

# Lake Chelan Water Quality

*Update for the Lake Chelan Watershed Planning Unit*

*LCWPU Meeting  
June 13, 2018*



Photo Taken June 11, 2018  
Near Lucerne



# Synoptic Update



Joe Heinlen's boat with Adrienne, Hanna and Matt collecting samples as Phil and Steve go by on the Lady II to collect Stehekin River and Railroad Ck. samples

- Secchi depths (*OK*)
- Nutrient data (*reassessing*)
- New collaborations with Flathead Lake Biological Station, USFS and NPS (*will all be incredibly valuable*)
- 15-minute data Sunset Marina and profiles collected with the EXO3 multiparameter probe (*providing key insight*)
- Fiber optic cable temperature data (*anxiously awaiting calibrated data from summer when the internal seiche will be at its peak*)
- Invasive species risk assessment (*planning ongoing*)
- **Distribution of Asian clams (*progress!*)**
- **Periphyton (*key initial data from Robin Matthews, WWU*)**
- Bathtub ring (*planning for summer*)
- Strategic Planning (*2<sup>nd</sup> visioning meeting June 29<sup>th</sup>*)
- Student involvement (*continuing success!*)



All Things Lake Chelan added 2 new photos.

March 29 · 🌐

April Slagle's Environmental Science class got some real science education on Wednesday, March 28 when they joined Phil Long of the Lake Chelan Research Institute to conduct an Asian clam abundance survey. For the full story on invasive species go to [allthingslakechelan.wordpress.com](http://allthingslakechelan.wordpress.com).



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Brandi Simpson, Jennifer Maydole, Jackie Revard and 12 others like this. Oldest ▾

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# First Asian clam surveys on Lake Chelan

(Chelan HS and Roots Community School)

