

# Attachment A

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**Conservation Practices Eligible Under the Santa Cruz Countywide Partners  
in Restoration Permit Coordination Program (i.e., Master Permit), with  
Allowed Dimensions and Project-Specific Conditions, and Summary of Tier  
System**

(NOTE: Numbers in parentheses indicate the practice number as  
referenced in the *NRCS Field Office Technical Guide*)

Projects proposed through this Certification may on a case-by-case basis exceed the dimensions shown in this table upon written approval by all agencies with jurisdiction over that project.

<p><b><i>1. Access Roads (Improvement) (560)</i></b> <i>(NOTE: Access road improvements typically involve multiple installations spread out over a long reach of road.)</i></p>	<p>Improvement of an existing road to provide access for property management while controlling runoff to prevent erosion and maintain or improve water quality. An example of this practice might include re-grading, outsloping, or the addition of a rolling dip to a road so that water is less erosive as it travels across the road. This practice may also be used for repair, removal, or addition of culverts. Ditch relief culverts that discharge onto slopes over 30% require additional measures. This practice is used only on existing roads. Some examples of practices from the California Department of Fish and Game, California Salmonid Stream Habitat Restoration Manual that could be utilized during implementation of the Access Road (Improvement) practice includes Waterbars (p. VII-96).</p>
<p align="center"><i>Dimensions<sup>2</sup></i></p>	<p><u>Length</u>: Average: 1,000 linear feet of work spread out over 2 miles; Max: 10,000 linear feet of work spread out over 12 miles. <u>Width</u>: Average: 30'; Max: 30'. <u>Area</u>: Average: 0.8 acres; Max: 4.5 acres. <u>Volume<sup>3</sup></u>: Average: 750 cu. yards; Max: 7,500 cu. yards (or 1,000 cu. yards in Coastal Zone Scenic Areas).</p>
<p align="center"><i>Additional Practice-Specific Protection Measures</i></p>	<p>Road improvements in Santa Cruz County are modeled on the "Handbook for Forest and Ranch Roads: A Guide for planning, designing, constructing, reconstructing, maintaining and closing wildland roads," by William Weaver and Danny Hagens. This manual contains</p>

	<p>descriptions of sound methods and designs to improve and maintain rural roads. Proper road planning, construction and maintenance of roads can correct problems associated with poor road placement and design that cause excess runoff, and erosion leading to many kinds of problems including polluted water supplies, increased flooding, landslides, destruction of fish habitat, and loss of vegetation and soil. Improvements to existing access roads under this practice shall not be carried out for the purpose of accommodating future development.</p>
<p><b>2. Planting (342, 612, 422, 391)</b></p>	<p>Planting of vegetation such as trees, shrubs, vines, grasses, or legumes (see Exhibits E, F and G for lists of suggested and prohibited species for revegetation), on highly erodible or critically eroding areas (does not include tree planting mainly for wood products). This practice is used to stabilize the soil, reduce damage from sediment and runoff to downstream areas, and improve wildlife habitat and visual resources. Plants may take up more of the nutrients in the soil, reducing the amount that can be washed into surface waters or leached into ground water. During grading, seedbed preparation, seeding, and mulching, quantities of sediment and associated chemicals may be washed into surface waters prior to plant establishment.</p>
<p><i>Dimensions</i></p>	<p><u>Area</u>: Average: 1 acre; Max: 5 acres.  <u>Volume</u><sup>3</sup>: Average: 700 cu. yards; Max: 1,000 cu. yards.</p>
<p><i>Additional Practice-Specific Protection Measures</i></p>	<p>When implementing or maintaining a critical area planting above the “ordinary high water mark”<sup>4</sup>, a filter fabric fence, fiber rolls and/or rice or straw bales shall be utilized, if needed, to keep sediment from flowing into the adjacent water body. When vegetation is sufficiently mature to provide erosion control, it may be appropriate to remove the fence, fiber rolls and/or rice/straw bales. Periodic review by RCD/NRCS shall occur until the critical area planting is established to control erosion.</p>
<p><b>3. Stream Habitat Improvement and Management(395)</b></p>	<p>Improvement of a stream channel to create new fish habitat or to enhance an existing habitat. The practice is used to improve or enhance aquatic habitat for fish in degraded streams, channels, and ditches by providing shade, controlling sediment, and restoring pool and riffle</p>

stream characteristics. Pools and riffles are formed in degraded stream sections through the strategic placement of logs, root wad, or natural rocks that reduces the flow velocity through the area. Coarse-grained sediments settle, reducing the quantity of sediment delivered downstream. The dissolved oxygen content may be increased, improving the stream's assimilative capacity. This practice may also be used for removal or modification of fish barriers such as flashboard dams. The modification of flashboard dams may involve cutting a notch in the dam to allow for fish passage. Complete removal of flashboard dams would also be covered under the program.

This practice may be used for the removal or modification of logjams that present a complete barrier to all life stages of anadromous fish passage. If the logjam does not act as a complete barrier, logjam removal may be implemented no more than two times annually under the program, but only if the following circumstance exists: In situations where water is actively or potentially deflecting water to a bank, threatening further erosion, bank failure, destruction of conservation practices installed to stabilize the bank, or threatening damage to life and housing, the logjam may be modified to minimize this threat.

This practice may be used to remove culverts that pose barriers to fish passage.. This practice may also be used to remove hardened crossings that pose barriers to salmonid passage such as culverts and simple fords that do not have complicated associated resource issues.

While most activities will occur during the summer months when most areas are dry, dewatering may be required for some projects involving the fish stream improvement practices. Dewatering a portion of a stream during construction would involve isolating the work area using temporary structures such as cofferdams and the pumping of water around the worksite in order to maintain flows downstream.

