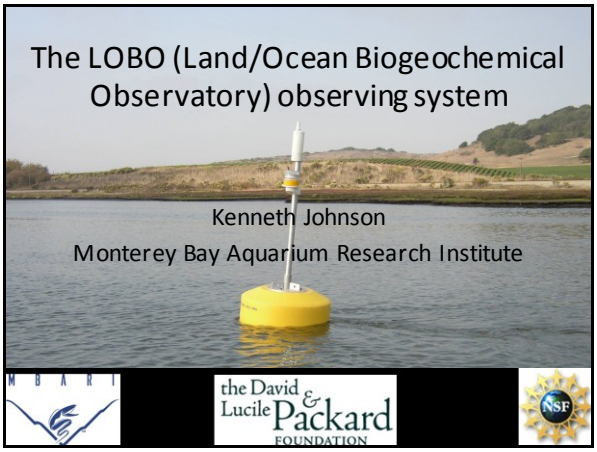
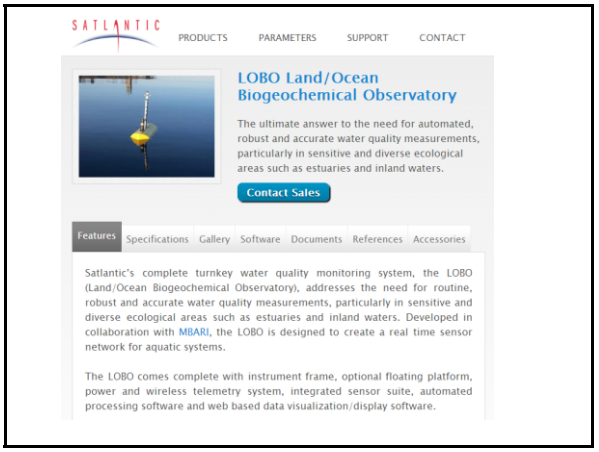
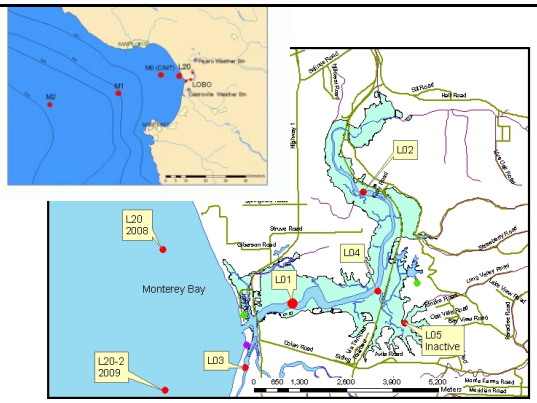
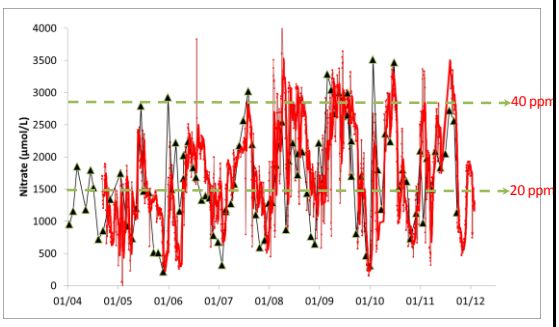

The LOBO (Land/Ocean Biogeochemical Observatory) observing system
Kenneth Johnson
Monterey Bay Aquarium Research Institute
MBARI
the David & Lucile Packard FOUNDATION
NSF

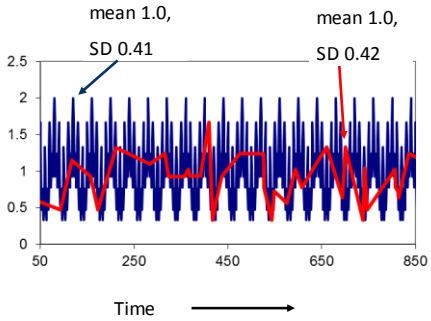

SATLANTIC
PRODUCTS
PARAMETERS
SUPPORT
CONTACT
LOBO Land/Ocean Biogeochemical Observatory
The ultimate answer to the need for automated, robust and accurate water quality measurements, particularly in sensitive and diverse ecological areas such as estuaries and inland waters.
Contact Sales
Features
Specifications
Gallery
Software
Documents
References
Accessories
Satlantic's complete turnkey water quality monitoring system, the LOBO (Land/Ocean Biogeochemical Observatory), addresses the need for routine, robust and accurate water quality measurements, particularly in sensitive and diverse ecological areas such as estuaries and inland waters. Developed in collaboration with MBARI, the LOBO is designed to create a real time sensor network for aquatic systems.
The LOBO comes complete with instrument frame, optional floating platform, power and wireless telemetry system, integrated sensor suite, automated processing software and web based data visualization/display software.

