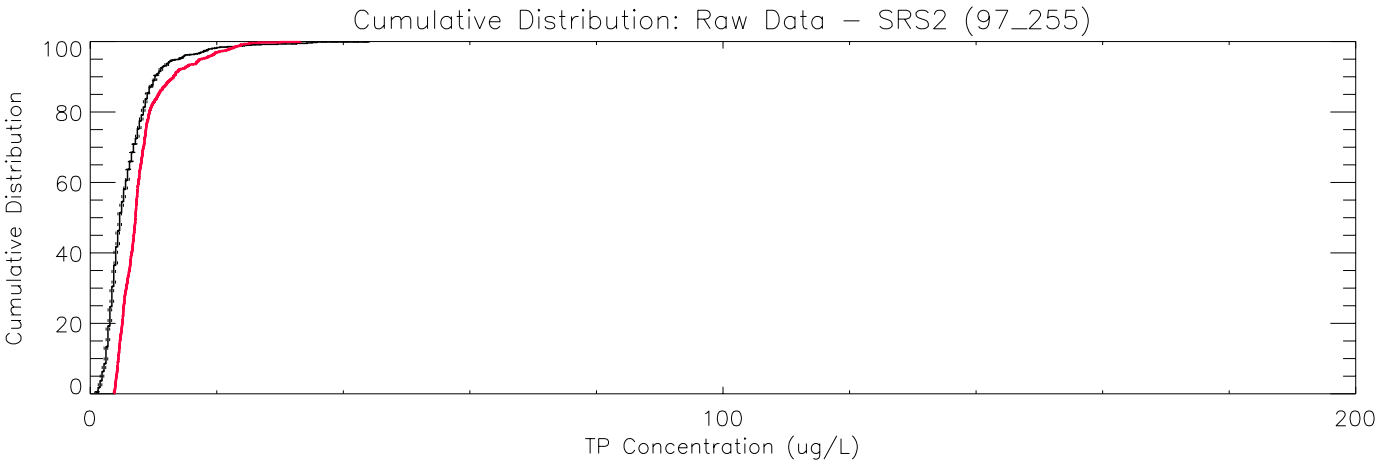
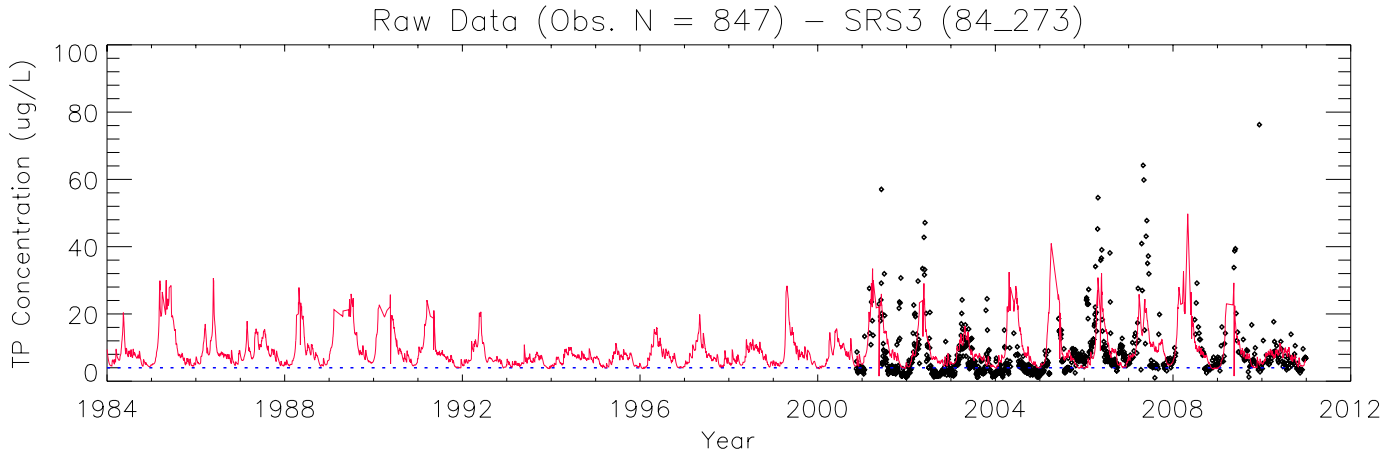
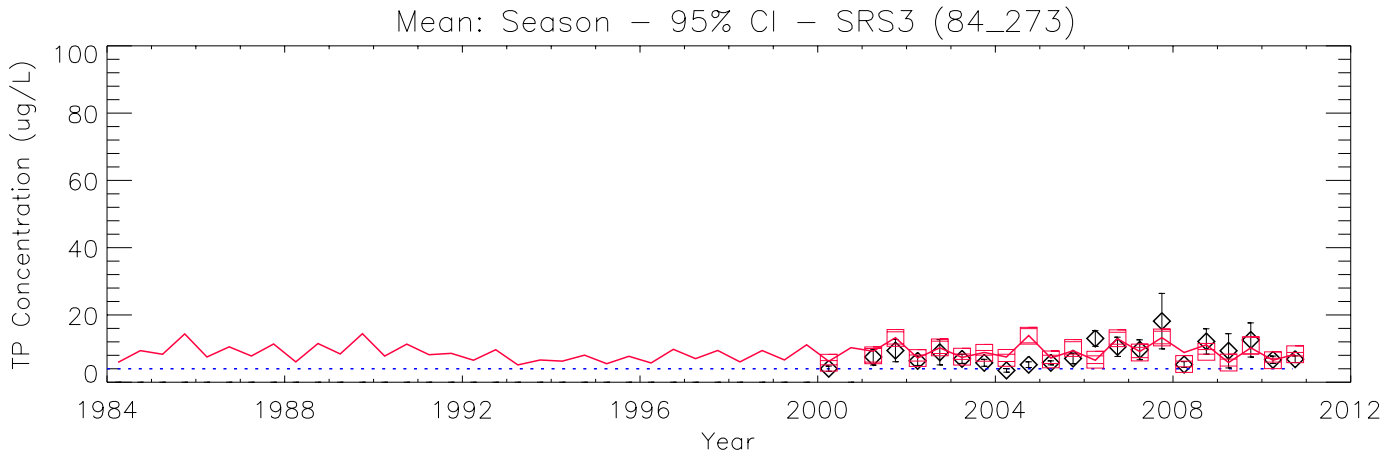
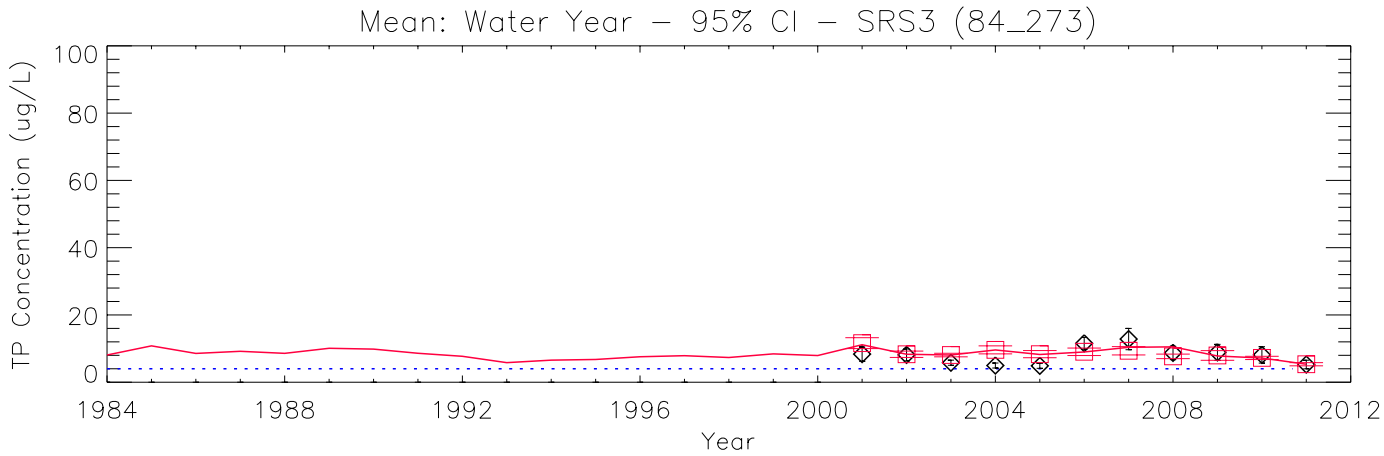
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

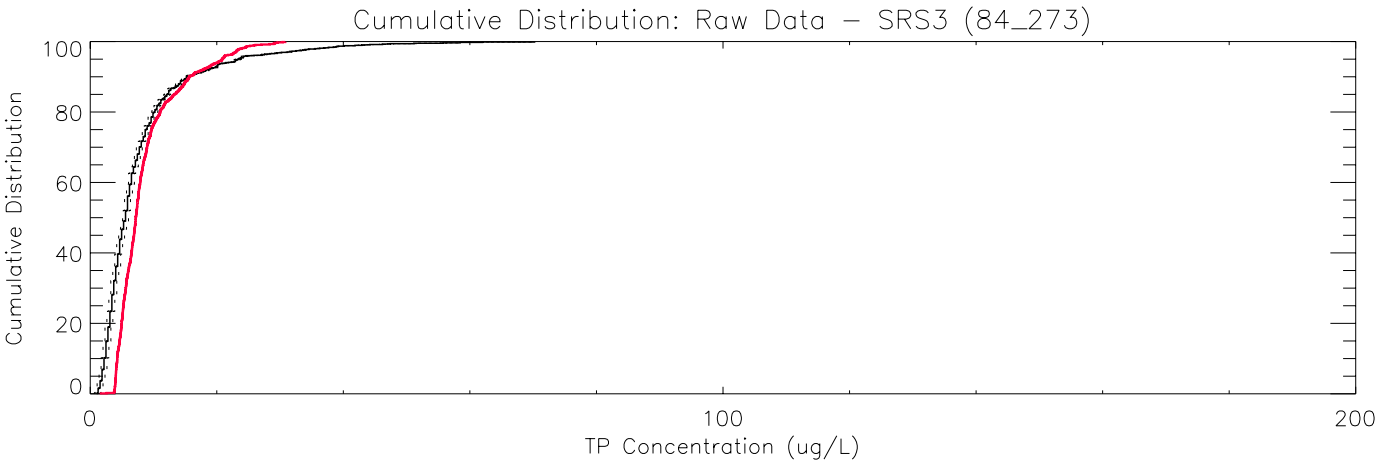

Mean: Water Year – 95% CI – SRS2 (97_255)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

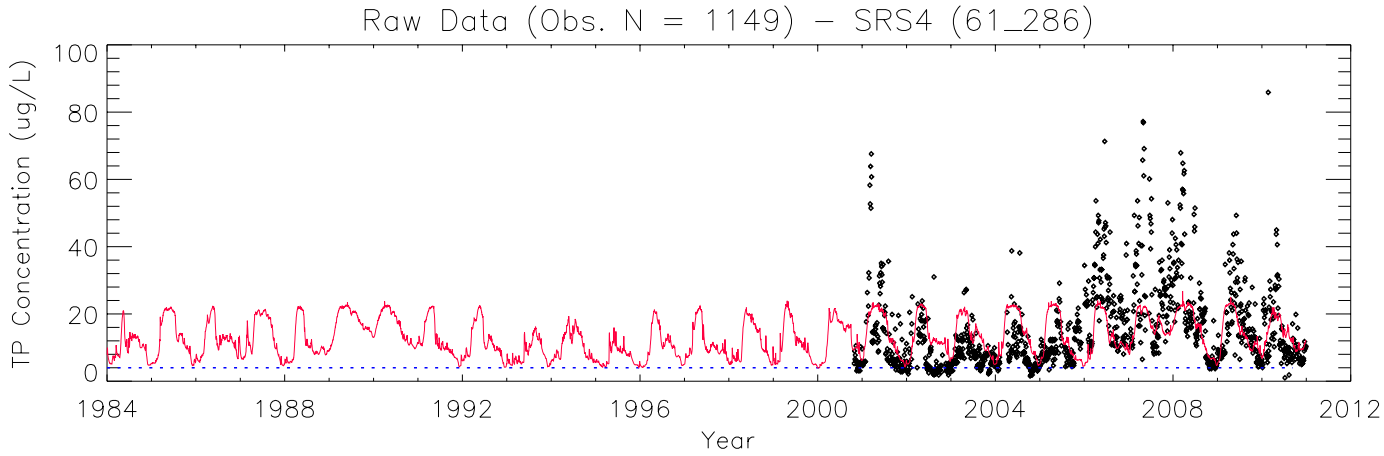

Cumulative Distribution: Raw Data – SRS2 (97_255)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

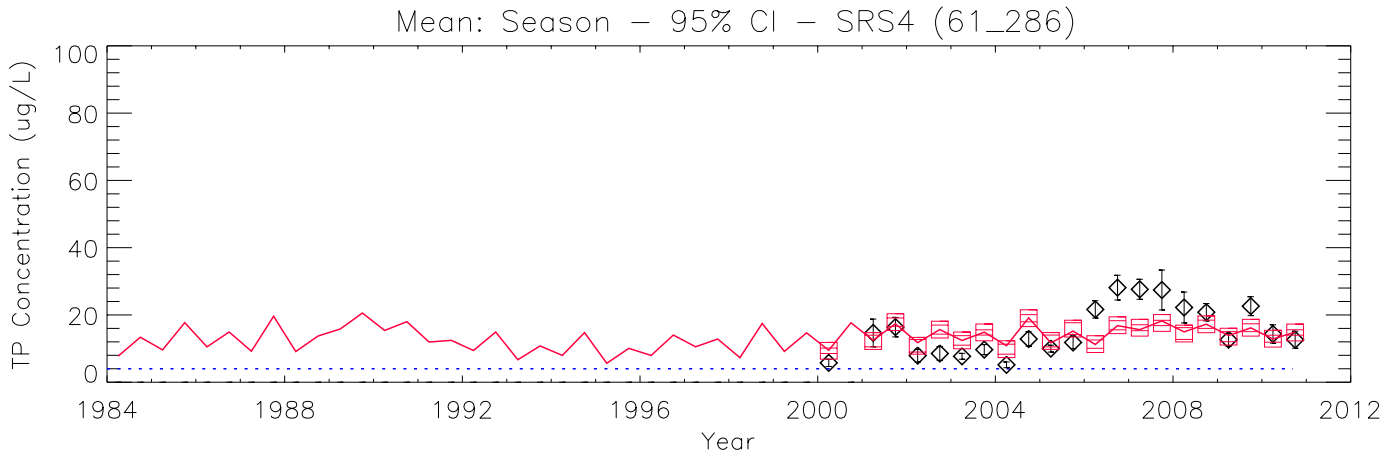

Raw Data (Obs. N = 847) – SRS3 (84_273)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

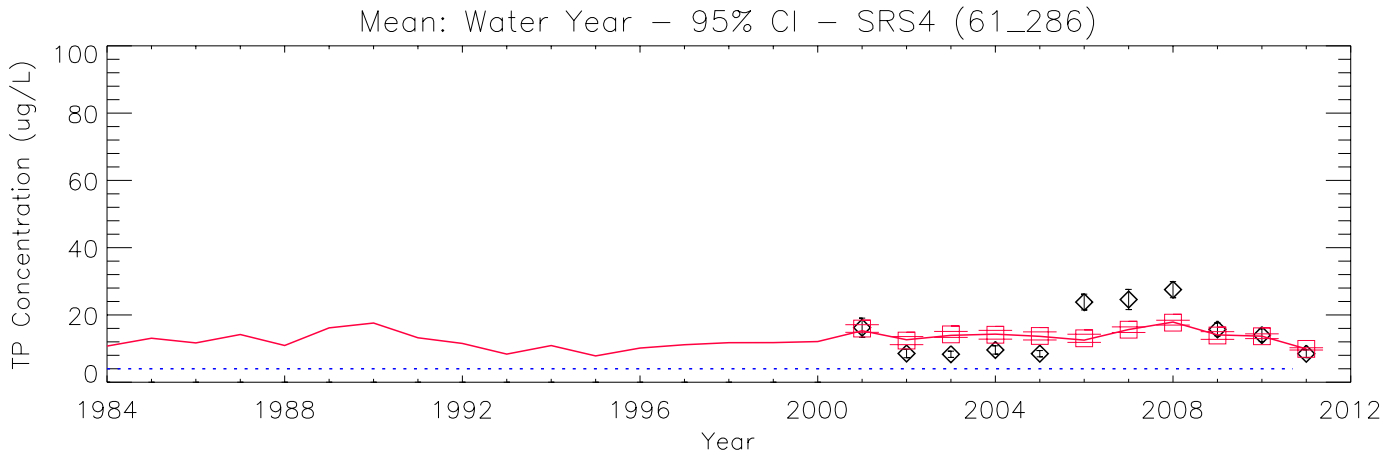

Mean: Season – 95% CI – SRS3 (84_273)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

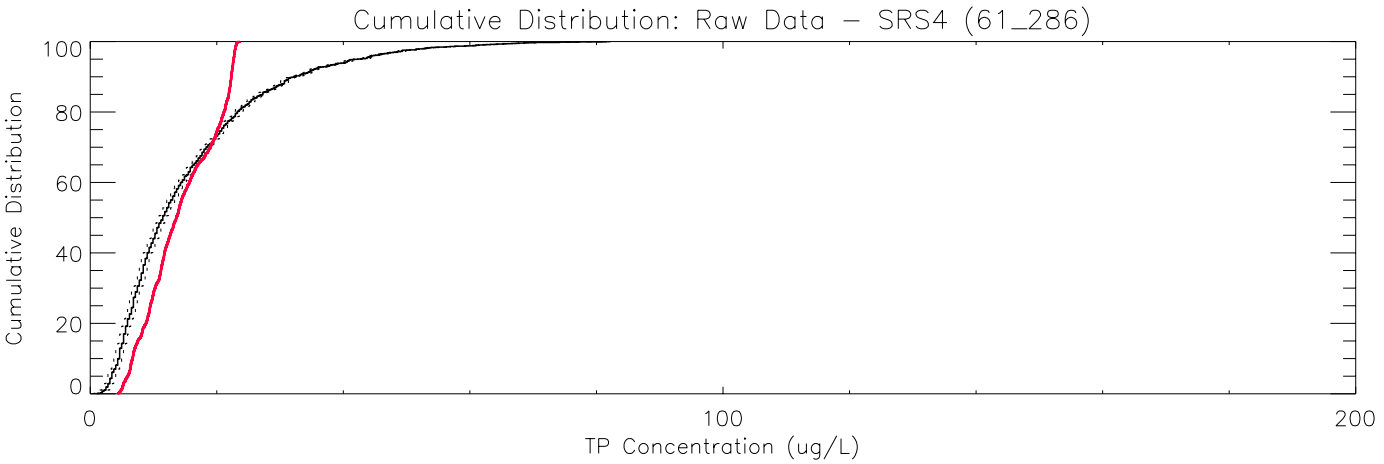

Mean: Water Year – 95% CI – SRS3 (84_273)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

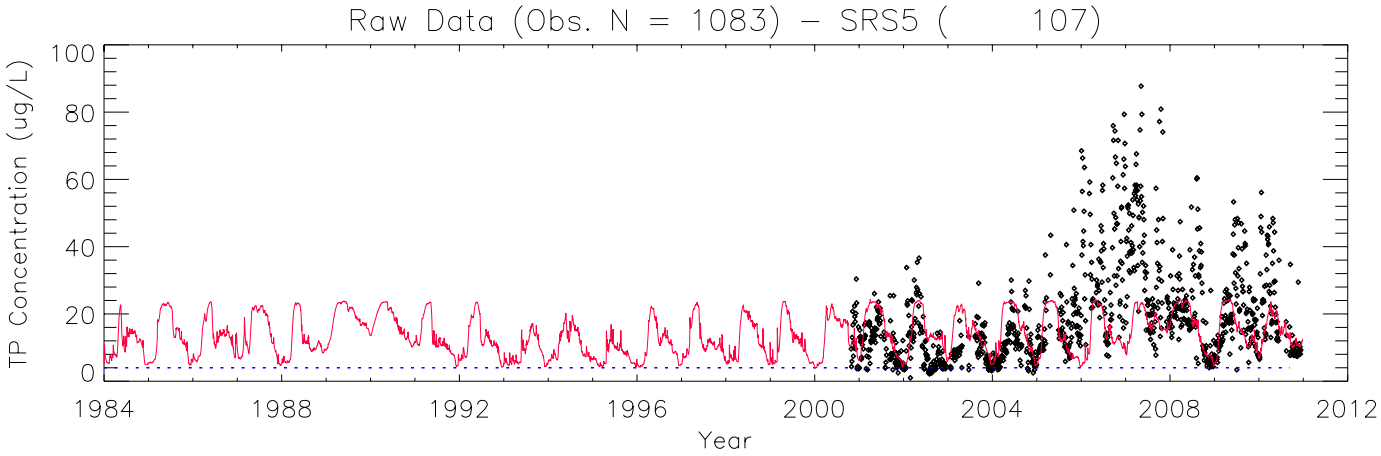

Cumulative Distribution: Raw Data – SRS3 (84_273)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

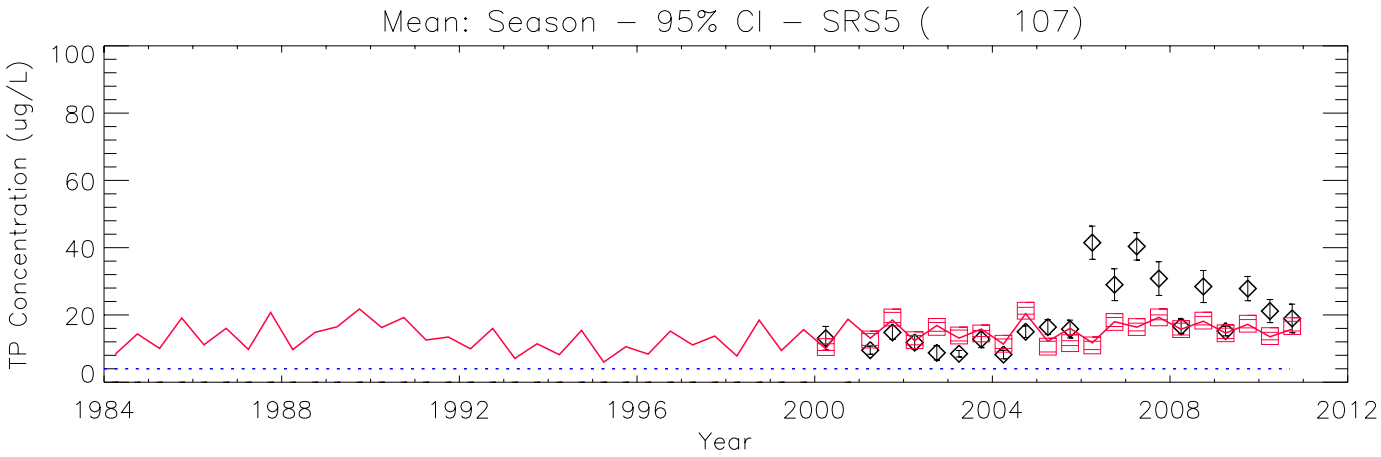

Raw Data (Obs. N = 1149) – SRS4 (61_286)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

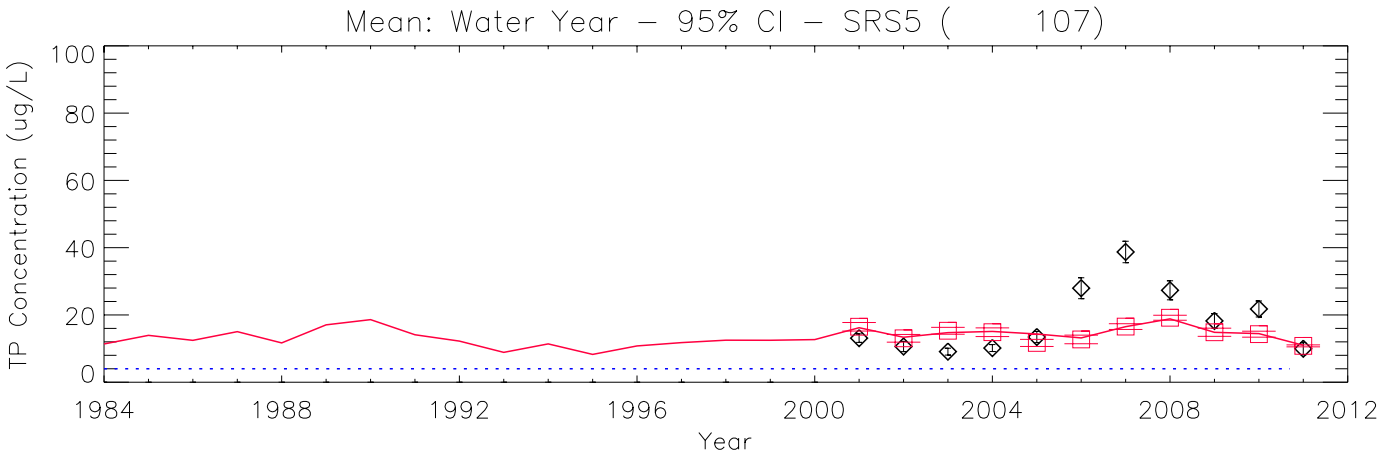

Mean: Season – 95% CI – SRS4 (61_286)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

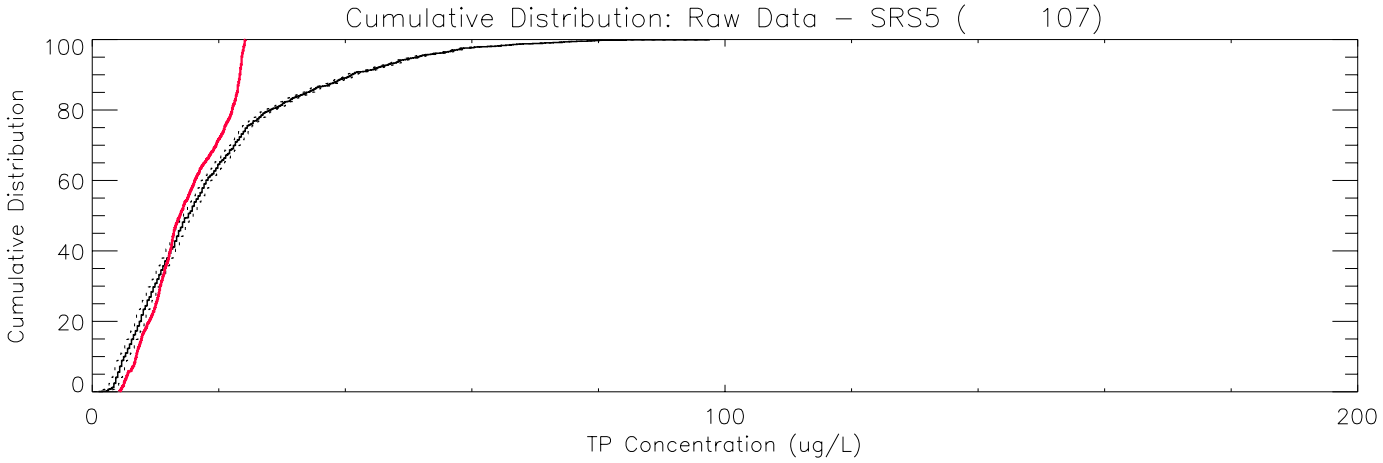

Mean: Water Year – 95% CI – SRS4 (61_286)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

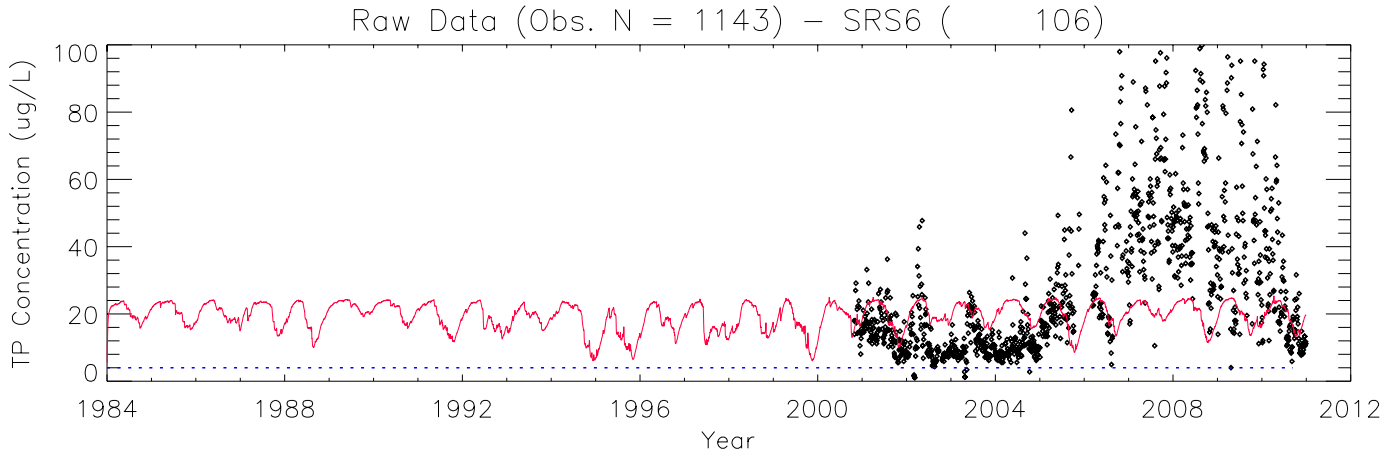

Cumulative Distribution: Raw Data – SRS4 (61_286)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

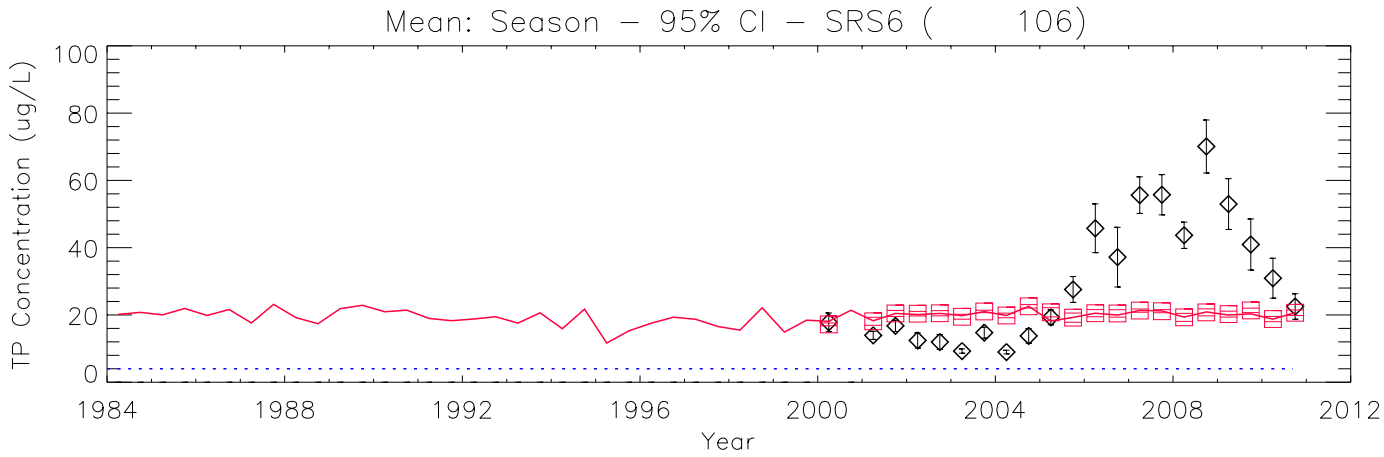

Raw Data (Obs. N = 1083) – SRS5 (107)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – SRS5 (107)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – SRS5 (107)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – SRS5 (107)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 1143) – SRS6 (106)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – SRS6 (106)
TP Concentration (ug/L)
0
20
40
60
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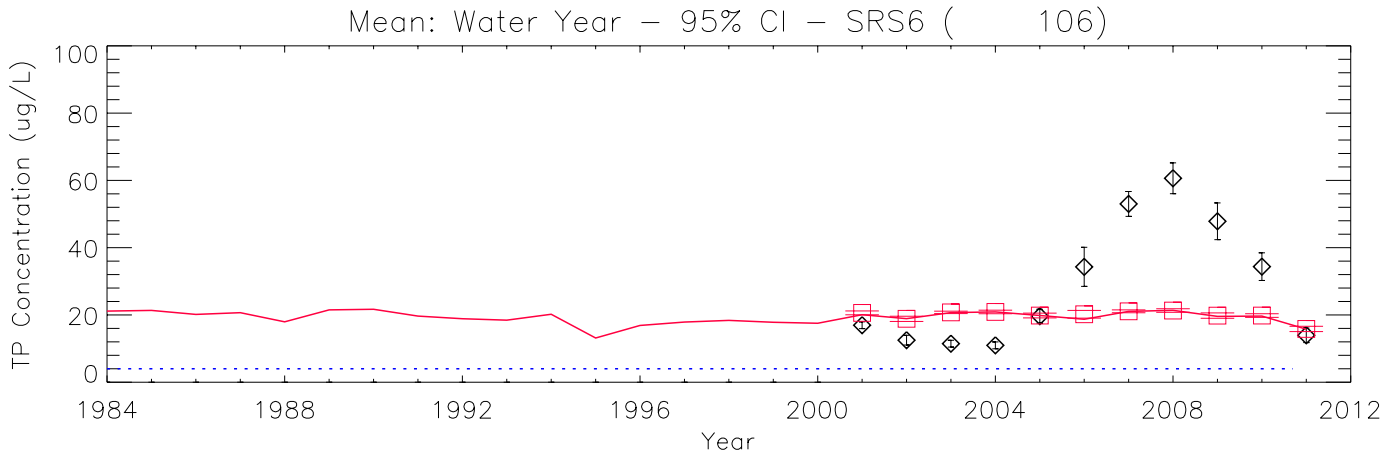
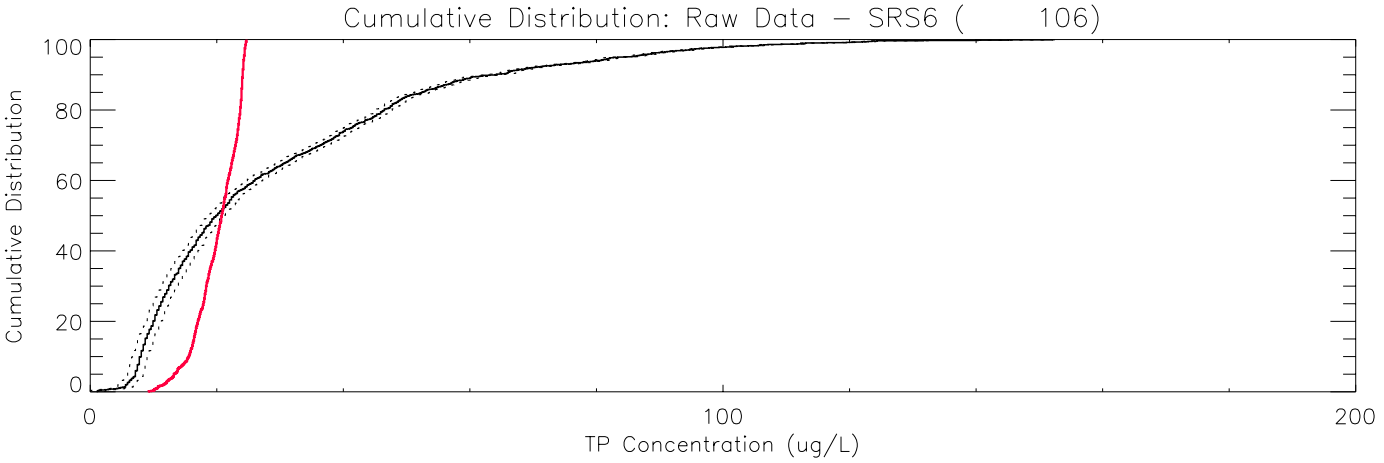
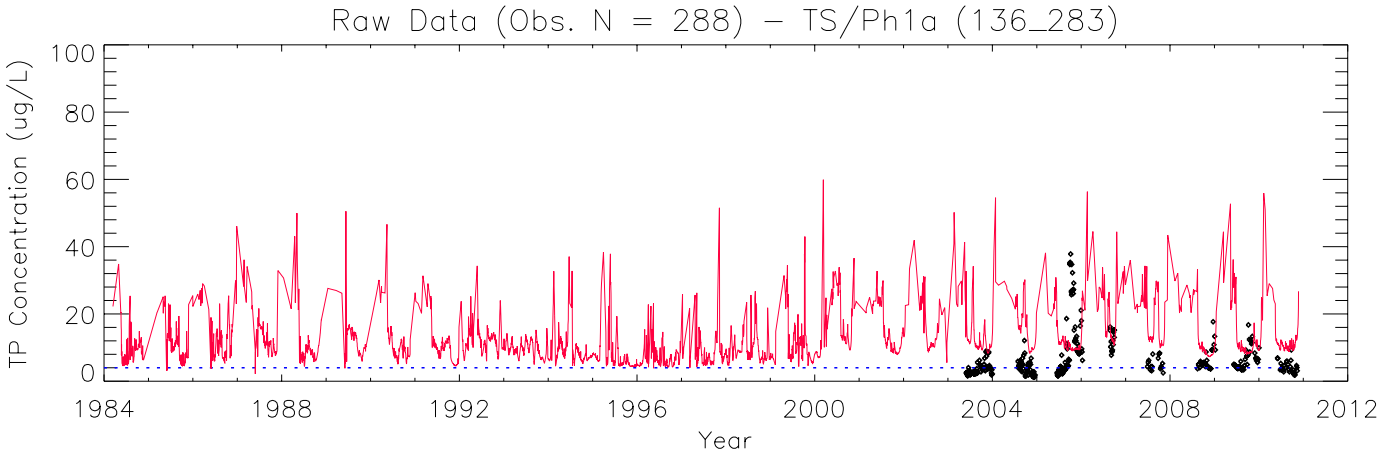
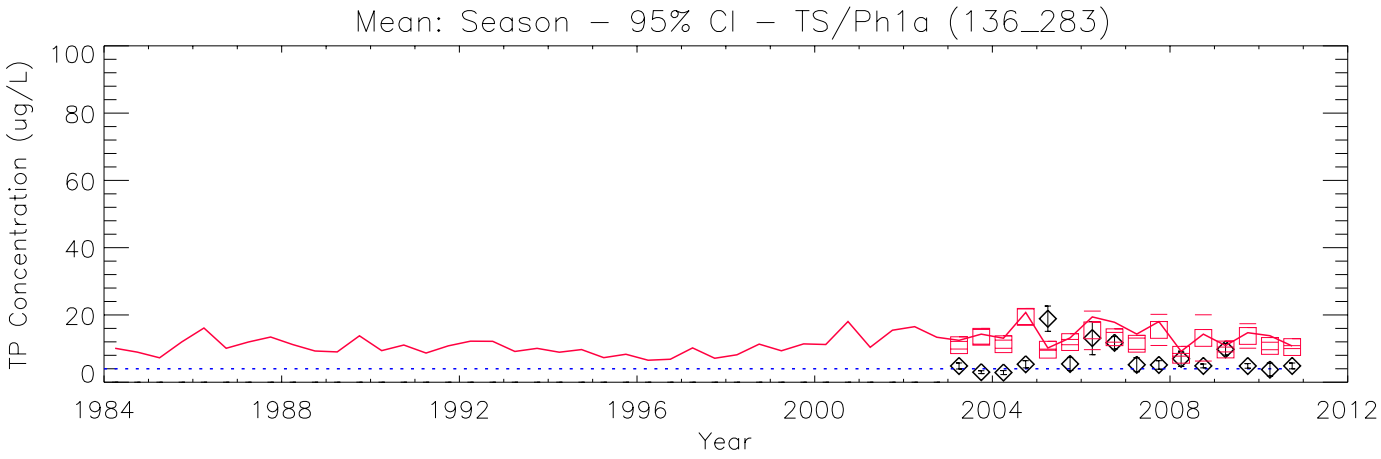
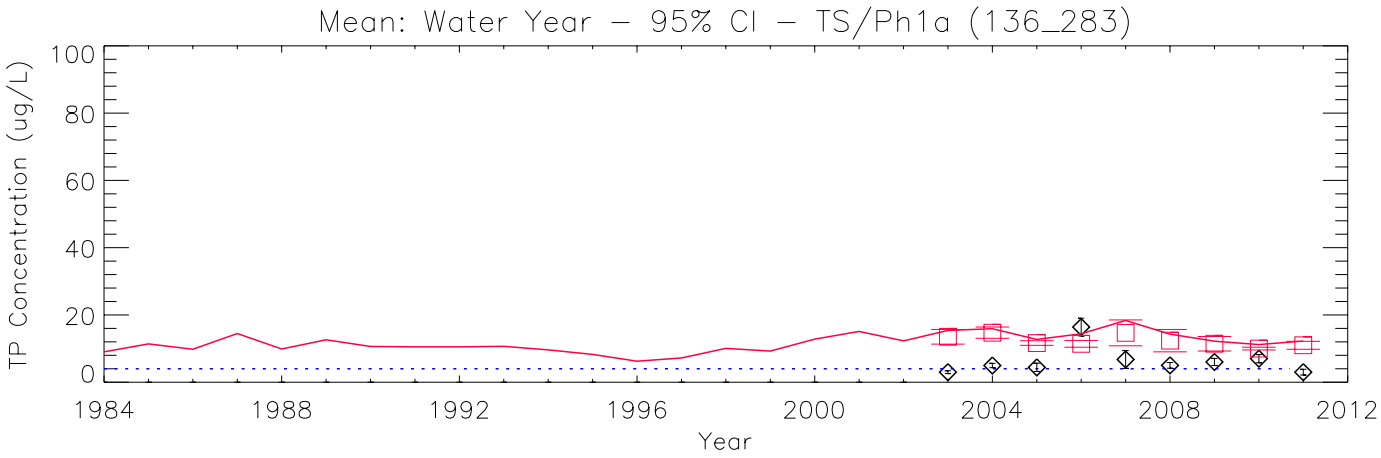
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

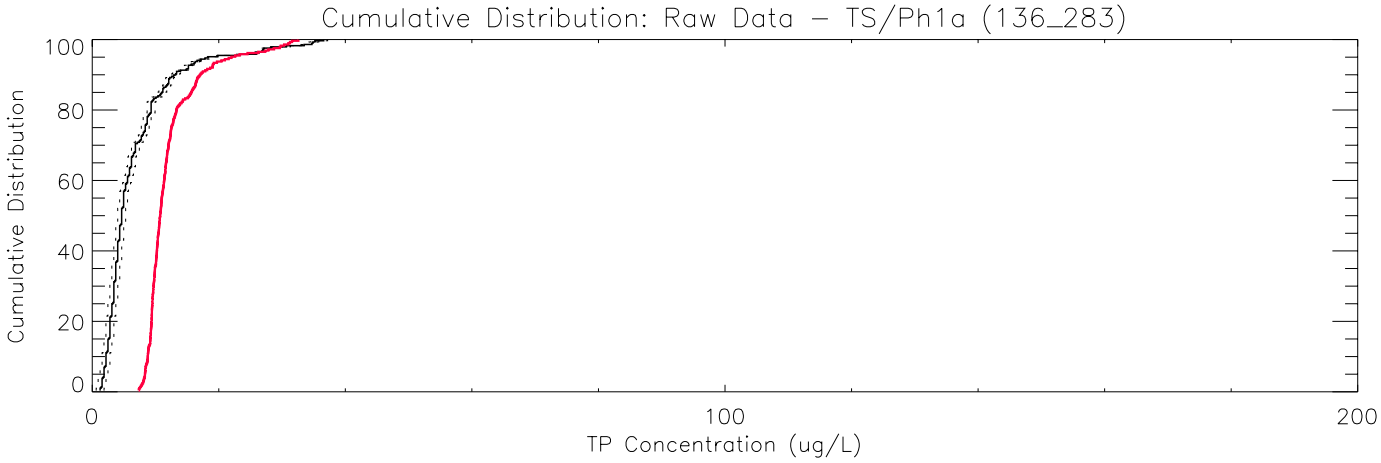

Mean: Water Year – 95% CI – SRS6 (106)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

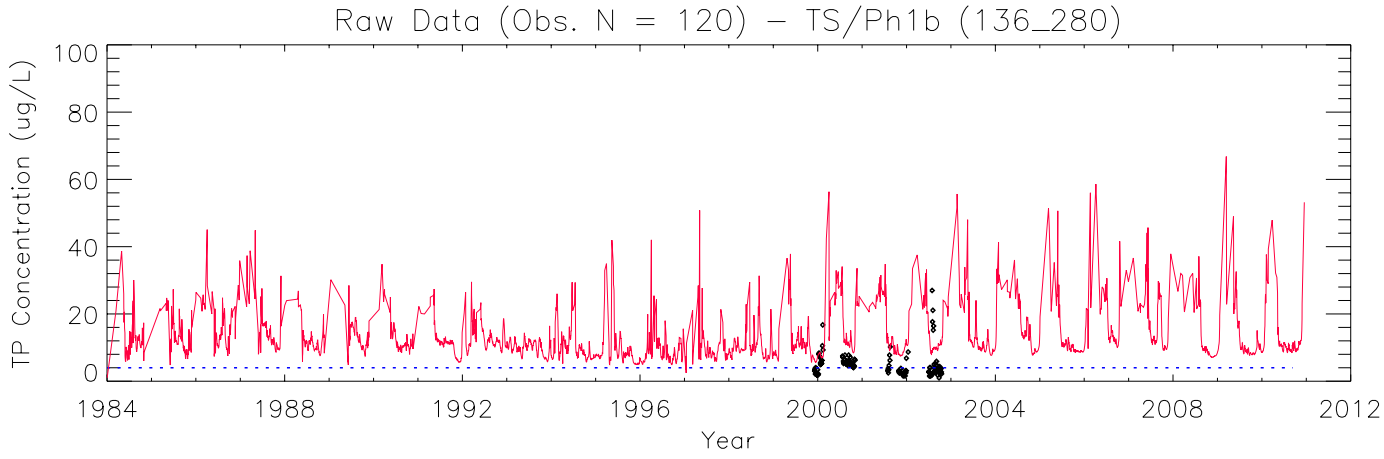

Cumulative Distribution: Raw Data – SRS6 (106)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

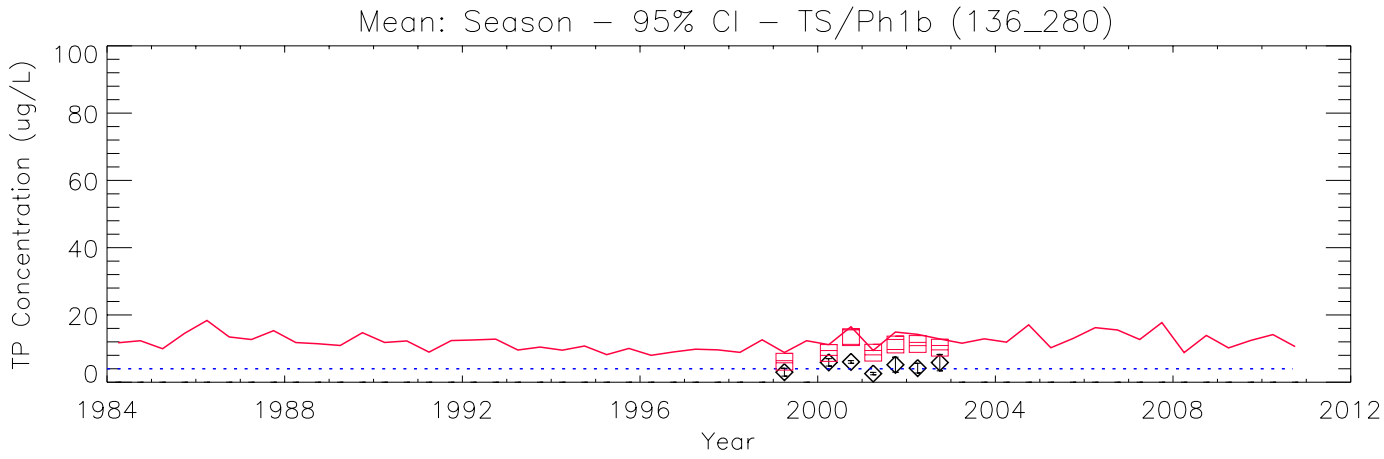

Raw Data (Obs. N = 288) – TS/Ph1a (136_283)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – TS/Ph1a (136_283)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – TS/Ph1a (136_283)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – TS/Ph1a (136_283)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 120) – TS/Ph1b (136_280)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – TS/Ph1b (136_280)
TP Concentration (ug/L)
0
20
40
60
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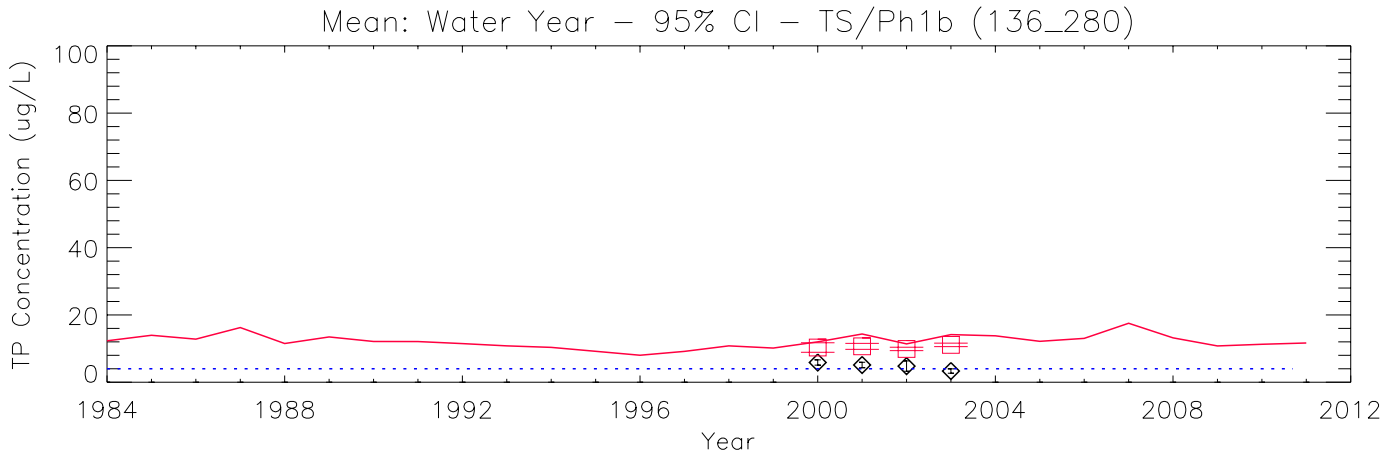
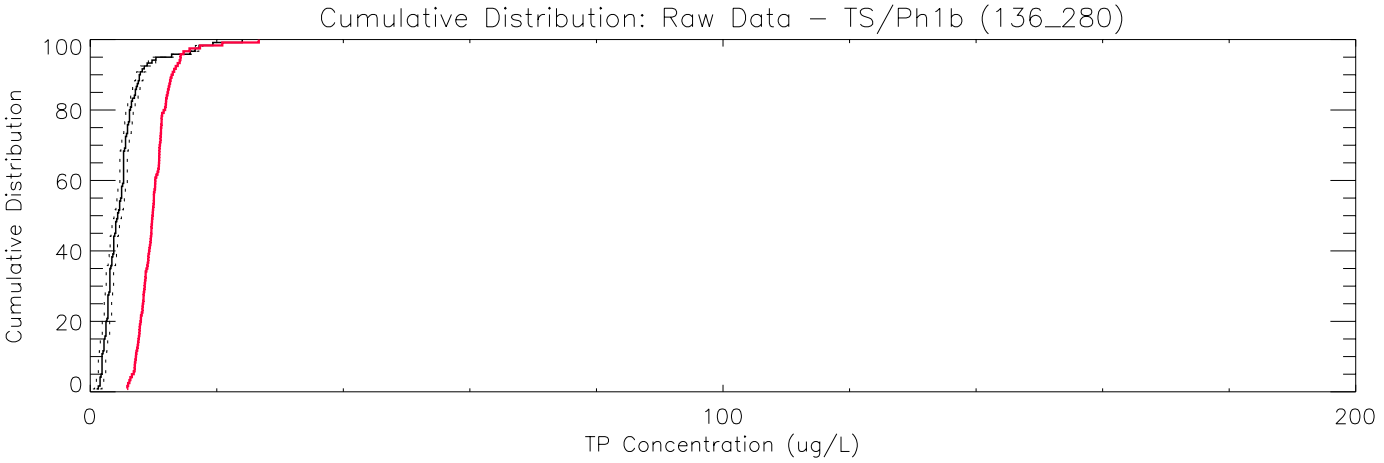
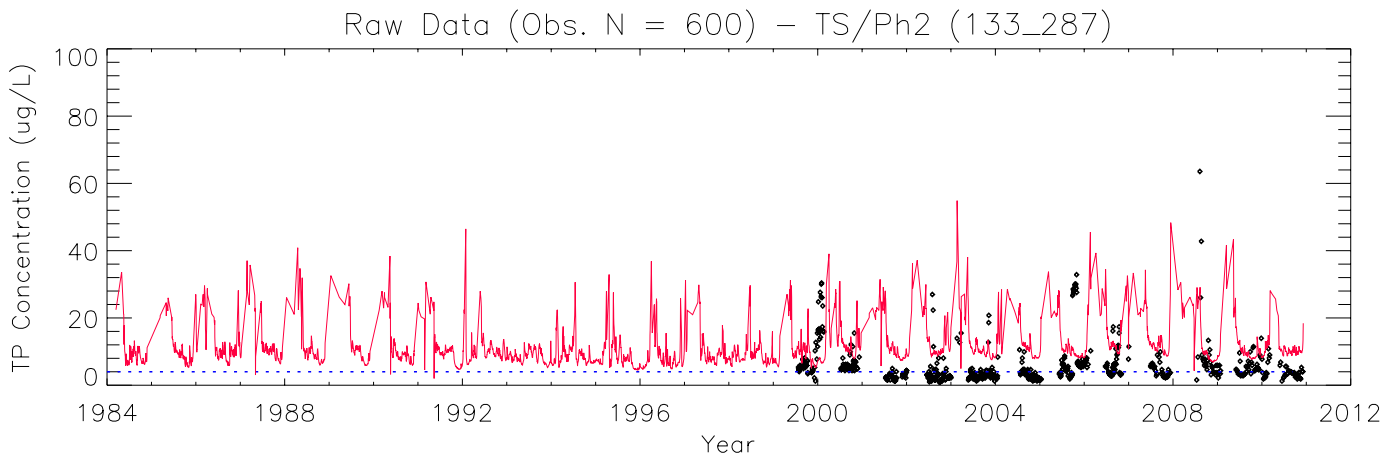
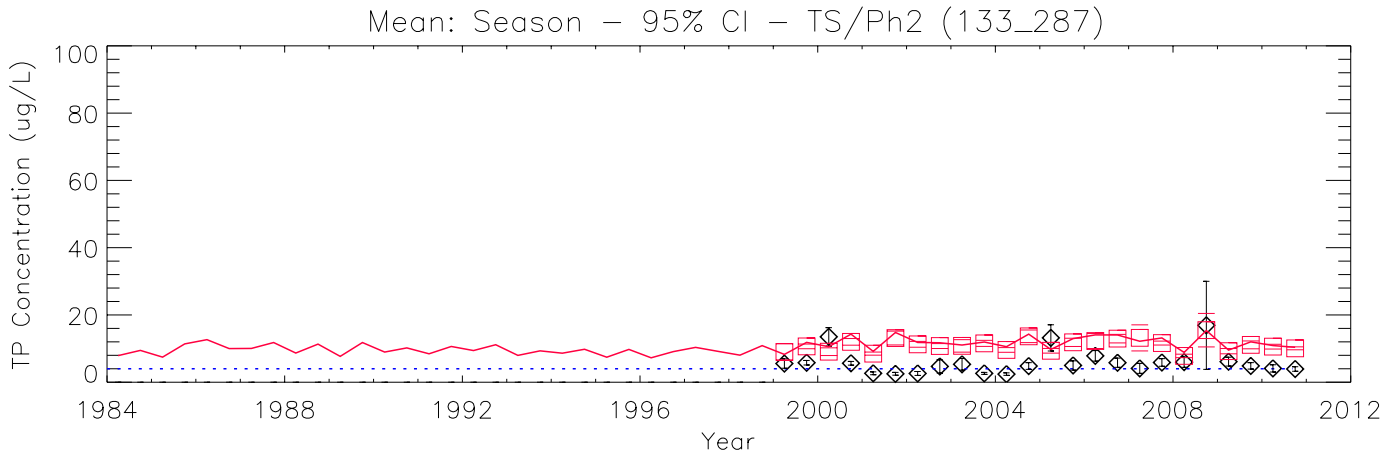
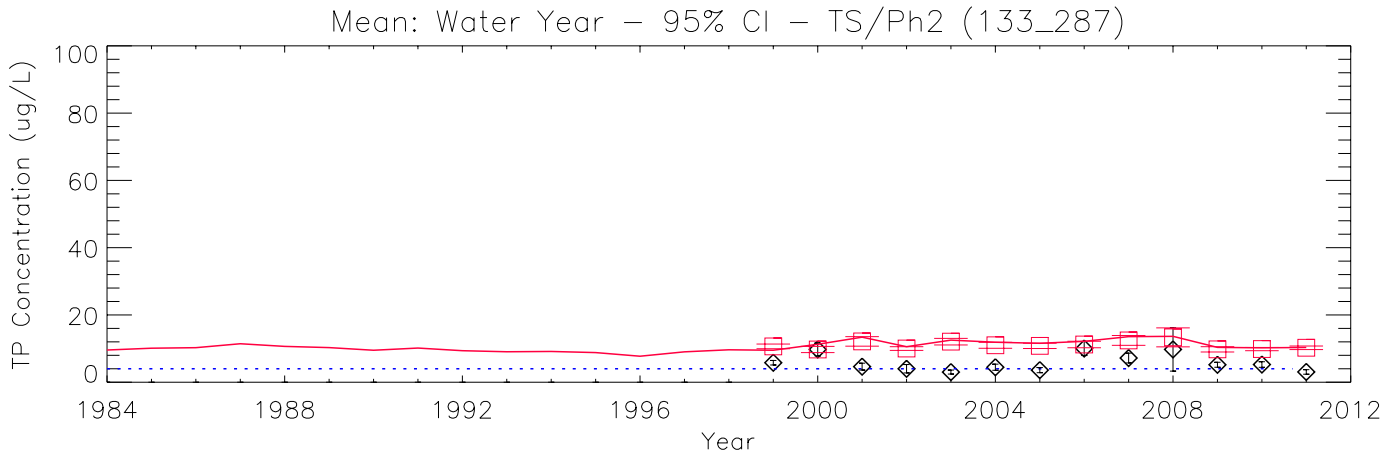
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

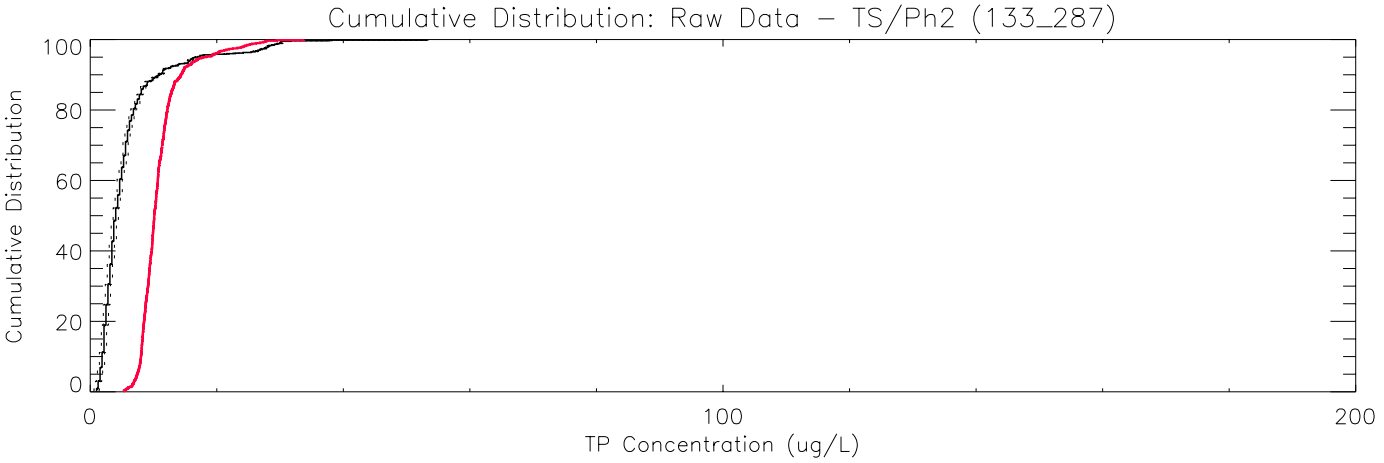

Mean: Water Year – 95% CI – TS/Ph1b (136_280)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

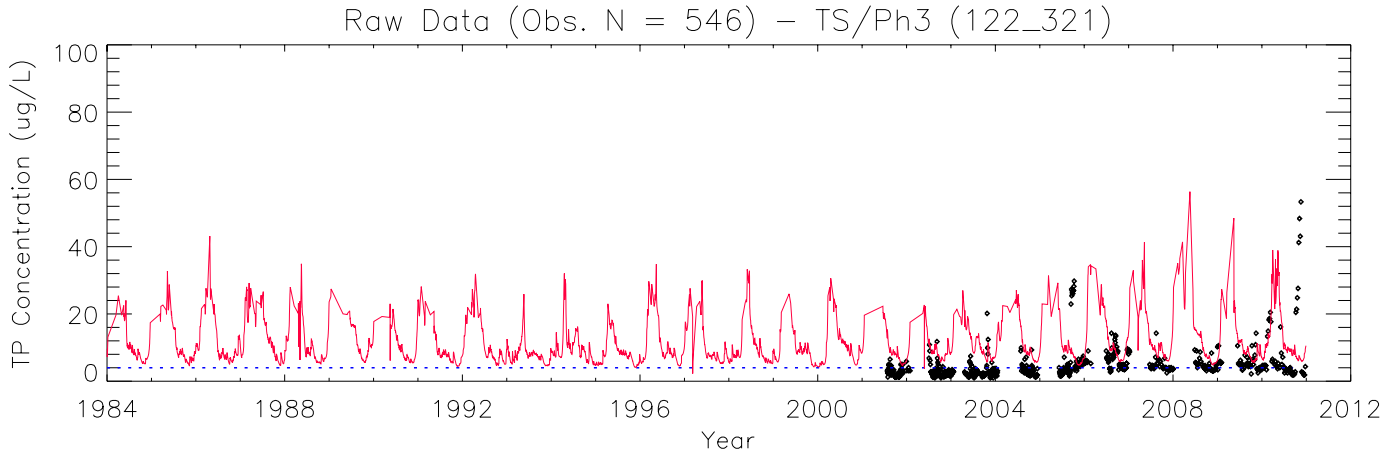

Cumulative Distribution: Raw Data – TS/Ph1b (136_280)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

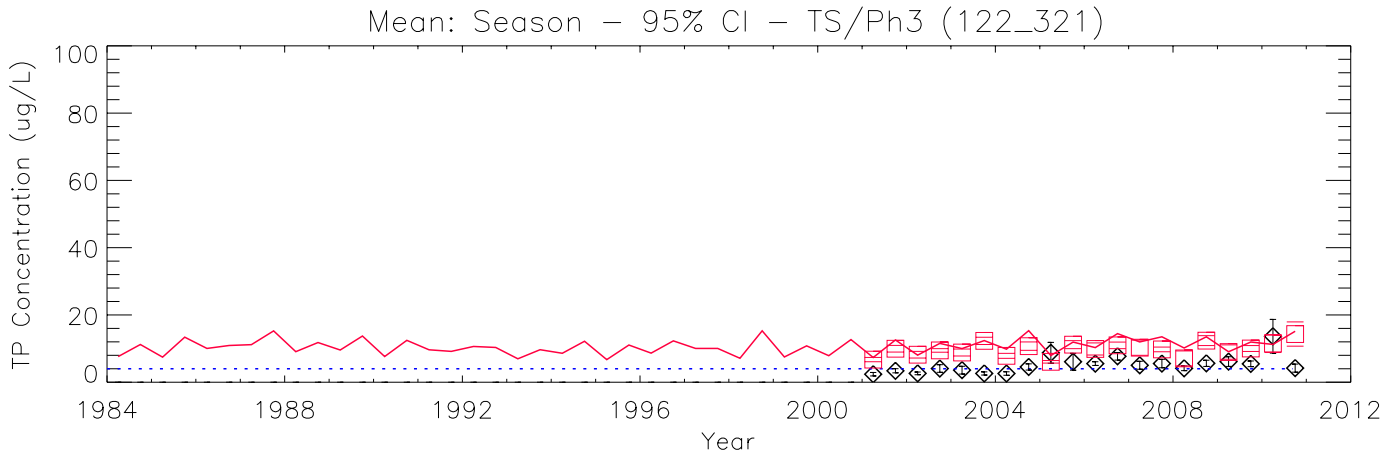

Raw Data (Obs. N = 600) – TS/Ph2 (133_287)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

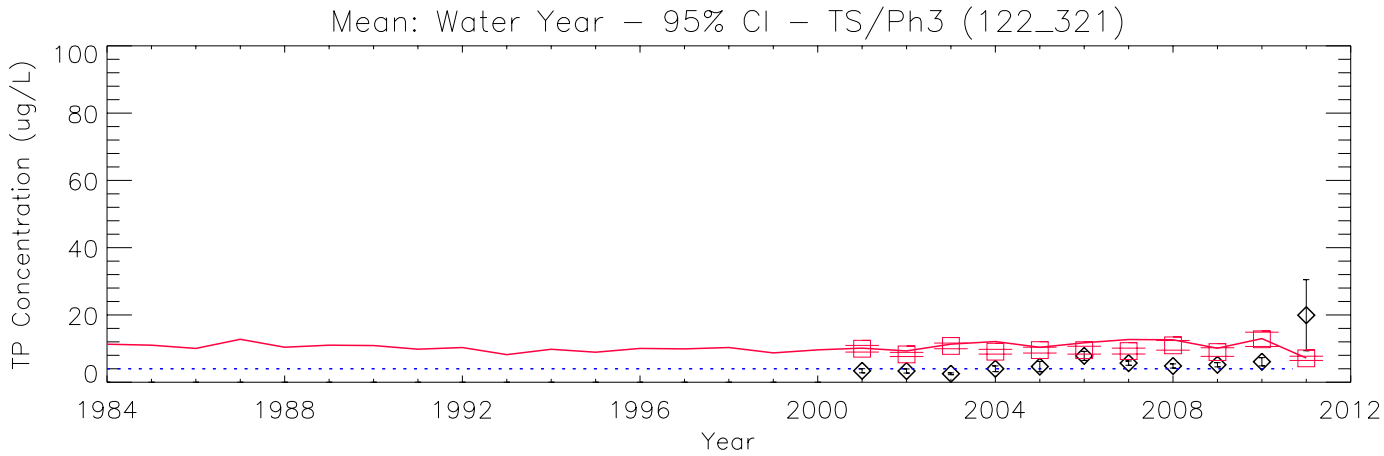

Mean: Season – 95% CI – TS/Ph2 (133_287)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

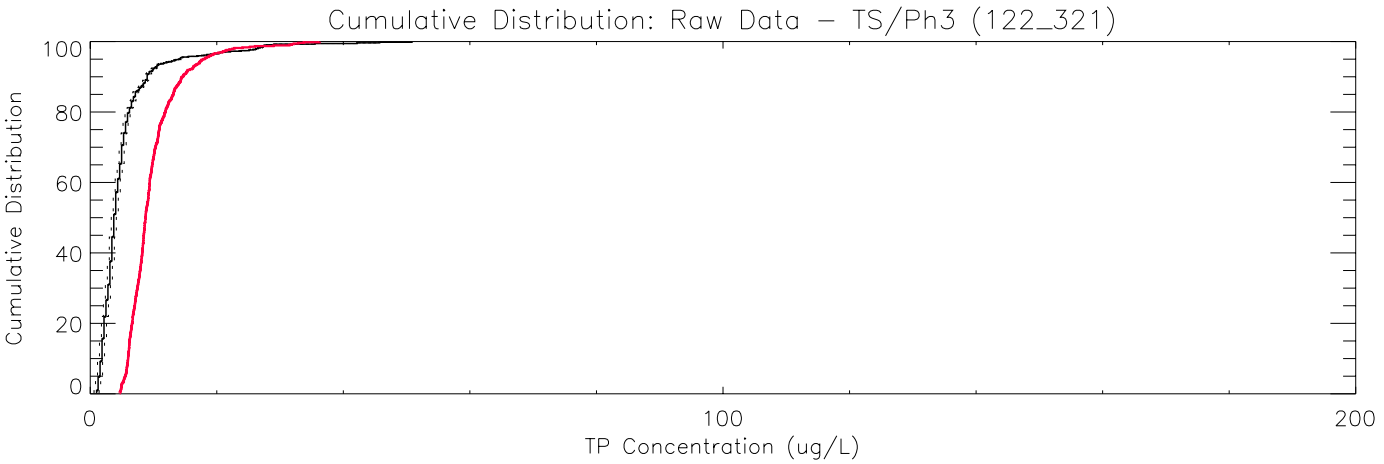

Mean: Water Year – 95% CI – TS/Ph2 (133_287)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

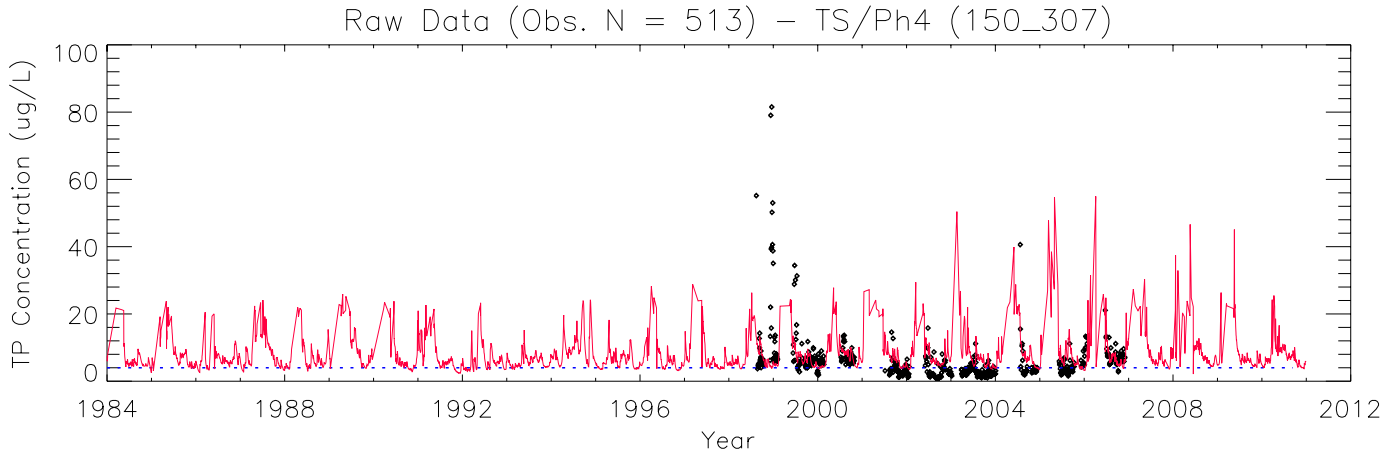

Cumulative Distribution: Raw Data – TS/Ph2 (133_287)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

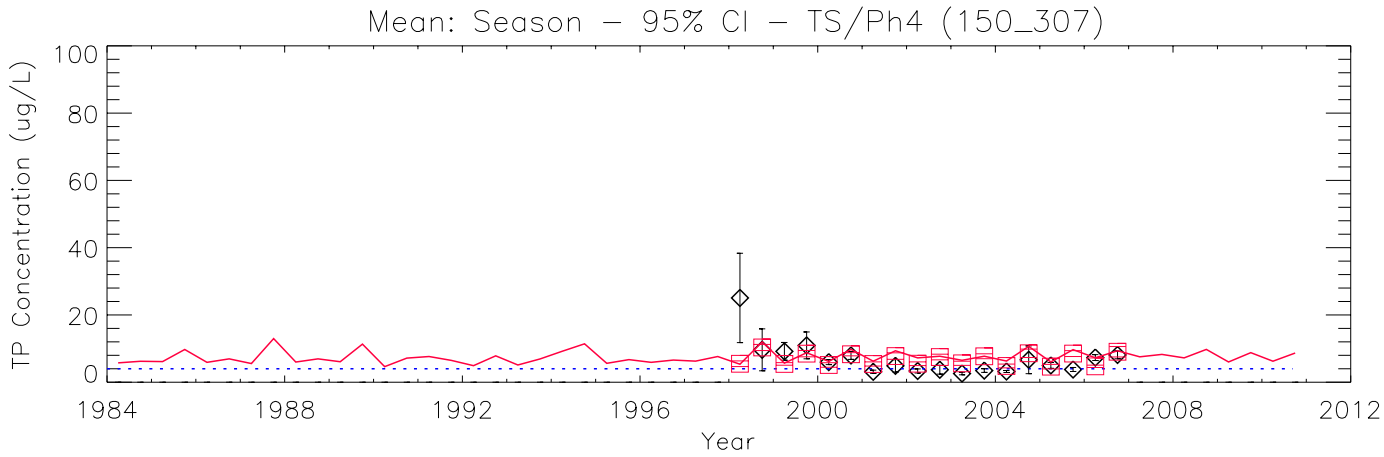

Raw Data (Obs. N = 546) – TS/Ph3 (122_321)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

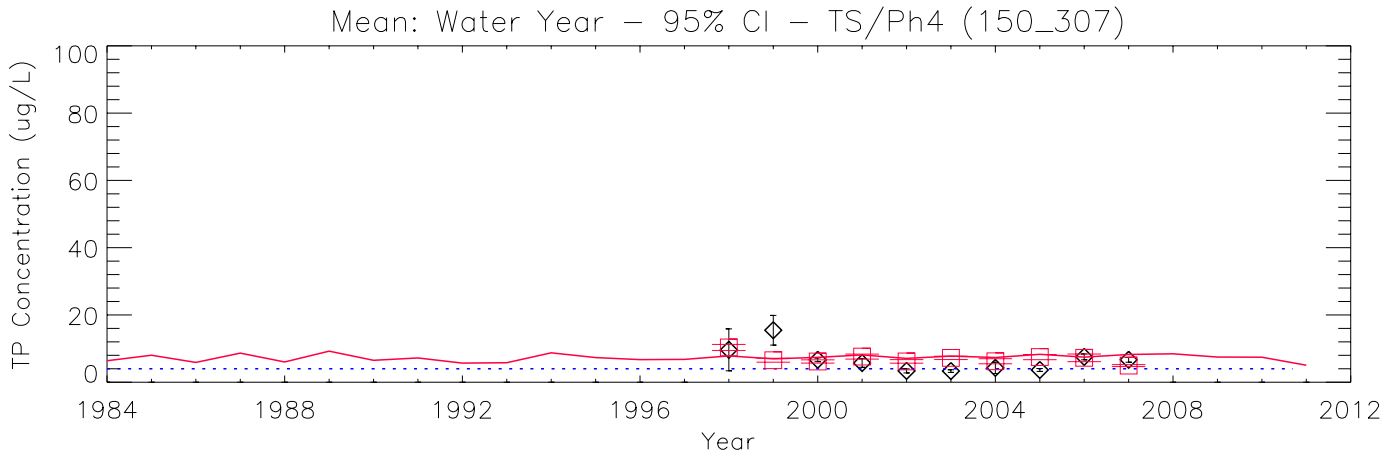

Mean: Season – 95% CI – TS/Ph3 (122_321)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

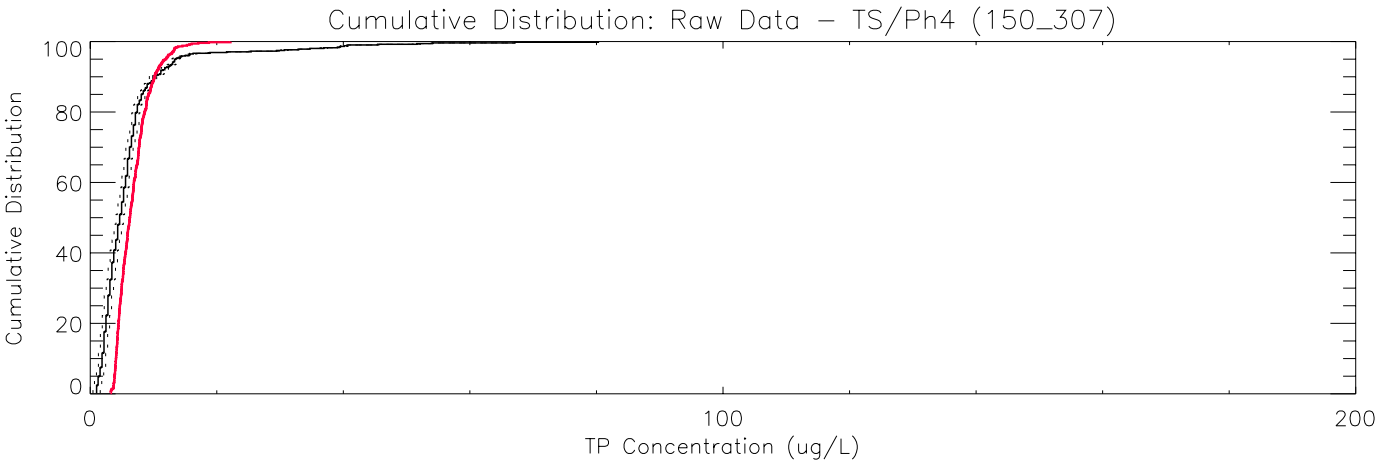

Mean: Water Year – 95% CI – TS/Ph3 (122_321)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

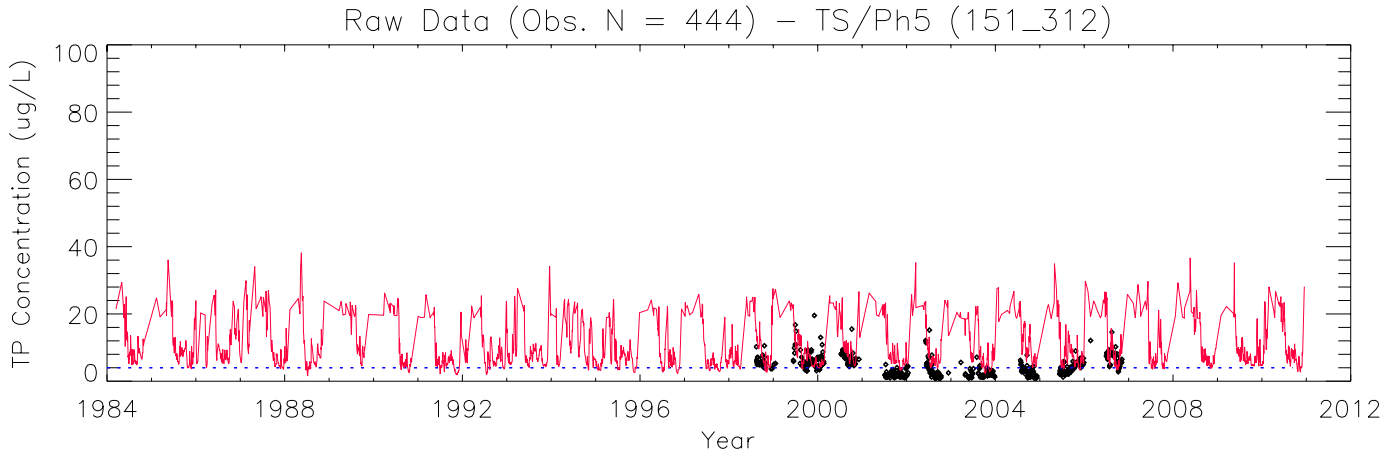

Cumulative Distribution: Raw Data – TS/Ph3 (122_321)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 513) – TS/Ph4 (150_307)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – TS/Ph4 (150_307)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – TS/Ph4 (150_307)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – TS/Ph4 (150_307)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 444) – TS/Ph5 (151_312)
TP Concentration (ug/L)
0
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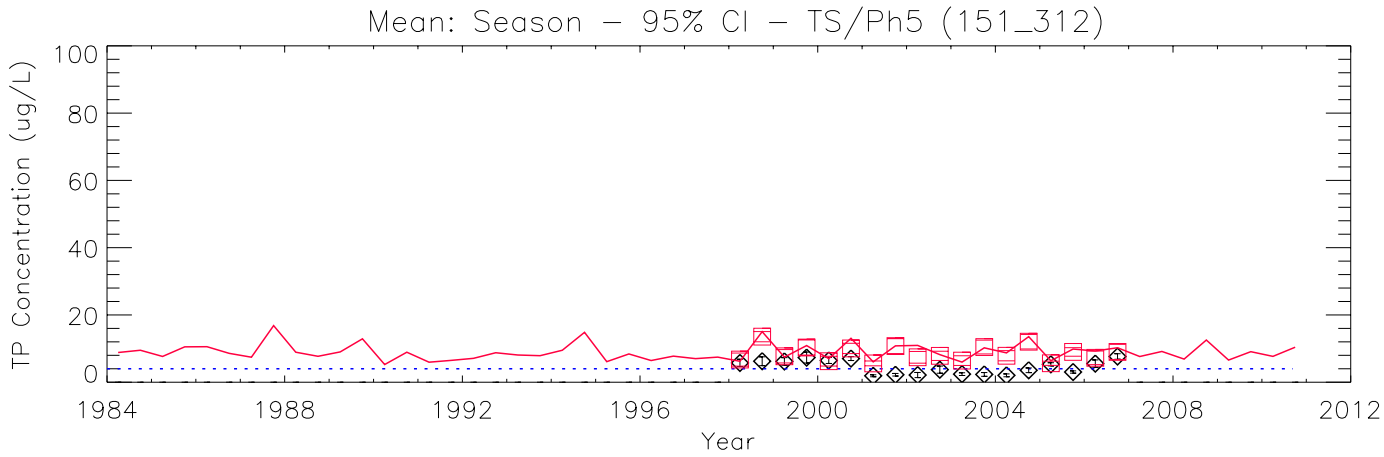
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – TS/Ph5 (151_312)
TP Concentration (ug/L)
0
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60
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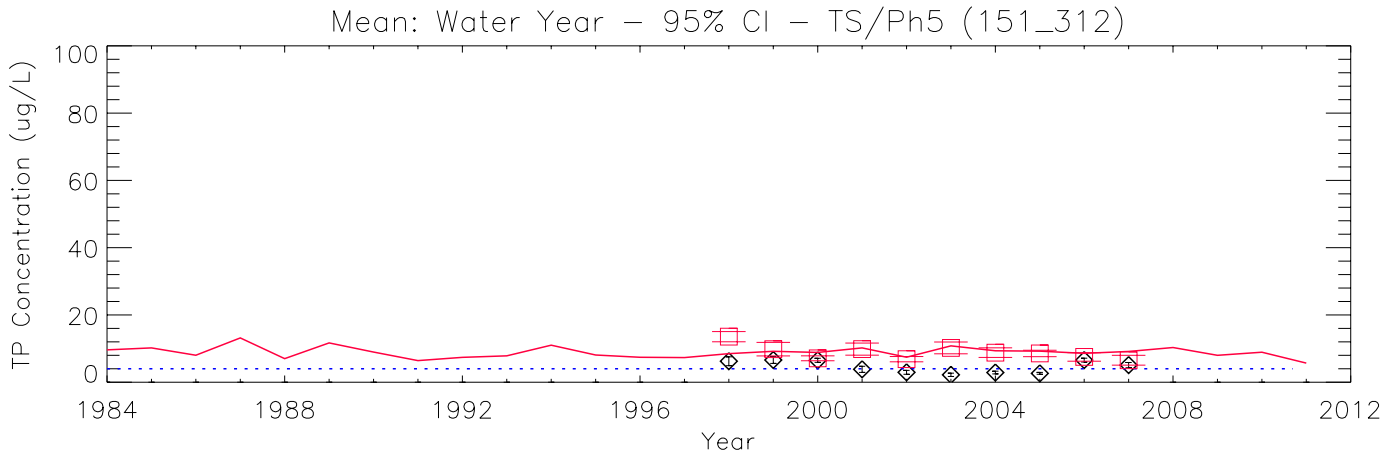
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – TS/Ph5 (151_312)
TP Concentration (ug/L)
0
20
40
60
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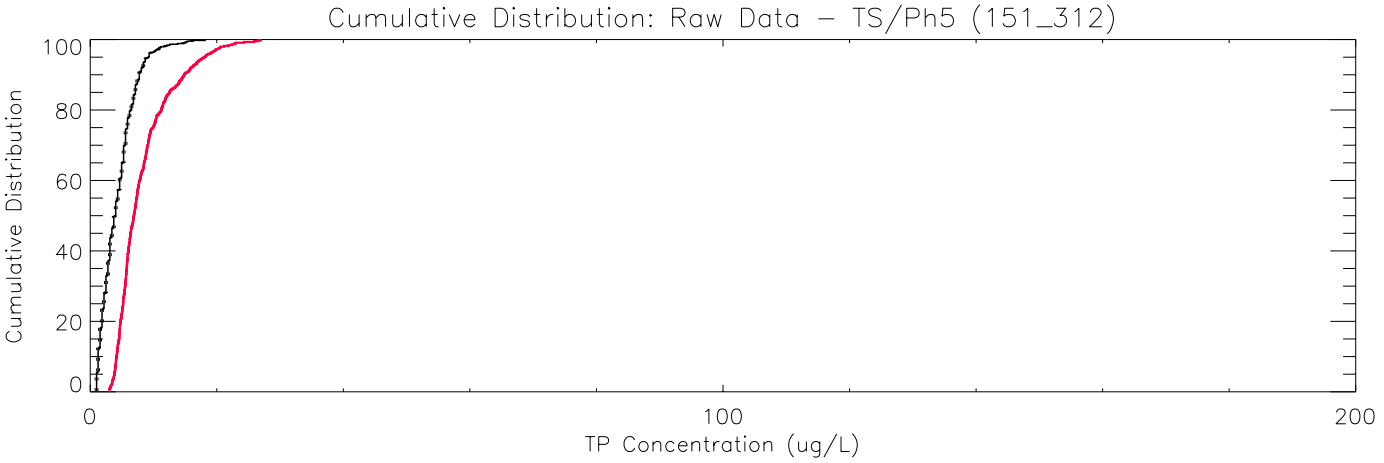
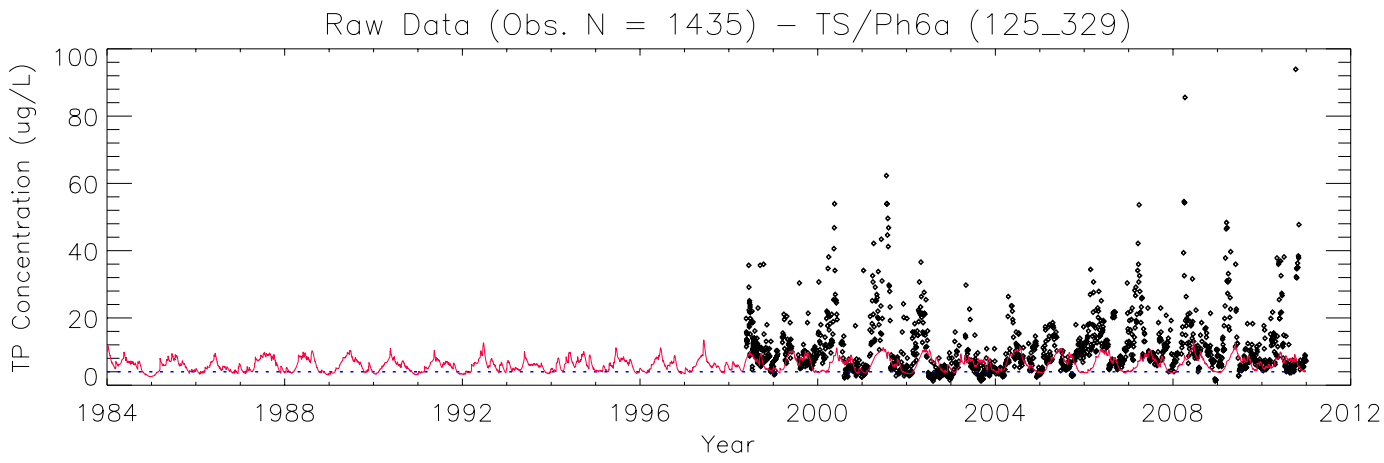
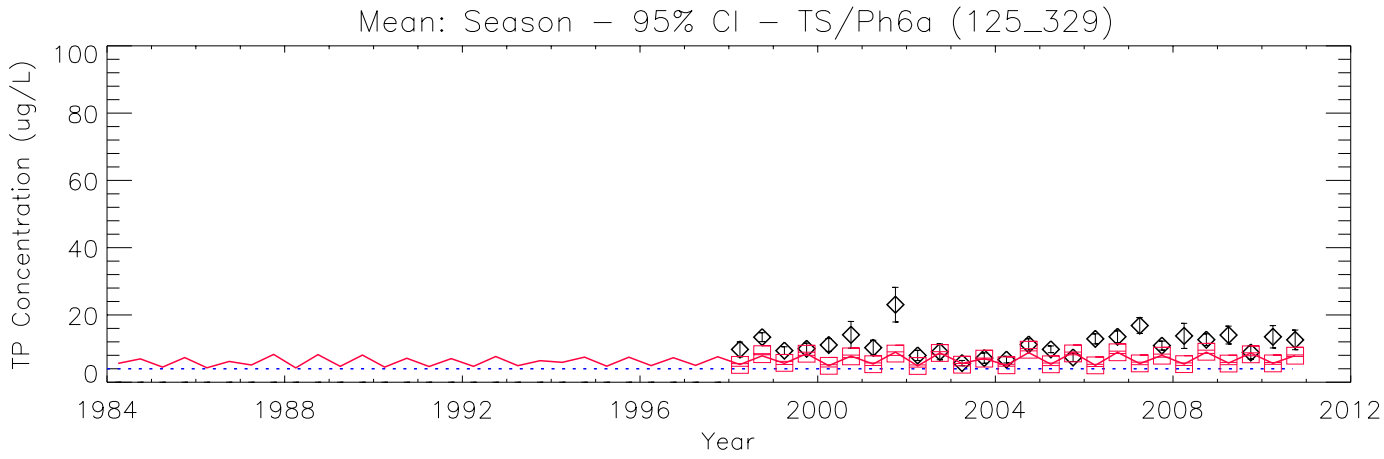
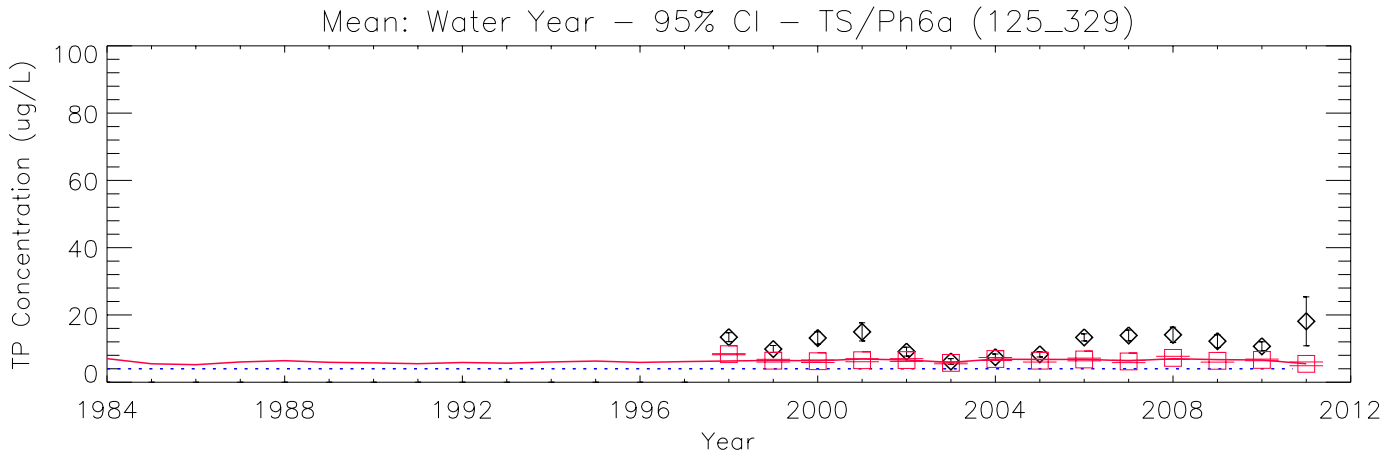
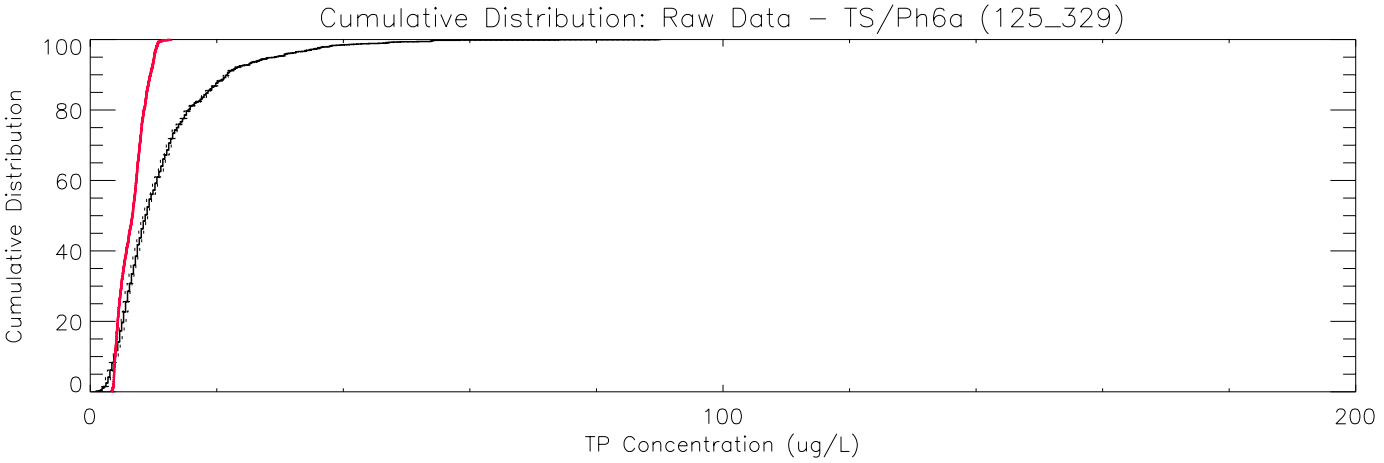
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

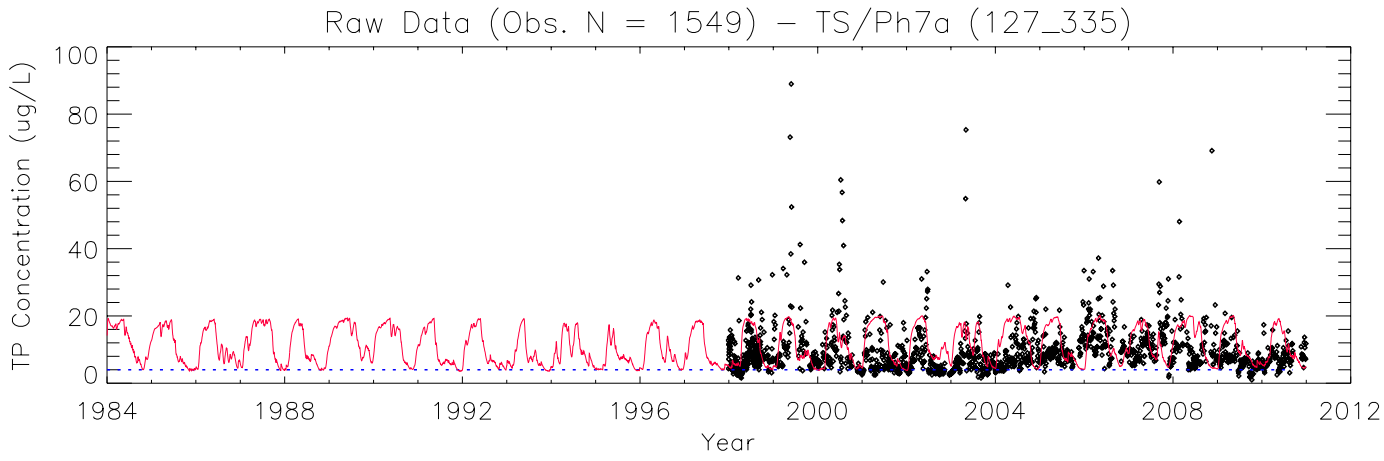

Cumulative Distribution: Raw Data – TS/Ph5 (151_312)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 1435) – TS/Ph6a (125_329)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – TS/Ph6a (125_329)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – TS/Ph6a (125_329)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – TS/Ph6a (125_329)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 1549) – TS/Ph7a (127_335)
TP Concentration (ug/L)
0
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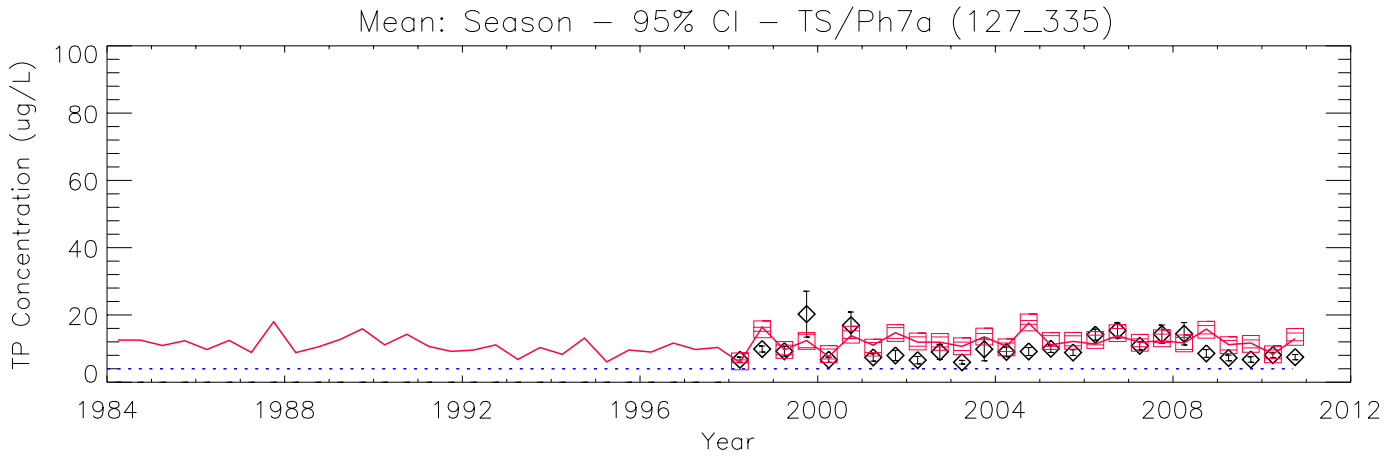
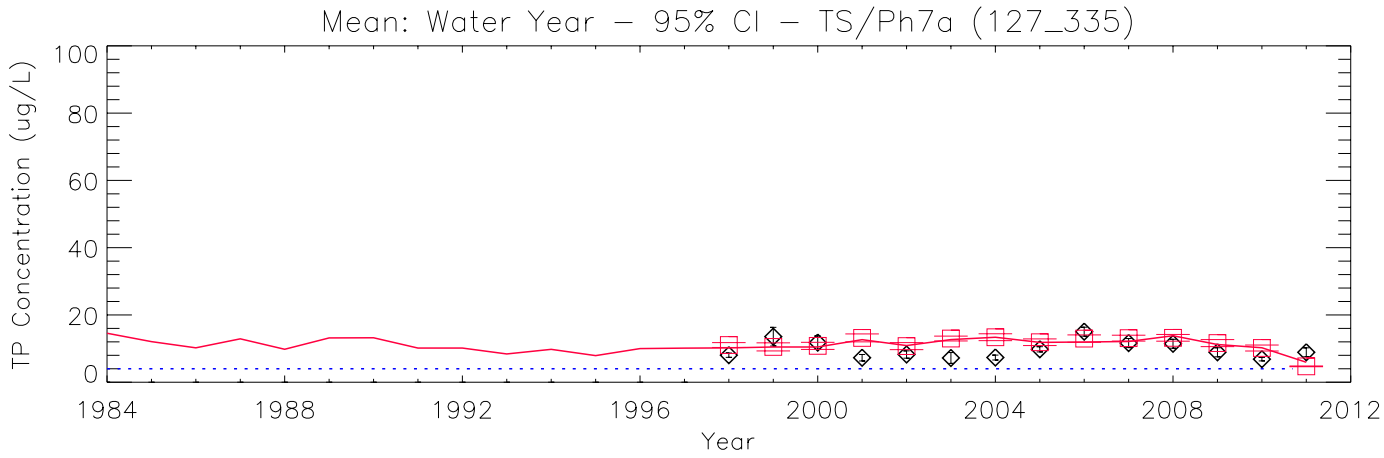
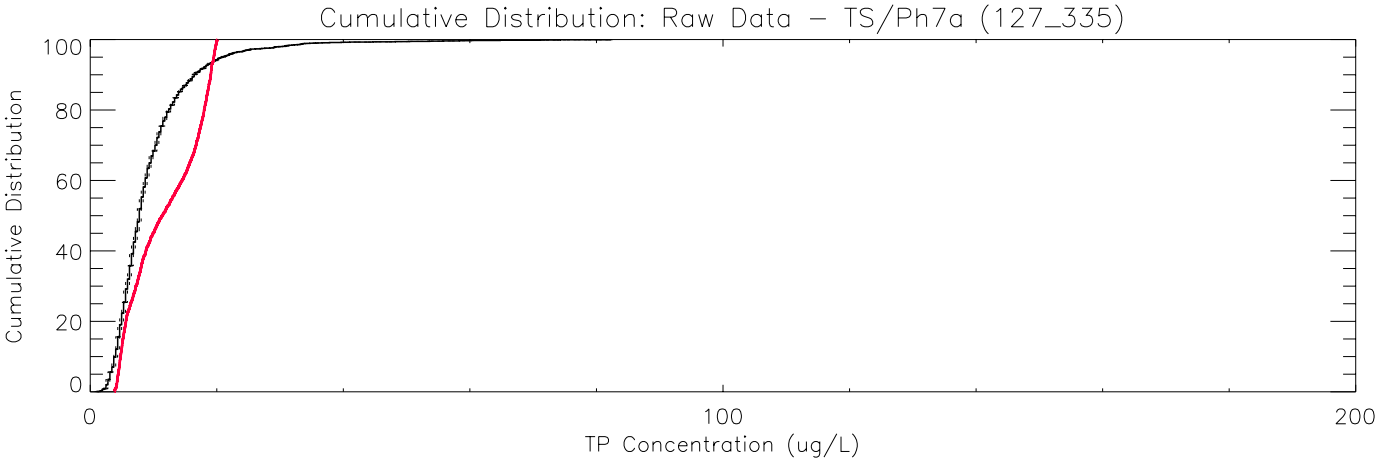
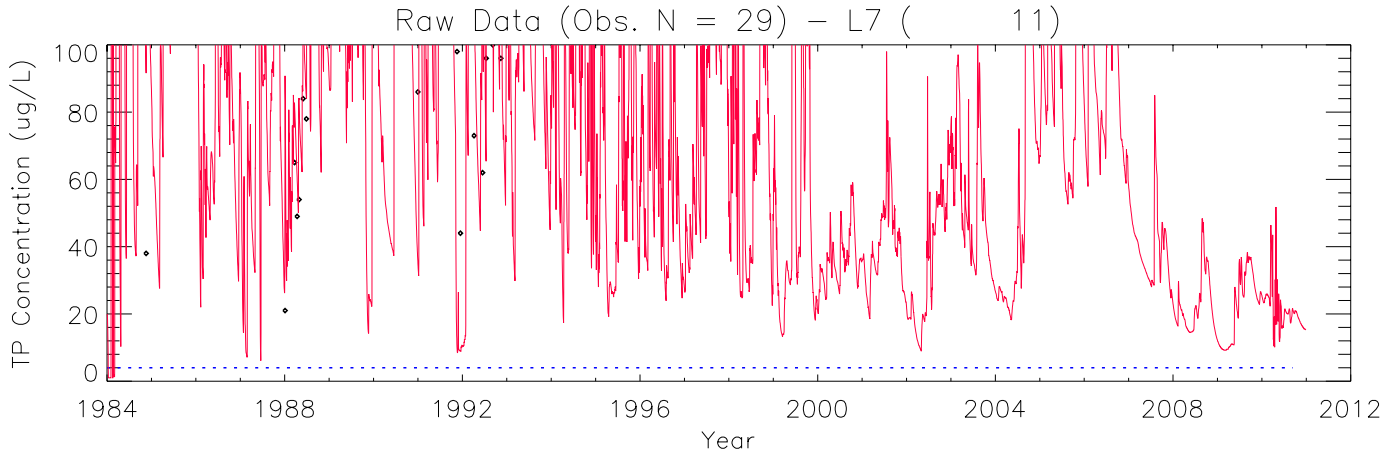
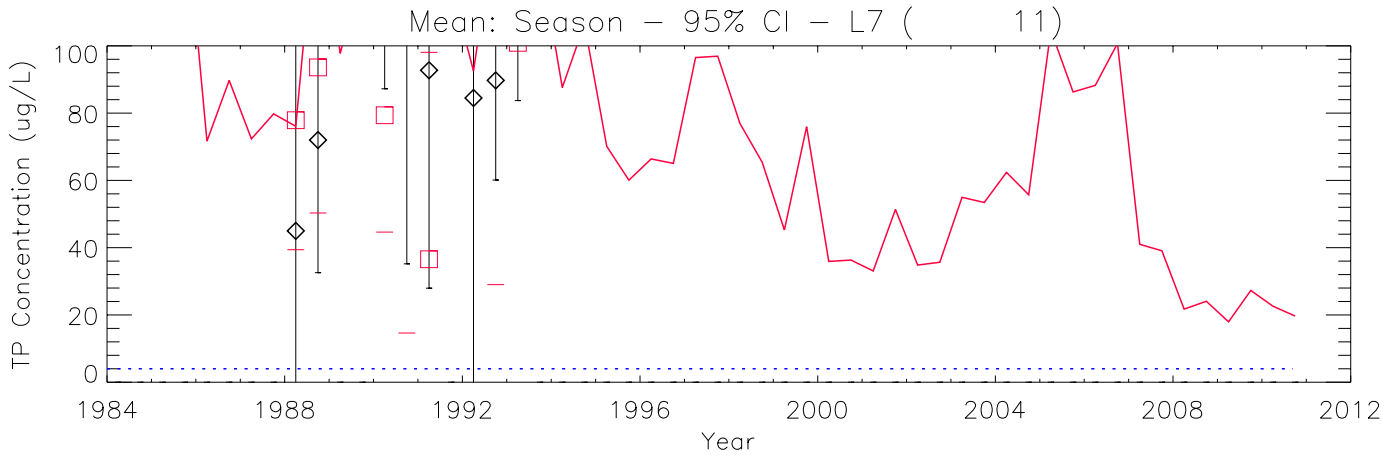
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

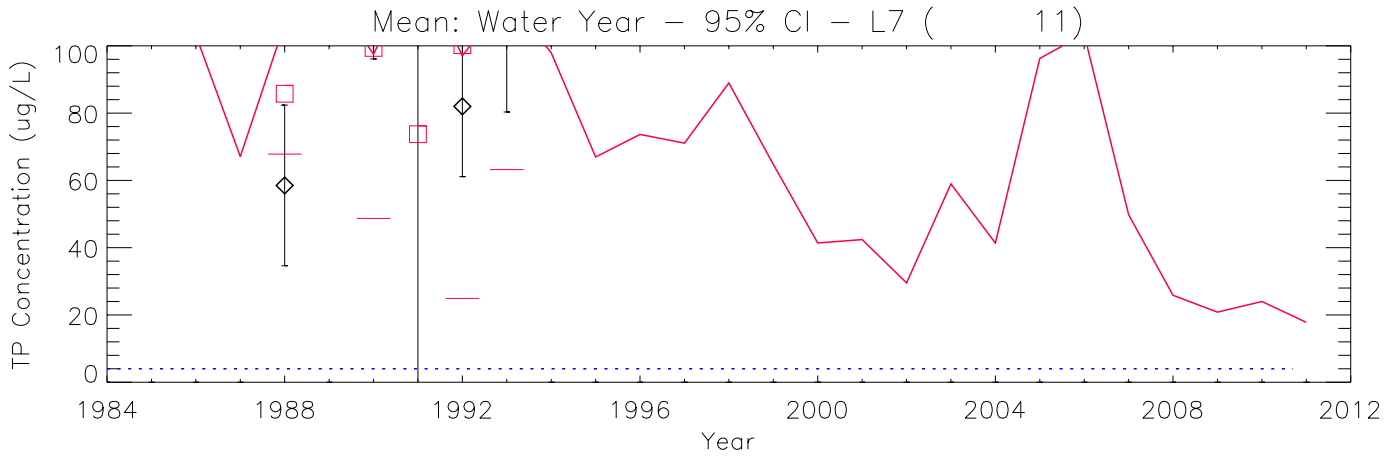

Mean: Season – 95% CI – TS/Ph7a (127_335)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

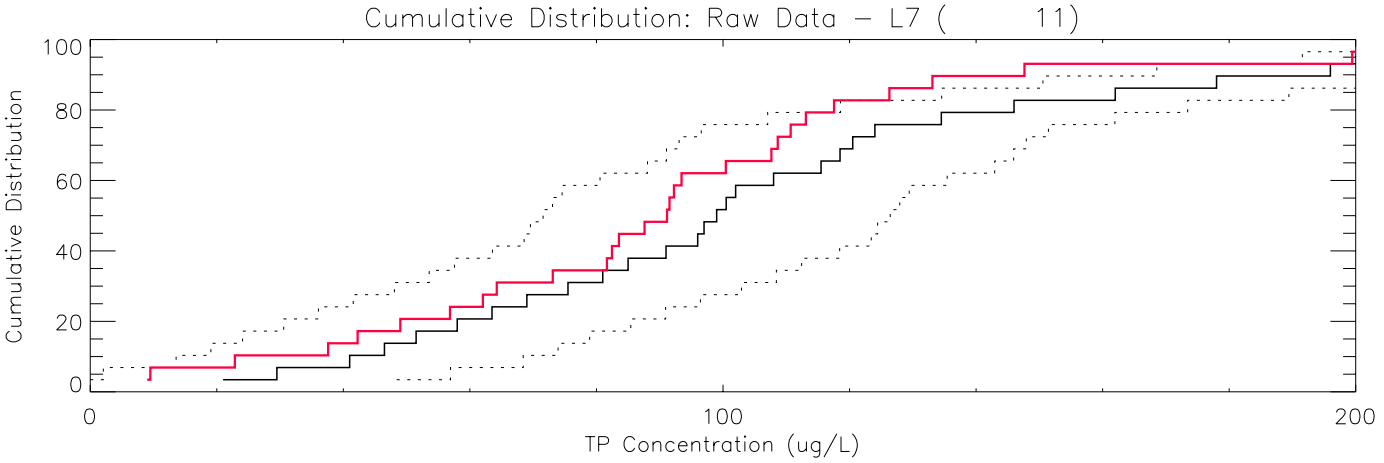

Mean: Water Year – 95% CI – TS/Ph7a (127_335)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

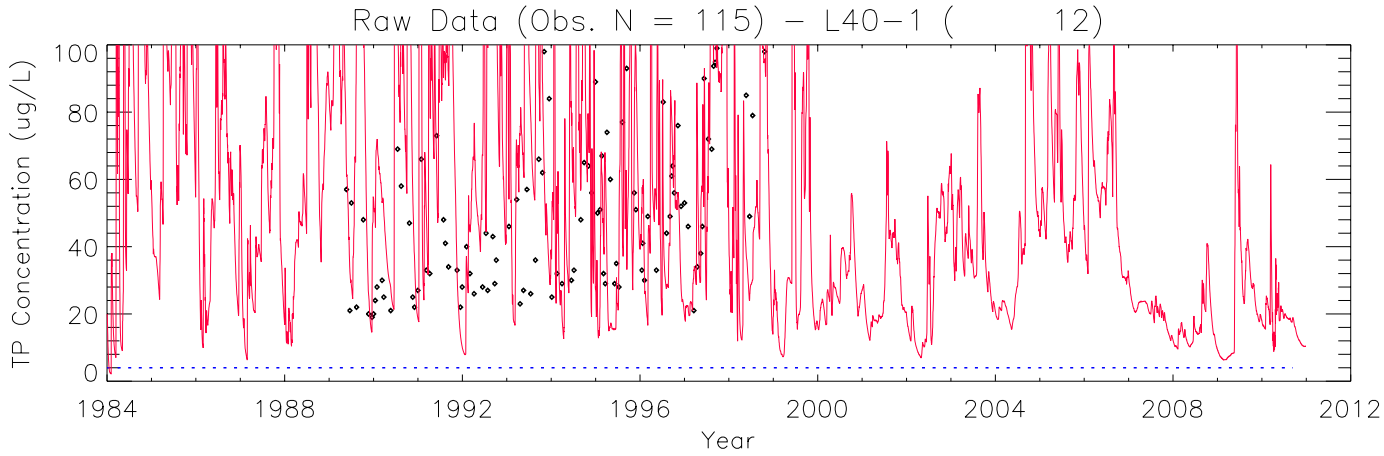

Cumulative Distribution: Raw Data – TS/Ph7a (127_335)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

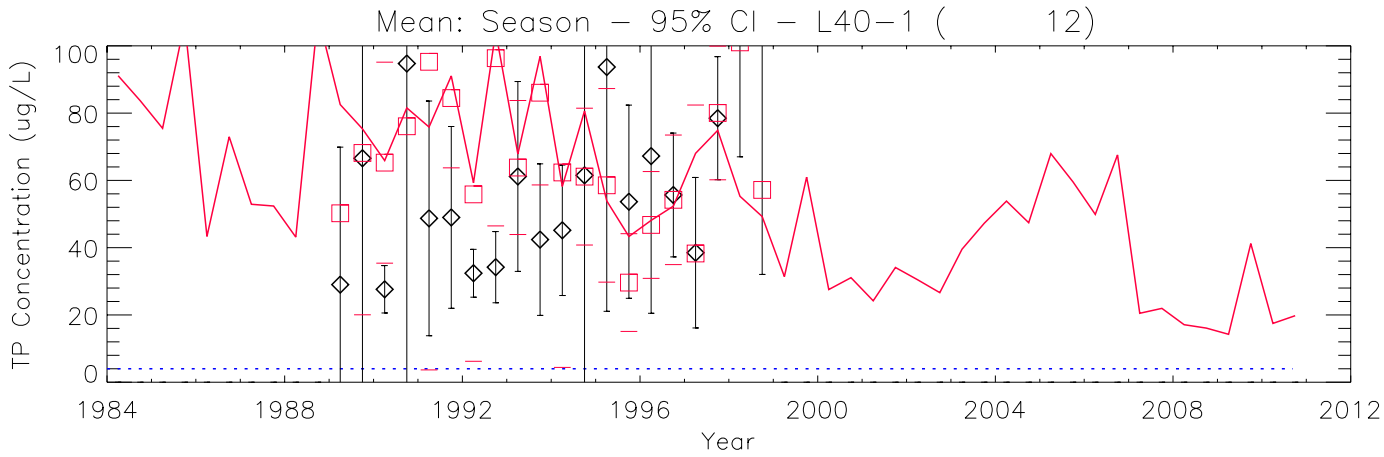

Raw Data (Obs. N = 29) – L7 (11)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

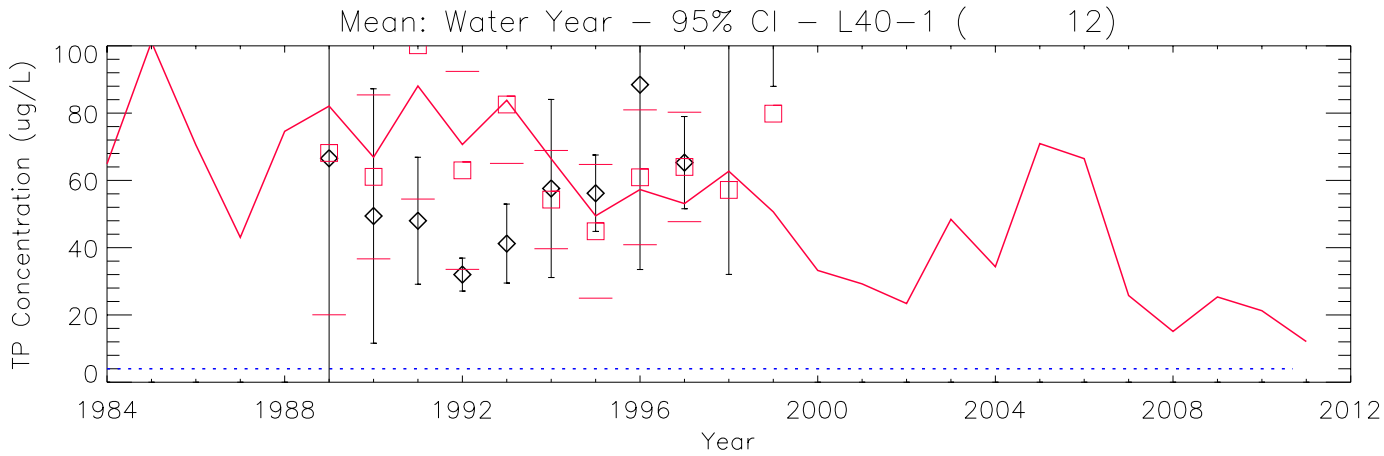

Mean: Season – 95% CI – L7 (11)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

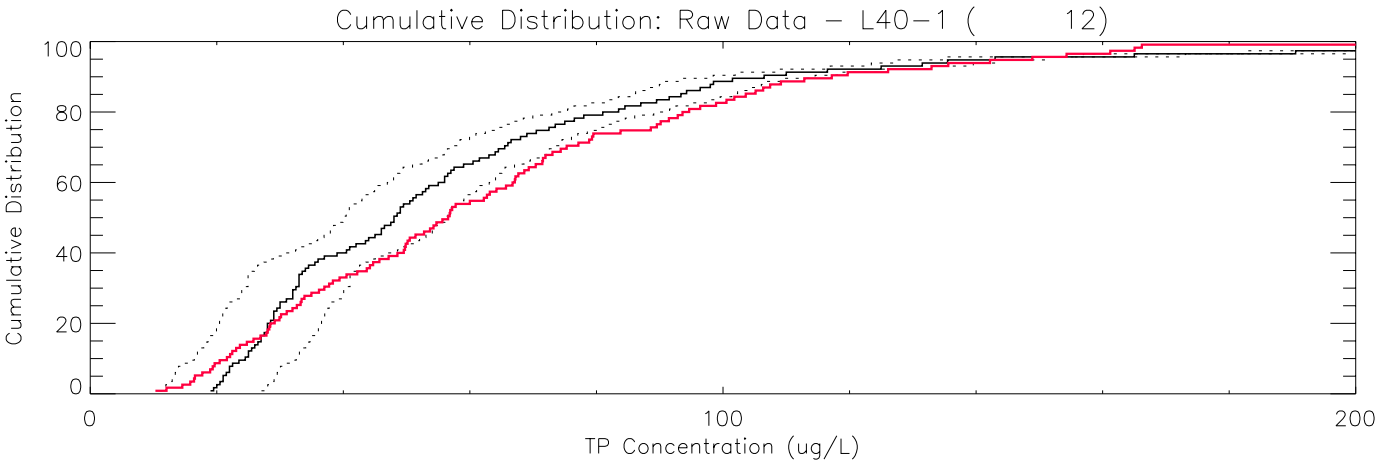

Mean: Water Year – 95% CI – L7 (11)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

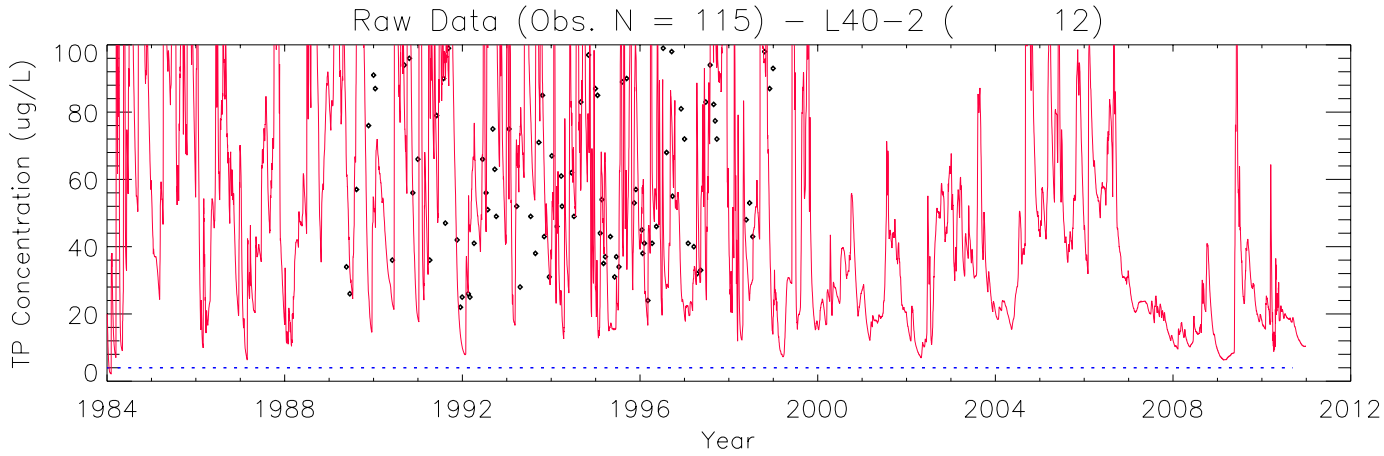

Cumulative Distribution: Raw Data – L7 (11)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

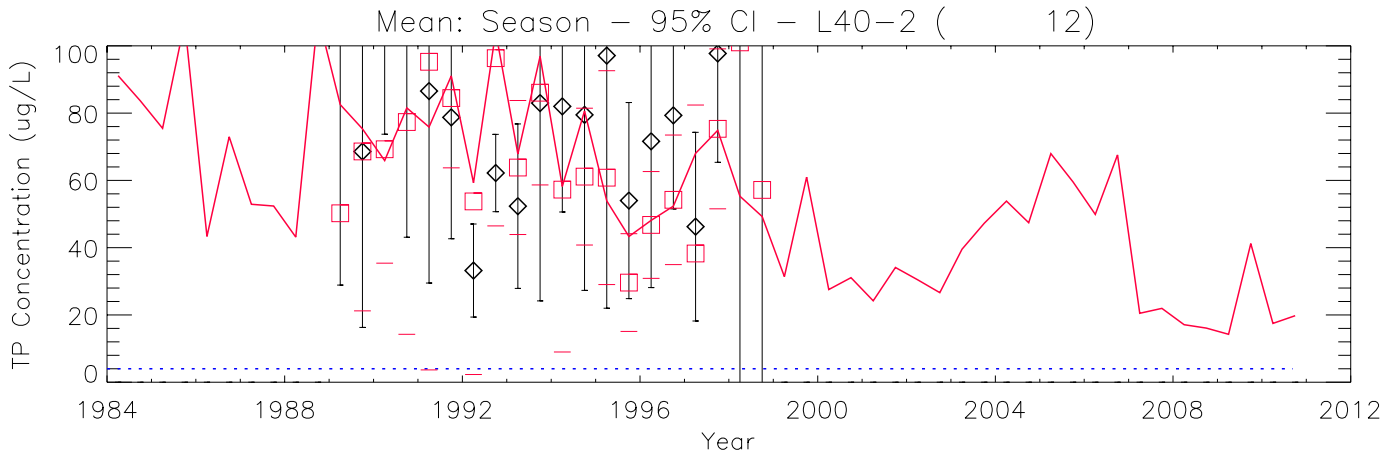

Raw Data (Obs. N = 115) - L40-1 (12)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

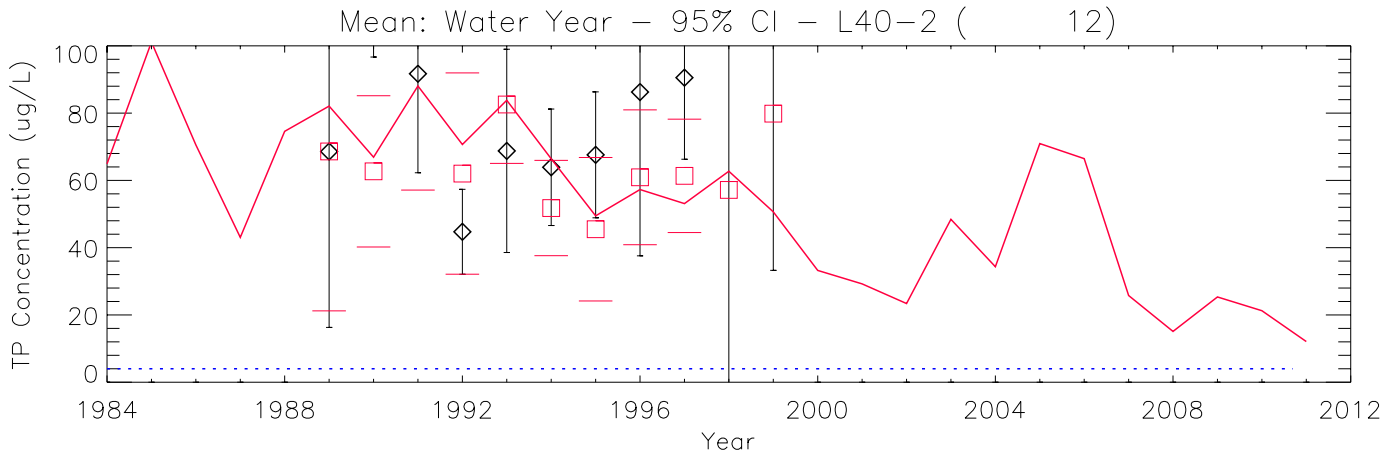

Mean: Season - 95% CI - L40-1 (12)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

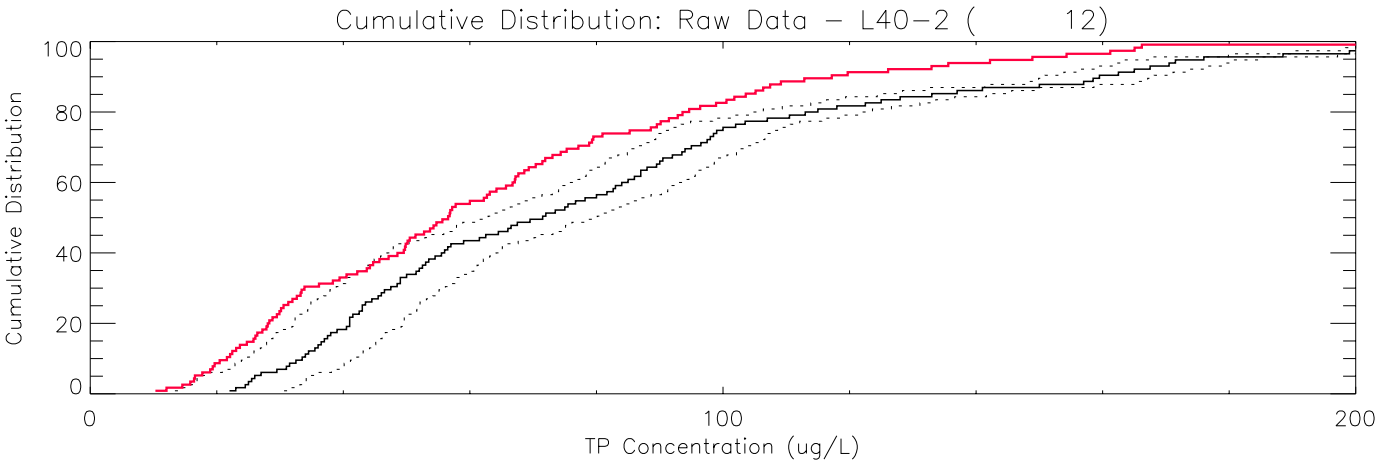

Mean: Water Year - 95% CI - L40-1 (12)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

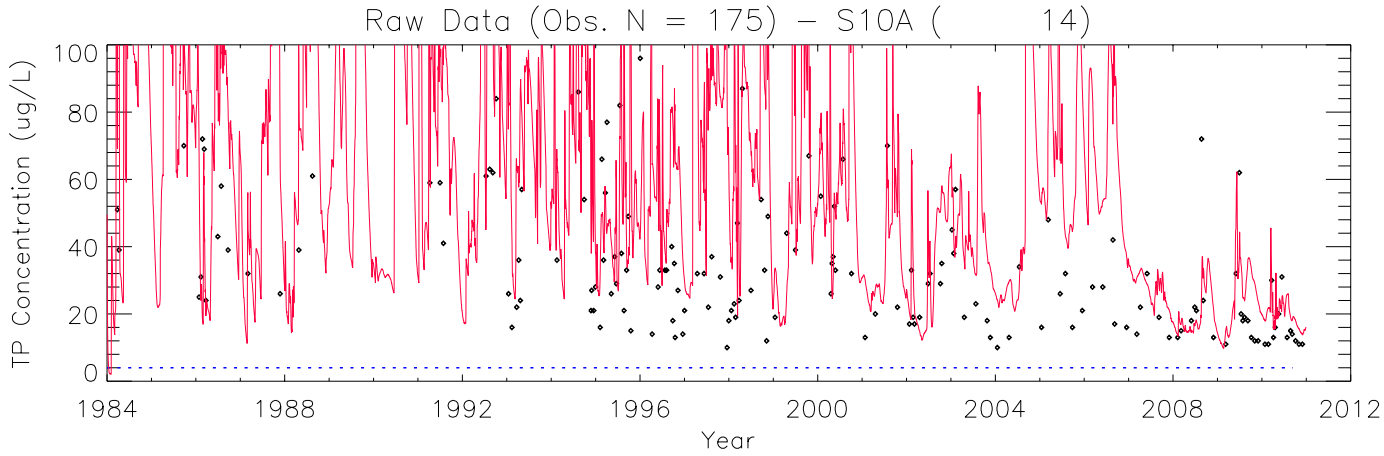

Cumulative Distribution: Raw Data - L40-1 (12)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

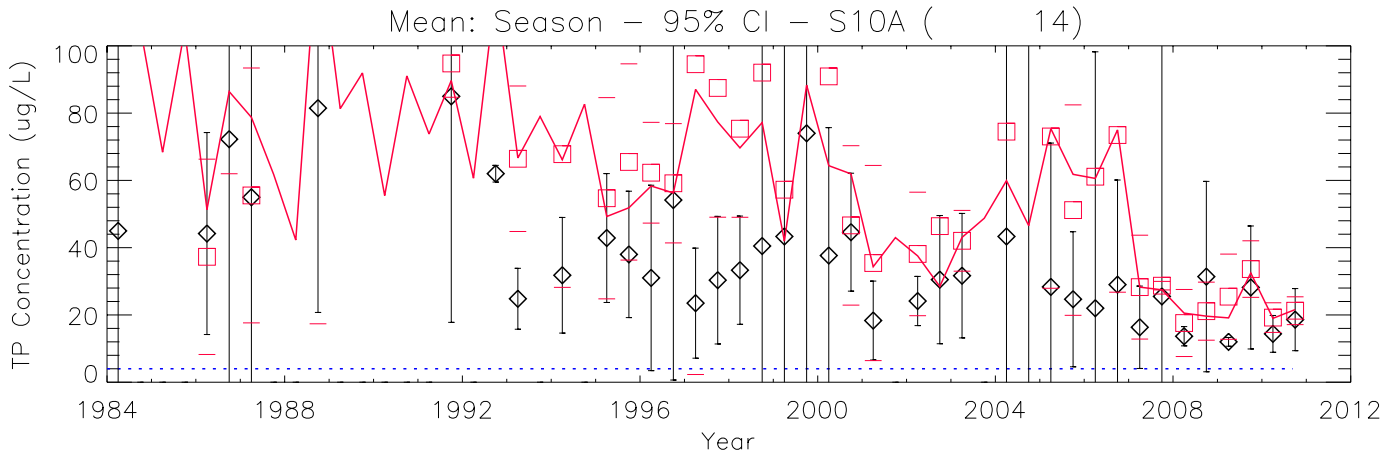

Raw Data (Obs. N = 115) - L40-2 (12)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

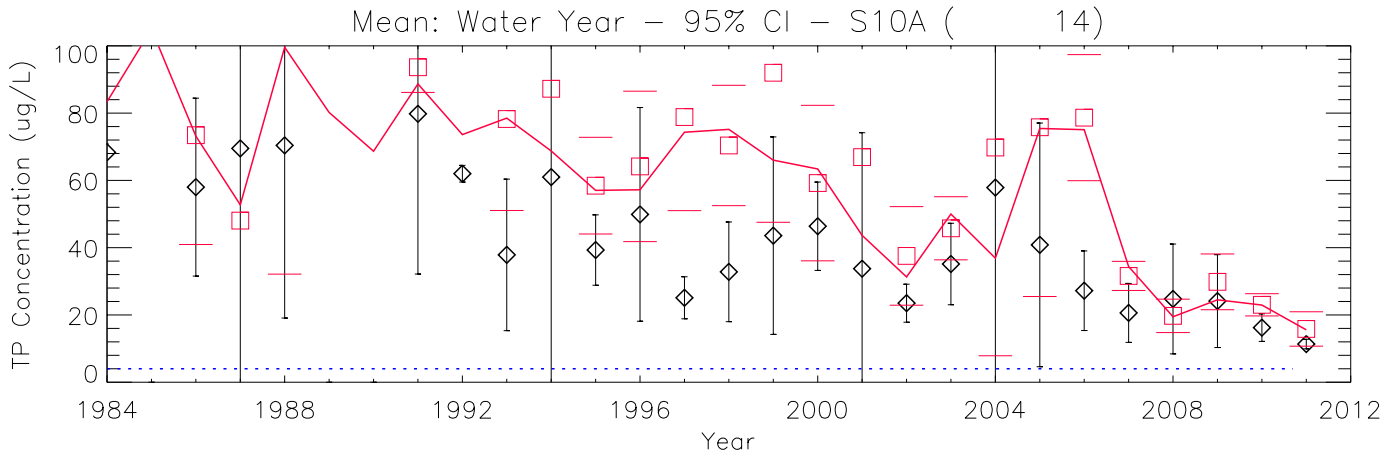

Mean: Season - 95% CI - L40-2 (12)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

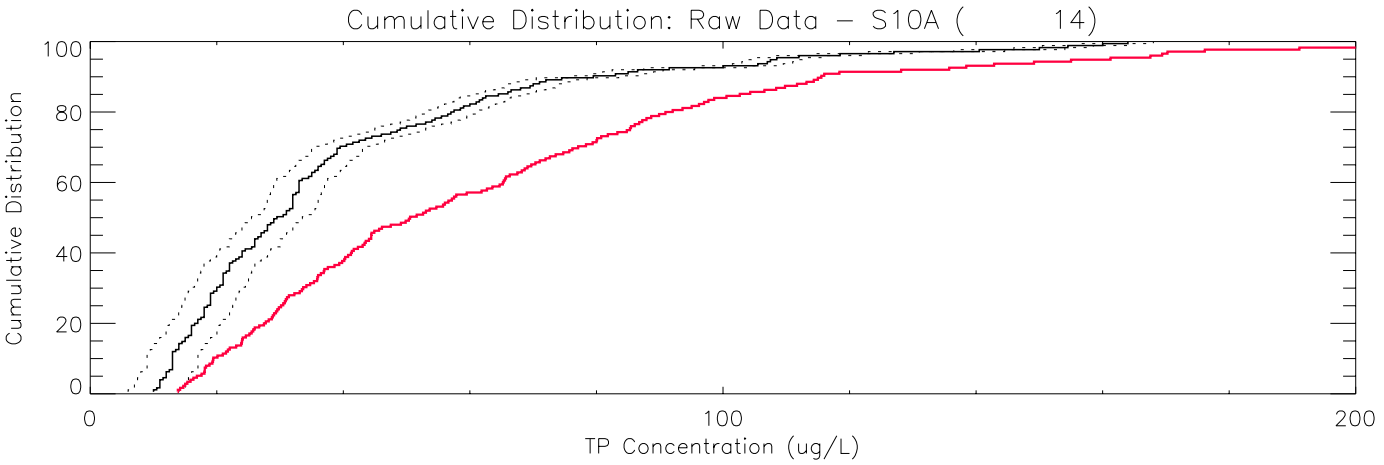

Mean: Water Year - 95% CI - L40-2 (12)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

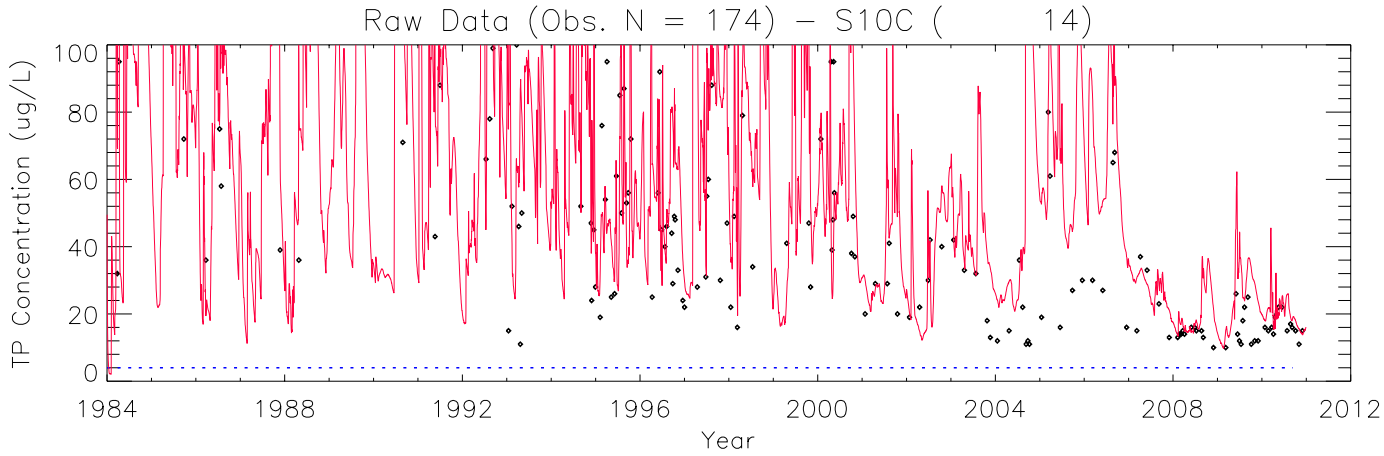

Cumulative Distribution: Raw Data - L40-2 (12)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