The Fish Stream Improvement practice will be designed and implemented in accordance with the California Department of Fish and Game's *California Salmonid*

	<p><i>Stream Habitat and Restoration Manual</i> or in coordination with NOAA Fisheries and CDFW Some examples of the practices that could be utilized during implementation of the Fish Stream Improvement practice include Digger Logs (p. VII-26 of the manual), Spider Logs (p. VII-27), and Log, Root Wad, and Boulder Combinations (p. VII-28).</p>
<p><i>Dimensions</i></p>	<p><u>Maximum Length:</u> 1 mile with multiple structures at multiple bank locations.</p> <p><u>Maximum dimensions for a logjam to be modified:</u> 30 ft by 50 ft (across channel).</p> <p><u>Maximum dimensions for a flashboard dam to be modified or removed:</u> 30 ft by 60 ft (across channel)</p> <p><u>Maximum dimensions for hardened crossing (fords) be removed:</u> 20 ft by 100 ft (across channel)</p> <p><u>Maximum and total area to be dewatered will not exceed 1,000 ft over the one mile maximum.</u></p>
<p><i>Additional Practice-Specific Protection Measures</i></p>	<p>The Fish Stream Improvement conservation practice will be designed and implemented in accordance with the California Department of Fish and Game’s <i>California Salmonid Stream Habitat Restoration Manual</i> or in coordination with NOAA Fisheries and CDFW.</p> <p>No chemically-treated timbers shall be used for grade or channel stabilization structures, bulkheads or other instream structures.</p>
<p><b>4. Stream Crossing (578)*</b></p>	<p>To provide access on a site where a in-stream barrier has been removed. If a culvert or ford has been removed, a bridge or other suitable crossing that is protective of water quality may be installed.</p>
<p><i>Dimensions</i></p>	<p><u>Maximum bridge size to be installed:</u> Max.100 ft (across stream) with 20 ft wide deck (20 ft is what the County of Santa Cruz prefers for emergency vehicles but it’s more likely that most bridges installed under the permit coordination program would not exceed 16 ft in width)</p>

	*Maximum and total area to be dewatered will not exceed 1,000 ft over the one mile maximum.
<i>Additional Practice-Specific Protection Measures</i>	Crossings will be consistent with California Department of Fish and Game’s “ <i>Culvert Criteria for Fish Passage</i> ” (May 2002) and National Marine Fisheries Service Southwest Region’s “ <i>Guidelines for Salmonid Passage as Stream Crossings</i> ” (September, 2001). If dewatering in a fish-bearing stream is proposed as part of a project implemented under the permit coordination program, the RCD/NRCS will comply with the terms and conditions outlined in the RC Biological Opinion, and any subsequent conditions, issued by NOAA Fisheries for this project.
<b>4. Grade Stabilization Structure (410)</b> <i>(In non-fish bearing streams, primarily for gully repair)</i>	Installation of a structure built into a gully to control the grade and prevent head cutting in natural or artificial channels. For the purposes of the Master Permit program, this practice will not be installed in fish bearing streams and would primarily be used for gully repair. This practice refers to rock, timber, or vegetative structures, such as a brush mattress, placed to slow water velocities above and below the structure, resulting in reduced erosion. This practice also involves earthmoving to reshape the area impacted by the gully. This will decrease the yield of sediment and sediment-attached substances and improve downstream water quality. An example of a practice from the CDFW California Salmonid Stream Habitat Restoration Manual that could be utilized during implementation of the Grade Stabilization practice is Brush Mattressing (p. VII-79).
<i>Dimensions</i>	<u>Length</u> : Average: 3 to 4 structures per 500’ of gully, Max: 10 structures per 1,000’ of gully. <u>Area</u> : Average: 0.5 acres; Max: 1.5 acres <u>Volume</u> <sup>3</sup> : Max: 30 cu. yards per structure; 300 cu. yards total. <u>Flow Rate</u> : Max: 300 cfs in the pipe.
<i>Additional Practice-Specific Protection Measures</i>	This practice will not be used in fish-bearing streams and will primarily be used for the repair of gullies.  Construction and maintenance of any practice that results in a change in volume of flow in streams that support a

	<p>fishery are not covered under this program. Construction and maintenance of Grade Stabilization Structures in streams or creeks that support a fishery are not covered under this program. Projects seeking to implement conservation practices in those circumstances must seek individual permits from appropriate public agencies.</p> <p>Grouted rock may be used for implementation of the Grade Stabilization practice at the head of gullies. Use of grouted rock will be minimized. Grouted rock would not be used on the bed or bank of a waterway. An example of a typical design from the CDFW California Salmonid Stream Habitat Restoration Manual that could be utilized during implementation of the Grade Stabilization practice is Brush Mattressing (p. VII-79).</p>
<p><b>5. Grassed Waterway (412)</b></p>	<p>Establishment of a natural or constructed channel that is shaped or graded to required dimensions and expected velocities, and establishment of suitable vegetation for the stable conveyance of runoff. This practice may reduce the erosion in a concentrated flow area, such as a gully. This may result in the reduction of sediment and substances delivered to receiving waters. Vegetation may act as a filter in removing some of the sediment delivered to the waterway, although this is not typically the primary function of a grassed waterway. Grassed waterways may be used to reduce the erosive force of runoff from agricultural lands into riparian or wetland areas or into a sediment basin. Grading and seedbed preparation may result in some short-term soil loss prior to establishment of vegetative cover.</p>
<p><i>Dimensions</i></p>	<p><u>Length</u>: Average: 1,000'; Max: 2,000'.  <u>Width</u>: Average: 20'; Max: 40'.  <u>Area</u>: Average: 0.5 acre; Max: 2 acre.  <u>Volume</u><sup>3</sup>: Average: 1,000 cu. yards; Max: 4,500 cu. yards (except in Coastal Zone Scenic Areas where the maximum grading allowed is 1,000 cu. yards).  <u>Flow Rate</u>: Max: 150 cfs.</p>
<p><i>Additional Practice-Specific Protection Measures</i></p>	<p>Grassed waterways are designed to convey the runoff associated with the contributory area along a prescribed slope to avoid erosion caused by the concentrated flow.</p>



