



CWSF
COUNCIL OF WESTERN
STATE FORESTERS

BEYOND THE

ZONE

WESTERN URBAN & COMMUNITY FORESTRY
PROJECTS THAT GO ABOVE & BEYOND



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Photo front cover: Washington DNR

FOR MORE INFORMATION

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www.westernforesters.org
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Overview

AN INTRODUCTION TO THIS PUBLICATION

AN INTRODUCTION TO THIS PUBLICATION

The Council of Western State Foresters (CWSF) is a nonpartisan, nonprofit membership organization comprised of state, territorial, and commonwealth foresters whose role is to protect, conserve, and enhance western and Pacific Island forests. CWSF's membership is comprised of 17 western U.S. State Foresters and six U.S.-Affiliated Pacific Island foresters. Unlike other organizations focused on just one aspect of forestry, CWSF takes a broad and comprehensive approach to forest management and provides expertise on the many complex and interrelated factors at play in western forestry.

An important part of CWSF's work is fulfilled through a relationship with the western leadership of the USDA Forest Service. This relationship is realized through the Western Forestry Leadership Coalition (WFLC). WFLC works collaboratively to ensure sustainable management of western forests to meet our needs today and for generations to come.

As part of this work, WFLC supports a network of Urban and Community Forestry (U&CF) coordinators in the western United States and Pacific Islands. This network meets regularly to discuss U&CF issues of importance.

The 2017 Western U&CF meeting included a brief report-out from attendees on projects in their respective state that have gone “beyond the zone.”

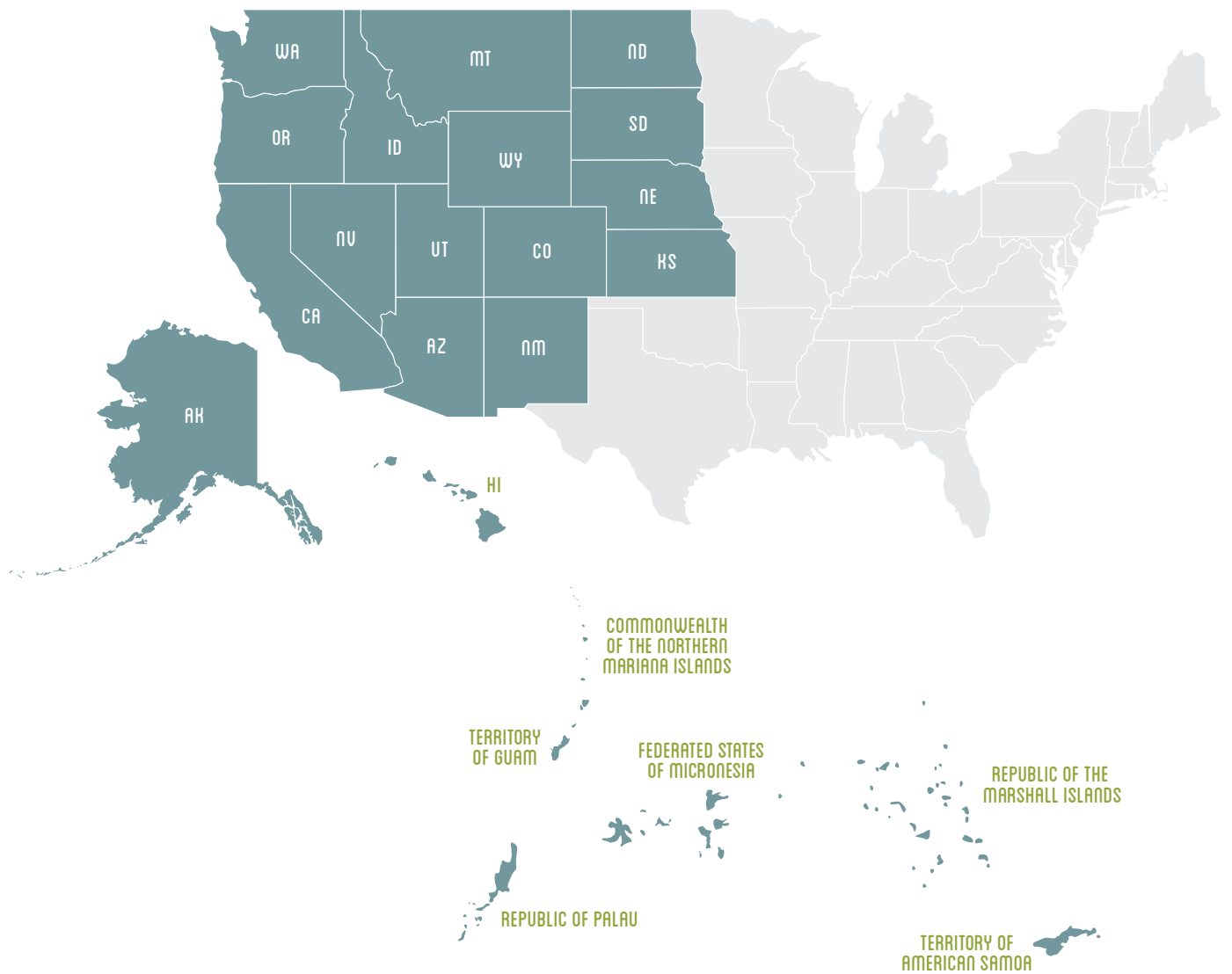
The phrase, “beyond the zone,” refers to projects being undertaken by forestry agencies that go above and beyond what has been traditionally taken on. Examples of projects that go “beyond the zone” include initiatives with new partners, innovations with limited resources, and programs that address issues outside the traditional scope of U&CF.

The following synthesis depicts the variety and innovative nature of U&CF projects being initiated by western states and Pacific Islands. These examples were provided by state forestry representatives in early 2017.



At-a-Glance

CWSF MEMBERSHIP



Alaska

ALASKA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF FORESTRY

As a major watershed and recreational destination of Alaska, the Campbell Creek Restoration Project presents the rare opportunity for project partners to share resources to improve the riparian ecosystem comprehensively and to raise public awareness of its importance to the larger urban environment. The project also builds on work by individual agencies and provides cost-effective restoration and conservation of high value resources that individual groups cannot accomplish on their own. Ultimately, partners will learn from shared expertise and will benefit from a comprehensive approach that addresses multiple challenges.

Campbell Creek flows from the Chugach Mountains to Cook Inlet through the heart of Anchorage, Alaska's largest city, creating a 70-square mile watershed that is home to five species of salmon, rainbow trout, moose, bears, and beavers. The associated Campbell Creek Greenbelt trail system offers easy access to recreation, fishing, and wildlife viewing. It is also a transportation corridor for humans and wildlife. However, development, heavy year-round use by approximately 40,000 trail users and 4,000 anglers annually, and climate change threaten the ecological values that support the diverse wildlife populations and draw people to the creek. The loss of vegetation, pervious surfaces and polluted runoff degrade aquatic and wildlife habitat and increase flooding risks. Alaska Department of Environmental Conservation classified the creek as impaired due to the pollutants, sediment and high temperatures that can harm fish and other aquatic life. The Municipality of Anchorage will reconstruct the trail, presenting a perfect opportunity to share resources to restore the riparian area, and create low impact access.

The three-year project focuses on the lower 7.5-mile portion of the greenbelt that has the highest use and is the most degraded stretch of the 18-mile long creek. Project partners will restore riparian forest functions, improve habitat and water quality, create low impact pedestrian routes at prioritized sites, and engage the community in education and stewardship.

