



Community Clean Water Institute

Dutch Bill Creek Fact Sheet

Dear Resident of the Dutch Bill Creek Watershed,

Over the past year, Community Clean Water Institute (CCWI) has performed water quality testing and monitoring on Dutch Bill Creek. The creek traverses eight miles northwest from the town of Occidental to the town of Monte Rio, where it drains into the Russian River, which flows into the Pacific Ocean.

This fact sheet explains some of the history of the creek and describes the current status of water quality in the creek. You will also find some things you can do to preserve water quality, including 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 Dutch Bill Creek, and in supporting clean water in your community.

Sincerely,

The Community Clean Water Institute



Recent Creek Monitoring Project

Working with Analytical Sciences, Inc. of Petaluma, CCWI monitored the following parameters as baseline indicators and in relation to wastewater or erosion impacts:

- turbidity
- total and fecal coliform,
- pH,
- dissolved oxygen,
- conductivity,
- temperature
- anion scan.

Sites

Starting from Occidental, going towards Monte Rio

Site 1: At bridge near Graton Rd. and Main Street near Harmony School

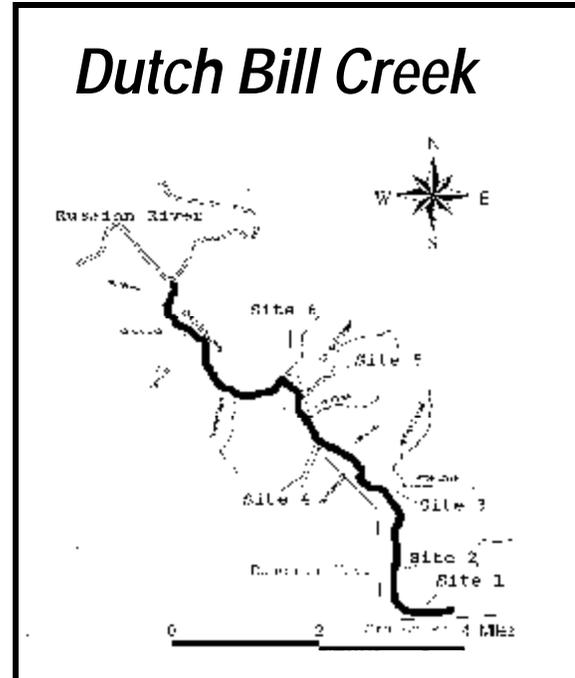
Site 2: 75 yards downstream from pump station, after narrow flow

Site 3: Lancel Creek- near railroad trestle

Site 4: Camp Meeker Dam

Site 5: Downstream from Bohemia Ranch, where Grub Creek enters Dutch Bill Creek on Westminster Woods property

Site 6: Fish ladder



CCWI sampled at 6 sites along Dutch Bill Creek on March 26th, 2002. Sites were chosen for representative creek characterization, potential for effects from wastewater discharges, erosion from dirt roads, or other potential sources, and accessibility and use in future citizen monitoring projects.



Historical Water Quality

Sources of pollution in the recent past

1. 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.

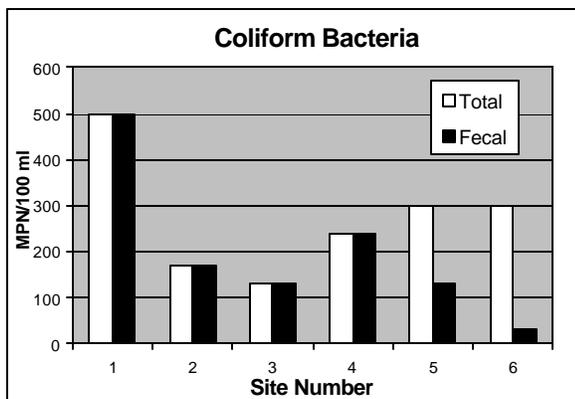
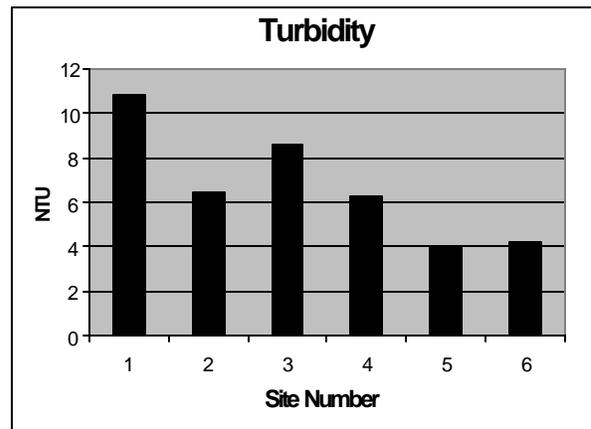
2. Erosion

- Erosion from dirt roads near the creek has been a source of water pollution.
- A landowner near Camp Meeker cited by the Water Board has addressed runoff from roads entering the creek.

Data and Findings

Two parameters, turbidity and coliform, gave interesting results.