	The waterway may not divert water out of the natural sub-watershed.
<b>6. Obstruction Removal (500)<sup>5</sup></b>	Removal and disposal of unwanted structures from waterways and/or other sensitive habitats, including cars, large appliances, and garbage (items that are anthropogenic and not natural to the system). Large objects such as cars and appliances would be removed unless their removal would result in a (net) detrimental effect. For example, cars will not be removed if the action would result in disturbance to an area beyond the maximum size identified for this practice or if the removal shall cause erosion in quantities deleterious to fish or other aquatic organisms. Structures would be removed when the stream channel is dry or during the lowest flows to minimize impacts. While most activities will occur during the summer months when most areas are dry, dewatering may be required for some projects involving removal of large objects such as cars and appliances. Dewatering a portion of a stream during construction would involve isolating the work area using temporary structures such as cofferdams and the pumping of water around the worksite in order to maintain flows downstream.
<i>Dimensions<sup>5</sup></i>	<u>Length</u> : Max: 50'. <u>Area</u> : Average: 10' x 15'; Max: 0.2 acre.
<i>Additional Practice-Specific Protection Measures</i>	Wherever possible, hand labor will be used, however, heavy equipment such as mechanical excavators may be employed in some projects, particularly where the project requires removal of larger items such as cars and appliances. Large objects removed from the area will be lifted out of the area, ensuring the obstruction is kept upright during removal and will not be pulled, dragged, or pushed to minimize potential impacts to the aquatic and terrestrial habitats. If the obstruction is easily accessible and/or an access road is adjacent to the work site, equipment such as a boom would be used to lift the obstruction out of the area. Additional limitations on use of construction equipment are described in the General Project Conditions under <b>Limitations on Construction Equipment</b> .

<p><b>7. Restoration and Management of Declining Habitats (643)</b></p>	<p>Restoring and conserving rare or declining native vegetated communities and associated wildlife species. This practice is used to restore land or aquatic habitats degraded by human activity; provide habitat for rare and declining wildlife species by restoring and conserving native plant communities; increase native plant community diversity; management of unique or declining native habitats (see Exhibits E, F and G for lists of suggested and prohibited species for revegetation). This practice may be used to remove invasive plant species in sensitive resource areas to improve the quality of the adjacent aquatic habitat or to manage non-native habitats that provide critical habitat for special status species, such as the monarch butterfly. This practice may also be used to manage fuel loads in sensitive habitats and allows treatment and maintenance of invasive species and noxious weeds, as well as revegetation of a treated area.</p>
<p><i>Dimensions</i></p>	<p><u>Length</u>: Average: 500'; Max: 1 mile.  <u>Area</u>: Average: 1 acre; Max: 5 acres.  <u>Volume</u><sup>3</sup>: Average: 50 cu. yards; Max: 1,000 cu. yards.</p>
<p><i>Additional Practice-Specific Protection Measures</i></p>	<p>When restoring or maintaining a rare or declining native plant community or wildlife habitat adjacent to and above the “ordinary high water mark”<sup>4</sup> of a water body, a filter fabric fence, fiber rolls and/or rice/straw bales shall be utilized, if needed, to keep sediment from flowing into the adjacent water body. When vegetation is sufficiently mature to provide erosion control, it may be appropriate to remove the fence, fiber rolls and/or rice or straw bales. Periodic review by RCD/NRCS shall occur until the native plant community or wildlife habitat planting is established to control erosion.</p>
<p><b>8. Sediment Basins (350) [with or without water control (638)]</b></p>	<p>Construction of basin(s) to collect and store debris or sediment. Sediment basins will trap sediment, sediment associated materials, and other debris and prevent undesirable deposition on bottomlands and in waterways and streams. Basins are generally located at the base of agricultural lands adjacent to natural drainage or riparian areas. Sediment basins shall not be constructed in a stream channel or other permanent water bodies. This practice may also involve designing the sediment basin to control water volumes leaving a site and releasing the water at a</p>

	<p>natural flow rate. If water control were recommended , an earth embankment or a combination ridge and channel design constructed across the slope and minor watercourses would be implemented to form a sediment trap and water detention basin. The practice does not treat the source of sediment but provides a barrier to reduce degradation of surface water downstream. Due to the detention of runoff in the basin, there is an increased opportunity for soluble materials to be leached toward the ground water. Basins may also increase groundwater recharge. The design of spillways and outlet works will include water control structures to prevent scouring at discharge point into natural drainage.</p>
<p><i>Dimensions</i></p>	<p><u>Area</u>: Average: 0.1 acre; Max: 1 acre.  <u>Volume</u><sup>3</sup>: Average: 400 cu. yards; Max: 4,000 cu. yards (compacted embankment); in Coastal Zone Scenic Areas no more than 1,000 cu. yards total grading volume.  <u>Impoundment Volume</u>: Average: 0.5 acre-foot; Max: 2 acre-feet.  <u>Impoundment Structure</u>: Average: 6 ft embankment measured from the lowest point in the basin to the spillway at a 2:1 maximum slope; Max: 6 ft – 10 ft embankment measured from the lowest point in the basin to the spillway at a 2:1 maximum slope<sup>6</sup>.</p>
<p><i>Additional Practice-Specific Protection Measures</i></p>	<p>Where water and sediment control basins create marshy conditions and attract nesting birds and other wildlife, maintenance may occur only after August 1<sup>st</sup>. If construction must occur during this period, a qualified individual approved by USFWS and/or CDFW will conduct pre-construction surveys for bird nests or bird nesting activity in the project area. Bird nesting sites shall be avoided as described above in Exhibit A (#2) <i>General Project Conditions, Temporal Limitations on Construction</i>. If the project has the potential to create standing water for longer than five (5) consecutive days, the County Mosquito Abatement and Vector Control District shall be consulted.</p> <p>Sediment basins shall not be constructed in a stream channel or other permanent water bodies. The work may involve grading along one shore of the stream to remove</p>