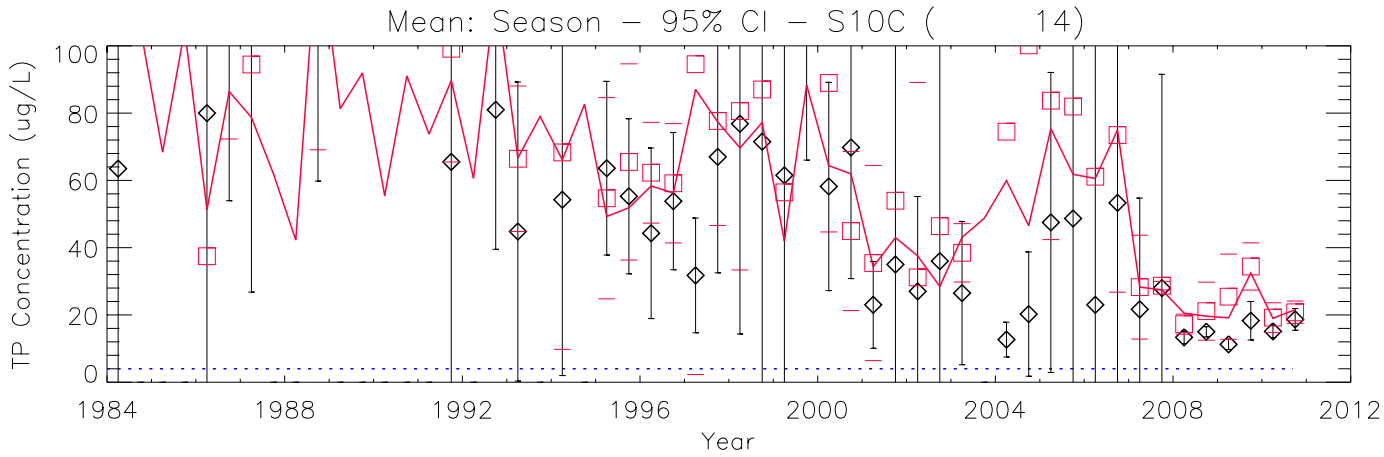

Raw Data (Obs. N = 175) – S10A (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

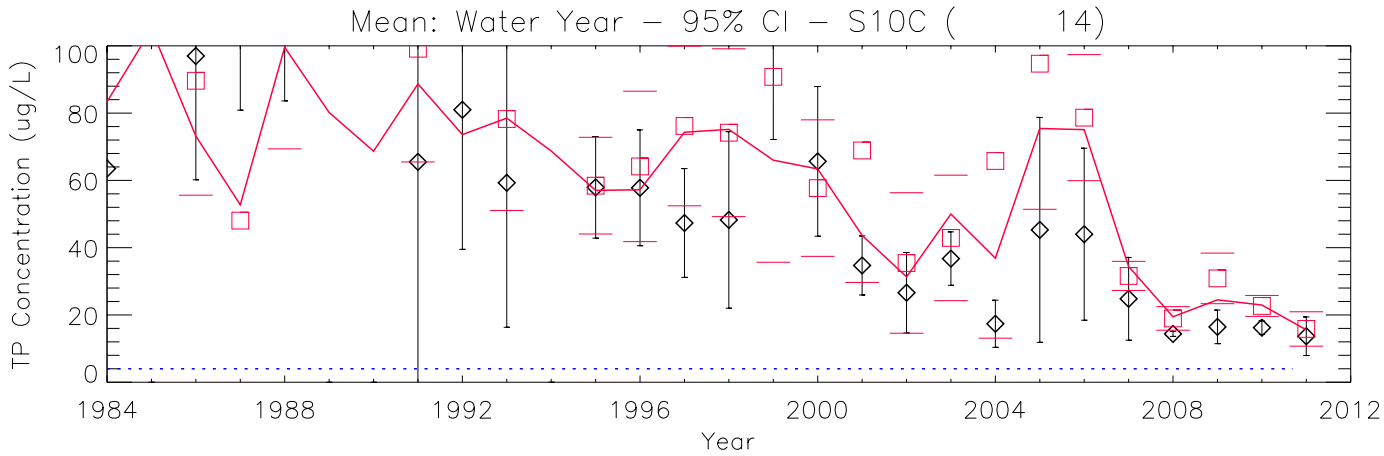

Mean: Season – 95% CI – S10A (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

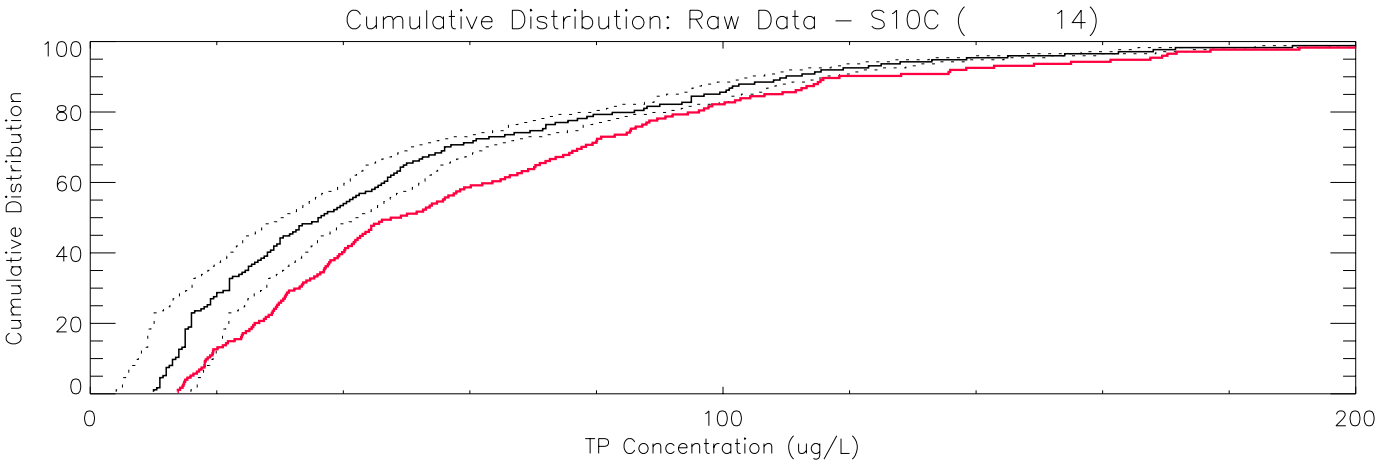

Mean: Water Year – 95% CI – S10A (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

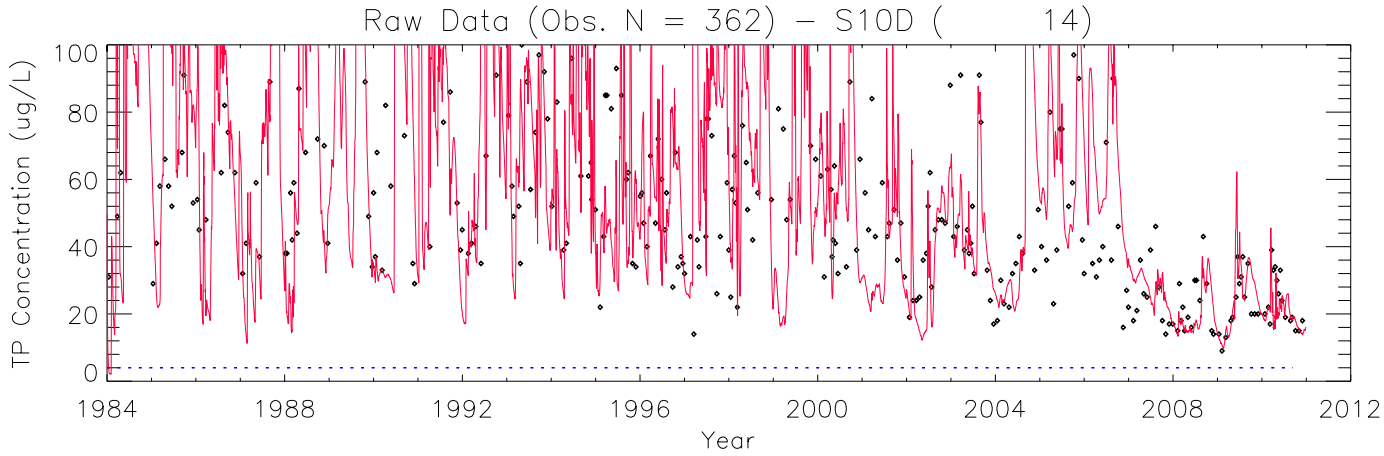

Cumulative Distribution: Raw Data – S10A (14)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

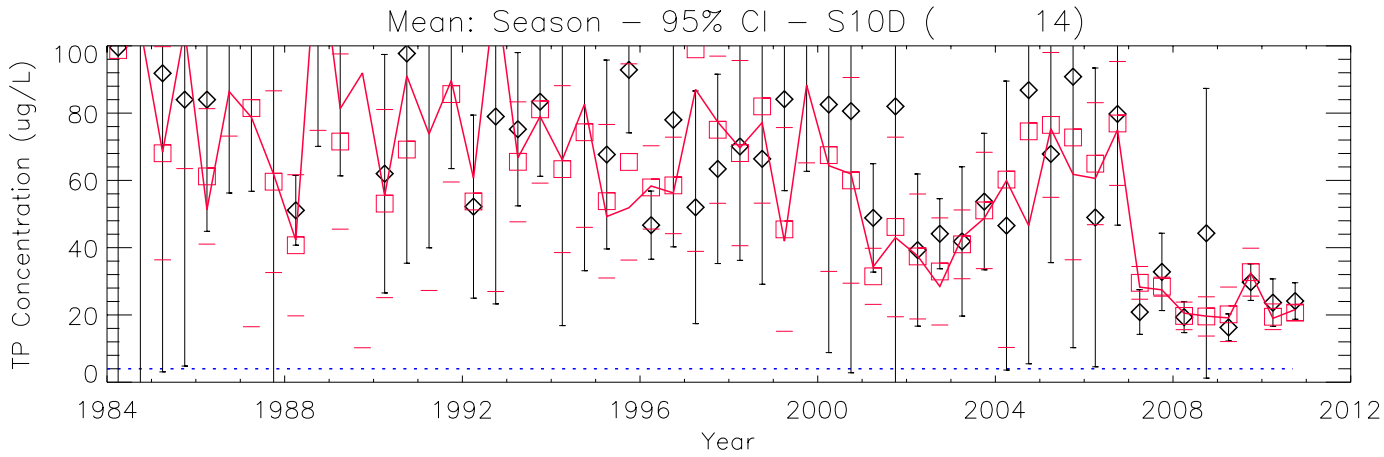

Raw Data (Obs. N = 174) – S10C (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

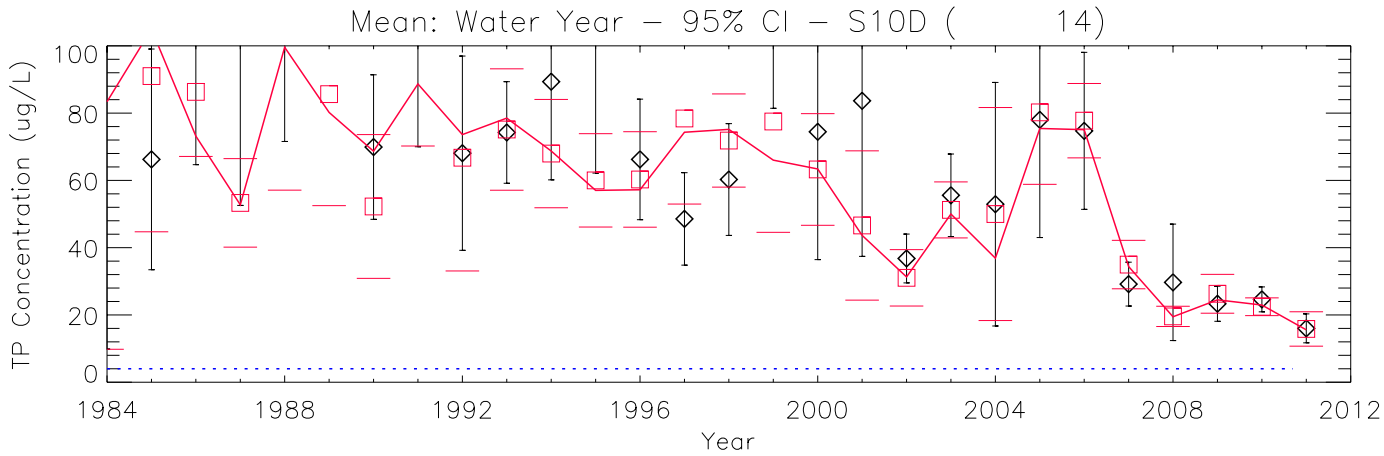

Mean: Season – 95% CI – S10C (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

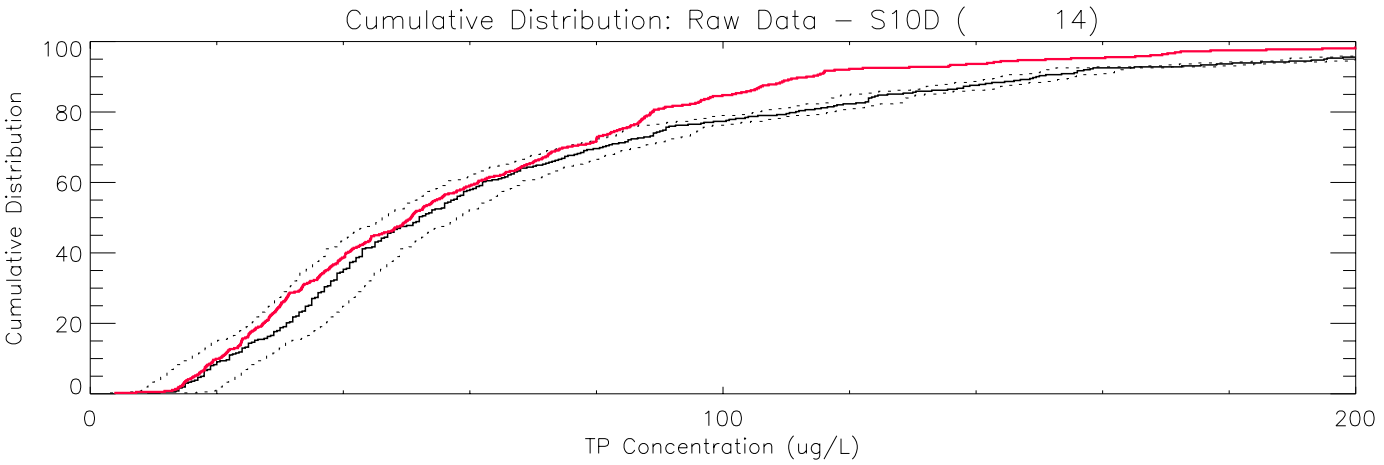

Mean: Water Year – 95% CI – S10C (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

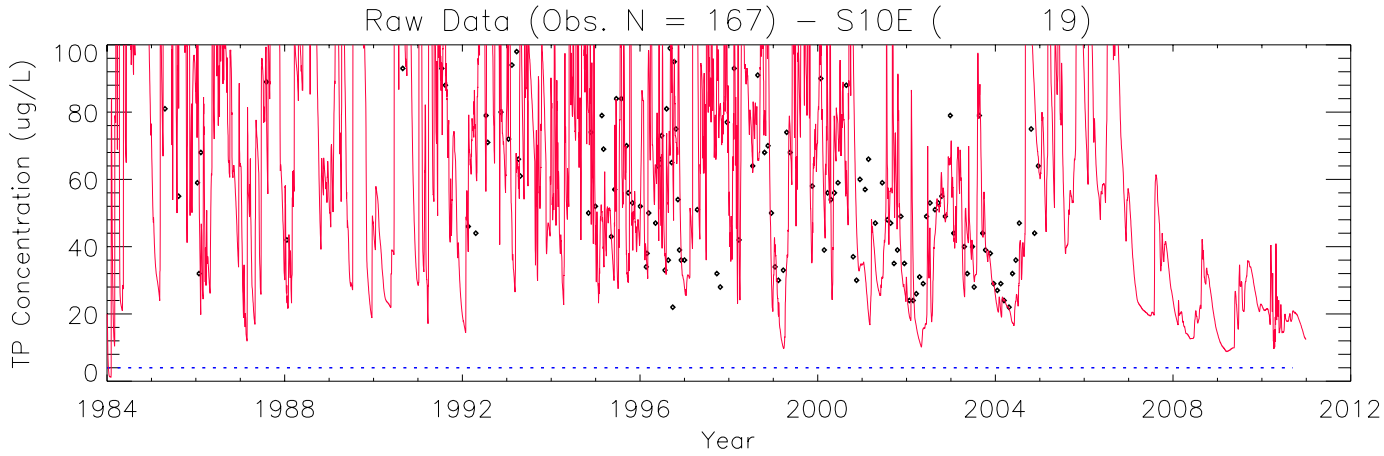

Cumulative Distribution: Raw Data – S10C (14)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

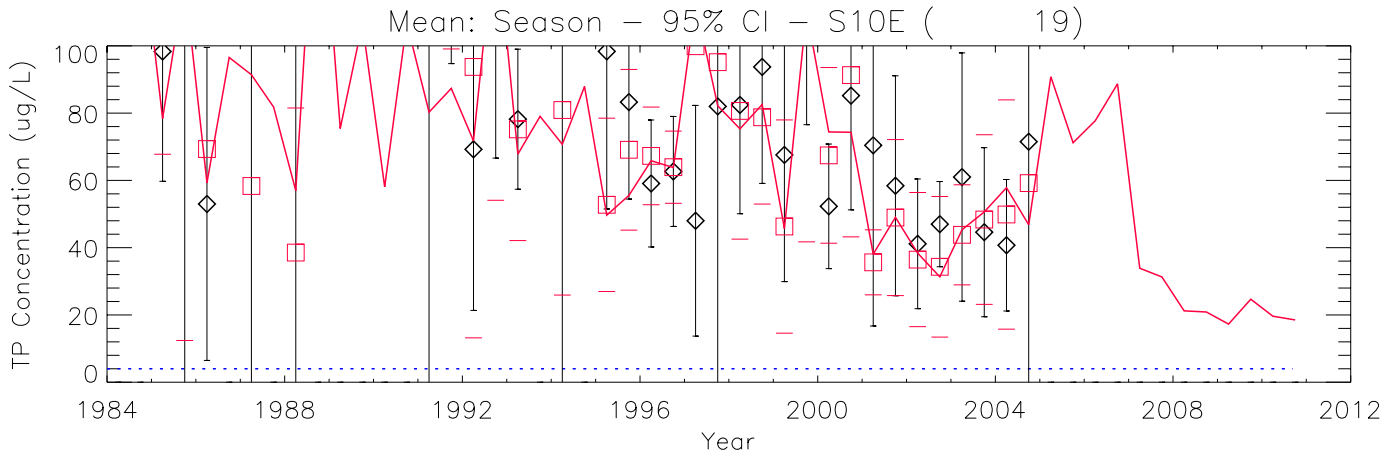

Raw Data (Obs. N = 362) – S10D (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

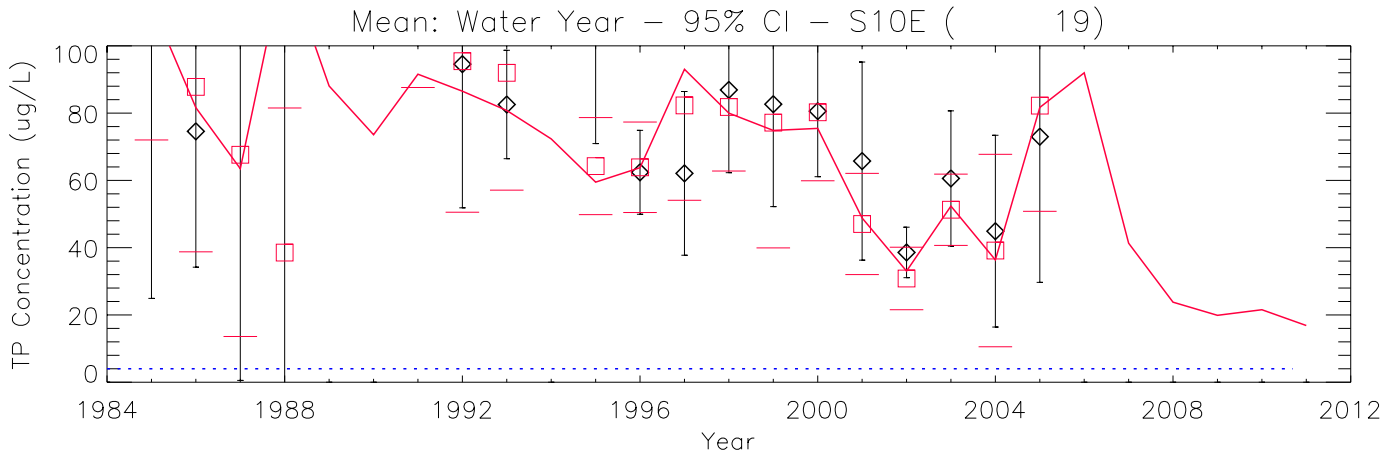

Mean: Season – 95% CI – S10D (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

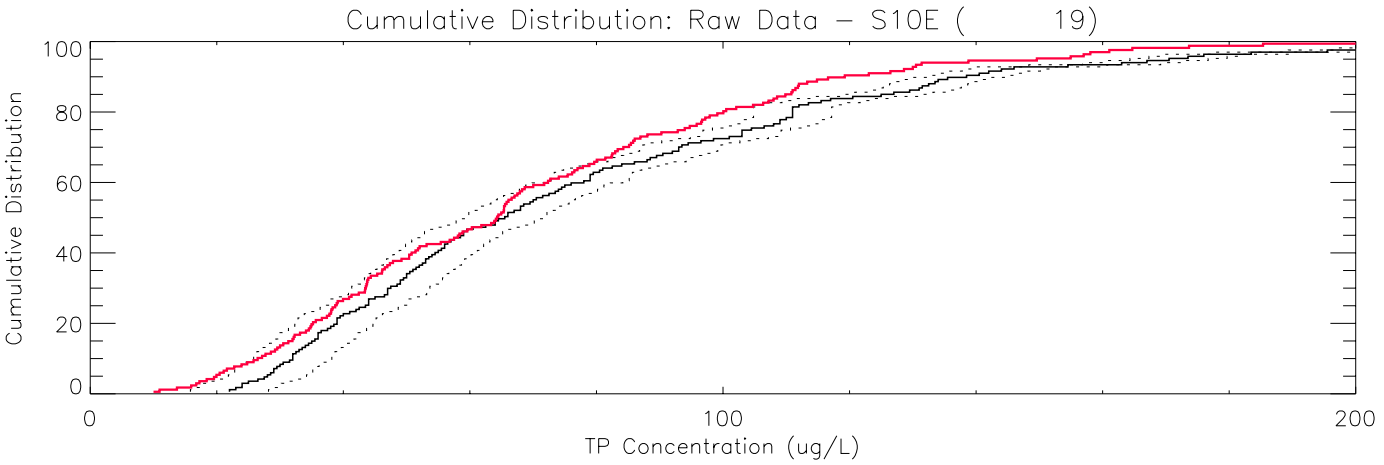

Mean: Water Year – 95% CI – S10D (14)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

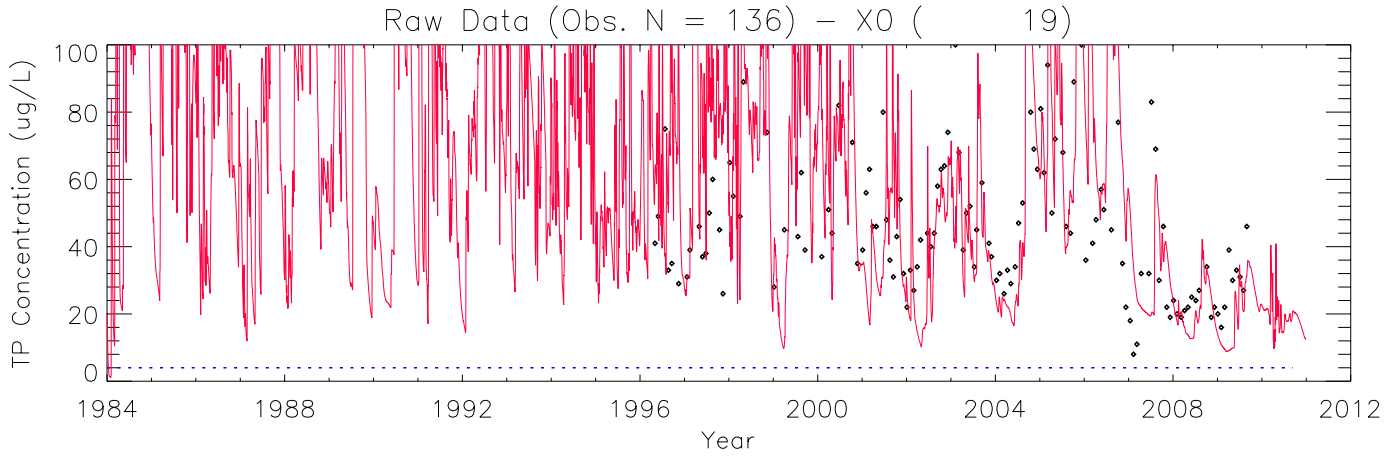

Cumulative Distribution: Raw Data – S10D (14)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

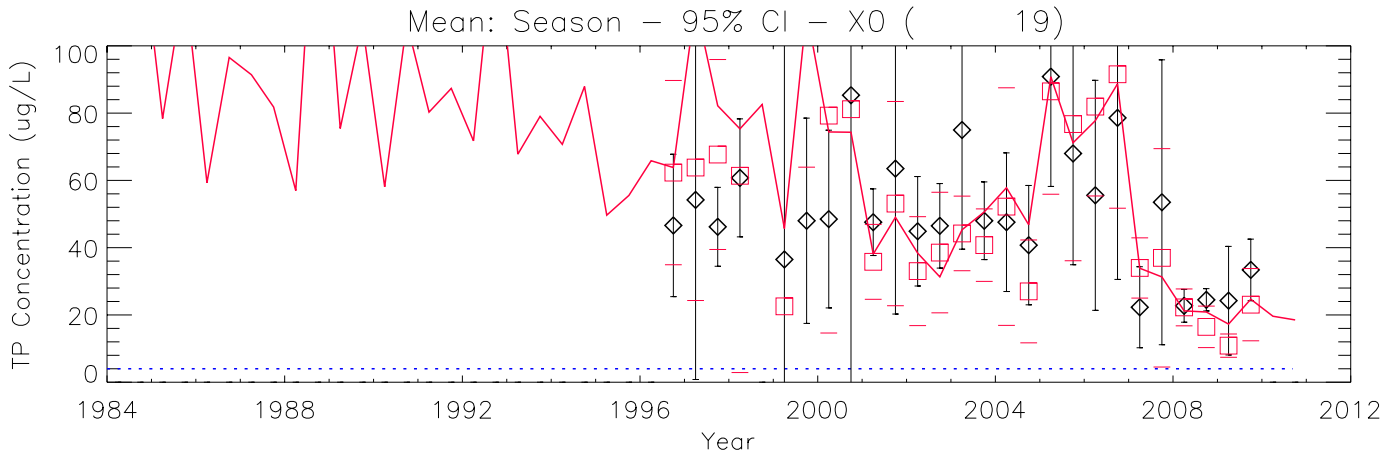

Raw Data (Obs. N = 167) – S10E (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

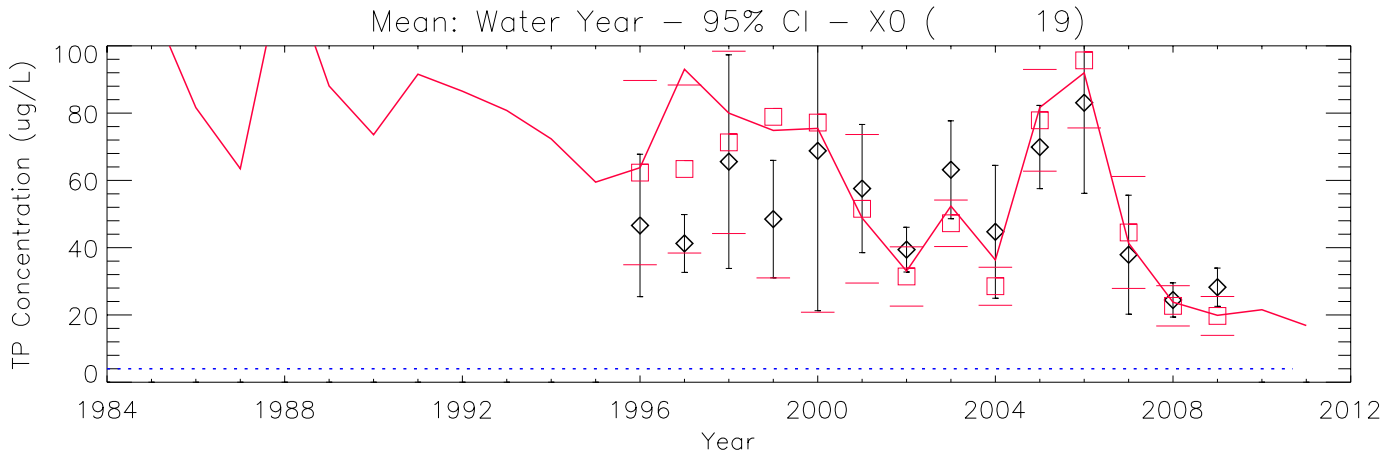

Mean: Season – 95% CI – S10E (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

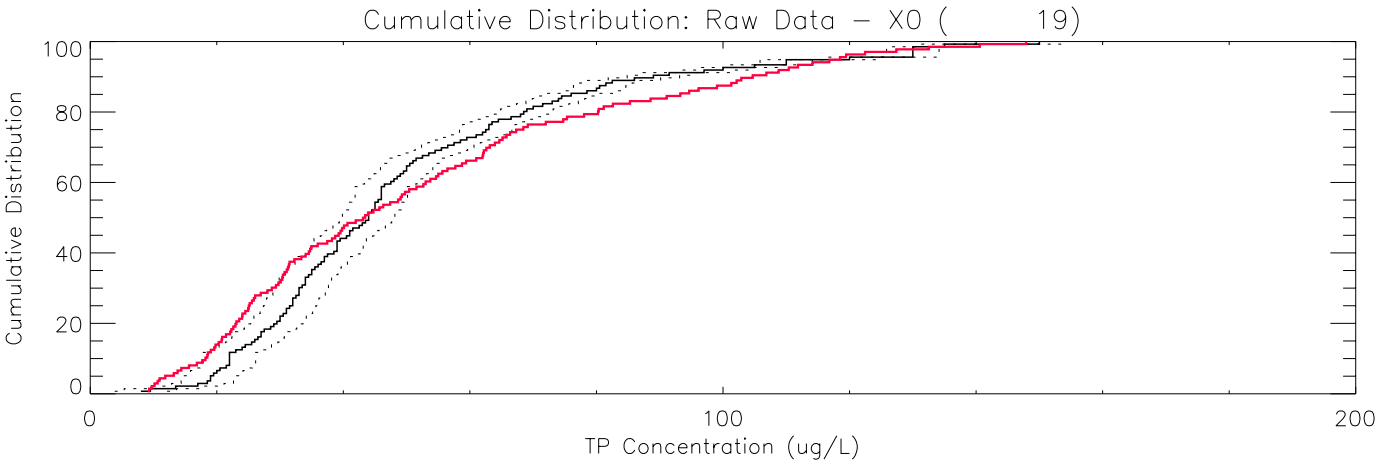

Mean: Water Year – 95% CI – S10E (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

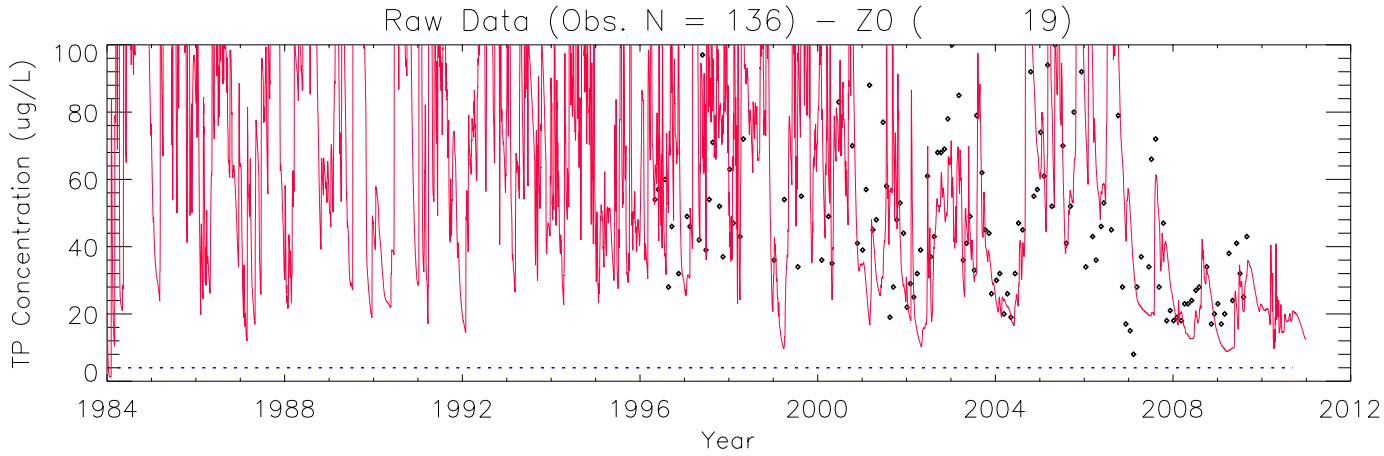

Cumulative Distribution: Raw Data – S10E (19)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

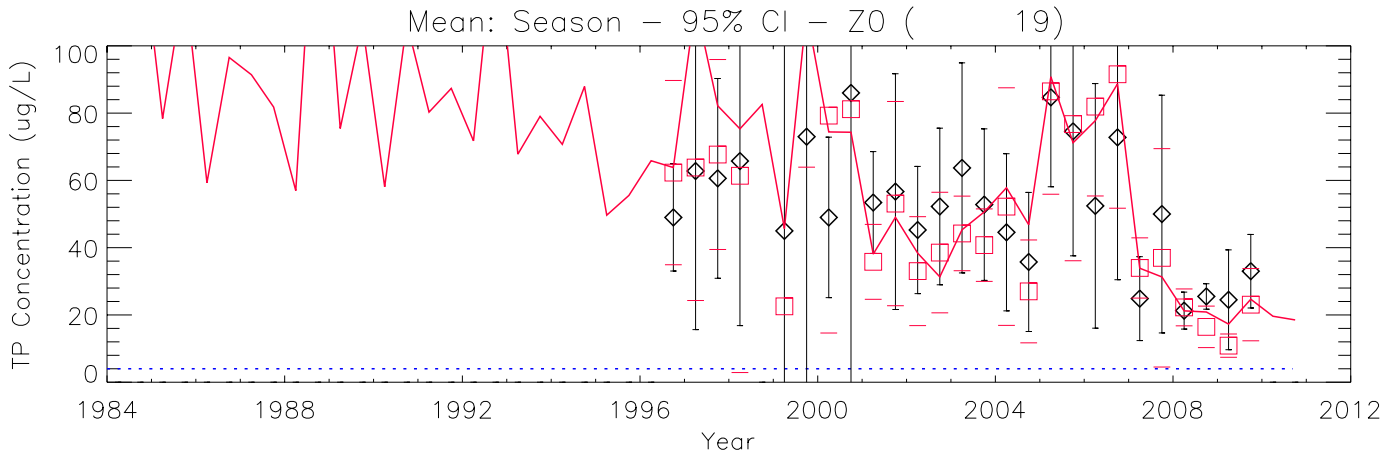

Raw Data (Obs. N = 136) – X0 (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

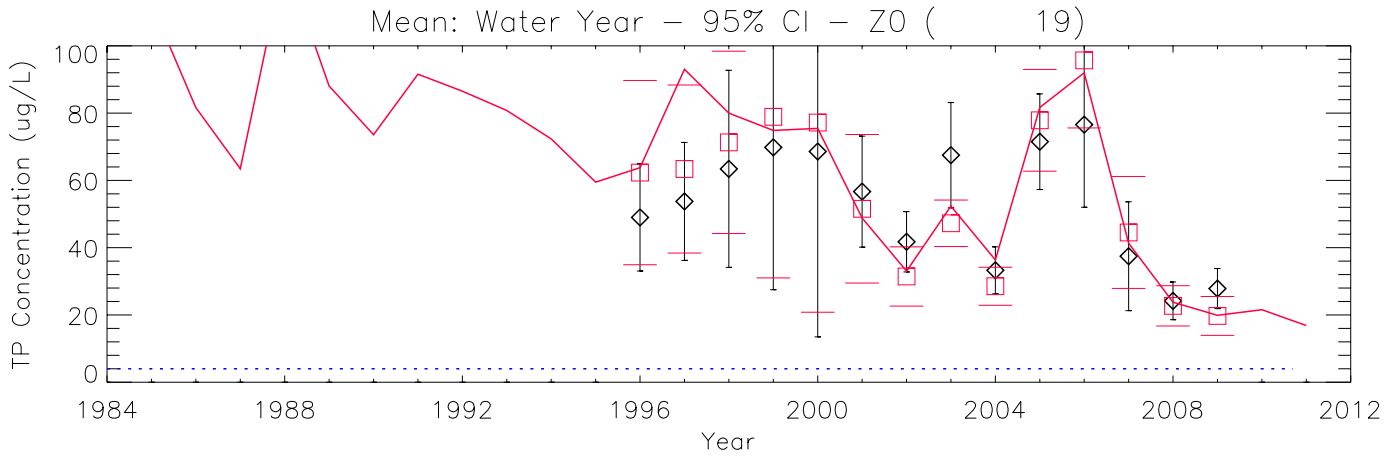

Mean: Season – 95% CI – X0 (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

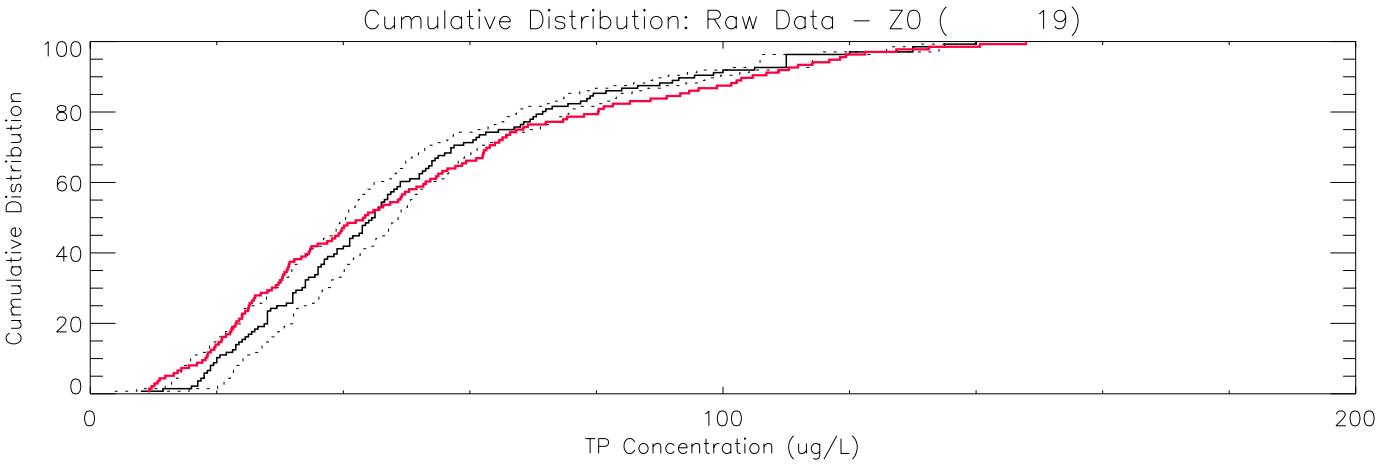

Mean: Water Year – 95% CI – X0 (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

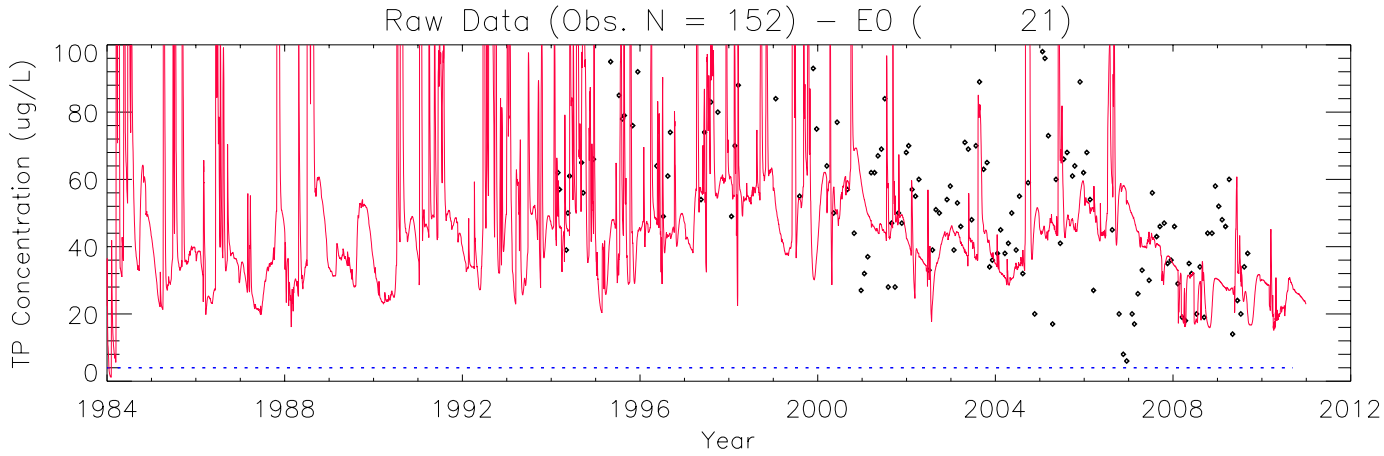

Cumulative Distribution: Raw Data – X0 (19)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

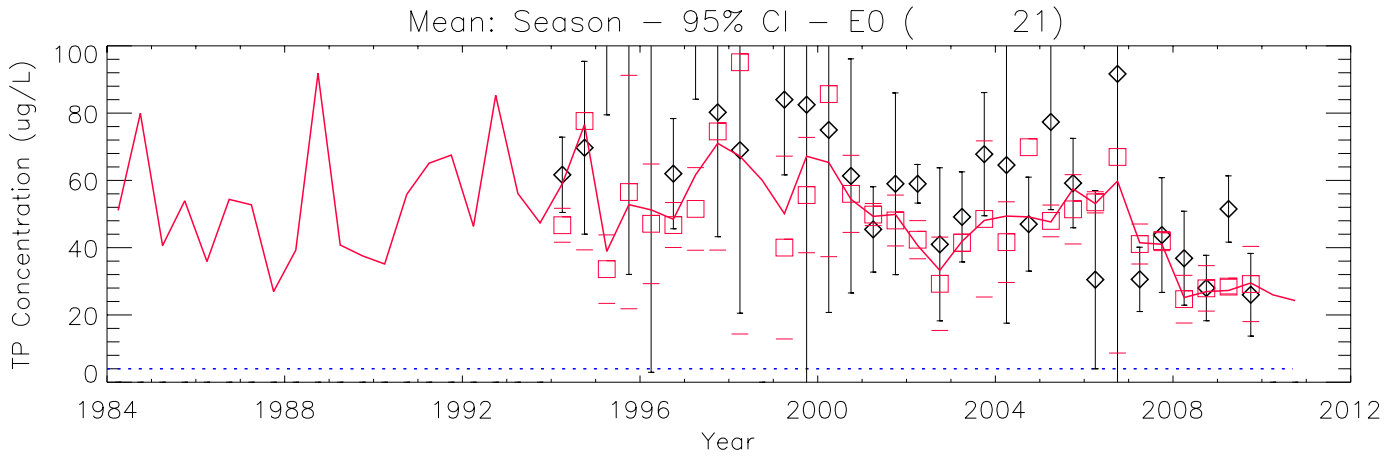

Raw Data (Obs. N = 136) – Z0 (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

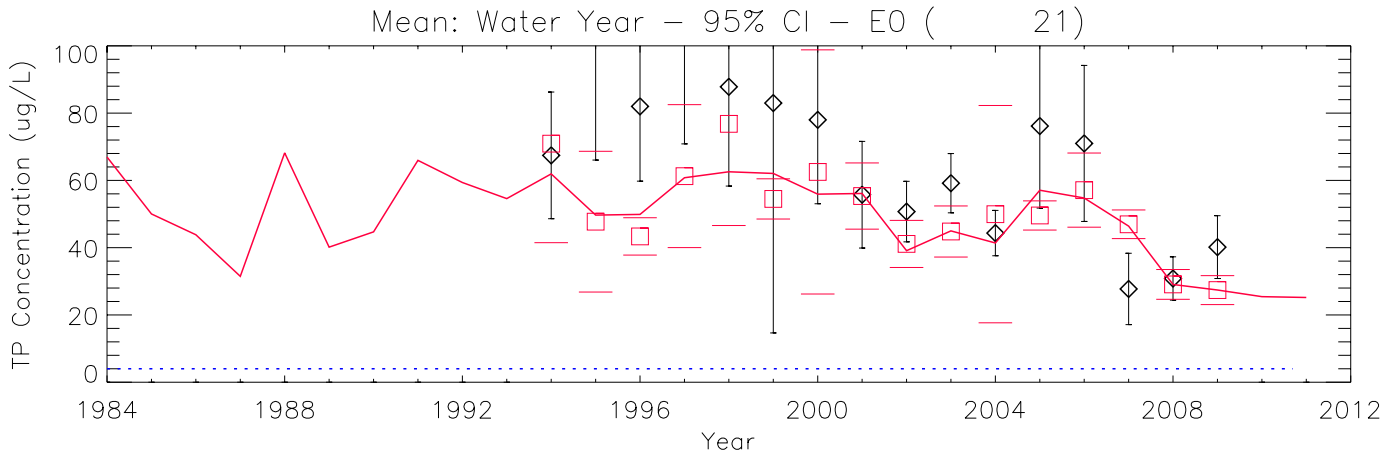

Mean: Season – 95% CI – Z0 (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

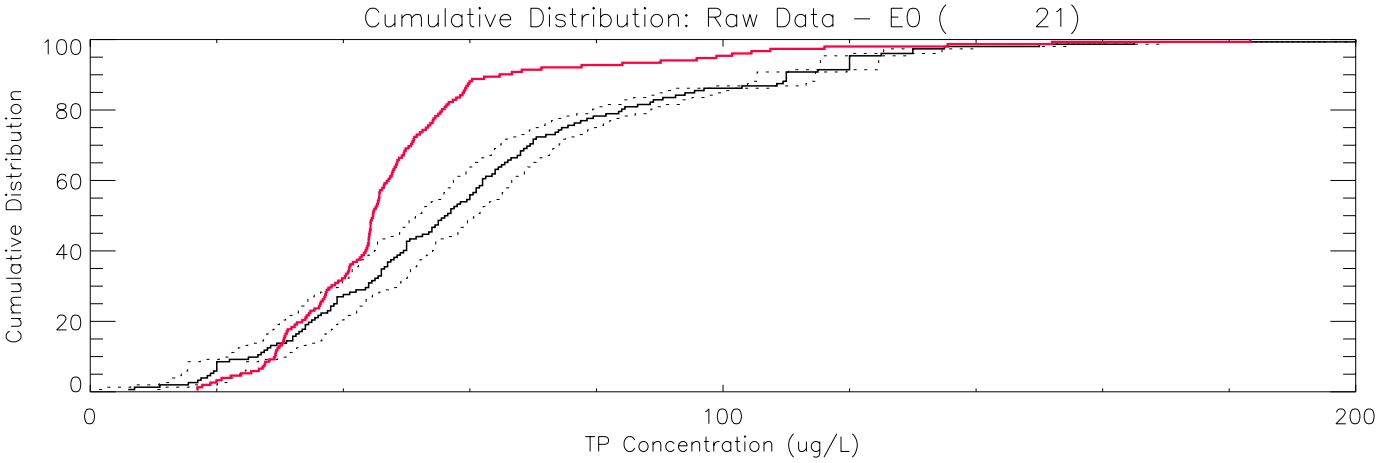

Mean: Water Year – 95% CI – Z0 (19)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

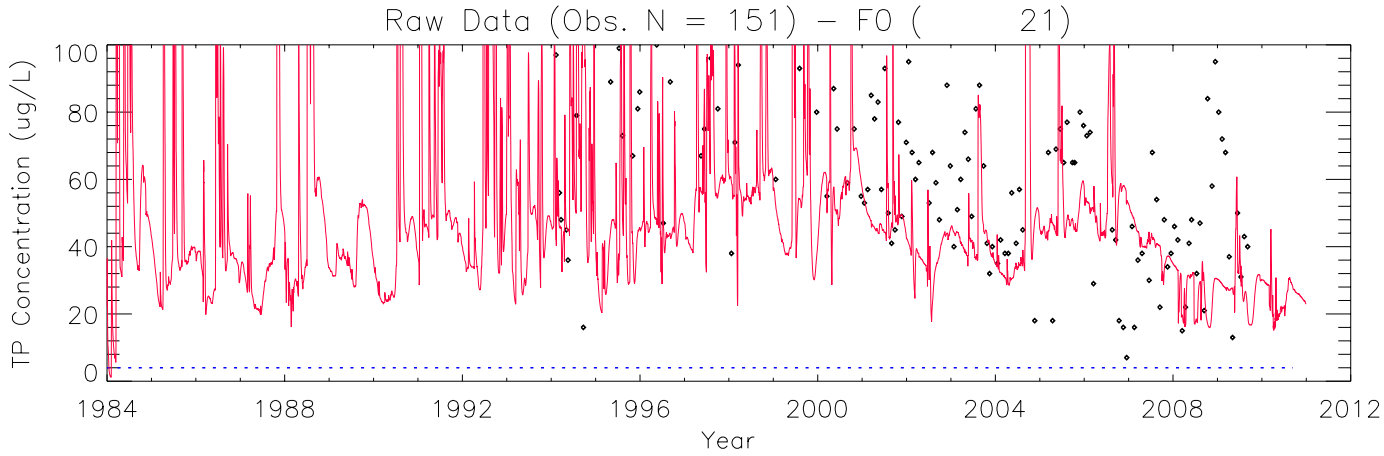

Cumulative Distribution: Raw Data – Z0 (19)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

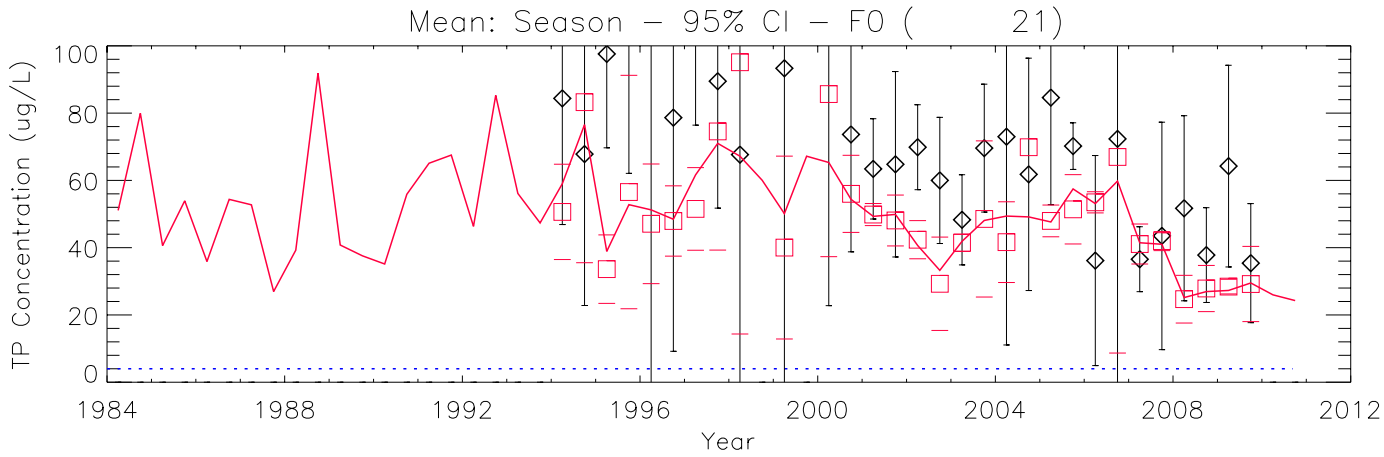

Raw Data (Obs. N = 152) – E0 (21)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

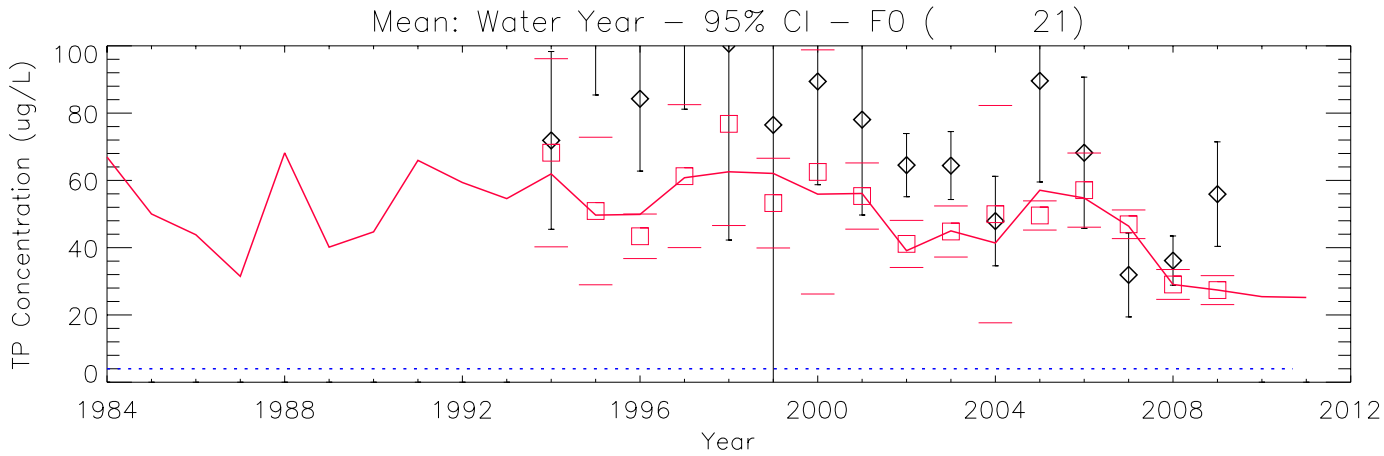

Mean: Season – 95% CI – E0 (21)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

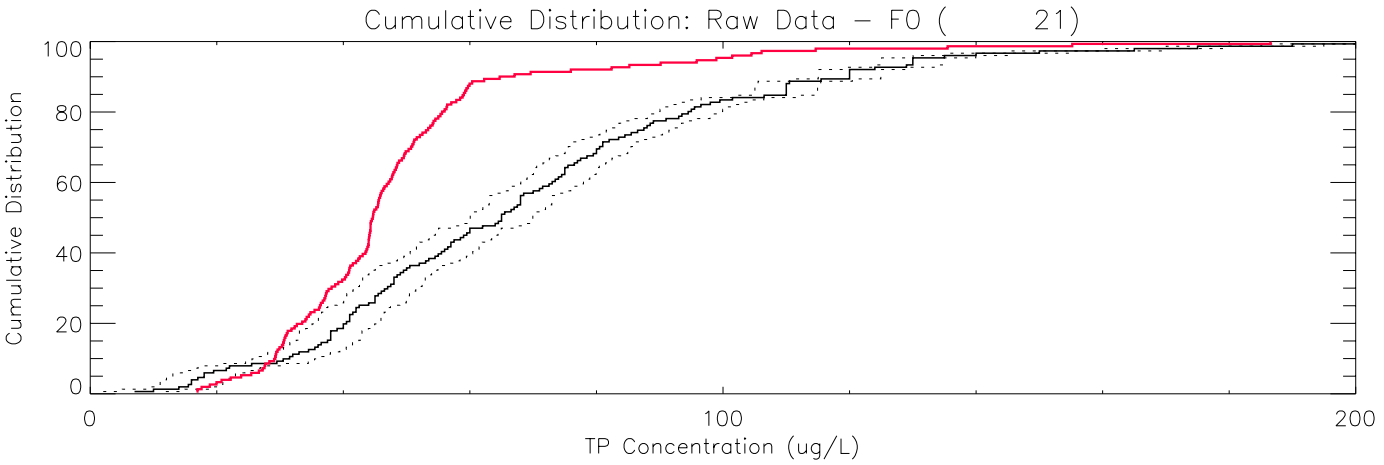

Mean: Water Year – 95% CI – E0 (21)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

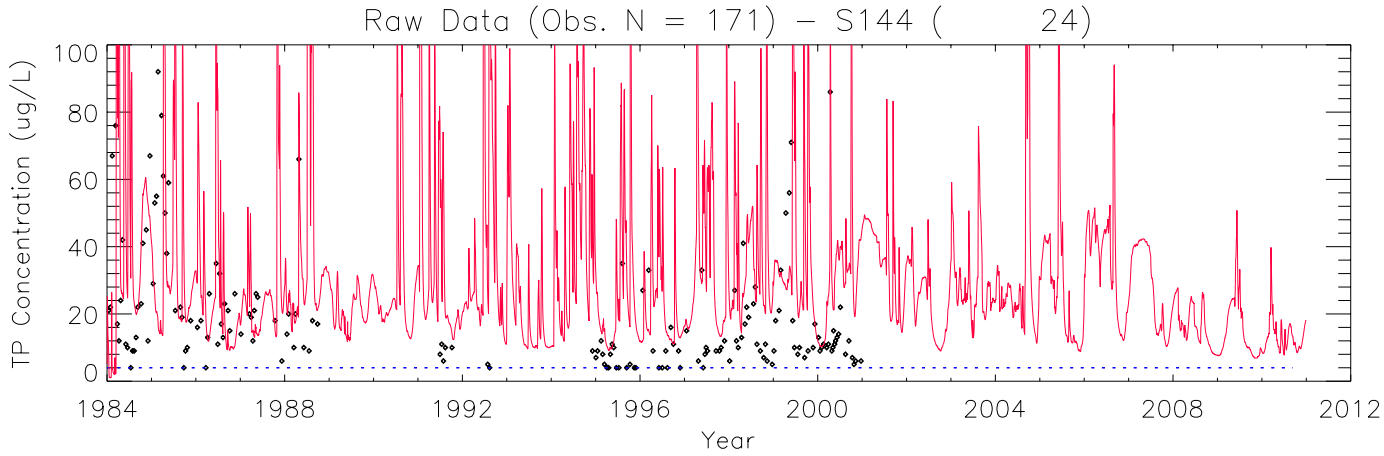

Cumulative Distribution: Raw Data – E0 (21)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

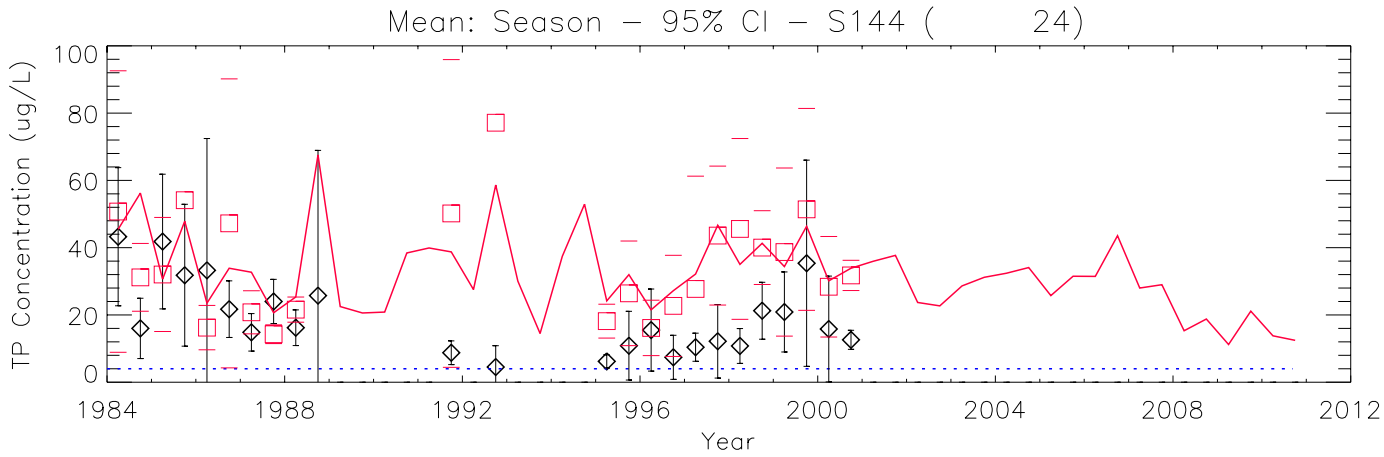

Raw Data (Obs. N = 151) – F0 (21)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

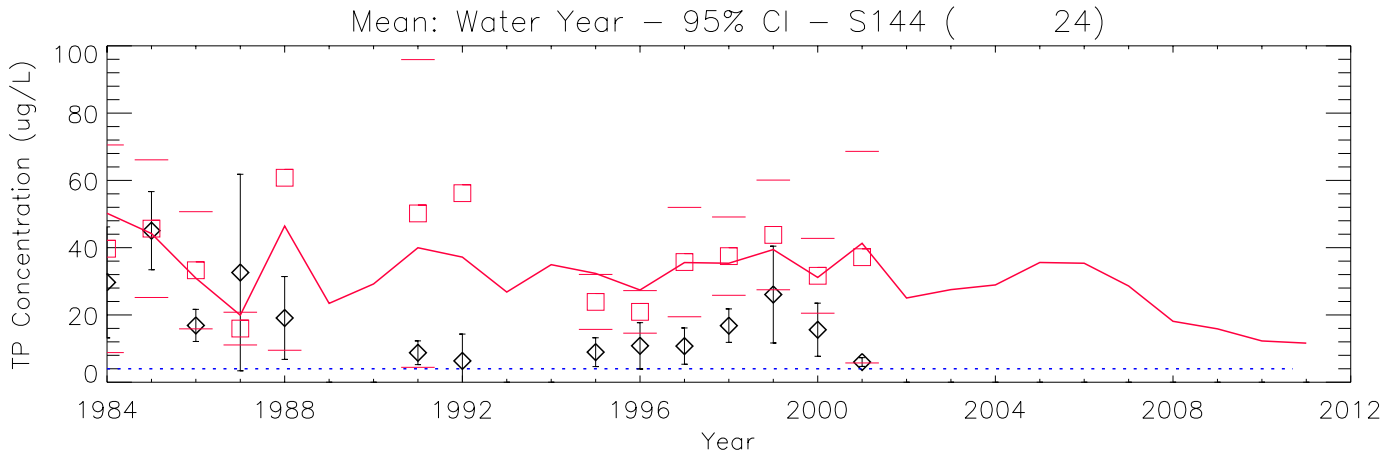

Mean: Season – 95% CI – F0 (21)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

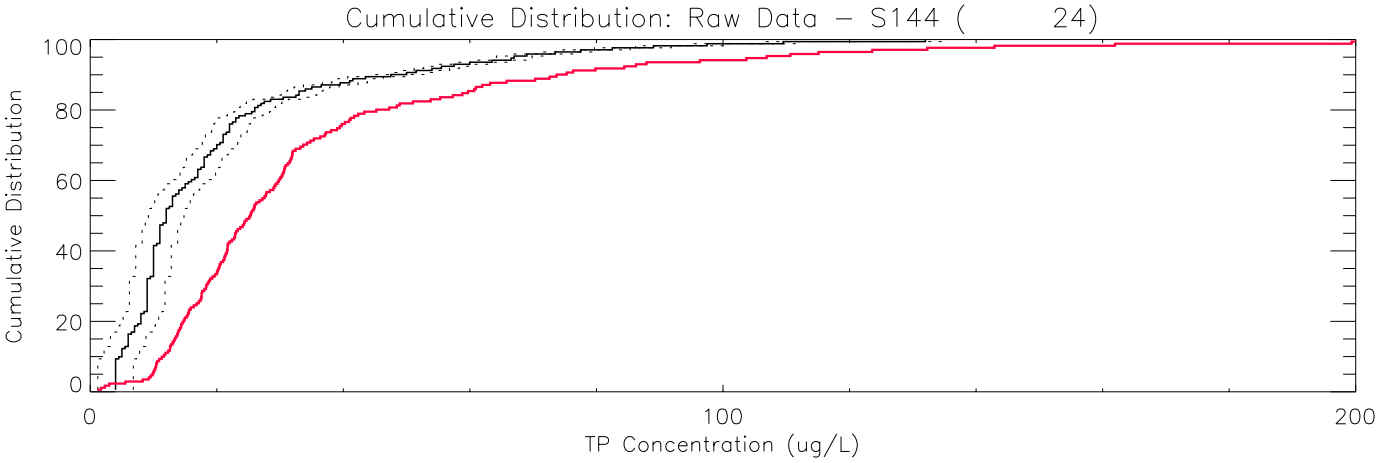

Mean: Water Year – 95% CI – F0 (21)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – F0 (21)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 171) – S144 (24)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S144 (24)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S144 (24)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S144 (24)
Cumulative Distribution
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80
100
0
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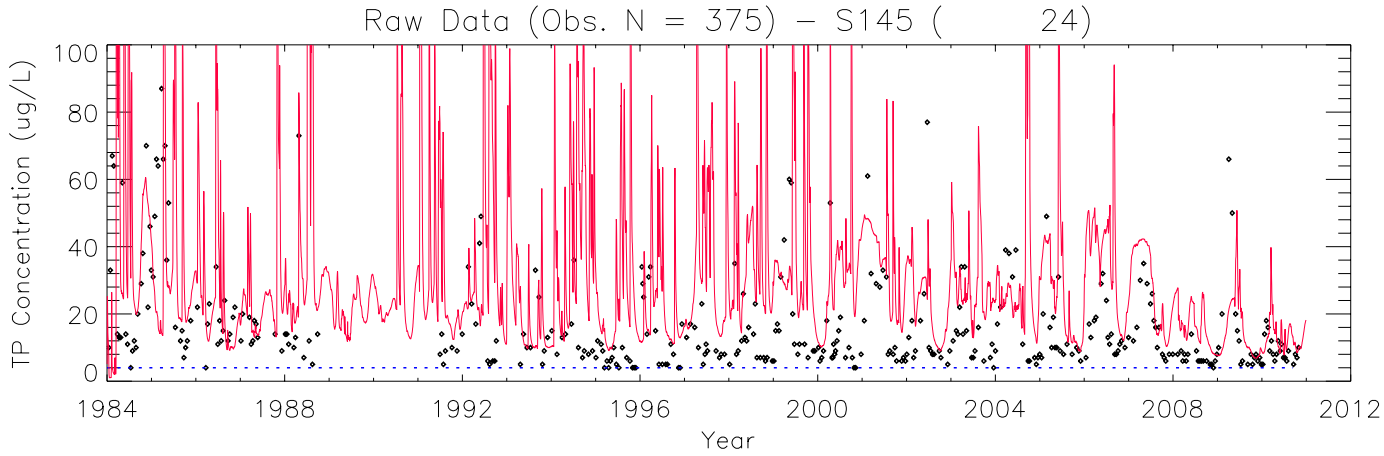
200
TP Concentration (ug/L)


Raw Data (Obs. N = 375) – S145 (24)
TP Concentration (ug/L)
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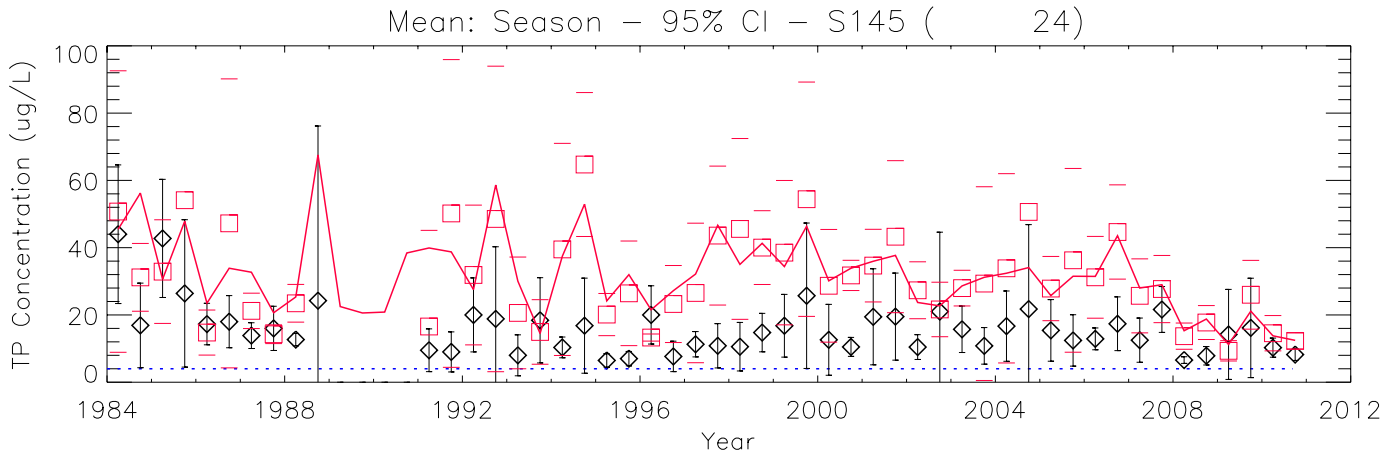
2012
Year


Mean: Season – 95% CI – S145 (24)
TP Concentration (ug/L)
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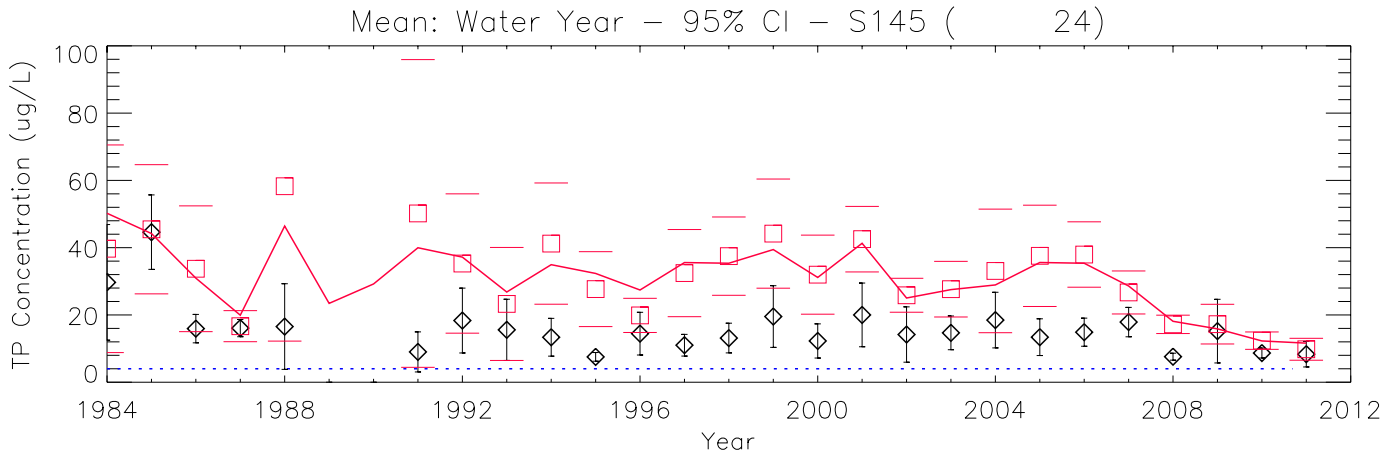
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S145 (24)
TP Concentration (ug/L)
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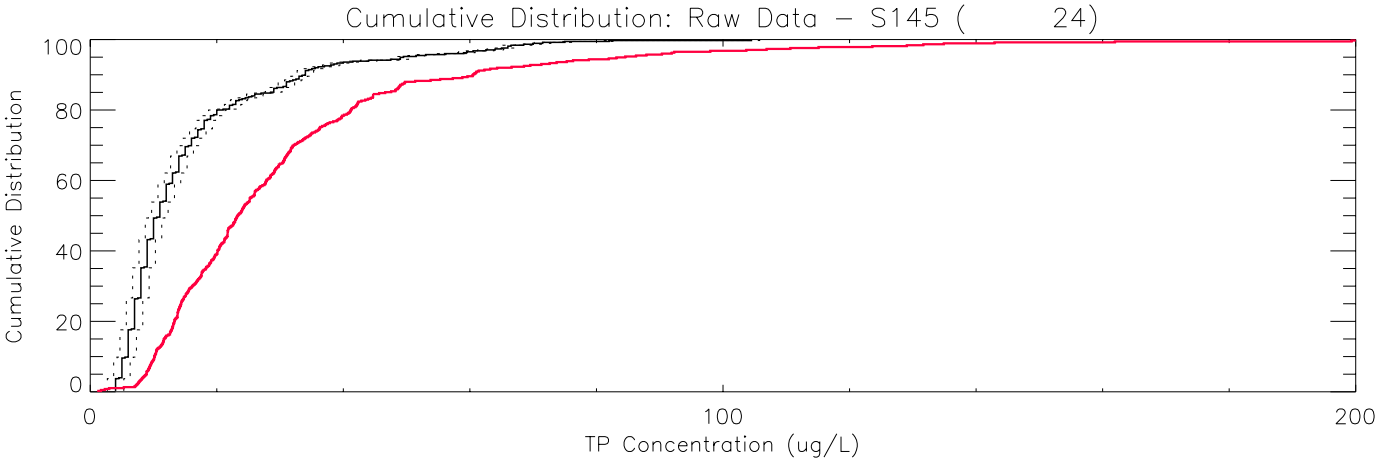
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S145 (24)
Cumulative Distribution
0
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40
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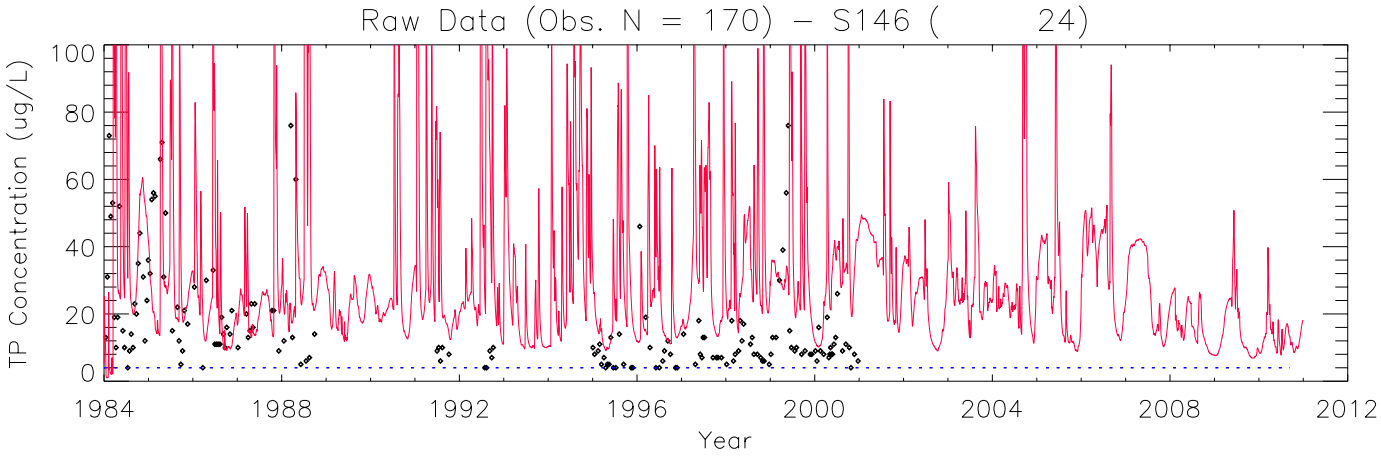
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 170) – S146 (24)
TP Concentration (ug/L)
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1992
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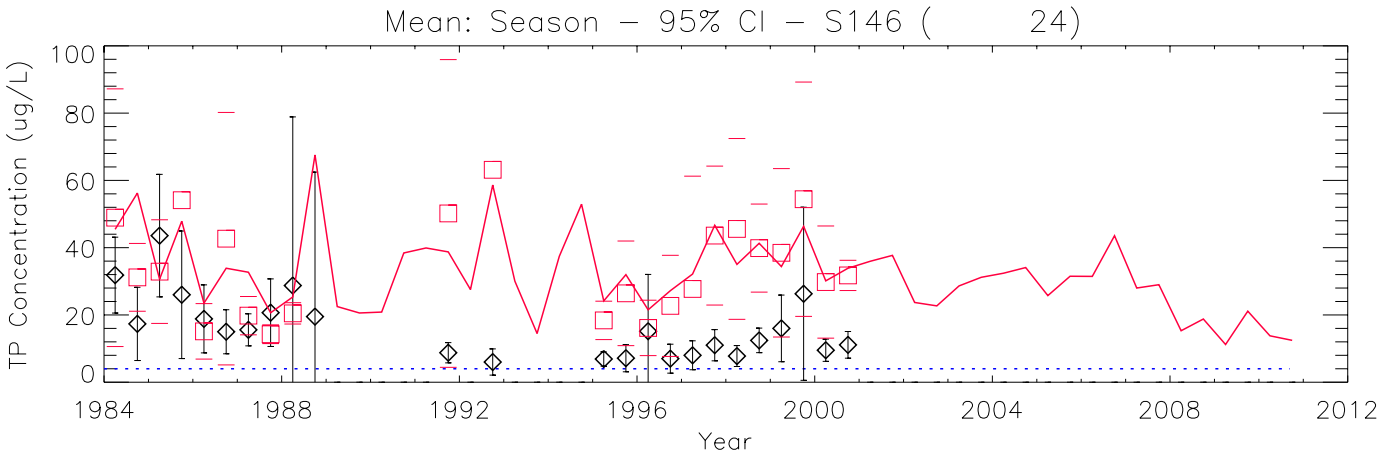
2012
Year


Mean: Season – 95% CI – S146 (24)
TP Concentration (ug/L)
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1988
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1996
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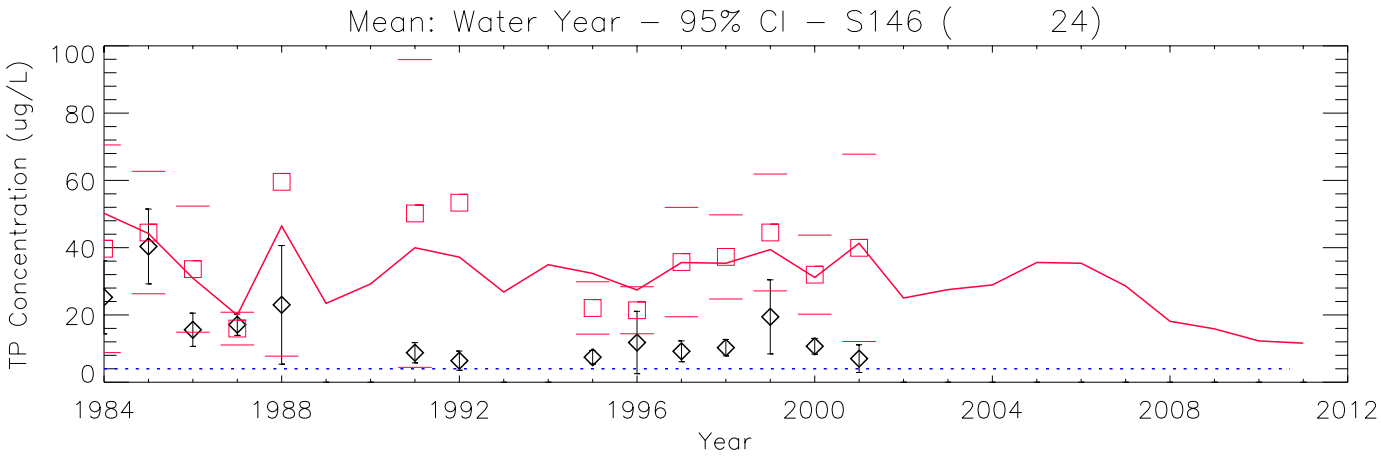
2004
2008
2012
Year


Mean: Water Year – 95% CI – S146 (24)
TP Concentration (ug/L)
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40
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100
1984
1988
1992
1996
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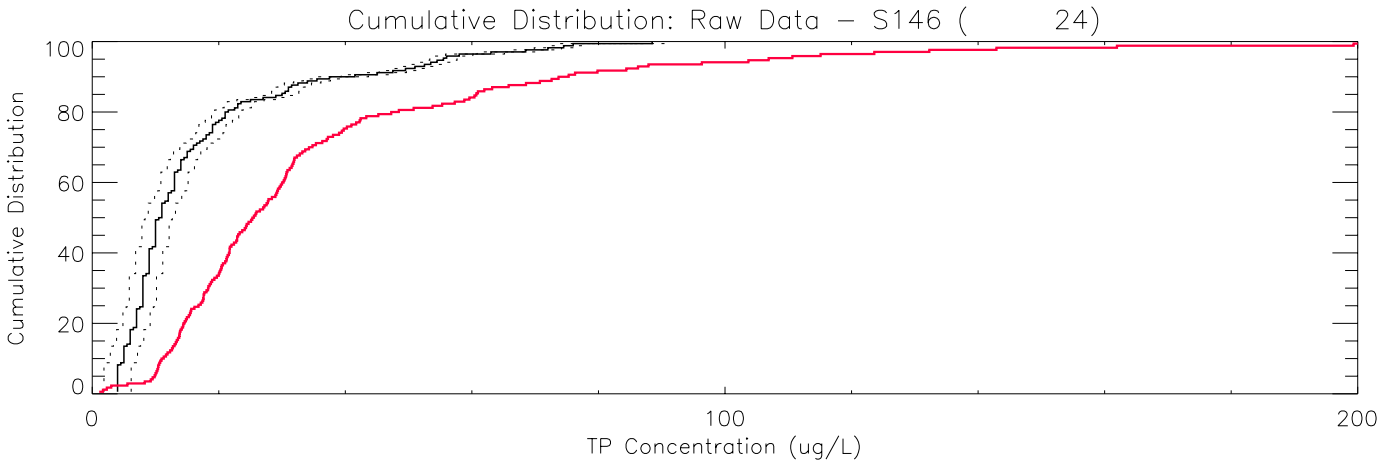
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S146 (24)
Cumulative Distribution
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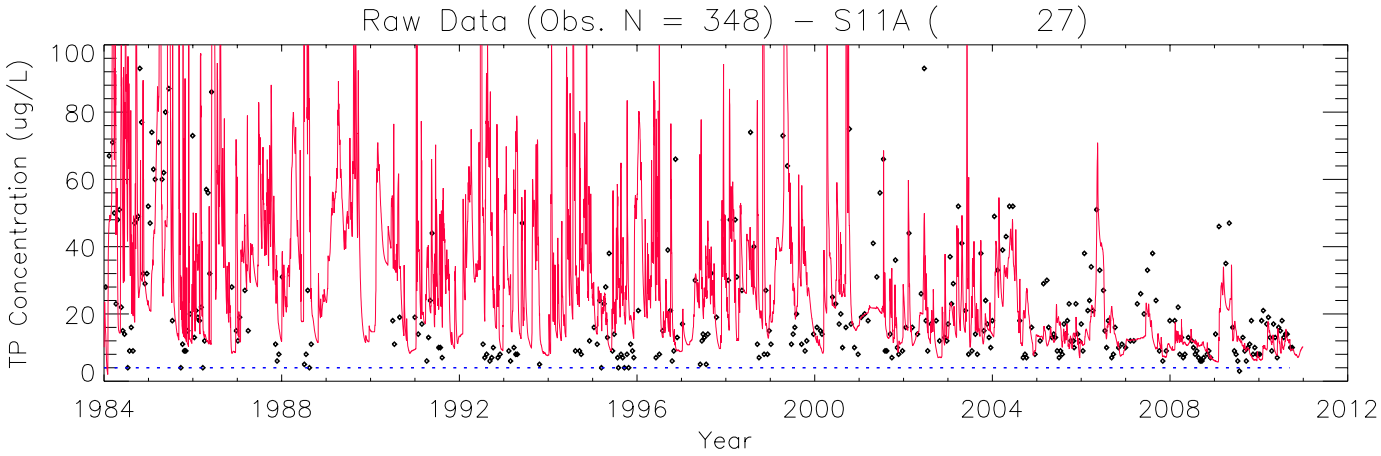
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 348) – S11A (27)
TP Concentration (ug/L)
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100
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1988
1992
1996
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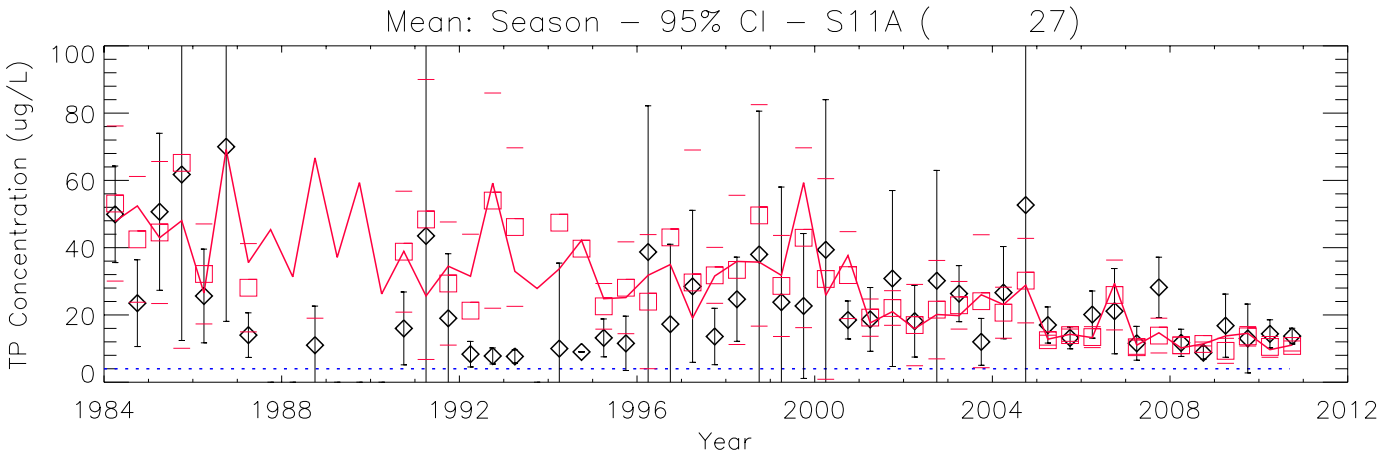
2004
2008
2012
Year


Mean: Season – 95% CI – S11A (27)
TP Concentration (ug/L)
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1988
1992
1996
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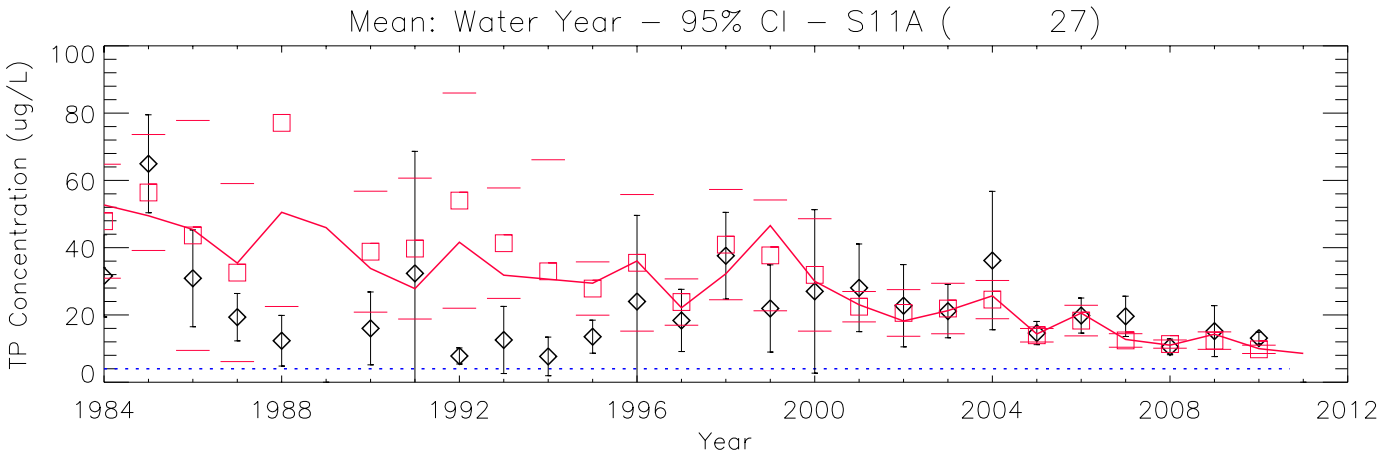
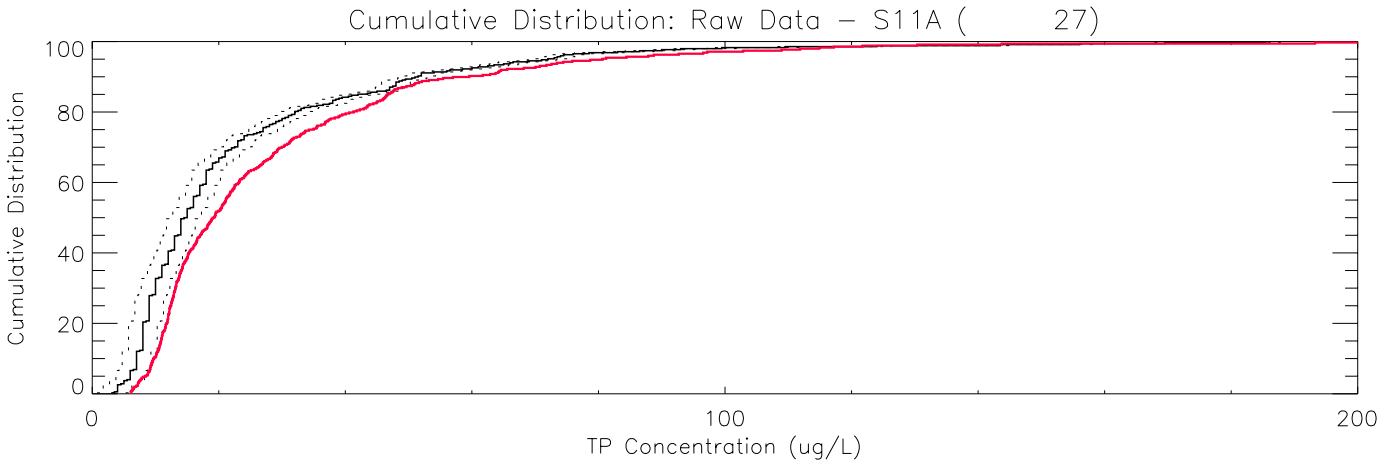
2004
2008
2012
Year


Mean: Water Year – 95% CI – S11A (27)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S11A (27)
Cumulative Distribution
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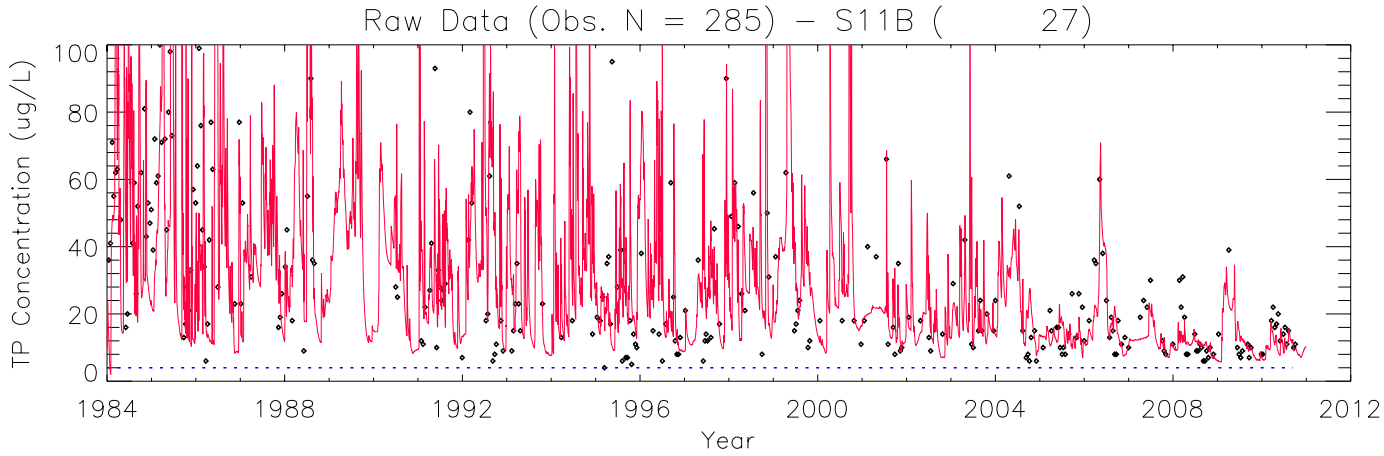
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 285) – S11B (27)
TP Concentration (ug/L)
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100
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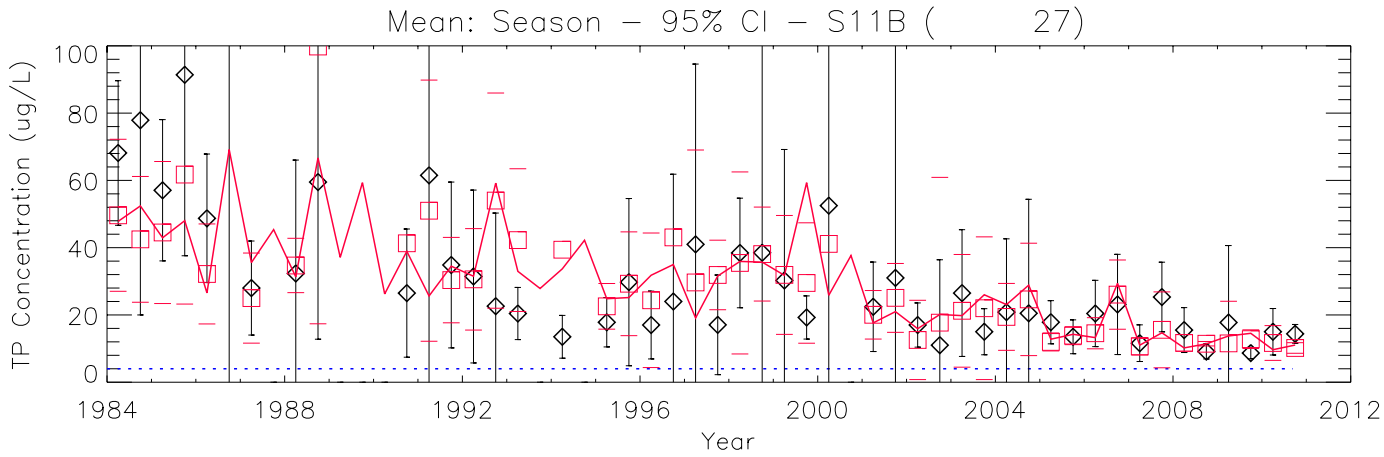
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S11B (27)
TP Concentration (ug/L)
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100
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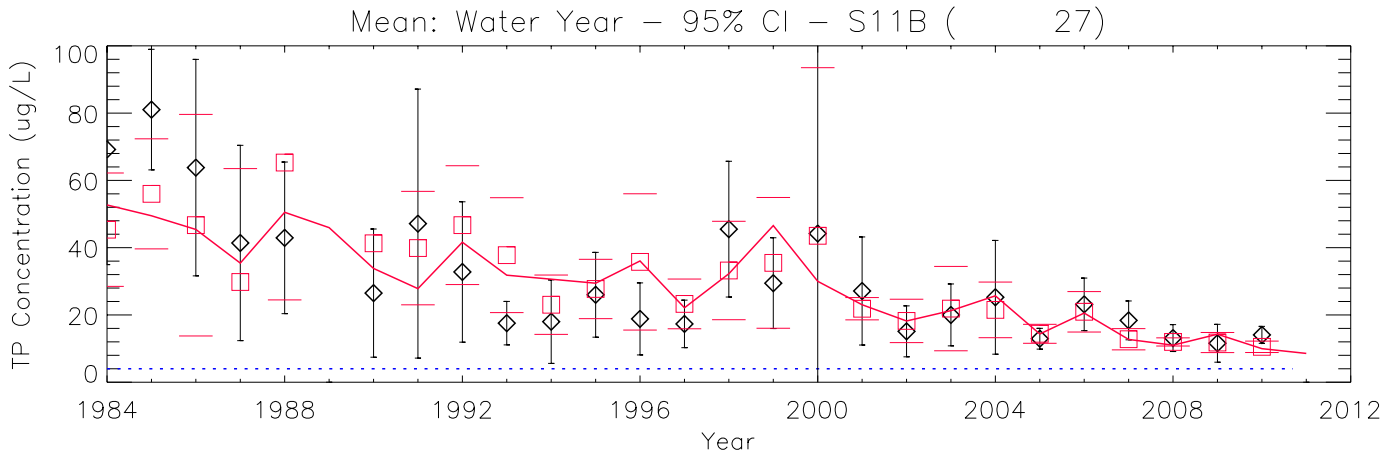
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S11B (27)
TP Concentration (ug/L)
0
20
40
60
80
100
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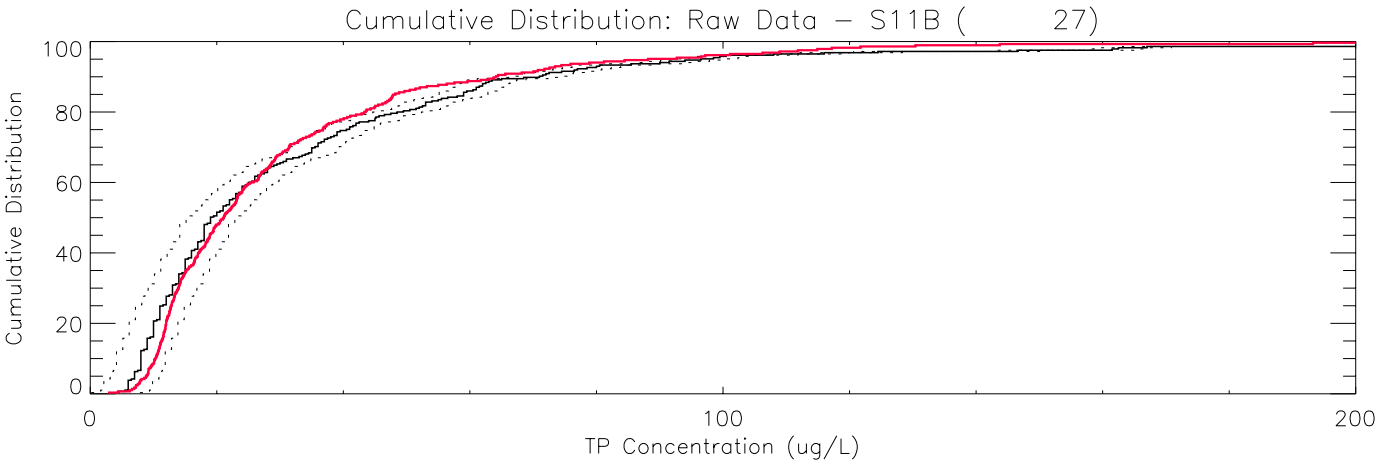
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S11B (27)
Cumulative Distribution
0
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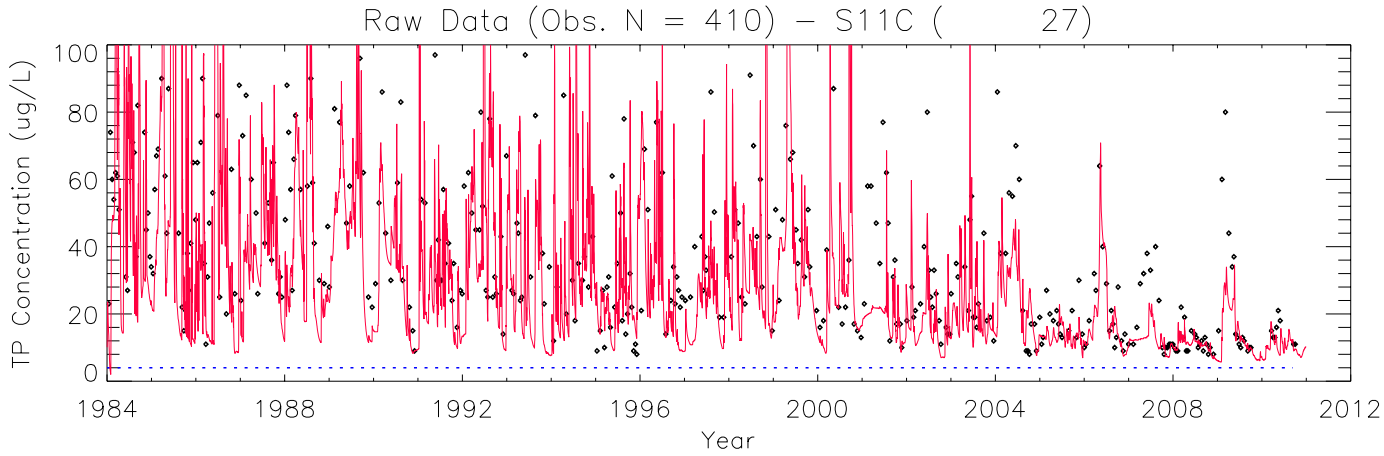
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 410) – S11C (27)
TP Concentration (ug/L)
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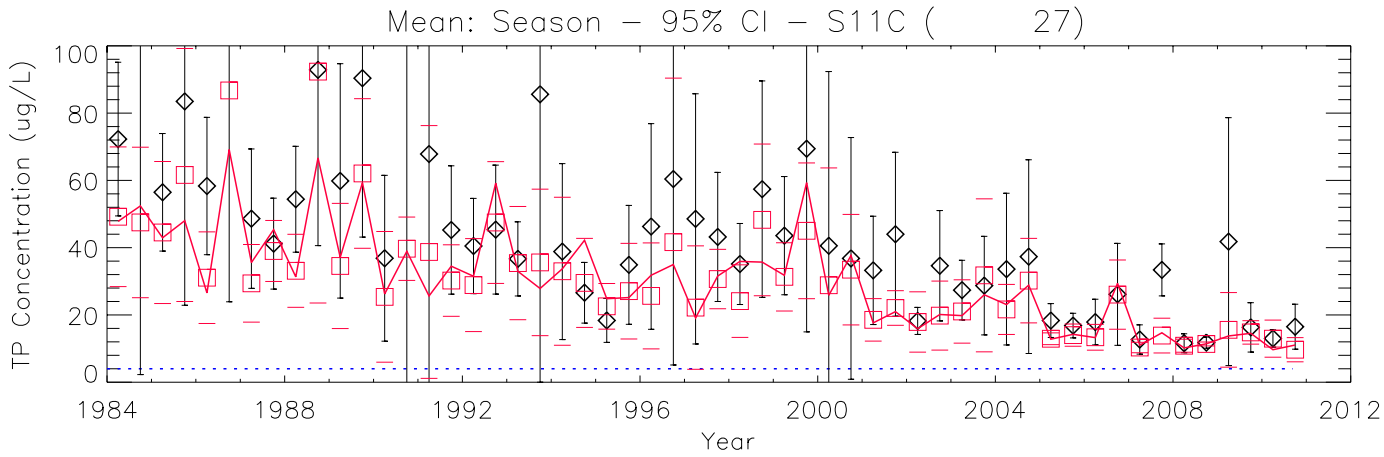
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S11C (27)
TP Concentration (ug/L)
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60
80
100
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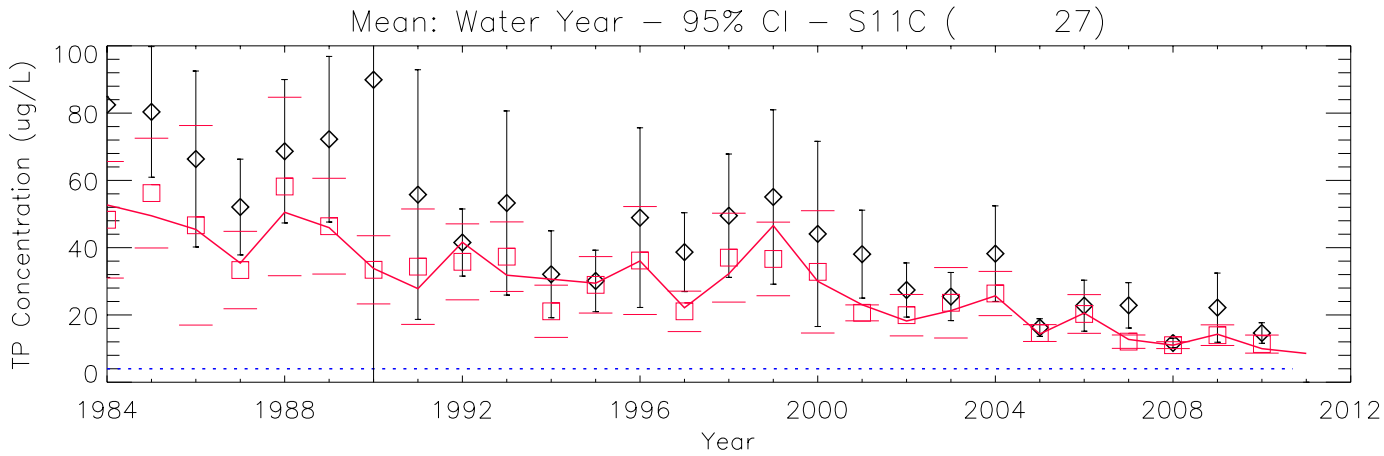
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S11C (27)
TP Concentration (ug/L)
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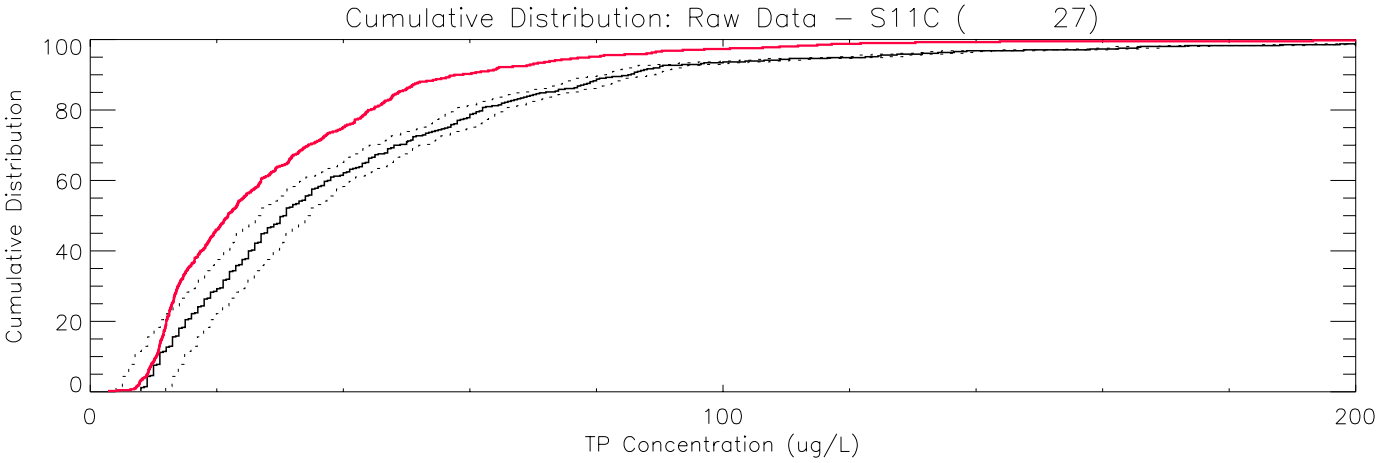
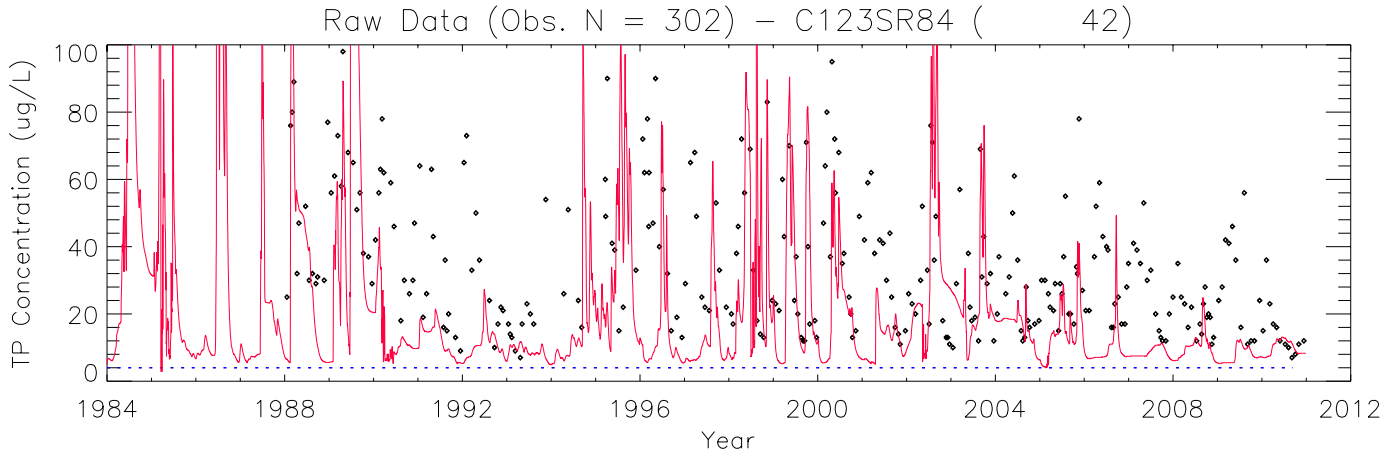
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S11C (27)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 302) – C123SR84 (42)
TP Concentration (ug/L)
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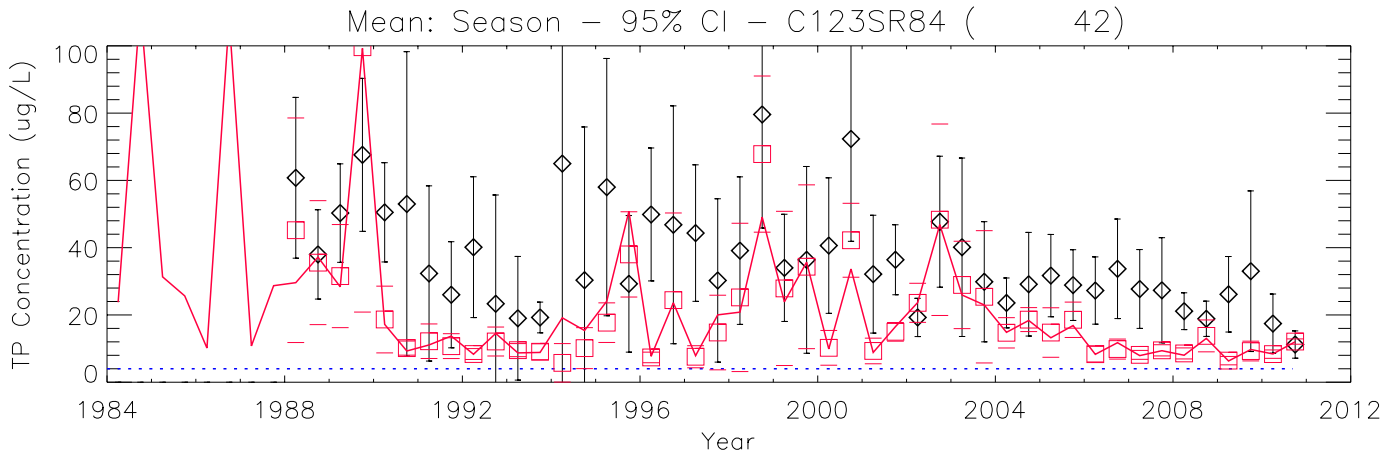
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – C123SR84 (42)
TP Concentration (ug/L)
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40
60
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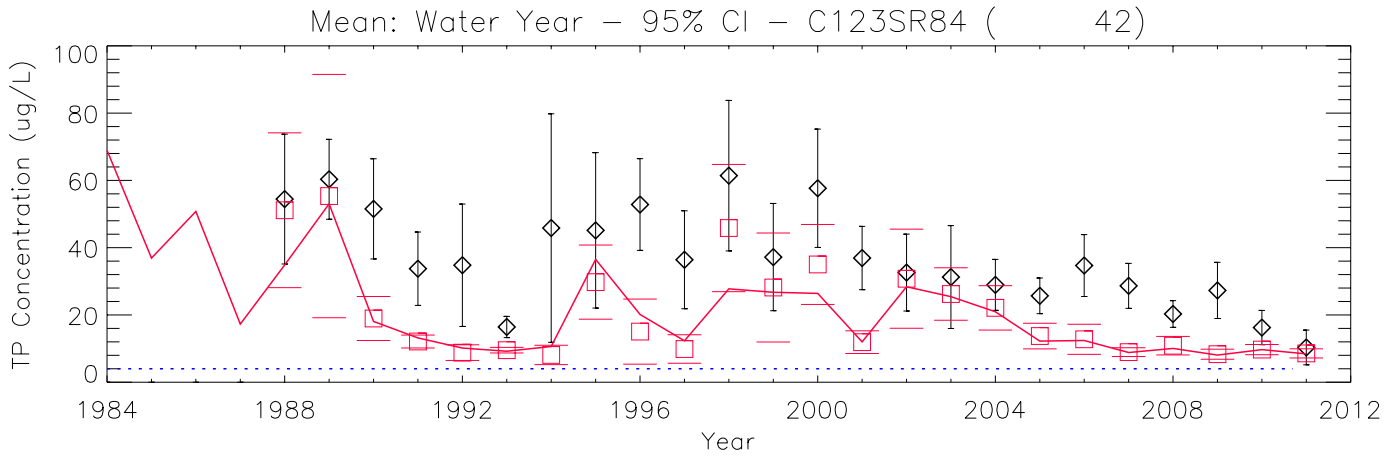
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – C123SR84 (42)
TP Concentration (ug/L)
0
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40
60
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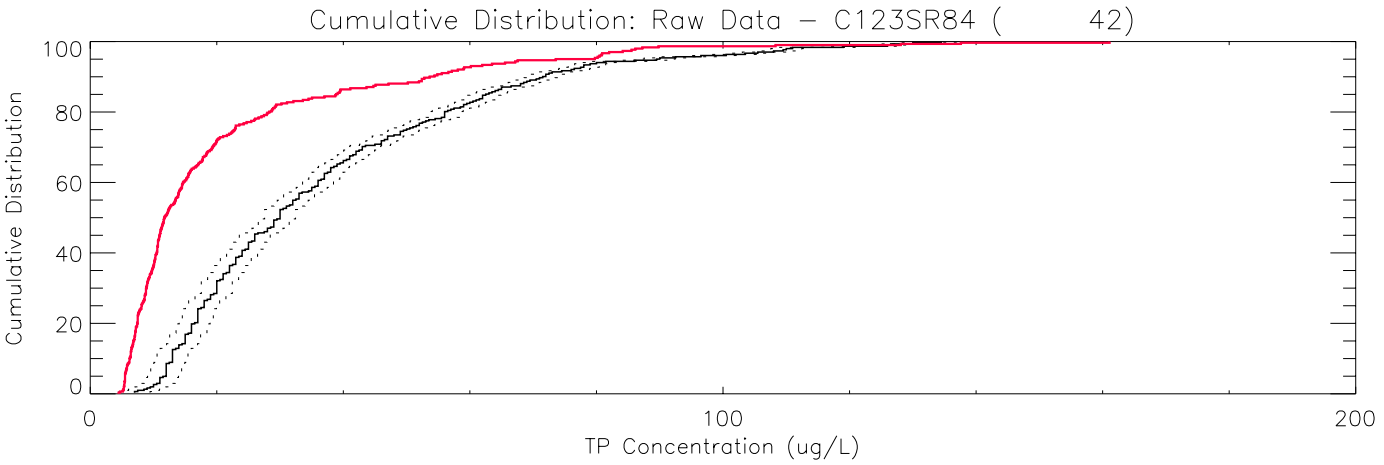
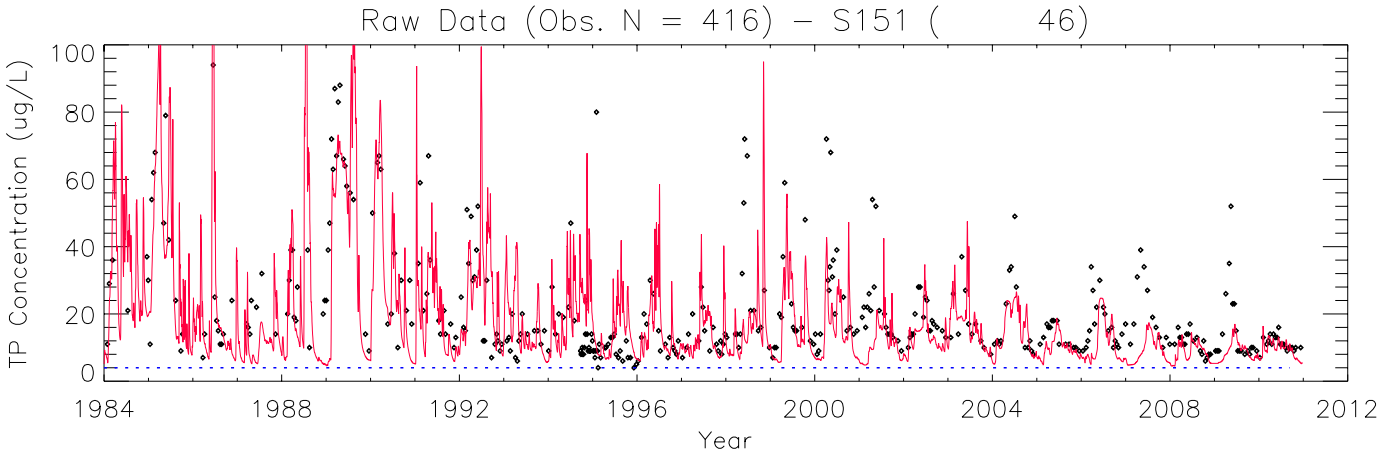
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – C123SR84 (42)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 416) – S151 (46)
TP Concentration (ug/L)
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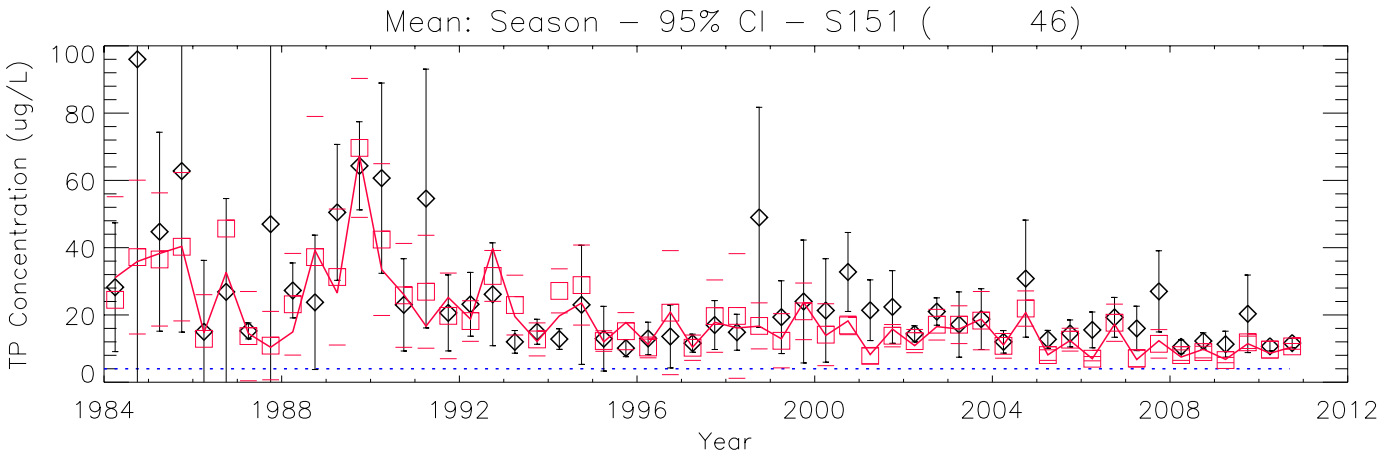
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S151 (46)
TP Concentration (ug/L)
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100
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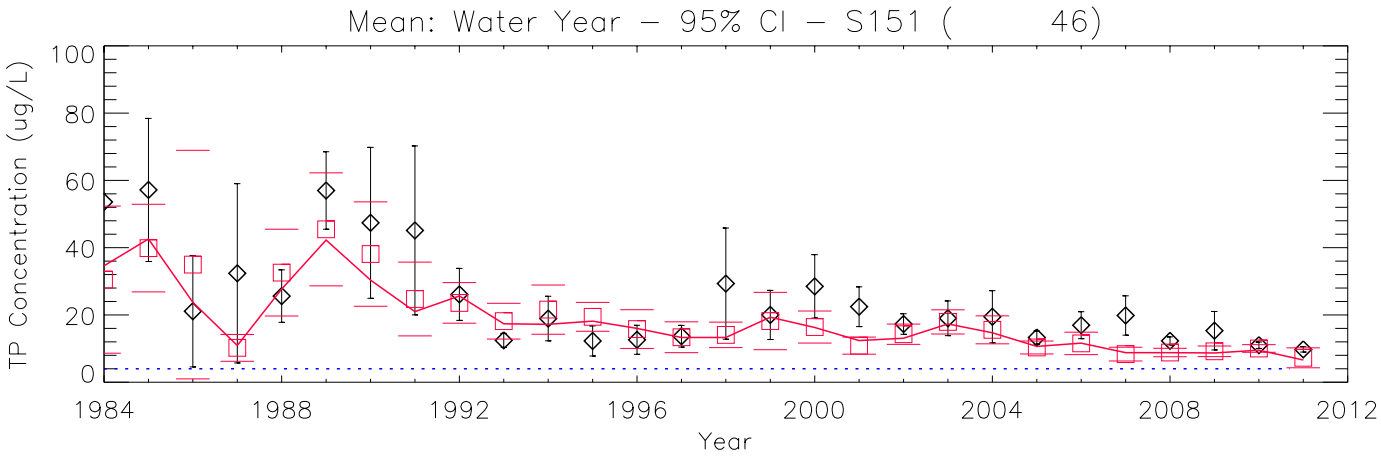
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S151 (46)
TP Concentration (ug/L)
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60
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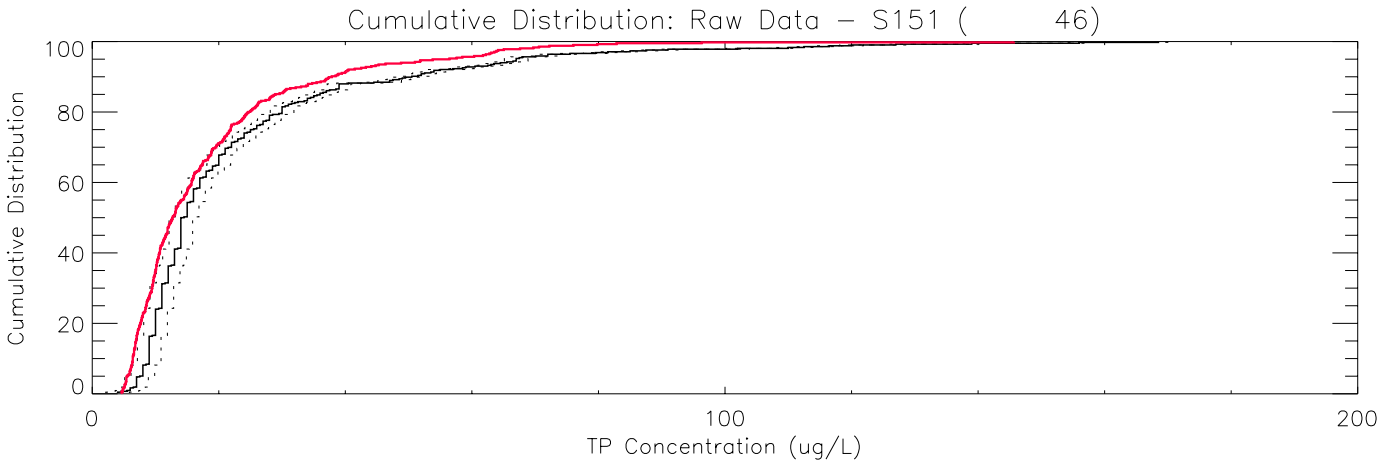
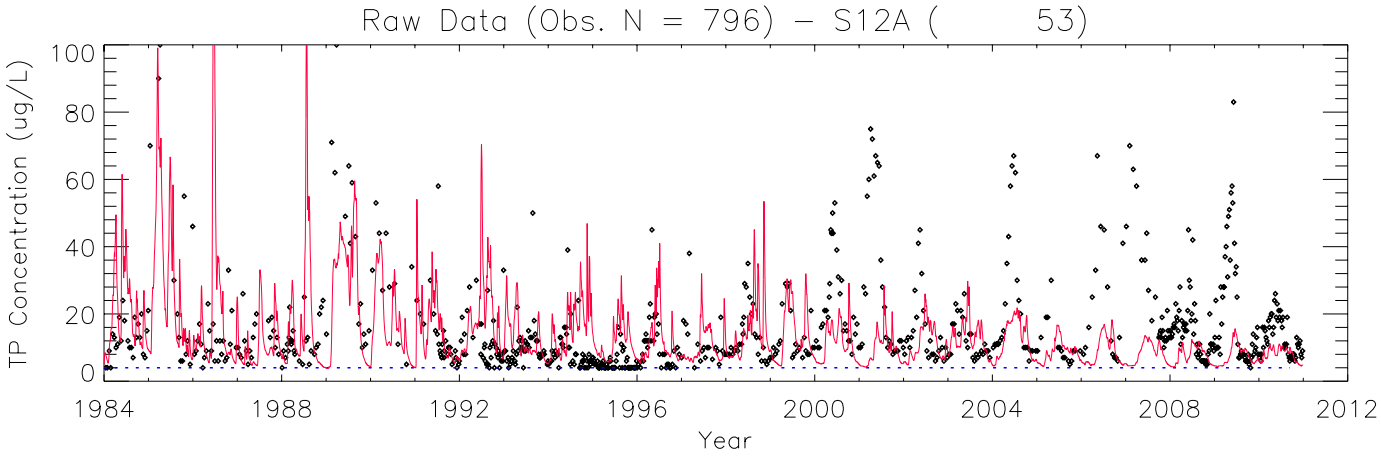
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S151 (46)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 796) – S12A (53)
TP Concentration (ug/L)
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60
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100
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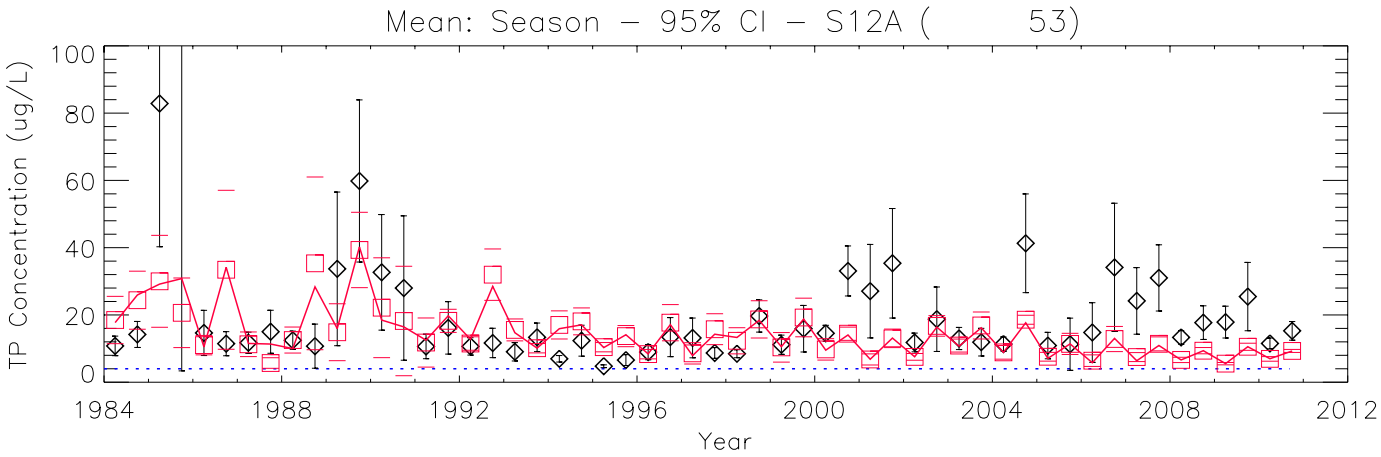
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S12A (53)
TP Concentration (ug/L)
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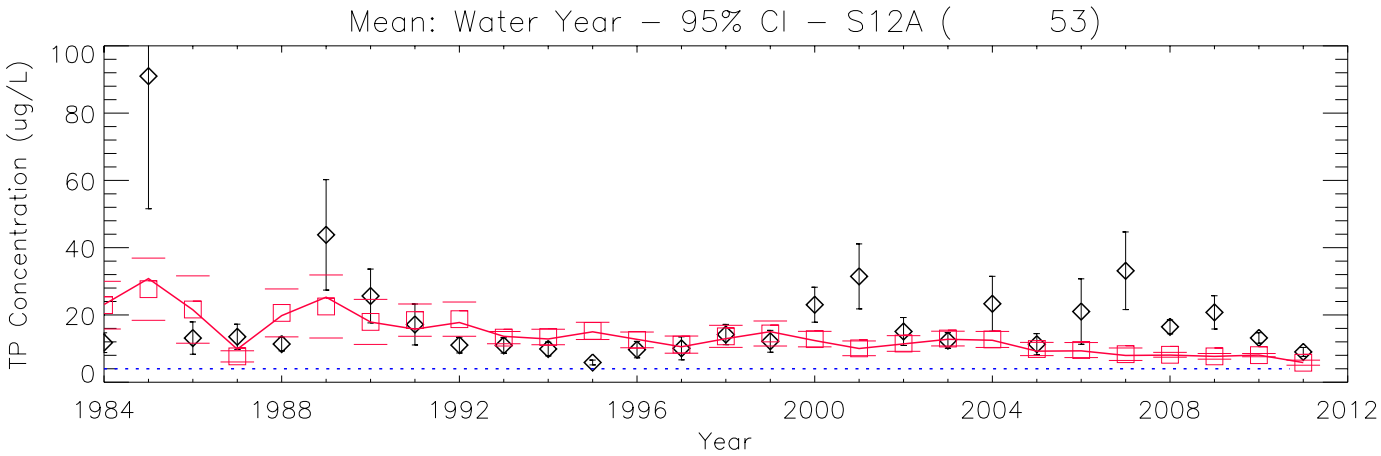
2012
Year


Mean: Water Year – 95% CI – S12A (53)
TP Concentration (ug/L)
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60
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100
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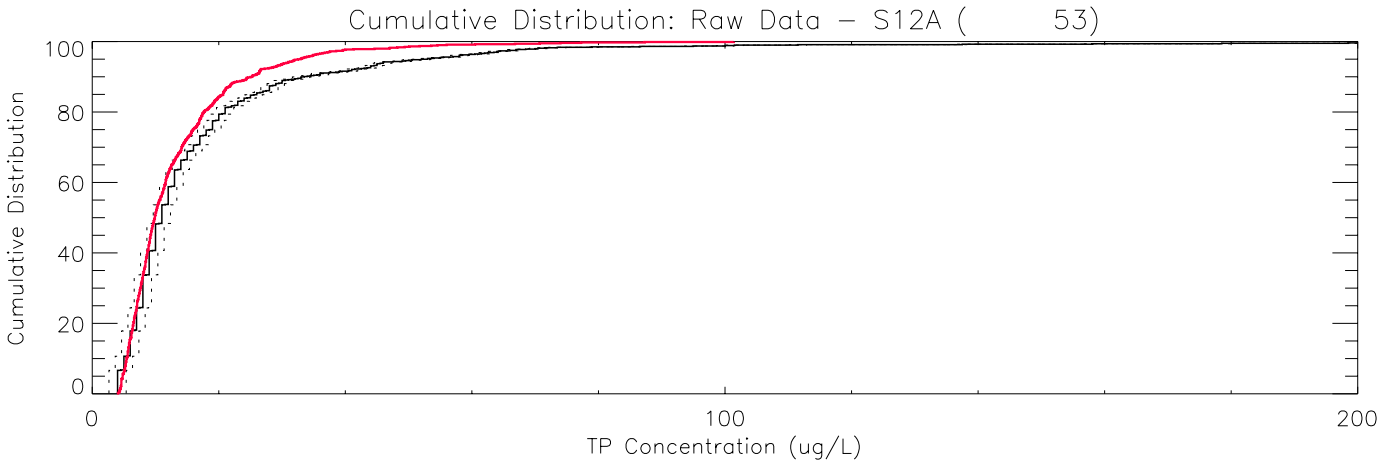
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S12A (53)
Cumulative Distribution
0
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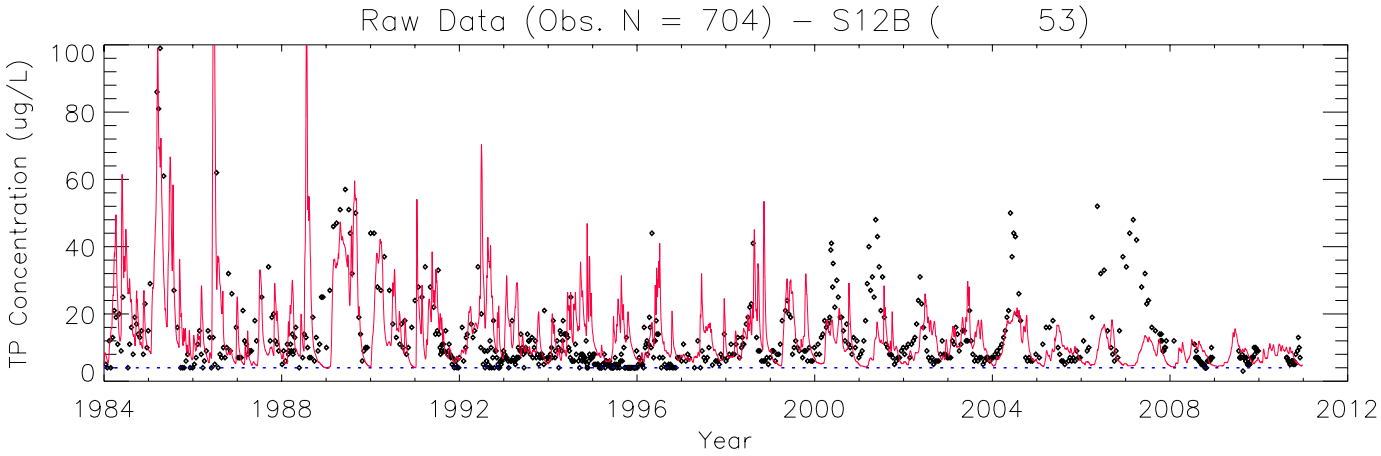
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 704) – S12B (53)
TP Concentration (ug/L)
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1996
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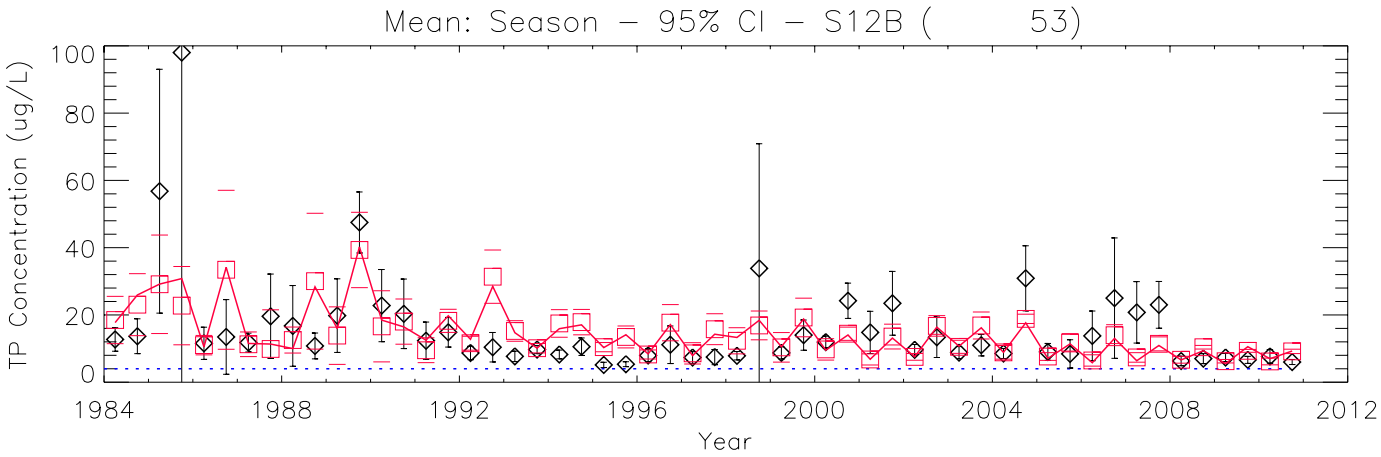
2012
Year


Mean: Season – 95% CI – S12B (53)
TP Concentration (ug/L)
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60
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2004
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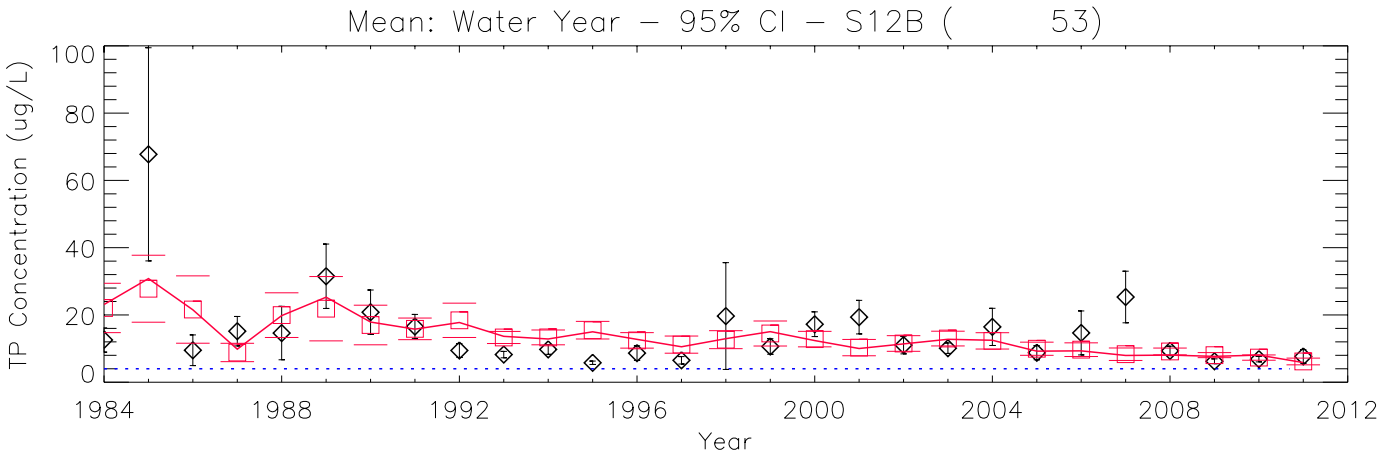
2012
Year