Turbidity: Turbidity is a measure of the amount of suspended particles such as algae, sediment, or organic matter. Turbidity was highest upstream at Site 1, with a reading of 10.8 NTU. At this level of turbidity, fish navigation is not impaired, but the creek does not meet drinking water standards.



Coliform: Coliform is a type of bacteria found in creeks. Coliform is a measure of the sanitary conditions in a waterway. Fecal coliform are those found in the feces of warm blooded animals. Coliform numbers were greatest at the top of the creek. Preventing cattle from grazing in the creek is one way to reduce fecal coliform counts.

Conclusions and Recommendations

Site 1 was the most impacted of 6 sites monitored, for both turbidity and coliform. Sites and tributaries downstream registered cleaner, suggesting that the source of pollution is upstream from Site 1, between Harmony School and the Waste Treatment discharge point. Sources of bacteria above Site 1 could be the Occidental Wastewater Treatment Plant, cattle grazing near the headwaters of the creek, or similar activities near the creek. The Best Practices on the facing page show ways residents can help protect the water quality of Dutch Bill Creek. Future monitoring at sites 1 and 6 at a higher sampling frequency would be effective in assessing the water quality over time. Such a monitoring program will establish a benchmark for this waterway. Contact CCWI to become involved in the Dutch Bill Creek Citizen Monitoring Program.

For a full report and more detailed analysis, contact the CCWI office at (707) 874-3803.

Best Practices

These best management practices can help preserve water quality in Dutch Bill Creek.

Residents

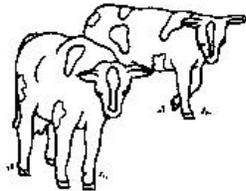
- Convert eroding roads to stable roads with easily obtained materials such as bales of hay and rocks and gravel. For more information contact the Mendocino Resource Conservation District at (707) 468-9223 x 3 for the Handbook for Forest Ranch Roads.
- Purchase inexpensive less-polluting alternatives to household oils and chemicals. Examples include: phosphate-free laundry and dishwashing detergents.
- Limit paved surfaces. Pavement increases run-off, leads to flooding, and decreases water quality.
- Landscape with nature. 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.
 - Properly manage your septic system, which reduces costs over time and preserves water quality downstream.
 - Store and dispose of chemicals properly. Call the County Waste Management Agency for guidelines on disposal of hazardous waste.
 - Take note of road and driveway ditches or culverts which drain directly to the creek. Re-align ditches to drain to vegetated buffer zones or riparian areas.
 - Contact CCWI for additional guidelines you can use to keep sediment and chemicals out of your creek.



Secure gates and fences to prevent illegal trespass by motorcycles and 4-wheel drive vehicles.

Farmers

- Fence cattle to prevent them from walking through the creek.
- Develop a waste management plan for livestock to reduce waste entering water.
- Reduce the use of pesticides.
- Manage irrigation by improving water use efficiency.
 - Manage livestock to prevent overgrazing.
 - Plant riparian (streamside) vegetation in order to serve water quality purposes.
 - Contact the Natural Resources Conservation Service Petaluma field office for both professional services and funding assistance at (707) 794-1242x3.



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. CCWI has initiated a citizen monitoring program with residents and neighborhood groups in the Dutch Bill Creek area. If you live in the Dutch Bill Creek watershed, you can become a citizen monitor. To find out more, contact the CCWI office at (707) 874-3803.



If you suspect water pollution in your area, contact the local regulatory agency, the County Department of Environmental Health at (707) 565-6565, Regional Water Board at (707) 576-2220, or CCWI at (707) 874-3803.



Community Clean Water Institute
PO Box 1082
Occidental, CA 95465

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Local resources for water quality in Dutch Bill Creek

Community Clean Water Institute

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CCWI Board of Directors

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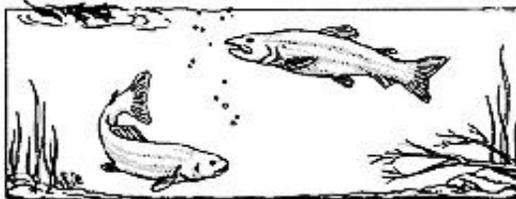
CCWI Staff

*Mike Sandler, Program Coordinator
Sarah Shaeffer, Program Associate
Rachel Peletz, Summer Intern*

**The Dutch Bill Creek Watershed Group- (707) 874-1504;
website: www.monitor.net/~david/coyoteadventures/**

Camp Meeker Park & Recreation Board- (707) 874-9246

**To report water pollution:
Dept. of Env. Health (707) 565-6565
Regional Water Board (707) 576-2220**



The Community Clean Water Institute (CCWI) is a non-profit 501(c)(3) organization, based in Occidental, 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. CCWI is currently engaged in water quality testing and monitoring of several rivers and streams in North Coast Regional Water Quality Control Board Region 1. Funding for this fact sheet and for the Dutch Bill Creek Monitoring Project comes from the Sonoma County Water Agency.