

Landscape Culture

a newsletter for cultural landscape stewards

Cultural Landscapes Program

Spring 2021

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Arborist Incident Response Team (AIR Team) Stabilizes Historic Eucalyptus Trees at Channel Islands NP

In late February 2021 members of the National Park Service’s Arborist Incident Response (AIR) Team deployed to Channel Islands NP (CHIS) for a 10-day emergency tree stabilization project at the Scorpion Cove campground on Santa Cruz Island. The park had requested the services of the AIR Team to mitigate certain conditions such as deadwood and long, overarching limbs that might pose a potential danger to campers when the campground opens in the spring. The scope of work included stabilization pruning of 34 historic mature blue gum eucalyptus trees (*Eucalyptus globulus*), as well as removal of 6 non-historic blue gum trees that had self-seeded and spread beyond the footprint of the original grove which dates to the island’s ranching period, ca. 1900.



Aloft in the canopy of a eucalyptus tree, Matt Kennedy of Glacier NP prunes hazardous dead wood (NPS).

The blue gum eucalyptus species is native to Australia and trees average about 100 feet in height in California but can exceed 300 feet tall under ideal circumstances. The 2004 [Santa Cruz Island Ranching District Cultural](#)

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About Us

Learn more about [cultural landscapes in the National Park System](#).

Learn more about the [organizational management of NPS cultural landscapes](#).

For current news about NPS cultural landscapes, join us on social media:



Landscape Inventory suggests that eucalyptus groves were historically planted near seaside ranch outposts to serve as lumber for pilings, should nearby piers need to be repaired. Although considered a potentially invasive species by many in California, the groves of eucalyptus on Santa Cruz Island are contributing resources to the historic district. They also offer the only substantial shade to be found on the otherwise grassy and windswept island. CHIS currently operates two campground areas in the Scorpion Cove ranch district, both of which are within the eucalyptus groves.



Heather Alexander of Channel Islands NP completes a pruning cut in one of the eucalyptus trees at Scorpion Campground (NPS).

The AIR Team's work was initially governed by climbing the trees using ropes until a small boom lift was borrowed from Santa Monica Mountains NRA and ferried across the 19 mile channel crossing from the mainland to the island. In addition to the six-person AIR Team, CHIS staff helped organize and coordinate the work on site, including staff from the maintenance, cultural, and natural resource divisions. The entire eucalyptus grove was assessed for nesting bird activity prior to the commencement of the project as well as actively monitored during the project. Nests discovered in tree canopies by AIR Team arborists were evaluated to ensure they were not active nests, and fortunately just one vacant nest was discovered during the course of the work.

Established in 2011, the service-wide Arborist Incident Response (AIR) program is made up of National Park Service qualified tree care professionals, who are skilled in hazard tree assessment, mitigating tree damage resulting from storms, and integrating cultural landscape preservation principles with arboriculture practices.



Keith Park of John Muir NHS falling a large eucalyptus in the campground that had succumbed to Sulphur fungus (NPS).

In addition to non-disaster emergency response work the AIR team has provided assistance to parks for numerous storm-related events including Sandy, Isaac, Irma, Dorian, and most recently Laura where the team deployed to Cane River Creole National Historical Park to clear uprooted and broken trees, mitigate overhead hazards, and dispose of debris so that the park could reopen in a timely manner. AIR Team Project/Incident Coordinator Chris Ulrey states that “the team consists of members from across the service, so it is great when we can work together and learn from each other. The team has a very strong safety culture and camaraderie, and members look forward to the opportunity to participate in either an incident or project.”

For more information on AIR Team capabilities and deployment, contact AIR Team Program Manager Steve Hanaburgh at steve_hanaburgh@nps.gov.



Michelle Richardson of Cane River Creole NHP receives instruction from Erik Andreasson of Wind Cave NP on the finer points of tree falling (NPS).

Employee Spotlight



Suzanne Bouchard documenting plant material in the field (NPS).

Name: Suzanne Bouchard

Position: Horticulturist, Cultural Landscape Preservation Program Manager

Park: George Washington Memorial Parkway (GWMP)

How long have you worked for the NPS? Almost two years

What is your background?

I have a B.S. degree in Plant and Soil Science and have been a certified horticulturist for more than ten years. I always loved history growing up in Virginia and my introduction to landscape preservation as a career came via my first job as a seasonal employee at George Washington's [Mount Vernon Estate](#). It allowed me to explore a variety of career fields from horticulture and animal science to interpretation and collection management. Those skills I later used and built upon while I was Director of Gardens and Grounds at [Tudor Place Historic House and Gardens](#) in Washington, D.C.