	<p>gullies or eroded banks prior to building a streamside basin. Where construction of a sediment basin includes a pipe or structure that empties into a stream (underground outlet), an energy dissipater shall be installed to reduce bank scour.</p>
<p><b>9. Streambank Protection (580)</b></p>	<p>Use of vegetation or structures to stabilize and protect banks of streams, lakes, or estuaries against scour and erosion. “Bioengineered” solutions using vegetation and soft materials (as opposed to concrete and rip rap, for example) are the preferred options where conditions are favorable for their use. The banks of streams and water bodies are protected by vegetation to reduce sediment loads causing downstream damage and pollution and to improve the stream for fish and wildlife habitat as well as protect adjacent land from erosion damage. Examples of this practice may include willow sprigging, brush mattresses, and live vegetative crib walls. This practice can be applied to natural or excavated channels where the stream banks are susceptible to erosion from the action of water or debris or to damage from livestock or vehicular traffic. The streambed grade must be controlled before most permanent types of bank protection can be considered feasible. Some examples of practices from the California Department of Fish and Game’s <i>California Salmonid Stream Habitat Restoration Manual</i> that could be utilized during implementation of the Streambank Protection practice include Log Cribbing (p. VII-68), Live Vegetative Crib Wall (p. VII-69), Logbank Armor (p. VII-70), Riprap (p. VII-65), Native Material Revetment (p. VII-75), Willow Sprigging (p. VII-77), Brush Mattressing (p. VII-77), and Trenching (p. VII-80). While most activities will occur during the summer months when most areas are dry, dewatering may be required for some projects involving implementation of streambank protection measures. Dewatering a portion of a stream during construction would involve isolating the work area using temporary structures such as cofferdams and the pumping of water around the worksite in order to maintain flows downstream.</p>
<p><i>Dimensions</i></p>	<p><u>Length</u>: Vegetation Average: 200’; Vegetation Max: 2,000’. Rock Max: 200’ contiguous rock protection and</p>

	<p>500' of non-contiguous protection over 2,000' of bank.  <u>Width:</u> Vegetation Average: 20'; Vegetation Max: 50'.  Rock Average: 4'; Rock Max: 15'.  <u>Area:</u> Average Vegetation: 0.1; Max Vegetation: 2.5 acre.  Rock Protection Max: 0.1 acre  <u>Volume</u><sup>3</sup>: Average Vegetation: 500 cu. yards; Max  Vegetation: 4,000 cu. Yards<sup>7</sup> (or 1,000 cu. yards in all  Coastal Zone Scenic Areas). Average Rock: 100 cu. yards;  Max Rock<sup>8</sup>: 800 cu. yards.  <u>Flow Rate:</u> Vegetation Max: 2,000 cfs instream.</p>
<p><i>Additional Practice-Specific Protection Measures</i></p>	<p>No fill will be placed in the flood hazard area unless it is accompanied by an analysis (by a civil engineer) showing that there will be no rise in the base elevation and no off-site impact.</p>
<p><b>10. Stream Channel Stabilization (584)</b></p>	<p>Stabilization of the channel of a stream with suitable structures. “Bioengineered” solutions using vegetation and soft materials (as opposed to concrete and rip rap, for example) are the preferred options where conditions are favorable for their use. This practice applies to stream channels undergoing damaging aggradation or degradation that cannot be reasonably controlled with upstream practices (establishment of vegetative protection, installation of bank protection, or by the installation of upstream water control measures). The design and installation of grade stabilization structures produce a stable streambed favorable to wildlife and riparian growth. The Master Permit program does not cover projects that involve installation of grade stabilization structures in fish bearing streams.</p> <p>In non-fish bearing streams, this practice may be utilized to remove accumulated sand or sediment that have caused the channel to become plugged due to a large storm event or bank failure. This practice would not be used in fish-bearing streams or for routine maintenance involving dredging of a waterway. This practice would be used to remove sediment that has accumulated behind a dam or as a result of a catastrophic event such as a flood, and would only be used once at a given location under this program.</p> <p>While most activities will occur during the summer</p>

	<p>months when most areas are dry, dewatering may be required for some projects involving installation of the stream channel stabilization practices. Dewatering a portion of a stream during construction would involve isolating the work area using temporary structures such as cofferdams and the pumping of water around the worksite in order to maintain flows downstream.</p>
<i>Dimensions</i>	<p><u>Length</u>: Average: 200'; Max: 2,000'.  <u>Width</u>: Average: 20'; Max: 100'.  <u>Area</u>: Average: 0.1 acre; Max: 4.5 acre.  <u>Volume</u><sup>3</sup>: Average: 200 cu. yards; Max: 7,500 cu. yards (1,000 cu. yards in Coastal Zone Scenic Areas).  <u>Flow Rate</u>: Max: 400 cfs.</p>
<i>Additional Practice-Specific Protection Measures</i>	<p>Sediment removal will not occur in fish-bearing streams. Sediment removal from non-fish bearing stream channels may occur if it will improve biological functioning of the stream and restore channel capacity. Sediment removal would occur as a one-time event and not a repeated maintenance practice. Sediment removal may not occur in a flowing stream or standing water. Sediment will not be stored in wetlands or waterways (including floodplains and floodways).</p>
<b>12. Structure for Water Control (587)</b>	<p>Installation of a structure in an irrigation, drainage, or other water management system, including streams and gullies, that conveys water, controls the direction or rate of flow, or maintains a desired water surface elevation, such as culverts, pipe drops or chutes within gullies, debris screens, etc. Structures for water control includes treatment systems, such as bioreactors, that improve on-site and/or downstream water quality. Structure for water control is used to replace or retrofit existing culverts that are either not functioning properly or are a barrier to fish passage. The placement of new culverts, when environmentally beneficial, is also covered. By controlling the velocity of water running through an area, this practice reduces erosion and prevents down cutting of stream channels. Culverts will be consistent with California Department of Fish and Game's "Culvert Criteria for Fish Passage" (April 2003) and National Marine Fisheries Service Southwest Region's "Guidelines for Salmonid</p>

