NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION

CRITICAL AREA PLANTING

(ACRE)

CODE 342

I. SCOPE

The work shall consist of furnishing all materials and placing them on all exposed, disturbed, or barren areas within the designated treatment areas to the limits as shown on the drawings or as staked in the field.

II. SPECIFICATIONS

General

Location in Nevada and treatment site conditions will dictate specific recommendations for plant selection, seeding or planting method, and site preparation prior to planting.

Consideration must be given to climate, topography, soil surface features and soil properties, availability of water, and other considerations. Refer to Nevada Cooperative Extension/NRCS joint publication BE-93-01 Conservation Plantings for Natural Resources Management for information and recommendations regarding planning and management of critical area plantings Nevada.

PLANT MATERIALS

Seed

All seed to be used shall conform to current Nevada State Seed Law and Regulations and current Nevada State Seed Certification Regulations (*Nevada Administrative Code* [NAC] 587.226). Seed shall be labeled in accordance with Nevada State laws and the U. S. Department of Agriculture rules and regulations under the Federal Seed Act.

Nevada State Seed Certification Regulations can be viewed at: www.leg.nv.us./NAC/NAC-587.html.

Nevada State Seed Law and Regulations can be viewed at: www.leg.nv.us./NRS/NRS-587.html.

- All commercially produced seed from *introduced plant species* shall be labeled either “certified seed” or "registered seed" as defined in the current Nevada State Seed Certification Regulations (NAC 587.226.)
- All commercially produced seed from *native plant species* shall be labeled as “certified seed”, "registered seed", "source identified seed", "selected seed", or "tested seed", as defined in NAC 587.226.
- All native plant seed from *wildland collections* shall be labeled as "source identified seed" as defined in NAC 587.226.
- Seed shall be from the latest crop available. No seed will be used having a date of test more than nine (9) months prior to the date of delivery to the site.
- Seed that has become wet, moldy, or otherwise damaged in transit or storage will not be used.
- Seed is to be certified as free of noxious weeds.
- Weed seed shall not exceed 1.5 percent (by weight) of the bulk seed supplied.

Seed Inoculant

All legume seed shall be inoculated. Inoculant for treating legume seeds shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species and shall not be used later than the date indicated on the container. A mixing medium, as recommended by the manufacturer shall be used to bond the inoculate to the seed.

For *non-pellet* inoculated seed, two times (2X) the amount of inoculate recommended by the manufacturer shall be used and seed shall be sown within 24-hours of treatment.

For *pellet* inoculated seed, a minimum of 30-pounds of inoculant shall be used per 1,000-pounds of bulk seed. Pellet inoculated seed shall be labeled to show Lot Number, Expiration Date, and Percent Coat of the finished product. Pellet inoculated seed shall be stored in a cool environment and planted within 180-days of the inoculation date.

II. SPECIFICATIONS (continued)

PLANT MATERIALS (continued)

Container Plants

Plant materials obtained from commercial sources shall be from nurseries that can provide verification of inspection and licensing by the State Department of Agriculture in which the nursery is located.

Plants shall be healthy and well-rooted, with roots showing no evidence of having been damaged, restricted, or deformed. Plants found to be root- or pot-bound will not be acceptable.

Plants shall be vigorous and free of disease, insect pests, eggs or larvae and shall be subject to inspection and approval upon delivery.

Plants shall not be allowed to freeze or dry.

The specified size of plant stock shall be delivered to the site in standard size containers for the plant stock size specified (*i.e.,* 5-gallon plant stock shall be of the standard five-gallon size and shall be delivered to the site in five-gallon containers).

Woody Cuttings

Woody cuttings obtained from commercial sources should be from parent stock that is located no more than 200 miles east or west or 100 miles north or south of the planting site and where no more than a 2000-foot elevation difference is noted.

Stem or branch cuttings of soft wood, hardwood or firm wood should be taken whenever possible from plants that are native to the locality or that are grown on sites similar to the planting area.

Cuttings from local parent material shall be from live, vigorous, plants with harvest made during the dormant season (late fall, winter, or very early spring before stem buds start to open).

Stems to be harvested as cuttings shall be at least one year old. The best stems to select for cuttings are typically 4 to 5 years old with smooth bark. Suckers and current year's growth are not to be used.

No more than 1/3rd of any one individual donating plant will be removed.

Select cuttings that are free of splitting, disease and insect damage.

Stem cuts are to be made clean using sharp tools.

The butt end of the stem should be a slant cut (± 45º) and the tip end is cut horizontally across the stem.

The top 1- to 2-inches of each cutting should be sealed to prevent excessive transpiration of water by dipping in a 50-50 mix of light-colored latex paint and water.

The deciding factor for specifying a cutting diameter is the planting method to be used. In general, cuttings should have a minimum diameter of ¾-inch. Cutting length is largely determined by depth to the mid-summer water table and erosive force of stream flows at the planting site.

For *slip-size cuttings*, the diameter of the cutting should not be more than 1½-inches at the butt end nor smaller than ¼-inch at the tip. Cutting length shall allow for 2 to 3 stem nodes to be above ground with no less than one-half the total stem length buried in the ground.