The improvements will also create a safer and more enjoyable experience for the thousands of people who visit the area year-round to fish, float and wade in the creek, watch wildlife, bike, ski, and walk. The residential and commercial developments along the creek will benefit from reduced erosion and flooding risks. Improved access and way-finding to appropriate sites will



Anchorage Park Foundation Youth Employment in Parks crew participate in a streambank restoration workshop, part of the Campbell Creek Restoration project.
Photo: Stephen Nickel, Alaska Division of Forestry

discourage trespassing on private property. The close proximity of so many residents, businesses, and schools to the creek and involvement of the Youth Employment in Parks teens offers opportunities to increase awareness of this valuable natural asset and to encourage stewardship of its resources.

Partners for this USDA Forest Service Landscape Scale Restoration Grant funded project include: Anchorage Park Foundation and Youth Employment in Parks, Municipality of Anchorage: Parks and Recreation, and Watershed Management Division, and the Alaska Department of Natural Resources, Division of Forestry, Community Forestry Program, State of Alaska Department of Fish & Game, Alaska Department of Environmental Conservation, USDA Forest Service, and U.S. Fish & Wildlife Service.

The project will serve as a model for land and recreation managers in other cities on how to conserve and manage natural resources successfully in densely populated urban areas. Demonstrating and documenting practices that are sustainable, effective, and affordable will encourage their use in other areas. Reforestation and streambank stabilization will lead to long-term improvements in forest health, water quality, and fish and wildlife habitat in this valuable urban watershed. The new partnerships formed, lessons learned, and ongoing monitoring will build capacity to expand this effort to other watersheds facing similar challenges. As the community experiences the improvements and participates in education and stewardship activities, support will grow for conserving and managing these valuable resources.

FOR MORE INFORMATION

Alaska Department of Natural Resources, Division of Forestry
Community Forestry Program
<http://forestry.alaska.gov/community/index>

Arizona

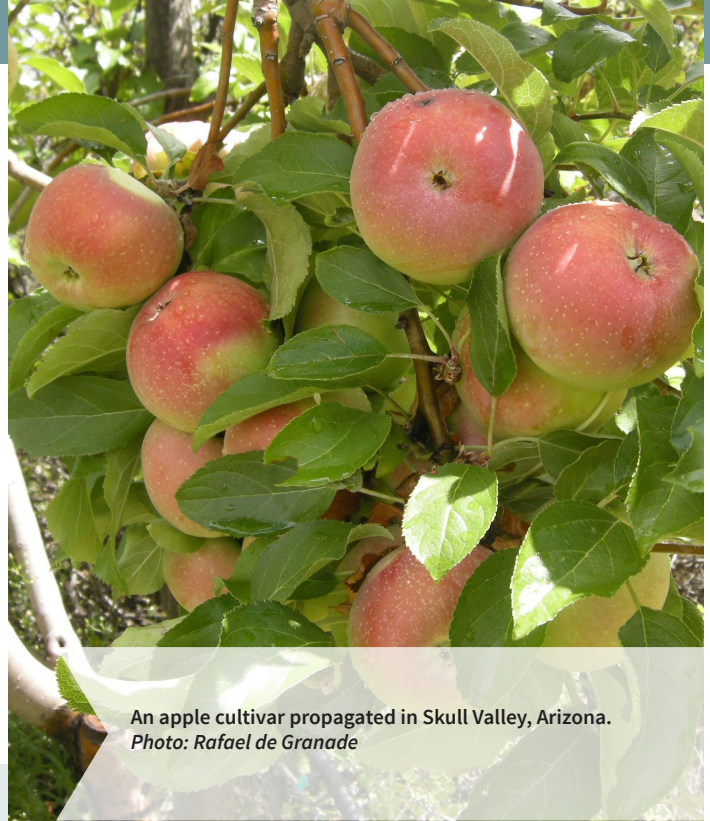
ARIZONA DEPARTMENT OF FORESTRY AND FIRE MANAGEMENT

Incorporating trees that produce edible products often presents challenges for municipalities because of distribution equitability or pest concerns. However, many of the associated “issues” related to edible trees can be easily overcome when information is readily available. This project has encouraged the LEAF Network to produce materials that help bridge this information gap, and further encourages the use of edible trees in public spaces (public parks, right-of-ways, and neighborhood greenways) as well as on private property.

Arizona Department of Forestry and Fire Management (DFFM) has partnered with other nonprofits and educational institutions to facilitate the development of a statewide LEAF Network (Linking Edible Arizona Forests; <http://leafnetworkaz.org/>). The LEAF Network’s mission is to link people with the benefits of edible trees and support edible trees with people’s stewardship. A secondary benefit is that people have a better understanding of the value and benefit that all trees provide to individuals, neighborhoods, and to the very fabric of American culture.

The LEAF Network connects people and places, allowing for the exchange of ideas and best management designs and practices as they relate to the use of edible trees in the Southwestern United States. Through major funding provided by the USDA Forest Service, the LEAF Network has produced an edible tree guide, *Growing Edible Arizona Forests, An Illustrated Guide*, that helps people learn, choose, plant, care for, and harvest edible trees. The *Guide* provides detailed illustrations and text that describe climate considerations as they pertain to the survival and production rates for trees that produce edible products.

A wide variety of Southwest-appropriate trees have been identified and described in the *Guide*, including both native and non-native cultivars used by multiple cultures over time. Through the common language of trees, the LEAF Network makes connections between traditional cultures and the use of edible native trees (like mesquite, ironwood and oaks) to the harvesting and preparation techniques brought to the United States by refugees and immigrants (like for date palms, jujubes, pomegranates, Seville oranges, and quince).



An apple cultivar propagated in Skull Valley, Arizona.
Photo: Rafael de Granade

The LEAF Network serves as a hub for a much broader understanding of trees in both urban and rural landscapes, which will ultimately lead to healthier trees and more livable communities.

Trees provide multiple benefits to people, including well-known benefits like oxygen production and storm water retention, as well as the less known benefits of edible products (especially from native trees like mesquite and ironwood). Use of edible trees in communities can add value by creating a gathering place where people come to care for and to harvest, as well as create a sense of place for refugee or immigrant populations that recognize a tree from their homeland.

FOR MORE INFORMATION

Arizona Department of Forestry and Fire Management
Urban/Community Forestry Program
<https://dffm.az.gov/forestry-community-forestry/urban-community-forestry>

California

CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION

The Los Angeles Center for Urban Natural Resources Sustainability (LA Urban Center) is a unique partnership that leverages work from public and private entities as well as community and academic-based groups to serve as a “Research & Information Destination Hub.” The center conducts research on urban natural resource stewardship and prioritizes targeted outreach to ensure these findings inform decisions and actions to enhance our urban forests, waterways, wildlife, green infrastructure, and quality of life for all Californians.

The LA Urban Center seeks out partnerships with public and private entities, the community, and academic-based groups to identify research and technology needs. The center also coordinates events to target communications about quantifiable benefits of green infrastructure in the Los Angeles metropolitan area. By connecting urban and wildland-urban interface inhabitants – including urban under-served youth – of Los Angeles with stewardship, ecological restoration, and research-focused opportunities, the center can engage with the community while expanding knowledge about the city’s sustainability.

The LA Urban Center operates through a partnership with the USDA Forest Service, the City of Los Angeles (City Plants), California Department of Forestry and Fire Protection (CAL FIRE), and a list of academic, industry, private, and nonprofit organizations. Physically located in the heart of Los Angeles in historic El Pueblo Historic District, the LA Urban Center is strategically positioned to offer programming to a variety of urban audiences where they live, work, and play.

Last year, the LA Urban Center provided technical, financial, and educational assistance to a number of projects including: the development of a network analysis of capacity (Stew Map), turnkey models for tree stewardship in environmental justice areas, an online clearinghouse database for relevant research, and the translation of research work into interactive conservation education modules for “pack and play” programs.



