



WQT02 Montana Supplement

Mulching for Moisture Conservation – (Water Quantity Enhancement)

Montana Clarification

No additional clarifications other than as described in the national enhancement.

Montana Specifications

The following tables were copied from Montana Practice Specification for Mulching (484).

TABLE 1. Application Rates for Hay, Straw, and Wood Fiber Mulch Anchored with Anchoring Tools or Other Methods.

METHOD OF ANCHORING AND MULCH	RATE FOR MULCH (POUNDS)		RATE FOR ASPHALT OR RESIN EMULSION (GAL)	
	PER ACRE	PER 1,000 FT ²	PER ACRE	PER 1,000 FT ²
ANCHORED WITH DISK				
Native or tame hay	5,000	118	-----	-----
Small grain straw	4,000/5,000*	140	-----	-----
Wood fiber	4,000	93	-----	-----
ANCHORED W/ ASPHALT OR RESIN EMULSIONS				
Native or tame hay	3,000	70	300	7
Small grain straw	3,000	70	300	7
Wood fiber	3,000	70	300	7
ANCHORED W/ MULCH NETTING OR STAKE AND TWINE OR SHOVEL (SILT)				
Native or tame hay	3,000	70	-----	-----
Small grain straw	3,000	70	-----	-----

*North Slopes = 4,000 pounds per acre

*South Slopes = 5,000 pounds per acre

TABLE 3. Straw Mulch Application on Irrigated Land.

SLOPE	MULCH RATE lbs/100 feet of ROW
0-2	2.00
2-3	4.00
3-4	6.00
>4	8.00

TABLE 4. Straw Weight for Irrigated Row Widths.

ROW SPACING (in)	POUNDS OF STRAW PER 100' OF ROW				
	1.0	2.0	3.0	4.0	8.0
22	240	480	720	960	1,920
30	175	350	525	700	1,400
36	145	290	435	580	1,160
44	120	240	360	480	960

TABLE 5. Mulch Types ^{1/}

TYPE	DESCRIPTION	REQUIRED EQUIPMENT	APPLICATION RATE	CONSIDERATIONS	LIFE
Straw	Certified Straw	Hand Application, Blown on or Applied by Helicopter	4,000 lbs./ac (4") on North slopes; 5,000 lbs./ac (5") on South side	Tough to put on extremely steep slopes except by helicopter. Inexpensive, effective.	2 years
Hydro Seed Wood Cellulose Mulch	Hydro Mulch with Wood Cellulose Mulch	Applies with a Hydro Seeding Machine	2,000 lbs./ac	Hydro Seeders are expensive to move in and are in short supply in the fall. Seeding cannot be kept current with construction. Very effective.	1 Year
Hydro Seed Paper Mulch	Hydro Mulch with Paper Mulch	Applied with a Hydro Seeding Machine	2,000 lbs./ac	SAME AS ABOVE.	1 Year
Blankets (SOME COME IMPREGNATED WITH SEED)	Various Types of Pre-made Erosion Control Blankets	Rolled Out and Staked or Pinned Down	By the Square Foot	Effective, netting decomposes at a different rate than mulch. Expensive.	2 Years
Netting	Various Types of Biodegradable and Non-degradable Netting	Rolled Out and Staked or Pinned Down, Over Mulch	By the Square Foot	Can trap animals, decomposes slowly; used over mulch; Biodegradable types are available.	2 Years
Channel Liners	Various Width Heavy Duty Blankets	Rolled Out and Staked or Pinned Down	By the Square Foot	Effective, usually left in place. Very expensive.	3 Years
Tackifiers	Sprayed on Material Used to Hold Soil in Place	Sprayed on, usually with a Truck Mounted Sprayer	By the Square Foot	Short Term.	1 Year
Sodding	Grass Sod	Rolled Out and Pinned Down	By the Square Foot	Used when instant plant establishment is important.	Indefinite

^{1/} Taken in part from the USDA–Forest Service, Region 1, Native Plant Handbook.

Incompatible Enhancements

This enhancement may not be contracted with the following enhancements:

ANM21, ANM22, SOE02

Eligible Land

Cropland

Applicable Acres

Acres of irrigated cropland (not hayland)

Example (System)

A producer owns 4 irrigated fields totaling 400 acres. The producer proposes to utilize this enhancement on one field (100 ac) beginning in year 2. The applicable acres would be 400 and the applied acres would be 100. The Toolkit plan would appear as follows:

	Year 1	Year 2	Year 3	Year 4	Year 5
WQT01	0	100 ac	100 ac	100 ac	100 ac

Documentation Requirements

NHQ enhancement asks for:

- 1) List of the fields, field size, and type of mulch used; and
- 2) Photo documentation of mulching with photos date stamped and labeled with field numbers.

I acknowledge that I have read and understand all that is required for the implementation of this CSP Enhancement Activity.

Contract participant

Date