



## **Environmental Review Initial Study**

**Application Number: 09-0362**

**Date:** November 16, 2009

**Staff Planner:** Kristen Kittleson

### **I. OVERVIEW AND ENVIRONMENTAL DETERMINATION**

**APPLICANT:** John Ricker, County  
Environmental Health

**APN:** n/a

**OWNER:** n/a

**SUPERVISORAL DISTRICT:** All

#### **LOCATION:**

This project will occur within Zone 4 of the County's Flood Control District, which includes all of Santa Cruz County (Attachment 1). The majority of the project work will occur within the perennial streams of the San Lorenzo, Soquel and Aptos watersheds and the Corralitos subbasin of the Pajaro River Watershed. Work will occasionally occur in smaller stream systems such as Arana Gulch and Rodeo Gulch, and north coast streams such as Liddell or San Vicente. Any work done within State Parks (including Henry Cowell and Nisene Marks) or within city limits will be done only with consent of the cooperating agency.

#### **SUMMARY PROJECT DESCRIPTION:**

The proposed project is the implementation of the County of Santa Cruz Large Woody Material Management Program (LWMMP). For the purposes of this program, 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. The LWMMP project area includes all of Santa Cruz County, but is most active in the perennial streams of the San Lorenzo, Soquel, Aptos and Corralitos watersheds.

The LWMMP responds to requests of streamside property owners and County drainage crews to evaluate, and, if necessary, modify accumulations of large woody material in county streams. To be considered for modification under the new policy, large woody material must pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

There is occasionally sediment associated with the large woody material accumulations subject to the LWMMP review or action. In specific cases where the sediment is impeding flow through a culvert or road crossing or contributing significantly to bank

erosion or localized flooding, the County may remove sediment from the stream channel.

**ALL OF THE FOLLOWING POTENTIAL ENVIRONMENTAL IMPACTS ARE EVALUATED IN THIS INITIAL STUDY. CATEGORIES THAT ARE MARKED HAVE BEEN ANALYZED IN GREATER DETAIL BASED ON PROJECT SPECIFIC INFORMATION.**

<input type="checkbox"/> Geology/Soils	<input type="checkbox"/> Noise
<input type="checkbox"/> Hydrology/Water Supply/Water Quality	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Public Services & Utilities
<input type="checkbox"/> Energy & Natural Resources	<input type="checkbox"/> Land Use, Population & Housing
<input type="checkbox"/> Visual Resources & Aesthetics	<input type="checkbox"/> Cumulative Impacts
<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Growth Inducement
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Mandatory Findings of Significance
<input type="checkbox"/> Transportation/Traffic	

**DISCRETIONARY APPROVAL(S) BEING CONSIDERED**

<input type="checkbox"/> General Plan Amendment	<input type="checkbox"/> Grading Permit
<input type="checkbox"/> Land Division	<input type="checkbox"/> Riparian Exception
<input type="checkbox"/> Rezoning	<input type="checkbox"/> Other:
<input type="checkbox"/> Development Permit	<input type="checkbox"/>
<input type="checkbox"/> Coastal Development Permit	<input type="checkbox"/>

**NON-LOCAL APPROVALS**

Other agencies that must issue permits or authorizations:  
California Dept. of Fish and Game  
Army Corps of Engineers  
Regional Water Quality Control Board

**ENVIRONMENTAL REVIEW ACTION**

On the basis of this Initial Study and supporting documents:

☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the attached

mitigation measures have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

\_\_\_\_ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

  
Matthew Johnston

11/30/09  
Date

For Claudia Slater  
Environmental Coordinator

## **II. BACKGROUND INFORMATION**

### **EXISTING SITE CONDITIONS**

**Parcel Size:** n/a

**Existing Land Use:** n/a

**Vegetation:** n/a

**Slope in area affected by project:** X 0 - 30% X 31 - 100%

**Nearby Watercourse:** intermittent and perennial streams in Santa Cruz County

**Distance To:** all streams tributary to Monterey Bay

### **ENVIRONMENTAL RESOURCES AND CONSTRAINTS**

**Groundwater Supply:** na

**Water Supply Watershed:** n/a

**Groundwater Recharge:** n/a

**Timber or Mineral:** n/a

**Agricultural Resource:** n/a

**Biologically Sensitive Habitat:** yes

**Fire Hazard:** n/a

**Floodplain:** yes

**Erosion:** yes

**Landslide:** n/a

**Liquefaction:** n/a

**Fault Zone:** n/a

**Scenic Corridor:** n/a

**Historic:** n/a

**Archaeology:** n/a

**Noise Constraint:** n/a

**Electric Power Lines:** n/a

**Solar Access:** n/a

**Solar Orientation:** n/a

**Hazardous Materials:** n/a

### **SERVICES**

**Fire Protection:** n/a

**School District:** n/a

**Sewage Disposal:** n/a

**Drainage District:** n/a

**Project Access:** n/a

**Water Supply:** n/a

### **PLANNING POLICIES**

**Zone District:** n/a

**General Plan:** n/a

**Urban Services Line:**

X Inside

X Outside

**Coastal Zone:**

X Inside

X Outside

**Special Designation:** n/a

### **PROJECT SETTING AND BACKGROUND:**

This project will occur within Zone 4 of the County's Flood Control District, which includes all of Santa Cruz County (Attachment 1). The majority of the project work will occur within the perennial streams of the San Lorenzo, Soquel and Aptos watersheds and the Corralitos subbasin of the Pajaro River Watershed. Work will occasionally occur in smaller stream systems such as Arana Gulch and Rodeo Gulch, and north coast streams such as Liddell or San Vicente. Any work done within State Parks (including Henry Cowell and Nisene Marks) or within city limits will be done only with consent of the cooperating agency.

In 1971, the County of Santa Cruz Board of Supervisors established Zone 4, which was intended in part 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." Under this previous policy, the County responded to requests from property owners and agencies to clear logjams and other large woody material from stream channels and to clear stream channels of large woody material during summer months in anticipation of winter storms. This program went through multiple changes over the past 38 years; most recently in the past 15 years, the program eliminated summer channel clearing and began to leave more large woody material in streams to benefit steelhead and coho salmon.

In March 2009, the County of Santa Cruz Board of Supervisors approved a new policy for the management of large woody material in Santa Cruz County streams (Attachment 2). The Board of Supervisors acknowledges that large woody material accumulates in county streams as a result of natural processes and conditions. The new policy 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 stream banks and channel stability, providing pools and refuges, and generally benefiting stream habitat, when such material does not pose an immediate threat to life, public infrastructure, public safety, or aquatic habitat.

#### **DETAILED PROJECT DESCRIPTION:**

The County of Santa Cruz Large Woody Material Management Program (LWMMP) responds to requests of streamside property owners and County drainage crews to evaluate, and, if necessary, modify accumulations of large woody material in county streams. For the purposes of this program, 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. To be considered for modification under the new policy, large woody material must pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

The process begins when either Public Works - Drainage Division (PW) or Environmental Health Services receives a request to remove wood from a county stream.

When a request is received, the following steps will be taken:

1. All requests will be entered into a database.
2. The site will be evaluated initially by Public Works. If the large wood does not pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat, no action will be taken and the property owner or managing agency will be informed of the County's policy.
3. If Public Works considers or recommends modification, staff from the Water Resources Program of Environmental Health Services and if appropriate, a contractor geomorphologist, and/or a wildlife biologist will evaluate the site and proposed work.

4. Environmental Health Services will make a decision on whether to take action to modify the large woody material. If no action is taken, the property owner or managing agency will be informed of the County's policy. When appropriate, a contract biologist will evaluate the site and proposed work. Recommendations from the biologist will be incorporated into the proposed work.
5. Public Works will perform any work associated with modifying the large woody material and follow appropriate measures and guidelines for protecting listed species, aquatic habitat and water quality.
6. All decisions and actions will be recorded in the database.

In most cases, modification of large woody material consists of using hand labor crews with chainsaws to cut woody material into 5-15' sections. All cut wood will remain in the stream channel, except where it is obstructing a road crossing at a bridge or culvert. In those cases, wood may need to be removed with a crane or backhoe and will be chipped and taken to the wood recycling facility at the County landfill.

The minimum amount of the large woody material will be cut or modified to reduce the hazard. One approach will be to clear large woody material from one side of the stream channel to allow flow through without flooding or erosion. Another approach will be to cut up one or more keystone pieces so that the accumulation of large woody material will change or move during the next high flows. The County expects to leave large woody material along outside bends adjacent to roads or homes in order to reduce bank erosion (Attachment 3 and 4).

There is occasionally sediment associated with the large woody material accumulations subject to the LWMMP review or action. In specific cases where the sediment is impeding flow through a culvert or road crossing, or contributing significantly to bank erosion or localized flooding, the County may remove sediment from the stream channel.

In most cases, sediment will be removed or relocated from the active channel using hand crews and shovels. In some cases, heavy equipment, such as a backhoe, will be operated from the bank or stream crossing (culvert, bridge) to remove sediment. No heavy equipment will be allowed within the active channel. Sediment removed with heavy equipment will be placed so that it does not re-enter the stream. Sediment removal will occur only during winter flows, when minor additional turbidity will not impact fish or wildlife.

Only the sediment that was deposited during a specific storm event and is associated with accumulations of large woody material will be removed. The County will remove up to 100 cubic yards of material among all locations within a given year. Sediment removal is expected to occur only occasionally and following very large storm events. For example, the County has not removed any sediment during the past 5 years in association with the LWMMP.

### III. ENVIRONMENTAL REVIEW CHECKLIST

#### A. Geology and Soils

Does the project have the potential to:

1. Expose people or structures to potential adverse effects, including the risk of material loss, injury, or death involving:

A. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or as identified by other substantial evidence?

\_\_\_\_\_ X \_\_\_\_\_

B. Seismic ground shaking?

\_\_\_\_\_ X \_\_\_\_\_

C. Seismic-related ground failure, including liquefaction?

\_\_\_\_\_ X \_\_\_\_\_

D. Landslides?

\_\_\_\_\_ X \_\_\_\_\_

All of Santa Cruz County is subject to some hazard from earthquakes. This project does not involve any construction, so the risk of workers exposed to earthquakes is the same as any location in the county.

Some areas along streams are subject to some hazard from landslides. Workers may be exposed to a slight risk of landslides through this project, but precautions will be taken to insure worker safety during wet winter conditions. LWM will not be removed where it is protecting the toe of a landslide from stream erosion.

2. Subject people or improvements to damage from soil instability as a result of on- or off-site landslide, lateral spreading, to subsidence, liquefaction, or structural collapse? \_\_\_\_\_ X

Some areas along streams are subject to some hazard from landslides. Workers may be exposed to a slight risk of landslides through this project, but precautions will be taken to insure worker safety during wet winter conditions. LWM will not be removed where it is protecting the toe of a landslide from stream erosion.

3. Develop land with a slope exceeding 30%? \_\_\_\_\_ X

There are slopes that exceed 30% along stream channels. However, no disturbance is proposed above the active channel.

4. Result in soil erosion or the substantial loss of topsoil? \_\_\_\_\_ X

The cutting of large woody material will not result in soil erosion or the substantial loss of topsoil.

5. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code(1994), creating substantial risks to property? \_\_\_\_\_ X

No construction is proposed.

6. Place sewage disposal systems in areas dependent upon soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems? \_\_\_\_\_ X

No septic systems are proposed.

7. Result in coastal cliff erosion? \_\_\_\_\_ X

The project will not take place on coastal cliffs.



**B. Hydrology, Water Supply and Water Quality**

Does the project have the potential to:

1. Place development within a 100-year flood hazard area? \_\_\_\_\_ X

This project does not include any development.

2. Place development within the floodway resulting in impedance or redirection of flood flows? \_\_\_\_\_ X

This project does not include any development.

3. Be inundated by a seiche or tsunami? \_\_\_\_\_ X

A seiche or tsunami may result in raised stream levels which may promote accumulations of Large Woody Material within a lagoon or stream channel.

4. Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit, or a significant contribution to an existing net deficit in available supply, or a significant lowering of the local groundwater table? \_\_\_\_\_ X

This project will not use any water supply.

5. Degrade a public or private water supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion). \_\_\_\_\_ X

This project will not involve contribution of urban contaminants, nutrient enrichments or other agricultural chemicals or seawater intrusion.

This project may contribute a minor amount of short-term turbidity to streams upstream of municipal water supply. However, it is not expected that any increased turbidity would be measurable, because streams will be turbid from winter storms.

The County's Fleet Maintenance Department maintains the chainsaws and promptly repairs any leaks. The County uses environmentally friendly chainsaw products, including biodegradable Stihl HP Ultra 2-Cycle Engine Oil and Stihl BioPlus Bar and Chain Oil, which is made with a vegetable oil base.

6. Degrade septic system functioning? \_\_\_\_\_ X

There is no indication that existing septic systems in the vicinity would be affected by the project.

7. Alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which could result in flooding, erosion, or siltation on or off-site? \_\_\_\_\_ X

This project will have a beneficial impact by modifying large woody material when necessary to prevent flooding, erosion, or siltation that threatens life or property.

8. Create or contribute runoff which would exceed the capacity of existing or planned storm water drainage systems, or create additional source(s) of polluted runoff? \_\_\_\_\_ X

This project will not result in an increase in runoff.

9. Contribute to flood levels or erosion in natural water courses by discharges of newly collected runoff? \_\_\_\_\_ X

No new impervious surfaces are proposed as part of the project, thus there will be no additional storm water runoff that could contribute to flooding or erosion.

10. Otherwise substantially degrade water supply or quality? \_\_\_\_\_ X

This project will not substantially degrade water supply or quality.

### **C. Biological Resources**

Does the project have the potential to:

1. Have an adverse effect on any species identified as a candidate, sensitive, or special status species, in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, or U.S. Fish and Wildlife Service? \_\_\_\_\_ X

This project has the potential for adverse effects on special status, threatened and endangered species, including the potential take of species through bed disturbance, movement of large woody material or turbidity. Species potentially affected include steelhead trout (*Oncorhynchus mykiss*), coho salmon (*Oncorhynchus kisutch*), tidewater goby (*Eucyclogobius newberryi*), red-legged frog (*Rana aurora*), yellow-legged frog (*Rana muscosa*) and western pond turtle (*Actinemys marmorata*) - Distribution Maps, Attachments 5, 6, 7).

The effects on the species listed above will be reduced to less than significant by following these measures:

- Modification of large woody material and sediment removal will be done primarily with hand crews using chainsaws and shovels.
- Large woody material will be cut to a minimum to allow streamflow and the passage of sediment and wood.
- Large wood will be cut in as few pieces as possible with an effort to maintain pieces of at least 8 feet in length.
- Sections of cut wood will remain in the stream channel.
- Environmental Health Services will determine when it is appropriate to request a geomorphologist and/or biologist to evaluate the site and give recommendations about how the modification of large woody material may impact flood reduction, erosion hazard or aquatic habitat. These recommendations will be

incorporated into the proposed work.

- When it is necessary to use heavy equipment for sediment removal, operations will occur from top of the bank or from the adjacent culvert or road crossings.
- Sediment removal is expected to be primarily sand substrate. Santa Cruz County streams in general have excess sand substrate that impairs spawning and rearing habitat for steelhead and coho salmon. To the extent practicable, larger substrates including cobble and boulders will not be removed from the stream.
- Sediments that show signs of spawning activity by steelhead or coho salmon will not be removed.
- When large woody material is adjacent to a pool and 3 or more pieces of large woody material will be modified, a pre-construction survey for red-legged frogs and western pond turtles will be conducted.
- USFWS will be contacted if any modification or removal of large woody material occurs within known tidewater goby distribution (Attachment 7). Most tidewater goby areas would involve a cooperating agency, such as the City of Capitola, City of Santa Cruz, State Parks or Caltrans. Large woody material has not been removed historically from most of the tidewater goby areas, including Corcoran, Moran, Moore, Younger, and Laguna. It is possible that intense storms or a seiche/tsunami could deposit problematic accumulations of large woody material in lagoon areas such as Aptos, Soquel or San Lorenzo. A possible scenario is that large woody material may need to be removed from a bridge, which would involve using a crane to remove wood from the channel, but would not include any bed disturbance that could potentially harm tidewater goby.

2. Have an adverse effect on a sensitive biotic community (riparian corridor), wetland, native grassland, special forests, intertidal zone, etc.)? \_\_\_\_\_

X

The project does not involve the disturbance of riparian vegetation or other sensitive biotic communities.

3. Interfere with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native or migratory wildlife nursery sites? \_\_\_\_\_

X

The proposed project does not involve any activities that would interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site. The project may result in modification of LWM where accumulations are impeding migration of anadromous fish.

4. Produce nighttime lighting that will illuminate animal habitats?

\_\_\_\_\_ X \_\_\_\_\_

This project will not produce any permanent nighttime lighting. In rare cases, lights may be used to work at night to prevent the loss of life or property, but this would be a one-time event.

5. Make a significant contribution to the reduction of the number of species of plants or animals?

\_\_\_\_\_ X \_\_\_\_\_

Refer to C-1 and C-2 above.

6. Conflict with any local policies or ordinances protecting biological resources (such as the Significant Tree Protection Ordinance, Sensitive Habitat Ordinance, provisions of the Design Review ordinance protecting trees with trunk sizes of 6 inch diameters or greater)?

\_\_\_\_\_ X \_\_\_\_\_

The project will not conflict with any local policies or ordinances.

7. Conflict with the provisions of an adopted Habitat Conservation Plan, Biotic Conservation Easement, or other approved local, regional, or state habitat conservation plan?

\_\_\_\_\_ X \_\_\_\_\_

This project area is not within the boundaries of any Habitat Conservation Plan, Biotic Conservation Easement or other approved local, regional or state habitat conservation plan.

**D. Energy and Natural Resources**

Does the project have the potential to:

1. Affect or be affected by land designated as "Timber Resources" by the General Plan? \_\_\_\_\_ X \_\_\_\_\_

This project may occur adjacent to land designated as Timber Resource. However, the project will not affect the resource or access to harvest the resource in the future. The timber resource may only be harvested in accordance with California Department of Forestry timber harvest rules and regulations.

2. Affect or be affected by lands currently utilized for agriculture, or designated in the General Plan for agricultural use? \_\_\_\_\_ X \_\_\_\_\_

This project may occur adjacent to land designated as agriculture, but will not affect the agricultural use of that land.

3. Encourage activities that result in the use of large amounts of fuel, water, or energy, or use of these in a wasteful manner? \_\_\_\_\_ X \_\_\_\_\_

This project does not involve the use of large amounts of fuel, water or energy.

4. Have a substantial effect on the potential use, extraction, or depletion of a natural resource (i.e., minerals or energy resources)? \_\_\_\_\_ X \_\_\_\_\_

This project takes place in streams and will not have any effect on the potential use, extraction or depletion of a natural resource.

**E. Visual Resources and Aesthetics**

Does the project have the potential to:

1. Have an adverse effect on a scenic resource, including visual obstruction of that resource? \_\_\_\_\_ X \_\_\_\_\_

The project will not directly impact any public scenic resources, as designated in the County's General Plan (1994), or obstruct any public views of these visual resources.

