



## CONSERVATION ENHANCEMENT ACTIVITY

### E484128Z Colorado

# CONSERVATION STEWARDSHIP PROGRAM

## Reduce particulate matter emissions by using orchard or vineyard generated woody materials as mulch

Conservation Practice: 484 Mulching

APPLICABLE LAND USE: Crop (perennial)

RESOURCE CONCERN ADDRESSED: Air Quality Impacts- Emissions of Particulate Matter

ENHANCEMENT LIFE SPAN: 1 Year

### Enhancement Description

Reduce particulate matter emissions by using orchard or vineyard generated woody materials as mulch. At least 90% of all woody materials are to be used as mulch on the operation. *An exception may be made when it is determined that infected material must be burned to preserve crop health.*

### Criteria

- Non-infected, woody material will not be burned and instead will be chipped and used as mulch. Infected material, may be burned to preserve crop health, but in order to count this enhancement as met, 90% of all woody material must be mulched.
- When mulching with wood products such as wood chips, bark, or shavings or other wood materials, apply a minimum 2-inch thickness of particles that will remain in place during heavy rainfall or strong wind events, or both, if applicable.
- Mulching plan must be developed. Mulched material must meet guidelines laid out in a mulching plan for size of chips and thickness of cover applied.
- Mulch does not have to be applied to the immediate source area (orchard or vineyard), but instead may be applied anywhere needed on the operation that are designated in the mulching plan (i.e. other areas of farmstead or cropland).

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- Avoid excessively thick or tightly packed mulches that can result in soggy, anaerobic conditions at the soil surface during wet weather; or prevent rainfall or overhead irrigation from reaching the soil during times of moisture deficit.
- Keep mulch 3 to 6 inches away from plant stems and crowns to prevent disease and pest problems. Additional weed control may be needed around the plant base area.
- For all organic or transitioning to organic operations, follow all National Organic Program (NOP) rules.



### Documentation and Implementation Requirements

#### Participant will:

- Prior to implementation, provide NRCS with information for review about current and proposed management of orchard or vineyard generated woody materials.

Field	Crop	Acres	Current Management	Proposed Management

- Prior to implementation, provide NRCS with the proposed mulching plan for development. NRCS can provide assistance in plan development, as needed. At a minimum, the plan must include:
  - o Purpose of mulching
  - o Type of mulch material
  - o Approximate amount of mulch material to be utilized
  - o Size of mulch pieces (size range or maximum size of pieces)
  - o Placement timing (planned and actual)
  - o Depth of mulch cover
  - o Any required site preparation
  - o Operation and maintenance information
  - o Map(s) of area where material is to be applied

Field	Crop/Location	Mulching Material	Planned Mulching Depth or Rate of Application (inches or pounds/acre)	Planned Application Date



- During implementation, notify NRCS of any planned changes in the mulching plan to verify the planned changes meet the enhancement criteria.
- During implementation, use mulch of sufficient ground cover, and suitable thickness and texture to provide habitat for ground beetles, spiders, and other predators of weed seeds and crop pests.
- During implementation, take photos of area mulched that document the average size of mulched material and depth of layer applied.
- After implementation, provide NRCS with the applied mulching information.

Field	Crop	Mulching Material	Actual Mulching Depth or Rate of Application (inches or pounds/acre)	Actual Application Date

- After implementation, provide mulching plan and photos for review of the area(s) mulched to document the average size of mulched material and depth of layer applied and to verify the planned system meets the enhancement criteria.

**NRCS will:**

- As needed, provide technical assistance to meet the criteria of the enhancement.
- Prior to implementation, review current and proposed management of orchard or vineyard generated woody materials. *Plan/contract the actual acres of the crop producing the woody materials to be managed.*
- Prior to implementation, verify that the mulching plan meets all criteria of the enhancement.
- During implementation, evaluate any planned changes in the mulching plan to verify the planned changes meet the enhancement criteria.
- After implementation, if changes were made from the planned system, use information provided from the participant to verify the applied system meets the enhancement criteria.



**NRCS Documentation Review:**

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name \_\_\_\_\_ Contract Number \_\_\_\_\_

Total Amount Applied \_\_\_\_\_ Fiscal Year Completed \_\_\_\_\_

\_\_\_\_\_  
NRCS Technical Adequacy Signature

\_\_\_\_\_  
Date

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