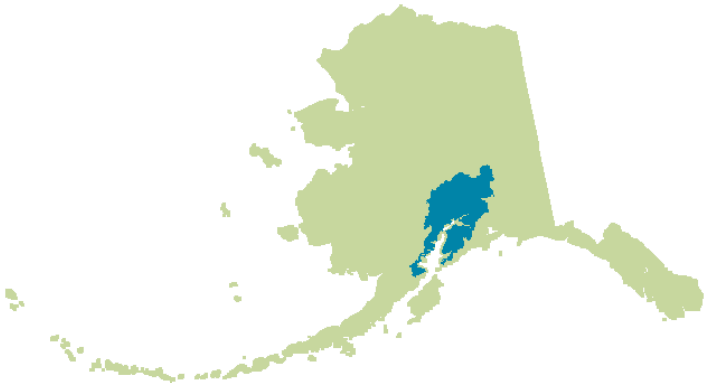
Citizens' Environmental Monitoring Program

2010 Year In Review


Two Moose
No Name
Ruby
Rice
Upper Fritz
Lower Fritz
Bridge
Upper Miller
Lower Diamond
Palmer
Upper Woodard
Lower Woodard
2010
Citizens' Environmental Monitoring Program
Anchor River & Kachemak Bay Watersheds
Monitoring Sites
N
W
E
S
0
3
6 Miles

2010 Year In Review



Cook Inletkeeper is a community-based non-profit organization that combines advocacy, outreach, and science toward its mission to protect Alaska's Cook Inlet watershed and the life it sustains.

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Cover Photos:

(l-r) Holly Aderhold samples at Lower Woodard Creek, looking upstream at No-Name Creek from the North Fork Road, Carla Milburn fixes dissolved oxygen at Ruby Creek.

Report prepared by:

Rachel Lord
Outreach & Monitoring Coordinator
Cook Inletkeeper
3734 Ben Walters Ln. Suite 201
Homer, AK 99603
(907) 235-4068 x29
rachel@inletkeeper.org

2010 data QC and graphs by Katie Gavenus

2010 In Review

2010 was a big year for the Citizens' Environmental Monitoring Program (CEMP). We embarked on a 5-year strategic plan to complete baseline datasets on our local streams and create a library of CEMP baseline water quality reports. In order to meet these goals, we are celebrating the successes of our long-term volunteers and re-focusing on streams that still fall short of a baseline dataset. Big thanks to Neil and Kyra Wagner, who completed baseline data collection on Upper Beaver Creek in March, Diana Carbonell who completed data collection on Upper Fritz Creek in December, and Anne and Todd Wieland who completed data collection on Rice Creek in December. Join us at the 2011 Splash Bash in July to honor our volunteers and celebrate these successes!

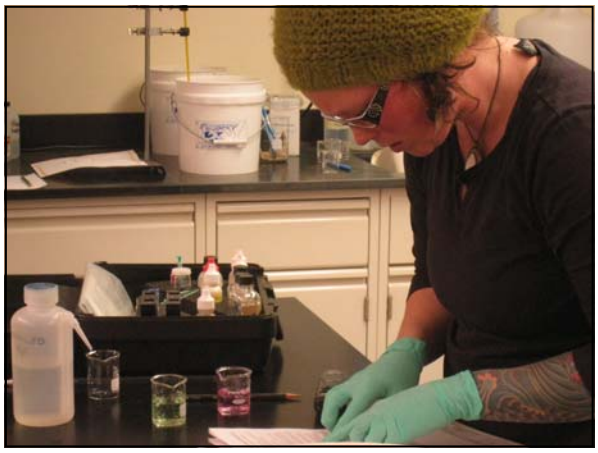
In 2010, 22 volunteers donated 387 hours of their time collecting valuable baseline water quality data at 12 sites, making an annual total of 170 site visits in the Homer area. Sixteen volunteers came out for re-certification in March, and we trained 4 new volunteers (Adrian Knowles, Brad Phelps, Holly Aderhold, and Jenny Stroyeck) in April. With their efforts we obtained 100% complete datasets for ALL of our CEMP streams! This is an unprecedented achievement, and I can't thank our volunteers enough for this kind of dedication.

In other monitoring news, we assessed aquatic invertebrates at 5 new sites in June and again in August. We placed temperature data loggers at 6 CEMP sites from May through October. We put out the 2009 Year In Review, and distributed 2 CEMP Newsletters in April and September. The weather was beautiful yet again for Splash Bash in July. We had good food, and excellent music provided by Work In Progress. Congratulations to Karen West, 2010 CEMP Volunteer of the Year. Karen has volunteered with Inletkeeper since 2005. She's logged over 100 hours in the last 5 years at Palmer Creek, and spent nearly 20 early mornings wading into Kachemak Bay to take water samples at Homer's recreational beaches for our BEACH sampling program. Karen and her puppy Forty are always a pleasure to see around the lab and in the field! The coveted (and to date singular) Golden Meter Award was presented to Anne Wieland for over 10 years of service to CEMP in the Homer area. We are proud to have such amazing people working with us to protect water quality and healthy salmon habitat.

Anne Wieland has monitored streams with CEMP for over 10 years. At the 2010 Splash Bash she was honored with the Golden Meter Award for her work protecting water quality in the Homer area.

Our Volunteers

Over 300 volunteers have been trained since 1996 to collect water quality data in the Homer area. Water quality monitors are dedicated to collecting high quality data for the Kachemak Bay and Anchor River Citizens' Environmental Monitoring Program, and through their efforts we are reaching our goal to document baseline water quality in these watersheds. These data will help inform our conservation efforts and guide development projects to protect clean water and healthy salmon.



(Top) Will Schlein and 2010 Alaska Conservation Foundation intern Marcella Dent sifting through samples of aquatic insects from Upper Miller Creek.

(Left) Adrien Knowles learning how to calibrate a Hanna meter during 2010 CEMP training.

Many thanks to our 2010 CEMP volunteers:

Adrien Knowles and Brad Phelps, Anne Wieland and Todd Gustafson, Bob Burns and Judi Nestor, Carla Milburn, Debbie Oudiz, Diana Carbonell, Frank Vondersaar, Holly Aderhold, Jim Brown, Jim Levine, Jenny Stroyeck, Karen West, Kyra and Neil Wagner, Lee and Jenny Dewees, Marcus York, Pam Joy, Phil Gordon, Sara Thompson, Scott Miller and Will Schlein

CEMP Reporting

Over the past decade, Inletkeeper has produced annual reports that detail the water quality monitoring efforts during the past year. This Year In Review provides the public and interested stakeholders with an overview of CEMP monitoring efforts during 2010, including monthly water quality sampling and summer bioassessment efforts. Graphs, raw data, and quality assurance records from all of our 2010 monitoring efforts and previous annual reports are available at our website: www.inletkeeper.org. Starting in 2011, baseline reports will be released as baseline datasets are completed on a site-by-site basis. These comprehensive reports will include GIS analysis for each watershed, all CEMP water quality data, a habitat assessment and photos. The first round of reports will be released in 2011, starting with the baseline report for Upper Beaver Creek (monitored by Neil & Kyra Wagner from 2002-2010).