2. Substantially damage scenic resources, within a designated scenic corridor or public view shed area including, but not limited to, trees, rock outcroppings, and historic buildings? \_\_\_\_\_ X \_\_\_\_\_

No geologic features will be destroyed, covered or modified in this project. Unique physical features of large woody material may be modified if they pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

3. Degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, and/or development on a ridge line? \_\_\_\_\_ X \_\_\_\_\_

This project will not create substantial change in topography or ground surface relief.

4. Create a new source of light or glare which would adversely affect day or nighttime views in the area? \_\_\_\_\_ X \_\_\_\_\_

This project does not involve the creation of a new light source

5. Destroy, cover, or modify any unique geologic or physical feature? \_\_\_\_\_ X \_\_\_\_\_

No geologic features will be destroyed, covered or modified in this project. Unique physical features of large woody material may be modified if they pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

#### **F. Cultural Resources**

Does the project have the potential to:

1. Cause an adverse change in the significance of a historical resource as defined in CEQA Guidelines 15064.5? \_\_\_\_\_ X \_\_\_\_\_

No historical resources will be changed as part of this project.

2. Cause an adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines 15064.5? \_\_\_\_\_

X

This project will occur within active stream channels and is not expected to occur within areas of known archeological resources. Pursuant to County Code Section 16.40.040, if at any time in the preparation for or process of excavating or otherwise disturbing the ground, any human remains of any age, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age are discovered, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.

3. Disturb any human remains, including those interred outside of formal cemeteries? \_\_\_\_\_

X

Pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

4. Directly or indirectly destroy a unique paleontological resource or site? \_\_\_\_\_

X

No known paleontological resource or site is within the project area.



**G. Hazards and Hazardous Materials**

Does the project have the potential to:

1. Create a significant hazard to the public or the environment as a result of the routine transport, storage, use, or disposal of hazardous materials, not including gasoline or other motor fuels?

\_\_\_\_\_ X \_\_\_\_\_

This project will not use any hazardous materials other than gasoline, oil or other motor fuels.

2. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

\_\_\_\_\_ X \_\_\_\_\_

This project will not located on a site that is included in a list of hazardous materials sites.

3. Create a safety hazard for people residing or working in the project area as a result of dangers from aircraft using a public or private airport located within two miles of the project site?

\_\_\_\_\_ X \_\_\_\_\_

This project does not involve the use of aircraft.

4. Expose people to electro-magnetic fields associated with electrical transmission lines?

\_\_\_\_\_ X \_\_\_\_\_

This project does not involve electrical transmission lines.

5. Create a potential fire hazard?

\_\_\_\_\_ X \_\_\_\_\_

The project design incorporates all applicable fire safety code requirements and will include fire protection devices as required by the local fire agency.

6. Release bio-engineered organisms or chemicals into the air outside of project buildings? \_\_\_\_\_ X

This project does not involve bio-engineered organisms.

**H. Transportation/Traffic**

Does the project have the potential to:

1. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? \_\_\_\_\_ X

There will be no impact because no additional traffic will be generated.

2. Cause an increase in parking demand which cannot be accommodated by existing parking facilities? \_\_\_\_\_ X

There will be no impact because no additional traffic will be generated.

3. Increase hazards to motorists, bicyclists, or pedestrians? \_\_\_\_\_ X

The proposed project will comply with current road requirements to prevent potential hazards to motorists, bicyclists, and/or pedestrians.

4. Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the county congestion management agency for designated intersections, roads or highways? \_\_\_\_\_ X

See response H-1 above.

**I. Noise**

Does the project have the potential to:

1. Generate a permanent increase in ambient noise levels in the project vicinity above levels existing without the project? \_\_\_\_\_ X

The project will not create any permanent increase in ambient noise levels.

2. Expose people to noise levels in excess of standards established in the General Plan, or applicable standards of other agencies? \_\_\_\_\_ X

This project will not expose people to noise levels in excess of standards established in the General Plan.

3. Generate a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? \_\_\_\_\_ X

Noise generated during project implementation will increase the ambient noise levels for adjoining areas. Noise will be temporary, however, and given the limited duration of this impact it is considered to be less than significant.

**J. Air Quality**

Does the project have the potential to:  
(Where available, the significance criteria established by the MBUAPCD may be relied upon to make the following determinations).

1. Violate any air quality standard or contribute substantially to an existing or projected air quality violation? \_\_\_\_\_ X

2. Conflict with or obstruct implementation of an adopted air quality plan? \_\_\_\_\_ X

- |    |  |       |       |       |             |
|----|--|-------|-------|-------|-------------|
| 3. | Expose sensitive receptors to substantial pollutant concentrations?  | _____ | _____ | _____ | _____X_____ |
| 4. | Create objectionable odors affecting a substantial number of people? | _____ | _____ | _____ | _____X_____ |

**K. Public Services and Utilities**

Does the project have the potential to:

- |    |  |       |       |       |             |
|----|--|-------|-------|-------|-------------|
| 1. | Result in the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: |       |       |       |             |
| a. | Fire protection?   | _____ | _____ | _____ | _____X_____ |
| b. | Police protection?   | _____ | _____ | _____ | _____X_____ |
| c. | Schools?   | _____ | _____ | _____ | _____X_____ |
| d. | Parks or other recreational activities?  | _____ | _____ | _____ | _____X_____ |
| e. | Other public facilities; including the maintenance of roads?   | _____ | _____ | _____ | _____X_____ |

This project will not create any increase in service needs.

2. Result in the need for construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? \_\_\_\_\_ X

This project will not result in a need for additional drainage facilities.

3. Result in the need for construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? \_\_\_\_\_ X

This project does not include the use of water or wastewater facilities.

4. Cause a violation of wastewater treatment standards of the Regional Water Quality Control Board? \_\_\_\_\_ X

This project does not include the use of wastewater facilities.

5. Create a situation in which water supplies are inadequate to serve the project or provide fire protection? \_\_\_\_\_ X

This project does not include the use of water.

6. Result in inadequate access for fire protection? \_\_\_\_\_ X

If necessary to park vehicles on the road, one lane will remain open at all times. Fire trucks, ambulances and other emergency vehicles will not be blocked from using the road at any time.

7. Make a significant contribution to a cumulative reduction of landfill capacity or ability to properly dispose of refuse? \_\_\_\_\_ X \_\_\_\_\_

If some sediment is taken to the landfill, than this project will make an incremental contribution to the reduced capacity of regional landfills. However, this contribution will be relatively small and will be of similar magnitude to that created by existing land uses around the project.

8. Result in a breach of federal, state, and local statutes and regulations related to solid waste management? \_\_\_\_\_ X \_\_\_\_\_

**L. Land Use, Population, and Housing**

Does the project have the potential to:

1. Conflict with any policy of the County adopted for the purpose of avoiding or mitigating an environmental effect? \_\_\_\_\_ X \_\_\_\_\_

The proposed project conforms to policy detailed in a letter to the Board of Supervisors and approved on March 3, 2009 (Attachment 2). The previous policy was to respond to requests by the public or public agencies to cut up large woody material that was a potential threat for flooding or damage to public and private property and facilities. The current policy acknowledges the value of large woody material in local streams and considers modification only if there is a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

2. Conflict with any County Code regulation adopted for the purpose of avoiding or mitigating an environmental effect? \_\_\_\_\_ X \_\_\_\_\_

The proposed project does not conflict with the Riparian Corridor Protection Ordinance that has been adopted for the purpose of avoiding or mitigating an environmental effect.

3. Physically divide an established community? \_\_\_\_\_ X \_\_\_\_\_

The project will not include any element that will physically divide an established community.

4. Have a potentially significant growth inducing effect, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? \_\_\_\_\_ X

This project does not propose any new homes or infrastructure.

5. Displace substantial numbers of people, or amount of existing housing, necessitating the construction of replacement housing elsewhere? \_\_\_\_\_ X

This project will not displace a substantial number of people or existing housing.

#### **M. Non-Local Approvals**

Does the project require approval of federal, state, or regional agencies? (See Page 2). Yes X No \_\_\_\_\_

#### **N. Mandatory Findings of Significance**

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant, animal, or natural community, or eliminate important examples of the major periods of California history or prehistory? Yes \_\_\_\_\_ No X
2. Does the project have the potential to achieve short term, to the disadvantage of long term environmental goals? (A short term impact on the environment is one which occurs in a relatively brief, definitive period of time while long term impacts endure well into the future) Yes \_\_\_\_\_ No X

3. Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, and the effects of reasonably foreseeable future projects which have entered the Environmental Review stage)?

Yes \_\_\_\_\_ No   X  

4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Yes \_\_\_\_\_ No   X



**TECHNICAL REVIEW CHECKLIST**

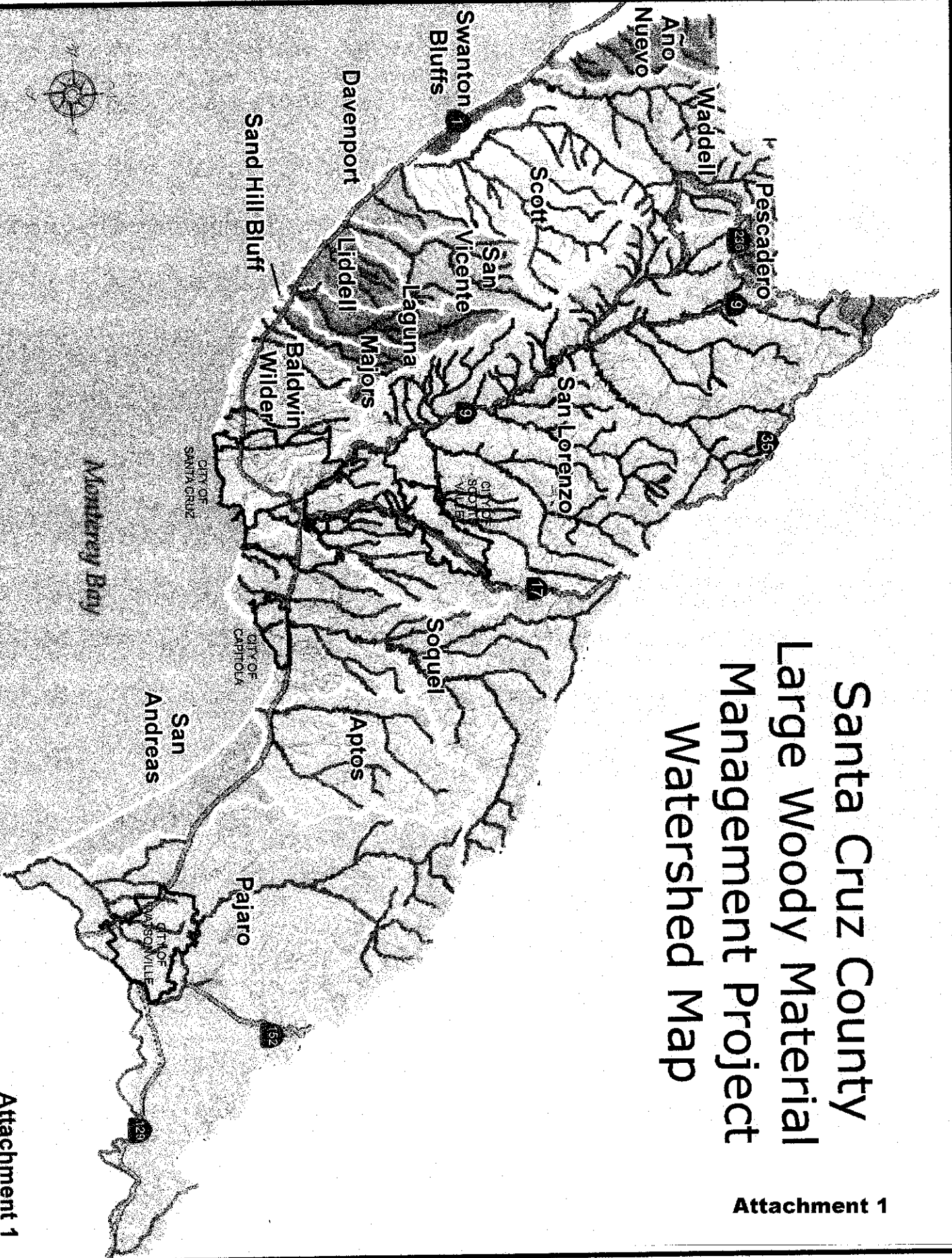
	<b><u>REQUIRED</u></b>	<b><u>COMPLETED*</u></b>	<b><u>N/A</u></b>
Agricultural Policy Advisory Commission (APAC) Review	_____	_____	X
Archaeological Review	_____	_____	X
Biotic Report/Assessment	_____	_____	X
Geologic Hazards Assessment (GHA)	_____	_____	X
Geologic Report	_____	_____	X
Geotechnical (Soils) Report	_____	_____	X
Riparian Pre-Site	_____	_____	X
Septic Lot Check	_____	_____	X
Other:	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

**Attachments:**

1. Watershed Map showing project area
2. Letter to Board of Supervisors, March 3 2009 agenda including Attachments 1, 2.  
The letter with all correspondence is available through the county's website:  
[http://sccounty01.co.santa-cruz.ca.us/bds/Govstream/ASP/Display/SCCB\\_AgendaDisplayWeb.asp?MeetingDate=3/3/2009](http://sccounty01.co.santa-cruz.ca.us/bds/Govstream/ASP/Display/SCCB_AgendaDisplayWeb.asp?MeetingDate=3/3/2009)
3. Typical Drawings
4. Project Photos
5. Map of Santa Cruz County Steelhead and Coho Salmon Distribution
6. Map of Distribution of California Red-legged Frog, western pond turtle and foothill yellow-legged frog.
7. Map of Tidewater goby distribution

# Santa Cruz County Large Woody Material Management Project Watershed Map

Attachment 1



Attachment 1



# County of Santa Cruz

## HEALTH SERVICES AGENCY

POST OFFICE BOX 962, 1080 EMELINE AVE., SANTA CRUZ, CA 95061-0962  
TELEPHONE: (831) 454-4000 FAX: (831) 454-4770 TDD: (831) 454-4123

### HEALTH SERVICES AGENCY ADMINISTRATION

February 26, 2009

March 3, 2009 Agenda

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

### Subject: County Log Jam Program

Members of the Board:

On January 13, 2009, your Board considered a report on County Water Resource programs and FishNet 4C 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.

### Background on the Importance of Large Woody Materials 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. Large woody material also benefits red-legged frogs (federal endangered species) and western pond turtle (state species of special concern).

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 is especially critical to reduce habitat loss in streams that will be impacted by the increased sediment flow. 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."

Given the increased awareness of the importance of large woody material, staff believes it is important to recommend revisions to the county's log jam removal program to safely increase the amount of large woody material left in streams to benefit aquatic habitat.

### **Background on the Flood Control Efforts of the County Relating to Log Jams**

For many years, the County Public Works Department has operated a log jam removal program. Due to funding restrictions and enhanced regulatory requirements designed to protect endangered species and the aquatic habitat, log jam activities have been reduced over time. The current program has an operating budget of approximately \$60,000 per year.

The goal of cutting up large woody material 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. Although cutting up large woody material may 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 does not completely prevent logjams 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, potentially creating more downstream log jams. All of these factors underscore the need for a thoughtful approach to the review of flood risks.

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. This fund is now administered by Environmental Health Division of Health Services. Zone 4 covers all of the County of Santa Cruz, including the incorporated areas and was created in 1971. A copy of the resolution forming the zone is provided as Attachment 1.

In a letter dated December 17, 2007, Dick Butler, NOAA Fisheries Service, clarified that NOAA considers the County's program a possible violation of the Endangered Species Act. (Attachment 3). He states, 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. 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 has consulted with Public Works and County Counsel on the most appropriate way to reduce and modify the program. In an effort to inform this process, this past summer, staff consulted with a geomorphologist on a specific logjam and on December 16, 2008, your Board authorized a contract for ongoing geomorphological consultation as needed.

### **Balancing the Need for Flood Protection and Habitat Protection and Enhancement**

Given the current awareness of the value of large woody material, the changing regulatory environment, the funding available and the need for flood protection, staff believes that it is appropriate to review the County's logjam removal program. As a result, staff believes that large woody material should be retained in streams and creeks unless the following conditions are met:

- the log jams are adversely affecting public safety, public infrastructure; aquatic habitat;
- or

- emergency conditions exist that pose a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property or essential public services.

Notwithstanding the criteria above, maintenance of the Pajaro River and Salsipuedes Creek flood control channel and other channels with an agency mandate for maintenance, and agreements with the resource agencies in place will be guided by those requirements and permits and will not be affected by the changes proposed by this letter.

Information will also be provided to the public regarding the value of large woody material and the need to get any necessary approvals from resource agencies prior to any work by private property owners in the streams.

Further, staff will maintain records of all known or reported accumulations of woody material and will monitor the condition of the channels in those areas and will work with the regulatory agencies to acquire any necessary permits for work that would be allowed under the new policies.

Using this criteria, Zone 4 funding would be redirected to address water quality protection, groundwater recharge protection, and watershed management. County Counsel's office believes it is not necessary to modify the Zone 4 charter. It is within the Board's prerogative to allocate resources among the functions enumerated in the existing charter.

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

In order to effectuate the changes outlined in this letter, staff has developed the following policies for your Board's consideration:

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 stream 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 or other special status species unless it is determined that such accumulations pose a clear and immediate threat to 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 state or federal agency.
3. Any modification or removal of LWM shall be carried out only as directed by a state or federal agency or by the Water Resources Division Director following consultation with a geomorphologist, fishery biologist, Department of Fish and Game, and/or NOAA Fisheries Service.
4. The FishNet 4C Guidelines for Woody Debris removal (Attachment 2) should be followed.



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5. 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.
6. County Environmental Health Water Resources 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 county policy.
7. Nothing in this policy shall limit the County's existing authority and procedure to act under emergency conditions where there is a need to act to prevent or mitigate the loss or impairment of life, health, property or essential public services. Any modification of large woody material under emergency conditions shall be reported to the Water Resources Division Director and the regulatory agencies that require notification.
8. Nothing in this policy shall limit the County's existing authority and procedure to perform maintenance of the Pajaro River and Salsipuedes Creek flood control channel and other channels with an agency mandate for maintenance, and agreements with the resource agencies in place.

Additional letters have been received from various regulatory agencies and interested parties in support of the proposed policy. The proposed policy change has also been discussed with the Water Advisory Commission and the Fish and Game Advisory Commission, which both support the proposal.

**Re** \_\_\_\_\_

It is therefore RECOMMENDED that your Board approve the policy for management 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

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Attachments: Board of Supervisors Resolution 417-71  
December 17, 2007, letter of NOAA Fisheries Service  
FishNet 4C Guidelines for Woody Debris Removal  
Correspondence

cc: County Counsel  
Public Works Department  
Planning Department  
Environmental Health  
Water Advisory Commission  
Fish and Game Advisory Commission

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BEFORE THE BOARD OF DIRECTORS  
OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
RESOLUTION NO. 417-71

ATTACHMENT !

