

## *TOMALES BAY WATERSHED ENHANCEMENT PROGRAM*

**Exhibit 2:** Actions that the RCD will promote on agricultural lands under the auspices of the program are limited to the implementation and maintenance of the following sixteen conservation practices.

1. **Access Roads** – Improves existing fixed route for travel for moving livestock, produce, equipment, and provides access for property management while controlling runoff to prevent erosion and maintain or improve water quality. An example of the practice might include regrading and outsloping a road so that water is less erosive as it travels across the road. This practice is used only on existing roads.
2. **Animal Trail and Walkway** – Provides a travel lane for animals to walk through difficult or ecologically sensitive terrain. This practice is installed on grazing lands as part of a conservation plan to improve access to forage or water and divert travel away from ecologically sensitive or erosive sites.
3. **Critical Area Planting** – Planting vegetation such as trees, shrubs, vines, grasses, or legumes, 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. This practice can be used to replant areas where invasive vegetation has been removed, or ancillary to stream restoration activities.
4. **Filter Strip** – A strip or area of vegetation for removing sediment, organic matter, and other pollutants from runoff and wastewater. This practice is used on cropland at the lower edges of fields adjacent to streams, ponds, and lakes to remove sediment and other pollutants from runoff. Installation often requires soil manipulation to remove surface irregularities and prepare for planting. When the field borders are located such that runoff flows across them in sheet flow, coarser grained sediments are filtered and deposited. Pesticides and nutrients may be removed from runoff through infiltration, absorption, adsorption, decomposition, and volatilization thereby protecting water quality downstream. Filter strips may also reduce erosion on the area where they are established.
5. **Fish Stream Improvement** – Improving a stream channel to create new fish habitat or to enhance an existing habitat. This practice is used to improve or enhance aquatic habitat for fish degraded streams, channels and ditches by providing shade, controlling sediment and restoring pool and riffle stream characteristics. Pools and riffles are formed in degraded stream sections through the strategic placement of root wad or natural rock that reduces the flow velocity through the area. Coarse-grained sediments settle, reducing the quantity of sediment delivered downstream. Increased shading from shrub and tree plantings may decrease water temperature during the warm season. The dissolved oxygen content may be increased, improving the stream's assimilative capacity.
6. **Grade Stabilization Structure** – A structure built into a gully to control the grade and prevent head cutting in natural or artificial channels. This practice refers to rock or timber structures that do not control the rate of flow or water level in channels. Stream velocities will be reduced above and below the structure resulting in reduced stream bank

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and streambed erosion. This will decrease the yield of sediment and sediment-attached substances. Structures that trap sediment will improve downstream water quality.

7. **Grassed Waterway** – A natural or constructed channel that is shaped or graded to required dimensions and velocities, and established to 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 the primary function of a grassed waterway. Grassed waterways may be used to move runoff from agricultural lands into riparian or wetland areas.
8. **Lined Waterway** – The placement of an erosion-resistant lining along a waterway or outlet. The waterway allows for the safe disposal of runoff from other conservation structures or from natural concentrations of flow where unlined or grassed waterways would be adequate. The practice is not used for irrigation water conveyance.
9. **Pipeline** – Pipeline installed for conveying water for livestock. Conveying water from a source of supply to point of use, directing livestock and away from streams and lakes. This practice is designed to reduce bank erosion, sediment yield and manure in watercourses. Occasionally, a pipeline may cross a stream or watercourse, and may require temporary disturbance of the bed and bank.
10. **Sediment Basin** – Basins constructed to collect and store debris or sediment. Sediment basins 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. The practice does not treat the source of sediment but provides a barrier to reduce degradation of surface water downstream. The design of spillways and outlet works will include water control structures to prevent scouring at discharge point into natural drainage.
11. **Spring Development** – Improving springs and seeps by fencing out livestock, excavating, cleaning, capping or providing collection and storage facilities. This practice is used to improve the distribution of water or increase the quantity of water for livestock and wildlife. Water bearing soil and rocks are developed and piping is installed to a trough or tank away from the spring. A wooden or concrete box backfilled with gravel may also be constructed to hold the water to be piped. The area around the spring may be fenced to control livestock and therefore improve the wildlife habitat value of the spring or seep. Developing sources of water away from riparian areas and water bodies may reduce the impacts of livestock on those areas as well. Development is confined to springs or seepage areas that can furnish a dependable supply of water. Water flow from the spring or seep may be temporarily reduced during the construction period. Spring development uses an excavation process that does not result in the placement of fill in or around spring areas.

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12. **Stream Bank Protection** – Using vegetation or structures to stabilize and protect banks of streams, lakes, estuaries, or excavated channels against scour and erosion. The banks of streams and water bodies are protected to reduce sediment loads causing downstream damage and pollution and to improve the stream for fish and wildlife habitat and to protect adjacent land from erosion damage. This practice can be applied to natural or excavated channels where the streambanks are susceptible to erosion from the action of water or debris or damage from livestock or vehicular traffic. The streambed grade must be controlled before most permanent types of bank protection can be considered feasible.
13. **Stream Channel Stabilization** – This practice involves stabilizing the channel of a stream with suitable structures. It applies to stream channels undergoing damage or degradation that cannot be controlled with upslope practices. The design and installation of stream channel stabilization structure produce a stable streambed favorable to wildlife and riparian growth.
14. **Structure for Water Control** – This practice will be used to replace existing culverts. When determined to be environmentally beneficial, new culverts may also be installed under this project.
15. **Underground Outlets** – A conduit installed beneath the surface of the ground to collect surface water and convey it to a suitable outlet. Excess surface water generated by farmland on steep terrain can be collected and conveyed to a sediment basin by installing pipe safely underground. Location, size, and number of inlets are designed to collect excess runoff and prevent erosive surface flow. This runoff is then discharged at a sediment basin where high velocity runoff is calmed and suspended sediment is trapped prior to releasing water into the natural drainage channel.
16. **Water and Sediment Control Basin** – An earthen embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin. This practice traps and removes sediment and sediment-attached substances from runoff. Often located alongside riparian or wetland environments to buffer impact of upslope runoff and sediment prior to release to natural drainage. Basins can be used to reduce concentrated off-site flow and associated erosion by metering out runoff following large storm events.