Cindy Blain (California ReLeaf), Natalie van Doorn (PSWRS), and John Melvin (CAL FIRE) pitch in to prepare a tree site during the LA Center for Urban Natural Resources Sustainability Partner’s Meeting.
Photo: Patricia Winter, PSWRS

In addition, the LA Urban Center has pooled resources across the partnership to address long term critical research gaps. For example, it provided technical and financial assistance on a long-term study to better understand urban forest management in a changing climate. The research will look at a variety of different indicators (e.g. drought tolerance, invasive species resistance, and sunlight exposure) and will translate findings into a toolkit for urban forest planning in California.

LA Center fellows complement these larger research endeavors by offering yearly fellowships to research high priority/real world topics. Past topic areas include research on drought tolerance, shot hole borer impacts on Los Angeles urban forest, and tree selection criteria for maximizing ecosystem services.

The LA Urban Center is a hub where researchers can engage with the community, fill critical research gaps, and collaborate with other scientific entities to innovate for a more sustainable Los Angeles.

FOR MORE INFORMATION

California Department of Forestry and Fire Protection
Urban & Community Forestry
http://www.fire.ca.gov/resource_mgt/resource_mgt_urbanforestry

Colorado

COLORADO STATE FOREST SERVICE

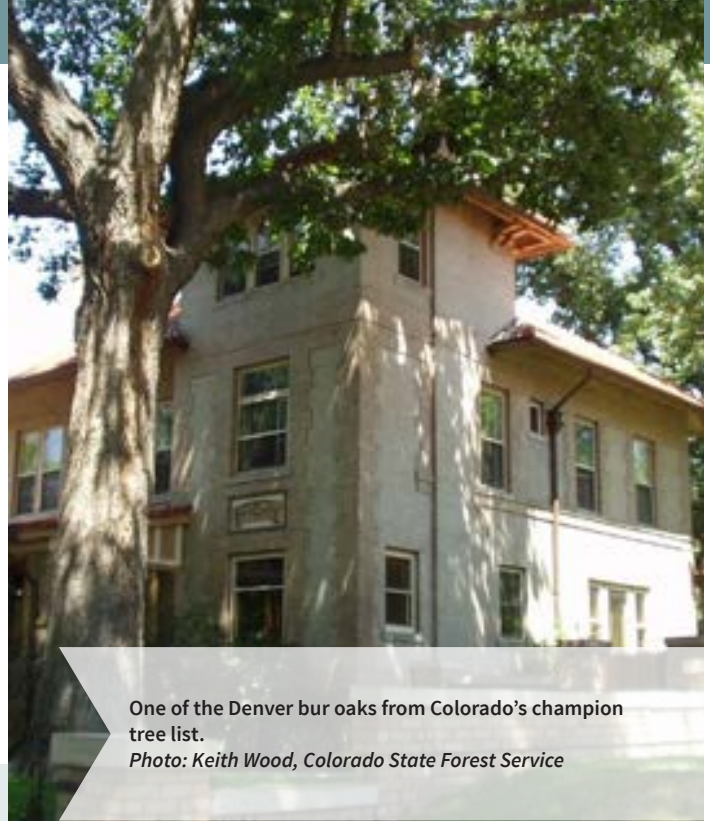
The Tree Collections tool of the Colorado State Forest Service links users to a network of diverse tree collections throughout the state, while also delivering consistent and comprehensive individual tree species information. The tool works to educate a diverse population and create a network of members, volunteers, and partners.

Urban and Community Forestry “beyond the zone” success stories in the Colorado State Forest Service are closely aligned with the efforts and commitment of the Colorado Tree Coalition (CTC) and its network of members, volunteers, and partners. The CTC can trace its beginning to the creation of the America the Beautiful program enacted by President George H.W. Bush in the 1990 Farm Bill, and since has been developing programs that think and inspire “beyond the zone” through its 25+ year existence.

One such program is the recently launched Tree Collections web tool (<https://treecollections.com>). An inspiration to inform regarding potential replacement trees for ash in light of emerald ash borer detection in Boulder in the Fall of 2013, the Tree Collection website is a tool to educate Coloradoans about the diverse array of trees that can be grown in Colorado.

The Tree Collections program creates a unique platform that links users to a network of diverse tree collections throughout the state, while also delivering consistent and comprehensive individual tree species information. Tree Collections is an educational tool for all seasons that can be utilized by students, curious visitors, nature lovers, and tree people alike.

Tree Collections, such as community arboretums, and other unique landscapes within a community with a diverse set of trees, are being added to the site to enable those with mobile and desktop devices alike to learn more about these diverse species.



One of the Denver bur oaks from Colorado’s champion tree list.

Photo: Keith Wood, Colorado State Forest Service

A future update to this site will include information and mapping of champion and other notable trees in Colorado. Users will be able to select the champion tree layer and zoom to their location on their device to learn more about the largest specimens of these diverse set of trees in the state.

The intent of this tool adds to the other complement of tree selection tools in Colorado to help create a more diverse, resilient urban forest resistant to the impacts of invasive pests, climate change and other future threats to our urban forests. The Tree Collections tool helps to educate Coloradoans about the diverse array of trees that can be grown in Colorado, intending to inspire Colorado residents to think “beyond the zone”.

FOR MORE INFORMATION

Colorado State Forest Service
Urban and Community Forestry
<https://csfs.colostate.edu/forest-management/community-urban-forestry/>

Guam

GUAM DEPARTMENT OF AGRICULTURE, FORESTRY AND SOIL RESOURCES DIVISION

By offering in-person courses to the foresters of Guam and other islands, this project works to eliminate accessibility challenges that Pacific Island foresters face. The collaboration between the Guam Department of Agriculture and the University of Guam is an excellent representation of a unique partnership that strengthens the forests of the Pacific Islands.

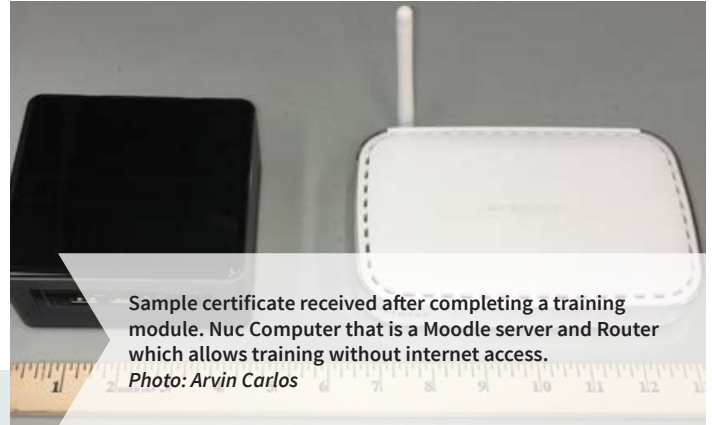
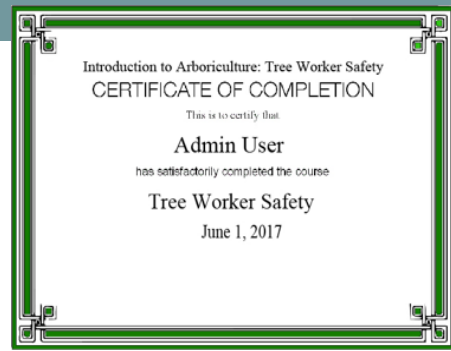
Guam's Department of Agriculture recently collaborated with the University of Guam to develop a set of certification courses that are easily accessible to the community of Guam and other communities throughout the Pacific Islands.

