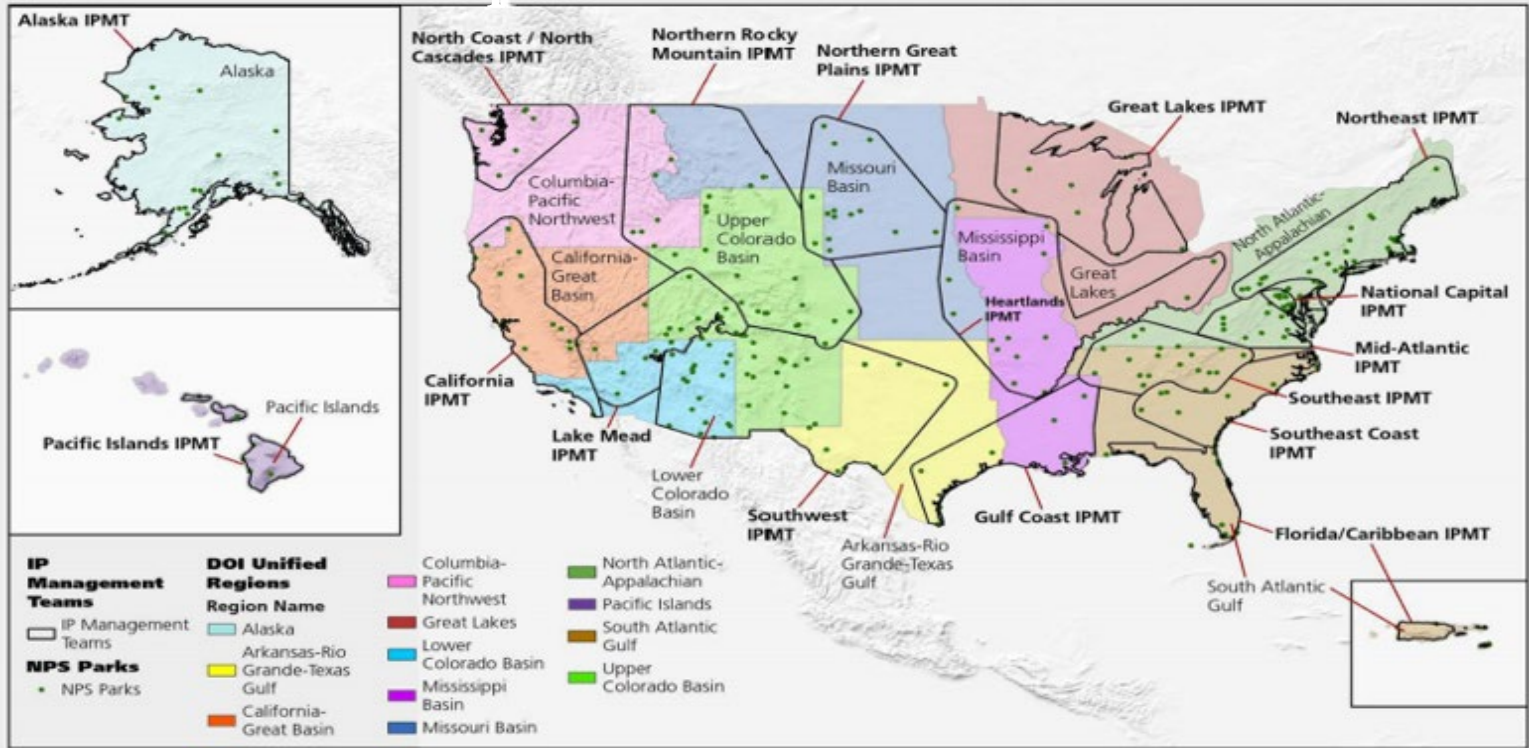




IPMT Annual Report: FY 2022



Map of Invasive Plant Management Team (IPMT) boundaries across the US and territories. Each team's name appears within the polygon that includes the parks they serve.

Background

The National Park Service (NPS), one of the 11 bureaus within the US Department of the Interior (DOI), is tasked with protecting park units' vast natural and cultural resources "for the enjoyment, education, and inspiration of this and future generations" (NPS Mission Statement). Federal laws and DOI and NPS policies direct park staff and 17 Invasive Plant Management Teams (IPMTs) to take steps to prevent the introduction of invasive species, and to control and eradicate established populations. The IPMTs were created in 2000 through the Natural Resource Challenge to assist parks with the growing threat posed by invasive plants. The national NPS Invasive Plant Program (IPP) funds 15 of the IPMTs. Interior Regions 3, 4, & 5 and Interior Region 2 oversee the other two teams. The teams serve over 303 park units as well as non-NPS partners across the US and its territories. The IPP staff and IPMTs are an integral part of the NPS response to a growing invasive species threat and provide a source of expertise in invasive plant management not otherwise available in most parks.

Since the program's inception, team liaisons have consistently demonstrated innovation, flexibility, and efficiency in managing their programs. Faced with unique challenges, each team incorporates strategies that best serve their partners to effectively protect natural, cultural, and significant ethnographic resources by providing or funding on-the-ground invasive species management support. In fiscal year (FY) 2021, the teams treated 7,430 acres and inventoried 20,390 acres for invasive plant species. In addition to treatment and survey work and with support from IPP and partners, IPMTs are leading efforts to prevent the introduction of new invasive species by guiding parks to adopt the DOI Early Detection and Rapid Response (EDRR) framework into daily operations. The IPMTs also lead restoration

Background (cont.)

efforts to increase native plant community resilience and reduce susceptibility to future invasions.

The IPMTs do so much more. They engage youth by providing employment and volunteer opportunities to inspire and train a new generation of land stewards. In fiscal year (FY) 2022, 1,028 youth employees and volunteers contributed approximately 145,000 hours to inventory and control of invasive plant species under the purview of the IPMTs. The IPMTs also provide a range of valuable training opportunities to park staff, partners, and volunteers. They effectively leverage program dollars through resourceful, productive, and mutually beneficial partnerships with contributions valued at nearly \$3 million in FY 2022. This collaborative approach to manage invasive plants allows the teams to stretch limited IPMT funds to assist parks and partners.