	Passage as Stream Crossings” (September, 2001).
<i>Dimensions</i>	<u>Flow Rate</u> : 80 cfs
<i>Additional Practice-Specific Protection Measures</i>	Crossings will be consistent with California Department of Fish and Game’s “ <i>Culvert Criteria for Fish Passage</i> ” (May 2002) and National Marine Fisheries Service Southwest Region’s “ <i>Guidelines for Salmonid Passage as Stream Crossings</i> ” (September, 2001). If dewatering in a fish-bearing stream is proposed as part of a project implemented under the permit coordination program, the RCD/NRCS will comply with the terms and conditions outlined in the RC Biological Opinion, and any subsequent conditions, issued by NOAA Fisheries for this project. If the project has the potential to create standing water for longer than five (5) consecutive days, the County Mosquito Abatement and Vector Control District shall be consulted.
<b>13. Underground Outlets (620)</b>	Installation of a conduit beneath the surface of the ground to collect surface water and convey it to a suitable outlet. This practice is typically, although not always, associated with a sediment basin (with or without water control). Excess surface water generated by farmland on steep terrain can be collected and conveyed to a sediment basin by installing pipe safely buried underground. Location, size, and number of inlets are determined to collect excess runoff and prevent erosive surface flow. This runoff is then discharged at sediment basin where high velocity runoff is calmed and suspended sediment is trapped prior to releasing water into natural drainage channel. The basin is designed to release water at a natural rate of flow.
<i>Dimensions</i>	<u>Length</u> : Max. in Riparian Areas: 50’. <u>Width</u> : Max. in Riparian Areas: 20’. <u>Area</u> : Max. in Riparian Areas: 1,000 sq. ft. <u>Volume</u> <sup>3</sup> : Max. in Riparian Areas: 10 cu. yards <sup>9</sup> . <u>Flow Rate</u> : Max. in Riparian Areas: 60 cfs.
<i>Additional Practice-Specific Protection Measures</i>	If a pipe or structure that empties into a stream (underground outlet), a properly sized energy dissipater shall be installed to reduce bank scour and bank erosion.

<p><b>14. Upland Wildlife Habitat Management (645, 382, 614, 516)</b></p>	<p>This practice will be utilized to create, restore, and/or enhance upland habitat for wildlife species. This practice may be used to install shelter, cover, and food, establish vegetation for shelter, food, and enable movement, and for manipulating vegetation to sustain optimal habitat conditions.</p> <p>This practice may include the creation of infrastructure to accomplish the intended purpose of the practice, including a livestock pipeline, fence, and watering facility.</p> <p>Use of a pipeline for conveying water from an existing source of supply to points of its use for livestock; to shift livestock to constructed waters sources and away from streams and lakes. This practice is designed to reduce bank erosion, sediment yield, and manure entering watercourses. Occasionally, a pipeline may cross streams or water courses.</p> <p>The Watering Facility practice is limited to the device that actually holds the water. It is not the well, spring, or other source of undeveloped water.</p> <p>The construction a fence across a riparian corridor or in a sensitive habitat may be utilized to improve grazing and land use management to achieve restoration goals</p>
<p><i>Dimensions</i></p>	<p><u>Length</u>: Average: 50’; Max: 200’ through riparian areas (includes 50’ on each bank and across a stream or gully), and up to 10,000’ through the upland areas.</p> <p><u>Width</u>: Average 15’; Max: 20’.</p> <p><u>Area</u>: Max: 4,000 sq. ft. through riparian areas/crossing streams</p> <p><u>Volume</u><sup>3</sup>: Average: 15 cu. yards; Max: 50 cu. yards through riparian areas<sup>4</sup>.</p> <p><u>Pressure</u>: Max: 300 psi (Highest capacity for a pipeline would not exceed 300 pounds per square inch). The</p>

<sup>4</sup> A “fish-bearing stream” is defined as a stream located within the range of the listed species



	maximum livestock pipeline diameter would be 3 inches.
<b>15. Wetland Management*</b> (657, 659, 356, 587, 644)	To restore and enhance wetlands conditions similar to those that existed prior to modification for farming, grazing, or other land use. This practice includes minor reshaping to restore topographic relief of the site, hydrological enhancement (increasing season of inundation or saturation), and vegetative enhancement to remove any undesired species that did not originally exist on the site or to plant native species. To actively manage the water regime to improve habitat for desired species or to be able to manage for pest control (i.e. mosquitoes), dike and Structure for Water Control may be used. Once constructed, the maintenance of the practice(s) is allowable, including management of water levels and a wide range of vegetation management activities to maintain or improve the vegetative composition on a site.
<i>Dimensions</i>	<u>Area</u> : 5 acres max (waters of the state); 18 acres max.  <u>Volume</u> <sup>3</sup> : 1,000 cyd. (scenic coastal areas); 7500 cyd max
<i>Additional Practice-Specific Protection Measures</i>	Activities will seek to emulate the functions of undisturbed conditions and will not result in significant loss of vegetation or disturbance which would negatively impact species' habitat, cover, food, etc.