Mean: Water Year – 95% CI – S12B (53)
TP Concentration (ug/L)
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1992
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2004
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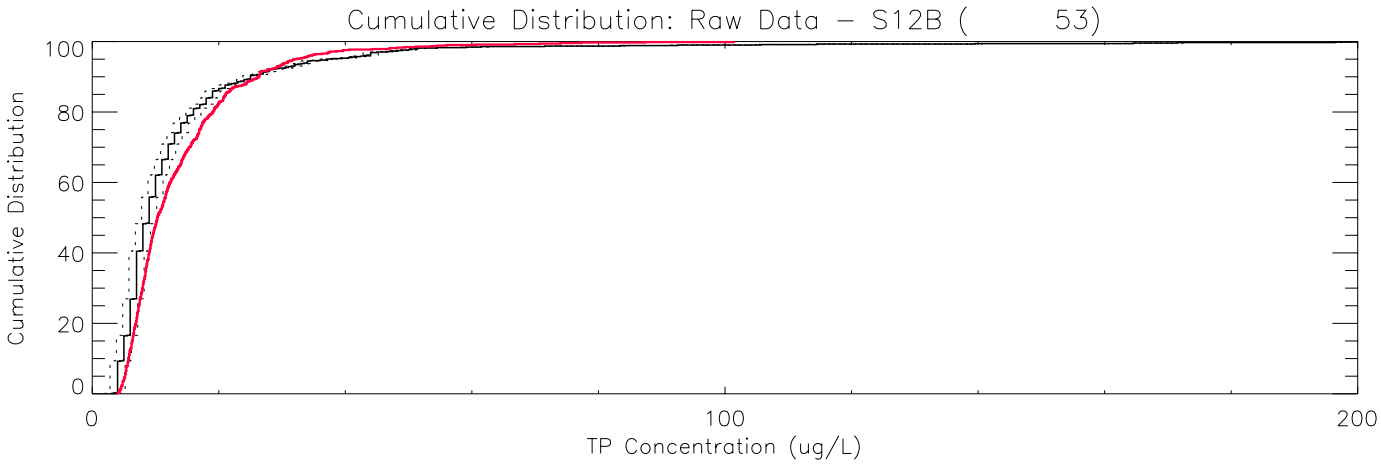
2012
Year


Cumulative Distribution: Raw Data – S12B (53)
Cumulative Distribution
0
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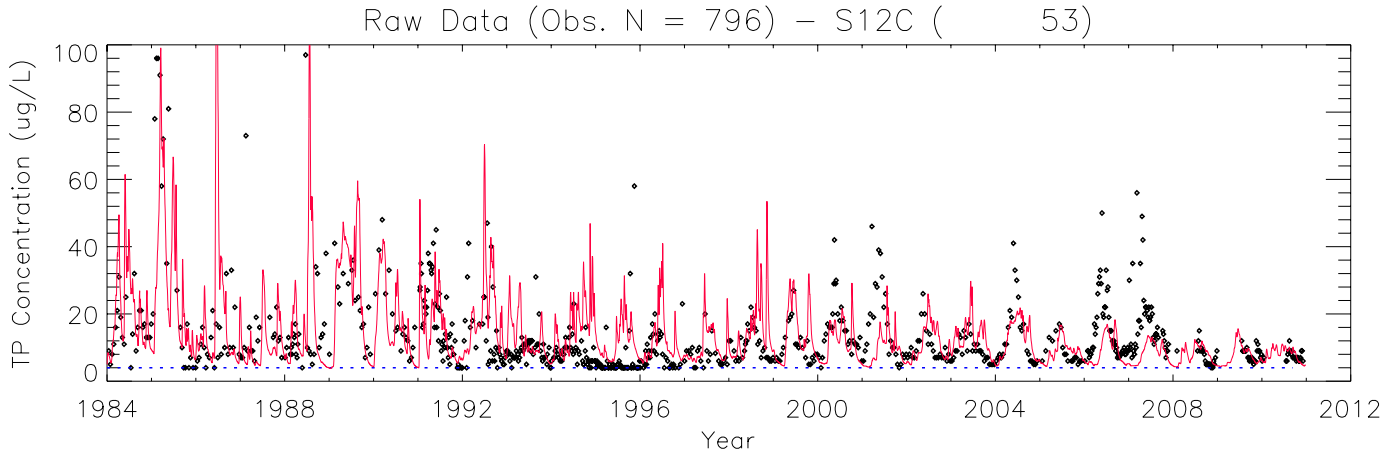
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 796) – S12C (53)
TP Concentration (ug/L)
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1992
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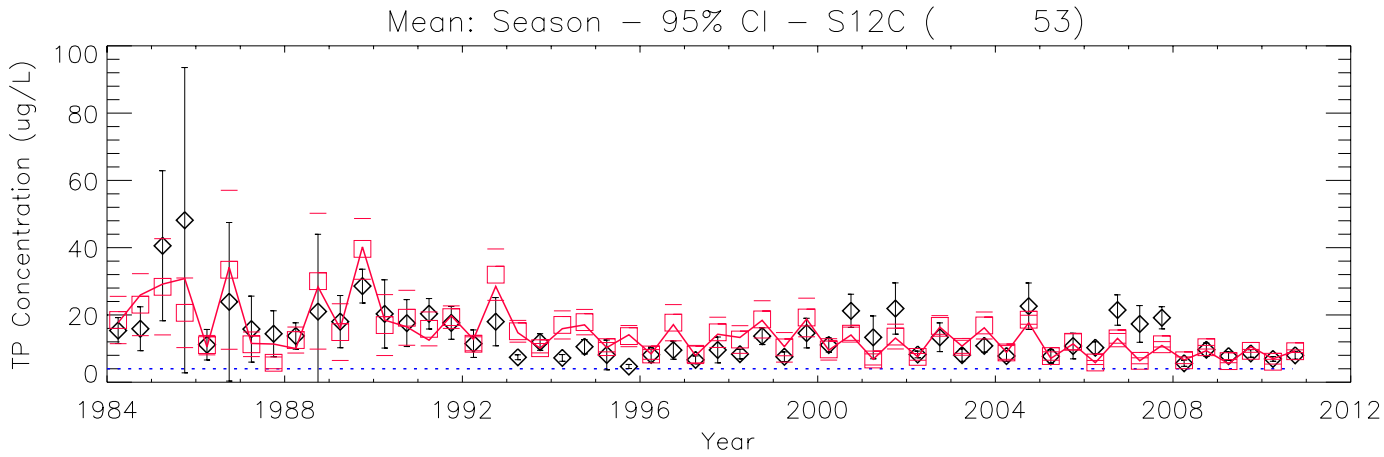
2004
2008
2012
Year


Mean: Season – 95% CI – S12C (53)
TP Concentration (ug/L)
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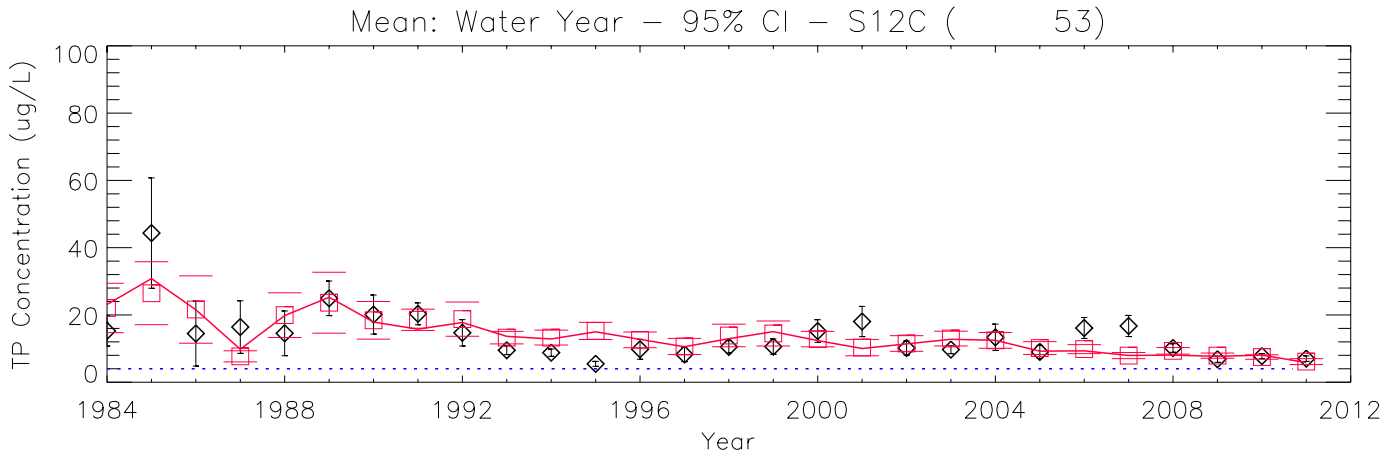
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S12C (53)
TP Concentration (ug/L)
0
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60
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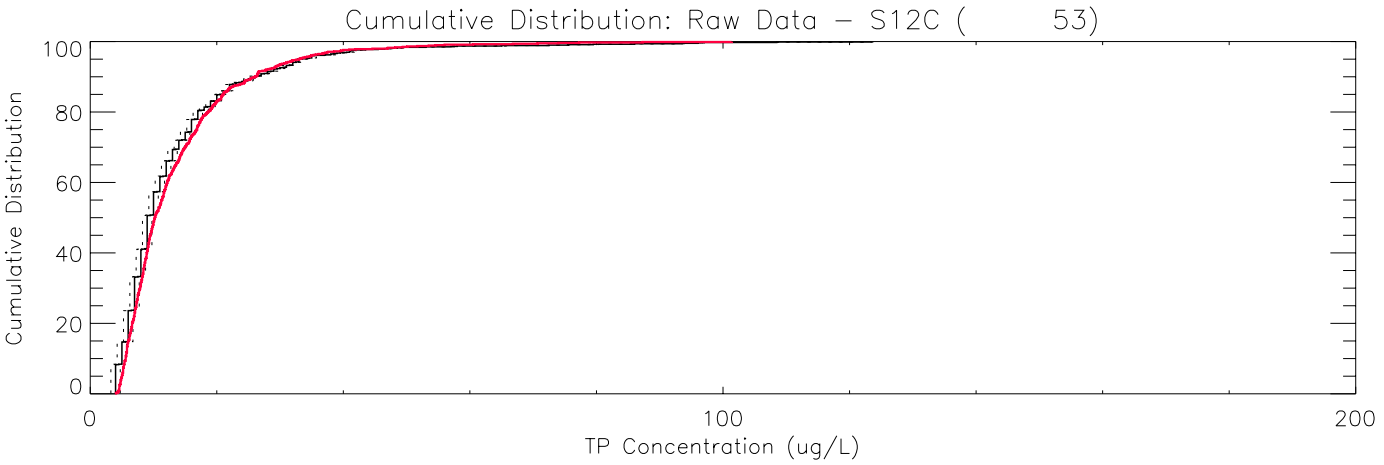
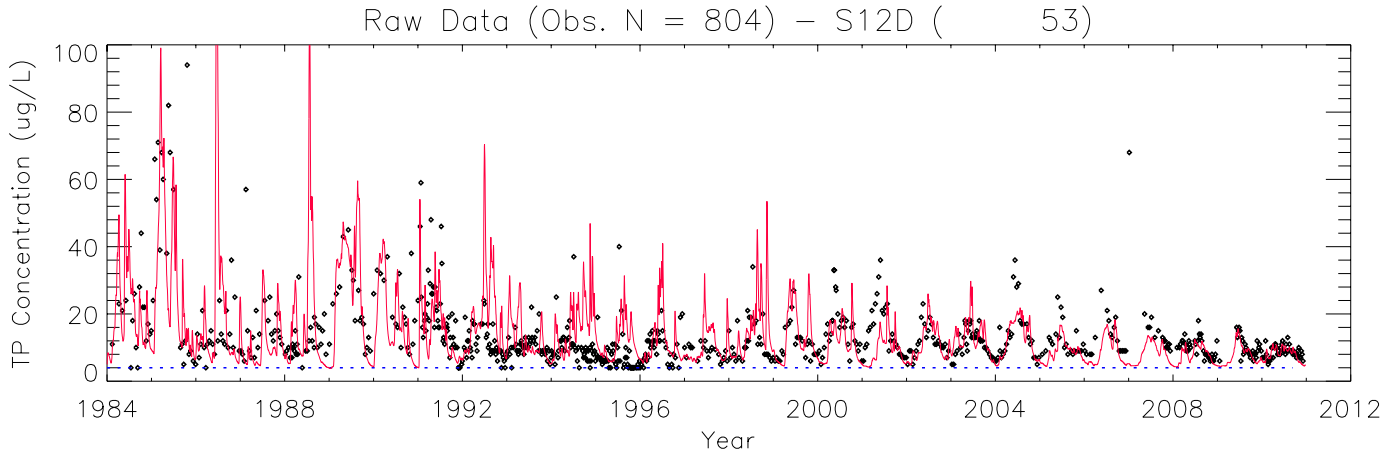
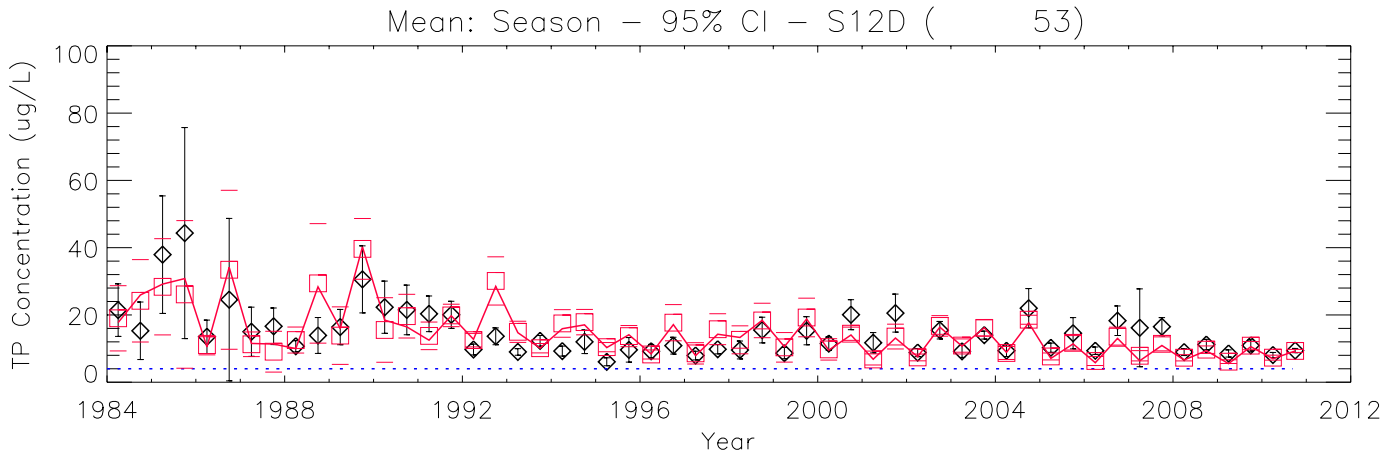
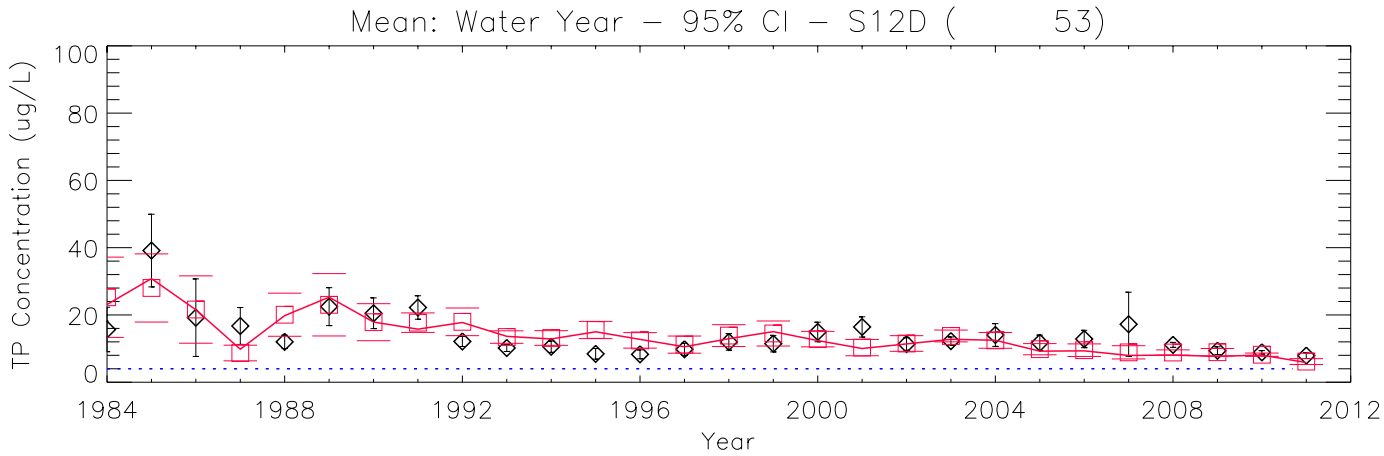
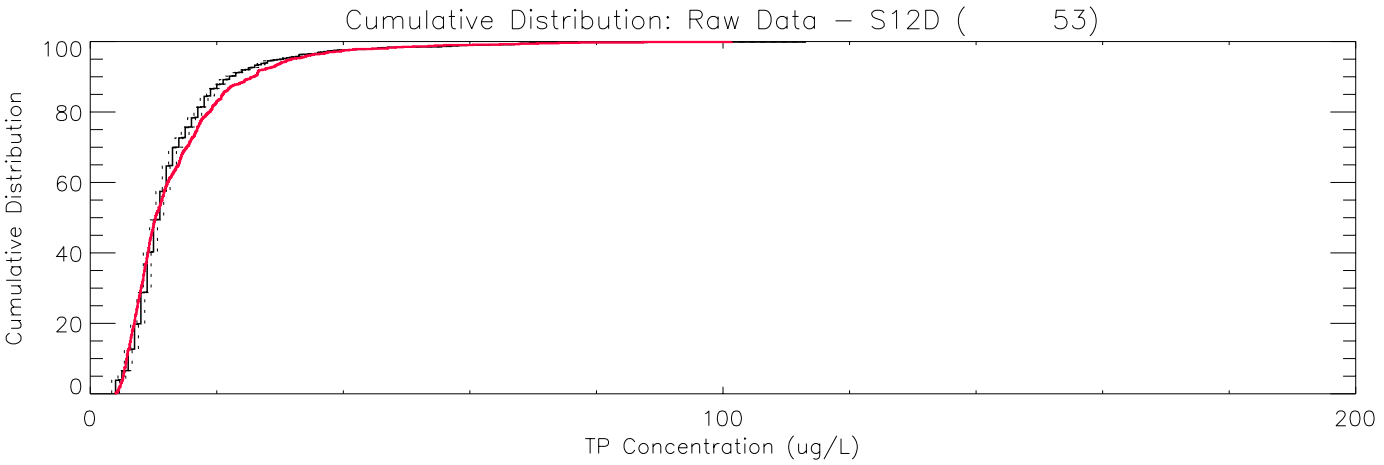
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

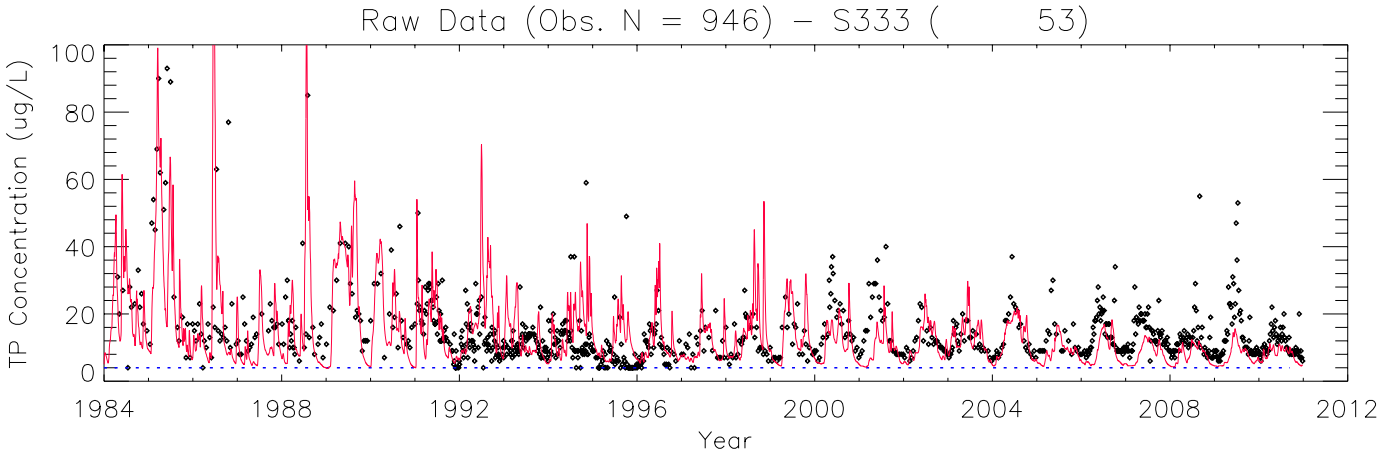

Cumulative Distribution: Raw Data – S12C (53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

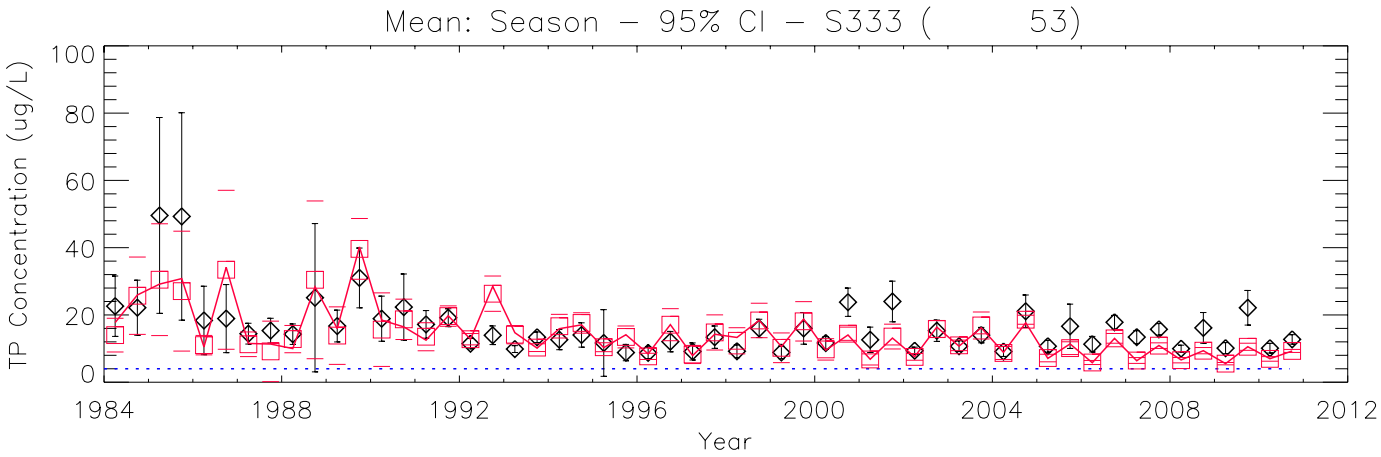

Raw Data (Obs. N = 804) – S12D (53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

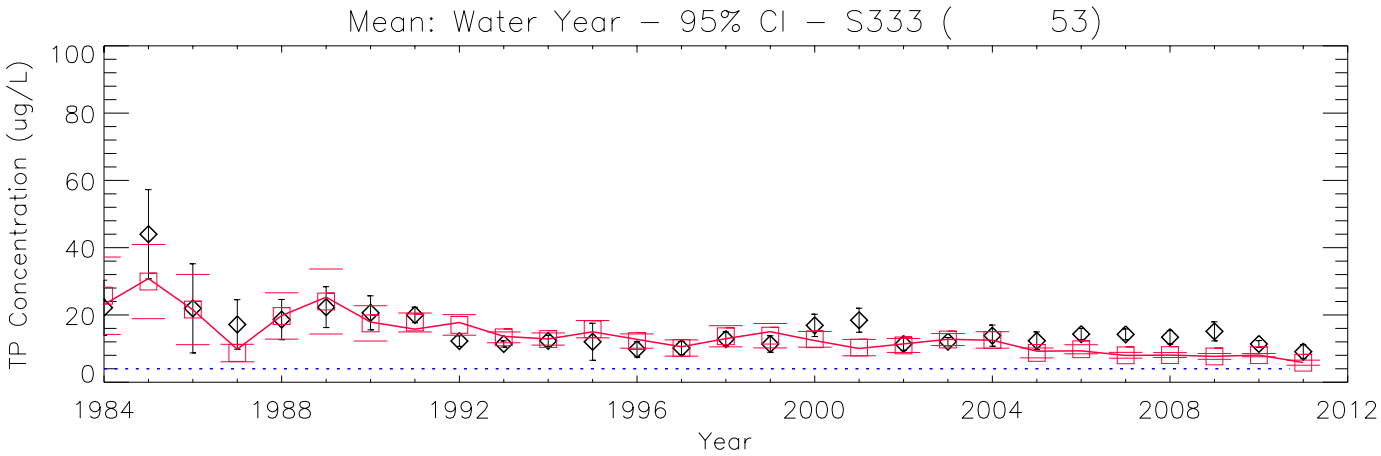

Mean: Season – 95% CI – S12D (53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

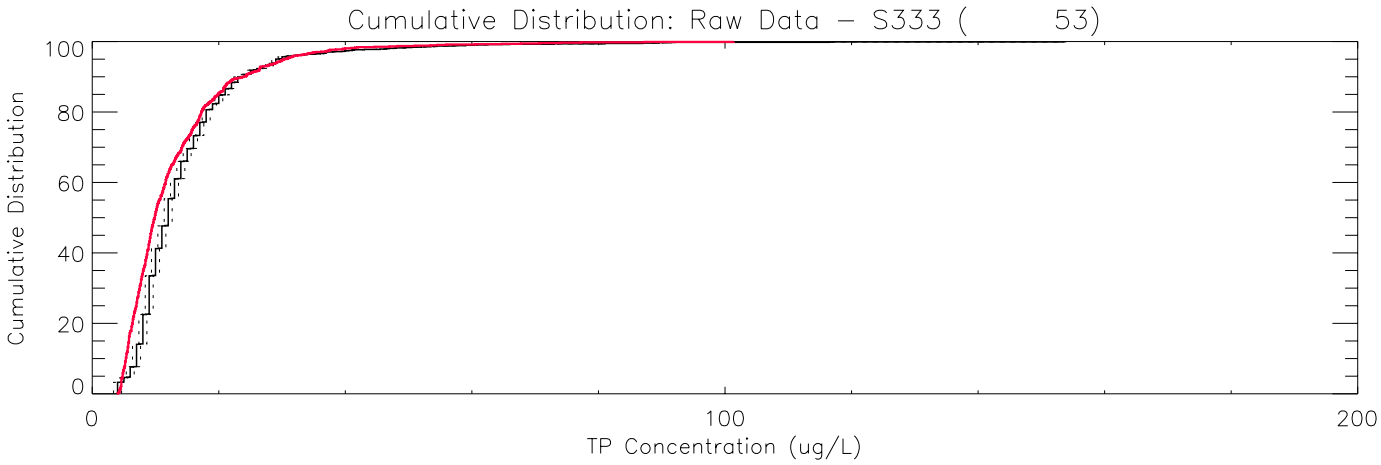

Mean: Water Year – 95% CI – S12D (53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

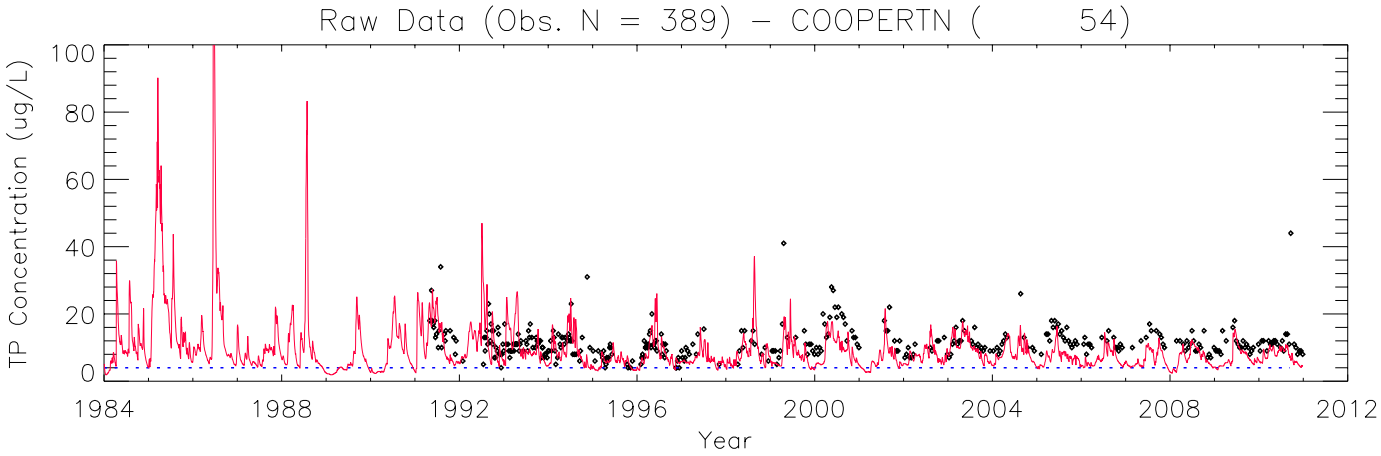

Cumulative Distribution: Raw Data – S12D (53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

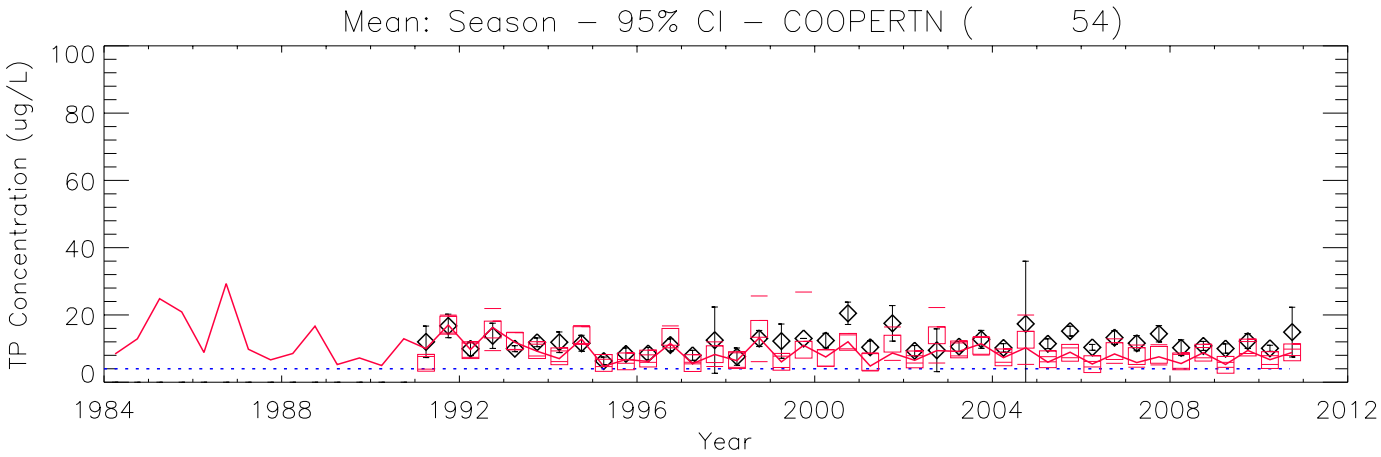

Raw Data (Obs. N = 946) – S333 (53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

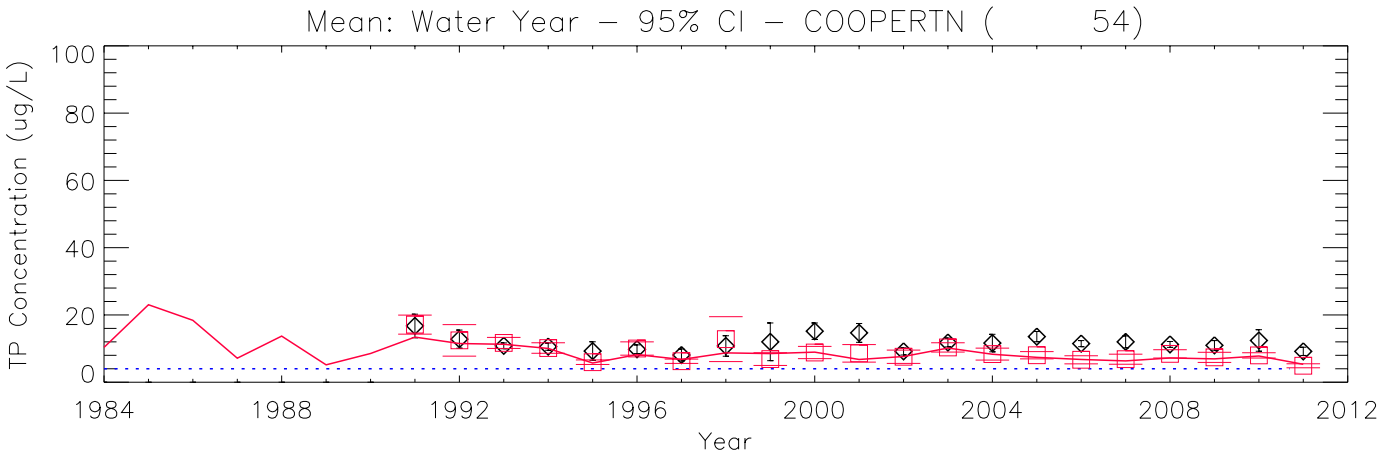

Mean: Season – 95% CI – S333 (53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

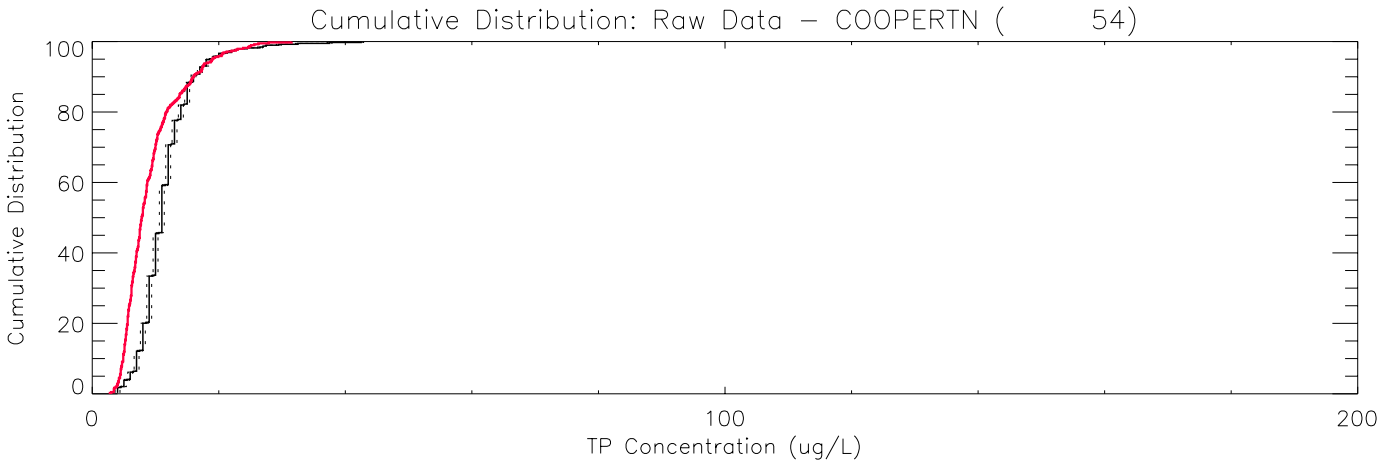

Mean: Water Year – 95% CI – S333 (53)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

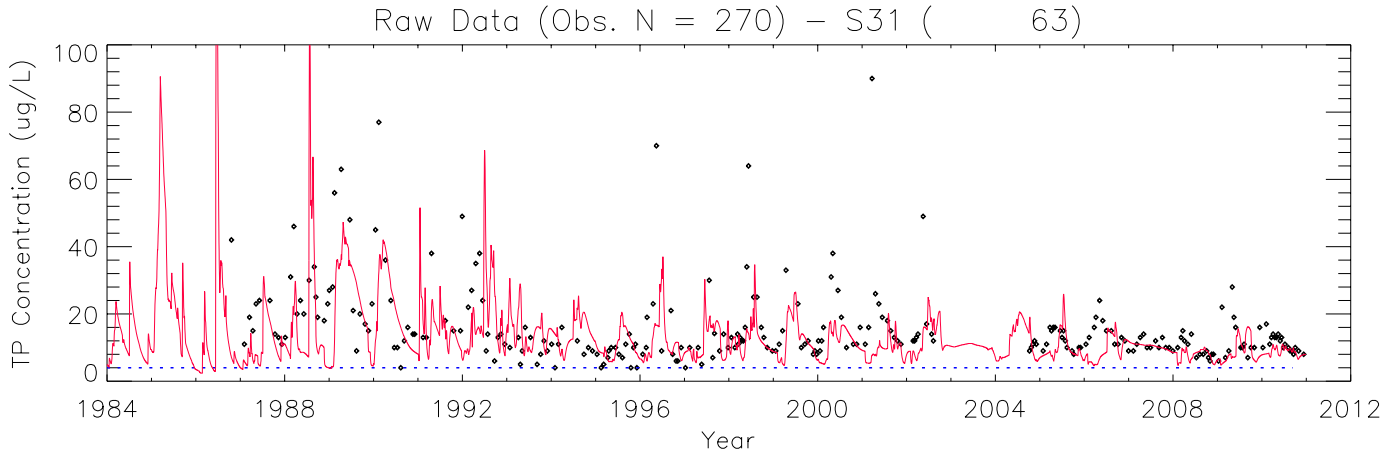

Cumulative Distribution: Raw Data – S333 (53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

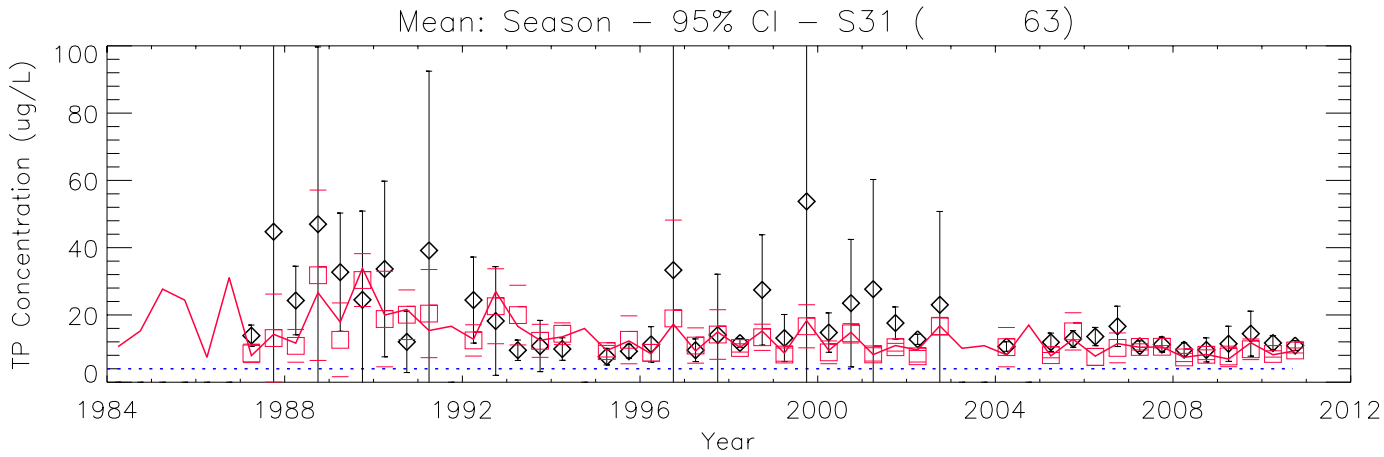

Raw Data (Obs. N = 389) – COOPERTN (54)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

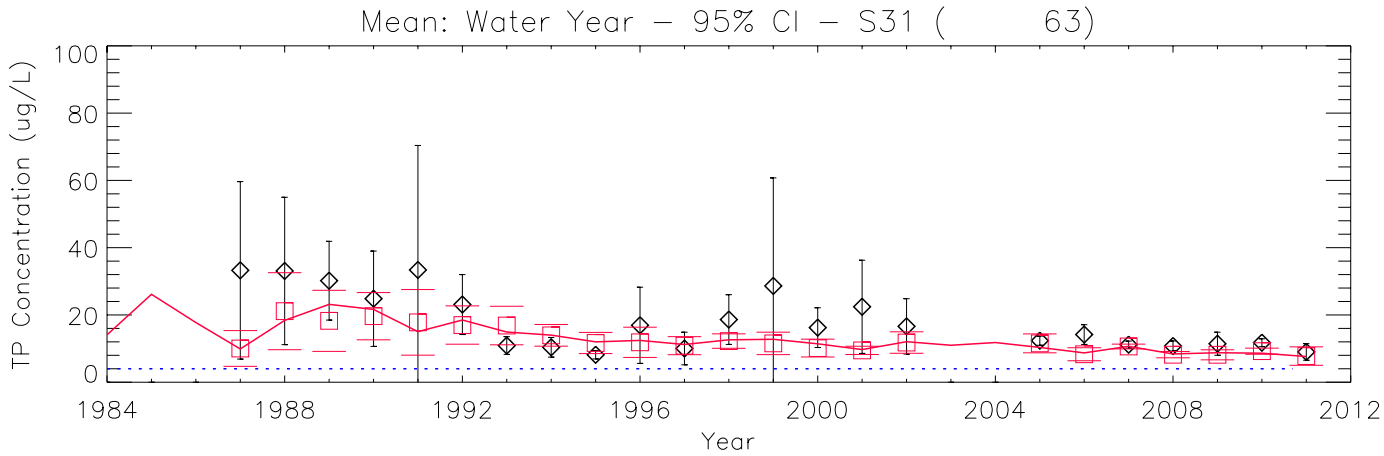

Mean: Season – 95% CI – COOPERTN (54)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year

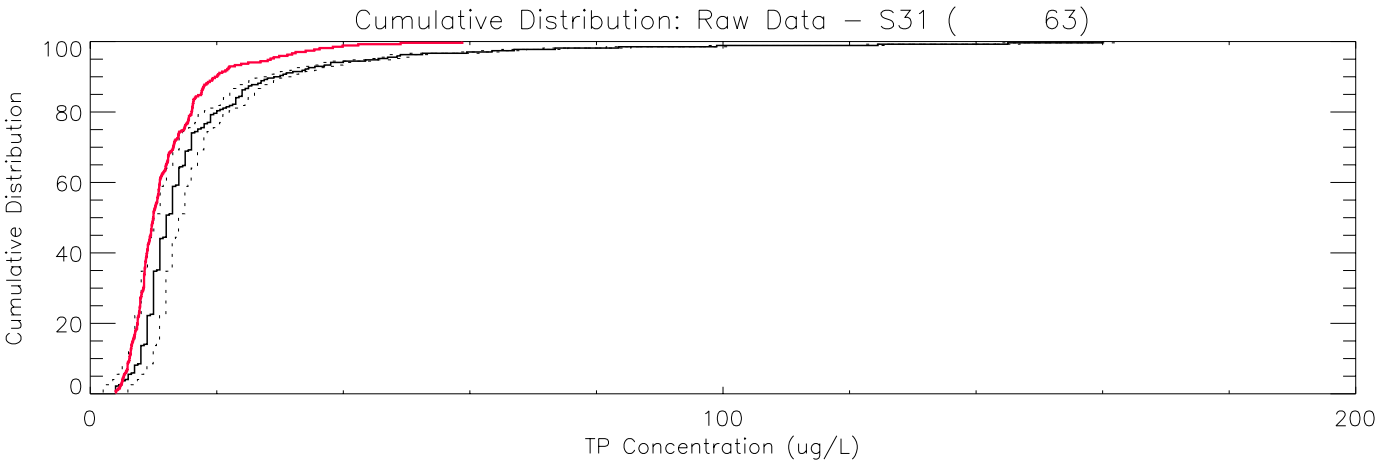

Mean: Water Year – 95% CI – COOPERTN (54)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – COOPERTN (54)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)


Raw Data (Obs. N = 270) – S31 (63)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S31 (63)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S31 (63)
TP Concentration (ug/L)
0
20
40
60
80
100
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S31 (63)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
TP Concentration (ug/L)

Appendix C, Figures C.1 – C.93. Time series plots of water column chloride (Cl) concentration and their associated Cumulative Frequency Distributions (CFD) for the period of record 1984-2010 at each monitoring location. The sequence of the figures is based on geographic location of marsh sites, starting in northwest, moving towards the southeast; following the set of plots of all marsh sites, the canal monitoring sites are similarly sequenced. A map of water quality monitoring sites in the northern Everglades is shown in Figure 4, with the southern Everglades sites shown in Figure 5.

The model grid cell column and row locations (col_row) or canal reach identifier (single integer) are shown in parentheses of each plot's title.

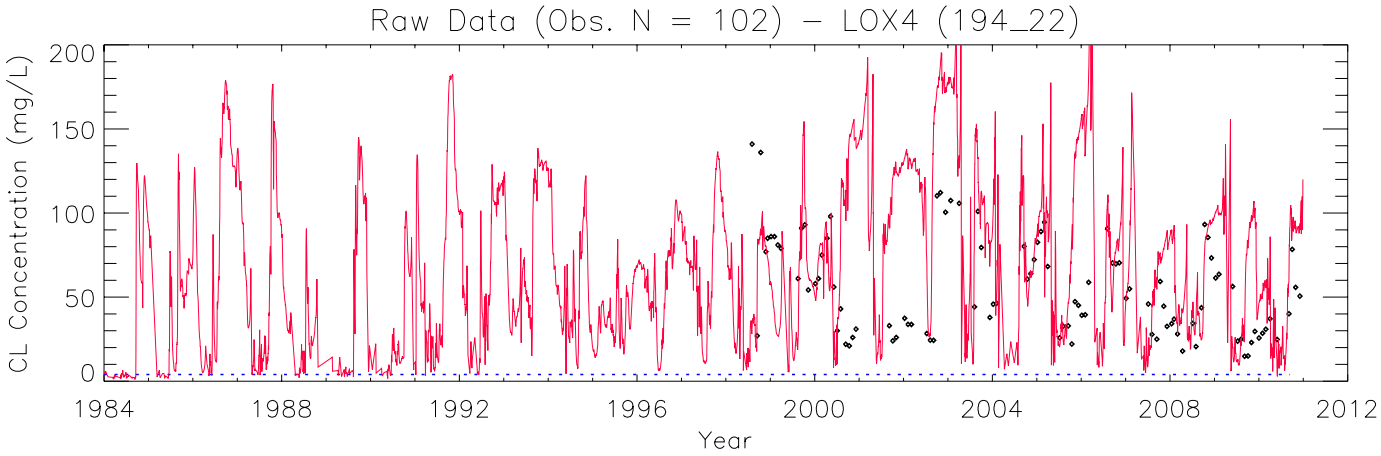
Each site-page has four figures:

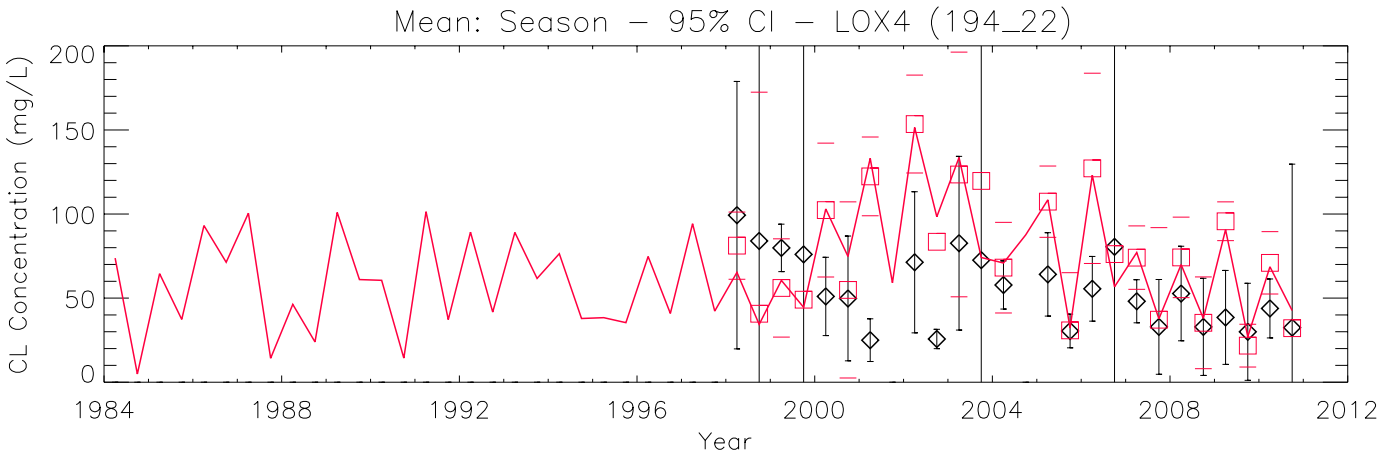
a) All data, with no temporal aggregation, of daily observations (black dots) and model results (red line).

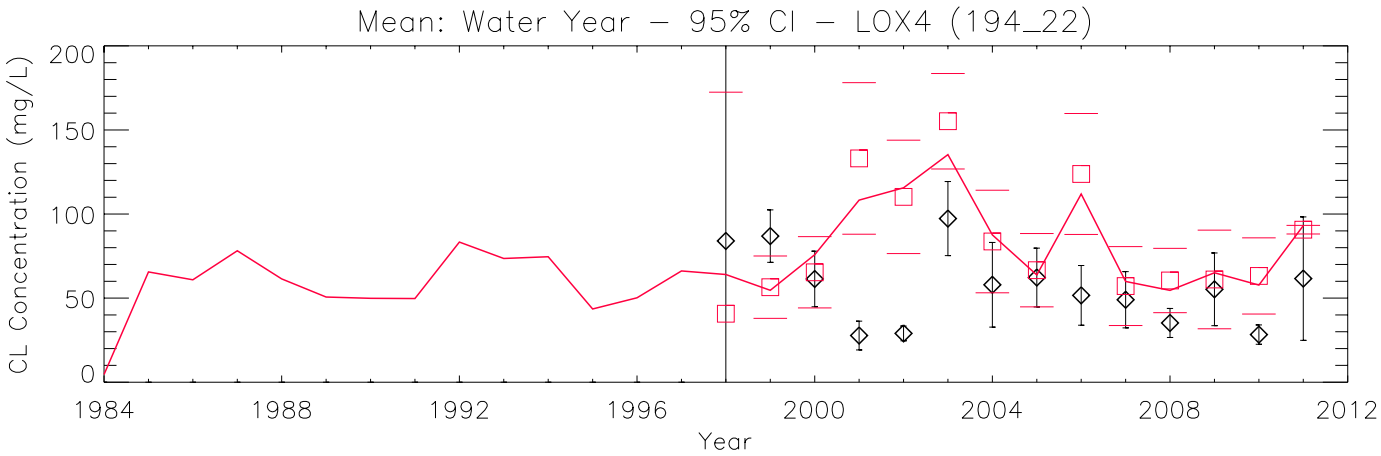
b) All data were aggregated into arithmetic mean values by wet and dry seasons within water years; the continuous lines pass through mean of all daily data points for each season; the mean of paired simulated & observed values are shown in red boxes and black diamonds, respectively; the 95% Confidence Interval (CI) of the paired means are shown by the "__" symbols in the red for the model and black for the observed data.

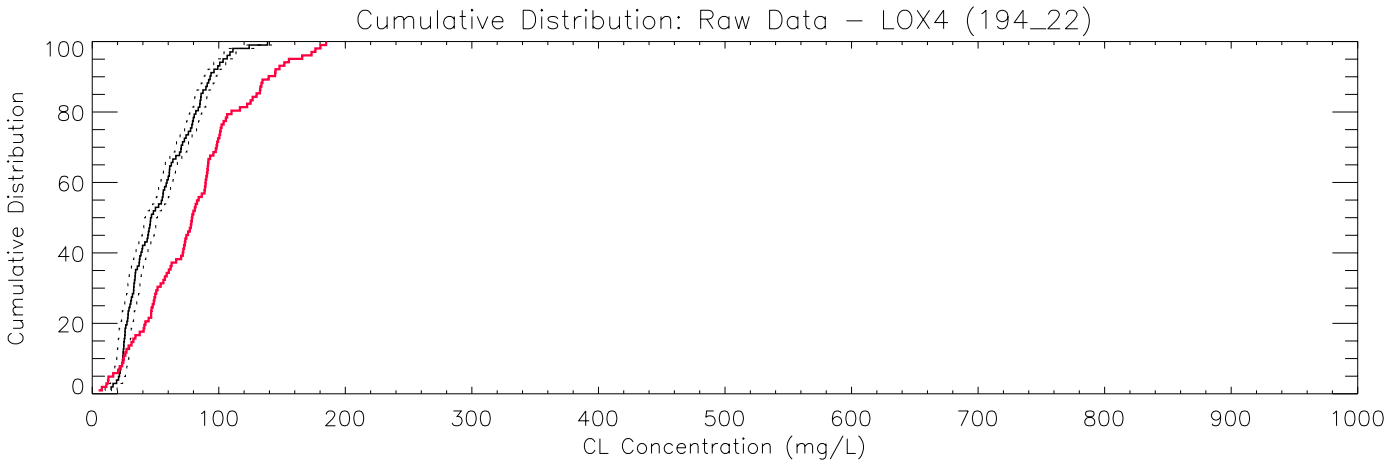
c) All data aggregated into arithmetic mean values by water year, with the same treatment as in plot b).

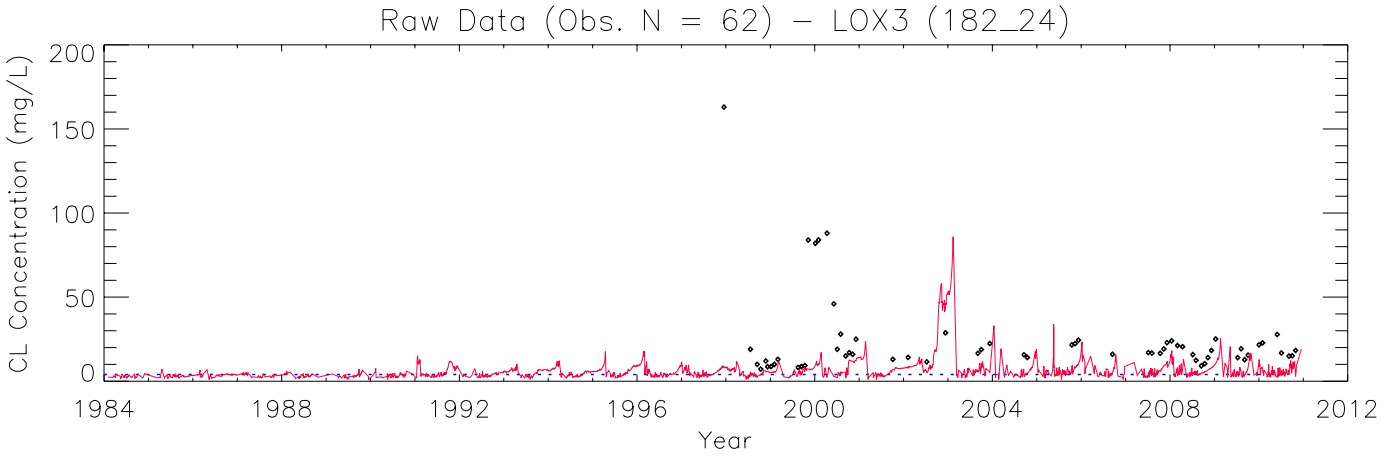
d) The cumulative frequency distributions of the simulated and observed (raw, un-aggregated) data; the 95% confidence interval for observed data is shown in the dashed black lines. Note that only paired simulated and observed data points are used.

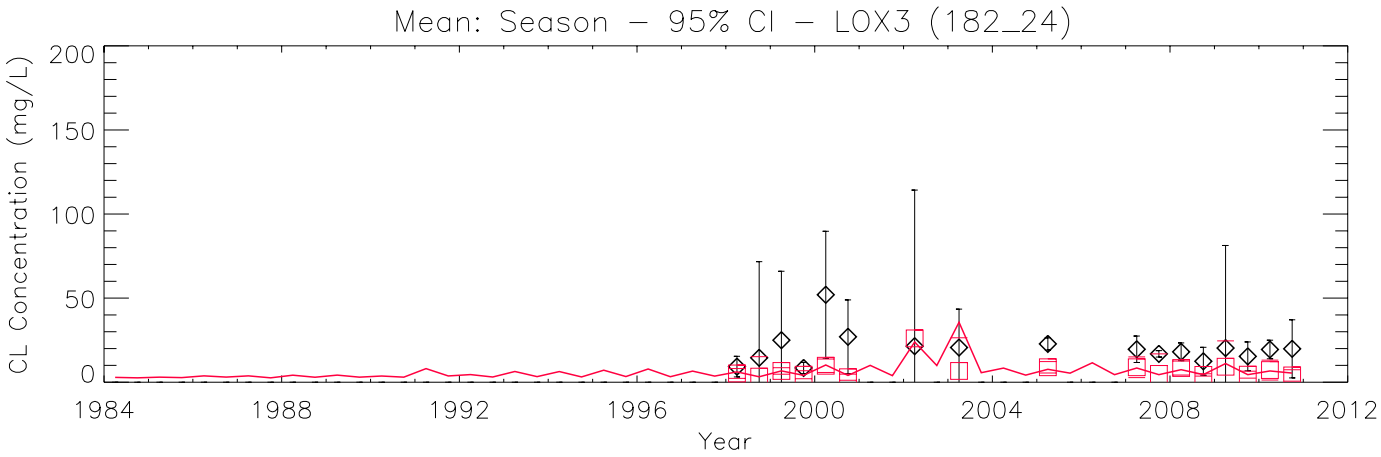

Raw Data (Obs. N = 102) – LOX4 (194_22)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

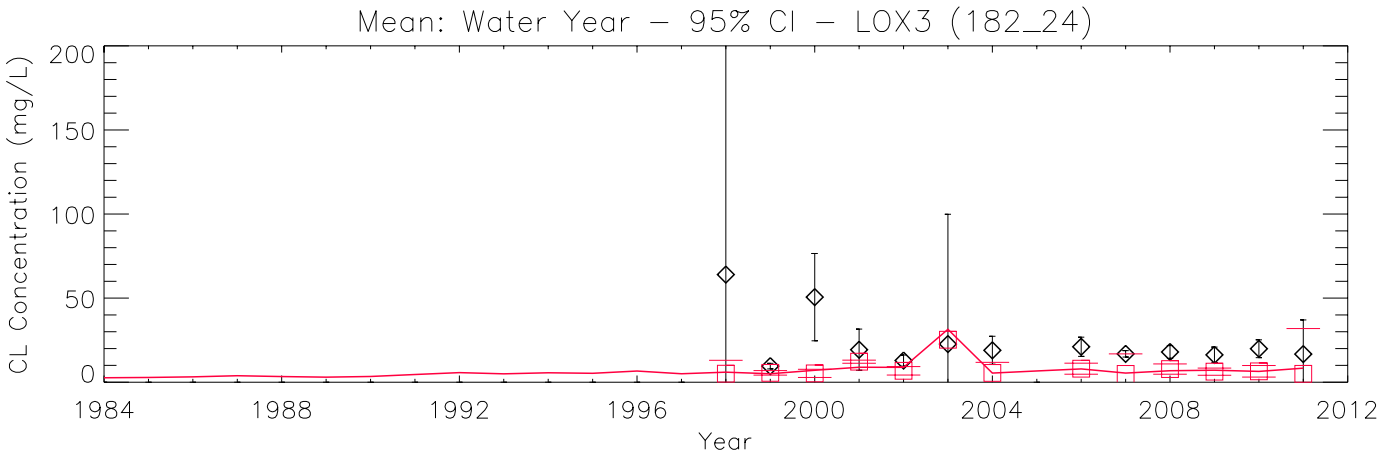

Mean: Season – 95% CI – LOX4 (194_22)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

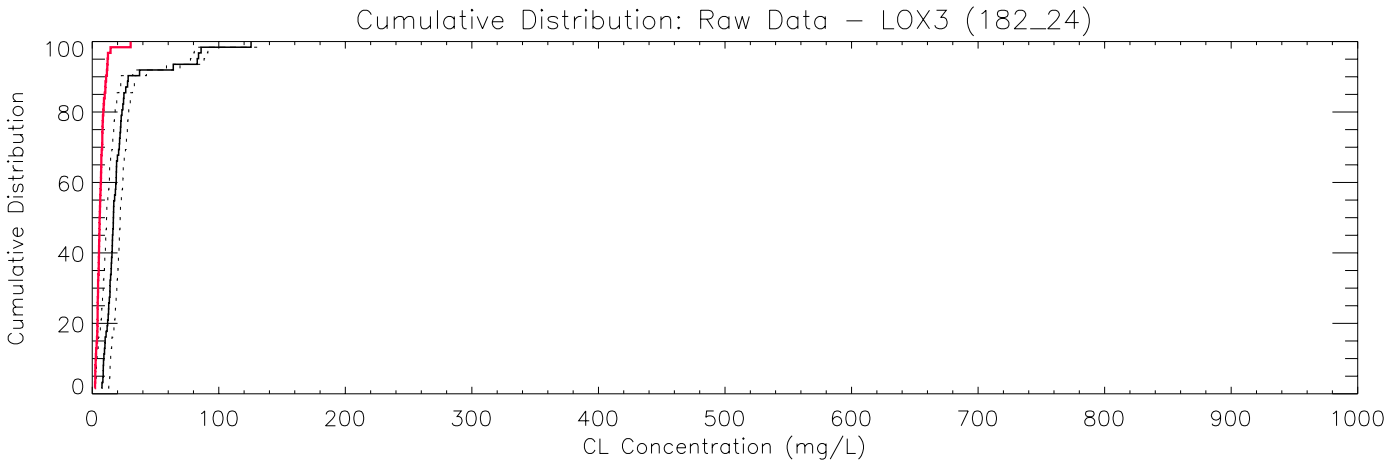

Mean: Water Year – 95% CI – LOX4 (194_22)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

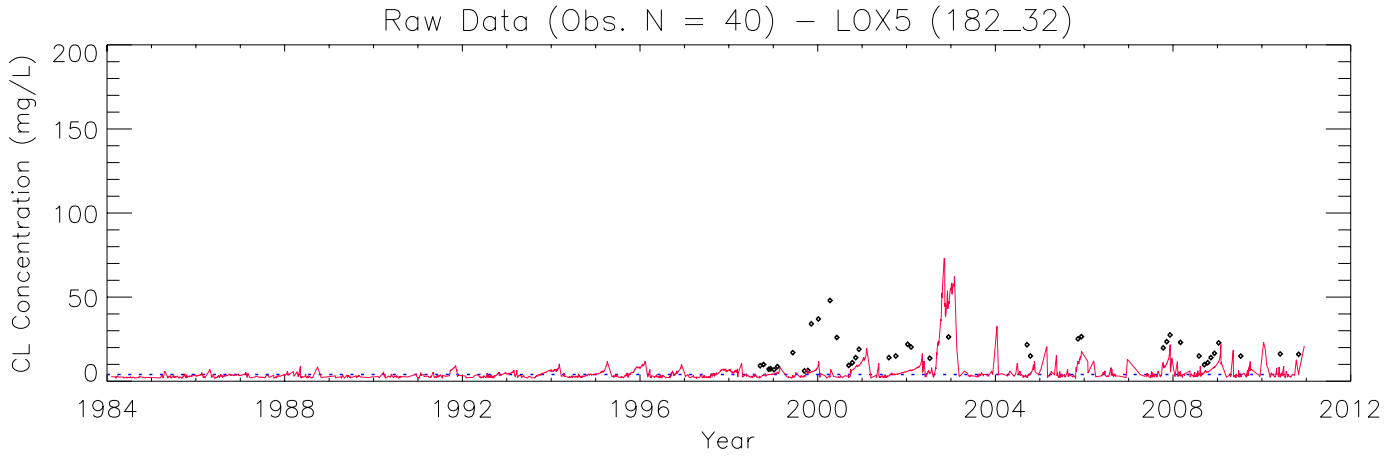

Cumulative Distribution: Raw Data – LOX4 (194_22)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

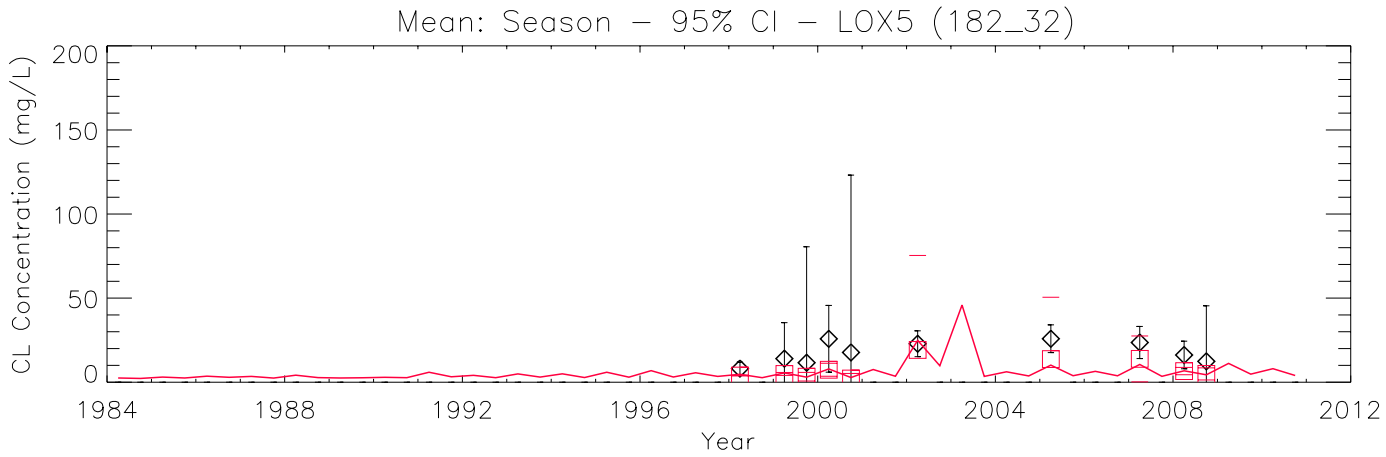

Raw Data (Obs. N = 62) – LOX3 (182_24)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

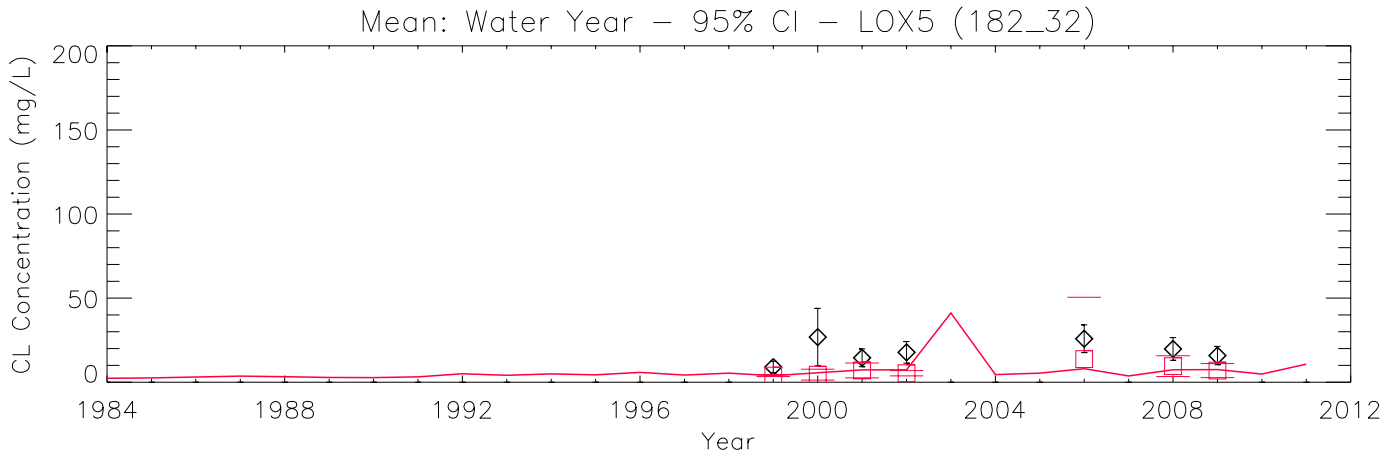

Mean: Season – 95% CI – LOX3 (182_24)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

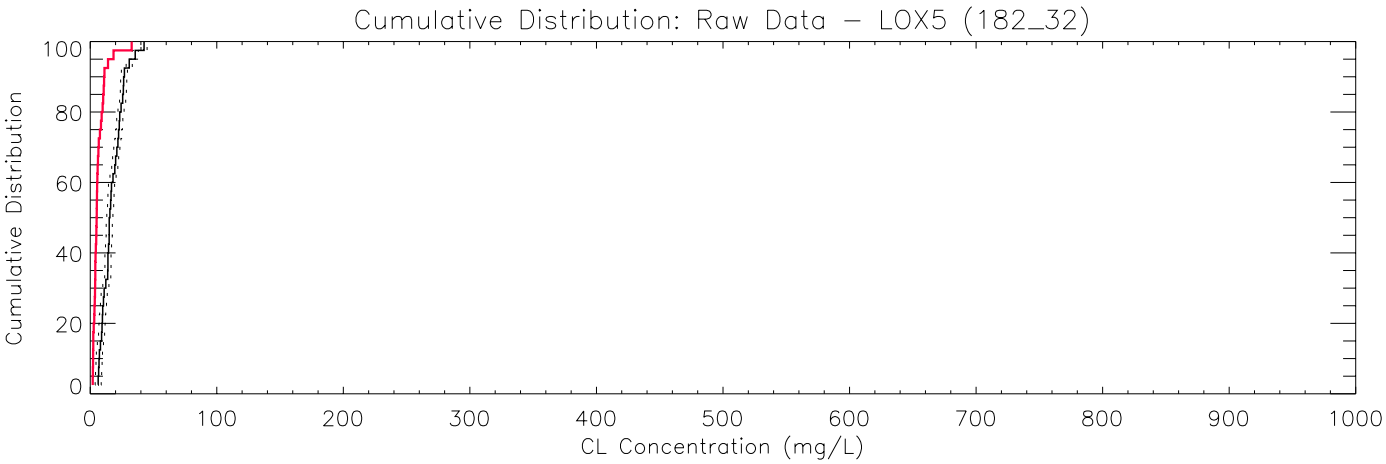

Mean: Water Year – 95% CI – LOX3 (182_24)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

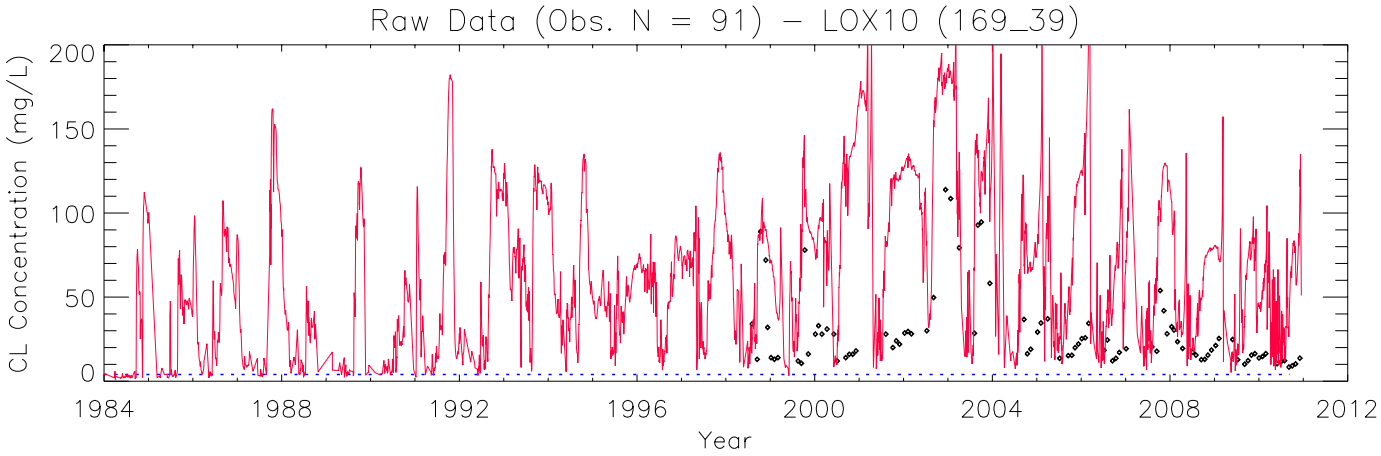

Cumulative Distribution: Raw Data – LOX3 (182_24)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

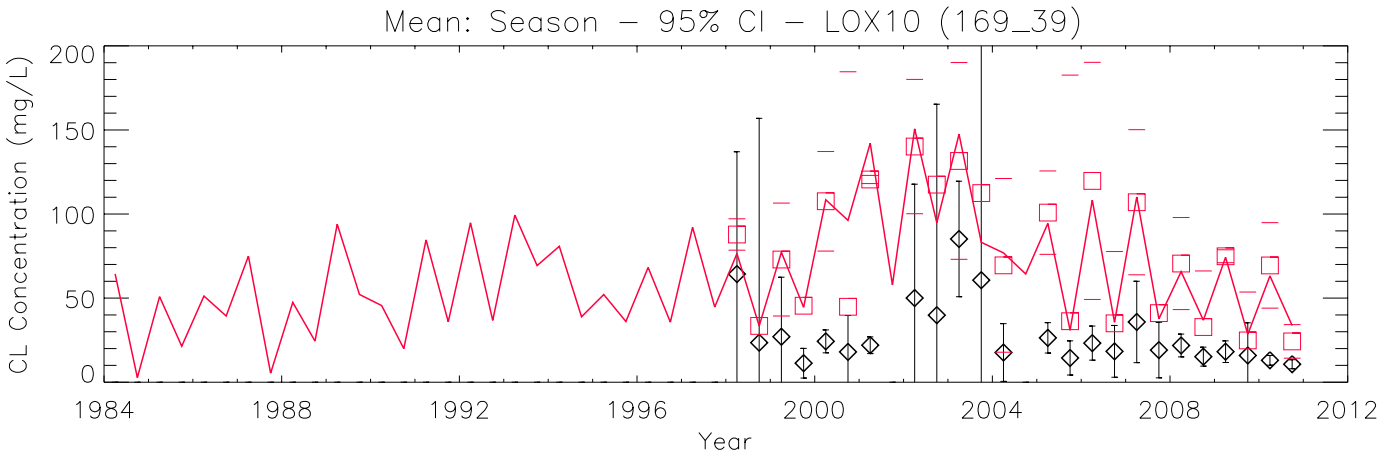

Raw Data (Obs. N = 40) – LOX5 (182_32)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

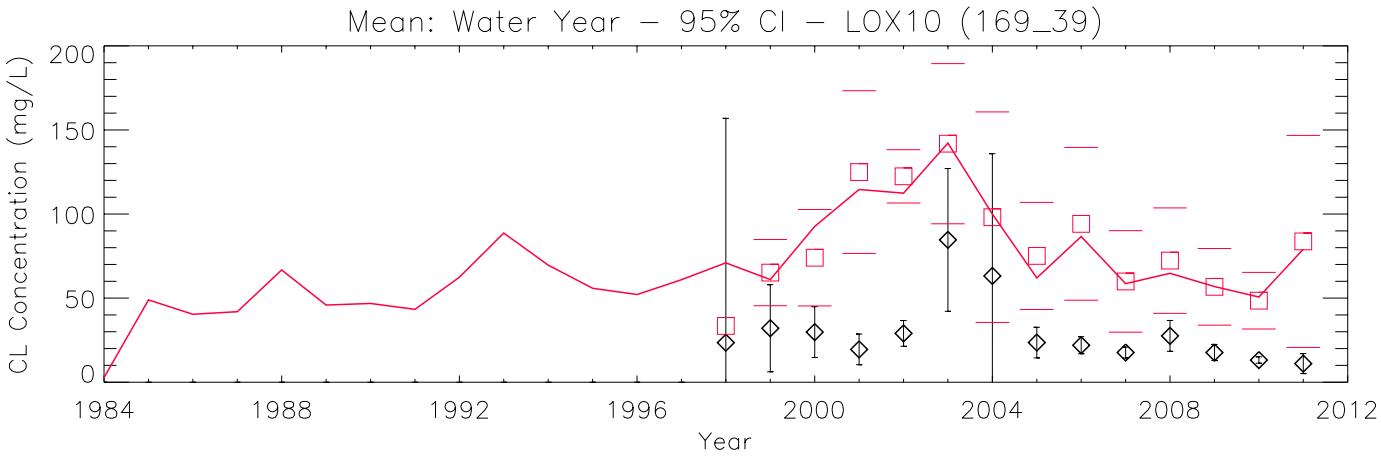

Mean: Season – 95% CI – LOX5 (182_32)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

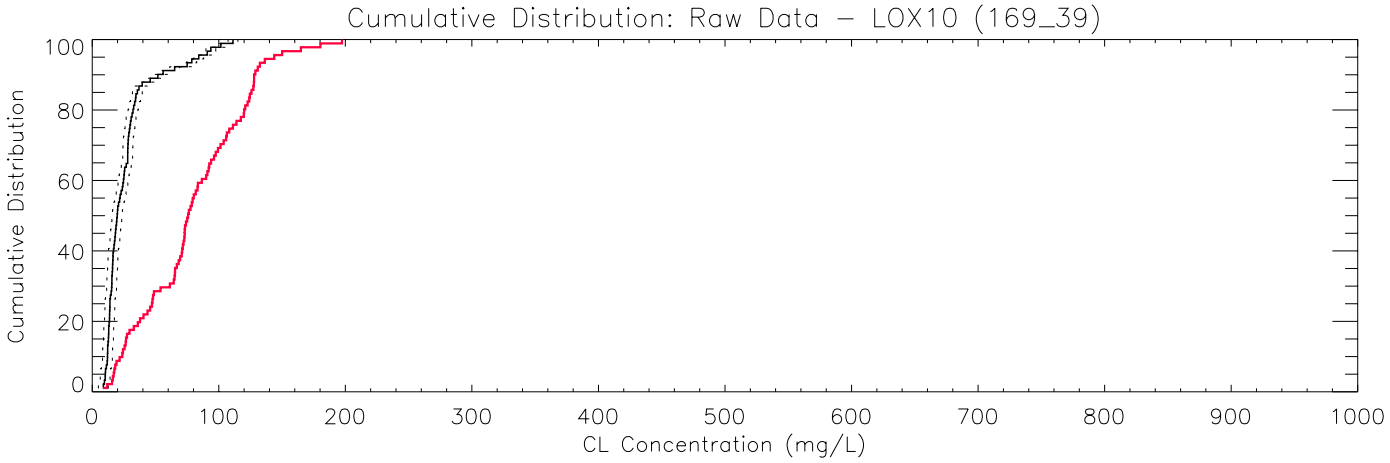

Mean: Water Year – 95% CI – LOX5 (182_32)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

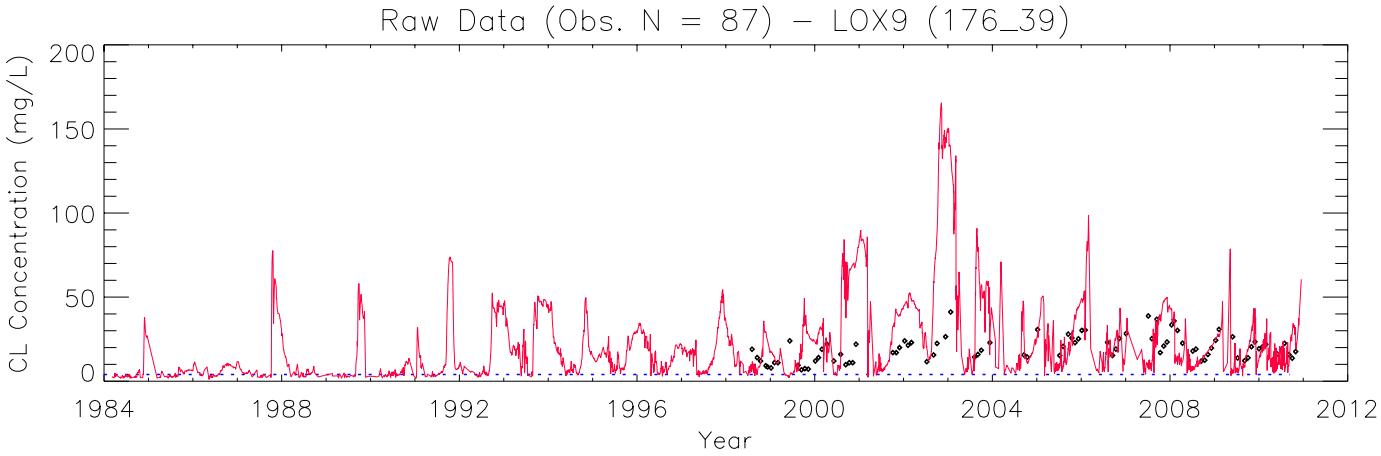

Cumulative Distribution: Raw Data – LOX5 (182_32)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

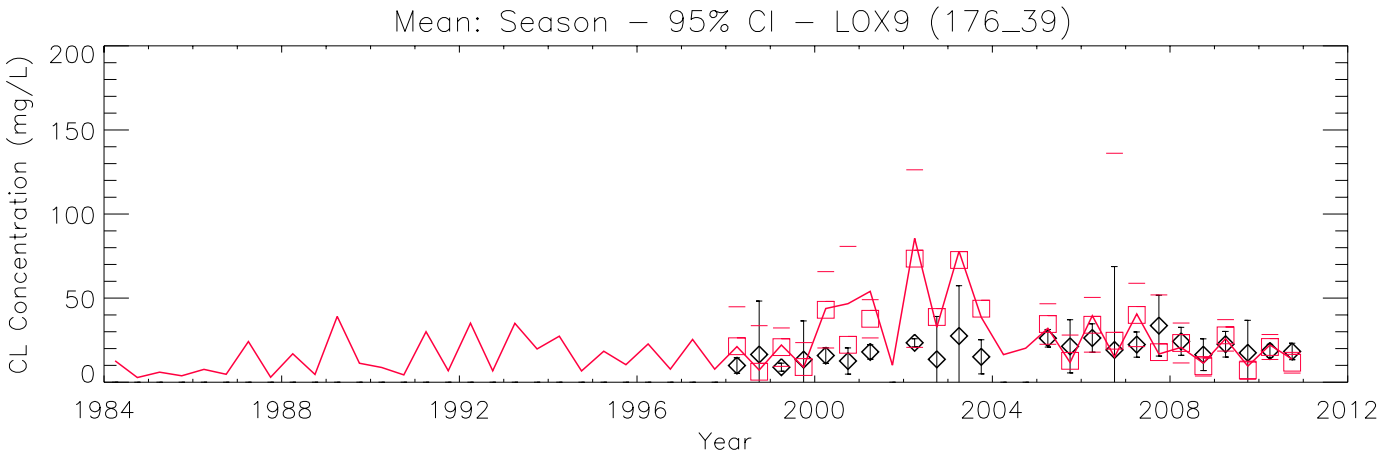

Raw Data (Obs. N = 91) – LOX10 (169_39)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

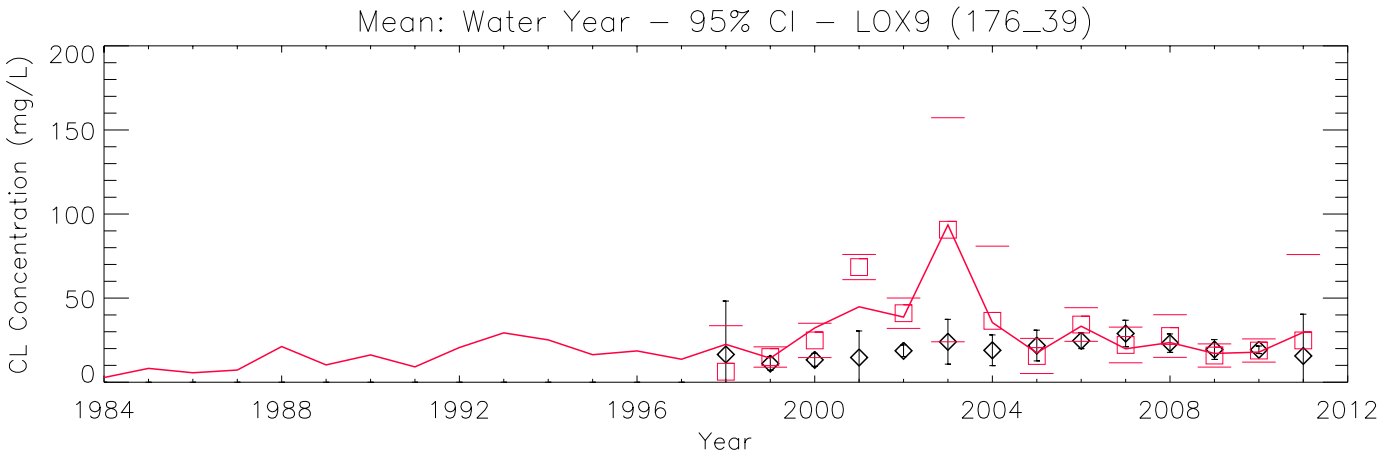

Mean: Season – 95% CI – LOX10 (169_39)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

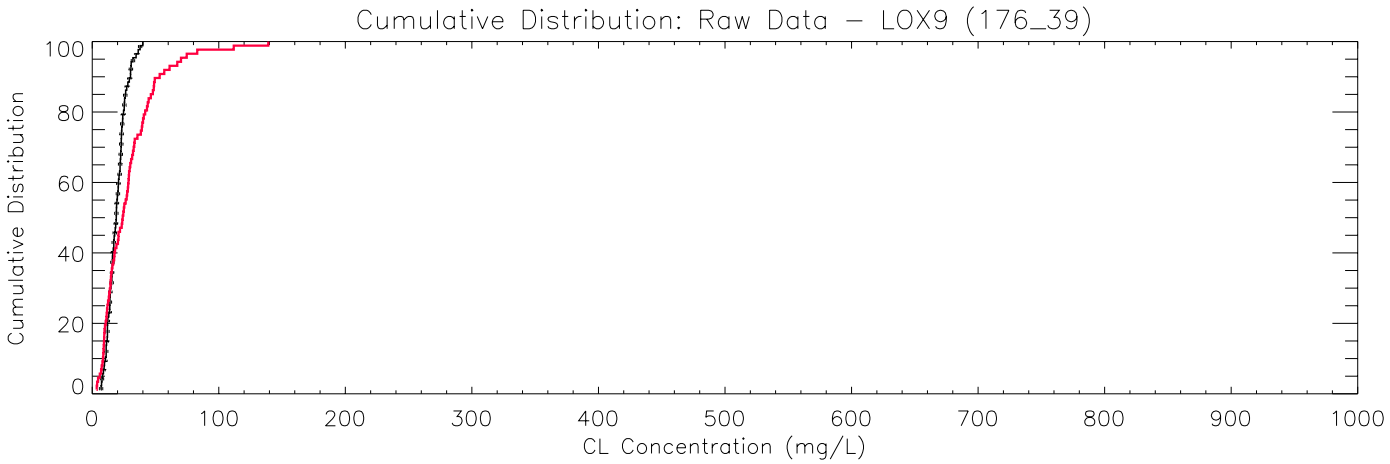

Mean: Water Year – 95% CI – LOX10 (169_39)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

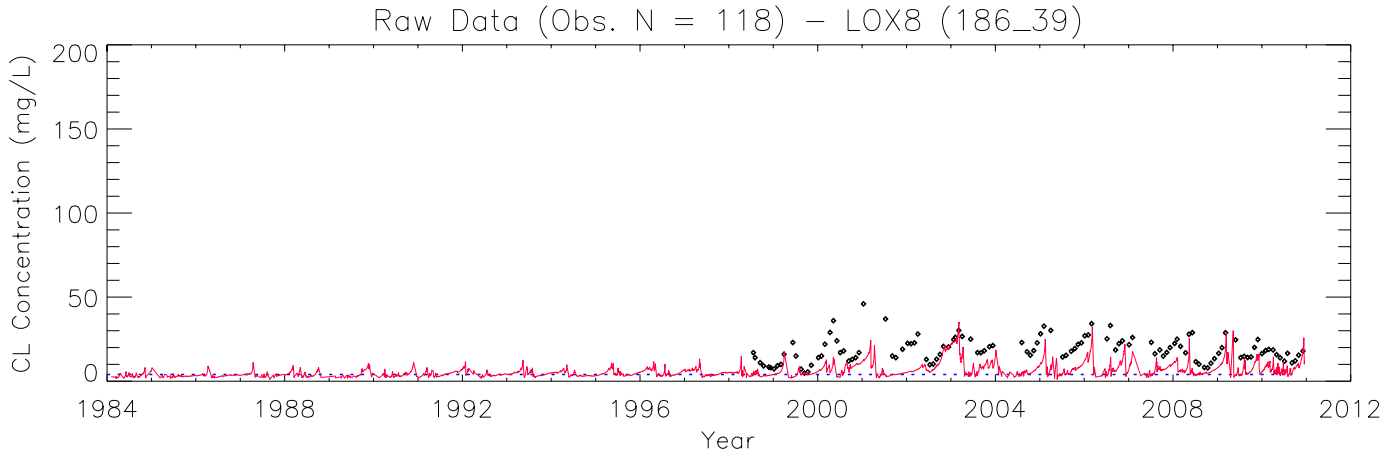

Cumulative Distribution: Raw Data – LOX10 (169_39)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

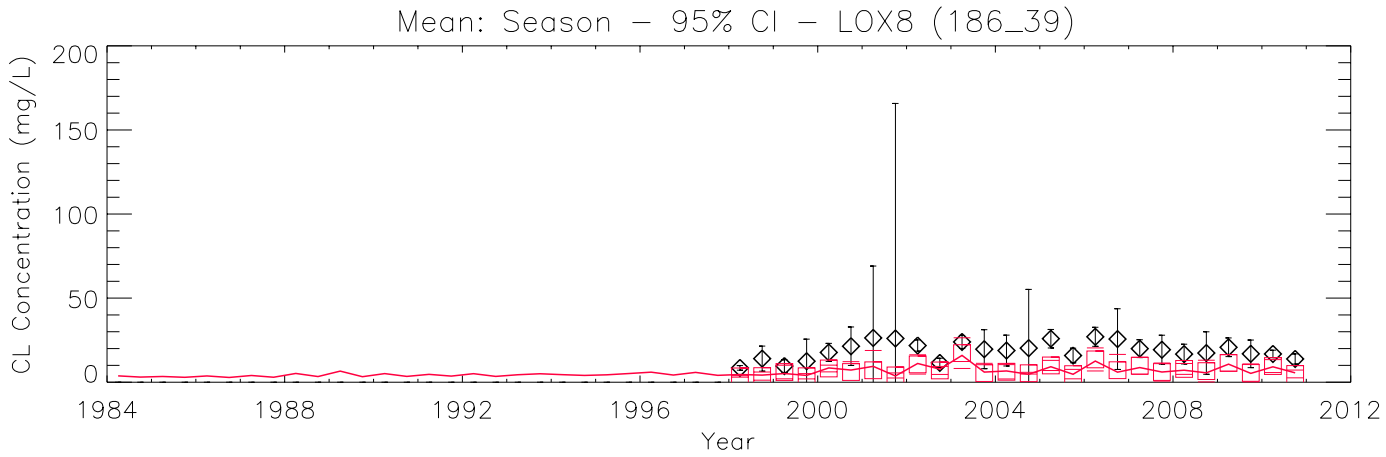

Raw Data (Obs. N = 87) – LOX9 (176_39)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

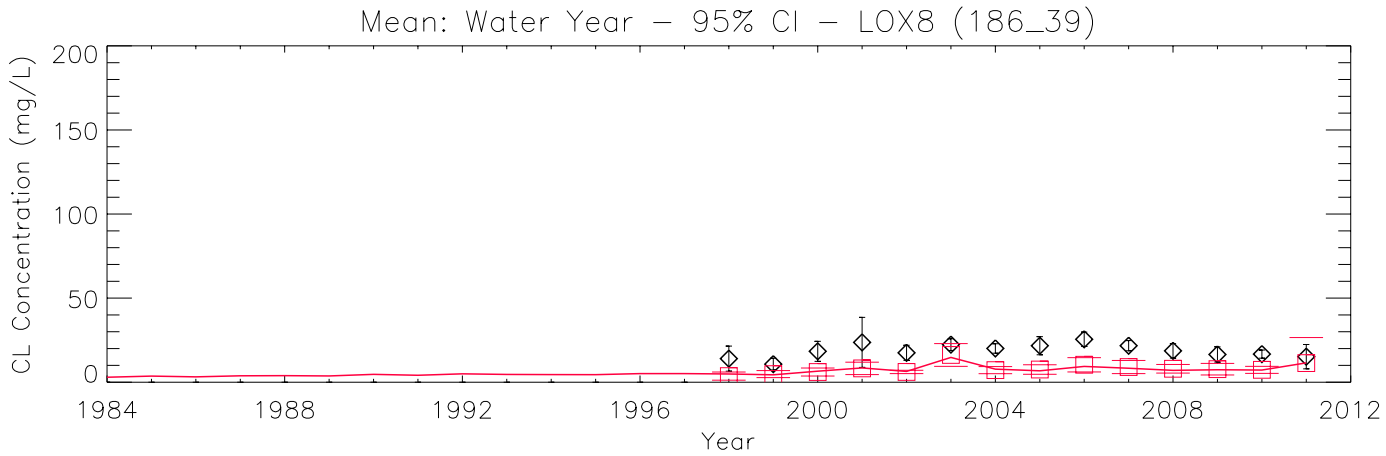

Mean: Season – 95% CI – LOX9 (176_39)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

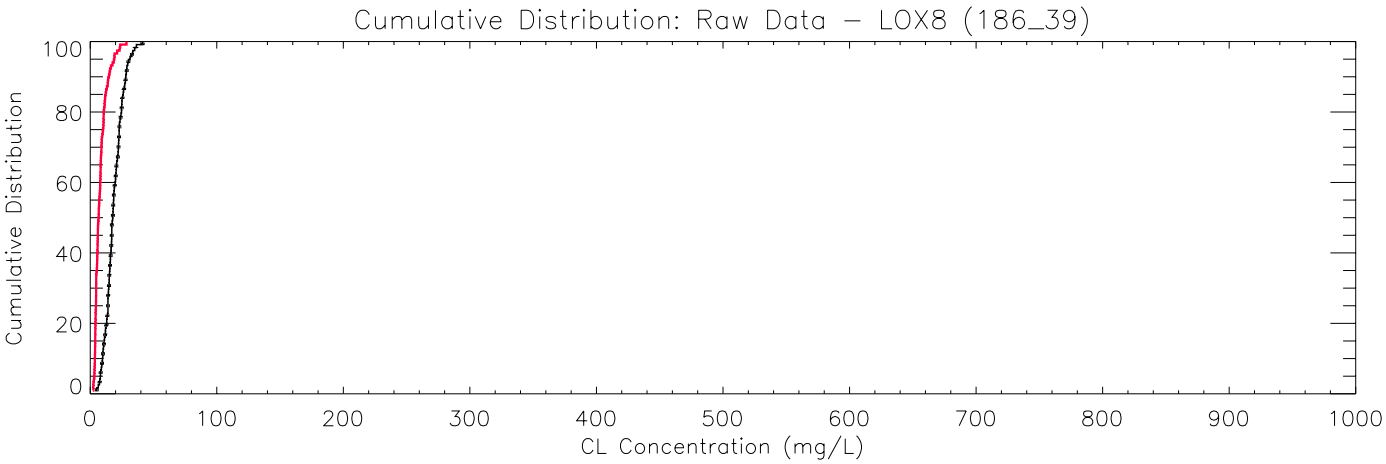

Mean: Water Year – 95% CI – LOX9 (176_39)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

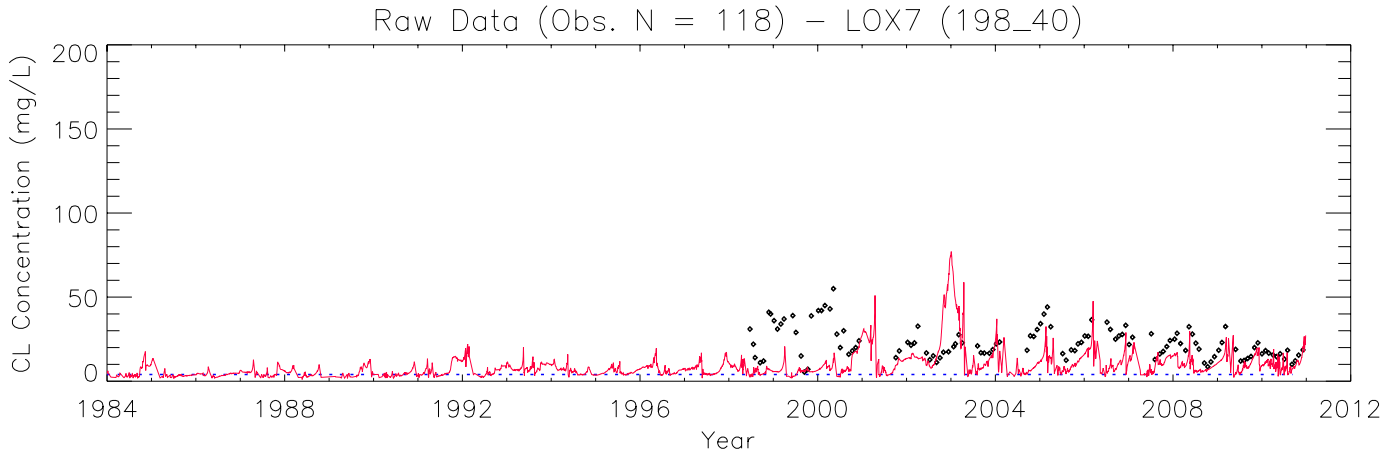

Cumulative Distribution: Raw Data – LOX9 (176_39)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

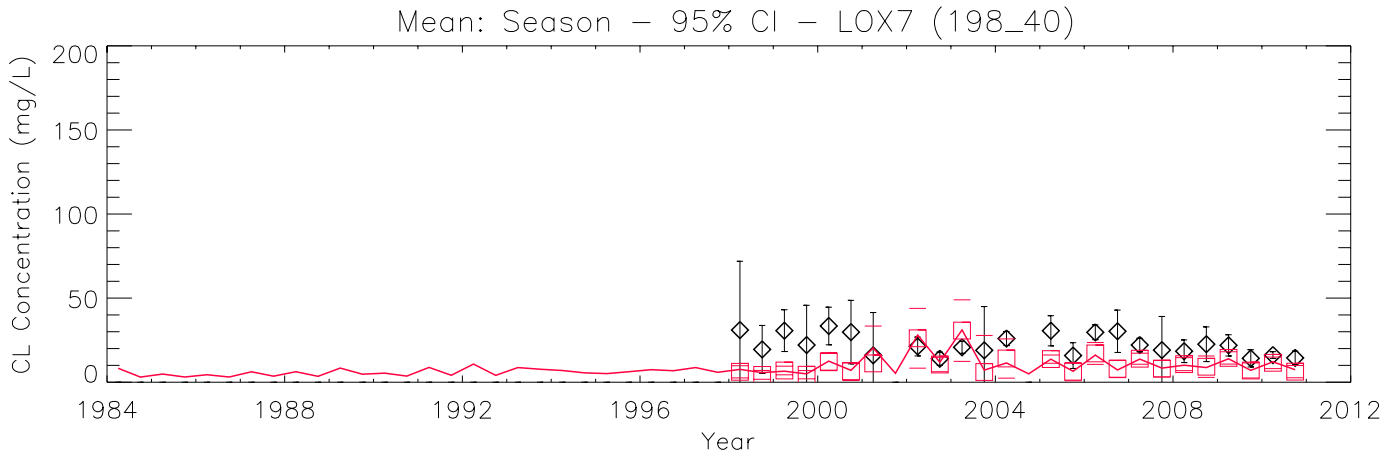

Raw Data (Obs. N = 118) – LOX8 (186_39)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

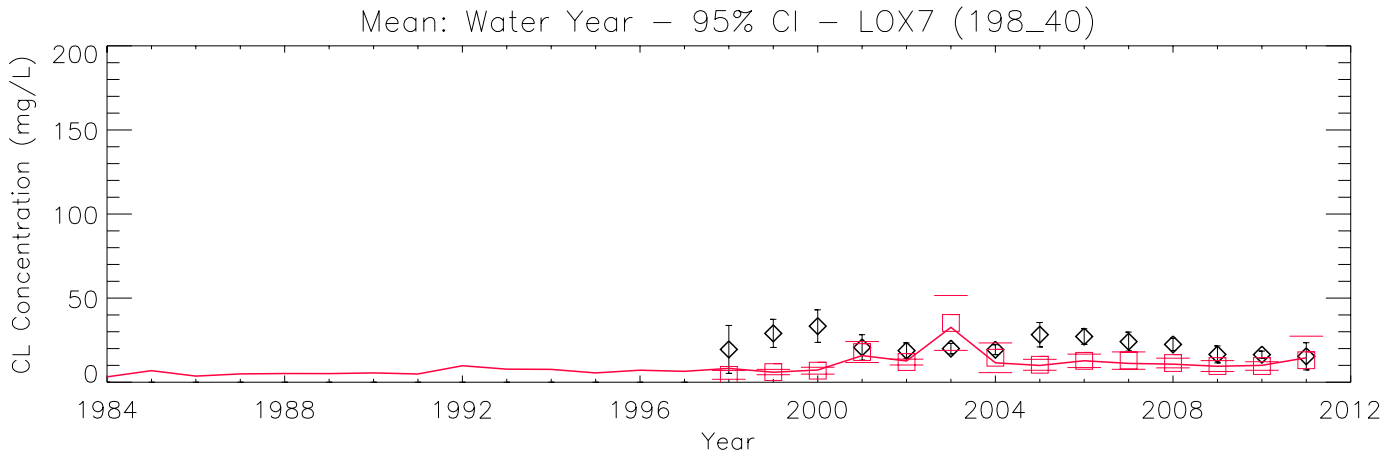

Mean: Season – 95% CI – LOX8 (186_39)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

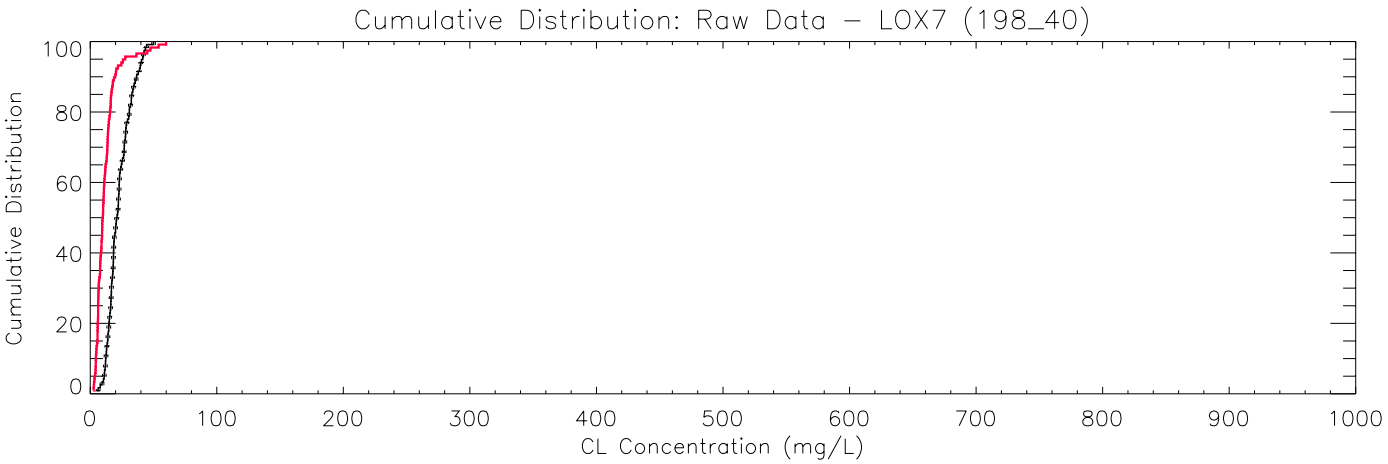

Mean: Water Year – 95% CI – LOX8 (186_39)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

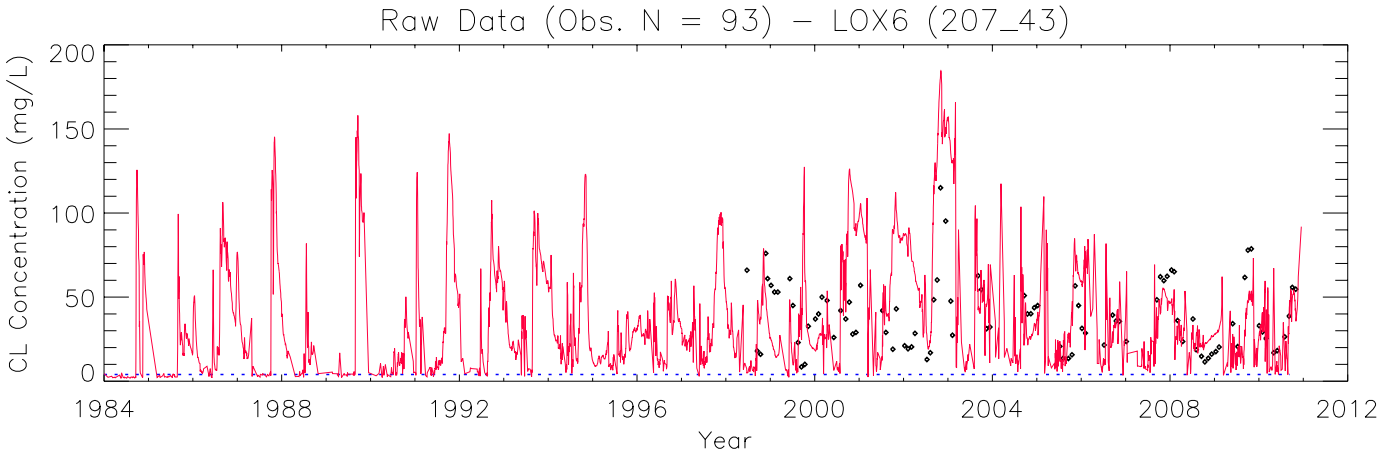

Cumulative Distribution: Raw Data – LOX8 (186_39)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

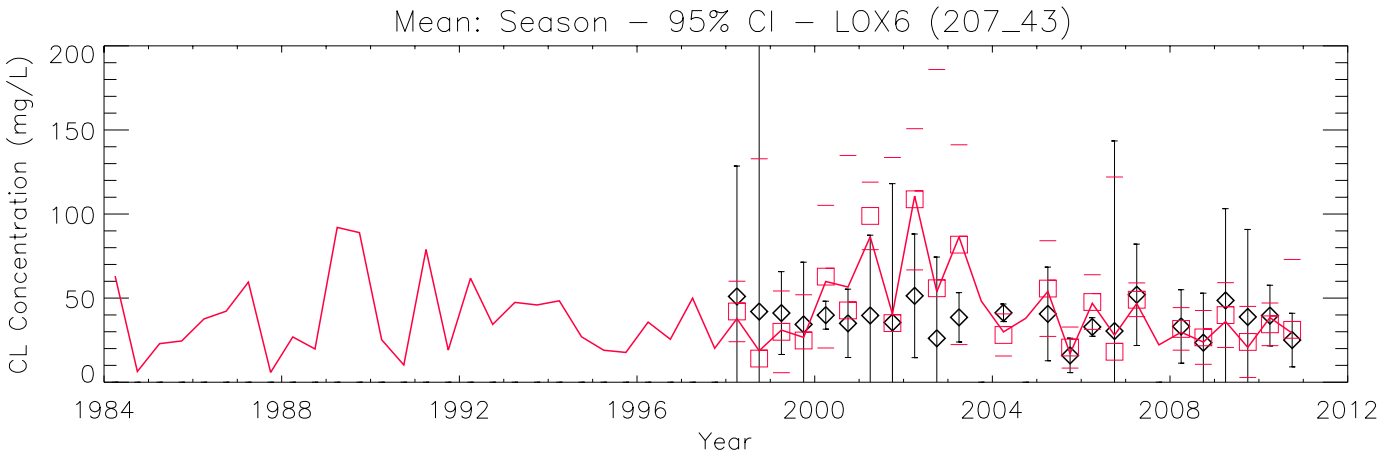

Raw Data (Obs. N = 118) – LOX7 (198_40)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

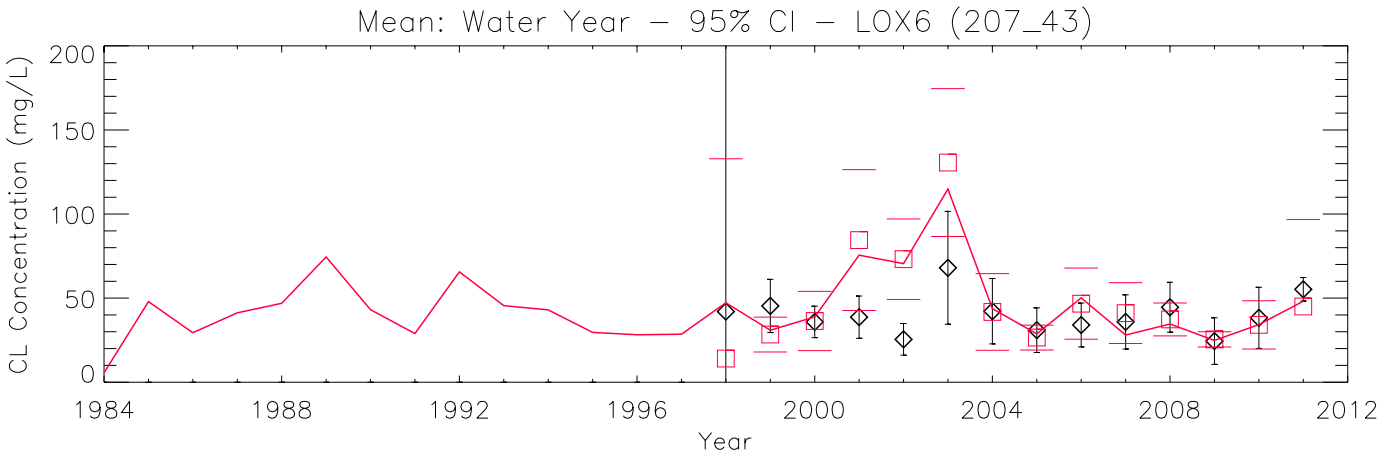

Mean: Season – 95% CI – LOX7 (198_40)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

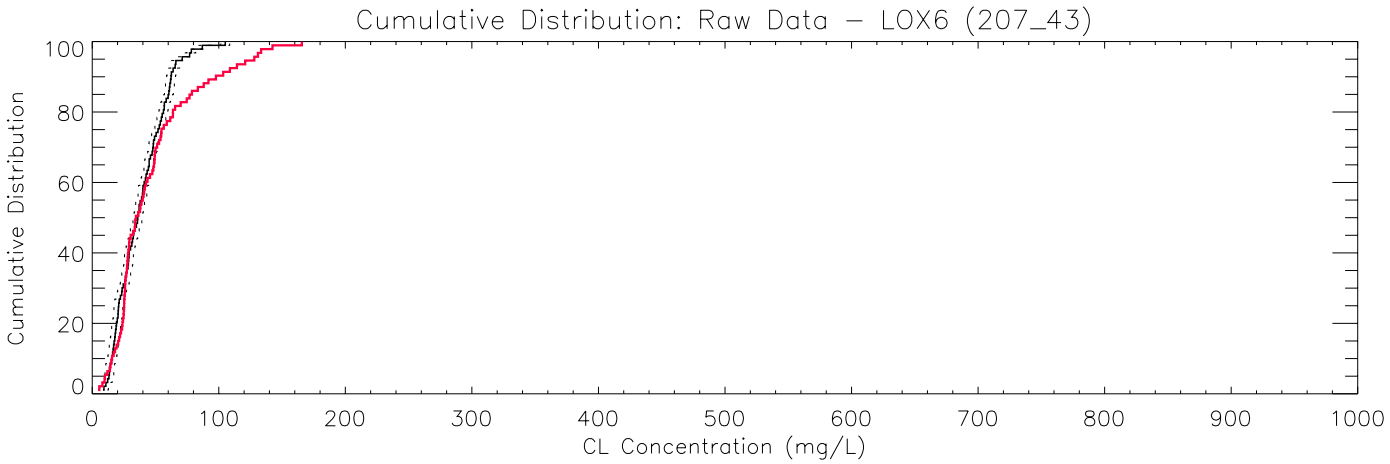

Mean: Water Year – 95% CI – LOX7 (198_40)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

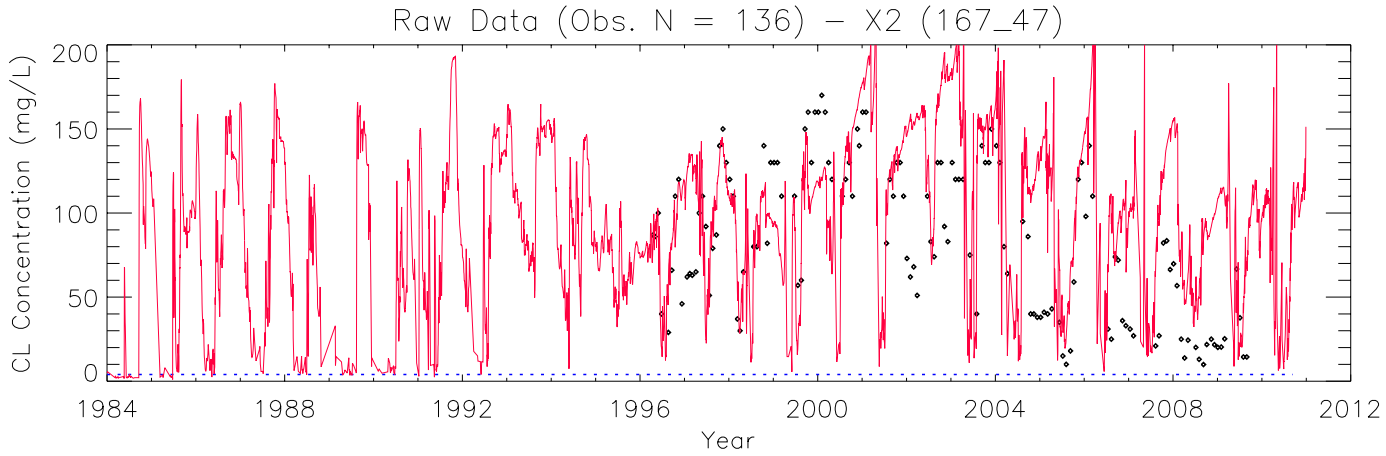

Cumulative Distribution: Raw Data – LOX7 (198_40)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

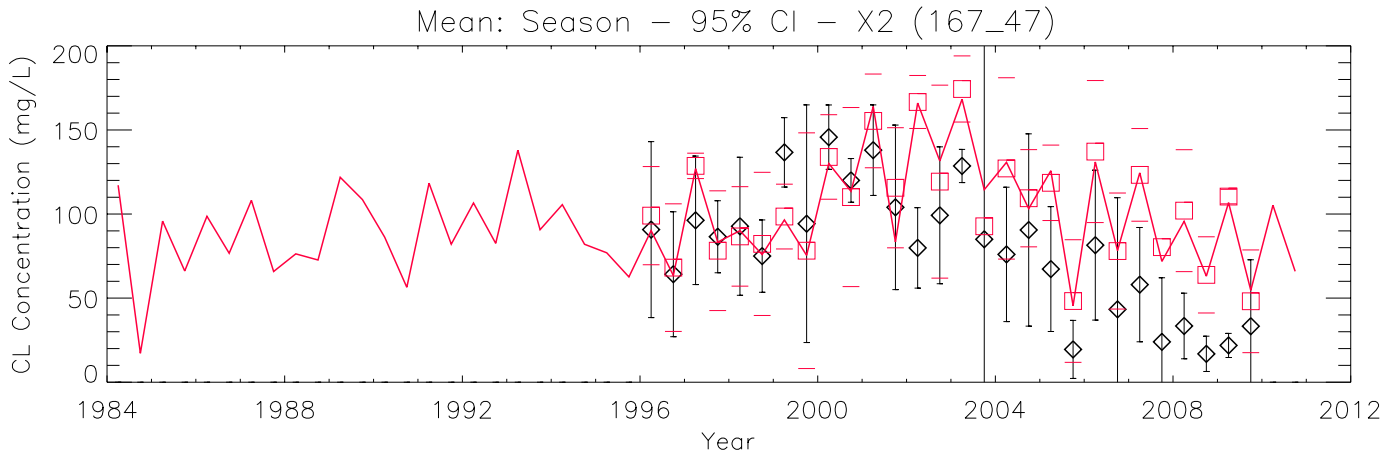

Raw Data (Obs. N = 93) – LOX6 (207_43)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

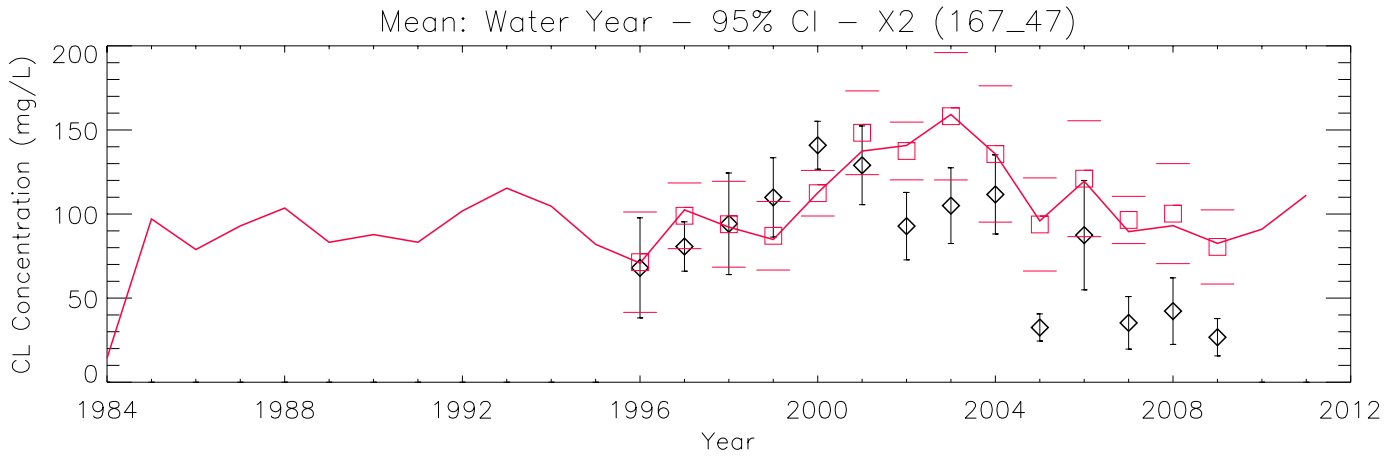

Mean: Season – 95% CI – LOX6 (207_43)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

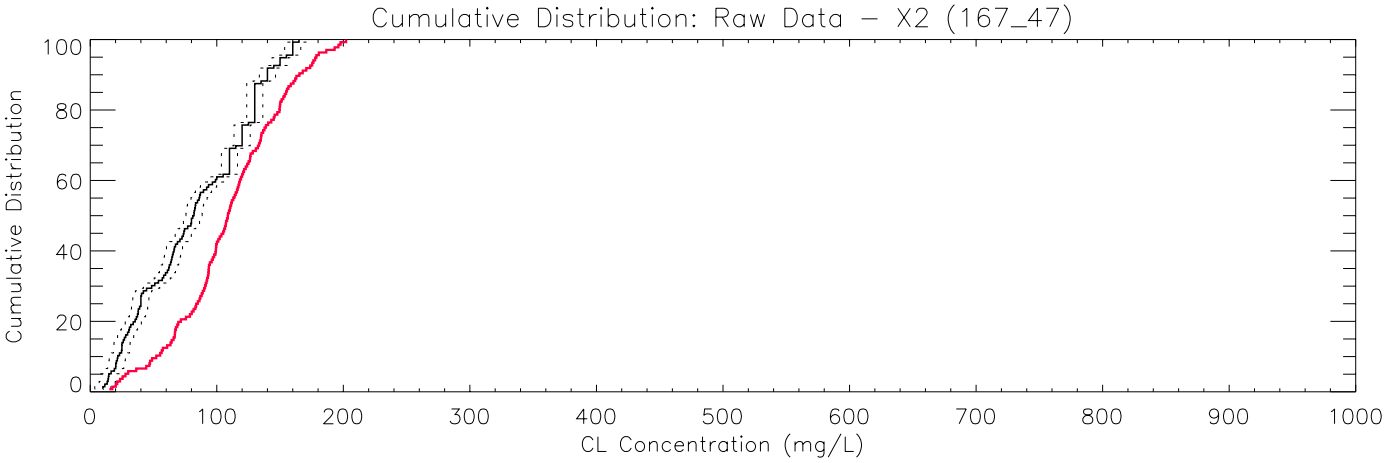

Mean: Water Year – 95% CI – LOX6 (207_43)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

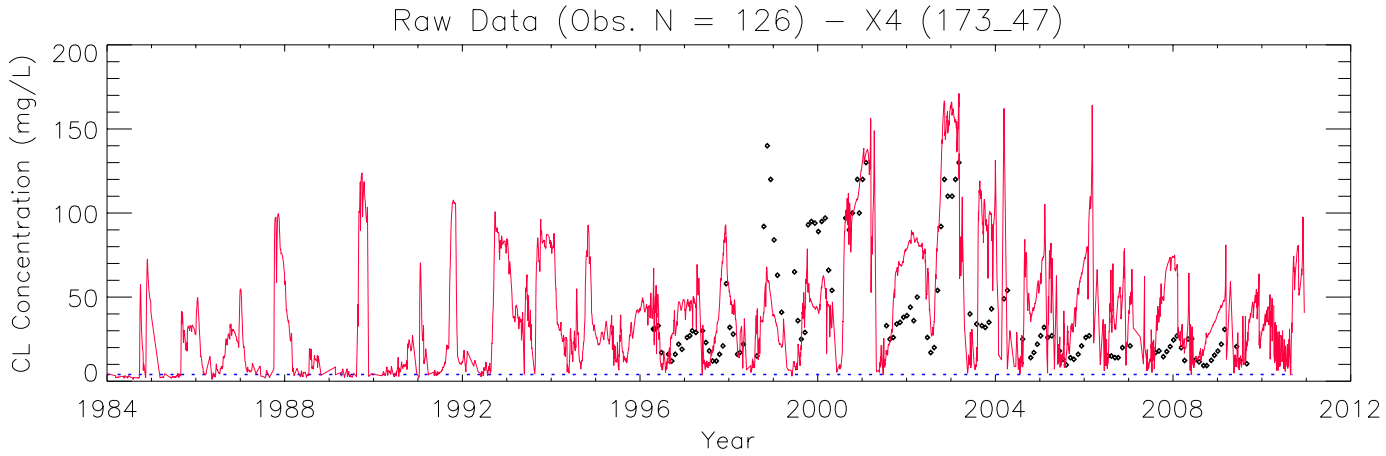

Cumulative Distribution: Raw Data – LOX6 (207_43)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

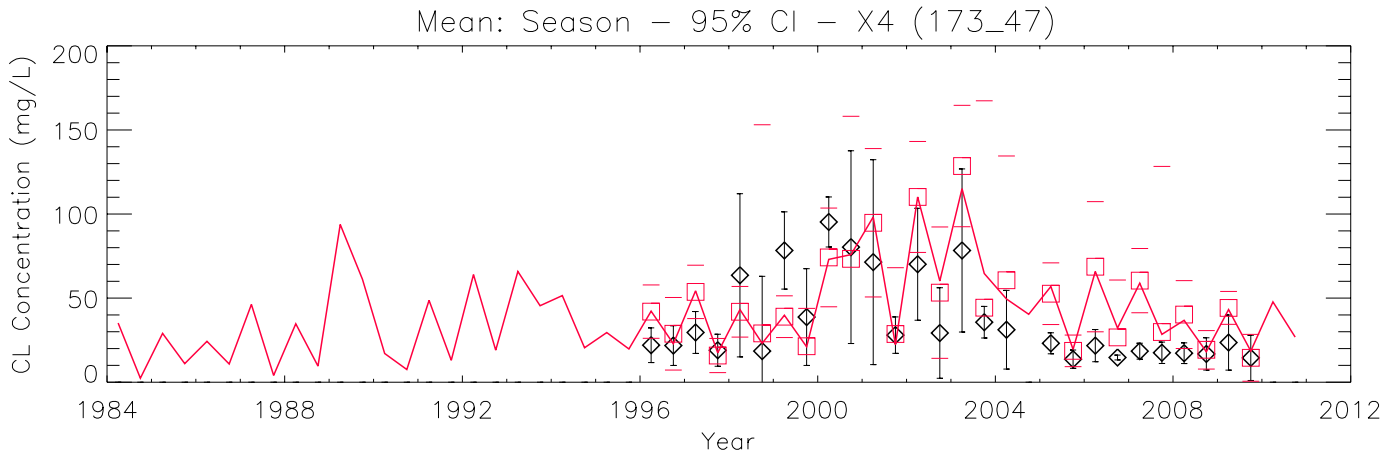

Raw Data (Obs. N = 136) – X2 (167_47)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

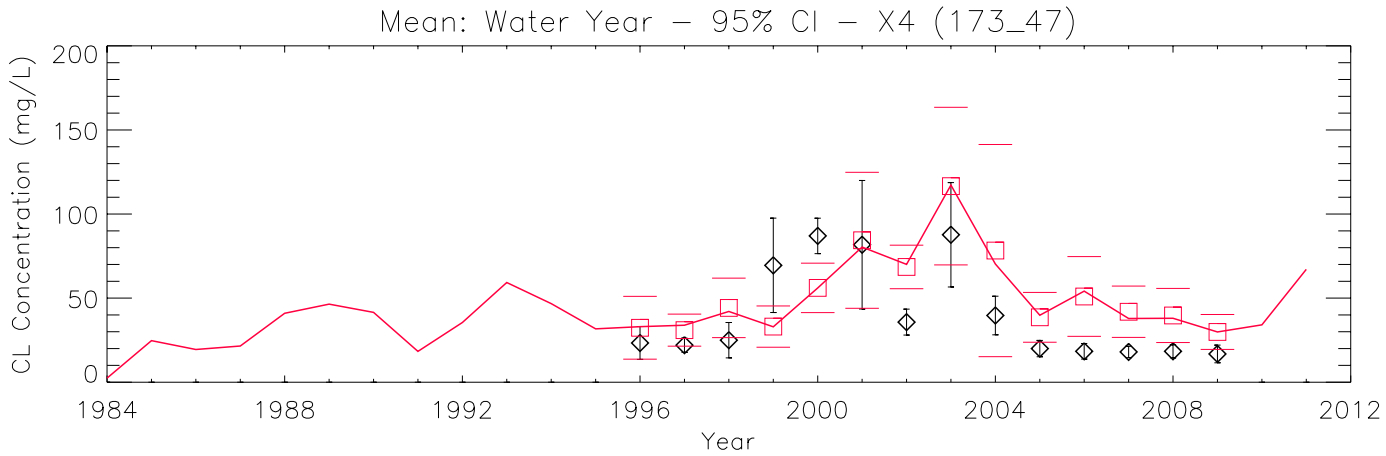

Mean: Season – 95% CI – X2 (167_47)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

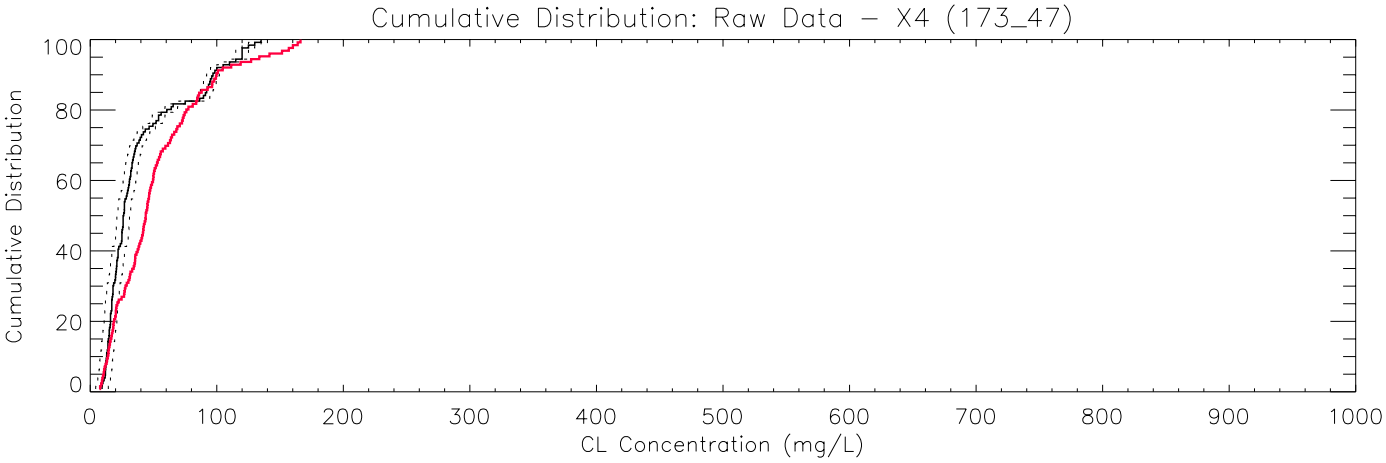

Mean: Water Year – 95% CI – X2 (167_47)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

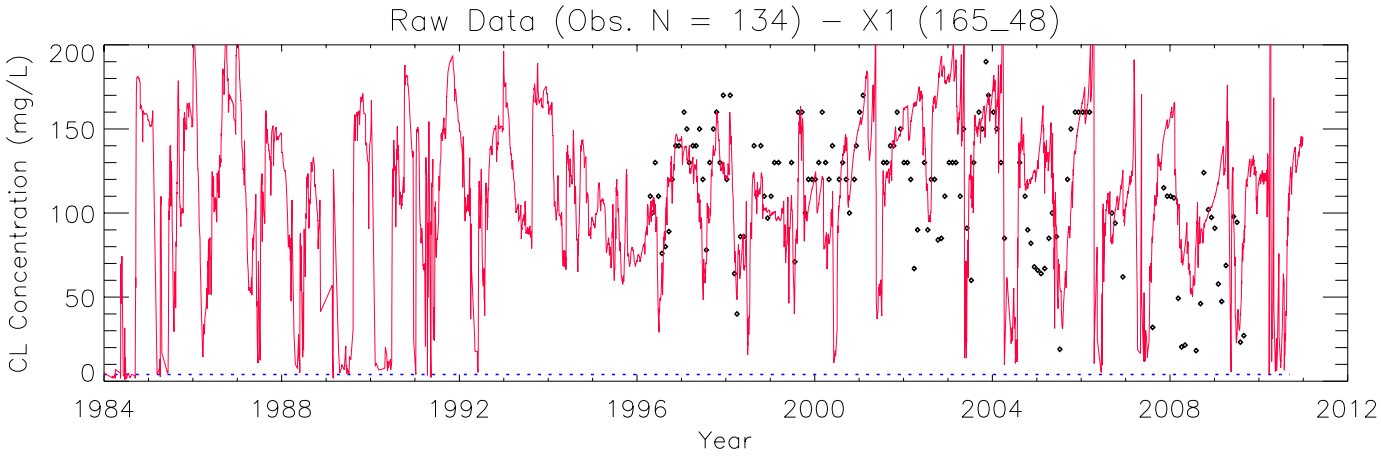

Cumulative Distribution: Raw Data – X2 (167_47)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

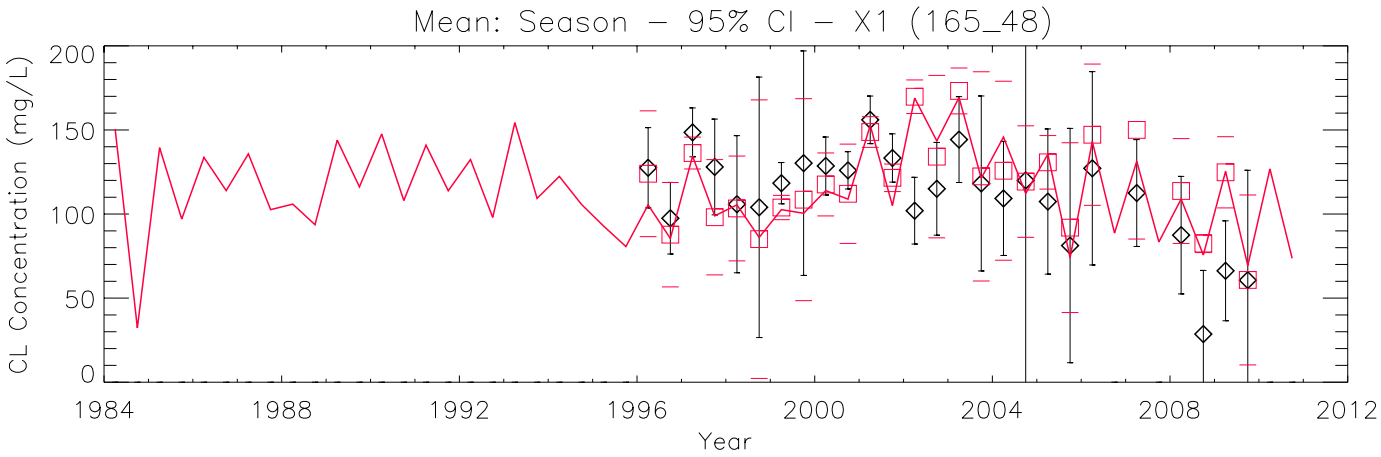

Raw Data (Obs. N = 126) – X4 (173_47)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

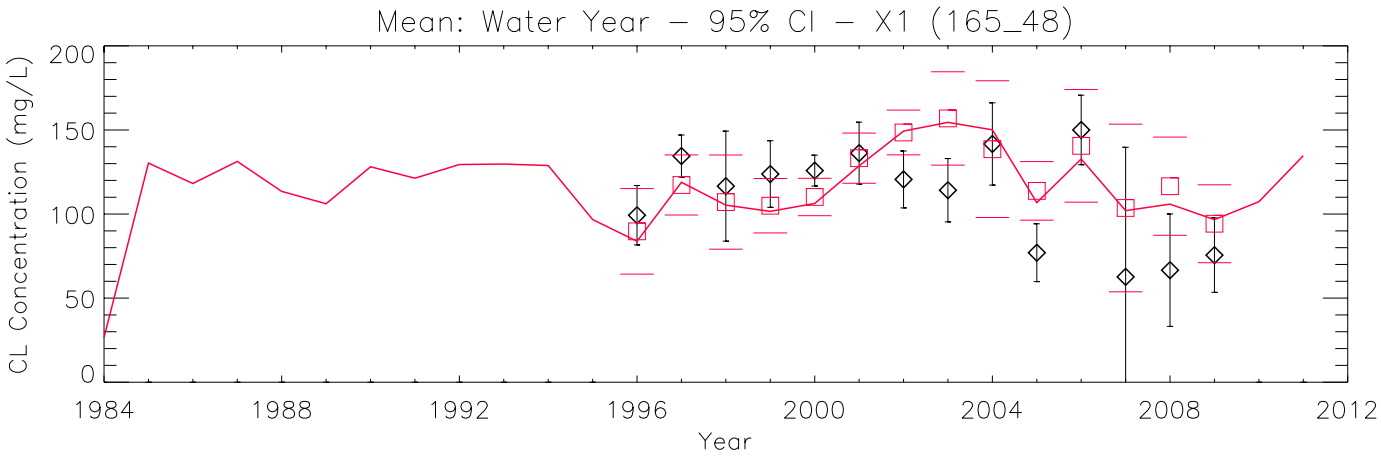

Mean: Season – 95% CI – X4 (173_47)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

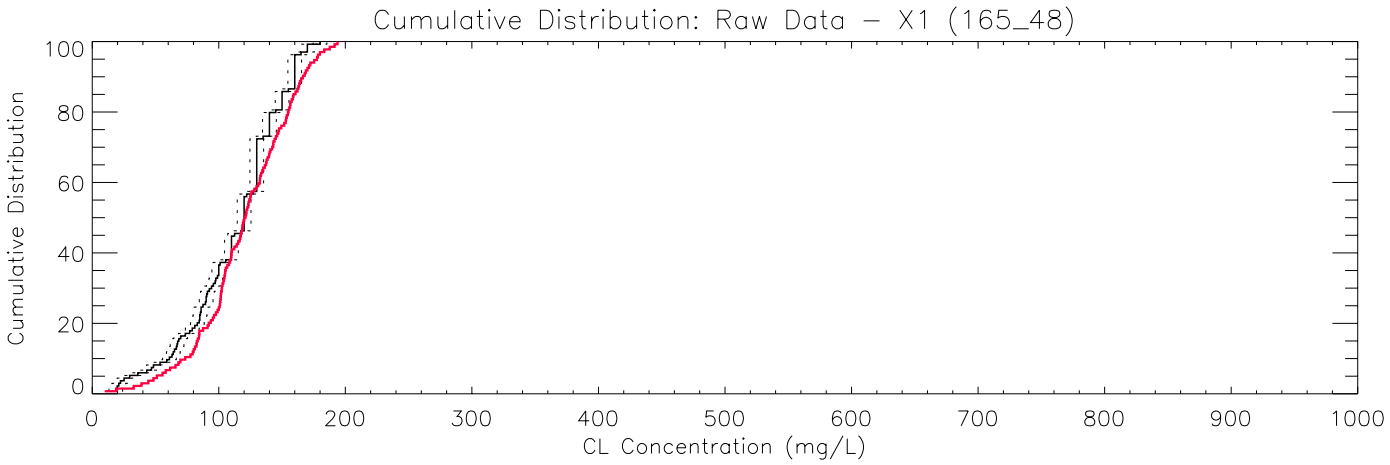

Mean: Water Year – 95% CI – X4 (173_47)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

