

## Resources for more information:

Carpinteria Creek Watershed Coalition  
684-5405, ext. 449  
[www.carpinteriacreek.org](http://www.carpinteriacreek.org)



Central Coast Regional  
Water Quality Control Board  
805-549-3147  
[www.swrcb.ca.gov](http://www.swrcb.ca.gov)



County of Santa Barbara's  
Project Clean Water  
805-568-3440  
[www.countyofsb.org/project\\_cleanwater](http://www.countyofsb.org/project_cleanwater)



Santa Barbara Coastal  
Long Term Ecological Research  
University of California, Santa Barbara  
805-893-8356  
<http://sbclternet.edu>



South Coast Watershed  
Resource Center  
2981 Cliff Drive, Santa Barbara  
805-682-6113  
[www.watershedresourcecenter.org/wrc](http://www.watershedresourcecenter.org/wrc)



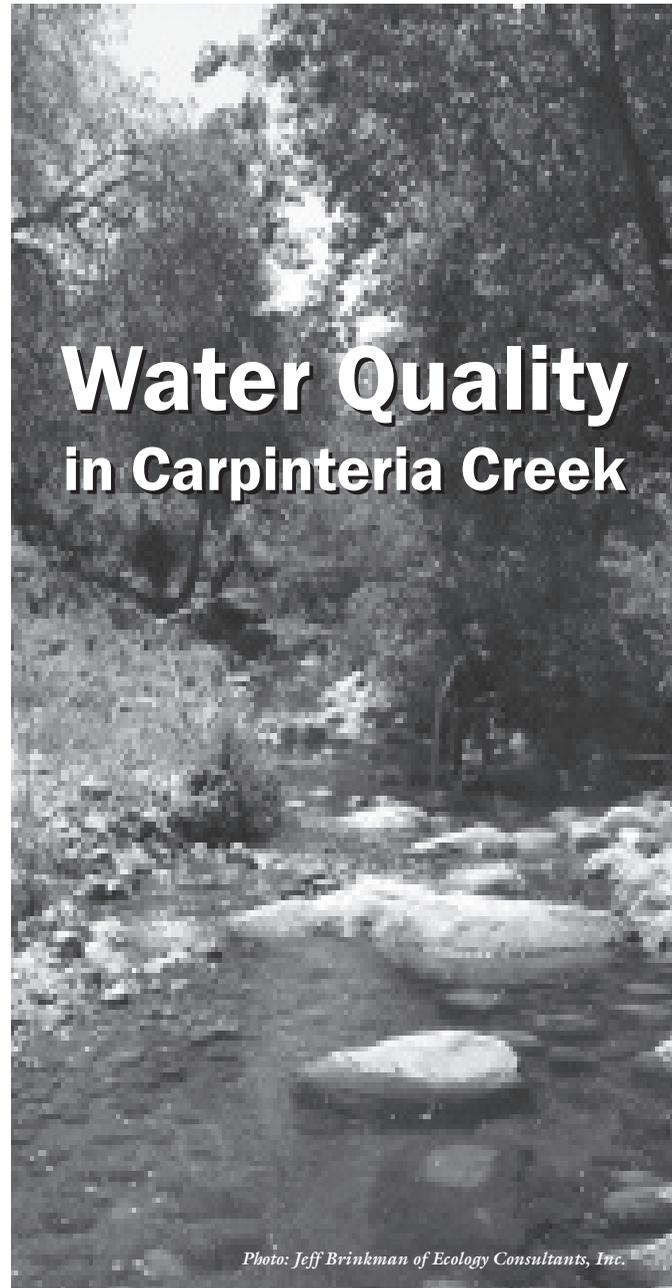
Creek Watchers  
Community Environmental Council  
930 Miramonte Drive, Santa Barbara  
805-963-0583  
[www.communityenvironmentalcouncil.org/](http://www.communityenvironmentalcouncil.org/)



This brochure was partially funded by:

Santa Barbara County's Coastal Resource Enhancement Fund, a partial mitigation of impacts from the following offshore oil and gas projects: Point Arguello, Point Pedernales, Santa Ynez Unit, and Gaviota Terminal.