1. A "fish-bearing stream" is defined as a stream located within the range of the listed species (Central California Coast (CCC) Evolutionarily Significant Unit (ESU) Coho, the CCC steelhead, and South Central Coast ESU Steelhead) and/or designated critical habitat for these salmonids. The County of Santa Cruz and CDFW fisheries experts prepared a GIS-based summary of the existing information on salmonid distribution in Santa Cruz County streams "Steelhead and Coho Salmon Distribution", County of Santa Cruz, May, 2004. The RCD and NRCS will utilize this map, and any subsequent updates to it, during the initial project assessment to determine if the project is taking place in a fish-bearing stream.
2. Dimensions refer to actual area of improvement.
3. Volume of soil disturbed, based on practice installation and representing the volume of soil excavated and used as fill or removed from site, or soil imported as fill.
4. The "ordinary high water mark" on non-tidal rivers is defined by the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas. Some indicators of the ordinary high water mark include water staining, shelving, and evidence of debris, among other potential indicators.

5. Actual objects rarely exceed 10 ft. x 15 ft. Access to an object may involve disturbance of up to 50' in length. It is difficult to estimate the total number of separate objects to be removed from a stream. Maximum disturbance per project is limited to .2 acres.
6. Embankment heights exceeding 6 ft will be accompanied by additional technical information that has been reviewed and approved by County Geologist and County Civil Engineer. At a minimum, all engineered practices shall be designed/sized to accommodate a 10-year storm event.
7. For vegetation treatments, soil disturbance is assumed to be a maximum of 700' of 2,000' maximum reach. The average depth of soil grading (cut or fill) is 3'.
8. Numbers provided for rock armoring refer to actual areas and volume of rock placed only. Total soil disturbance limits are same as for vegetative treatments since remainder of work area will be vegetated. Rock placed would be used at the toe of the bank in conjunction with bioengineering techniques. RSP for bank protection is limited to approximately 300 cyd. Up to 800 cyd of rock is allowable if the majority of rock will be used for fish-friendly practices, such as rock vanes, j-hooks, root wad anchoring, etc.
9. Area of practice within riparian area includes a 50' length and a 20' wide work area for equipment. Volume of soil is based on a 2' wide trench over 50' with pipe buried to an average depth of 2'.

At a minimum, all engineered practices shall be designed/sized to accommodate a 10-year storm event.

\* Where this practice involves replacement of a fish passage barrier with a bridge, bridge plans will be designed by a civil engineer and soil information will be supplied to the County by a civil engineer or geotechnical engineer.

Also, per the County of Santa Cruz requirements, a registered civil engineer (RCE) would be responsible for signing designs for projects where the following conditions exist:

- When grading exceeds 2000 cubic yards or the County geologist/engineer determines that the project warrants further investigation;
- When the embankment heights for a sediment basin exceeds six feet; or
- If project involves placement of fill in the FEMA identified flood hazard area (Zones A, V, or floodway), including footings, supports, approaches, erosion protection and other elements of bridges.

Lastly, if a ditch relief culvert outlets to a slope greater than 30%, a letter will be provided with the PCN documenting the stability of the slope.



	<b>TIER I</b>	<b>TIER II</b>	<b>TIER III</b>
		<p>been obtained from Central Coast Water Board staff.</p> <p>Work outside this period may be authorized by agency staff on a site-specific basis.</p> <ul style="list-style-type: none"> <li>• Bare soil and areas where invasive plant species are removed must be stabilized before a Predicted Rain Event.</li> <li>•The Permittee shall consider wildlife usage in the project area.</li> <li>•Manual revegetation (revegetation that does not require the use of heavy equipment in the waterbody) may occur when rain conditions allow per the winter period text above.</li> <li>•Work shall be timed to avoid disturbing breeding birds in native habitat. Projects that could affect breeding birds shall not begin until August 1 or until a qualified individual determines that a) the birds have fledged and are no longer reliant on the nest or parental care for survival, or b) the nest is abandoned.</li> </ul>	
<b>Notification</b>	<ul style="list-style-type: none"> <li>•Notifications shall include information specified in the PCN template</li> <li>•Tier I PCNs shall be submitted to regulatory agencies with regulatory authority over project activities no more frequently than two times per year (by March 15<sup>th</sup> and May 15<sup>th</sup>).</li> <li>•Projects may begin 10 working days after PCNs have been submitted to the</li> </ul>	<ul style="list-style-type: none"> <li>•Tier II PCNs shall be submitted to regulatory agencies with regulatory authority over project activities no more frequently than two times per year (by March 15<sup>th</sup> and May 15<sup>th</sup>).</li> <li>•Projects may not begin until 30 days after submittal of the PCN or until May 31<sup>st</sup>, whichever is later, unless the Permittee is contacted by the regulatory agencies. If</li> </ul>	<ul style="list-style-type: none"> <li>• Notifications shall include information specified in the PCN template.</li> <li>Tier III PCNs shall be submitted one time per year by May 15<sup>th</sup>, unless a late submittal is approved by all agencies with regulatory authority over project activities.</li> <li>•Projects may begin 30 days after the PCNs have been submitted and no sooner than</li> </ul>

	<b>TIER I</b>	<b>TIER II</b>	<b>TIER III</b>
	regulatory agencies, unless the RCDSCC is contacted by the agencies.	<p>contacted, the Permittee shall not begin work until after the PCN is re-submitted incorporating agency recommendations into the project description and until May 31.</p> <ul style="list-style-type: none"> <li>•The PCN shall flag (mark for attention) projects that exceed the dimensions identified in the Conservation Practices table.</li> <li>•For Tier II projects that exceed the dimensions identified in the Conservation Practices table, the Permittee shall submit the PCNs by February 21st to allow time for additional review.</li> </ul>	<p>May 31, unless the Permittee is contacted by the regulatory agencies.</p> <ul style="list-style-type: none"> <li>•If the regulatory agencies require modifications, the Permittee shall prepare and circulate a Final PCN for final project approval.</li> <li>•Work may begin 10 working days after the Final PCN is sent and no sooner than May 31.</li> <li>•The PCN shall flag (mark for attention) projects that exceed the dimensions identified in the Conservation Practices table (Attachment XX).</li> <li>•For Tier III projects that exceed the dimensions identified in the Conservation Practices table (Attachment XX), the Permittee shall submit the PCNs by March 15th to allow time for additional review.</li> </ul>