The IPMT program is supported by the IPMT Advisory Group (IPMTAG) that is made up of representatives from across the NPS. The IPMTAG provides oversight, strategic direction, and invaluable assistance to the program. Together with the IPP Manager, they tackle emerging issues and significant challenges faced by the IPMTs in order to facilitate the teams' efforts across the country.

With a changing climate, parks and IPMTs must brace for new norms that may further exacerbate challenges associated with the management of invasive species. Through IPMTs' innovation, flexibility, and efficiency, the teams are well equipped to continue protecting and preserving the natural and cultural resources entrusted to the NPS for this and future generations.



What the IPMTs Protect: Sunrise on a still Lake Helen, Lassen Volcanic National Park. NPS photo.

What the IPMTs Protect

The NPS IPMTs are proactive and innovative in their approaches to invasive plant management to protect resources. These resources span the entire US and its territories, and many are recognized as globally important, with designations and recognitions that include international biosphere reserves, designated wilderness, biodiversity hotspots, and Important Bird and Biodiversity Areas.

The IPMTs strive to protect a range of natural resources and ecosystems. IPMT territory covers coastal, wetland, and riparian native plant and animal communities including on the east, Gulf, and west coasts, the dunes along the shores of Lake Superior, western rainforest valleys, riparian woodlands, and southeastern old-growth bottomland forest. Teams cover terrestrial communities such as boreal forests, sagebrush steppe, sub-alpine meadows, cave features, tallgrass prairies, eastern deciduous forests, and mixed shortleaf pine-oak-hickory forests. The IPMTs' invasive plant management work also protects a range of species of concern and the habitats they require to survive, including that of sea turtles, snowy plovers, least terns, and Coho salmon, as well as multiple rare, significant, and globally threatened ecosystems.

The IPMTs' work also protects and preserves cultural resources and historic sites and features. Many parks commemorate important historical events, locations, people, and cultural practices, which requires integrating invasive plant management into cultural landscapes. They include historic battlefields, archeological sites, earthworks, scenic byways, and ethnographic and landscapes.

FY 2022 projects focused on protecting significant resources within NPS units. The [National Capital Region IPMT](#) and National Capital Parks-East mitigated the impacts of a construction project adjacent to Shepherd Parkway. One of the few contiguous greenways in Southeast Washington, DC, Shepherd Parkway provides connected habitat and an important corridor for urban wildlife. Interns with the [Southeast IPMT](#) supported projects to restore the rare Georgia aster (*Symphyotrichum georgianum*) at Kings Mountain National Military Park through planting of seedlings following invasive plant management. At Haleakalā National Park, where invasive species are degrading sites that were documented as possessing 90% endemic plant species 50 years ago, the [Pacific Islands IPMT](#) supported stopping the upslope movement of Himalayan ginger (*Hedychium gardnerianum*) in the Kipahulu Valley Biological Reserve. These efforts help preserve the unique resources that the NPS encompasses.



Stories of Success: Top) large patch of common reed in a West Beach panne at Indiana Dunes National Park in 2009. Bottom) after restoration in 2022, the Great Lakes IPMT has successfully removed common reed to be replaced by native species. NPS photos.

Stories of Success

The work required to successfully manage invasive species and protect and restore significant NPS resources is challenging and can seem impossible at times. However, the IPMTs demonstrate that success is achievable through patience and perseverance. As part of a long-term project at Mojave National Preserve, the [Lake Mead IPMT](#) is keeping Sahara mustard (*Brassica tournefortii*) out of the park's Kelso Dunes and from spreading throughout the park. This work protects valuable habitats by controlling this and other invasive plant species. Through collaboration between the [Great Lakes IPMT](#) and Indiana Dunes National Park, a globally vulnerable interdunal wetland community with many endangered and at-risk species was restored after being infested by invasive plants including common reed (*Phragmites australis*). In less than two decades, an ecosystem was restored, and decades of degradation were repaired. The most important lessons learned from both of these examples is that control of invasive plants and full restoration of sites requires consistent, strategic, and uncompromising management efforts. Many of NPS's restoration projects previously thought not viable can and will become success stories like these if this lesson is heeded.

Restoration

The IPMTs engage in the full range of restoration activities to assure that degraded sites are set on a trajectory toward increased native plant and animal biodiversity. Infrastructure to support these efforts is vital to successful restoration. The California IPMT funded Channel Islands National Park to rebuild its aging nursery complexes to support the restoration needs of the park. While controlling invasive plants is essential to restoring resilient ecosystems, high quality, locally grown native plant materials is equally important.

Other teams help with identification of site desired conditions and planning for and working to achieve those desired conditions. The Heartland Network IPMT is conducting an oak-hickory forest restoration project at Lincoln Boyhood National Memorial to correct changes that impede the natural fire regime by removing understory species that prefer higher moisture levels and by planting native oak and hickory saplings. The Mid-Atlantic IPMT has been engaging in native meadow restoration at Cedar Creek and Belle Grove National



Prevention, EDRR: North Coast and Cascade Network IPMT prepare for surveys on Ross Lake in Ross Lake National Recreation Area. NPS photo.

Restoration (cont.)

Historical Park to remove invasive plants, improve habitat for native wildlife and pollinators by increasing biodiversity and cover of native plant species, and increase visitor awareness of the importance of biodiversity for wildlife and pollinator habitat.

Invasive plant management is but one aspect of successful restoration. The IPMTs demonstrate flexibility and a wide range of expertise and support for restoration efforts.

Prevention, Early Detection and Rapid Response

Prevention and early detection and rapid response (EDRR) are the most effective means to control invasive species and the IPMTs use a range of tools to assist in both.