Department of Fish and Game (Support Program – General Funds), NOAA Fisheries, and the California Coastal Salmon Recovery Program (CCSRP).



# Water Quality in Carpinteria Creek

*Photo: Jeff Brinkman of Ecology Consultants, Inc.*



**Carpinteria Creek  
Watershed Coalition**

**Anything that flows from yards, streets and gutters enters the storm drain and flows to the creeks and ocean untreated.**



*Photo: Project Clean Water*

The water quality in Carpinteria Creek affects the life that depends on the creek, ranging from tiny insects to the endangered steelhead trout, and even humans. The water quality in the creek also affects the health of our local beaches. Although a creek can appear clean, the water can be polluted with fertilizers, pesticides, sediment, oil and grease, bacteria, and other contaminants.

Most of these pollutants come from urban and rural land use practices. In contrast to a “point source” such as a factory, which pollutes the river from a single pipe, these pollutants are diffuse and difficult to identify. They are considered “nonpoint” sources of pollution. That’s why improving water quality in Carpinteria Creek is everyone’s responsibility, including government agencies, community members, businesses, land owners, and agricultural growers.



*Photo: John Southwick and the Cachuma Operations and Maintenance Board*

## What can you do?

There are many things we can do to protect water quality, by limiting pollutants from everyday activities:

- Recycle motor oil and antifreeze.
- Inspect and maintain your car regularly to prevent leaks.
- Wash cars at a commercial car wash where water is collected and treated.
- Pick up after your pet!
- Use non-toxic alternatives to pesticides.
- Control erosion at construction sites.
- Rinse paintbrushes in the sink, not the gutter, when using water-based paint.
- Avoid the use of oil-based paints; take leftover paint and solvents to a hazardous waste collection center.
- Get involved: volunteer with your kids for creek and beach clean up days, or water quality sampling. (Check with Creek Watchers for volunteer opportunities — contact information is on the back of this sheet.)
- Tell your friends and neighbors about what you learned in this fact sheet.
- Do not dump anything down the storm drain - remember, “only rain down the storm drain”.
- Report water quality violations to the proper authorities by calling 1-877-OUR-OCEAN. For example:
  - Restaurants hosing off kitchen mats into the gutter.
  - Construction sites rinsing equipment into the storm drain.
  - Sewer spills.
  - Illegal dumping of wastes into creeks or storm drains.

## What types of pollutants are found in Carpinteria Creek?

One pollutant that exists in Carpinteria Creek is bacteria, which can indicate the presence of disease-causing pathogens. The main sources for this type of bacteria are: warm-blooded creatures, such as wildlife; people not picking up after their pets; and human waste that enters the creek. When sampled and tested, bacteria levels in Carpinteria Creek were generally high, exceeding the state standards for recreational contact.

Bacteria carried to the ocean by the creek can cause the bacteria levels to exceed state standards for recreational contact, and the beach will be posted under advisory. High levels of bacteria can indicate an increased risk of disease for people who swim, surf, or have other contact with the creek or ocean water. Bacteria levels at the beach are usually high during storm flows, but low flow conditions can also trigger beach advisories. Bacteria sources include animal waste, leaking septic systems or sewage spills.

In addition, pesticides, nutrients (fertilizers), and metals have also been found in Carpinteria Creek. These pollutants come from “nonpoint” sources, such as people spraying for ants, fertilizing their lawn, or failing to repair a leaky car. These pollutants can also come from farm operations, or routine maintenance of streets or buildings. Because the sources are many and widespread, this type of pollution is particularly challenging to clean up.

## What’s being done to improve local water quality?

Concerns over catastrophic water pollution in the 1970’s resulted in the Clean Water Act. Under this law, local governments in the Carpinteria Valley, including the City of Carpinteria and the County of Santa Barbara, have developed plans to reduce nonpoint source pollutants. These plans must include elements such as public outreach and participation, methods for identifying and eliminating pollutant discharges, and the creation of guidelines that reduce pollutants during construction and after the new development is complete.

