

Pacheco Creek Agricultural Watershed Plan Annual Report

June 2005

The Pacheco Watershed Working Group, in cooperation with the Santa Clara/San Benito County Farm Bureau's Agricultural Water Quality Program, prepared the following watershed plan.

Description of the Pacheco Watershed

The Pacheco Watershed runs from the Diablo Range to the Pajaro River. It crosses two Counties, Santa Clara and San Benito. Forests to the north and grazing lands to the south dominate the top of the watershed. The watershed has 3 main tributaries, Santa Ana Creek, Arroyo de Los Viboras, and Dos Pichachos, which flow to the Tequisquita Slough before joining Pacheco Creek above Soap (Frazier) Lake. The lower watershed of the Pacheco mainstem is a mixture of agricultural (primarily orchards, nurseries/greenhouses, vineyards and row crops) and rural residential, while the tributaries flow from the rangeland at the top, through rural residential and agriculture, then through Hollister's suburbs and industrial area before moving back into the agricultural/rural residential areas at Tequisquita Slough. All 4 creeks were intermittently dry in the summer in the past but, in recent years, Pacheco and Tequisquita Slough have flowed all year, albeit sluggishly. There is one reservoir, the Pacheco Reservoir, near the top of the watershed. The purpose of that reservoir was to supplement flow to the creek during dry months so as to provide continued irrigation and groundwater recharge. However, after the introduction of the San Felipe Pipeline in June 1987, more and more growers upstream of the Tequisquita Slough area have used the imported water instead of pumping groundwater, resulting in excessively high groundwater and artesianing wells in the Slough area.

Anticipated changes to the watershed include continued pressure for rural and suburban residential development, resulting in increased impervious surface and may have impacts on the amount of runoff carried by the watershed

The watershed has been identified as having critical habitat for steelhead and red-legged frogs. The lower watershed serves as steelhead migration area while native trout have been observed in the Santa Ana Creek.

Pacheco Creek is a tributary to the Pajaro River on the Central Coast of California. The Pajaro River is listed as an impaired waterbody by the State of California as designate for the U.S. EPA under provisions of the federal Clean Water Act. The pollutants of concern are nutrients, fecal coliform and sedimentation/siltation. The Pacheco is listed as an impaired water body for these three pollutants. The state is required by law to set Total Maximum Daily Loads (TMDLs) for the amount of each of the listed pollutants the river can handle on a daily (or annual) basis. Both the nutrient and sediment TMDLs are underway. The Nutrient TMDL was supposed to be released in May 2005 but the Central Coast Regional Board (Regional Board) now says that it will be delayed for at least one year as a state task force discusses how to set water quality

standards for nutrients and bio-stimulation (there are currently only standards for nitrates). The Sediment TMDL, which was also supposed to be released in May 2005, is currently waiting for Technical Peer Review and legal review. The Regional Board staff is hoping to have that document ready for public discussion in the fall.

Goals of The Pacheco Watershed Working Group

We have identified 140 active growers in the Pacheco Watershed. They farm more than 28,858 acres (note that we only have acreage that is registered by the Ag Commissioner for pesticide or organic and self reported acres, we do not have all of the ranch and non-pesticide using acreage so actual farmed acreage in the watershed is greater than 28,858). Of those 130 growers, 65 (46%) are active in the watershed workgroup. The 65 growers who are active cultivate 14,701 acres – which is 51% of the identified acreage in the watershed. Note that 21 (16%) of the growers in the Pacheco Watershed farm 5 or fewer acres and 27 (19%) farm 10 or fewer acres. These small growers are harder to involve.

Established in April 2002, the Pacheco Watershed Working Group is an association of agricultural landowners, managers and operators within the watershed, who have organized to address agricultural non point source pollution concerns. The agricultural landowners in the Pacheco Creek watershed want to proactively address water quality problems in a way that is practical and feasible for agriculture. As a watershed-working group, the agricultural landowners are developing this watershed plan to submit to the Central Coast Regional Water Quality Control Board for consideration.

It is the mission of the Pacheco Watershed Working Group to improve water quality by voluntarily implementing farming practices that successfully reduce sedimentation and agricultural non point source pollution. The Watershed Working Group seeks to achieve and sustain environmental improvements while maintaining the economic viability of the agriculture. The Working Group agreed on the following items as the next steps for protecting water quality in the Pajaro watershed:

Watershed Working Group Action Items

1. Begin to develop individual, confidential Farm/Ranch Water Quality Plans, or Vineyard self-assessments by participation in short courses or Central Coast Vineyard team's Program.

Status: 53 growers (53 ranches) in the watershed attended the short course, 24 have completed their Farm/Ranch Water Quality Plans, and 65 are active in the watershed-working group.