In 2022, the [Southwest IPMT](#) collaborated with Tucson Audubon Society to conduct Burned Area Emergency Response invasive plant surveys and treatment within the 1,771 acre Cerro Pelado Fire burned area at Bandelier National Monument and Valles Caldera National Preserve. This effort required flexibility to rapidly respond to prevent invasive plant species from establishing new populations within the fire scar. Ross Lake National Recreation Area and North Cascades National Park are home to unique wetlands and lakes that harbor high biodiversity. Infestations of invasive reed canarygrass (*Phalaris arundinacea*) threaten these vulnerable aquatic habitats. The [North Coast and Cascades Network IPMT](#) and the national park units with which they work partnered with the Skagit River Hydroelectric Project owner and operator and Parks Canada to map out the extent of reed canarygrass in tributaries to Ross Lake and quickly manage any outlying populations. Fortunately, excepting one wetland in a tributary to Ross Lake, the scouted creeks and watersheds remain free of this invasive menace. Other teams also conducted successful EDRR efforts. The [Northeast IPMT](#) discovered, and treated when possible, six new EDRR species in Delaware Water Gap National Recreation Area in 2022 including common reed (*Phragmites australis*). The [Northern Rocky Mountain IPMT](#) focused on EDRR species hoary alyssum (*Berteroa incana*), leafy spurge (*Euphorbia esula*), and musk thistle (*Carduus nutans*) at Florissant Fossil Beds National Monument, treating the several small infestations found by the team.

Documentation, treatment, and eventual eradication of EDRR species is vital to prevent the establishment and spread of species new to an area before they pose a serious threat to neighboring native plant communities.



Outreach and Youth Engagement: Klondike Gold Rush National Historic Park's IPMT working with volunteers and park staff to remove reed canarygrass during the weed pull day with the Skagway Recreation Summer Camp. NPS photo.

Outreach and Youth Engagement

The IPMTs engage youth through education and outreach and by working with youth conservation corps to broaden awareness of the threats posed by invasive species and mentor future stewards.

With support from the [Alaska IPMT](#), Klondike Gold Rush National Historic Park focused its outreach on grade-schoolers through activities that instill an awareness of invasive plants and the threats they pose. Park and park-based IPMT interns, in collaboration with the Skagway Traditional council, participated in two summer camp days through the Skagway Recreation Center. They opened the summer camp with a short informal talk then integrated invasive species awareness into planned activities via games and competitions. These efforts were aimed at nurturing Alaska's future stewards.

The well known saying "it takes a village" is not lost on the IPMTs. The [Northern Great Plains IPMT](#) has had a fruitful collaboration with is the Montana Conservation Corps, a nonprofit that inspires young people through hands-on conservation service to be leaders, stewards of the land, and engaged citizens who can improve their communities. The [Southeast Coast IPMT](#) conducts most of its field work with youth conservation corps interns while the [Gulf Coast IPMT](#) engages youth interns to develop resources to aid parks in their work to manage invasive species and restore the natural areas they steward. In FY 2022, This effort included posting 62 species strategies on the NPS Washington Office's Pest and Invasive Species Management internal online species strategy library. These strategies contain information on plant identification, phenology, control methods, and distribution maps. These partnerships provide an opportunity for corps members to build resource management skills and experience environmental stewardship firsthand.

Impacts of a Changing Climate

The impacts of climate change pose many challenges related to invasive plant management. Buck Island Reef National Monument is a 176-acre undeveloped tropical forested island two miles north of St. Croix, U.S. Virgin Islands. It is home to four species of threatened and endangered sea turtles. In September 2017, the park experienced two Category 5 hurricanes that felled trees and also stripped trees and shrubs of their leaves thus opening the forest canopy. Park staff began to observe a significant resurgence of invasive plants in these opened areas. For almost a decade prior to these storms, invasive plants had



Impacts of a Changing Climate: Contract crew treating Guinea grass (*Megathyrsus maximus*) at Buck Island Reef National Monument. NPS photo.

Impacts of a Changing Climate (cont.)

been 80% controlled in the National Monument. The monument is a logistically difficult place to work with necessary boat trips, limited facilities, and steep untrammelled terrain. However, the [Florida and Caribbean IPMT](#) provided funding for treatment which began in the spring of 2022. IPMT efforts address the consequences of a changing climate and teams and the national NPS IPP are engaged in the development of tools (e.g. the Invasive Species Habitat Tool - [INHABIT](#)) to aid in planning work with the impacts of climate change in mind.

Safety

The IPMTs continue exemplify safety in the field, rarely reporting lost time injuries in spite of the challenging conditions within which they work (i.e., working in remote areas over rugged terrain).

In FY 2022, only two lost time injuries were reported by IPMTs and these were for staff funded by the IPMTs but supervised by parks. Both injuries occurred in the field and were caused by terrain and physically demanding work. Mitigations included assessments of terrain and conditions and taking care and remaining alert to obstacles when working or walking to work sites.

However, some injuries occurred that required minor first aid responses and follow up mitigation measures such as tailgate safety debriefings and changes in operations. For example, IPMT staff incidents included aggravation of a previous wrist injury after using a pump-action backpack sprayer, exposure to poison oak, and some minor trips and falls. Teams addressed these issues through after action reviews and adding mitigation measures into the existing training program.

More vehicle related incidents occurred. Most of these were near misses or resulted in minor dings and dents. The IPMT Safety Committee has been reviewing existing, accessible online vehicle-related safety trainings with the goals of compiling a complete set of trainings that cover the IPMTs' needs and making recommendations. The Committee recognizes that online training is only one component of vehicle safety training. Behind the wheel training and resources like Job Hazard Analyses (JHAs) and vehicle inspection forms are also necessary.

Some time was lost due to exposure of IPMTs and partners to COVID-19. These incidents occurred both within and outside of the



Brian Lockwood, Shea Bruscia, and NPS Director Sams at Biscayne National Park. NPS photo.

Safety (cont.)

work environment. IPMTs developed and shared COVID-19 safety Standard Operating Procedures, protocols, JHAs, and operational practices.

IPMTs continue to provide stellar annual training to IPMT and park staff to prepare them for the hazards inherent in their work (e.g. truck and trailering, chainsaw operations, UTV training, defensive driving, CPR and wilderness first aid).

Summarized Data for 2025

Measure	Acres
Treated	x,xxx
Inventoried/Monitored	x,xxx
Gross Infested Area	x,xxx
Net Infested Area	x,xxx
Youth Engagement	
Total Number of Youth Participants and Youth Employees	1,028
Total Hours for Youth Participants and Youth Employees	144,757

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Alaska IPMT Annual Report: FY 2022



Kenai Fjords National Park's Invasive Plant Management (IPMT) Student Conservation Association (SCA) intern Morgan Valone, Youth Conservation Corps intern Ava Pullins, and IPMT Liaison Anna O'Brien treating dandelion (*Taraxacum officinale*) in the Outwash Plains below the Exit Glacier. NPS photo. Photo Caption. Credit (i.e., NPS photo).

