

DRAFT

February 2, 2009

March 4, 2009 Agenda

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

SUBJECT: Log Jams

Members of the Board:

On January 13, 2009, your Board considered a report on County Water Resource programs and FishNet \$C implementation. At that time, we indicated we would be returning with a report on the county program for removal of large woody material (log jams) in streams.

In recent years, fisheries scientists have determined that log jams and large woody material in stream channels are critical for maintaining good aquatic habitat for salmon, steelhead and other aquatic species. Within Santa Cruz County, steelhead are listed as threatened and coho salmon are listed as endangered under the federal Endangered Species Act. A lack of large woody material in streams has been identified as one of the primary limiting factors for steelhead and coho salmon in Santa Cruz County. The County has historically conducted a log jam removal program, although it has been significantly reduced in recent years. Given the increased awareness of the importance of large woody material, staff believes it is important to significantly modify the county's log jam removal program to increase the amount of large woody material left in streams to benefit steelhead and coho salmon habitat.

Large woody material contributes to stream habitat in several ways. Large woody material provides scour objects for pool development and can influence the development of riffle habitat and spawning areas. Large woody material provides cover habitat for adults during migration, for juveniles during rearing and as flow refuge during winter storms. In addition, large woody material helps sort and meter the movement of sediments and wood in the stream system and can provide pockets of good habitat even when streams experience excessive sediment load, as is often the case in Santa Cruz County streams. This function will be especially critical to reduce habitat loss in streams that will be impacted by the increased sediment flow from the Summit fire. The State Emergency Assessment Team Report cites concerns over runoff and debris flow from the Summit fire area, but recommends that "In-stream woody debris should not be removed unless there is a risk of imminent threat of damage to life and/or property."

The goal of cutting up large woody material in the past has been to prevent potential flooding that might be created by logjams and to prevent or reduce bank erosion and other property damage, such as damage to homes, roads and bridges. By cutting up large woody material, the wood is mobilized more easily and moves downstream or out of the watershed, but it no longer provides any benefit of habitat improvement. While cutting up large woody material may appear to be effective at reducing the risk of flooding or bank erosion, research following the 1982 logjam at Soquel Drive Bridge at Soquel Creek, indicated that most of the wood caught on the bridge was not present in the stream at the start of the storm. In other words, stream clearance cannot prevent log jams during storms because logs will be introduced to streams by landslides and bank failures during large storm events. Some have also speculated that a lack of wood in an alluvial channel can lead to increased channel scour, bank erosion, and resultant toppling of streamside trees into the channel.

Log jam removal has been conducted by Public Works at the request of streamside property owners and County drainage crews with funding from Zone 4 of the Santa Cruz County Flood Control and Water Conservation District, which is now administered by Environmental Health for watershed management. Zone 4 covers all of the County of Santa Cruz, including the incorporated areas and was created in 1971, with one of its purposes “ to maintain the stream channels of the County free of such debris, snags, logs and other materials which might be extremely hazardous to property during times of flood”. However, the enabling resolution also states that “[t]he Zone, in performance of its function, shall not take any action or engage in any activity which might be incompatible with maintenance of an optimum of fish and wildlife habitat or detrimental to the environment.” Given the current awareness of the value of large woody material, staff believes that it is no longer appropriate to use Zone 4 funding for log jam removal, unless the log jams are adversely affecting life, public safety, public infrastructure, or habitat.

In a letter dated December 17, 2007 (Attachment 3), Dick Butler, NOAA Fisheries Service, clarified that NOAA considers the County’s program a possible violation of the Endangered Species Act. The removal or cutting up of large woody material could be considered “harm” which is one of the definitions of “take” under the Endangered Species Act listing. In lieu of enforcement, NOAA has requested that the County take the initiative to modify the existing logjam removal program. Since receiving the letter, Environmental Health staff have consulted with Public Works and County Counsel on the most appropriate way to reduce and modify the program. This past summer, staff consulted with a geomorphologist on a specific log jam and on December 16, 2008, your Board authorized a contract for ongoing consultation as needed. Staff recognizes that the proposed change in County policy and priority for removal of large woody material could initially result in some claims and litigation, as some private property owners may expect the County to remove log jams which are a perceived threat to their property. Public information regarding the value of large woody material will be a key part of the program. The policy would still allow for maintenance of the Pajaro River flood control channel and other channels with an agency mandate for maintenance.

Proposed Policy for Management of Large Woody Material in Santa Cruz County Streams

1. Large woody material accumulates in county streams as a result of natural processes and conditions. The Board of Supervisors recognizes the value of allowing large woody material to remain in these streams to the greatest extent possible and its importance for sorting sediment, protecting steam banks and channel stability, providing pools and refuges, and generally benefiting stream habitat, when such material does not threaten life, public infrastructure, public safety, or aquatic habitat. Large woody material (LWM) is defined as stumps, rootwads and logs having an average diameter greater than 6 inches and a length greater than 10 feet.
2. County staff will not remove, cut-up or otherwise modify accumulations of large woody material in county streams that support salmonids unless it is determined that such accumulations pose a clear and immediate threat to life, public safety, public infrastructure or aquatic habitat; however, such accumulations may be removed, cut-up or otherwise modified under a direction or order issued by a governmental entity or regulatory agency.
3. Any modification or removal of LWM shall be only be carried out with the following conditions:
 - a. under non-emergency conditions as directed by the Water Resources Division Director following consultation of a geomorphologist, fishery biologist, Department of Fish and Game, and/or NOAA Fisheries Service; or
 - b. under an emergency where there is a clear and immediate threat to life, public safety, or public infrastructure as directed by Public Works or Environmental Health management.

4. Any requests for removal or modification of large woody material shall be forwarded to the Fisheries Resource Planner or Water Resources Division Director in Environmental Health for evaluation and consultation with consultants and resource agencies.
5. The FishNet 4C Guidelines for Woody Debris removal (Attachment 4) should be followed.
6. Any modification of large woody debris by a private property owner or other member of the public may require the review and approval of the Department of Fish and Game.
7. County staff shall disseminate information to the public regarding the value of large woody material for habitat and natural stream function and the terms of the current county policy.

Recommendation

It is therefore RECOMMENDED that your Board approve the policy for removal of large woody material in streams, as described in this report.

Sincerely,

John A. Ricker
Water Resources Division Director

Rama Khalsa, PhD
Health Services Agency Director

RECOMMENDED:

SUSAN A. MAURIELLO
County Administrative Officer

Attachments: December 17, 2007, letter of NOAA Fisheries Service
FishNet 4C Guidelines for Woody Debris Removal

cc: Public Works Department
Planning Department
Environmental Health
Water Advisory Commission