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| **QUESTION** | **Application** |
| **SS3.1** | Is Hydraulic Mulch applied as required? |
| **CGP, Attachment C.D.2, D.D.2, E.D.2** | Risk Level 1, 2 and 3 dischargers shall provide effective soil cover for inactive1 areas and all finished slopes, open space, utility backfill, and completed lots.  1 Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days. |
| **CGP, Attachment D.E.3, E.E.3** | Risk Level 2 and 3 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active2 construction.  2 Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage. |
| **13-1.03A General** | Install soil stabilization materials for water pollution control practices in all work areas that are inactive or before storm events. |
| **SPECs, 13-5.03A General** | Apply temporary soil stabilization materials within 24 hours after an area is ready to receive temporary soil stabilization or before a forecasted storm event. |

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|  | **Installation** |
| **SS3.2** | Is Hydraulic Mulch installed properly? |
| **SPECs, 13-5.03A General** | Do not use hydraulically-applied materials under the following conditions:  1. During precipitation 2. Whenever water is standing on or moving across the soil surface 3. Soil is frozen  4. Air temperature is below 40 degrees F during the tackifier's curing period unless allowed by the tackifier manufacturer and authorized |
| **SPECs, 13-5.03D Temporary Hydraulic Mulch** | If rates are not shown, apply temporary hydraulic mulch at the following rate:  1. Fiber at 2,000 lb/acre 2. Tackifier under the manufacturer's instructions for the slope, soil, and wind conditions |
| **SPECs, 13-5.03E Temporary Hydraulic Mulch (Bonded Fiber Matrix)** | If rates are not shown, apply temporary hydraulic mulch (bonded fiber matrix) at the rate of 3,500 lb/acre. |
| **SPECs, 13-5.03F Temporary Hydraulic Mulch (Polymer-Stabilized Fiber Matrix)** | If rates are not shown, apply temporary hydraulic mulch (polymer-stabilize fiber matrix) at the following rate:  1. Fiber at 2,000 lb/acre  2. Tackifier at 8 gallons/acre |
| **SPECs, 13-5.03G Temporary Hydraulic Mulch (Cementitious Binder)** | If rates are not shown, apply temporary hydraulic mulch (cementitious binder) at the following rate:  1. Fiber at 2,000 lb/acre  2. Cementitious binder at 4,000 lb/acre  Fiber for temporary hydraulic mulch (cementitious binder) must be at least 50 percent wood fiber. The remaining percentage must be cellulose fiber, alternate fiber, or a combination. |
| **SPECs, 21-1.03E Hydromulch and Hydroseed** | Apply hydromuch with hydraulic spray equipment that mixes fiber, tackifier, fertilizer, and other erosion control materials specified. If applying hydroseed, add seed to hydromulch. Seed may be dry applied to small areas not accessible by hydroseeding equipment if authorized.  Add water to hydromulch and hydroseed materials as recommended by the manufacturer and mix sufficiently to ensure an even application. A dispersing agent may be added to the mixture if authorized.  Equipment must utilize a built-in continuous agitation and discharge system capable of producing a homogeneous mixture and a uniform application rate. The tank must have a minimum capacity of 1,000 gallons. You may use a smaller tank if authorized.  Apply materials in locations, rates, and number of applications shown and as follows:  1. Begin application within 60 minutes after adding seed to the tank.  2. Apply in successive passes as necessary to achieve the required application rate.  3. Apply all hydromulch or hydroseed materials indicated for a single area within 72 hours.  When hydromulch or hydroseed materials are applied to areas covered by RECP, apply hydromulch and hydroseed materials to the rolled product as follows:  1. Verify the RECP is in uniform contact with the slope surface.  2. Spray materials into the RECP perpendicular to the slope and integrate well.  3. Do not displace or damage the RECP.  After the final application, do not allow pedestrians or equipment onto the treated areas. |
| **SPECs, 21-1.03J Bonded Fiber Matrix** | Apply bonded fiber matrix materials in the locations, rates, and number of applications shown and as follows:  1. Apply in successive passes as necessary to achieve the required application rate.  2. Form a continuous uniform mat with no gaps between the mat and the soil surface as follows:  2.1. Apply in 2 or more directions if necessary.  2.2. Apply in layers as necessary to avoid slumping and aid drying. |

