Community Clean Water Institute

Lower Russian River Water Quality

Fact Sheet 3– Dutch Bill Creek

Dear Resident of the Dutch Bill Creek Watershed,

Community Clean Water Institute (CCWI) has performed water quality testing and monitoring on the Lower Russian River since 2002. The monitoring is part of a study encompassing 9 sites over 13 miles from Dutch Bill Creek in Occidental to the river mouth at Jenner. This Fact Sheet describes the monitoring performed on Dutch Bill Creek.

This fact sheet provides information about the current status of water quality on the creek in your area including things you can do to preserve water quality in your watershed, such as becoming a citizen monitor. We encourage you to become an advocate for clean water in your community and to use this fact sheet as a starting point for implementing best management practices in your household and in your watershed. Thank you for your interest in learning more about the Russian River and Dutch Bill Creek watersheds and in supporting clean water in your community.

Citizen Monitor Tom Austin takes readings for pH and Electrical Conductivity using handheld meters on a stretch of Dutch Bill Creek .

Sincerely,

The Community Clean Water Institute

Water Quality Monitoring on Dutch Bill Creek

Site Name	GPS	Site Description
DBC010	38°26.747"N 122°58.842W	Fish ladder
DBC020	38°26.309" N 122°58.517"W	Westminster Woods, downstream from Bohemian Ranch
DBC030	38°25.489"N 122°57.504"W	Camp Meeker dam
LAN010	38°25.293"N 122°57.154"W	Lancel Creek at confluence of Dutch Bill
DBC050	38°24.887"N 122°57.064"W	75 yards downstream from pump station
DBC060	38°24.645"N 122°56.919"W	Graton Rd. and Main St., at bridge

All sites on Dutch Bill Creek are monitored on a monthly basis by citizen monitors for the following parameters:

- Temperature (air & water)
- pH
- Electrical Conductivity
- Turbidity
- Dissolved Oxygen
- Nitrate & Phosphate

The Lower Russian River Water Quality Monitoring Project is funded by a grant from the State Water Resources Control Board. For more information, contact CCWI at (707) 824-4370 or info@ccwi.org.

Local Water Quality Overview

In December 2001, spawning Coho salmon were found in Dutch Bill Creek for the first time since the 1950s-60s. This is in part due to the dedicated restoration efforts of many local landowners in the watershed**.** These efforts include the creation of scour pools, installation of bolted logs and root wads, and the discontinued use of many summer dams along the creek.

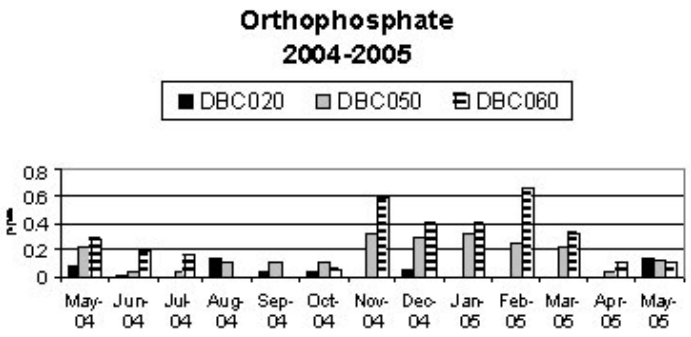
Sources of pollution in the recent past:

Wastewater

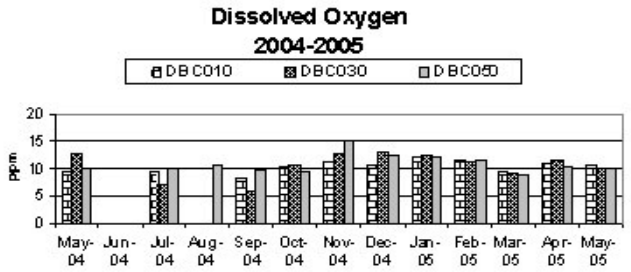
- The Occidental Wastewater Treatment Plant uses a holding pond at the headwaters of the creek, and is allowed to discharge to the creek up to 1% of creek flow between October and May.
- Manure from cattle which graze directly adjacent to the creek near its headwaters also may enter the creek.

Erosion

- Erosion from dirt roads near the creek has been a source of water pollution.
- During the "First Flush" storm monitoring event in October 2004, volunteers collected a sample with elevated turbidity levels originating from a tributary of Dutch Bill Creek that was draining a newly constructed road.



Phosphate stimulates the growth of aquatic plants, providing food for larger organisms, including fish and mammals. Phosphate enters watercourses through lawn and agricultural fertilizers, partially treated and untreated sewage, laundry detergent and commercial cleaning fluids, and through permitted industrial discharges. The EPA recommends levels below 0.1 parts per million (ppm). DBC050 and DBC060, near the headwaters of the creek, exceeded this limit eight times in the course of one year. In contrast, DBC020 farther downstream, had only two exceedences. This suggests the source is near the headwaters. DBC060 was dry in August and September; other months with no data indicate undetectable levels.