Background

The Alaska Invasive Plant Management Team (AK IPMT) assists units of the National Park Service (NPS) throughout Alaska. These units cover more than 52 million acres of high-quality natural areas and wilderness, including coastal fjords, glacial valleys, tundra, and boreal forests. Most national parks in Alaska protect healthy, intact, native ecosystems, yet invasive plants are making their way into some of these nearly pristine areas.

The geography of Alaska makes invasive plant management difficult, requiring backcountry or air travel to reach many parks. Recreational use is widely dispersed with access by boat, backpacking, or planes. Remote airstrips, trails, cabins, and concessionaire activities can provide pathways for the introduction of invasive species into wilderness areas, where they are difficult to detect and manage. Therefore, the AK IPMT program relies heavily on information, knowledge, and participation from park staff.

The AK IPMT provided technical assistance to most of its partner parks during fiscal year (FY) 2022. The IPMT also placed interns in four partner parks, assisted parks with invasive plant surveys, and worked on several park directed projects. In addition to this assistance, the AK IPMT provided data management support to all parks doing invasive plant treatments or surveys.

Program Highlights

Alaska IPMT Reaches Out

In FY 2022, the AK IPMT participated in projects and education and outreach events with partner parks and other partners. Denali (DENA) and Katmai (KATM) National Park and Preserve, Kenai Fjords National Park (KEFJ), and Klondike Gold Rush National Historic Park (KLGO) all hosted volunteer events or education and outreach events that targeted the local communities and visitors. KEFJ and DENA focused on volunteer events for all ages. KATM staffed a booth at a festival with the US Fish and Wildlife Service (FWS). But, KLGO took a different approach.

KLGO focused its outreach on grade-schoolers through a range of activities intended to instill an awareness of invasive plants and the threat they pose to ecosystems. Park staff participated in and co-hosted activities in and around the park to educate youth about invasive species. For Junior Ranger Day, KLGO focused on educational take-home activities related to invasive species. Park interns, in collaboration with the Skagway Traditional council, participated in two summer camp days run through the Skagway Recreation Center. They opened the summer camp days with a short informal talk, then integrated invasive species awareness into the planned activity for the day via games and competitions and sent participants home with information about invasive plants. These efforts were aimed at nurturing Alaska's future stewards.



Denali National Park and Preserve (DENA) IPMT SCA Decker Sisk shows volunteers how to properly manually remove dandelion during DENA Dandelion Demolition volunteer day. NPS photo.



Klondike Gold Rush National Historic Park's IPMT SCA Olivia Varga, volunteers and park staff removing reed canarygrass (*Phalaris arundinacea*) during the invasive plant pull day with the Skagway Recreation Summer Camp. NPS photo.

Program Highlights (cont.)

Strengthening Partnerships

In addition to working with partner parks, the AK IPMT also focused on building and strengthening partnerships with groups like the Alaska Invasive Species Partnership, local Soil and Water Conservation Districts, other Federal Agencies, and state and private entities. The goals of these relationships are to improve treatment consistency, improve communication with others engaged in invasive species management and outreach, increase public education, and leverage the work of others. To achieve these goals, partners conducted a joint project in Yukon-Charlie Rivers National Preserve (YUCH). For this project, staff and interns from DENA, the IPMT liaison, staff from YUCH, and staff from the FWS traveled down the Yukon River scouting 24 river miles for and pulling white sweet-clover (*Melilotus albus*). The work resulted in the removal of approximately 15 pounds of white sweet-clover and strengthened the partnership among the parks and with the AK IPMT and FWS.

Summary of Accomplishments

While COVID-19 continued to have some impact in Alaska, for example there were no Student Conservation Association crews in FY 2022 because of hiring challenges during the pandemic, the AK IPMT and NPS staff and interns under the direction of the IPMT were able to survey and treat invasive plants within seven parks this year. Some partner parks participated in and hosted volunteer days while others increased their education and outreach capabilities and implemented prevention measures by adding boot brushes and educational signs in areas with high visitor traffic. The use of a range of virtual communication tools increases the AK IPMT's ability to build strong relationships with parks and partners. This increase in communication has a positive impact on the consistent and cross jurisdictional treatment of invasive plant species. Another positive change includes the AK IPMT's proactive development of financial agreements and partnerships to help ensure that the coming year is even more successful than FY 2022.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	7
Total Hours for Youth Participants and Youth Employees	5,040

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California IPMT Annual Report: FY 2022



Velvetgrass (*Holcus lanatus*) treatment sites along the Kern River in the Sequoia National Park wilderness. NPS photo.

Background

The California Invasive Plant Management Team (CA IPMT) serves 17 National Park Service (NPS) units in the California Floristic Province and southern Oregon. The region is noted as one of 25 global biodiversity hotspots. The CA IPMT is a consultative model of the IPMT program, assisting partner parks with all aspects of invasive plant management. It provides technical assistance, direct financial support, strategic investments in shared capacity, and expanded coordination between parks and other state and federal agencies, partners, and non-governmental organizations. The CA IPMT model was developed to alleviate travel costs and overhead of a standing crew, redirecting those funds to partner parks. The model seeks to augment local invasive plant management capacity and enable partners to leverage local resources to successfully build and maintain invasive plant programs at parks across the region.

CA IPMT is working to support redundancy and resiliency in systems, both within the agency and the invaded vegetation communities targeted for complete restoration. The team functions as community organizer, technical support, and strategic planner. The focus is on maintaining persistent treatment across the parks, while developing a more reliable native plant materials supply to support restoration efforts. Goals also include building early detection and rapid response (EDRR) capacity and collaborating with NPS Inventory and Monitoring Networks (I&M) and other agencies to train the next generation of botanists to expand inventory and mapping efforts. “The more we row together, the further we go together.”