On the motion of Director Forbus  
Duly seconded by Director Harry  
The following resolution is adopted:

RESOLUTION ESTABLISHING ZONE NO. 4 OF THE SANTA CRUZ  
COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
IN ACCORDANCE WITH PROVISIONS OF ACT 7390 OF THE  
CALIFORNIA WATER CODE (uncodified)

WHEREAS, this Board of Directors of the Santa Cruz County Flood Control and Water Conservation District by its Resolution No. 390-71 adopted November 16, 1971, declared its intention to establish Zone No. 4 of said District within the County of Santa Cruz, and with proper notice set Tuesday, December 14, 1971 at 7:30 P.M. as the date for public hearing upon the formation of said Zone; and

WHEREAS, the hearing was held at the time and place fixed in said Resolution of intention, the Report of the Chief Engineer was considered and adopted, and a majority protest was not received;

NOW, THEREFORE, BE IT RESOLVED AND ORDERED:

1. The Board of Directors of the Santa Cruz County Flood Control and Water Conservation District does hereby declare and determine that Zone No. 4 of said District be, and it hereby is, established.
2. That the boundaries of Zone No. 4 so formed shall be all of the territory of Santa Cruz County.
3. The name of the Zone is: "SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE NO. 4."
4. The works of Improvement for which Zone No. 4 is created are as follows:
  - a. 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, or deleterious to the quality of the waters of the County, both surface and underground.
  - b. To maintain, preserve and enhance the quality of both the surface and subsurface waters of the County.
  - c. To maintain, enhance and improve the areas of percolation of surface waters to the underground waters of the County.
  - d. To police and enforce laws and regulations designed to minimize flood damage and to protect the quality of surface and subsurface waters.

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It shall NOT be a function of Zone No. 4 to construct or maintain such improvements within stream channels as revetments, levees, retaining walls, storm sewers or any other substantial construction for the protection of any private properties, nor to issue bonds to finance such improvements, except through improvement or assessment district procedures.

f. The 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.

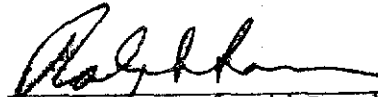
5. The maximum tax that can be levied by Zone No. 4 shall be 5 cents per \$100.00 of assessed valuation.

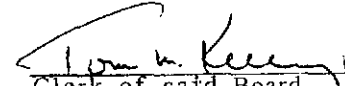
BE IT FURTHER RESOLVED AND ORDERED that the Clerk of this Board shall and hereby is directed to:

1. File a statement setting forth the legal description of Zone No. 4 with a plat or map showing said boundaries with the Assessor of the County of Santa Cruz and with the State Board of Equalization in Sacramento.

PASSED AND ADOPTED by the Board of Directors of the Santa Cruz County Flood Control and Water Conservation District this 14th day of December, 1971, by the following vote:

AYES: DIRECTORS Forbus, Mello, Harry, Cress, Sanson  
NOES: DIRECTORS None  
ABSENT: DIRECTORS None


  
Chairman of said Board

ATTEST:   
Clerk of said Board

Distribution: County Counsel  
Water Projects Coordinator  
Public Works Department  
Auditor-Controller

Approved as to form:

  
County Counsel

STATE OF CALIFORNIA COUNTY OF SANTA CRUZ I, SUSANA A. MAURIELLO, County Administrative Officer and ex-officio Clerk of the Board of Super- visors of the County of Santa Cruz, State of California, do hereby certify that the foregoing is a true and correct copy of the resolution passed and adopted by and among the members of the said board. In witness whereof I have hereunto set my hand and the seal of the said Board on this <u>14th</u> day of <u>December</u> , 1971. SUSANA A. MAURIELLO, County Administrative Officer By  Deputy
---

THOMAS J. GERALD

## 6.3 WOODY DEBRIS

### DESCRIPTION

A healthy salmon stream is chock full of large wood- big logs and rootwads, that dig into the banks and help form the channel's complexity.- making pools and providing food and shelter. Wood is a key link in the ecosystem of salmon. Restorationists and public agencies have taken on the task of placing large woody debris structures into creeks to benefit salmon. While restoration certainly helps, *our goal in this section is to provide guidelines on how to keep wood in the creek in the first place.*

Large Woody Debris (LWD), is defined as stumps, rootwads and logs having an average diameter greater than 6 inches and a length greater than 10 feet. When we refer to woody debris management it is best to think about *modification*, rather than removal, whenever feasible. Removal of wood from creeks has such a negative impact on salmon, that as a general practice, it should not be done unless there is a very real threat to county property or public safety. Best Management practices outlined below will help guide crews in avoiding or minimizing this impact.

One of the very best ways to allow wood to stay in the creek is to maintain culverts and bridges that pass the 100-year flood flows. This ensures that large debris flows will also pass, creating more natural channel conditions overall. See 6.2 *Culvert Cleaning, Repair and Replacement*.

**Note:** The maintenance practices covered in this section *do not* include traditional channel maintenance or flood control activities. For information on flood control or channel maintenance BMPs, please refer to Flood Control Facility Maintenance Manual developed by the Bay Area Stormwater Management Agencies Association (BASMAA, June 2000).

### ENVIRONMENTAL CONCERNS

- ✓ Loss of instream habitat due to wood removal.
- ✓ Harm to instream aquatic habitat or aquatic species.
- ✓ Harm to riparian areas and riparian species.
- ✓ Alteration of natural channel function or shape or destabilization of stream banks.
- ✓ Water pollution from equipment operation.
- ✓ Alteration of stream hydraulics and diversion of stream energies that may cause downstream erosion or structural damage.

### BMP OBJECTIVES

- ✓ Preserve and protect important woody debris in creeks to the extent possible.
- ✓ Prevent potential water pollution from equipment operations.



## BEST MANAGEMENT PRACTICES

- 1) Only remove (as opposed to modify) logs and debris from streams as a "last resort" when accumulation of debris poses a threat to road stability and bridges, culverts or other instream structures.
- 2) Have both a biologist and an engineer conduct a full review of the situation. The biologist should be familiar with the life histories and habitat needs of federally listed plants and animals in the area and be able to identify any of the life stages of these species. If in doubt as to the best way to handle large woody debris in a stream, consult with DFG personnel.
- 3) If log jams immediately threaten, or are damaging the integrity of roads, bridges, other public facilities during high flows, consider opportunities to *modify* the debris jam to halt damage and direct flow toward a more desirable path.
- 4) Take precautions to ensure that modifications of logs or debris jams will not cause damage downstream to culverts and other structures.
- 5) Limit modifications and/or removal to materials that extend higher than approximately two feet above the streambed (i.e. above knee height) to preserve some instream habitat features, *unless* the log or debris jam is immediately upstream and threatening a culvert or bridge, or if permit conditions require otherwise.
- 6) When modifying log jams, leave trees, logs and/or stumps in the longest lengths and diameters practicable for removal and hauling. If logs must be cut from fallen trees, leave as much as possible of the main trunk (12 feet plus is desirable) attached to the rootball and only cut branches obstructing flow. Log jams create suitable habitat for California red-legged frogs and San Francisco garter snakes and so where applicable this should be considered before removing or modifying any logjams.
- 7) Whenever feasible, incorporate LWD removed from water bodies into streambank repairs or cribbing at a nearby location, and/or transport any removed LWD to an approved storage site and make available for later use (e.g. in stream restoration activities).

## BMP TOOLBOX

### Planning and Prevention BMPs

- ✓ Seasonal Planning

## PERMITS

### 6.3 WOODY DEBRIS

Activity or Condition	Required permit or limitation
Removing or modifying large woody debris	Consult with DFG biologists

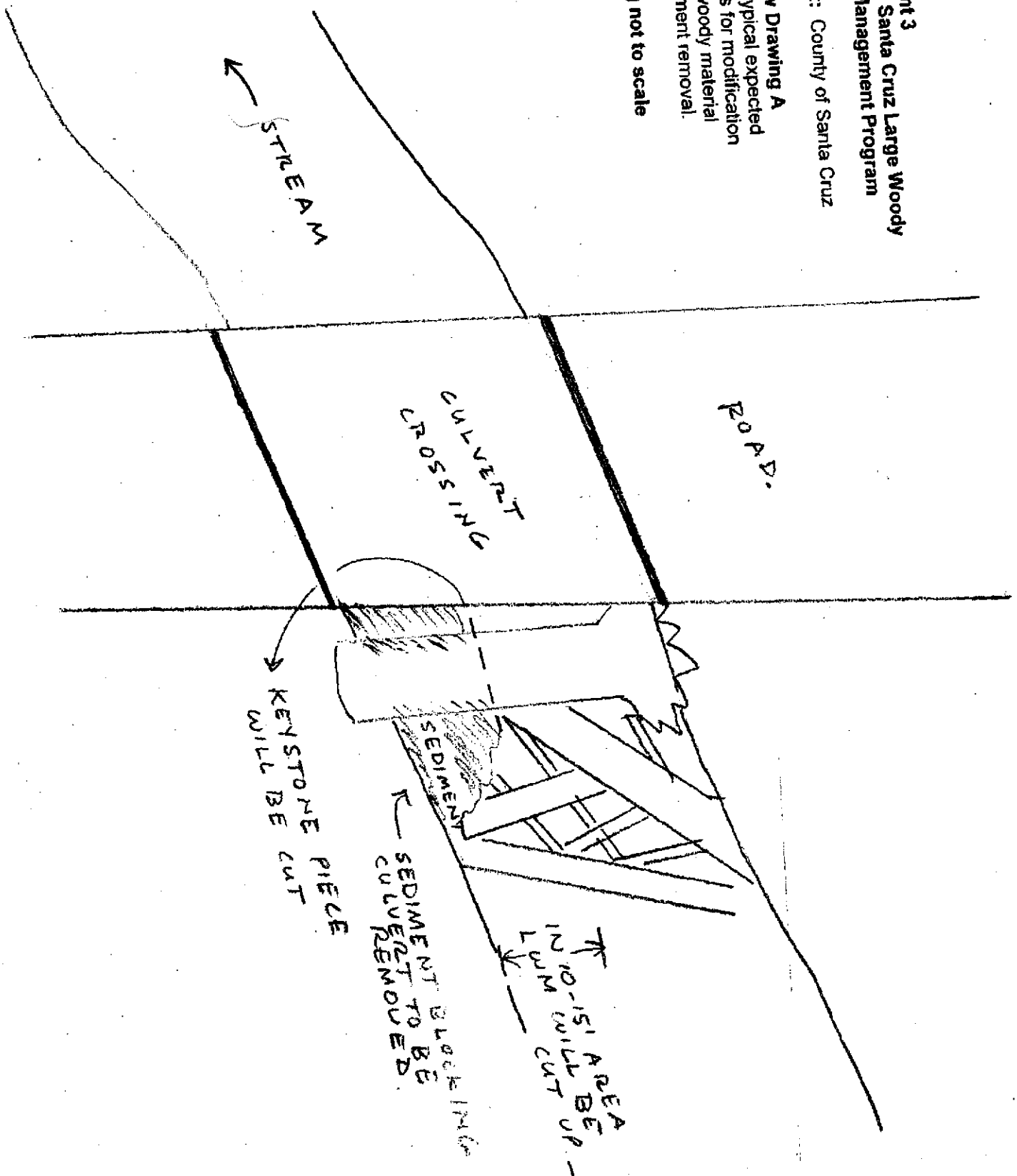


Attachment 3  
County of Santa Cruz Large Woody  
Material Management Program

Applicant: County of Santa Cruz

Plan View Drawing A  
showing typical expected  
conditions for modification  
of large woody material  
and sediment removal.

Drawing not to scale

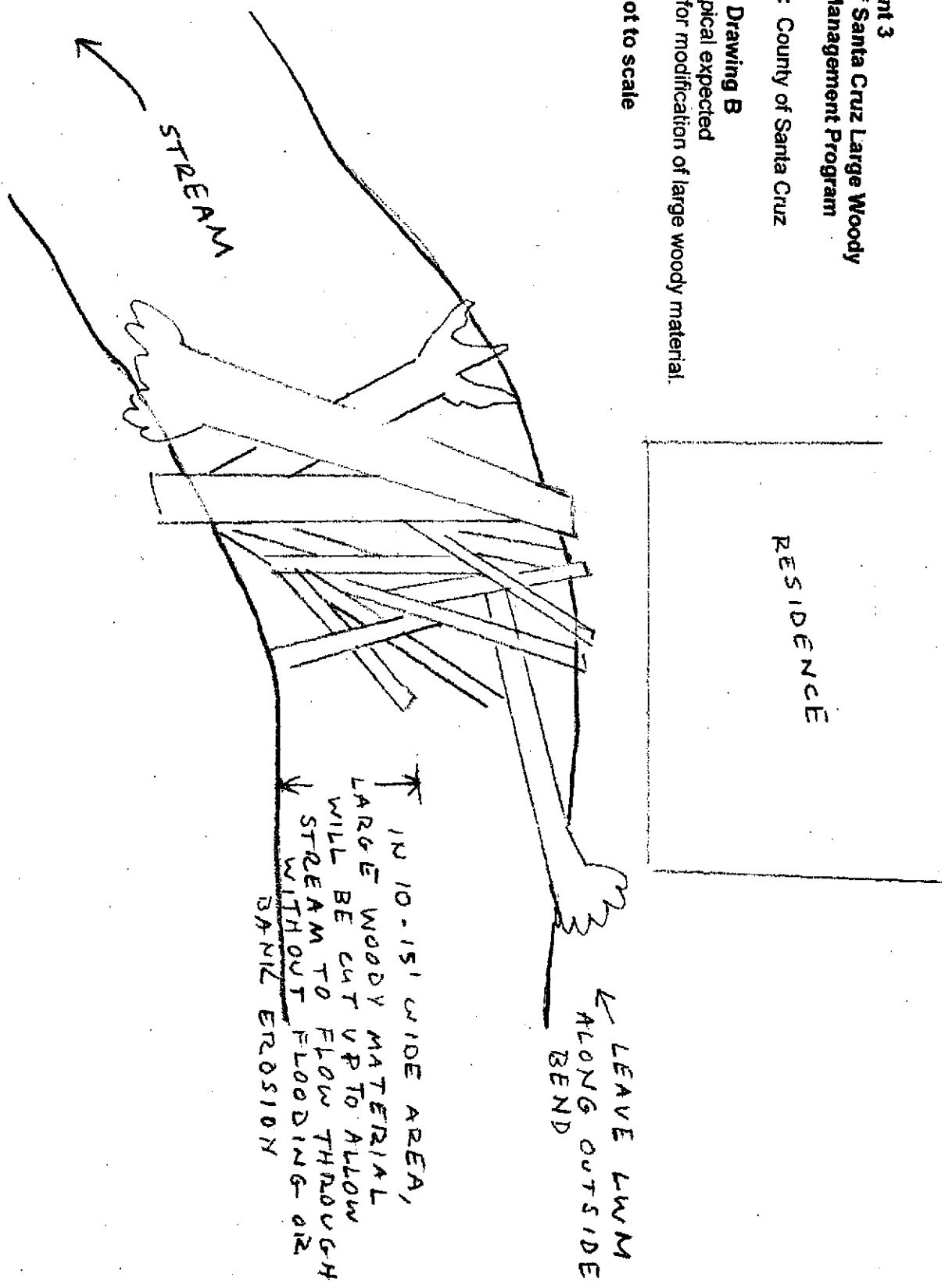


Attachment 3  
County of Santa Cruz Large Woody  
Material Management Program

Applicant: County of Santa Cruz

Plan View Drawing B  
showing typical expected  
conditions for modification of large woody material.

Drawing not to scale

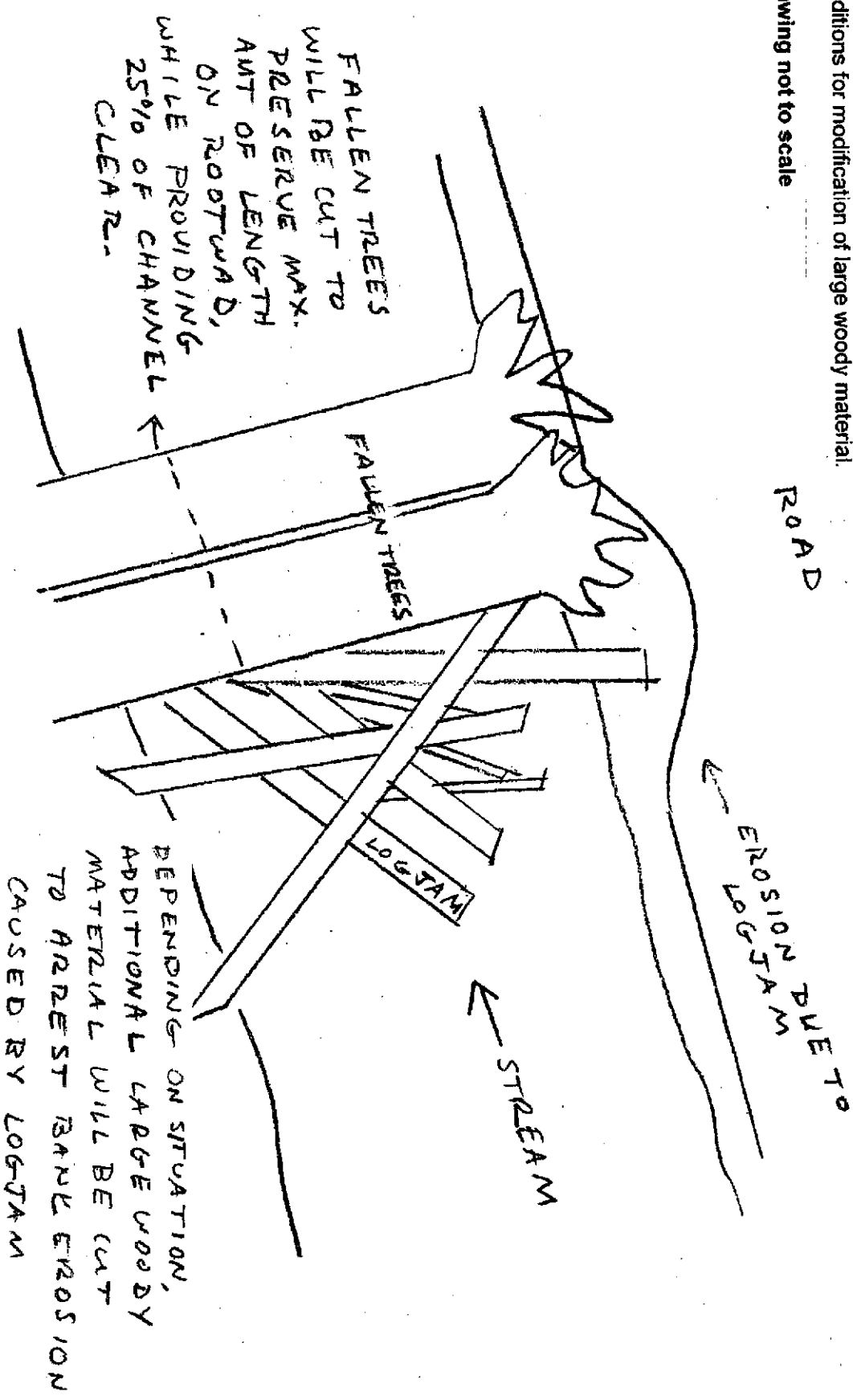


Attachment 3  
County of Santa Cruz Large Woody  
Material Management Program

Applicant: County of Santa Cruz

Plan View Drawing C showing typical expected  
conditions for modification of large woody material.