The arborists of the Pacific Islands often face challenges that arborists in the continental United States do not. One of these challenges includes accessing internet, the typical method by which arborists obtain Continuing Education Units (CEUs) to continue to be certified in their field.

Through development of courses from Guam's Urban and Community Forestry Program and Dr. Jim McConnell at the University of Guam, the island of Guam makes it easier to maintain being a certified arborist.

By providing courses surrounding these CEUs, the arborists of Guam and other Pacific Islands can continue their forestry education and maintain certifications in a different way of obtaining credits. These courses can also expand into the community, creating better accessibility for the public to become educated about forestry issues and tree maintenance.

This project will have a large reach, allowing arborists on multiple islands to have access to professional development education. This project also enhances the forestry practices of each island by ensuring that passionate, knowledgeable people will remain in their roles.



Sample certificate received after completing a training module. Nuc Computer that is a Moodle server and Router which allows training without internet access.
Photo: Arvin Carlos

This collaboration between the Guam Department of Agriculture and the University of Guam has allowed more local arborists to maintain their certifications and continue to add knowledge and experience to the island's community of foresters.

FOR MORE INFORMATION

Guam Department of Agriculture
Forestry and Soil Resources Division
Urban and Community Forestry Program
<http://forestry.guam.gov/>

Hawaii

HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES, DIVISION OF FORESTRY AND WILDLIFE

The Citizen Forester Tree Inventory project successfully meets critical needs in the state of Hawaii by building new partnerships and engaging new constituencies.

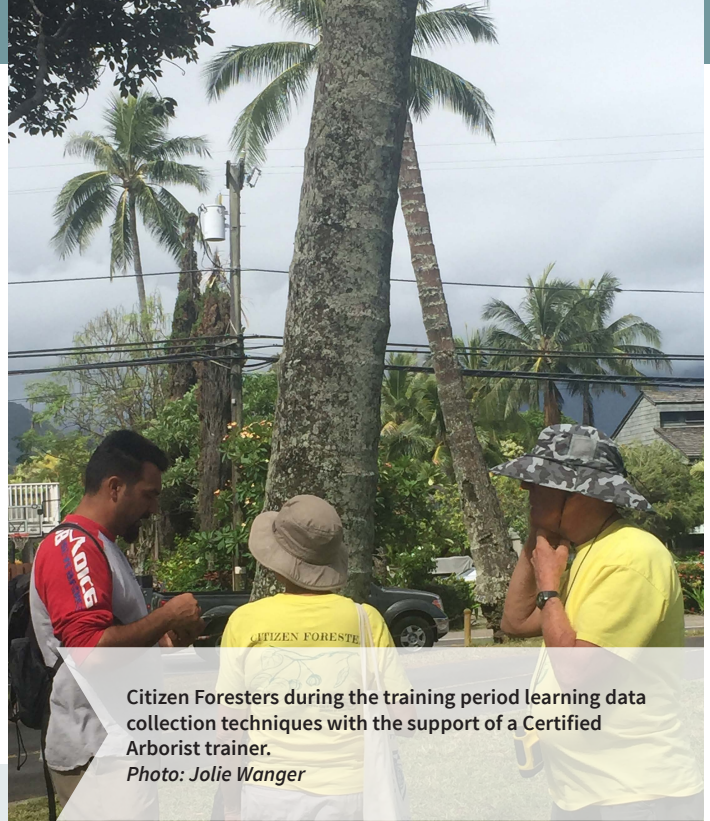
In response to Hawaii's U&CF Council and City Urban Forestry partners, the Kaulunani Urban and Community Forestry Program identified a unique opportunity to build partnerships and engage new constituencies through a Citizen Forester Tree Inventory project.

The Hawaii Division of Forestry and Wildlife partnered with the City Urban Forestry Department, two community nonprofits and the University of Hawaii in a targeted citizen science program. This program has allowed the City Urban Forestry Department to make strides towards completing an inventory of its tree resources, which has eluded them for decades.

At the same time, the partnerships which were developed have allowed multiple organizations to make progress towards winning the hearts and minds of residents who have not before seen the value of their street trees.

The Citizen Foresters serve as ambassadors in their community as they elevate the visibility of the value of urban trees. Citizen Foresters receive substantial training and continuing education, allowing the Hawaii Division of Forestry and Wildlife to extend its knowledge more broadly in the community.

This project has cut across boundaries, built bridges between the Kaulunani Urban and Community Forestry Program and the community, and opened a new path for urban forestry in Hawaii.



Citizen Foresters during the training period learning data collection techniques with the support of a Certified Arborist trainer.
Photo: Jolie Wanger

Overall, a community science program like the Citizen Forester Tree Inventory project has value well beyond the data being collected in the new partnerships formed and the day-to-day outreach to neighbors and businesses who may otherwise not be exposed to information about forestry programs.

FOR MORE INFORMATION

Hawaii Department of Land and Natural Resources
Division of Forestry and Wildlife
Kaulunani Urban and Community Forestry Program
<http://dlnr.hawaii.gov/forestry/lap/kaulunani/>

Idaho

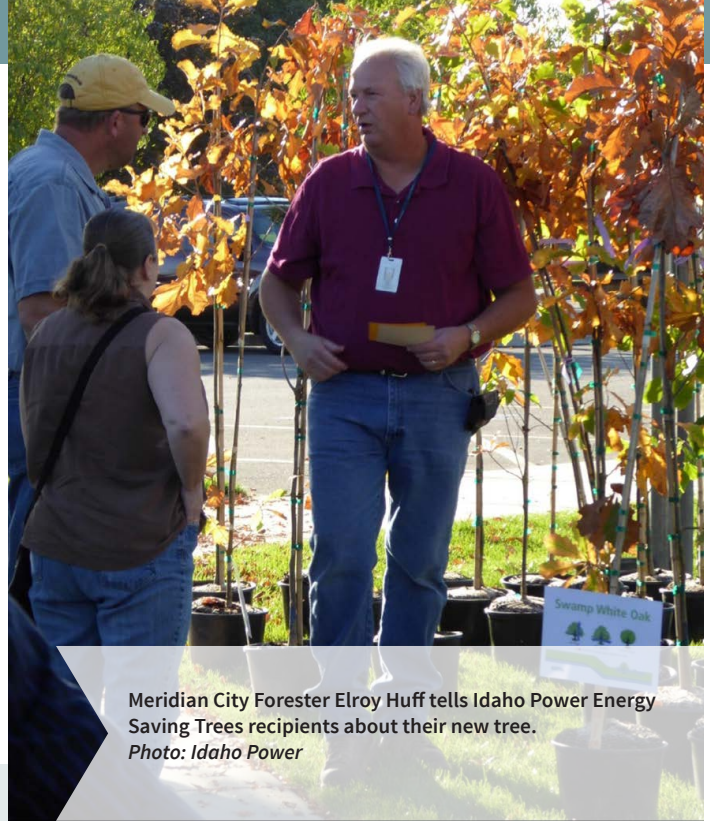
IDAHO DEPARTMENT OF LANDS

Urban foresters have long worked with utility arborists on managing trees under utility lines to decrease interference and increase safety. More recently, utility companies have recognized that, planted in the right places, trees can reduce energy consumption. This, in turn, makes existing energy capacity go further, reducing the need for additional—and very expensive—new power plants. The partnership between the Idaho Department of Lands (IDL) and Idaho Power has increased the usage of trees as functional infrastructure to address critical issues and has engaged new partners “beyond the zone” tasked with managing these issues.

In 2013, Idaho Power initiated a new program using the Arbor Day Foundation’s (ADF) Energy Saving Trees (EST) web-based tool. Data from an Idaho Department of Land’s urban tree canopy assessment over the two most populous counties in Idaho identified tree planting sites west of homes—locations which provide the greatest energy conservation benefit. This enabled Idaho Power to target these customers and encourage them to sign up for the program, which provides up to two trees per household for planting in specific locations. Customers received 250 trees to plant within the first year.

