

Evaluating a Lake Tahoe nearshore assessment strategy: A circumnavigation survey, August 2011

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**Poster will be presented by J. Reuter (UC-Davis) J. Landy (EPA)

We had the opportunity to apply a high-resolution nearshore sampling strategy, developed in the US/Canadian Laurentian Great Lakes, to Lake Tahoe. The strategy uses towed in situ sensors (physico-chemistry and biology) oscillated from near surface to near bottom while a vessel is underway (~4-5 kn) along a semi-constant depth contour parallel to shore. EPA and UC-Davis collaborators conducted a nearshore circumnavigation of Lake Tahoe (~ 98 km) at the 15-20 m depth contour. Several 5-10 km stretches were repeated within the week-long sampling, during which we also did supplemental tracks throughout Emerald Bay, intensive grids along select shallow shelf/beach areas, and some inshore-to-offshore transects around the lake. In addition to towed sensors, we sampled fixed stations for chemistry and biology, additional sensor profiling (including ADCP current velocity measurements), and water chemistry of major tributaries sampled around the lake. This presentation will provide preliminary descriptive results for the entire nearshore. For example, the comprehensive towing results reveal broad scale spatial patterns along the shoreline and suggest a few specific areas of reduced water clarity during this survey. The sampling strategy and results are relevant to issues addressed in Lake Tahoe's fine sediment and nutrient TMDL to restore historic pelagic lake clarity, and to the separate effort to improve nearshore standards and monitoring. Related, our presentation will highlight how modeling and data syntheses will use survey results to link watersheds with the nearshore, and evaluate ecological interactions between the nearshore and the main body of the lake.