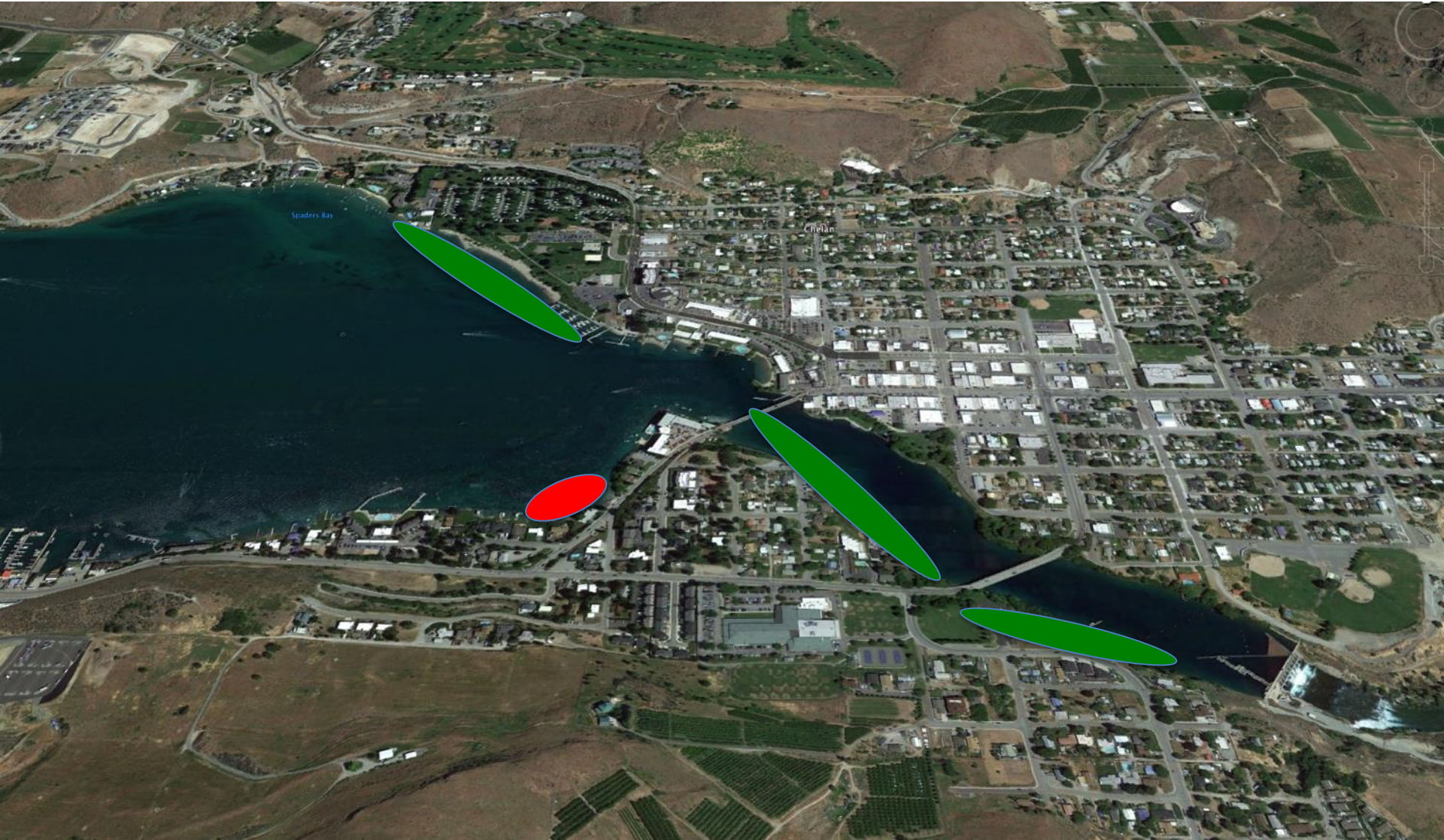


# Asian Clam Survey Locations





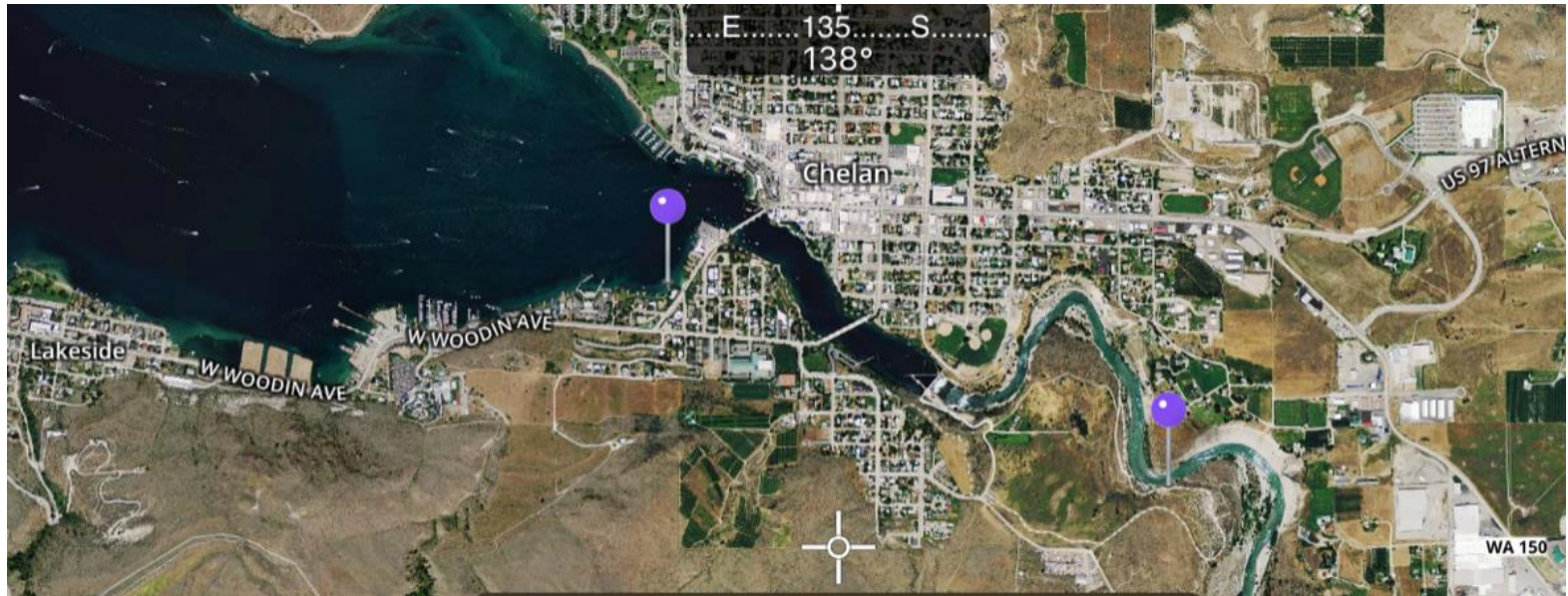
# Asian Clam Survey Locations (detail)