Many other US utilities are involved in the EST program, but most use utility foundation, or soft dollars. The primary purpose of these efforts is to encourage tree planting for shade, as well as offer assistance for effective energy-saving measures. To support their program, Idaho Power is using funds through its Commission-approved Energy Efficiency Rider charged on customer bills. Doing so necessitates a detailed cost-benefit analysis—in order to sustain the program, the value of the energy saved must be higher than the cost of the program. If the analysis confirms that it is, Idaho Power will sustain the program as part of their corporate energy conservation strategies.

In 2014, IDL, working with Idaho Power and local partners, applied for and received a Landscape Scale Restoration (LSR) grant from the USDA Forest Service. The grant enabled Idaho Power and local partners to increase the trees given to homeowners to 3,000 per year, develop education materials, source trees locally, implement a field evaluation program to measure success, and engage a great network of partners.



Meridian City Forester Elroy Huff tells Idaho Power Energy Saving Trees recipients about their new tree.
Photo: Idaho Power

To date, more than 7,500 trees have been distributed and planted, which will provide an estimated 5 million kilowatt-hours saved over the next 20 years. Additional evaluation will occur this summer, and completion of the cost-benefit analysis should be completed soon after.

Idaho Power’s Energy Saving Trees program model is focused on efficiency and effectiveness by using trees strategically to reduce energy use and thereby reducing the need to create additional capacity.

A detailed cost-benefit analysis of the program will determine the energy price point at which the value of energy saved exceeds the cost of the program. This data will inform Idaho Power’s desire to sustain and grow this program throughout their service area and will be useful for utilities across the country interested in similar initiatives. Beyond energy conservation, trees also improve air quality, reduce stormwater and increase public health.

FOR MORE INFORMATION

Idaho Department of Lands
Urban and Community Forestry
<https://www.idl.idaho.gov/forestry/community-forestry/>

Kansas

KANSAS FOREST SERVICE

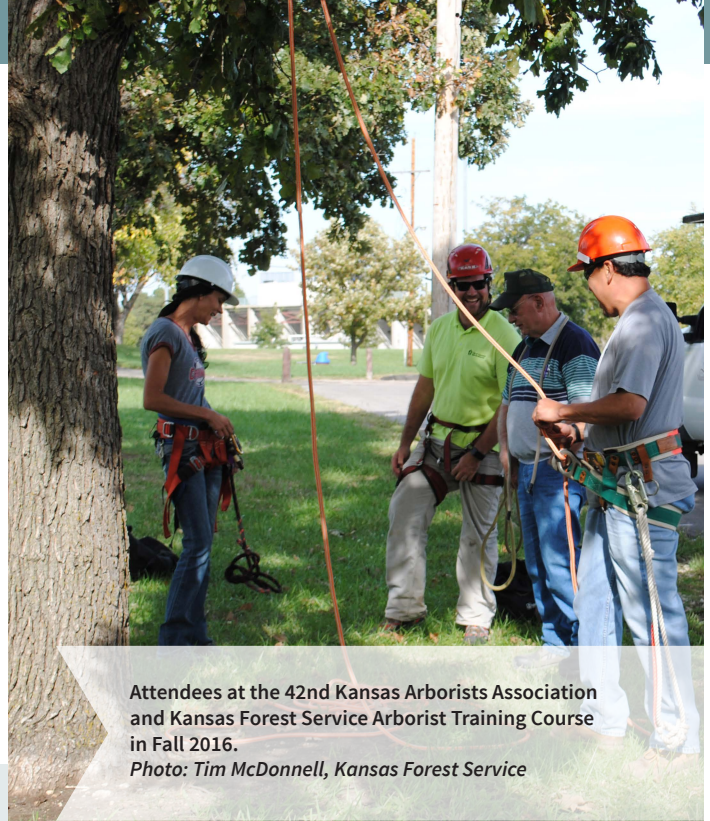
By partnering with the Kansas Arborists Association, the Kansas Forest Service can guarantee that every Certified Arborist not only is of the highest quality but also has been screened and trained with consistency. This key partnership between private and public organizations increases professional staff in both sectors, therefore increasing economic opportunities overall for both individuals and companies.

The Kansas Arborists Association and the Kansas Forest Service have a 42-year partnership through the Arborist Training Course that increases the professionalism, training, and education of local commercial and municipal arborists.

The Arborist Training Course fulfills the educational requirement to become a Kansas Certified Arborist. The course is a week-long class and is limited to 40 attendees. It is a mix of classroom and field demos and climbing. The course is usually an equal distribution of commercial and municipal arborists with a range of experience from one year to 30 years.

After passing the course, the attendees must apply to become certified. The application requires two years commercial experience or four years of governmental experience; their tree work requires an inspection process with two current Kansas Certified Arborists approving and signing their application. Applicants must also provide proof of insurance and sign a Code of Ethics.

Over the 42 years of this partnership, there have been over 1,800 attendees with currently 280 Kansas Certified arborists. The course encourages consistency between each arborist in knowledge, decision-making, and professionalism. The course also increases the number of Kansas Certified Arborists and requires Continuing Education Units (CEUs) to maintain the certification, which continues to advance the education and training element of the program.



Attendees at the 42nd Kansas Arborists Association and Kansas Forest Service Arborist Training Course in Fall 2016.

Photo: Tim McDonnell, Kansas Forest Service

The Arborist Training Course that partners together the Kansas Forest Service and the Kansas Arborist Association has standardized professionalism and education for arborists across the state. The partnership between public and private entities lends itself to an increase in staff in both sectors and increase in economic opportunities for the attendees of the course and companies looking to hire professional arborists.

FOR MORE INFORMATION

Kansas Forest Service
Community Forestry Program
http://www.kansasforests.org/community_forestry/

Montana

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

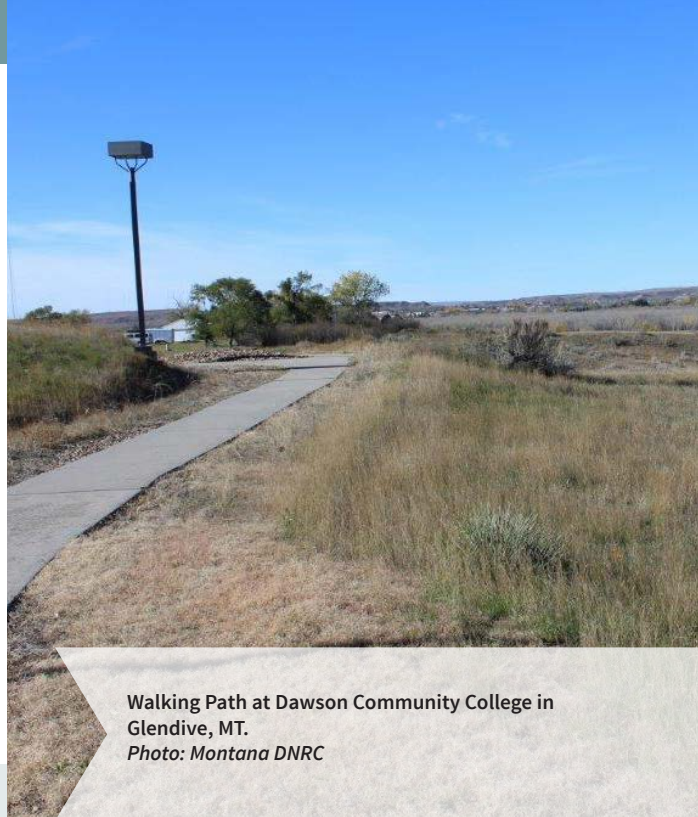
With increasing climate variability, projects that promote diversity and adaptability are vital to advancing the practice of urban forestry in Montana. Rural communities must consider ways to be self-sufficient, and higher populated areas must find opportunities to move forward and to plan for sustainable urban forest management.