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|  | **Materials** |
| **SS3.3** | Does Hydraulic Mulch consist of the proper materials? |
| **SPECs, 13-5.02D Cementitious Binder** | Cementitious binder must be:  1. Calcium sulfate hemihydrate 2. At least 85 percent pure 3. Functional for at least 365 days 4. Able to easily mix with water and fiber  5. Nontoxic to aquatic organisms 6. Free from growth or germination-inhibiting factors 7. Nonflammable |
| **SPECs, 21-1.02E Fiber** | Fiber must be wood fiber, cellulose fiber, alternate fiber, or a combination of these fibers.  Wood fiber must be a long strand, whole wood fiber thermos-mechanically processed from clean whole wood chips.  Celullose fiber must be made from natural or recycled pulp fiber, such as wood chips, sawdust, newsprint, chipboard, corrugated cardboard, or a combination of these materials.  Alternate fiber must be a long strand, whole natural fiber made from clean straw, cotton, corn, or other natural feed stock.  Fiber must:  1. Disperse into a uniform slurry when mixed with water.  2. Contain 3/4-inch fiber strands for at least 25 percent by total volume.  3. Have at least 40 percent retained when passed through a no. 25 sieve.  4. Have an initial moisture content of no more than 15 percent of its dry weight when tested under CA Test 226. The moisture content must be marked on the packaging.  5. Have a water holding capacity, by weight, of at least 1,200 percent when tested under the procedure designated in the Department's Final Report, CA-DOT-TL-2176-1-76-36, Water Holding Capacity for Hydromulch, available from METS.  6. Be nontoxic to plants and animal life.  7. Be free of synthetic or plastic materials, lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, and chlorine bleach.  8. Contain less than 250 ppm of boron.  9. Contain less than 7 percent ash when tested under Technical Association of the Pulp and Paper Industry, TAPPI Standard T 413.  10. Be colored to contrast with the area on which the fiber is to be applied. The coloring agent must be biodegradable, nontoxic, and free from copper, mercury and arsenic and must not stain concrete or painted surfaces.  Fiber for temporary hydraulic mulch must be at least 50 percent wood fiber. The remaining percentage must be cellulose fiber, alternate fiber, or a combination.  Fiber for temporary bonded fiber matrix and bonded fiber matrix must be 100 percent wood fiber and comply with the requirements for fiber except the sieve requirement must be at least 50 percent retained on a no. 25 sieve.  Fiber for polymer stabilized fiber matrix must be at least 50 percent wood fiber. The remaining percentage must be cellulose fiber, alternate fiber, or a combination. |
| **SPECs, 21-1.02F(1) Tackifier, General** | Tackifier must be (1) free from growth or germination inhibiting factors, (2) nonflammable, (3) nontoxic to aquatic organisms, and (4) functional for a minimum of 180 days.  General purpose tackifier may be either a plant based product or a polymeric emulsion blend as follows:  1. Plant based tackifier must be a natural high molecular weight polysaccharide, a high viscosity hydrocolloid that is miscible in water, and labeled as either guar, psyllium, or starch, as follows:  1.1. Guar gum based product must be derived from the ground endosperm of the guar plant, Cyanmopsis tetragonolobus. It must be treated with dispersing agents for easy mixing. It must be able to be diluted at the rate of 1 to 5 pounds per 100 gallons of water.  1.2. Psyllium based product must be manufactured from the finely ground, mucilloid coating of Plantago ovata or Plantago ispaghula seeds and able to dry and form a firm but rewettable membrane.  1.3. Starch based product must be a nonionic, water-soluble, granular material derived from corn, potato, or other plant-based source.  2. Polymeric emulsion blend tackifier must be a prepackaged liquid or dry powder, anionic formulation with a residual monomer content not exceeding 0.05 percent by weight. The tackifier must contain and be labeled with one of the following as the primary active ingredients:  2.1. Acrylic copolymers and polymers.  2.2. Polymers of methacrylates and acrylates.  2.3. Copolymers of sodium acrylates and acrylamides.  2.4. Polyacrylamide and copolymer of acrylamide.  2.5. Hydrocolloid polymers. |
| **SPECs, 21-1.02F(2) Polymer Stabilized Fiber Matrix Tackifier** | Tackifier for polymer stabilized fiber matrix must be:  1. A liquid formulation with polyacrylamide as the primary active ingredient with the following requirements:  1.1. Linear, anionic copolymer of acrylamide and sodium acrylate.  1.2. Anionic with a residual monomer content that is at most 0.05 percent by weight.  2. Formulated and labeled as one of the following:  2.1. Water-in-oil emulsion containing at least 2.6 pounds of pure polyacrylamide per gallon. Pure polyacrylamide must be at least 30 percent active.  2.2. Liquid dispersed polyacrylamide containing at least 4.4 pounds pure polyacrylamide per gallon. Pure polyacrylamide must be at least 35 percent active. |
| **SPECs, 21-1.02F(3) Bonded Fiber Matrix Tackifier** | Tackifier for bonded fiber matrix must:  1. Be bonded to the fiber or prepackaged with the fiber by the manufacturer  2. Contain a minimum of 10 percent of the combined weight of the dry fiber, activating agents, and additives  3. Be an organic, high viscosity colloidal polysaccharide with activating agents or a blended hydrocolloid-based binder |
| **SPECs, 21-1.02J Polymer Stabilized Fiber Matrix** | Polymer stabilized fiber matrix must be hydraulically-applied material composed of fiber and tackifier and may also include seed and fertilizer as shown. |
| **SPECs, 21-1.02K Bonded Fiber Matrix** | Bonded fiber matrix must be hydraulically-applied material composed of fiber and tackifier and may also include seed and fertilizer as shown. |

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|  | **Maintenance** |
| **SS3.4** | Is Hydraulic Mulch maintained properly? |
| **CGP, Order IV.E Proper Operations and Maintenance** | The discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit. |