The UC Davis Tahoe Environmental Research Center is currently undertaking the most extensive water quality investigation of Clear Lake

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Tahoe Environmental
Research Center

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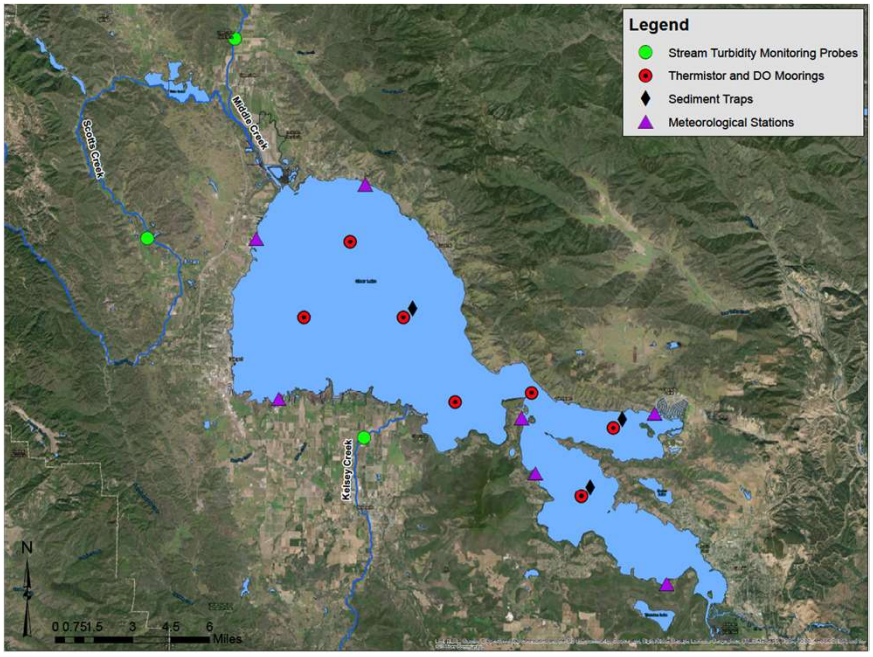
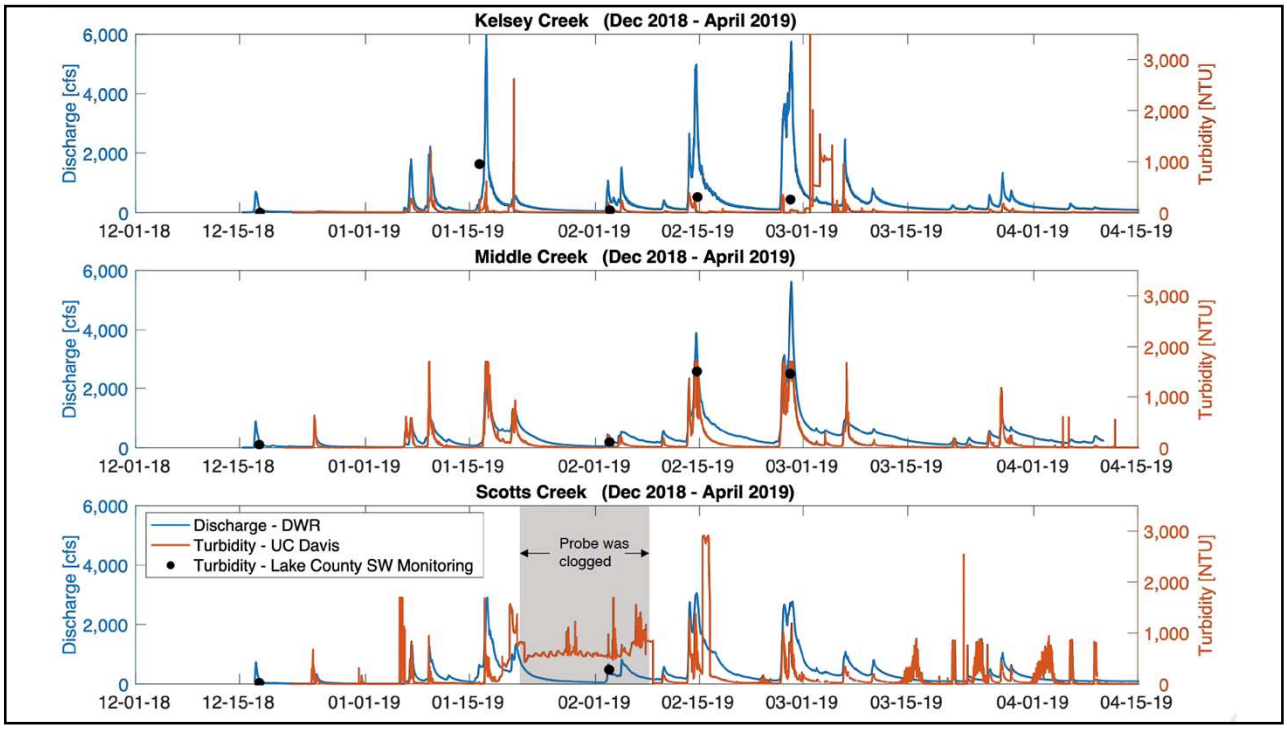
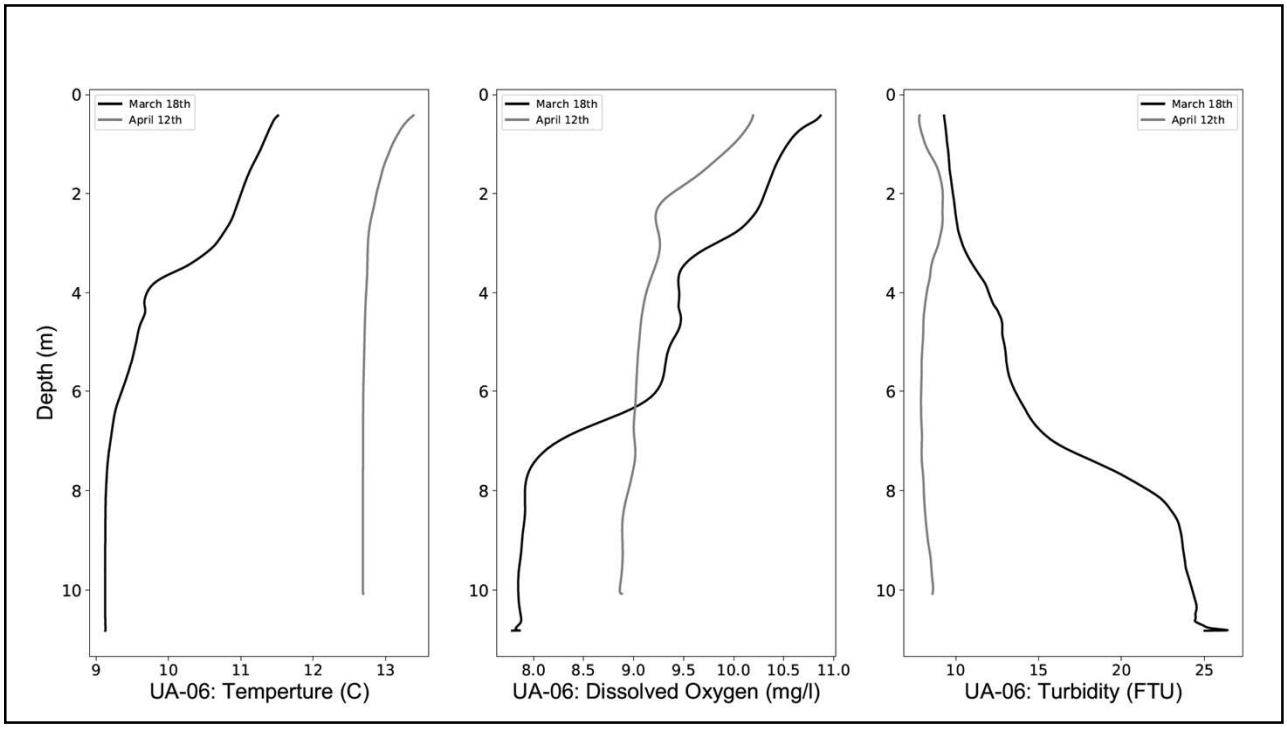