The Montana Department of Natural Resources and Conservation (DNRC) Urban Forestry Program encourages communities to find sustainable methods in managing their urban forest resource. The DNRC has supported projects such as solar-powered drip irrigation, edible forest gardens, urban tree farms, and trees for fruit and berry production.

While Montana's climate spans across five zones, finding a wide variety of species from local nurseries can be a challenge. When a community supports itself through local sourcing, such as growing trees locally, or utilizing public spaces for fruit trees or marketable wood, it benefits everyone. It reduces costs and fuel consumption by minimizing transportation, trees are better acclimated, and generates local produce or wood-viable products.

While the concept of developing urban and community-based shelterbelts of trees is not new, Montana is finding the practice to be a viable one. Public use areas such as baseball fields, disc-golf courses, and walking trails on the edge of town are using trees to attract more use and provide various benefits for the community.

The campus of Dawson Community College in Glendive in east Montana has very few trees and sought a DNRC grant to assist in designing a shelterbelt near a walking path to help protect from snow, wind, and dust, and provide visual appeal. This area of the state is mostly plains and grassland, with extreme weather conditions. The goals of the project are to beautify the campus, to educate college staff about landscaping with trees, and to



Walking Path at Dawson Community College in
Glendive, MT.
Photo: Montana DNRC

plant low-maintenance, climate-hardy trees. Tree selection includes a combination of drought tolerant species and hardy ornamentals. Through some networking, Dawson College partnered with the neighboring community of Sidney to acquire trees adapted to the climate. Water conservation and efficient irrigation is also a component for this endeavor.

Urban and Community Forestry managers, groups, and the green industry must look to biodiversity to create a resilient community forest. As conditions and climates change, the practice and science of urban forestry must evolve too. This means utilizing the latest technology, research, policy tools, and broad-based collaboration for creating sustainable, multifunctional green infrastructure.

FOR MORE INFORMATION

Montana Department of Natural Resources and Conservation
Urban and Community Forestry Program
[http://dnrc.mt.gov/divisions/forestry/forestry-assistance/
urban-and-community-forestry](http://dnrc.mt.gov/divisions/forestry/forestry-assistance/urban-and-community-forestry)

Nebraska

NEBRASKA FOREST SERVICE

In its collaboration with the nonprofit Nebraska Statewide Arboretum, Inc., the Nebraska Forest Service has created a partnership that leverages networks to reach new audiences. This partnership that resulted in the Community Forestry and Sustainable Landscapes Program serves community members by providing opportunities such as landscape cost-share programs and professional development for landscape managers.

The Nebraska Forest Service (NFS) and Urban and Community Forestry program partnered with the state-wide nonprofit, Nebraska Statewide Arboretum, Inc. (NSA) to deliver collaborative programming across the entire community forest spectrum.

Utilizing a memorandum of understanding, staff from both organizations are housed together under the Community Forestry and Sustainable Landscapes Program (CFSL) umbrella and operate with NFS oversight and guidance from the NSA Board of Directors.

Through this collaborative partnership, NFS and NSA are able to support turnkey green infrastructure services for municipalities, green industry professionals, and community groups. While trees are the backbone of the community forest, the CFSL program looks at trees as just one of many components within the overall landscape.

This focus has allowed NFS to diversify its efforts, partnerships, and potential program funding opportunities to other segments of the landscape and green industry including urban horticulture, landscape design, stormwater management, and water quality. A recent effort of the program has been to collaborate on a Landscape Scale Restoration project titled “Environmentally Adapted Trees” where tried-and-proven seed sources are trialed across the state and promoted for retail sales within the nursery industry to promote diversity as well as mitigate the impacts of a more extreme climate.



ReTree Ambassadors celebrate another state-wide planting during ReTree Week.
Photo: Nebraska Forest Service

The defined partnership between NFS and NSA resulted in a landscape program that serves to benefit the community in a multitude of aspects. The program’s utilization of formal agreements and defined expectations has greatly improved program effectiveness and has created cost-saving efficiencies.

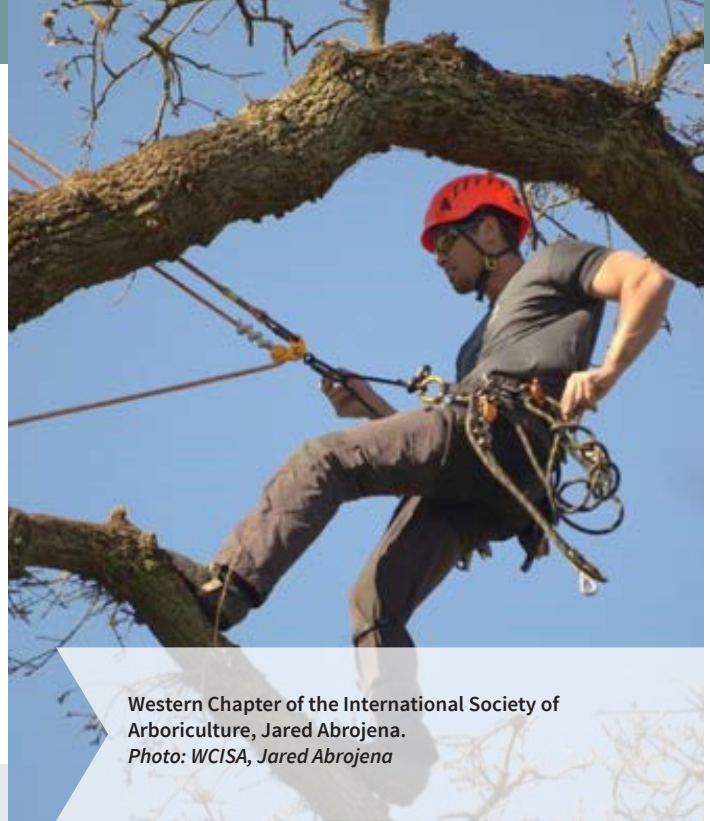
FOR MORE INFORMATION

Nebraska Forest Service
Community Forestry and Sustainable Landscapes Program
<http://nfs.unl.edu/program-communityforestry.asp>
<https://plantnebraska.org/>

Nevada

NEVADA DIVISION OF FORESTRY

The Nevada Division of Forestry's Urban and Community Forestry Program aims to identify gaps in urban forestry and arboriculture information available to citizens of Nevada. According to the International Society of Arboriculture (ISA), Nevada has only twelve ISA certified tree workers in the state. This is the lowest number of certified tree workers in the Western Chapter both per state and per capita.



Western Chapter of the International Society of Arboriculture, Jared Abrojena.
Photo: WCISA, Jared Abrojena

Nevada Division of Forestry, in partnership with Western Chapter of the ISA, Nevada Shade Tree Council and the Southern Region Tree Working Group will host two workshops for climbing techniques in Nevada. The City of Reno and Henderson will host two events each, at Idlewild Park and Wells Park, respectively.

These workshops will provide tree care professionals with affordable hands-on training by instructors that have many years of field and competition experience. Field stations will include learning equipment and knots, throw line practice, methods of entry, maneuvers and limb walk, safety and aerial rescue practice. The aerial rescue will include the ability to certify, which is one step toward the ISA Certified Tree Worker. Training is offered bilingual.

