

JACOBY CREEK RESIDENTS'
ACCOUNTS OF THE WATERSHED

Northcoast Region
California Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

The logo for Koken is written in a stylized, cursive script font.

1870 Golfcourse Rd
Bayside, California
95524-9322
phone/fax modem:
(707) 822-8961

Re: Jacoby Creek Watershed

Dear Mr. St. John and Board Members,

This letter is regarding the degradation of the Jacoby Creek Drainage in the 27 years that I have lived in this watershed.

The Regional Water Quality Control Board (Regional Board) declared the area to be a Waiver Prohibition Area with regard to onsite sewage disposal systems (SDS) in 1979. It did so because Regional Board staff found that 1) 20 to 25% of all existing SDS were failing, 2) 28 out of 30 sites surveyed were not suitable for the use of individual systems due to high groundwater, or poor textures or shallow soils, and 3) consistent fecal coliform levels in excess of those considered safe for direct human contact were found in the majority of surface water drainages throughout the area. The second reason for the failures, high groundwater and poor soils, often creates failed septic systems that are occult to anything but laboratory effluent testing or further water quality testing in the watershed in general. That is, there is no surfacing sewage, no stench and no backed up plumbing.

In spite of the creation of the Waiver Prohibition Area, and to some degree *because* of its creation, the watershed has been steadily degraded, for several reasons. The reasons for this degradation are many and interrelated.

The creation of the Waiver Prohibition Area was a trigger for loans and grant money to allow the extension of Jacoby Creek Community Services District (CSD) water to many parcels which would otherwise have only had surface water supplies or shallow wells. This availability of clean water contributed to the desirability of the area in general, and made many parcels able to support onsite sewage disposal systems where they may not have otherwise been able to do so, given the county required setbacks for onsite water. It is also a known fact that households with community water use more water than those with onsite water, especially where the onsite water is of poor quality or seasonally restricted quantity. Thus, more water has been going into all sewage systems, since the CSD water was extended. While the Waiver Prohibition Area may have prevented the most egregious onsite systems from going in, it did nothing for the existing systems which were then failing or which would fail in the intervening 22 years.

The Waiver Prohibition also extended the Arcata City limits and its sewer system to

part of Bayside along Old Arcata Road. At first glance, one might think that sewerage the area would help water quality but, over time, that is not the case. Sewer systems for cities are notorious groundwater polluters, because of leaky or failed pipes. Where groundwater has been tested for municipalities, it has been shown to have some of the highest coliform and viral indicators of any areas, *because of the sewers themselves*. This phenomenon was recently discussed by Dr. George Tchobanoglous at a workshop on onsite filtration units in Sacramento. It is highly unlikely that any further testing has been done since 1979 in the Jacoby Creek drainage, but a look at the development in the area in the last 22 years will tell you that the "creative in-filling" within the city limits of Arcata and the steady growth along Jacoby Creek road and its tributary roads has created sewage volume on the order of 50% higher than it was in 1979, and possibly approaching 100%. Humboldt County Health Department did not institute water table monitoring as part of its onsite sewage design requirements until 1991, so that much of the development that occurred before then did not entirely meet Basin Plan water table separation.

There have also been other significant factors in the watershed impairment. One of these is the increased activity (until last year) at Roger's Garage on Old Arcata Road. That activity included auto repair and auto wrecking, underground storage tank (UST) use and removal (which mobilized some of the pollutants), and a body shop which was added sometime during the late 1980's or early 1990's. There is a storm drainage inlet (DI) quite near the entrance to the Garage, and since the body shop itself was unpermitted for about half its existence, it seems likely that the solvent smell available to pedestrians from the DI was probably due to the body shop. The drains from that area go to the Gannon slough and Jacoby Creek areas along U.S.101. The likely fate of the documented pollution from the UST and from the heavy metals in the wrecking yard is to slowly leach into the Jacoby Creek water shed, unless the Regional Board requires clean-up and removal rather than capping. The removal seems unlikely given the Board's historical stance on such issues.

