

Van Duzen Watershed Project

2691 Hillside Drive, Fortuna, CA 95540 ptrich@asis.com

May 4, 2011

Martha Spencer
Humboldt County Planning Department
Eureka, CA 95540



MSpencer@co.humboldt.ca.us

Subject: General Plan
Biological Resources Element

Dear Ms. Spencer and Planning Commissioners,

As a watershed scientist who has resided in Humboldt County for most of my life, I consider myself a stakeholder in the outcome of the Humboldt County General Plan. I have spent nearly my entire life, as a youngster and an adult fishing and swimming in the Eel and Van Duzen Rivers. I have spent the last 12 years working as a GIS Analyst and Environmental Consultant on watershed projects from Southern Oregon to Sonoma County in California. For the last three years I have guided and directed the Van Duzen Watershed Project, which involved water quality monitoring and spatial analysis of upslope conditions throughout the Lower Van Duzen River Basin.

Habitat quality directly affects the survival of salmon and steelhead in our local rivers and streams. These fish require shade, cold water, deep pools, and clean gravel, and their survival is greatly diminished when these habitats become polluted with sediment.

Instream habitat is directly affected by the conditions around the stream, an area referred to as the riparian zone, or streamside management area (SMA). Because they are fundamental to salmon habitat and survival, these zones need to be maintained in their natural state.

Removal of trees, improper logging, grading, road building, and the grazing of cattle, all serve to degrade streamside management areas, and therefore result in the loss of salmon habitat.

The riparian zone contributes shade and large woody debris, both of which help to maintain the physical integrity of the stream. Currents tend to swirl around large wood, scouring the bottom and creating deep pools that are necessary for salmon, and large logs produce the best scouring effect. Therefore, as conifers are generally larger than hardwoods, coniferous forest (which, in Humboldt County usually includes redwoods) should be designated as part of the riparian zone.

The temperature of the stream during the hot summer months is strongly influenced by the microclimate of the air directly above the stream. An intact riparian zone that includes conifers serves to moderate these above-stream temperatures, and maintains acceptable levels of humidity, all of which helps to keep instream temperatures cool. This microclimate within the riparian zone holds stream temperatures at acceptable levels, even though hot summer

Van Duzen Watershed Project

2691 Hillside Drive, Fortuna, CA 95540 ptrich@asis.com

temperatures outside the riparian zone often reach levels that would be lethal for salmonids. Deep pools allow juveniles to escape high temperatures that typically occur in shallow water during the summer months.

One of the biggest problems regarding SMAs in the past has been the tendency for reductions in the dimension of this zone around the stream. In the Van Duzen River Basin, we have witnessed the riparian zone reduced to 50 feet. This short distance does not provide enough protection for the safeguarding of this important ecological unit. Minimal distances for adequate protection should be increased to at least 150 feet, and preferably 300 feet from the stream (Alternative A, Section BR-S5).

Strict guidelines need to be established regarding SMAs, including no cutting of firewood, no logging, and no clearing of pastureland within these areas (BR-S7). Logs that induce scouring and deepening of pools when they fall into the streams (i.e., large woody debris) need to be left in place to provide for continued adequate salmon habitat (BR-S8).

Toward these goals, it is necessary that the county protect sensitive fish and wildlife habitat and minimize erosion, runoff, and interference with surface water flows. In short, the county should maintain adequate and healthy Streamside Management Areas including those areas around intermittent streams that exhibit wetland characteristics and off-channel riparian vegetation that contributes to the water quality of perennial fish-bearing streams.

All areas within the county designated as Sensitive and Critical Habitat, including SMAs, should be considered unavailable for development. No modifications of these areas or stream channels should be allowed under any circumstances, or at the minimum they should be listed as designated in Alternative A.

Thank you,

Paul J. Trichilo, Director
Van Duzen Watershed Project