For *pole-size cuttings*, the diameter of the cutting should not be more than 4-inches nor smaller than 2-inches at the butt end. The tip of a pole-sized cutting is at least ½-inch in diameter. Pole cuttings shall have a minimum length that accounts for depth to the mid-summer water table plus 3-feet above ground with 3 to 4 stem buds exposed.

Cuttings shall not be allowed to dry and shall not be more than 7-days old when planted unless cold storage (24 to 32ºF) is provided. Cuttings may be stored for several months in a storage area that is dark and moist, and that can maintain consistent cool temperatures.

See Nevada Technical Note TN-PLANT MATERIALS-33 for additional information on the propagation of willow and cottonwood species by stem cuttings.

PRACTICE INSTALLATION

SITE PREPARATION

Where possible, soil of the target area should be salvaged and stored by soil horizon prior to major disturbance.

To maintain soil biological attributes, topsoil should not be stored longer than two years.

Drastically disturbed sites that are unsuitable for vegetative establishment should be evenly covered with a minimum of 4-inches of topsoil, if possible.

Should soil particle size differ significantly between subsoil and placed topsoil, a mixing of the soil layers should be made to facilitate water percolation and root penetration.

On steep slopes and sites where significant runoff is expected to occur, measures to divert runoff water from treatment area should be installed.

II. SPECIFICATIONS (continued)

PRACTICE INSTALLATION (continued)

SEEDING

Seedbed Preparation: The area to be planted shall be weed free and have a firm seedbed which has previously been roughened by scarifying, disking, harrowing, chiseling, or otherwise worked to a depth of 2- to 4-inches.

Seedbed may be prepared at time of completion of earth moving work.

The horizontal indentations left by tracked equipment is acceptable on steep slopes.

Rocks larger than 6-inches in diameter, trash, weeds, and other debris that will interfere with seeding shall be removed.

Seedbed preparation shall be suspended when soil moisture conditions are not suitable for obtaining a satisfactory seedbed.

Direct Seeding: Drill seed or broadcast seed by hand, mechanical hand seeder, or power operated seeder. Seed can also be sown in a water slurry by hydroseeder. Broadcast seed shall be incorporated into the soil by raking, harrowing, or chaining.

Adapted plant species listed on the Critical Area Planting Practice Documentation Worksheet (NV-CPA-342) or on a separate Critical Area Planting Plan shall be used.

Non-irrigated seedings are planted in late fall.

Very high seeding rates, as much as 75 seeds per square foot, are required on highly erodible or critically eroding areas.

Seeding rates are to be specified in terms of pure live seed and are based on label information from bags of purchased seed. The seeding rate(s) shall be the weight of pure live seed exclusive of any coating material.

MULCH

On steep slopes, and other sites where appropriate, a covering of straw or other suitable material should be placed over the seeded area to reduce potential for soil erosion and seed loss while preserving soil moisture.

Straw Mulch: Straw mulch shall be new straw from rice, wheat, oats, or barley that satisfies Nevada Department of Agriculture standards for absence of weed pests.

Straw is to be distributed uniformly over the seeded area at the rate of two (2) tons per acre unless a different amount is specified.

The mulch is to be applied within 48-hours of seeding.

Straw Mulch: (continued)

The straw shall be applied by hand, blower, or other suitable equipment. If straw is applied by blower, it shall be chopped in lengths not less than 6-inches.

Assume a distance of 75-feet as the effective range for straw blowing equipment.

Several methods of anchoring straw mulch are acceptable:

- On slope gradients less than 3:1, equipment such as mulching rollers, crimpers, or straight serrated disks may be used to anchor straw. Straw mulch can also be anchored using hand tools. The straw shall be tucked into the surface a minimum of 3-inches on a spacing not to exceed one-foot. See Exhibit 1.
- Straw mulch can also be anchored in place with use of jute netting or excelsior matting placed over the spread straw. See Exhibit 2.

  Jute matting shall be cloth mesh having a uniform weave of plain, undyed and unbleached, jute yarn with a minimum weight of one pound per 10 square feet. Mesh shall have a maximum opening size of 1-inch by 1-inch.

  Excelsior matting is a machine-produced mat of wood excelsior fiber. Excelsior matting shall have consistent thickness and the fibers are to be evenly distributed over the entire area of the blanket. At least 70 percent of the fibers shall be a minimum of 6-inches in length. The topside of each blanket shall be covered with a biodegradable extruded plastic mesh. Mesh shall have a maximum opening size of 2-inches by 2-inches.

  Jute or excelsior matting is installed up and down slope and is to extend beyond the edge of the mulched or seeded area at least 1-foot on all sides. If existing vegetation or structures set the boundaries of the treatment area, matting shall be continued into a stable vegetated area or to the edge of the adjoining structure. The matting shall be cut around objects so it will lie flat on the soil surface.

  The upper end of the matting at the top of the mulched area is to be buried in a trench that is at least 6-inches deep. Sides of mat rolls shall overlap at least 4-inches, and rolls shall overlap at least 3-feet where an uphill roll joins a downhill roll. The uphill roll shall overlie the downhill roll.