Drawing not to scale

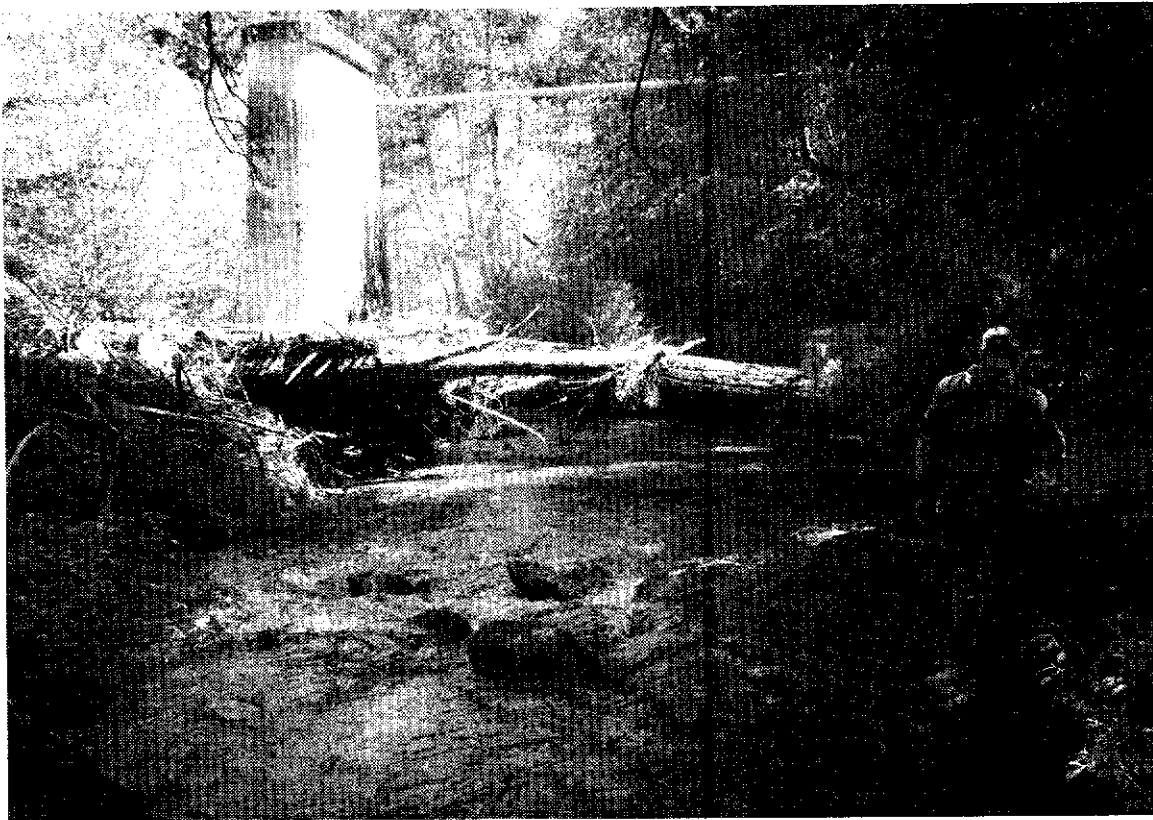


Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



This photo shows an accumulation of large woody material that was mildly threatening the road. The yellow arrows point to a few key pieces that were cut to encourage a clear path for the creek while preserving the large woody material against the eroded slope.

Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



The photo shows a logjam that was created by a keystone log spanning between an old railroad bridge pier and the bank. The logjam was causing bank erosion that was threatening a residence and was a hazard to navigation. The keystone log was cut and wood at the top of the logjam was cut.



Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



This photo shows an example of an accumulation of large woody material adjacent to bank erosion. If this large woody material were causing a clear and immediate threat to public safety, public infrastructure or aquatic habitat, this project would consider modification.

Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



This photo shows an example of a large woody material accumulation. While this wood was not cut by the County, the existing cut ends of the logs show how this project could cut large woody material towards one bank while preserving it on the other bank. Note the pool habitat formed by the large woody material in the foreground.

Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



This photo shows an example of how a rootwad was cut and a portion of the stem preserved. This project will maximize the length of stem preserved.

# Steelhead and Coho Salmon Distribution

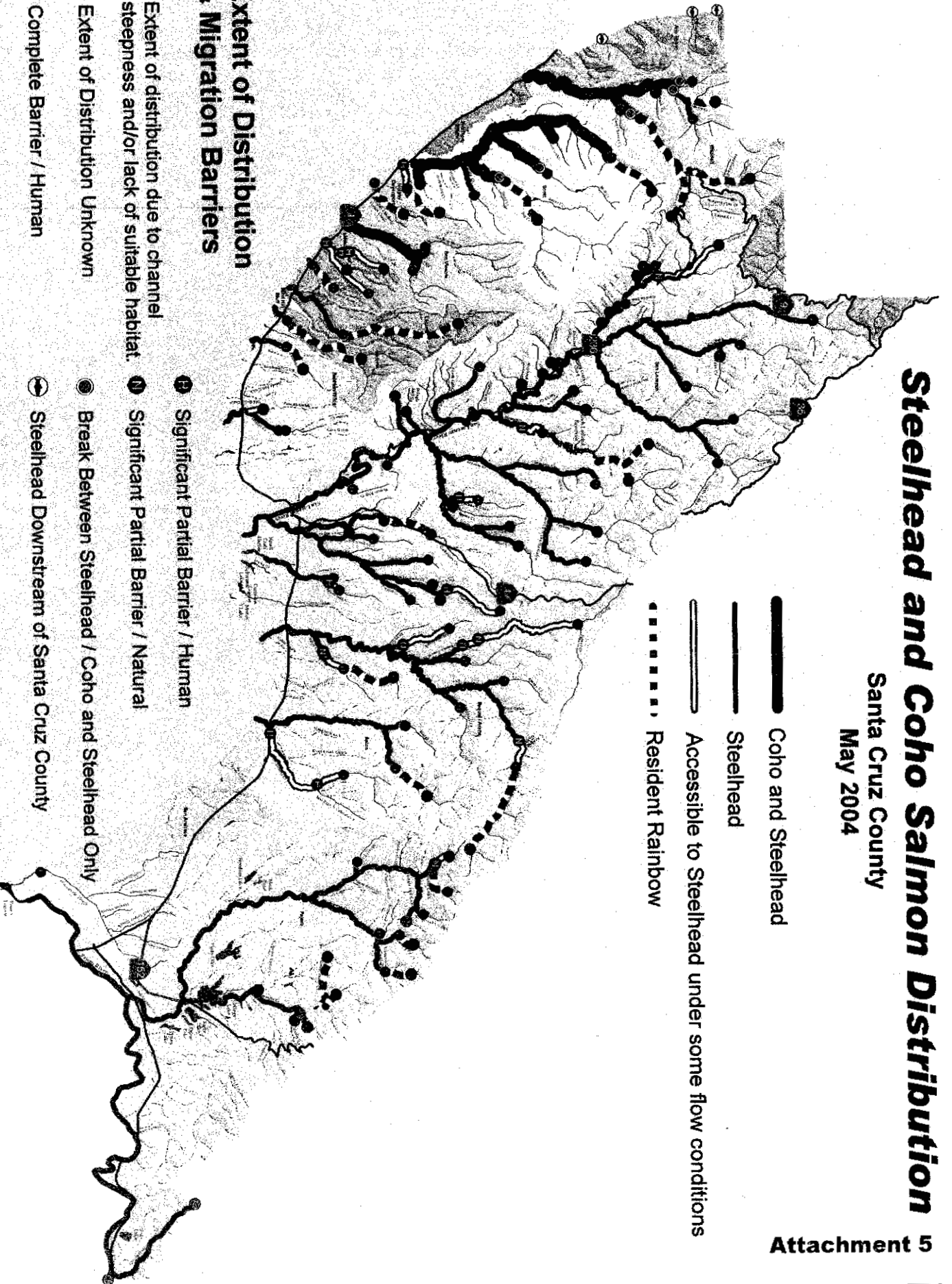
Santa Cruz County  
May 2004

Attachment 5

- Coho and Steelhead
- Steelhead
- Accessible to Steelhead under some flow conditions
- ..... Resident Rainbow

## Extent of Distribution & Migration Barriers

- Extent of distribution due to channel steepness and/or lack of suitable habitat.
- Extent of Distribution Unknown
- Complete Barrier / Human
- Complete Barrier / Natural
- Significant Partial Barrier / Human
- Significant Partial Barrier / Natural
- Break Between Steelhead / Coho and Steelhead Only
- Steelhead Downstream of Santa Cruz County
- Whole Stream In Santa Cruz County Accessible

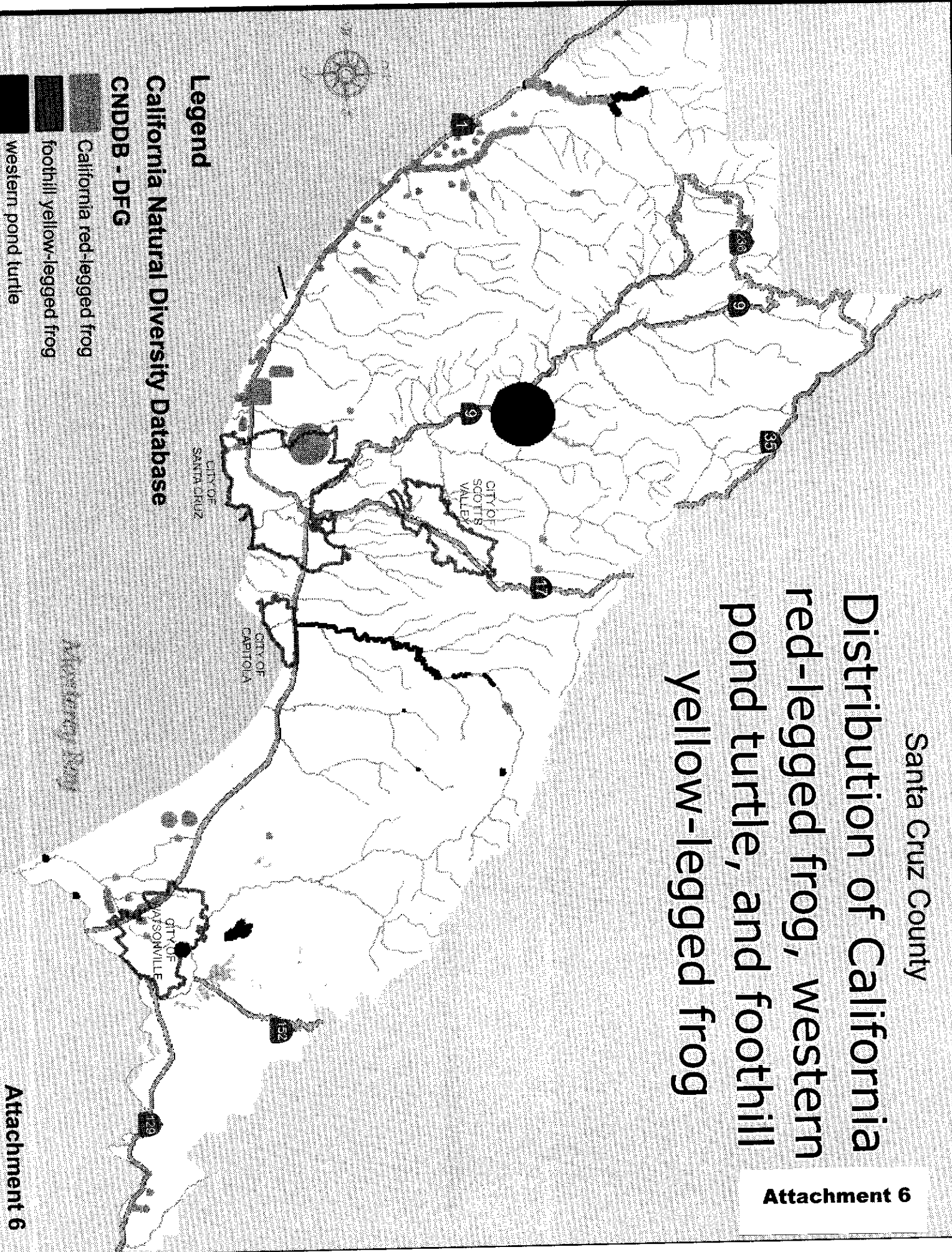




Santa Cruz County

Distribution of California  
red-legged frog, western  
pond turtle, and foothill  
yellow-legged frog

Attachment 6



Attachment 6

# Distribution of Tidewater Goby

Key

Description

- 1 SCOTT CREEK, FROM MOUTH TO 1.0 MILE UPSTREAM, 3 MILES NW OF DAVENPORT.
- 2 PALJARO RIVER, FROM MOUTH TO 1.0 MILE UPSTREAM, APPROX 3 MILES NORTH OF MOSS LANDING
- 3 WADDELL CREEK, FROM MOUTH TO 1.0 MILE UPSTREAM, 7 MILES (11.5 KM) NORTHWEST OF DAVENPORT.
- 4 CORCORAN LAGOON/RODEO GULCH, FROM MOUTH TO 1.0 MILE UPSTREAM, CAPITOLA.
- 5 APTOS CREEK, FROM MOUTH TO 1.0 MILE UPSTREAM, APTOS.
- 6 SOQUEL CREEK, BETWEEN CAPITOLA STATE BEACH AND HIGHWAY 1, CAPITOLA.
- 7 WOODS LAGOON (TWIN LAKES), FROM MOUTH TO 1.0 MILE UPSTREAM, BETWEEN SANTA CRUZ & CAPITOLA, EASTERN OF THE TWO LAKES.
- 8 LAGUNA CREEK, FROM THE MOUTH TO 0.5 MILE UPSTREAM, 6 MILES WNW OF SANTA CRUZ.
- 9 WILDER CREEK LAGOON, 1 MILE WEST OF NATURAL BRIDGES STATE BEACH, WEST OF SANTA CRUZ
- 10 MOORE CREEK, FROM MOUTH TO 0.25 MILE UPSTREAM, NATURAL BRIDGES STATE BEACH, NORTH EDGE OF SANTA CRUZ.
- 11 BALDWIN CREEK, FROM MOUTH TO 0.25 MILE UPSTREAM, 4 MILES WEST OF SANTA CRUZ.
- 12 LOMBARDI CREEK LAGOON, 4 MILES WEST OF SANTA CRUZ.
- 13 WEST BANK OF THE SAN LORENZO RIVER, BETWEEN THE RIVERSIDE AVENUE BRIDGE AND THE SOQUEL AVENUE BRIDGE, SANTA CRUZ
- 14 YOUNGER LAGOON, NW OF LONG'S MARINE LAB, SANTA CRUZ
- 15 MORAN LAKE, JUST NW OF SOQUEL POINT, SANTA CRUZ

Source: California Natural Diversity Database

06-2-09

Attachment 7

Attachment 7

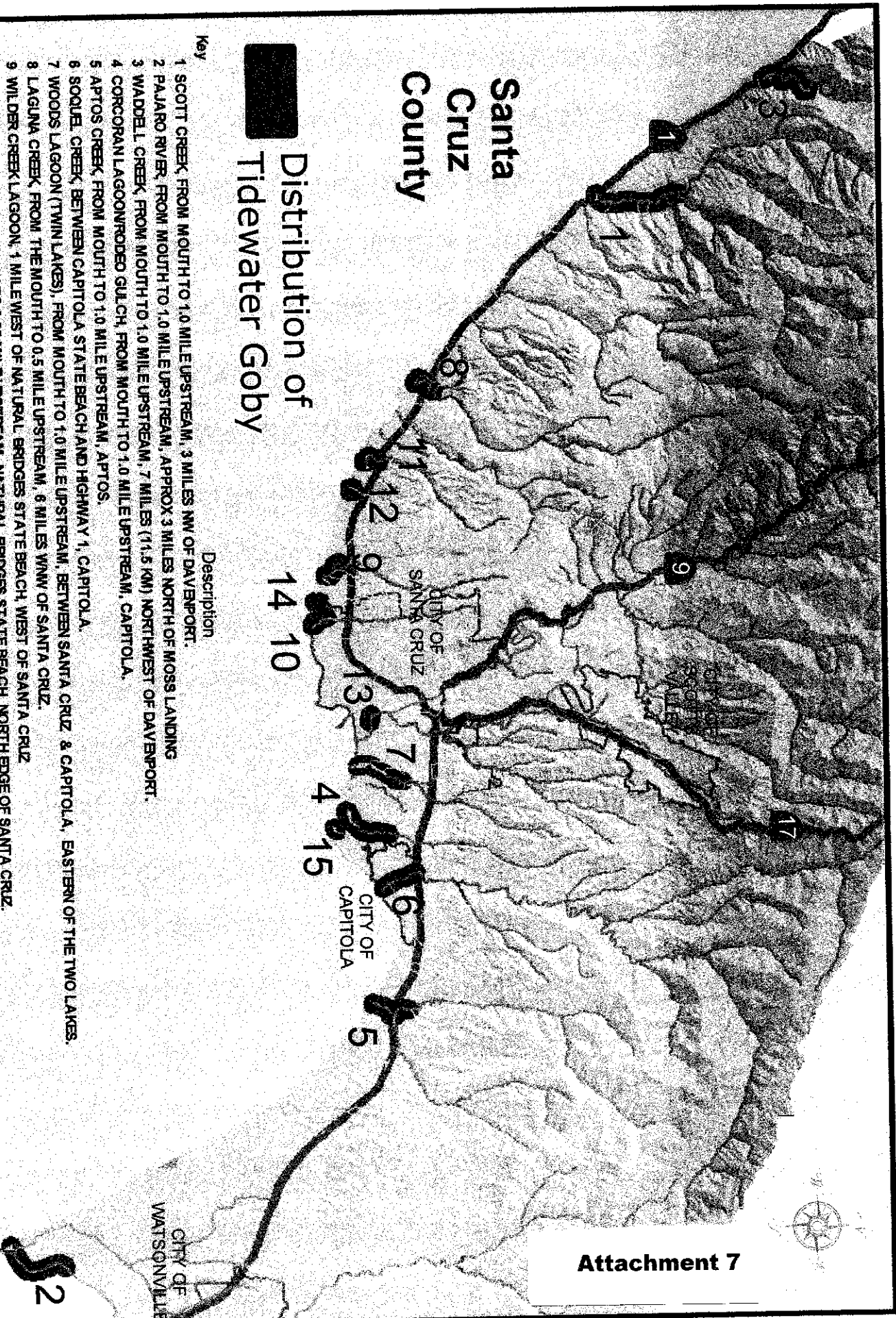
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CITY OF  
WATSONVILLE

CITY OF  
CAPITOLA

CITY OF  
SANTA CRUZ

SCOTT  
VALLEY





# COUNTY OF SANTA CRUZ

## PLANNING DEPARTMENT

701 OCEAN STREET, 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060  
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

TOM BURNS, PLANNING DIRECTOR

### NOTICE OF ENVIRONMENTAL REVIEW PERIOD

#### SANTA CRUZ COUNTY

APPLICANT: John Ricker, Environmental Health, Santa Cruz County

APPLICATION NO.: 09-0362

APN: N/A

The Environmental Coordinator has reviewed the Initial Study for your application and made the following preliminary determination:

XX Negative Declaration  
(Your project will not have a significant impact on the environment.)

           Mitigations will be attached to the Negative Declaration.

XX No mitigations will be attached.

           Environmental Impact Report  
(Your project may have a significant effect on the environment. An EIR must be prepared to address the potential impacts.)