It is my hope that measures will be taken to stop this kind of steady degradation of the watershed.

Sincerely,



Angela R. Koken

10 May 2001

California Water Quality Control Board
North Coast Region
1440 Guerneville Rd.
Santa Rosa, Ca 95403

2002 303(d) List Update
Deferance # ~~2~~ 32

Dear Chairperson and Members of the Board:

I am writing these comments to you from the perspective of a small private landowner. I have owned ten acres of unimproved forest land in the Jacoby Creek watershed for the past thirty years, and have invested a substantial amount of time and resources in rehabilitation work on that parcel which had been clearcut during the 1960s.

After an initial stint at clearing the streambed of the worst debris and stabilizing the stream banks with willow wattle, rocks and removing logging debris during the 70s and 80s, I have most recently replanted a slide area with native trees in an attempt to stabilize same.

To make a long story short: I've tried to make amends for some of the logging excesses of the past, yet the major timber operators in this watershed continue to clearcut in this unstable and fragile ecosystem with devastating results.

During the late 80s and early 90s we were beginning to see a return of indicator species of fish upstream which was good news; however, now, with the most recent logging activity that hopeful sign of renewal has again diminished due to increased turbidity and sedimentation from commercial logging.

It is high time that your agency and the other resource agencies of this state step in to protect our precious resources before it's too late. Jacoby Creek is not only the prime fresh water feeder stream for upper Humboldt Bay and its wetlands, but a prime habitat nursery for salmon and steelhead. Clearcutting and streamside logging is sheer lunacy in this watershed and must be stopped now. Timber operators in our north coast area must be held accountable and weaned from their past and current ^{semi-selective logging} modus operandi. Sustainable forestry is a viable alternative and the only practicable way for man and nature to coexist.

Please act now to save our precious watersheds, fish and all the other codependent species including us, of course!

N.B. I have provided access to numerous fish count studies over the past decade ^{Sincerely,} Orin H. Shump & these should provide useful data

Gary L. Friedrichsen, Biologist
P.O. Box 890
Arcata, CA 95518

Thirty years at the mouth of Jacoby Creek.

A good deal of change had already occurred to the small watershed known as Jacoby Creek by the time I began my residence in a duck hunting shack at the mouth of the Creek in 1970. Most of the wetlands to the east of the cabin had been "reclaimed" for over eighty years and the creek's channel had been confined by berms to decrease the likelihood of winter floods invading the newly claimed marshland. This channeling has dramatically reduced the delta and estuary of Jacoby Creek and gives cause to the high speed and increased volume of flow at peak runoff.

Living four feet from a raging winter torrent, I have had the opportunity to witness the intensity of the episodic flow and the associated materials carried to the bay. I believe Jacoby Creek has delivered an inordinate amount of silt to Humboldt Bay since logging began in the valley in the mid 1860s. I can not say that there is more or less sediment being carried at this time but I can attest to the fact that even moderate rains turn the creek brown in a very short period of time.

I think the most telling factor identifying deteriorating condition in this watershed is the increased frequency of floods with rainfall amounts that would not have had similar effects in the drainage 10-15 years ago. I believe that the soils have been impacted and compacted to the point that the system that would historically recharge the aquifer is in disrepair. Water that would normally get broken up by the hillside cover and then slowly be delivered to the soil is now being swept along to the mouth carrying increased sediment load in the process.

Another telling point is the successful invasion of plants that are slightly salt tolerant but not true salt marsh inhabitants. For the past five years I've noticed a rise in legumes, umbels, and grasses that I had not recorded in my first series of plant records near the shack in the early 1970s. I believe this is likely caused by the yearly deposition of silts building up the level of the stream corridor margins to the point that they are infrequently inundated by the normal tide cycles.

All of these point to deteriorating conditions in this watershed and should lend credence to the need for 303 d listing for this impaired waterway.