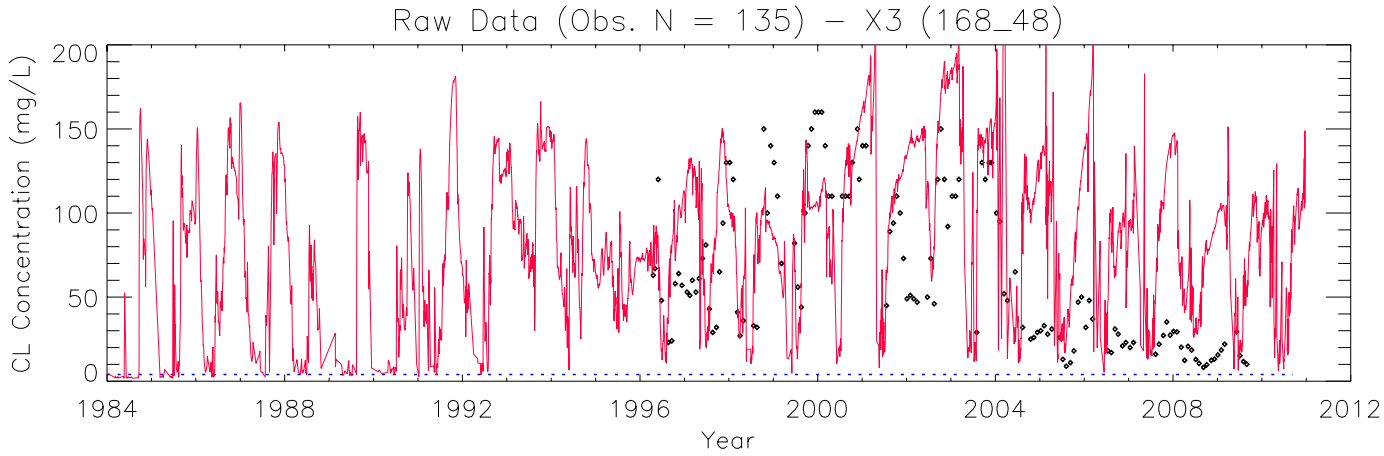

Cumulative Distribution: Raw Data – X4 (173_47)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

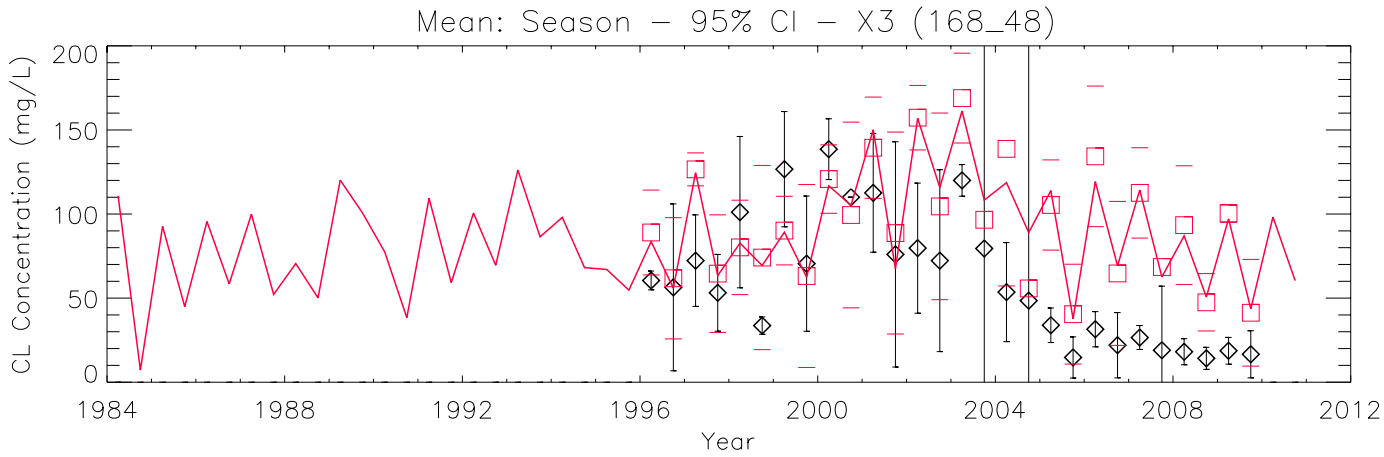

Raw Data (Obs. N = 134) – X1 (165_48)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

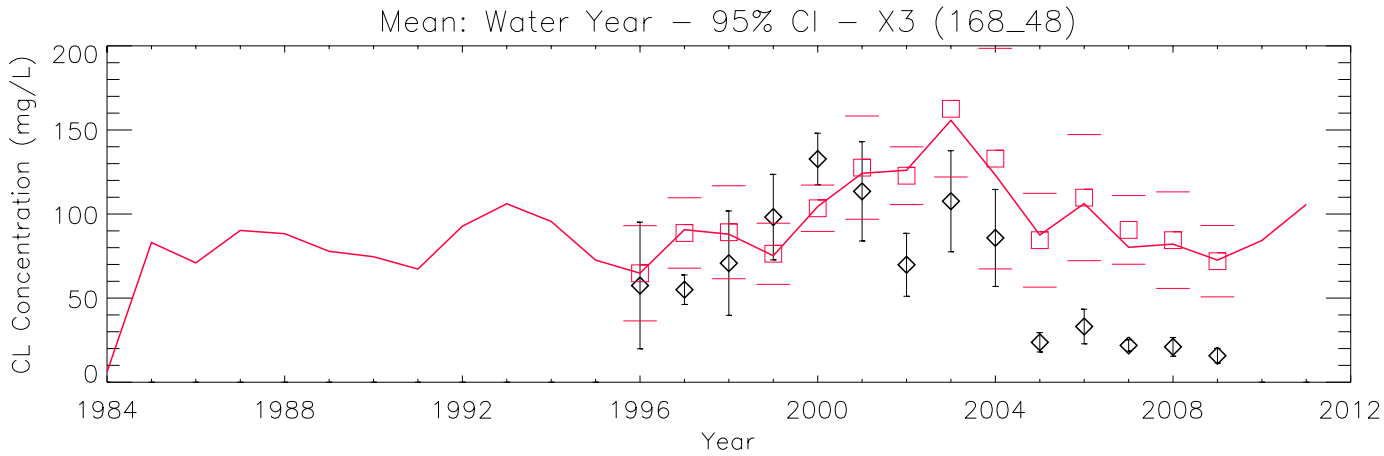

Mean: Season – 95% CI – X1 (165_48)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

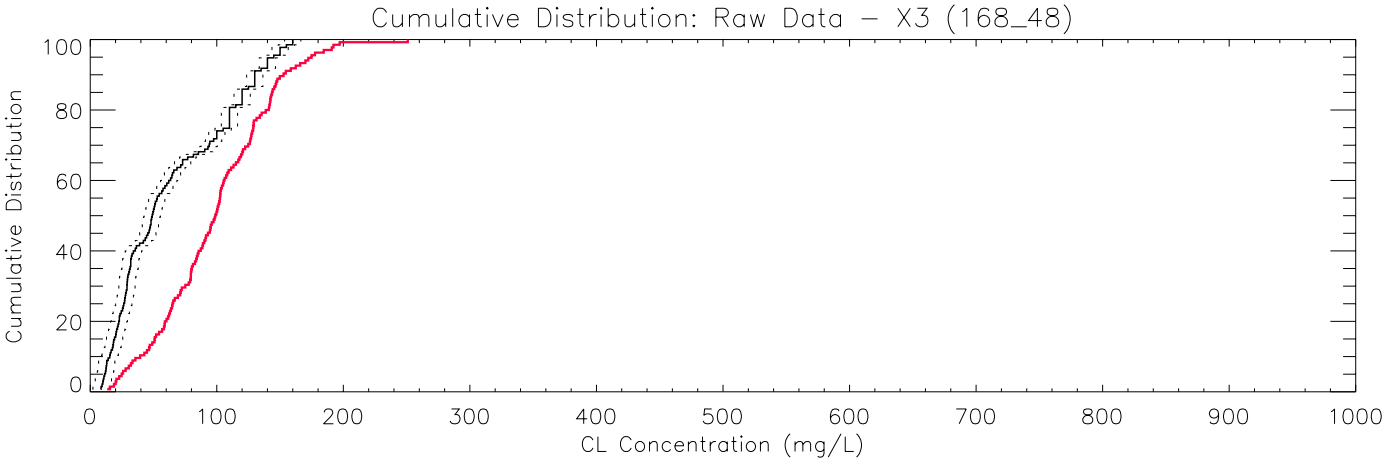

Mean: Water Year – 95% CI – X1 (165_48)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

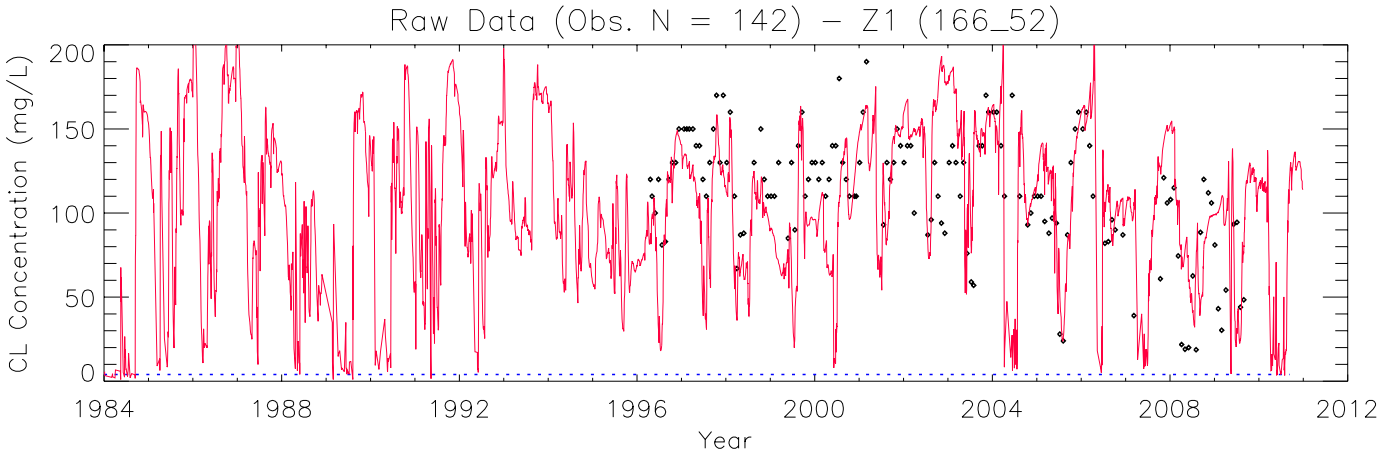

Cumulative Distribution: Raw Data – X1 (165_48)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

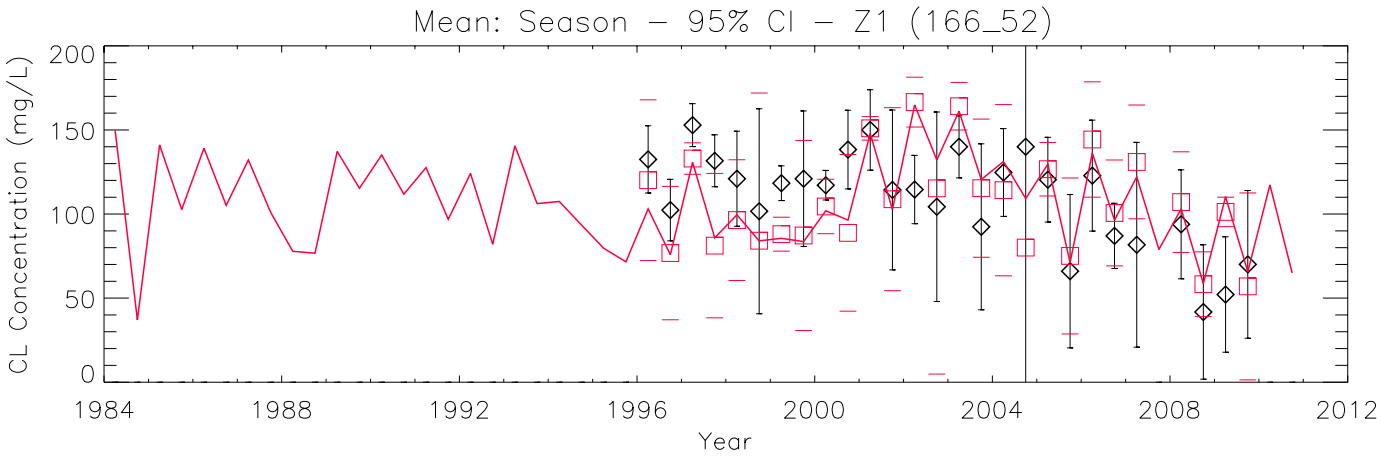

Raw Data (Obs. N = 135) – X3 (168_48)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

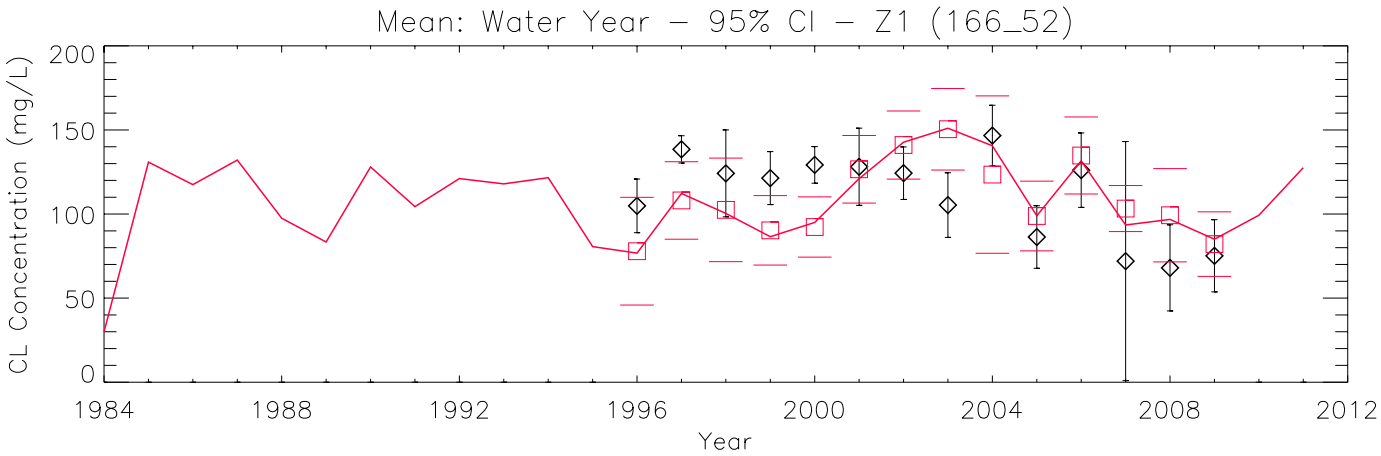

Mean: Season – 95% CI – X3 (168_48)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

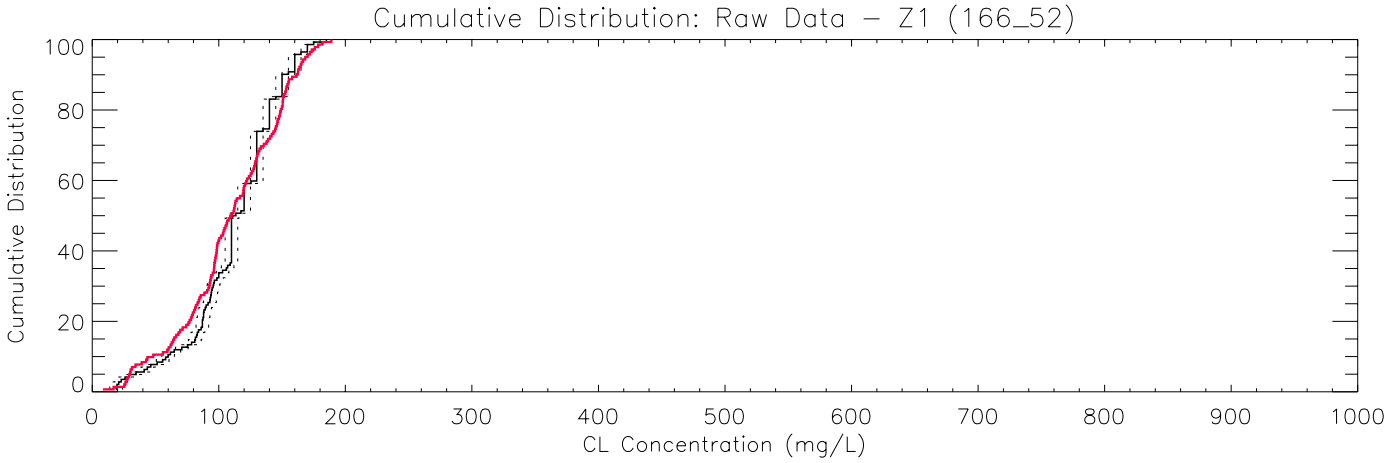

Mean: Water Year – 95% CI – X3 (168_48)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

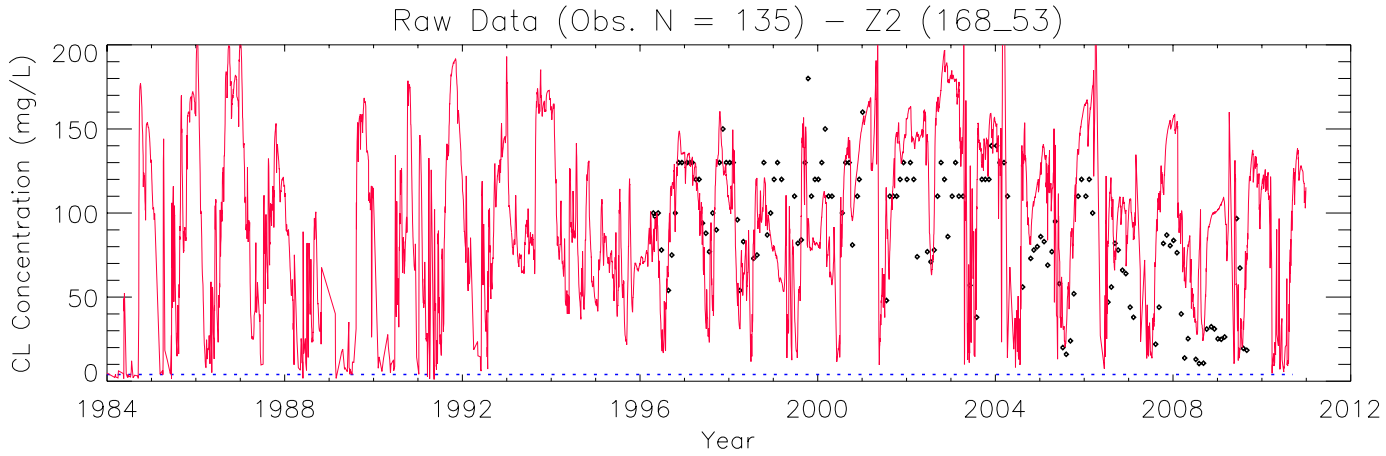

Cumulative Distribution: Raw Data – X3 (168_48)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

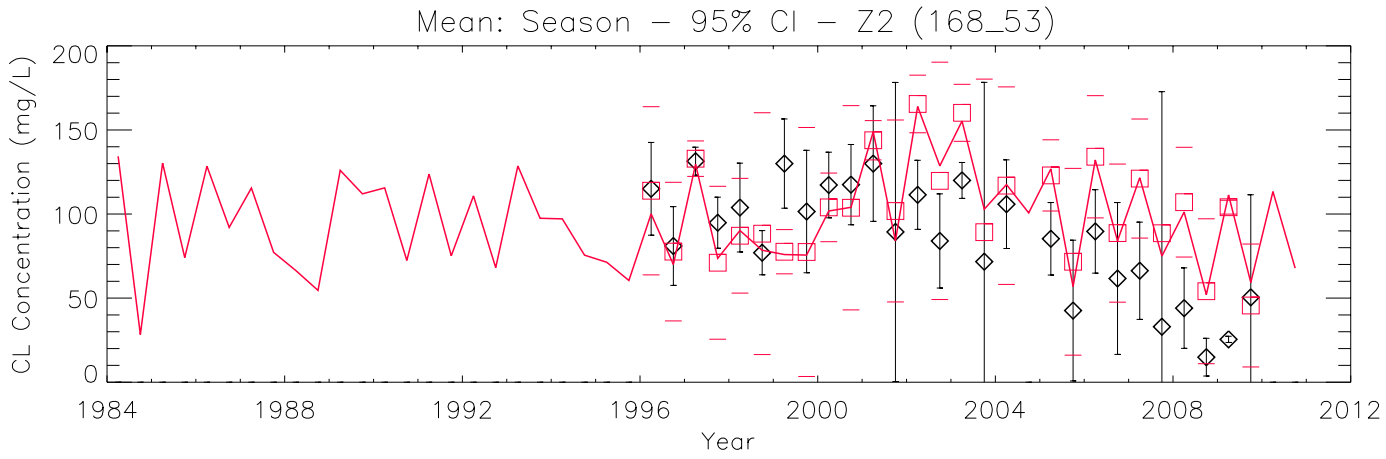

Raw Data (Obs. N = 142) – Z1 (166_52)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

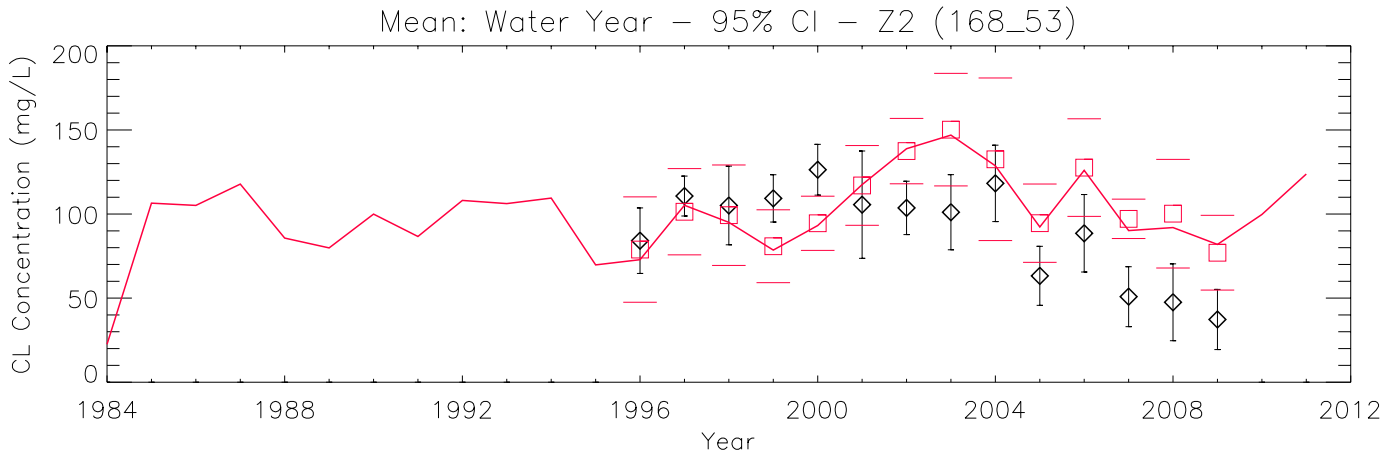

Mean: Season – 95% CI – Z1 (166_52)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

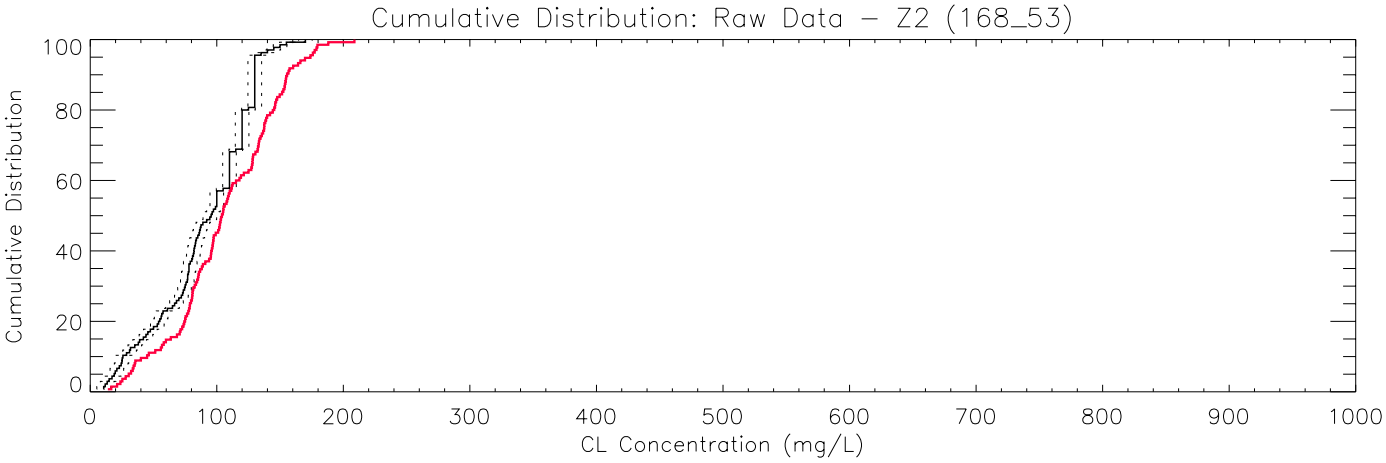

Mean: Water Year – 95% CI – Z1 (166_52)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

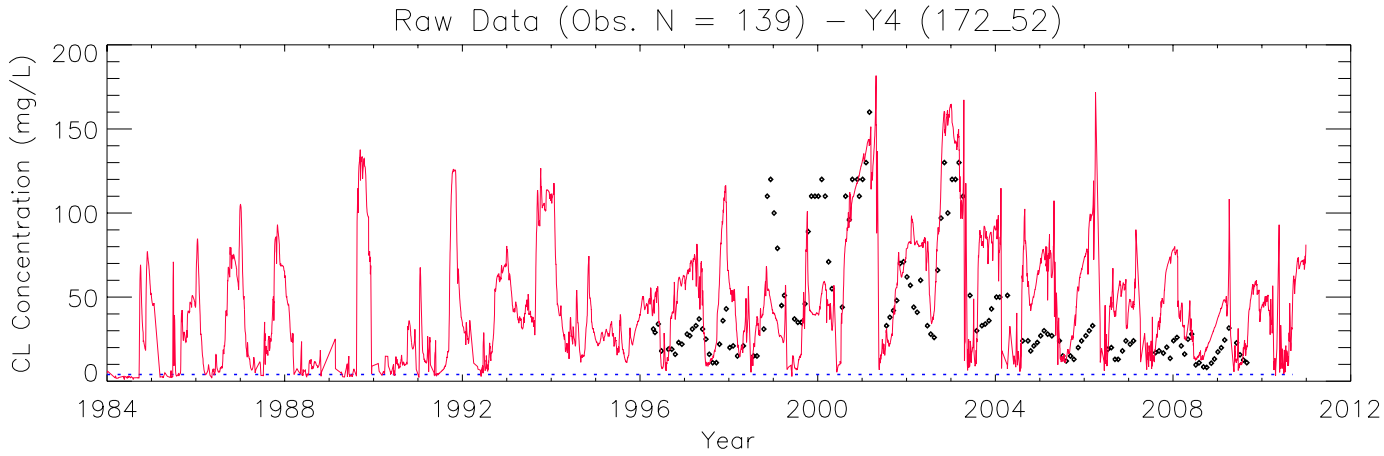

Cumulative Distribution: Raw Data – Z1 (166_52)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

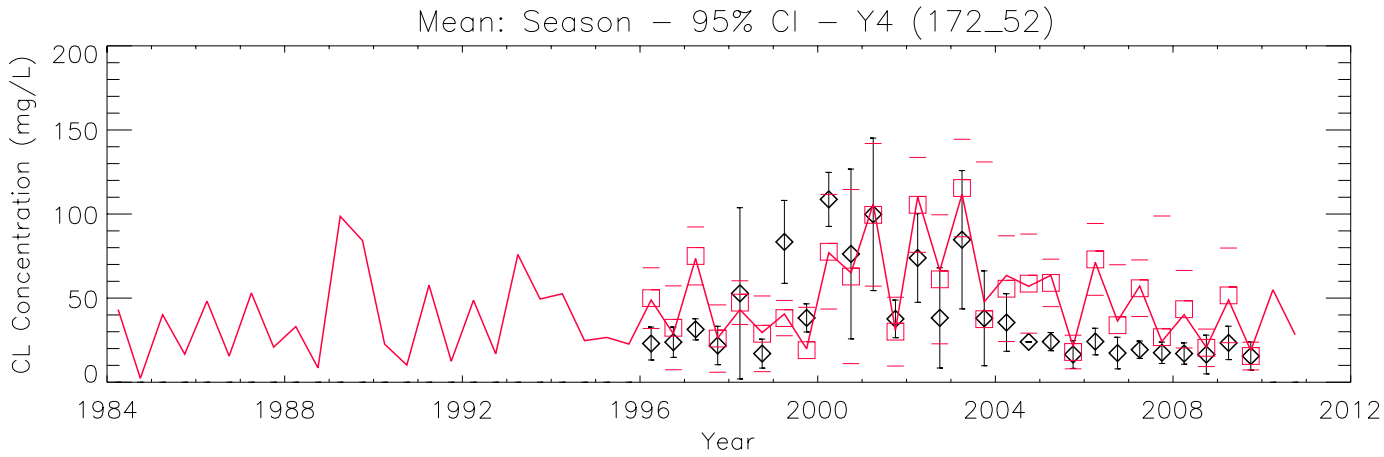

Raw Data (Obs. N = 135) – Z2 (168_53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

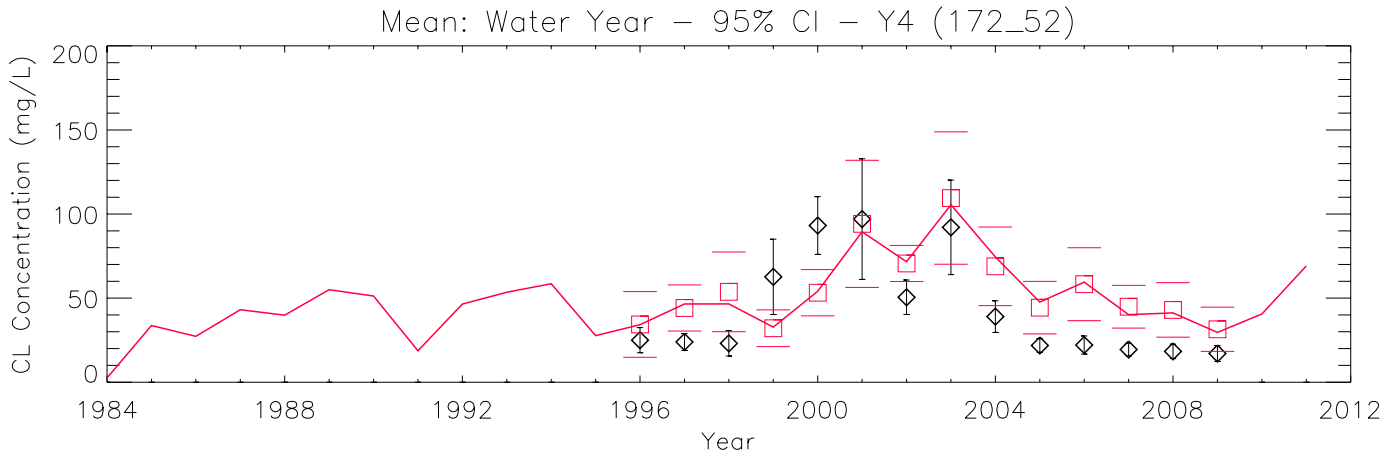

Mean: Season – 95% CI – Z2 (168_53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

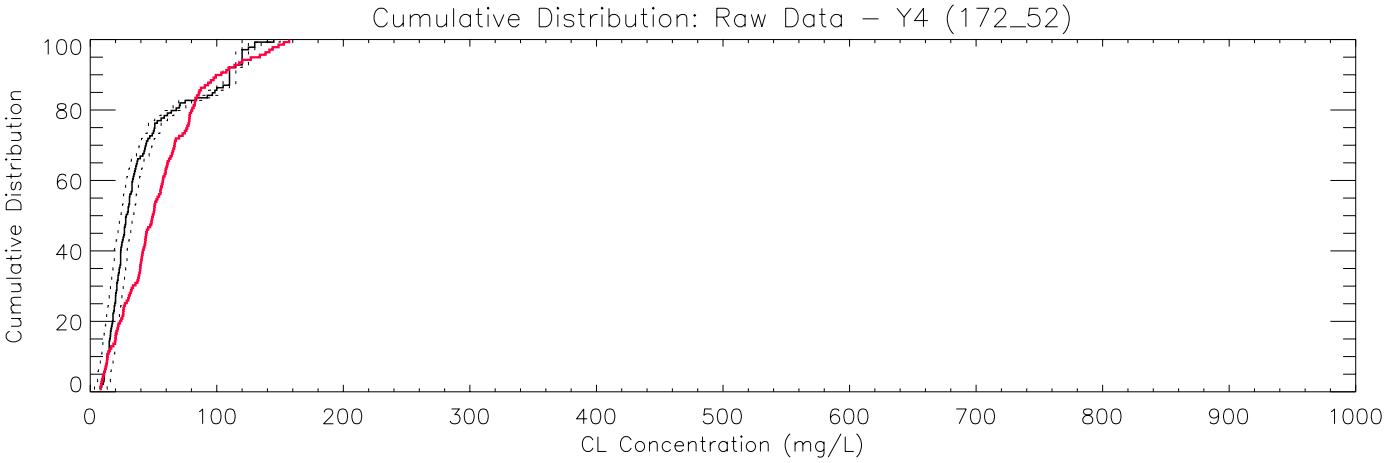

Mean: Water Year – 95% CI – Z2 (168_53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

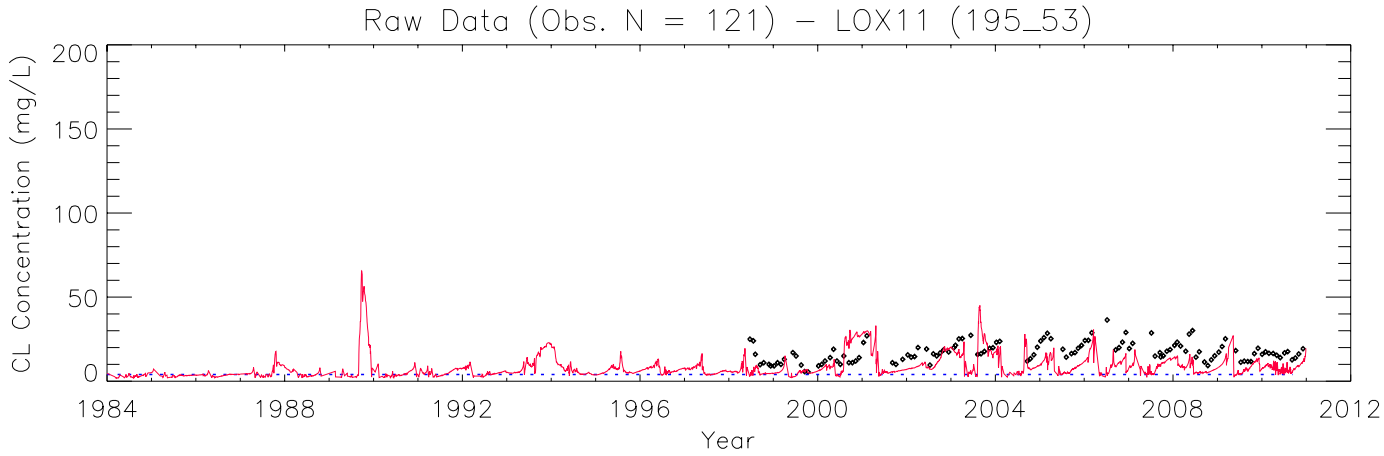

Cumulative Distribution: Raw Data – Z2 (168_53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

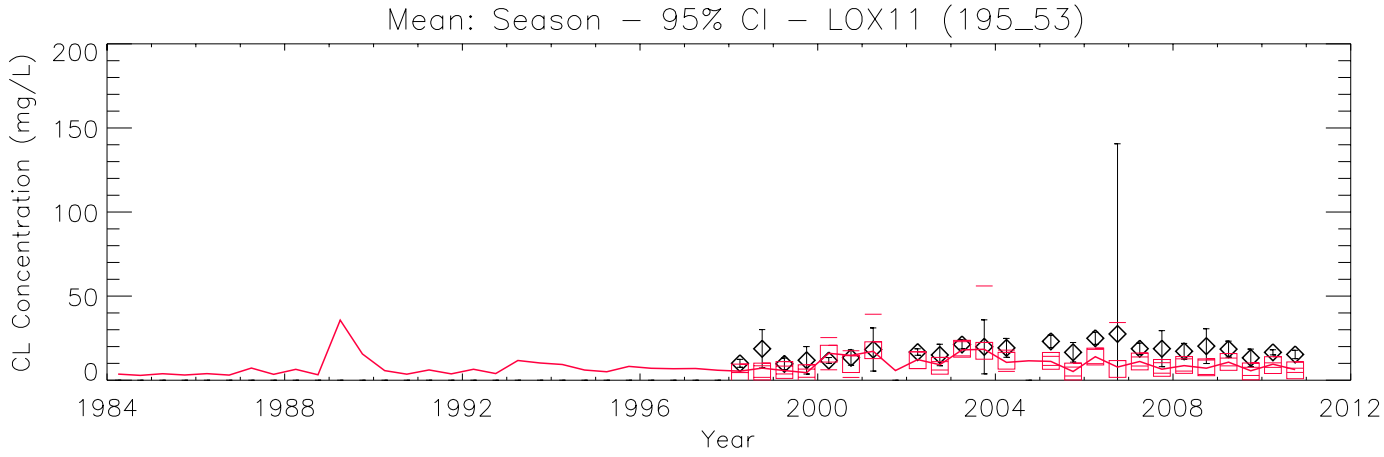

Raw Data (Obs. N = 139) – Y4 (172_52)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

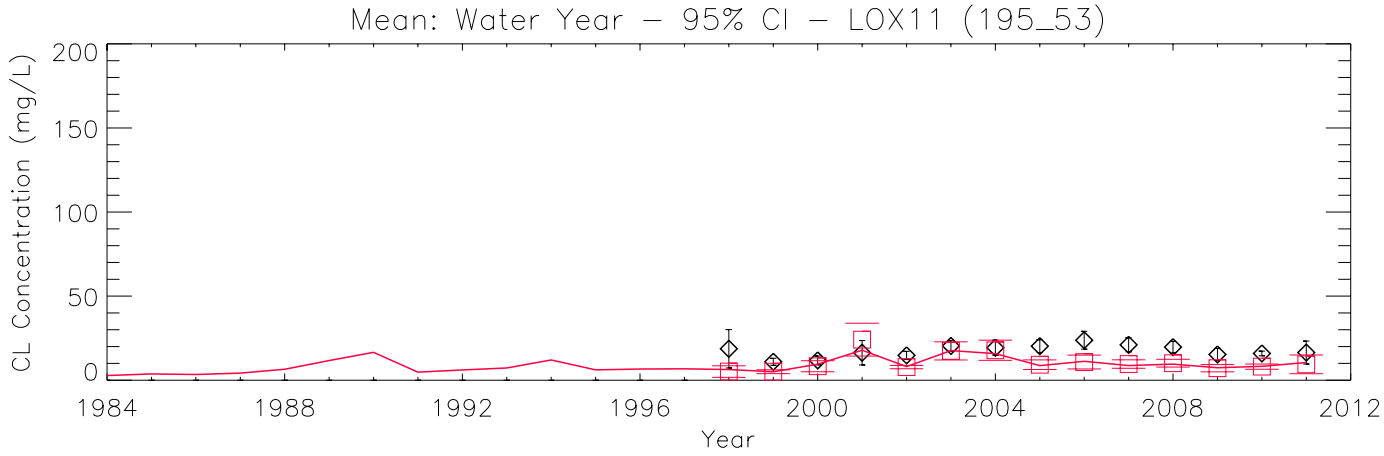

Mean: Season – 95% CI – Y4 (172_52)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

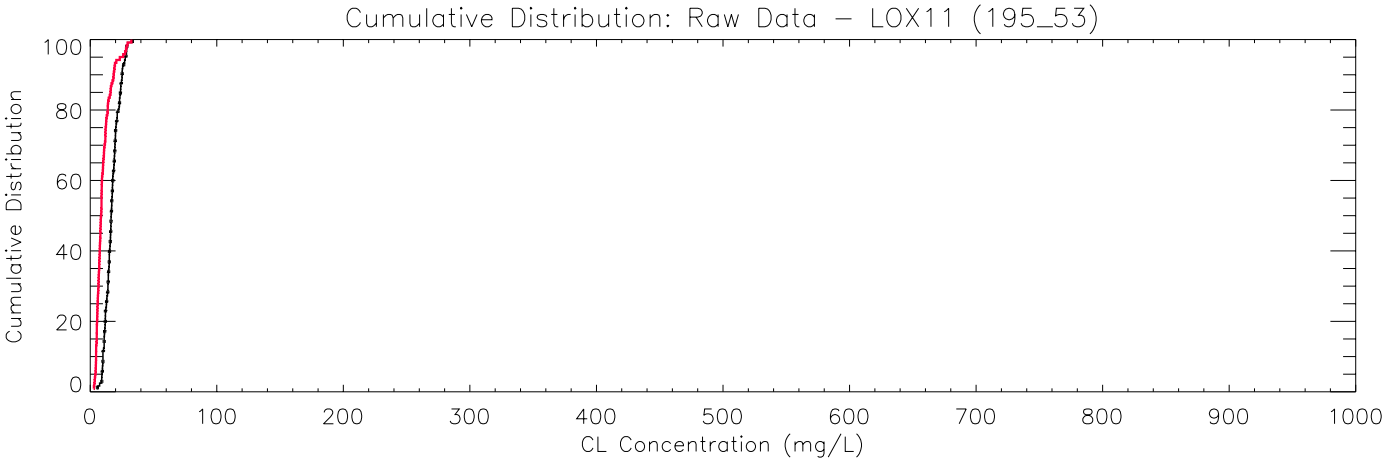

Mean: Water Year – 95% CI – Y4 (172_52)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

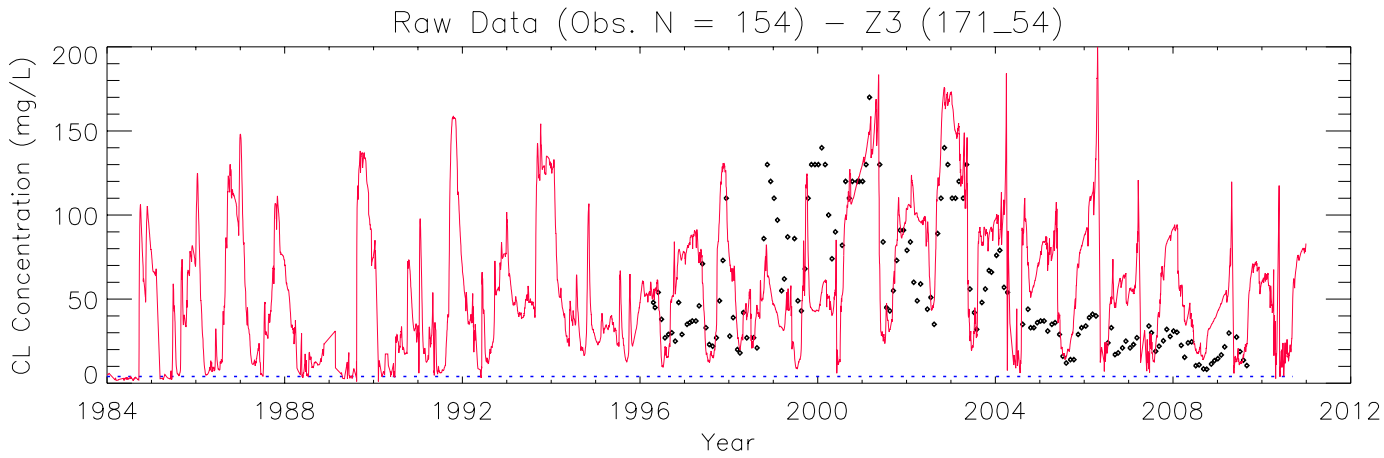

Cumulative Distribution: Raw Data – Y4 (172_52)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

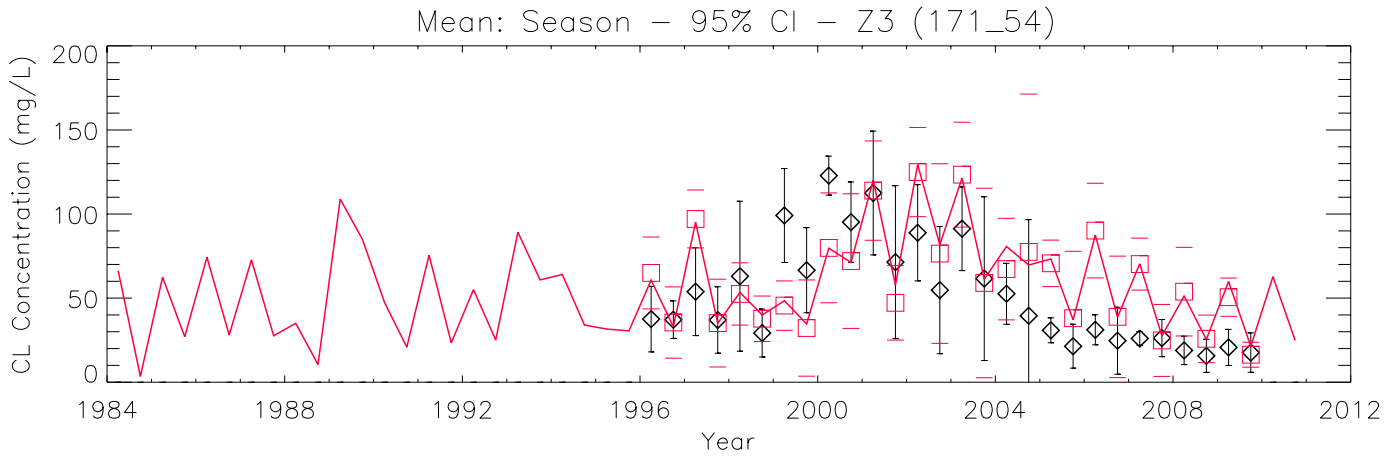

Raw Data (Obs. N = 121) – LOX11 (195_53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

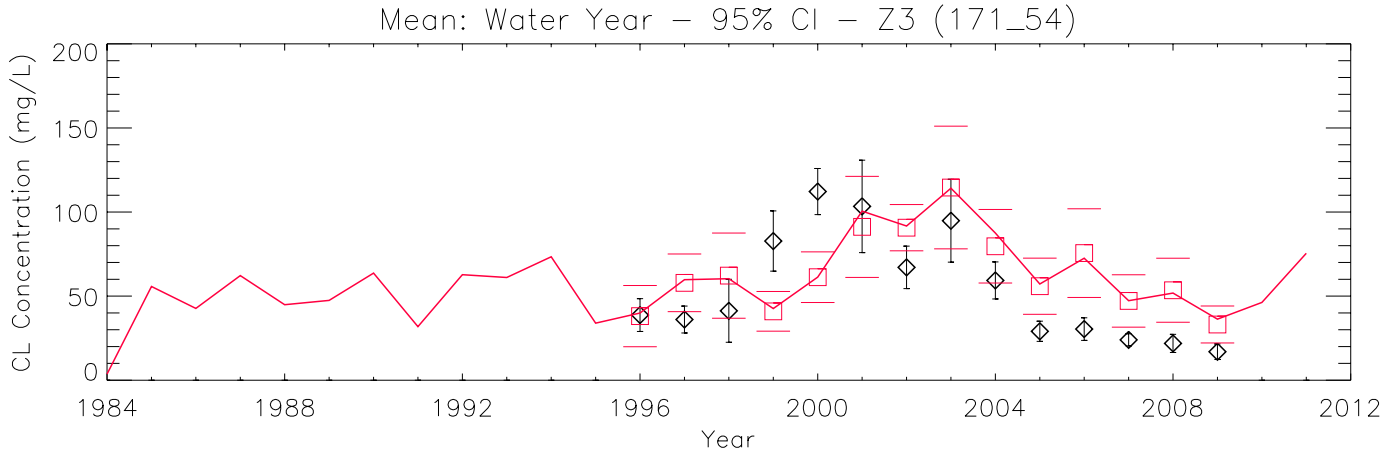

Mean: Season – 95% CI – LOX11 (195_53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

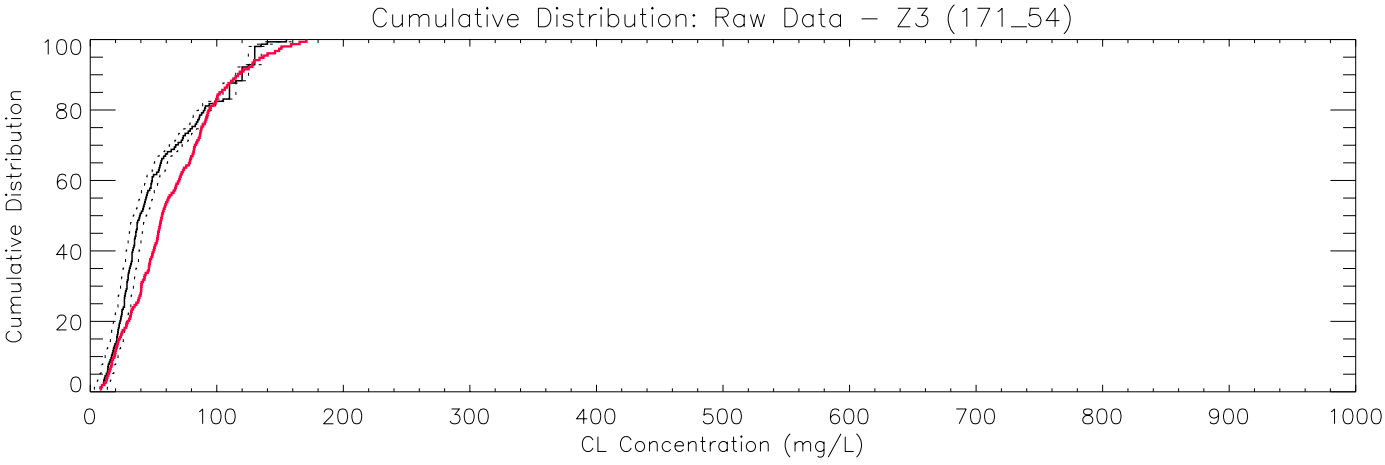

Mean: Water Year – 95% CI – LOX11 (195_53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

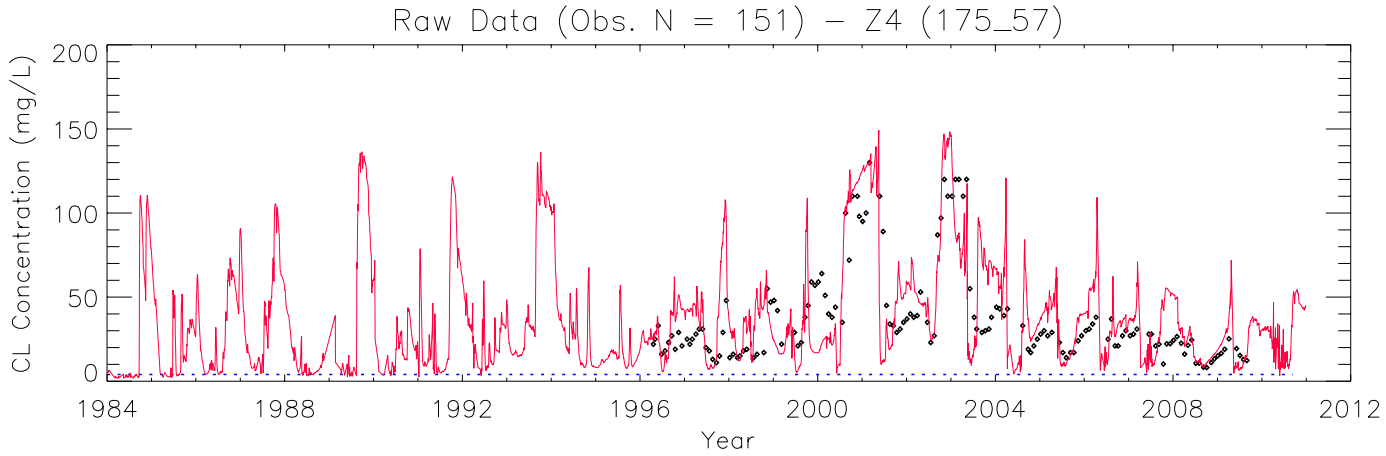

Cumulative Distribution: Raw Data – LOX11 (195_53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

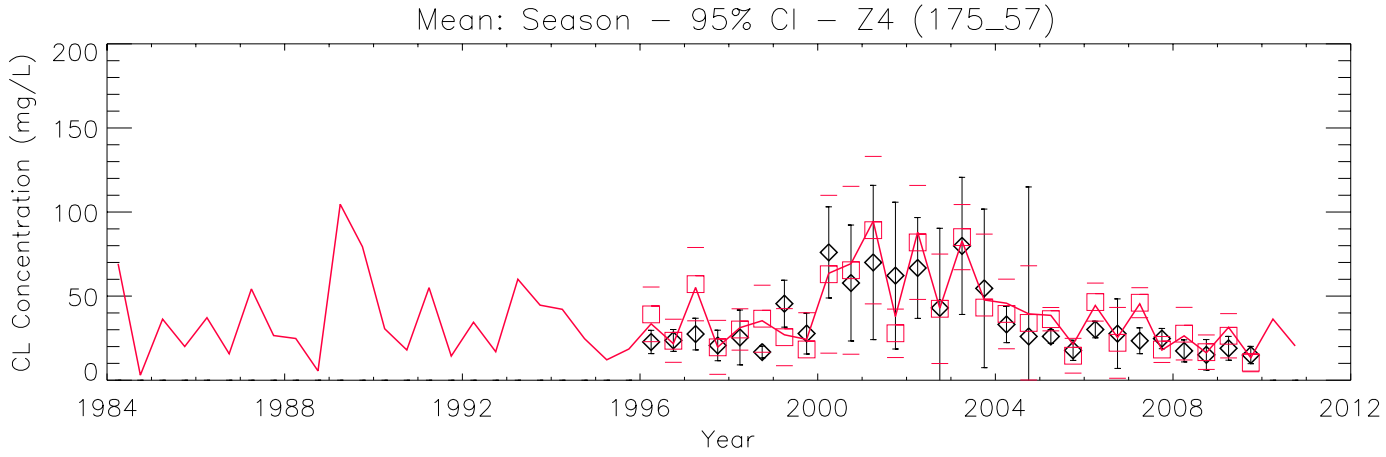

Raw Data (Obs. N = 154) – Z3 (171_54)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

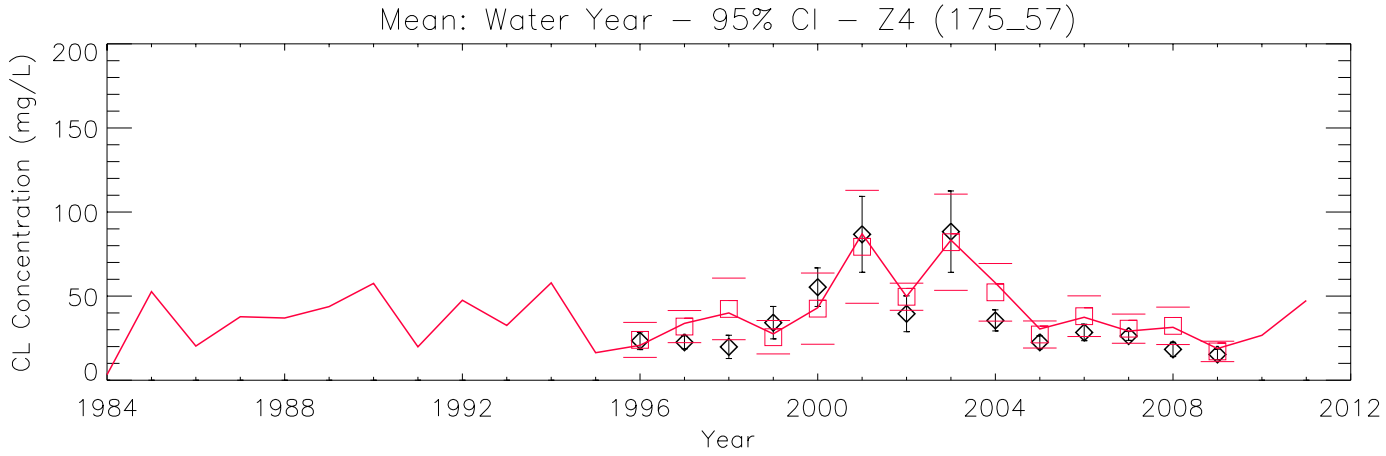

Mean: Season – 95% CI – Z3 (171_54)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

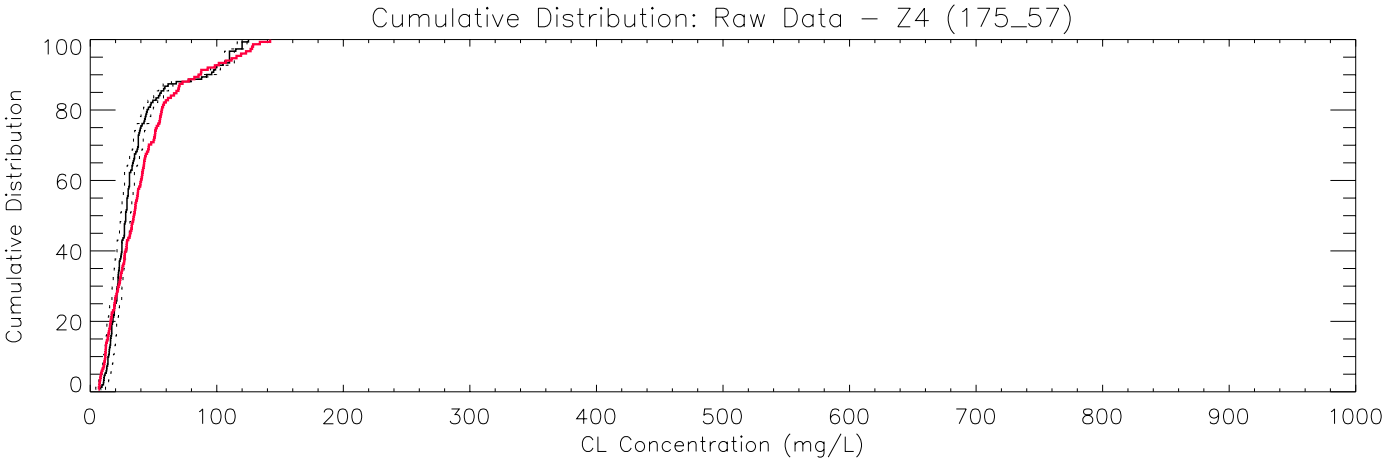

Mean: Water Year – 95% CI – Z3 (171_54)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

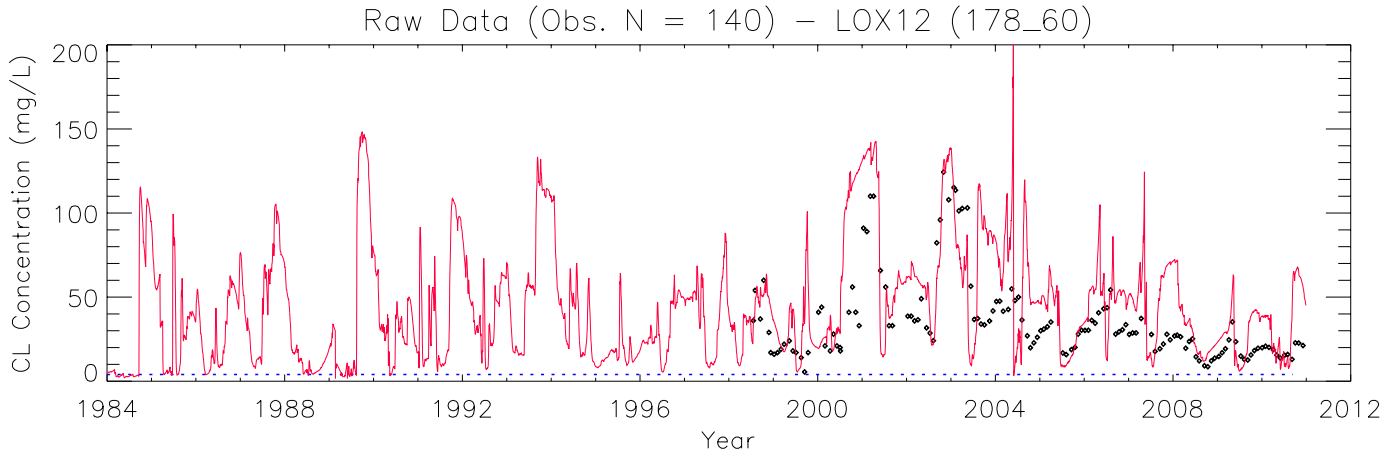

Cumulative Distribution: Raw Data – Z3 (171_54)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

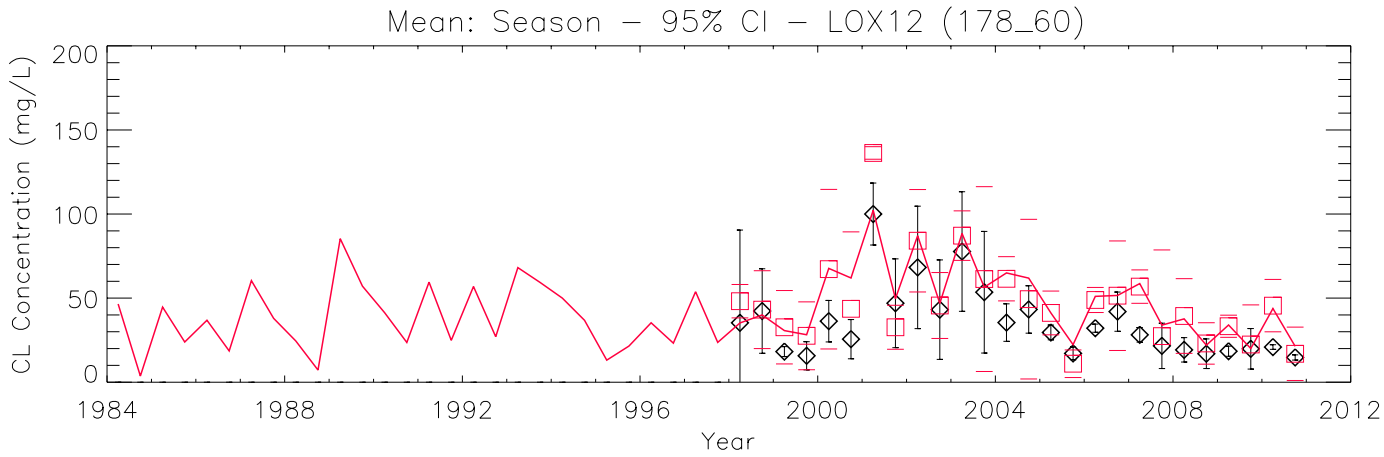

Raw Data (Obs. N = 151) – Z4 (175_57)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

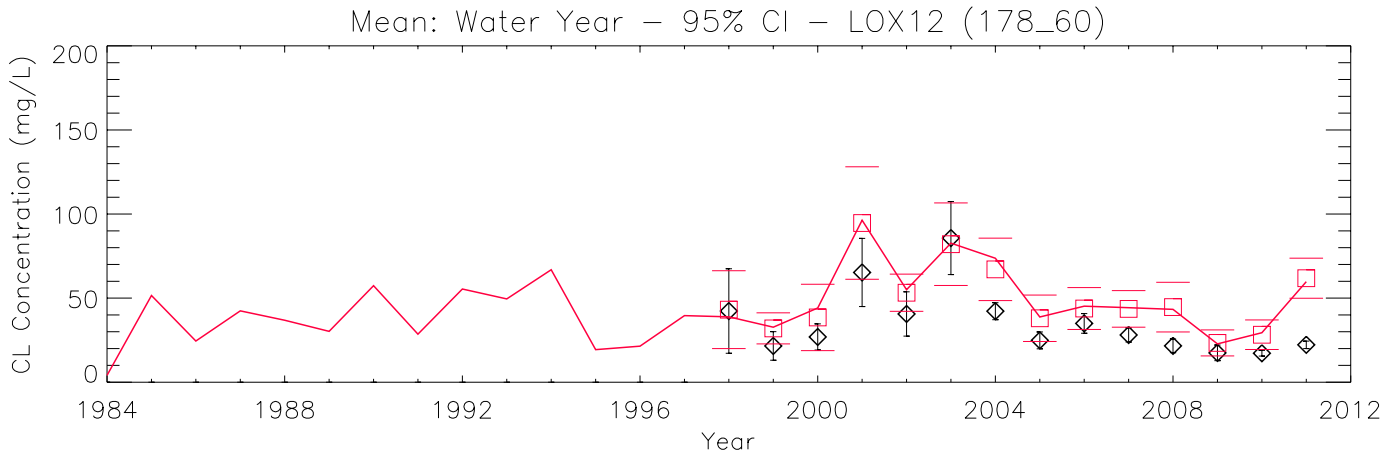

Mean: Season – 95% CI – Z4 (175_57)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

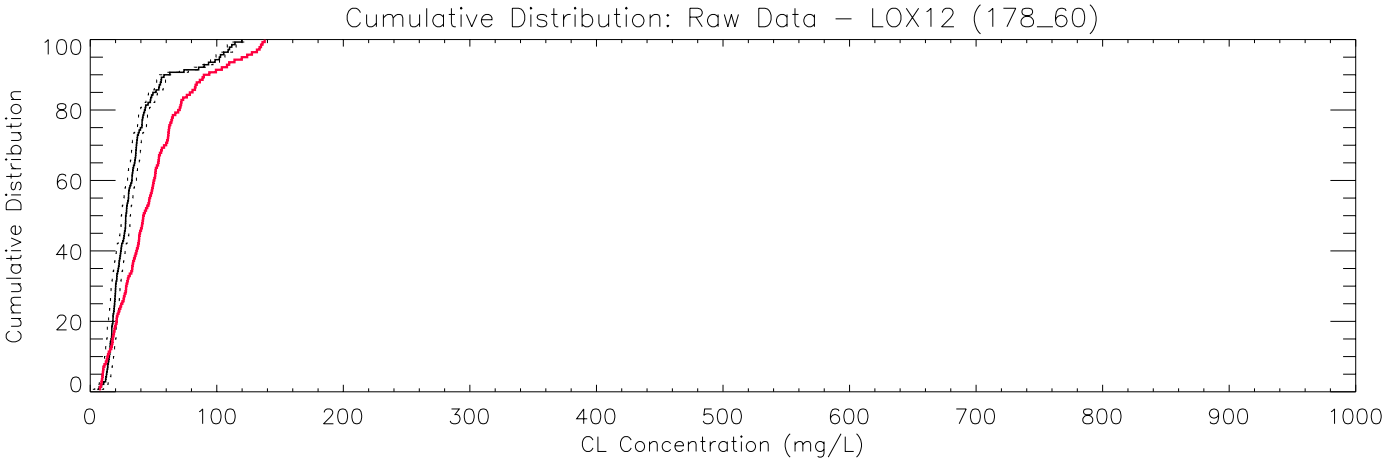

Mean: Water Year – 95% CI – Z4 (175_57)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

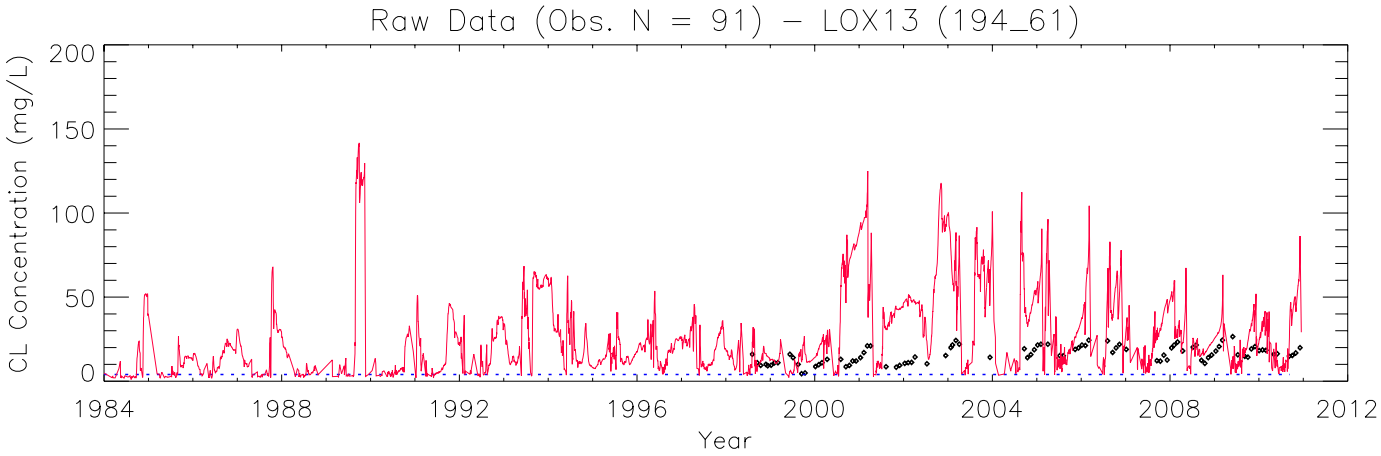

Cumulative Distribution: Raw Data – Z4 (175_57)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

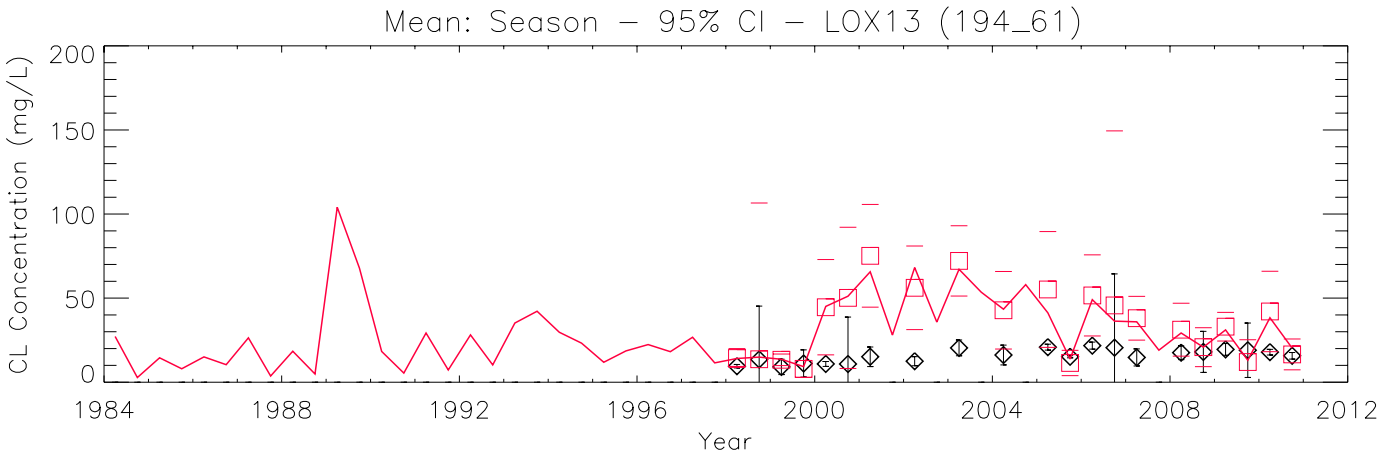

Raw Data (Obs. N = 140) – LOX12 (178_60)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

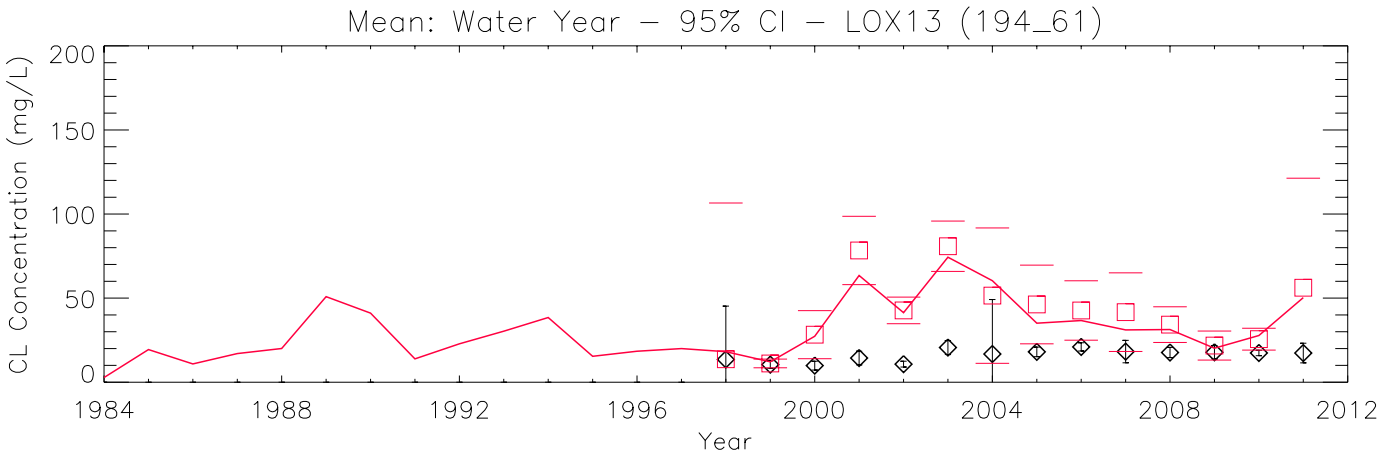

Mean: Season – 95% CI – LOX12 (178_60)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

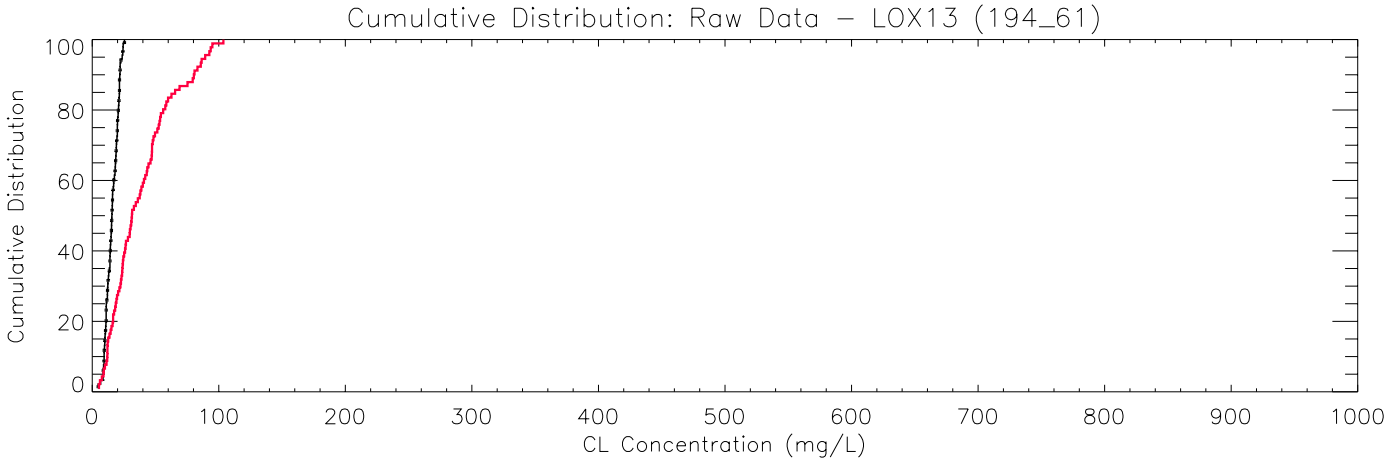

Mean: Water Year – 95% CI – LOX12 (178_60)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

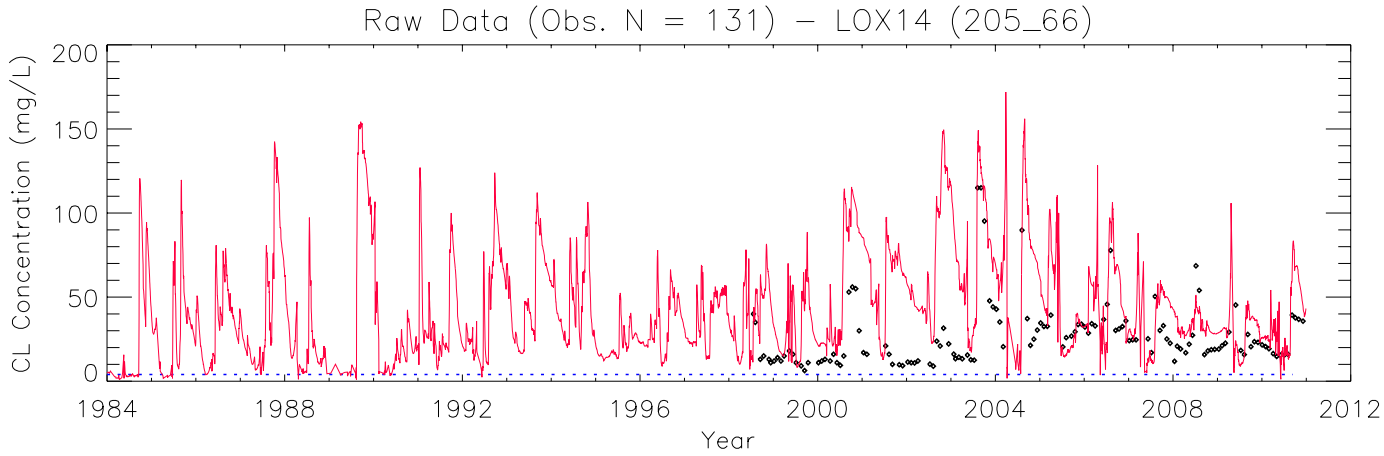

Cumulative Distribution: Raw Data – LOX12 (178_60)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

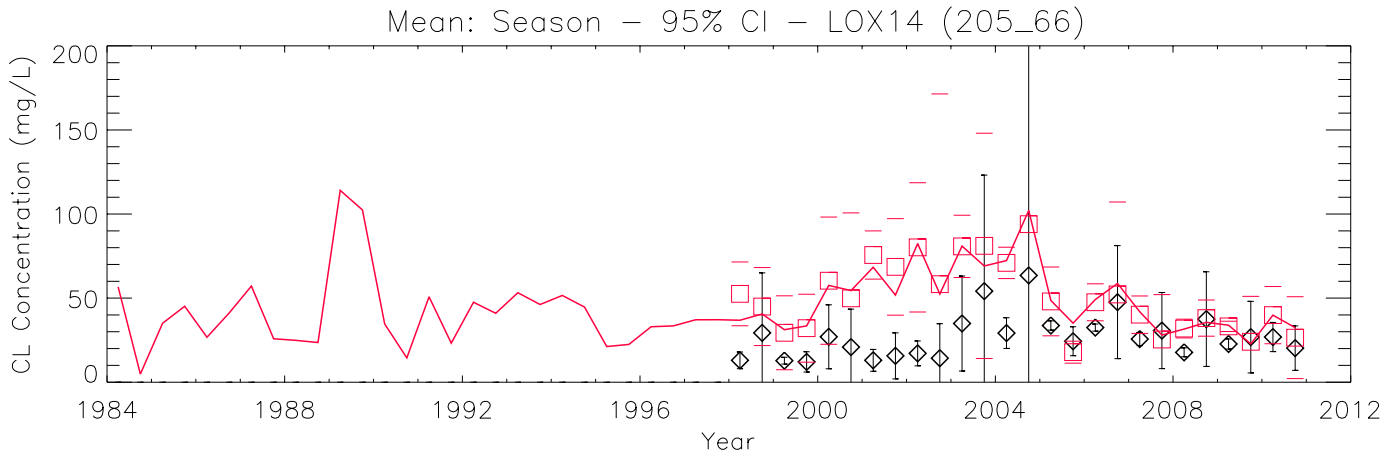

Raw Data (Obs. N = 91) – LOX13 (194_61)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

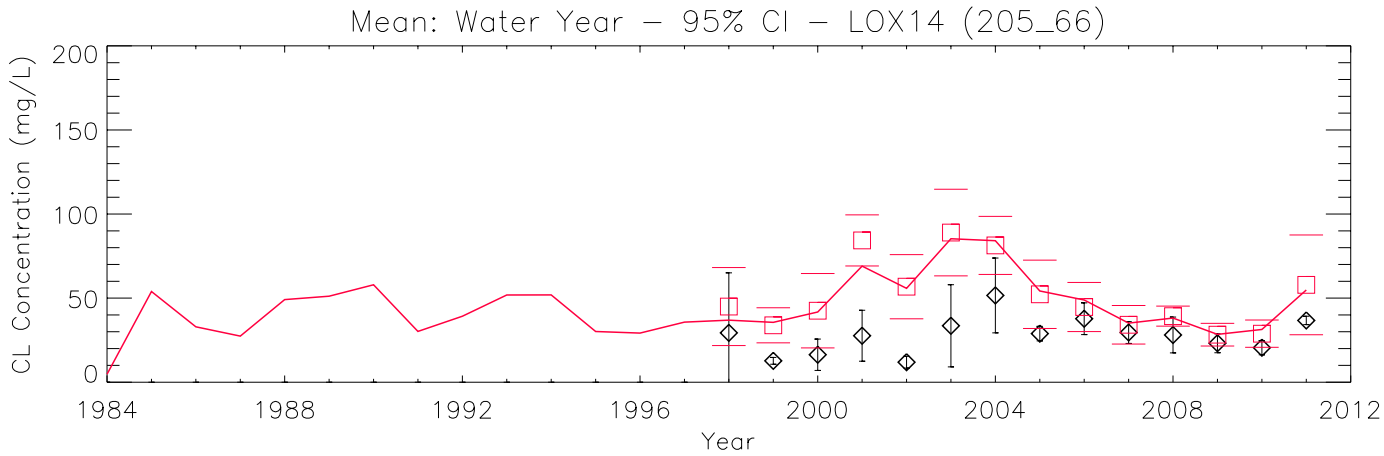

Mean: Season – 95% CI – LOX13 (194_61)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

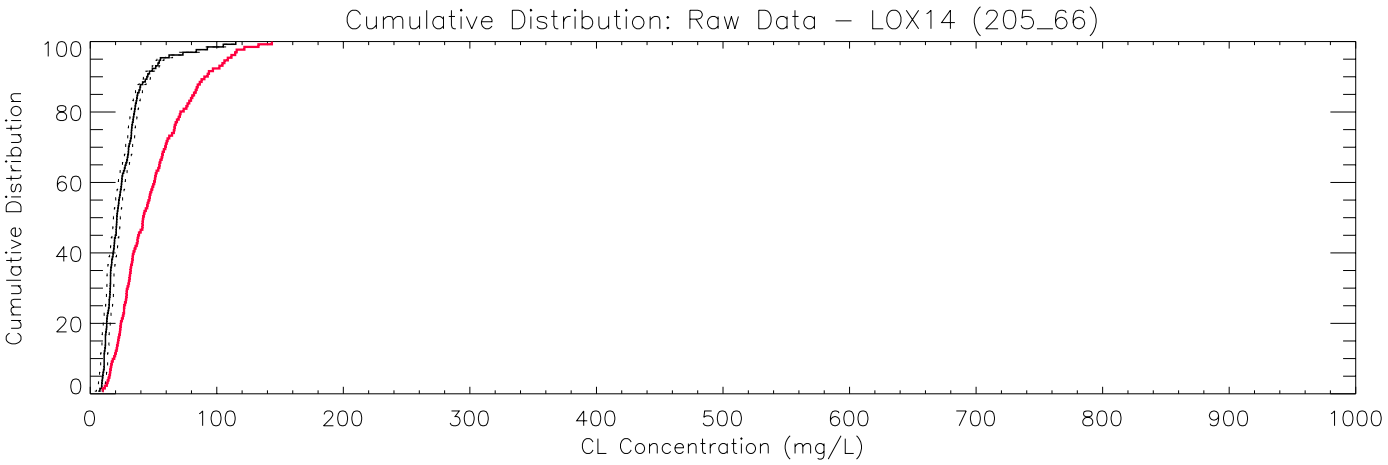

Mean: Water Year – 95% CI – LOX13 (194_61)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

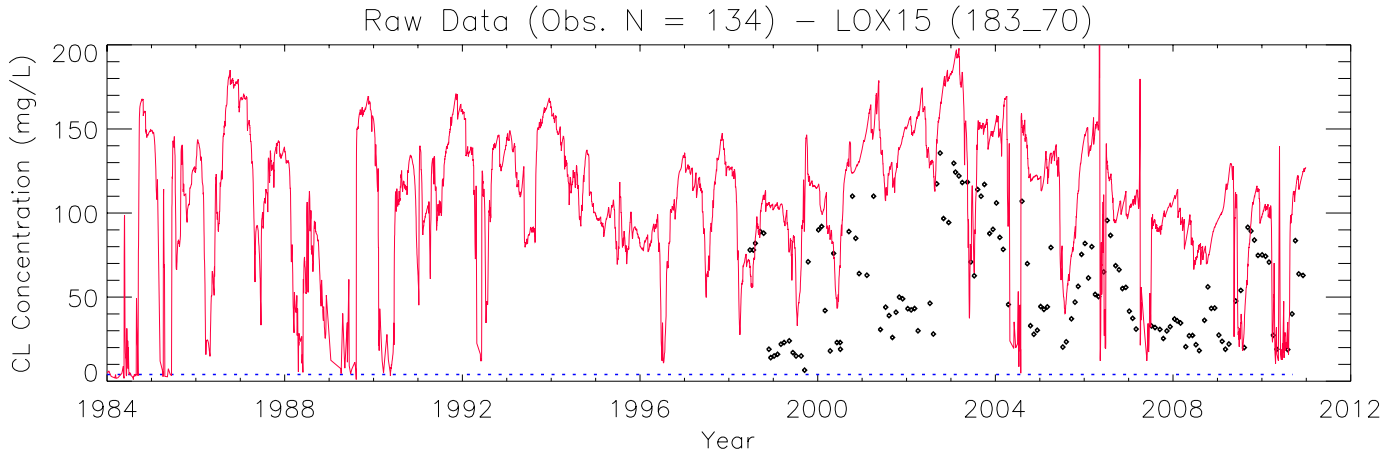

Cumulative Distribution: Raw Data – LOX13 (194_61)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

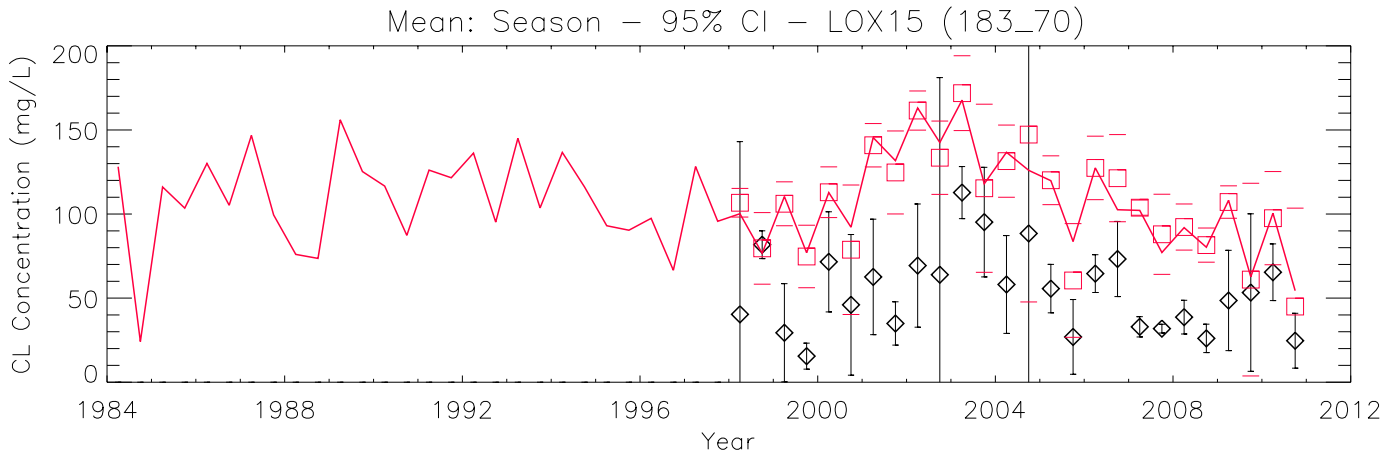

Raw Data (Obs. N = 131) – LOX14 (205_66)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

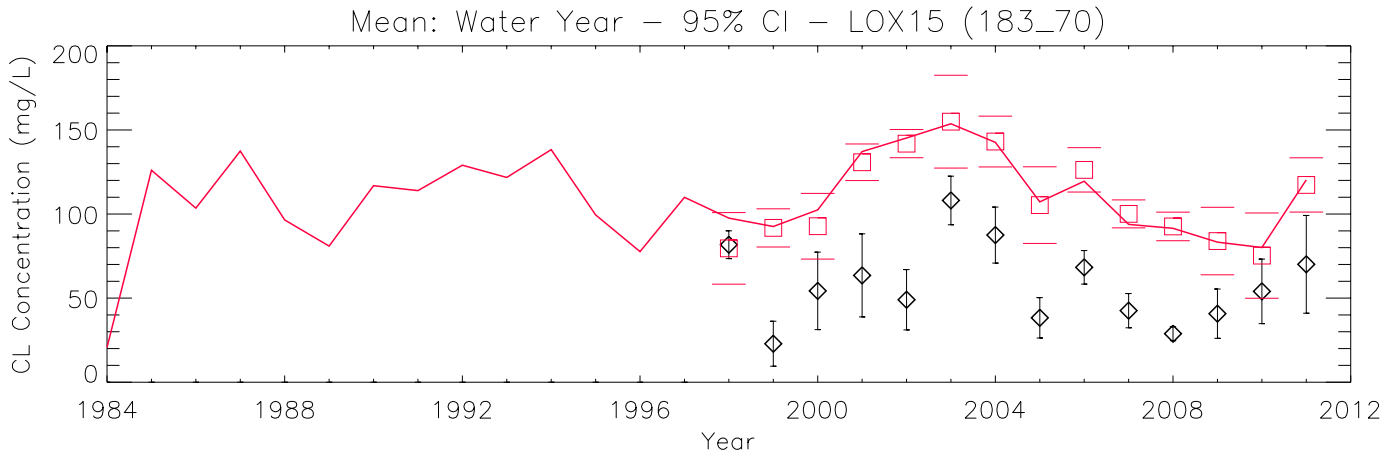

Mean: Season – 95% CI – LOX14 (205_66)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

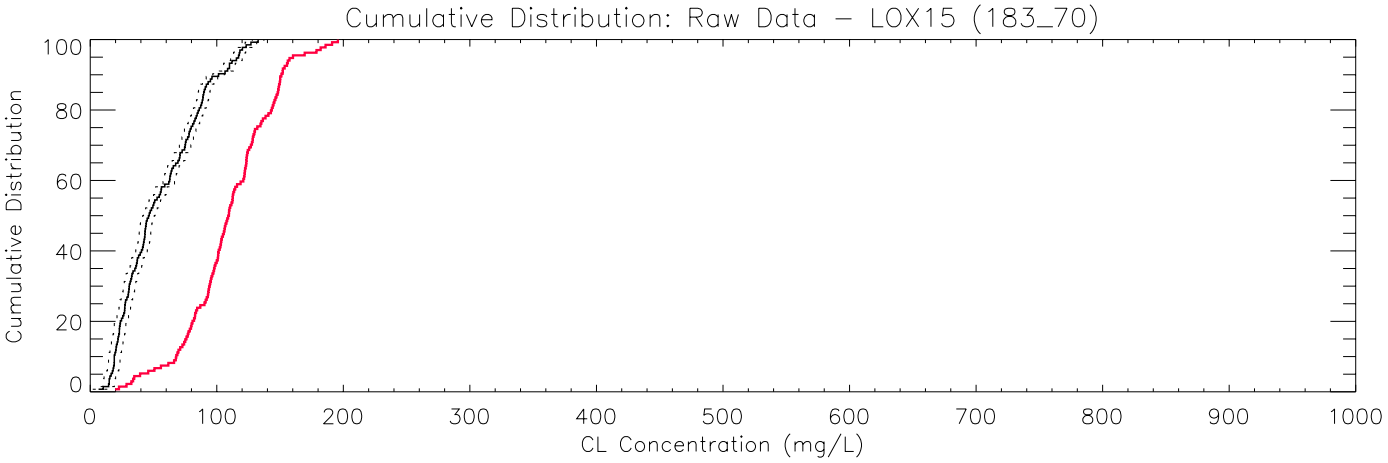

Mean: Water Year – 95% CI – LOX14 (205_66)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

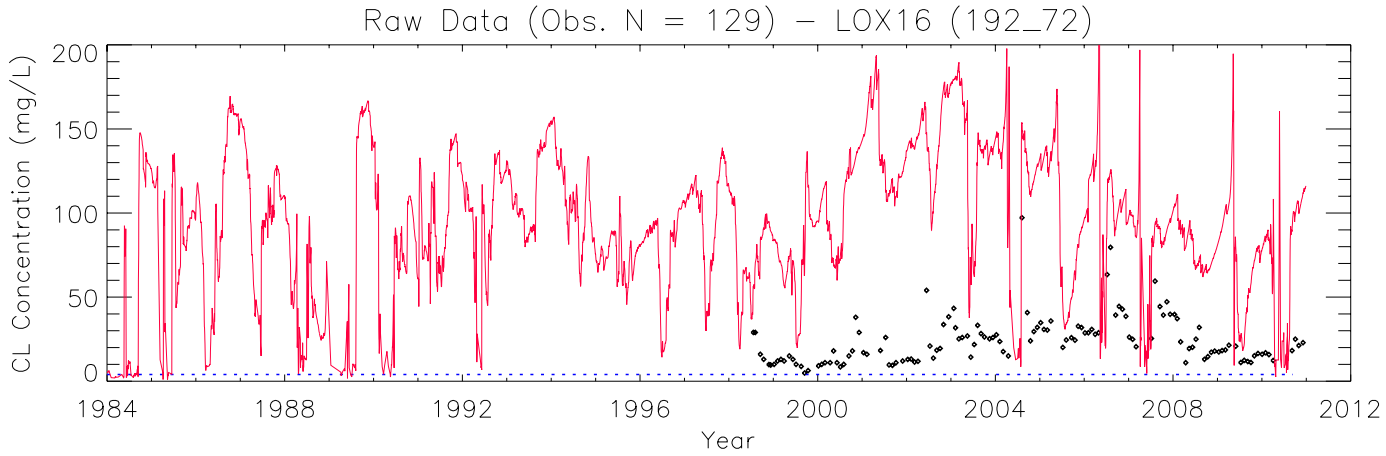

Cumulative Distribution: Raw Data – LOX14 (205_66)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

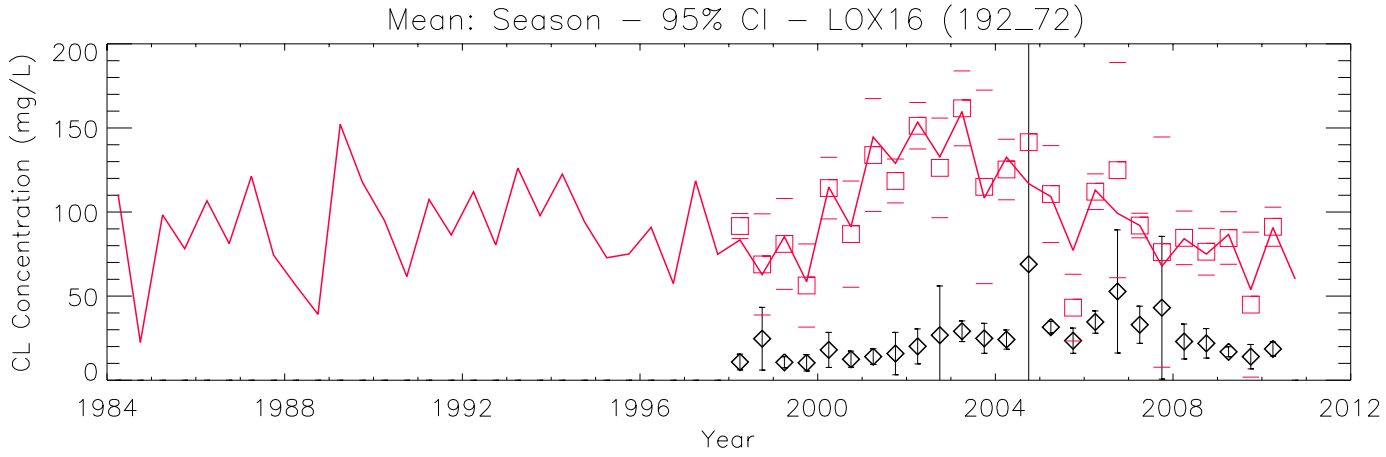

Raw Data (Obs. N = 134) – LOX15 (183_70)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

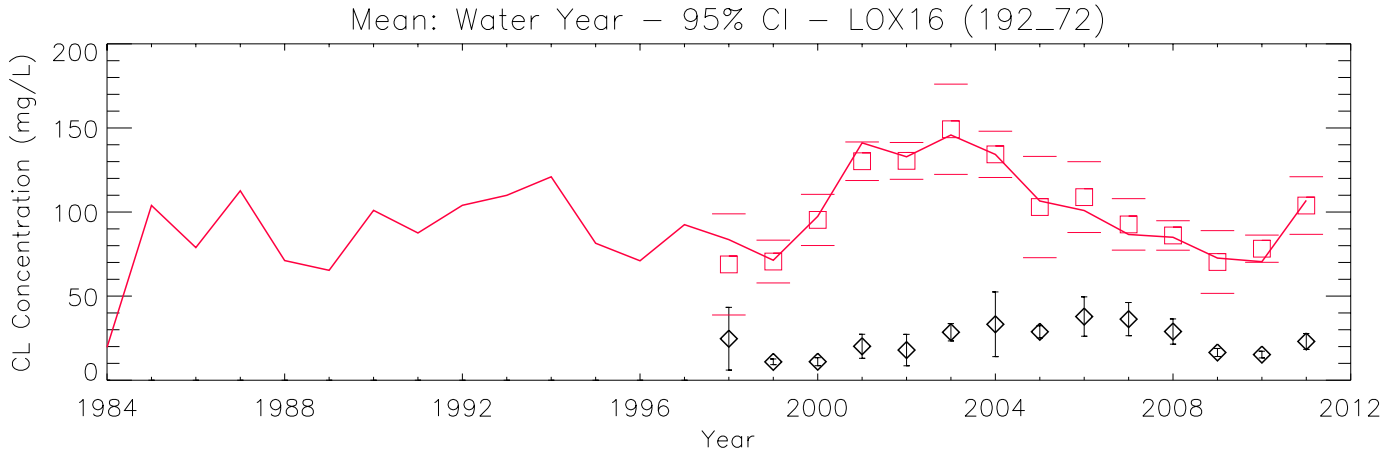

Mean: Season – 95% CI – LOX15 (183_70)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

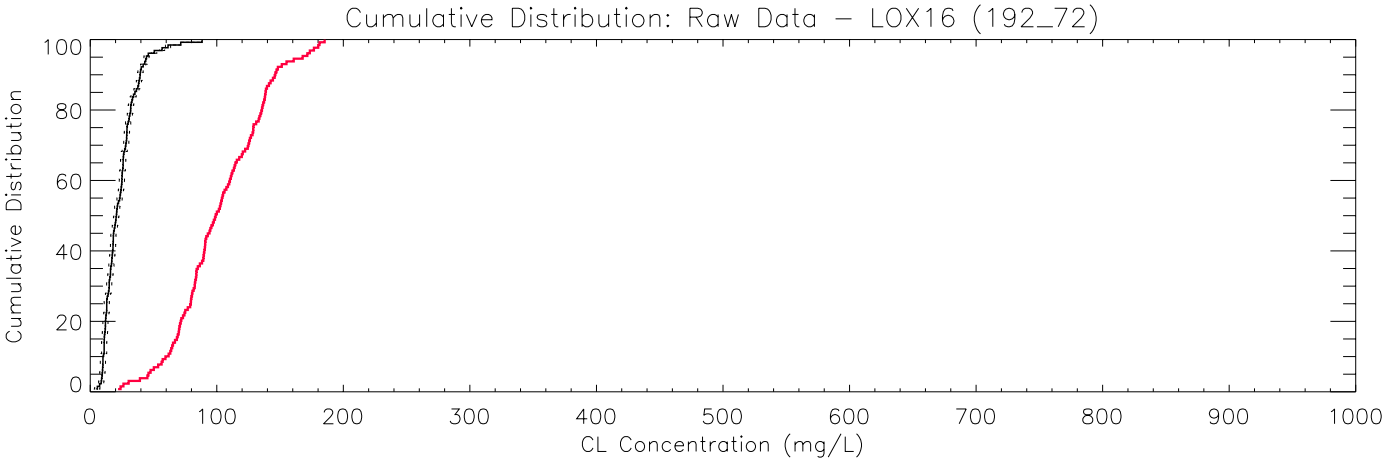

Mean: Water Year – 95% CI – LOX15 (183_70)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

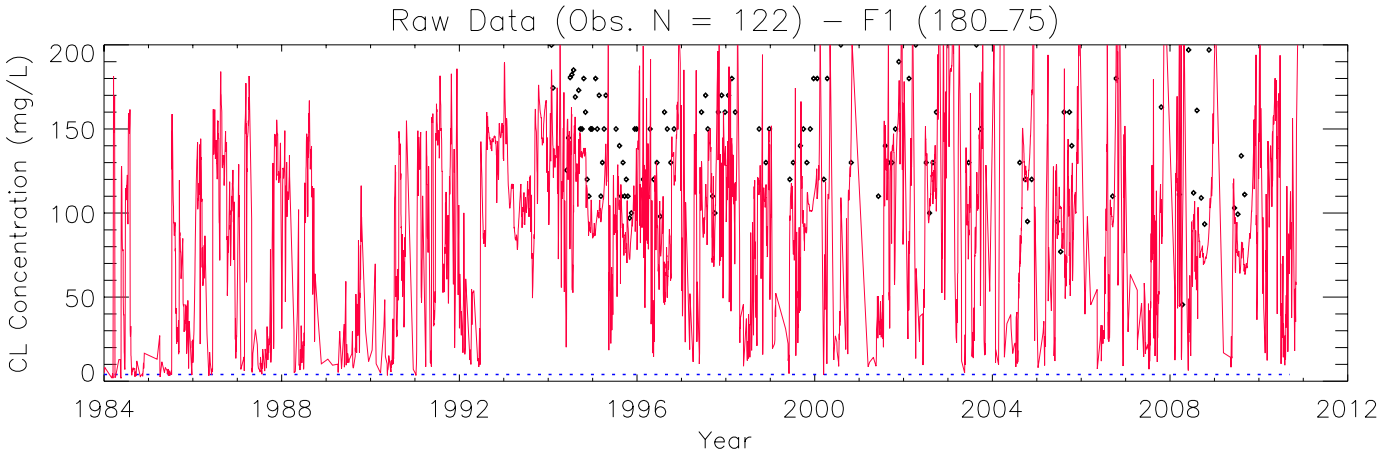

Cumulative Distribution: Raw Data – LOX15 (183_70)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

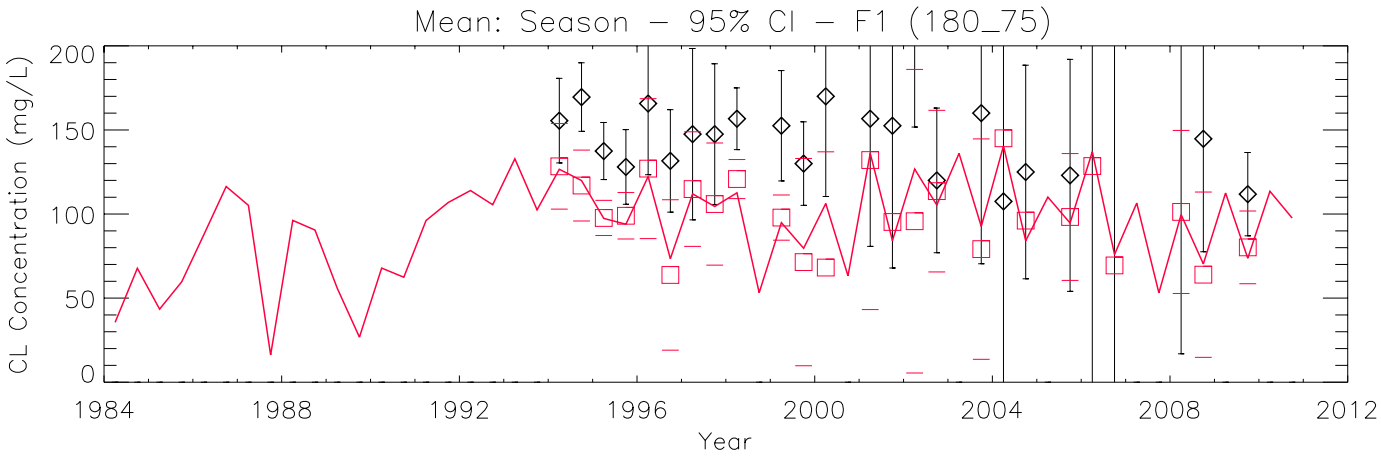

Raw Data (Obs. N = 129) – LOX16 (192_72)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

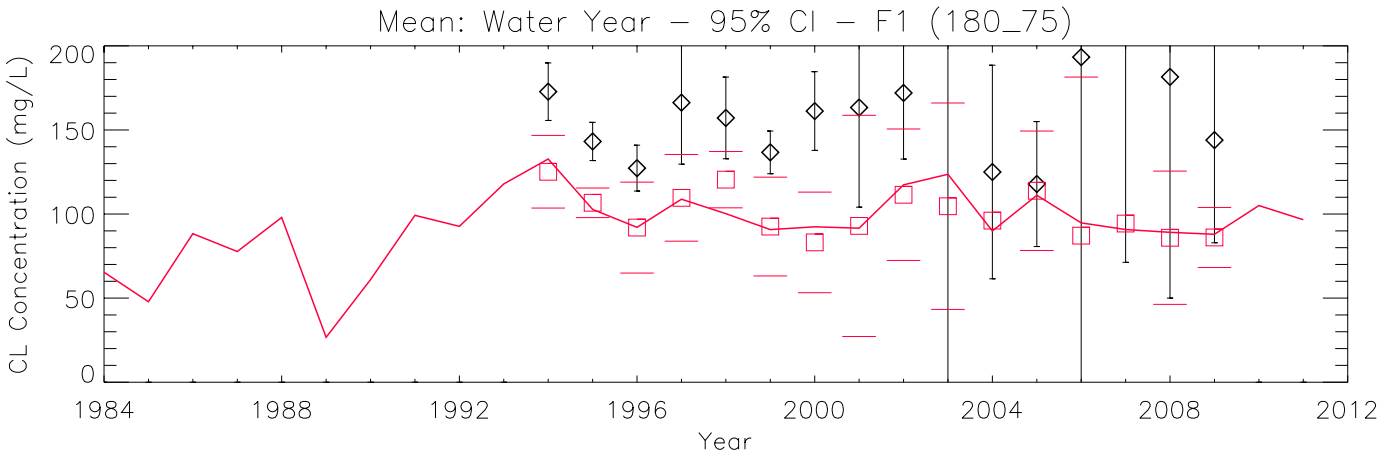

Mean: Season – 95% CI – LOX16 (192_72)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

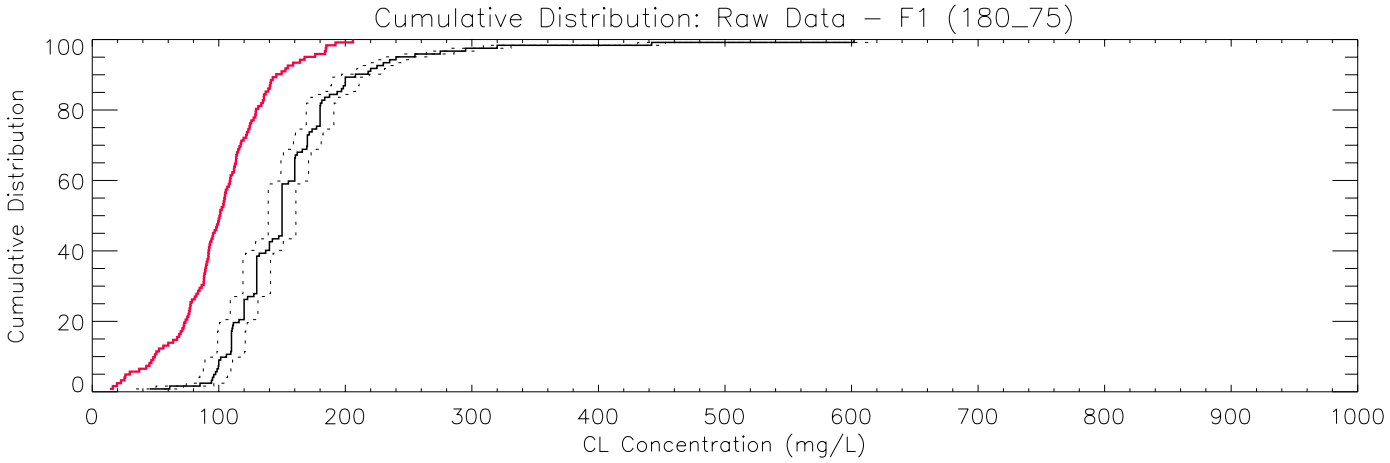

Mean: Water Year – 95% CI – LOX16 (192_72)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

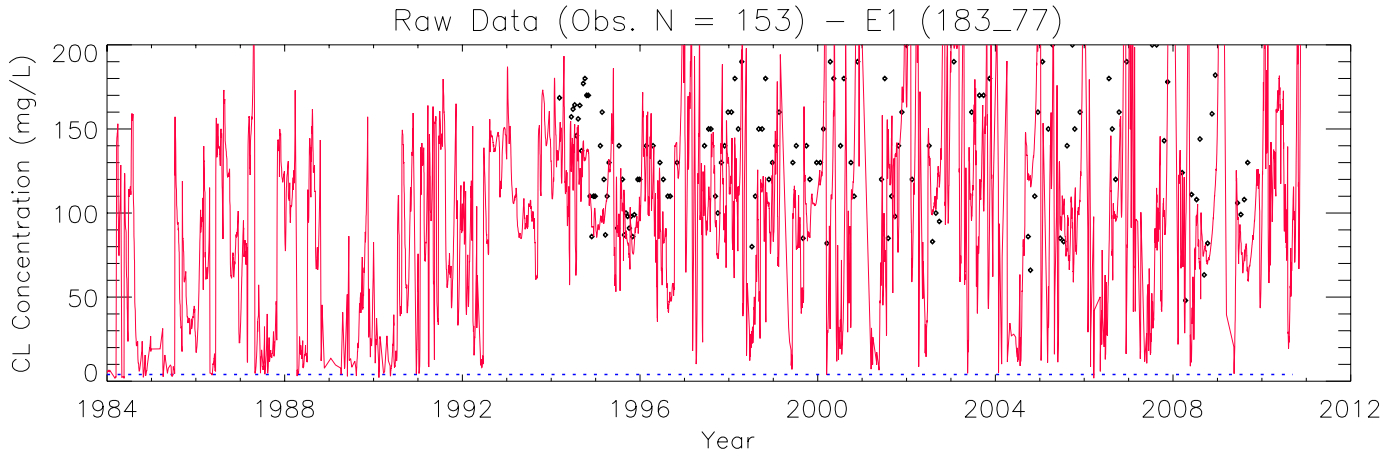

Cumulative Distribution: Raw Data – LOX16 (192_72)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

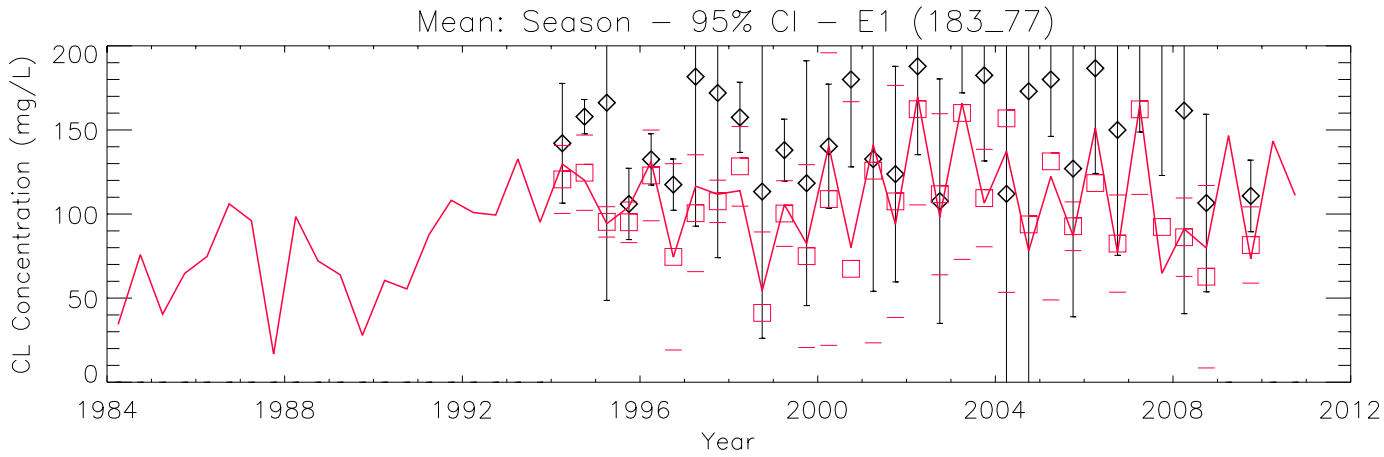

Raw Data (Obs. N = 122) – F1 (180_75)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

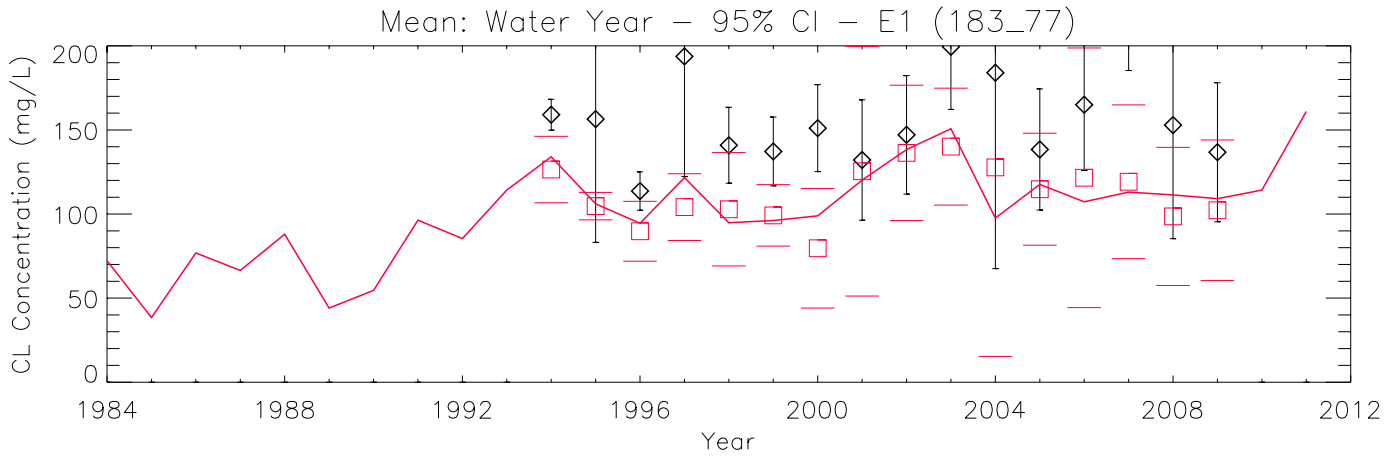

Mean: Season – 95% CI – F1 (180_75)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

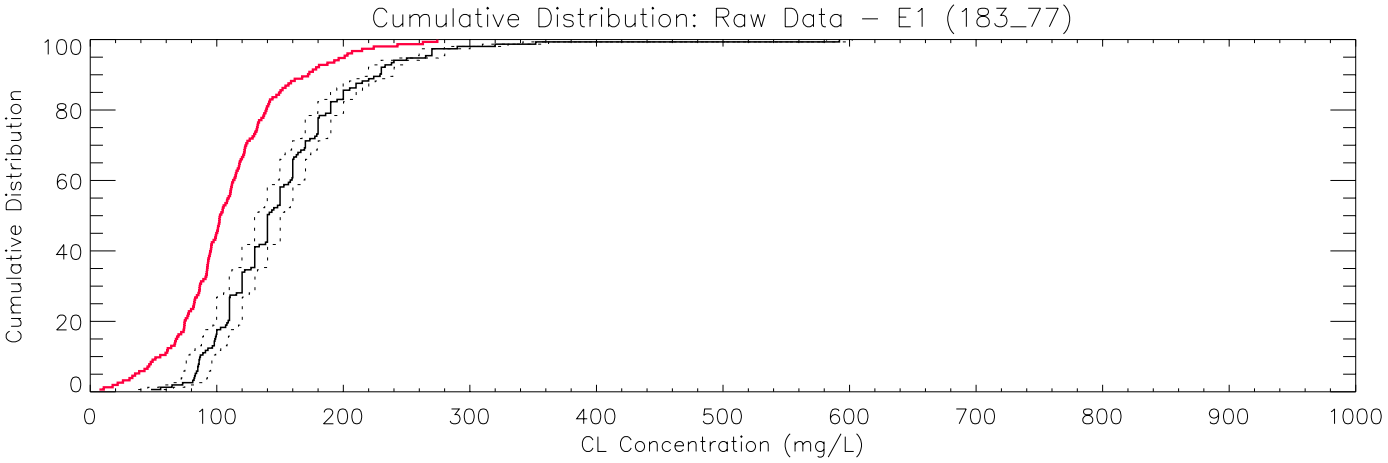

Mean: Water Year – 95% CI – F1 (180_75)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

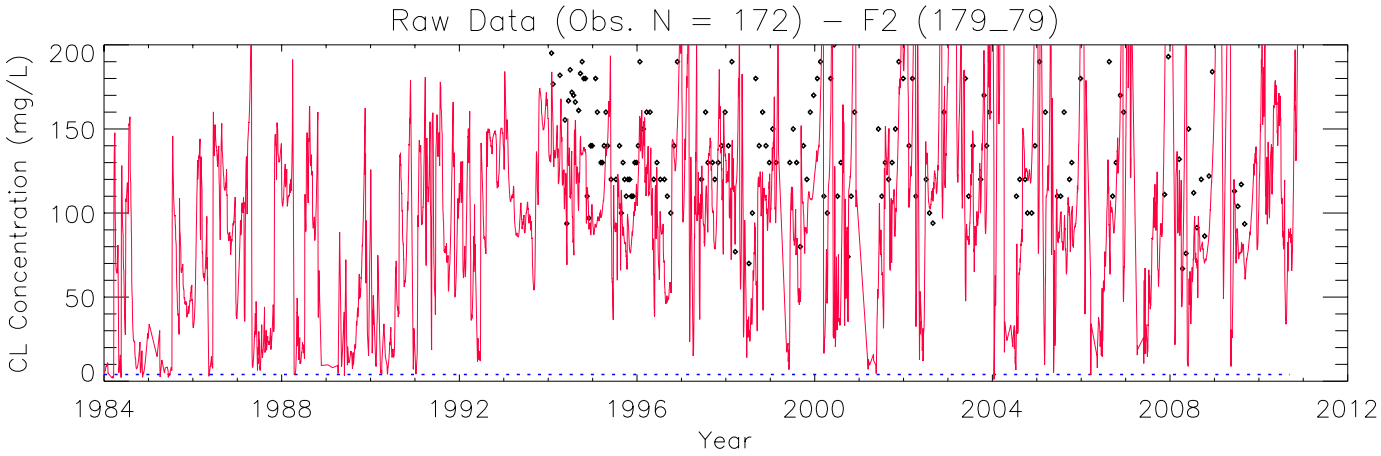

Cumulative Distribution: Raw Data – F1 (180_75)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

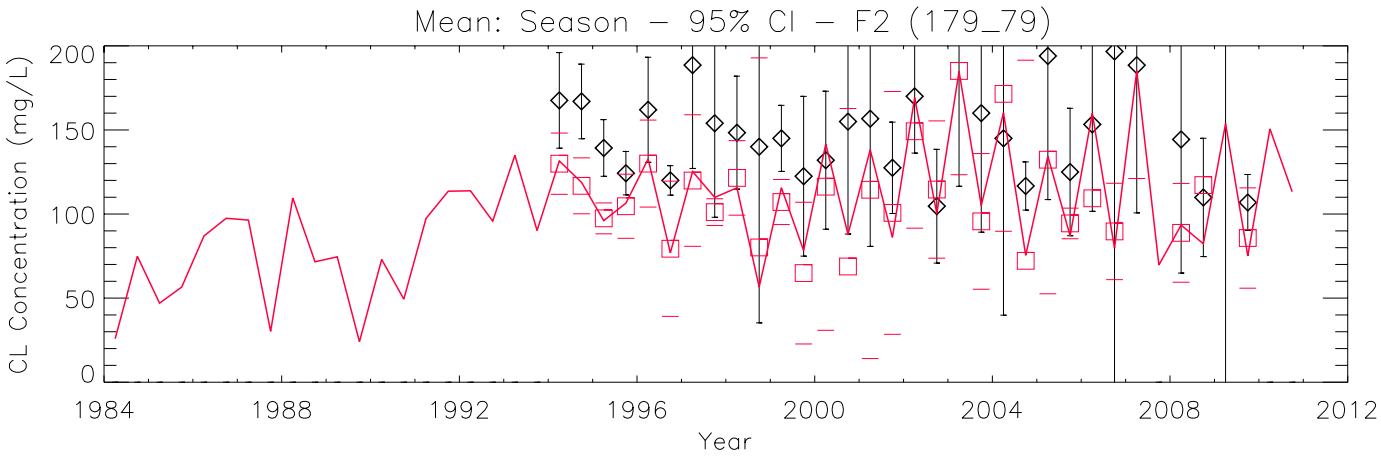

Raw Data (Obs. N = 153) – E1 (183_77)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

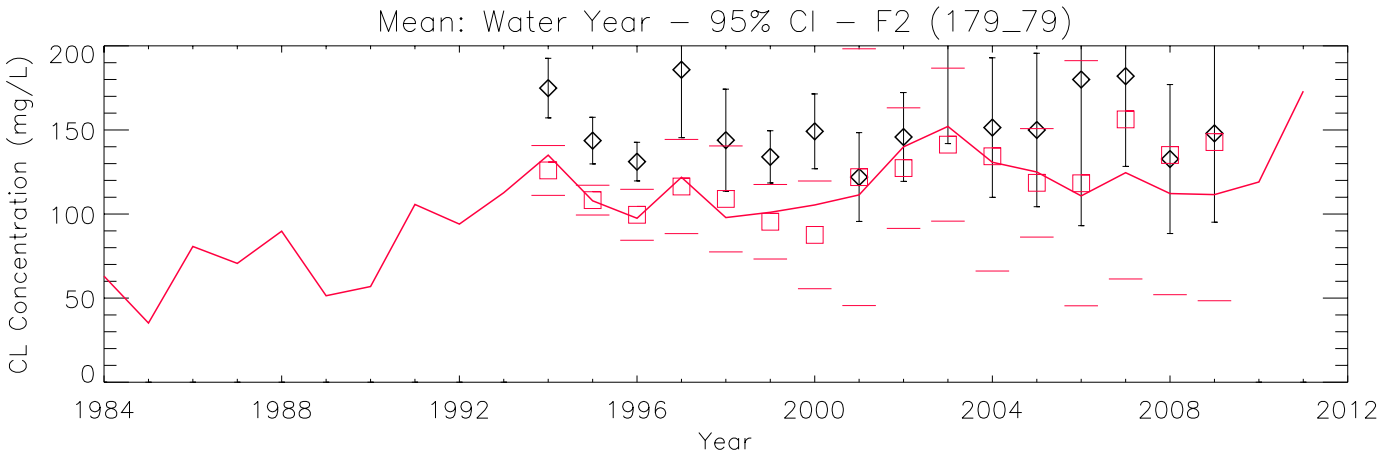

Mean: Season – 95% CI – E1 (183_77)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

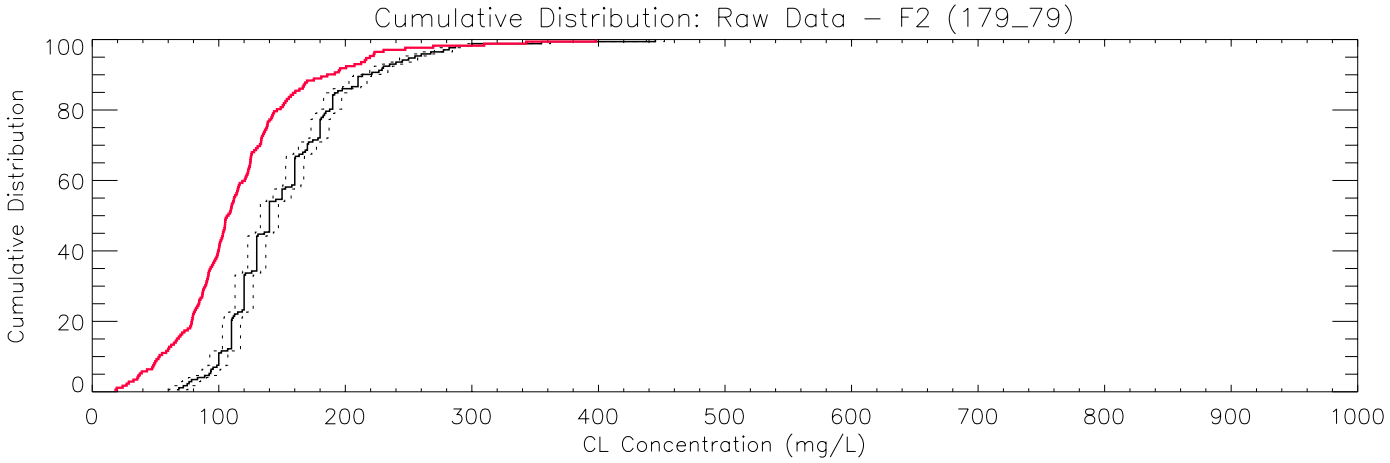

Mean: Water Year – 95% CI – E1 (183_77)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

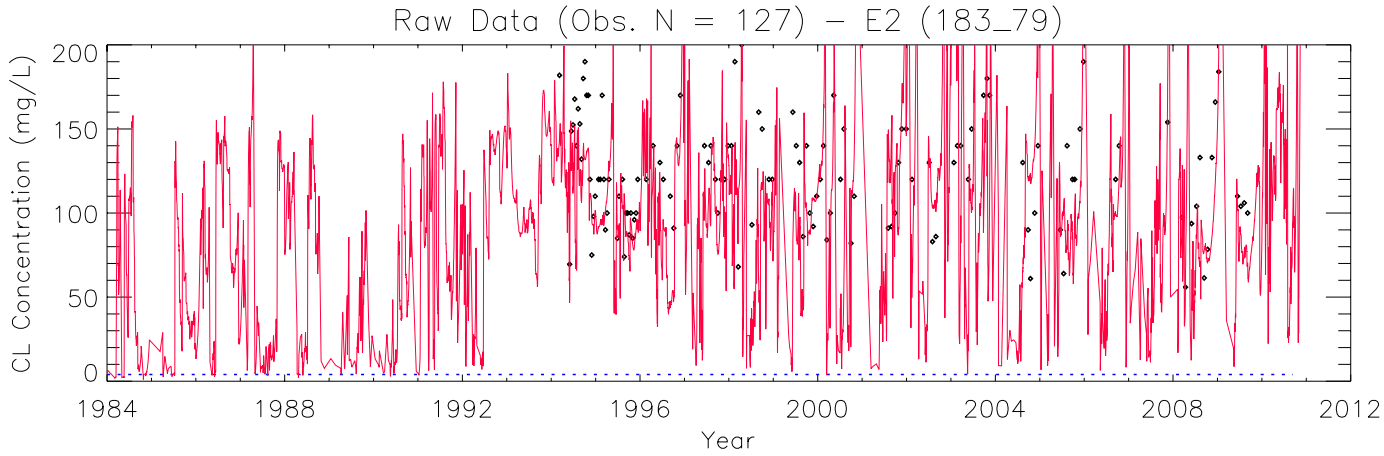

Cumulative Distribution: Raw Data – E1 (183_77)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

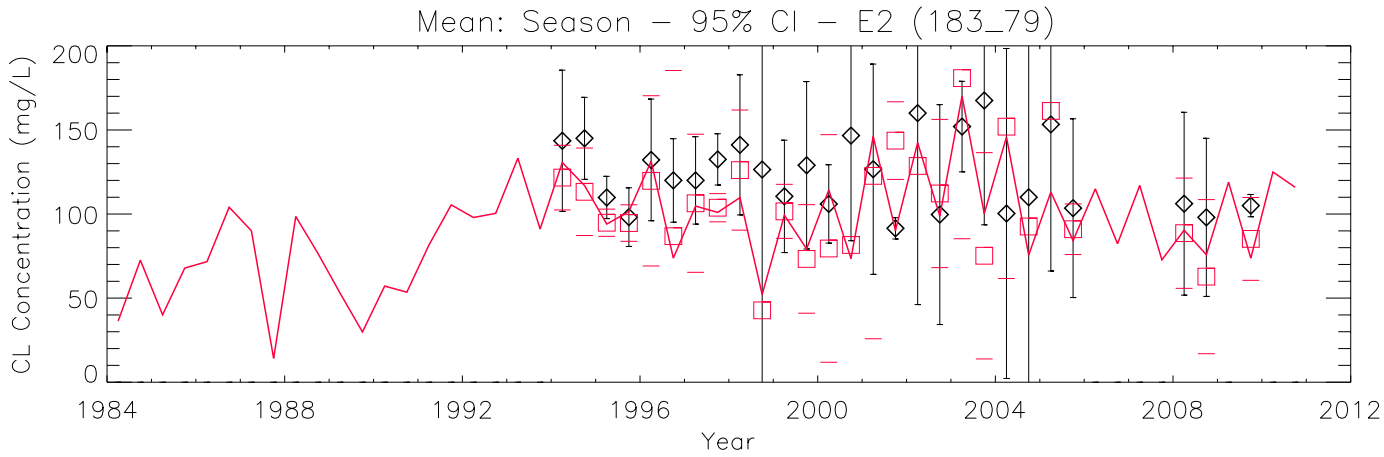

Raw Data (Obs. N = 172) – F2 (179_79)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

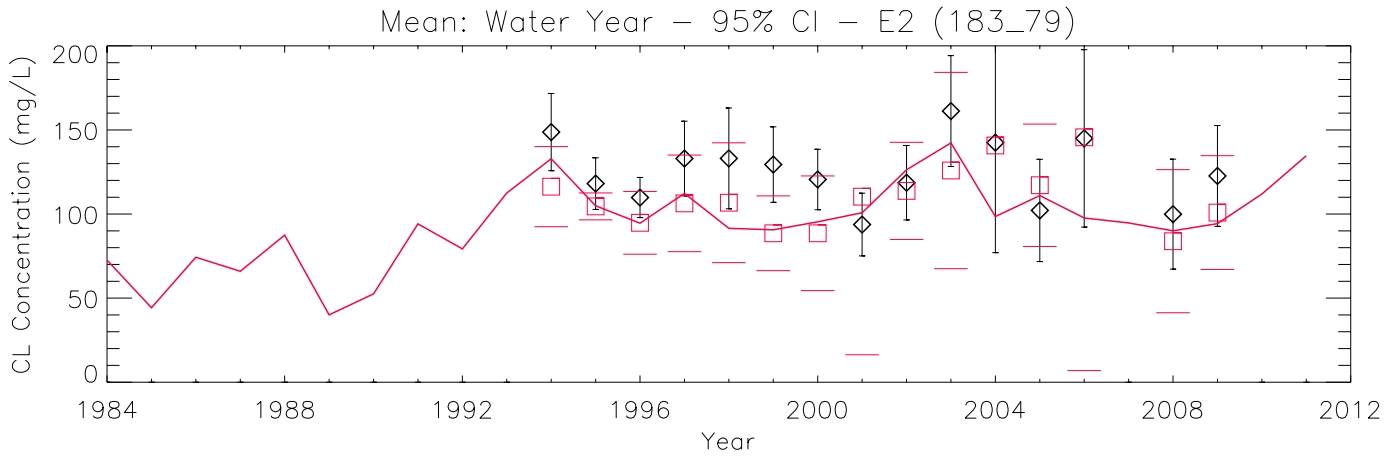

Mean: Season – 95% CI – F2 (179_79)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

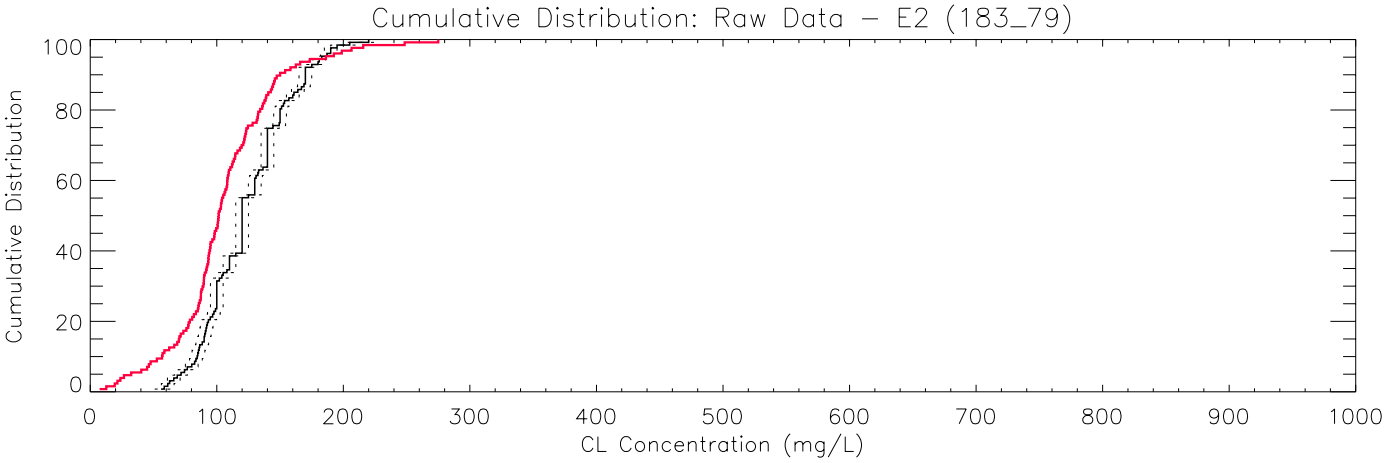

Mean: Water Year – 95% CI – F2 (179_79)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

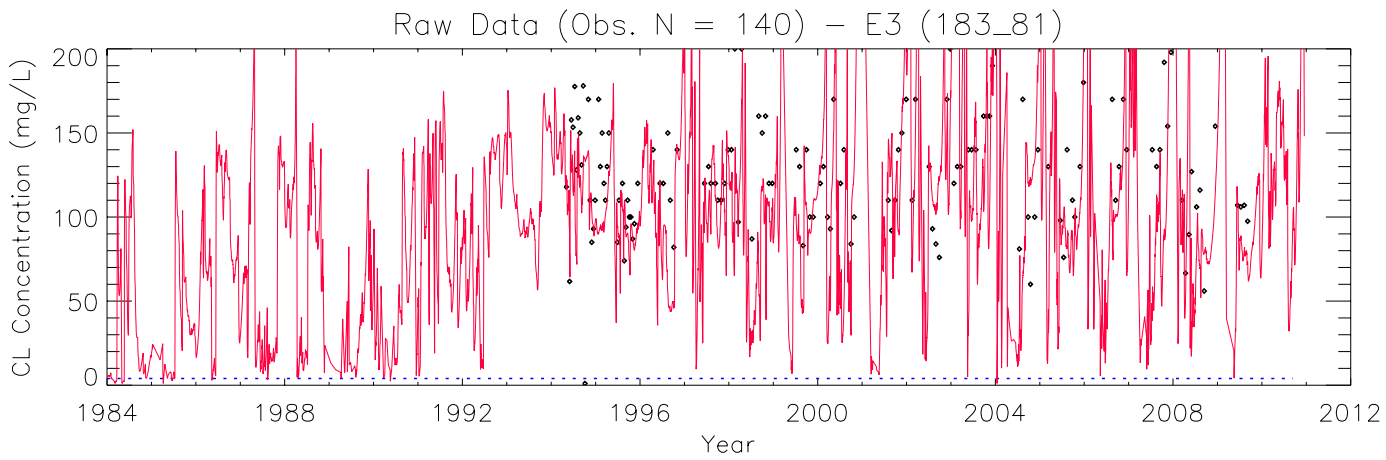

Cumulative Distribution: Raw Data – F2 (179_79)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