II. SPECIFICATIONS (continued)

PRACTICE INSTALLATION (continued)

Straw Mulch: (continued)

- Matting is held in place with wire staples or specially manufactured anchor pins. Staples shall be made of 0.09-inch diameter, or heavier, "U" shaped galvanized wire with legs at least 8-inches in length. Anchor pins shall be made of rigid 0.12-inch diameter, or heavier, galvanized wire with a minimum length of 10-inches for hook or "J"-type pins.

  Staples are to be spaced approximately |5-feet apart along each side in the mat overlap area. Staples shall be spaced approximately 5-feet apart down center of each roll.

  Staples are set at 1-foot intervals along the upper edge of each roll and at not more than 1-foot intervals across the overlap area where an uphill roll joins a downhill roll.
- Straw mulch may also be anchored in place by covering the mulched area with plastic netting. Plastic netting shall be fabricated of polypropylene extruded plastic with square or rectangular openings that are ¾-inches or less in diameter. The minimum weight for plastic netting is 2.6-pounds per 1000-square feet. See Exhibit 3.

  Plastic netting is placed following the installation specifications for jute or excelsior matting outlined above.

  Plastic netting is anchored in place with wire staples or wood stakes set at 5-foot intervals. Staples/stakes set on the exterior edges of the netting shall be spaced 5-feet apart.

Hydromulch: On sites where use of equipment is not feasible or is undesirable, wood fiber mulch and a tackifier to hold mulch in place can be applied over the treatment site in a water slurry using a hydroseeder. In addition to the mulch material and tackifier, the water slurry also contains seed that is to be dispersed and any required fertilizer.

Assume a distance of 125-feet as the effective range for hydroseeding equipment. This range can be to 200-feet when a 100-foot extension hose is supplied.

Wood fiber is applied at a minimum rate of 1500-pounds per acre unless otherwise specified.

The hydroseeder is to be equipped with a built-in, continuous, agitation system of sufficient operating capacity to produce a homogeneous slurry. The hydroseeder must also be equipped with a discharge system which can apply the slurry at a continuous and uniform rate.

Wood fiber used for hydromulch operations shall be a wood cellulose fiber that contains no plant germination or growth inhibiting substances. Wood fiber mulch is produced from new or recycled wood products such as wood chips; or from recycled newsprint and cardboard that contain at least 50 percent cardboard; or a combination of newsprint and non-recycled wood fiber that contains no more than 50 percent newsprint.

Wood fiber material selected for use shall exhibit the ability to be evenly dispersed and remain suspended in water when agitated.

The wood fiber mulch material shall be colored with a nontoxic, water soluble, green dye to provide a proper gauge for metering of material over ground surfaces.

Wood fiber mulch products that have moisture contents greater than 15 percent shall have application rates increased by the factor "*c*" determined as follows :

$$c = \frac{85 \text{ percent}}{\text{percent fiber (solids) in product}}$$

Tackifier used shall be one of the following, or other specified product, that can be evenly dispersed and suspended in water when agitated:

M Binder Sentinel
Ecotak SAT Fish STIK
Soil Master WR

Application rates for the tackifiers listed above shall be:

TACKIFIER	RATE	WOOD FIBER MULCH
Ecotak-SAT	100 lbs	1,500 to 2,000 lbs
Fish-STIK	100 lbs	1,500 to 2,000 lbs
M-Binder	100 lbs	1,500 to 2,000 lbs
Sentinel	100 lbs	1,500 to 2,000 lbs
Soil Master WR	100 gallons	2,000 to 2,500 lbs

The slurry is to be continuously stirred or agitated and shall be mixed for at least five minutes after the last addition of a slurry ingredient before the start of application.

The slurry is to be applied uniformly over the site at a rate that is non-erosive and that minimizes runoff.

Seed is not to remain in the water slurry longer than thirty minutes. The wood fiber product shall not remain in the slurry longer than two hours. Fertilizer shall not remain in the slurry longer than two hours.

II. SPECIFICATIONS (continued)

PRACTICE INSTALLATION (continued)

MULCH (continued)

"Split" Hydroseeding: A hydroseeder is used to distribute seed and fertilizer over the treatment area to ensure good seed-soil contact. The water slurry prepared forseeding shall also contain wood fiber at the rate of 500 pound per acre.

A wood fiber mulch (with tackifier) is then disbursed uniformly over the seeded area using the hydroseeder. The hydroseeder slurry for mulch application shall contain wood fiber at the rate of 1500-pounds per acre.

Application of the wood fiber mulch and tackifier is made within 48-hours following seeding.

Specifications for hydroseeder, wood fiber and tackifier to be used for mulching, and the handling of slurry are listed above with hydromulch operations.

Tackified Straw: Drill or broadcast seed. Broadcast seed shall be incorporated into the soil by raking or harrowing. Seed can also be sown in a water slurry by hydroseeder. A covering of straw is then placed over the seeded area to reduce potential for soil erosion and seed loss while preserving soil moisture. The straw mulch is lightly anchored using hand tools prior to application of a tackifier employed to hold the mulch in place.

