CU I&E Submission: Steam Weed Control [1]

Who

Darren Willett is the Turf Manager for Housing & Dining Services at CU Boulder. He noticed the potential of using steam to control weeds during the flood of 2013 when steam vaults overflowed and killed all surrounding vegetation.

Darren worked with David Lawson, HDS Facilities Manager, to research options for using steam to control weeds. This practice was not widely used in the United States, but they eventually found an Australian company, Weedtechnics, with a track record of success.

Darren and David worked with Pedro Vazquez Silva, HDS Irrigation Technician, to implement a weed management strategy and document the results.

What

The patented Weedtechnics Steamwand utilizes a pump, boiler and various proprietary heads and nozzles. The machine superheats pressurized water to raise the boiling point. As the water enters the chambers of the nozzle system, it is depressurized and explodes into saturated steam. This mix of steam and boiling water destroys the cells of weeds.

During initial tests in the pilot area, the Steamwand was able to cover 63 percent more ground per hour than pulling weeds by hand. This led to a twofold improvement in the campus landscape. Not only were their fewer weeds, but staff were also free to spend more of their time focused on higher level landscape tasks.

The process is safe, easy to operate and provides immediate results which make it a great for student employees. This allows them to make a noticeable contribution to the appearance of the campus and take an active role in promoting CU Boulder’s reputation as a leader in sustainability.

Why

CU officials made the decision to implement an herbicide-free turfgrass program for all areas of the Boulder campus in 2011. Shortly after that, Housing & Dining took the additional step of going herbicide-free in their landscape beds to align with the desires of students and residents living in on-campus housing.

It was extremely difficult to control weeds at an acceptable level either by hand or other ineffective mechanical methods. This process allowed us to have a high presentation standard in the landscape without using chemicals or hiring additional staff.

Where

The steam weed control process was first implemented at the residence halls around Farrand Field on the main campus of CU Boulder. The process has been expanded to all Housing & Dining landscape areas. The Facilities Management Outdoor Services Department also purchased a Steamwand in 2017, expanding the use of this process throughout the Boulder campus.

We have hosted several demonstrations of the steam weed control process for CU campuses, state universities and local municipalities. The City of Boulder will be implementing this process in 2018.

When

The steam weed control process was implemented in the pilot area in the Spring of 2016 and expanded throughout the Boulder campus in the Spring of 2017.

Submitter's Information

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Links
[1] https://www.cu.edu/controller/i-e-awards/past-submissions/cu-ie-submission-steam-weed-control
[2] mailto:david.lawson@colorado.edu