Most aquatic organisms need oxygen to survive and grow. Substances such as yard clippings, sewage, oil, and dead organic material reduce the amount of dissolved oxygen (DO) when they break down. An overabundance of algae can also lower the DO available to aquatic organisms. To support most fish life, levels should be between 5-8 parts per million (ppm). Salmonids need levels greater than 6 ppm. Readings on Dutch Bill Creek are generally in this range.

Conclusions & Recommendations

This study is part of an ongoing monitoring project in order to better understand the Russian River watershed. Data indicates sources of nutrients at the headwaters. CCWI recommends special testing to determine if the source is animal or human. Opposite is a list of Best Practices that anyone can use to protect the important resources of the Lower Russian River.

Watershed Best Practices– How You Can Help

These best management practices can help preserve water quality in the Russian River.

Residents

- Save water with low flow toilets, washing machines, showerheads, and drip irrigation.
- Use phosphate-free laundry and dishwashing detergents.
- Stop soil erosion using hay, rocks and gravel to stabilize roads.
- Limit paved surfaces. Use permeable bricks, rock, and gravel. Pavement increases run-off, leads to flooding, and decreases water quality.

- Landscape with nature. Use drought resistant, native plants for landscaping. Irrigate during cooler hours of the day, and limit fertilizer applications on lawns and gardens. Do not spray chemicals within 50 feet of a waterway.
- Maintain your septic system, which reduces costs over time and preserves water quality downstream.
- Store and dispose of chemicals properly. Do not pour toxic chemicals down the drain. Call the County Waste Management Agency for guidelines on disposal of hazardous waste.
- Re-align ditches and culverts to drain to vegetated buffer zones or riparian areas along creeks & streams.
- Protect the forests forever, put a conservation easement on your land. Call Landpaths (707) 544-7284, Bodega Land Trust (707) 876-1806, or Sonoma Land Trust (707) 526-6930 for more information.

Agriculture

- Preserve and restore a shady riparian corridor along streams, rivers and creeks. Do not convert forests to vineyards or other development.
- Reduce the use of pesticides.
- Use drip irrigation to improve water use efficiency.
- Fence livestock to prevent them from walking through the creek.

- Develop a manure management plan for livestock to reduce water pollution.
- Manage livestock to prevent overgrazing.
- Contact local resources for more information: the Natural Resources Conservation Service Petaluma field office for both professional services and funding assistance at (707) 794-1242 x3, or Gold Ridge Conservation District 823-4662, UC Cooperative Extension 565-2621, Sonoma County Agricultural Commissioner 565-2371.

Become a Citizen Monitor

Citizen monitoring is monitoring of the environment by community volunteers interested in watershed protection. Citizen monitors collect water quality data and evaluate stream health on a monthly basis. CCWI has an ongoing citizen monitoring program with residents and neighborhood groups in the Lower Russian River. If you live in this watershed, you can become a citizen monitor. Monitoring your watershed is a great way to get to know your local creeks. Get your feet wet! To find out more, contact the CCWI office at (707) 824-4370 or visit our website at www.ccwi.org.

If you suspect water pollution in your area, contact Russian RiverKeeper (707) 433-1958, Regional Water Quality Control Board at (707) 576-2220, or the County Department of Environmental Health at (707) 565-6565.

Community Clean Water Institute
c/o Town Hall Coalition
6741 Sebastopol Ave #140
Sebastopol, CA 95472

Local Resources for Water Quality on Dutch Bill Creek

Community Clean Water Institute
6741 Sebastopol Ave #140
Sebastopol, CA 95472
(707) 824-4370
info@ccwi.org
www.ccwi.org

Dutch Bill Creek Watershed Group (707) 874-1504
http://www.sonic.net/~david5/coyoteadventures/DBCW1/default.htm

Russian RiverKeeper (707) 433-1958
www.russianriverkeeper.org

Forests Unlimited (707) 632-6070

CCWI Factsheets on Dutch Bill Creek
http://ccwi.org/issues/data.htm

To report water pollution, or find out about beach closures:

County Department of Environmental Health (707) 565-6565
www.sonoma-county.org/health/index.htm

Regional Water Quality Control Board (707) 576-2220
www.waterboards.ca.gov/northcoast

Community Clean Water Institute (CCWI) *is a non-profit 501(c)(3) organization, based in Sebastopol, California. CCWI's mission is to protect water resources and public health by identifying sources of pollution through water testing programs, public outreach and education programs.*

Funding for the Lower Russian River Water Quality Monitoring Project has been provided in part through an Agreement with the State Water Resources Control Board (SWRCB) pursuant to the Costa-Machado Water Act of 2000 (Proposition 13) and any amendments thereto for the implementation of California's Nonpoint Source Pollution Control Program. The contents of this document do not necessarily reflect the views and policies of the SWRCB, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.