As part of the environmental review process required by the California Environmental Quality Act (CEQA), this is your opportunity to respond to the preliminary determination before it is finalized. Please contact Matt Johnston, Environmental Coordinator at (831) 454-3201, if you wish to comment on the preliminary determination. Written comments will be received until 5:00 p.m. on the last day of the review period.

Review Period Ends: January 2, 2010

Matt Johnston, staff planner

Phone: (831) 454-3201

Date: December 3, 2009







## **Environmental Review Initial Study**

**Application Number: 09-0362**

**Date:** November 16, 2009

**Staff Planner:** Kristen Kittleson

### **I. OVERVIEW AND ENVIRONMENTAL DETERMINATION**

**APPLICANT:** John Ricker, County  
Environmental Health

**APN:** n/a

**OWNER:** n/a

**SUPERVISORAL DISTRICT:** All

#### **LOCATION:**

This project will occur within Zone 4 of the County's Flood Control District, which includes all of Santa Cruz County (Attachment 1). The majority of the project work will occur within the perennial streams of the San Lorenzo, Soquel and Aptos watersheds and the Corralitos subbasin of the Pajaro River Watershed. Work will occasionally occur in smaller stream systems such as Arana Gulch and Rodeo Gulch, and north coast streams such as Liddell or San Vicente. Any work done within State Parks (including Henry Cowell and Nisene Marks) or within city limits will be done only with consent of the cooperating agency.

#### **SUMMARY PROJECT DESCRIPTION:**

The proposed project is the implementation of the County of Santa Cruz Large Woody Material Management Program (LWMMP). For the purposes of this program, 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. The LWMMP project area includes all of Santa Cruz County, but is most active in the perennial streams of the San Lorenzo, Soquel, Aptos and Corralitos watersheds.

The LWMMP responds to requests of streamside property owners and County drainage crews to evaluate, and, if necessary, modify accumulations of large woody material in county streams. To be considered for modification under the new policy, large woody material must pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

There is occasionally sediment associated with the large woody material accumulations subject to the LWMMP review or action. In specific cases where the sediment is impeding flow through a culvert or road crossing or contributing significantly to bank

erosion or localized flooding, the County may remove sediment from the stream channel.

**ALL OF THE FOLLOWING POTENTIAL ENVIRONMENTAL IMPACTS ARE EVALUATED IN THIS INITIAL STUDY. CATEGORIES THAT ARE MARKED HAVE BEEN ANALYZED IN GREATER DETAIL BASED ON PROJECT SPECIFIC INFORMATION.**

<input type="checkbox"/> Geology/Soils	<input type="checkbox"/> Noise
<input type="checkbox"/> Hydrology/Water Supply/Water Quality	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Public Services & Utilities
<input type="checkbox"/> Energy & Natural Resources	<input type="checkbox"/> Land Use, Population & Housing
<input type="checkbox"/> Visual Resources & Aesthetics	<input type="checkbox"/> Cumulative Impacts
<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Growth Inducement
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Mandatory Findings of Significance
<input type="checkbox"/> Transportation/Traffic	

**DISCRETIONARY APPROVAL(S) BEING CONSIDERED**

<input type="checkbox"/> General Plan Amendment	<input type="checkbox"/> Grading Permit
<input type="checkbox"/> Land Division	<input type="checkbox"/> Riparian Exception
<input type="checkbox"/> Rezoning	<input type="checkbox"/> Other:
<input type="checkbox"/> Development Permit	<input type="checkbox"/>
<input type="checkbox"/> Coastal Development Permit	<input type="checkbox"/>

**NON-LOCAL APPROVALS**

Other agencies that must issue permits or authorizations:  
California Dept. of Fish and Game  
Army Corps of Engineers  
Regional Water Quality Control Board

**ENVIRONMENTAL REVIEW ACTION**

On the basis of this Initial Study and supporting documents:

☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the attached

mitigation measures have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

\_\_\_ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

  
Matthew Johnston

  
Date

For Claudia Slater  
Environmental Coordinator

## II. BACKGROUND INFORMATION

### EXISTING SITE CONDITIONS

Parcel Size: n/a

Existing Land Use: n/a

Vegetation: n/a

Slope in area affected by project:   X   0 - 30%   X   31 - 100%

Nearby Watercourse: intermittent and perennial streams in Santa Cruz County

Distance To: all streams tributary to Monterey Bay

### ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Groundwater Supply: na

Water Supply Watershed: n/a

Groundwater Recharge: n/a

Timber or Mineral: n/a

Agricultural Resource: n/a

Biologically Sensitive Habitat: yes

Fire Hazard: n/a

Floodplain: yes

Erosion: yes

Landslide: n/a

Liquefaction: n/a

Fault Zone: n/a

Scenic Corridor: n/a

Historic: n/a

Archaeology: n/a

Noise Constraint: n/a

Electric Power Lines: n/a

Solar Access: n/a

Solar Orientation: n/a

Hazardous Materials: n/a

### SERVICES

Fire Protection: n/a

School District: n/a

Sewage Disposal: n/a

Drainage District: n/a

Project Access: n/a

Water Supply: n/a

### PLANNING POLICIES

Zone District: n/a

General Plan: n/a

Urban Services Line:

  X   Inside

  X   Outside

Coastal Zone:

  X   Inside

  X   Outside

Special Designation: n/a

### PROJECT SETTING AND BACKGROUND:

This project will occur within Zone 4 of the County's Flood Control District, which includes all of Santa Cruz County (Attachment 1). The majority of the project work will occur within the perennial streams of the San Lorenzo, Soquel and Aptos watersheds and the Corralitos subbasin of the Pajaro River Watershed. Work will occasionally occur in smaller stream systems such as Arana Gulch and Rodeo Gulch, and north coast streams such as Liddell or San Vicente. Any work done within State Parks (including Henry Cowell and Nisene Marks) or within city limits will be done only with consent of the cooperating agency.

In 1971, the County of Santa Cruz Board of Supervisors established Zone 4, which was intended in part 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." Under this previous policy, the County responded to requests from property owners and agencies to clear logjams and other large woody material from stream channels and to clear stream channels of large woody material during summer months in anticipation of winter storms. This program went through multiple changes over the past 38 years; most recently in the past 15 years, the program eliminated summer channel clearing and began to leave more large woody material in streams to benefit steelhead and coho salmon.

In March 2009, the County of Santa Cruz Board of Supervisors approved a new policy for the management of large woody material in Santa Cruz County streams (Attachment 2). The Board of Supervisors acknowledges that large woody material accumulates in county streams as a result of natural processes and conditions. The new policy 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 stream banks and channel stability, providing pools and refuges, and generally benefiting stream habitat, when such material does not pose an immediate threat to life, public infrastructure, public safety, or aquatic habitat.

#### **DETAILED PROJECT DESCRIPTION:**

The County of Santa Cruz Large Woody Material Management Program (LWMMP) responds to requests of streamside property owners and County drainage crews to evaluate, and, if necessary, modify accumulations of large woody material in county streams. For the purposes of this program, 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. To be considered for modification under the new policy, large woody material must pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

The process begins when either Public Works - Drainage Division (PW) or Environmental Health Services receives a request to remove wood from a county stream.

When a request is received, the following steps will be taken:

1. All requests will be entered into a database.
2. The site will be evaluated initially by Public Works. If the large wood does not pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat, no action will be taken and the property owner or managing agency will be informed of the County's policy.
3. If Public Works considers or recommends modification, staff from the Water Resources Program of Environmental Health Services and if appropriate, a contractor geomorphologist, and/or a wildlife biologist will evaluate the site and proposed work.

4. Environmental Health Services will make a decision on whether to take action to modify the large woody material. If no action is taken, the property owner or managing agency will be informed of the County's policy. When appropriate, a contract biologist will evaluate the site and proposed work. Recommendations from the biologist will be incorporated into the proposed work.
5. Public Works will perform any work associated with modifying the large woody material and follow appropriate measures and guidelines for protecting listed species, aquatic habitat and water quality.
6. All decisions and actions will be recorded in the database.

In most cases, modification of large woody material consists of using hand labor crews with chainsaws to cut woody material into 5-15' sections. All cut wood will remain in the stream channel, except where it is obstructing a road crossing at a bridge or culvert. In those cases, wood may need to be removed with a crane or backhoe and will be chipped and taken to the wood recycling facility at the County landfill.

The minimum amount of the large woody material will be cut or modified to reduce the hazard. One approach will be to clear large woody material from one side of the stream channel to allow flow through without flooding or erosion. Another approach will be to cut up one or more keystone pieces so that the accumulation of large woody material will change or move during the next high flows. The County expects to leave large woody material along outside bends adjacent to roads or homes in order to reduce bank erosion (Attachment 3 and 4).

There is occasionally sediment associated with the large woody material accumulations subject to the LWMMP review or action. In specific cases where the sediment is impeding flow through a culvert or road crossing, or contributing significantly to bank erosion or localized flooding, the County may remove sediment from the stream channel.

In most cases, sediment will be removed or relocated from the active channel using hand crews and shovels. In some cases, heavy equipment, such as a backhoe, will be operated from the bank or stream crossing (culvert, bridge) to remove sediment. No heavy equipment will be allowed within the active channel. Sediment removed with heavy equipment will be placed so that it does not re-enter the stream. Sediment removal will occur only during winter flows, when minor additional turbidity will not impact fish or wildlife.

Only the sediment that was deposited during a specific storm event and is associated with accumulations of large woody material will be removed. The County will remove up to 100 cubic yards of material among all locations within a given year. Sediment removal is expected to occur only occasionally and following very large storm events. For example, the County has not removed any sediment during the past 5 years in association with the LWMMP.

### III. ENVIRONMENTAL REVIEW CHECKLIST

#### A. Geology and Soils

Does the project have the potential to:

1. Expose people or structures to potential adverse effects, including the risk of material loss, injury, or death involving:

- A. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or as identified by other substantial evidence?

\_\_\_\_\_ X \_\_\_\_\_

- B. Seismic ground shaking?

\_\_\_\_\_ X \_\_\_\_\_

- C. Seismic-related ground failure, including liquefaction?

\_\_\_\_\_ X \_\_\_\_\_

- D. Landslides?

\_\_\_\_\_ X \_\_\_\_\_

All of Santa Cruz County is subject to some hazard from earthquakes. This project does not involve any construction, so the risk of workers exposed to earthquakes is the same as any location in the county.

Some areas along streams are subject to some hazard from landslides. Workers may be exposed to a slight risk of landslides through this project, but precautions will be taken to insure worker safety during wet winter conditions. LWM will not be removed where it is protecting the toe of a landslide from stream erosion.

2. Subject people or improvements to damage from soil instability as a result of on- or off-site landslide, lateral spreading, to subsidence, liquefaction, or structural collapse?

\_\_\_\_\_ X \_\_\_\_\_

Some areas along streams are subject to some hazard from landslides. Workers may be exposed to a slight risk of landslides through this project, but precautions will be taken to insure worker safety during wet winter conditions. LWM will not be removed where it is protecting the toe of a landslide from stream erosion.

3. Develop land with a slope exceeding 30%?

\_\_\_\_\_ X \_\_\_\_\_

There are slopes that exceed 30% along stream channels. However, no disturbance is proposed above the active channel.

4. Result in soil erosion or the substantial loss of topsoil?

\_\_\_\_\_ X \_\_\_\_\_

The cutting of large woody material will not result in soil erosion or the substantial loss of topsoil.

5. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code(1994), creating substantial risks to property?

\_\_\_\_\_ X \_\_\_\_\_

No construction is proposed.

6. Place sewage disposal systems in areas dependent upon soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems?

\_\_\_\_\_ X \_\_\_\_\_

No septic systems are proposed.

7. Result in coastal cliff erosion?

\_\_\_\_\_ X \_\_\_\_\_

The project will not take place on coastal cliffs.



**B. Hydrology, Water Supply and Water Quality**

Does the project have the potential to:

1. Place development within a 100-year flood hazard area? \_\_\_\_\_ X \_\_\_\_\_

This project does not include any development.

2. Place development within the floodway resulting in impedance or redirection of flood flows? \_\_\_\_\_ X \_\_\_\_\_

This project does not include any development.

3. Be inundated by a seiche or tsunami? \_\_\_\_\_ X \_\_\_\_\_

A seiche or tsunami may result in raised stream levels which may promote accumulations of Large Woody Material within a lagoon or stream channel.

4. Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit, or a significant contribution to an existing net deficit in available supply, or a significant lowering of the local groundwater table? \_\_\_\_\_ X \_\_\_\_\_

This project will not use any water supply.

5. Degrade a public or private water supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).

X

This project will not involve contribution of urban contaminants, nutrient enrichments or other agricultural chemicals or seawater intrusion.

This project may contribute a minor amount of short-term turbidity to streams upstream of municipal water supply. However, it is not expected that any increased turbidity would be measurable, because streams will be turbid from winter storms.

The County's Fleet Maintenance Department maintains the chainsaws and promptly repairs any leaks. The County uses environmentally friendly chainsaw products, including biodegradable Stihl HP Ultra 2-Cycle Engine Oil and Stihl BioPlus Bar and Chain Oil, which is made with a vegetable oil base.

6. Degrade septic system functioning?

X

There is no indication that existing septic systems in the vicinity would be affected by the project.

7. Alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which could result in flooding, erosion, or siltation on or off-site?

X

This project will have a beneficial impact by modifying large woody material when necessary to prevent flooding, erosion, or siltation that threatens life or property.

8. Create or contribute runoff which would exceed the capacity of existing or planned storm water drainage systems, or create additional source(s) of polluted runoff?

X

This project will not result in an increase in runoff.

9. Contribute to flood levels or erosion in natural water courses by discharges of newly collected runoff? \_\_\_\_\_ X

No new impervious surfaces are proposed as part of the project, thus there will be no additional storm water runoff that could contribute to flooding or erosion.

10. Otherwise substantially degrade water supply or quality? \_\_\_\_\_ X

This project will not substantially degrade water supply or quality.

### **C. Biological Resources**

Does the project have the potential to:

1. Have an adverse effect on any species identified as a candidate, sensitive, or special status species, in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, or U.S. Fish and Wildlife Service? \_\_\_\_\_ X

This project has the potential for adverse effects on special status, threatened and endangered species, including the potential take of species through bed disturbance, movement of large woody material or turbidity. Species potentially affected include steelhead trout (*Oncorhynchus mykiss*), coho salmon (*Oncorhynchus kisutch*), tidewater goby (*Eucyclogobius newberryi*), red-legged frog (*Rana aurora*), yellow-legged frog (*Rana muscosa*) and western pond turtle (*Actinemys marmorata*) - Distribution Maps, Attachments 5, 6, 7).

The effects on the species listed above will be reduced to less than significant by following these measures:

- Modification of large woody material and sediment removal will be done primarily with hand crews using chainsaws and shovels.
- Large woody material will be cut to a minimum to allow streamflow and the passage of sediment and wood.
- Large wood will be cut in as few pieces as possible with an effort to maintain pieces of at least 8 feet in length.
- Sections of cut wood will remain in the stream channel.
- Environmental Health Services will determine when it is appropriate to request a geomorphologist and/or biologist to evaluate the site and give recommendations about how the modification of large woody material may impact flood reduction, erosion hazard or aquatic habitat. These recommendations will be

incorporated into the proposed work.

- When it is necessary to use heavy equipment for sediment removal, operations will occur from top of the bank or from the adjacent culvert or road crossings.
- Sediment removal is expected to be primarily sand substrate. Santa Cruz County streams in general have excess sand substrate that impairs spawning and rearing habitat for steelhead and coho salmon. To the extent practicable, larger substrates including cobble and boulders will not be removed from the stream.
- Sediments that show signs of spawning activity by steelhead or coho salmon will not be removed.
- When large woody material is adjacent to a pool and 3 or more pieces of large woody material will be modified, a pre-construction survey for red-legged frogs and western pond turtles will be conducted.
- USFWS will be contacted if any modification or removal of large woody material occurs within known tidewater goby distribution (Attachment 7). Most tidewater goby areas would involve a cooperating agency, such as the City of Capitola, City of Santa Cruz, State Parks or Caltrans. Large woody material has not been removed historically from most of the tidewater goby areas, including Corcoran, Moran, Moore, Younger, and Laguna. It is possible that intense storms or a seiche/tsunami could deposit problematic accumulations of large woody material in lagoon areas such as Aptos, Soquel or San Lorenzo. A possible scenario is that large woody material may need to be removed from a bridge, which would involve using a crane to remove wood from the channel, but would not include any bed disturbance that could potentially harm tidewater goby.

2. Have an adverse effect on a sensitive biotic community (riparian corridor), wetland, native grassland, special forests, intertidal zone, etc.)?

X

The project does not involve the disturbance of riparian vegetation or other sensitive biotic communities.

3. Interfere with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native or migratory wildlife nursery sites?

X

The proposed project does not involve any activities that would interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site. The project may result in modification of LWM where accumulations are impeding migration of anadromous fish.

4. Produce nighttime lighting that will illuminate animal habitats? \_\_\_\_\_

X

This project will not produce any permanent nighttime lighting. In rare cases, lights may be used to work at night to prevent the loss of life or property, but this would be a one-time event.

5. Make a significant contribution to the reduction of the number of species of plants or animals? \_\_\_\_\_

X

Refer to C-1 and C-2 above.

6. Conflict with any local policies or ordinances protecting biological resources (such as the Significant Tree Protection Ordinance, Sensitive Habitat Ordinance, provisions of the Design Review ordinance protecting trees with trunk sizes of 6 inch diameters or greater)? \_\_\_\_\_

X

The project will not conflict with any local policies or ordinances.

7. Conflict with the provisions of an adopted Habitat Conservation Plan, Biotic Conservation Easement, or other approved local, regional, or state habitat conservation plan? \_\_\_\_\_

X

This project area is not within the boundaries of any Habitat Conservation Plan, Biotic Conservation Easement or other approved local, regional or state habitat conservation plan.

**D. Energy and Natural Resources**

Does the project have the potential to:

1. Affect or be affected by land designated as "Timber Resources" by the General Plan? \_\_\_\_\_ X \_\_\_\_\_

This project may occur adjacent to land designated as Timber Resource. However, the project will not affect the resource or access to harvest the resource in the future. The timber resource may only be harvested in accordance with California Department of Forestry timber harvest rules and regulations.

2. Affect or be affected by lands currently utilized for agriculture, or designated in the General Plan for agricultural use? \_\_\_\_\_ X \_\_\_\_\_

This project may occur adjacent to land designated as agriculture, but will not affect the agricultural use of that land.

3. Encourage activities that result in the use of large amounts of fuel, water, or energy, or use of these in a wasteful manner? \_\_\_\_\_ X \_\_\_\_\_

This project does not involve the use of large amounts of fuel, water or energy.

4. Have a substantial effect on the potential use, extraction, or depletion of a natural resource (i.e., minerals or energy resources)? \_\_\_\_\_ X \_\_\_\_\_

This project takes place in streams and will not have any effect on the potential use, extraction or depletion of a natural resource.

**E. Visual Resources and Aesthetics**

Does the project have the potential to:

1. Have an adverse effect on a scenic resource, including visual obstruction of that resource? \_\_\_\_\_ X \_\_\_\_\_

The project will not directly impact any public scenic resources, as designated in the County's General Plan (1994), or obstruct any public views of these visual resources.