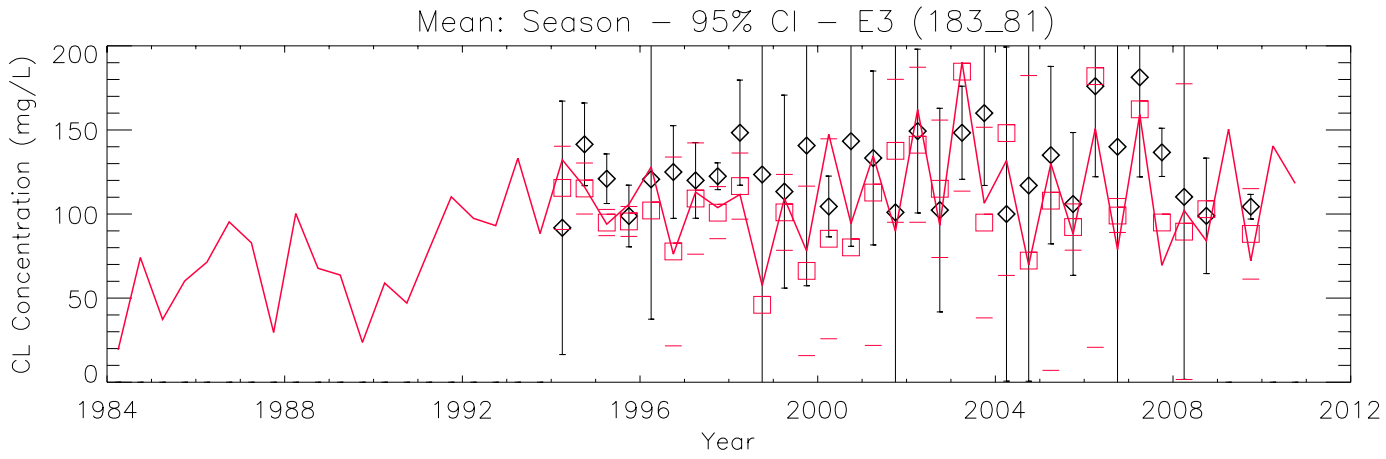

Raw Data (Obs. N = 127) – E2 (183_79)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

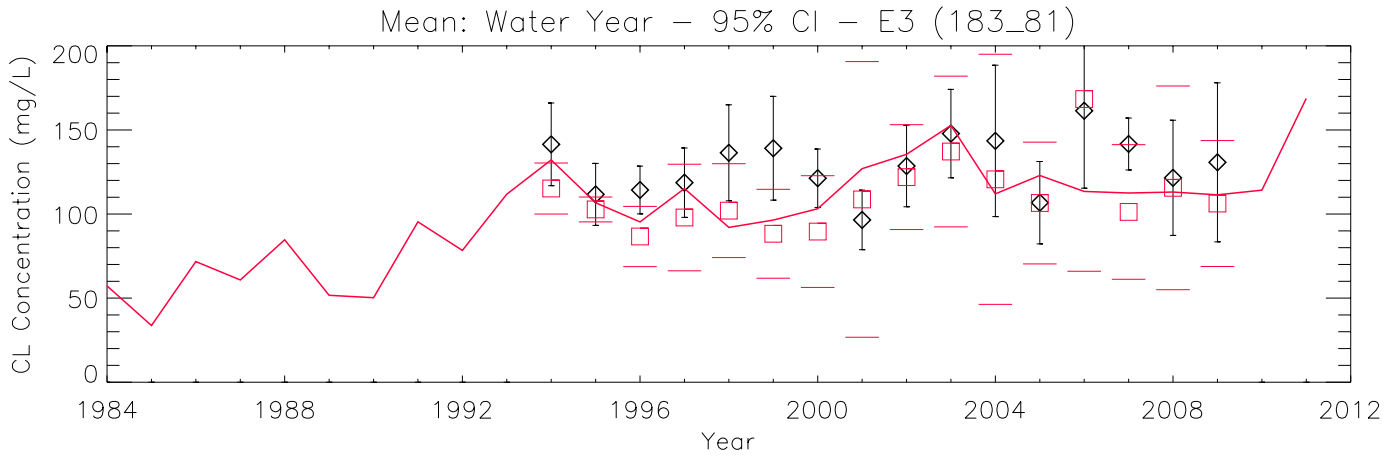

Mean: Season – 95% CI – E2 (183_79)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

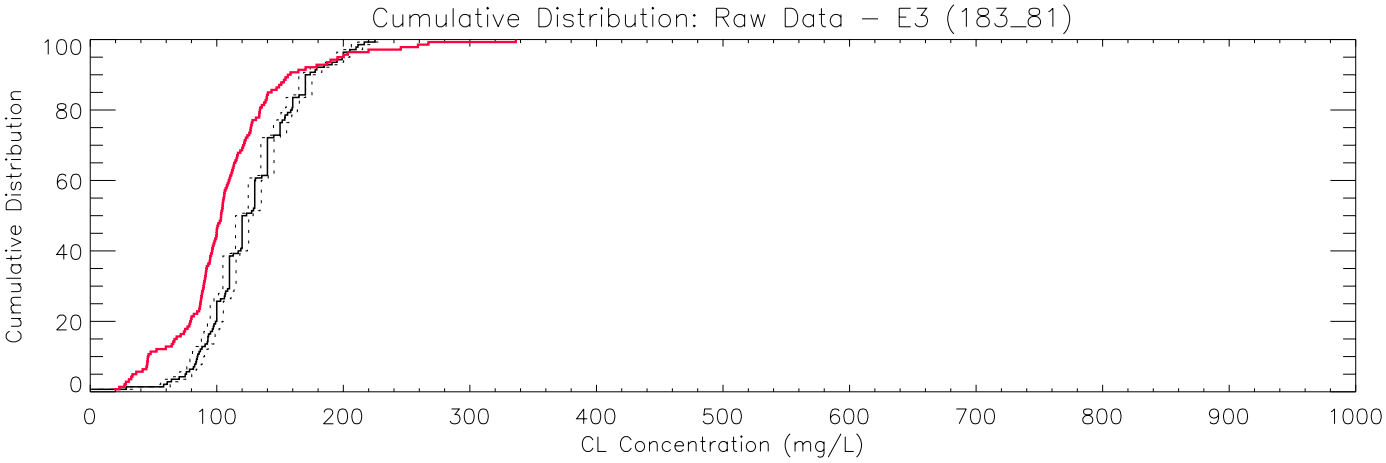

Mean: Water Year – 95% CI – E2 (183_79)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

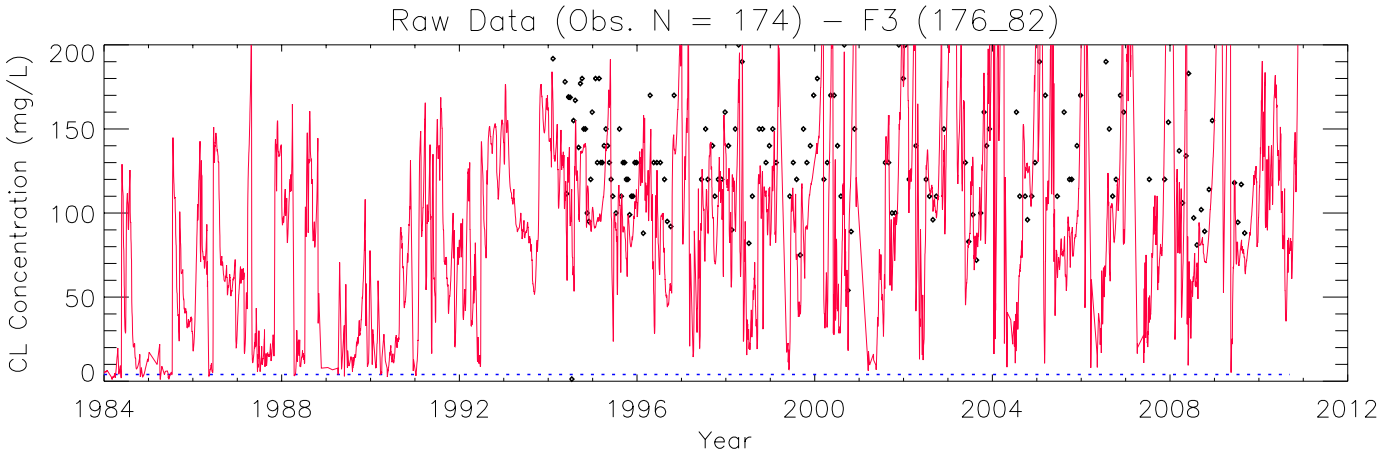

Cumulative Distribution: Raw Data – E2 (183_79)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

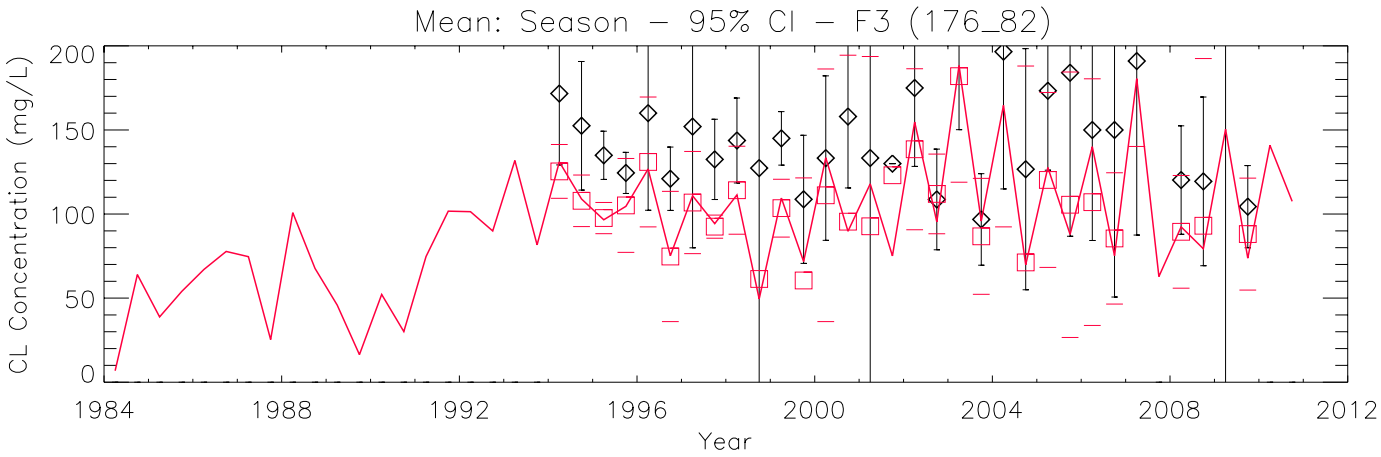

Raw Data (Obs. N = 140) – E3 (183_81)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

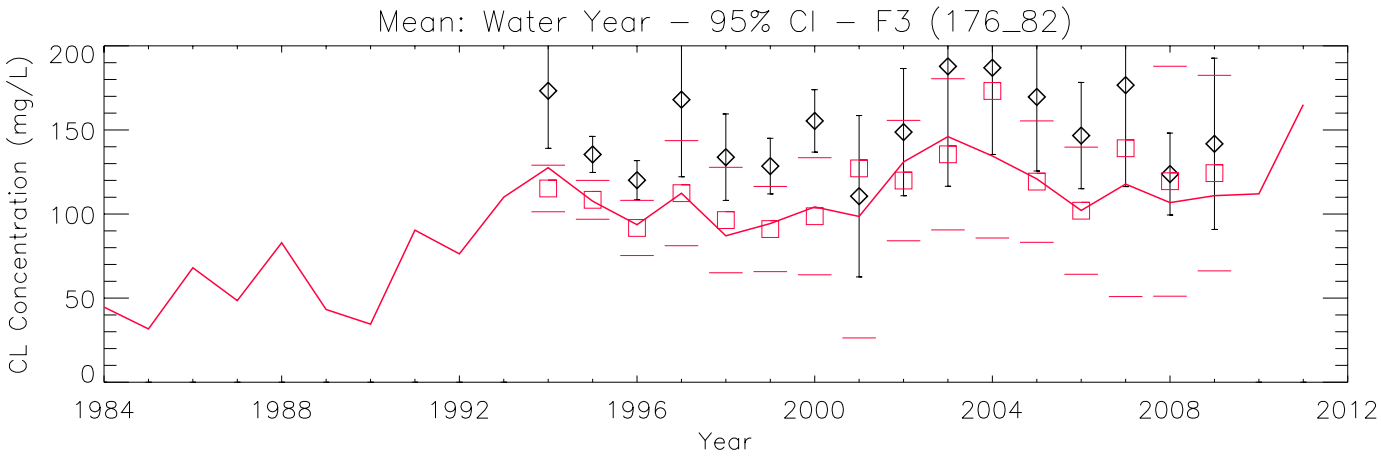

Mean: Season – 95% CI – E3 (183_81)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

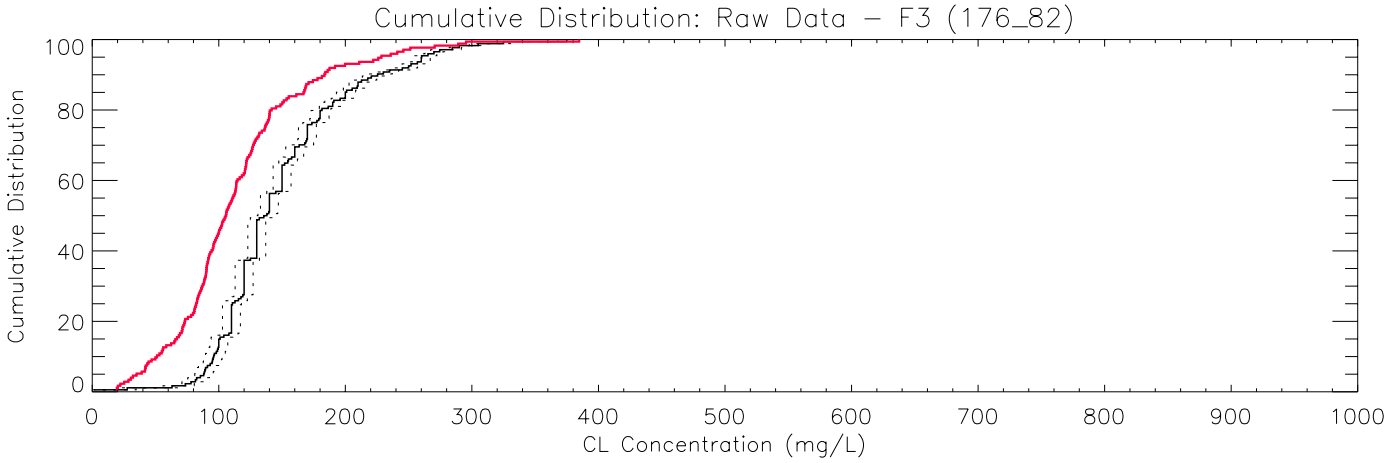

Mean: Water Year – 95% CI – E3 (183_81)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

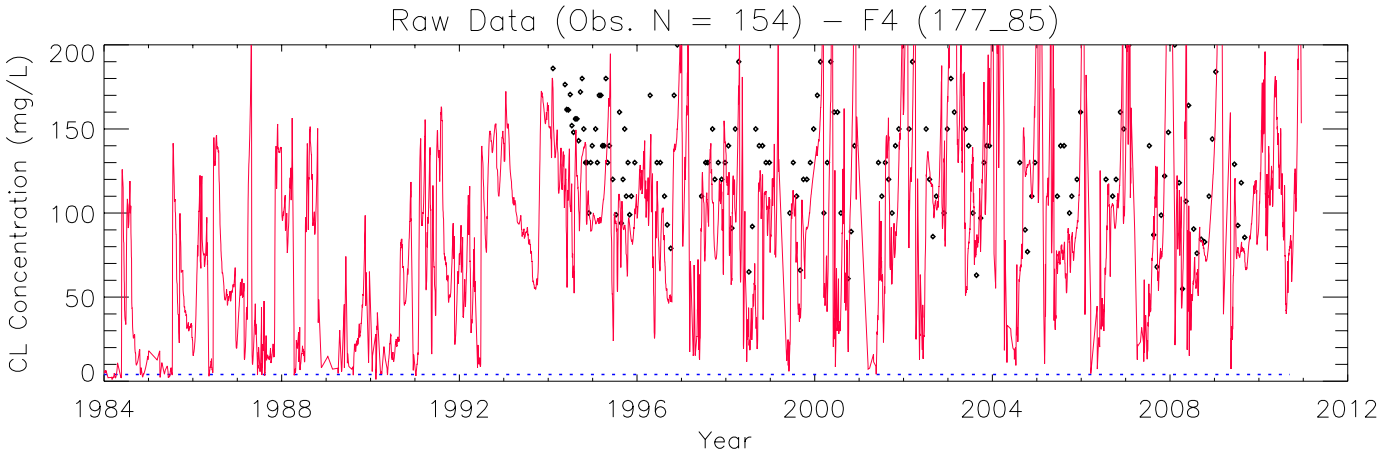

Cumulative Distribution: Raw Data – E3 (183_81)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

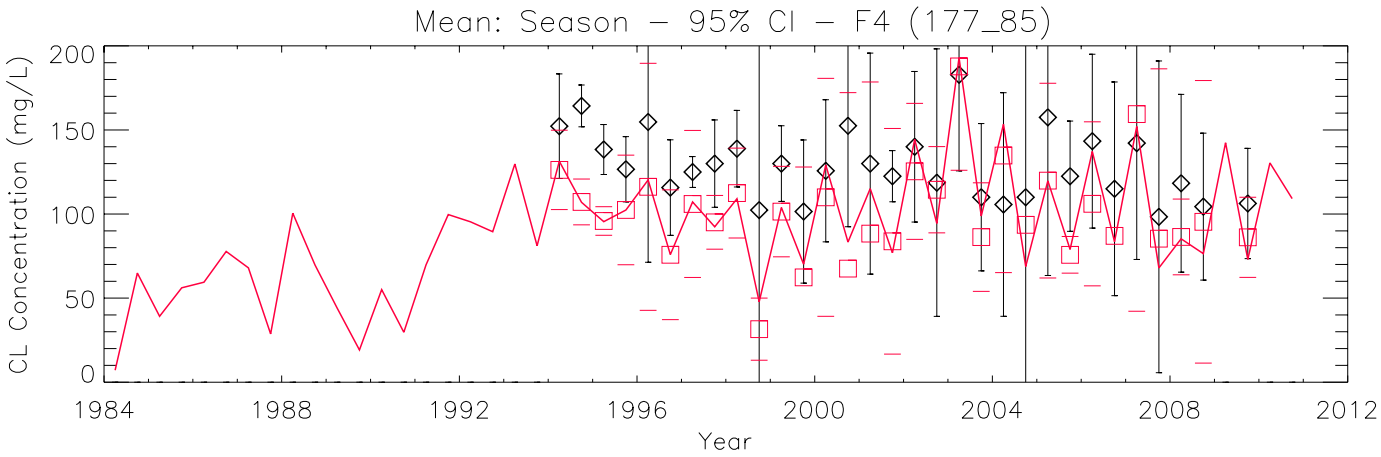

Raw Data (Obs. N = 174) – F3 (176_82)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

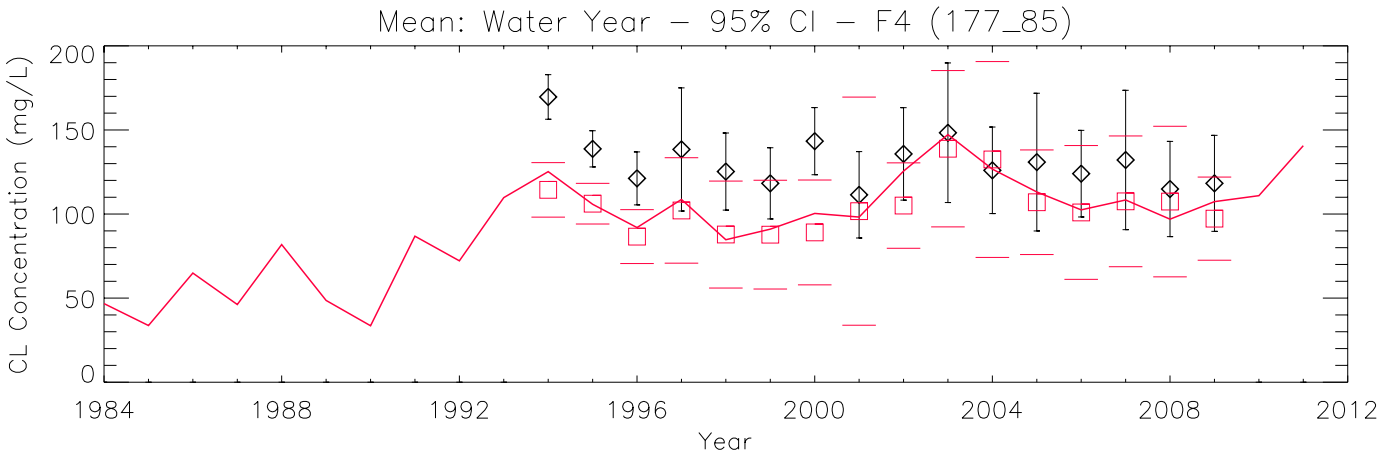

Mean: Season – 95% CI – F3 (176_82)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

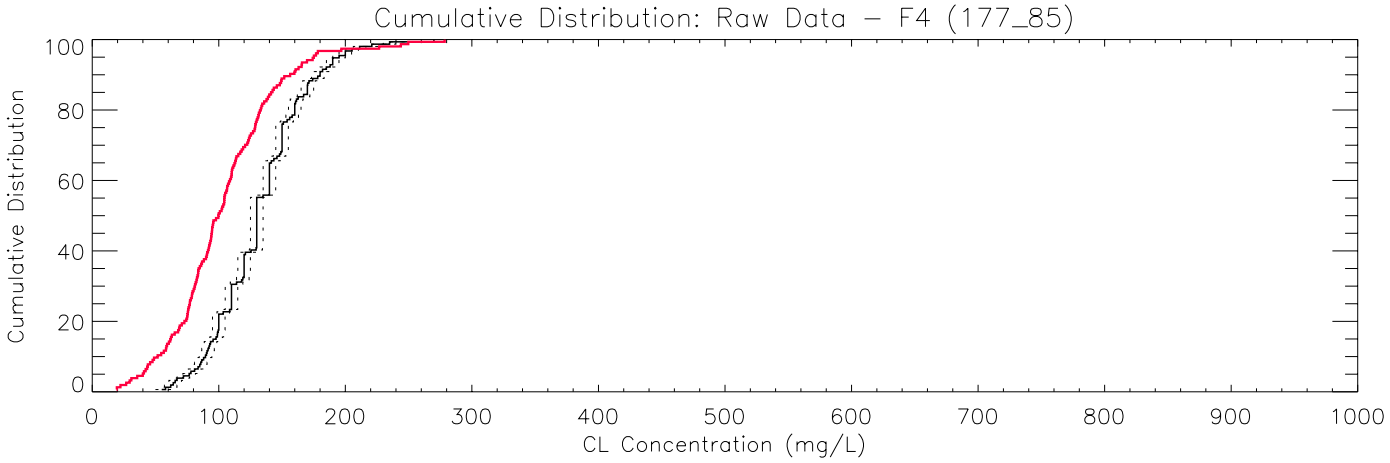

Mean: Water Year – 95% CI – F3 (176_82)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

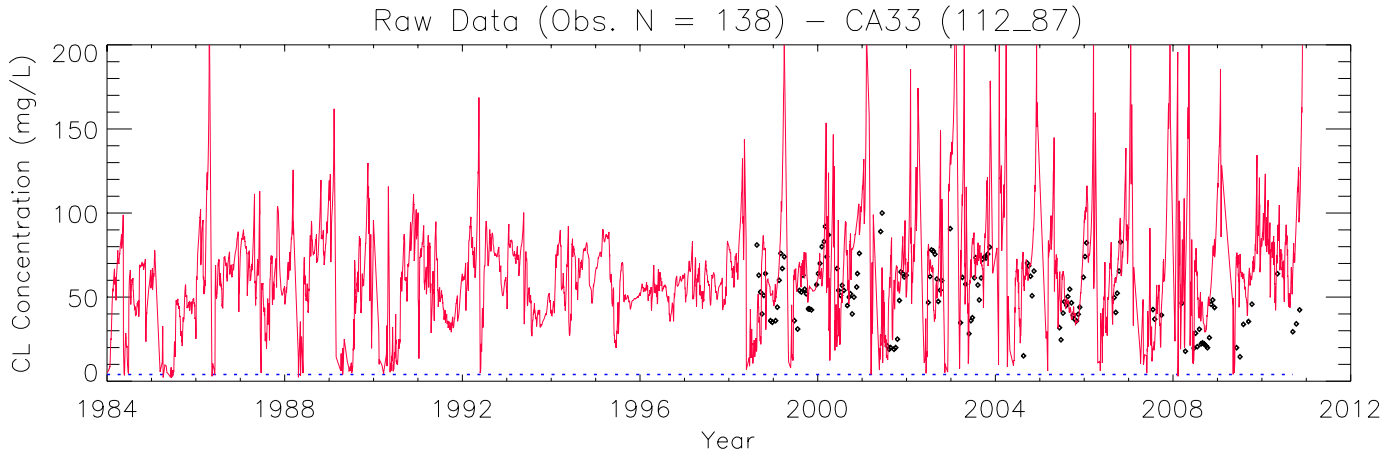

Cumulative Distribution: Raw Data – F3 (176_82)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

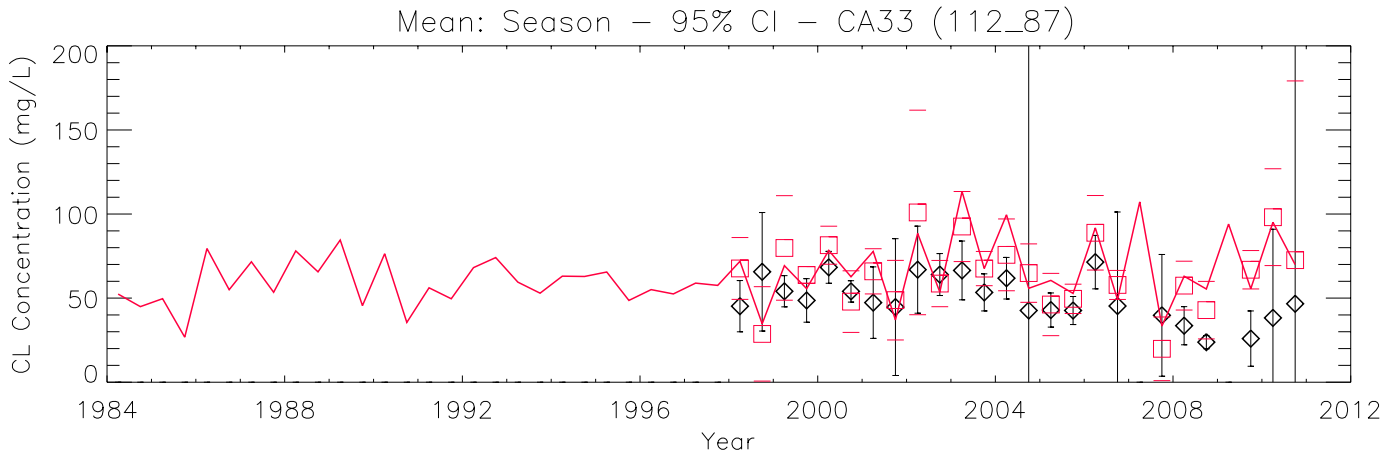

Raw Data (Obs. N = 154) – F4 (177_85)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

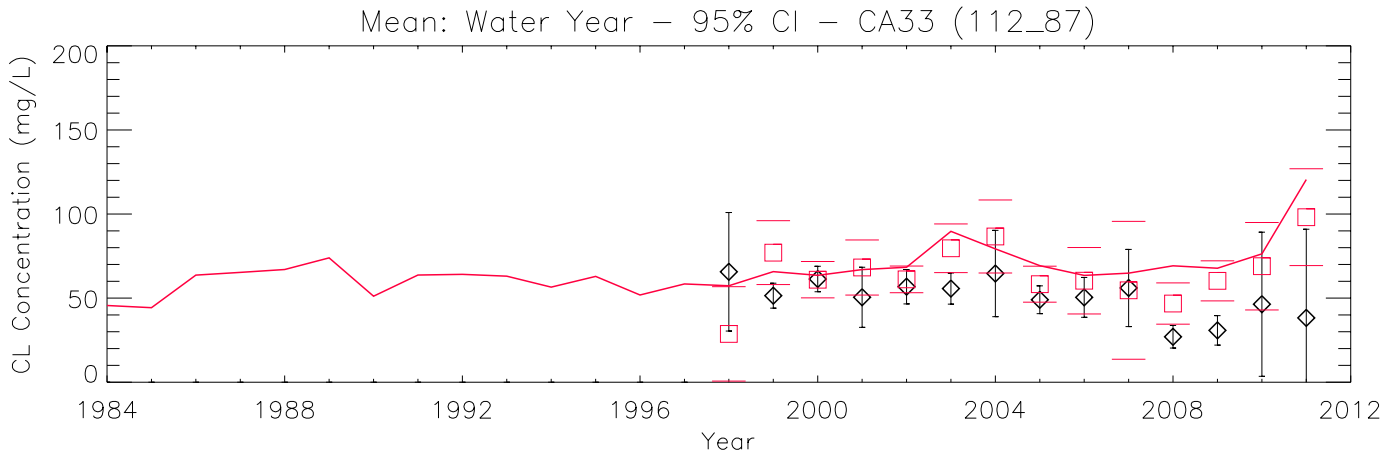

Mean: Season – 95% CI – F4 (177_85)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

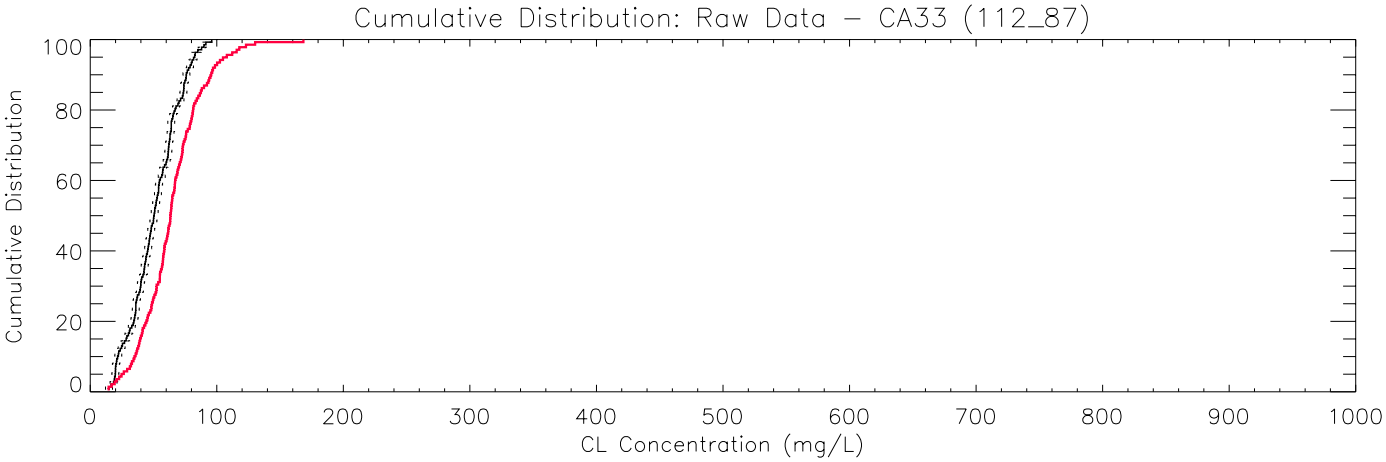

Mean: Water Year – 95% CI – F4 (177_85)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

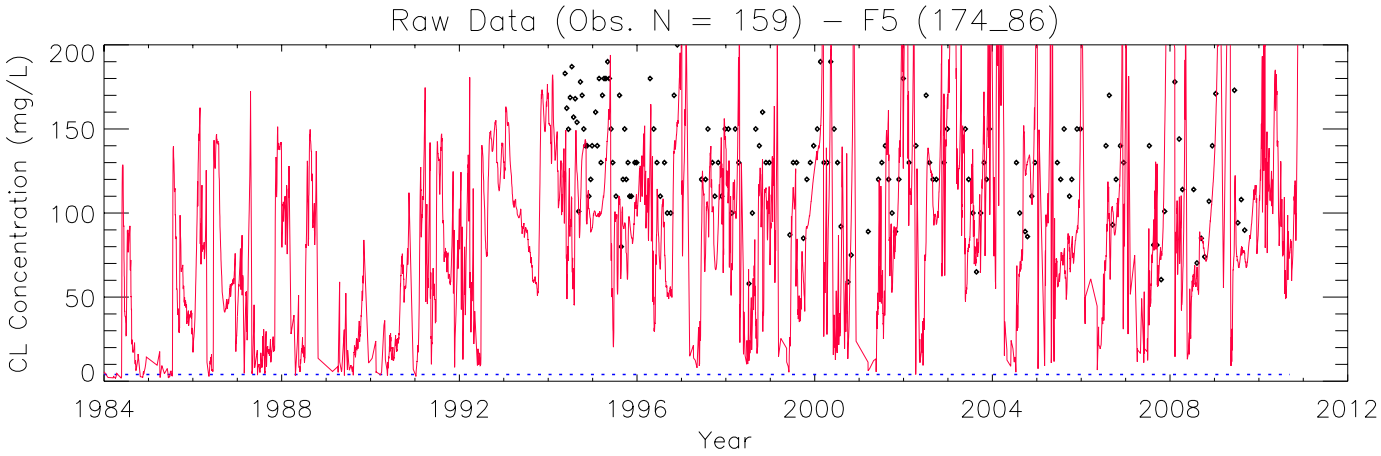

Cumulative Distribution: Raw Data – F4 (177_85)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

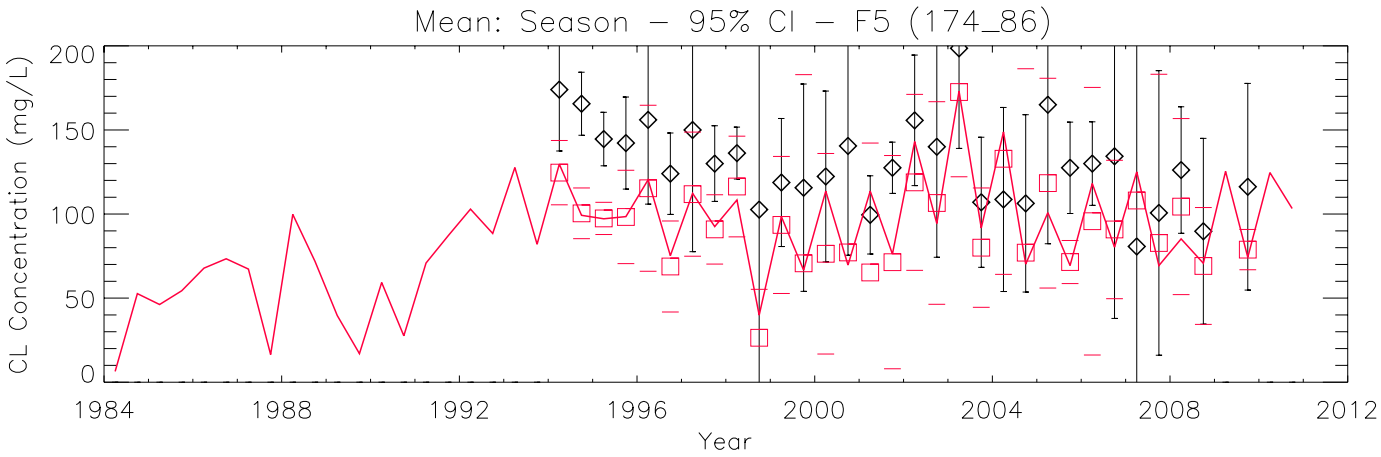

Raw Data (Obs. N = 138) – CA33 (112_87)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

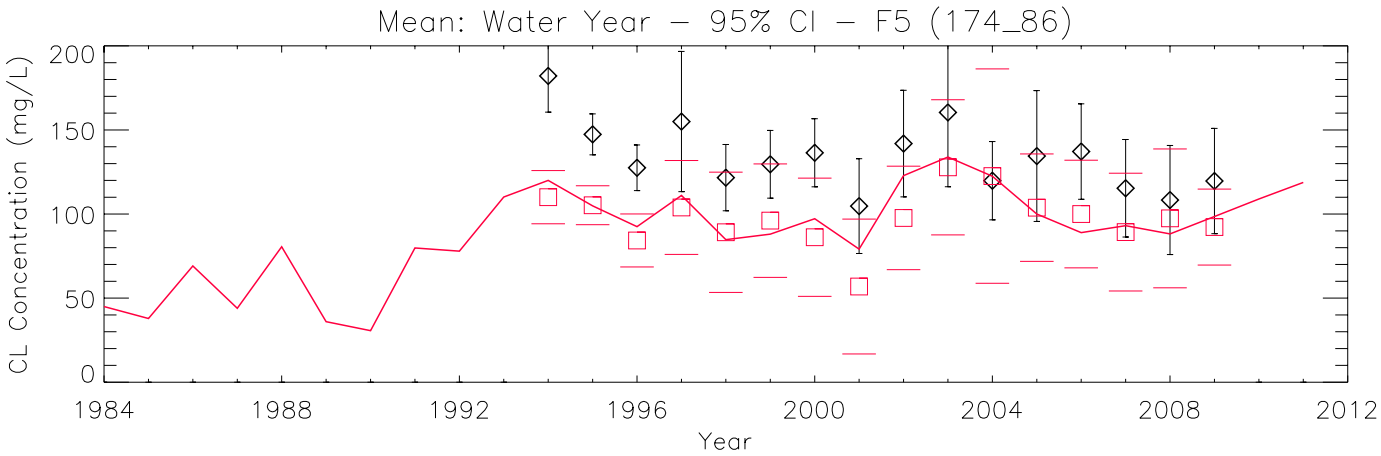

Mean: Season – 95% CI – CA33 (112_87)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

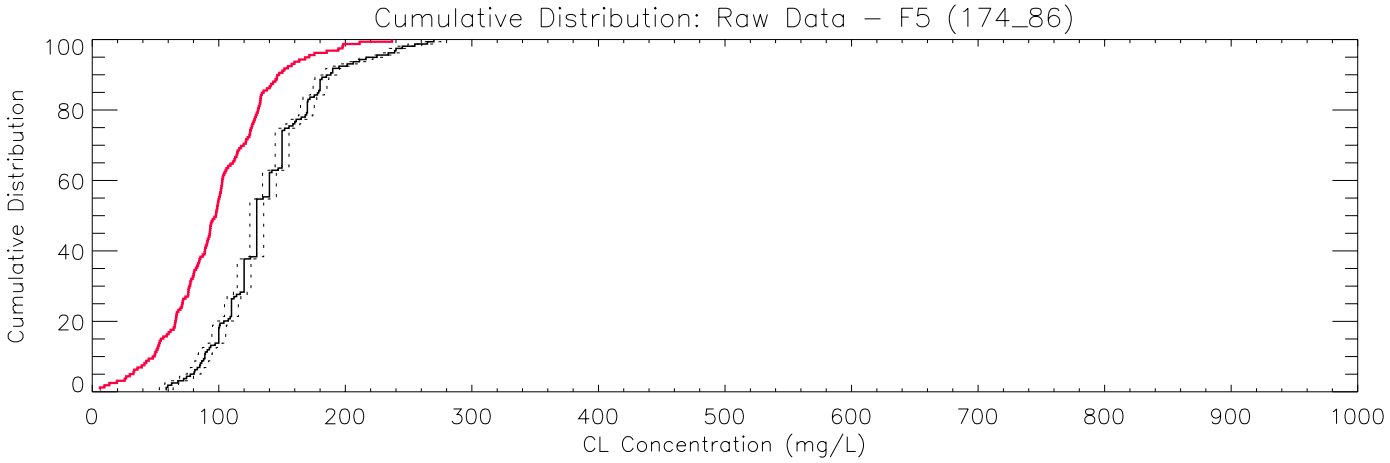

Mean: Water Year – 95% CI – CA33 (112_87)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

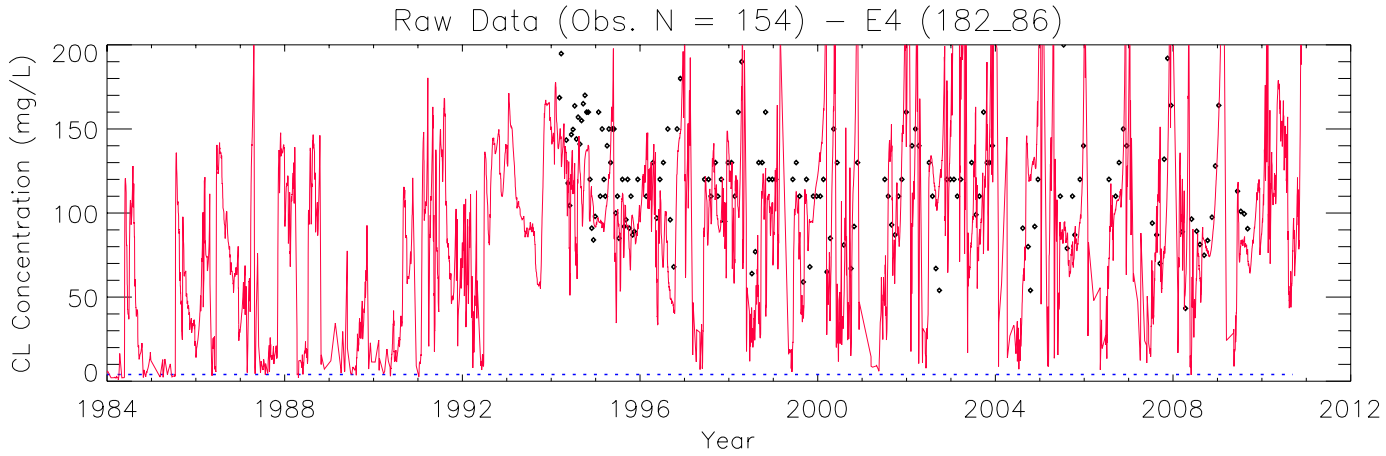

Cumulative Distribution: Raw Data – CA33 (112_87)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

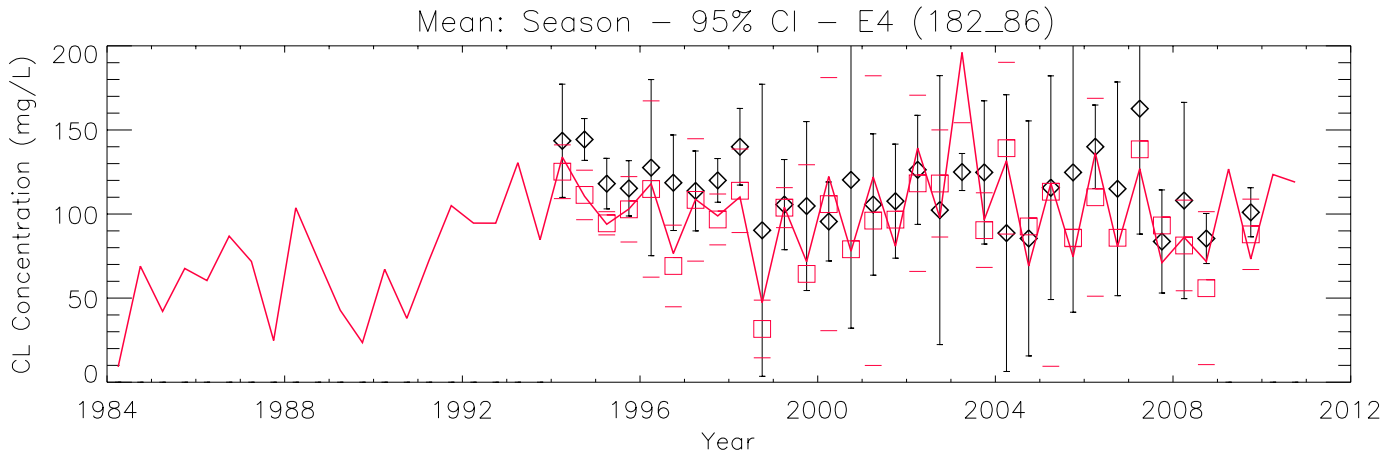

Raw Data (Obs. N = 159) – F5 (174_86)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

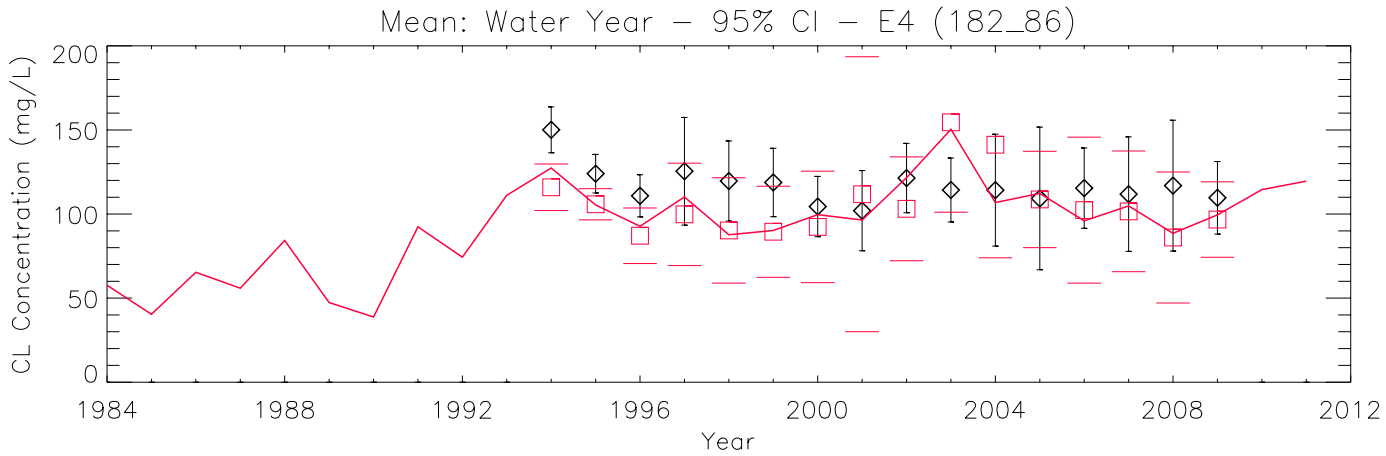

Mean: Season – 95% CI – F5 (174_86)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

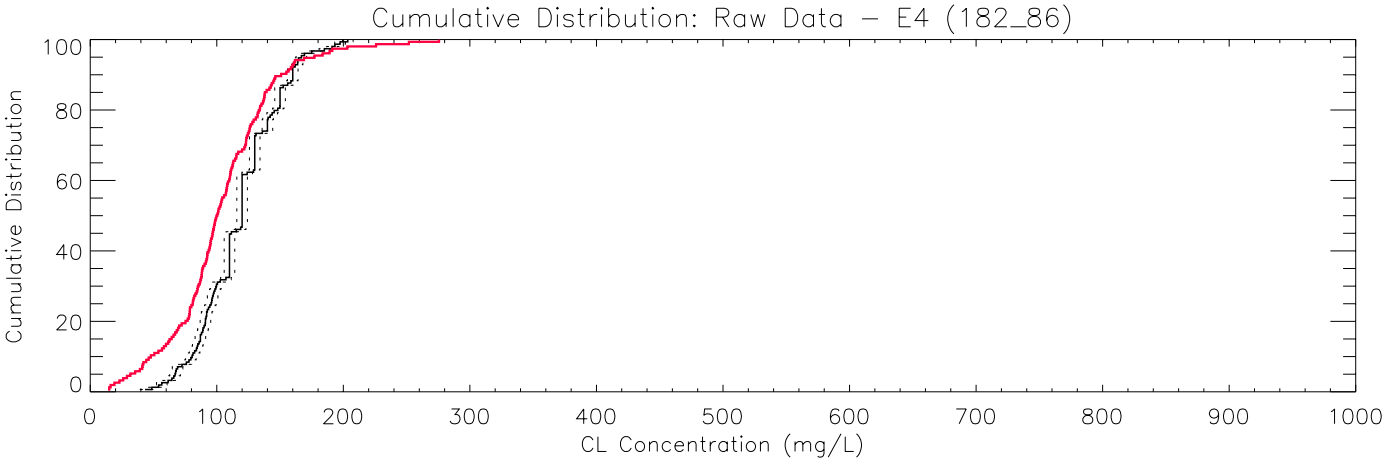

Mean: Water Year – 95% CI – F5 (174_86)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

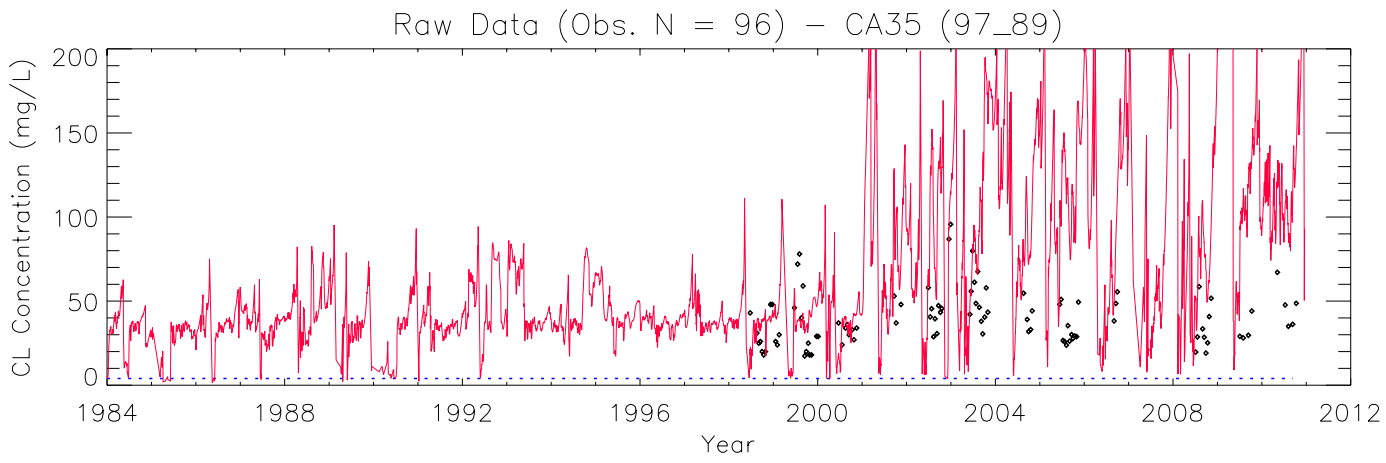

Cumulative Distribution: Raw Data – F5 (174_86)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

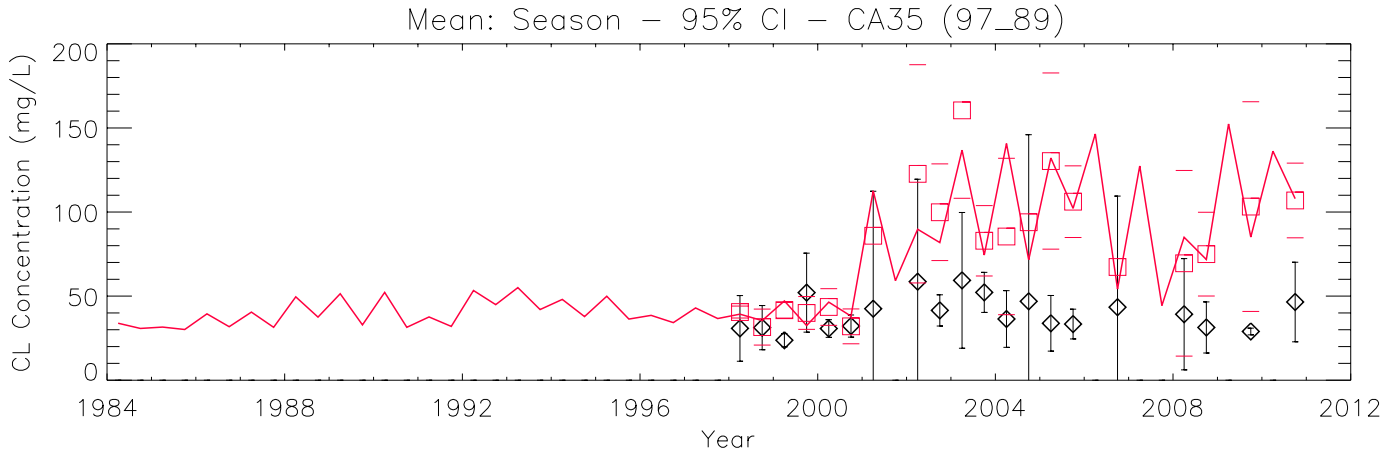

Raw Data (Obs. N = 154) – E4 (182_86)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

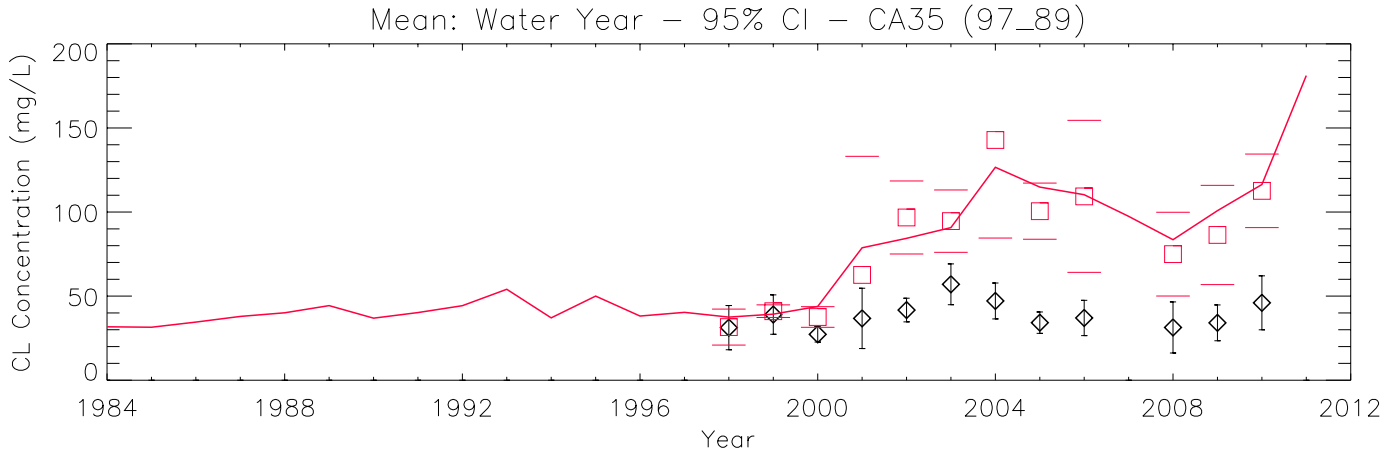

Mean: Season – 95% CI – E4 (182_86)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

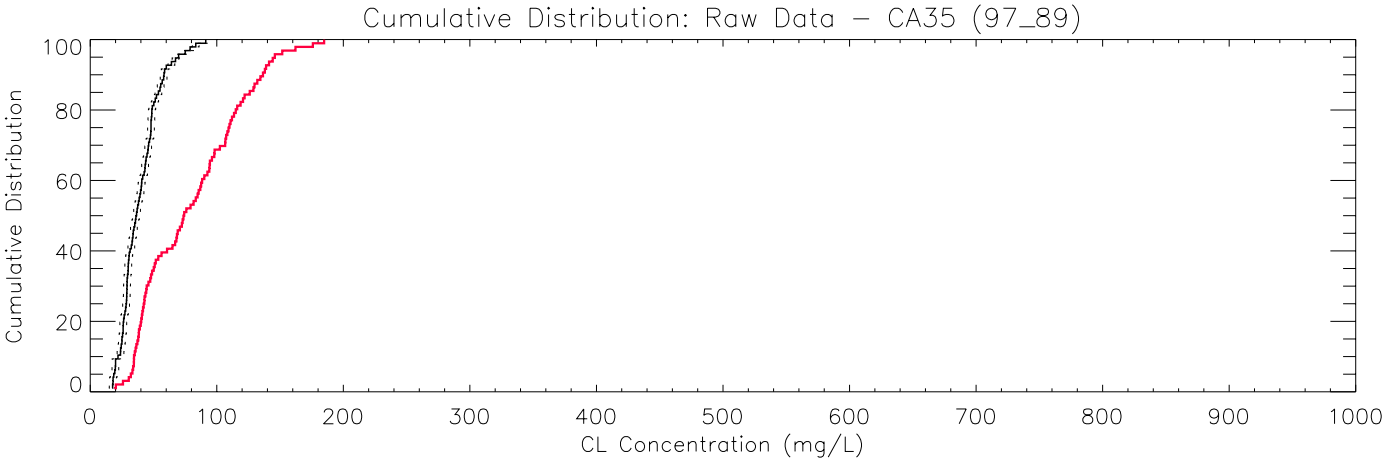

Mean: Water Year – 95% CI – E4 (182_86)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

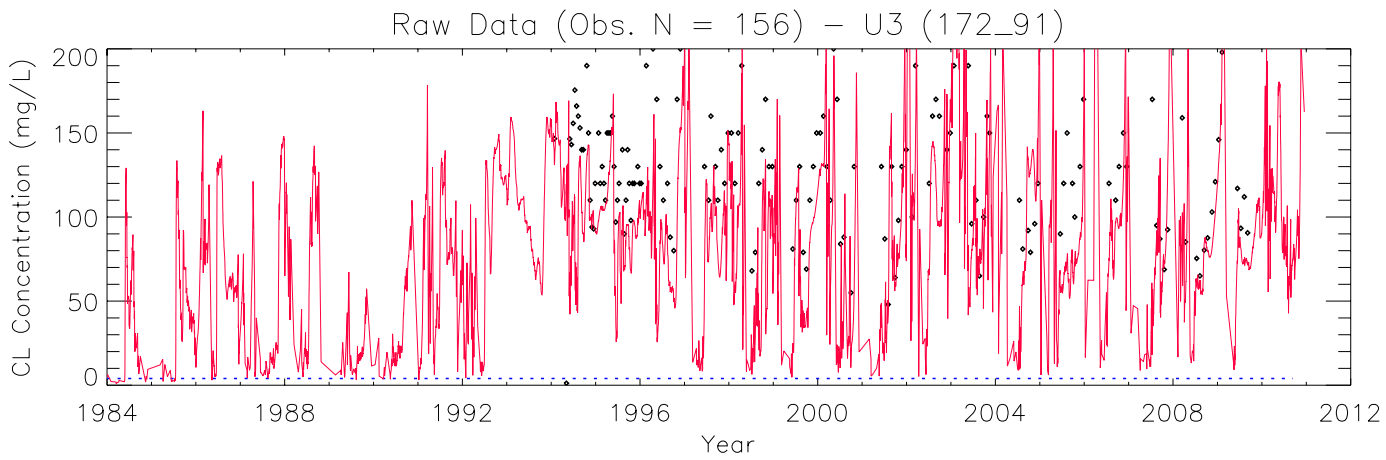

Cumulative Distribution: Raw Data – E4 (182_86)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

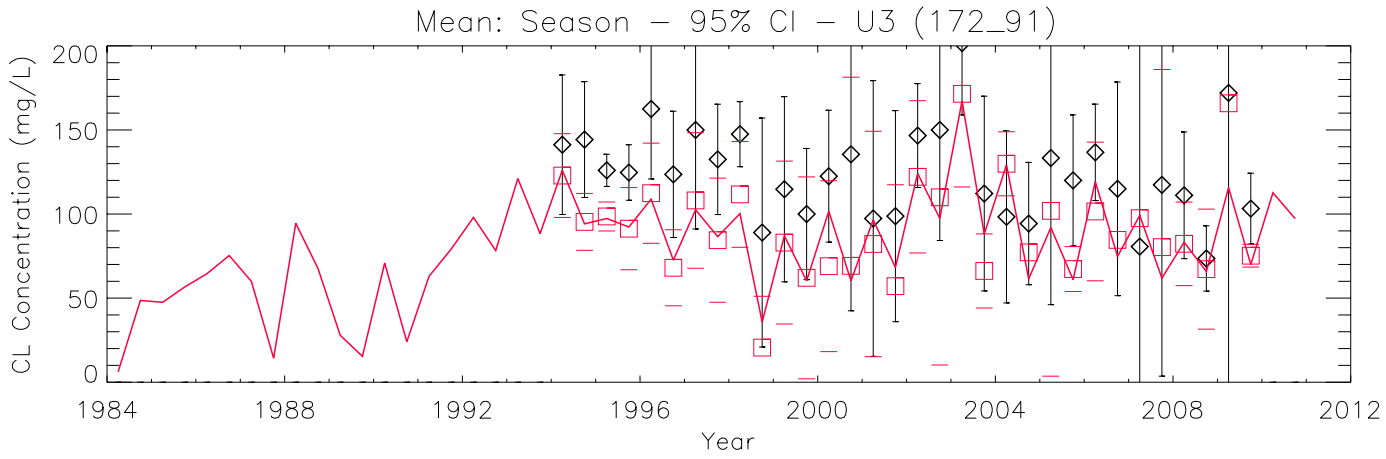

Raw Data (Obs. N = 96) – CA35 (97_89)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

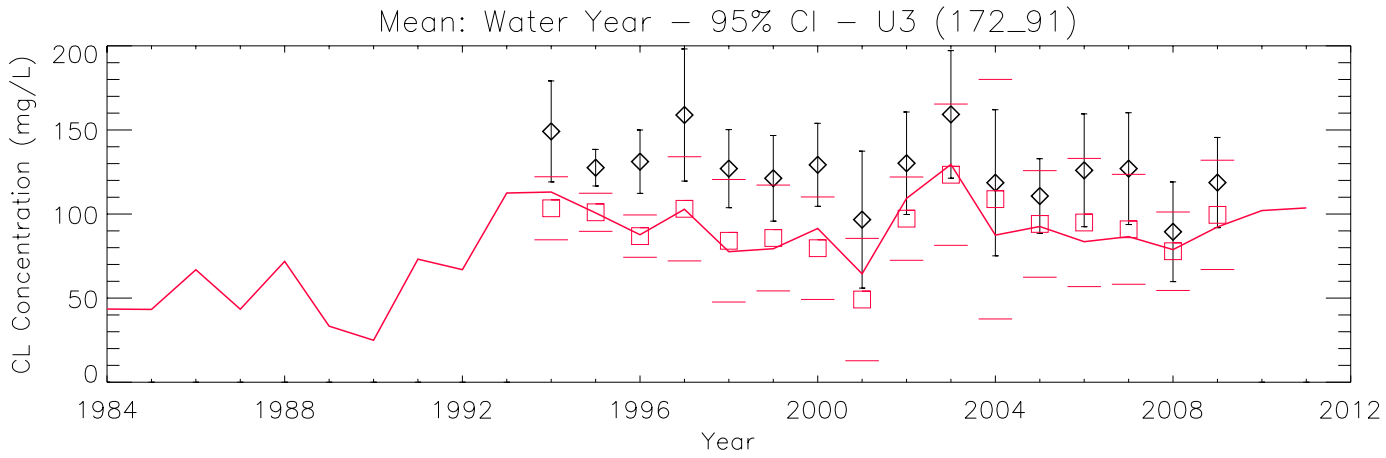

Mean: Season – 95% CI – CA35 (97_89)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

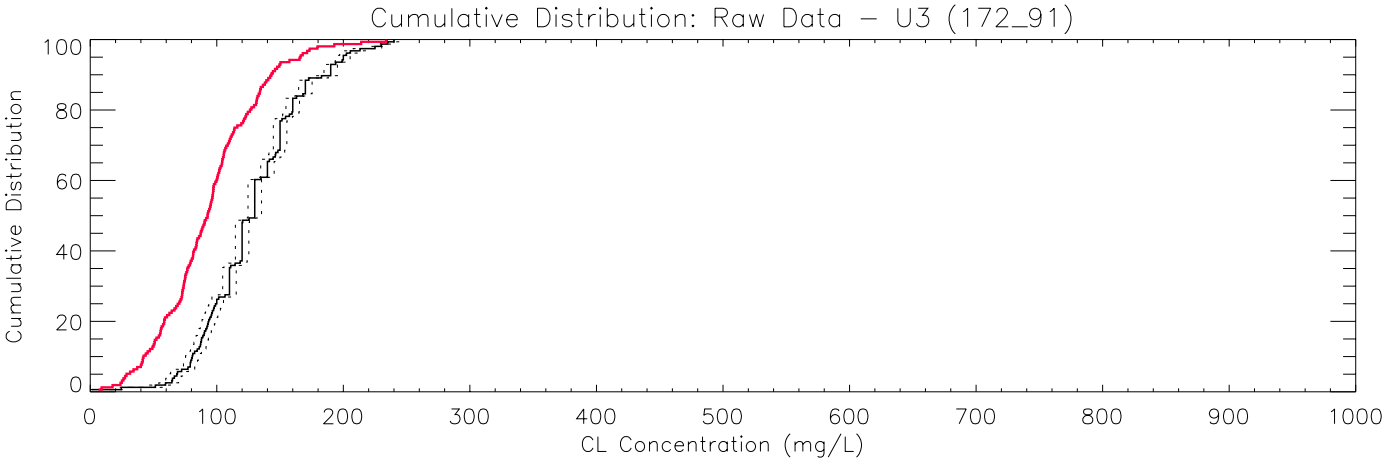

Mean: Water Year – 95% CI – CA35 (97_89)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

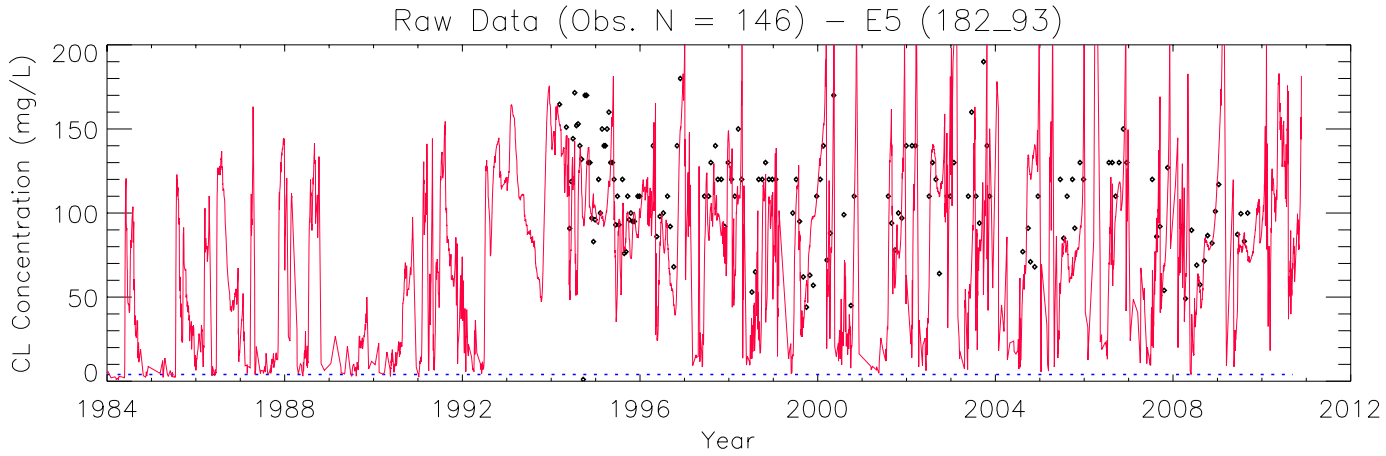

Cumulative Distribution: Raw Data – CA35 (97_89)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

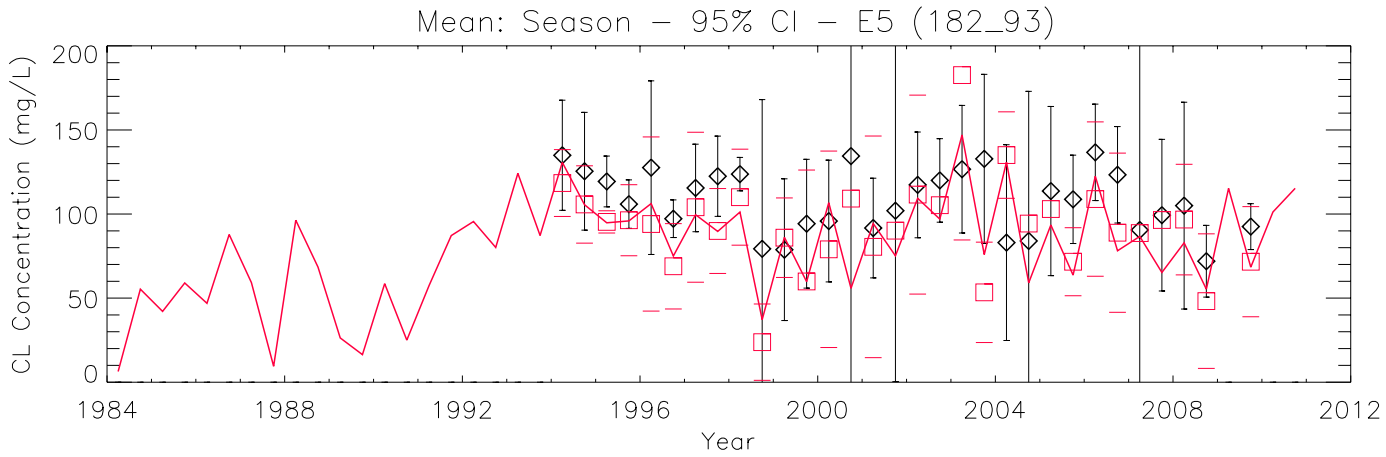

Raw Data (Obs. N = 156) – U3 (172_91)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

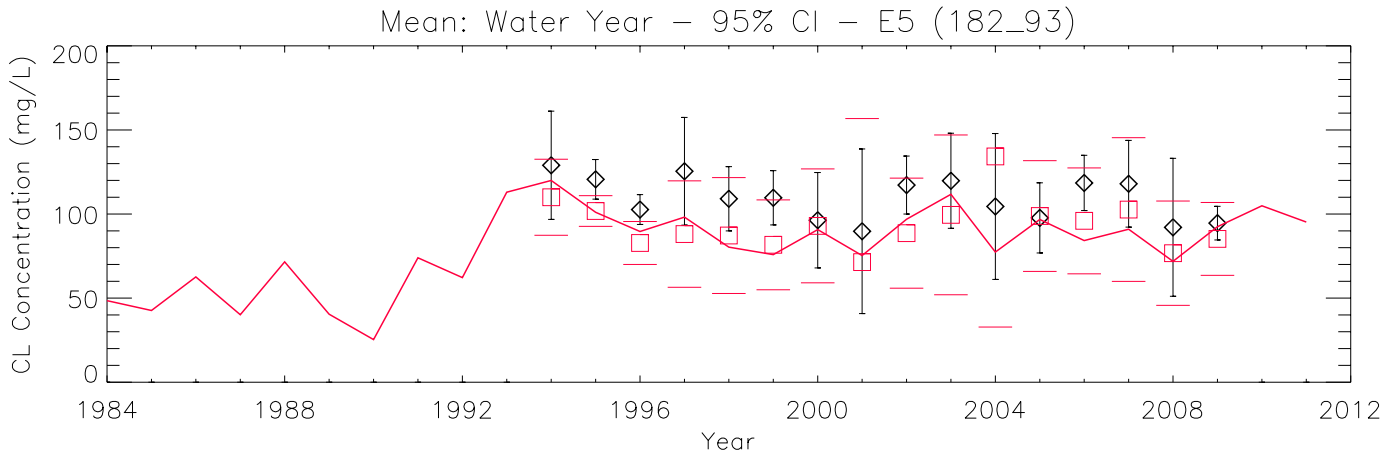

Mean: Season – 95% CI – U3 (172_91)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

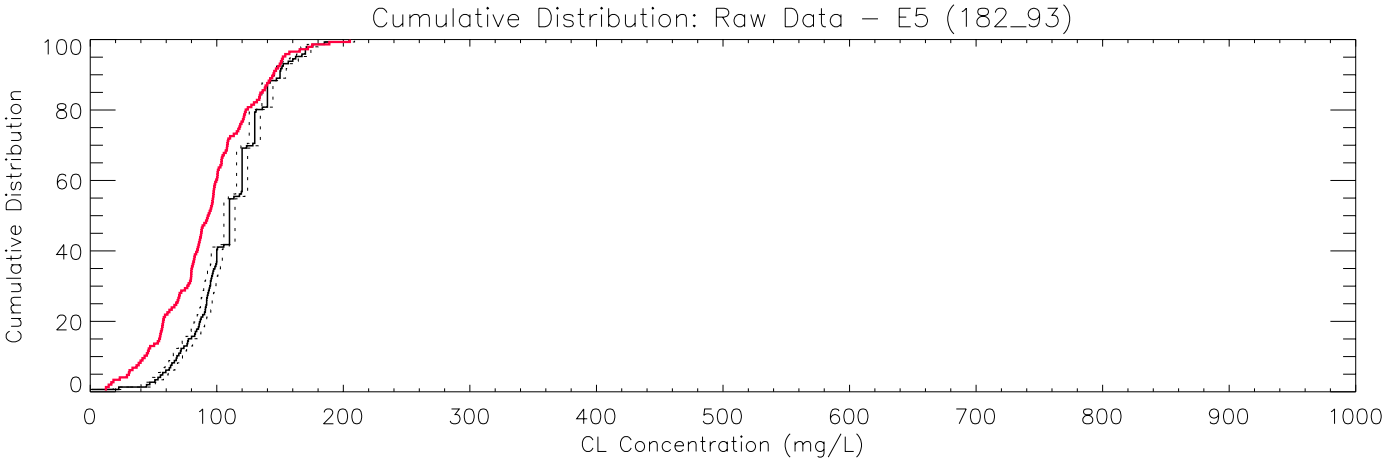

Mean: Water Year – 95% CI – U3 (172_91)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

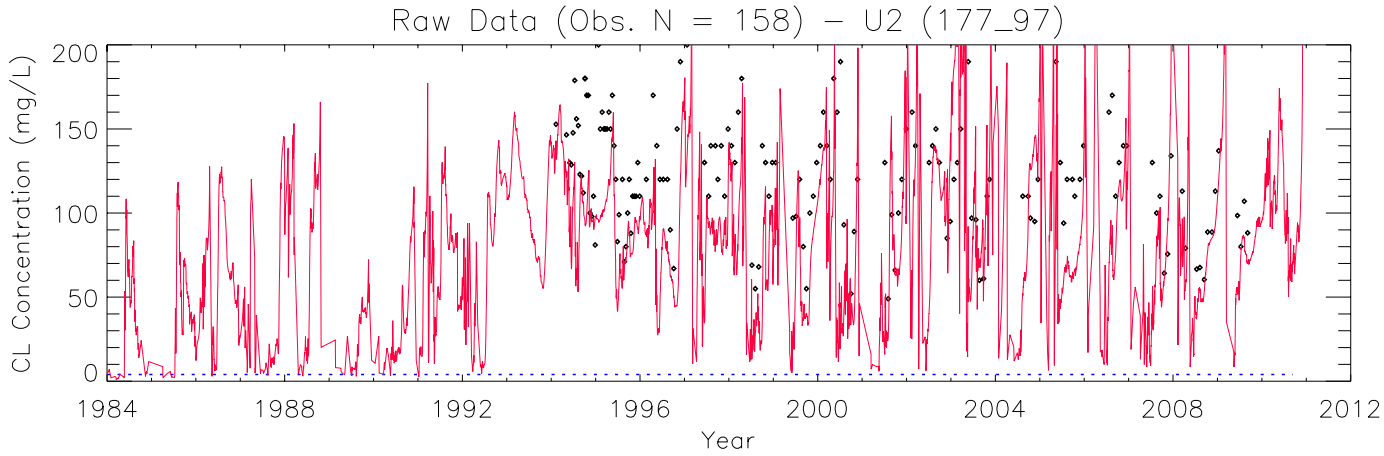

Cumulative Distribution: Raw Data – U3 (172_91)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

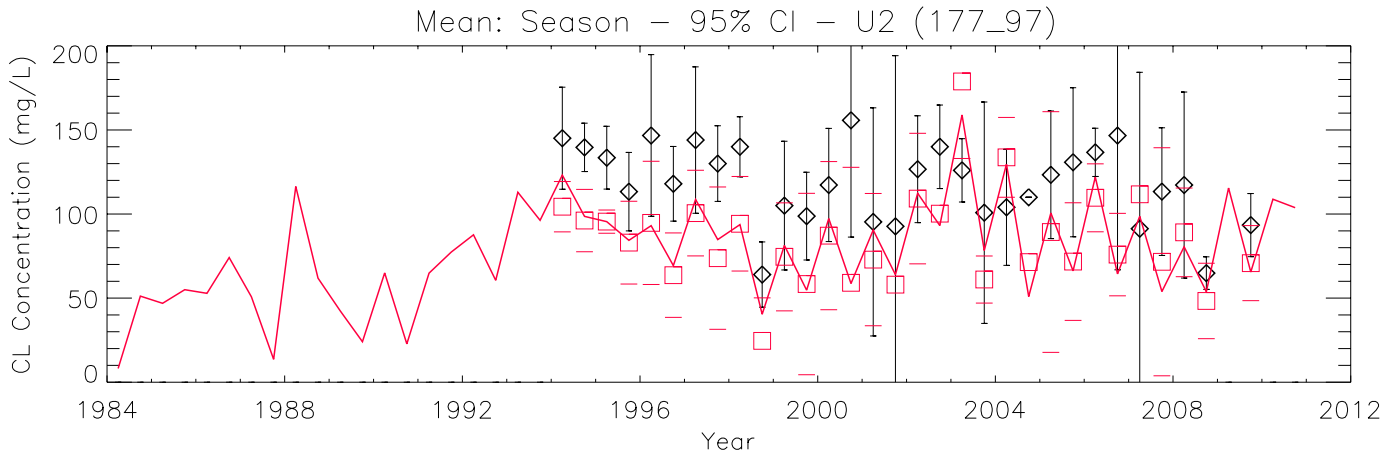

Raw Data (Obs. N = 146) – E5 (182_93)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

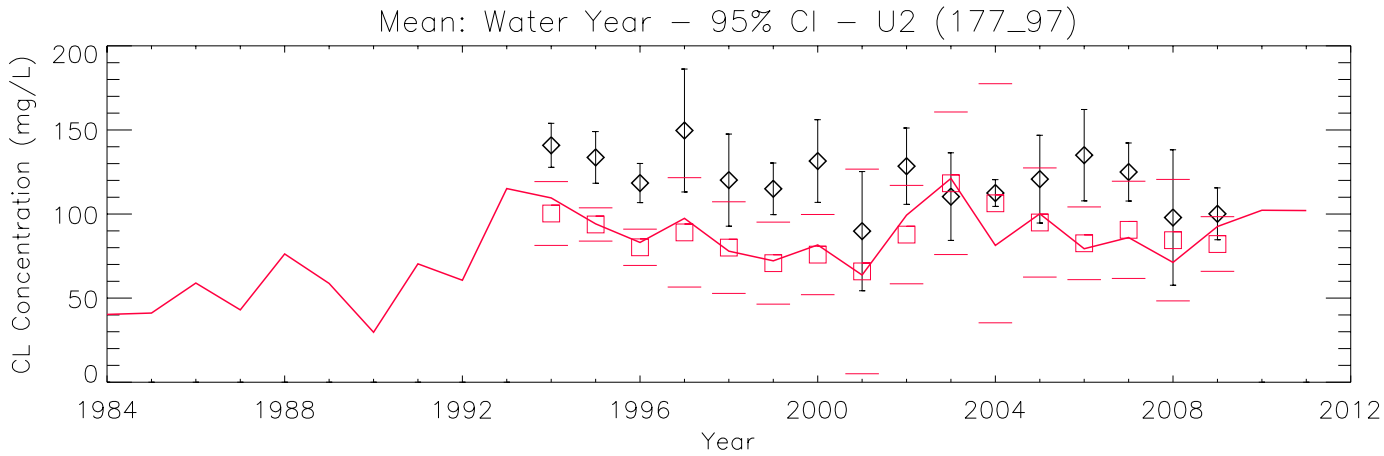

Mean: Season – 95% CI – E5 (182_93)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

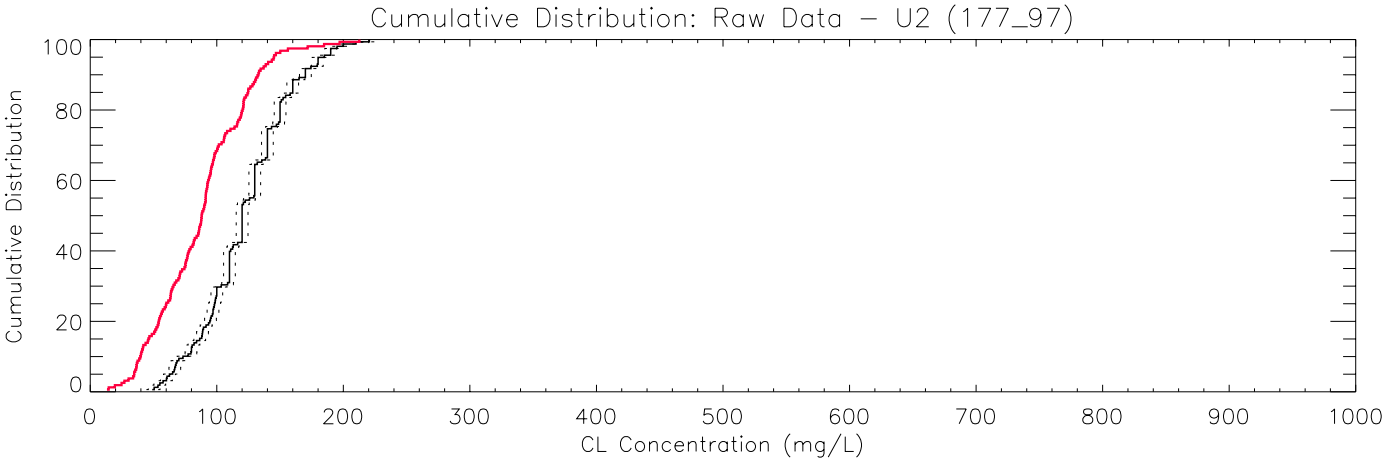

Mean: Water Year – 95% CI – E5 (182_93)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

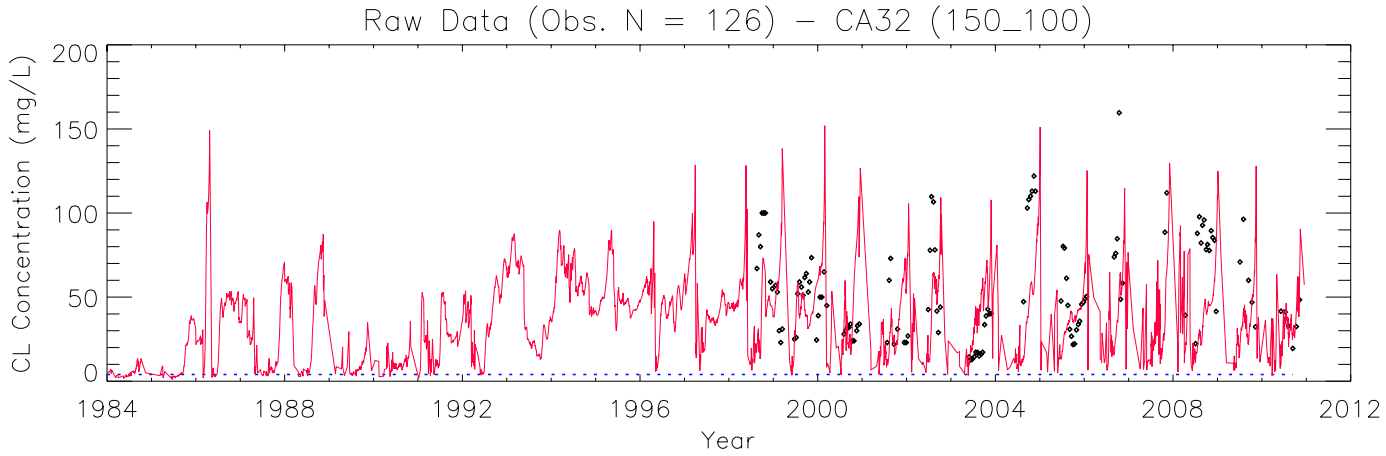

Cumulative Distribution: Raw Data – E5 (182_93)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

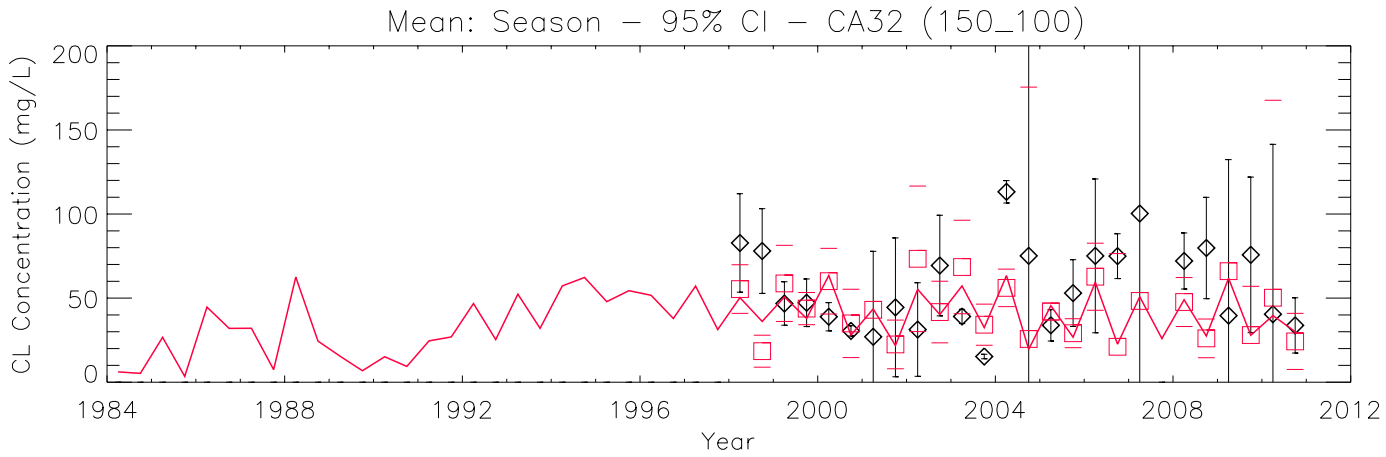

Raw Data (Obs. N = 158) – U2 (177_97)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

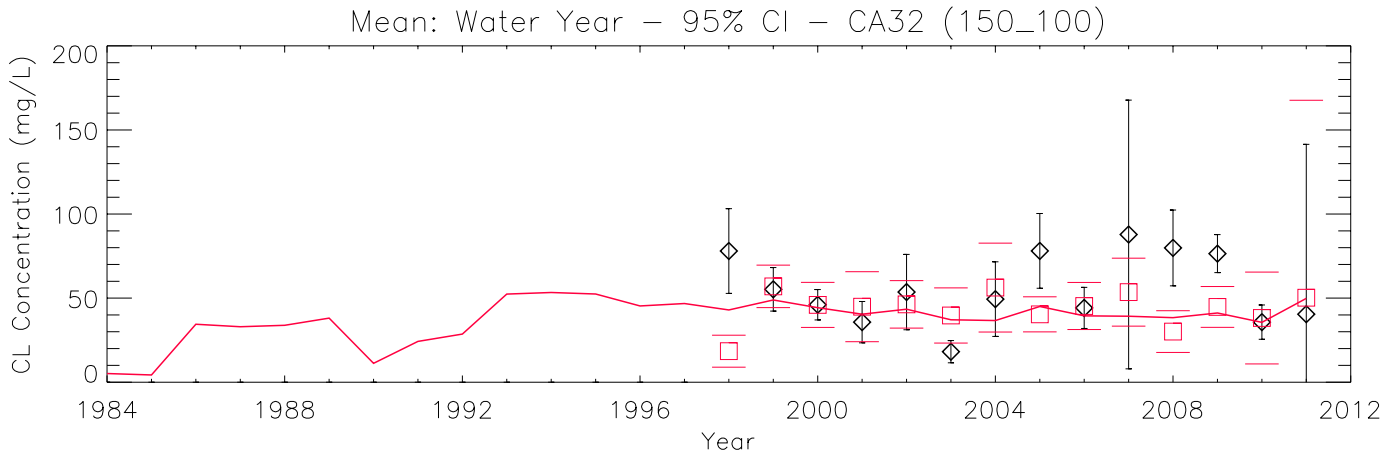

Mean: Season – 95% CI – U2 (177_97)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

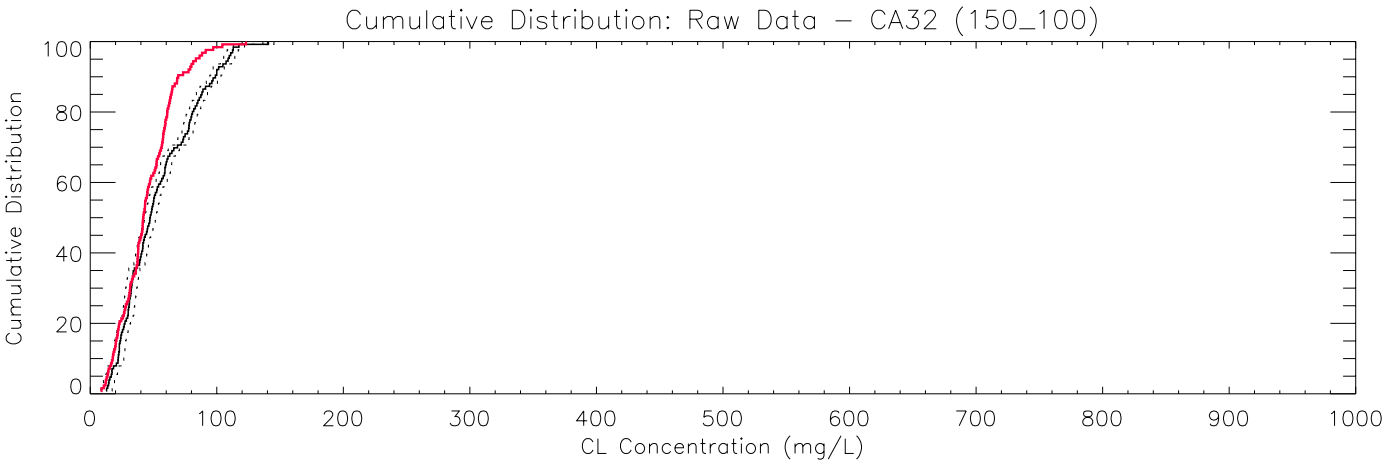

Mean: Water Year – 95% CI – U2 (177_97)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

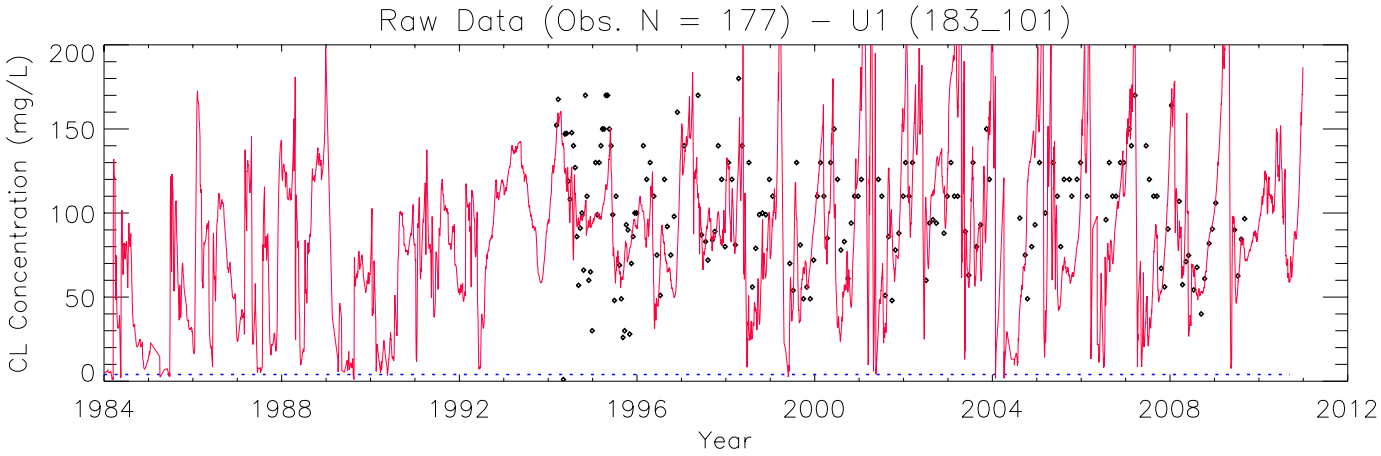

Cumulative Distribution: Raw Data – U2 (177_97)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

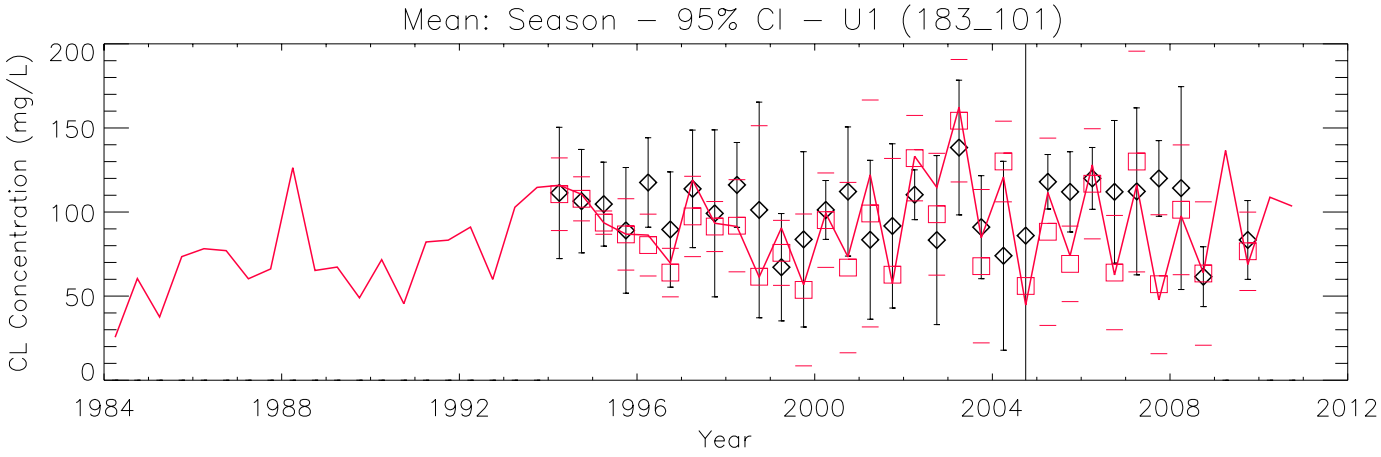

Raw Data (Obs. N = 126) – CA32 (150_100)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

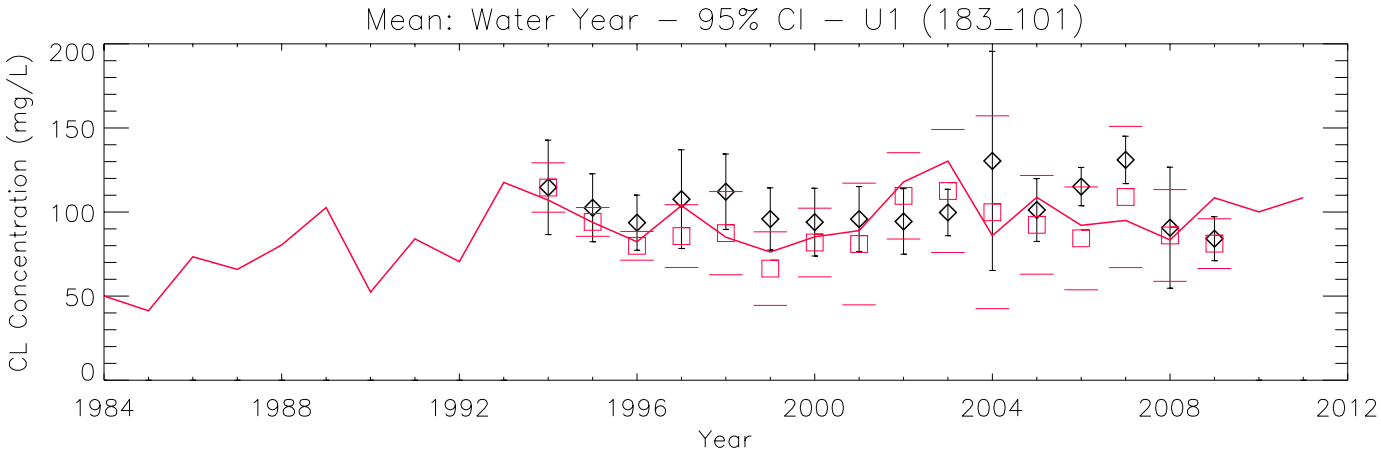

Mean: Season – 95% CI – CA32 (150_100)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

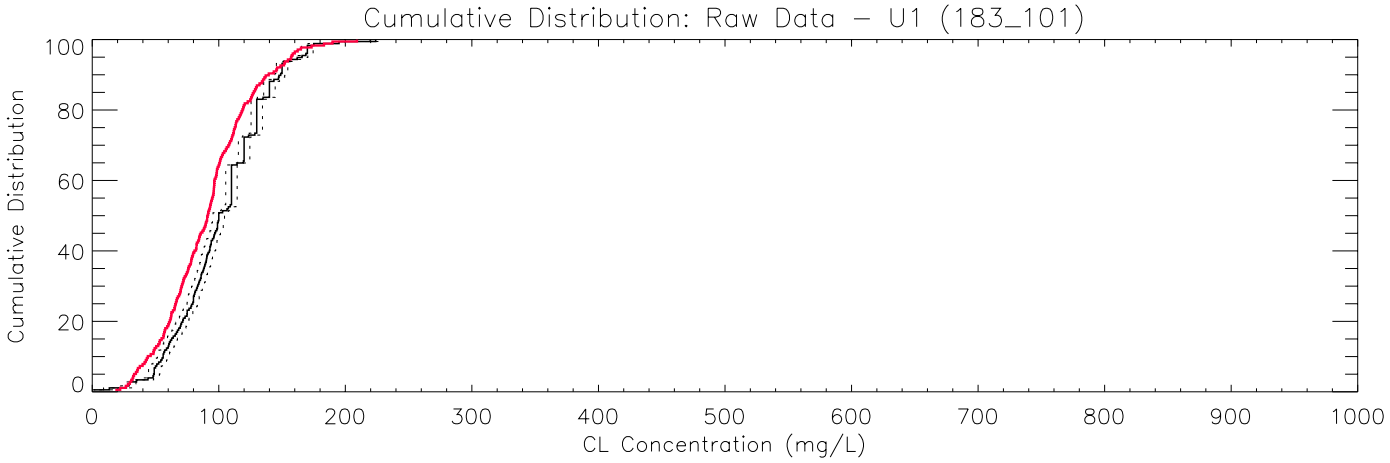

Mean: Water Year – 95% CI – CA32 (150_100)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

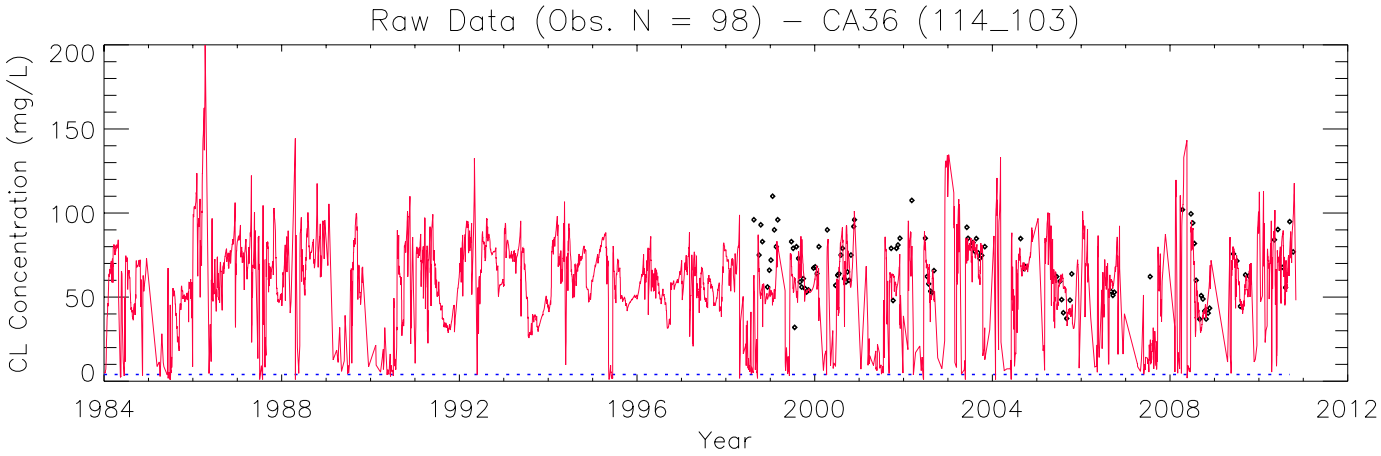

Cumulative Distribution: Raw Data – CA32 (150_100)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

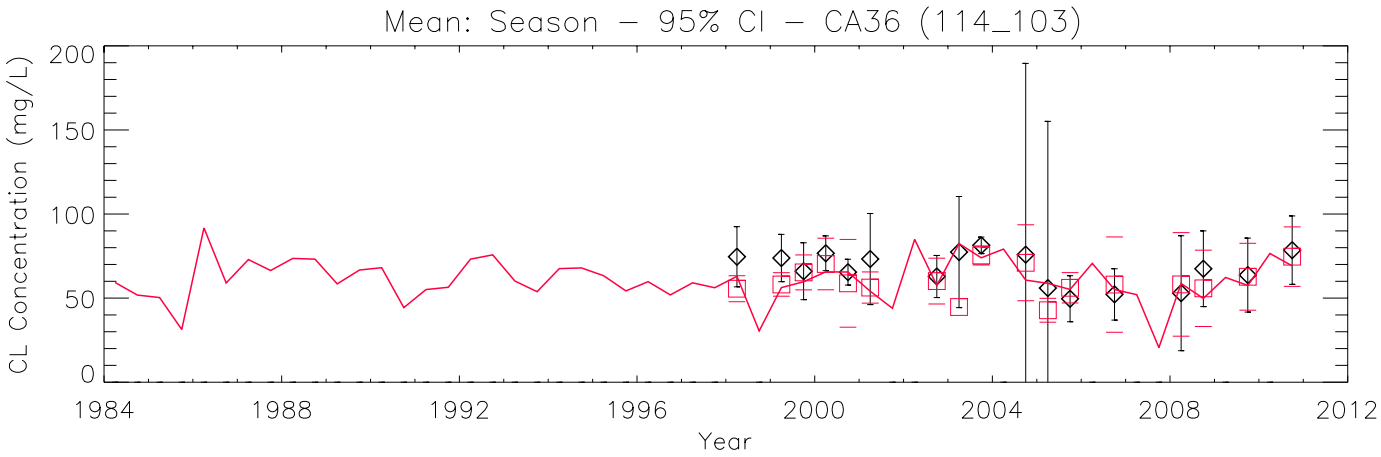

Raw Data (Obs. N = 177) – U1 (183_101)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

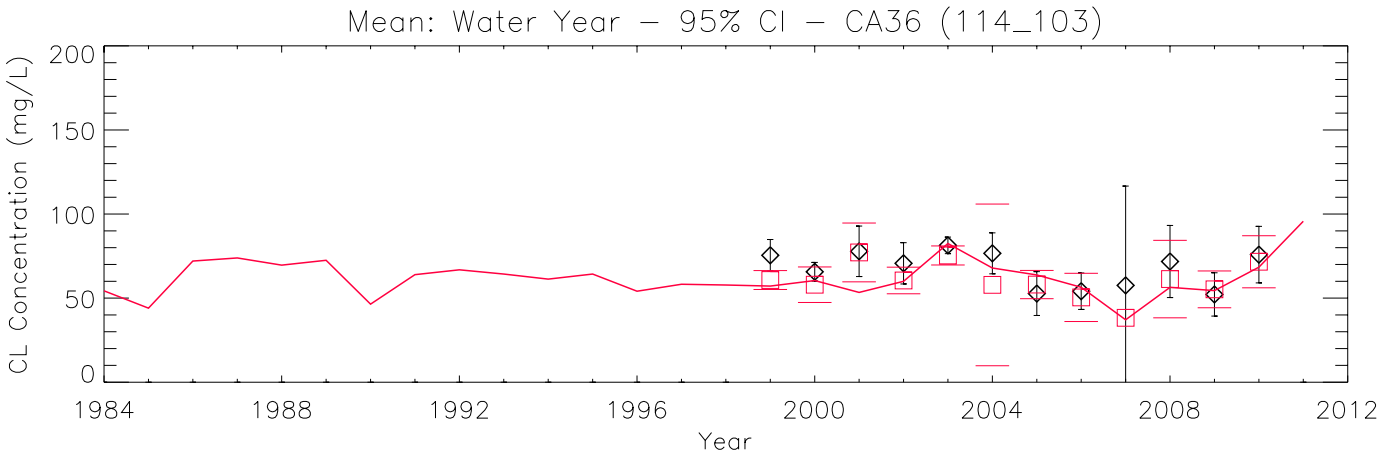

Mean: Season – 95% CI – U1 (183_101)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

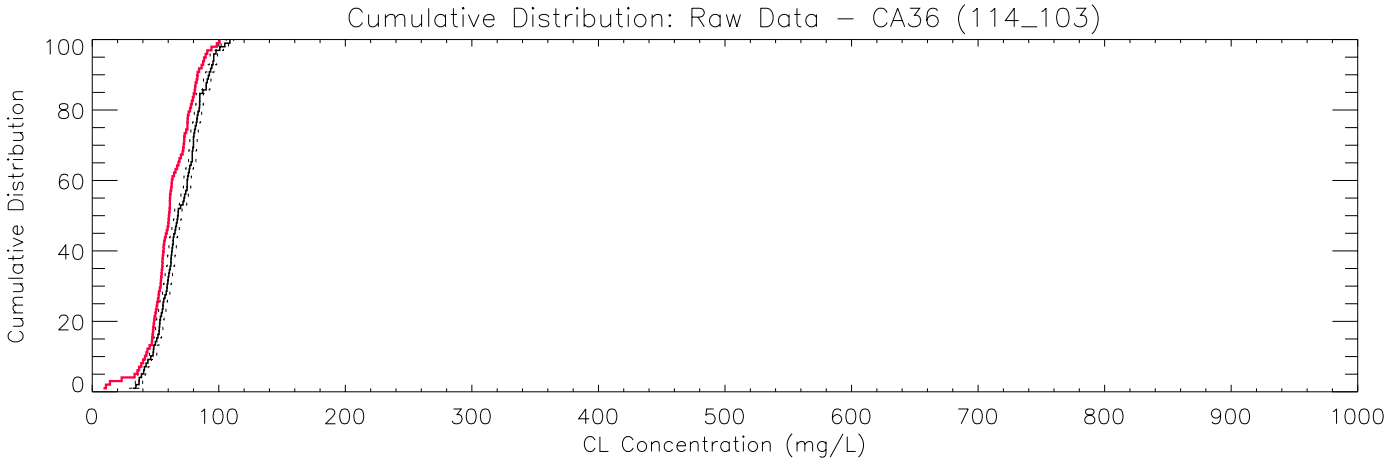

Mean: Water Year – 95% CI – U1 (183_101)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

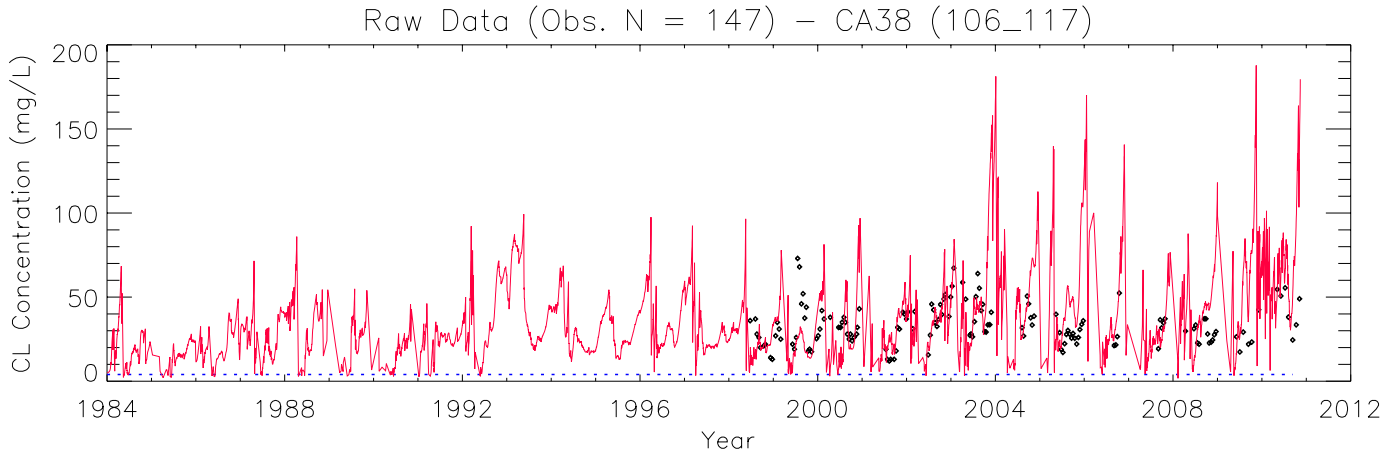

Cumulative Distribution: Raw Data – U1 (183_101)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

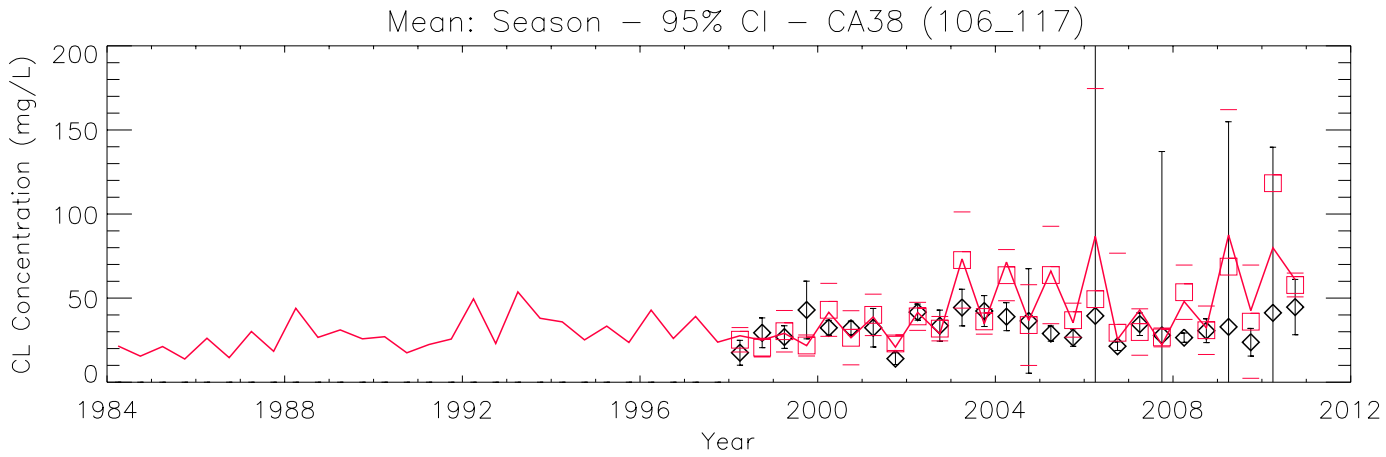

Raw Data (Obs. N = 98) – CA36 (114_103)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

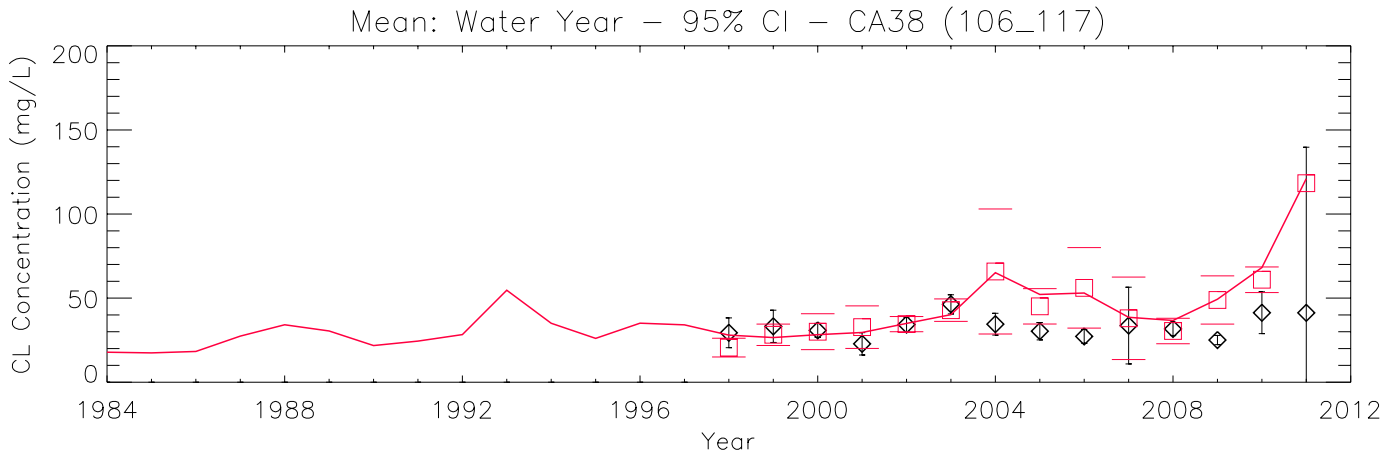

Mean: Season – 95% CI – CA36 (114_103)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

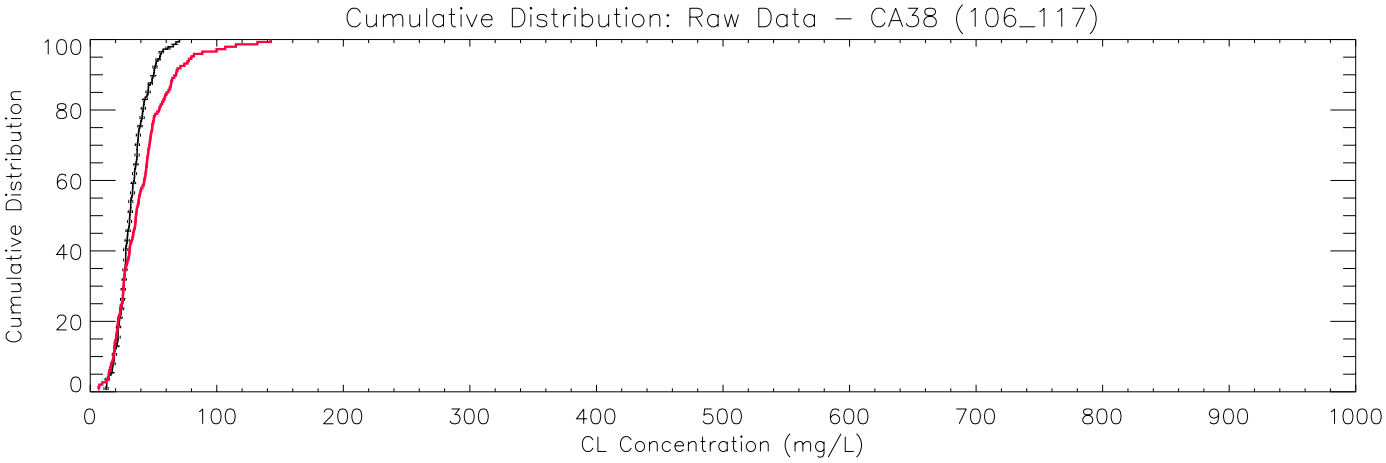

Mean: Water Year – 95% CI – CA36 (114_103)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

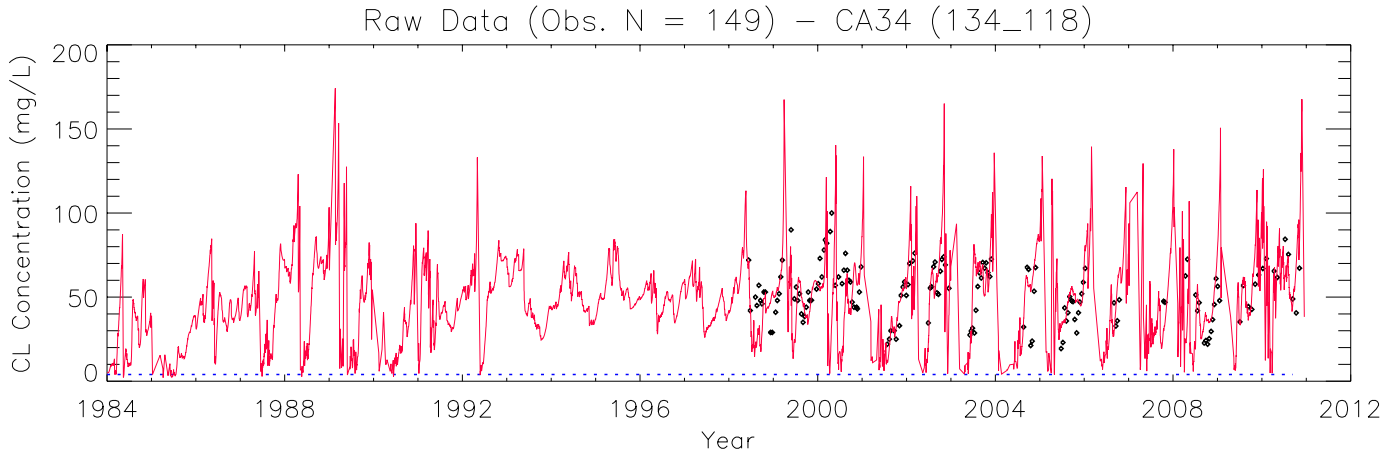

Cumulative Distribution: Raw Data – CA36 (114_103)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

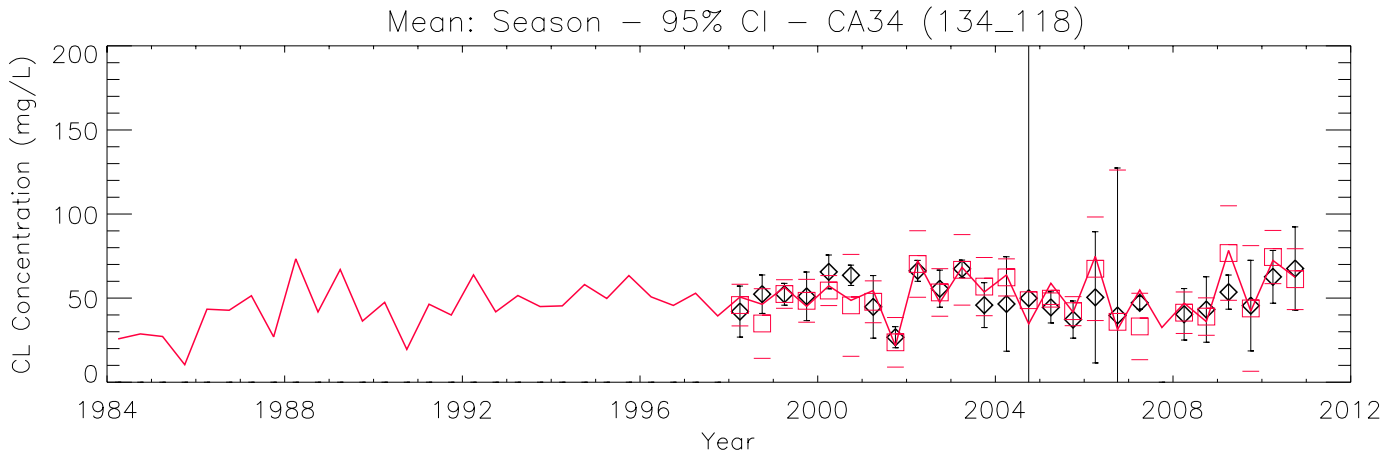

Raw Data (Obs. N = 147) – CA38 (106_117)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

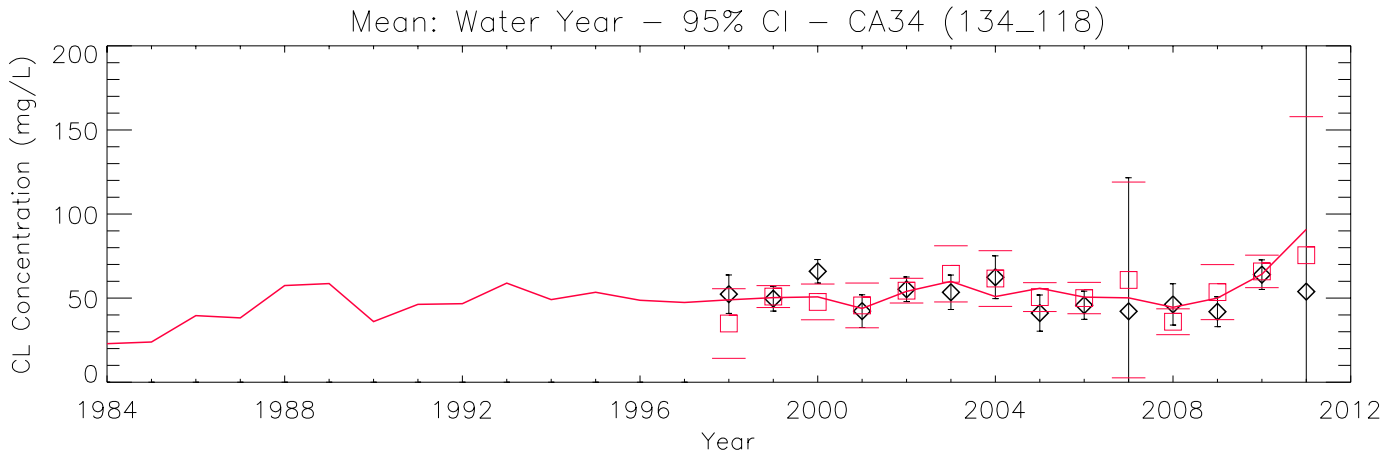

Mean: Season – 95% CI – CA38 (106_117)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

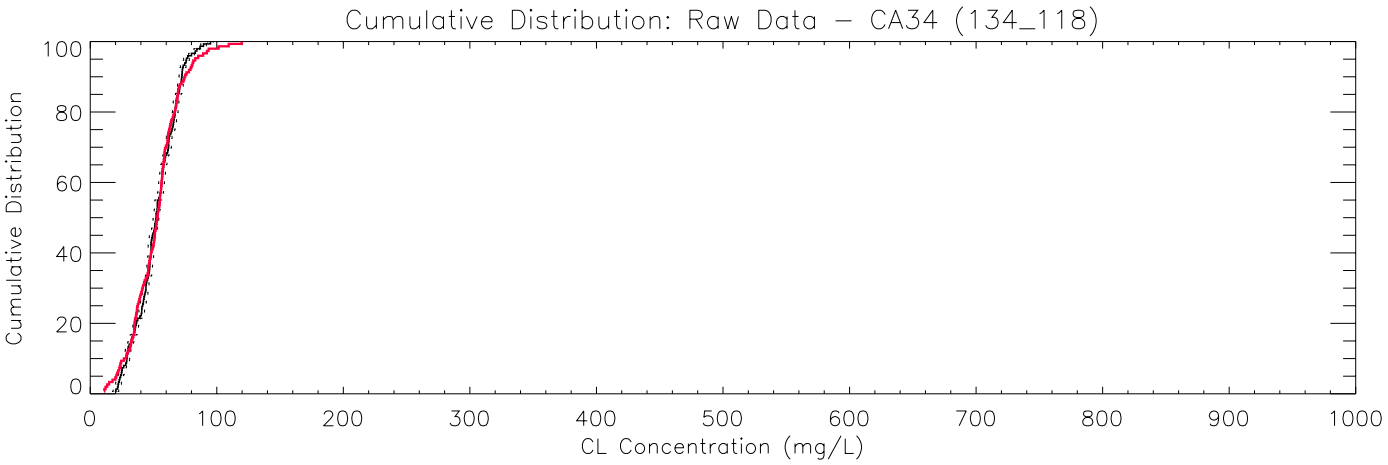

Mean: Water Year – 95% CI – CA38 (106_117)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

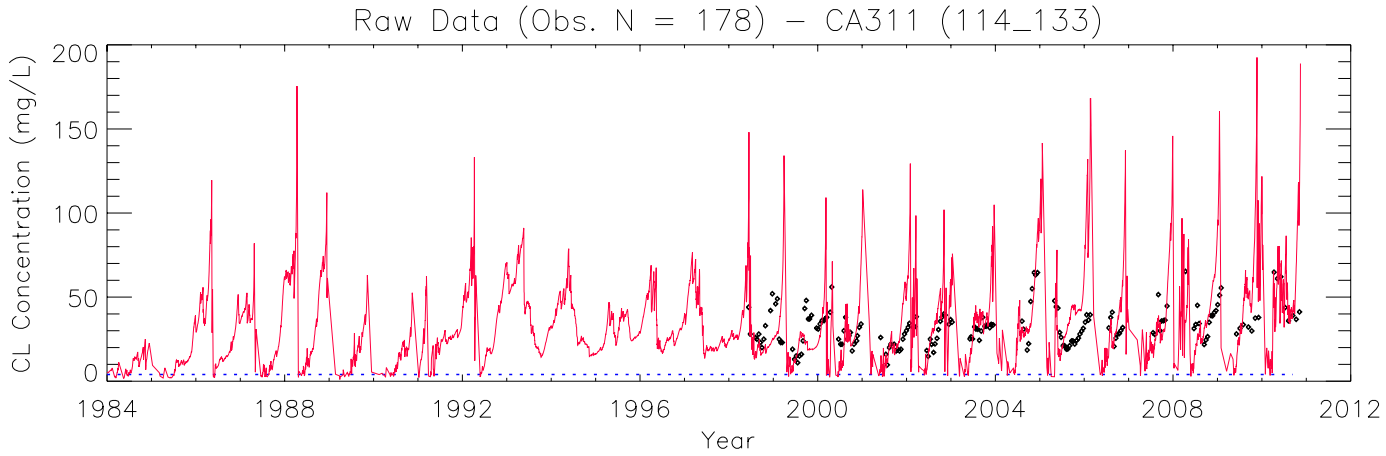

Cumulative Distribution: Raw Data – CA38 (106_117)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

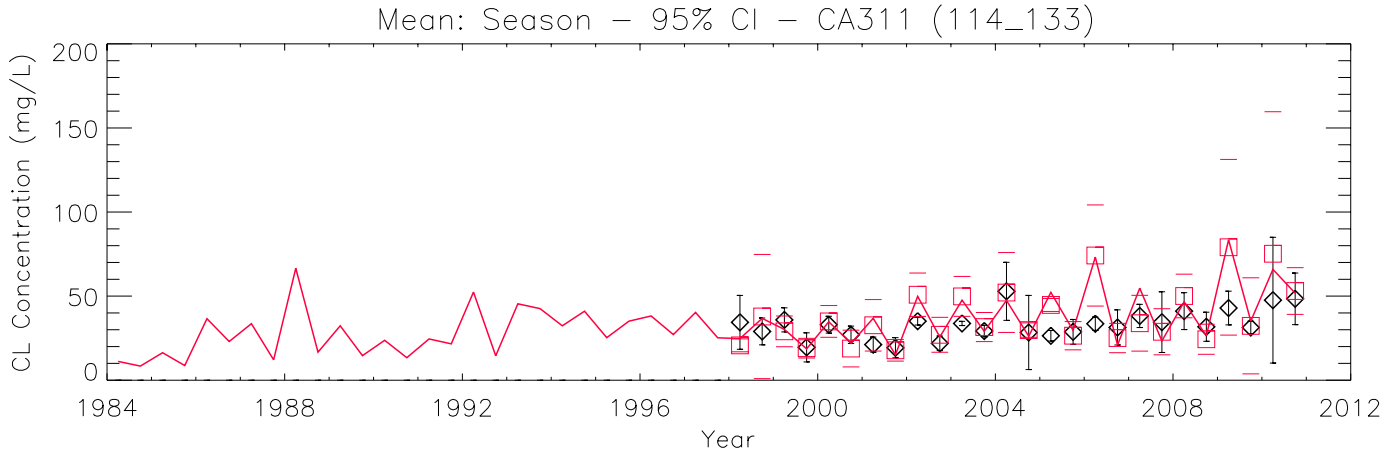

Raw Data (Obs. N = 149) – CA34 (134_118)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

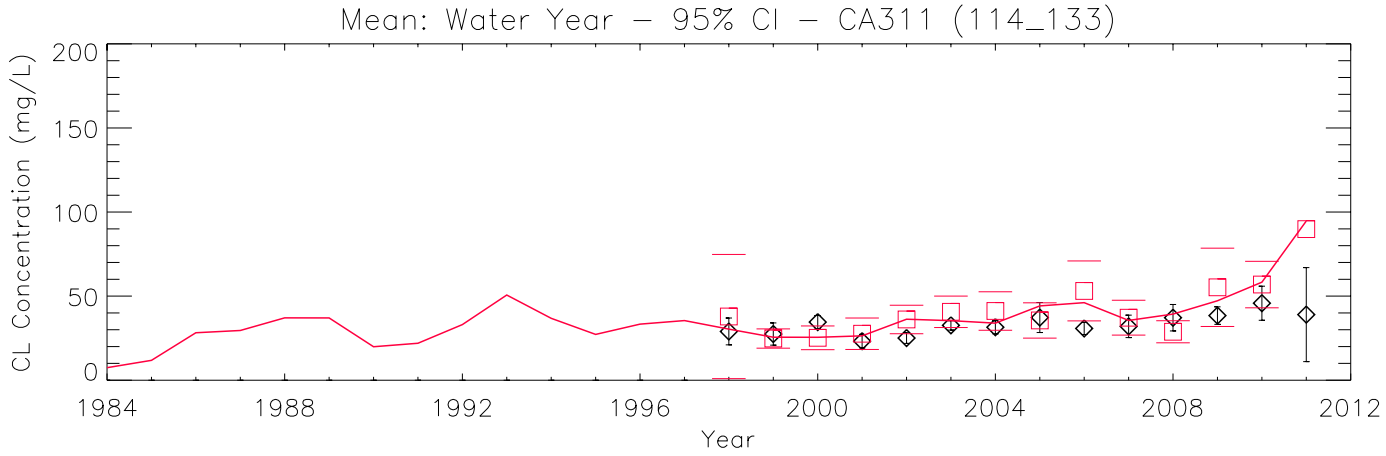

Mean: Season – 95% CI – CA34 (134_118)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

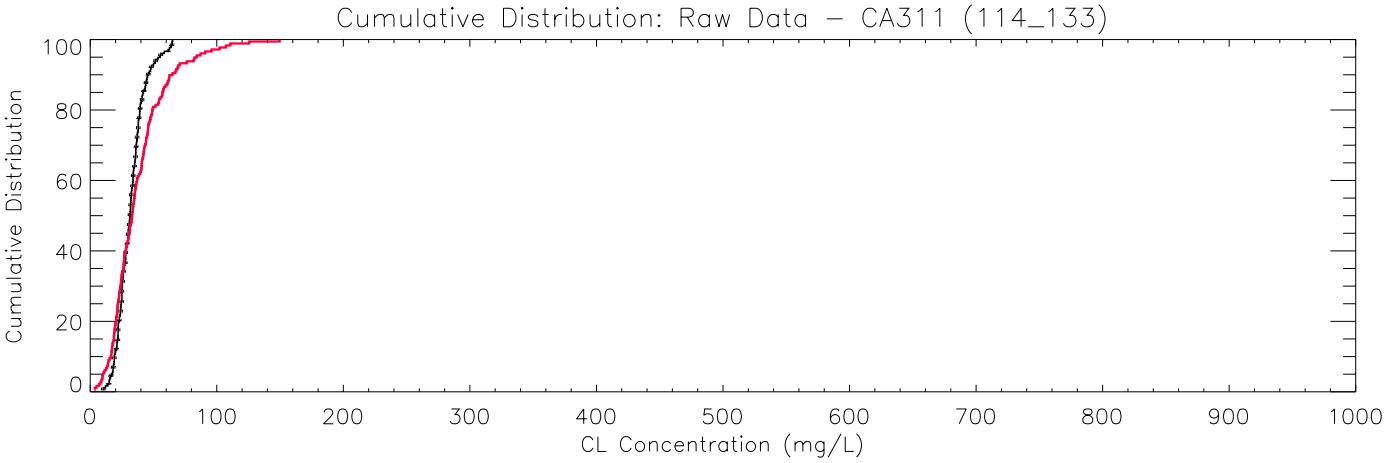

Mean: Water Year – 95% CI – CA34 (134_118)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

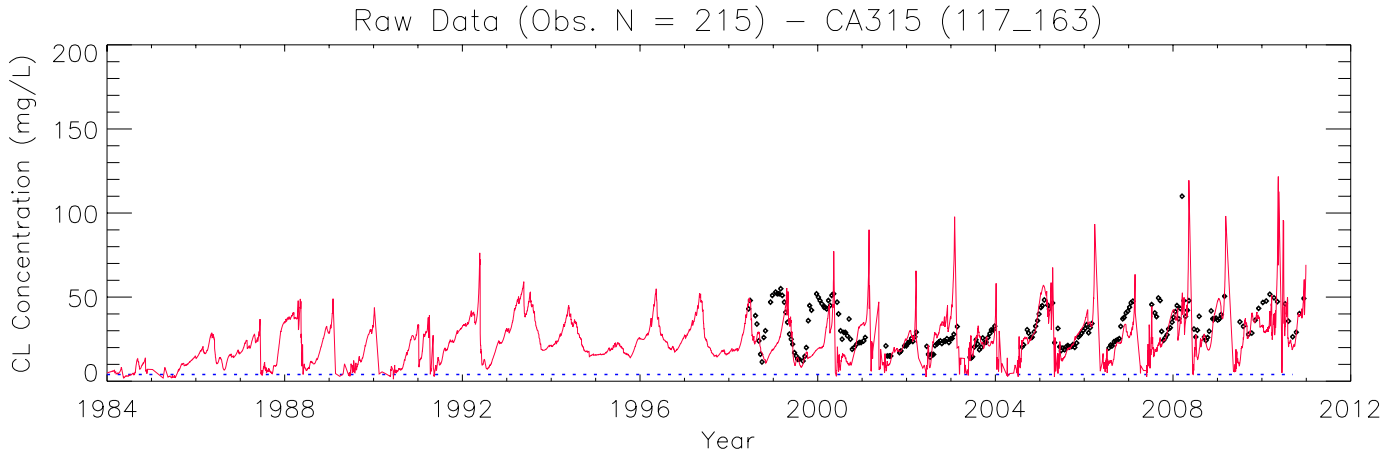

Cumulative Distribution: Raw Data – CA34 (134_118)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

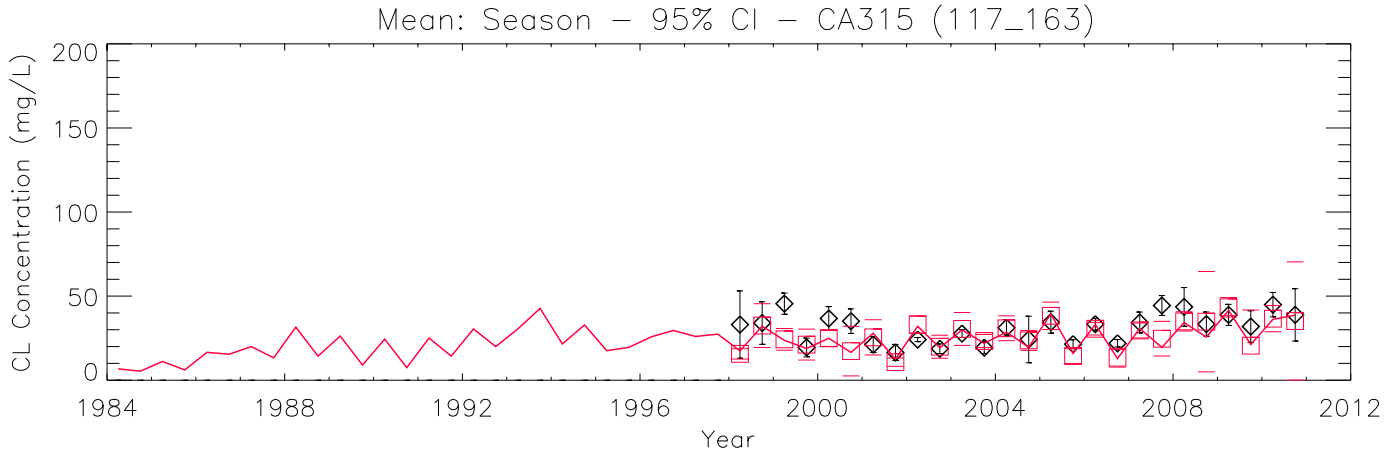

Raw Data (Obs. N = 178) – CA311 (114_133)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

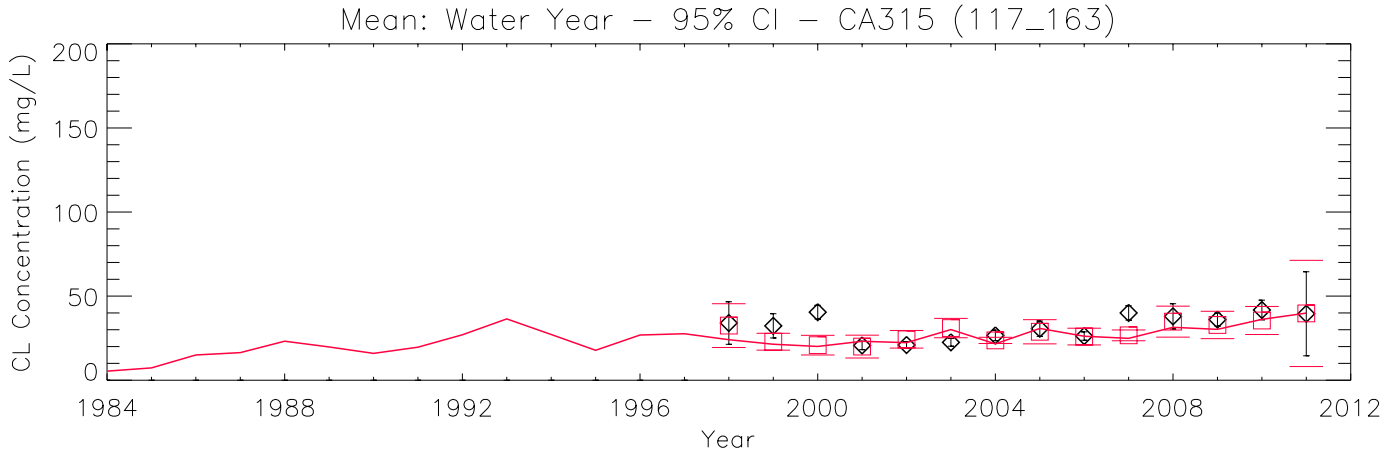

Mean: Season – 95% CI – CA311 (114_133)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