The Nevada Division of Forestry's Urban Forestry Program can have impact on local practices across the state. With the aid of a USDA Forest Service Urban and Community Forestry grant, the program has a very low fee and turnout is expected to be

high. This is a great example of states helping each other, as the cadre is from California, and excited to help make a difference in Nevada. New partnerships have been created that will better serve the community forests as these groups work together to achieve a common goal of tree worker safety, and many more future endeavors such as a First Annual Tree Climbing Competition in 2019.



Photo: Lisa Ortega

FOR MORE INFORMATION

Nevada Division of Forestry
Urban and Community Forestry Program
<http://forestry.nv.gov/forestry-resources/urban-and-community-forest/>

New Mexico

NEW MEXICO STATE FORESTRY

Through its participation in an annual International District Health Fair, New Mexico State Forestry's (NMSF) Urban and Community Forestry Program is striving to make the link between human health and community forestry by working with non-traditional partners and connecting in creative ways.

Albuquerque, New Mexico's health care community is working to address multiple social determinants of health and wellness for its most vulnerable community members. Social determinants of health include economic stability, neighborhood/physical environment, education, food, social context, and health care systems¹. Community forestry can play a part in addressing many of these determinants, and NMSF's Urban and Community Forestry Program is working to make that connection.

Albuquerque's International District faces critical social determinants to health and wellness including high poverty and unemployment, urban blight, and crime, while celebrating the 47 languages spoken there². The community health center hosts an annual International District Health Fair, which brings together over 100 groups to provide health screenings and other health and wellness resources. NMSF has participated for the past two years, providing tree seedlings from NMSF's Conservation Tree Seedling program. In addition to providing green resources to a district with one of the lowest tree canopies in the city, NMSF stands side-by-side with health-care groups, emphasizing the connection of green space as a part of health and wellness.

This connection with the International District has led to a hopeful partnership with a long-term arts and community development effort. The "Enchanting Urban Forest" is one of the community-led projects being organized by Artful Life, a nonprofit organization that transforms communities through the co-creation of art. The "Enchanting Urban Forest" project will convert a 0% tree canopy intersection into an art and plant-filled



Tree seedlings provided by New Mexico State Forestry at the Annual International District Health Fair.
Photo: Jennifer Dann, NMSF

space designed by community members working collaboratively with artists and urban foresters. NMSF has been providing technical assistance and resources to allow project coordinators to strongly advocate for city and private foundation funding.

Urban forestry is just one part of a complex approach to addressing the social determinants to health and wellness. By building partnerships through project work, we make important and significant progress in connecting healthcare and urban forestry.

¹ Heiman and Artiga, Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity, November 2015.

² <https://www.artful-life.org/international-district>

FOR MORE INFORMATION

New Mexico State Forestry
Urban and Community Forestry Program
<http://www.emnrd.state.nm.us/SFD/CommunityFor/Community.html>

North Dakota

NORTH DAKOTA FOREST SERVICE

The project of “Enhancement of Small/Midsize Urban Forests in North Dakota” is a Landscape Scale Restoration grant, and is “beyond the zone” of common funding sources for North Dakota Community Forestry projects. This project is a collaborative effort of public, private and nonprofit partners, involving the state forest service, North Dakota State University, ND Urban and Community Forestry Association, ND Recreation and Parks Association and ND Nursery, Greenhouse and Landscape Association. This project fortifies the sustainable management capabilities of small North Dakota communities with limited resources.

The project of “Enhancement of Small/Midsize Urban Forests in North Dakota” builds the planning and management capacity of North Dakota city tree boards to protect community forests more effectively.

This project also educates decision makers about the importance of green infrastructure and increases public awareness of the benefits of community forests. Participating communities have access to an urban forestry technical assistance team and a city-to-city mentor program enables communication and resource-sharing beyond the life of the project.

This project includes the implementation of a statewide web-based tree inventory and planning (TIP) tool, with the added features of an Emerald Ash Borer (EAB) calculator, tree tour creator, and training and coaching for users.

The impact of the project is wide-reaching. This statewide project directly impacts one-third of the state and establishes a framework to reach the remainder of North Dakota, with a template that could easily be replicated in other states in the region.



North Dakota is home to 48 Tree City USA communities. While recent inventories in more than 80 communities across the state reveal an average street tree population consisting of 46% green ash, current efforts will enhance the health and resilience of ND’s community forests in the face of invasive pests such as EAB. *Photo: Mary O’Neill, NDFS*

The results of this project in North Dakota include increased species diversity, mitigation of potential impacts of invasive species, and healthier, more resilient urban forests that are recognized for valuable environmental, social & economic benefits.

FOR MORE INFORMATION

North Dakota Forest Service
Community Forestry Program
<https://www.ag.ndsu.edu/ndfs>

Oregon

OREGON DEPARTMENT OF FORESTRY

Generally speaking, it is often easier for large communities – with a population greater than 25,000 – to conceive, plan, fund, and implement green infrastructure (GI) projects than for small communities. This project examines the specific challenges that small communities face when implementing a complex project. Over the past three years, Oregon Department of Forestry collaborated with Oregon State University to observe the implementation process and to record challenges, solutions, and lessons learned. Using insights from this project, part of the grant funds are being used for creating a website and online training program to guide small communities in carrying out green infrastructure projects in the future.

This project, funded through a 2014 USDA Forest Service Landscape Scale Restoration grant is a partnership between the Oregon Department of Forestry and Oregon State University which focuses on two communities' processes while implementing green infrastructure projects. This project analyzes the obstacles and pitfalls that these two cities encounter; and uses the information to create both a small community-focused GI website and an online GI training program. This project addresses the disconnect between urban-centric GI guidance documents and the realities facing small communities tasked with implementing an emerging or innovative technology.

Upon observing the implementation of GI projects in small communities, the Oregon Department of Forestry had three overall findings:

1. The professional is often personal. In small towns, while local professionals may have the required knowledge/ desirable background to bring to a project, they are also members of the community so they may also have personal connection to the town. A personal history or local reputation can be an asset, proving traditional ecological knowledge to the table; however, innovation is often met with resistance, often complicating project implementation.
2. Small towns often rely on a small group of dedicated volunteers. Volunteers work best when an organized, engaging leader can coordinate the project effectively. Sometimes volunteers and their leaders do not have the scope of authority to make key decisions about a project.



Completed green infrastructure project at Coos History Museum, Coos Bay, Oregon.
Photo: Alexa Carlton, Coos Watershed Association

3. Online resources that are designed for small communities can increase competency or technical knowledge of project leaders, enabling them to prioritize best management practices that are appropriate for their sites while also achieving multiple project goals.

Small communities face challenges that are different from those of larger cities when implementing green infrastructure projects. Green infrastructure projects in small towns work best when the city staff, project leaders, and volunteers are brought into the project early and help with the creation of the project. Engagement is increased when complex concepts are communicated clearly to all participants with nontechnical language. This understanding of how small communities succeed best in implementing green infrastructure projects will allow the Oregon Department of Forestry to increase the overall number of green infrastructure projects throughout the state.

FOR MORE INFORMATION

Oregon Department of Forestry
Urban and Community Forestry Assistance Program
<http://www.oregon.gov/ODF/ForestBenefits/Pages/UrbanForests.aspx>

South Dakota

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE, DIVISION OF RESOURCE CONSERVATION AND FORESTRY

South Dakota Department of Agriculture's Division of Resource Conservation and Forestry "Storm Damage Grant Program" supports communities interested in maintaining their urban forests by offering aid for damaged trees. Being motivated to maintain a strong urban forest can be difficult for the communities in South Dakota that are found in such a severe climate, particularly when the restorative process of replacing trees and landscapes can be difficult and time-consuming. This grant program offers resources as a way to open a new door for communities in South Dakota trying to enhance their community forests.