2. Substantially damage scenic resources, within a designated scenic corridor or public view shed area including, but not limited to, trees, rock outcroppings, and historic buildings? \_\_\_\_\_ X \_\_\_\_\_

No geologic features will be destroyed, covered or modified in this project. Unique physical features of large woody material may be modified if they pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

3. Degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, and/or development on a ridge line? \_\_\_\_\_ X \_\_\_\_\_

This project will not create substantial change in topography or ground surface relief.

4. Create a new source of light or glare which would adversely affect day or nighttime views in the area? \_\_\_\_\_ X \_\_\_\_\_

This project does not involve the creation of a new light source

5. Destroy, cover, or modify any unique geologic or physical feature? \_\_\_\_\_ X \_\_\_\_\_

No geologic features will be destroyed, covered or modified in this project. Unique physical features of large woody material may be modified if they pose a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

#### **F. Cultural Resources**

Does the project have the potential to:

1. Cause an adverse change in the significance of a historical resource as defined in CEQA Guidelines 15064.5? \_\_\_\_\_ X \_\_\_\_\_

No historical resources will be changed as part of this project.

2. Cause an adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines 15064.5? \_\_\_\_\_ X \_\_\_\_\_

This project will occur within active stream channels and is not expected to occur within areas of known archeological resources. Pursuant to County Code Section 16.40.040, if at any time in the preparation for or process of excavating or otherwise disturbing the ground, any human remains of any age, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age are discovered, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.

3. Disturb any human remains, including those interred outside of formal cemeteries? \_\_\_\_\_ X \_\_\_\_\_

Pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

4. Directly or indirectly destroy a unique paleontological resource or site? \_\_\_\_\_ X \_\_\_\_\_

No known paleontological resource or site is within the project area.



**G. Hazards and Hazardous Materials**

Does the project have the potential to:

1. Create a significant hazard to the public or the environment as a result of the routine transport, storage, use, or disposal of hazardous materials, not including gasoline or other motor fuels?

\_\_\_\_\_ X \_\_\_\_\_

This project will not use any hazardous materials other than gasoline, oil or other motor fuels.

2. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

\_\_\_\_\_ X \_\_\_\_\_

This project will not located on a site that is included in a list of hazardous materials sites.

3. Create a safety hazard for people residing or working in the project area as a result of dangers from aircraft using a public or private airport located within two miles of the project site?

\_\_\_\_\_ X \_\_\_\_\_

This project does not involve the use of aircraft.

4. Expose people to electro-magnetic fields associated with electrical transmission lines?

\_\_\_\_\_ X \_\_\_\_\_

This project does not involve electrical transmission lines.

5. Create a potential fire hazard?

\_\_\_\_\_ X \_\_\_\_\_

The project design incorporates all applicable fire safety code requirements and will include fire protection devices as required by the local fire agency.

6. Release bio-engineered organisms or chemicals into the air outside of project buildings? \_\_\_\_\_ X

This project does not involve bio-engineered organisms.

**H. Transportation/Traffic**

Does the project have the potential to:

1. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? \_\_\_\_\_ X

There will be no impact because no additional traffic will be generated.

2. Cause an increase in parking demand which cannot be accommodated by existing parking facilities? \_\_\_\_\_ X

There will be no impact because no additional traffic will be generated.

3. Increase hazards to motorists, bicyclists, or pedestrians? \_\_\_\_\_ X

The proposed project will comply with current road requirements to prevent potential hazards to motorists, bicyclists, and/or pedestrians.

4. Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the county congestion management agency for designated intersections, roads or highways? \_\_\_\_\_ X

See response H-1 above.

**I. Noise**

Does the project have the potential to:

1. Generate a permanent increase in ambient noise levels in the project vicinity above levels existing without the project? \_\_\_\_\_ X

The project will not create any permanent increase in ambient noise levels.

2. Expose people to noise levels in excess of standards established in the General Plan, or applicable standards of other agencies? \_\_\_\_\_ X

This project will not expose people to noise levels in excess of standards established in the General Plan.

3. Generate a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? \_\_\_\_\_ X

Noise generated during project implementation will increase the ambient noise levels for adjoining areas. Noise will be temporary, however, and given the limited duration of this impact it is considered to be less than significant.

**J. Air Quality**

Does the project have the potential to:  
(Where available, the significance criteria established by the MBUAPCD may be relied upon to make the following determinations).

1. Violate any air quality standard or contribute substantially to an existing or projected air quality violation? \_\_\_\_\_ X

2. Conflict with or obstruct implementation of an adopted air quality plan? \_\_\_\_\_ X

- |    |  |       |       |       |       |   |
|----|--|-------|-------|-------|-------|---|
| 3. | Expose sensitive receptors to substantial pollutant concentrations?  | _____ | _____ | _____ | _____ | X |
| 4. | Create objectionable odors affecting a substantial number of people? | _____ | _____ | _____ | _____ | X |

**K. Public Services and Utilities**

Does the project have the potential to:

- |    |  |       |       |       |       |   |
|----|--|-------|-------|-------|-------|---|
| 1. | Result in the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: |       |       |       |       |   |
| a. | Fire protection?   | _____ | _____ | _____ | _____ | X |
| b. | Police protection?   | _____ | _____ | _____ | _____ | X |
| c. | Schools?   | _____ | _____ | _____ | _____ | X |
| d. | Parks or other recreational activities?  | _____ | _____ | _____ | _____ | X |
| e. | Other public facilities; including the maintenance of roads?   | _____ | _____ | _____ | _____ | X |

This project will not create any increase in service needs.

2. Result in the need for construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? \_\_\_\_\_ X

This project will not result in a need for additional drainage facilities.

3. Result in the need for construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? \_\_\_\_\_ X

This project does not include the use of water or wastewater facilities.

4. Cause a violation of wastewater treatment standards of the Regional Water Quality Control Board? \_\_\_\_\_ X

This project does not include the use of wastewater facilities.

5. Create a situation in which water supplies are inadequate to serve the project or provide fire protection? \_\_\_\_\_ X

This project does not include the use of water.

6. Result in inadequate access for fire protection? \_\_\_\_\_ X

If necessary to park vehicles on the road, one lane will remain open at all times. Fire trucks, ambulances and other emergency vehicles will not be blocked from using the road at any time.

7. Make a significant contribution to a cumulative reduction of landfill capacity or ability to properly dispose of refuse? \_\_\_\_\_ X \_\_\_\_\_

If some sediment is taken to the landfill, than this project will make an incremental contribution to the reduced capacity of regional landfills. However, this contribution will be relatively small and will be of similar magnitude to that created by existing land uses around the project.

8. Result in a breach of federal, state, and local statutes and regulations related to solid waste management? \_\_\_\_\_ X \_\_\_\_\_

**L. Land Use, Population, and Housing**

Does the project have the potential to:

1. Conflict with any policy of the County adopted for the purpose of avoiding or mitigating an environmental effect? \_\_\_\_\_ X \_\_\_\_\_

The proposed project conforms to policy detailed in a letter to the Board of Supervisors and approved on March 3, 2009 (Attachment 2). The previous policy was to respond to requests by the public or public agencies to cut up large woody material that was a potential threat for flooding or damage to public and private property and facilities. The current policy acknowledges the value of large woody material in local streams and considers modification only if there is a clear and immediate threat to public safety, public infrastructure or aquatic habitat.

2. Conflict with any County Code regulation adopted for the purpose of avoiding or mitigating an environmental effect? \_\_\_\_\_ X \_\_\_\_\_

The proposed project does not conflict with the Riparian Corridor Protection Ordinance that has been adopted for the purpose of avoiding or mitigating an environmental effect.

3. Physically divide an established community? \_\_\_\_\_ X \_\_\_\_\_

The project will not include any element that will physically divide an established community.

4. Have a potentially significant growth inducing effect, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? \_\_\_\_\_ X

This project does not propose any new homes or infrastructure.

5. Displace substantial numbers of people, or amount of existing housing, necessitating the construction of replacement housing elsewhere? \_\_\_\_\_ X

This project will not displace a substantial number of people or existing housing.

**M. Non-Local Approvals**

Does the project require approval of federal, state, or regional agencies? (See Page 2). Yes X No \_\_\_\_\_

**N. Mandatory Findings of Significance**

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant, animal, or natural community, or eliminate important examples of the major periods of California history or prehistory? Yes \_\_\_\_\_ No X
2. Does the project have the potential to achieve short term, to the disadvantage of long term environmental goals? (A short term impact on the environment is one which occurs in a relatively brief, definitive period of time while long term impacts endure well into the future) Yes \_\_\_\_\_ No X

3. Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, and the effects of reasonably foreseeable future projects which have entered the Environmental Review stage)?

Yes \_\_\_\_\_ No   X  

4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Yes \_\_\_\_\_ No   X



**TECHNICAL REVIEW CHECKLIST**

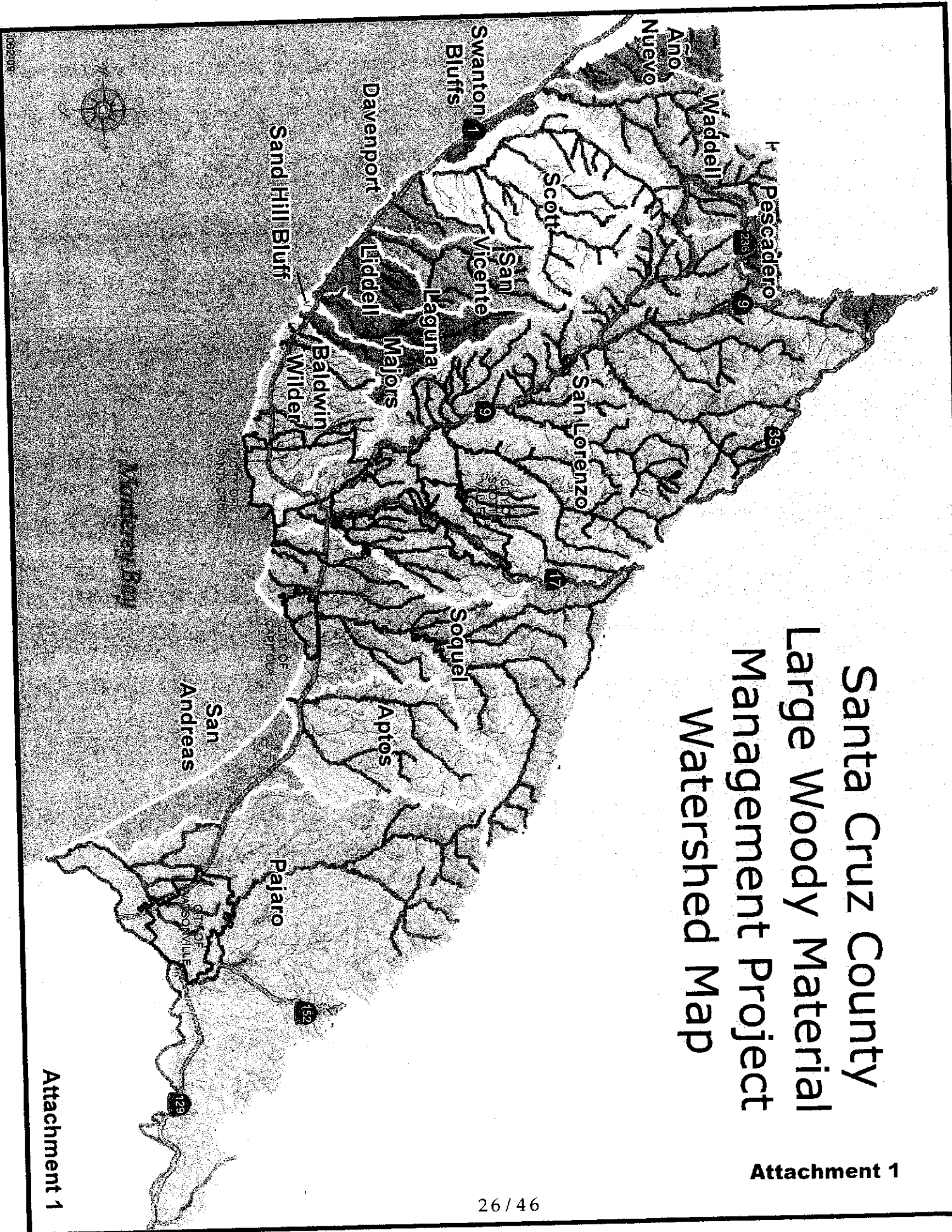
	<b><u>REQUIRED</u></b>	<b><u>COMPLETED*</u></b>	<b><u>N/A</u></b>
Agricultural Policy Advisory Commission (APAC) Review	_____	_____	<u>X</u>
Archaeological Review	_____	_____	<u>X</u>
Biotic Report/Assessment	_____	_____	<u>X</u>
Geologic Hazards Assessment (GHA)	_____	_____	<u>X</u>
Geologic Report	_____	_____	<u>X</u>
Geotechnical (Soils) Report	_____	_____	<u>X</u>
Riparian Pre-Site	_____	_____	<u>X</u>
Septic Lot Check	_____	_____	<u>X</u>
Other:	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

**Attachments:**

1. Watershed Map showing project area
2. Letter to Board of Supervisors, March 3 2009 agenda including Attachments 1, 2.  
The letter with all correspondence is available through the county's website:  
[http://sccounty01.co.santa-cruz.ca.us/bds/Govstream/ASP/Display/SCCB\\_AgendaDisplayWeb.asp?MeetingDate=3/3/2009](http://sccounty01.co.santa-cruz.ca.us/bds/Govstream/ASP/Display/SCCB_AgendaDisplayWeb.asp?MeetingDate=3/3/2009)
3. Typical Drawings
4. Project Photos
5. Map of Santa Cruz County Steelhead and Coho Salmon Distribution
6. Map of Distribution of California Red-legged Frog, western pond turtle and foothill yellow-legged frog.
7. Map of Tidewater goby distribution

# Santa Cruz County Large Woody Material Management Project Watershed Map

Attachment 1



## Attachment 2



# County of Santa Cruz

## HEALTH SERVICES AGENCY

POST OFFICE BOX 962, 1080 EMELINE AVE., SANTA CRUZ, CA 95061-0962  
TELEPHONE: (831) 454-4000 FAX: (831) 454-4770 TDD: (831) 454-4123

### HEALTH SERVICES AGENCY ADMINISTRATION

February 26, 2009

March 3, 2009 Agenda

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

### Subject: County Log Jam Program

#### Members of the Board:

On January 13, 2009, your Board considered a report on County Water Resource programs and FishNet 4C 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.

#### Background on the Importance of Large Woody Materials 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. Large woody material also benefits red-legged frogs (federal endangered species) and western pond turtle (state species of special concern).

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 is especially critical to reduce habitat loss in streams that will be impacted by the increased sediment flow. 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."

Given the increased awareness of the importance of large woody material, staff believes it is important to recommend revisions to the county's log jam removal program to safely increase the amount of large woody material left in streams to benefit aquatic habitat.

### **Background on the Flood Control Efforts of the County Relating to Log Jams**

For many years, the County Public Works Department has operated a log jam removal program. Due to funding restrictions and enhanced regulatory requirements designed to protect endangered species and the aquatic habitat, log jam activities have been reduced over time. The current program has an operating budget of approximately \$60,000 per year.

The goal of cutting up large woody material 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. Although cutting up large woody material may 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 does not completely prevent logjams 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, potentially creating more downstream logjams. All of these factors underscore the need for a thoughtful approach to the review of flood risks.

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. This fund is now administered by Environmental Health Division of Health Services. Zone 4 covers all of the County of Santa Cruz, including the incorporated areas and was created in 1971. A copy of the resolution forming the zone is provided as Attachment 1.

In a letter dated December 17, 2007, Dick Butler, NOAA Fisheries Service, clarified that NOAA considers the County's program a possible violation of the Endangered Species Act. (Attachment 3). He states, 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. 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 has consulted with Public Works and County Counsel on the most appropriate way to reduce and modify the program. In an effort to inform this process, this past summer, staff consulted with a geomorphologist on a specific logjam and on December 16, 2008, your Board authorized a contract for ongoing geomorphological consultation as needed.

### **Balancing the Need for Flood Protection and Habitat Protection and Enhancement**

Given the current awareness of the value of large woody material, the changing regulatory environment, the funding available and the need for flood protection, staff believes that it is appropriate to review the County's logjam removal program. As a result, staff believes that large woody material should be retained in streams and creeks unless the following conditions are met:

- the log jams are adversely affecting public safety, public infrastructure; aquatic habitat;  
or

- emergency conditions exist that pose a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property or essential public services.

Notwithstanding the criteria above, maintenance of the Pajaro River and Salsipuedes Creek flood control channel and other channels with an agency mandate for maintenance, and agreements with the resource agencies in place will be guided by those requirements and permits and will not be affected by the changes proposed by this letter.

Information will also be provided to the public regarding the value of large woody material and the need to get any necessary approvals from resource agencies prior to any work by private property owners in the streams.

Further, staff will maintain records of all known or reported accumulations of woody material and will monitor the condition of the channels in those areas and will work with the regulatory agencies to acquire any necessary permits for work that would be allowed under the new policies.

Using this criteria, Zone 4 funding would be redirected to address water quality protection, groundwater recharge protection, and watershed management. County Counsel's office believes it is not necessary to modify the Zone 4 charter. It is within the Board's prerogative to allocate resources among the functions enumerated in the existing charter.

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

In order to effectuate the changes outlined in this letter, staff has developed the following policies for your Board's consideration:

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 stream 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 or other special status species unless it is determined that such accumulations pose a clear and immediate threat to 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 state or federal agency.
3. Any modification or removal of LWM shall be carried out only as directed by a state or federal agency or by the Water Resources Division Director following consultation with a geomorphologist, fishery biologist, Department of Fish and Game, and/or NOAA Fisheries Service.
4. The FishNet 4C Guidelines for Woody Debris removal (Attachment 2) should be followed.

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5. 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.
6. County Environmental Health Water Resources 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 county policy.
7. Nothing in this policy shall limit the County's existing authority and procedure to act under emergency conditions where there is a need to act to prevent or mitigate the loss or impairment of life, health, property or essential public services. Any modification of large woody material under emergency conditions shall be reported to the Water Resources Division Director and the regulatory agencies that require notification.
8. Nothing in this policy shall limit the County's existing authority and procedure to perform maintenance of the Pajaro River and Salsipuedes Creek flood control channel and other channels with an agency mandate for maintenance, and agreements with the resource agencies in place.

Additional letters have been received from various regulatory agencies and interested parties in support of the proposed policy. The proposed policy change has also been discussed with the Water Advisory Commission and the Fish and Game Advisory Commission, which both support the proposal.