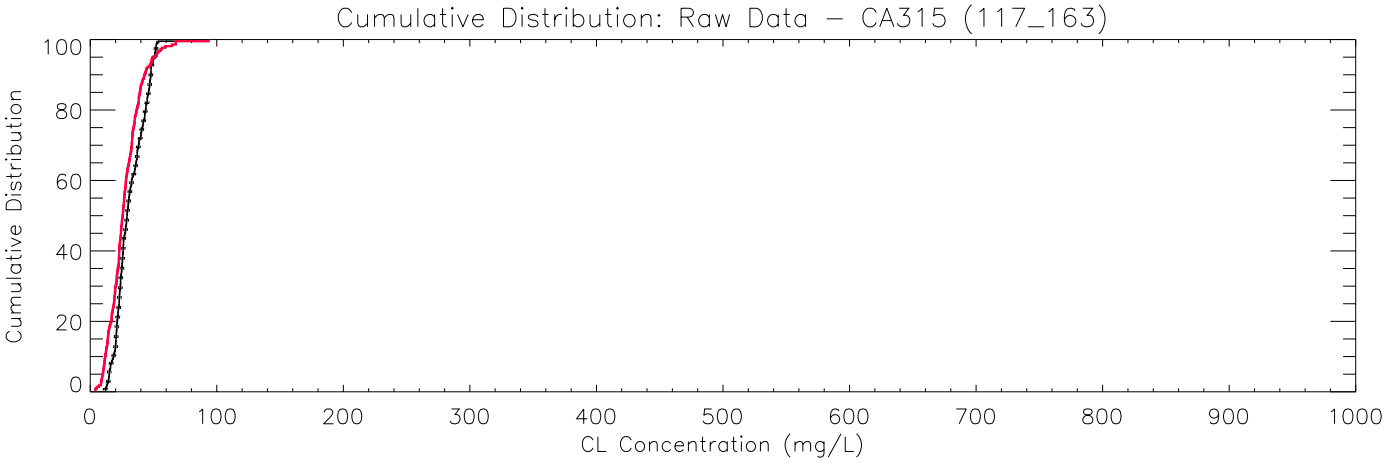

Mean: Water Year – 95% CI – CA311 (114_133)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

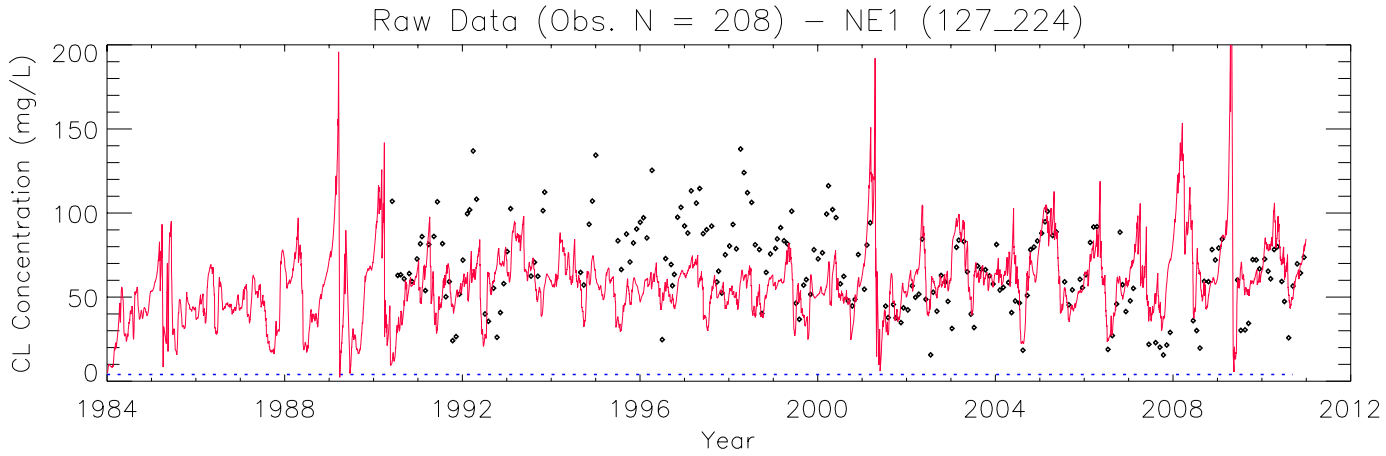

Cumulative Distribution: Raw Data – CA311 (114_133)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

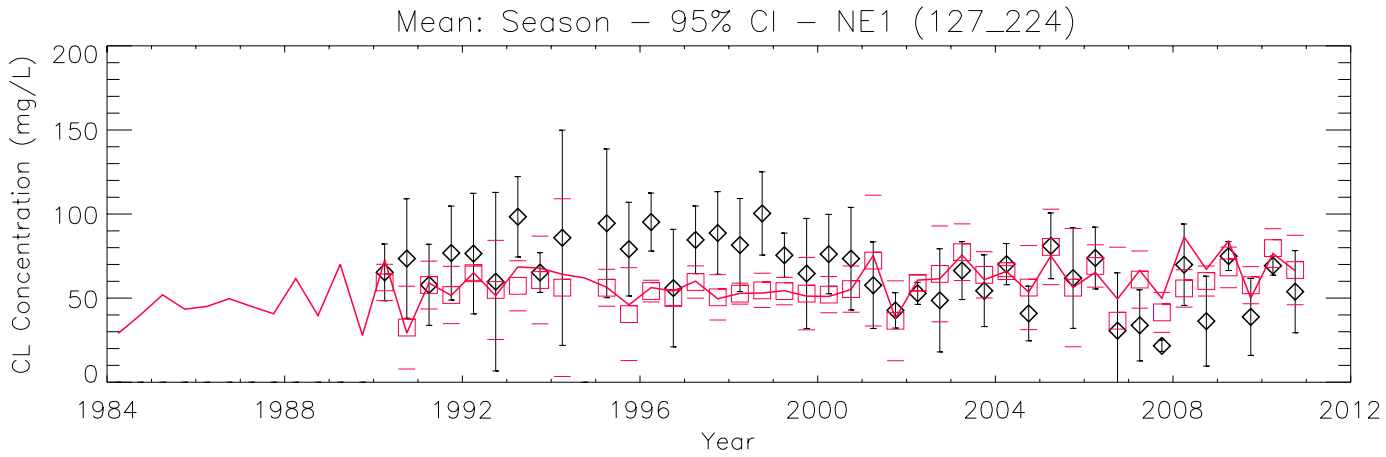

Raw Data (Obs. N = 215) – CA315 (117_163)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

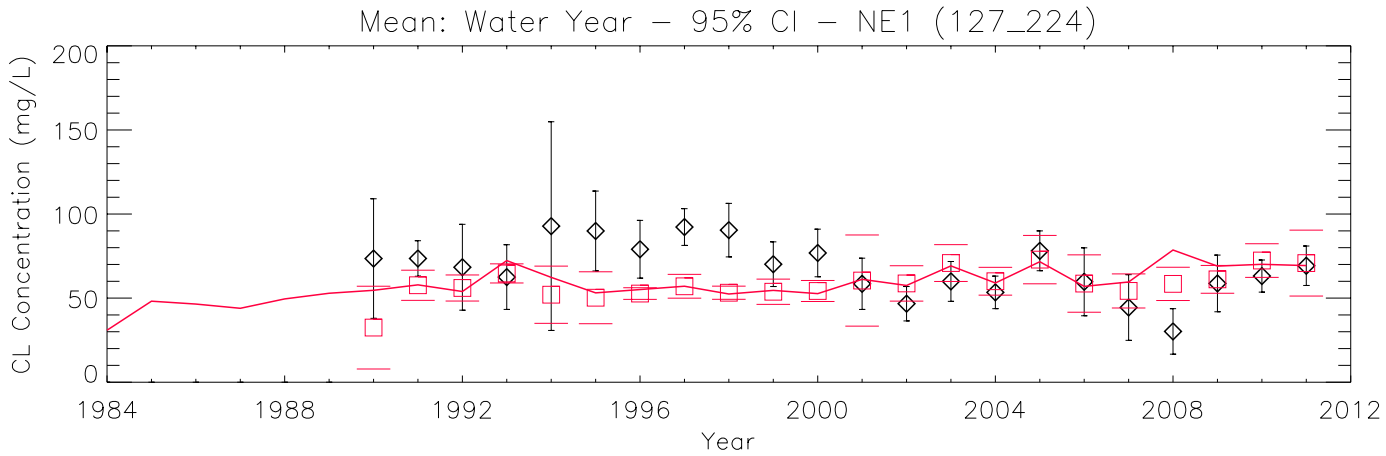

Mean: Season – 95% CI – CA315 (117_163)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

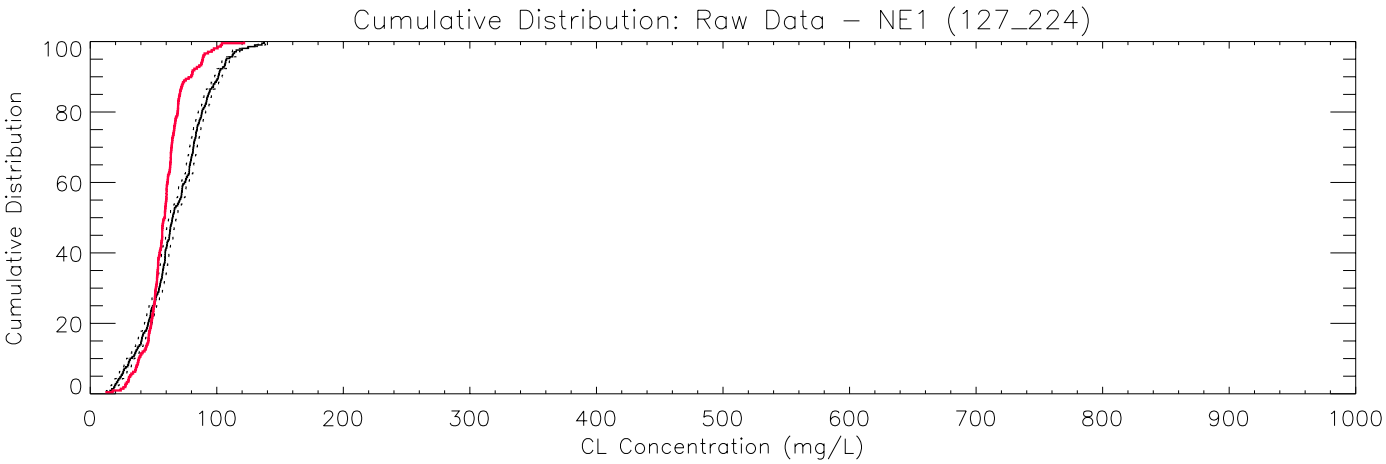

Mean: Water Year – 95% CI – CA315 (117_163)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

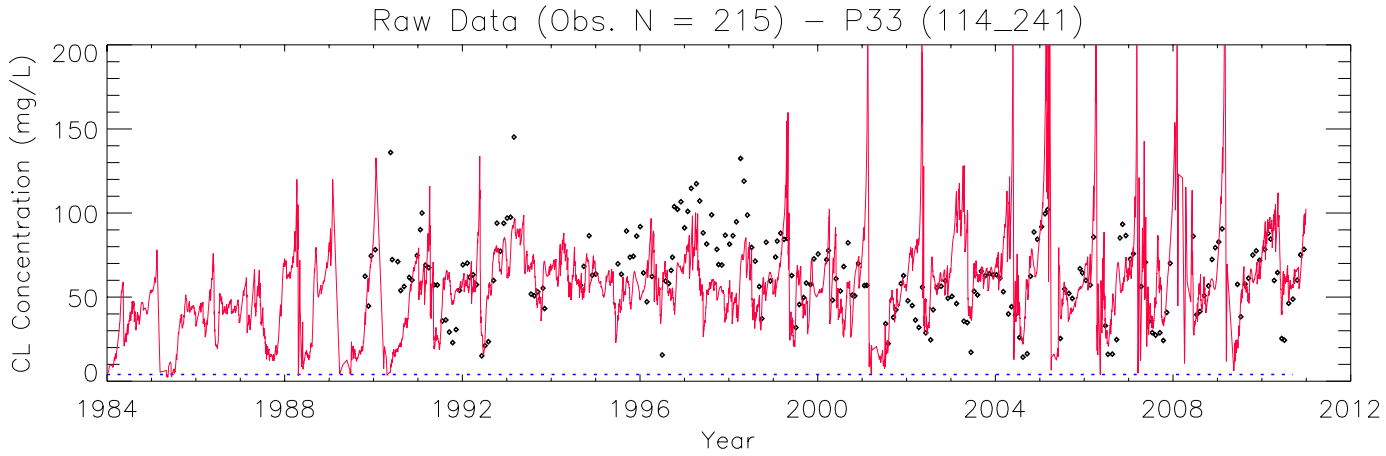

Cumulative Distribution: Raw Data – CA315 (117_163)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

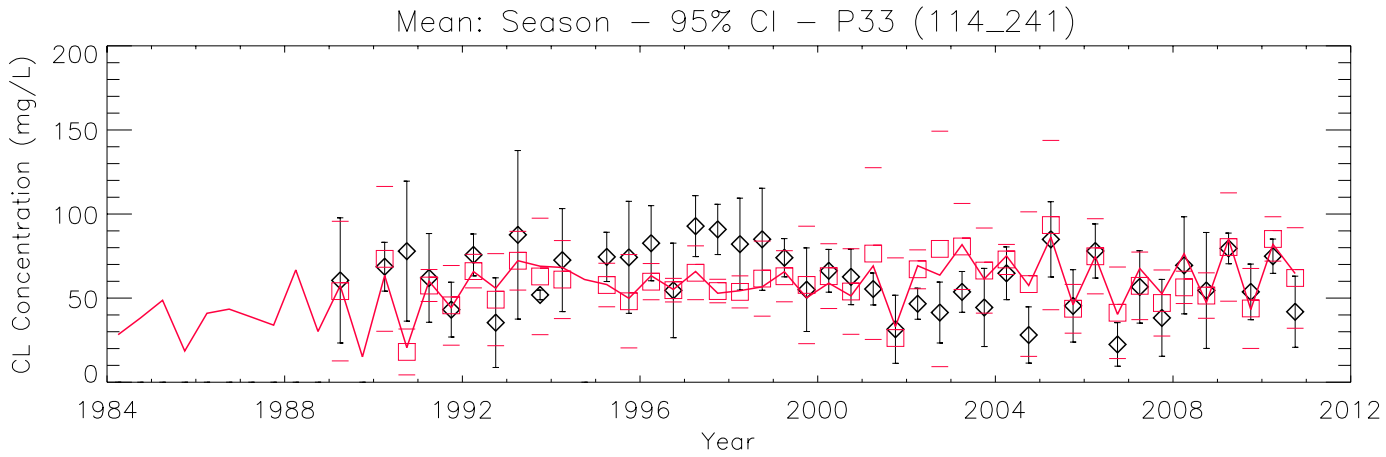

Raw Data (Obs. N = 208) – NE1 (127_224)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

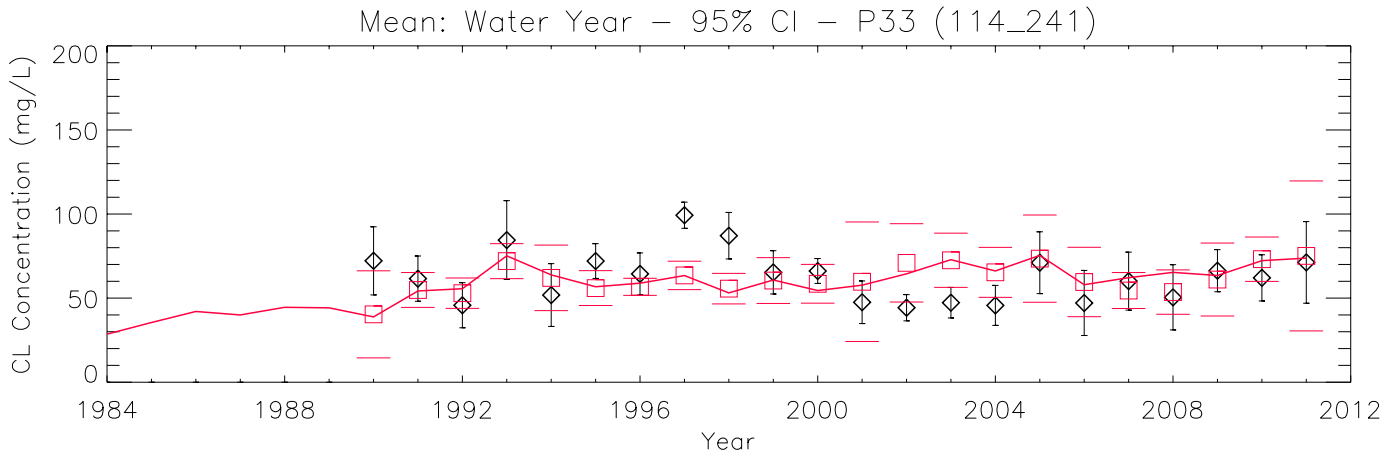

Mean: Season – 95% CI – NE1 (127_224)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

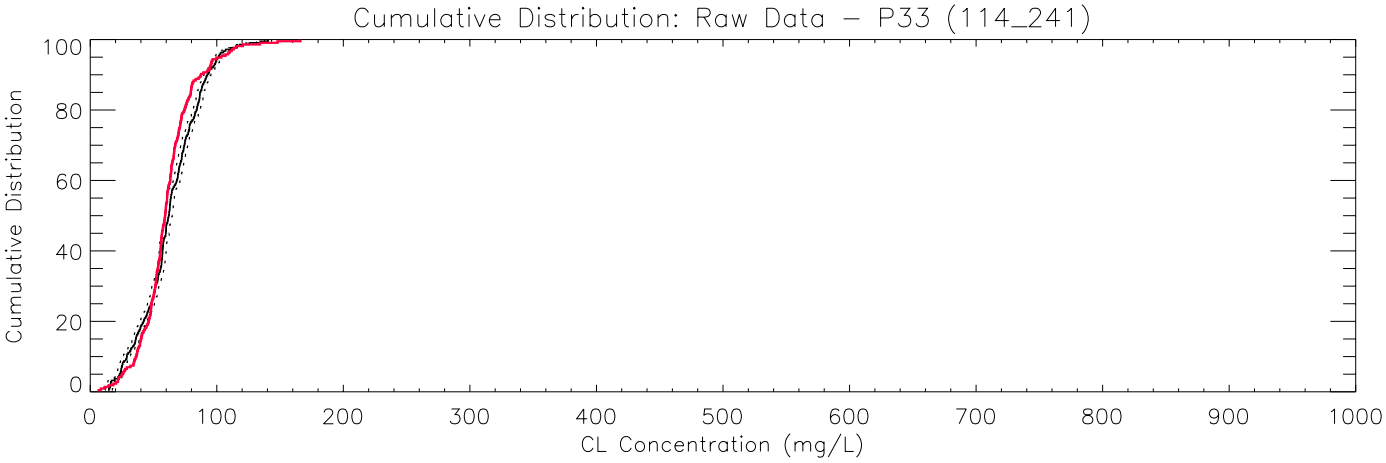

Mean: Water Year – 95% CI – NE1 (127_224)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

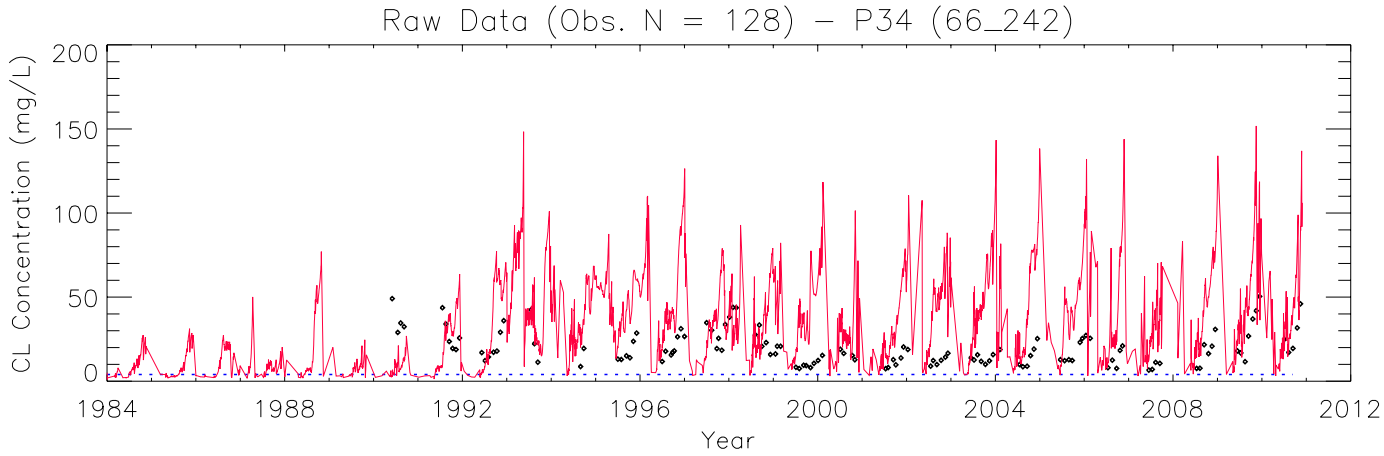

Cumulative Distribution: Raw Data – NE1 (127_224)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

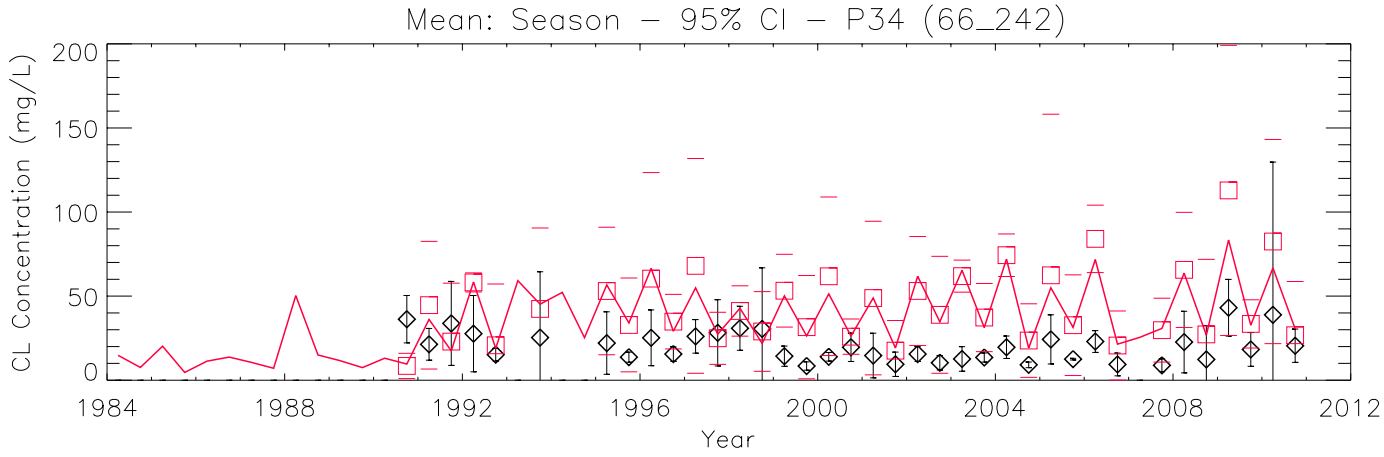

Raw Data (Obs. N = 215) – P33 (114_241)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

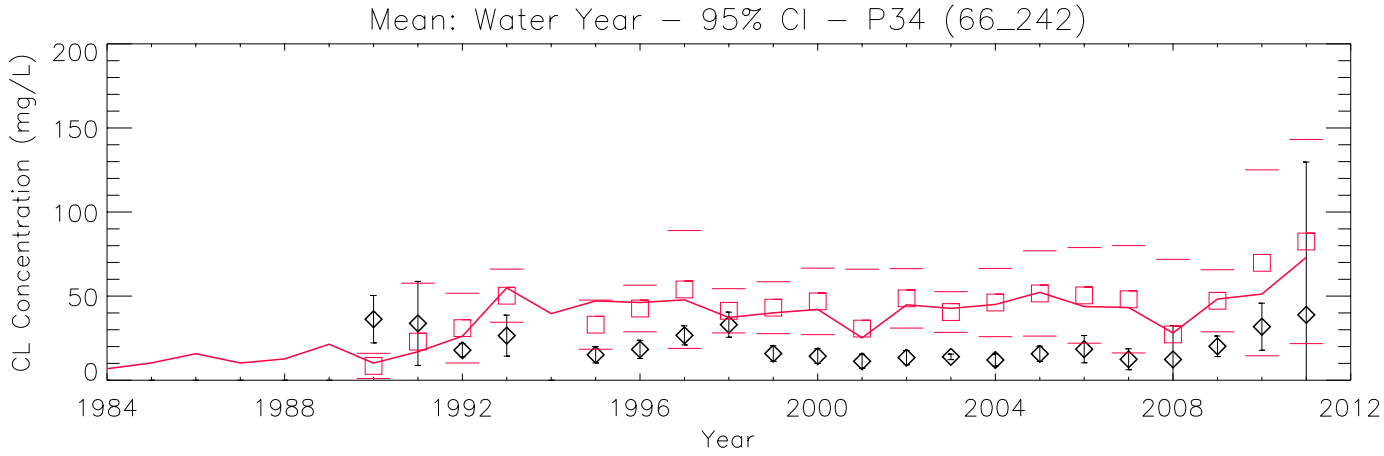

Mean: Season – 95% CI – P33 (114_241)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

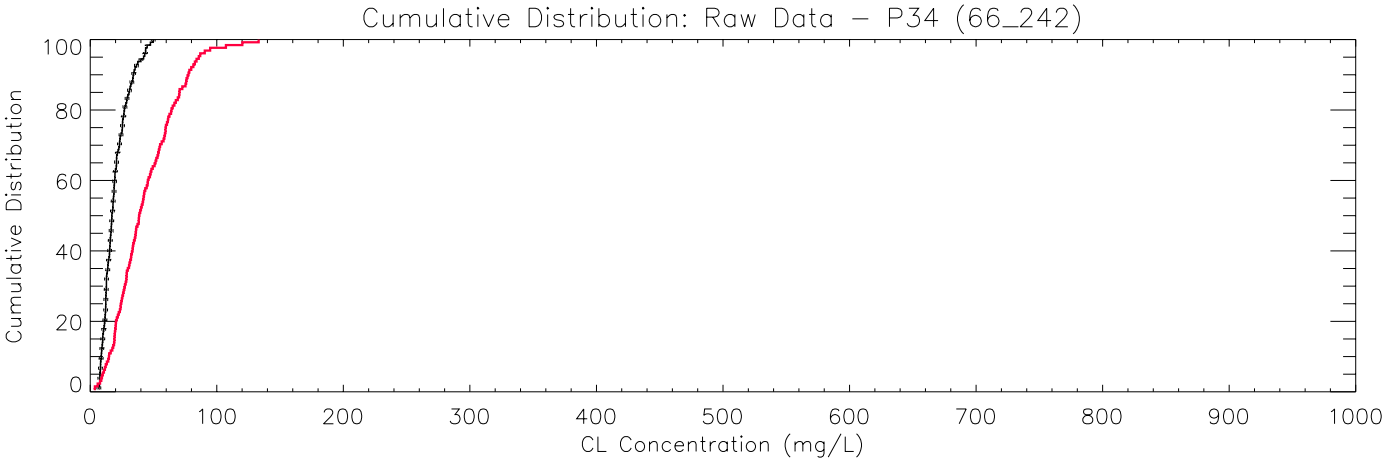

Mean: Water Year – 95% CI – P33 (114_241)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

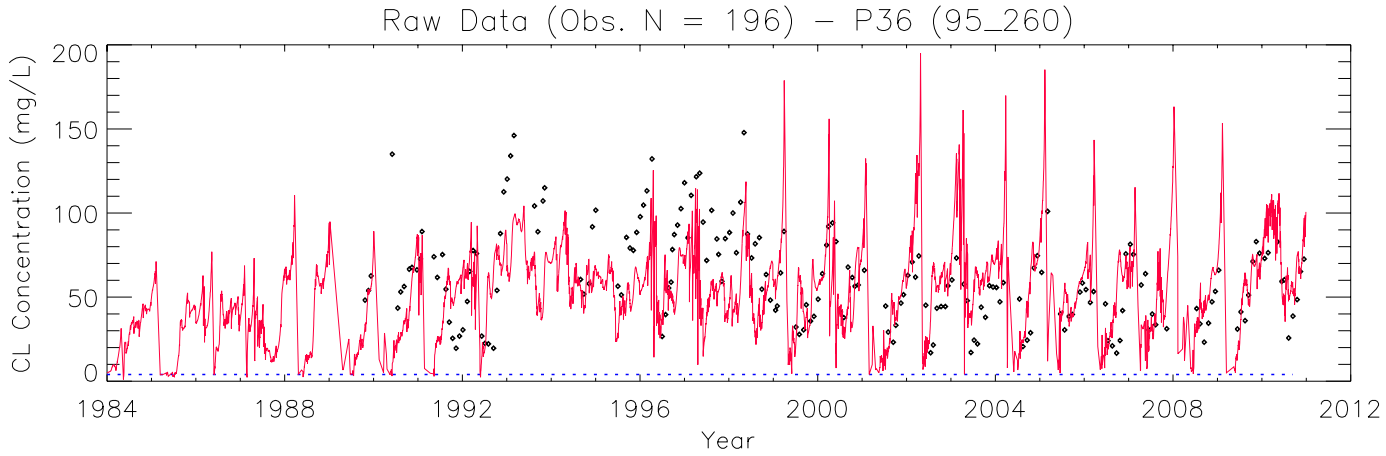

Cumulative Distribution: Raw Data – P33 (114_241)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

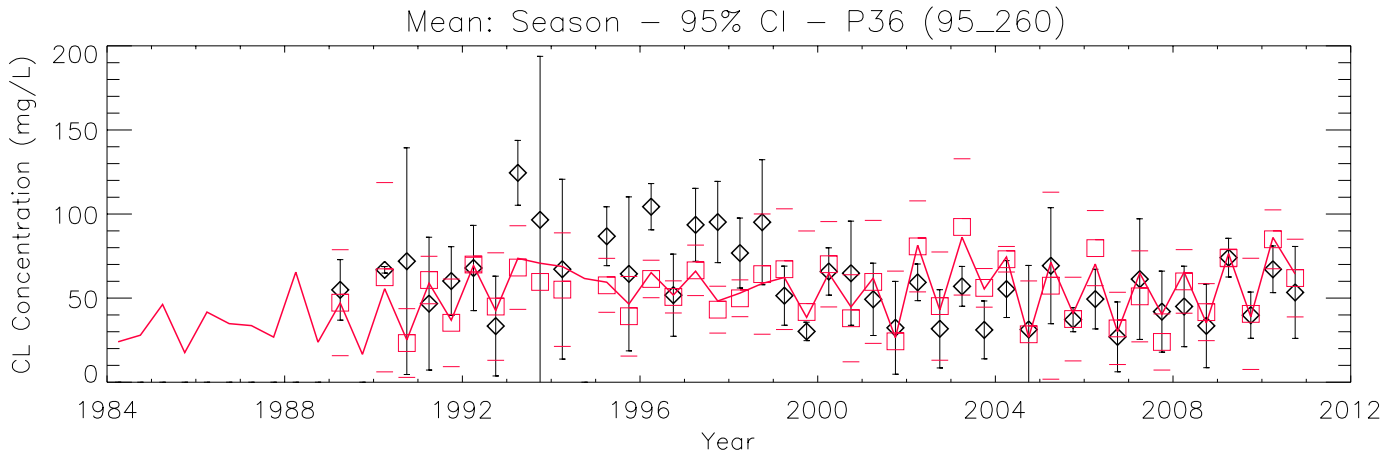

Raw Data (Obs. N = 128) – P34 (66_242)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

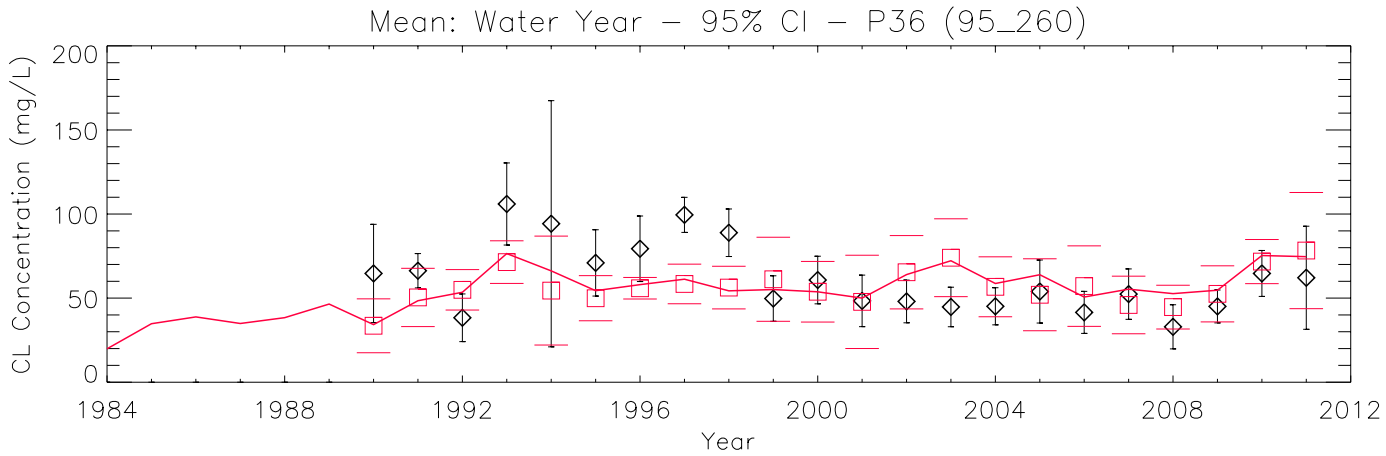

Mean: Season – 95% CI – P34 (66_242)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

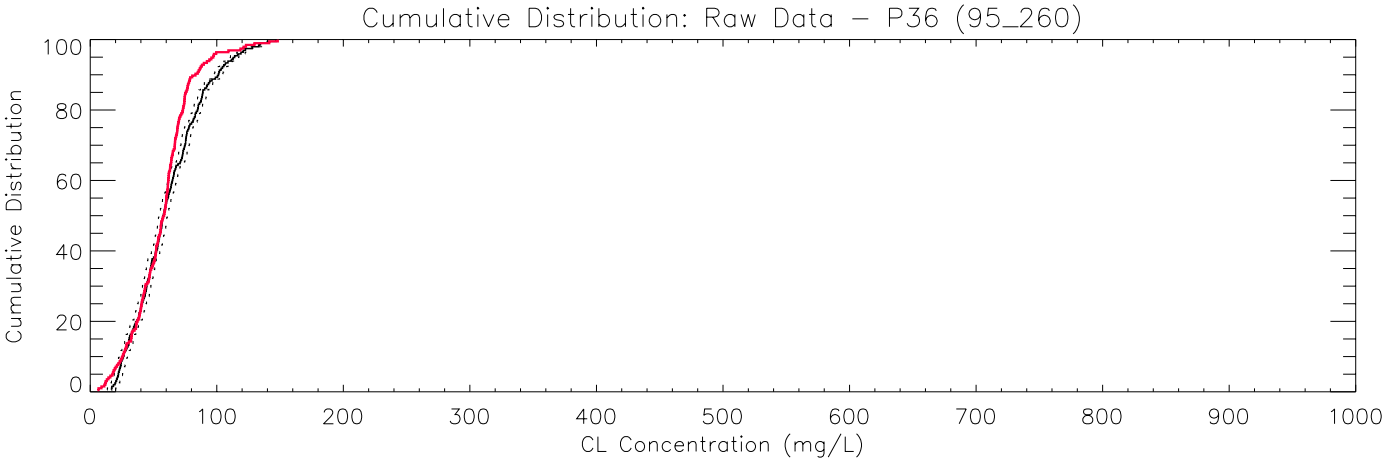

Mean: Water Year – 95% CI – P34 (66_242)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

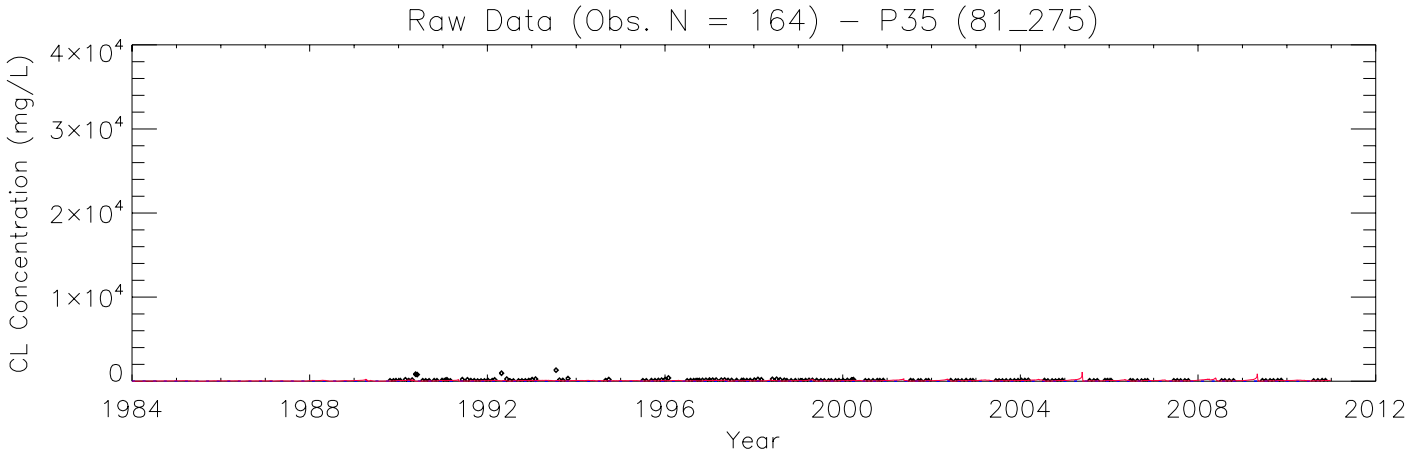

Cumulative Distribution: Raw Data – P34 (66_242)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

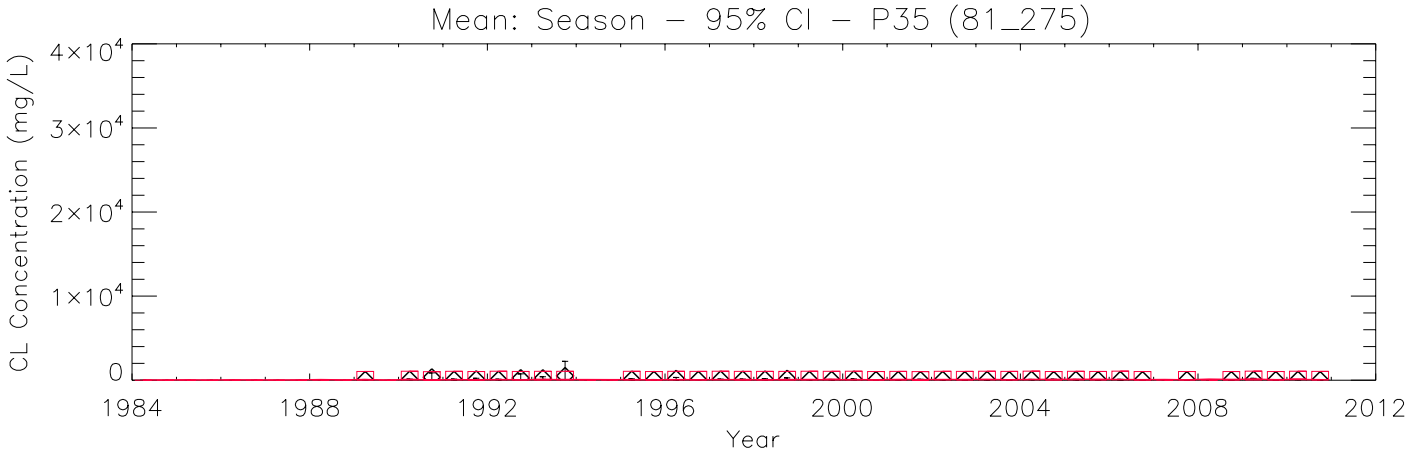

Raw Data (Obs. N = 196) – P36 (95_260)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

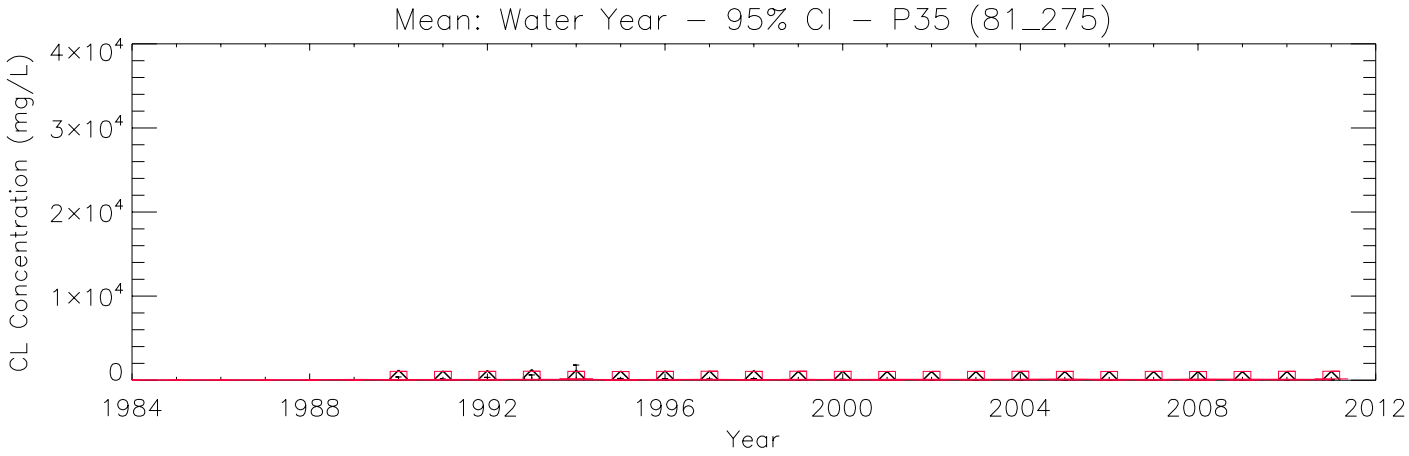

Mean: Season – 95% CI – P36 (95_260)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

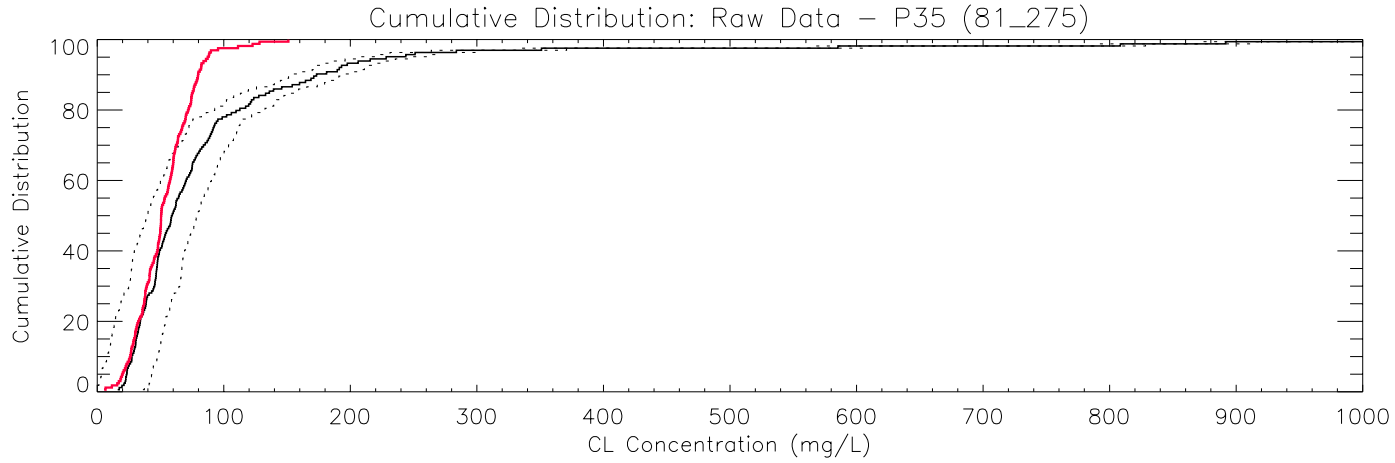

Mean: Water Year – 95% CI – P36 (95_260)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

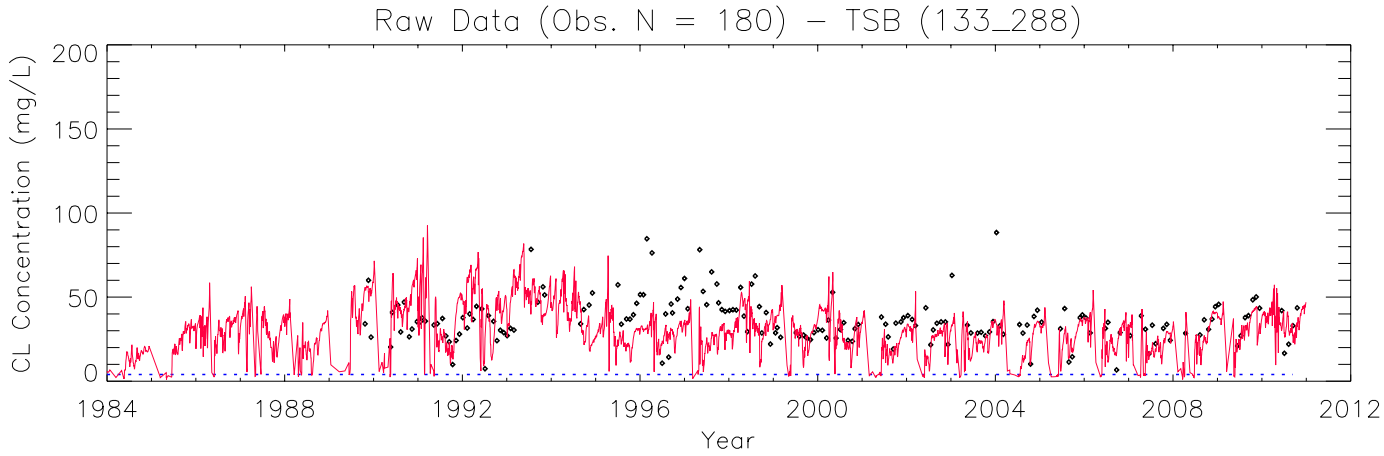

Cumulative Distribution: Raw Data – P36 (95_260)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

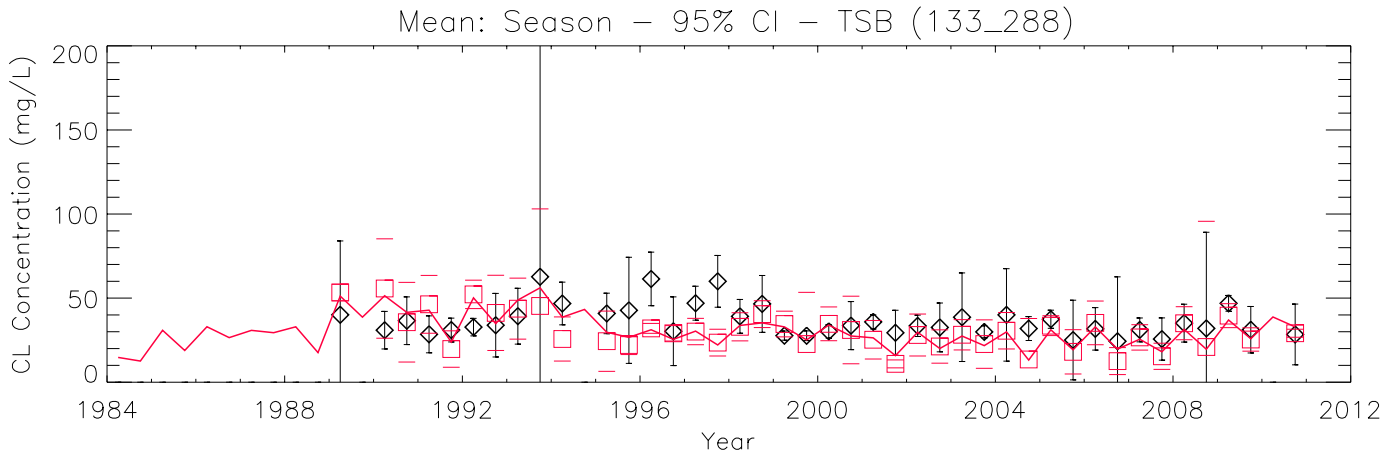

Raw Data (Obs. N = 164) – P35 (81_275)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

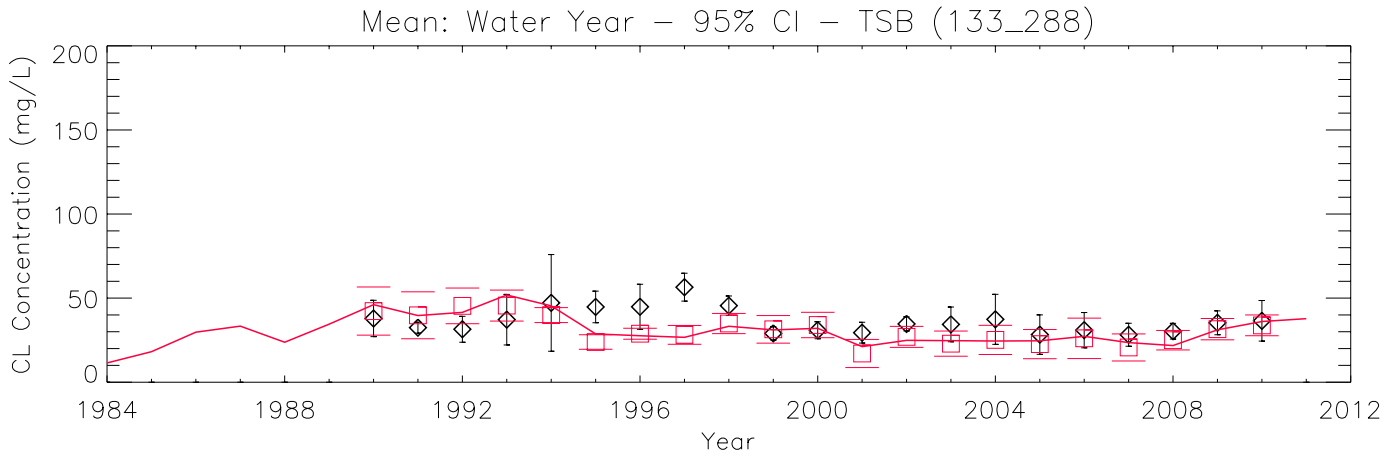

Mean: Season – 95% CI – P35 (81_275)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

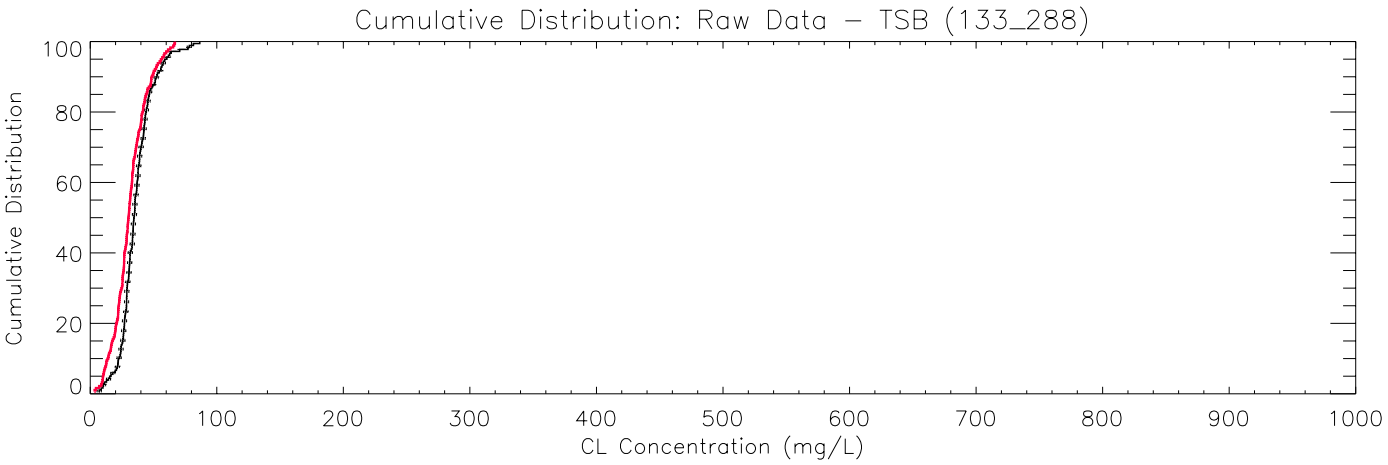

Mean: Water Year – 95% CI – P35 (81_275)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

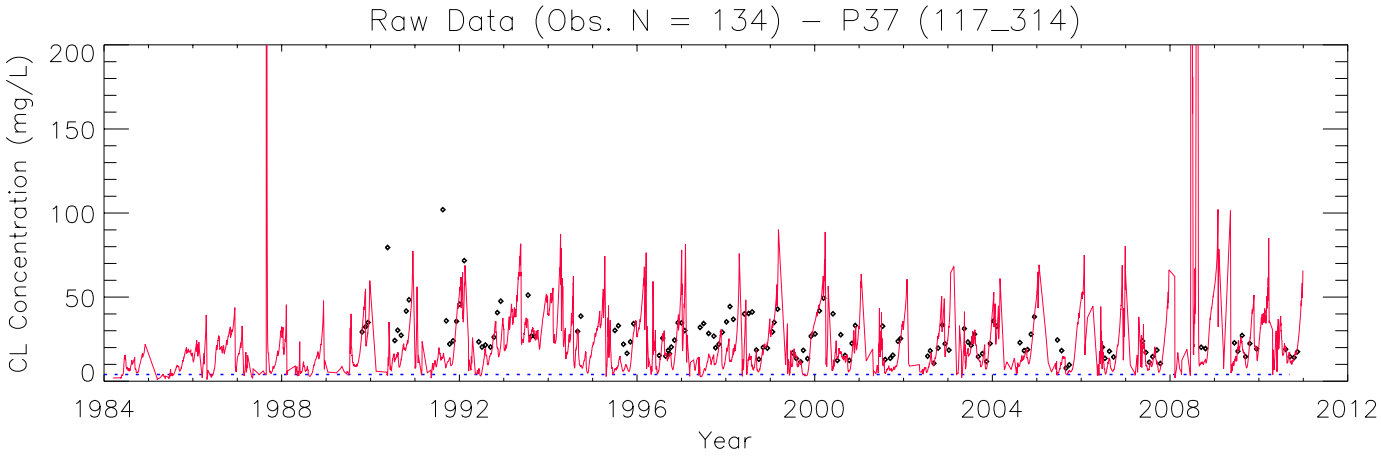

Cumulative Distribution: Raw Data – P35 (81_275)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

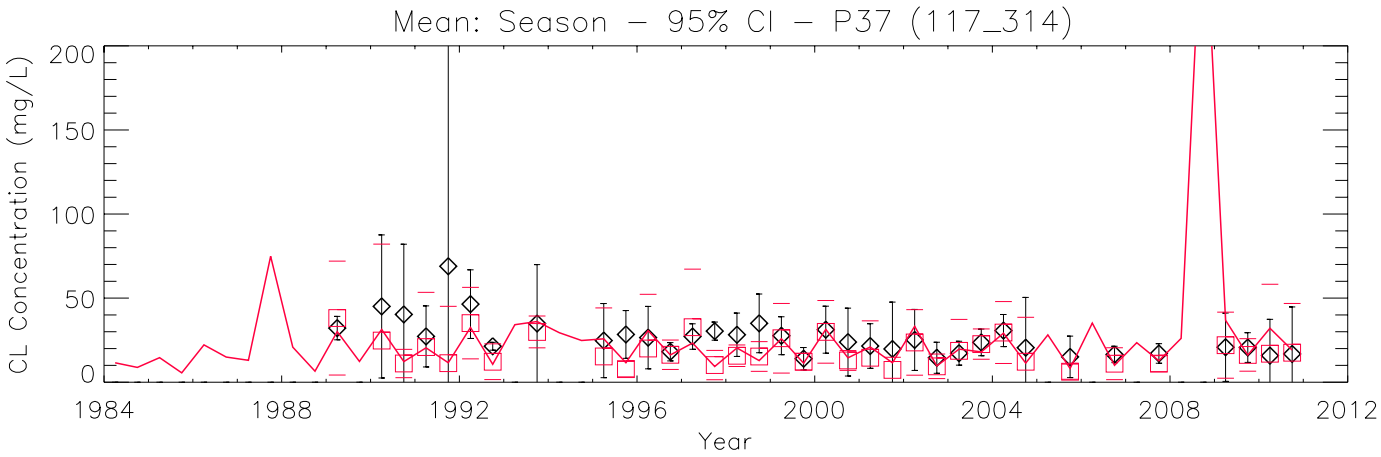

Raw Data (Obs. N = 180) – TSB (133_288)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

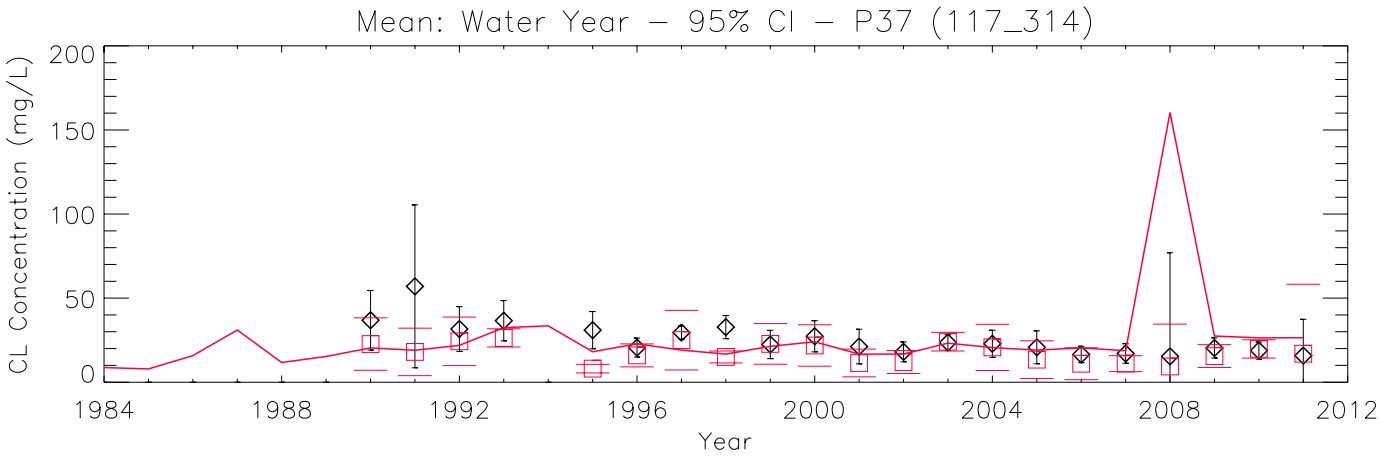

Mean: Season – 95% CI – TSB (133_288)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

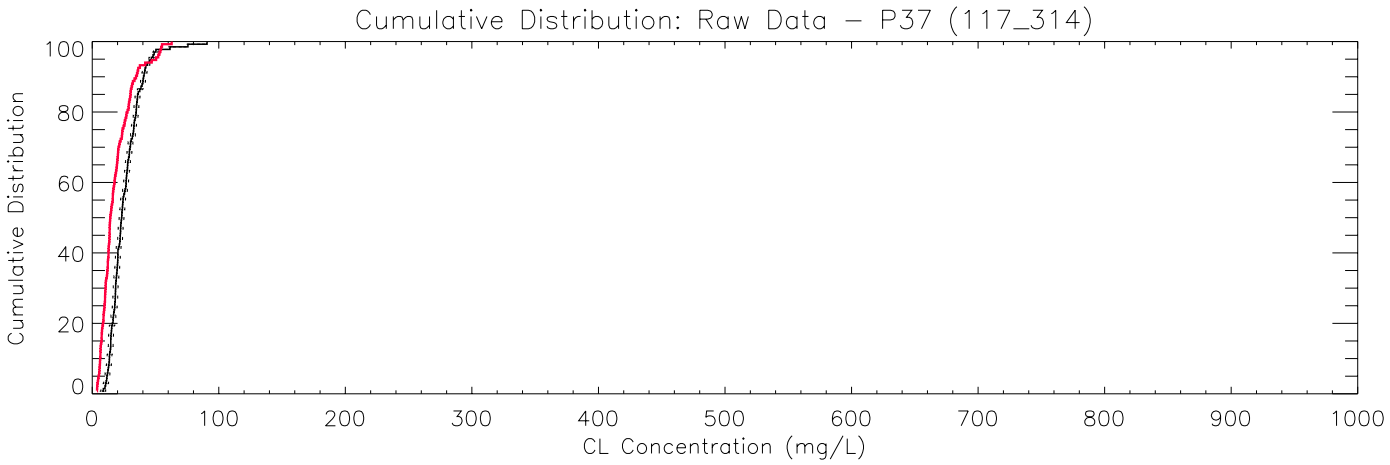

Mean: Water Year – 95% CI – TSB (133_288)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

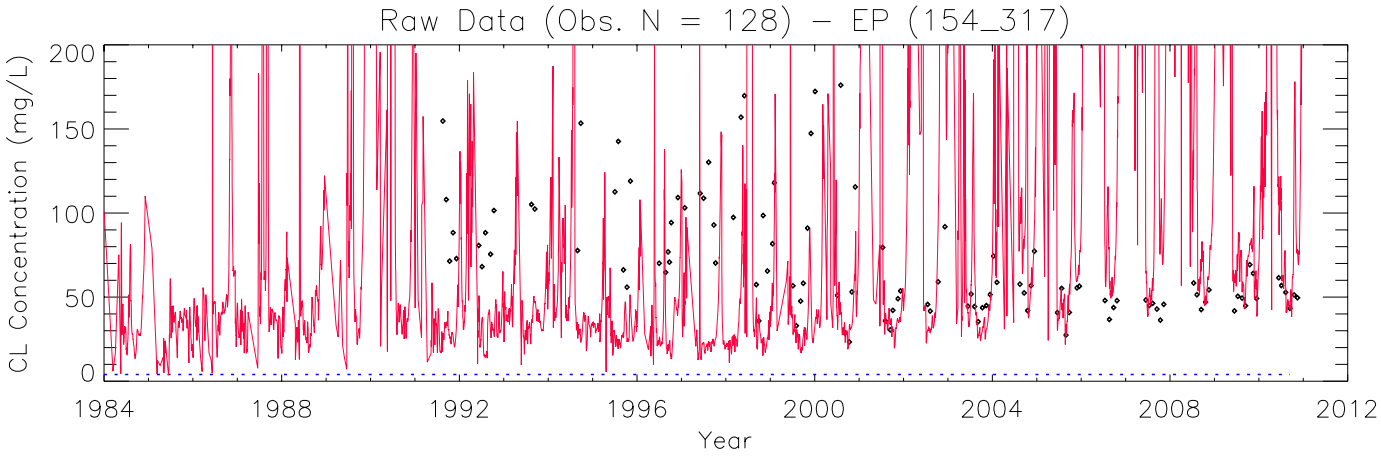

Cumulative Distribution: Raw Data – TSB (133_288)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

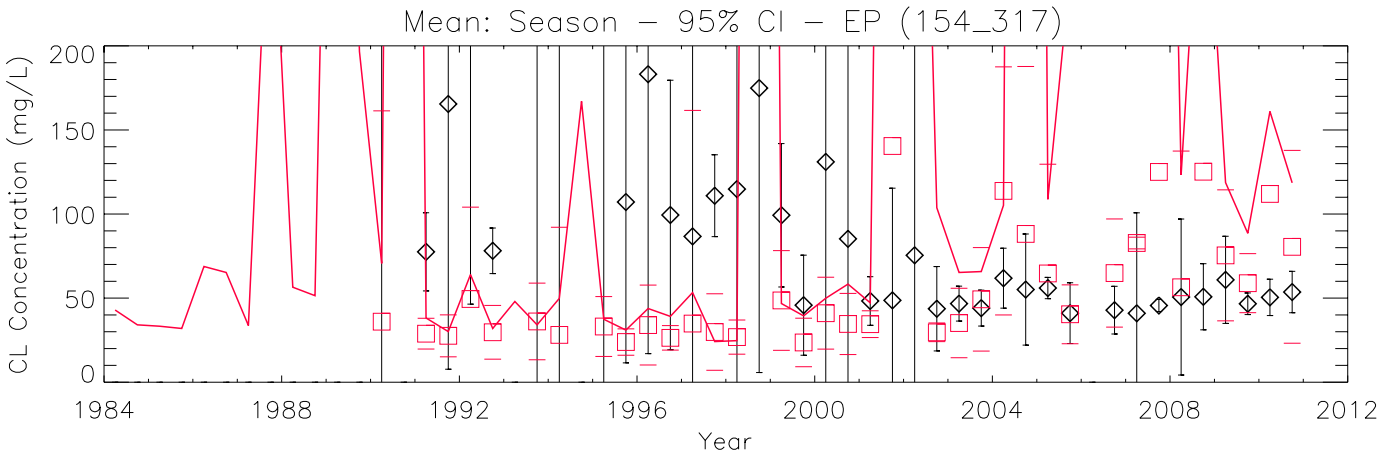

Raw Data (Obs. N = 134) – P37 (117_314)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

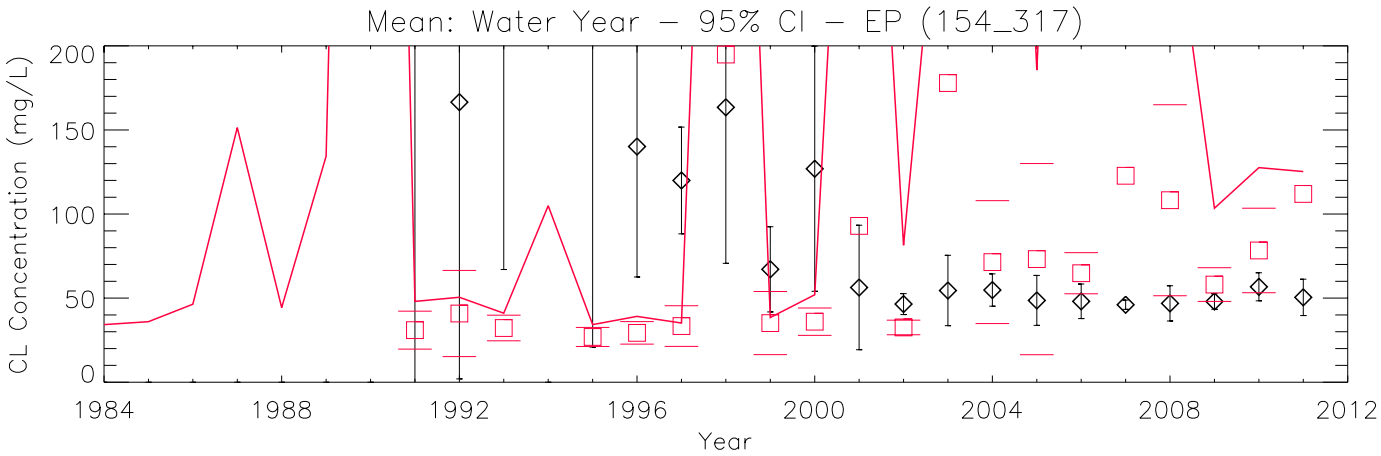

Mean: Season – 95% CI – P37 (117_314)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

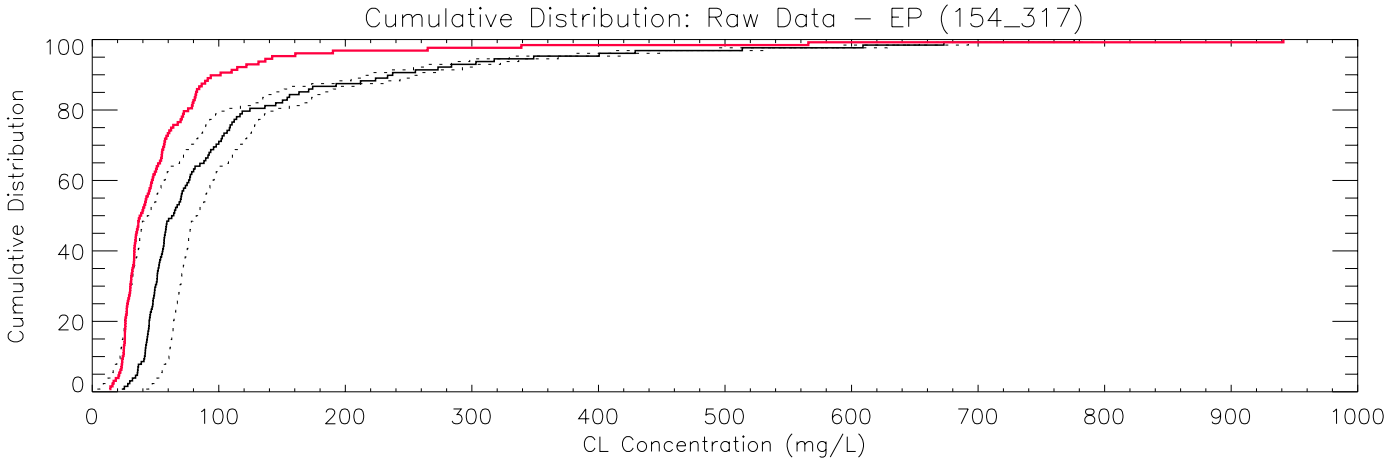

Mean: Water Year – 95% CI – P37 (117_314)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

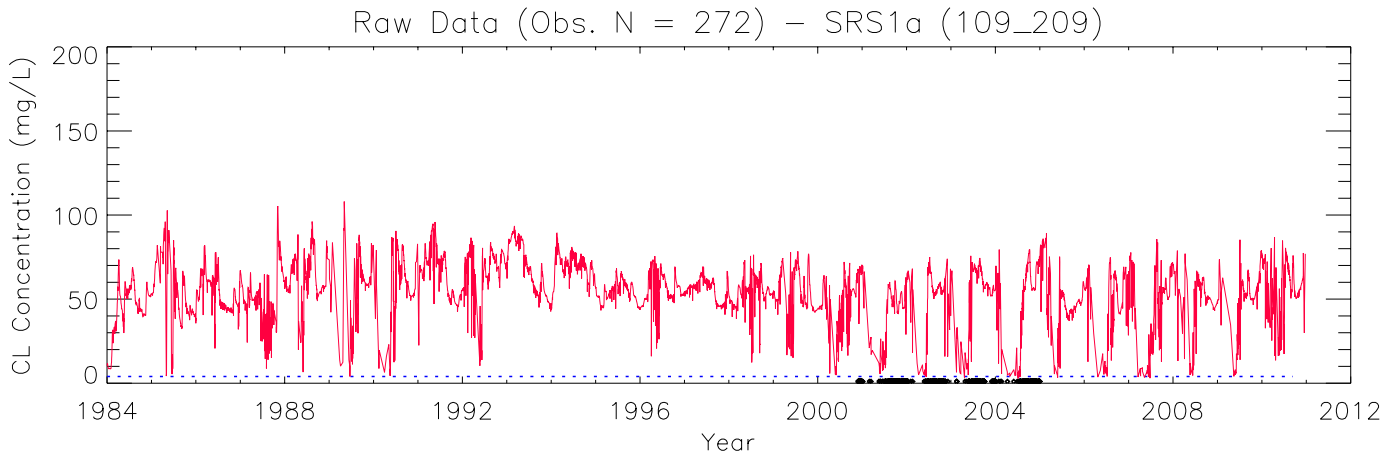

Cumulative Distribution: Raw Data – P37 (117_314)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

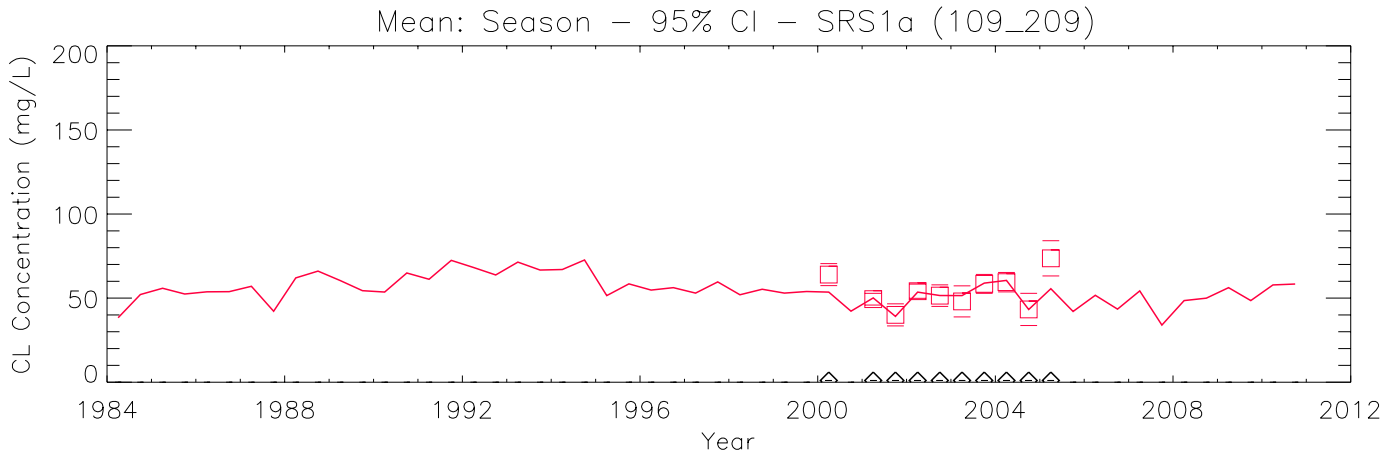

Raw Data (Obs. N = 128) – EP (154_317)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

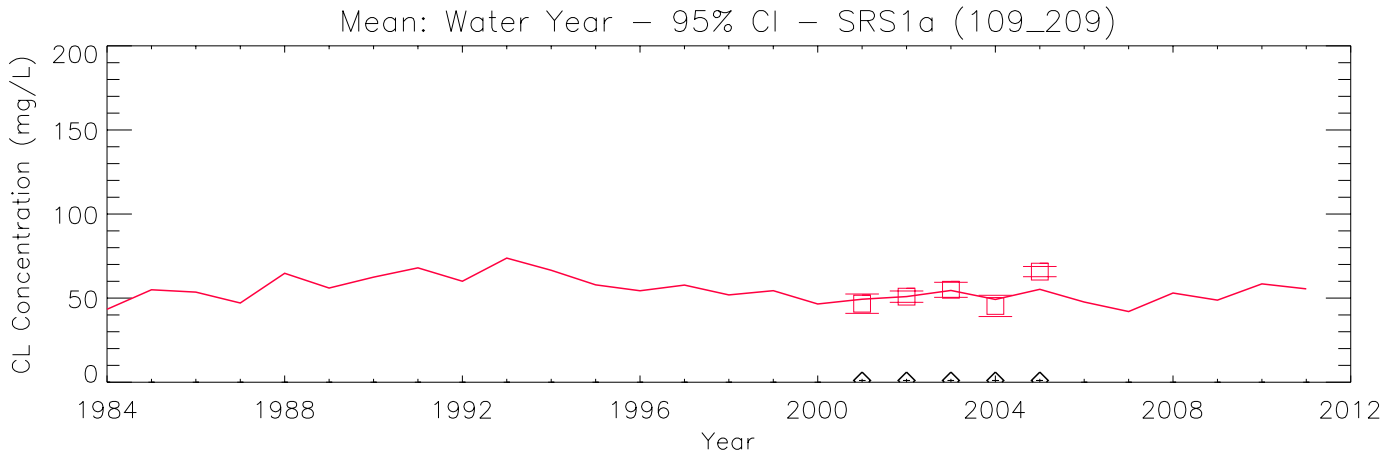

Mean: Season – 95% CI – EP (154_317)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

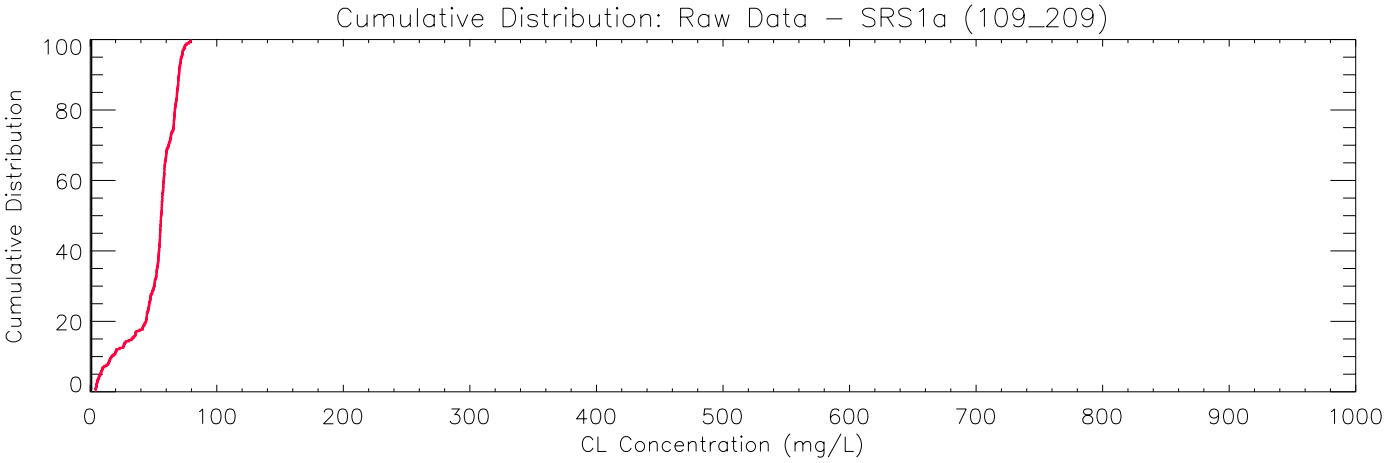

Mean: Water Year – 95% CI – EP (154_317)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

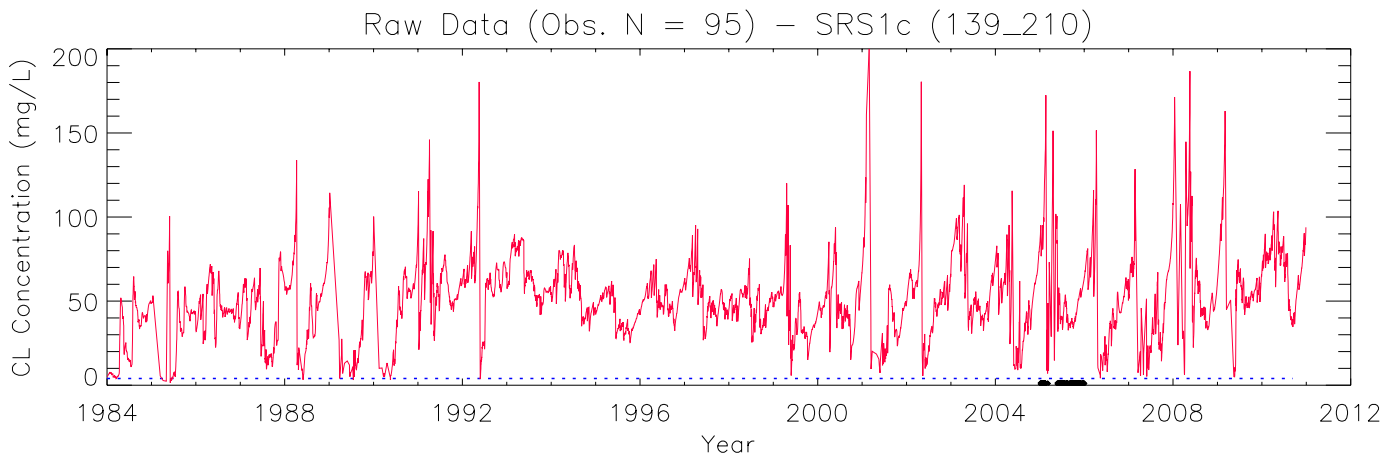

Cumulative Distribution: Raw Data – EP (154_317)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

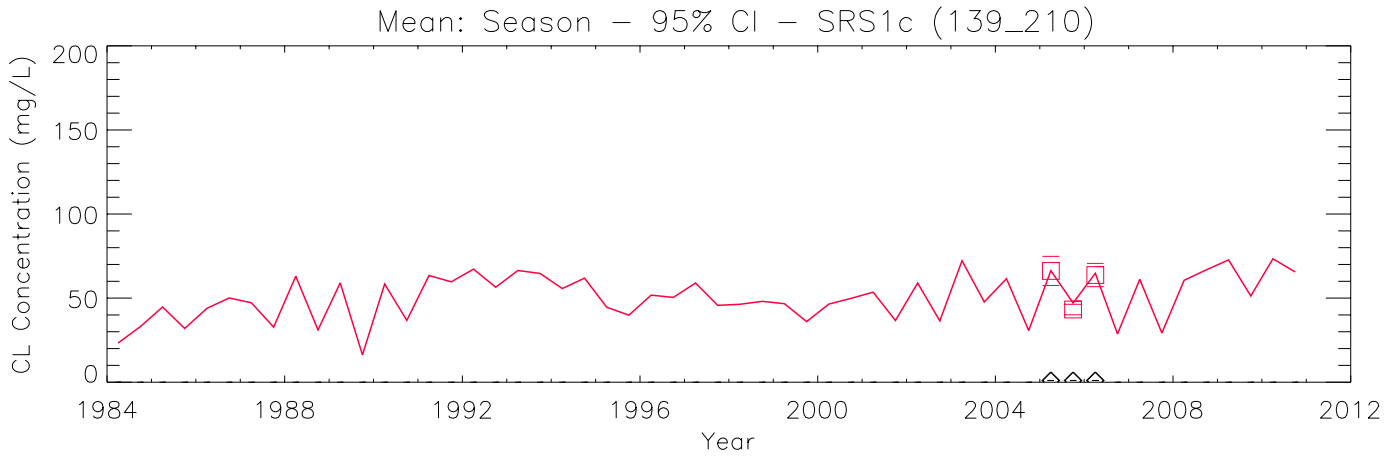

Raw Data (Obs. N = 272) – SRS1a (109_209)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

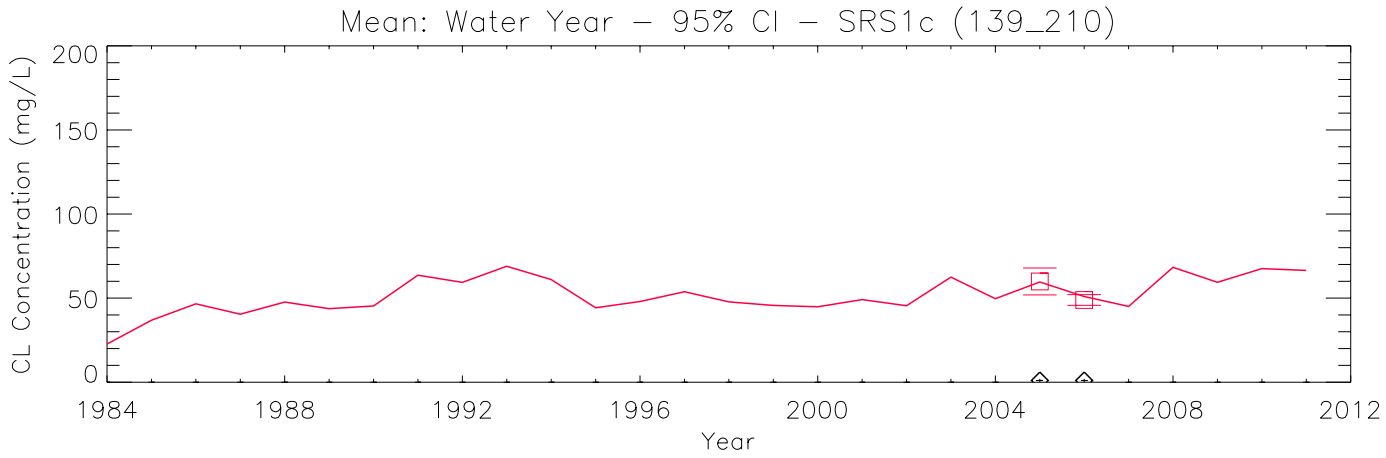

Mean: Season – 95% CI – SRS1a (109_209)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

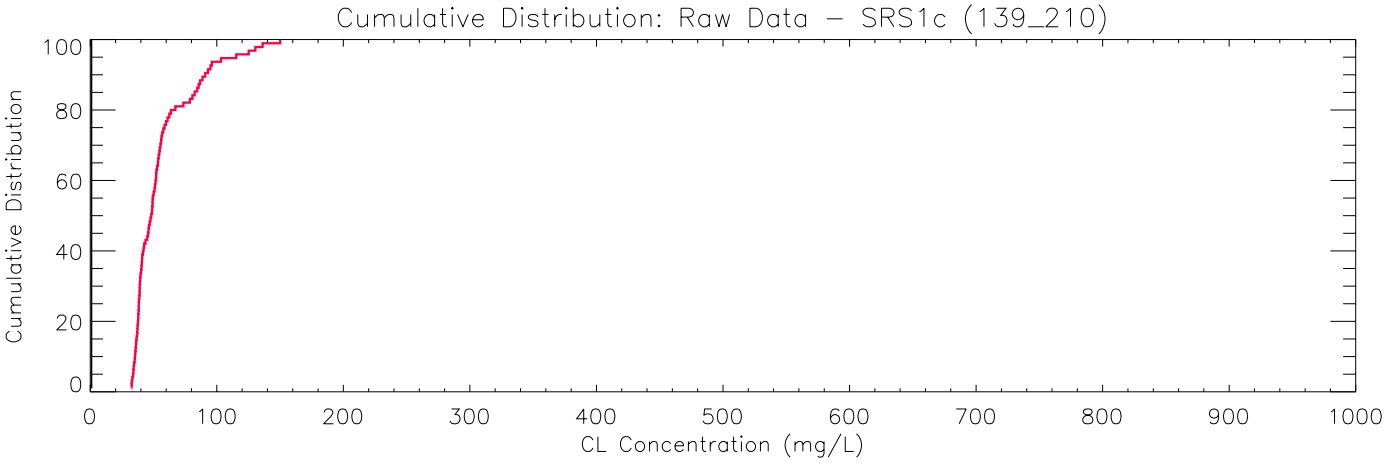

Mean: Water Year – 95% CI – SRS1a (109_209)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

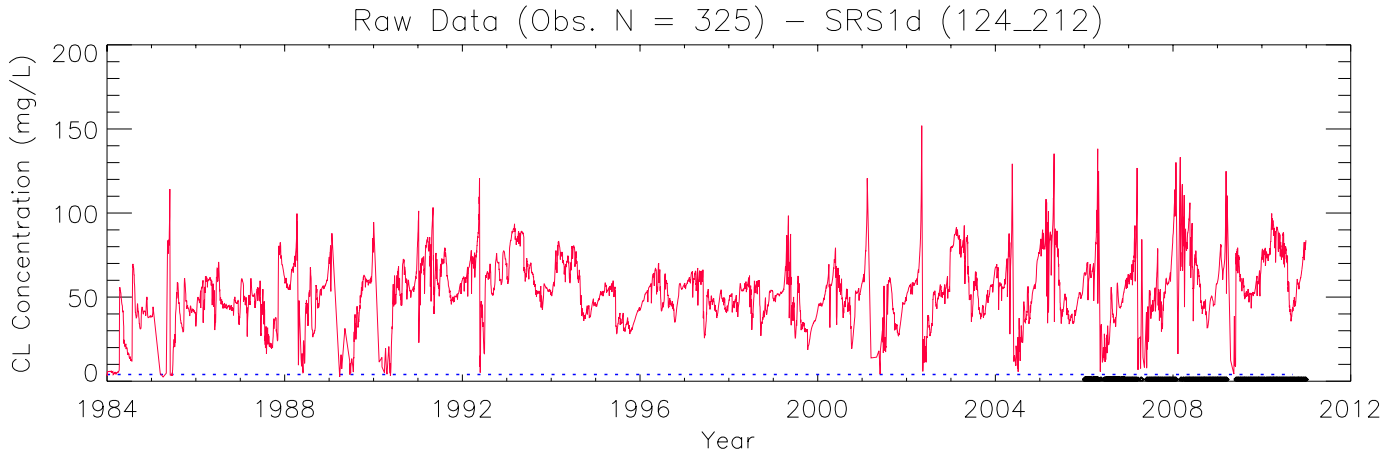

Cumulative Distribution: Raw Data – SRS1a (109_209)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

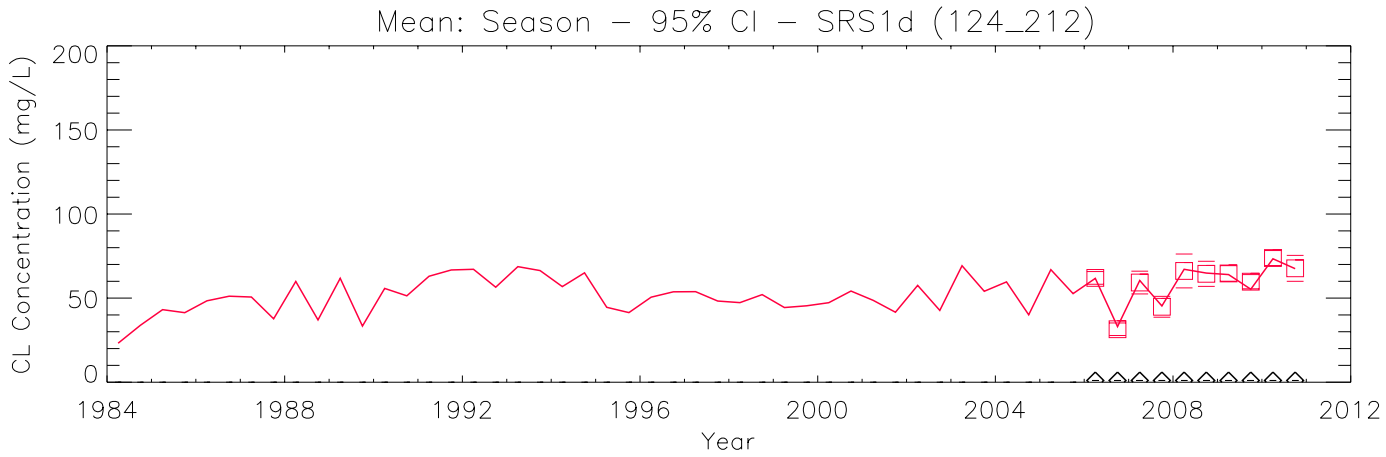

Raw Data (Obs. N = 95) – SRS1c (139_210)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

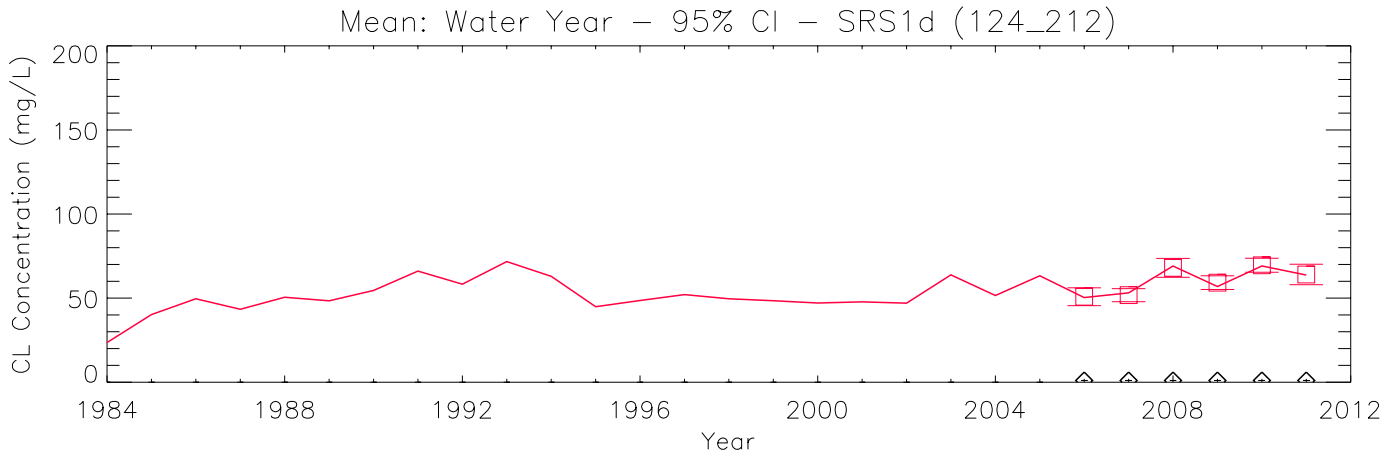

Mean: Season – 95% CI – SRS1c (139_210)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

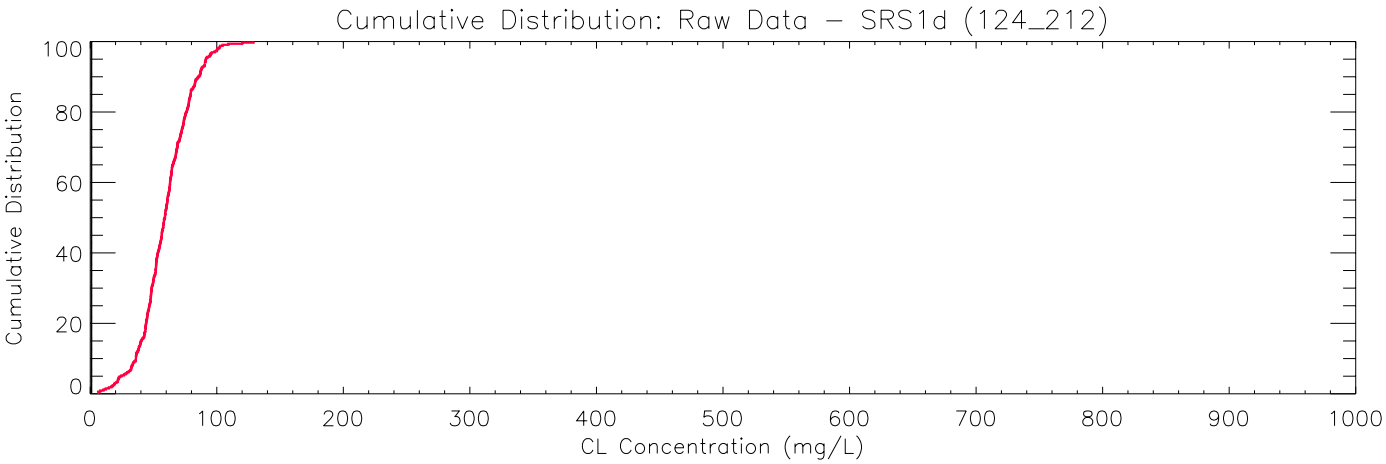

Mean: Water Year – 95% CI – SRS1c (139_210)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

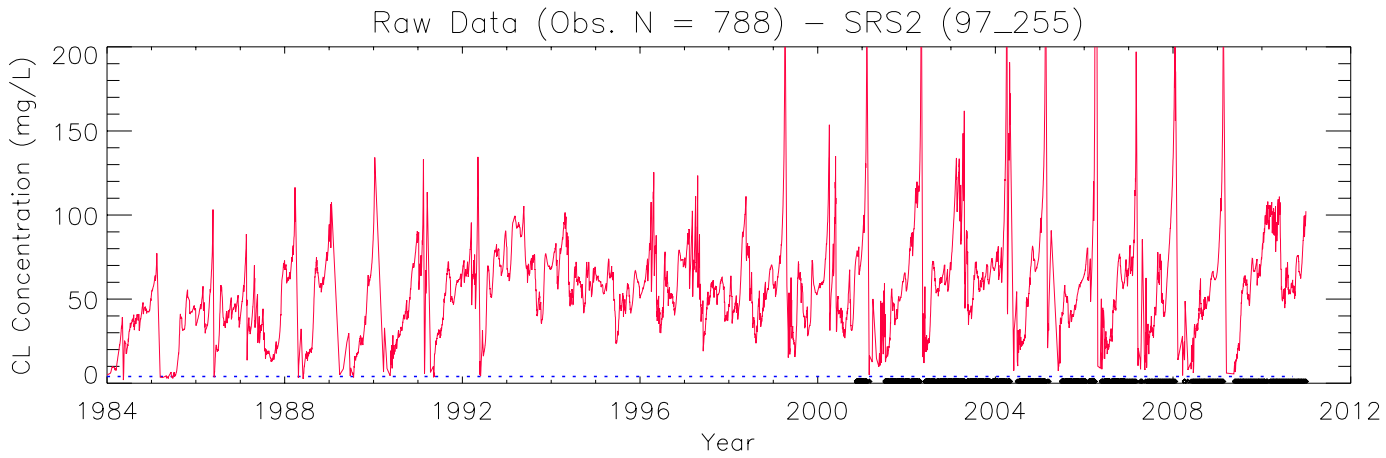

Cumulative Distribution: Raw Data – SRS1c (139_210)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

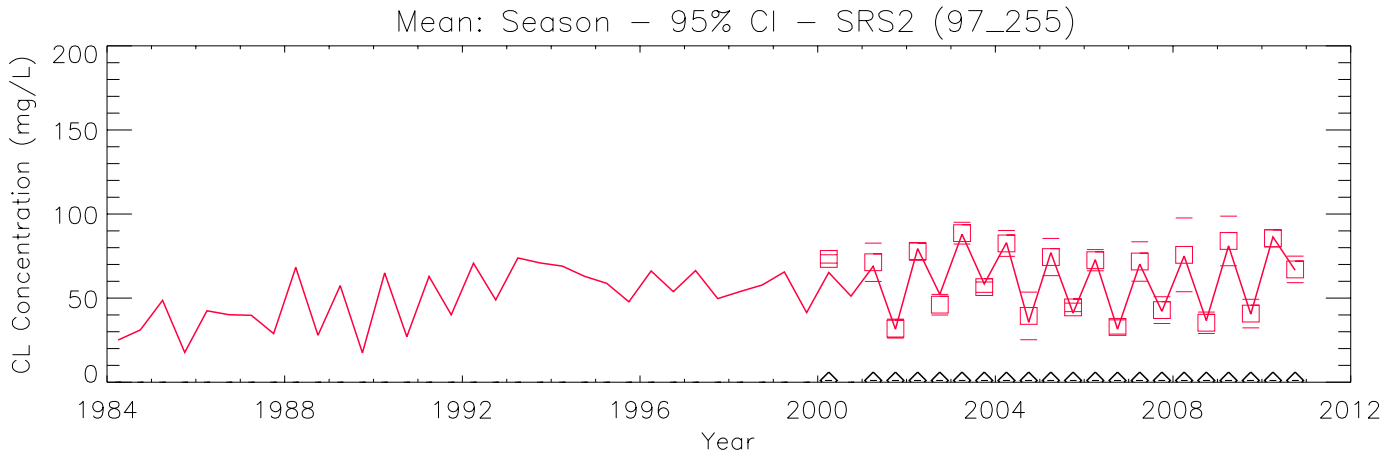

Raw Data (Obs. N = 325) – SRS1d (124_212)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

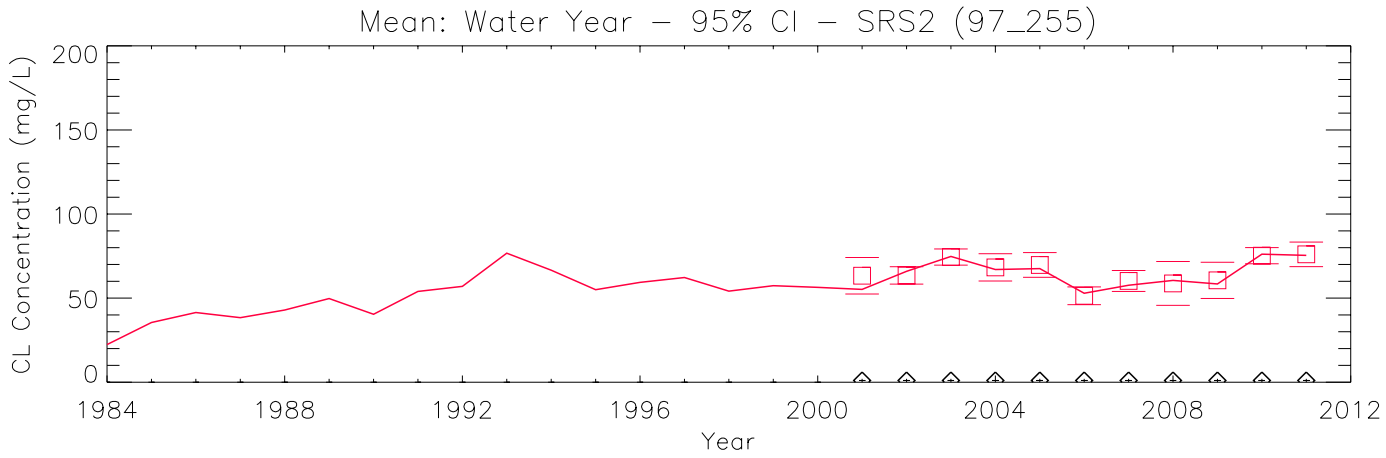

Mean: Season – 95% CI – SRS1d (124_212)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

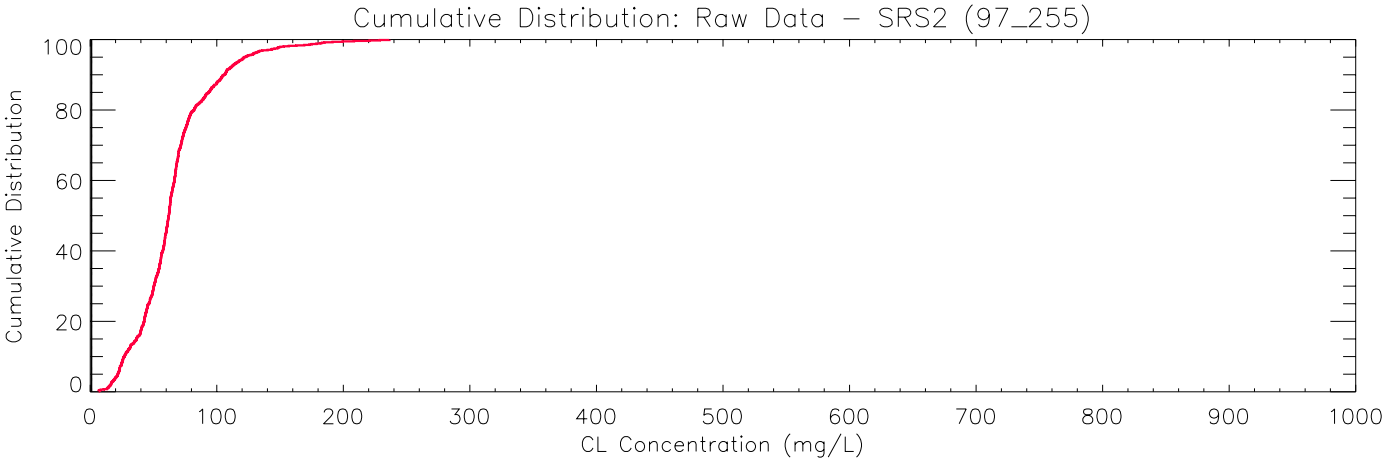

Mean: Water Year – 95% CI – SRS1d (124_212)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

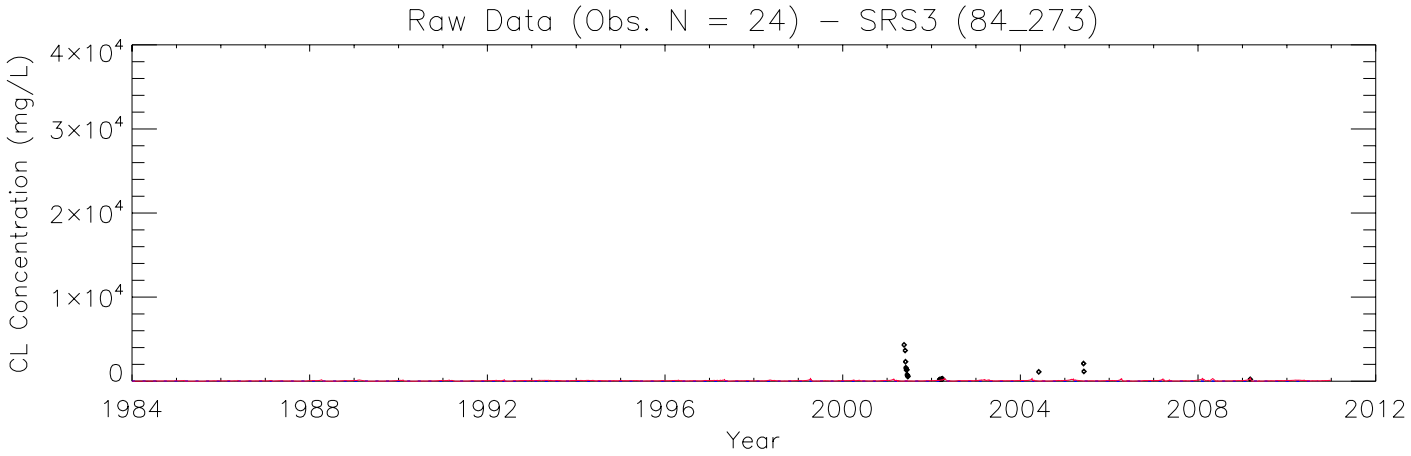

Cumulative Distribution: Raw Data – SRS1d (124_212)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

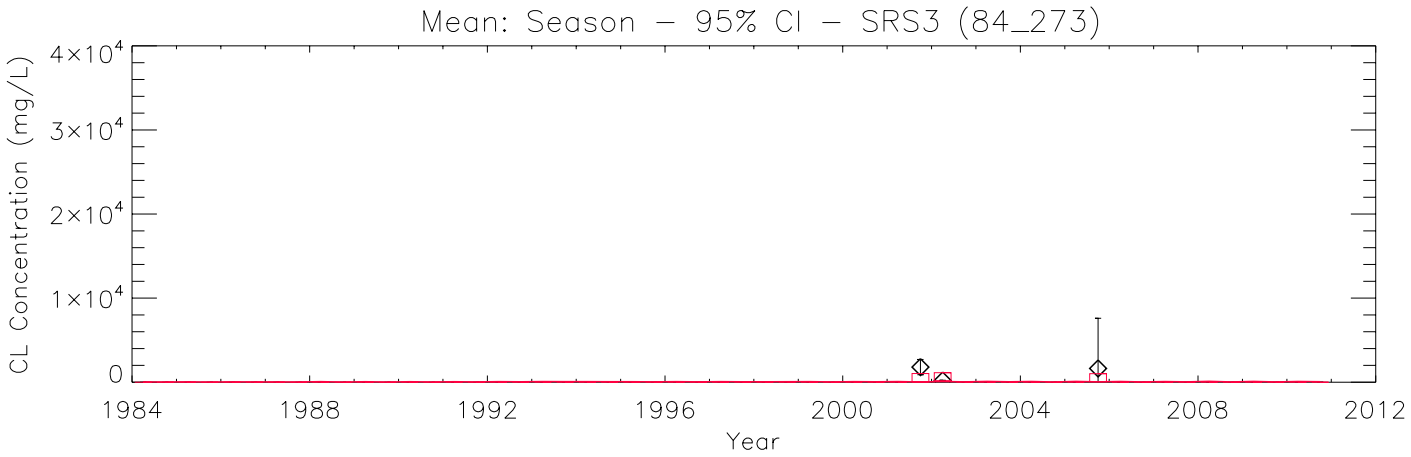

Raw Data (Obs. N = 788) – SRS2 (97_255)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

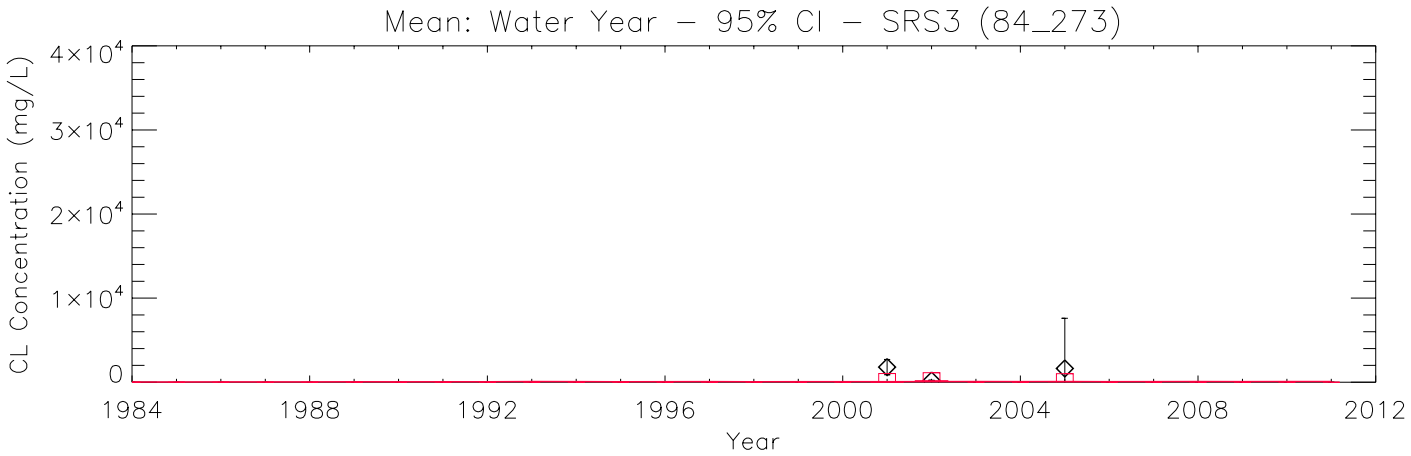

Mean: Season – 95% CI – SRS2 (97_255)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

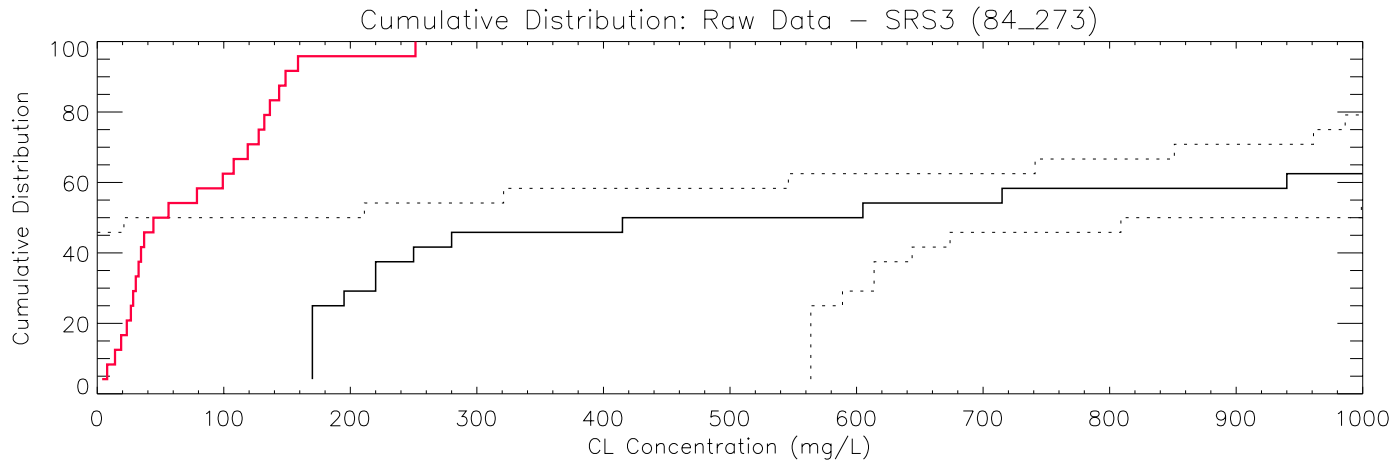

Mean: Water Year – 95% CI – SRS2 (97_255)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

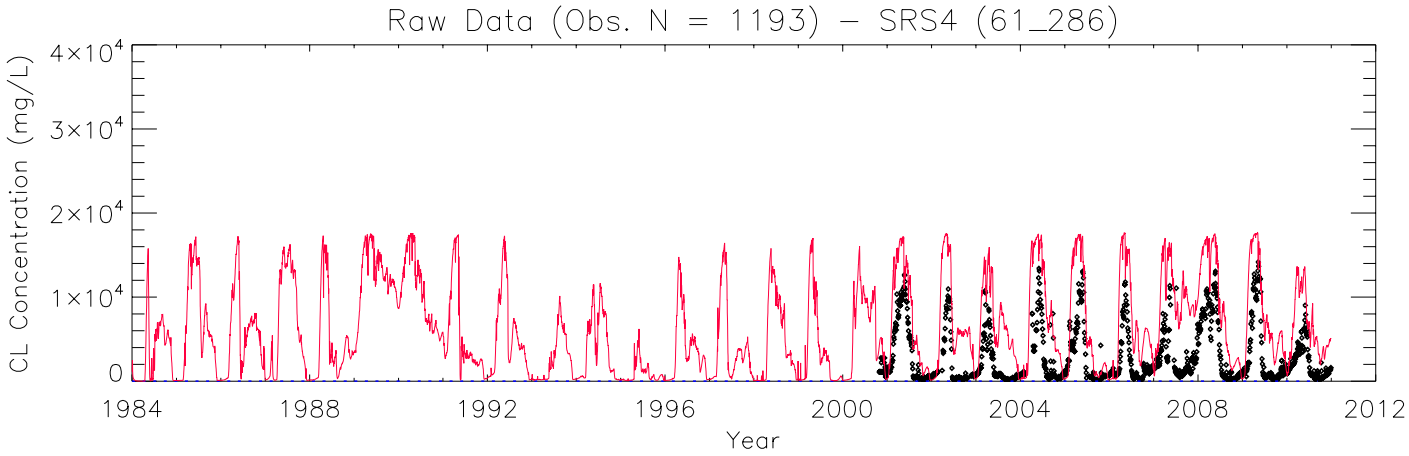

Cumulative Distribution: Raw Data – SRS2 (97_255)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

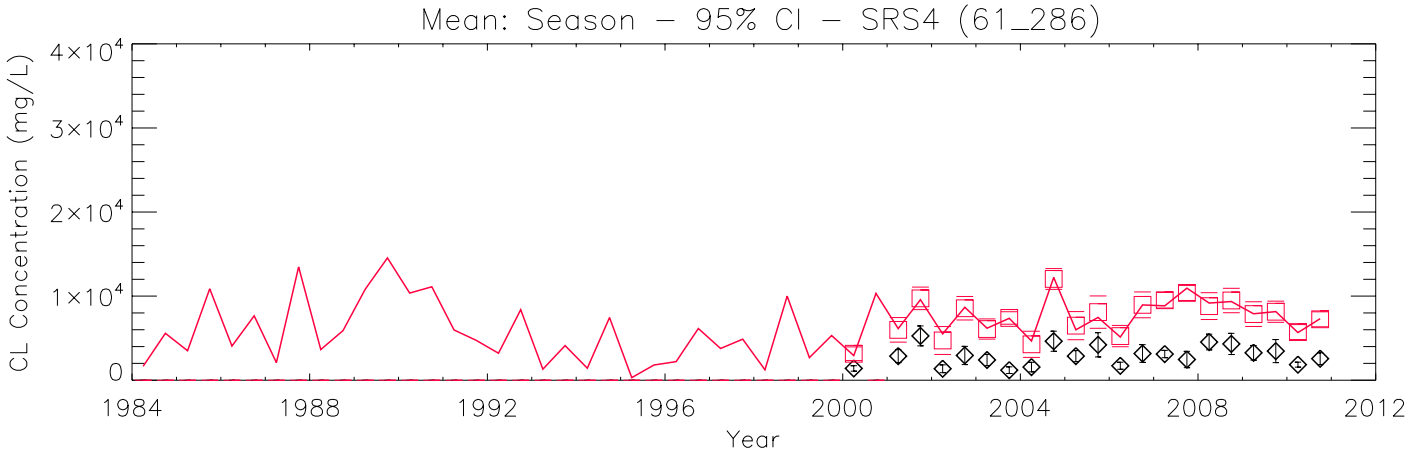

Raw Data (Obs. N = 24) – SRS3 (84_273)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

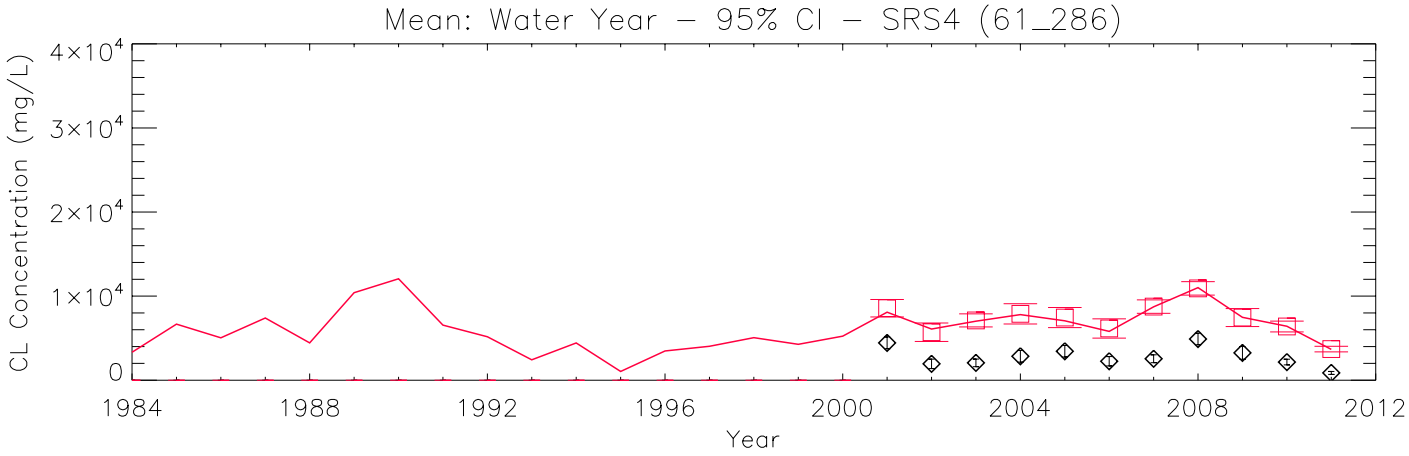

Mean: Season – 95% CI – SRS3 (84_273)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

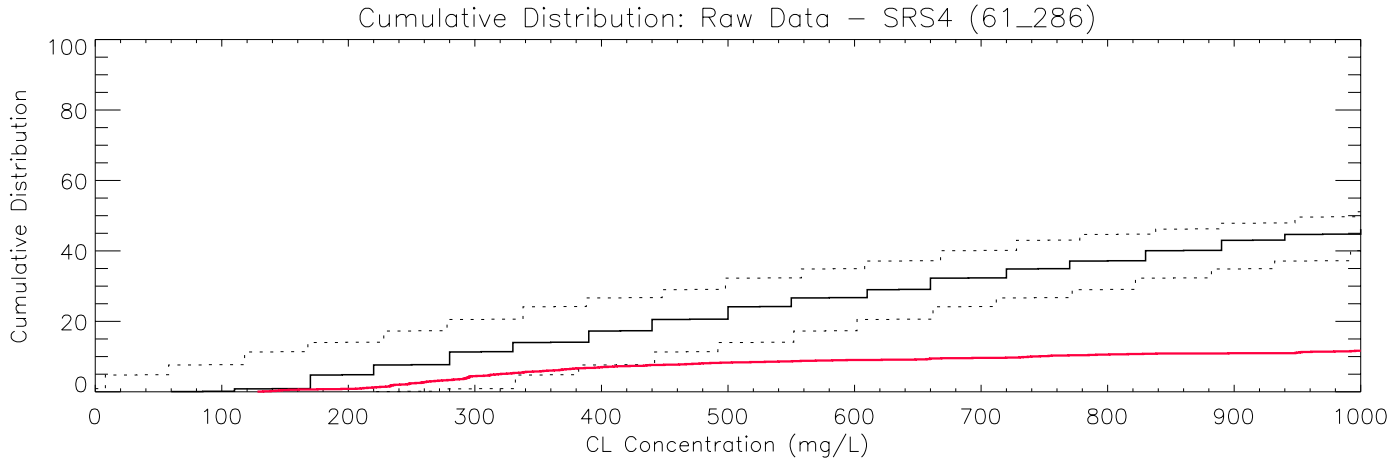

Mean: Water Year – 95% CI – SRS3 (84_273)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

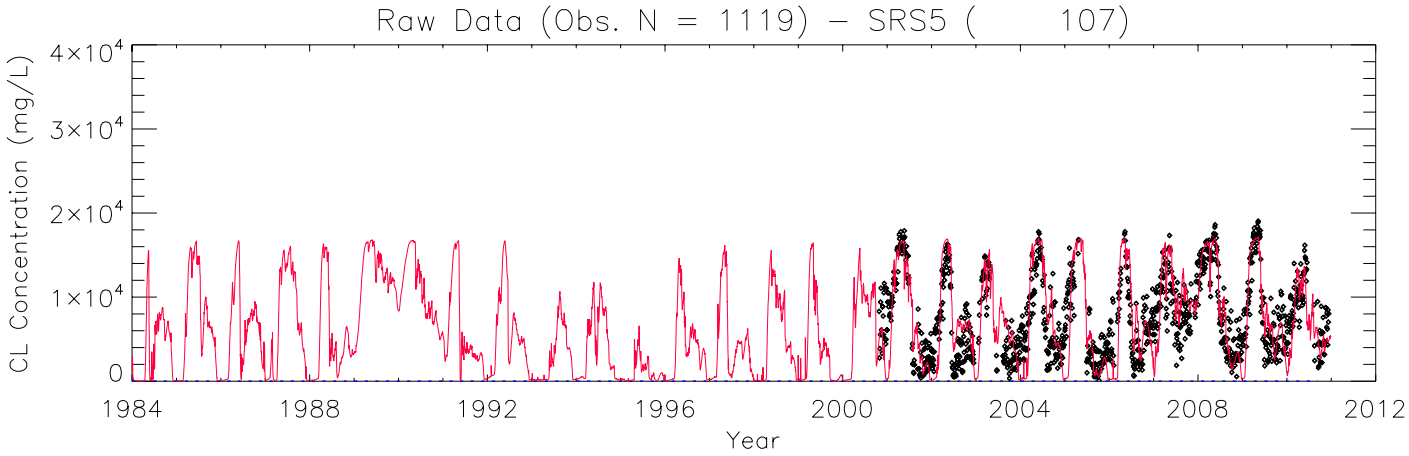

Cumulative Distribution: Raw Data – SRS3 (84_273)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

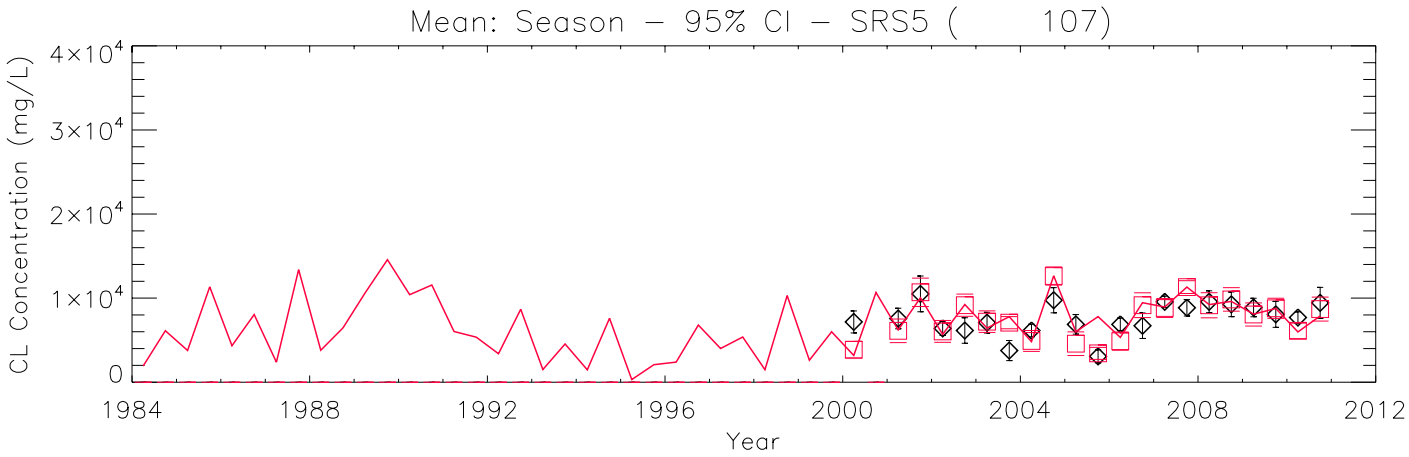

Raw Data (Obs. N = 1193) – SRS4 (61_286)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

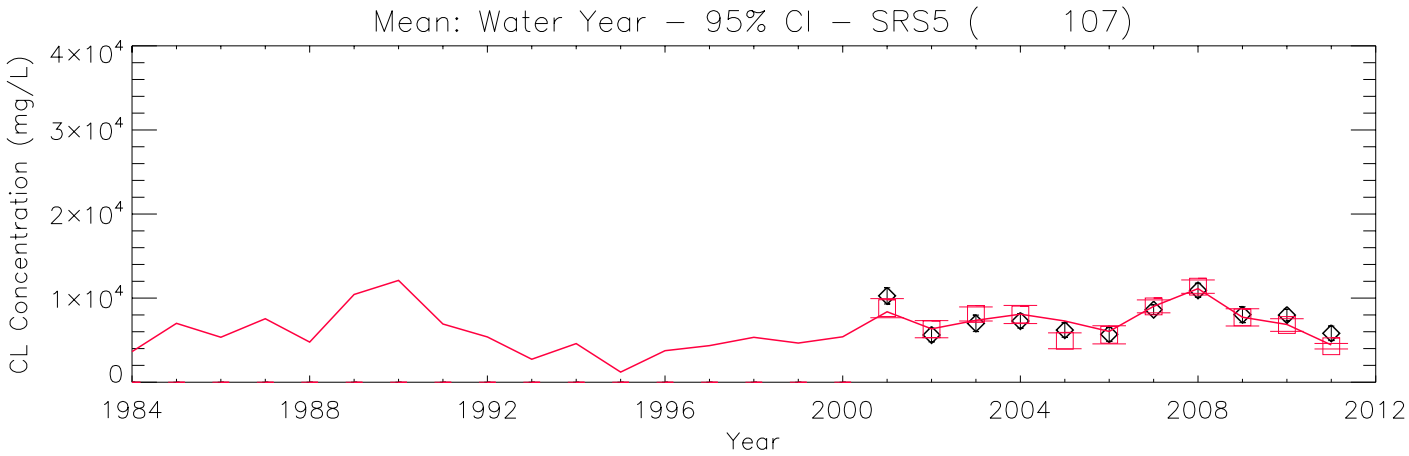

Mean: Season – 95% CI – SRS4 (61_286)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

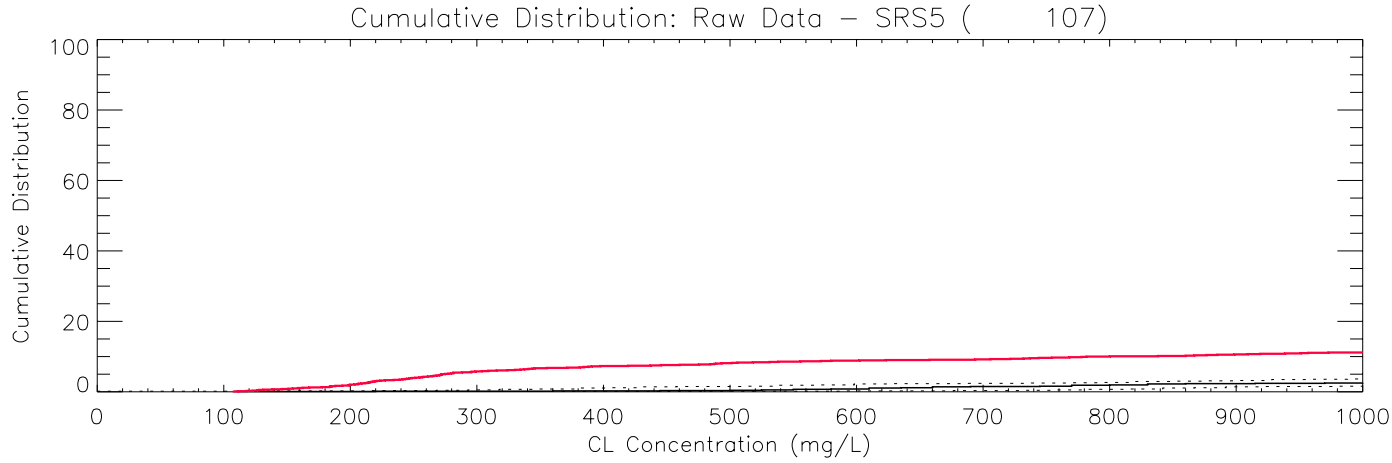

Mean: Water Year – 95% CI – SRS4 (61_286)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

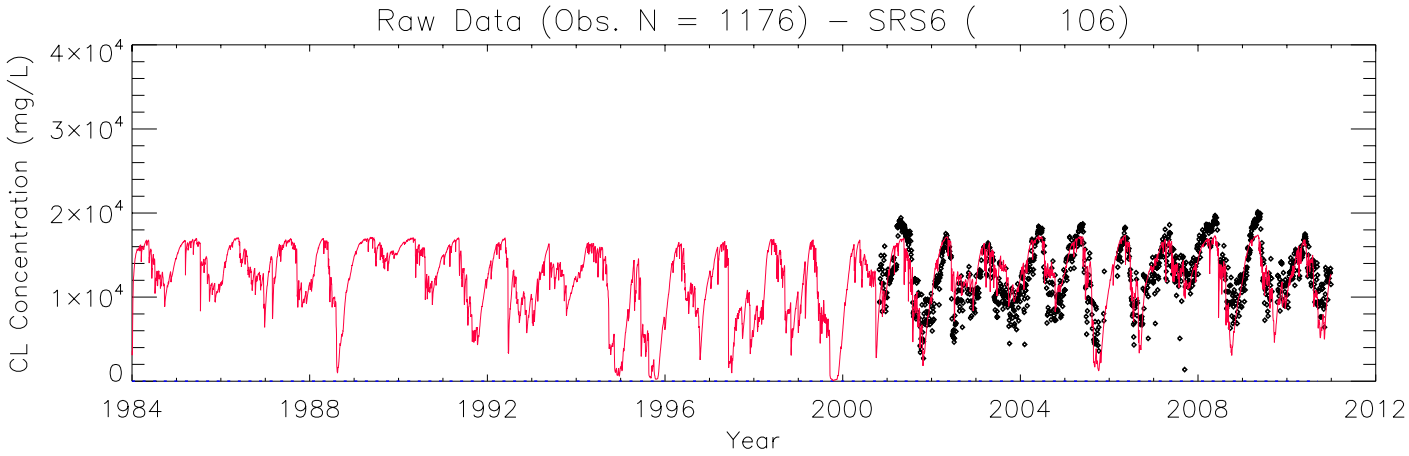

Cumulative Distribution: Raw Data – SRS4 (61_286)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

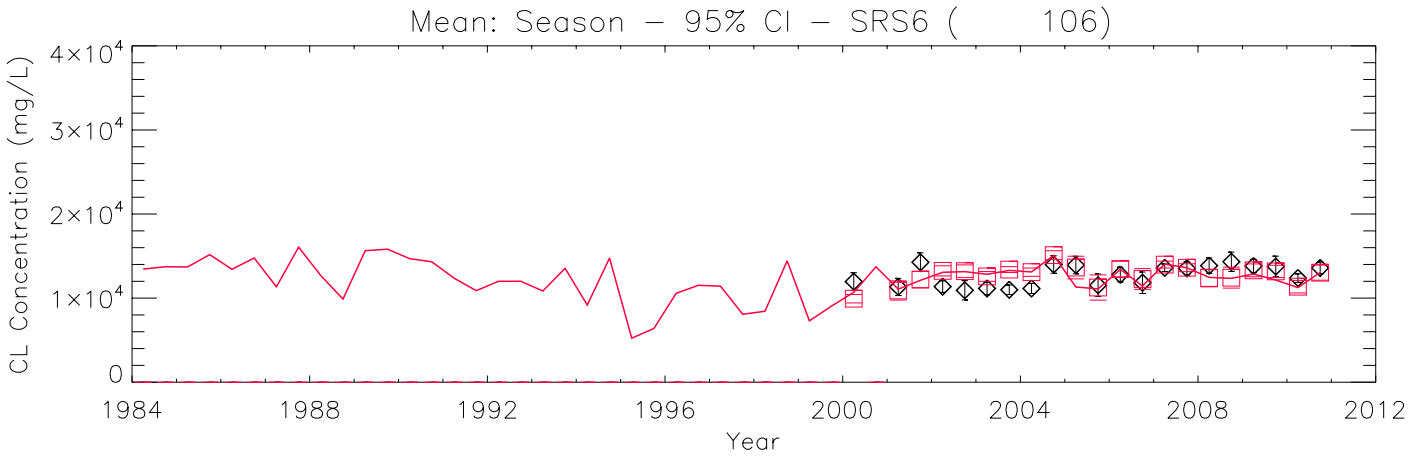

Raw Data (Obs. N = 1119) – SRS5 (107)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

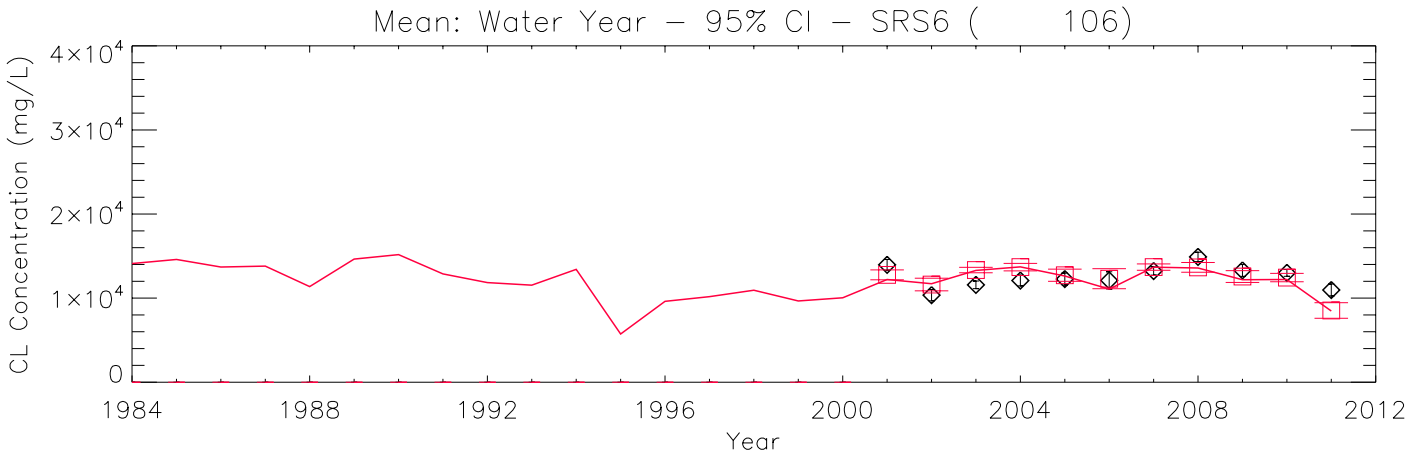

Mean: Season – 95% CI – SRS5 (107)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

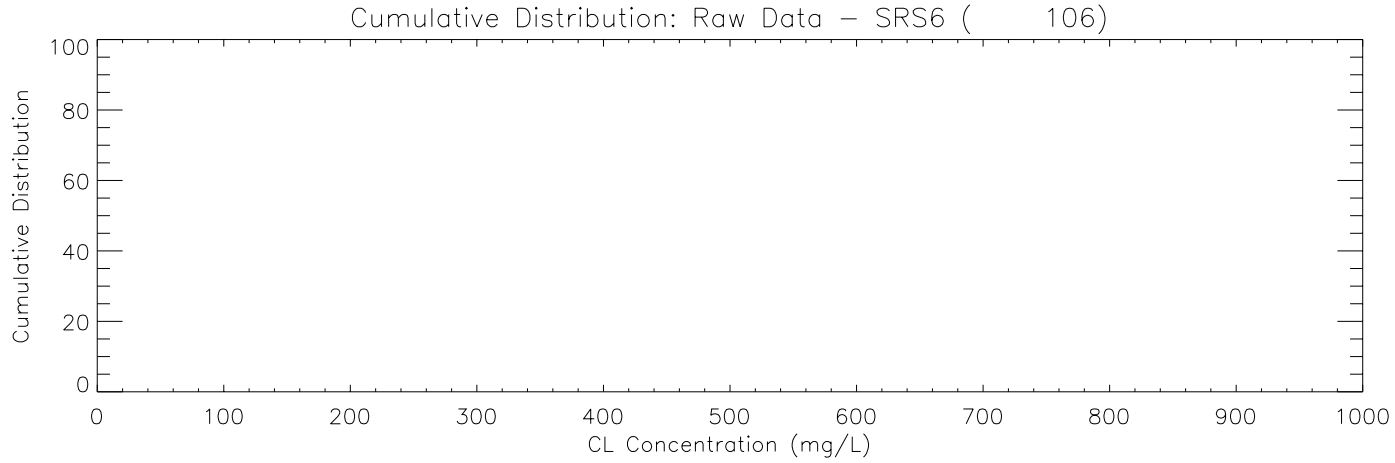

Mean: Water Year – 95% CI – SRS5 (107)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

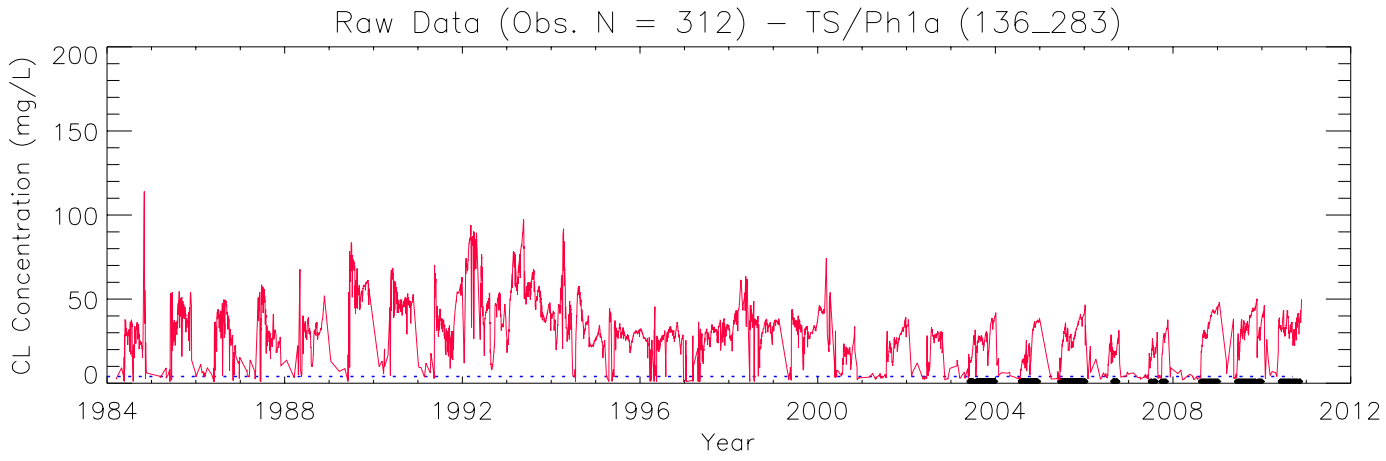

Cumulative Distribution: Raw Data – SRS5 (107)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

