



COUNTY OF SANTA CRUZ

FISH AND WILDLIFE ADVISORY COMMISSION

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Santa Cruz County Board of Supervisors
701 Ocean Street
Santa Cruz, CA 95060

November 16, 2021

RE: Environmental Impacts of Unmanaged Camping in Riparian Corridors

Dear Honorable Supervisors,

The Santa Cruz County Fish and Wildlife Advisory Commission is an advisory body for the protection and preservation of fish and wildlife and their habitats while also considering water quality, watershed protection, and public safety. The intent of this letter is to identify potential impacts to riparian ecosystems and associated fish and wildlife resulting from illicit encampments in these areas.

Background

A growing population of the unhoused community are increasingly creating encampments along creeks and rivers throughout Santa Cruz County, with deleterious impacts on the health of our watersheds and therefore negative impacts on the whole community of Santa Cruz County. The Central Coast Basin Plan, enforced by the Regional Water Quality Control Board, regulates the following beneficial uses of riparian areas all of which are adversely impacted by activities of unhoused populations living in riparian corridors:

Municipal water supply, agricultural water supply, water contact recreation, sport fishing, cold freshwater habitat, estuarine habitat, wildlife habitat, preservation of biological habitats of special significance, rare, threatened or endangered species, migration of aquatic organisms, and spawning, reproduction and/or early development of fish (Basin Plan 2017).

Environmental impacts from encampments within riparian corridors are complex and overlapping. In an effort to illuminate the issue, the County Fish and Wildlife Advisory Commission has identified serious impacts to our waterways. However, this is not meant to be a comprehensive list of impacts. The Commission requests that these concerns be considered in future decisions regarding the unhoused community and impacts to local water bodies and riparian corridors.

Water Quality

The City of Santa Cruz, the San Lorenzo Valley and other communities in our region rely on surface water for water supply. Homeless populations camping in riparian areas upstream from municipal surface water diversions directly impact water quality. Latrines dug adjacent to the waterline along creeks and rivers throughout the county contribute high levels of fecal contamination, nutrient sources and sedimentation which can lead to algal blooms, turbidity, and adversely impact public health.

Erosion and Sedimentation

Encampment activities along riparian corridors include trail building, terracing, excavation into levees to build flat campsites, as well as vegetation removal, for building materials and firewood. Healthy riparian zones entrap and retain small particles, reducing the sediment input to streams (Studinsky, Hartman, Niles & Keyser, 2012). Excavation and vegetation removal result in erosion and delivery of sediment to streams, particularly fine particles (Kaufmann, Larsen & Faustinin, 2009). Increased inputs of sediment to streams can have numerous environmental effects, and can be particularly damaging to certain freshwater organisms. For example, shifts in aquatic invertebrate communities, which are food for fish, and decreased reproductive success of fish due to smothering of fish eggs and juveniles, etc., have been observed as a result of sedimentation (Studinsky, et al., 2012).

Vegetation Removal

The removal of riparian vegetation, while contributing directly to increased sedimentation into streams, may have additional effects upon water bodies. In particular, "removal or alteration of riparian vegetation can have important implications for stream temperature" (Poole & Berman, 2001). Temperature, due to the effects on metabolism, is one of the leading causes of death for threatened and endangered salmon species and is of particular concern in the San Lorenzo River - which is listed as "impaired" by high temperatures under the Clean Water Act. In addition to the temperature-regulating effects of riparian vegetation, plants and trees that overhang the water body provide other benefits to freshwater organisms, including organic inputs which serve as the basis of the food web in many lotic systems. Riparian vegetation is also a source of woody debris, which provides important habitat and shelter for aquatic organisms including threatened and endangered fishes and amphibians.

Flood Protection

Impacts with regard to flood control include security, maintenance logistics, and accumulation of debris from structures including wood, trash and vehicles. Debris accumulation often causes flooding and backwater events which can overtop levees. Also, excavation or damage to levees and other flood control infrastructure can undermine earthen levees and increase flood risk to surrounding neighborhoods. Furthermore, allowing entrenched camps within flood-prone areas presents risks to both the unhoused community as well as creates additional burdens for emergency responders.

Fire Hazards

One of the more dramatic outcomes of people living in heavily vegetated and wind-exposed areas is the occurrence of wildfire. This is sometimes the unintended consequence of fire building for heating and cooking purposes; however fires can also be accidentally started as a result of careless use or disposal of cigarettes and illicit drug paraphernalia. Fires in riparian zones create canopy gaps and dry conditions, allowing subsequent buildup of dead wood and establishment of fire adapted species, which increases fuel loads and the probability of another fire (Pettit & Naiman, 2007).

Fish and Wildlife

Encampments in riparian corridors can adversely impact fish and wildlife in several ways beyond those mentioned above. Trash from camps can wash into streams, rivers, and out to sea, degrading habitat for protected fish and wildlife species and adding to ocean pollution. Encampments and pets occupying wildlife corridors result in the displacement of wildlife by interfering with animals' ability to move through their range, and to find drinking water, food and mates. Likewise, water diversions for illegal gardens can reduce water availability for fish and wildlife. Illegal netting, trapping and poaching of salmon and other wildlife may reduce population sizes, which can be especially detrimental in recently restored watersheds where populations are just beginning to rebound. Additionally, human activities attract non-native rats, which (among other broader-ranging impacts) can negatively impact bird breeding success.

Conclusions

State laws and county ordinances have been created to protect riparian habitat for fish and wildlife, and local and state governments invest substantial resources in restoring and protecting these ecosystems. Yet year after year the illegal camping has continued, while ongoing clean-ups are a drain on county resources and seem to be only temporary fixes.

Some of the activities associated with encampments in riparian zones are directly contravened by county, state and federal regulations including California Fish and Game Code Section 5652¹. The Santa Cruz County Fish and Wildlife Advisory Commission strongly recommends actions by the Board that would greatly reduce or eliminate the impacts of encampments to riparian habitats and water bodies. These actions could include, for example, convening a multi-agency task force, as suggested by Captain Steven Schindler (CDFW), and which had some success in San Jose. However, because our Commission's expertise lies in wildlife and environmental issues rather than socio-economic problems, we do not feel we are equipped to prescribe solutions for the complex problems involved in housing in Santa Cruz County - rather, we hope this letter illustrates the scope of ongoing and possible future harm to the County's natural resources, particularly in sensitive riparian areas.

We appreciate your consideration of these important concerns and would be happy to further engage with the Board and other groups working on these issues, if so desired.

Sincerely,



Chris Berry
County of Santa Cruz Fish and Wildlife Advisory Commission Chair

¹ https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=FGC§ionNum=5652

Works Cited

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