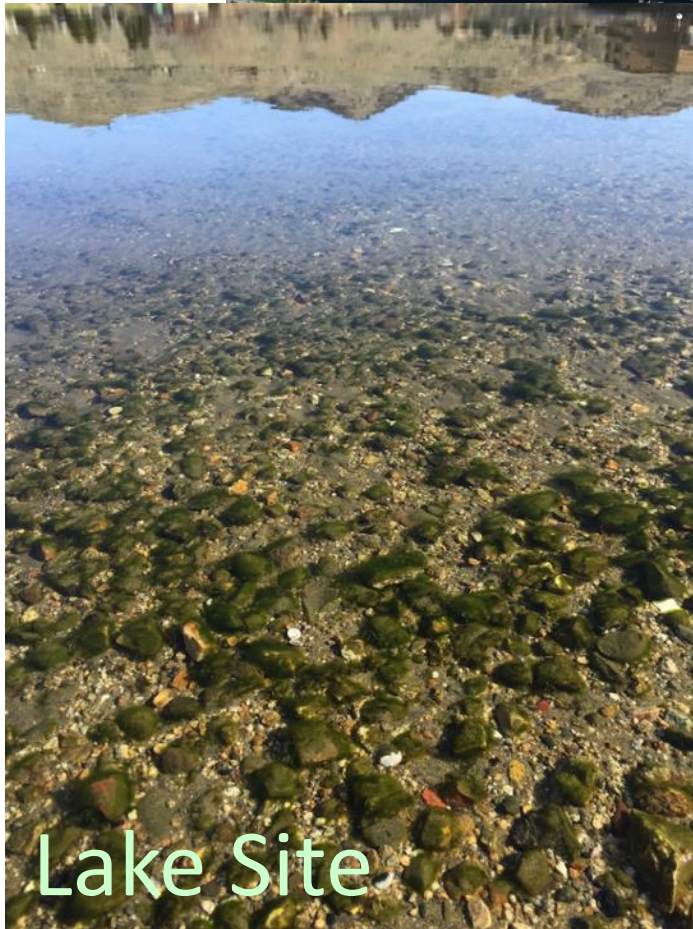
# Periphyton sample locations and photos

April 3, 2018



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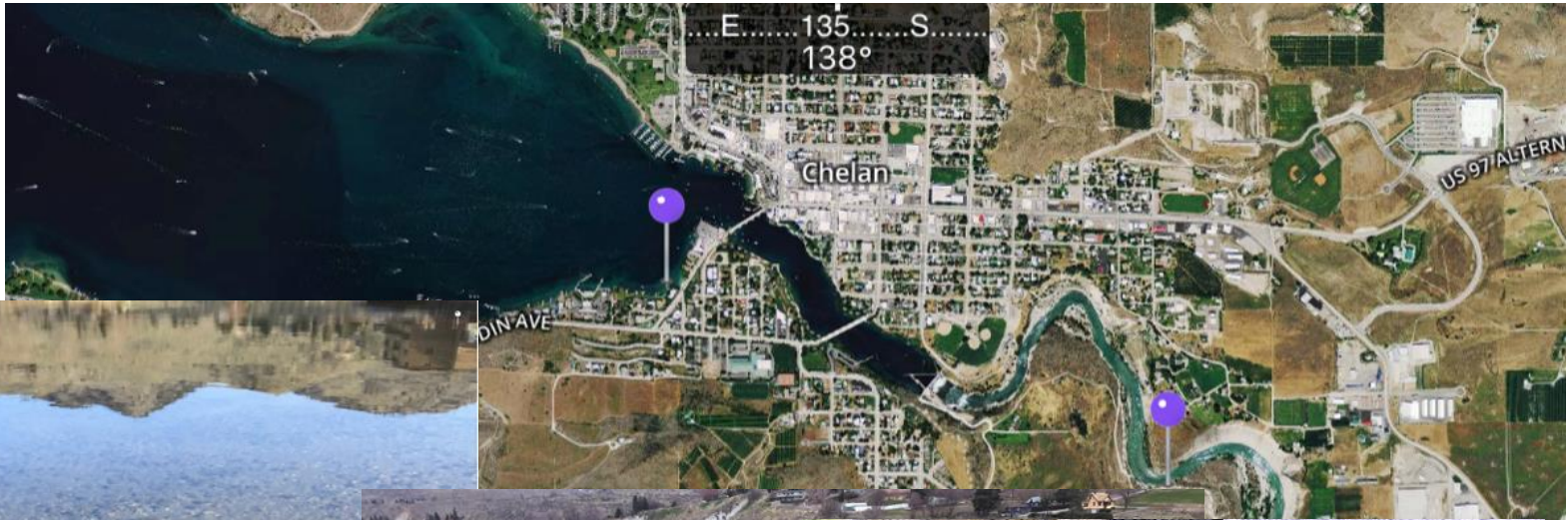
April 3, 2018