We use the following as guidelines for defining a baseline dataset:

- 5+ years of data with at least 80 site visits
- At least 40 site visits during summer months
- At least 5 site visits during every month of the year
- 3 years of continuous temperature monitoring (at select sites)
- 6 bioassessment sampling events over at least 3 years (at select sites)

For more information about these guidelines, see the CEMP Effectiveness Report (2003) available online at http://www.inletkeeper.org/CEMP/effectiveness.htm.

(Top) Beaver Creek will be the first site with a baseline report, to be released in 2011.

(Middle) Looking upstream at Bidarka Creek during the summer of 2010. The second baseline report will be for Bidarka Creek.

(Bottom) Frank Vondersaar monitored Bidarka Creek from 2005—2010.

Monitoring Water Quality

CEMP volunteers monitor the following water quality parameters: temperature, dissolved oxygen, pH, specific conductance, coliform bacteria, and turbidity. Volunteers attend a 3-day training to become certified monitors, and attend performance evaluation sessions every year to maintain their certification. Data collected through CEMP are stored in a Microsoft Access database, and Inletkeeper's Outreach & Monitoring Coordinator manages the data. A full description of CEMP methods, our Quality Assurance Project Plan (QAPP), and our quality assurance documents can all be found on Inletkeeper's website: www.inletkeeper.org. As part of our assessment we compare our data to the Alaska Department of Environmental Conservation's water quality standards (see the table below). Each CEMP site is held to the water quality standards for its designated use. These uses are included in the CEMP site table on the next page.

Department of Environmental Conservation Alaska Statewide Water Quality Standards 18 AAC 70					
Designated Use	**Water Temperature**	**Dissolved Oxygen**	**pH**	**Fecal Coliform Bacteria (FC)**	**Turbidity**
Water Supply: drinking, culinary, and food processing	May not exceed 15C	Dissolved Oxygen (DO) must be > or = 4.0 mg/l	May not be < 6.0 or > 8.5	In a 30-day period, the geometric mean may not exceed 20 FC/100ml, and not more than 10% of the samples may exceed 40 FC/100ml	Not to exceed 5 NTU above natural conditions when the turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU
Water Supply: Growth and propagation of fish, shellfish, aquatic life, and wildlife	May not exceed 20C. May not exceed where applicable: Fish migration routes: 15C Fish spawning areas: 13C Fish rearing areas: 15C Egg & fry incubation: 13C	DO must be > or = 7.0 mg/l. For waters not used by anadromous or resident fish, DO must be > or = 5.0 mg/l. The concentration of DO may not exceed 110% of saturation in any samples collected.	May not be < 6.5 or > 8.5. May not vary more than 0.5 pH units from natural conditions.	Not applicable	Not to exceed 25 NTU above natural conditions
Water recreation: contact recreation (freshwater)	May not exceed 30C	DO must be > or = 4.0 mg/l	May not be < 6.5 or > 8.5	In a 30-day period, the geometric mean may not exceed 100 FC/100ml, and not more than one sample, or more than 10% of the samples if there are more than 10 samples, may exceed 200 FC/100ml	Not to exceed 5 NTU above natural conditions when the turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when natural turbidity is more than 50 NTU, not to exceed a maximum increase of 15 NTU

CEMP Monitoring in 2010

CEMP volunteers conducted baseline water quality monitoring at 12 sites in 2010. Four sites were located in the Anchor River watershed and 8 in the Kachemak Bay watershed (see map on the back of the front cover). The table below shows each site, the year it was first monitored, the total number of site visits to-date, the number of site visits in 2010, and its designated use.

Inletkeeper volunteers monitor local streams 16 times per year: once a month in the winter (September through April) and twice a month in the summer (May through August). Our annual minimum requirement is 75% completed site visits (at least 12) per site for baseline data collection. In 2010 all sites met the criteria for a full dataset!

CEMP monitors each site for water temperature, air temperature, dissolved oxygen, pH, conductivity, turbidity, and bacteria. Photographs are taken quarterly at all sites.

For the purposes of displaying data from 2010, sites are grouped into geographically similar locations. These groups, used throughout this report, are: Anchor River Sites (Two Moose Creek, Ruby Creek, No-Name Creek, and Bridge Creek), Lower Diamond Creek, Woodard Creek (Upper and Lower sites), City Sites (Palmer Creek and Upper Miller Creek), Fritz Creek (Upper and Lower sites), and Rice Creek.

2010 CEMP Sites

Creek Sites	Year Began	2010 Monitors	Total Site Visits	2010 Site Visits	Designated Use
Two Moose	2002	Marcus York	56	14	Growth & propagation of fish
Ruby	1997	Carla Milburn	86	12	Growth & propagation of fish
No-Name	2002	Jim Levine & Jenny Stroyeck	81	15	Growth & propagation of fish
Bridge	1997	Jim Brown	74	12	Water supply
Lower Diamond	2000	Lee & Jenny Dewees	98	13	Growth & propagation of fish
Upper Woodard	1998	Frank Vondersaar, Adrian Knowles, & Brad Phelps	84	15	Water recreation
Lower Woodard	1998	Will Schlein & Holly Aderhold	120	16	Water recreation
Palmer	2005	Karen West	76	15	Water recreation
Upper Miller	2004	Bob Burns & Judi Nestor	72	15	Water recreation
Upper Fritz	1997	Diana Carbonell	157	14	Growth & propagation of fish
Lower Fritz	2009	Scott Miller	28	16	Growth & propagation of fish
Rice	1999	Anne Wieland & Todd Gustafson	112	13	Water recreation

2010 Water Quality Summary

Our water quality sampling indicated no persistent effects of pollution in most CEMP streams during 2010. Summer temperatures in Two Moose Creek, an anadromous tributary to the Anchor River, continue to be higher than the state standards for fish migration, spawning, egg incubation and fry rearing. We will continue to place temperature data loggers in this stream for the next several years to better assess the status and potential needs for restoration or watershed action. During spring break-up there was a series of exceedences of *E. coli* bacteria at both Upper and Lower Fritz Creek. By late-April bacteria levels had dropped below water quality standards at both sites. We will continue to collect water samples to test for bacteria at both Upper and Lower Fritz Creek during spring break-up in 2011 to monitor for potential persistent causes of concern.

