

Sedimentation from Agricultural Operations



What Is It & What Can I Do?

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What is It?

Sedimentation occurs when wind or water runoff carries soil particles from an area, such as a farm field, and transports them to a water body, such as a stream or lake. Excessive sedimentation clouds the water, which reduces the amount of sunlight reaching aquatic plants; covers fish spawning areas and food supplies; and clogs the gills of fish. In addition, other pollutants like phosphorus, pathogens, and heavy metals are often attached to the soil particles and wind up in the water bodies with the sediment. Farmers and ranchers can reduce erosion and sedimentation by 20 to 90 percent by applying management measures to control the volume and flow rate of runoff water, keep the soil in place, and reduce soil transport.*

What can I do?

Develop a “conservation plan” for your own property. What does that mean? A conservation plan can apply to whole geographic regions or it can be as specific as your own land. According to the U.S. Natural Resources Conservation Service (NRCS), “Conservation plans are site-specific for each farm or ranch and can be developed by producers with help from NRCS or other service providers . . . plans should address the primary natural resource concerns.” Essentially, a plan of this type will allow you to have and to document measures to conserve or protect natural resources. The following are techniques you can incorporate into your plan.

Access Road - Designate a roadway as part of your conservation plan. Its purpose is to provide a fixed route for travel for moving livestock, produce, equipment, and supplies. It may also be used to provide access for proper operation, maintenance and management of conservation activities while controlling runoff to prevent erosion and maintain or improve water quality.

Barnyard Runoff Control - Examine your property for ways to collect and reduce runoff water and agricultural wastes from the barnyard and other outdoor livestock concentration areas.

Channel Vegetation - Establish and maintain appropriate plants (you may consult the NRCS in your area for what plants are best) on channel banks, beds, berms and associated areas. This will help to stabilize channel banks and adjacent areas for temporary and/or permanent protection and reduce erosion and sedimentation.

Conservation Cover - Establish and maintain perennial vegetative cover to protect soil and water resources on land retired/fallowed from agricultural production. This will help reduce soil erosion and sedimentation, thus protecting water quality.

Cover and Green Crop - Plant a crop of close-growing grasses, legumes or small grain. These are usually grown for one year or less to control erosion during periods when major crops do not furnish adequate cover. They also may improve the soil.

Critical Area Planting - Consider planting vegetation, such as trees, shrubs, vines, grasses or legumes on highly erodible or critically eroding areas.

Field Border - Try using a band of grass or legumes at the edge of a fields. This practice is used to control erosion and to protect edges of fields that are used as turnrows or travel lanes.

Filter Strip - Consider using areas of vegetation for removing or filtering sediment, organic matter and other pollutants from runoff.

Heavy Use Area Protection - These areas can be especially vulnerable. To protect against erosion on heavily used areas, establish vegetative cover, or surface with other suitable material. You may even need to install barriers such as berms to prevent erosion and runoff.

Mulching - This can be an excellent method to control erosion. Mulching will help conserve moisture; prevent surface compaction or crusting; reduce runoff and erosion; control weeds; and help establish plant cover.

Roof Runoff Management - Hard surfaces such as the roofs of homes and other structures can yield lots of runoff from rain. Creating a facility for collecting or channeling this runoff helps to prevent it from flowing across concentrated waste areas, barnyards, roads and alleys, and to reduce pollution and erosion, improve water quality, prevent flooding improve drainage, and protect the environment.

Sediment Basin - If conditions preclude the installation of other erosion control measures, this will help to keep sediment and debris from collecting in inappropriate areas or leaving your property.

Where can I turn for assistance?

Several local agencies are available to assist you at little or no charge. There are also a variety of information resources available on the Internet. We have listed some of them below:

Resource Conservation District of Greater San Diego County and
USDA Natural Resources Conservation Service
760 - 745 - 2061
serves all areas except: Fallbrook, Oceanside, Bonsall and Rainbow

Mission Resource Conservation District
760 - 728 - 1332
serves Fallbrook, Oceanside, Bonsall and Rainbow

Upper San Luis Rey Resource Conservation District
760 - 728 - 1332
serves Pauma Valley and Warner Springs

University of California Cooperative Extension (Farm & Home Advisor)
858 - 694 - 2845

Managing Nonpoint Source Pollution from Agriculture
www.epa.gov/OWOW/NPS/facts/point6.htm

California Integrated Waste Management Board
<http://www.ciwmb.ca.gov/Organics/GreenTeam/Target6/ProjMap.htm>

*Source: EPA Pointer No.6, EPA841-F-96-004F

**Source: Soil Erosion and Sedimentation Control Manual for Agriculture, Commonwealth of Pennsylvania