Gary L. Friedrichsen

Robert Wunner
1640 Union Street
Arcata, CA 95521

1) I am a biologist and have worked on fishery and watershed restoration projects on Jacoby Creek since 1977. In this period I have had similar work on other Northcoast watersheds; also I have worked as a botanical consultant in the San Joaquin Valley, Mojave Desert, and the Territory of Guam. I have a BS. Degree in Wildlife Management, a MA. in Biology from Humboldt State College, and have done additional graduate studies at the U. of Montana and the U. of Kansas.

The experience of the following projects are pertinent to my comments.

1977 Project Director--Jacoby Creek Watershed Study. Survey of soil, water quality and salmon and steelhead resources of the Jacoby Creek watershed. Sponsored by Humboldt State University Center For Community Development and Jacoby Creek Canyon Community.

1979 Project Director--Airstrip Creek Rehabilitation Project. Watershed restoration Redwood National Park.

1979 Investigator--Trinity River Restoration. Surveyed salmon and steelhead fisheries habitat restoration needs of the Trinity River Watershed for Humboldt Co.

1981 Project Director--South Fork Trinity River Fisheries Assistance Team. Surveyed and delineated problem areas on the Grouse Creek watershed and outlined needs for action throughout the South Fork Trinity watershed

1983-1989 Project Supervisor, Redwood Community Action Agency. Erosion control and riparian revegetation restoration on McDonald, Little Larabee and Jacoby Creeks. Projects funded by CA Dept. of Fish and Game, Fish and Wildlife Conservation Board, CA Div. of Forestry, CA Coastal Conservancy.

1987. Researcher. Monitoring Study of LSA Eelgrass transplant project, Humboldt Bay.

1988-89. Lathyrus biflorus Field Search. Challenge Cost Share. CNPS & Six Rivers NF.

1988 Effect of deer browsing and feral pig rooting on streamside vegetation on Bull Creek, Humboldt Redwoods State Park

1989. Project Director, Twin Parks Lumber Company. Jacoby Creek Blue Slide. Designed and coordinated project using heavy equipment and revegetation to reduce erosion from a road (and RR) activated slide. Funded by CA Dept. of Fish and Game.

1990. Rare and Sensitive Plants, and Plant Communities Lassics Botanical Area. Challenge Cost Share CNPS & Six Rivers NF.

1991 Botanical Survey Rare and Endangered Plants Mojave Desert, to southwest San Joaquin Valley. Biosystems, Inc.

1991 Dock Hand. UNOCAL Humboldt Bay. Monitored off-loading of gasoline from tankers

1992. Timber Harvest Assessment Consultant. Coastal Headwaters Assoc.

1992. Botanist. Wetlands Delineation, Guam. Winzler & Kelly

1992-94. Botanical Inventory & Consultant. Sanctuary Forest Land Trust.

1993. Consultant. Biological Management Plan: Weston Ranch, S. Fk Eel River.

1993. Notes on Vascular Plants of High Plateau & Long Ridge, Del Norte County, CA. Challenge Cost Share, Six Rivers NF.

1991. Project Director, Twin Parks Lumber Company. Jacoby Creek N. Fk. restoration. Designed and coordinated project using heavy equipment to remove a log landing (3000 cubic yards) built over the stream channel, revegetated with native plants from the surrounding area. Funded by CA Dept. of Fish and Game.

1994. Consultant. Riparian Forest Vegetation of the Lower Eel River. Eel River Resource Conservation District.

1997. Consultant. Biol. Characteristics Moore Ranch, Kneeland Prairie

1997-98. Consultant. A Significant Natural Area Conservation Strategy for Jacoby Creek Land Trust. funded by CA Coastal Conservancy.

I have written: "The Jacoby Creek Watershed Study," "Jacoby Creek Past, Present and Future", "Long Term Improvement of the Jacoby Creek Watershed," and "A Conservation Strategy for the Jacoby Creek Watershed"

I have served on the City of Arcata Forest Advisory Committee, Arcata Parks and Recreation Commission, and the Humboldt County Dunes Advisory Committee. I was a founding member of the Jacoby Creek Land Trust. I am presently a member of the Arcata Open Space Committee.

2) I documented the loss of fish habitat caused by culverts blocking fish migration along the Jacoby Creek Road.

