

after the fire

Straw Mulching for Erosion Control Following Wildfire

- Straw mulching when done correctly with the right product and care can be one of the most effective measures to: reduce runoff; filter and slow toxic debris mobilization from burned structures; and control soil erosion and sedimentation following fire even without seeding.
- If mulching is deeper than 4" it can delay recovery time of existing seed bank in the soil or in cases when seeding is done in conjunction with mulching.
- Straw mulch should be as weed-free as possible such as sterile wheat or barley or rice straw. In some areas native grass straw may be available as well. *Note: "Weed free" mulch such as rice straw is not necessarily "weed free". It all depends on the source, transport carrier, and the staging area of the mulch. Rice straw is lighter and more difficult to spread. It is also generally less expensive but not always locally available. There may still be a need for weed management where ever straw is used.*
- Mulching will not prevent invasive plants from taking over, in fact, studies show that mulching can actually aid in non-native establishment by retaining more moisture for longer periods than in areas not mulched.
- Mulch can be a fire hazard if installed when fire is still a danger especially in the interface of burned and unburned landscapes which happens to be where many firebreaks are located. Mulching should not be used while ground is still hot from fire and be delayed until just before the first rains.
- Rice straw is very difficult to spread because it's light and fluffy and has a tendency to stick together. Many workers get frustrated with it and end up throwing out big solid flakes that won't let plants grow through.
- Mulching can be done in 6-10' strips along the contour and spaced at 50-100' intervals (depending on slope) to make it go a longer way on large areas needing protection. This method will also help break down long steep slopes to slow runoff and trap sediment. Where steep slopes and/or wind is an issue straw can be "tucked" in with a shovel or "tracked" in by equipment (if there is equipment access without causing more disturbance to soil/slope). Straw can also be covered with netting and secured with staples to hold in place.
- Straw mulch that is not certified as "weed free" will not only have weed seed in it but might have other non-native grass seed in it as well.
- Mulching is best used around homes & home sites, above watercourses (but not on streambanks) alongside roads and water bodies. Wide spread mulching over the watershed by hand or by plane is not cost effective nor provides significant benefits where this practice has been used in the past. Wide spread straw mulching may also contribute to the widespread establishment of non-native plants.
- Straw mulch should be used in loose form. If and whenever straw is used in bale form then installation of whole bales should only be done according to a design prepared by a certified erosion control specialist and regularly maintained throughout the first rainy season following fire. The bale structure should then be removed or replaced with a more permanent structure after the first rainy season. *Note: When straw bales get wet, they become a brick wall and have absolutely no sediment filtration function, in fact, they will act as dams impounding or redirecting runoff with undesirable consequences.*
- Mulching is not needed in areas where leaf drop is heavy from heat/smoke damaged trees.

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