Straw shall be applied at the rate of two-tons per acre unless a different amount is specified.

The straw mulch is applied by hand, blower, or other suitable equipment. If straw is applied by blower, it shall be chopped in lengths not less than 6-inches. Assume a distance of 75-feet as the effective range for straw blowing equipment.

Wood fiber (with tackifier) in a water slurry is then disbursed uniformly over the seeded and straw mulched area using a hydroseeder. Application of the wood fiber mulch and tackifier is made within 48-hours following seeding.

The slurry shall contain wood fiber mulch, tackifier, and water in the proportions listed below: (*Rates listed are on a per acre basis*)

TACKIFIER	RATE	WOOD FIBER MULCH	WATER
Ecotak-SAT	100lbs	150lbs	700 gallons
Fish-STIK	60lbs	500lbs	3,000 gallons
M-Binder	100lbs	150lbs	700 gallons
Sentinel	100lbs	500lbs	2,000 gallons
Soil Master WR	100lbs	250lbs	1,000 gallons

Specifications for hydroseeder, straw to be used as mulch, wood fiber material, tackifier products, and the handling of slurry are listed under **Hydromulch** above.

Erosion Control Blanket: Drill or broadcast seed. Seed can also be sown in a water slurry by hydroseeder. Broadcast seed shall be incorporated into the soil by raking or harrowing.

Within 48-hours of seeding, erosion control blankets are uniformly placed over the surface of the seeded area.

Erosion control blankets consist of a machine-produced mat of wood excelsior fiber with consistent thickness and the fiber evenly distributed throughout the entire area of the blanket. At least 70 percent of the fibers shall be six-inches or longer. Erosion control blankets may also be machine fabricated mats of 70 percent wheat straw and 30 percent coconut fiber or 100 percent coconut fiber.

The topside of each blanket shall be covered with a biodegradable extruded plastic mesh with openings not exceeding 2-inches by 2-inches.

Erosion control blankets shall have a minimum density of 0.5-pounds per square yard and be enclosed in netted material.

Erosion control blankets shall be started a minimum of three-feet below the crest of the first slope break noted above the treatment area. Erosion control blankets are oriented lengthwise up and down the treated slope. The plastic mesh covering each blanket is to be placed facing upward with the blanket fibers in contact with the soil. Blanket edges are to overlap at least 4-inches onto adjoining blankets.

Erosion control blankets are to be anchored with wire staples constructed of 11-gauge, or heavier, galvanized wire. Staples shall be "U"-shaped, and will have a two 2-inch crown width with legs at least 10-inches in length.

Staples shall be driven vertically into the ground with reference to the slope. Four staples shall be uniformly spaced across the start and end of each roll and set 4-inches from the starting edge at the crest of the slope and 2-inches from the end of each roll. Staples shall also be uniformly spaced down both sides of each roll at 6-foot intervals and set 2-inches from the edge of the blanket. Staples are also installed down the center of each roll at 6-foot intervals and alternately spaced with respect to the staples on each side.

II. SPECIFICATIONS (continued)

PRACTICE INSTALLATION (continued)

WOODY CUTTINGS

Use woody plants in gullies, on streambanks, along shorelines, and on steep slopes. In many instances, a combination of woody and herbaceous plants should be used.

Planting Site Preparation: The area to be planted shall be weed free and have a uniform surface.

No implement shall be used that will create an excessive amount of downward movement of clods on sloping areas.

The planting site may be prepared at time of completion of earth moving work.

The horizontal indentations left by tracked equipment is acceptable on steep slopes.

Rocks larger than 6-inches in diameter, trash, weeds, and other debris that will interfere with seeding shall be removed.

Seedbed preparation shall be suspended when soil moisture conditions are not suitable for obtaining a satisfactory seedbed.

Planting: Cuttings shall be planted in one or more rows and set upright as possible.

"Slip-size" cuttings shall be spaced at 3-foot intervals within a row. For multiple row plantings, spacing between rows shall be 3-feet and cuttings shall be staggered with respect to those in adjacent rows unless otherwise specified. Cuttings shall be planted in prepared holes or "V"-furrows to avoid stripping the bark, especially in rocky or clayey soils. Cuttings are placed in the soil with the butt end pointed downward.

All "slip" cuttings shall have 6-inches to a maximum of 12-inches (including at least two stem nodes) exposed above ground level.

Cuttings shall be placed into the soil to a depth specified. If however, due to some physical condition in the soil, the specified planting depth cannot be attained, the cuttings shall be set with one-half of the total length in the soil.

"Pole-size" cuttings are planted in adequately sized, vegetation-free holes. An auger may be used to open a hole leading to the water table. Place pole cuttings in the augured hole one-half foot above the mid-summer water table.

After planting, pack the soil firmly around each pole to eliminate air pockets. "Mudding", by filling the hole with water and then adding more soil to the hole to form a slurry, can remove air pockets.

container plantings

CONTAINER PLANTINGS

Planting Site Preparation: The sites to be planted shall be cultivated and raked to a depth of 8-inches to remove any weeds, stones, or other foreign material greater than 2-inches in diameter. No planting will be allowed in soil that is too wet, too dry, or otherwise improperly conditioned.