(Top) Bob Burns and Judi Nestor during re-certification in April 2010
(Middle) Holly Aderhold demonstrating the usual stream width during overflow conditions at Lower Woodard Creek in December.
(Bottom) Local businesses support CEMP
(Left) Scott Miller's picture of Lower Fritz Creek on May 28, 2010, looking upstream.

2010: Water Temperature

During CEMP site visits, monitors record water and air temperatures using alcohol-filled thermometers. Fish and other aquatic organisms are adapted to living within a certain temperature range. Changes in riparian (or streamside) vegetation, groundwater inputs, weather, and climate patterns can all affect water temperatures.

Average air temperature across all site visits was 45° F, with a maximum of 68°F at Upper Fritz Creek in July and a minimum of 10°F at Ruby Creek in November. The average water temperature across all site visits was 5.6°C, with a maximum temperature of 15° C at Upper Miller Creek in May and a minimum of -5° C at No-Name Creek in February and Lower Fritz Creek in January, February, and March. Water quality standards for fish spawning (>13°C) were violated 2 times in our anadromous streams; both exceedences occurred at Two Moose Creek.

After a very cool mid-June, water temperatures peaked in late-June and early-July. Temperatures began to fall by August, and reached lows in December and January.

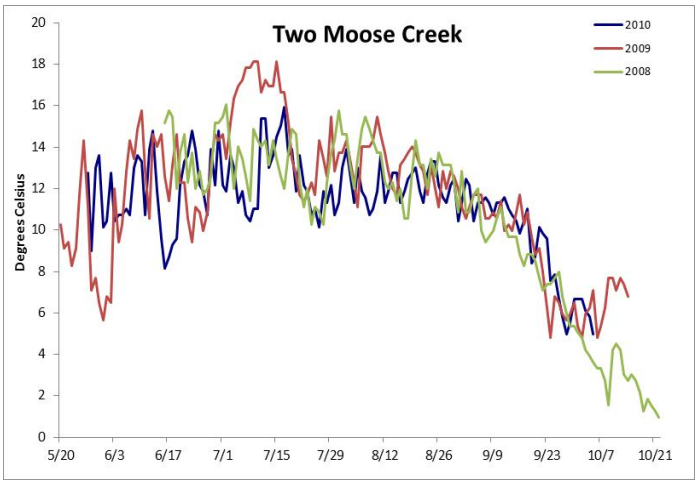
We placed continuous temperature data loggers in 6 CEMP streams in 2010: Two Moose, Ruby, Lower Diamond, Lower Woodard, Lower Fritz, and Palmer Creek. These loggers recorded temperature every 15 minutes from mid-May through mid-October (when they were removed). The figures on the right show the maximum daily temperatures at each site for 2008, 2009, and 2010. Following a very cool period in mid-June of 2010, water temperatures in these streams were similar to those in 2008 and generally cooler than 2009. During 2010, peak temperatures exceeded water quality standards for fish spawning (>13°C) on 32 days at Two Moose Creek. Standards for fish migration (>15°C) were violated 4 times at Two Moose Creek. Water quality standards for fish spawning (>13°C) were violated 4 times at Lower Fritz Creek, once in late-June and three times in mid-July. No exceedences were seen at other sites with data loggers. Hand-held thermometers continue to dramatically underestimate the number of violations of state water quality standards for temperature at

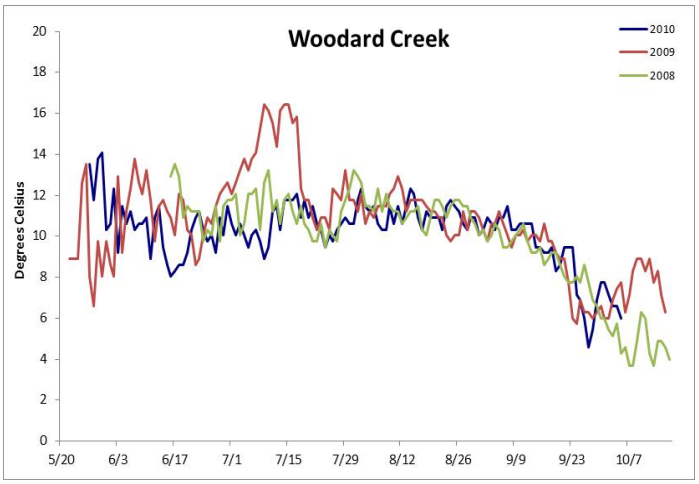
(Top) Sara Thompson putting a temperature data logger in at Lower Fritz Creek in May 2010.

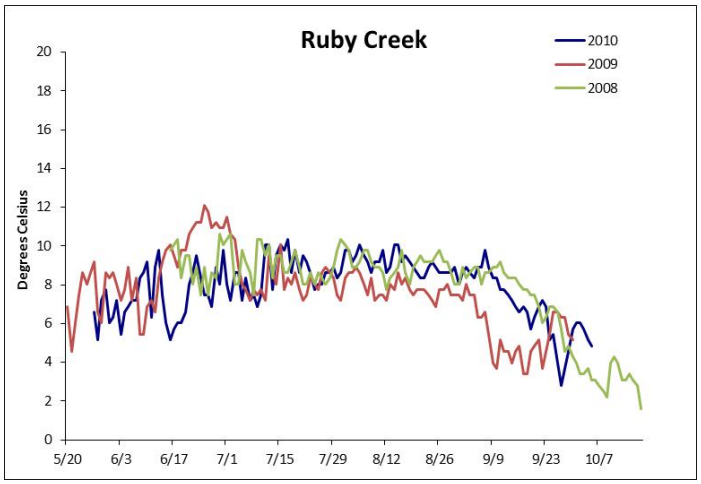
(Bottom) CEMP Coordinator Rachel Lord putting in a temperature data logger at Palmer Creek in May 2010.

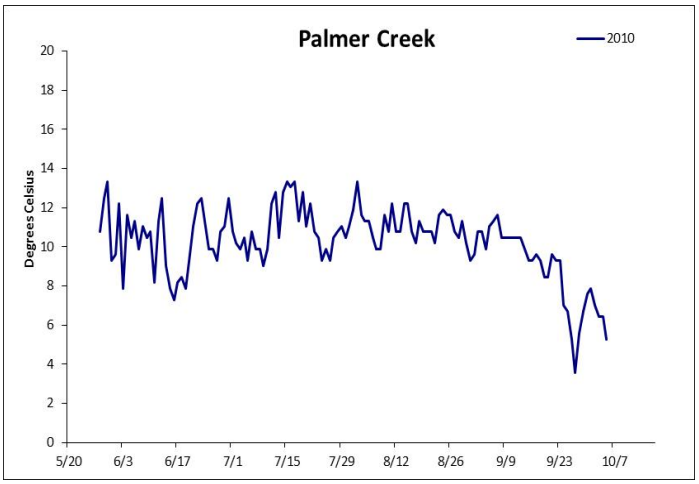
Water Temperature (Continued)

