

Restoration Fusion: The Utilization of a Young, Diverse Membership and Unique Partnerships to Accomplish Wildland Recovery Throughout California

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American Conservation Experience, Dulzura, Boulder Creek, and South Lake Tahoe



Introduction
American Conservation Experience (ACE), a non-profit service organization, creates meaningful career-building opportunities in wildland restoration for its young and diverse members by partnering with like-minded federal, state, local, and non-profit land agencies and organizations. In 2018, local ACE California crews worked in partnership with the Plumas National Forest, Back Country Land Trust, Pinnacles National Park, and Land Trust of Napa County to remove invasive species, conduct fuels reduction efforts, and revegetate areas with native plants. Through hands-on field projects such as these, with a variety of land partners, ACE youth members are able to broaden their land-based restoration knowledge and skills while connecting to the greater community. This poster will demonstrate how meaningful partnerships provide youth from diverse backgrounds the opportunity to engage in successful restoration projects with a focus on invasive species management.

Back Country Land Trust
Since 2010 Back Country Land Trust (BCLT), a non-profit organization, has been working diligently to preserve open space and protect the small mountain community of Alpine, CA, from potentially catastrophic wildfire danger. The BCLT has united with many local agencies, partners and private landowners to map and control invasive plants in the city's watershed. *Arundo donax* (or giant reed) is priority number one. With almost 70 tons of dry and dead biomass per acre, extremely low stand moisture content, high surface to volume ratios, and abundant vertical height (good for crowning fires) this invasive grass is an explosion of flames waiting to happen. For the last two years, through funding from the State of California's Natural Resource Agency's Environmental Enhancement and Mitigation Program along with matching funds from the County of San Diego, American Conservation Experience (ACE) crews have been working alongside the BCLT to eliminate many of the encroaching *Arundo* stands in Wildland Urban Interface (WUI) areas—unmaintained open spaces that border homes and businesses.

During the winter of 2018-2019, ACE crews based out of the organization's Dulzura, California, branch, worked a total of 1,480 hours controlling *Arundo* and other invasive plant species by mechanical (brush-cutters, chainsaws, handsaws, and loppers) and chemical means. In total ACE crews treated:

- 1.3 acres of *Arundo donax*
- 12,448 square feet of *Allanthurus altissima* (Tree of Heaven)
- 1,271 square feet of *Tamarix spp.* (salt cedar), *Ricinus communis* (castor bean), *Nicotiana glauca* (tree tobacco), *Elaeagnus angustifolia* (Russian olive), and *Eucalyptus camaldulensis*

Crews also participated in revegetation projects by planting:

- 195 willow pole cuttings
- 30 potted plants of various species

Pinnacles National Park
Invasive plants, including yellow starthistle, Sahara mustard, and horehound, are of high concern for central California's Pinnacles National Park. Through the park's Youth Partnership Program, American Conservation Experience (ACE) crews, based out ACE's Felton branch, north of Santa Cruz, conducted mechanical control on these invasive species using hand tools and brush cutters. In 2018, ACE crews amassed 3,496 hours towards fulfilling the program's five guiding principles:

1. Provide opportunities for ACE crew members to learn technical skills and gain natural resource management experiences.
2. Aid in fuels reduction activities around infrastructure, particularly around infrastructure that is critical to natural resource protection, like the park's Condor facility.
3. Assist the vegetation management program in controlling 50 acres of yellow star-thistle in the park's bottomlands areas.
4. Bring highly degraded lands to a healthier condition through intense invasive species control and protecting existing resources through fuels reduction.
5. Offer opportunities for ACE crew members to contribute to, and gain an understanding of resource management efforts through resource management and fire activities in Pinnacles National Park.

In total, ACE crews removed:

- 85,510 *Centaurea solstitialis* (yellow starthistle) plants
- 9,925 *Brassica tournefortii* (Sahara mustard) plants
- 7,630 *Marrubium vulgare* (horehound) plants

Crews also collected 10 ounces of *Eschecholzia californica* (California poppy) seed for future park revegetation efforts.



Plumas National Forest
With 127,000 acres of intact old growth fir and pine forest and 75 miles of Pacific Crest Trail, the 1,146,000 acre Plumas National Forest embodies the heart of California's northern Sierra Nevada. In 2017, American Conservation Experience's northern California branch, based in South Lake Tahoe, launched a 5-year, \$250,000 partnership with the Plumas National Forest. Restoration work includes invasive plant control and conifer thinning to enhance rare aspen stand health and sensitive species habitat.

Priority invasive weed projects have begun in several wildland fire scars within the forest's Mt. Hough Ranger District—the 52,000-acre Storrie-Rich Fire and the 65,000-acre and heavily litigated Moonlight Fire. American Conservation Experience (ACE) crews manually and chemically treat encroaching weeds like Canada thistle, French broom, yellow starthistle, spotted knapweed, invasive mustards, and Himalayan blackberry.

In 2018, ACE crews spent 4,928 hours implementing Storrie-Rich and Moonlight Fire area invasive species plant treatment and habitat enhancement projects. Project accomplishments include mechanical and chemical control of:

- 10,000 individual *Genista monspessulana* (French broom) plants
- 78.08 acres of *Centaurea solstitialis* (yellow starthistle)
- 2 acres of ponderosa pine fuels reduction to improve *Astragalus webberi* (Webber's milkvetch) habitat
- 15.7 acres of *Rubus armeniacus* (Himalayan blackberry)
- 1.28 acres of *Centaurea maculosa* (spotted knapweed)
- 37.02 acres of *Cirsium arvense* (Canada thistle)

Land Trust of Napa County
Established in 1976, Land Trust of Napa County (LTNC), a community-based nonprofit, has dedicated itself to preserving the character of Napa by permanently protecting the natural land therein. In the organization's 43-year history, 73,848 acres, or almost 15% of Napa County, have been protected through conservation easements, acquisitions, and property transfers. During the 2018 field season, Youth Preserve Partnership Crews from the American Conservation Experience (ACE) spent 3,579 hours on restoration-oriented work across these seven LTNC properties:

- Missimer-Snell Valley Wildflower Preserve
- Dunn-Wildlake Ranch Preserve
- Linda Falls Preserve
- Archer Taylor Preserve
- Wantrup Preserve
- Wragg Ridge Preserve
- Dimmick Preserve

In total, crews pulled 7.389 acres (and 302.79 cubic feet) of invasive plants including vetch, *Vinca*, yellow starthistle, Himalayan blackberry, medusahead rye, and goatgrass by hand or with digging tools and weed wrenches. ACE planted native vegetation at the Linda Falls Preserve. In addition, a majority of crew members attended LTNC volunteer events during which they removed invasive plants alongside local community participants.



Conclusion
In 2018, American Conservation Experience (ACE) California crews successfully controlled a total of 143,085 acres of invasive species, removed an additional 113,065 invasive plants, installed 225 native plants, and collected 10 ounces of seed for future revegetation efforts in partnership with Back Country Land Trust, Pinnacles National Park, Plumas National Forest, and Land Trust of Napa County. Through a variety of wildland restoration projects, a diversity of members from across the United States and beyond worked to develop tangible technical skills in the field of conservation, while improving vital interpersonal skills transferable to any career path. With a combined total of 13,483 hours contributed, ACE members were able to directly connect with their surroundings and work together as part of a much larger collaborative effort to restore public lands. These lasting and evolving partnerships with local, state, federal, and non-profit land agencies continue to afford diverse youth opportunities to explore resource management careers through multi-faceted, impactful outdoor experiences.