In between those two jobs, I was offered an opportunity to intern as a soil scientist with the Natural Resources Conservation Service and work as a Horticulturist/IPM Manager for a commercial landscaping company. Prior to joining the NPS, I was the City Horticulturist for Alexandria, VA overseeing landscape maintenance contracts, the City's community garden program, and I worked with park planning staff on landscape renewal projects.

What is your favorite part of your job?

The variety of projects I can work on. I have taken part in replanting projects at Arlington House and Dyke Marsh, documentation projects like the LBJ Memorial Grove on the Potomac Cultural Landscapes Inventory, and landscape assessments for sites such as Memorial Avenue.

What project are you working on?

I just finished a landscape management plan for Arlington House and have begun developing a framework for an urban forestry management plan for the parkway's cultural landscapes. I am also working on two projects with volunteers at Arlington House, reestablishing the kitchen garden and maintenance support for the south flower garden.

What was your favorite experience in the park?

My favorite experience so far was towards the end of the restoration work at Arlington House. I was able to take advantage of the scaffolding still being accessible around the house so I could take the first round of Deodar cedar cuttings. The tree is 150 years old and it has been in declining health for the past several years. The extra height allowed for better access to the tree's canopy and provided a wonderful view of the landscape.



South flower garden at Arlington House looking north toward the legacy Deodar cedar and the kitchen garden (NPS).

Tool of the Moment: Protective Decking and Mats for Landscapes



For the 2013 presidential inauguration at the National Mall park resource managers utilized polyethylene (HDPE) sheeting to protect the turf from extensive foot traffic (NPS).

Park landscapes host a great deal of traffic, whether it's the footsteps of visitors, parking for events, tents, stages, NPS vehicles, or heavy equipment. Traffic often takes place upon the landscape, potentially subjecting soil, turf, trees, and other vegetation to compaction. Preserving the landscape means taking steps to protect these resources. Activities should be planned to avoid damage, and protective decking or mats can be part of the strategy.

Depending upon the need there's a type of decking to help. All decking and mats offer efficient access but differ significantly in application. Selecting the right protection for a specific application makes the difference between protecting resources or creating damage that needs to be repaired.

The following table provides a summary of protective decking and mat capabilities (zoom to enlarge).

Considerations for Protective Decking/Mat Product Selection																				
Type	Description	Examples	Type of Access			Length of Protection				Resource to be Protected			Climatic Conditions				Suggested Uses	Rehab Required?		
			Foot Traffic	Light Truck	Heavy Equip.	1 Day	3 Days	1 Week	Long Term	Soil	Plant Roots	Turf	Paved	Wet	Dry	Cold			Hot	
Pedestrian Decking	Cavity back, translucent	Terrplas, ArmorDeck1, Supa Trac Translucent, RGT Panel Pedestrian	✓			✓	✓				✓	✓	✓			✓	✓		Special events, tent builds, queue lines, concerts	None—if appropriate time limits followed
Pedestrian Decking	Flat back, translucent	MatraxHD, Armor Deck 3, RGT Panel	✓	✓		✓	✓				✓	✓	✓	✓	✓	✓	✓		Golf cart traffic on turf and exposed soil	None—if appropriate time limits followed
Light-Duty Vehicle Mat (w/grip)	Opaque, HDPE, mats, lighter	TrakMat, AltarnaMats, LibertyMat		✓		✓					✓	✓			✓	✓			Short term utility access	More rehab needed—the longer used, and the softer the conditions
Light-Duty Vehicle Mat (smooth)	Opaque, HDPE, smooth mats, lighter	VersaMats		✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓		Hardscape protection	None
Exterior Plywood	Composite wood sheets	Generic exterior plywood	✓	✓		✓					✓	✓			✓	✓			Informal, short term utility access	More rehab needed—the longer used, and the softer the conditions
Heavy-Duty Vehicle Mat	Interlocking, opaque, HDPE, mats with grip, heavy duty	Dura-Base	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		Construction staging	Yes— aeration, top dressing, over-seeding
Heavy-Duty Temporary Road	Hardwood timbers	Sterling Timber Mats			✓	✓	✓	✓	✓	✓			✓	✓	✓	✓			Vehicle access while protecting from ground disturbance	Yes— aeration, top dressing, over-seeding

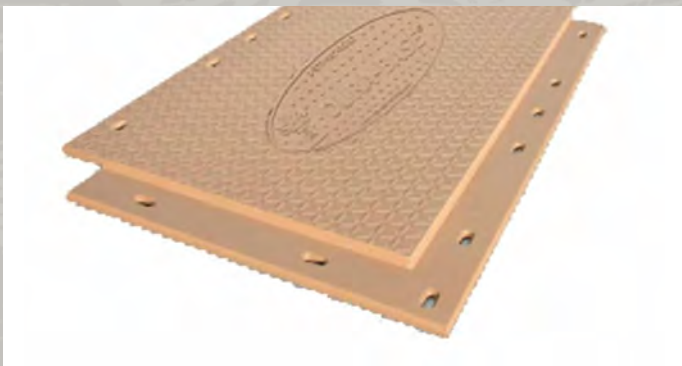
Table data assembled by the Park Cultural Landscapes Program.