3 Real–time Stream Turbidity Stations
7 In-lake Moorings (Temp and DO)
6-weekly WQ profiling and 7 stations
4-depth nutrient sampling at 7 stations
2 depth phytoplankton ID at 7 stations
3 In-lake sediment traps
7 Met. Stations
Multiple sediment core stations

2


Kelsey Creek (Dec 2018 - April 2019)
Middle Creek (Dec 2018 - April 2019)
Scotts Creek (Dec 2018 - April 2019)
Discharge [cfs]
Turbidity [NTU]
Discharge - DWR
Turbidity - UC Davis
Turbidity - Lake County SW Monitoring
Probe was clogged
12-01-18
12-15-18
01-01-19
01-15-19
02-01-19
02-15-19
03-01-19
03-15-19
04-01-19
04-15-19

3


March 18th
April 12th
Depth (m)
UA-06: Temperture (C)
UA-06: Dissolved Oxygen (mg/l)
UA-06: Turbidity (FTU)

4

Clear Lake: Data Results

Sample Date : 3/19/18

Sample Site	Depth (m)	NO_3+NO_2 (ppb)	SRP (ppb)	DOC (ppm)	PP (ppb)	TDP (ppb)	TDN (ppb)	Chl-a (ppb)
UA-01	1: 0.5	45.71	28.26		12.99	45.78	377.15	
UA-01	2: 6	45.40	27.80		12.55	46.09	400.82	
UA-01	3: 9	60.90	31.71		11.22	46.40	408.45	
UA-01	4: 10	58.37	38.14		14.55	54.51	435.93	
UA-06	1:							
UA-06	2:							