The South Dakota Department of Agriculture's Division of Resource Conservation and Forestry supports communities around the state with grant awards for storm damage.

These grant awards are dispersed among communities throughout South Dakota who are salvaging their urban forests from past storms. In South Dakota, this damaging weather can range from ice storms to snow storms to thunderstorms to wind storms. As a result, the funds can only be used to plant and replace trees; however, there is no limit on how much a community can request.

In the March 2017 grant cycle, awarded grant funds totaled \$10,000. These funds originated from the Landscape Scale



Community members in the small community of Reliance, South Dakota coming together in May 2017 to plant trees.
Photo: Rachel Ormseth

Restoration competitive grant program and have opened a new door of resources for communities in South Dakota trying to enhance their community forests.

This grant program has provided the South Dakota Department of Agriculture's Division of Resource Conservation and Forestry with the tools to reach out to a variety of communities and has positively impacted communities around while promoting the importance of urban forests.



Photo: Josh Larson

FOR MORE INFORMATION

South Dakota Department of Agriculture
Division of Resource Conservation and Forestry
<https://sdda.sd.gov/conservation-forestry/>

Utah

UTAH DIVISION OF FORESTRY, FIRE AND STATE LANDS



Choosing reliable tree species that are proven to be hardy, yet offer diversity from the monotony of over-planted species, can be daunting for municipal foresters and residents alike. In an effort to better inform tree-planting decisions throughout the state, the Utah Division of Forestry, Fire and State Lands' Urban and Community Forestry Program contacted a network of experienced urban foresters and nursery growers to provide input for the compilation of a statewide recommended tree species list – the Utah Preferred Tree Species List.

In partnership with the Utah Community Forest Council, Utah State University Extension Service, nursery personnel, and municipal foresters, a detailed and thorough list was generated under the direction of the Division's Urban & Community Forestry Program. The list was then categorized into recommended tree species for three different climate zones in the state: Northern Region, Southern Region, and High Elevation Region. These lists provide the public with a valuable resource about tree species that are reliable, hardy, and diverse in various parts of the state.

The lists have been marketed by sharing with local nurseries and encouraging them to make the identified species available to customers. Stickers were printed for nurseries to label the Utah Preferred Tree Species for sale in their nursery, hopefully increasing sales of these desirable trees. Into the future, the intent of the Division and partners is to revisit the list every few years and update it by replacing some of the species with new focus tree species. The Division will manage the list and lead the effort to update it.

The Utah Preferred Tree Species List has proven to be highly successful. Although the list is available online, there is a high demand for a printed version to distribute at nurseries, in Extension and Division offices, and other tree-related events.



Additionally, the distribution of the list has encouraged the public to become more engaged, with many individuals and organizations sharing their recommendations on tree species that should be considered for future revisions. This was an unanticipated but welcome outcome of the project and outreach effort.

Overall, the project helped to increase communication between nurseries and those who are planting trees, creating increased awareness and education, better planting decisions, and significantly stronger partnerships between agency and private partners.

FOR MORE INFORMATION

Utah Division of Forestry, Fire and State Lands
Urban & Community Forestry Program
<https://ffsl.utah.gov/>

Washington

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

The Urban Forest Restoration Project, funded through a Western Competitive Grant, has engaged a broad range of new internal and external partners, and established a model for training young adults in preparation for natural resources careers.

The Urban Forest Restoration Project – organized by the Washington State Department of Natural Resources (DNR) – coordinates natural resource jobs for young adults and veterans returning from service by partnering with communities in western Washington to improve community forests and restore urban natural areas. The project is focused on restoration work in the Puget Sound area of western Washington, an area that covers 1.6 million acres with a human population exceeding four million.

Project implementation is by the Puget SoundCorps (PSC), an AmeriCorps program administered by the Washington State Department of Ecology. Crews and projects are coordinated by urban and community forestry (UCF) staff. The model for this program was initiated and funded through a two-year 'Jobs Now' bill legislated in WA State in 2012. The project continued with funding through the 2014 Western Competitive Grant. Local project partners are granted one month of crew time for urban forestry restoration or improvement activities. Projects are mapped by PSC crews using ArcGIS online then incorporated into a project report of work accomplished written by UCF. Once they've received the report, project partners are required to develop and submit to UCF a three-year maintenance and monitoring plan with assistance by UCF. Following the plan, partners report annually for three years on the status of the project, including strategies for maintenance.

The original Western Competitive Grant proposal design was for one year of implementation with three PSC crews assisting 27 local project partners. Through an internal partnership



Puget SoundCorps crews pause after a service project at Bloedel Reserve on Bainbridge Island, WA. Three crews worked together to clear five acres of invasive English ivy and holly from Reserve grounds.

Photo: Micki McNaughton, Washington DNR



Ivy and holly, ready for the chipper.

Photo: Micki McNaughton, Washington DNR

with DNR's NW Region, the Recreation and Aquatics Divisions and some creative scheduling to share crew time, the UCF Program coordinated year-round work for five PSC crews. During summer months, when crews were able to work on water-based aquatics restoration projects, crew and staff time was paid for by the Aquatics division. By leveraging grant funding, the project tripled in scope with 72 urban forestry restoration and maintenance projects completed in 42 communities, counties, and in cooperation with nonprofit volunteer organizations. Each partner has developed three-year maintenance and monitoring plans to assure project sustainability. Close to 100 young adults have been trained in urban forestry technical skills and GIS mapping.

Project success has garnered support from all three Washington DNR divisions. A collaborative budget request was submitted in support of a full-time staff coordinator position and three to four PSC crews over the next two years, which will continue the internal and external partnerships developed over the last three years.

FOR MORE INFORMATION

Washington State Department of Natural Resources
Urban and Community Forestry Program
Wildfire Division
<https://www.dnr.wa.gov/urbanforestry>

Wyoming

WYOMING STATE FORESTRY DIVISION

While statewide green industry associations and conferences are common in most states, this annual Cheyenne Green Industry Workshop is unique to Wyoming because it provides a means for learning and networking at the municipal level. It brings together a diverse group of stakeholders involved with green infrastructure planning and management who may not otherwise meet and interact. The one day workshop has inspired professional business relationships and a better understanding of urban forestry-related activities within the city.

The Cheyenne Green Industry Workshop is organized by the Cheyenne Urban Forestry Division with financial assistance from government and industry sponsors. This networking and professional development event connects many attending stakeholders, including nursery owners, arborists, landscapers, city planners, landscape architects, civil engineers, and more.

The one day workshop not only provides the attendees with an expansive network but also covers a variety of topics that are urban forestry related. These topics have included landscape ordinances and enforcement, arborist licensing and certification requirements, species selection, structural pruning, and landscape design.

The workshop includes an interactive working lunch as well as outdoor demonstrations. Local businesses donate dozens of quality door prizes. In three years, the event has grown from 50 attendees to approximately 100.

The Cheyenne Green Industry Workshop is an opportunity for various stakeholders involved with green infrastructure to interact, to learn, and to share experiences. The annual event has resulted in positive exposure for the Cheyenne Urban Forestry Division and a better understanding of the many responsibilities of the division and the importance of proper management of the urban forest. The workshop is also an outstanding example of a level of learning, networking, and communication for other cities to follow.



Various stakeholders gather for a day of learning about planning, developing, and maintaining the urban forest and related green infrastructure.
Photo: Cheyenne Urban Forestry Division

Overall, the workshop has provided greatly increased networking and professional relationships among various stakeholders involved with the Cheyenne's urban forest and related green infrastructure.

FOR MORE INFORMATION

Wyoming State Forestry Division
Community Forestry Program
wsfd.wyo.gov



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