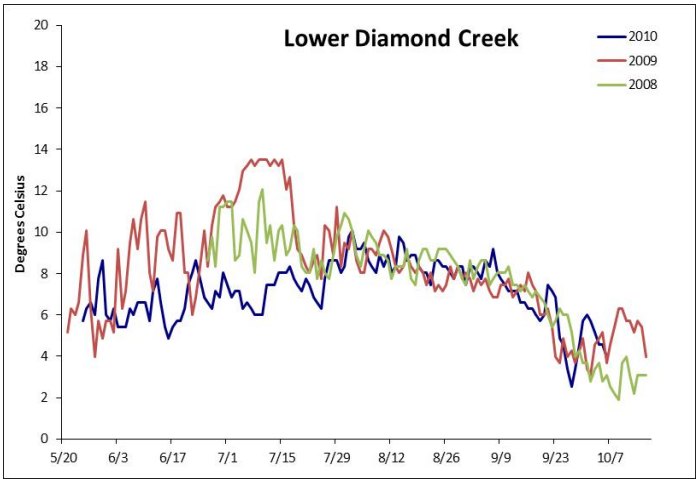
CEMP sites. Inletkeeper will continue to place temperature loggers at priority streams to better understand local water temperature patterns.

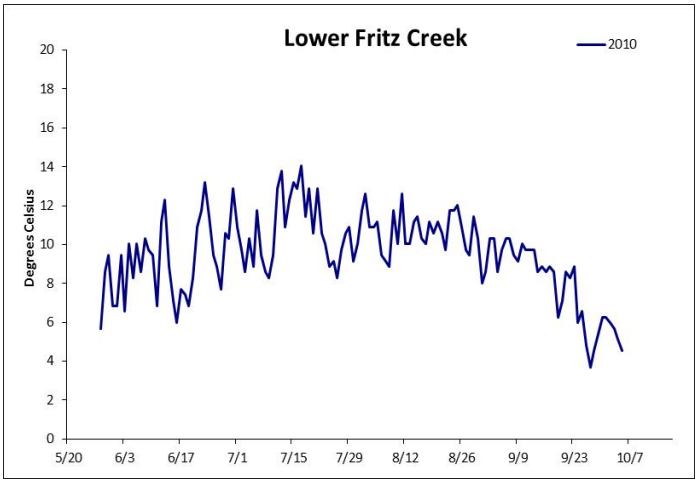












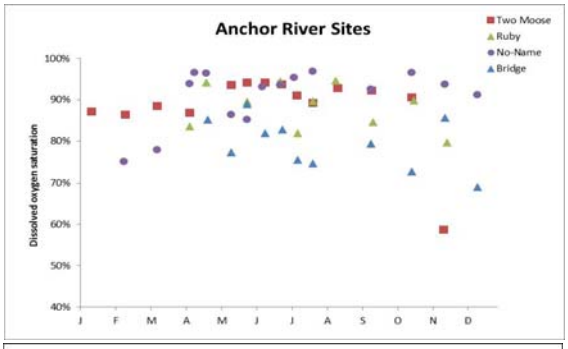
Maximum daily water temperatures, recorded by continuous data loggers, in six CEMP streams from May through October. We only have data from 2010 in Palmer Creek and Lower Fritz Creek.

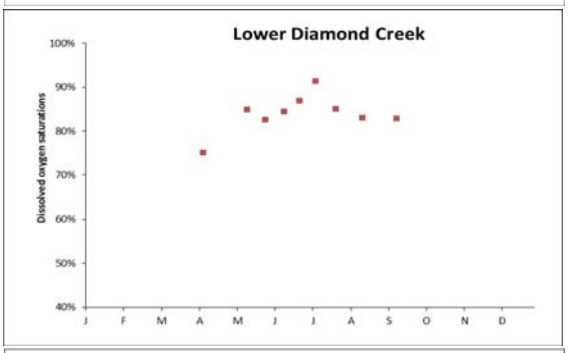
2010: Dissolved Oxygen

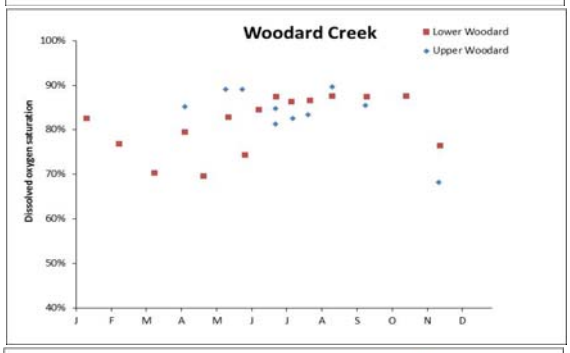
CEMP monitors the levels of dissolved oxygen (DO) in our streams. Oxygen is needed by fish and other aquatic organisms to live. We measure DO using a chemical titration, and express it as a concentration of milligrams of oxygen per liter of water. The amount of oxygen that can be dissolved in water is temperature dependent; colder water can hold more oxygen. Therefore we also look at how saturated the water is with oxygen, that is – how much oxygen does it hold compared to what it could hold at that temperature. Saturation is expressed as a percent.

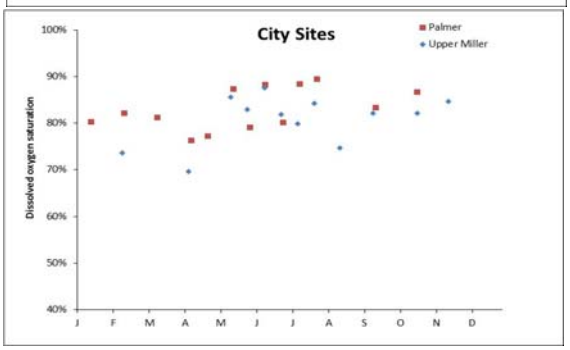
Changes in dissolved oxygen can be caused by turbulence and interactions with the air (like in a waterfall), decaying plant matter, sewage, and effluent wastewater inputs. High levels of photosynthesis and increased mixing with the air through riffles and small waterfalls could increase saturation levels above 100%, creating a condition of supersaturation. Supersaturation was not recorded at any CEMP sites during 2010.

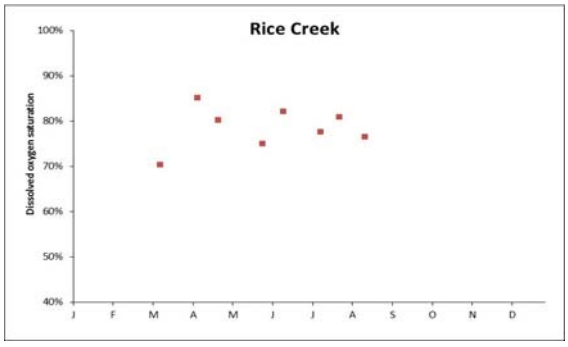
There were no exceedences of the dissolved oxygen water quality standard at any CEMP site during 2010. Lower saturation levels tend to occur in the spring and winter when water samples are often taken through holes in ice. Rice Creek and Miller Creek had the lowest average dissolved oxygen levels during 2010, ranging from 70% to 86% and 69% to 87% respectively throughout the year.