Program Highlights

Protecting wilderness resources in Sequoia National Park

Working 20 miles into the Sequoia National Park wilderness, one can be forgiven for a certain amount of bodily aches and pains. It is tiring work, but persistence in invasive plant treatments, in spite of difficulties, yields positive results. Challenging both logistically and physically, invasive plant management efforts in the wilderness at the headwaters of the Kern River has slowly diminished an infestation of velvetgrass (*Holcus lanatus*) from nearly 300,000 plants to under 5,000 over the last 14 years. The COVID-19 pandemic with its associated labor issues and the Rattlesnake fire in 2020 threatened to derail efforts to control the velvetgrass infestation which is known to respond positively to fire and rebound in the absence of treatment. Persistence has proven the key to successful management of this species, and IPMT funded treatments in 2022 allowed the park to relocate all 136 known velvetgrass sites and visit them multiple times, effectively eliminating any seed drop and further reducing the population at a critical moment in its treatment history.

Protecting the 768,222 acre wilderness (one of the largest in the lower 48 states) from invasive plants is a long-standing commitment of the park. As control of species advances, more effort is required to make additional progress, and in this case the final miles are proving difficult. Consistent treatments have so far protected a vulnerable and important place from degradation and lost biodiversity, but resistance to change is a long game.



The Scorpion Nursery on Santa Cruz Island, Channel Islands National Park. NPS photo.

Program Highlights (cont.)

Growing restoration plant materials at Channel Islands National Park

Working on islands poses a unique set of challenges. At Channel Islands National Park (CHIS), growing high quality restoration plant materials on the islands is crucial for maintaining the biodiversity of the park by preventing inadvertent introductions of non-native species through the nursery trade. The park maintains a network of nurseries on each of the five islands to support restoration work in these highly altered ecosystems. CHIS is starting to rebuild the aging nursery complexes to support the restoration needs of the park.

Nurseries on Santa Rosa and Santa Cruz Islands were supported by investments that began a multi-year rebuilding process. CA IPMT and the park work together to identify additional funding to increase nursery production capacity and get ahead of restoration needs. While controlling invasive plant populations is an indispensable step to restoring resilient ecosystems, high quality, locally grown native plant materials is proving equally important as demonstrated by the park’s restoration of the unique biodiversity of the coastal sage scrub after control of the highly invasive ice plant (*Carpobrotus edulis*).

Summary of Accomplishments

This year marked the first full year since 2019 that the CA IPMT had a liaison at the helm. The charter was updated and three parks from the Klamath I&M Network were added to parks served by the team. The CA IPMT invested in data management and experimented with National Invasive Species Management Information System (NISIMS) data entry through ArcGIS Online. This reduced the burden on parks that lack GIS expertise by funding regional technical support. The team received additional funding to support seed collection and seed production in 14 parks and additional Wildfire Risk Reduction funds to support treatment in six others. Other accomplishments include the development of important research and science communication agreements with the California Invasive Plant Council and the University of California, Davis and expanded efforts to coordinate between fire operations and invasive plant managers. By adopting the CA State Parks framework for EDRR methods, the CA IPMT is now poised to implement a data collection effort across every park in the network in 2023.



Volunteers at the Santa Rosa Island Nursery, rolling wattles for cloud forest restoration. NPS photo.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	108
Total Hours for Youth Participants and Youth Employees	4,792

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Florida/Caribbean IPMT Annual Report: FY 2022



Prairie along the Florida National Scenic Trail in Big Cypress National Preserve. NPS photo

Background

Invasive plants have a destructive effect on native plant communities by reducing native plant diversity and altering ecological processes. The Florida and Caribbean Invasive Plant Management Team (FLC IPMT) supports 16 National Park Service units by expanding existing invasive plant control efforts including inventory and monitoring, control, education, restoration, and research. The FLC IPMT contracts crews for large eradication projects within park units while the team, parks, and volunteers carry out smaller projects. The temperate, tropical, and sub-tropical climate zones within the 2.68 million acres of park lands supported by the FLC IPMT favor invasive plants. More than 400,000 of these acres are infested with invasive species. Some common species include Brazilian peppertree (*Schinus terebinthifolius*), Old World climbing fern (*Lygodium microphyllum*), Australian pine (*Casuarina equisetifolia*), guineagrass (*Megathyrsus maximus*), and punktree (*Melaleuca quinquenervia*).

The FLC IPMT holds an annual steering committee meeting to review and approve the team's strategic direction and financial plan, rank projects, ensure the team provides information relevant to management, and develop a treatment schedule for the fiscal year. The ranking committee consists of representatives from the Interior Region 2 - South Atlantic Gulf IPMT Program, US Army Corps of Engineers, and Florida Fish and Wildlife Conservation Commission (FWC). These meetings are held at a different park unit each year.

Program Highlights

Everglades National Park: East Everglades Addition Area Retreatment

FLC IPMT awarded Everglades National Park \$100,000 to re-treat the East Everglades Addition area, which was acquired in 1989 and is heavily infested with invasive plants. This area is primarily composed of freshwater marl prairie and freshwater slough with scattered hardwood hammock tree islands. This habitat is critical for many threatened and endangered species including the Wood Stork (*Mycteria americana*), Snail Kite (*Rostrhamus sociabilis*), and Florida Bonneted Bat (*Eumops floridanus*).

Everglades Exotic Vegetation Management staff chose a "surround and eliminate" technique due to the high volume of seed sources entering the park from outside of the park's eastern boundary. Treating west to east removes smaller infestations in the west, containing the higher density of invasive plants to the eastern boundary where the park can focus more intensive efforts.

During a reconnaissance flight prior to treatment, park staff surveyed the locations and density of invasive plants within the project area. This data guided the crews on where to focus their efforts for maximum efficiency. Crews covered 1,219 acres, treating 224 canopy acres of some of the most invasive species in south Florida, including Australian pine, Brazilian peppertree, and punktree. Park staff will continuously monitor and retreat this area when necessary.



Contract crews treating punktree (*Melaleuca quinquenervia*) in the East Everglades Addition area of Everglades National Park. Photographer, Laroque.



Contract crew treating guineagrass (*Megathyrsus maximus*) at Buck Island Reef National Monument. NPS photo.

Program Highlights (cont.)