Locations selected for planting shall be marked using wood laths, wire flagging, or other approved means.

Holes for trees and shrubs shall be excavated to minimum diameters and depths as follows:

CONTAINER SIZE	HOLE DIAMETER	HOLE DEPTH
One quart	12"	12"
One gallon	12"	12"
Five gallon	20"	20"
Fifteen gallon	32"	24"

The hole sides shall be vertical and lightly scarified or roughened. The soil at the bottom of the hole shall be loosened to an additional depth of six-inches.

Trees and Shrubs: Partially backfill planting hole with planting mixture consisting of 50 percent native soil, 25 percent sand, and 25 percent manure (by volume), unless otherwise specified. Planting mixture is to be uniformly mixed and free of clods or lumps. Blend planting mix into top 2-inches of loosened soil at bottom of the hole.

Plants are to be removed from their containers in such a manner that the ball of earth surrounding the roots is not broken. Once removed from the container, plants are immediately placed in the prepared hole. Set plants in the center of prepared hole, adjusting so that after settlement the crown of the plant will stand one- or two-inches above the ground surface.

Backfill hole with planting mixture to one-half the root ball height and place one fertilizer tablet per foot of plant height two-inches away from root ball, then water thoroughly. Backfill the rest of hole with planting mixture. Firm soil around plant, eliminating all air pockets. Build a four-inch berm around the edge of the root ball to form a basin for holding water. Fill basin with water immediately after planting. Settled plants shall be reset to proper grade position and planting basin restored.

Only the number of plants that can be expected to be planted and watered within the period allotted for planting should be disbursed to planting sites.

II. SPECIFICATIONS (continued)

PRACTICE INSTALLATION (continued)

CONTAINER PLANTINGS (continued)

"Flat-Size" Plants: Prior to planting "flat size" plants, the planting sites shall be fertilized and watered thoroughly to insure optimum soil moisture to a minimum depth of 8-inches.

"Flat size" plants shall be planted at spacing specified. Water lightly, but thoroughly, immediately after completion of planting.

Tree Seedlings: Planting holes shall be made using the Western planting tool, mattock, or other suitable tool. The hole shall have one flat, vertical, side and be excavated to a depth that is greater than the plant container.

A single plant shall be immediately placed against the flat, vertical side of the hole with roots straight and vertical and the hole carefully backfilled with excavated soil ensuring that roots are not damaged. Plants in biodegradable containers shall be planted in their container. Plants in non-biodegradable containers shall be removed from their container at time of planting. The soil around the plant shall be firmed by tamping to eliminate all air pockets.

A 1.5-foot radius around each plant shall be cleared of all vegetation.

Planting operations shall not create an excessive amount of downward movement of soil or clods on sloping areas and shall not damage newly placed plants, existing trees or tree seedlings.

Mulch shall be applied around each tree and shrub to cover the bottom of the prepared watering basin to a depth of two-inches. Mulch shall consist of redwood, fir, cedar, or pine bark chips that are ground to 3/8-inch to 1¼-inch in length.

Plants shall not be pruned prior to planting.

All 5-gallon and 15-gallon size trees installed shall be supported by three stakes plus ties within 48-hours after planting. Spindly trees shall also be supported by a flexible rod plus ties with the three stakes held by a steel strap. Flexible rods shall be ¼-inch diameter steel for five-gallon plants and 3/8-inch diameter steel for 15-gallon plants.

Ties shall be heavy-duty vinyl, a minimum of .010-inches thick, or 1-inch width, flexible, rubberized, cloth, webbing.

Straps shall be 1/16-inch by 1-inch mild steel nailed to stakes with 8d box nails.

DUNE STABILIZATION

Use wind-controlling fences or artificial windbreaks (*i.e.,* straw bales) as needed to disrupt flow of sand blowing over the area to be treated.

Three to five rows of wind-controlling fence, that are of uniform height and spaced at approximately 50-foot intervals, are placed perpendicular to the prevailing winds.

Temporary wind-controlling fence is to be installed prior to seeding or mulching operations.

A mulch may be used to help stabilize the sand until seeded plants become established.

Where feasible, a solid windbreak of plants should be established on the downwind edge of the treatment area as soon as possible. See Windbreak/Shelterbelt (Code 380) conservation practice standards and specifications.

FERTILIZATION

Soils that are very low in fertility are generally associated with sites requiring critical area planting.

Fertilizer is applied according to local recommendations or soil test.

Bulk, pelleted or granular, fertilizer is to be uniform in composition, dry, and free flowing. All bagged fertilizer shall be delivered in original, unopened factory packaging and shall be free of lumps or other moisture damage.

All fertilizer shall be labeled in accordance with applicable state regulations and bear the warranty of the producer for the grade furnished.

Application of fertilizer and soil amendments will be in accordance with **NUTRIENT MANAGEMENT** (Code 590) conservation practice standards and specifications.

Direct Seeding: Apply ammonium phosphate or ammonium phosphate sulfate fertilizer containing a minimum of 20 percent available phosphoric acid (P_2O_5).