Re \_\_\_\_\_

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

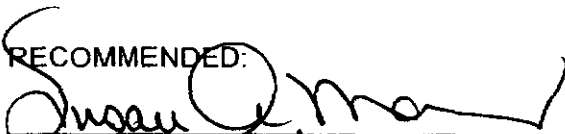
Sincerely,



John A. Ricker  
 Water Resources Division Director



Rama Khalsa, PhD  
 Health Services Agency Director

RECOMMENDED:  


SUSAN A. MAURIELLO  
 County Administrative Officer

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Attachments: Board of Supervisors Resolution 417-71  
December 17, 2007, letter of NOAA Fisheries Service  
FishNet 4C Guidelines for Woody Debris Removal  
Correspondence

cc: County Counsel  
Public Works Department  
Planning Department  
Environmental Health  
Water Advisory Commission  
Fish and Game Advisory Commission

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BEFORE THE BOARD OF DIRECTORS  
OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
RESOLUTION NO. 417-71

ATTACHMENT I

On the motion of Director Forbus  
Duly seconded by Director Harry  
The following resolution is adopted:

RESOLUTION ESTABLISHING ZONE NO. 4 OF THE SANTA CRUZ  
COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
IN ACCORDANCE WITH PROVISIONS OF ACT 7390 OF THE  
CALIFORNIA WATER CODE (uncodified)

WHEREAS, this Board of Directors of the Santa Cruz County Flood Control and Water Conservation District by its Resolution No. 390-71 adopted November 16, 1971, declared its intention to establish Zone No. 4 of said District within the County of Santa Cruz, and with proper notice set Tuesday, December 14, 1971 at 7:30 P.M. as the date for public hearing upon the formation of said Zone; and

WHEREAS, the hearing was held at the time and place fixed in said Resolution of Intention, the Report of the Chief Engineer was considered and adopted, and a majority protest was not received;

NOW, THEREFORE, BE IT RESOLVED AND ORDERED:

1. The Board of Directors of the Santa Cruz County Flood Control and Water Conservation District does hereby declare and determine that Zone No. 4 of said District be, and it hereby is, established.
2. That the boundaries of Zone No. 4 so formed shall be all of the territory of Santa Cruz County.
3. The name of the Zone is: "SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE NO. 4."
4. The works of Improvement for which Zone No. 4 is created are as follows:
  - a. 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, or deleterious to the quality of the waters of the County, both surface and underground.
  - b. To maintain, preserve and enhance the quality of both the surface and subsurface waters of the County.
  - c. To maintain, enhance and improve the areas of percolation of surface waters to the underground waters of the County.
  - d. To police and enforce laws and regulations designed to minimize flood damage and to protect the quality of surface and subsurface waters.

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It shall NOT be a function of Zone No. 4 to construct or maintain such improvements within stream channels as revetments, levees, retaining walls, storm sewers or any other substantial construction for the protection of any private properties, nor to issue bonds to finance such improvements, except through improvement or assessment district procedures.

f. The 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.

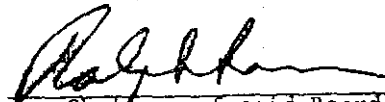
5. The maximum tax that can be levied by Zone No. 4 shall be 5 cents per \$100.00 of assessed valuation.

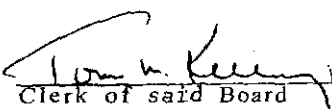
BE IT FURTHER RESOLVED AND ORDERED that the Clerk of this Board shall and hereby is directed to:

1. File a statement setting forth the legal description of Zone No. 4 with a plat or map showing said boundaries with the Assessor of the County of Santa Cruz and with the State Board of Equalization in Sacramento.

PASSED AND ADOPTED by the Board of Directors of the Santa Cruz County Flood Control and Water Conservation District this 14th day of December, 1971, by the following vote:

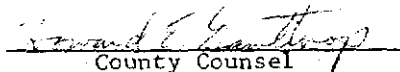
AYES: DIRECTORS Forbus, Mello, Harry, Cress, Sanson  
NOES: DIRECTORS None  
ABSENT: DIRECTORS None

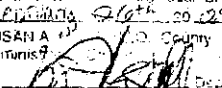
  
Chairman of said Board

ATTEST:   
Clerk of said Board

Distribution: County Counsel  
Water Projects Coordinator  
Public Works Department  
Auditor-Controller

Approved as to form:

  
County Counsel

STATE OF CALIFORNIA COUNTY OF SANTA CRUZ I, SUSAN A. MAURIELLO, County Administrative Officer and ex-officio Clerk of the Board of Super- visors of the County of Santa Cruz, State of California, do hereby certify that the foregoing is a true and correct copy of the resolution passed and adopted by and of the minutes of the said board. In witness whereof I have hereunto set my hand and the seal of the said Board on <u>14th</u> day of <u>December</u> , 1971. SUSAN A. MAURIELLO, County Administrative Officer By  Deputy
---

THOMAS TIGERD

## 6.3 WOODY DEBRIS

### DESCRIPTION

A healthy salmon stream is chock full of large wood- big logs and rootwads, that dig into the banks and help form the channel's complexity- making pools and providing food and shelter. Wood is a key link in the ecosystem of salmon. Restorationists and public agencies have taken on the task of placing large woody debris structures into creeks to benefit salmon. While restoration certainly helps, *our goal in this section is to provide guidelines on how to keep wood in the creek in the first place.*

Large Woody Debris (LWD), is defined as stumps, rootwads and logs having an average diameter greater than 6 inches and a length greater than 10 feet. When we refer to woody debris management it is best to think about *modification*, rather than removal, whenever feasible. Removal of wood from creeks has such a negative impact on salmon, that as a general practice, it should not be done unless there is a very real threat to county property or public safety. Best Management practices outlined below will help guide crews in avoiding or minimizing this impact.

One of the very best ways to allow wood to stay in the creek is to maintain culverts and bridges that pass the 100-year flood flows. This ensures that large debris flows will also pass, creating more natural channel conditions overall. See 6.2 *Culvert Cleaning, Repair and Replacement*.

*Note:* The maintenance practices covered in this section *do not* include traditional channel maintenance or flood control activities. For information on flood control or channel maintenance BMPs, please refer to Flood Control Facility Maintenance Manual developed by the Bay Area Stormwater Management Agencies Association (BASMAA, June 2000).

### ENVIRONMENTAL CONCERNS

- ✓ Loss of instream habitat due to wood removal.
- ✓ Harm to instream aquatic habitat or aquatic species.
- ✓ Harm to riparian areas and riparian species.
- ✓ Alteration of natural channel function or shape or destabilization of stream banks.
- ✓ Water pollution from equipment operation.
- ✓ Alteration of stream hydraulics and diversion of stream energies that may cause downstream erosion or structural damage.

### BMP OBJECTIVES

- ✓ Preserve and protect important woody debris in creeks to the extent possible.
- ✓ Prevent potential water pollution from equipment operations.



## BEST MANAGEMENT PRACTICES

- 1) Only remove (as opposed to modify) logs and debris from streams as a "last resort" when accumulation of debris poses a threat to road stability and bridges, culverts or other instream structures.
- 2) Have both a biologist and an engineer conduct a full review of the situation. The biologist should be familiar with the life histories and habitat needs of federally listed plants and animals in the area and be able to identify any of the life stages of these species. If in doubt as to the best way to handle large woody debris in a stream, consult with DFG personnel.
- 3) If log jams immediately threaten, or are damaging the integrity of roads, bridges, other public facilities during high flows, consider opportunities to *modify* the debris jam to halt damage and direct flow toward a more desirable path.
- 4) Take precautions to ensure that modifications of logs or debris jams will not cause damage downstream to culverts and other structures.
- 5) Limit modifications and/or removal to materials that extend higher than approximately two feet above the streambed (i.e. above knee height) to preserve some instream habitat features, *unless* the log or debris jam is immediately upstream and threatening a culvert or bridge, or if permit conditions require otherwise.
- 6) When modifying log jams, leave trees, logs and/or stumps in the longest lengths and diameters practicable for removal and hauling. If logs must be cut from fallen trees, leave as much as possible of the main trunk (12 feet plus is desirable) attached to the rootball and only cut branches obstructing flow. Log jams create suitable habitat for California red-legged frogs and San Francisco garter snakes and so where applicable this should be considered before removing or modifying any logjams.
- 7) Whenever feasible, incorporate LWD removed from water bodies into streambank repairs or cribbing at a nearby location, and/or transport any removed LWD to an approved storage site and make available for later use (e.g. in stream restoration activities).

## BMP TOOLBOX

### Planning and Prevention BMPs

- ✓ Seasonal Planning

## PERMITS

6.3 WOODY DEBRIS	
Activity or Condition	Required permit or limitation
Removing or modifying large woody debris	Consult with DFG biologists

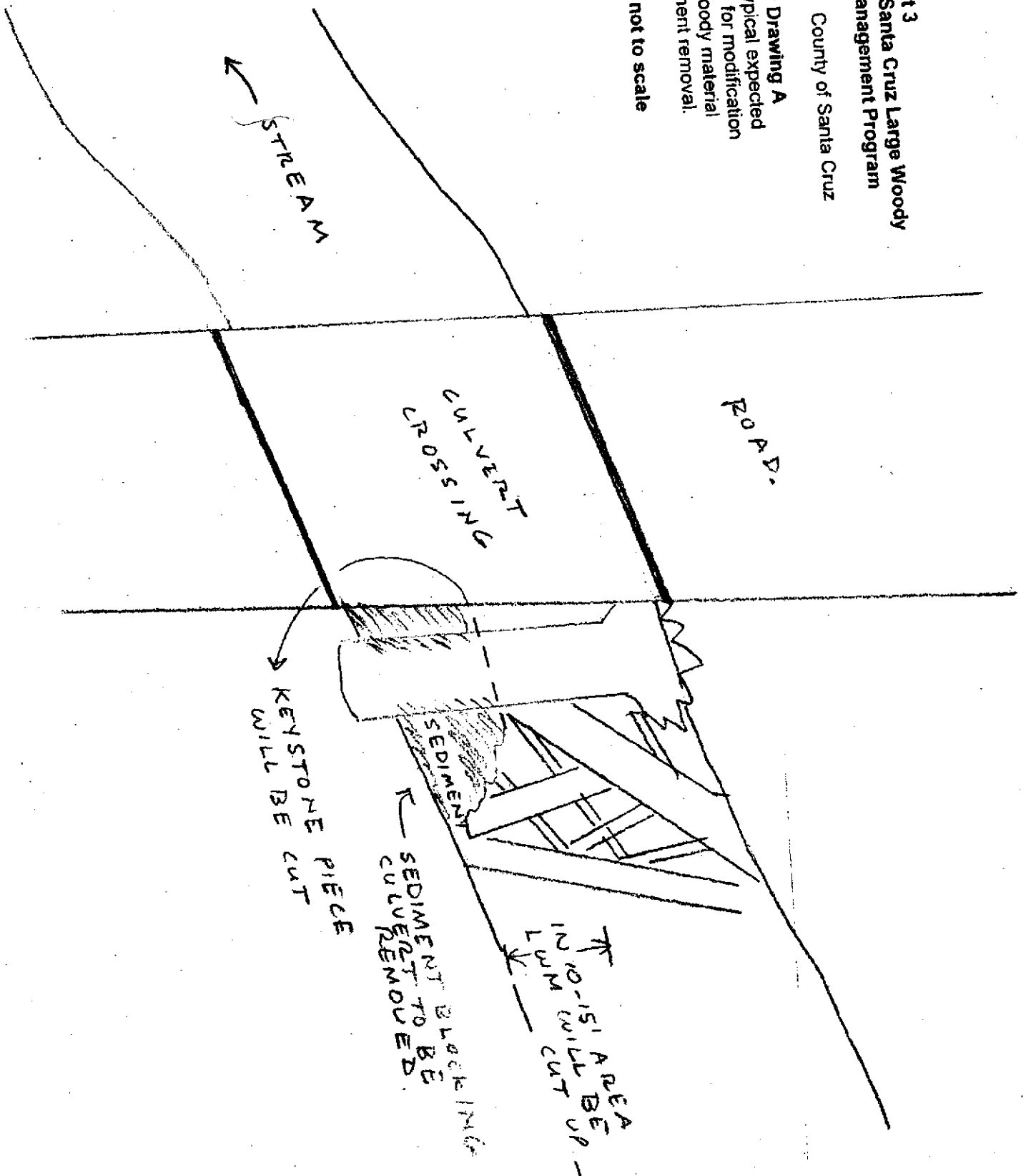


Attachment 3  
County of Santa Cruz Large Woody  
Material Management Program

Applicant: County of Santa Cruz

Plan View Drawing A  
showing typical expected  
conditions for modification  
of large woody material  
and sediment removal.

Drawing not to scale

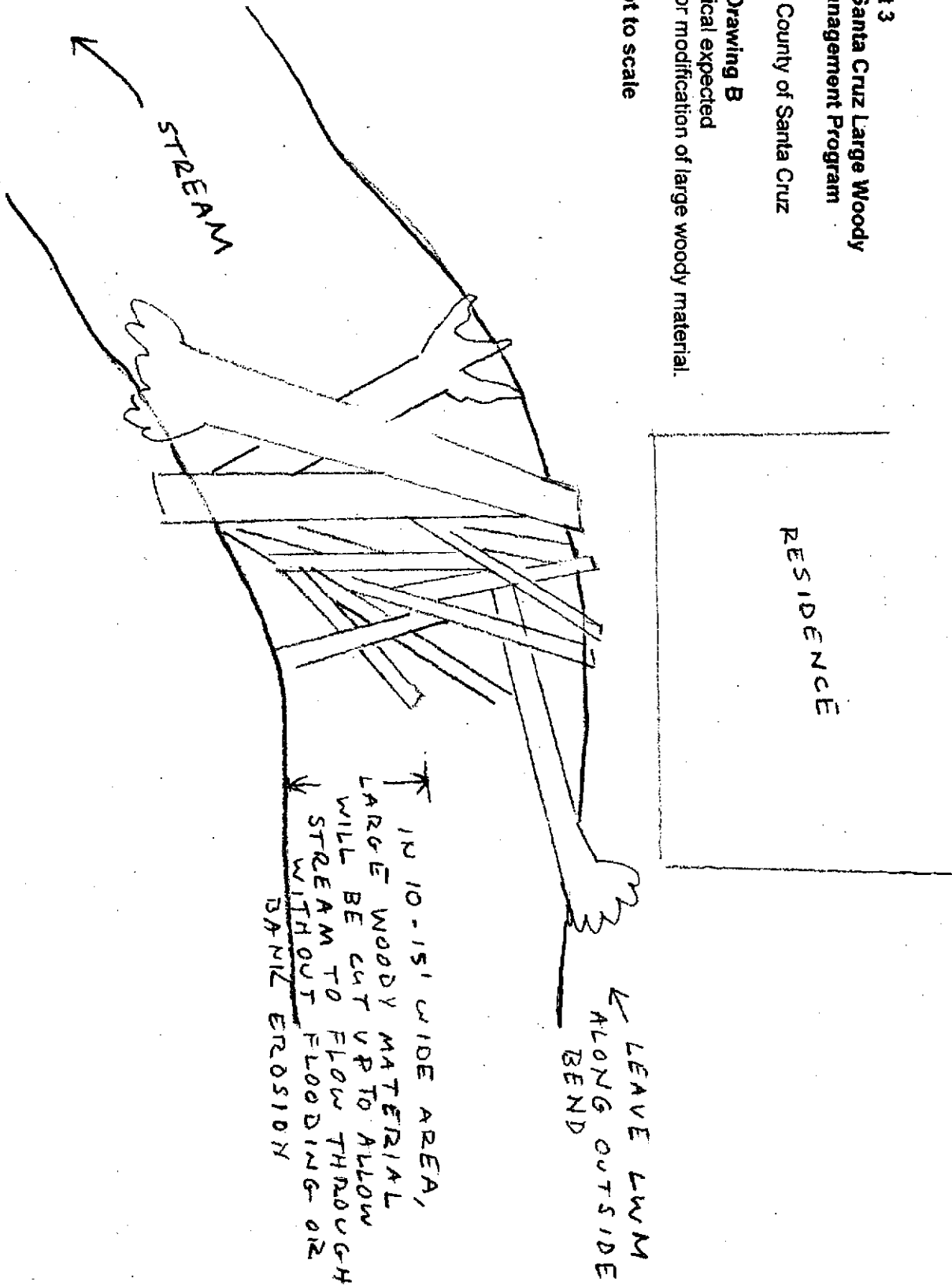


Attachment 3  
County of Santa Cruz Large Woody  
Material Management Program

Applicant: County of Santa Cruz

Plan View Drawing B  
showing typical expected  
conditions for modification of large woody material.

Drawing not to scale

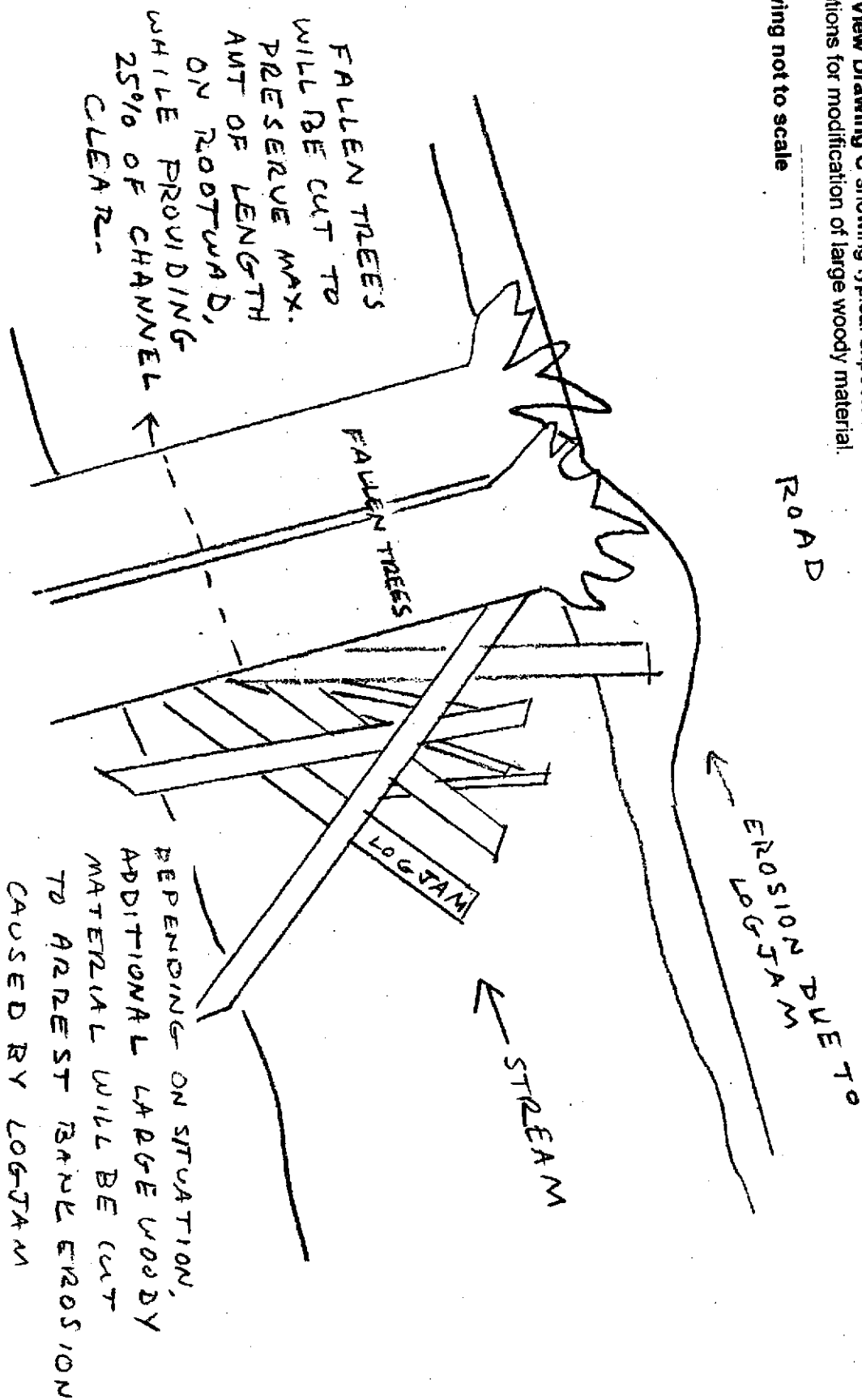


Attachment 3  
County of Santa Cruz Large Woody  
Material Management Program

Applicant: County of Santa Cruz

Plan View Drawing C showing typical expected  
conditions for modification of large woody material.

