



February 8, 2007

Tam Doduc, Chair  
State Water Resources Control Board  
PO Box 100  
Sacramento, CA 95812



Chairperson Doduc,

On behalf of the board, staff, and supporting members of Humboldt Baykeeper, I would like to commend the State Water Resources Control Board (SWRCB) for taking positive action in listing Humboldt Bay as impaired for dioxin compounds as part of the 2006 section 303(d) List of Water Quality Limited Segments (Resolution No. 2006-0079). The SWRCB's action will provide a great opportunity for identifying dioxin-contaminated sites around Humboldt Bay and developing strategies for stopping the flow of dioxin to Humboldt Bay.

We agree with your staff's analysis that readily available data show levels of dioxins in Humboldt Bay biota that indicate that the Bay qualifies for listing as an impaired water body. Additionally, we agree with your staff's use of Office of Environmental Health Hazard Assessment (OEHHA) guidelines for determining compliance with narrative water quality objectives found in the Basin Plan.

The Bay is an important spawning and nursery ground for numerous fish and other aquatic species, hosting halibut, perch, green and white sturgeon, Pacific herring, lingcod, Dungeness crab, rock crab, rockfish, salmon, oysters, and clams. Humboldt Bay provides a critical link for migrating and wintering water birds in the chain of diminishing coastal wetlands from the Arctic Circle to South America, annually supporting millions of waterbirds, shorebirds, raptors, and songbirds. The Bay also supports large commercial and sport fishing, clamming, oystering and other seafood industries. In fact, seven of California's twelve shellfish reserves set aside for public clamming and oystering, are located within Humboldt Bay. The Bay is also essential habitat for more than 30 mammal species.

Dioxins in Humboldt Bay sediments are accumulated in aquatic organisms and increase in concentration as they move up the food chain. They are known to cause adverse developmental effects in fish, birds and mammals at extremely low levels. In

humans, developmental and reproductive effects are of particular concern to children and developing fetuses. Dioxins are also known to cause cancer.

The determination that Humboldt Bay is impaired by dioxins is consistent with the *Water Quality Control Policy for Developing California's Section 303(d) List (2004)*, *SWRCB Resolution 2004-0063*, ("Listing Policy"). Notably, section 3.1 of the Listing Policy states that when determining impairment by toxicants if the sample size is 25-36 a water body should be listed if the number of exceedances is equal to or greater than 3. The SWRCB staff used 29 samples in making the listing determination, 14 of which had levels of dioxins that exceeded the OEHHA screening values for dioxin in fish tissue, the only available State-issued guideline for dioxins. These results greatly surpass the "weight-of evidence" requirements to place a water segment on the Section 303(d) list for toxicants.

In response to the Geomatrix "White Paper" on the Humboldt Bay dioxin listing, the North Coast Regional Water Quality Control Board has recently made available electronic records of sediment and biota dioxin sampling from 1989 and 1990. According to a September 25, 1989 memo from NCRWQCB staffer William Rodriguez, dioxins and furans were discovered in the effluent of Humboldt Bay's two pulp mills and were also found in Dungeness Crab and Pacific Tomcod near where the pulp mills discharged their effluent. In an effort to investigate background dioxin levels, the NCRWQCB collected and analyzed mussels and oysters from 13 sites along the North Coast, from Crescent City to Bodega Bay. Three of the thirteen samples were collected inside Humboldt Bay, and one sample was collected in the Pacific Ocean just outside Humboldt Bay at its mouth. The analytical laboratory results showed that the mussels sampled within the Bay were ten to forty times higher in dioxin than the mussels collected outside the Bay. Both Bay mussel samples (1.15 ppt and 4.26 ppt) greatly exceed the OEHHA screening value of (.3 ppt). The composite oyster sample collected in the Bay found a dioxin level of 10.9 ppt, over 36 times the OEHHA screening value.

The Rodriguez memo noted concerns about the use and sloppy handling of pentachlorophenol at Humboldt Bay lumber mills that resulted in discharges of PCP, dioxins and furans. Additional sampling was conducted the following year. The NCRWQCB sampled mussels, oysters, and starry flounder in Humboldt Bay and once again found dioxin levels that exceeded the OEHHA screening values.

Though the 1989 and 1990 data was not used by SWRCB staff in making the listing determination, since six out of the eight biota samples show significant exceedances of the OEHHA screening values, it clearly supports the determination that Humboldt Bay is impaired by dioxins.

Recently, we have been made aware of questions raised by several local stakeholders regarding the transparency of the process regarding the 2006 303(d) listing cycle. While we appreciate the SWRCB's efforts to allow all voices to be heard, we also believe that the data solicitation, public comment periods, and noticing surrounding this process were conducted properly. It is also important to note that the NCRWQCB was

aware of the process, received all of the pertinent information surrounding the listing, and ultimately supported the decision by the SWRCB to list Humboldt Bay as impaired for dioxin contamination.

Again, Humboldt Baykeeper commends the Board for its decision to place Humboldt Bay on the 2006 303(d) list of impaired water segments and we look forward to working with all interested parties in efforts to abate the dioxin problem in the Bay.

Sincerely,

Pete Nichols, Director