#### Description of Conservation Practices and Tier System

CONSERVATION PRACTICE (FOTG PRACTICE CODE)	TIER	PURPOSE AND COMMON USES
<b>Access Road Improvement (560)</b>	I, III,	Road projects for which grading exceeds 100 cyd in upland habitat would fit in tier I; projects with T&E species, or their habitat would fit in tier III.
<b>Planting (342, 612, 422, 391)</b>	I, II or III	Projects for which grading exceeds 100 cyd in upland habitat would fit in tier I; planting projects within a riparian corridor would fit in tier II; projects with T&E species, or near or in their habitat would fit in tier III.
<b>Stream Habitat Improvement and Management (395)</b>	II, III,	Projects within a riparian corridor would fit into tier II; projects with T&E species, or their habitat would fit into tier III..
<b>Stream Crossing (578)</b>	II, III	Activities without listed species would fit into tier II; projects with T&E species, or their habitat would fit into tier III.
<b>Grade Stabilization Structure (410)</b>	I or III	Projects for which grading exceeds 100 cyd in upland habitat would fit in tier I; projects with T&E species, or their habitat would fit in tier III.
<b>Grassed Waterway</b>	I or III	Projects for which grading exceeds 100 cyd in upland habitat would fit in tier

CONSERVATION PRACTICE (FOTG PRACTICE CODE)	TIER	PURPOSE AND COMMON USES
(412)		I; projects with T&E species, or their habitat would fit in tier III.
<b>Obstruction Removal (500)</b>	II ,III	Projects within a riparian corridor would fit into tier II; projects with T&E species, or their habitat would fit into tier III.
<b>Restoration and Management of Declining Habitats (643)</b>	I, II or III	Projects for which grading exceeds 100 cyd in upland habitat would fit in tier I; projects within a riparian corridor would fit in tier II; projects with T&E species, or their habitat would fit in tier III.
<b>Sediment Basin (350) [with or without Water Control (638)]</b>	I or III	Projects for which grading exceeds 100 cyd in upland habitat would fit in tier I; projects with T&E species, or their habitat would fit in tier III.
<b>Streambank Protection (580)</b>	II ,III	Streambank restoration activities, without listed species, would fit into tier II; projects with T&E species, or their habitat would fit into tier III.
<b>Stream Channel Stabilization (584)</b>	II, III	Stream channel activities, without listed species, would fit into tier II; projects with T&E species, or their habitat would fit into tier III.
<b>Structure for Water Control (587)</b>	I, II, III	Projects for which grading exceeds 100 cyd in upland habitat would fit in tier I; projects within a riparian corridor would fit in tier II.
<b>Underground Outlet (620)</b>	I, II or III	Projects for which grading exceeds 100 cyd in upland habitat would fit in tier I; projects within a riparian corridor would fit in tier II; projects with T&E species, or their habitat would fit in tier III.
<b>Upland Wildlife Habitat Management (645, 382, 614, 516)</b>	I or III	Projects for which grading exceeds 100 cyd in upland habitat would fit in tier I; projects with T&E species, or their habitat would fit in tier III.
<b>Wetland Management (657, 659, 356, 644)</b>	II or III	Projects within a wetland, without T&E species or their habitat would fit in tier II; projects with T&E species, or habitat would fit in tier III.

## EXHIBIT C:

### **Notification and Communication Procedures for the Countywide Partners in Restoration Permit Coordination Program (i.e., Master Permit)**

#### Preliminary Pre-Construction Notification:

Tier I. The RCD will provide an electronic Pre-Construction Notifications (PCN) for each project to County Planning Department (attn: Environmental Planning) no more frequently than 2 times per year; March 15<sup>th</sup> and May 15<sup>th</sup>. Tier 1 notifications will include the following information:

- Project identification and location, including location map.
- Nature of work and description of project need.
- Approved practices to be installed.
- Environmental setting – surrounding habitat, adjacent land use.
- Photos of the project area and immediate surroundings annotated to describe the project area and any applicable site features.

- The volume of any proposed grading, including the offsite location to which the fill will be exported (if location is not a municipal landfill), and a valid grading permit (and, if in the coastal zone, a coastal permit) authorizing placement of the fill at the receiving site in such cases. Where grading exceeds 2,000 cubic yards, or as otherwise requested by the Planning Director, certification that plans have been designed and signed by a Registered Civil Engineer (RCE) practicing in accordance with the standards of the State of California (to be indicated by marking a checkbox on the PCN form).
- The compaction requirements and finished maximum cut and fill slopes, as applicable.
- When native vegetation will be removed and revegetation will occur, a visual assessment of dominant native shrubs and trees, approximate species diversity, and approximate coverage.
- Information and justification about the plant species to be used for revegetation (checkboxes).
- Potential presence of listed species (i.e., indication that CNDDDB map has been consulted for species) (checkbox).
- Indication that County archeological and paleontological resources maps have been consulted to determine if the project is located in an area where such resources may be impacted (checkbox); with certification that the NRCS Cultural Resources Coordinator or the USACE Regulatory Project Manager has been notified of any projects potentially impacting archeological resources (checkbox).
- If any projects will take place within Coastal Zone, certification that the PCN has been circulated to the California Coastal Commission, Central Coast District office (checkbox).
- For projects within the Coastal Zone, certification that the plans for such projects have been circulated to the California Coastal Commission, Central Coast District office (checkbox). All such plans should include:
  - Location map.
  - Site plan and cross-section/elevation views (if applicable);
  - Plans/maps showing property lines, as providing by the County of Santa Cruz GIS website and APNs (RCD and NRCS will provide agencies with a key linking up the APNs for project locations and the landowner names);
  - Indication of any easements or other restrictions applicable to the project area. RCD and NRCS shall inform participating landowners that: (1) landowners are responsible for providing the RCD and NRCS with accurate information about any easements and/or other restrictions affecting that portion of their property where the project would occur; (2) if landowners indicate that there are no such easements and/or restrictions when in fact this is inaccurate, or if they fail to identify all such easements and/or restrictions, and if project implementation leads to a conflict with the terms and conditions of any such easement(s) and/or restriction(s), then the involved landowner(s) shall be held responsible for rectifying the problems created by the project consistent with the terms and conditions of such easements and/or restrictions. When any easements and/or restrictions are identified, RCD and NRCS shall review such easements