Another strategy contained in the Clean Water Act is to set limits on the amount of pollution that is allowed to enter a body of water, from all sources. The state is required to maintain a list of water bodies that do not meet water quality standards, and this list serves as the basis for the development of strategies to reduce the targeted pollutant. The Central Coast Regional Water Quality Control Board, which is a state agency, is responsible for this program.

### Santa Barbara Coastal Long Term Ecological Research

Although there is increasing concern about the impacts of human activities on coastal watersheds, the beach and the ocean, there have been few long-term studies exploring the link between these environments. Researchers at the University of California, Santa Barbara, are helping to fill this gap by studying the effects of land and ocean derived pollutants on kelp forests.

One portion of this study is examining the contribution of nutrients (fertilizers) from various land uses in the Carpinteria Valley. This Long Term Ecological Research (SBCLTER) project examines the contribution from undisturbed, urban, agricultural, and industrial land uses by taking water samples at locations on Santa Monica, Franklin and Carpinteria creeks. Samples are collected around the clock during storms, and on a weekly basis during dry conditions. Levels of nitrates and phosphates, two common components of fertilizer, are measured from the samples.

Below is a table showing the total amount of nitrate (NO<sub>3</sub>) and phosphate (PO<sub>4</sub>) leaving the Carpinteria Creek watershed during a dry year (2002) and a wet year (2003). The Upper Gobernador site indicates the contribution from undisturbed land, while the 8<sup>th</sup> Street bridge site indicates the contribution of these constituents from urban and agricultural development. A metric ton is 1000 kilograms (2204.6 lbs). Ten metric tons of nitrate export (2003 8<sup>th</sup> Street Footbridge) is equivalent to 1,470 50-pound sacks of lawn fertilizer (30% nitrogen) entering the ocean from Carpinteria Creek watershed in a year.



Photo: Tim Robinson, UCSB

Carpinteria Creek is listed for pathogens (bacteria), and development of a plan to reduce this pollution is scheduled to begin in 2006. The first step in the development of such a plan is to encourage community involvement and the formation of watershed working groups such as the Carpinteria Creek Watershed Coalition (CCWC). The CCWC is currently developing a watershed management plan that will identify and address nonpoint source pollution, including pathogens. This type of community-based action can help prevent regulatory action down the line, and allow the community to identify the most appropriate ways to improve water quality in our creek.

**The Clean Water Act provides guidelines for protecting and improving water quality, but much of the success depends on all of us — changing behavior and habits that result in water pollution, and becoming involved in creating local solutions.**



Photo: Project Clean Water

Project Clean Water employee Tommy Liddell taking a water sample in Carpinteria Creek.

### Water Sampling

As part of the County of Santa Barbara’s Project Clean Water and research at UCSB, storm water sampling was done in Carpinteria Creek during the winters of 1999 – 2004. During storms, samples were collected from Carpinteria Creek from locations throughout the urban area. Project Clean Water typically found high levels of pesticides, nutrients (fertilizers), and metals in Carpinteria Creek. These pollutants come from nonpoint sources, such as people spraying for ants, fertilizing their lawn, or failing to repair a leaky car.

### Bioassessment

Project Clean Water is also conducting a bioassessment study of south coast creeks, including Carpinteria Creek. This study focuses on the use of benthic macroinvertebrates (BMIs), which are small aquatic insects and bugs, as indicators of the health of the stream ecosystem. Changes in the distribution and abundance of certain BMI species can indicate changes in creek health. For instance, if sensitive species begin to disappear, it can be an indication of increasing water pollution or other problems. The goal of the program is to be able to determine how aquatic critters respond through time to changing human influences, including changes in land use, and stream habitat restoration and water quality improvement efforts. For more information on this study, check the Project Clean Water web site listed on the back of this brochure.