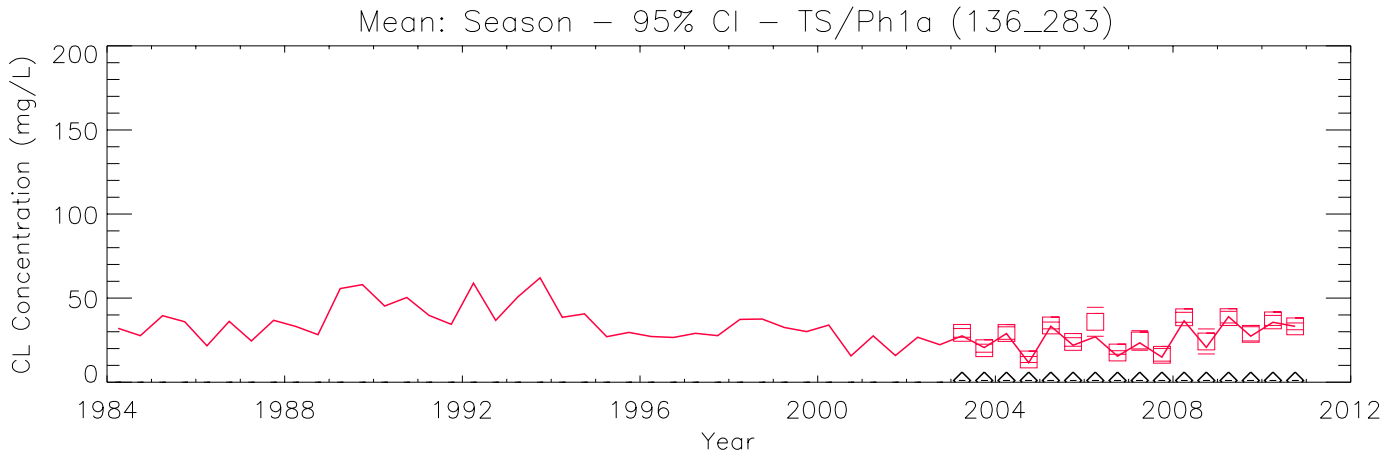

Raw Data (Obs. N = 1176) – SRS6 (106)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

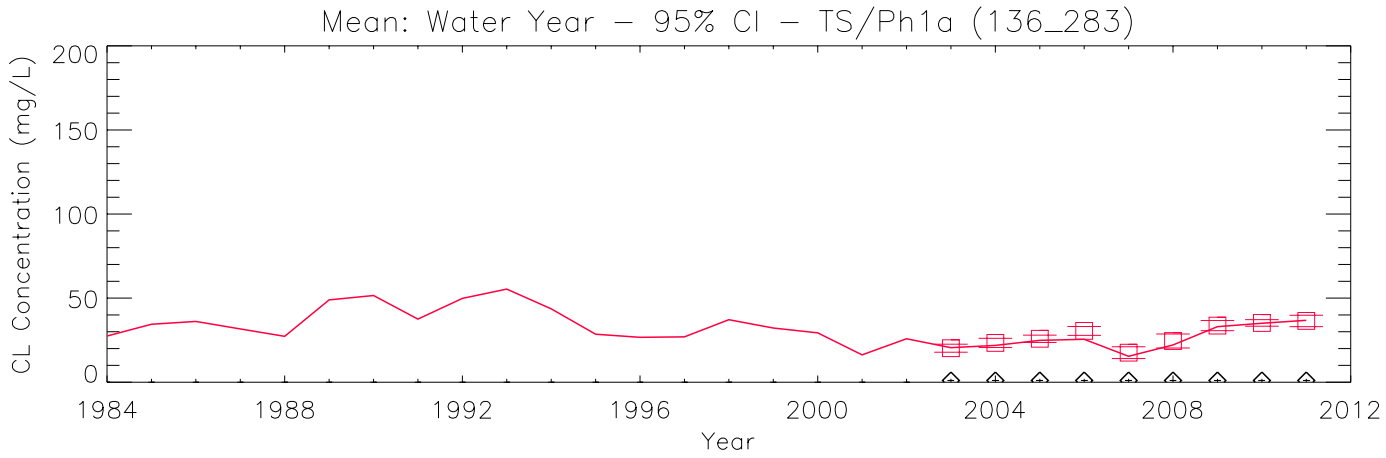

Mean: Season – 95% CI – SRS6 (106)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

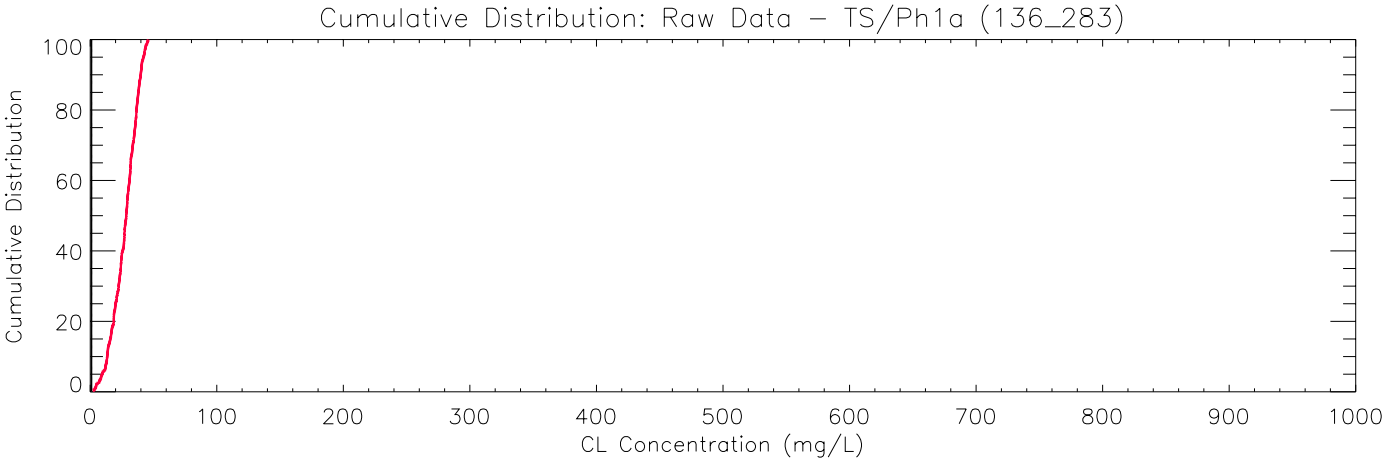

Mean: Water Year – 95% CI – SRS6 (106)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

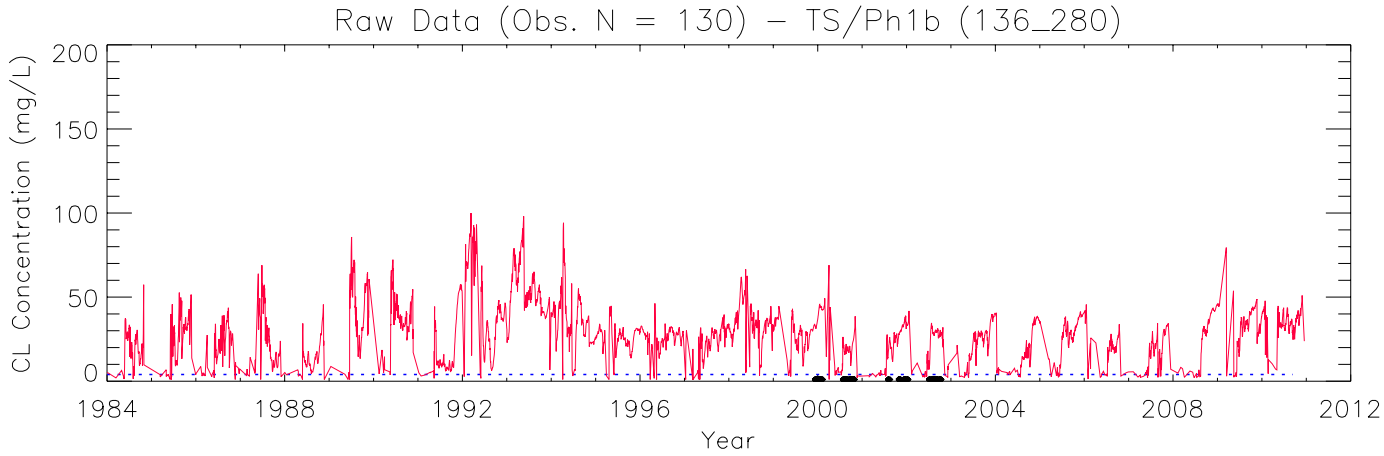

Cumulative Distribution: Raw Data – SRS6 (106)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

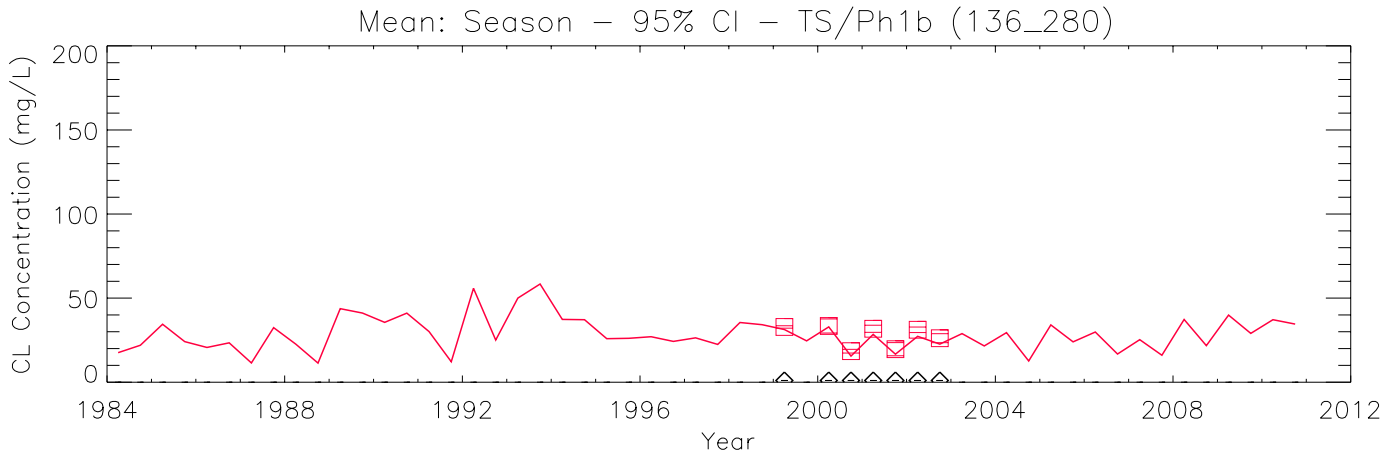

Raw Data (Obs. N = 312) – TS/Ph1a (136_283)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

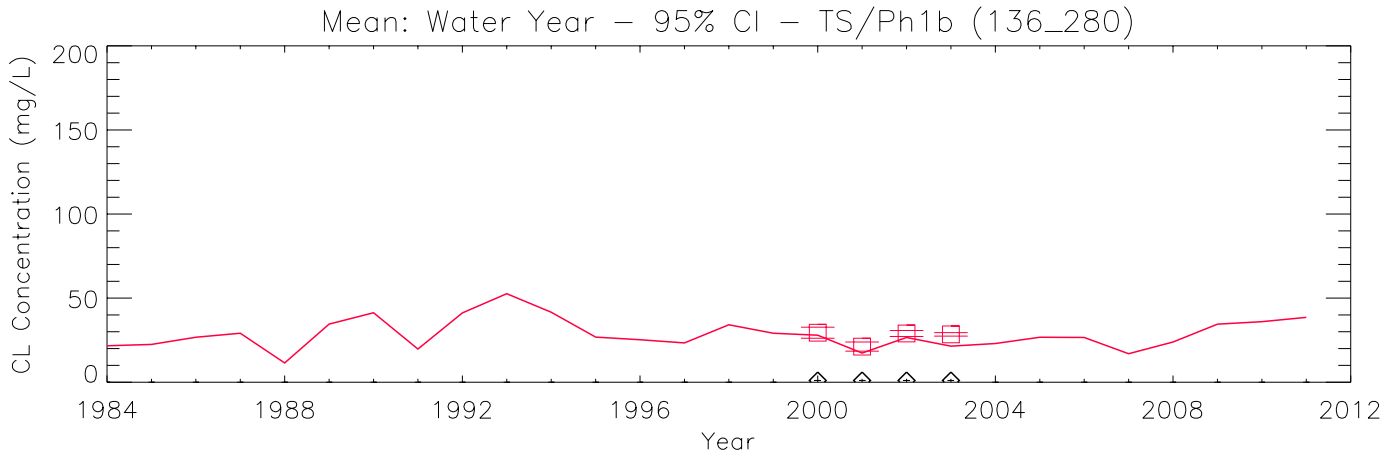

Mean: Season – 95% CI – TS/Ph1a (136_283)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

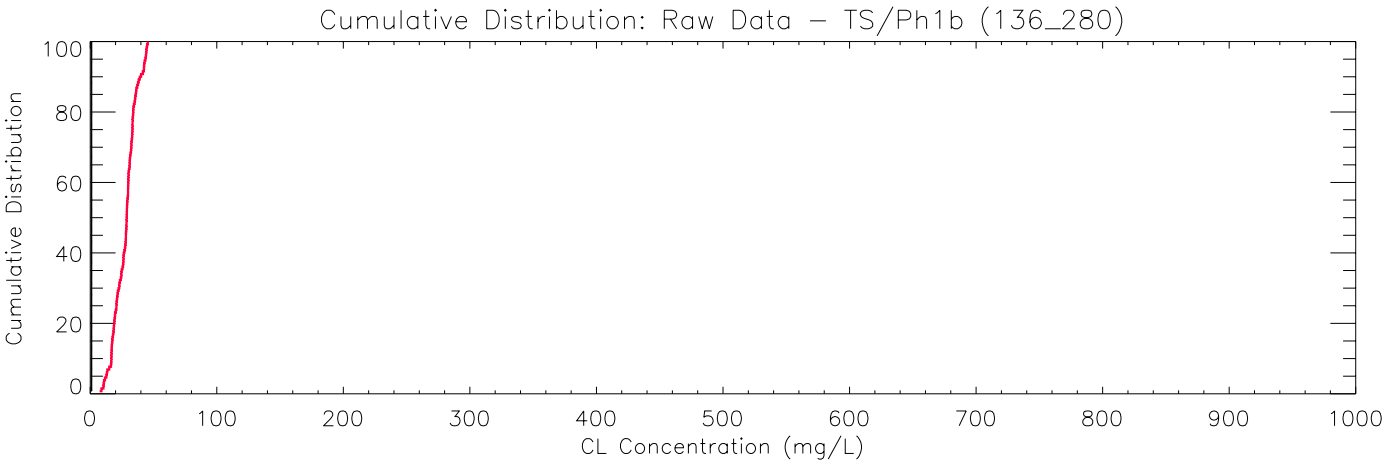

Mean: Water Year – 95% CI – TS/Ph1a (136_283)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

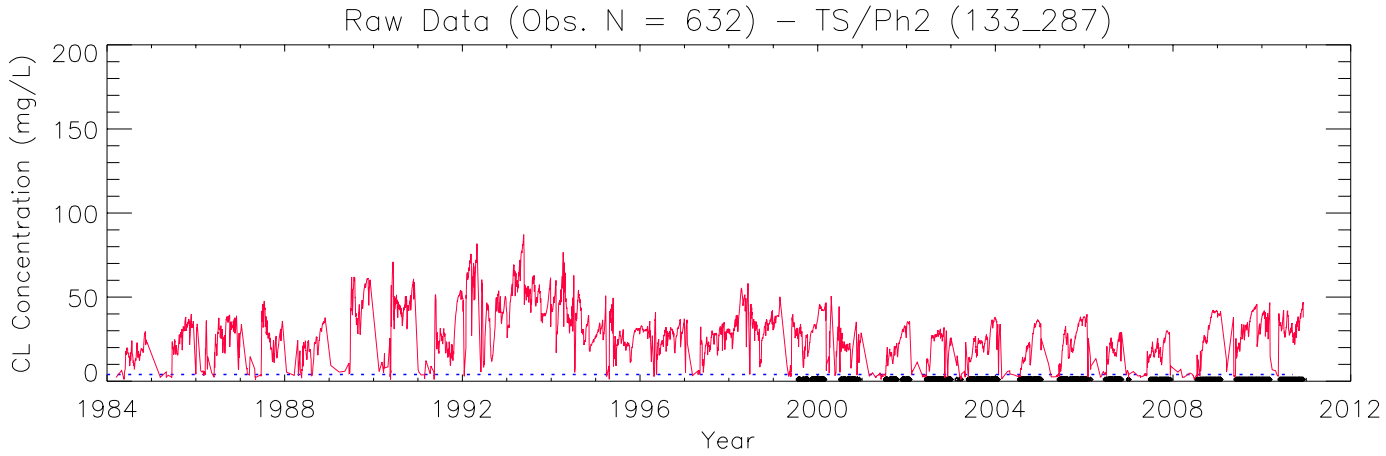

Cumulative Distribution: Raw Data – TS/Ph1a (136_283)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

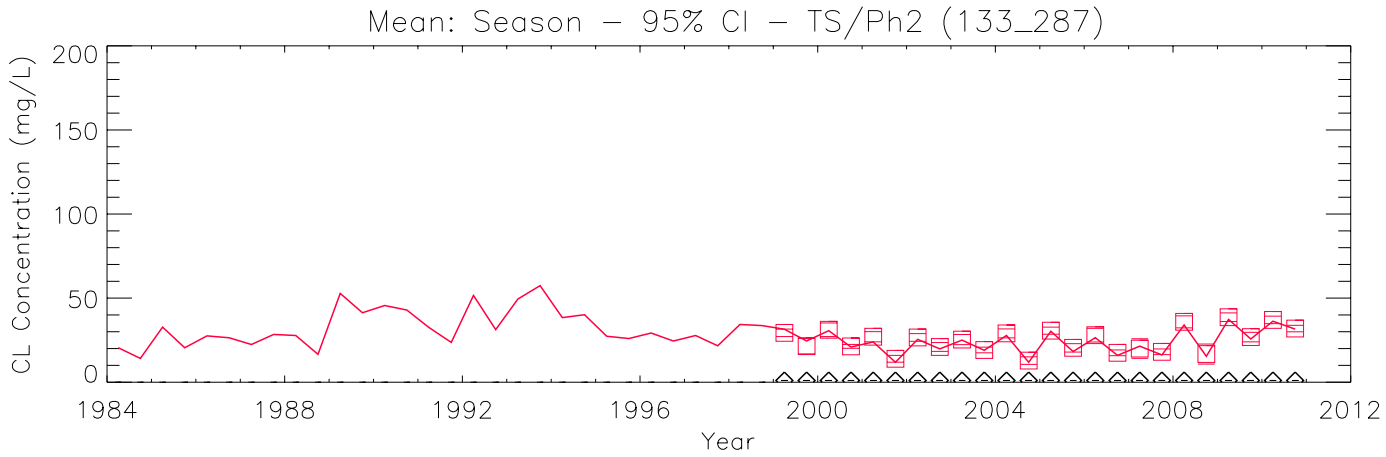

Raw Data (Obs. N = 130) – TS/Ph1b (136_280)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

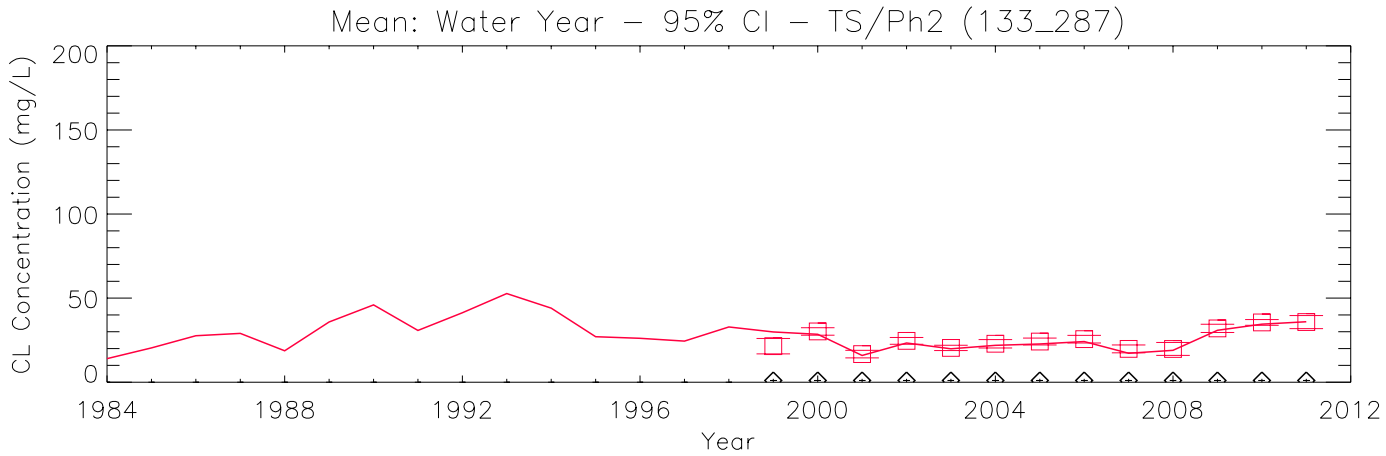

Mean: Season – 95% CI – TS/Ph1b (136_280)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

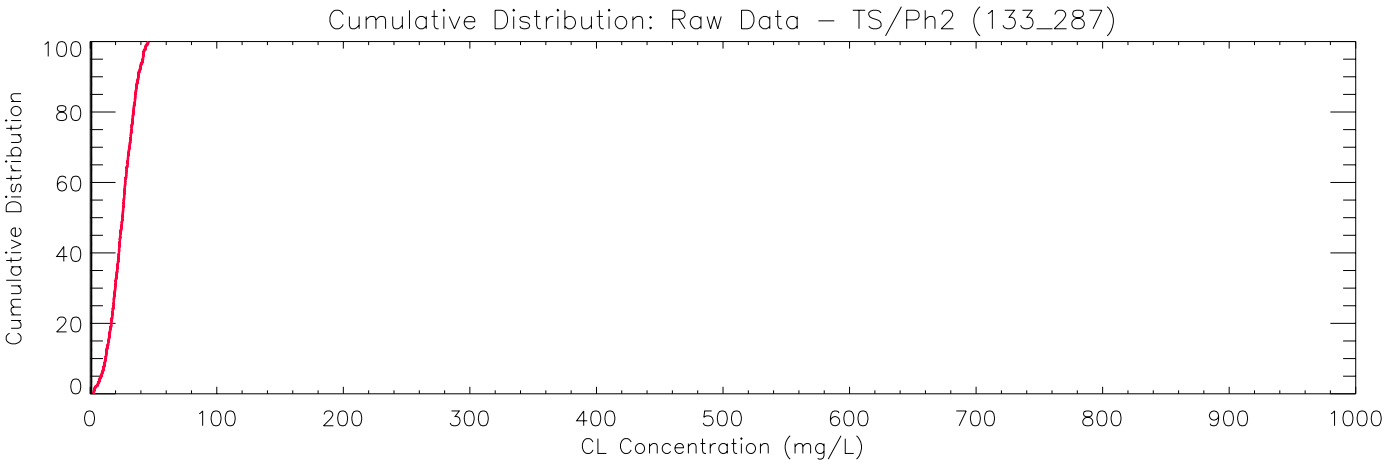

Mean: Water Year – 95% CI – TS/Ph1b (136_280)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

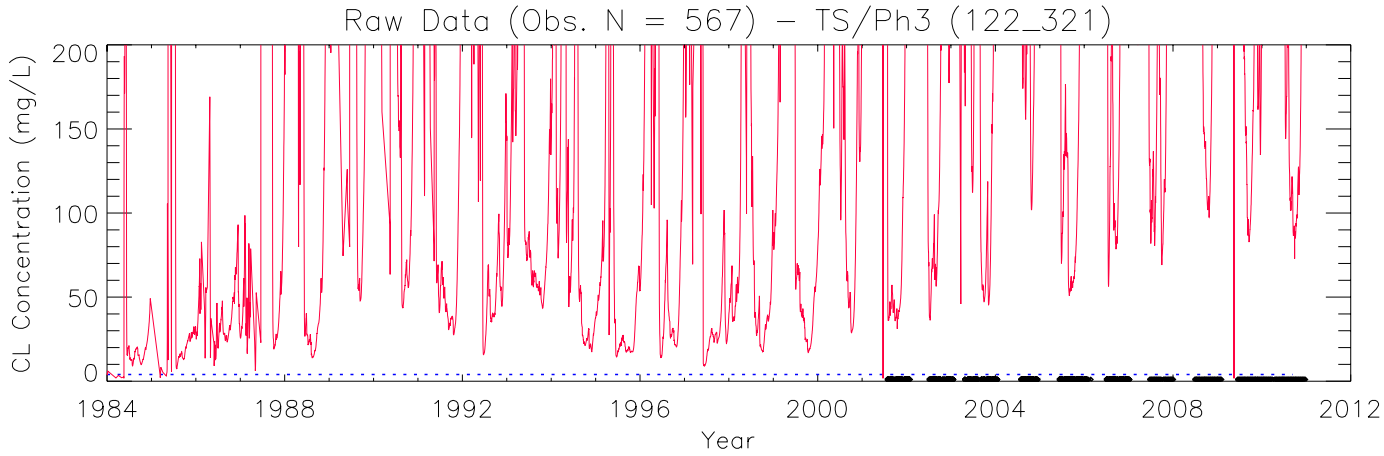

Cumulative Distribution: Raw Data – TS/Ph1b (136_280)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

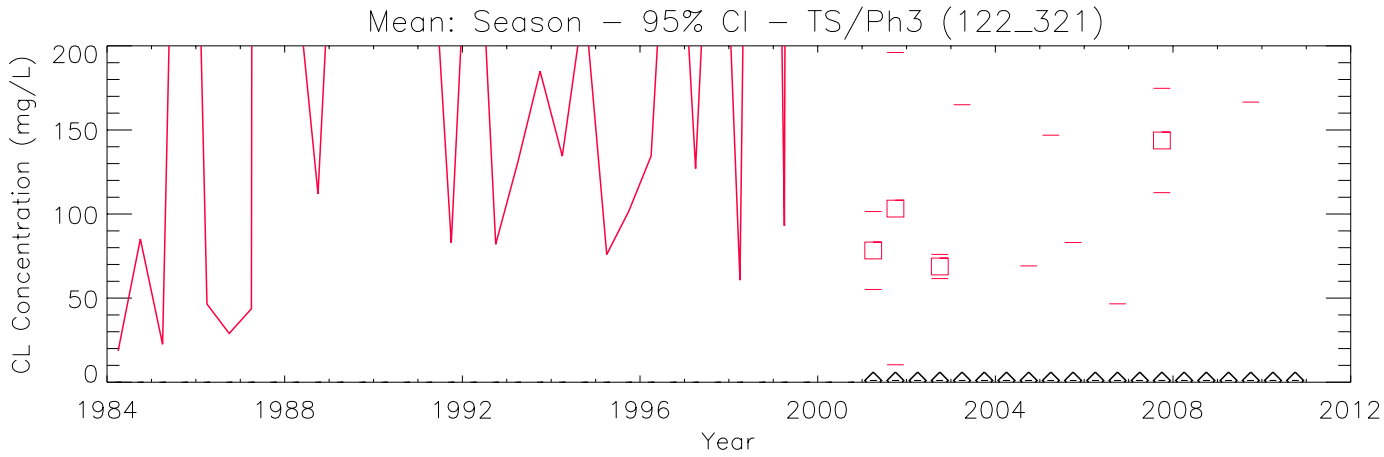

Raw Data (Obs. N = 632) – TS/Ph2 (133_287)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

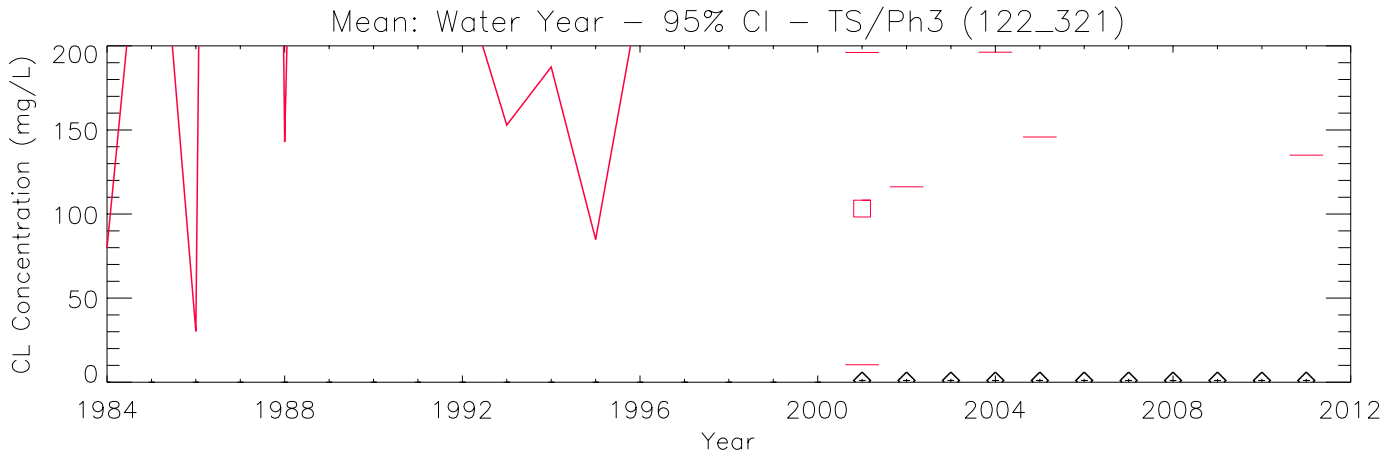

Mean: Season – 95% CI – TS/Ph2 (133_287)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

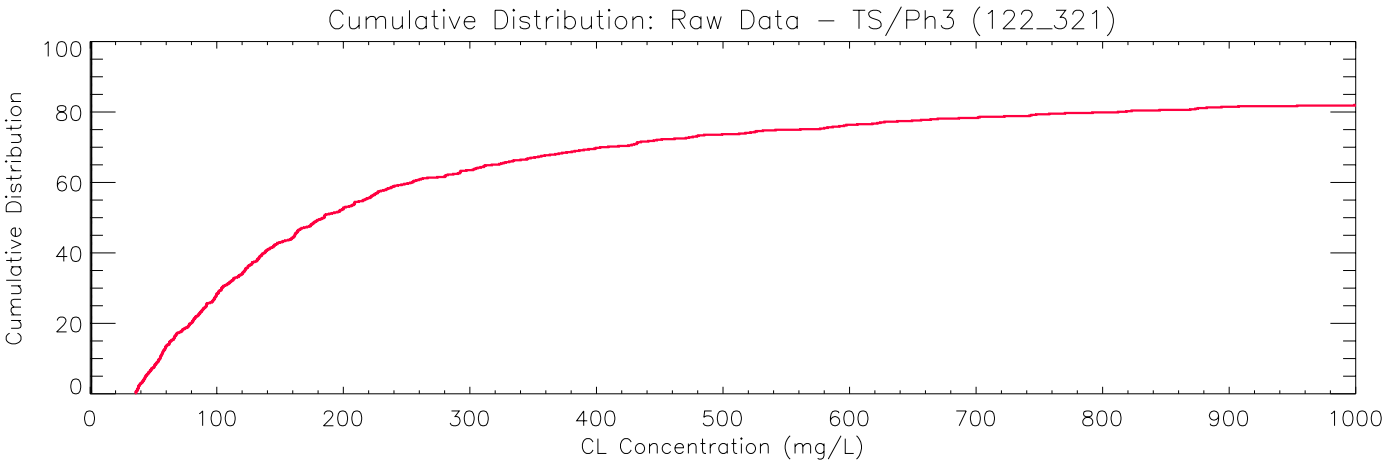

Mean: Water Year – 95% CI – TS/Ph2 (133_287)
CL Concentration (mg/L)
200
150
100
50
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

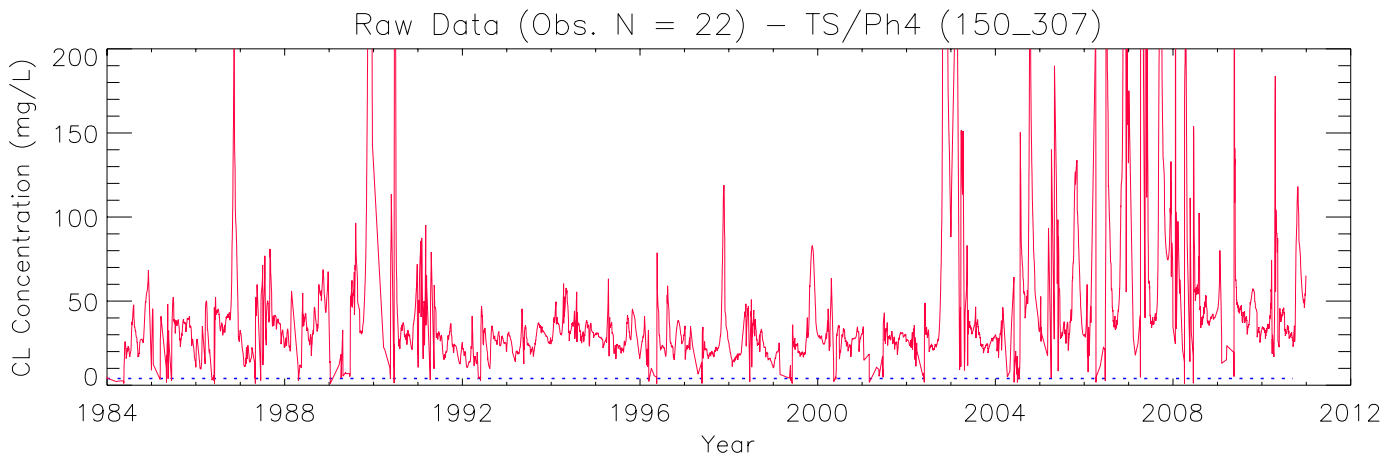

Cumulative Distribution: Raw Data – TS/Ph2 (133_287)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

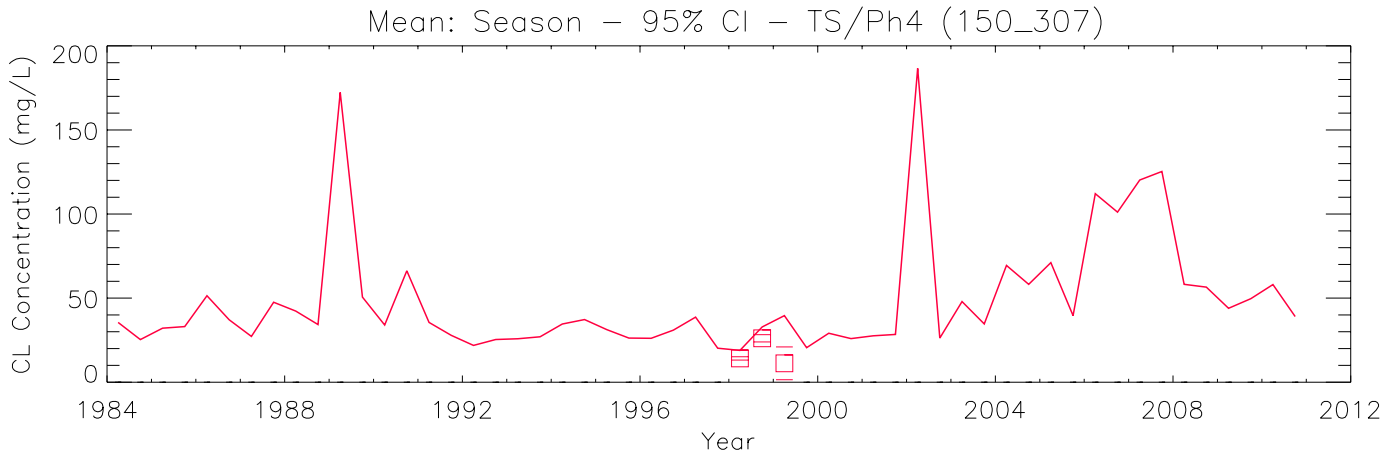

Raw Data (Obs. N = 567) – TS/Ph3 (122_321)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

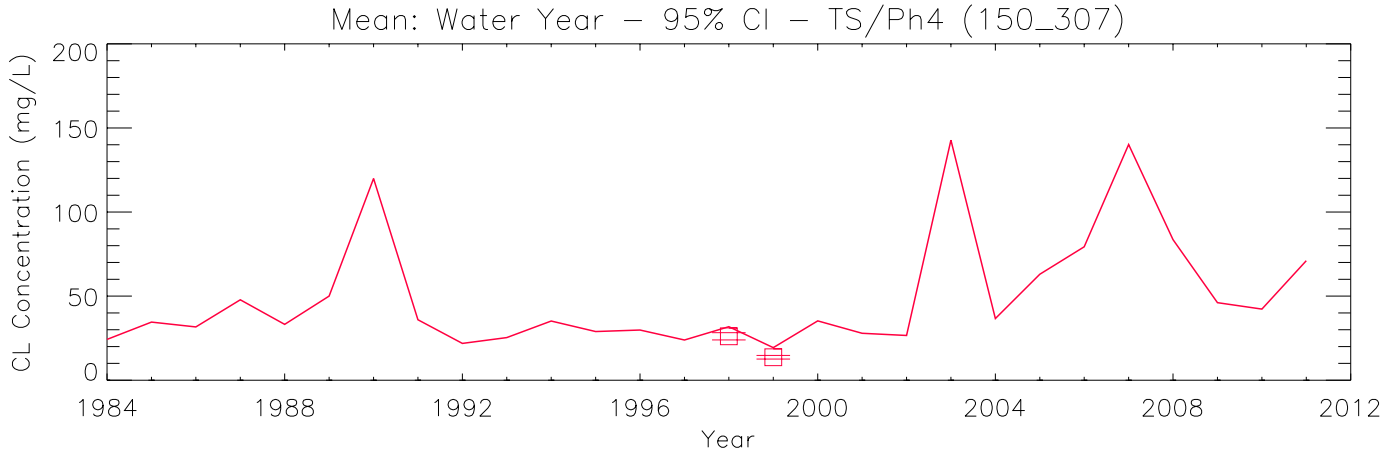

Mean: Season – 95% CI – TS/Ph3 (122_321)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

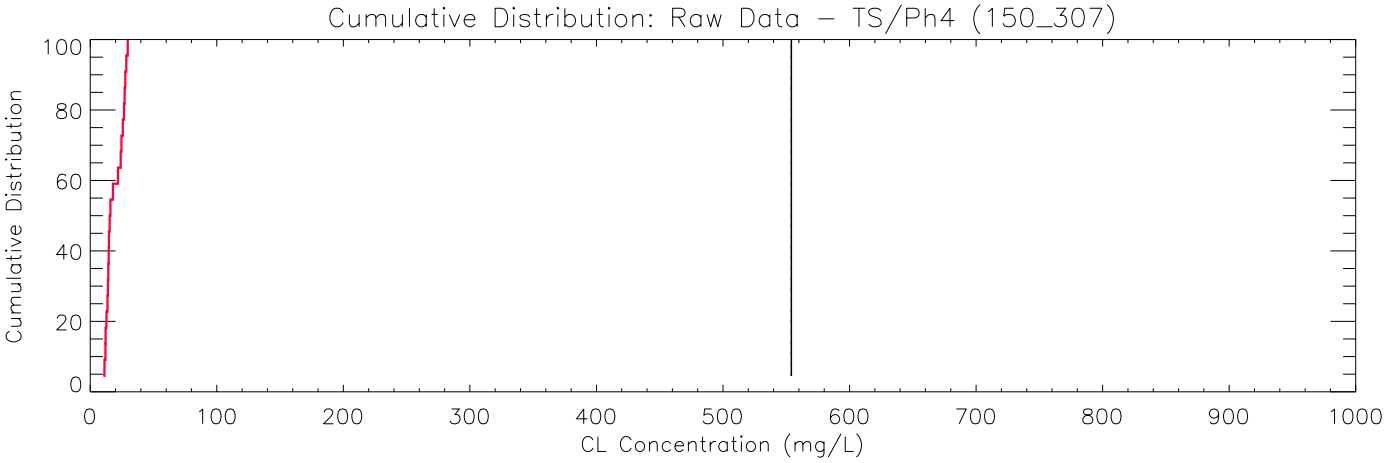

Mean: Water Year – 95% CI – TS/Ph3 (122_321)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

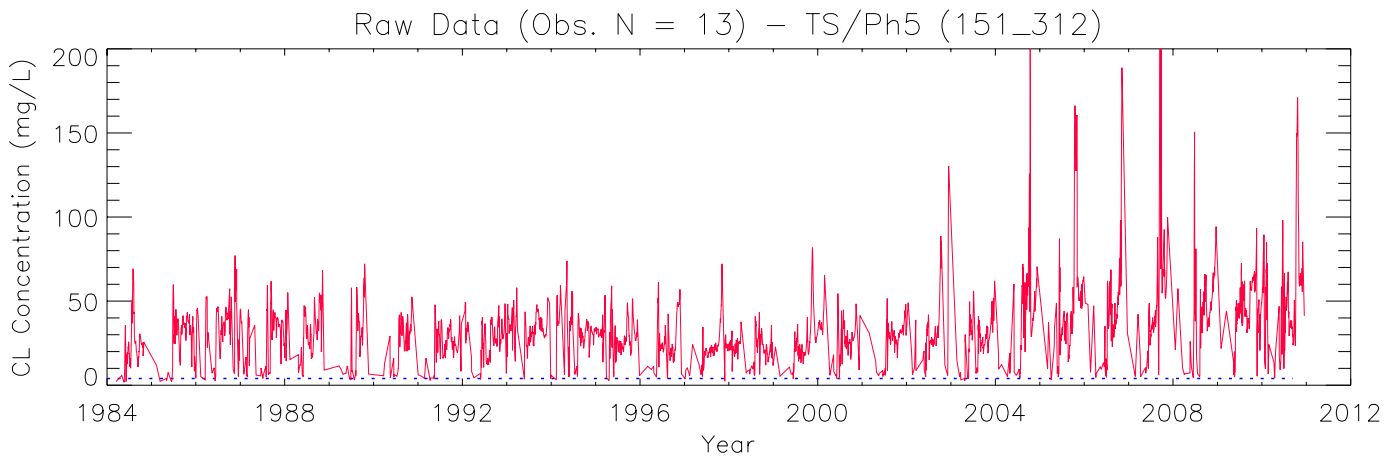

Cumulative Distribution: Raw Data – TS/Ph3 (122_321)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

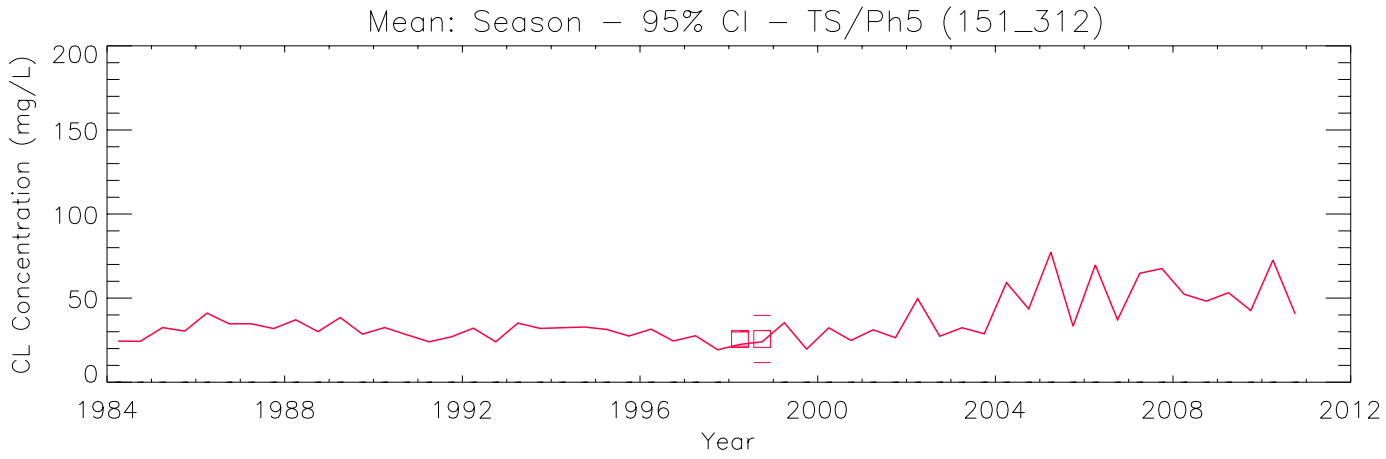

Raw Data (Obs. N = 22) – TS/Ph4 (150_307)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

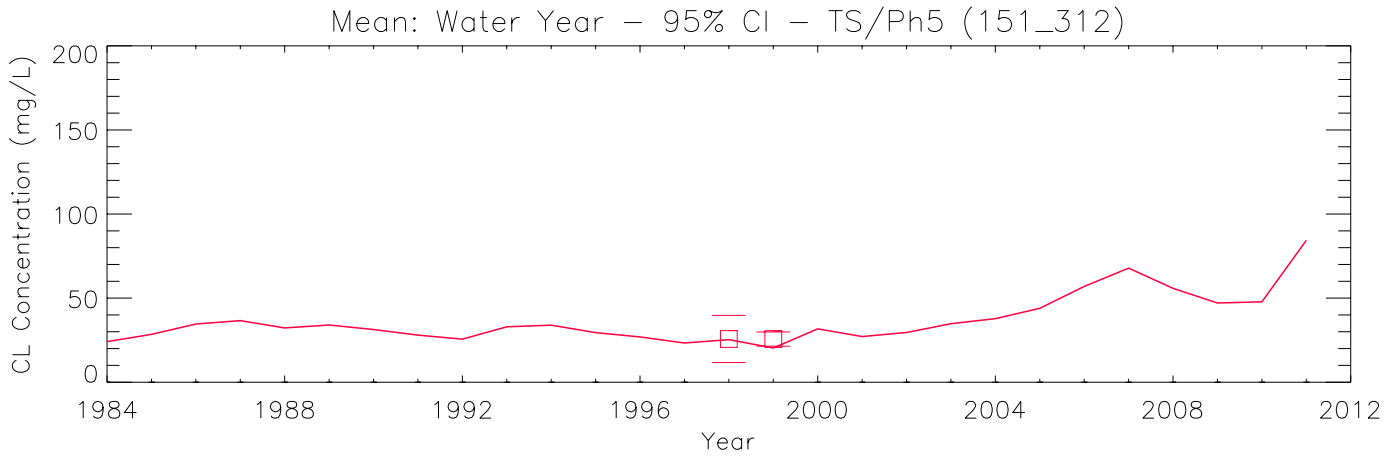

Mean: Season – 95% CI – TS/Ph4 (150_307)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

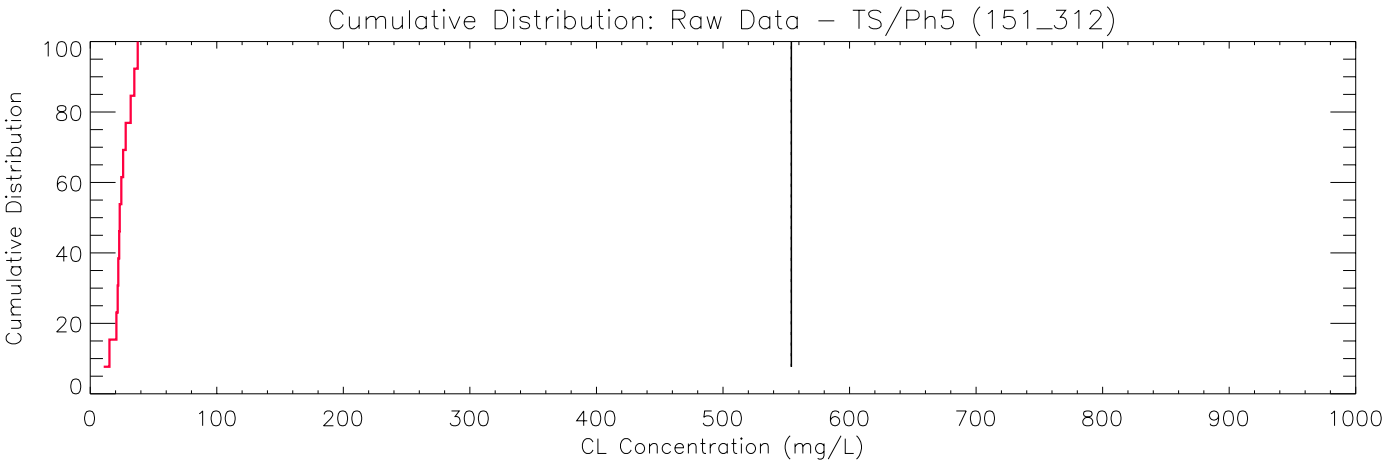

Mean: Water Year – 95% CI – TS/Ph4 (150_307)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

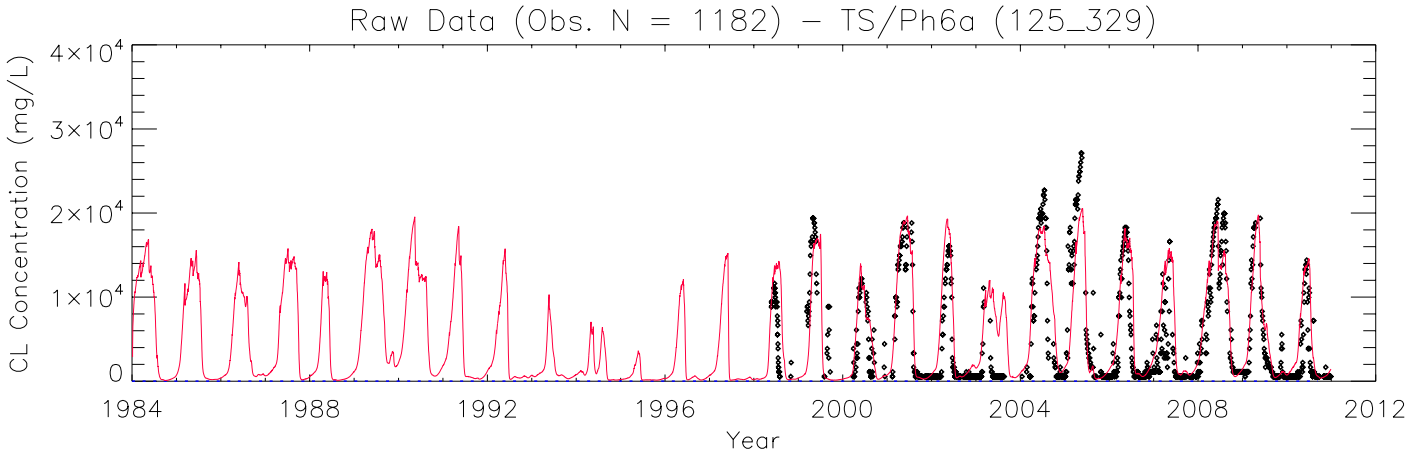

Cumulative Distribution: Raw Data – TS/Ph4 (150_307)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

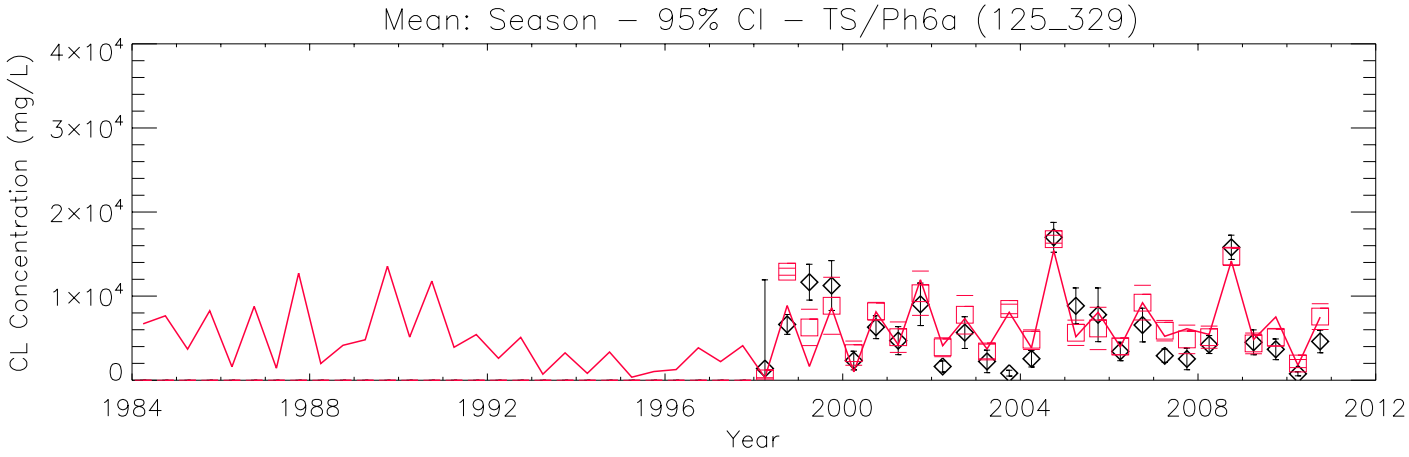

Raw Data (Obs. N = 13) – TS/Ph5 (151_312)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

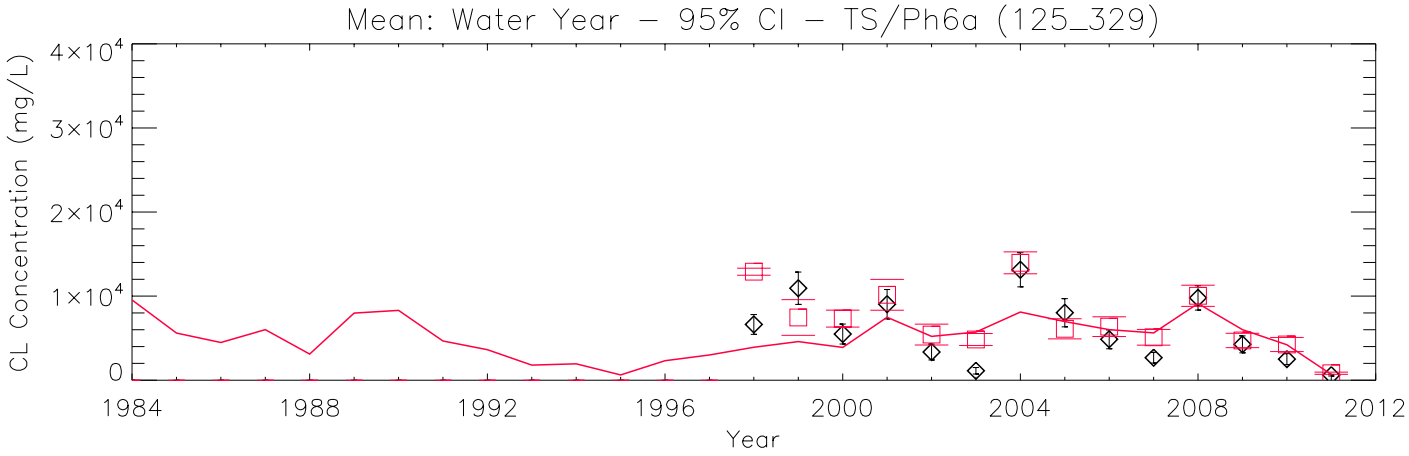

Mean: Season – 95% CI – TS/Ph5 (151_312)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

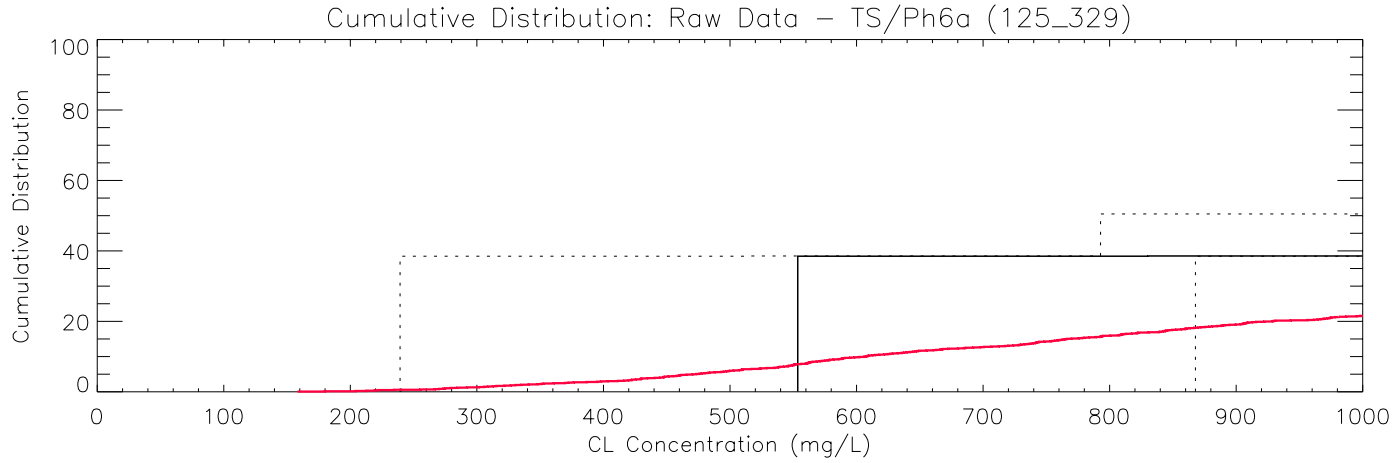

Mean: Water Year – 95% CI – TS/Ph5 (151_312)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

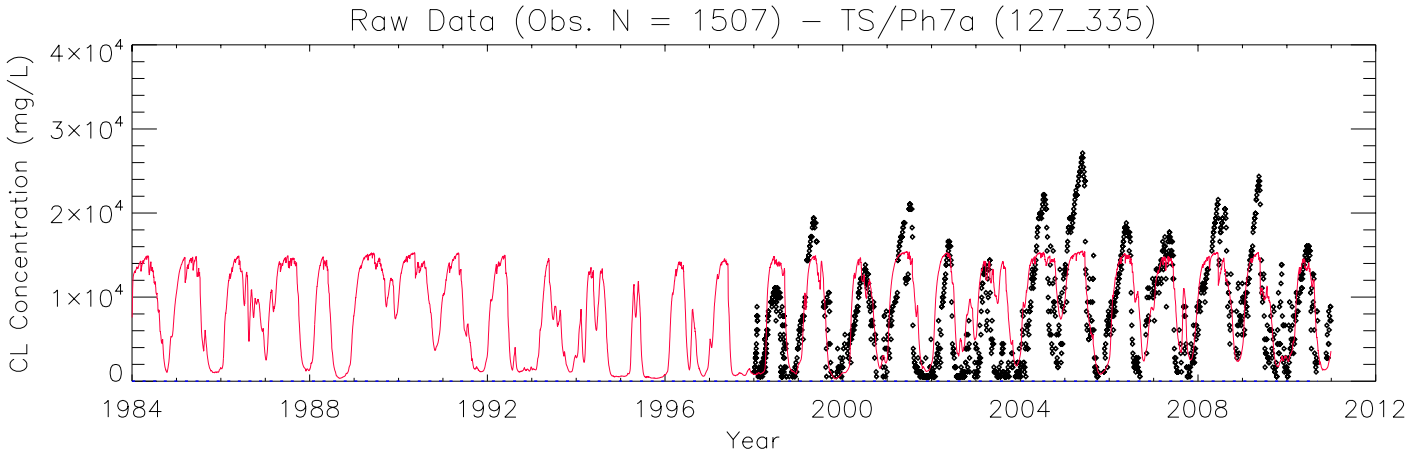

Cumulative Distribution: Raw Data – TS/Ph5 (151_312)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

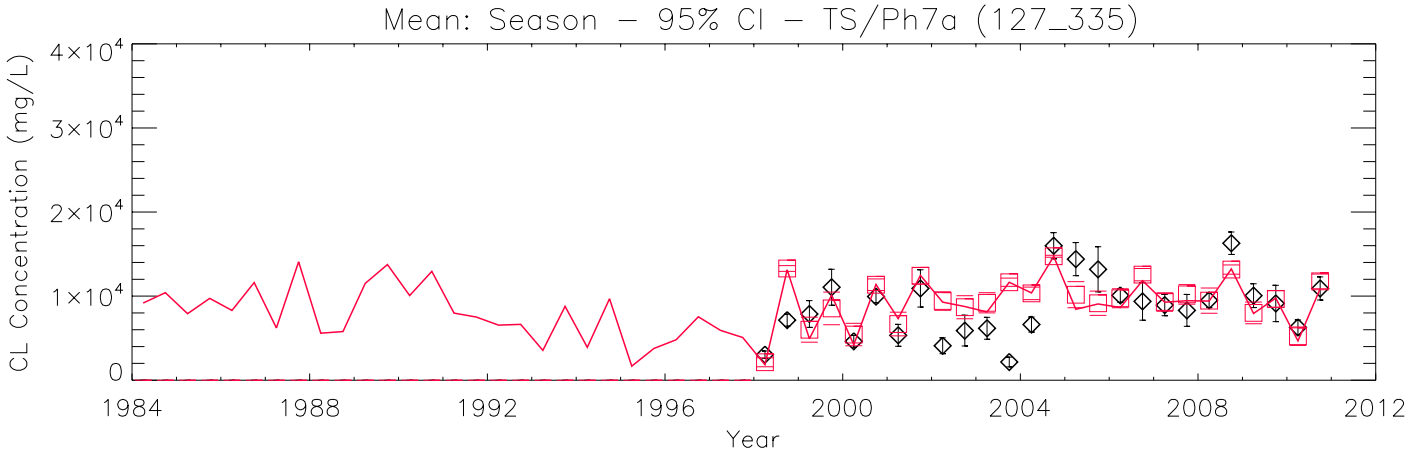

Raw Data (Obs. N = 1182) – TS/Ph6a (125_329)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

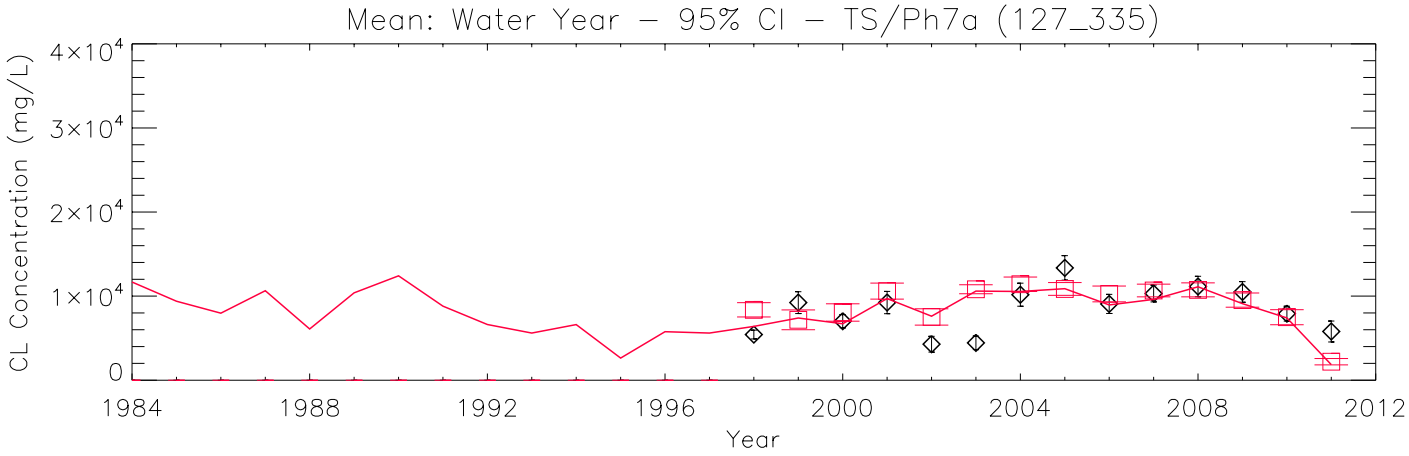

Mean: Season – 95% CI – TS/Ph6a (125_329)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

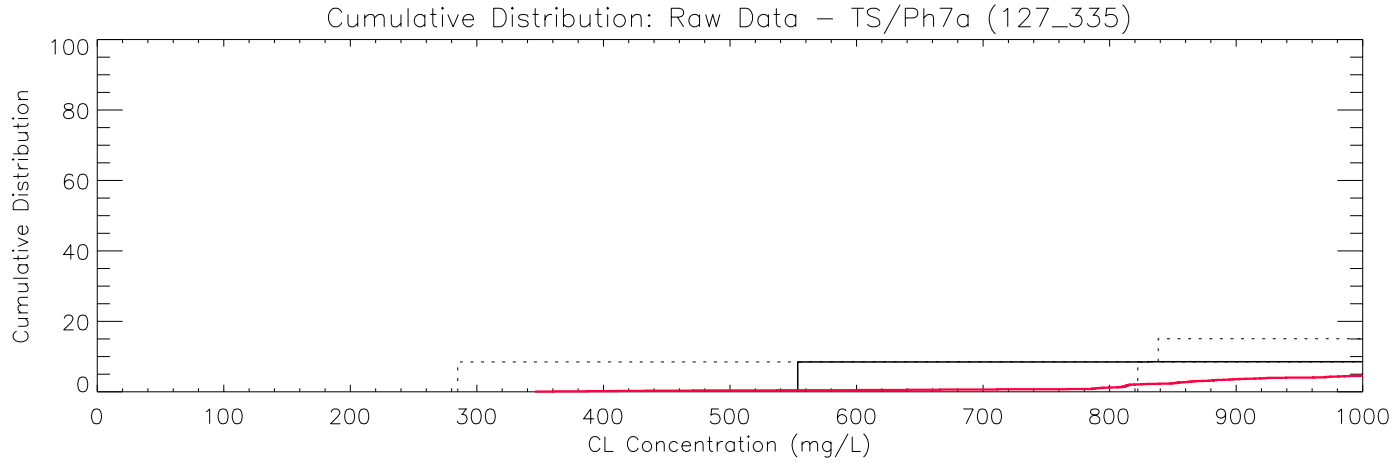

Mean: Water Year – 95% CI – TS/Ph6a (125_329)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

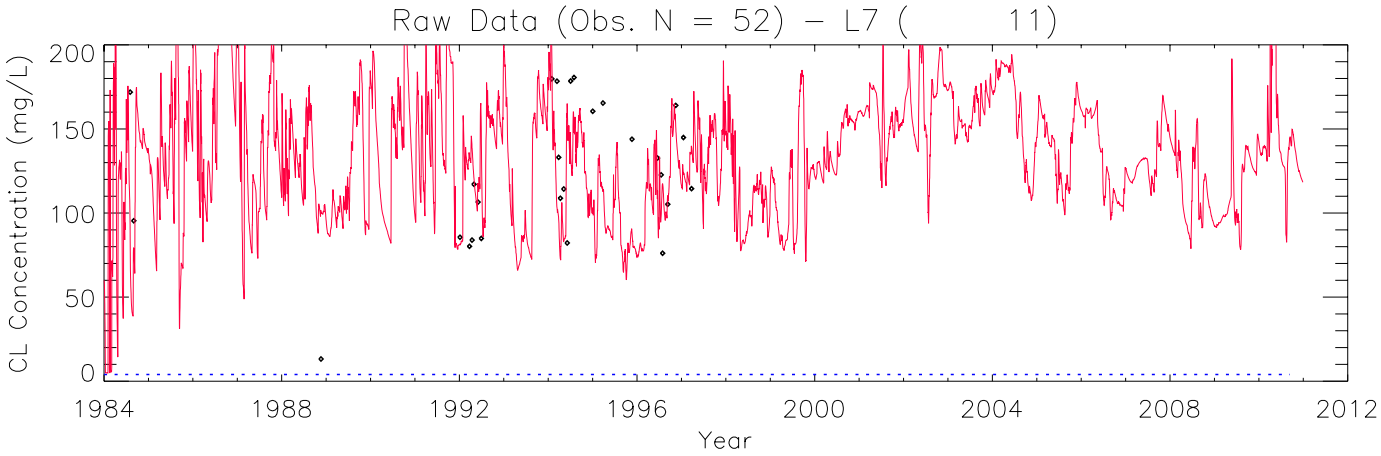

Cumulative Distribution: Raw Data – TS/Ph6a (125_329)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

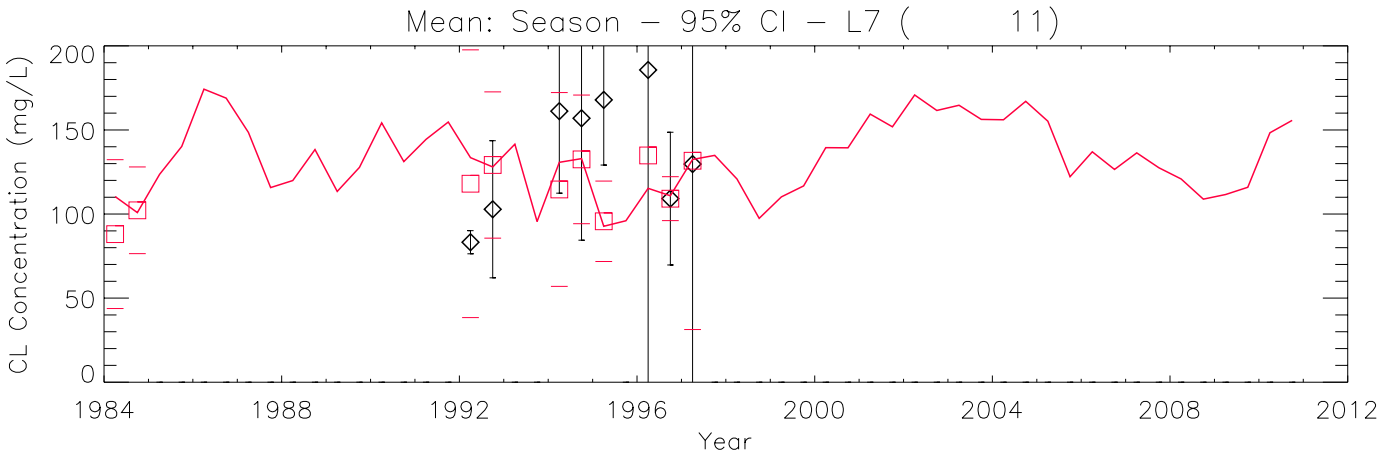

Raw Data (Obs. N = 1507) – TS/Ph7a (127_335)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

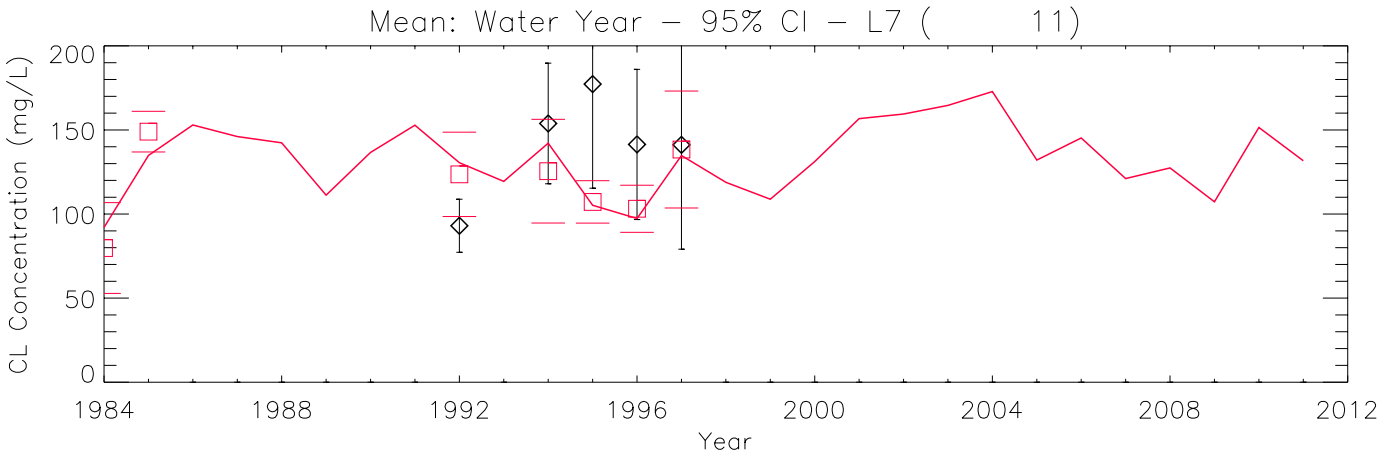

Mean: Season – 95% CI – TS/Ph7a (127_335)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

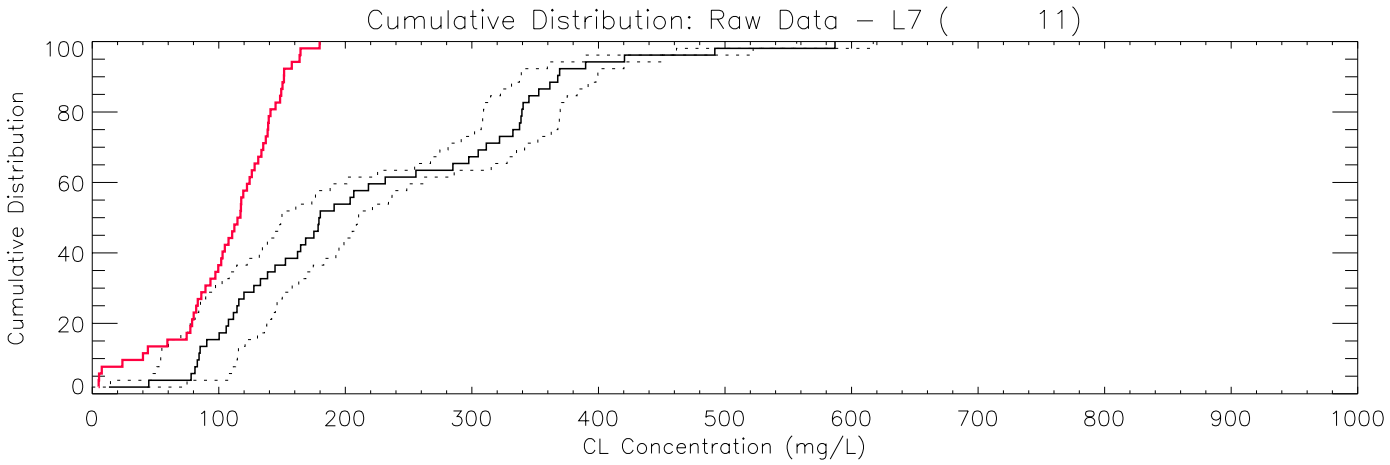

Mean: Water Year – 95% CI – TS/Ph7a (127_335)
CL Concentration (mg/L)
4×10^4
3×10^4
2×10^4
1×10^4
0
1984
1988
1992
1996
2000
2004
2008
2012
Year

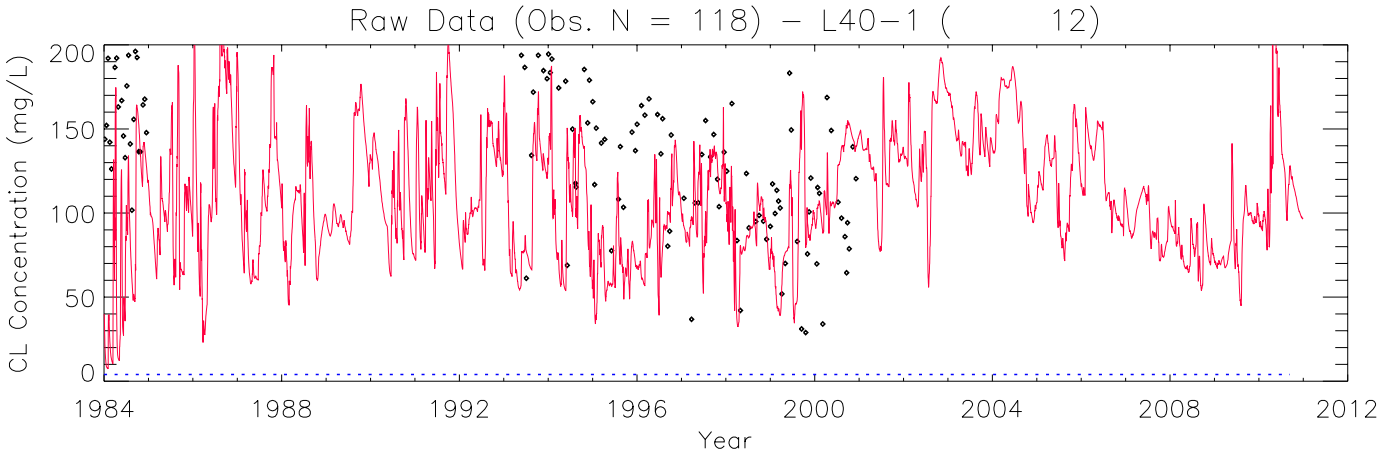

Cumulative Distribution: Raw Data – TS/Ph7a (127_335)
Cumulative Distribution
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

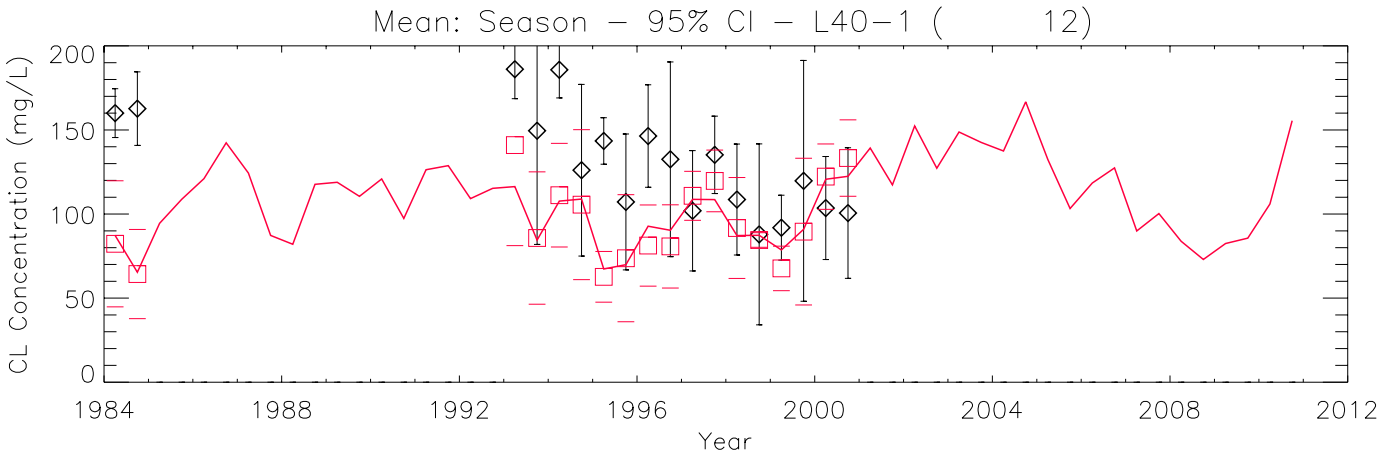

Raw Data (Obs. N = 52) – L7 (11)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

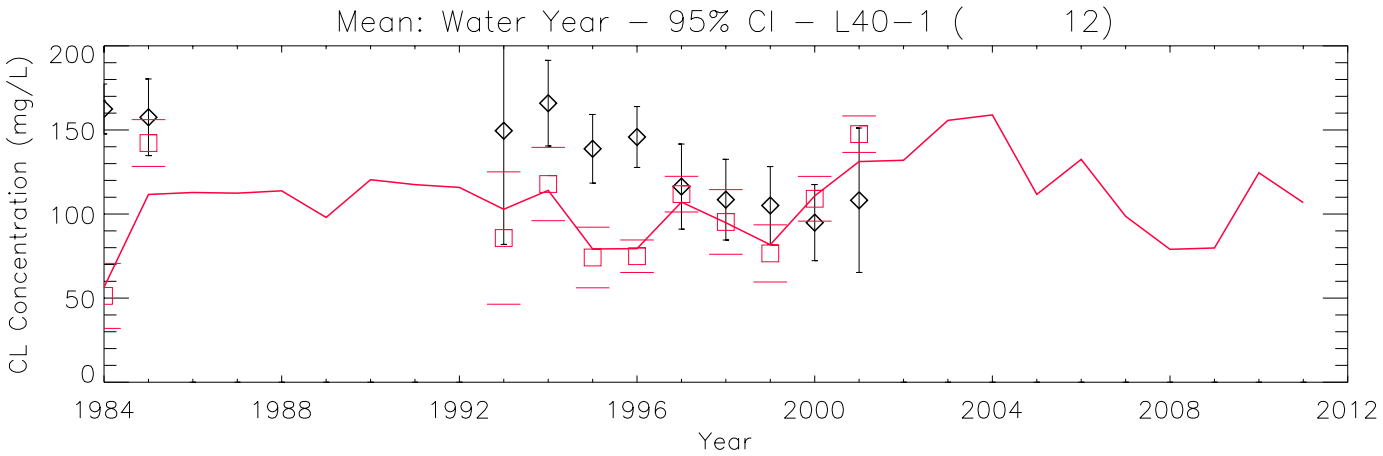

Mean: Season – 95% CI – L7 (11)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

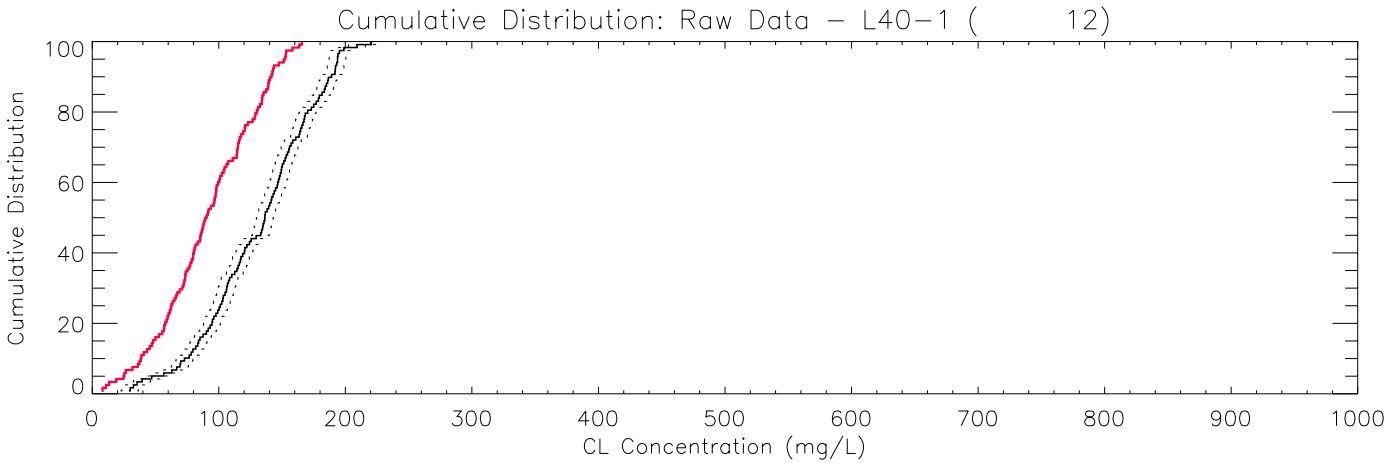

Mean: Water Year – 95% CI – L7 (11)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

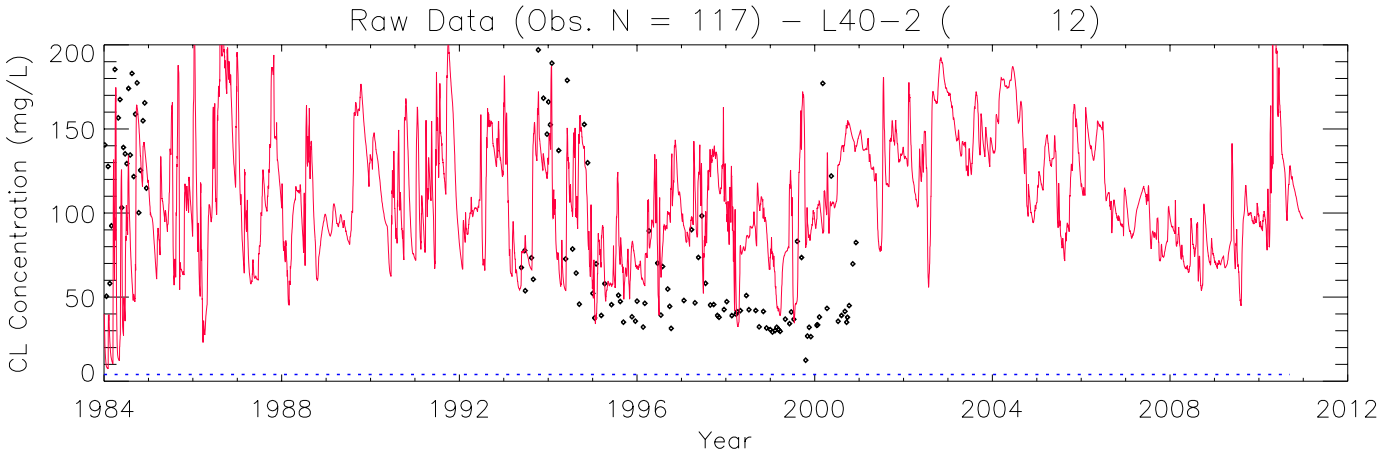

Cumulative Distribution: Raw Data – L7 (11)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

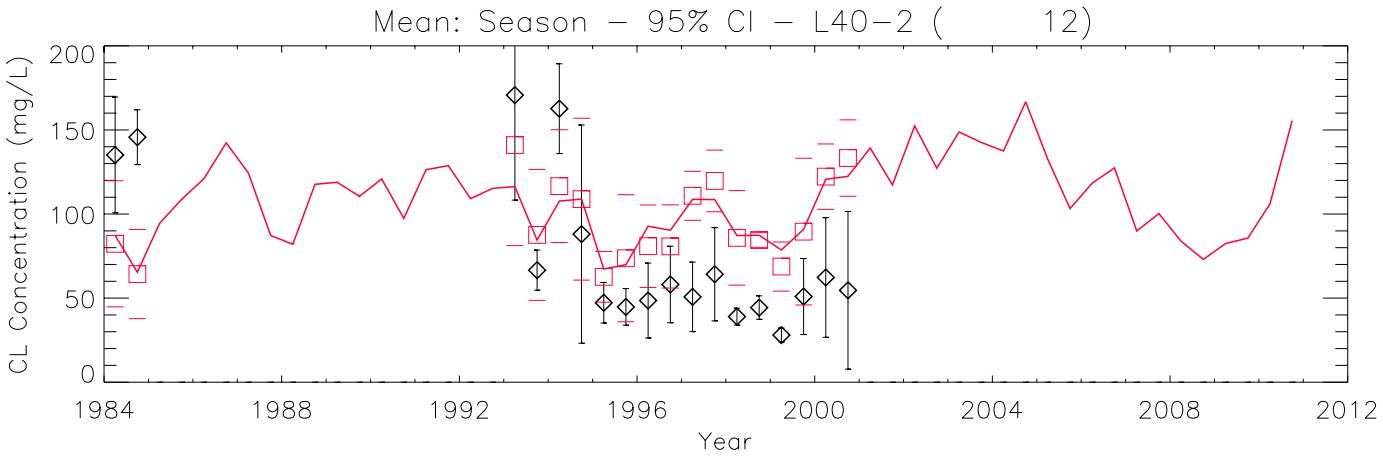

Raw Data (Obs. N = 118) – L40–1 (12)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

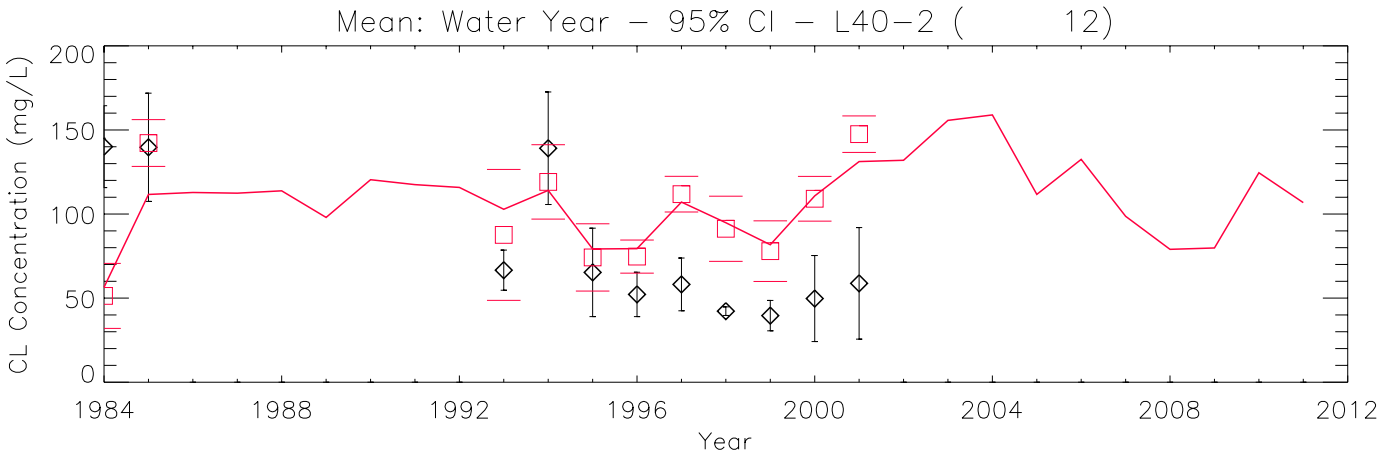

Mean: Season – 95% CI – L40–1 (12)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

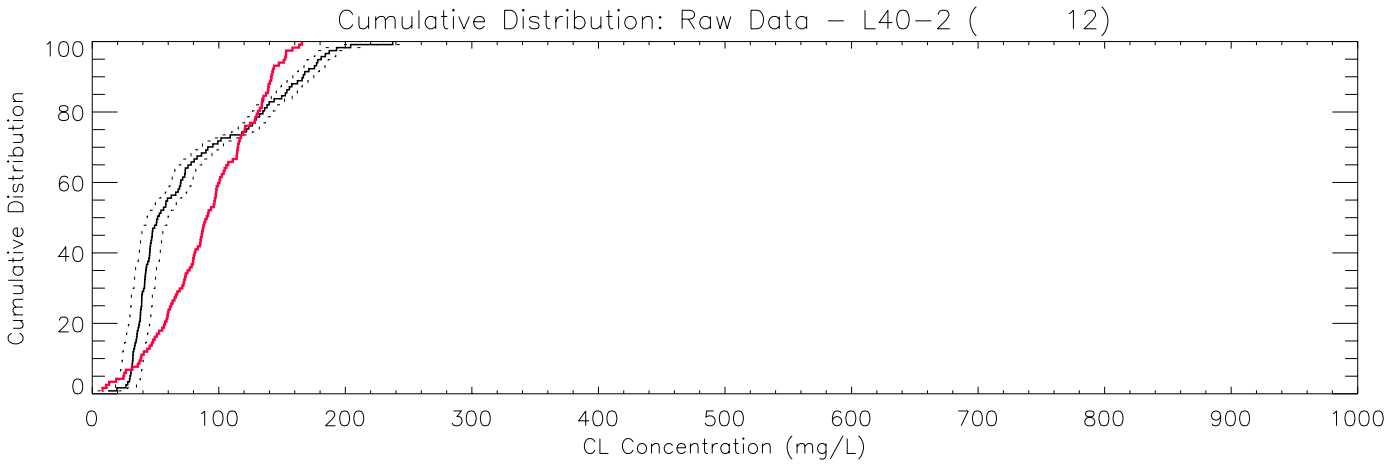

Mean: Water Year – 95% CI – L40–1 (12)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

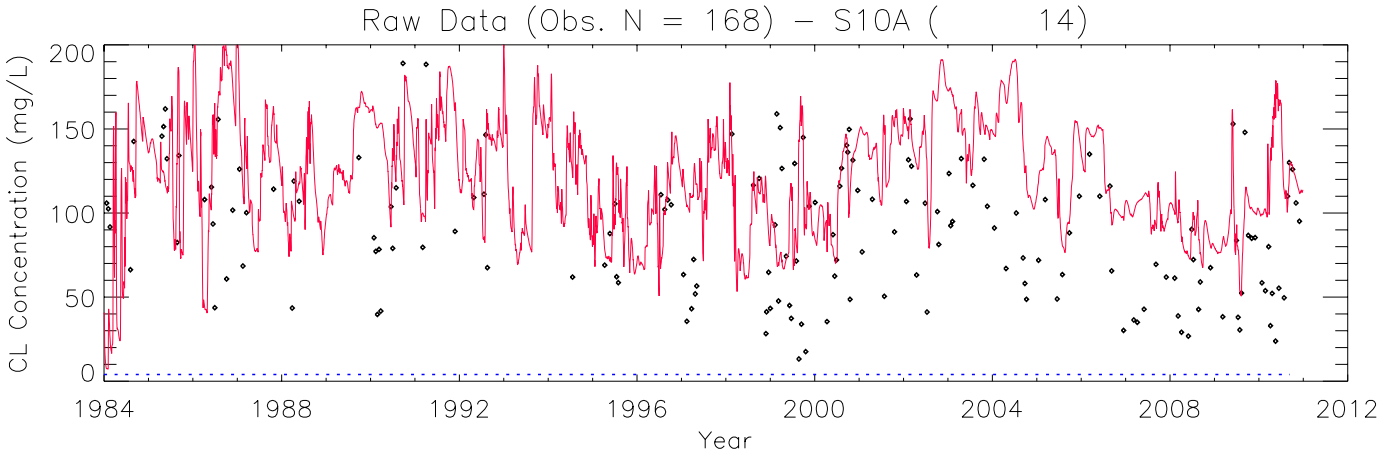

Cumulative Distribution: Raw Data – L40–1 (12)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

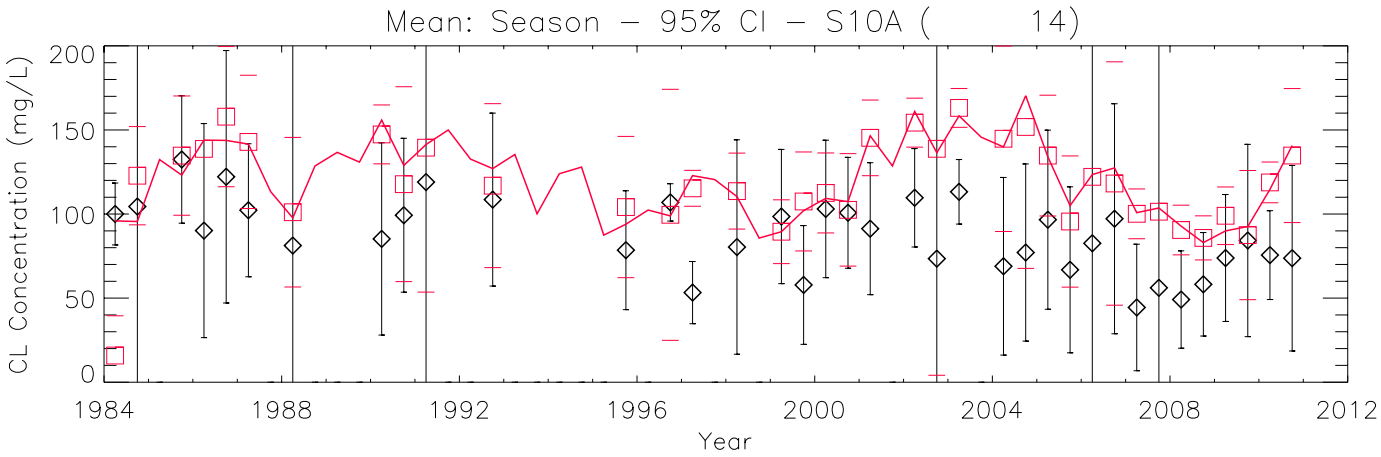

Raw Data (Obs. N = 117) – L40–2 (12)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

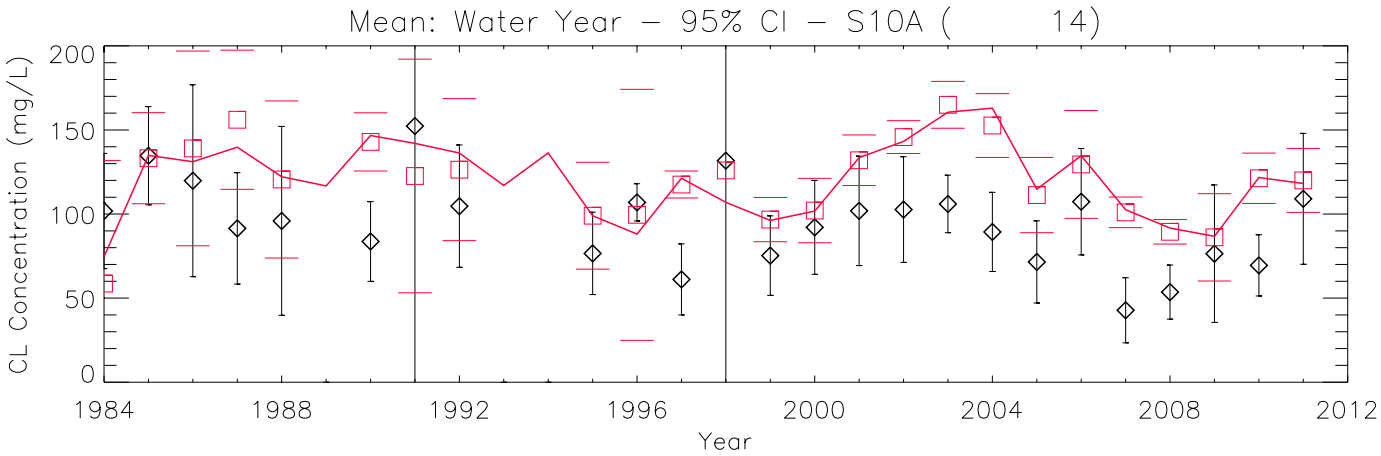

Mean: Season – 95% CI – L40–2 (12)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

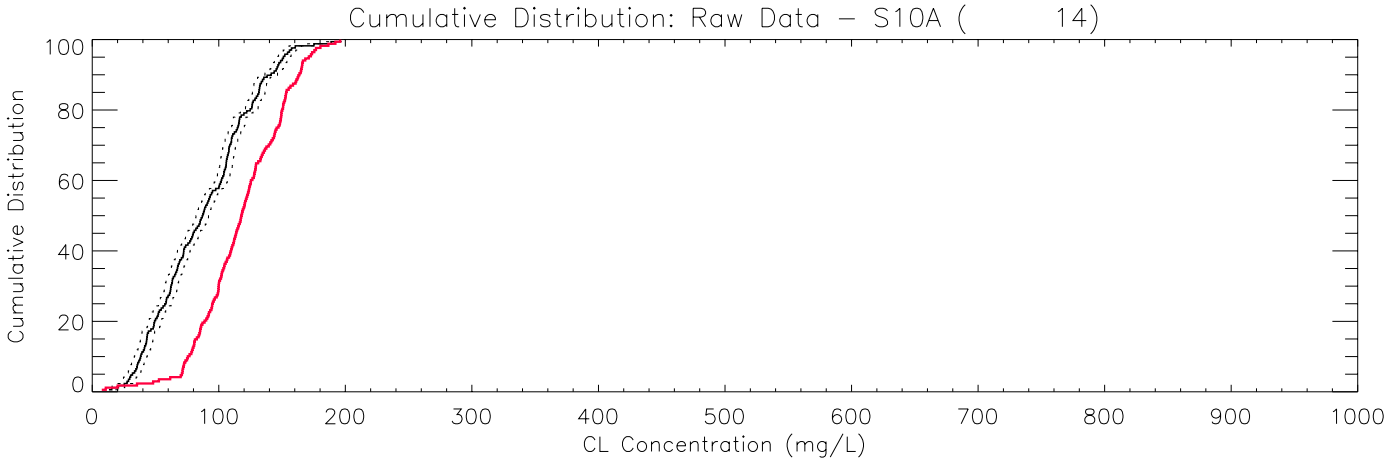

Mean: Water Year – 95% CI – L40–2 (12)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

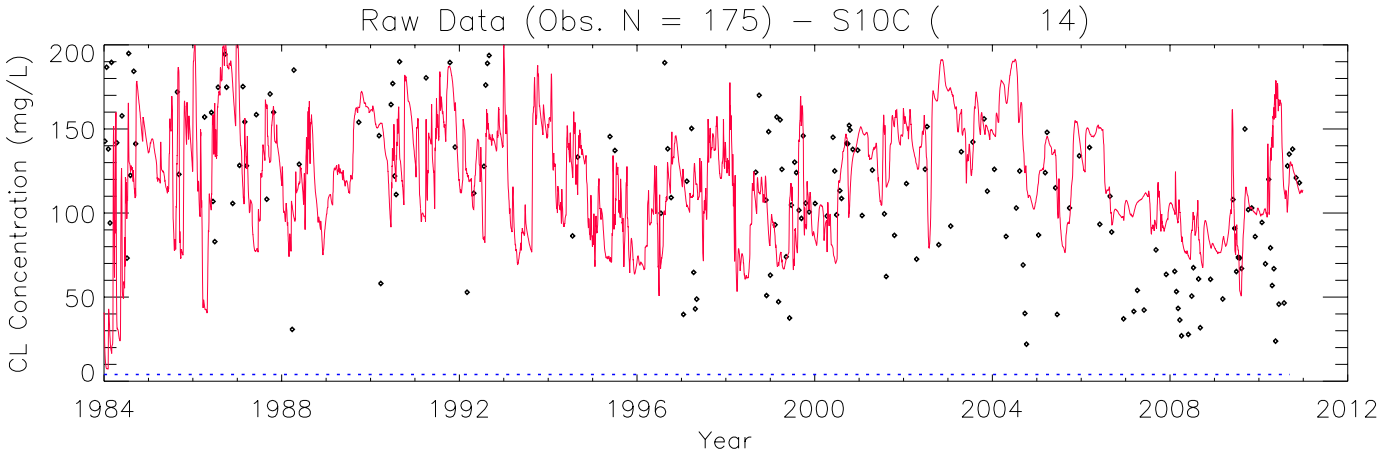

Cumulative Distribution: Raw Data – L40–2 (12)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

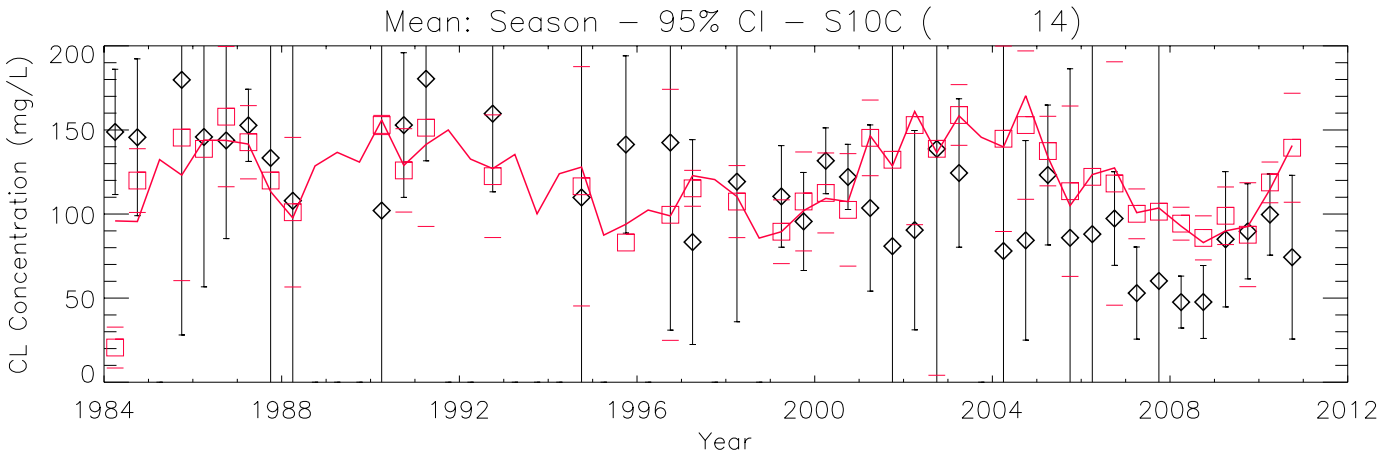

Raw Data (Obs. N = 168) – S10A (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

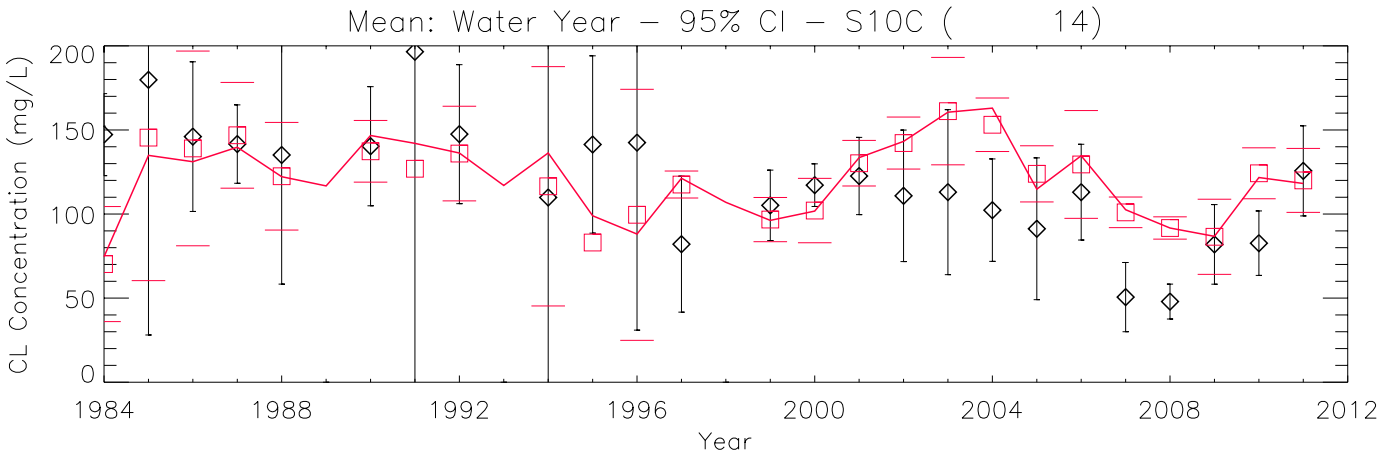

Mean: Season – 95% CI – S10A (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

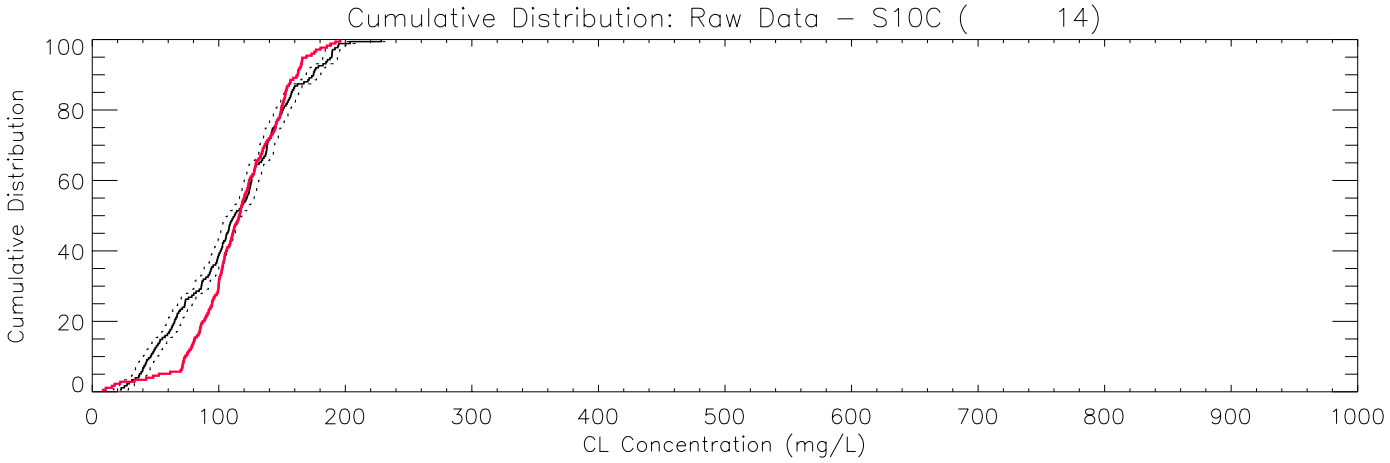

Mean: Water Year – 95% CI – S10A (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

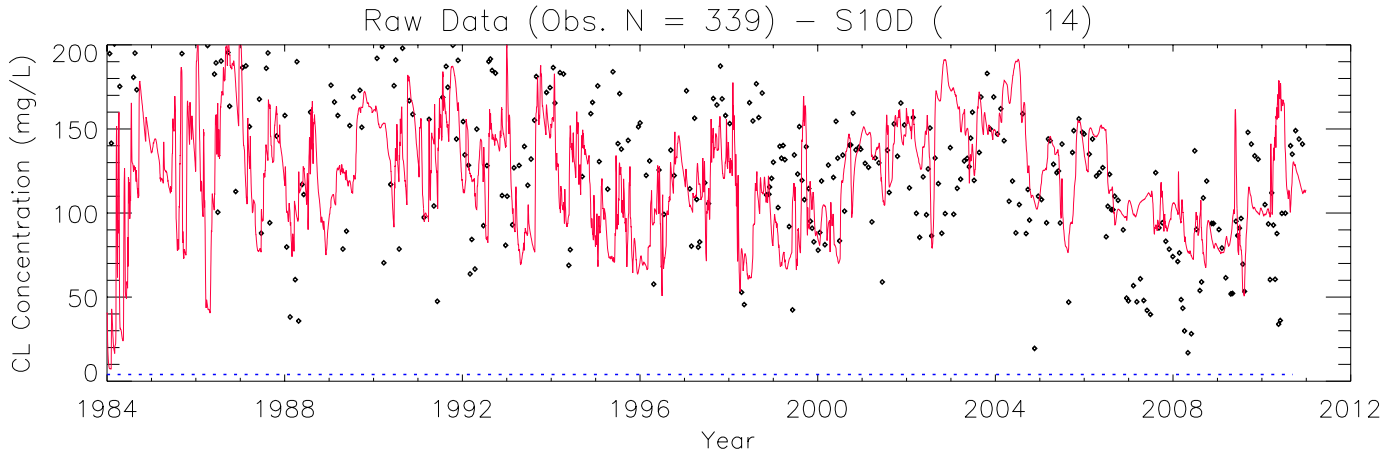

Cumulative Distribution: Raw Data – S10A (14)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

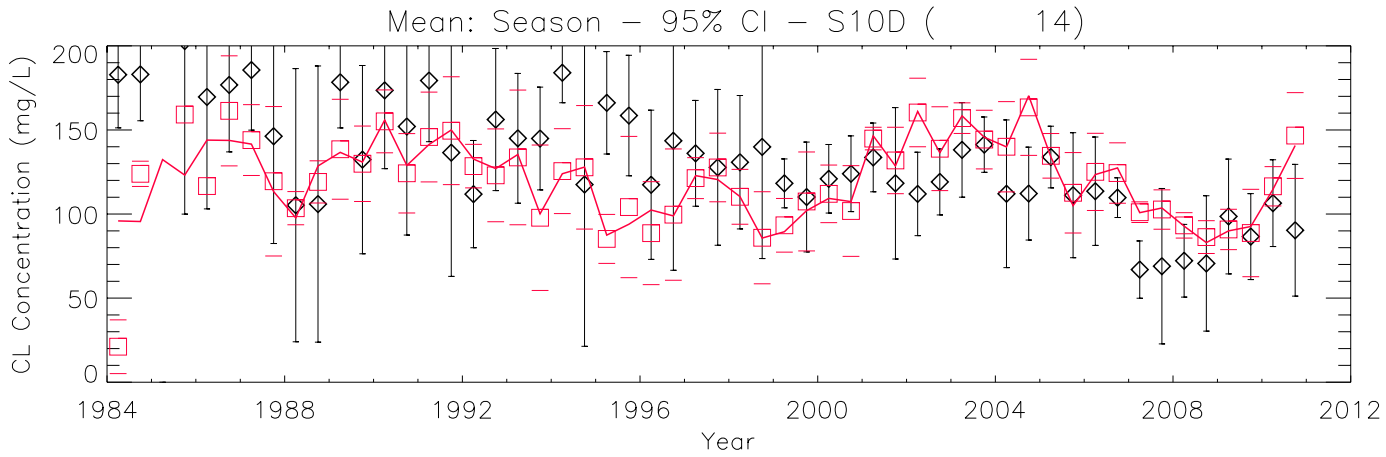

Raw Data (Obs. N = 175) – S10C (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

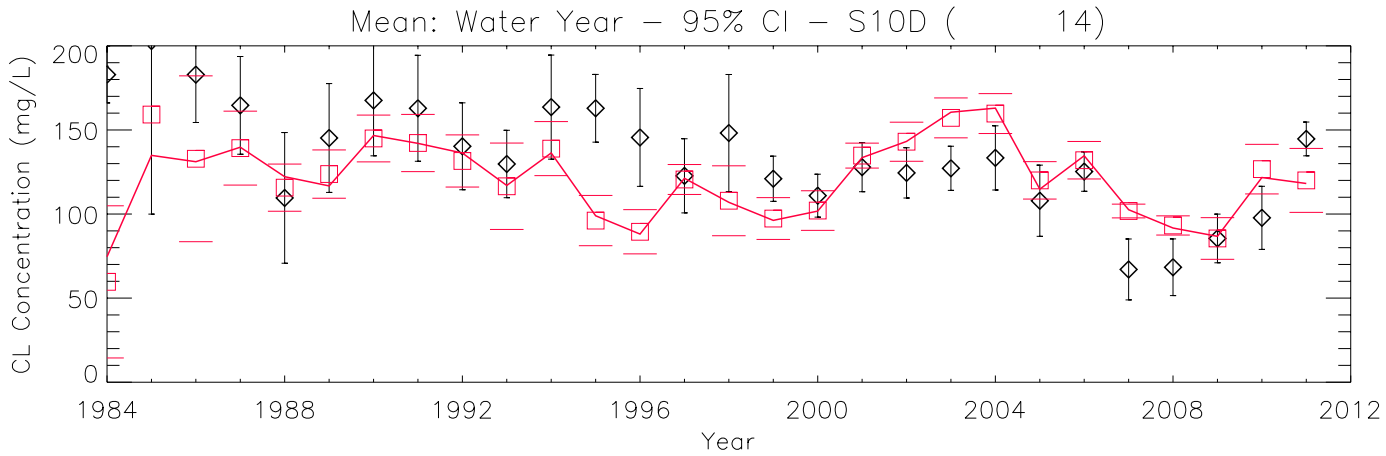

Mean: Season – 95% CI – S10C (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

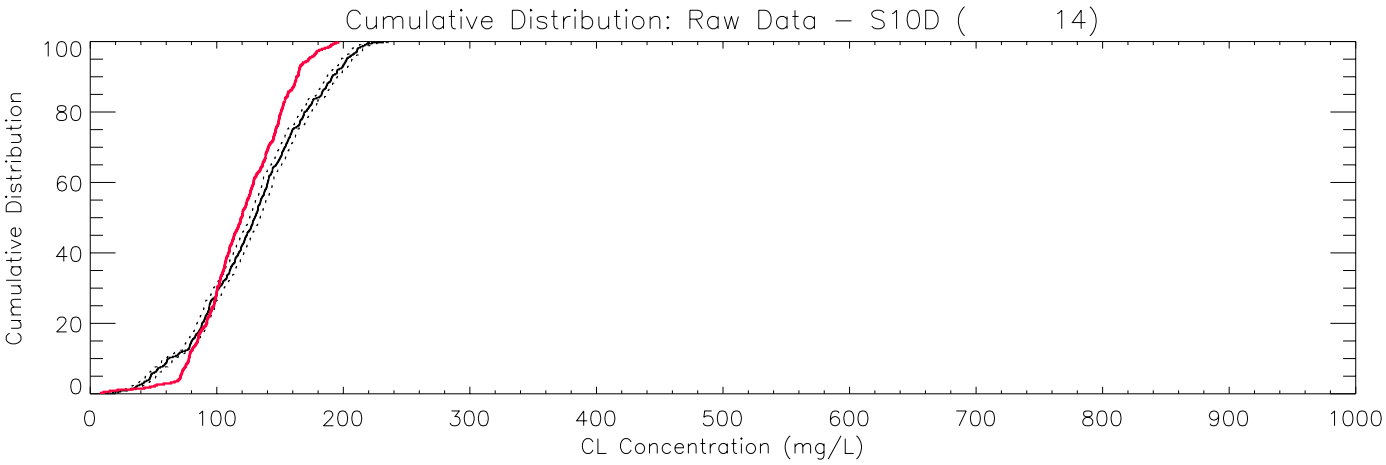

Mean: Water Year – 95% CI – S10C (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

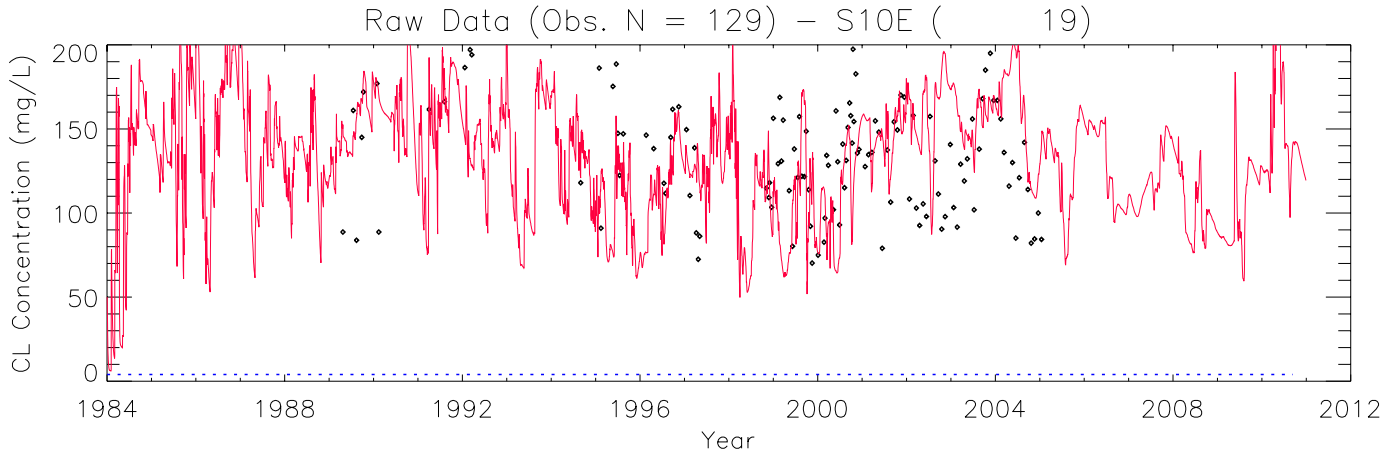

Cumulative Distribution: Raw Data – S10C (14)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

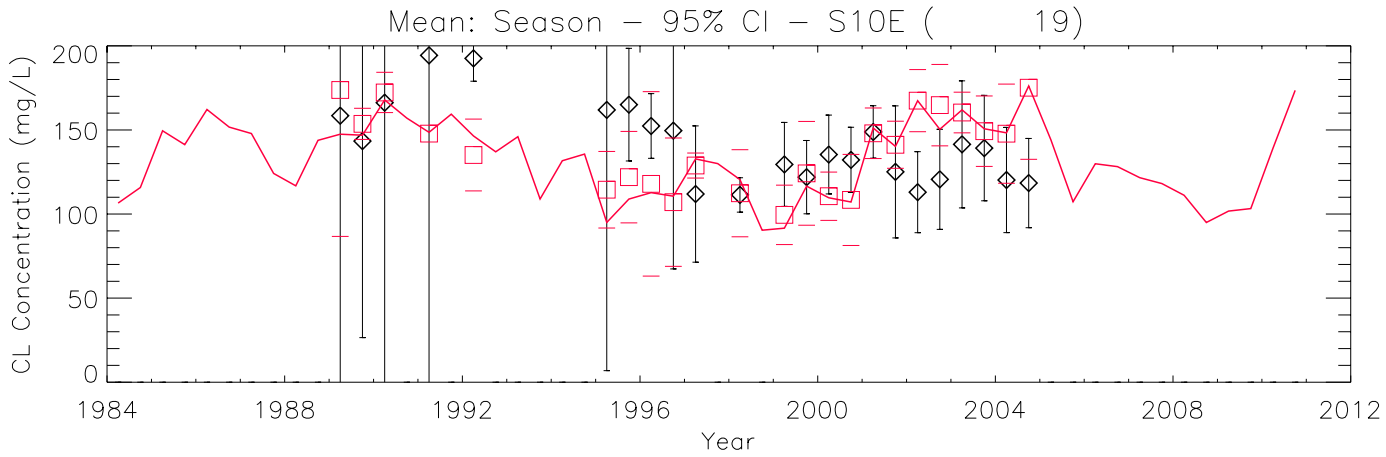

Raw Data (Obs. N = 339) – S10D (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

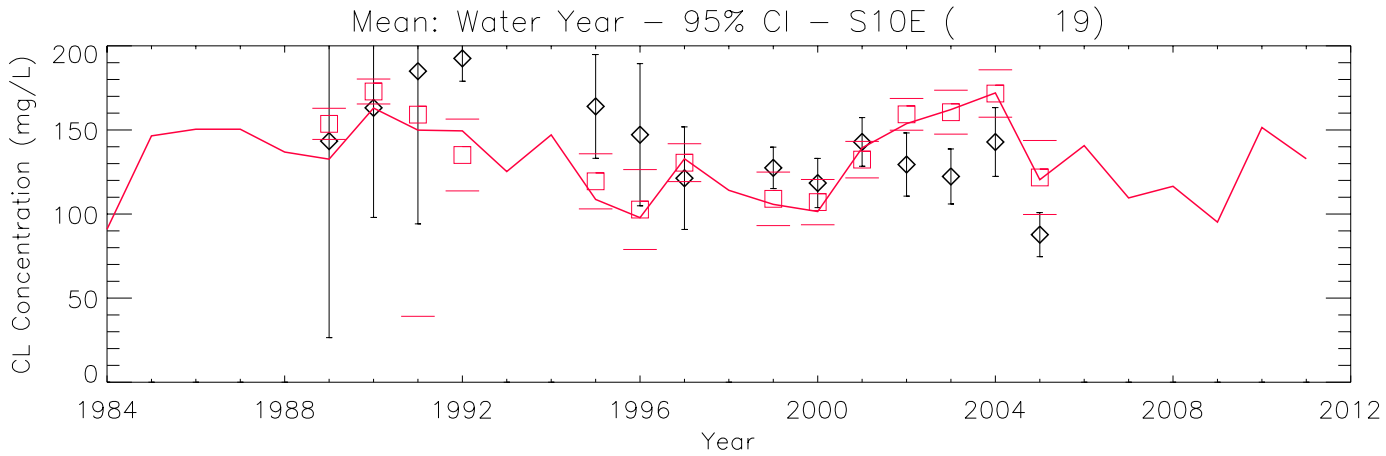

Mean: Season – 95% CI – S10D (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

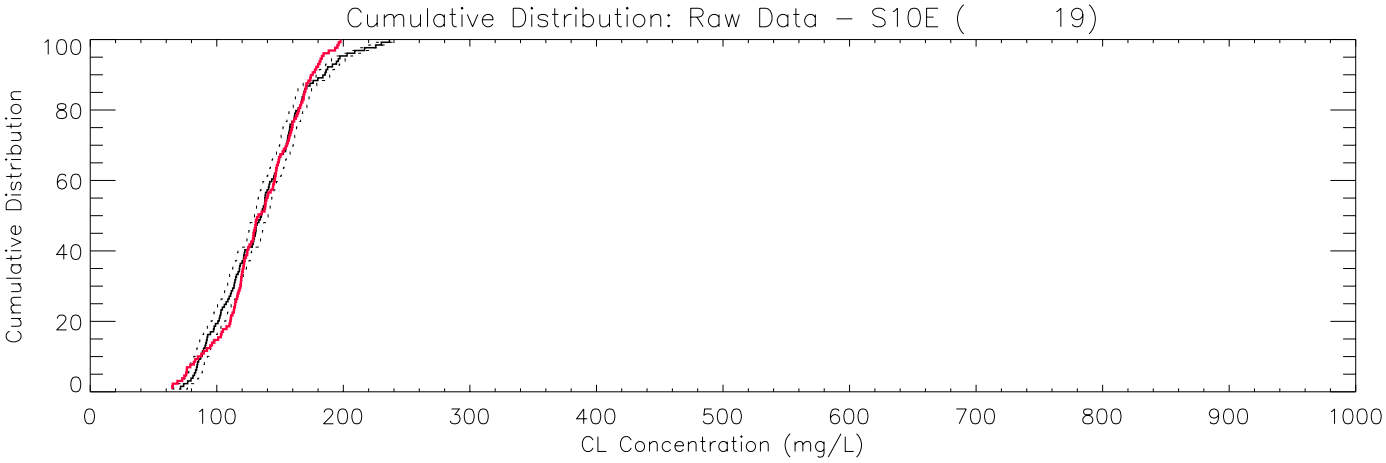

Mean: Water Year – 95% CI – S10D (14)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

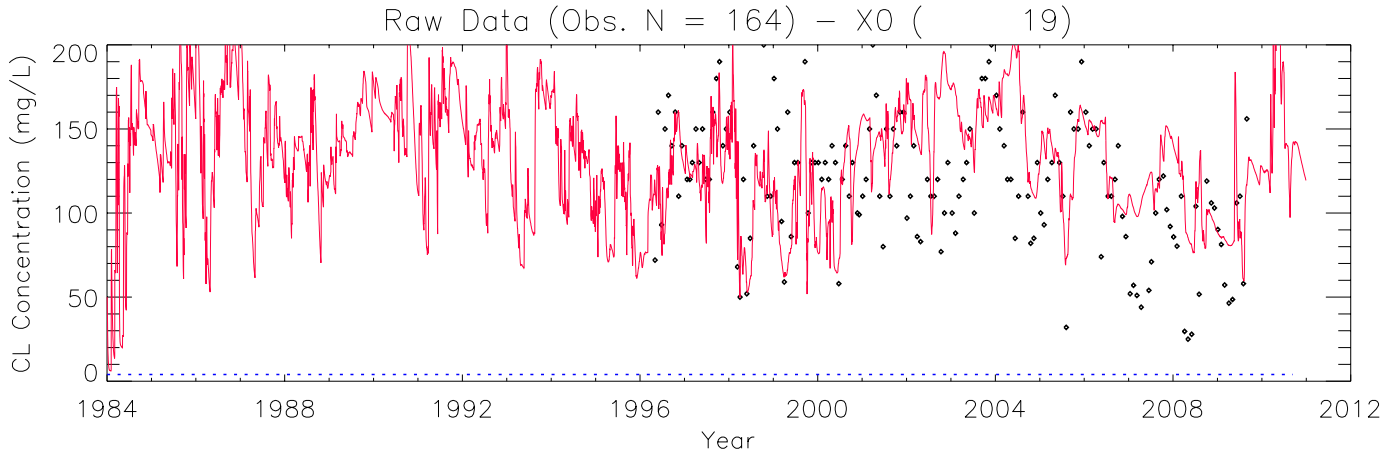

Cumulative Distribution: Raw Data – S10D (14)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

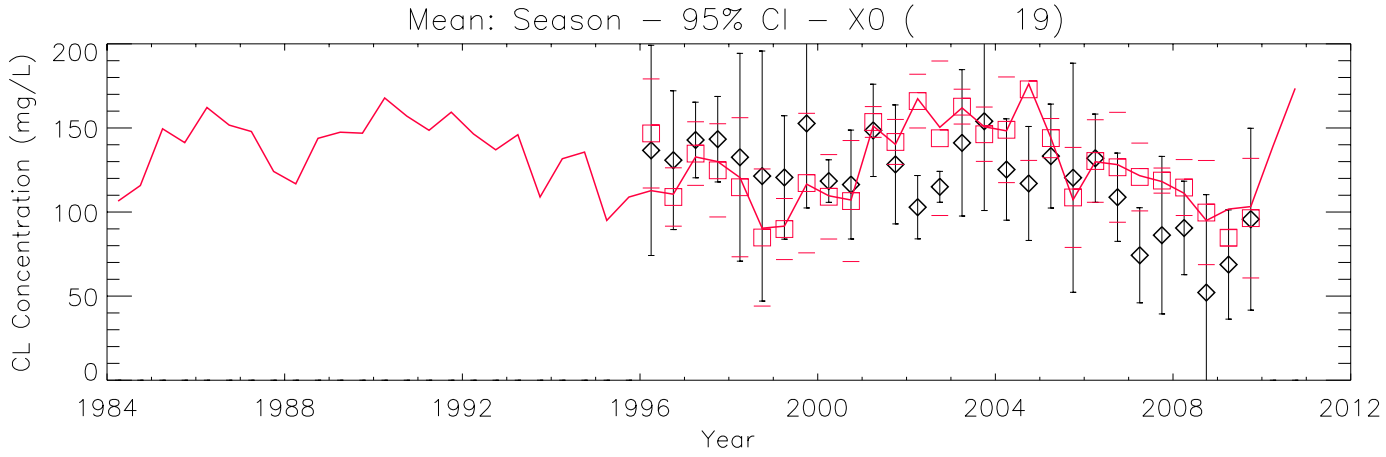

Raw Data (Obs. N = 129) – S10E (19)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

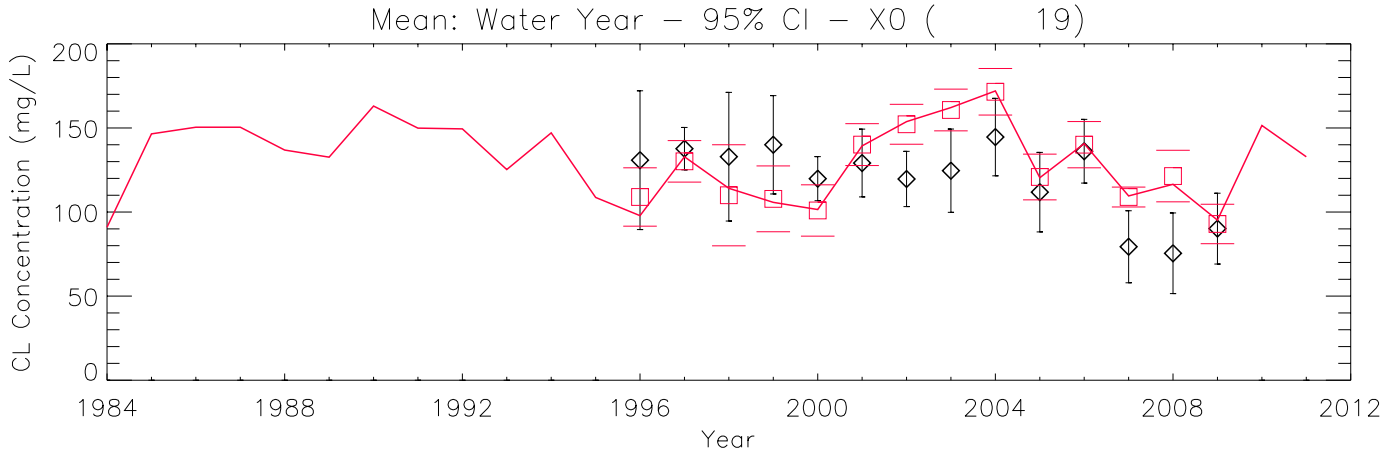

Mean: Season – 95% CI – S10E (19)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