Fertilizer shall not be applied more than 15-days prior to planting. Where feasible, incorporate fertilizer into soil to a depth of at least four-inches. Fertilizer may be incorporated into the soil as part of seedbed preparation activities or with the seeding operation.

Addition of nitrogen fertilizers to enhance establishment of seeded grasses may also benefit aggressive weed species.

Fertilizer application rates should be reduced when treating sandy, coarse textured, soils or granitic soils.

II. SPECIFICATIONS (continued)

PRACTICE INSTALLATION (continued)

FERTILIZATION (continued)

Container Plants: Commercial fertilizer for trees and shrubs shall be a compressed, slow release, tablet containing a minimum of 20 percent nitrogen (N), 10 percent available phosphoric acid (P_2O_5), and 5 percent water soluble potash (K_2O).

Flat-Size Plants: Commercial fertilizer for flat-size plants should contain a minimum of 10 percent N, 8 percent available P_2O_5, and 4 percent water soluble K_2O. Fertilizer shall be distributed uniformly at the rate of 20-pounds per 1000-square feet. Fertilizer may be applied in any manner that will result in uniform distribution. Fertilizer should be incorporated into the soil prior to planting. Fertilization shall not be accomplished more than 15-days prior to planting. Manure shall be well composted, weed free, pulverized, sterilized, and may be furnished in bulk.

Hydroseeding: Fertilizer shall be applied hydraulically by hydroseeder in the form of a slurry that also contains the required seed. Fertilizer shall not remain in the slurry longer than two-hours.

IRRIGATION

Where practical and feasible, plantings should be irrigated for stand establishment.

When plantings are to be irrigated, maintain adequate moisture in the upper 6-inches of soil during the first 4-weeks and in the upper 12-inches of soil thereafter until plants are well established. Trees, shrubs, and flat-size plants on upland sites should be watered immediately after planting and thereafter as necessary to keep the soil reasonably moist throughout the root system during the first and second growing seasons. Irrigation water shall be applied in a moderate stream that does not displace mulch or soil surrounding the plants.

PESTICIDES

All pesticides used in performing this practice shall be Federally, State, and locally registered and shall be applied strictly in accordance with authorized and registered uses, directions on the label, and other Federal or State policies and requirements. Chemical containers shall be properly stored and disposed of.

Application of herbicides and other pesticides will be in accordance with **PEST MANAGEMENT** (Code 595) conservation practice standards and specifications.

III. PLANS AND SPECIFICATIONS

Narrative statements in the conservation plan may be used to record practice specifications for practice application. Separate critical area planting plans that are filed in the cooperator case file and referenced to in the conservation plan are to be prepared for conditions that require detailed information.

Plans will include provision for excluding livestock, and human foot and vehicular traffic on treated areas. See Use Exclusion (Code 472) conservation practice standards and specifications.

IV. OPERATION AND MAINTENANCE

MAINTENANCE

Maintenance applications of fertilizer and irrigation on established plantings are to be based on general appearance of vegetation and tests of soil fertility.

Established plantings that produce less than 50 percent of the total vegetative cover listed as an objective of practice application should be replanted. Established plantings that produce less than 50 percent of the total canopy and basal cover identified in the ecological site description for the treatment area should be replanted. See CRITICAL AREA PLANTING Conservation Practice Documentation Worksheet (NV-CPA-342).

OPERATIONS

Operations shall be done in such a manner that soil erosion is minimized and the impacts on air and water resources do not exceed state air and water quality standards.

The owner, operator, contractor, and other persons shall conduct all work and operations in accordance with proper safety codes for the type of equipment and operations being performed with due regard to safety of all persons and property.

REFERENCES

NRCS/NvCES. (1993). Conservation Plantings for Natural Resources Management. Publication No. BE-93-01. UNReno/NRCS Reno, Nevada.

NRCS. (2002). California NRCS Field Office Technical Guide - Section IV; Critical Area Planting conservation practice specification.

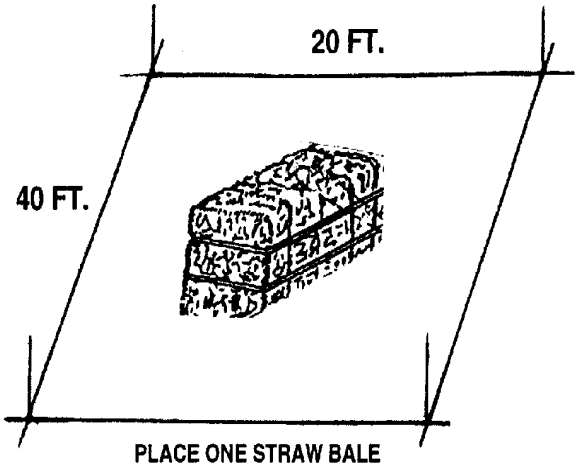
Cook, C. W. Et al. (1974) Revegetation Guidelines for Surface Mined Areas. Colorado State Univ., Range Science Series No. 16. Ft. Collins, CO.