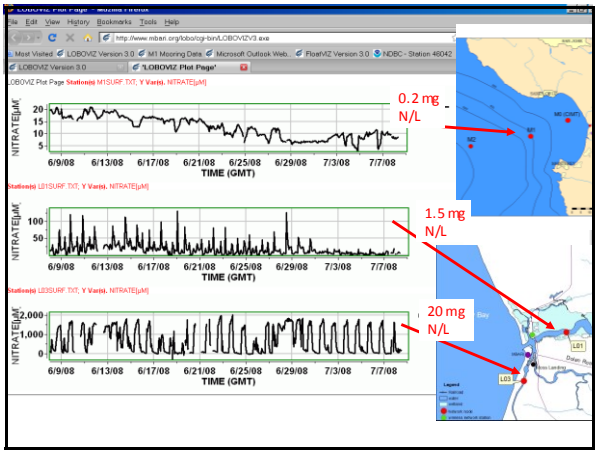


Old Salinas River NO_3^- estimates
Daily: LOBO 1727 µM (1 SD = 809 µM) or 24 mg as N/L
Monthly: ESNERR 1647 µM (1 SD =) or 23 mg as N/L

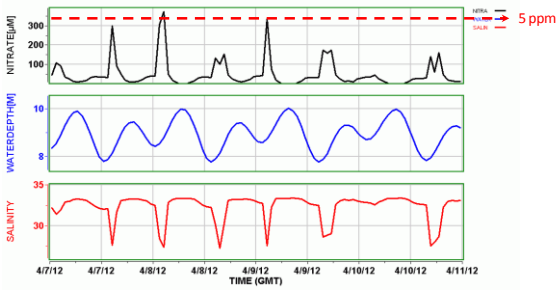


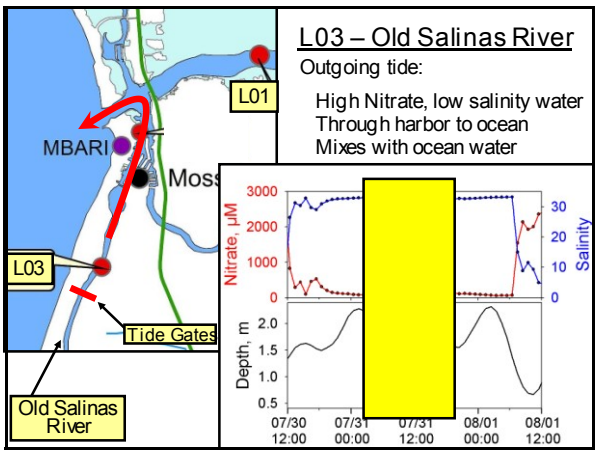
Time series sampling errors. What happens if you undersample a time series? Statistical properties of each series are exactly the same (once you sample enough cycles).