Buck Island Reef National Monument Island-wide Retreatment

Buck Island Reef National Monument (BUIS), established in 1961, is a 176-acre undeveloped tropical forested island two miles north of St. Croix, U.S. Virgin Islands. It is home to four species of threatened and endangered sea turtles.

In September 2017, BUIS experienced two Category 5 hurricanes that felled trees and also stripped trees and shrubs of their leaves thus opening the forest canopy. Park staff began to observe a significant resurgence of invasive plants in these opened areas including guineagrass, white lead tree (*Leucaena leucocephala*), seaside mahoe (*Thespesia populnea*), and ginger Thomas (*Tecoma stans*). For almost a decade prior to these storms, invasive plants had been 80% controlled in the National Monument. BUIS is a logistically difficult place to work with necessary boat trips, limited facilities, and steep untrammeled terrain. However, a contract was awarded through FLC IPMT funds and treatment of these invasive plants began in the spring of 2022.

Summary of Accomplishments

In February 2022, the FLC IPMT held its ranking meeting virtually for the second year in a row due to COVID-19 restrictions. Of the seven proposals presented by park representatives, six were approved for funding. The FWC contributed additional funding for projects in Big Cypress National Preserve (BICY), Canaveral National Seashore, and Everglades National Park.

The FLC IPMT assisted the South Florida/Caribbean Inventory and Monitoring Network with their Corridors of Invasiveness project at BICY. Early detection, rapid response surveys did not find any new species. During surveys, IPMT and Network staff mapped previously treated infestations to compare infestation density and extent to previous years.

Brian Lockwood successfully completed a 120 day detail as the regional Terrestrial Branch Chief. The position supervises the regional IPMT liaisons, the Wildlife Biologist, and the Natural Sounds and Night Skies Biologist.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	1
Total Hours for Youth Participants and Youth Employees	2,080

More Information

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Great Lakes IPMT Annual Report: FY 2022



Restored wetland panne at Indiana Dunes National Park's West Beach, 2022. NPS photo

Background

The Great Lakes Invasive Plant Management Team (GL IPMT) provides support to twelve national park units across four states in the western Great Lakes Region. From the dunes along the shores of Lake Michigan, west to the scenic riverways of Wisconsin and Minnesota, and north to the boreal forests along the Canadian border, this is an area with diverse aquatic and terrestrial ecosystems. The region contains multiple rare, significant, and globally-threatened ecosystems. It is also home to an international biosphere reserve.

Geographical and environmental conditions have mostly limited invasive species to those of cultural origin (ornamental and intentionally planted species). However, visitor use and necessary maintenance activities have introduced other invasive species.

The GL IPMT balances its activity to meet two vastly different needs: (1) long-term, large-scale control and restoration, and (2) early detection and eradication of nascent populations. To meet those needs, the team provides parks with focused regional expertise and skilled control work. Discipline-specific knowledge and a network of partners allow the team to anticipate threats to individual parks and implement site-specific management strategies. As a shared regional resource, GL IPMT either augments existing management efforts at parks or provides the parks with management options.

Program Highlights

Making a Difference at Indiana Dunes National Park

Interdunal wetlands or pannes located at Indiana Dunes National Park are considered globally imperiled and at risk of extinction. They are the park's number one resource priority due to their rarity and overall conservation value. West Beach, one of the park's most popular destinations, contains several of these rare pannes. Since 2005, the GL IPMT has helped the park remove purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), invasive cattails (*Typha spp.*), and invasive thistles (*Cirsium spp.*) from the wetlands. Many of the pannes had small populations of invasive plants with remnant native vegetation. However, one six-acre panne was completely overrun with invasive plants.

To many, the infested site would have seemed like a lost cause. Nevertheless, in 2009 the GL IPMT began initial control work. By 2015 the park was able to start restoring and revegetating the panne. Today, 14 years after work began, the site is once again an example of a rare, high-quality wetland ecosystem. This project provides a prime example of how Invasive Plant Management Teams' successful partnerships with parks are making a difference to restore and protect rare, significant, and valued resources that might otherwise be lost. After years of hard work and perseverance, resource managers from the GL IPMT and the park were deeply moved by the result of the project. This success reinforces the fact that the GL IPMT is making a difference.



Highly degraded wetland panne at Indiana Dunes National Park's West Beach prior to control work that was initiated in 2009. NPS photo.



Conservation Corp of MN and IA Individual Placement Member Renea McNemee targeting invasive plants before road construction begins at the Grand Portage National Monument. NPS photo.

Program Highlights (cont.)

An Ounce of Prevention at the Grand Portage National Monument

Construction and maintenance activities are needed to keep infrastructure safe and reliable. Unfortunately, they often lead to introductions of invasive plants. Such introductions threaten natural and cultural resources and can jeopardize the success of the construction project. Targeting invasive plants before they become established is an easier and more cost-effective option to limiting the spread of invasive plants.

Necessary road construction and bridge replacement at the Grand Portage National Monument (GPRO) have the potential to introduce invasive plants and negatively affect park resources, including a culturally-sensitive sweet grass meadow. The GL IPMT, GPRO staff, and Denver Service Center partnered to plan prevention and mitigation activities, and to develop best management practices (BMPs) for construction. With funding from the Federal Highways Administration, the team began control of current populations of invasives plants to limit their spread during construction. Once construction begins, the BMPs for equipment cleaning, earth moving, and fill will be implemented. The GL IPMT will conduct monitoring, carry out post-construction control work, and assist with native plant revegetation to ensure resources remain intact.

Summary of Accomplishments

In 2022 the GL IPMT completed its longest field season ever and worked in all 12 GL IPMT partner park units. High demand for training, qualified chainsaw operators, and help with invasive plant projects that were delayed due to COVID-19 added to the workload. For their work on invasive plants in Minnesota, the team was nominated for the Carol Mortensen Award given through the Minnesota Invasive Species Advisory Council (MISAC).

In February, Dan Jorgensen joined the GL IPMT as the new field crew leader. Dan began his career as a youth Conservation Corps member with the GL IPMT in 2018, then worked with the team for several years as a seasonal Biological Science Technician. The team's involvement with Youth Conservation Corps has led to better retention of talented people and a more highly-trained workforce.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	16
Total Hours for Youth Participants and Youth Employees	5,620

More Information

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Gulf Coast IPMT Annual Report: FY 2022



The work of the Gulf Coast Invasive Plant Management Team (GC IPMT) protects important natural habitats such as the island dunes of Horn Island at Gulf Islands National Seashore in Florida. NPS photo.