STRAW MULCH

EXHIBIT 1

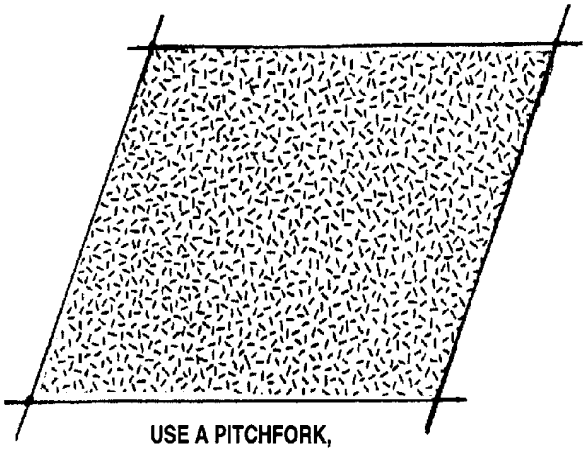
HAND CRIMPING TO ANCHOR STRAW MULCH

MARK OFF 800 SQ FT. PLOTS



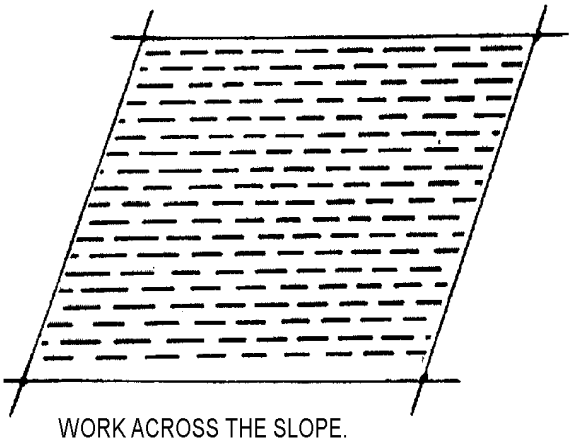
PLACE ONE STRAW BALE
PER PLOT (~74 POUNDS).
THIS IS EQUIVALENT
TO 2 TONS PER ACRE.