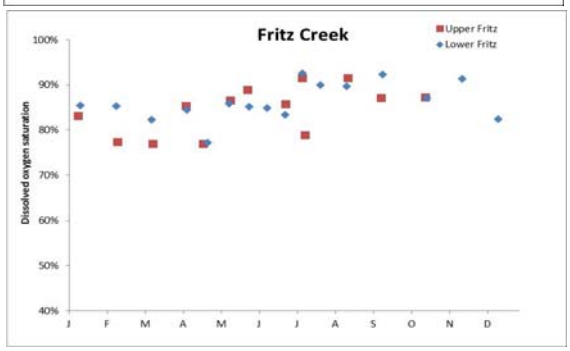






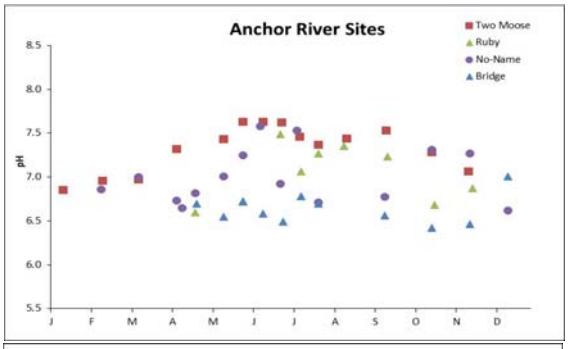


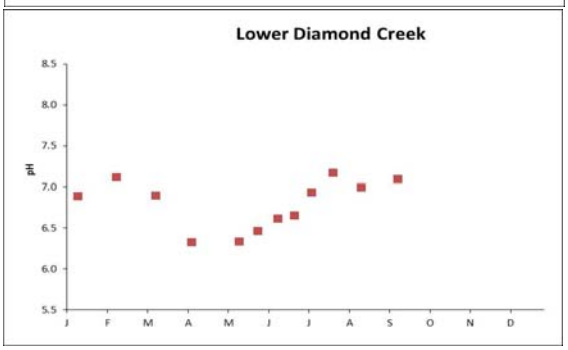


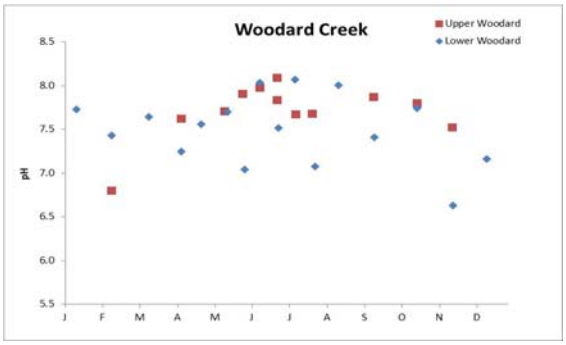


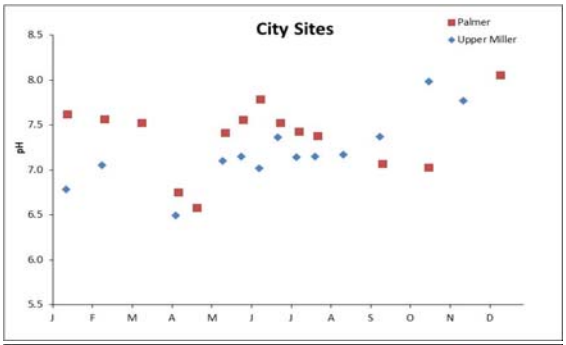
Dissolved oxygen saturation levels at all CEMP sites during each month of 2010.

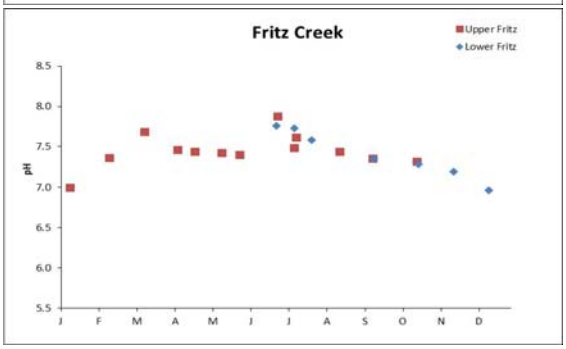
2010: pH

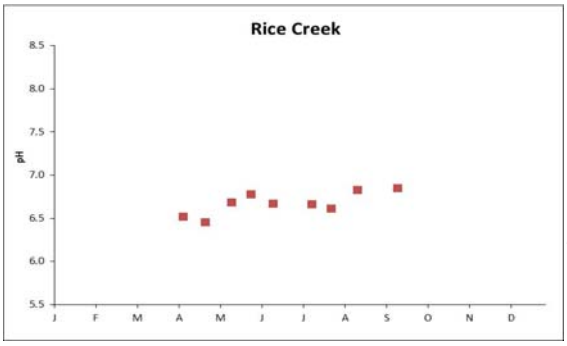












pH at all CEMP sites during each month of 2010.

pH is a measure of the level of activity of hydrogen ions in the water. It is on a logarithmic scale and ranges from 0 (acidic) to 14 (basic). Most streams naturally range between 6.5 to 8.0 pH units. Monitoring pH provides CEMP with a background level of acidity in streams in the Kachemak Bay and Anchor River watersheds. Differences in pH can result from rain and groundwater inputs, decaying plant material, and inputs from runoff. Rain water tends to have a lower pH, ranging from 5.6-5.8.

We saw seasonal variation in pH at CEMP sites in 2010; this variation is typical of what we have seen in previous years. pH increased as the year progressed, and began to drop back down by early-winter. This seasonal pattern was most pronounced at Two Moose, Ruby, No-Name, Lower Diamond, and Palmer Creeks. pH remained fairly high at Palmer Creek through the winter months of 2010. In general we see higher average pH at CEMP sites that are closer to urban areas and some high-traffic roads. Woodard Creek, Palmer Creek, Upper Miller Creek, and Upper Fritz Creek all have slightly higher pH on average across all years than other CEMP sites in more rural locations.

