

RESTORATION

Beat Back Buffelgrass: Trans- Jurisdictional, Volunteer-Driven Invasive Species Treatment

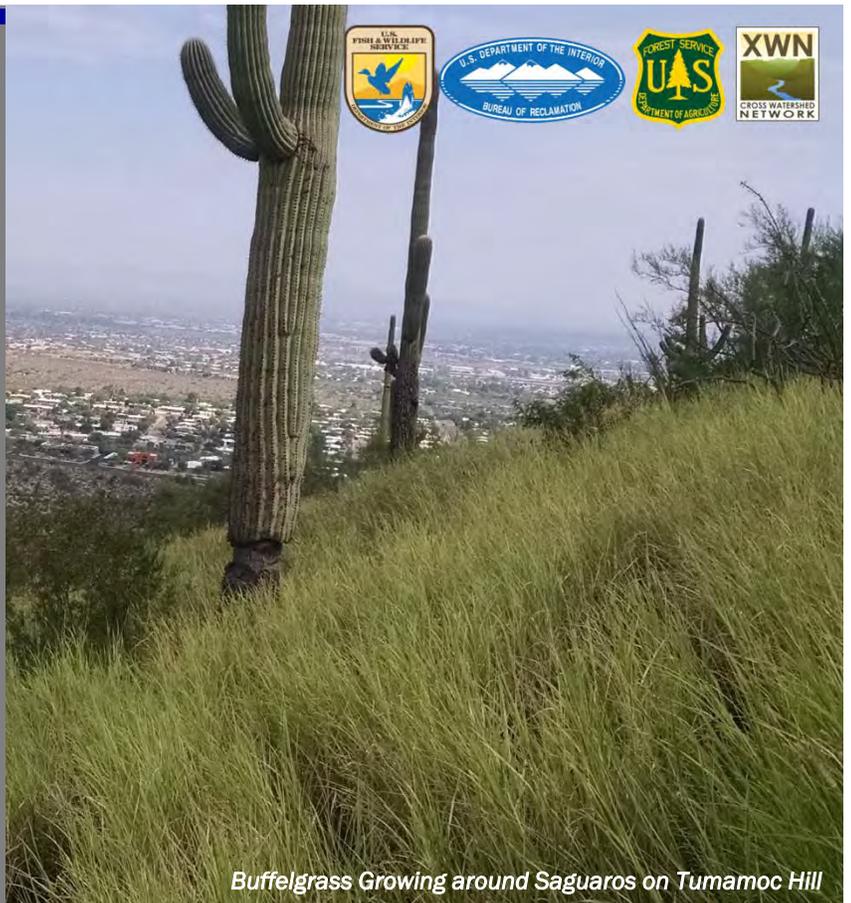
ARIZONA-SONORA
**DESERT
MUSEUM**



The Tucson Basin is home to over 1 million people and iconic Sonoran Desert landscapes with myriad recreational opportunities that boost the regional economy. Buffelgrass is an invasive species that threatens these landscapes, and many scientists and citizens are concerned about the loss of native vegetation and wildlife habitat associated with its rapid establishment and spread. Since 2008, land managers in the Tucson Basin have worked together to strategically control and mitigate buffelgrass by prioritizing trans-jurisdictional collaboration and engaging residents and community decision-makers.



Project Location



Buffelgrass Growing around Saguaros on Tumamoc Hill

KEY ISSUES ADDRESSED

Buffelgrass, a drought-tolerant perennial bunchgrass, was introduced to North America for livestock forage and erosion control in the 1930s. It has aggressively spread in arid and semiarid regions such as the Sonoran Desert where it outcompetes native plants and poses significant ecological and economic threats. Unlike the typically sparse vegetation native to this region, buffelgrass provides a continuous fuelbed leading to more frequent and hotter fires. This altered fire regime further promotes buffelgrass establishment, while killing native vegetation such as iconic saguaros. Buffelgrass-fueled fires are a risk to private property and human safety, and the loss of iconic Sonoran Desert vegetation could have a significant impact on the tourist economy. The scale and trans-jurisdictional nature of buffelgrass invasion requires extensive collaboration and community involvement to strategically control invasion.

PROJECT GOALS

- Educate and engage the public and decision-makers about buffelgrass impacts and control techniques
- Promote collaboration and knowledge-sharing across jurisdictional boundaries
- Implement treatments to strategically control existing infestations and minimize spread in areas where buffelgrass has not yet become established

VOLUNTEER EVENTS

During the 2018 Beat Back Buffelgrass month, approximately 450 volunteers showed up across 30 different sites throughout the month. Of these, just over 190 had never pulled buffelgrass before and 127 were under the age of 18.



Volunteers Pull Buffelgrass near Tucson, AZ

PROJECT HIGHLIGHTS

Spreading the Word: Project partners have implemented a public outreach strategy to educate the public on how buffelgrass impacts natural resources, human communities, and economies of the region. Outreach materials include a flagship website (www.buffelgrass.org), brochures, handouts, social media pages, videos, native and invasive plant identification guides, and treatment technique information.

Sustaining Volunteerism: For ten years, project partners have organized Beat Back Buffelgrass (BBBG) events, now known as Save Our Saguaros (SOS) Month, which convene hundreds of volunteers annually to pull buffelgrass. In addition to BBBG/SOS, Saguaro National Park, as well as many private groups and neighborhood associations, organize buffelgrass removal events.

Region-Wide Collaboration: The Arizona-Sonora Desert Museum (ASDM) facilitates coordination among partners who share training opportunities and help with each other's treatments. For example, ASDM, NPS (Saguaro NP and Southwest Exotic Plant Management Team), Pima County, and the Arizona Native Plant Society helped with treatments on Tumamoc Hill, which is owned by the University of Arizona.

Collaborators

See online for full list of collaborators

Funding Partners

- Federal Emergency Management Agency
- Department of the Interior
- Individual agencies and donors

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Photos courtesy of Julia Rowe/ASDM

LESSONS LEARNED

Invasive species are not restricted to jurisdictional boundaries. One agency or organization cannot tackle buffelgrass alone.

Community members and decision-makers must be involved to effect real change. Therefore, land managers and scientists need to become better communicators and more comfortable working with decision-makers. Community awareness and knowledge regarding buffelgrass has increased greatly in recent years. As a result, the number of local groups working on buffelgrass has increased, and critical partners have become more engaged including the City of Tucson and Arizona Department of Transportation.

Buffelgrass grows in difficult terrain, and some places may not be appropriate for the "average" volunteer. More experienced, returning volunteers can guide new volunteers. Because buffelgrass is a large-scale problem that needs repeated follow-up, it is important to stress the long-term commitment needed to achieve success, and the importance of each individual's contribution.

NEXT STEPS

- Continue to research effective control methods for a range of site conditions
- Find a method to integrate partner databases
- Promote long-term stewardship programs

PROJECT RESOURCES

For more information on this project, contact Julia Rowe: buffelgrass@desertmuseum.org

For additional project resources and case studies, visit the Collaborative Conservation and Adaptation Strategy Toolbox:

WWW.DESERTLCC.ORG/RESOURCE/CCAST



Buffelgrass Lines a Tucson Alleyway