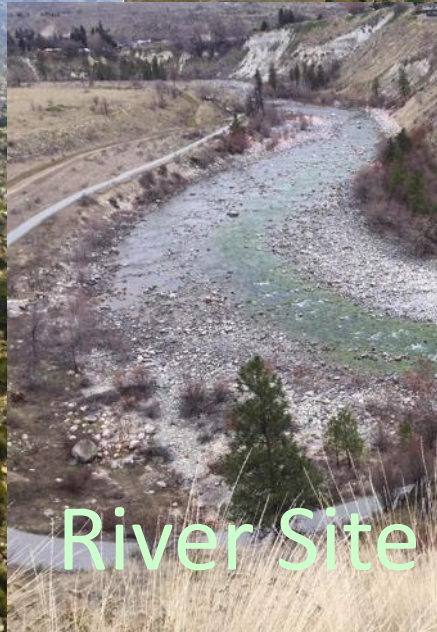


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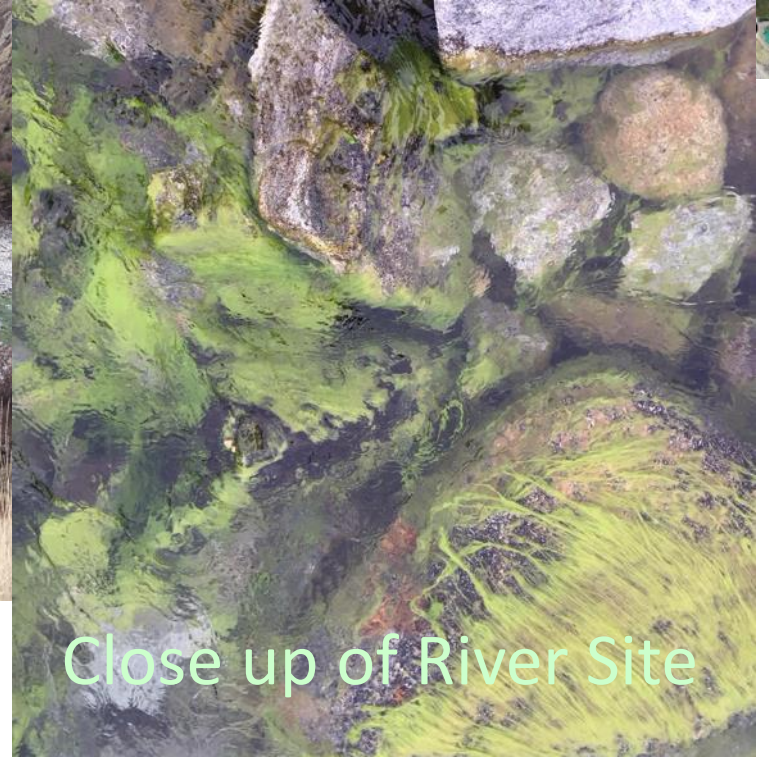
April 3, 2018



Lake Site



River Site



Close up of River Site



# Algae identification from Lake Chelan (LCa, LCb) and the Chelan River (CRa, CRb)

(Robin Matthews, PhD, Western Washington University)

<b>Algae</b>	<b>Site(s)</b>	<b>Type</b>
Tychonema	CRa	Cyanobacteria - filamentous
Cymbella group	CRa	Diatom
Didymosphenia geminata	CRa, CRb	Diatom
Encyonema	CRb	Diatom
Fragilaria	CRa	Diatom
Synedra (renamed Fragilaria)	CRa	Diatom
Tabellaria	CRa	Diatom
Crucigenia	CRb	Green - colonial
Cosmarium	CRa	Green - desmid
Staurodesmus	CRa	Green - desmid
Oedogonium (spp)	CRa	Green - filamentous
Spirogyra	CRa	Green - filamentous
Ulothrix (spp)	CRb, LCa, LCb	Green - filamentous
Zygnema	CRa	Green - filamentous



# Next Steps

- **Asian Clams:**
  - Repeat surveys as the water drops this fall
  - Recruit volunteer divers to do underwater surveys this summer
  - Expand surveys to new areas
  - Refine methods
- **Algae:**
  - Planning a summer program to monitor algae at Stink Creek, a representative sea wall, and the Chelan River
  - Extend sampling into the fall
  - Long term goal is quantify algae growth, systematically monitoring the bath tub ring

