



## CONSERVATION ENHANCEMENT ACTIVITY

E484B

# CONSERVATION STEWARDSHIP PROGRAM

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

Conservation Practice: 484 Mulching

APPLICABLE LAND USE: Crop (perennial)

RESOURCE CONCERN: Air

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, but instead will be chipped and used as mulch. Infected material may be burned to preserve crop health, but 90% of all woody material must be mulched in order to count this enhancement as met.
- When mulching with wood products such as wood chips, bark, shavings, or other wood materials, apply a minimum two-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 is designated in the mulching plan (e.g., other areas of farmstead or cropland).
- 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

E484B - Reduce particulate matter emissions by using orchard or vineyard generated woody material as mulch	August 2019	Page   1
--	-------------	----------



overhead irrigation from reaching the soil during times of moisture deficit.

- Keep mulch three to six 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, as needed, in plan development. 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 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 ensure enhancement criteria are met.
- If changes were made after implementation, use information provided from the participant to verify the applied system meets the enhancement criteria.



**NRCS Documentation Review:**

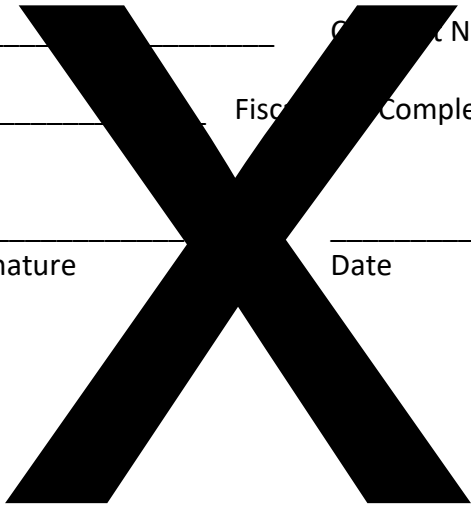
I have reviewed all required participant documentation and determined the participant has implemented the enhancement and met all criteria and requirements.

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

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

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

\_\_\_\_\_  
Date



**Design Approvals & Acknowledgements:**

<b>Design Approval</b>	<b>Date</b>	<b>Job Approval Authority</b>
Designed by:		
Approved by:		

**Client's Acknowledgement Statement:**

The client acknowledges:

- I have received a copy of the specification and understand the contents and requirements.
- It is my responsibility to obtain all necessary permits and/or rights and to comply with all ordinances and laws pertaining to the application of this practice.
- I will not begin installation of this practice until I have received appropriate approval to do so. I understand NRCS also has Federal and state laws to comply with that may take some time to address (e.g. cultural resources).

<b>Client's</b>	<b>Date</b>
<b>Signature</b>	

**Certification Documentation:**

	Field Evaluation: Post-treatment inventory, measurements, notes, as-built, and supporting documentation (document completion in conservation plan), as required.
	Map(s): Including field numbers, fields treated, and units treated (may document on conservation plan map), as required.
	Photos or other supporting documentation (e.g., seed tags, soil tests, receipts, invoices, spray records, fertilizer records, etc.)
Brief Description of Work Accomplished (types of equipment used, date of application, extents and quantities installed, etc.)	

**Certification Statement:**

The employee certifies the implementation of this conservation practice:

- Meets the purpose, general criteria, and any required additional criteria as documented in the conservation practice standard and/or enhancement sheet.
- Meets the specifications contained herein and is complete.
- Conforms to my existing Job Approval Authority controlling factors and levels.

Name	Date	Job Approval Authority

<b>Field Level Certification</b> – For multiple applications of this design.				
Land Unit/ Contract Item Number	Date	Unit(s)	Amount Installed	Certifier