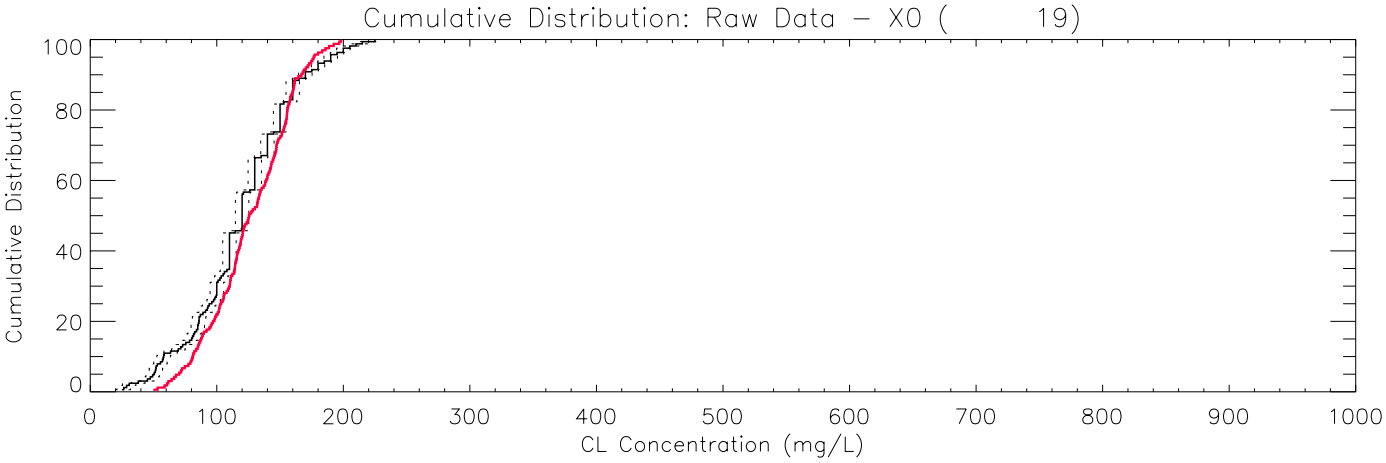

Mean: Water Year – 95% CI – S10E (19)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S10E (19)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 164) – X0 (19)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – X0 (19)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – X0 (19)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – X0 (19)
Cumulative Distribution
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20
40
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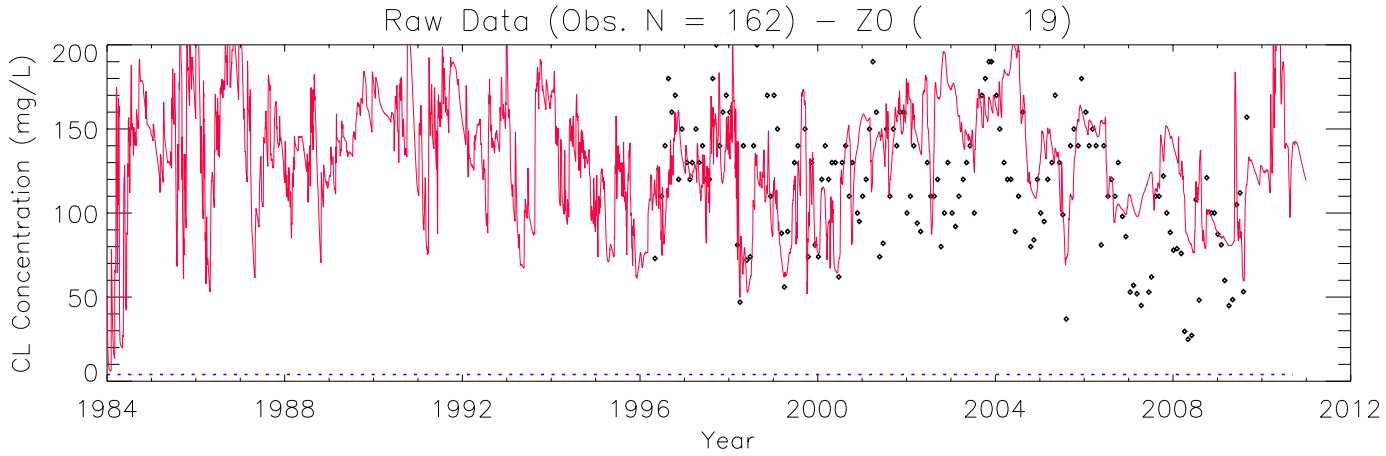
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 162) – Z0 (19)
CL Concentration (mg/L)
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100
150
200
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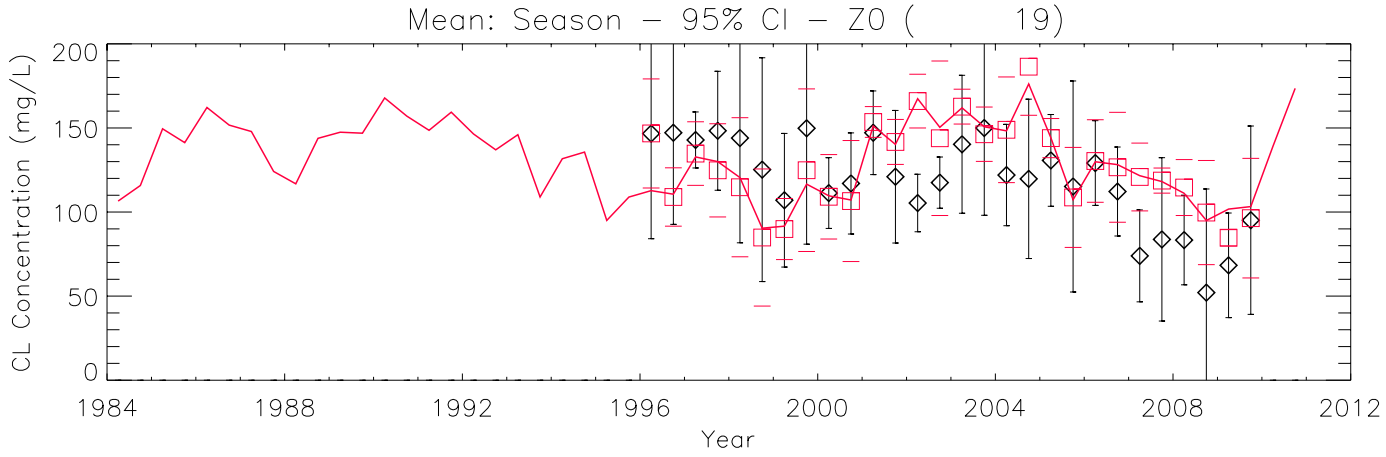
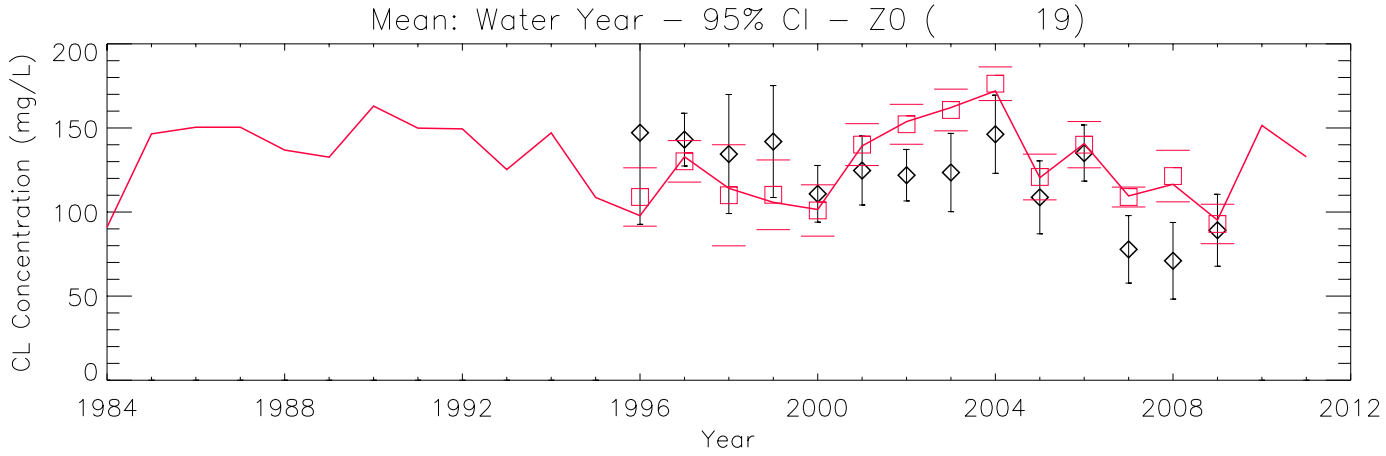
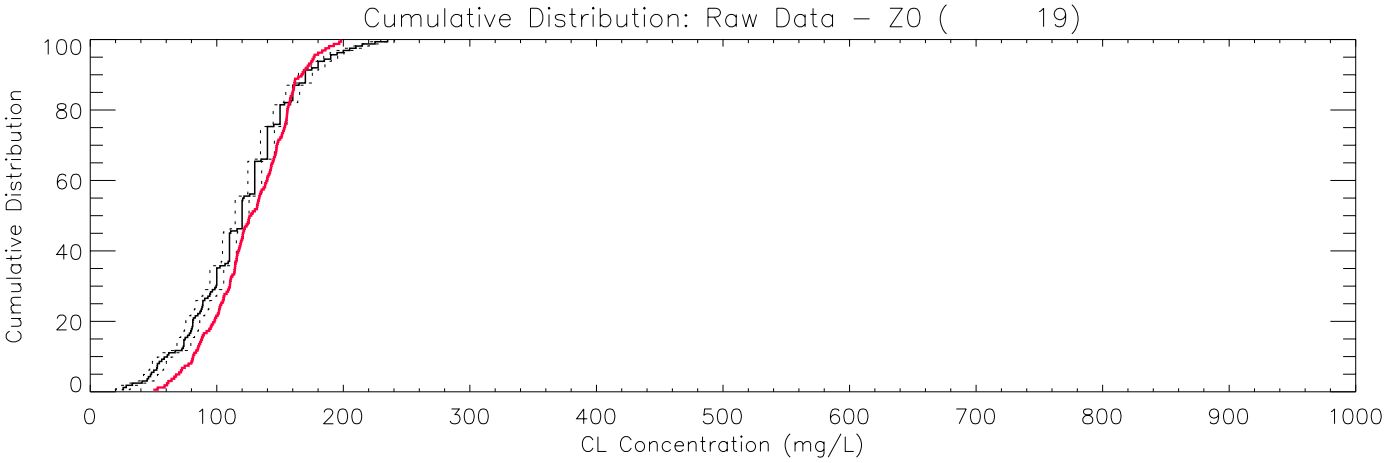
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – Z0 (19)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – Z0 (19)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – Z0 (19)
Cumulative Distribution
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40
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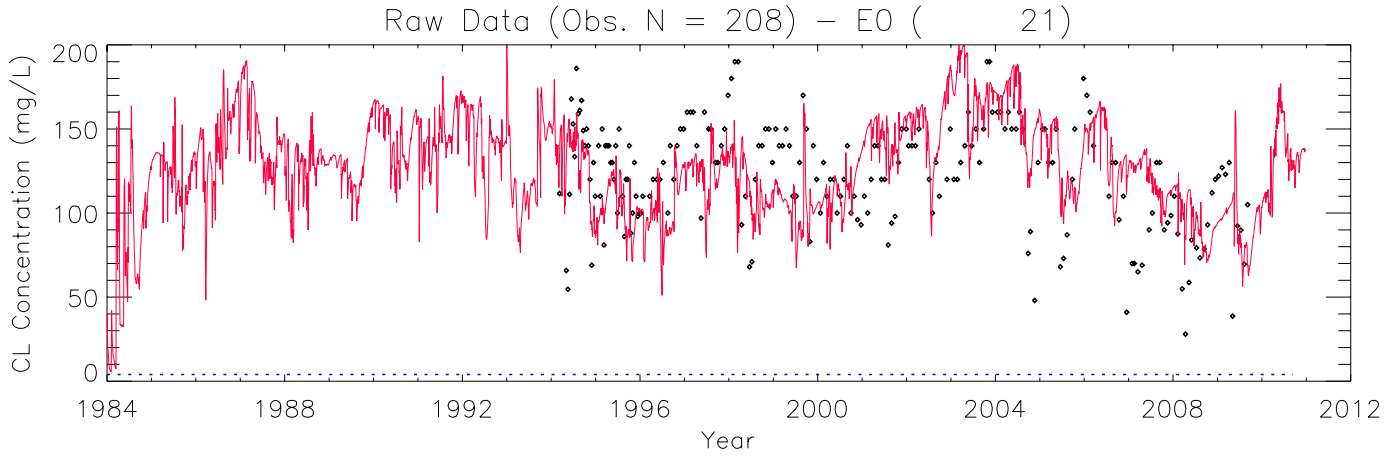
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 208) – E0 (21)
CL Concentration (mg/L)
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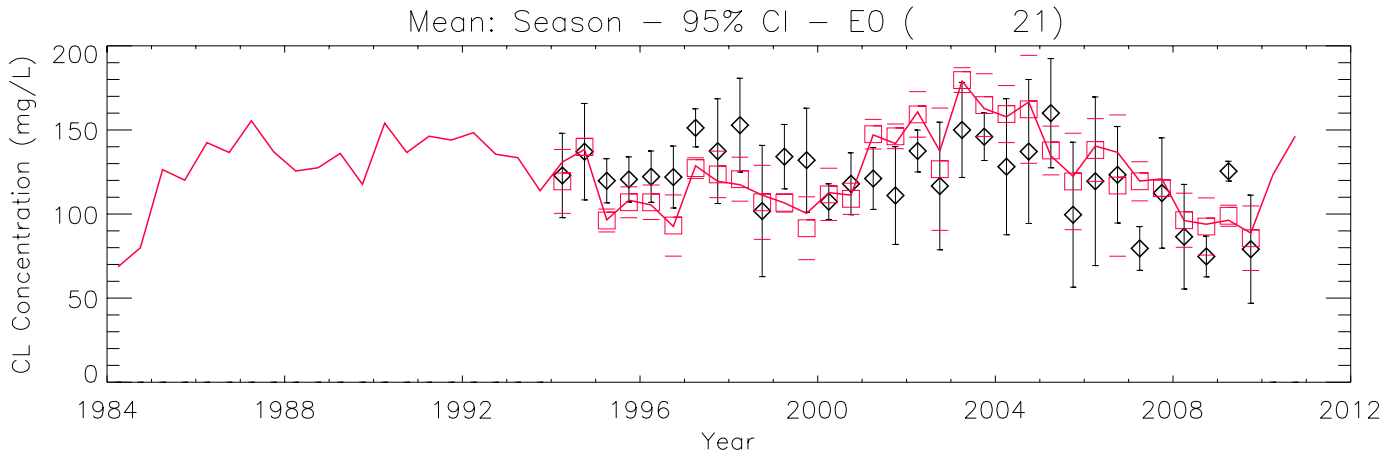
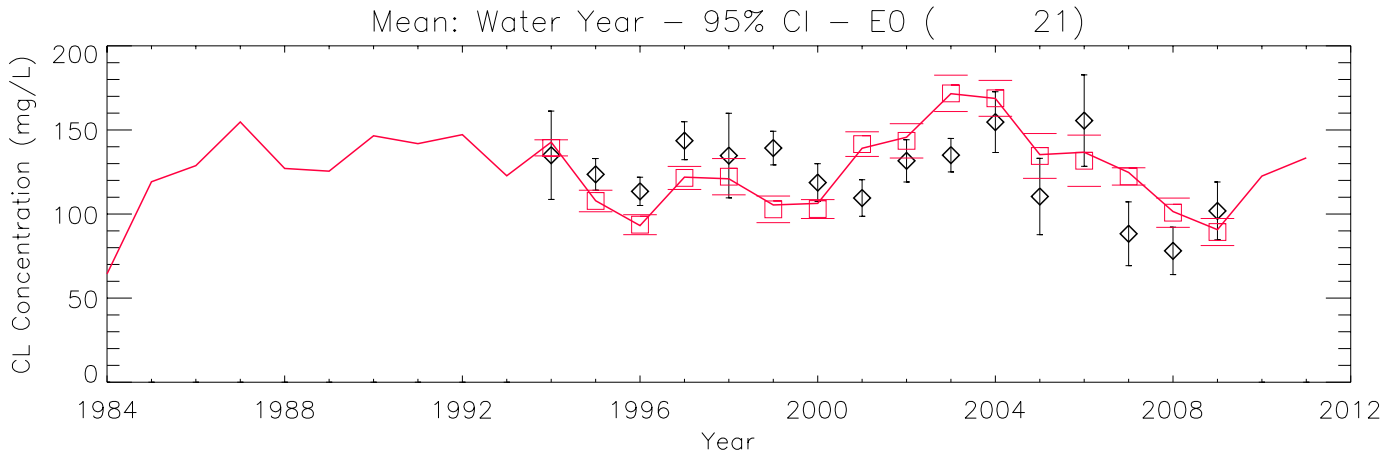
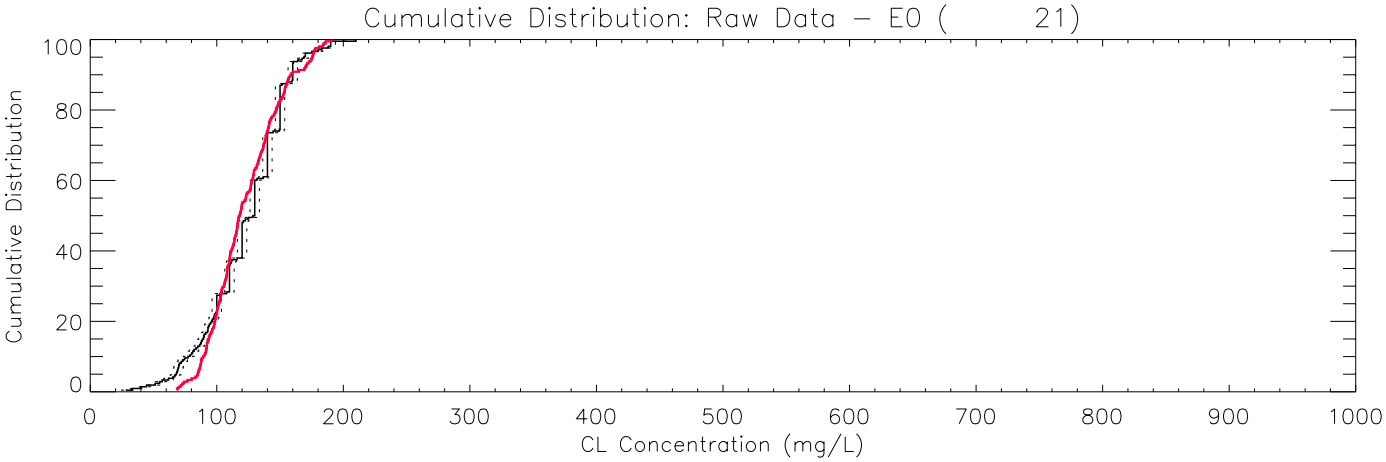
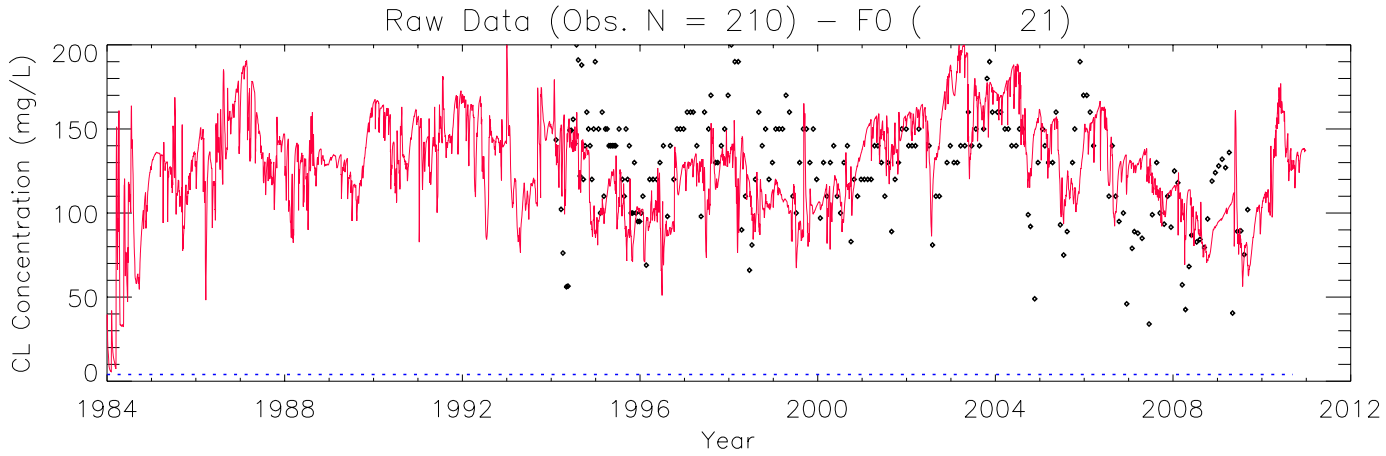
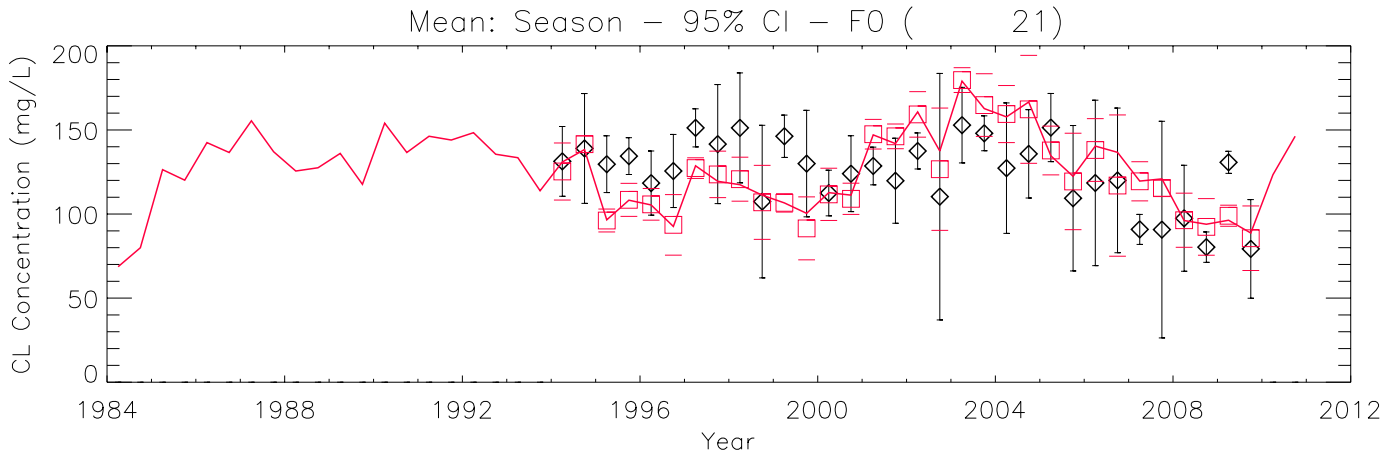
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

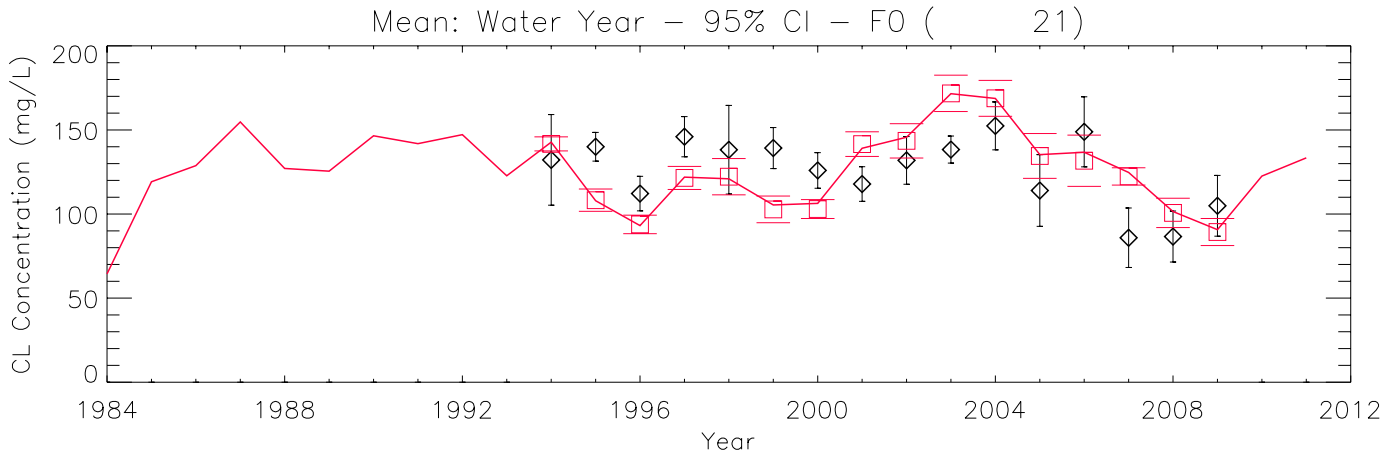

Mean: Season – 95% CI – E0 (21)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

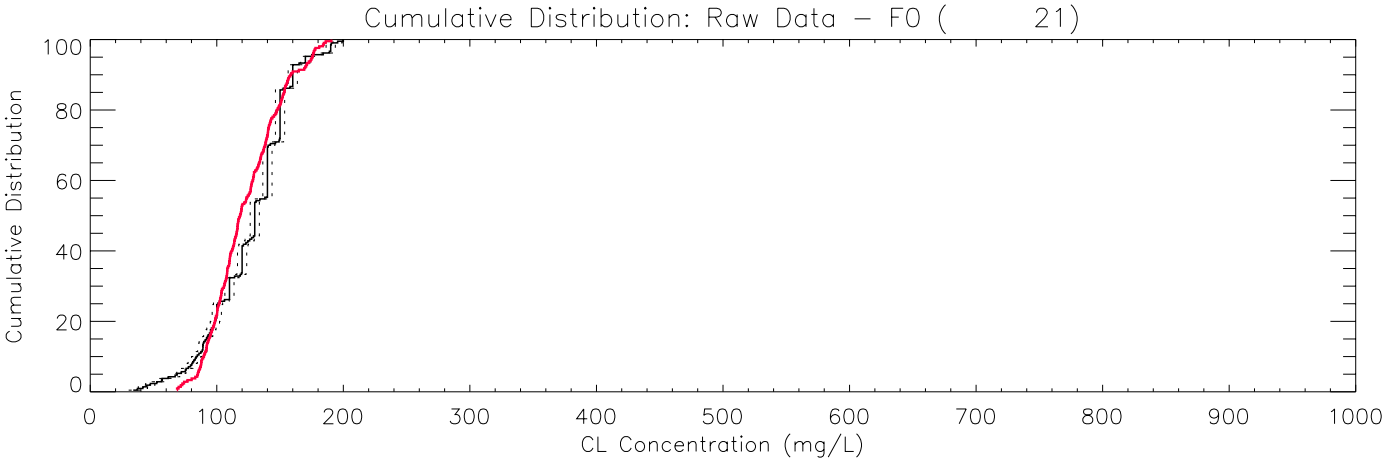

Mean: Water Year – 95% CI – E0 (21)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – E0 (21)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 210) – F0 (21)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – F0 (21)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – F0 (21)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – F0 (21)
Cumulative Distribution
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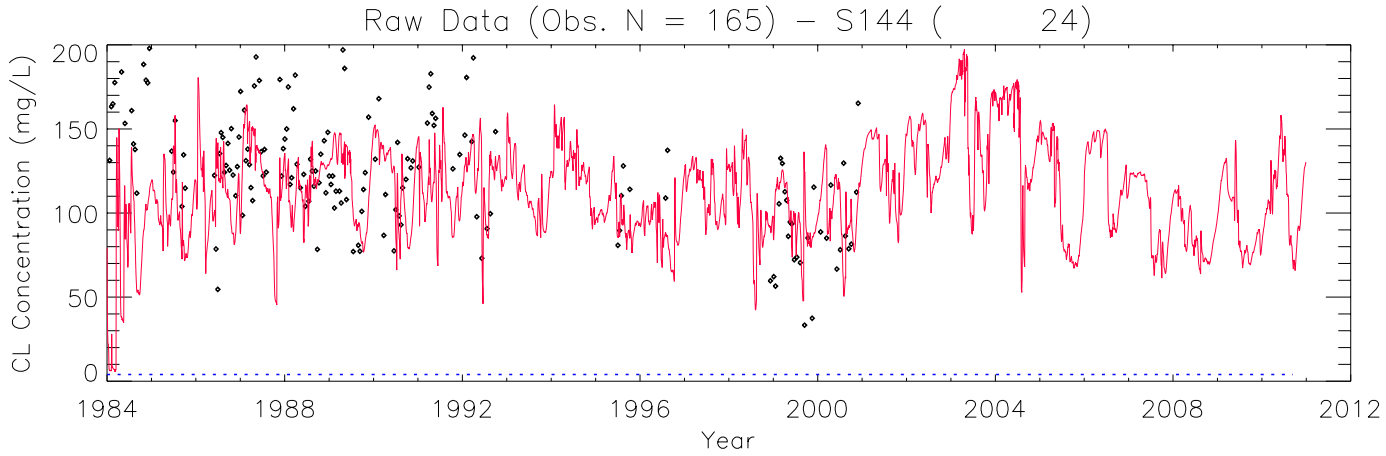
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 165) – S144 (24)
CL Concentration (mg/L)
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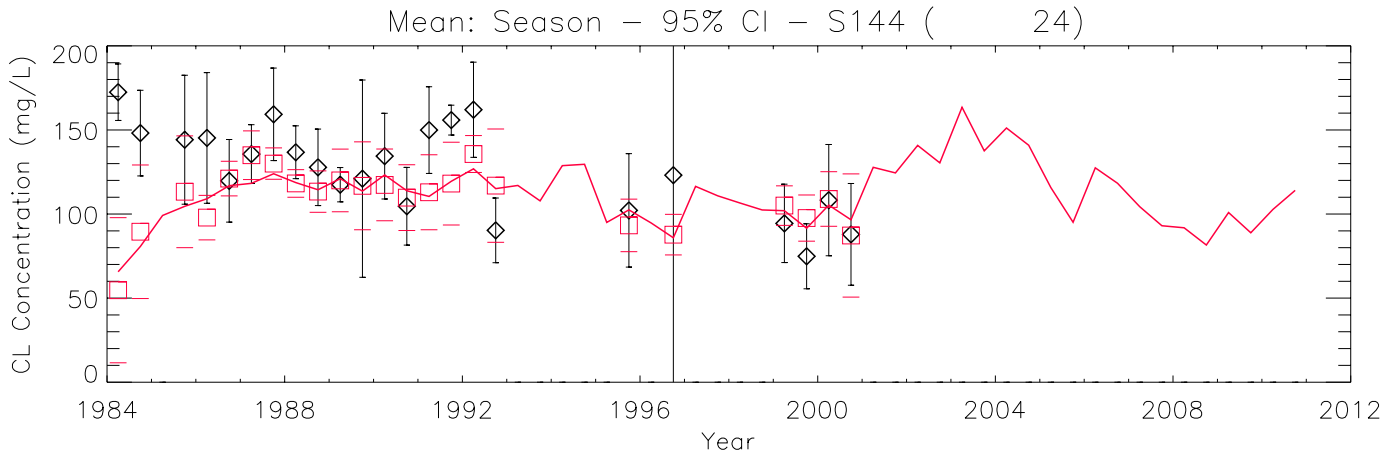
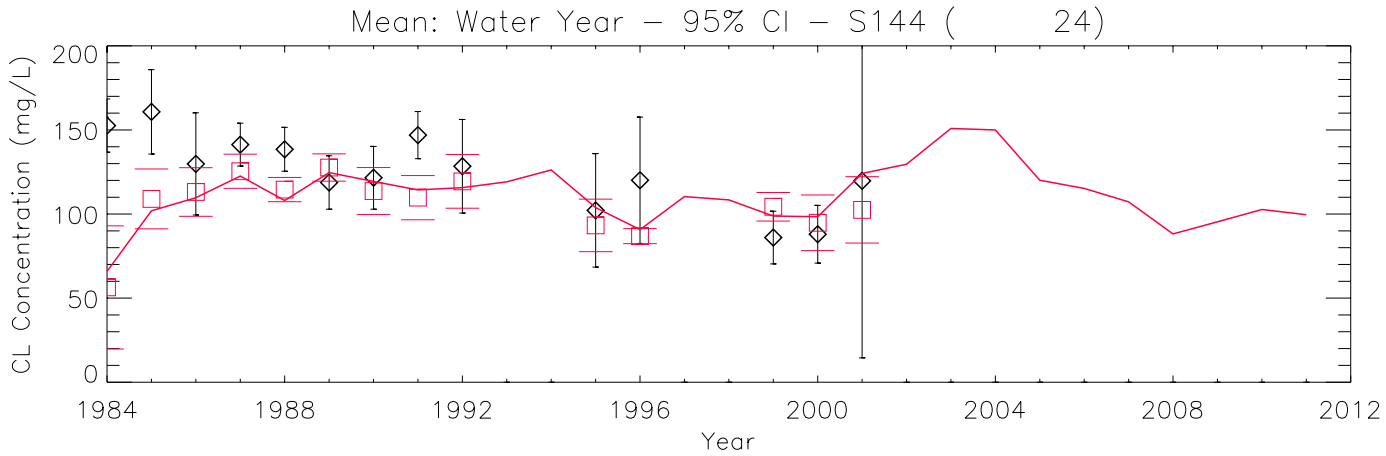
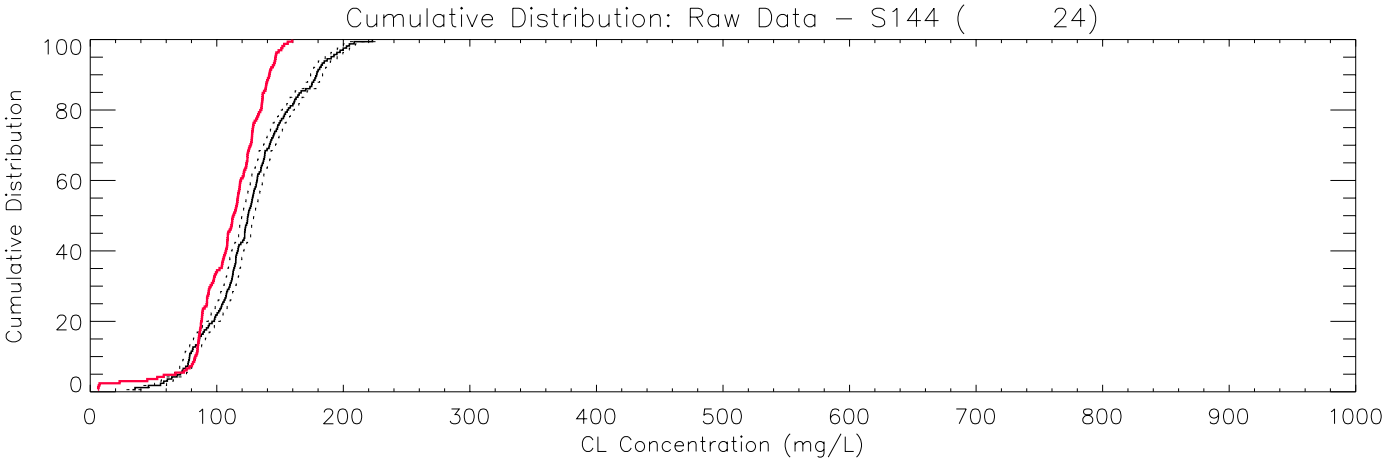
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S144 (24)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S144 (24)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S144 (24)
Cumulative Distribution
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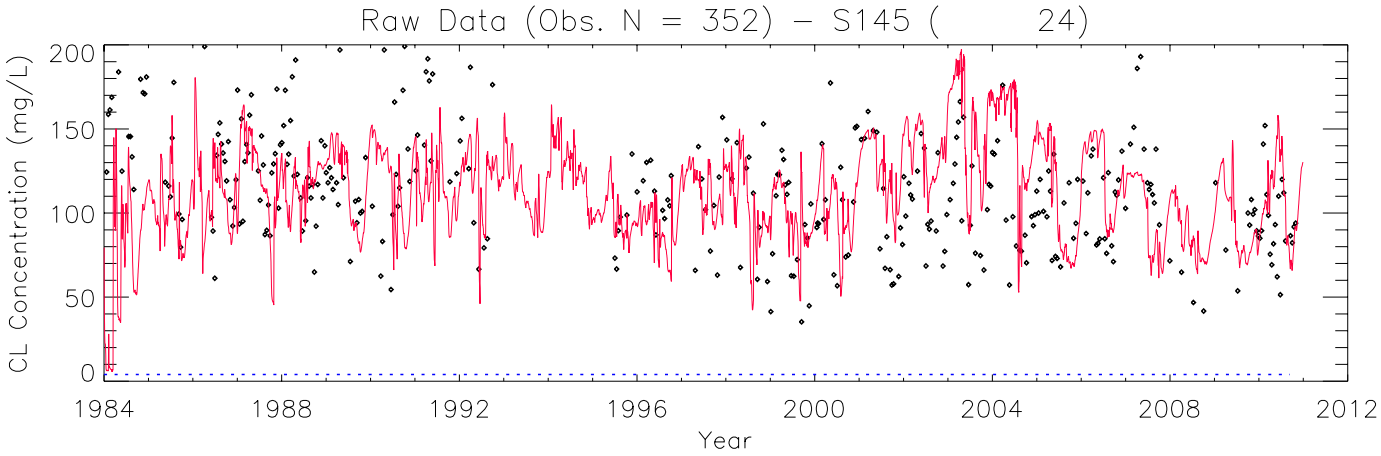
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 352) – S145 (24)
CL Concentration (mg/L)
0
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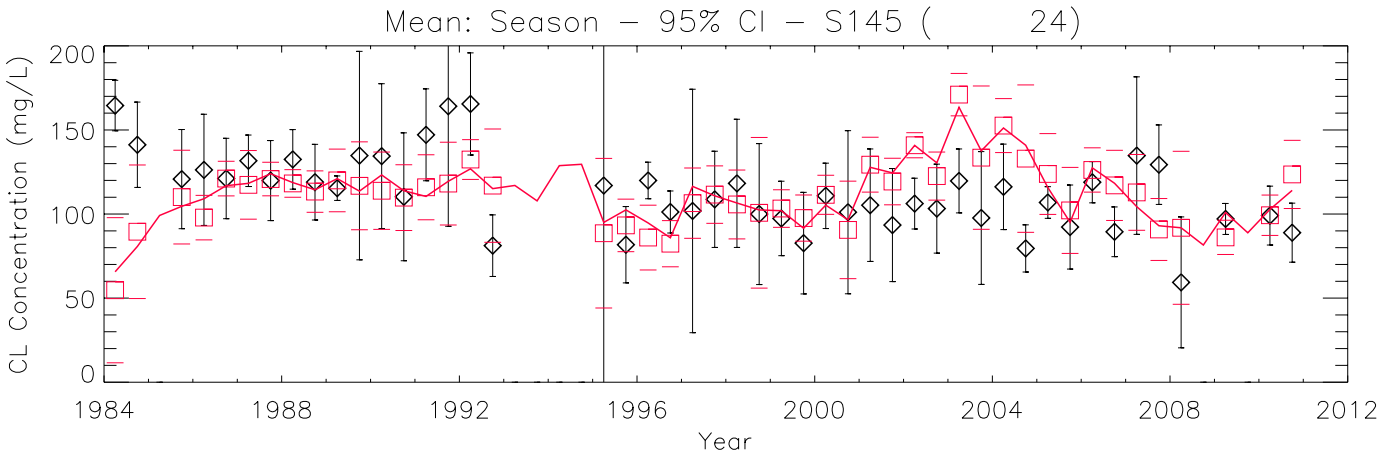
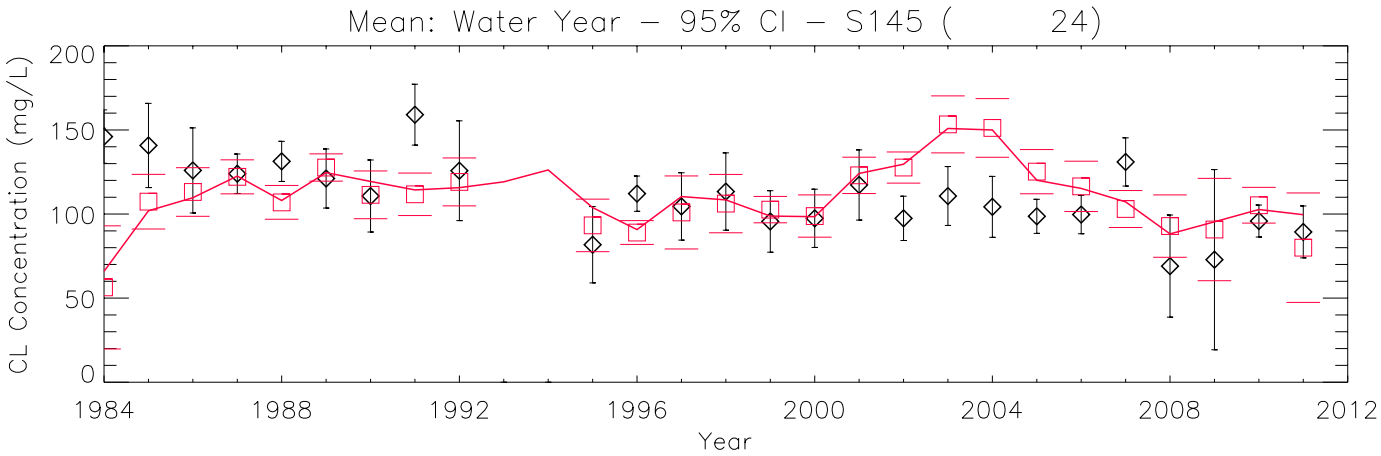
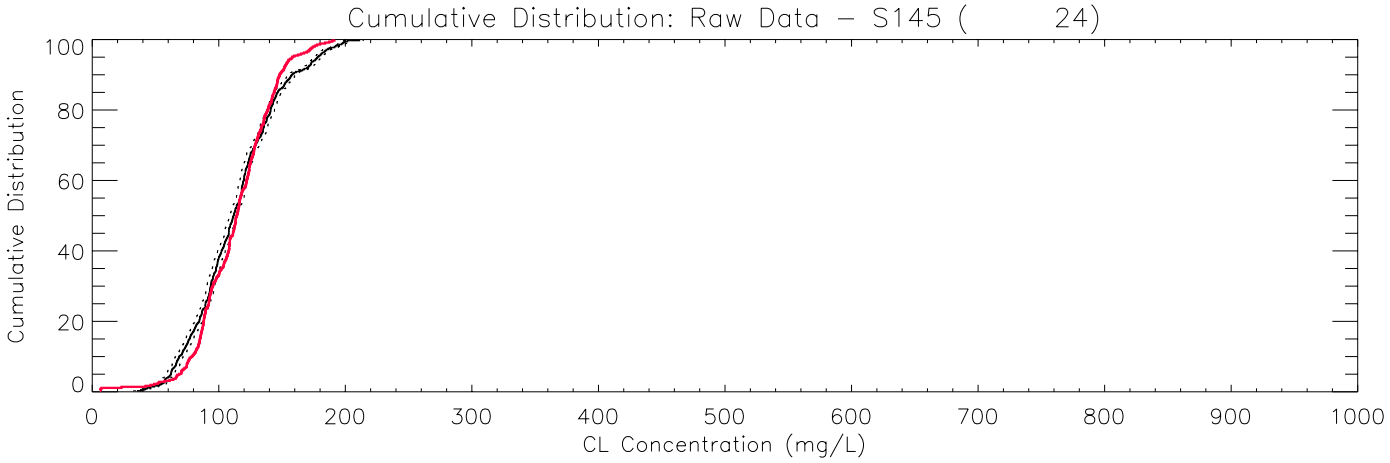
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S145 (24)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S145 (24)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S145 (24)
Cumulative Distribution
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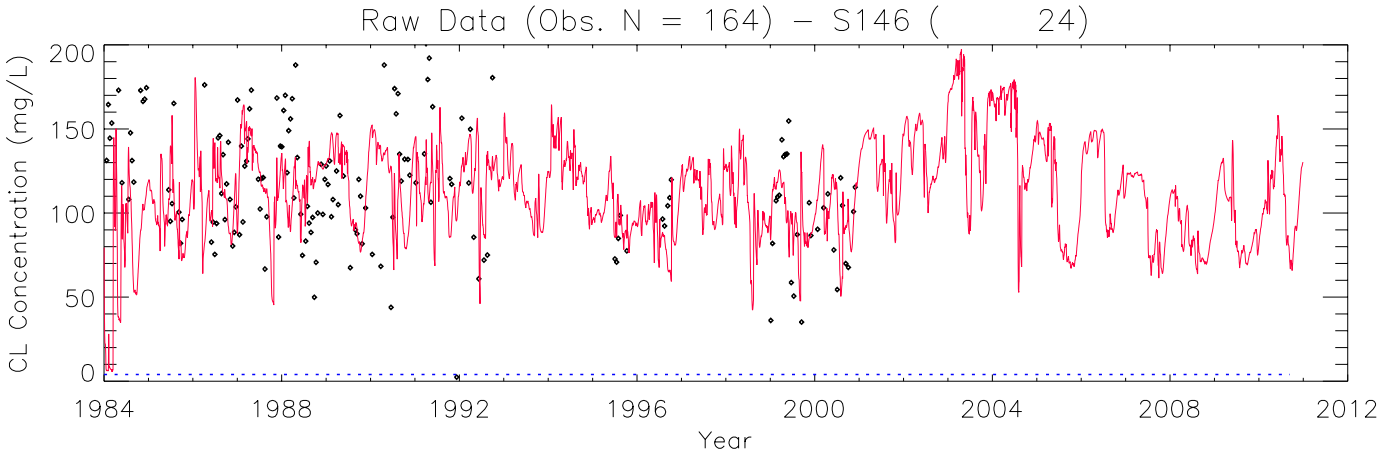
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 164) – S146 (24)
CL Concentration (mg/L)
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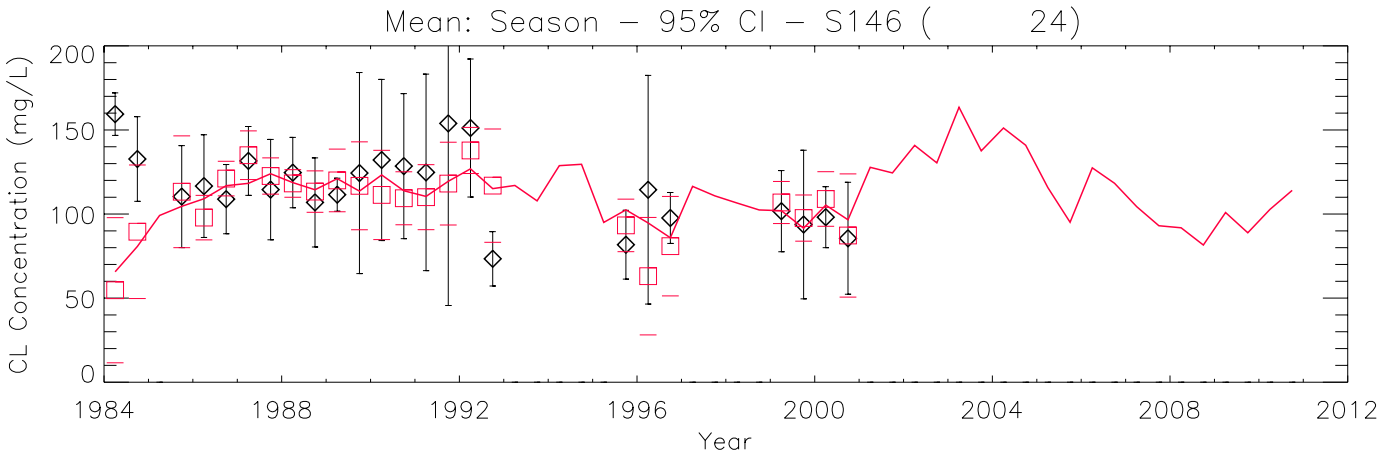
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S146 (24)
CL Concentration (mg/L)
0
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100
150
200
1984
1988
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1996
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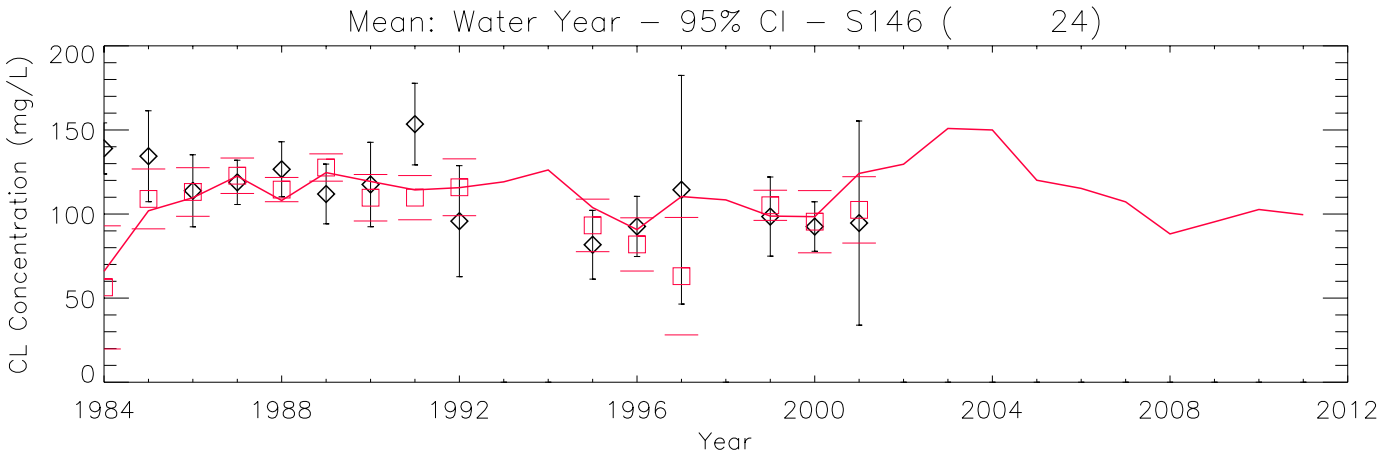
2004
2008
2012
Year


Mean: Water Year – 95% CI – S146 (24)
CL Concentration (mg/L)
0
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100
150
200
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1988
1992
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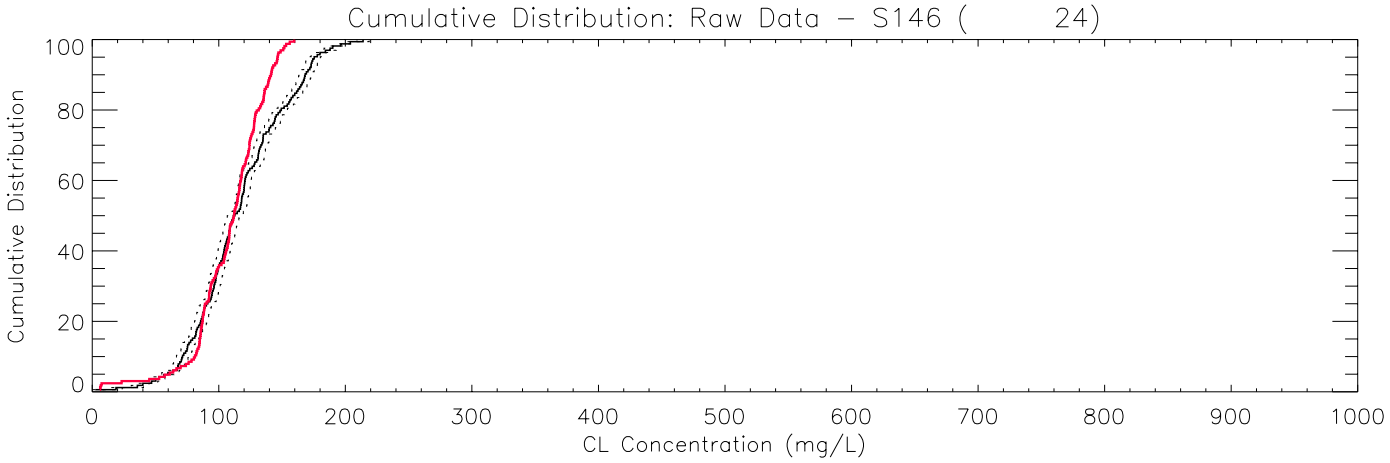
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S146 (24)
Cumulative Distribution
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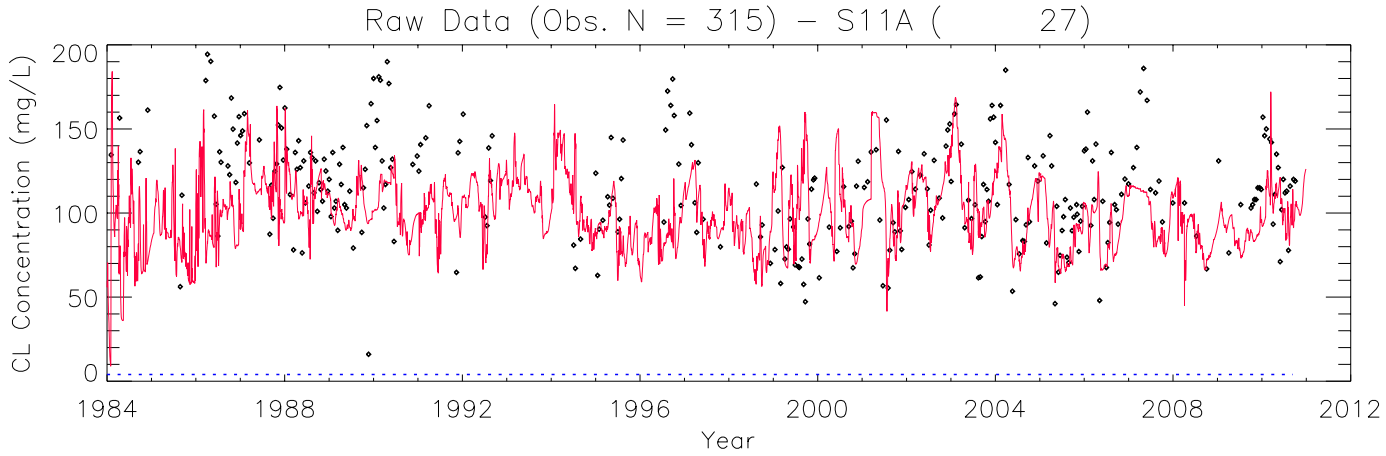
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 315) – S11A (27)
CL Concentration (mg/L)
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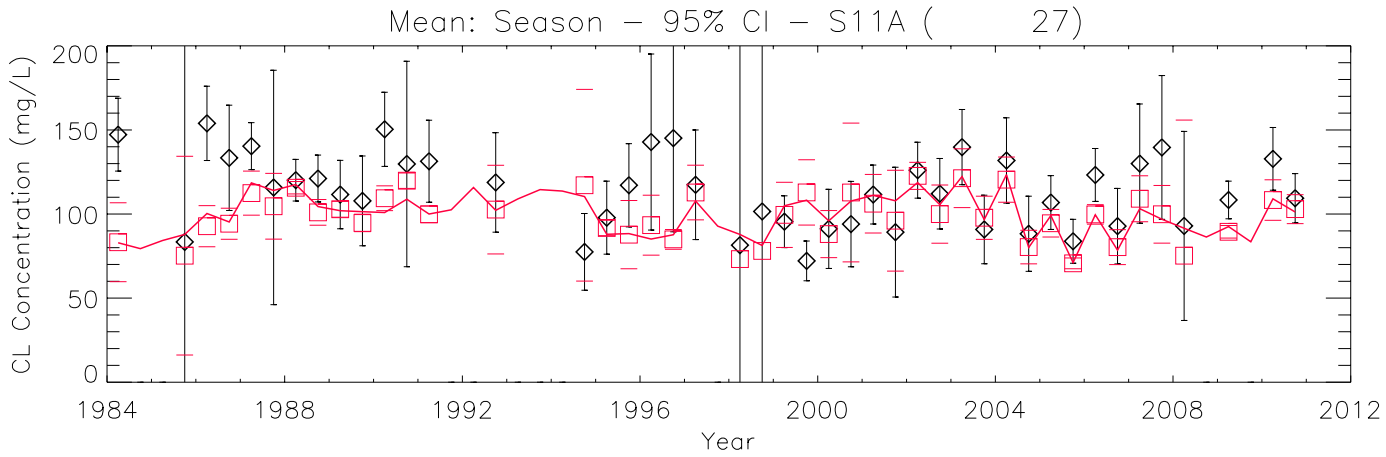
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S11A (27)
CL Concentration (mg/L)
0
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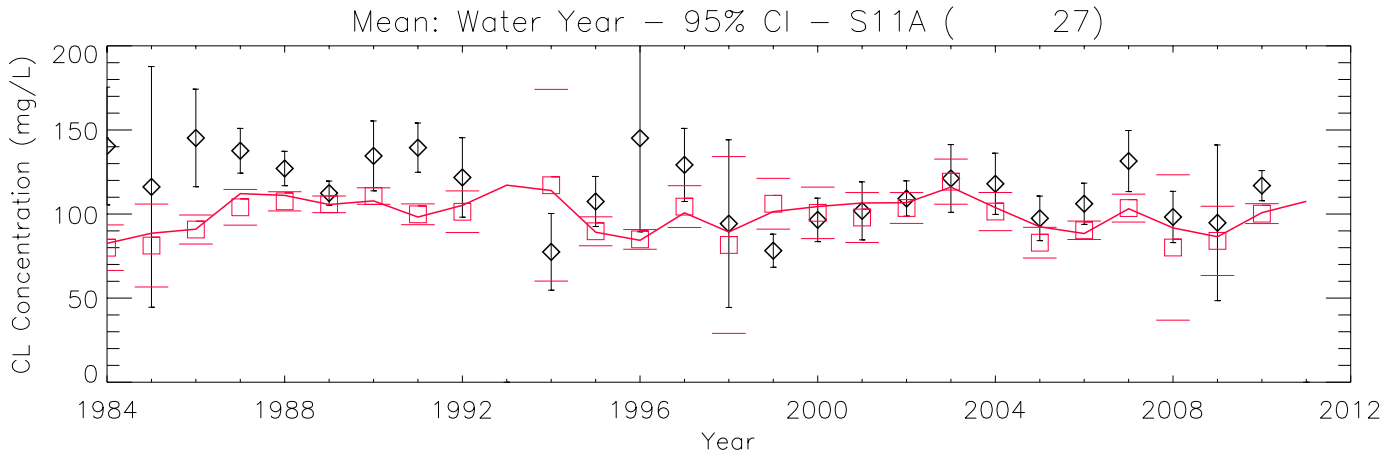
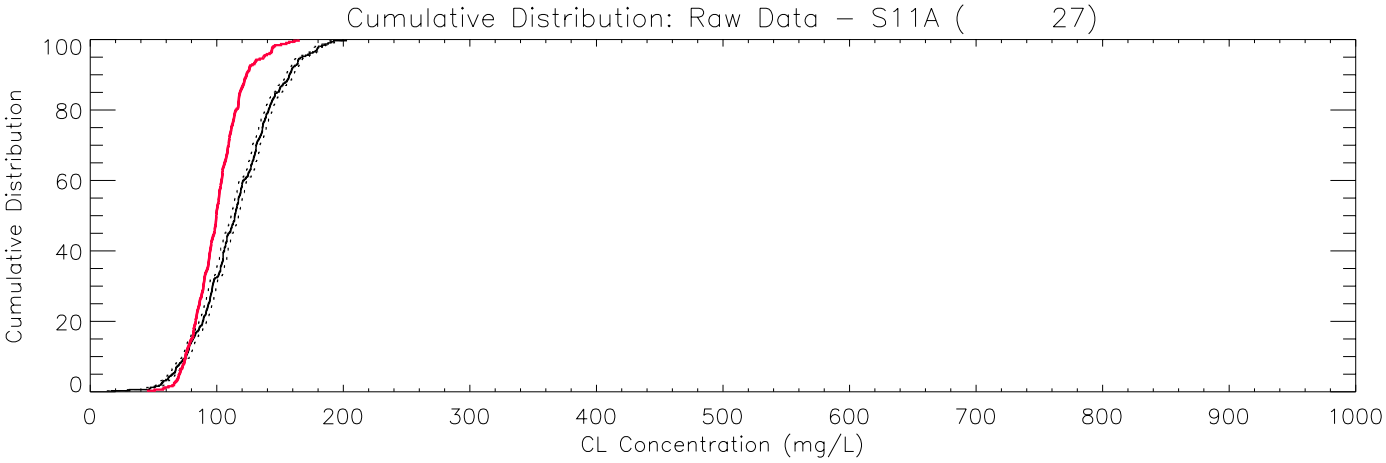
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S11A (27)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S11A (27)
Cumulative Distribution
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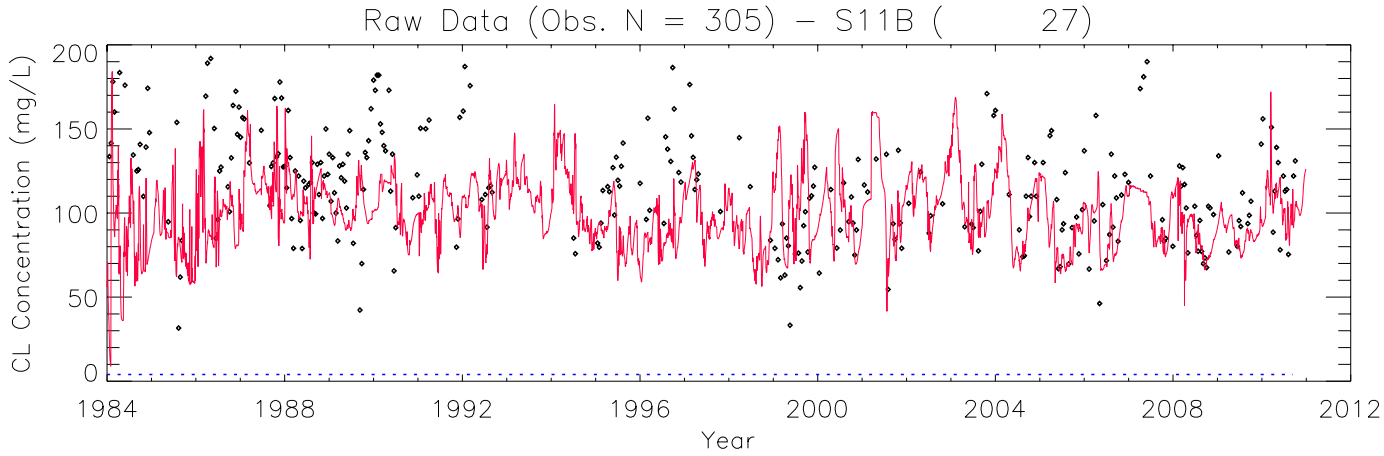
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 305) – S11B (27)
CL Concentration (mg/L)
0
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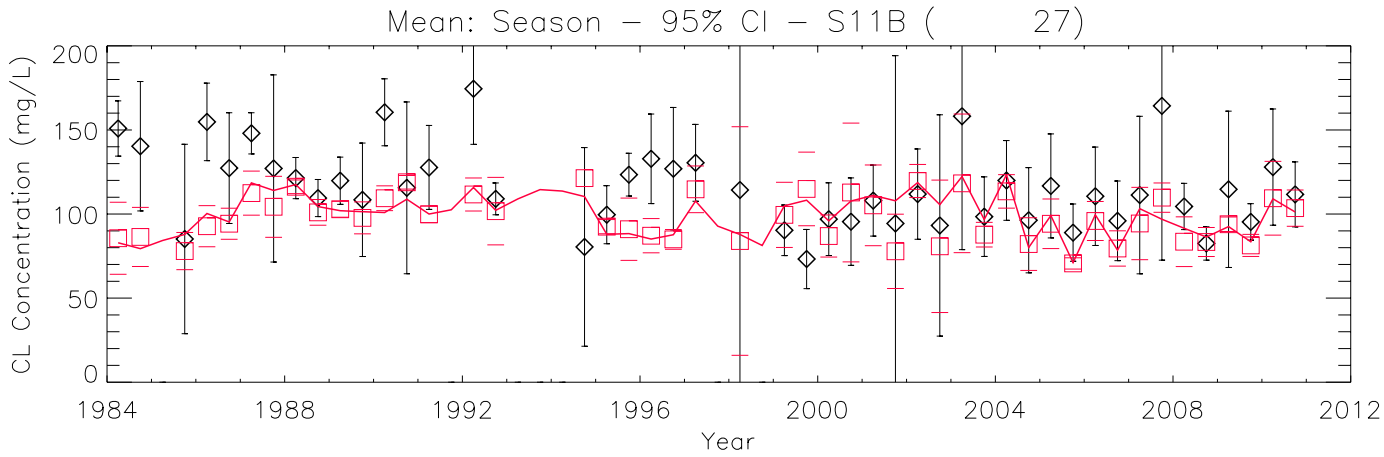
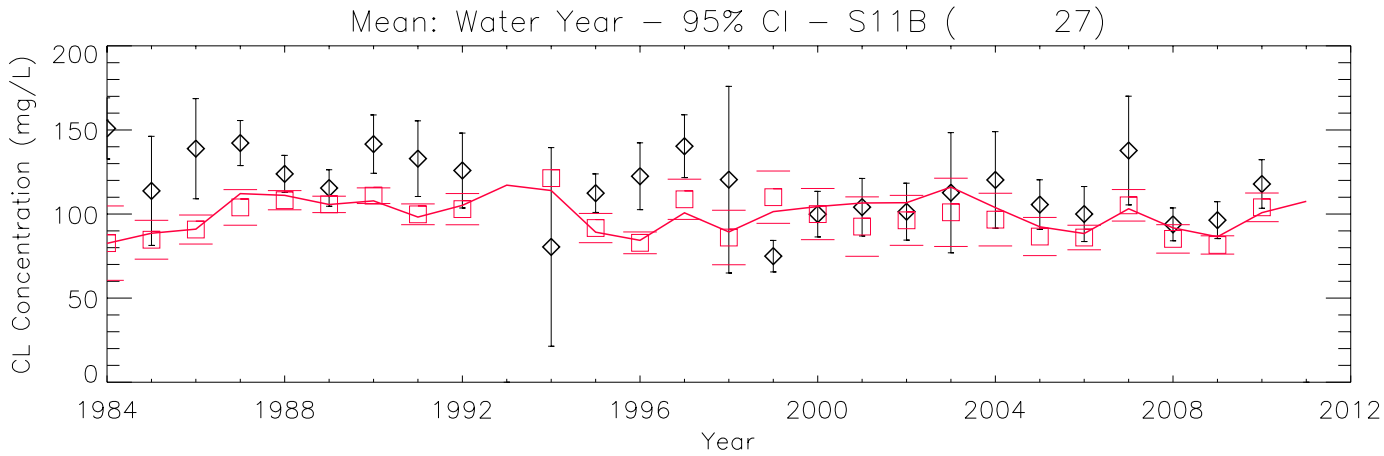
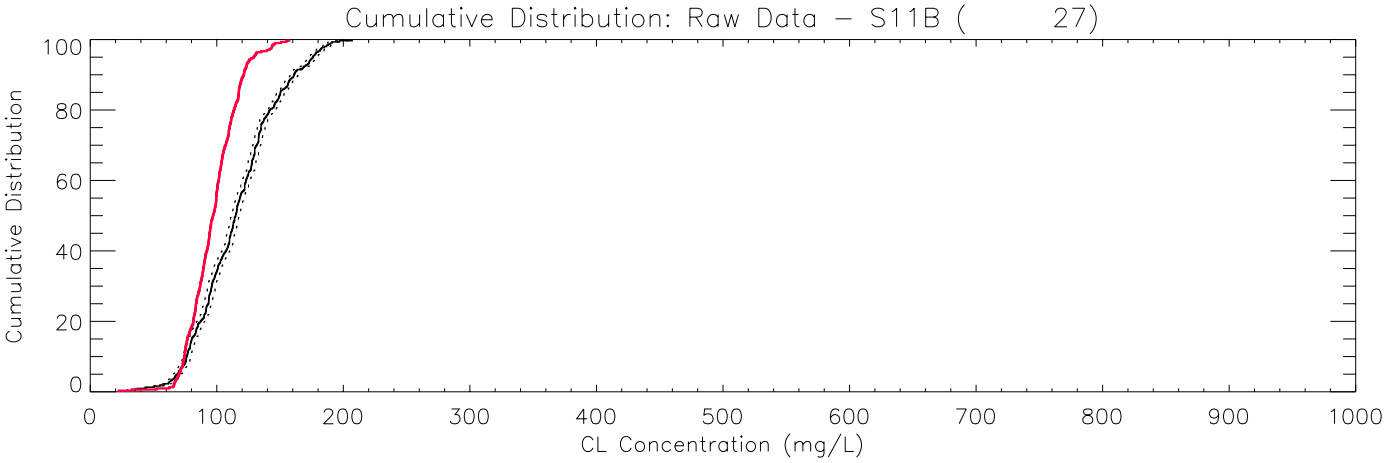
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S11B (27)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S11B (27)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S11B (27)
Cumulative Distribution
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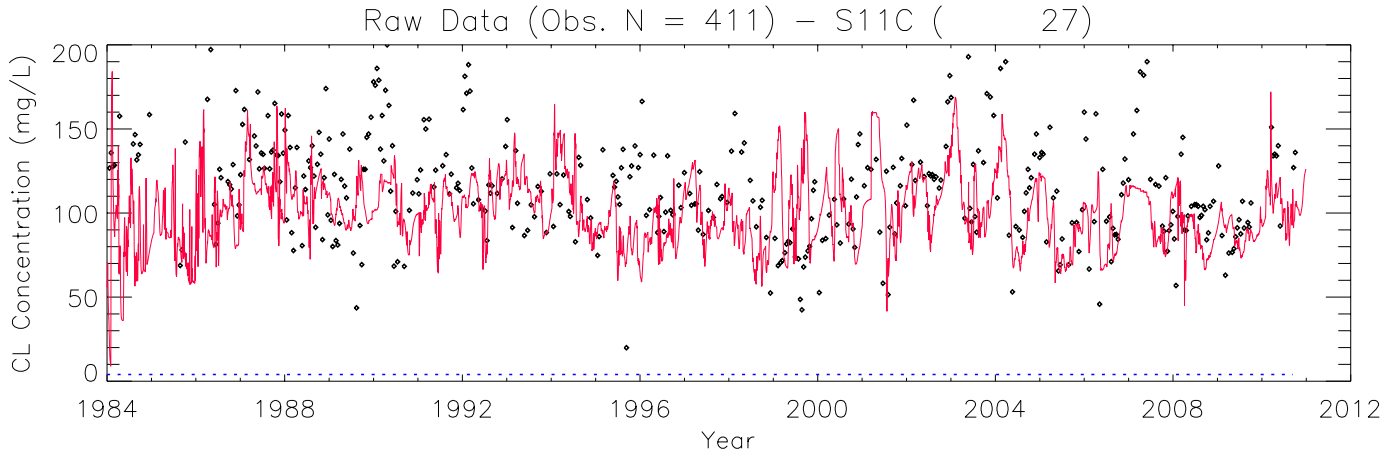
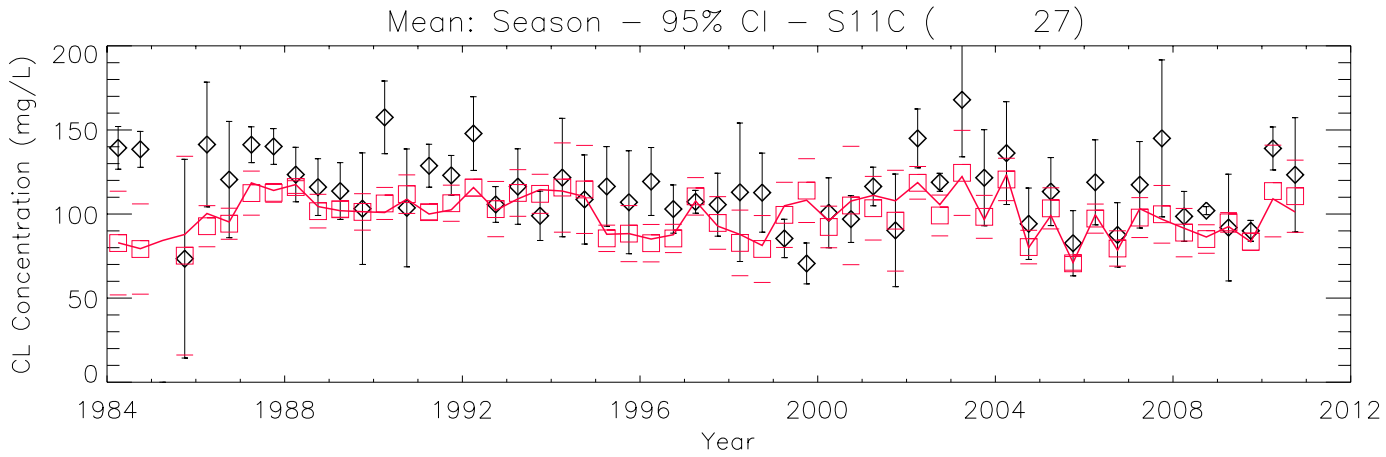
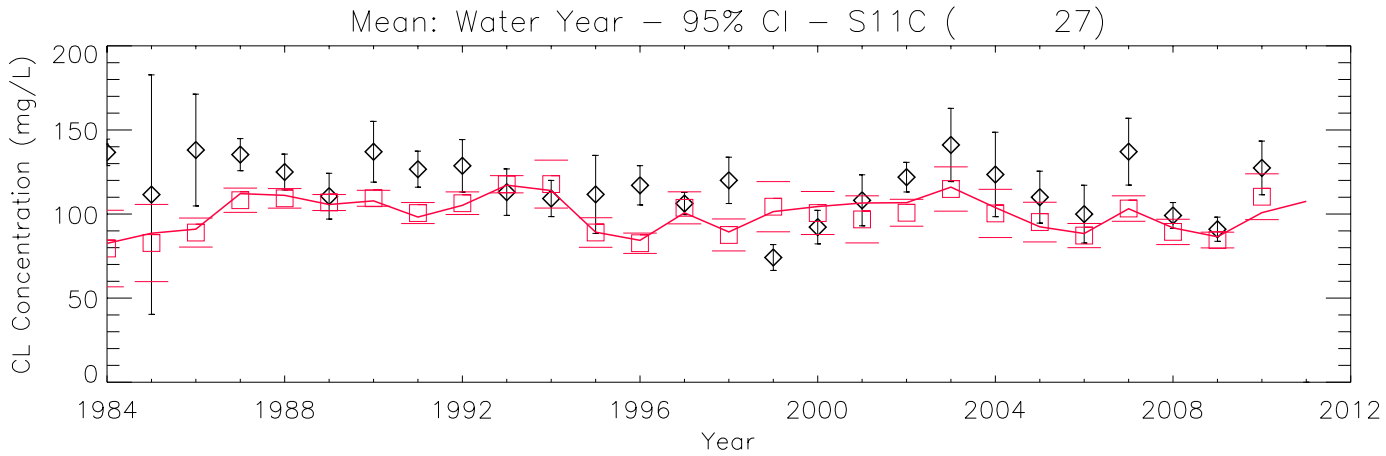
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 411) – S11C (27)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S11C (27)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S11C (27)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
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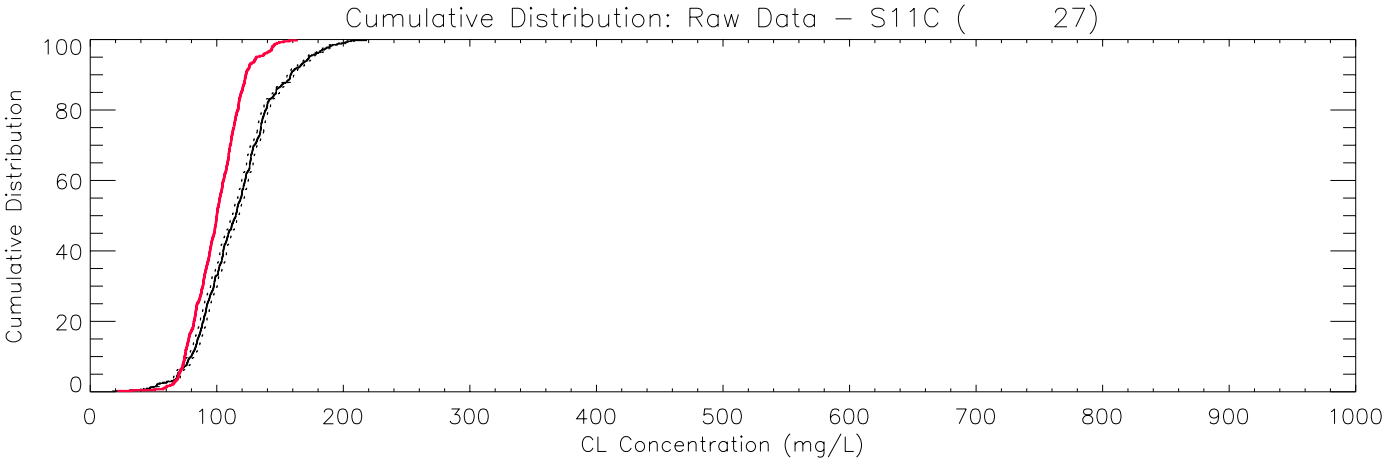
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S11C (27)
Cumulative Distribution
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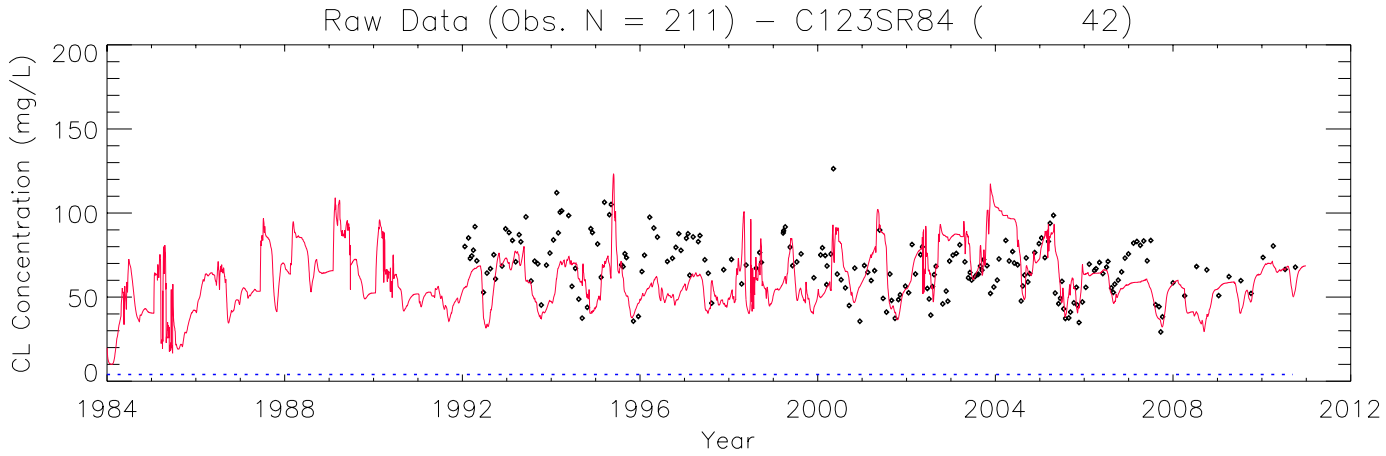
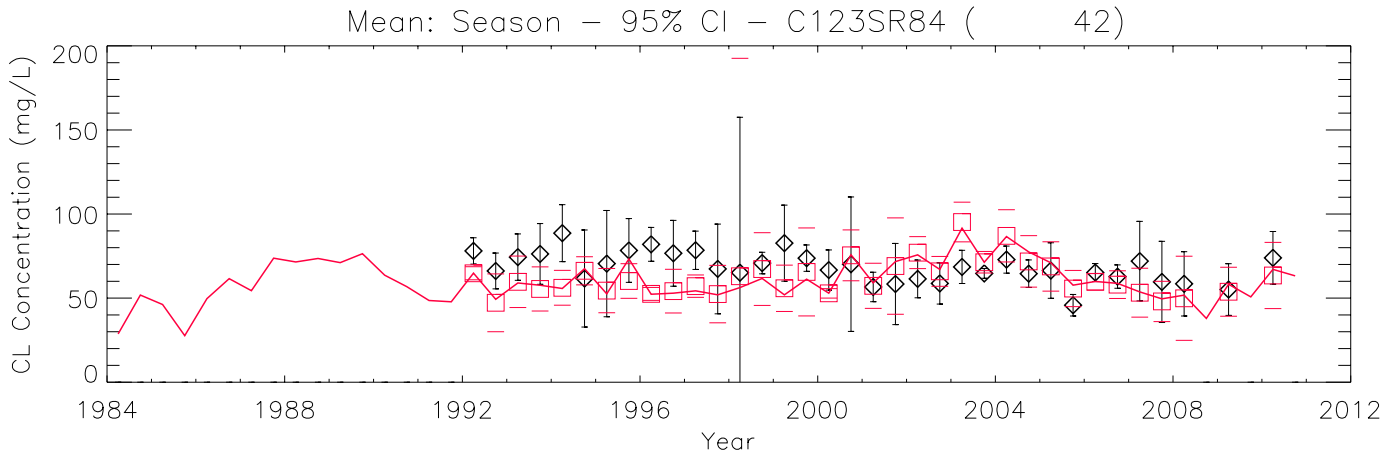
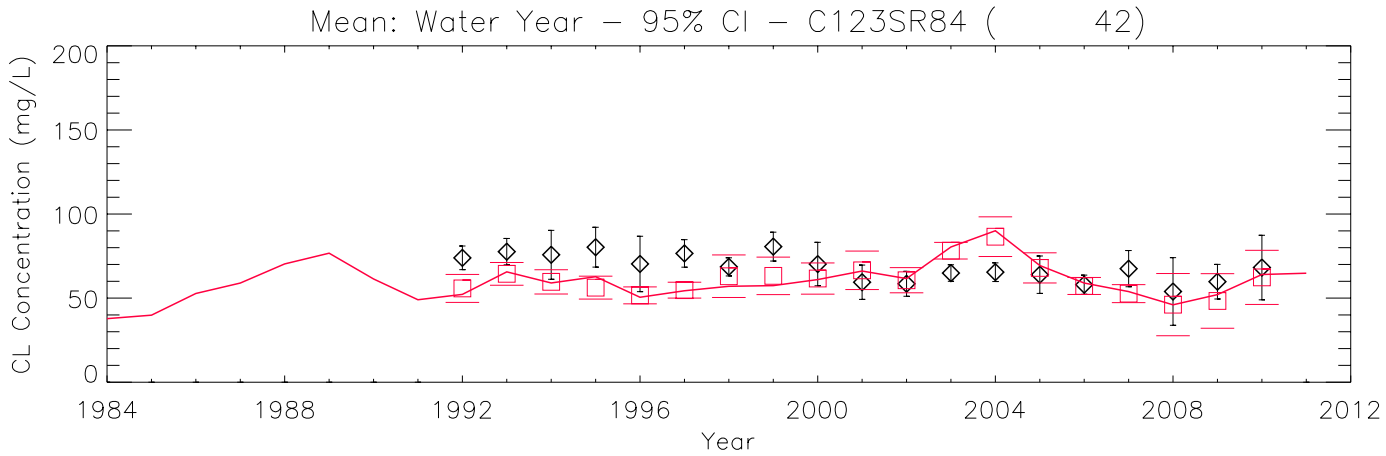
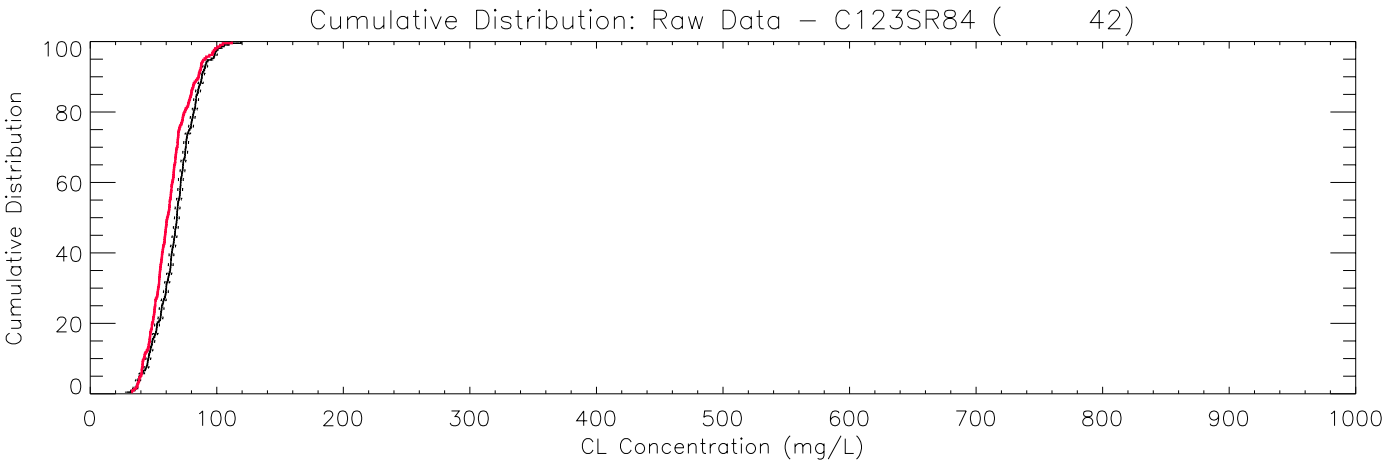
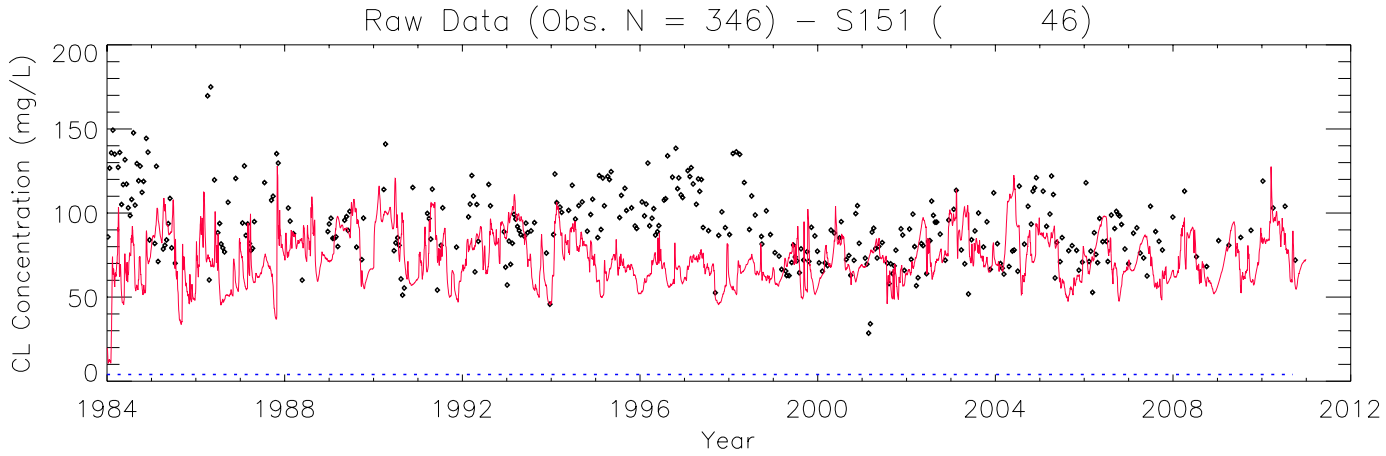
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

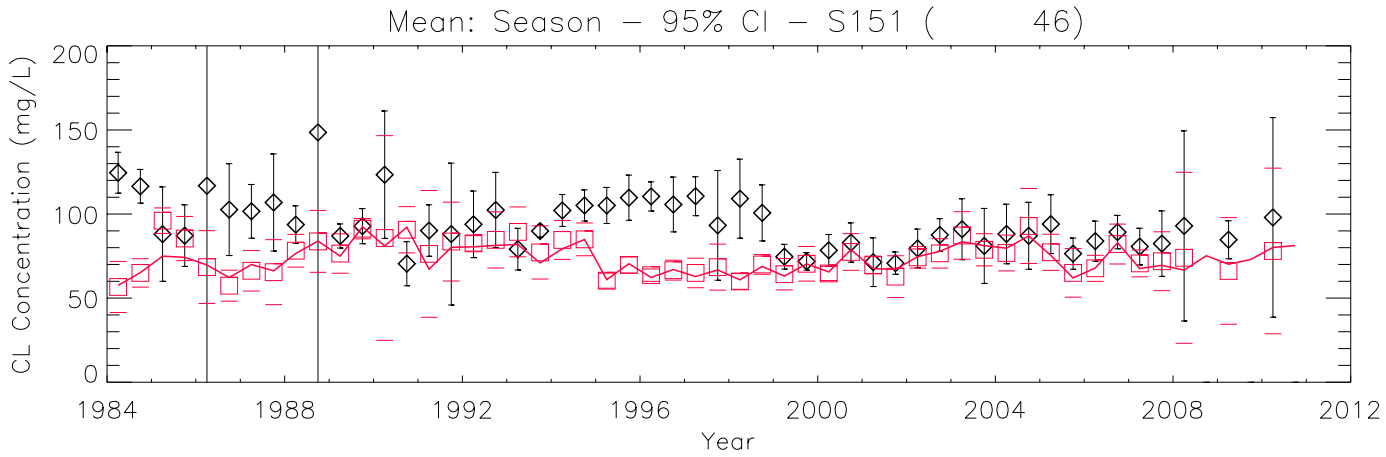

Raw Data (Obs. N = 211) – C123SR84 (42)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

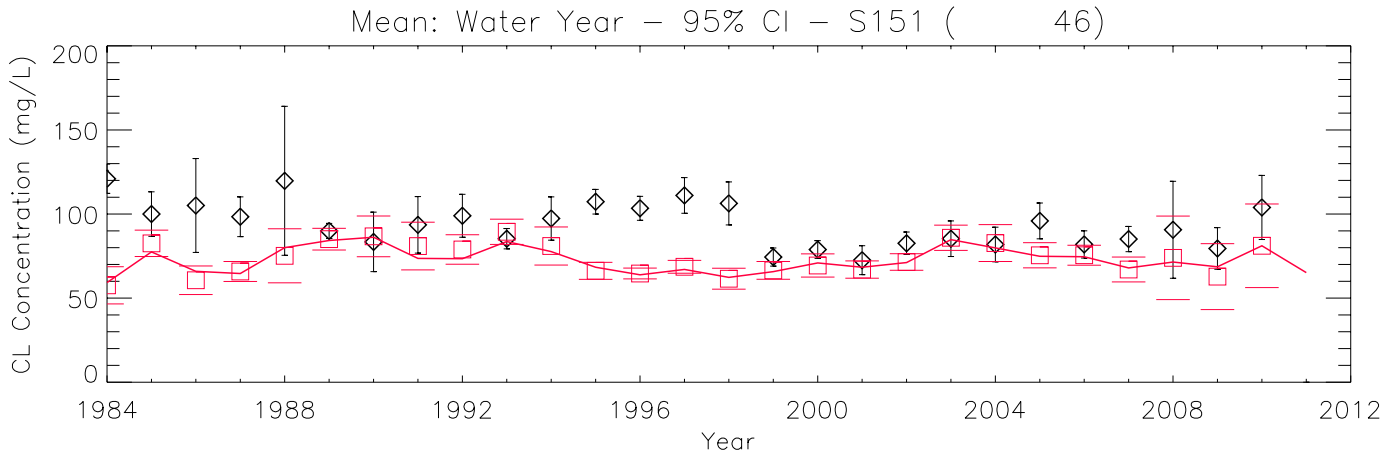

Mean: Season – 95% CI – C123SR84 (42)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

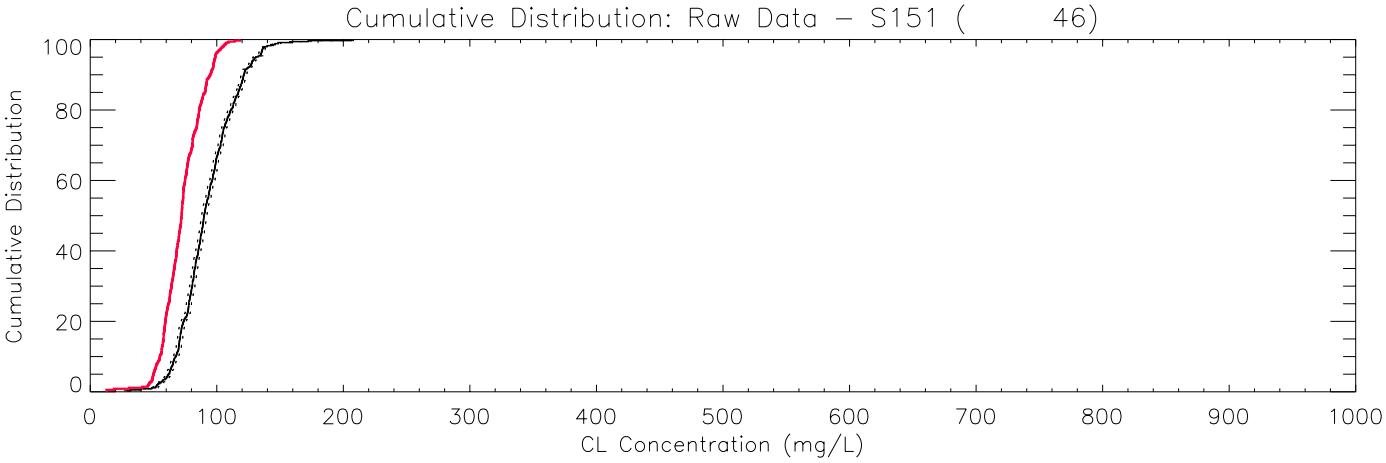

Mean: Water Year – 95% CI – C123SR84 (42)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

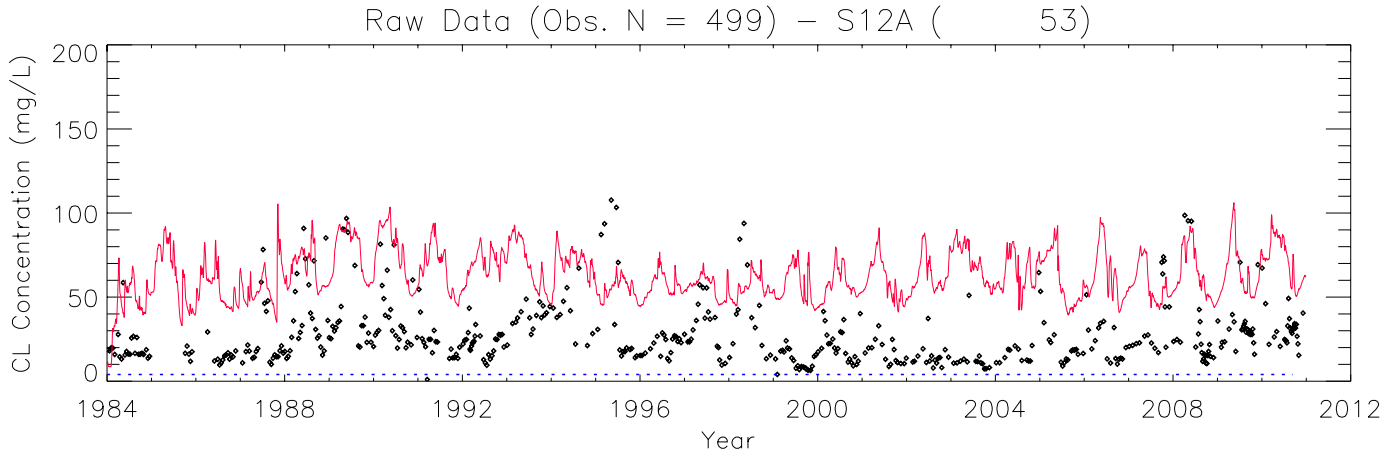

Cumulative Distribution: Raw Data – C123SR84 (42)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

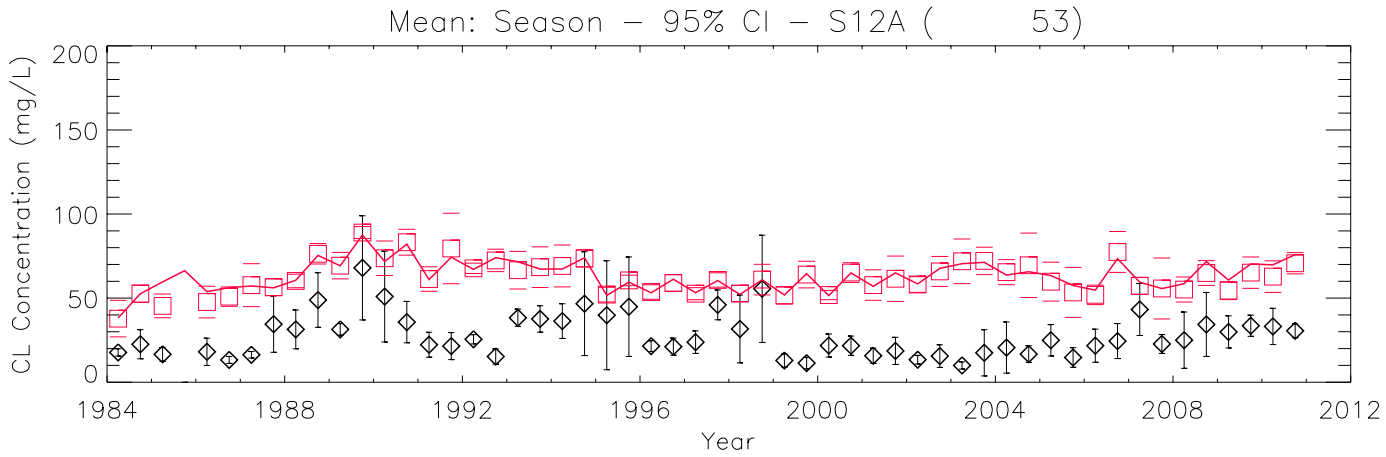

Raw Data (Obs. N = 346) – S151 (46)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

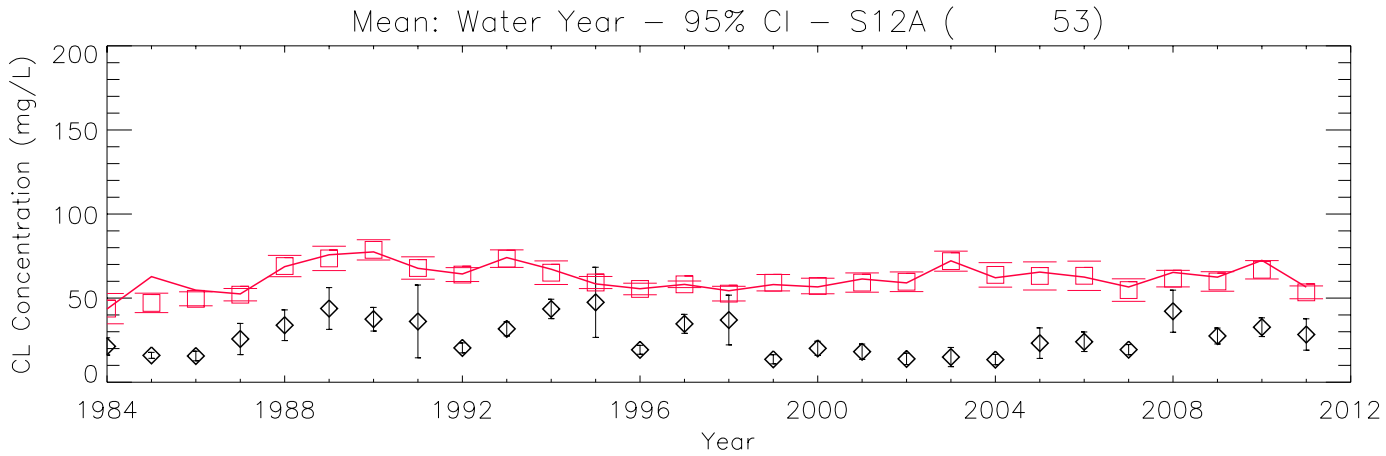

Mean: Season – 95% CI – S151 (46)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

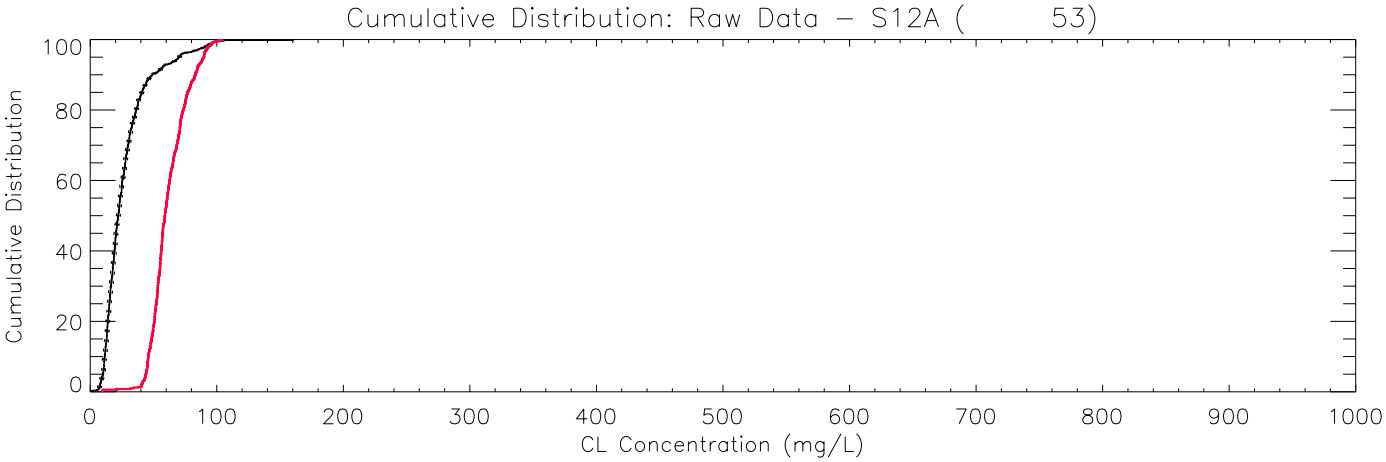

Mean: Water Year – 95% CI – S151 (46)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

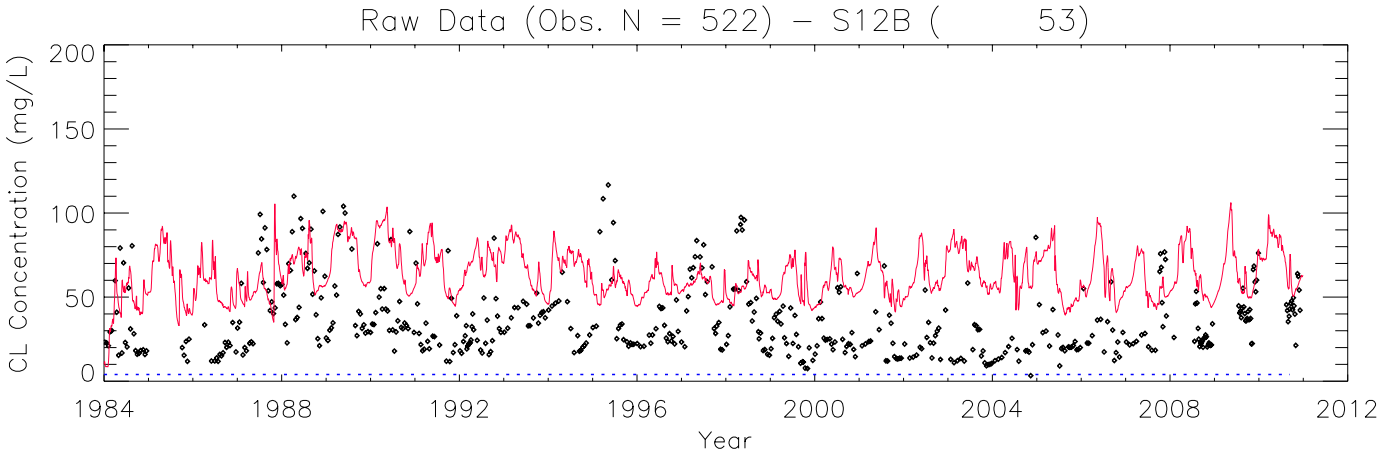

Cumulative Distribution: Raw Data – S151 (46)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

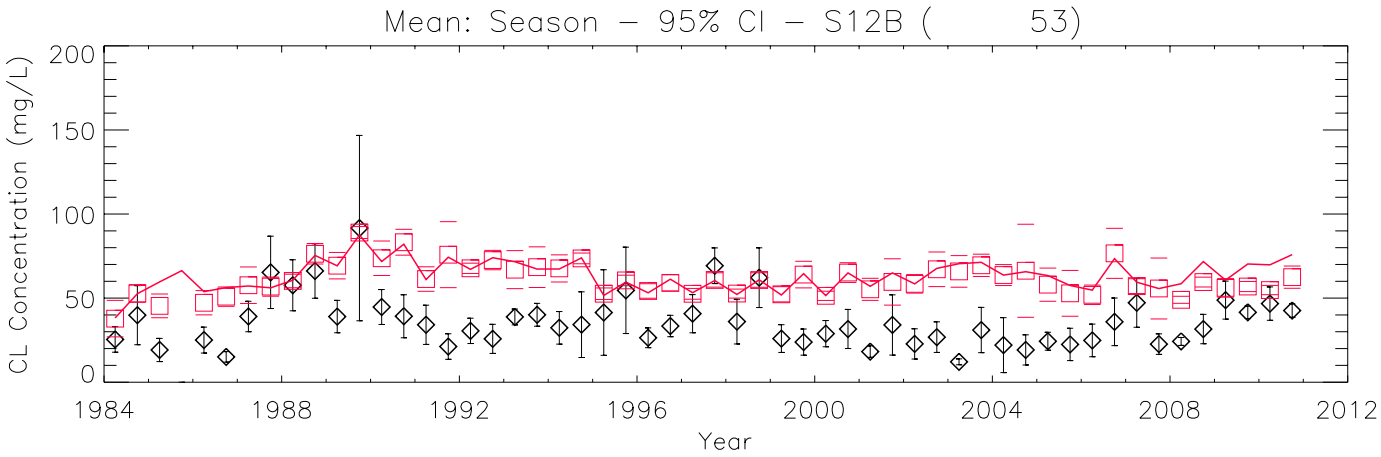

Raw Data (Obs. N = 499) – S12A (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

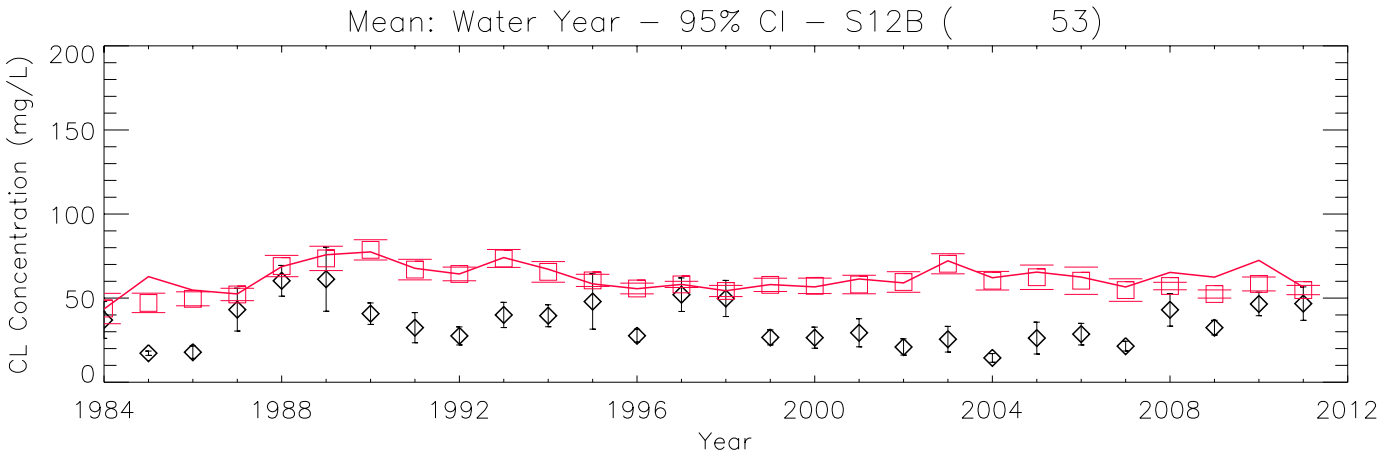

Mean: Season – 95% CI – S12A (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

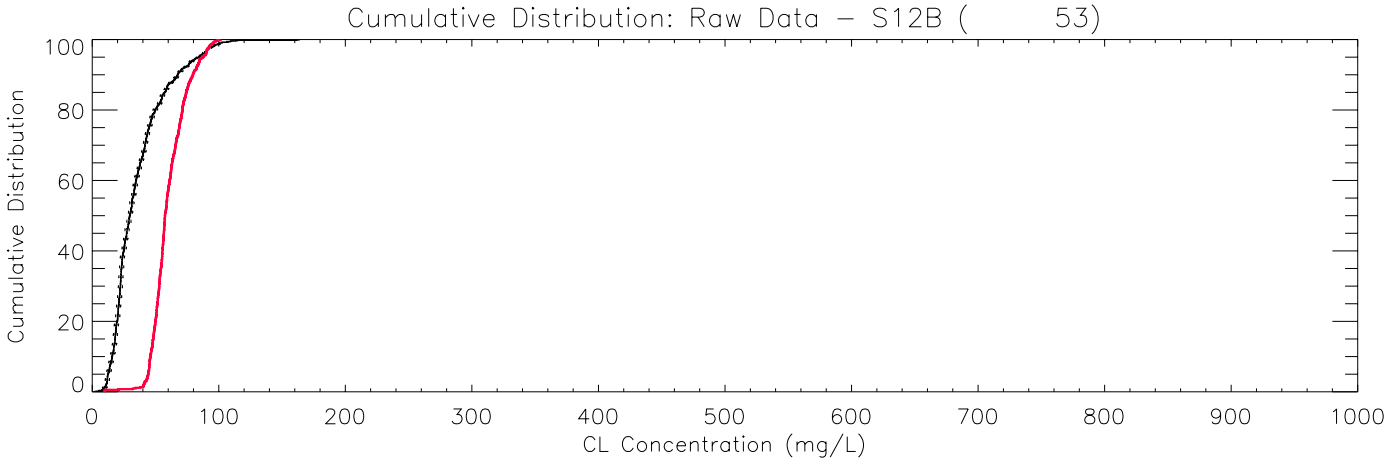

Mean: Water Year – 95% CI – S12A (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

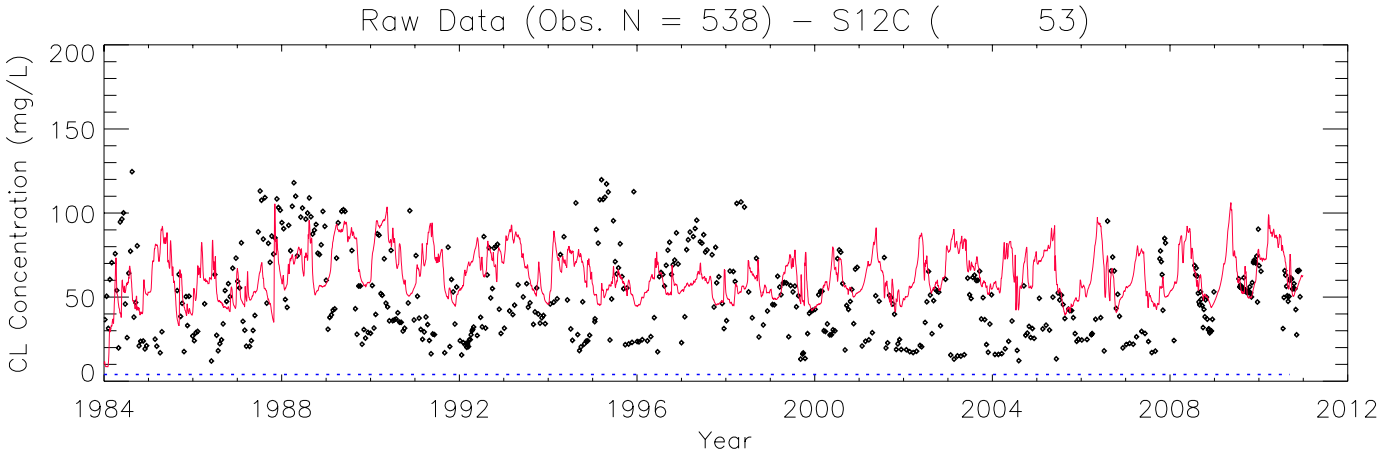

Cumulative Distribution: Raw Data – S12A (53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

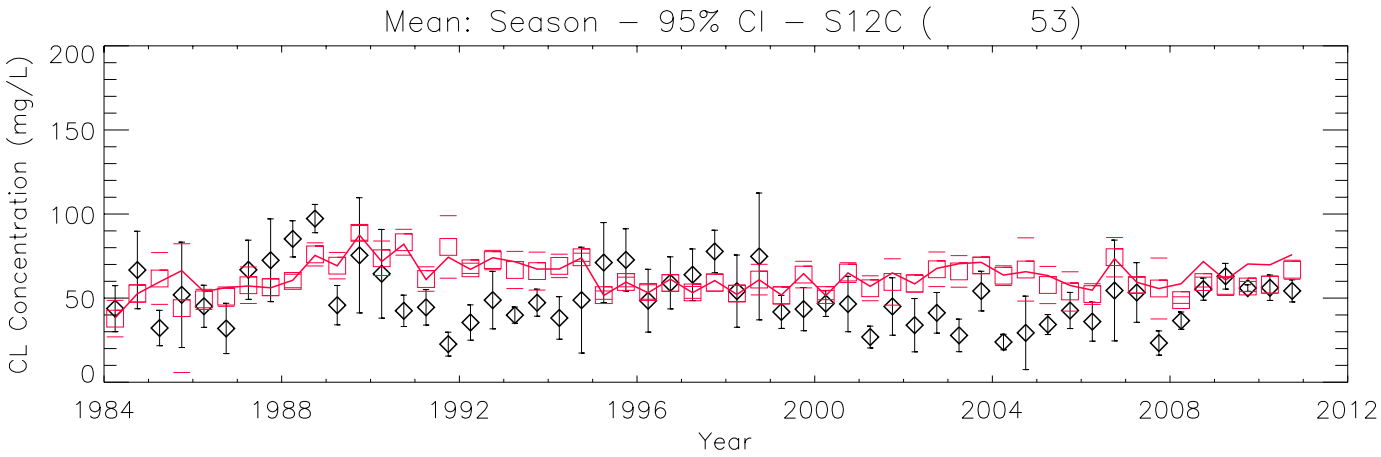

Raw Data (Obs. N = 522) – S12B (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

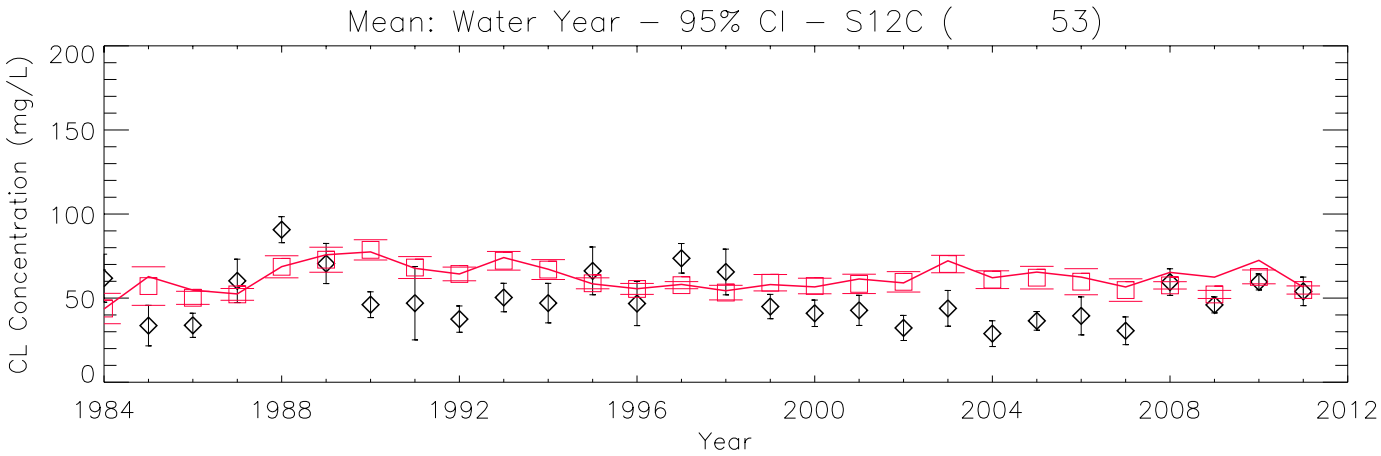

Mean: Season – 95% CI – S12B (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

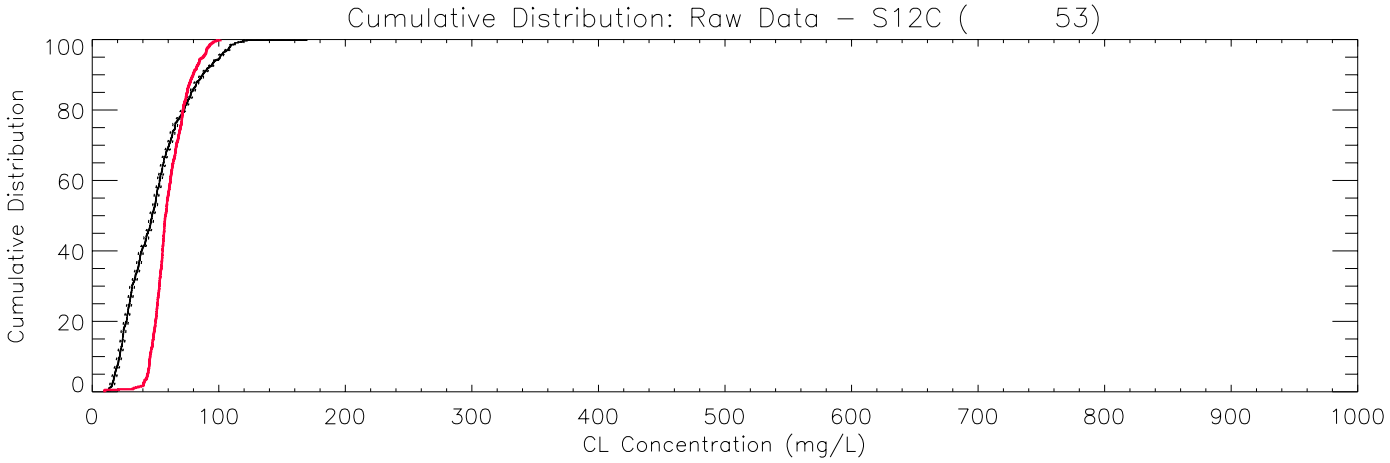

Mean: Water Year – 95% CI – S12B (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

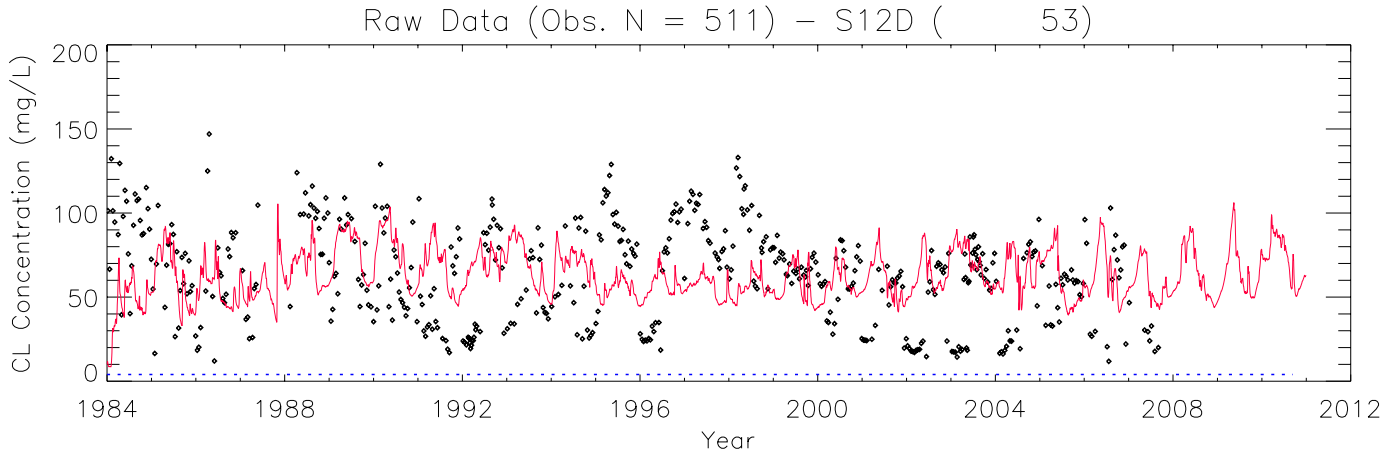

Cumulative Distribution: Raw Data – S12B (53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

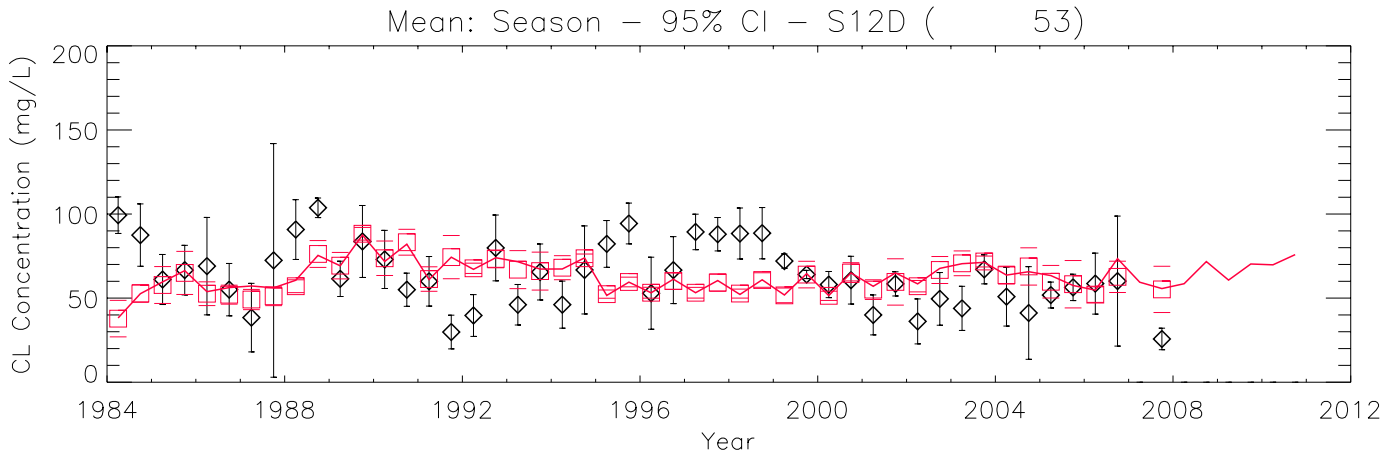

Raw Data (Obs. N = 538) – S12C (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

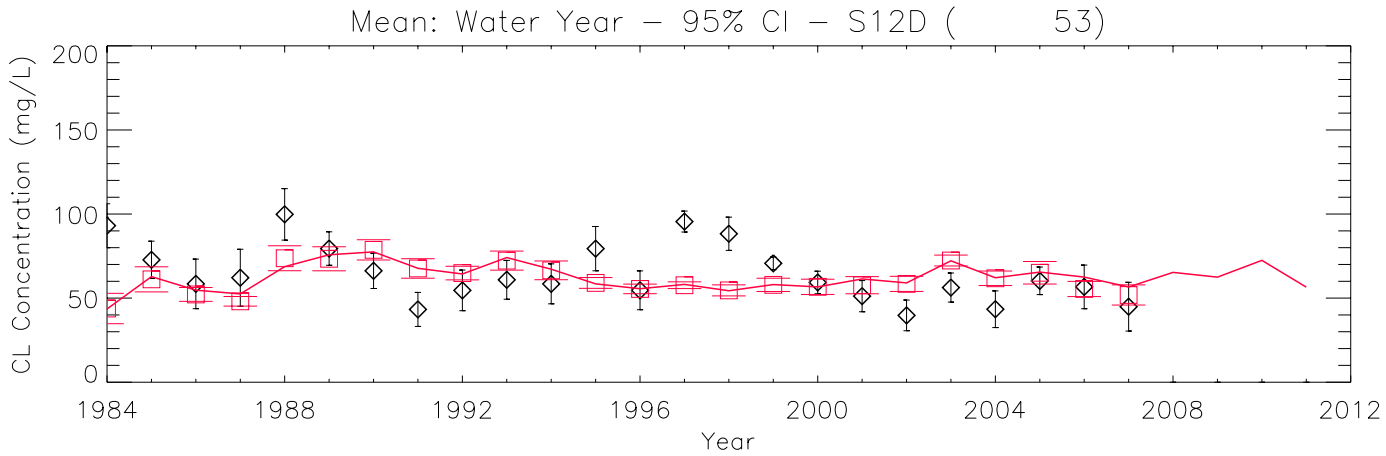

Mean: Season – 95% CI – S12C (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

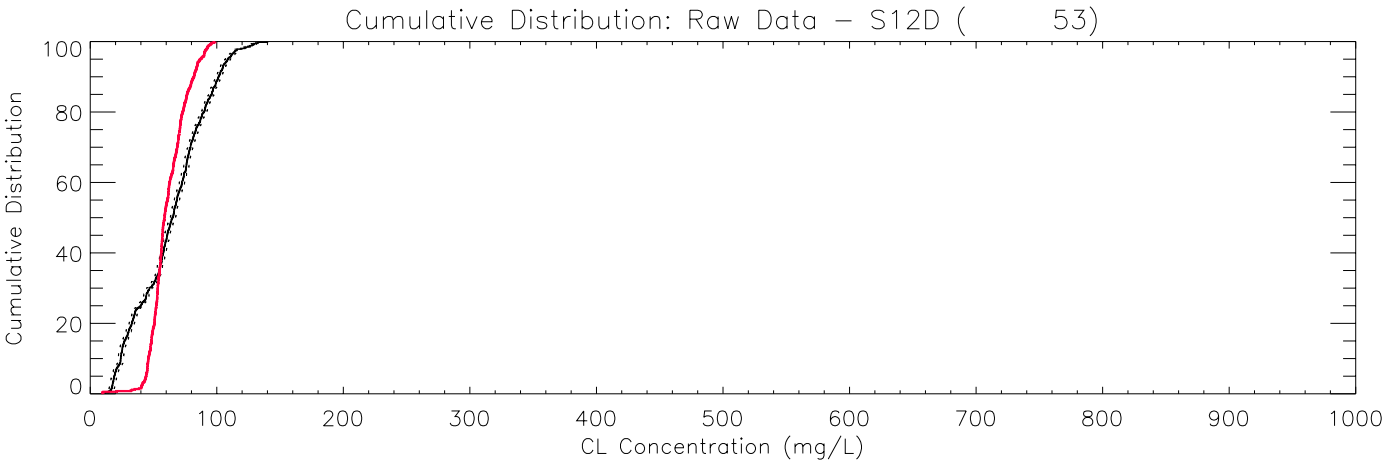

Mean: Water Year – 95% CI – S12C (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

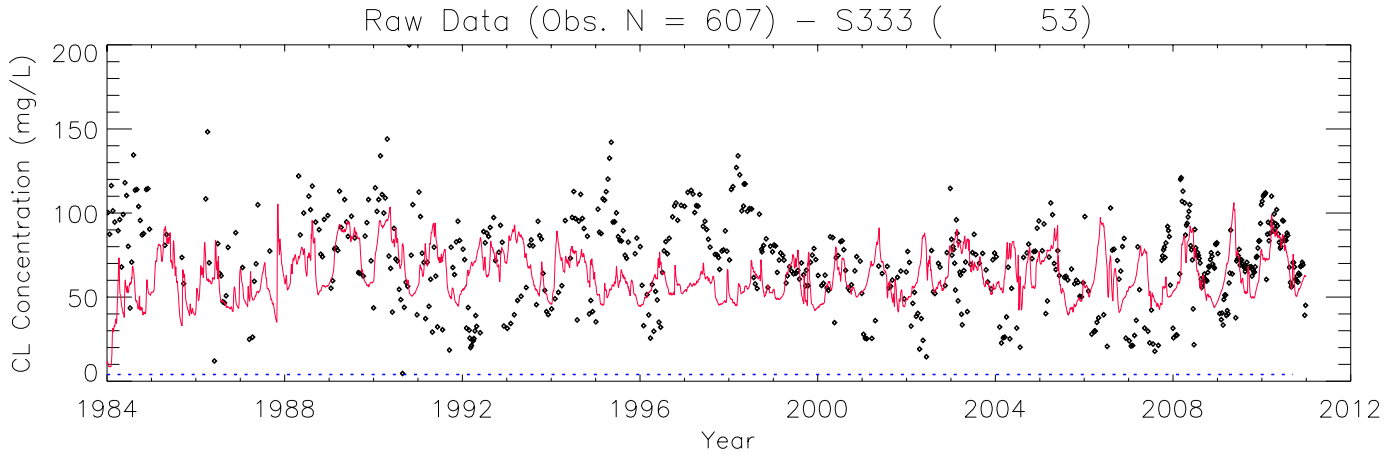

Cumulative Distribution: Raw Data – S12C (53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

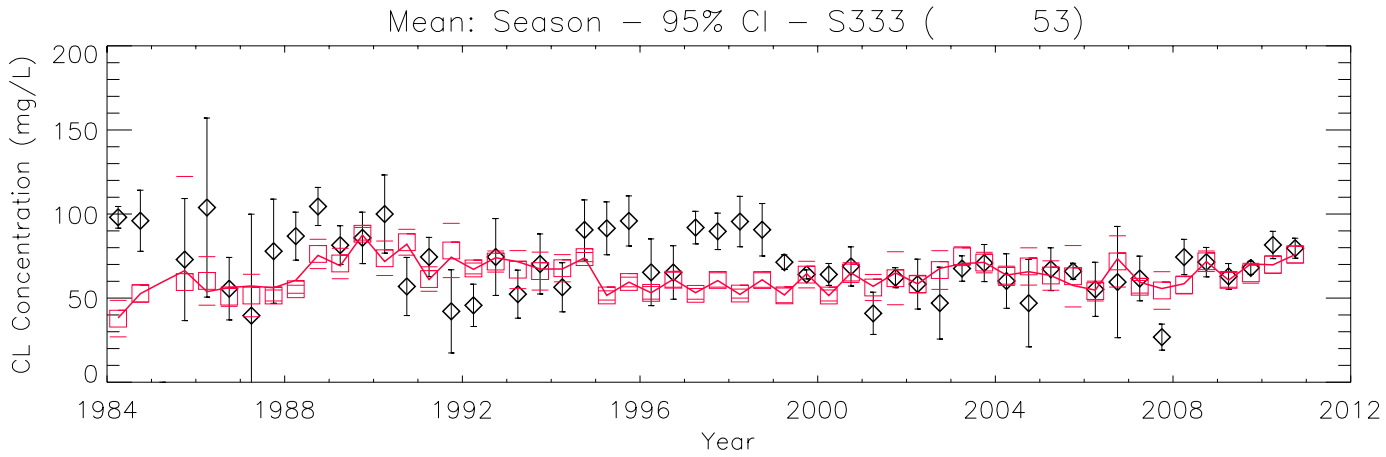

Raw Data (Obs. N = 511) – S12D (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

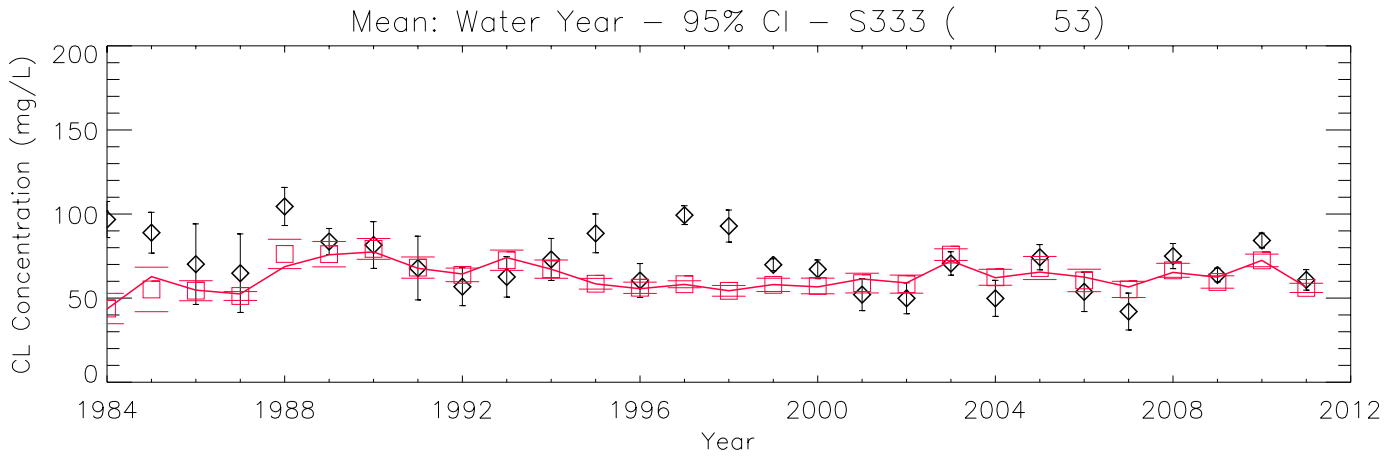

Mean: Season – 95% CI – S12D (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

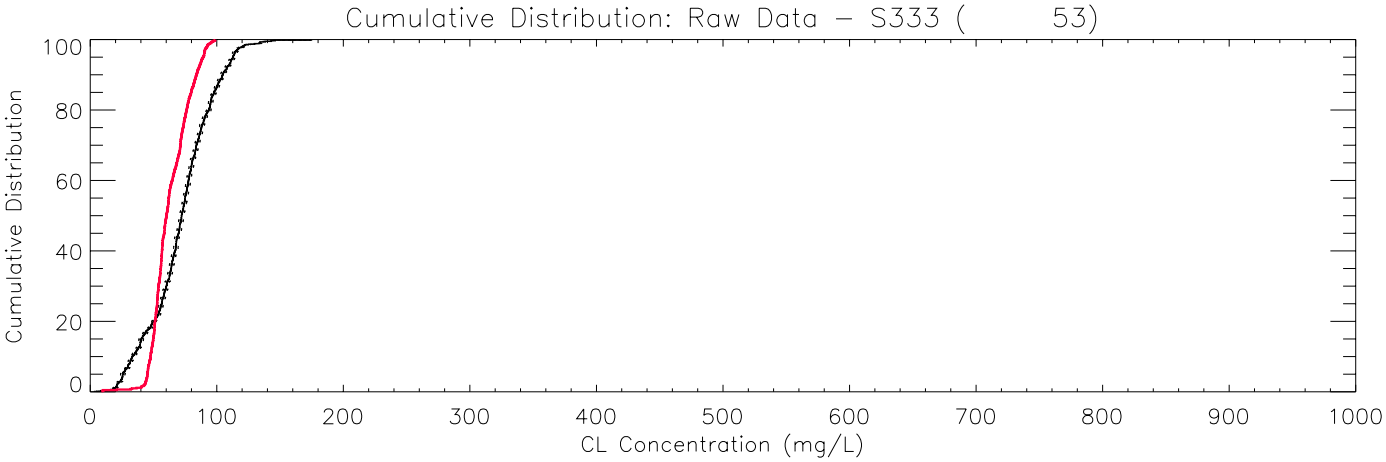

Mean: Water Year – 95% CI – S12D (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

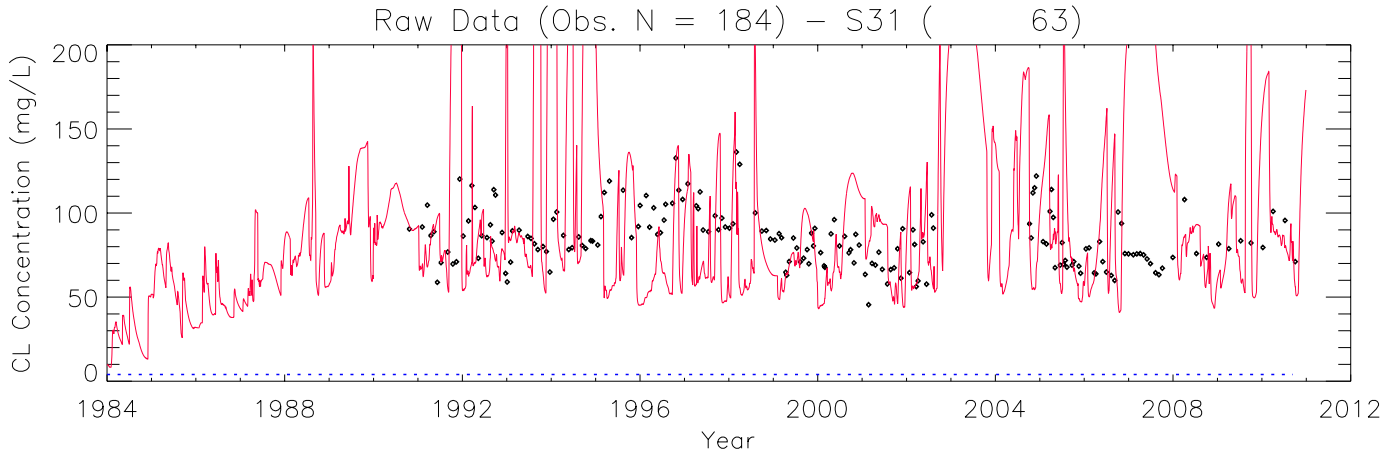

Cumulative Distribution: Raw Data – S12D (53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)

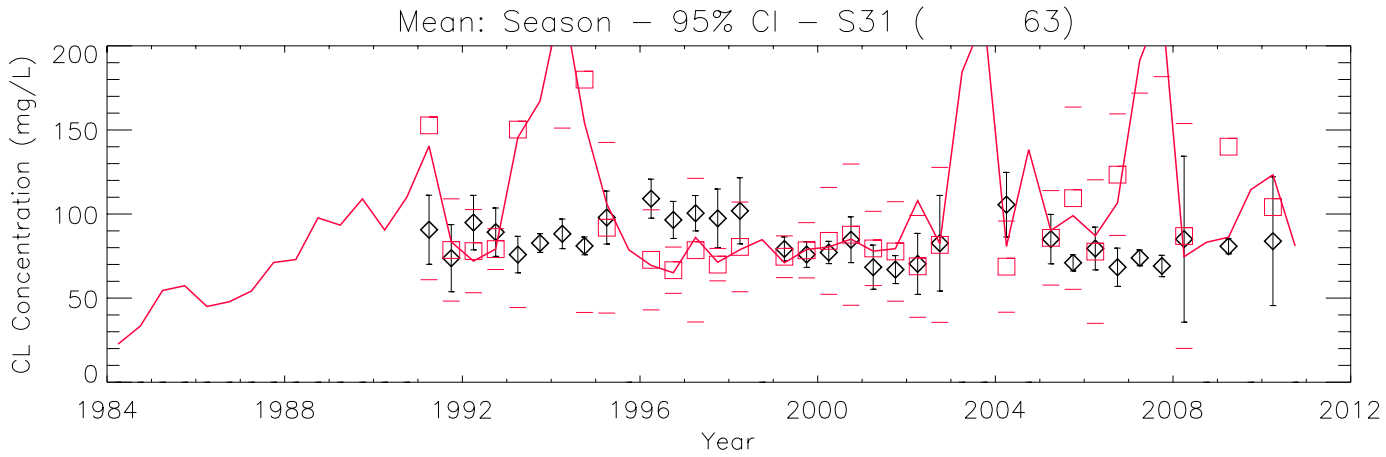

Raw Data (Obs. N = 607) – S333 (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

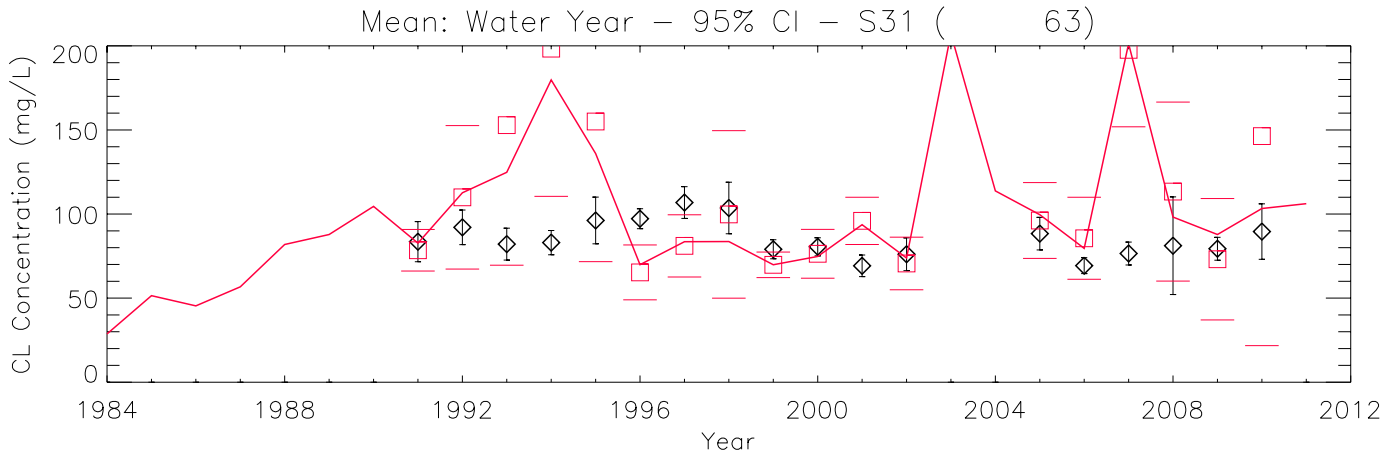

Mean: Season – 95% CI – S333 (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year

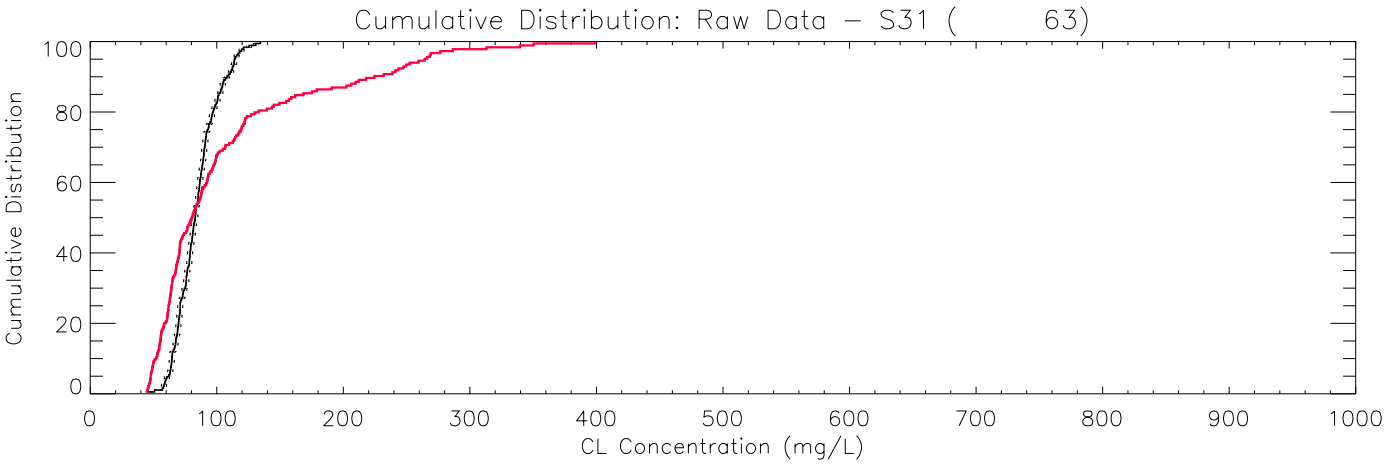

Mean: Water Year – 95% CI – S333 (53)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S333 (53)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)


Raw Data (Obs. N = 184) – S31 (63)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Season – 95% CI – S31 (63)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Mean: Water Year – 95% CI – S31 (63)
CL Concentration (mg/L)
0
50
100
150
200
1984
1988
1992
1996
2000
2004
2008
2012
Year


Cumulative Distribution: Raw Data – S31 (63)
Cumulative Distribution
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000
CL Concentration (mg/L)