3) I conducted a study of salmonid fish habitat which showed that salmonid populations were limited by the shallowness of pools which made juvenile fish vulnerable to predation. The result of shallower pools is that fish habitat and dependent fish populations and biological diversity are reduced.

4) I observed and documented the sedimentation of pools along Jacoby Creek. Pools were shallower in recent times based on old-time accounts. Sedimentation was related to the following factors--documented by Pillsbury, NH. (1972), and Tuttle and Dickert, (1987):

The incidence of surface debris slides as measured from aerial photographs has more than doubled between 1941 and 1978, with 3 times more slides associated with roads than with unroaded sites.

Over 60% of the upper headwaters was clearcut prior to the 1973 revision of the California Forest Practices Act, resulting in severe soil and stream channel disturbances.

A five-fold increase in residential development occurred between 1970 and 1978.

5) Large plugs of sediment are moved down Jacoby Creek during major storm events. These sediments, besides affecting instream habitat described in paragraphs 3 and 4 above, degrade wetland habitat in Humboldt Bay. The sediments form a delta. The development of lobes of the delta can be seen on aerial photographs. The lobes are composed of coarse materials (Thompson, R.W., 1971) carried downstream by rainy season runoff and spread on an out wash fan; the lobes correspond with the 1955, 1972 and 1975 storms (Tuttle and Dickert, 1986). In the delta area the raised elevations are subject to less tidal inundation and thus have a different biota. When sediment rise above a certain tidal elevation they become vegetated with creates a more terrestrial ecosystem. The delta extending beyond the established marsh has been shown (Tuttle and Dickert, 1986) to have grown by 18 acres, of which nearly 8 acres have become vegetated.

6) I have concerns of cumulative impacts to wetlands also because sediment yield from housing and road construction are not considered with sediment yield from past and present timber harvest and other activities

7) As almost all residents of the Jacoby Creek watershed use septic tanks, I am concerned about Nitrogen pollution of the creek, Humboldt Bay and the near shore waters of the Pacific Ocean from leaking or overfull septic tanks, including the so-called Wisconsin Mounds (employed so low land soils sites, that will not pass the Perc test, can be developed). Nitrogen is known to be of paramount importance in both causing and controlling marine eutrophication. Nutrient over-enrichment is a significant problem for U.S. coastal regions. Abundance of Nitrogen has been demonstrated to lead to the loss of seagrass beds, changes in marine biodiversity and distribution of species, depletion of dissolved oxygen, and associated die-off of marine life. A Nationwide Strategy to address nutrient over-enrichment has been formulated. This strategy strives to protect coastal waters. A goal is to ensure that no "healthy" coastal areas develop symptoms related to nutrient over-

enrichment to 2020. Recognizing Jacoby Creek as an impaired watershed would raise awareness to address this concern.

3) I am concerned that herbicide and petrochemical poison groundwater plumes runoff into Jacoby Creek and Humboldt Bay from the Bayside Golf Course and Rogers Garage.

Robert Wunner

References:

Murray, A. G. and R.C. Wunner, 1980. A Study of the Jacoby Creek Watershed. 84 p. Report on File at HSU Library.

Fillsbury, N.H. 1972. Sediment Transport and Stream Flow Characteristics for Jacoby Creek California. MA Humboldt State University, Arcata, California.

Thompson, R.W. 1971. Recent Sediments of Humboldt Bay, Eureka California. Final Report PRF #789-G2. Humboldt State University, Arcata, California. School of Natural Resources. 62 p

Tuttle, A.E. 1985. Cumulative Impacts Assessment in Coastal Wetland Watersheds: Jacoby Creek, Humboldt County, CA. Ph.D. thesis. UC Berkeley

Tuttle, A.E. and T.G. Dickert. 1987. Assessing Cumulative Impacts in Wetland Watersheds. Coastal Zone 87. Seattle. Soc. of American Engineers. Pg. 1760-1774

This is a copy of a letter I sent to California Department of Forestry in early July, 2000. This letter is in reference to a video tape also sent to CDF (a segment of which is on the videotape included with this 303 (d) application).