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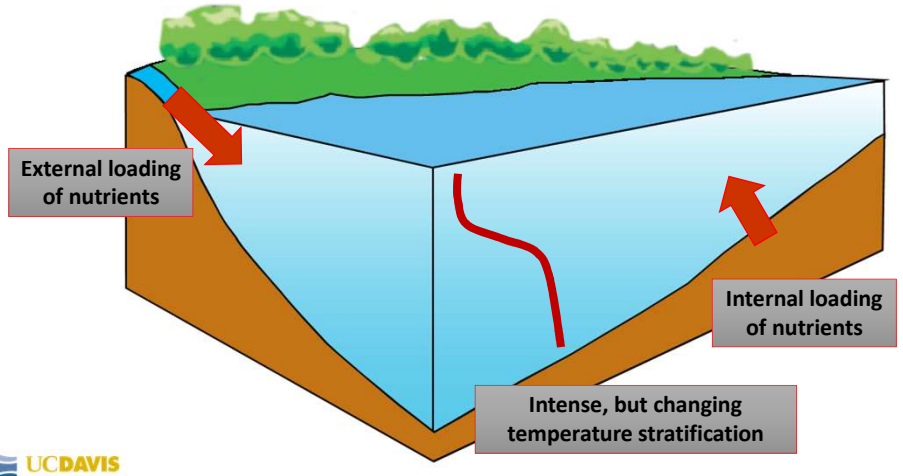
Fundamental Question - What drives eutrophication and blue-green blooms?



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1. Real-time stream turbidity measurement. Provides better estimates of stream nutrient and sediment fluxes.
2. Sediment N & P release rates (under aerobic and anaerobic conditions). Internal loading not considered in the TMDL, but it has the potential to be a major source.
3. Nutrient distributions in all 3 basins
4. Quantifying particulate nutrient flux with sediment traps.
5. Oxygen depletion rates and distribution of anoxic water to quantify internal nutrient release potential and timing. Implications for fish too
6. Future ADCP and AUV operations will quantify the spatial distribution of WQ components (oxygen, chlorophyll, phycocyanin, temperature, conductivity, turbidity).
7. Review of past data WQ data, plus review of existing cyanobacterial data collection
8. Remote sensing to quantify cyanobacterial distributions.
9. Watershed modeling
10. 3-D Lake modeling, calibrated with the data being collected, will allow for an understanding of the distribution of contaminants and the design of control measures for internal phosphorus, cyanobacterial blooms, and MeHg control in the future

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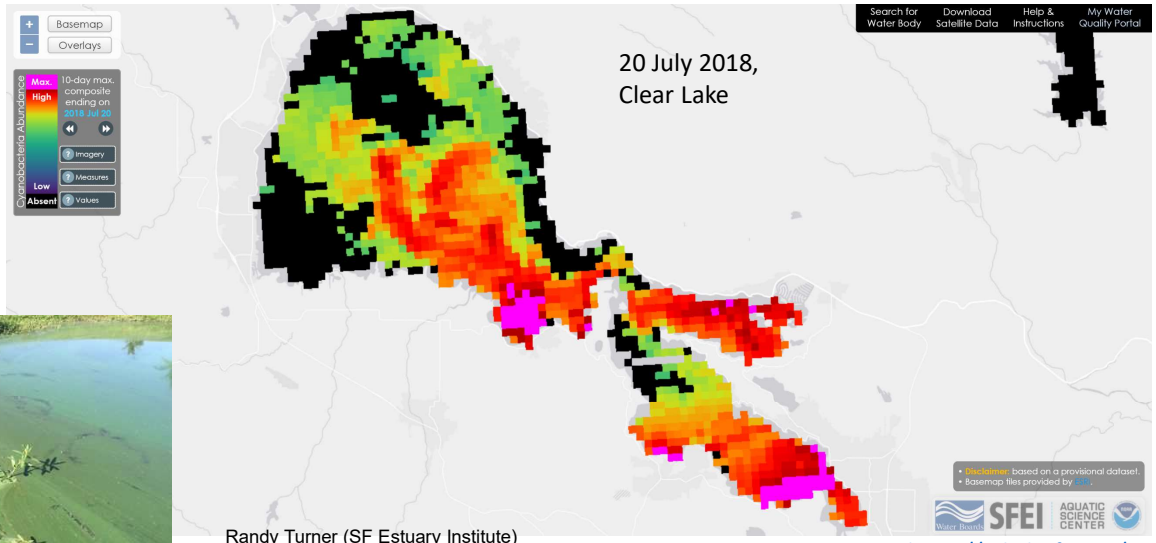
Cyanobacteria Blooms



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https://cchab.sfei.org/

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