Drawing not to scale

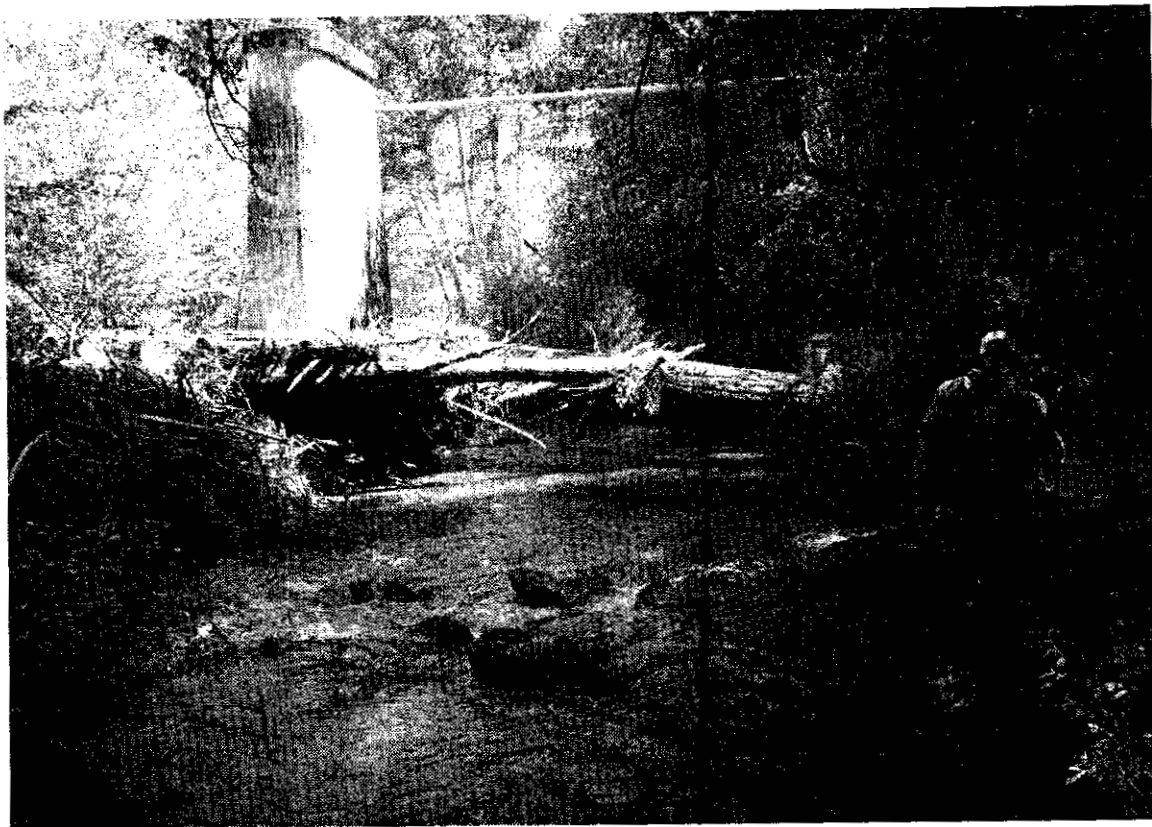


Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



This photo shows an accumulation of large woody material that was mildly threatening the road. The yellow arrows point to a few key pieces that were cut to encourage a clear path for the creek while preserving the large woody material against the eroded slope.

Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



The photo shows a logjam that was created by a keystone log spanning between an old railroad bridge pier and the bank. The logjam was causing bank erosion that was threatening a residence and was a hazard to navigation. The keystone log was cut and wood at the top of the logjam was cut.



Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



This photo shows an example of an accumulation of large woody material adjacent to bank erosion. If this large woody material were causing a clear and immediate threat to public safety, public infrastructure or aquatic habitat, this project would consider modification.

Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program



This photo shows an example of a large woody material accumulation. While this wood was not cut by the County, the existing cut ends of the logs show how this project could cut large woody material towards one bank while preserving it on the other bank. Note the pool habitat formed by the large woody material in the foreground.

Attachment 4: Project Photos  
County of Santa Cruz  
Large Woody Material Management Program

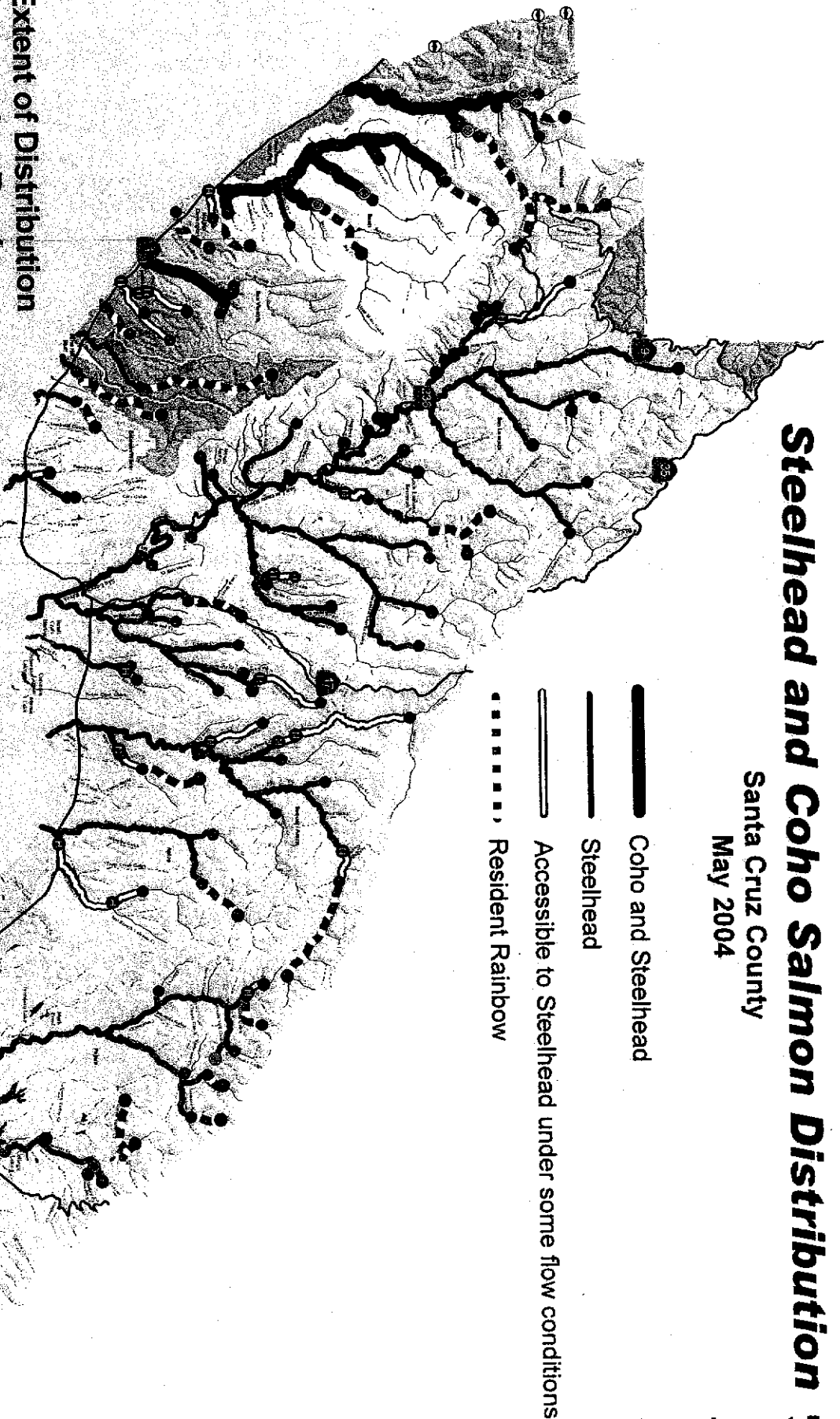


This photo shows an example of how a rootwad was cut and a portion of the stem preserved. This project will maximize the length of stem preserved.

# Steelhead and Coho Salmon Distribution

Santa Cruz County  
May 2004

Attachment 5

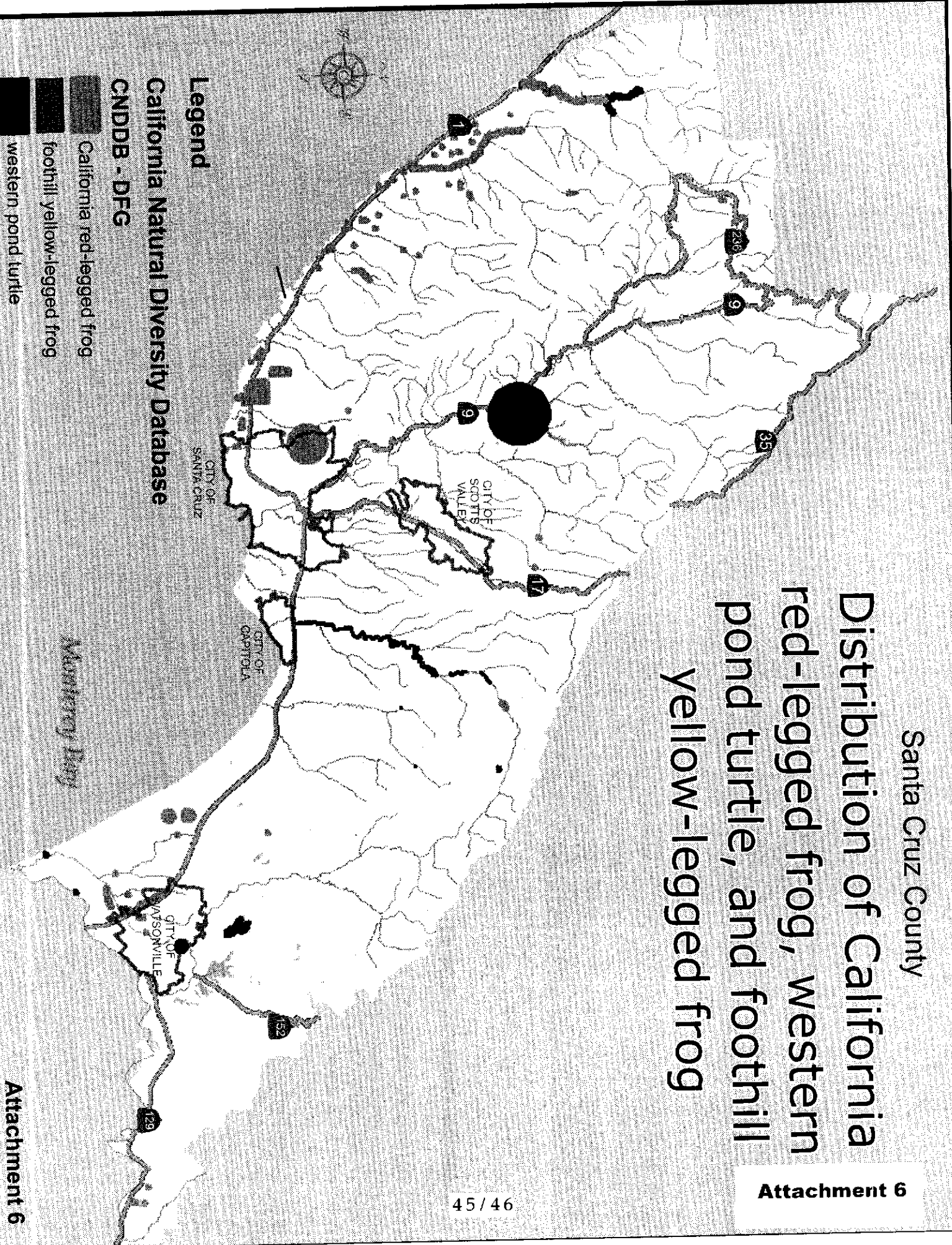


## Extent of Distribution & Migration Barriers

- Extent of distribution due to channel steepness and/or lack of suitable habitat.
- Extent of Distribution Unknown
- Complete Barrier / Human
- Complete Barrier / Natural
- Significant Partial Barrier / Human
- Significant Partial Barrier / Natural
- Break Between Steelhead / Coho and Steelhead Only
- Steelhead Downstream of Santa Cruz County
- Whole Stream In Santa Cruz County Accessible

Santa Cruz County

Distribution of California  
red-legged frog, western  
pond turtle, and foothill  
yellow-legged frog





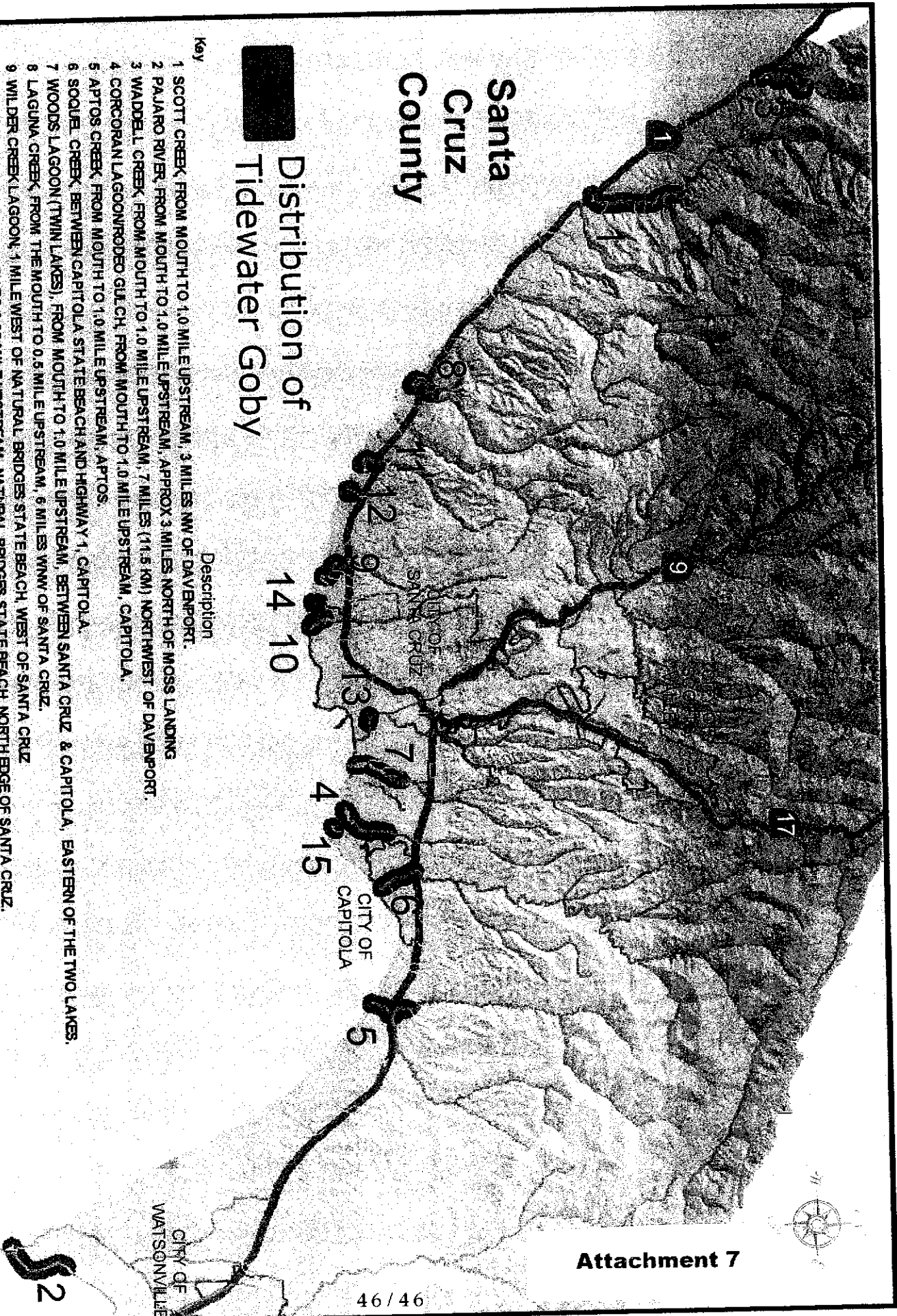
# Distribution of Tidewater Goby

Key

Description

- 1 SCOTT CREEK, FROM MOUTH TO 1.0 MILE UPSTREAM, 3 MILES NW OF DAVEPORT.
- 2 PALJARO RIVER, FROM MOUTH TO 1.0 MILE UPSTREAM, APPROX 3 MILES NORTH OF MOSS LANDING
- 3 WADDELL CREEK, FROM MOUTH TO 1.0 MILE UPSTREAM, 7 MILES (11.5 KM) NORTHWEST OF DAVEPORT.
- 4 CORCORAN LAGOON/RODEO GULCH, FROM MOUTH TO 1.0 MILE UPSTREAM, CAPITOLA.
- 5 APTOS CREEK, FROM MOUTH TO 1.0 MILE UPSTREAM, APTOS.
- 6 SOQUEL CREEK, BETWEEN CAPITOLA STATE BEACH AND HIGHWAY 1, CAPITOLA.
- 7 WOODS LAGOON (TWIN LAKES), FROM MOUTH TO 1.0 MILE UPSTREAM, BETWEEN SANTA CRUZ & CAPITOLA, EASTERN OF THE TWO LAKES.
- 8 LAGUNA CREEK, FROM THE MOUTH TO 0.5 MILE UPSTREAM, 6 MILES WNW OF SANTA CRUZ.
- 9 WILDER CREEK LAGOON, 1 MILE WEST OF NATURAL BRIDGES STATE BEACH, WEST OF SANTA CRUZ
- 10 MOORE CREEK, FROM MOUTH TO 0.25 MILE UPSTREAM, NATURAL BRIDGES STATE BEACH, NORTH EDGE OF SANTA CRUZ.
- 11 BALDWIN CREEK, FROM MOUTH TO 0.25 MILE UPSTREAM, 4 MILES WEST OF SANTA CRUZ.
- 12 LOMBARDI CREEK LAGOON, 4 MILES WEST OF SANTA CRUZ.
- 13 WEST BANK OF THE SAN LORENZO RIVER, BETWEEN THE RIVERSIDE AVENUE BRIDGE AND THE SOQUEL AVENUE BRIDGE, SANTA CRUZ
- 14 YOUNGER LAGOON, NW OF LONG'S MARINE LAB, SANTA CRUZ
- 15 MORAN LAKE, JUST NW OF SOQUEL POINT, SANTA CRUZ

Source: California Natural Diversity Database 062-09



Attachment 7

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