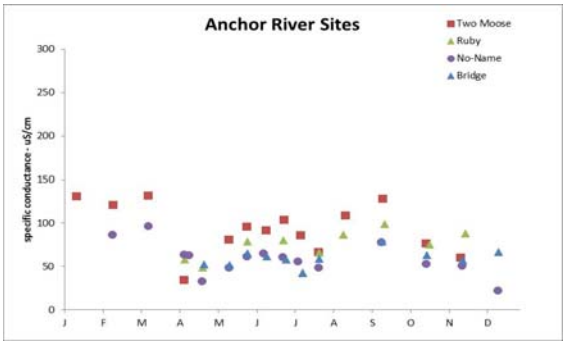
There were 8 exceedences of the state pH water quality standard in 2010. pH was below 6.5 at 3 times at both Bridge Creek (July, October, and November) and Lower Diamond Creek (April, May, and June).

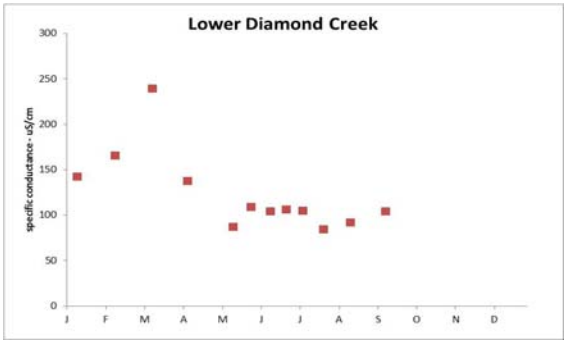
2010: Specific Conductance

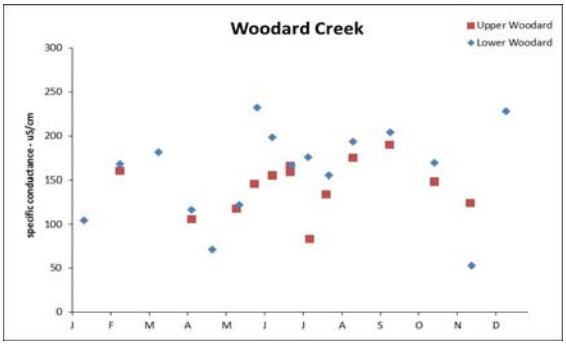
Specific conductance measures the ability of water to conduct an electrical current at a given temperature. It is recorded as micro Siemens per centimeter (µS/cm). The presence of ions, or salts, in water increases the ability to conduct electricity; thus, conductivity is a measure of the dissolved solids in a stream. Conductance is influenced by groundwater and rainwater inputs as well as road and other urban runoff.

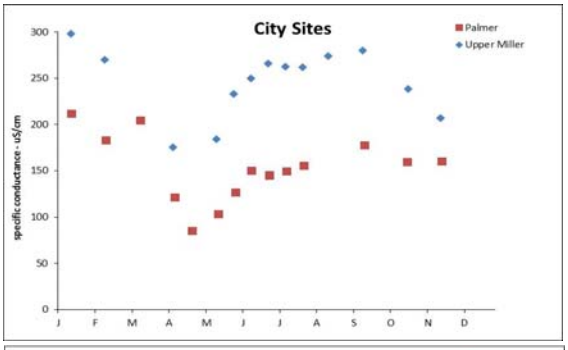
Specific conductance in CEMP streams during 2010 ranged from 22 µS/cm at No-Name Creek to 282 µS/cm at Upper Miller Creek. Upper Miller Creek also had the maximum recorded conductance value in 2009. Generally we see higher conductivity at streams located in the City of Homer which are adjacent to increased amounts of impervious cover such as roads and parking lots. Runoff from these surfaces during rain events generally increases the amounts of dissolved solids in the water and thereby increases conductivity levels.

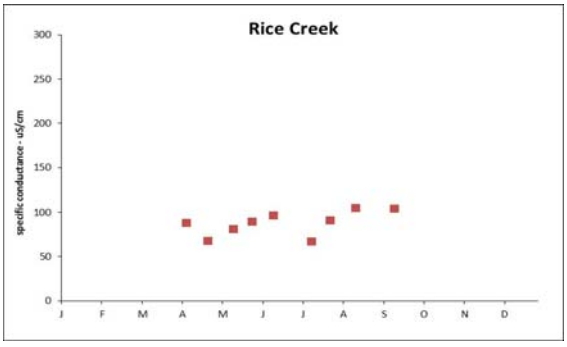
Conductance at No-Name Creek and Bridge Creek, both located in areas with undeveloped upstream landscapes, stayed below 100 µS/cm throughout the year. City streams, including Upper and Lower Woodard, Palmer, and Upper Miller Creeks, had average conductance levels from 143 µS/cm to 246 µS/cm over the course of the year. The minimum conductance value recorded at Upper Miller Creek during 2010 was 175 µS/cm.