2. Perpetuate or implement management practices (farming practices) that reduce or mitigate sediment and non point source pollution sources. Monitor success by completing inventory of existing and further commitments for water quality management practices and compile into an annual watershed report to the Regional Board. (August 2003, annually thereafter)

Status: This is the second Annual Report. 37 growers responded to our survey on implementation of management practices. The growers who completed the survey reported that they are cultivating 16,696 acres. Their primary crops are row crops, vineyards, nursery plants, orchards, and cattle. The growers reported implementing or planning to implement the following practices. Note that most growers did not report on the number of acres protected and/or were confused by the question so we will not be asking it on future surveys.

1. Vegetative controls

- A. **Annual grassing** – 2 growers, NA acres
- B. **Cover Crops** – 11 growers, 1085 acres
- C. **Critical area planting** – 1 growers, 5 acres
- D. **Field border strips** – 5 growers, 151 acres
- E. **Filter strips** – 3 growers, 750 acres
- F. **Grassed/vegetated waterways** – 7 growers, 885 acres
- G. **Hedgerows** – 0 grower, 0 acres
- H. **Mulching** – 3 growers, 100 acres
- I. **Seeding Furrow bottoms** – 2 growers, 600 acres
- J. **Windbreaks** – 1 growers, 100 acres

2. Field management:

- A. **Crop rotation** – 5 growers, 850 acres
- B. **Move roads/rows** – 0 growers, 0 acres
- C. **Repair of potential erosion sites** – 6 growers, 212 acres
- D. **Row arrangement** – 5 growers, 150 acres
- E. **Slope management** – 4 growers, 48 acres
- F. **Tailwater Recovery / Reuse** – 4 growers, 225 acres
- G. **Underground outlets** – 0 growers, 0 acres
- H. **Water conservation** -- 9 growers, 1080 acres
- I. **Water/sediment control** – 10 growers, 120 acres
- J. **Unspecified sediment management** - 7 growers, 1030 acres

3. Animal Management

- A. **Grazing Management** – 2 grower, 5 acres
- B. **Animal Feed out of waterway** – 2 grower, 25 acres
- C. **Animal Access to water** - 0 growers, 0 acres

4. Pest Management

- A. **Integrated pest management** – 8 growers, 1800 acres
- B. **Beneficial insects** – 2 growers, 950 acres

5. Monitoring

- C. **Monitoring** – 7 growers, 888 acres
- D. **Pre-sidedress soil testing** – 3 growers, 970 acres

3. Channel clearing as appropriate to clean up garbage/cars in creek; remove invasive species; encourage fish passage, reduce surface water table and reduce flood danger.

Status: Two projects, Arundo removal and clearing of the Tequisquita Slough, were initiated. The Arundo removal project, which received almost \$11,000 in grant funding from the Agricultural Commissioner, the CA Dept. of Fish and Game and the USDA Natural Resources Conservation Service (NRCS), was successfully completed. The project cleared Arundo from the top of Santa Ana Creek to Shore Road. The Tequisquita Slough project has received conceptual approval by all parties (growers, regulatory agencies, etc.) and NRCS is developed a conceptual plan. The project is stalled by lack of funding.

4. Rural residential education as to best management practices to protect water quality and reduce septic impact.

Status: We requested that the Loma Prieta Resource Conservation District increase the frequency of their short course for Ranchette owners. They held 2 classes in 2004 and both were full. We will be requesting additional classes in 2005 as resources become available.

5. Lower the groundwater table and improve the quality of the water pumped from wells

Status: The San Benito Water District is working on a plan to improve the County's groundwater. The Water District presented its plan to the Working Group at a meeting this summer and the group continues to follow progress. In addition, the Group hopes that the Tequisquita Slough project will lower the groundwater table somewhat for properties directly adjacent to the Slough.

6. Continue to hold demonstration/educational events and pilot project meetings as needed.

Status: Members of the Working Group have participated in short courses, monitoring workshops, farm tours, harvest festivals, media interviews and other training/educational events.

7. Develop water quality projects (demonstration & research) on farms with technical assistance from RCD, NRCS, and UCCE.

Status: The Tequisquita Slough project, which was being done in cooperation with the NRCS, is designed to improve the flow and quality of water through the Slough, improve fish passage and increase riparian habitat by conserving additional wetland area. If we can obtain funding, the goal is to complete that project, described above, as soon as possible. In addition, we referred 2 growers from the Pacheco Watershed to the RCD or NRCS. One grower talked to the RCD but decided to do the project himself. The other grower had to go to his other property for the summer and has indicated that he would like NRCS assistance beginning in November.