Background

The Gulf Coast Invasive Plant Management Team (GC IPMT) supports eight National Park Service (NPS) units within Interior Regions 2, 4, and 6. In east Texas, the GC IPMT provides invasive plant management services for the culturally significant salt prairie and brushland ecosystems of Palo Alto Battlefield National Historic Park, bird habitat of Padre Island National Seashore on the undeveloped barrier island and dredge material islands, the cultural landscapes surrounding the four mission churches of San Antonio Missions National Historic Park, and the ecologically important floodplain and wetland habitats of Big Thicket National Preserve. East to Louisiana, Mississippi, Alabama, and Tennessee, the GC IPMT aids in the protection of the Barataria wetlands ecosystem of Jean Lafitte National Historical Park and Preserve, the Civil War battlefield cultural landscape and surrounding natural areas at Vicksburg National Military Park, portions of seven ecoregions along Natchez Trace Parkway, and barrier islands including federally designated wilderness at Gulf Islands National Seashore.

The GC IPMT implements invasive plant control work across all partner parks through contracts and direct assistance. Additionally, the team has relied upon partnerships to identify and geospatially map priority plant infestations within the parks. The GC IPMT liaison works directly with park management to address management priorities and oversees contracts and cooperative task agreements, and the regional IPMT data manager provides data management support.

Program Highlights

New Park Reference Documents

In 2022, the GC IPMT and youth interns continued to develop new reference materials to help park staff identify best management strategies for controlling invasive plant species. This effort included posting 62 species-specific documents within the NPS Washington Office's Pest and Invasive Species Management internal online species strategy library. Each species strategy contains information on plant identification, phenology, and control methods. This year the team added distribution maps to all previously posted species strategies and began incorporating these into new documents. Parks often lack the capacity and expertise to gather this information. Species strategies remove this burden from park staff by gathering important information, including references, into one document posted on an accessible site.

The GC IPMT also finalized and internally distributed a regional biological control reference guide that parks can use as a starting point when planning to use biocontrol agents to manage invasive species. The guide includes information for completing Pesticide Use Proposals (PUPS) and a spreadsheet listing over 200 approved or potential biological control agents. These efforts demonstrate the GC IPMT's commitment to provide partner parks with the most effective and efficient treatment recommendations in accordance with federal and state laws, and agency policy.



The work of the Gulf Coast IPMT protects species such as longleaf pine (*Pinus palustris*) and golden colicroot (*Aletris aurea*) within the wetland pine savanna of Big Thicket National Preserve in Texas. NPS photo.



Southeast Coast IPMT field crew leader and interns from Southeast Coast and Gulf Coast IPMTs at Chattahoochee River National Recreation Area in Georgia. NPS photo.

Program Highlights (cont.)

Non-native Plant Treatments for Three Gulf Coast Parks

The fiscal year (FY) field season started during April 2022 with surveys and treatments on the Barataria Preserve unit of Jean Lafitte National Historical Park and Preserve in Louisiana. Later during the year, the team funded completion of surveys and treatments at Natchez Trace Parkway and Vicksburg National Military Park in Mississippi.

Assisting Southeast Coast IPMT

The GC IPMT intern assisted the Southeast Coast IPMT in treatments on Chattahoochee National River and Recreation Area in Georgia during September 2022. Though the teams focused primarily on treating an approximately five acre Chinese wisteria (*Wisteria sinensis*) infestation, they treated six other invasive species during the field event, including autumn olive (*Elaeagnus umbellata*), thorny olive (*Elaeagnus pungens*), Chinese lespedeza (*Lespedeza cuneata*), Chinese privet (*Ligustrum sinense*), and Japanese honeysuckle (*Lonicera japonica*). The IPMTs in Interior Region 2 look forward to partnering together in support of parks. All four regional IPMTs, including Southeast and Florida/Caribbean IPMTs, plan to team up during early fiscal year 2023 for treatments at Timucuan Ecological and Historical Preserve in Florida.

Summary of Accomplishments

During FY 2022, the GC IPMT assisted in treating at three partner parks, including the Barataria unit of Jean Lafitte National Historical Park and Preserve, natural and culturally important areas of Vicksburg National Military Park, and the first 67 miles along Natchez Trace Parkway, moving northward from Natchez, Mississippi. The team’s liaison coordinated over 2,450 hours of surveys and treatments. The team treated five target species at these parks including camphor tree (*Cinnamomum camphora*), Chinese privet, Chinese tallowtree (*Triadica sebifera*), kudzu (*Pueraria montana*), and trifoliate orange (*Poncirus trifoliata*). In support of park invasive plant management needs, the team also finalized over four dozen reference documents during the year and assisted the Southeast Coast IPMT with field treatments.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	4
Total Hours for Youth Participants and Youth Employees	1,890

More Information

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Heartland Network IPMT Annual Report: FY 2022



Heartland IPMT, Conservation Corps of Iowa and the Watershed Conservation Corps working together to manage invasive shrubs. NPS photo.

Background

The Heartland Network Invasive Plant Management Team (HTLN IPMT) serves 16 national parks in eight states of the Midwest and Mid-south. The parks include an array of plant communities including unplowed and restored tallgrass prairie in the Flint Hills of Kansas and Sioux quartzite outcrops in Minnesota; eastern deciduous forests from northeastern Iowa and northeastern Ohio to southwest Missouri and southern Indiana; Midwestern riparian woodlands; mixed shortleaf pine-oak-hickory forests in the Ozark and Ouachita Mountains; and a variety of wetlands from southeastern cypress tupelo swamps to emergent wetlands along tributaries to Lake Erie. The majority of these parks commemorate important historical events, locations, people, and, cultural practices, which requires integrating invasive plant management into cultural and natural landscapes.

The HTLN IPMT exists to serve park managers within its partner park network and the resources that they are responsible for protecting. The IPMT follows the National Park Service's constructive model of identifying "prudent and feasible" invasive plant control projects. Because there is, unfortunately, no single litmus test to assess the prudence or feasibility of a project, the IPMT works to ensure the connection of invasive plant management and restoration projects with larger park vegetation management goals; to assess the long-term costs of projects; and to rely on evidence-based scientific data to support projects.