and/or restrictions (including coordinating with any third-party easement/restriction holders if there are any) to ensure that the project is consistent with them. The RCD and NRCS shall document recommendations on how the project should be modified, if necessary, to ensure consistency with any such restrictions and communicate this information to the landowner. If the landowner moves forward with project implementation and fails to incorporate such recommendations resulting in a conflict with any existing easements/restrictions, the landowner shall be held responsible for rectifying the problems consistent with the terms and conditions of such easements and/or restrictions. As described in the Project Description, and in the Cooperator Agreement itself, if a landowner (or Cooperator) does not carry out work consistent with project design standards and specifications, the RCD and NRCS shall notify the landowner and work directly with them to resolve the problem. If the landowner still fails to conform to the standards set forth in this Program, the NRCS or RCD shall notify the Cooperator that their activities are inconsistent with the standards and specifications contained in the Project Plans and Specifications and that the Cooperator's actions are no longer covered by the Program's permits and agreements. This easement/restriction language shall be included in the Cooperator Agreement signed by the participating landowners.

- For projects in Coastal Zone, a map showing trees that will be disturbed or removed, with description of how findings in County Code Chapter 16.34 (Significant Trees Protection) will be met for any proposed removal of a “significant tree” as defined in County Code Section 16.34.030.
- Indication if any part of the project area is within 40-feet of a County right-of-way.
- For any project that potentially could impact County rights-of-way and for which DPW Encroachment Permits would normally be needed, certification that plans for such projects have been circulated to the County Department of Public Works (DPW) (checkbox).
- Certification that site is not on list of hazardous materials sites cited in the CEQA Initial Study (checkbox).
- Proposed strategies for implementation of CEQA mitigations and other requirements, as specified in the Initial Study and Mitigated Negative Declaration for the Countywide Permit Coordination Program.
- Description of the criteria that will be used to measure success for each project, and the time frame to be used to monitor the identified success criteria. If identified success criteria are to be monitored for less than five years initially, then information and a rationale supporting such a decreased monitoring time-frame shall be provided.
- Indication that landowner access consent has been obtained for the project site and any properties that must be crossed to implement the project (checkbox).
- For all other project types requiring RCE review/approval, as indicated in Exhibit B (i.e., for practices designated with two asterisks in Exhibit B, or as indicated in



the endnotes of Exhibit B), certification that an RCE has reviewed, analyzed, and/or designed the project (checkbox).

- Applicable information regarding CEQA mitigation monitoring, as described in #6 below.

Tier II. The RCD will provide an electronic Preliminary PCN for each project to County Planning Department (attn: Environmental Planning) no more frequently than 2 times per year; March 15<sup>th</sup> and May 15<sup>th</sup>. Notifications will include all Tier I information, as well as the following:

- Identification of those projects with in-stream work, and those potentially directly or indirectly impacting fish bearing streams<sup>5</sup>.
- Estimated number of creek crossings and type(s) of vehicle(s) to be used.
- A description of proposed water diversion or silt control, if working in a perennial stream and if flows will be isolated from the workspace.
- Presence of barriers to aquatic species migration.
- Indication that County FEMA map has been consulted to determine if the project is located in a FEMA identified flood hazard area (Zones A, V, or floodway) (checkbox).
- For all projects with the potential to impact a floodway or floodplain, the written analysis of a Registered Civil Engineer (RCE), or licensed hydrologist, indicating that the project will not decrease floodwater storage, modify floodwater conveyance, increase base flood elevation, or otherwise create an adverse impact either on the site, or upstream or downstream of the site.

Tier III. By May 15<sup>th</sup> of each year, the RCD will send an electronic Preliminary PCN to the County Planning Department (attn: Environmental Planning) for each project planned for the upcoming construction season. Notifications will include all Tier II information, as well as the following:

- Description of any proposed wetland disturbance, including description of how project/practice will increase functional capacity of said wetland, and a description of the wetland delineation methodology (checkbox).
- Information on special status species/habitat present in relation to the work area, potential impacts to special status species/habitat, and all applicable environmental protection and mitigation measures.

All PCNs will include a cover sheet signed by the NRCS and the RCD certifying that each proposed project meets the criteria to qualify under the Santa Cruz Countywide Partners in Restoration Permit Coordination Program (i.e. Master Permit).

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<sup>5</sup> A “fish-bearing stream” is defined as a stream located within the range of the listed species (Central California Coast (CCC) Evolutionarily Significant Unit (ESU) Coho, the CCC steelhead, and South Central Coast ESU Steelhead) and/or designated critical habitat for these salmonids. The County of Santa Cruz and CDFW fisheries experts prepared a GIS-based summary of the existing information on salmonid distribution in Santa Cruz County streams “Steelhead and Coho Salmon Distribution”, County of Santa Cruz, May, 2004. The NRCS and RCD will utilize this map, and any subsequent updates to it, during the initial project assessment to determine if the project is taking place in a fish-bearing stream.

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