Grower Profile: George Bonacich, Farm Manager

“Without good quality water, we will not get a good crop”
George Bonacich

George Bonacich came from a farming family and farming is what he has known his whole life. He grew up in Cupertino when farming was the primary industry. He attended college at UC Davis, and got a degree in “Plum log”, which is fruit tree production - a job that’s he has done ever since. He manages many farms in Santa Clara and San Benito and owns his own land and pasture in San Benito County. Fortunately, farming will continue in the Bonacich family, George’s son is the 4th generation farmer.

George first heard of this class through one of the many Farm Bureau mailings. He knew he had to do something to take control of the situation. Since he does manage a lot of farms, he decided it was in his best interest to take the class for himself and to cover the farms that he manages as well as to learn more about water quality issues. He did talk to all his landowners and let them know that he would be taking this class and all of them were very happy to be covered by him. “Without good quality water, we will not get a good crop” is a quote that George sticks by and I think a lot of other farmers do too.

What George learned in the class, he took right out and applied to the farms that he manages. All the owners are very supportive and help him in any way that they can. One of the major things that he learned from the class was water quality monitoring using the water testing kit. He had never monitored the amount of nitrogen that was coming from his well water before. Once he tested the water, he found that he has way too much nitrogen in there. He made an appointment to have the Mobile Lab service come and test his well more precisely. They confirmed his finding and confirmed that there was no value in adding additional the fertilizer to the trees. After that finding, George has been able to cut down on his use of fertilizer – and eliminate nitrogen fertilizer all together, and has saves a significant amount of money in the long run. Ever since that, he has continued to monitor all the wells that he manages with the result that he uses a lot less fertilizer, the water quality in the wells continues to improve, and everyone is saving money.

George says that he is glad that he has taken these classes and has stayed on top on the new studies and new regulations. He believes that; in the long run, it will help everyone out.

Existing and Ongoing Water Quality Data Collection –

The following programs are collecting data on the watershed. This data will be analyzed as baseline data over the winter and then, in conjunction with the data collected through this program, will be used to compare trends and identify potential issues.

- **Six County Cooperative Monitoring:** The vast majority of the growers in this watershed have indicated on their Notice of Intent that they plan to join the Preservation Inc. Cooperative Monitoring Program. They are awaiting details as to how to sign up.
- **Ag Commissioner/County Planning:** general description of groundwater quality and quantity can be found in the County's General Plan
- **NRCS:** monthly water quality monitoring at two locations along Llagas Creek. Parameters measured include: Nitrate-N, Orthophosphate as PO₄, Ammonia-N, Water Temperature, pH, Electrical Conductivity and Turbidity (NTU). The result of the local NRCS monitoring is attached in an excel document.
- **RWQCB Central Coast Ambient Monitoring Program (CCAMP):** In 1998 and 2005, the CCAMP program had 1 monitoring station on Uvas creek. That station is located at the Bloomfield Avenue crossing of Uvas. No results are available yet for the 2004-05 monitoring program. http://www.ccamp.org/ccamp/CCAMP_Pajaro_Report.pdf
- **303d List:** The Uvas Creek is not listed as a polluted waterway on the EPA's 303d list.
- **Santa Clara Valley Water District Groundwater Testing:** There is no established surface water-testing program. The District data is available at: http://www.valleywater.org/Water/Water_Quality/What_is_in_your_water/index.shtm
- **San Benito Water District Groundwater/Surface Water Testing:** groundwater test wells are located throughout San Benito County.
- **UC Davis Researchers:** UC-Davis did a special study on Pacheco and Uvas Creeks during 2004-05. The purpose of their study was to try and isolate the impacts of agricultural uses on the creeks. They selected 2 sites above and below the heavily agricultural area in each watershed. The sites on Pacheco were at Walnut above Casa De Fruta and at Lovers Lane at the south end of the watershed. The testing showed that both creeks were in relatively good shape. They got a complete data set for Pacheco Creek (19 samples), and less for Uvas/Carnadero because there wasn't water in Uvas year-round. There was no significant water toxicity to Ceriodaphnia, no sediment toxicity to the amphipod Hyalella, and nutrient concentrations were generally low at all stations. All other water quality parameters looked pretty good (so far). The researcher reported that he still has to compile the pesticide chemistry data, but given the lack of toxicity, he doesn't expect to see any high pesticide concentrations. He will send us the final results of the study.
- **USGS:** The USGS collected data at 4 sites on Llagas Creek between 21/24/1971 and 7/23/1991. That data is available at: http://nwis.waterdata.usgs.gov/ca/nwis/qwdata?huc_cd=18060002&format=station_list&sort_key=site_no&group_key=NONE&sitefile_output_format=html_table&column_name=agency_cd&column_name=site_no&column_name=station_nm&column_name=lat_va&column_name=long_va&begin_date=&end_date=&inventory_output=0&rdb_invento

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