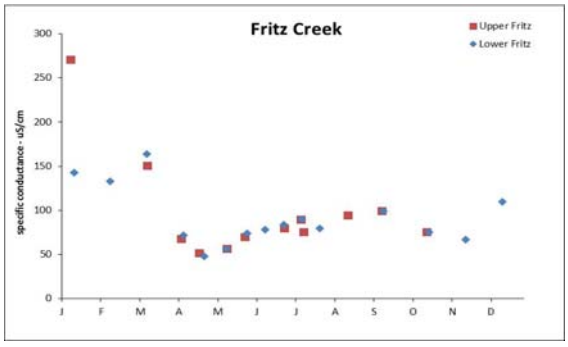






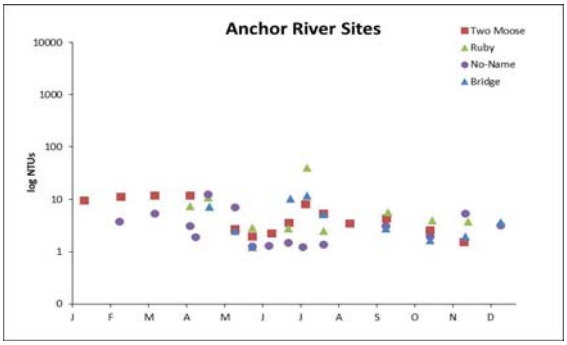


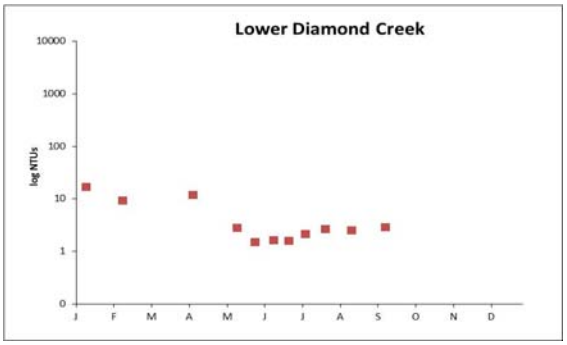


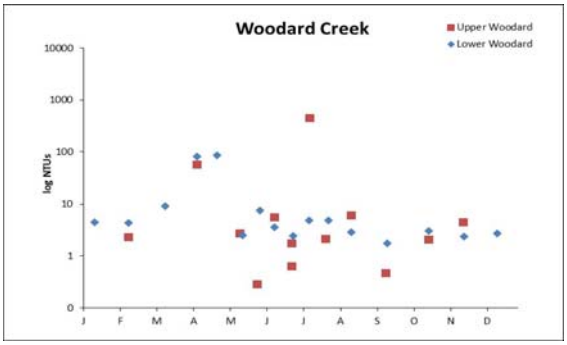


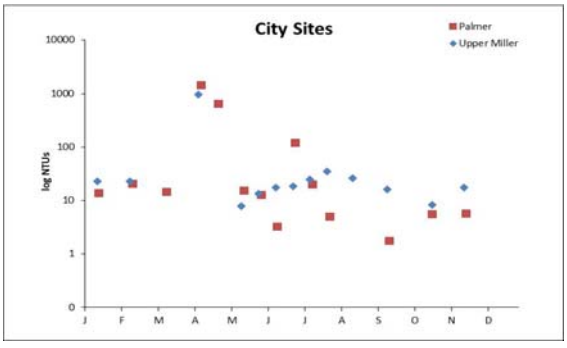
Specific conductance at all CEMP sites during each month of 2010.

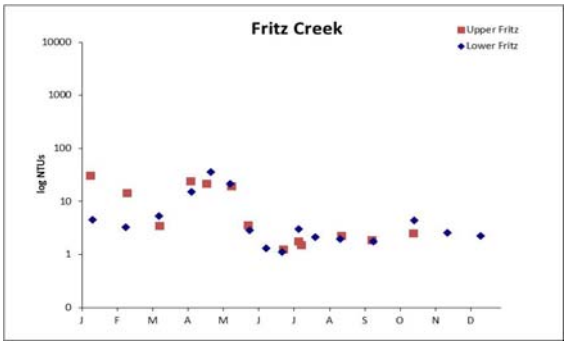
2010: Turbidity

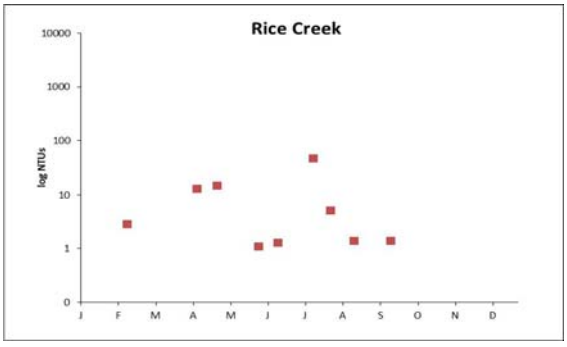












Turbidity, shown here on a log scale, at all CEMP sites during each month of 2010.

Turbidity is a measure of water clarity and describes the amount of light scattered or absorbed by water. Silt, clay, organic material, and colored organic compounds can all influence turbidity. Natural and human caused erosion, as well as storm water runoff can increase turbidity. Negative impacts from increased turbidity may include increased water temperatures, decreased habitat for fish and other aquatic organisms, and more opportunities for the growth of potentially harmful bacteria.

Turbidity (expressed on a logarithmic scale in the graphs) was higher in most CEMP streams during the spring months of April and May. These months typically see increased precipitation and stream flows, and are influenced by the effects of spring breakup. This is a typical pattern that we have seen during previous years of CEMP data.

Anchor River sites all had similar patterns, with the exception of a spike in turbidity at Ruby Creek on July 26. Similar spikes were seen at Bridge Creek, Upper Woodard Creek, and Rice Creek which were sampled on the same day. Historical weather data from the Homer airport shows a rain event that occurred largely on July 26th that brought just over an inch of rain to the area. Throughout the season, Upper Miller Creek had turbidity values consistently above 15 NTUs. With the exception of the spring runoff period mentioned above, all other CEMP sites had turbidity levels below 10 NTUs.

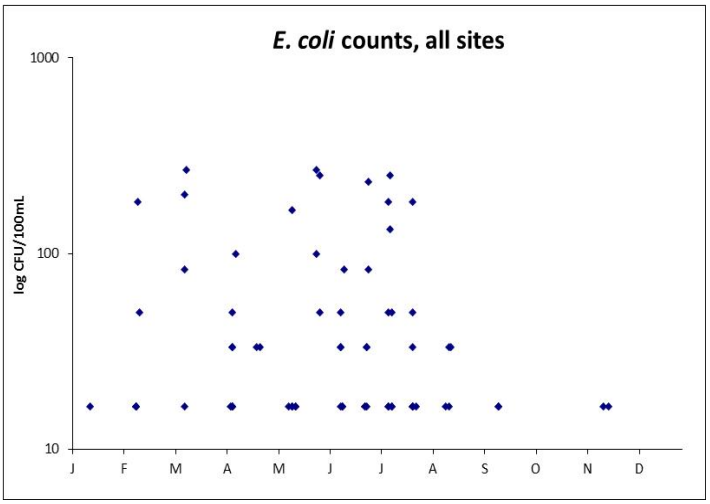
2010: Coliform Bacteria

CEMP volunteers monitor for total and fecal coliforms at all sites throughout the year. Many types of coliform bacteria are normally found in soil and water. *E. coli* is an indicator of fecal bacteria that is found in the intestines of human and other warm-blooded animals. State water quality standards are for fecal coliforms. CEMP tests reveal the number of colony forming units (CFUs) of *E. coli*, which we utilize as a preliminary indicator of fecal coliforms. In the event of a persistent exceedences through both high and low stream flows, the CEMP Coordinator sends samples to a lab in Anchorage for official fecal coliform testing. Finding *E. coli* levels that are above state water quality standards may be indicative of contamination by runoff from animal waste, decaying animals, or human waste from sewage or septic tanks.

Table of Fritz Creek bacteria testing results from Spring 2010. Results in parentheses indicate that they are not in exceedence of state water quality standards.

***E. coli* sampling at Fritz Creek, Spring 2010**			
Date	**Sampling**	**Upper Fritz** Avg. CFU/100mL	**Lower Fritz** Avg. CFU/100mL
March 29	Regular	267	200
March 30	Exceedence	367	217
April 6	Exceedence	200	(183)
April 13	Exceedence	833	667
April 20	Exceedence	(133)	(183)
April 29	Regular	(17)	(17)
May 8	Regular	(0)	(0)

High *E. coli* colony counts at Fritz Creek on March 29th prompted Inletkeeper to work with volunteers to continue monitoring both Upper and Lower Fritz Creek weekly. Results from this sampling are show in the table above. High *E. coli* levels persisted in Fritz Creek through the middle of April. After April 20th, no bacteria exceedences occurred at Fritz Creek



E. coli levels at all CEMP sites during 2010 (expressed on a log scale). Only sites with detected colonies are shown.

in 2010. We will monitor Fritz Creek closely during spring break-up in 2011 to assess if this is a persistent seasonal water quality concern.