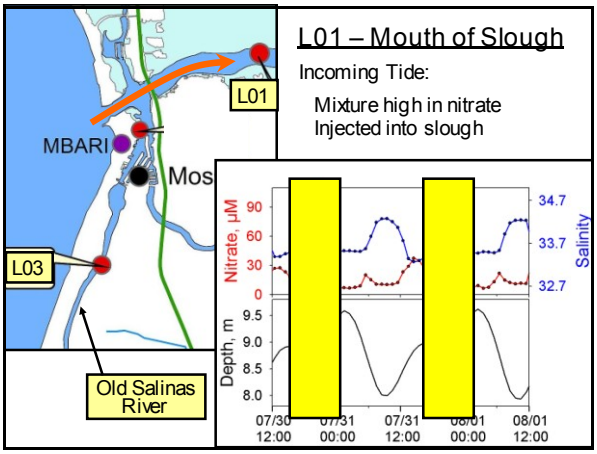


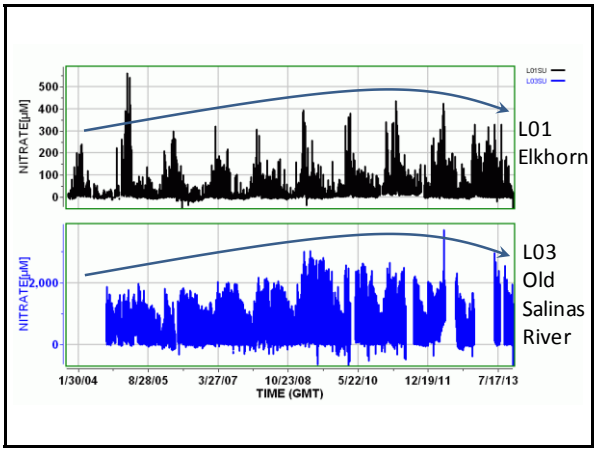


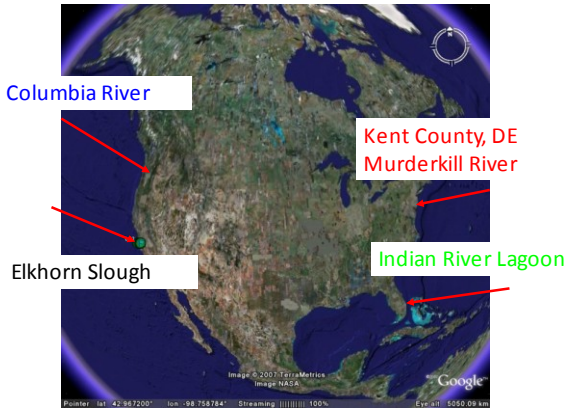
How does the system work? L01 mooring sees big spikes in NO_3^- concentration with low salinity = runoff from land.

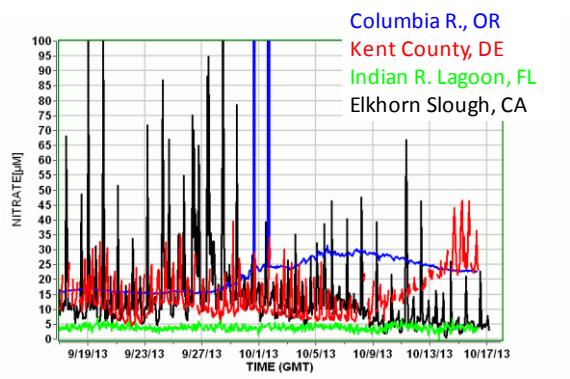


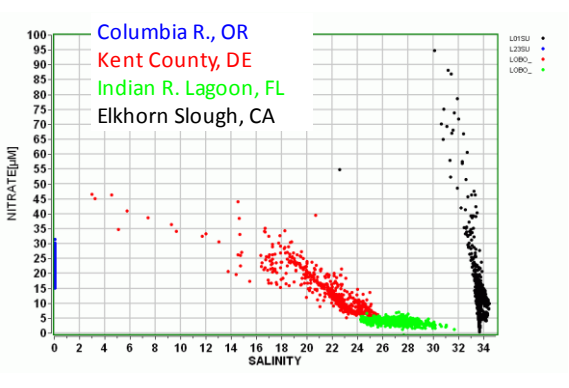


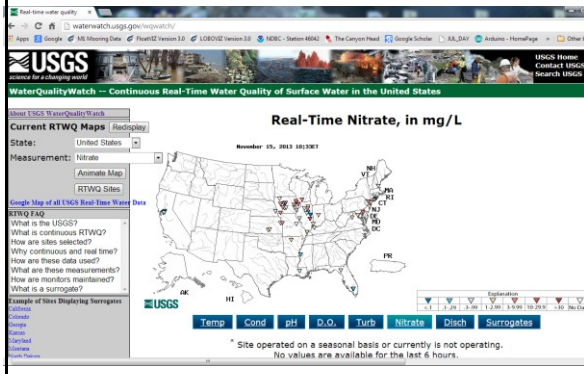





Columbia River
Kent County, DE
Murderkill River
Elkhorn Slough
Indian River Lagoon


Columbia R., OR
Kent County, DE
Indian R. Lagoon, FL
Elkhorn Slough, CA
NITRATE[µM]
TIME (GMT)
9/19/13
9/23/13
9/27/13
10/1/13
10/5/13
10/9/13
10/13/13
10/17/13


Columbia R., OR
Kent County, DE
Indian R. Lagoon, FL
Elkhorn Slough, CA
NITRATE[µM]
SALINITY


USGS
WaterQualityWatch -- Continuous Real-Time Water Quality of Surface Water in the United States
Real-Time Nitrate, in mg/L
Current RTWQ Maps
Temp
Cond
pH
D.O.
Turb
Nitrate
Disch
Surrogates