SPREAD EVENLY



USE A PITCHFORK,
SPADING FORK,
OR BY HAND

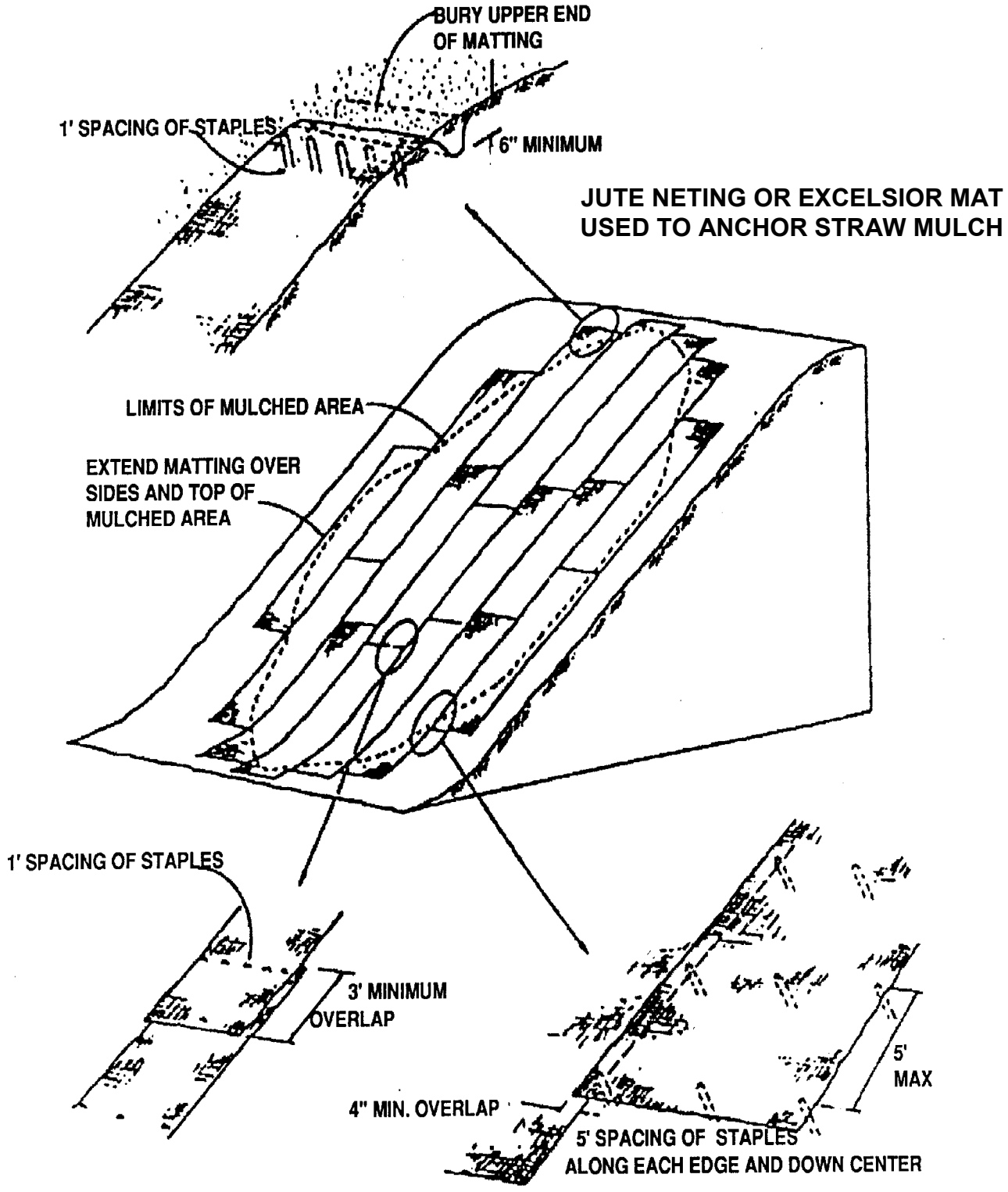
CRIMP BY HAND



WORK ACROSS THE SLOPE.
PUNCH STRAW 3 TO 4 INCHES DEEP.
A SQUARE END SPADE WORKS WELL.
MAKE PUNCH EVERY 12 INCHES.

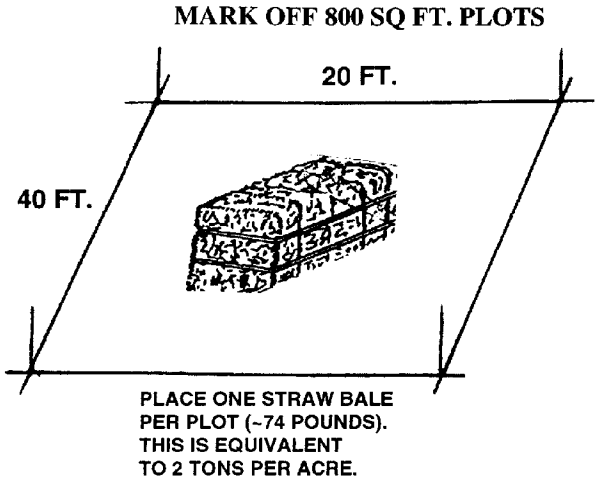
STRAW MULCH

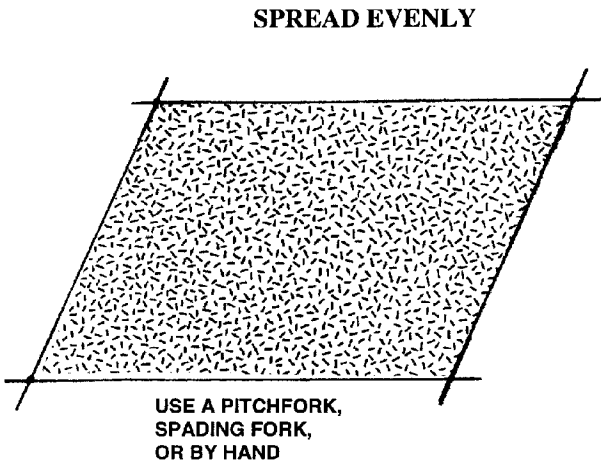
EXHIBIT 2



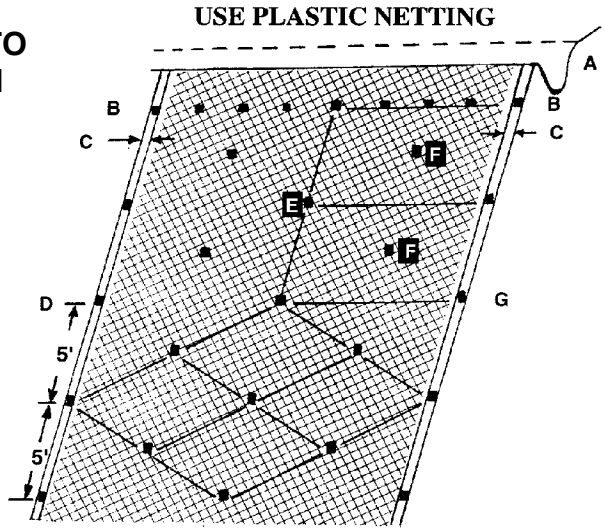
STRAW MULCH

EXHIBIT 3





PLASTIC NETTING USED TO ANCHOR STRAW MULCH



Place netting in strips down the slope over the straw mulch. Bury upper end of netting in 6-inch deep and 6 to 8-inch wide trench. Most netting comes in 14 to 17-foot wide rolls.

Use "U"-shaped wire staples at least 9-inches long, or pointed 1-inch x 2 inch wooden stakes 8 to 9-inches long to secure netting. Leave stake top 1- to 2-inches above netting.

Secure the upper end with staples/stakes every 2-feet.

Overlap seams of netting strips by 4 to 5-inches on each side and secure with staples/stakes every 5-feet.

Set staples/stakes every 5-feet down the center of each roll.

Staple/stake center of netting to create a diamond pattern with staples/stakes spaced 4 to 5-feet apart.

When joining two strips, overlap upper strip 3-feet over top of lower strip and secure with staples/stakes every 2-feet.