I later spoke with Jeff Shimke of CDF who said he would send staff to investigate. Mr. Shimke also assured me that he would share the video and concern with staff from Water Quality in Aug, 2000. Throughout the winter of 2000-2001 I have taken water samples to document continued high levels of sediment.

As of 5/01, I have seen no corrective action with regard to the Eric Lane tributary to Jacoby Creek (Eric Creek).

Re : Severe sediment load after recent rainfall.

From:

Gerry Blue
6074 Jacoby Creek
Bayside CA 95524
826-0619

To Whom It May Concern:

I live on Jacoby Creek and utilize the creek for domestic water use. I have lived at this site for over six years and have informally monitored the sediment load in Jacoby Creek, as this has a direct and substantial impact on my property value and quality of life.

On the afternoon of June 9, 2000, there was a fair amount of rain for about 3-4 hours, and I decided to take a look at Jacoby Creek. As you know, there is a brand new logging operation a short distance downstream of my house, and I was curious to see if there was a detectable impact, in terms of sedimentation, from their new road, etc.

I discovered that upstream of the new operation, Jacoby Creek was running fairly clear, as might be expected after a minimal rainfall event. Then I looked at the creek which runs along Eric Lane, and merges with Jacoby Creek at the foot of Eric Lane (known as Eric Creek). This tributary was very heavily sedimented, and it was dumping coffee-colored water into the main stem of Jacoby Creek. After this confluence, Jacoby Creek itself was extremely muddy, as if we had just had a major winter storm.

Over the last six years, I have never witnessed the Eric Lane tributary respond to minor rainfall with such an incredible amount of sediment.

I documented this with my video camera, and would be happy to share this evidence with you or any responsible parties.

It is clear to me that there is a land-use activity, somewhere connected to this stream on Eric Lane, that is causing extreme erosion and sedimentation. In light of my long-term observations of the creek, I believe that the sedimentation I witnessed is the result of a very recent land-use activity. In light of the new logging operation(s), it is reasonable to speculate that this is the source. It is reasonable to conclude that somewhere upstream on Eric Lane, there are illegal practices occurring, and causing severe problems for Jacoby Creek water quality.

I call this concern to you for prompt attention to determine the source and enforce mitigation.

I trust that you share my concern, and I am eager to hear about your plan to correct this problem.

Sincerely,
Gerry Blue

California Regional Water Quality Control Board

RE: Health of Jacoby Creek

We built our house next to Jacoby Creek seventeen years ago. The creek wraps around our property on two sides just after it flows under the covered bridge at Brookwood Drive.

We love the watershed and the diversity of wildlife still to be found here. In fact we have left a dense buffer of riparian vegetation in hopes of encouraging wildlife use of our land.

IN TIMES OF LOW FLOW: we are discouraged that the neighbors on either side of us draw water from the creek simply to maintain vast expanses of green lawn. And we can't help but think an aggressive educational program by a governmental entity could go a long way to educating otherwise well-intentioned people.

IN TIMES OF HIGH FLOW: we see the greatest change of all. Years ago, well into the wet season we would comment on the muddy water and opine that the landscape of the watershed was finally tested to capacity. But now the water is muddy with the first rain and all subsequent rainfall!!! And as each wet season comes, we're experiencing high water with increasing regularity. About five years ago, we finally placed a strip of tape across our well house indicating water depth. When the water reaches the tape, we must turn off the electricity to our well in order to preserve the electric switch box there. And that of course means no water even to flush toilets!

We take comfort that our dense riparian vegetation sifts debris and slows down the creek flow as it hits the corner and turns along our second boundary. But with all the activity on the land further up the watershed, we worry about the future.

We sincerely hope that your agency will understand that Jacoby Creek needs serious restoration decisions now. Just like human health, prevention would have been great...now it's late and we need intervention before it's too late.

Sincerely, Rex and Charlotte Dixon
4156 Brookwood Drive
Bayside, California 95524.