From a total of 158 regular site visits with bacteria tests successfully performed, 90 had no *E. coli* colonies present. Of the 68 site visits with *E. coli* present (not including the exceedence sampling efforts at Fritz Creek in the table below), there were 6 preliminary exceedences of the state water quality standard in CEMP streams. In addition to Upper and Lower Fritz Creeks, exceedences in 2010 were at: Rice Creek, 267 CFU/100mL on June 13, Palmer Creek, 250 CFU/100mL on June 15 and 233 CFU/100mL on July 13, and Bridge Creek, 250 CFU/100mL on July 26.

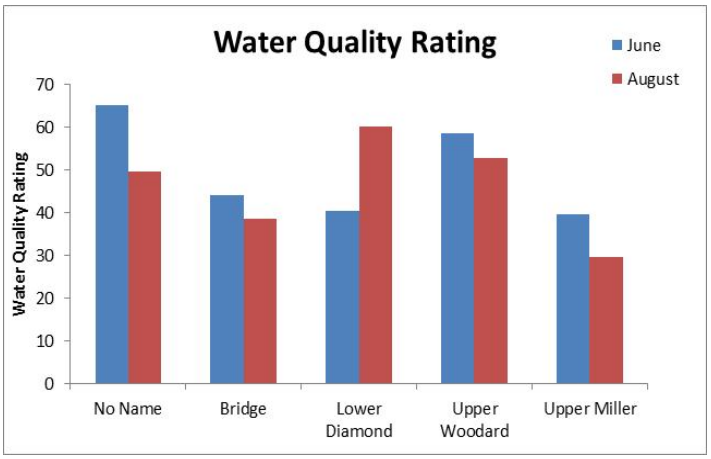
2010: Biological Monitoring

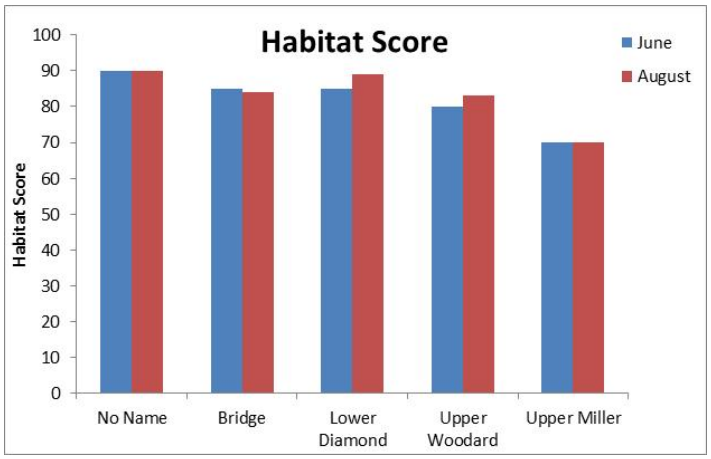
Our summer Stream Team of specially-trained CEMP volunteers conducted biological monitoring, also known as bug assessment, at 5 CEMP sites in 2010: No-Name Creek, Lower Diamond Creek, Upper Woodard Creek, Bridge Creek, and Upper Miller Creek. 2010 was the first year of biological monitoring at these sites, with the exception of one monitoring event at Lower Diamond Creek in 2004. Biological monitoring is done twice per summer, once in June and again in August, to capture seasonal variability in bug communities.

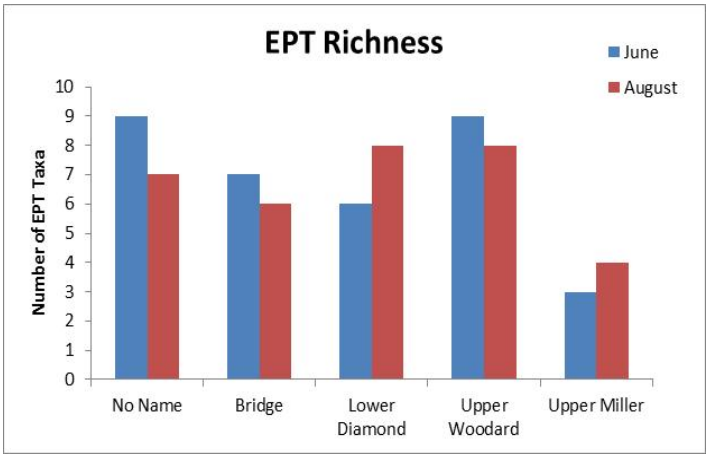
Water quality ratings (WQRs) are calculated for each site based on the types of bug communities present. This rating takes into account the different types of bugs that are found in the stream and how those types typically respond to pollution or disturbance. Higher WQRs indicate that there were more sensitive invertebrates present in the stream than tolerant bugs. The highest WQRs in 2010 were at No-Name Creek in June (65.0) and Lower Diamond Creek in August (60.1). The WQRs at Upper Woodard Creek in 2010 (June = 58.5, August = 52.8) were higher than at Lower Woodard Creek at similar times of the summer in 2009 (June = 45.7, August = 40.1). Upper Miller Creek had the lowest WQRs in both June (39.6) and August (29.7).

Habitat scores were fairly high at all five sites, with the lowest again at Upper Miller Creek (70 in both June and August). Habitat scores take into account 10 different aspects of bug habitat, including how full the streambed is and the amount and diversity of habitat types within the reach.

EPT Richness is a count of the number of insect taxa that are sensitive to pollution in each stream. EPT stands for Ephemeroptera, Plecoptera, and Tricoptera—three sensitive groups of aquatic insects. Most streams had higher counts of EPT taxa in June versus August, except for Lower Diamond and Upper Miller Creeks. Highest EPT Richness during our sampling was at No-Name Creek and Upper Woodard Creek .







Water quality rating, habitat scores, and EPT richness counts for all CEMP sites with biological assessment done in 2010.

Thanks for a great 2010!

Clockwise, from top left: Phil Gordon and Kyra Wagner sample aquatic invertebrates at Lower Diamond Creek, Debbie Oudiz conducts a habitat assessment at Upper Miller Creek, Brad Phelps and Adrien Knowles during CEMP training in April, Holly Aderhold, Jenny Stroyeck, and Sue Mauger at CEMP training in the lab, Katie Gavenus helped QA and summarize all 2010 CEMP data for the Year In Review, Fresh Sourdough Express donated a beautiful cake for the 2010 Splash Bash, Inletkeeper celebrates our volunteers at the 2010 Splash Bash at Bishop's Beach. Center: Beaver Creek with brilliant fall colors in August 2010.