

# Management

————— Reduce seed production by integrating available tools —————

## Mechanical control

Medusahead can be removed by hand throughout the year, but ideally before seed has been produced. Mowing can effectively disrupt thatch and control plants, without impacting desirable grasses and forbs when timed during the early flowering stage. These strategies are impractical on a large scale.

## Biological control

Due to the close relationship to wheat, thus it is unlikely that a safe, effective biological control agent will be found and introduced to control medusahead.



**Prescribed burns help to remove medusahead thatch and restore ecosystem function by making space for native grasses and forbs. However, they can be difficult to carry out in urban areas.**

## Physical control

Grazing and prescribed burns can be effective tools to reduce thatch and eliminate seed production. Short duration grazing with high densities of cows and sheep can increase the consumption of this usually unpalatable plant. The ideal time is mid to late spring just before flowering, to ensure plants will not regrow. Planting native perennial grasses and annual forbs can help to increase competition with medusahead and restore ecosystem functions.

## Chemical control

Chemicals can be a useful tool when combined with non-chemical methods in an integrated approach. Consideration for species of concern and non-target plants must be taken.



## Get involved!

Want to play a role in the management of noxious weeds in your parklands? Inquire with your local EBRPD park staff about the possibility of setting up a work day for your organized group or visit <http://www.ebparks.org/getinvolved/volunteer/operations> for more information and to register for volunteer opportunities. See you in the parks!

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# Medusahead



**Grazing is an important strategy to manage medusahead. Although it is unpalatable to most grazing animals, when employed at high densities, animals will eat medusahead. The disturbance also helps to break up the thatch.**

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## How did it get here?

Medusahead (*Taeniatherum caput-medusae*), native to the Mediterranean region, was most likely first introduced to the United States by way of seeds trapped in the fur of imported livestock in the late 1800s. It quickly became pervasive throughout the grasslands, oak woodlands, and chaparral of the western US, spread by seeds that are easily attached to animal fur, clothing, vehicles, and machinery.



**Medusahead forms dense layers of thatch, as shown above, which makes it very difficult for any other plant species to germinate. A noxious weed is a plant that has been designated by the Federal, State or county government to be threatening to public health, agriculture, recreation, wildlife, or property.**

## Identification

Medusahead, a member of the grass family, is related to many of our commercial grains like wheat, barley, and cereal rye. It is a winter annual species, meaning seeds germinate as bright green shoots every fall. Over winter, it grows slowly, putting energy into roots, so that come spring it can rapidly grow to be 6-20 inches tall before it produces seed and dies. Bristly seed heads are made up of small seeds with long, wavy awns (thin tails) that have small barbs. It is usually found growing in full sun in clay soils.

## One plant with a strong influence

Medusahead is adapted to aggressively compete for resources in our climate, while, at the same time, transform the ecosystem to make it more favorable for its own growth. It can grow to very high densities (over 900 plants per square foot). Its vegetation is high in silica and it does not readily degrade back into the soil, quickly forming a thick layer of thatch. This thatch conserves water and prevents the growth of other plants, resulting in a monoculture. By maturing later in the season after other annual grasses have died, medusahead is able to use water and light without much competition. This late season water use takes water from establishing native perennial grasses.

**Medusahead matures later in the spring than other annual grasses in our East Bay grasslands, and can be identified by its bright green color when everything else is golden. This adaptation contributes to medusahead's success because it does not have to compete with other grasses during reproduction. However, this provides a short but critical window to manage medusahead with little impact to other grasses, which have already dropped their seed.**

## What's the big deal?

The exclusion of other types of vegetation by medusahead, forming a monoculture, alters the functioning of the ecosystem. The loss of native forbs impacts native pollinators, like bees, as well as other species that rely on the diversity of the ecosystem. Native perennial grasses provide habitat and play an important role in carbon sequestration and surface water infiltration. Such ecosystem services are lost with an invasive monoculture. Rangelands are degraded by a reduction in available forage because the high silica content in medusahead makes it unpalatable to livestock.