Terraplas translucent pedestrian decking with cavity-back, air holes and feet (Terraplas.com).



TrakMak opaque light-duty vehicle mat with hand-holds for maneuvering (usplastic.com).



Dura-Base heavy-duty interlocking mats are maneuvered into place using heavy equipment (newpark.com).



Sterling Timber Mats are fastened together then maneuvered into place using heavy equipment (sterlingsolutions.com).

Choosing the Right Decking

Here's a summary of the range of protective decking and mats.

PEDESTRIAN DECKING is translucent, high-density polyethylene (HDPE) sheeting designed to allow some light and air penetration to turf. Cavity-back products like Terraplas make less contact with turf, but the air in the cavities heats up and their use should be avoided in hot weather. Flat back products like Matrax leave less damage in wet weather when cavity or ribbed products tend to incise. Because of the light penetration, these mats can be down for longer periods of time (seasonally adjusted to avoid heat build up) without damaging turf.

LIGHT-DUTY VEHICLE MATS are opaque HDPE, heavier than pedestrian decking but lighter and cheaper than heavy-duty vehicle mats. Best used in dry, cool conditions, these mats like AlternaMat have ribbed backs, allowing short term access across soil for pick-up trucks and light equipment. Flat back light-duty vehicle mats such as VersaMats are used on hardscapes, where ribbing could cause incision damage. Exterior plywood is another type of light-duty vehicle mat that's cheap, lightweight, and easily procured. Their opacity constrains their use to soil or pavement rather than turf, and their brittleness requires firm ground conditions to avoid breakage and soil damage.

HEAVY-DUTY VEHICLE MATS are made of opaque HDPE that is thicker and heavier than other HDPE decking. These mats interlock, allowing weight to be distributed over a wide area, such as Dura-Base. Their weight and opacity makes them unsuitable for turf, but better for soil and root protection. Intended to be used on construction sites and in equipment staging areas, expect to aerate and augment soil when the mats are lifted.

HEAVY-DUTY TEMPORARY ROAD DECKING is made of hardwood timbers that are laid on uneven, unfinished ground. This decking, like Sterling Timber Mats, can be fastened together to support movement of the heaviest equipment. The decking protects the ground from disturbance but expect to aerate and augment the soil when the timbers are lifted.

For more information, check out this [presentation on protective decking and mats](#) by Michael Stachowicz, Program Manager for Preservation Maintenance, Olmsted Center for Landscape Preservation.

Video Corner

Tribally-driven Bison Restoration Comes to the Glacier/Waterton World Heritage Site

The Innnii (Bison) Initiative was launched by leaders of the four tribes that make up the Blackfoot Confederacy (Blackfoot Nation, Kainai Nation, Piikani Nation, and Siksika Nation) to conserve traditional lands, protect Blackfoot culture, and create a home for the buffalo to return to. The initiative includes the entirety of the Waterton-Glacier International Peace Park. This webinar showcases a variety of background and perspectives on the initiative and the relationships that are in place to help the effort succeed – including members of the Blackfoot Tribe, the Wildlife Conservation Society, and Glacier National Park.



Upcoming Training Opportunities

Nursery Tree Production Techniques

Morris Arboretum

Virtual, April 14, 2021, 1:00p ET, \$90

System-Level Tree Risk Management Webinar

Duntemann Urban Forestry, LLC

Virtual, April 15, 22, and 29 1:00p ET or 7:00p ET

Planning for the Next Three Letter Urban Tree Canopy Changer: Lessons Learned with DED, EAB, ETC

Tree Fund

Virtual, April 20, 2021, 10:00a PT (1:00p ET)

The Care and Keeping of Trees

NC Cooperative Extension, Durham County

Virtual, May 13, 2021, 3:00p PT (6:00p) ET

Cultural Landscapes: An Overview

National Preservation Institute

eLearning, on-demand, \$100

2020/21 Heritage Orchard Conference

University of Idaho Sandpoint Organic

Agriculture Center

eLearning, on-demand

Announcements & Publications

Recently posted:

» [In the Field with the Women of the National Park Service.](#) Learn about some of the women working in the field in parks.

» [Abra Lee Highlights the History of African-American Horticulturists.](#) Growing Greener podcast November interview with Abra Lee.