Program Highlights

Lincoln Boyhood National Memorial Old Growth Restoration Project

The HTLN IPMT continued its oak-hickory forest restoration project at Lincoln Boyhood National Memorial. Natural regeneration of canopy species was poor in areas of the park in part due to exclusion of fire, leading to the replacement of fire tolerant species (i.e. oaks, hickories) with fire-sensitive species (mesophication). As this process continued, compositional and structural changes enabled a high abundance of sugar maple (*Acer saccharum*) to establish in the understory, further inhibiting oak-hickory establishment.

Beginning in 2017, the HTLN IPMT began the process of understory removal and stump herbicide application of species that prefer higher moisture levels, tree planting, and site maintenance for 12 acres on Cemetery Hill, where Nancy Hanks (Abraham Lincoln's mother) is buried. The IPMT selected three species for the planting: white oak (*Quercus alba*), black oak (*Quercus velutina*), and shagbark hickory (*Carya ovata*). Each of these tree species are dominant in the project area overstory and were present in the early 1800's landscape, which is the reference condition for this project.

In March 2022, the HTLN IPMT planted 1,900 trees across five acres. An additional two acres of invasive understory was also cleared and stump treated for future planting. To date, over 4,900 trees have been planted to assist the trajectory of this forest returning to historic conditions.



Watershed Conservation Corps members managing invasive trees within old-growth forests at Hot Springs National Park. NPS photo..

Program Highlights (cont.)

Hot Springs National Park Old-Growth Forest Project

The HTLN IPMT is working to preserve the historic, natural conditions of two upland forests within Hot Springs National Park. Old-growth stands with trees as old as 300 years are significant resources for the park and the Ouachita Mountain ecoregion. After an early season prescription burn in 2016, latent princess tree (*Paulownia tomentosa*) seed germinated in areas where it previously had been absent. Unfortunately, princess tree can disseminate seeds up to 40 miles. Left unmanaged this fast-growing tree (e.g. up to 15 ft/year) could quickly displace the natural regeneration of pine, oak, and hickory needed to maintain and preserve these old forests.

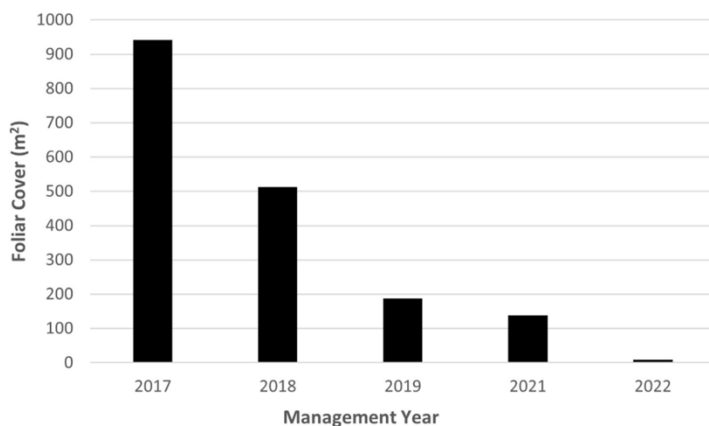
The Ozark Highlands Fire Group brought this project to the HTLN IPMT's attention during routine post-fire monitoring in 2017. Since then, the IPMT has conducted cut-stump treatments annually except for in 2020. Based on treatment effectiveness data collected during management (see chart above right), the princess tree infestation decreased by 99.1% after five treatments over six years. Although it is tempting to declare this project successful and move on to others, future prescribed burns on the site may yield similar results as the 2016 prescribed burn. The HTLN IPMT continues to monitor, manage, and protect 220 acres of old-growth forests across the park.

Summary of Accomplishments

The fiscal year (FY) 2022 season was unusually busy as many HTLN IPMT parks and partners returned to normal operations. IPMT work crews completed 16 projects across six states. While most of these projects entailed re-treatments, projects at Buffalo National River and Hot Springs National Park expanded into new areas by 87 and 110 acres, respectively.

Currently, the HTLN IPMT portfolio of projects consists of 24 projects spanning over 3,204 acres. In FY 2022 the IPMT continued work on projects that covered approximately 1,252 acres. Using treatment data, these projects are continually evaluated to determine what extent management actions contribute to meeting desired conditions. The IPMT also continues to strengthen its on-going relationships with the Conservation Corps of Iowa and the Watershed Conservation Corps.

Princess tree
Paulownia tomentosa



Treatment effectiveness data for princess tree (*Paulownia tomentosa*) managed in old-growth forests at Hot Springs National Park.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	25
Total Hours for Youth Participants and Youth Employees	20,580

More Information

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Lake Mead IPMT Annual Report: FY 2022



LAKE IPMT member surveying and treating puncture vine (*Tribulus terrestris*) at the Clark County, NV Boulder City Conservation Easement, a long term local partner of the team. NPS photo.

Background

The Lake Mead Invasive Plant Management Team (LAKE IPMT) was established in 1996 serving as the prototype model for what eventually developed into the National Park Service (NPS) IPMT program. The IPMT has conducted on-the-ground projects with field crews on land managed by the NPS, the Bureau of Land Management (BLM), US Fish and Wildlife Service (FWS) Refuges, US Forest Service, Bureau of Indian Affairs Units, Bureau of Reclamation (Reclamation), Marine Corps Yuma Air Station, and sites managed by state and local entities.

LAKE IPMT's three primary goals are to 1) provide expertise in the control of invasive plants in priority areas to preserve, restore, and maintain native plant communities, 2) professionalize invasive plant management within the NPS and partner organizations by developing staff expertise, and 3) improve government efficiencies through interagency cooperation by developing partnerships to effectively manage invasive plant species on a landscape scale. Partnerships are integral to the team's success, annually leveraging each NPS base dollar with three additional dollars. Partnerships facilitate invasive plant management across boundaries and increase the LAKE IPMT's capacity to serve NPS units. Annually, partnership funds total over a million dollars and support up to a 20-person crew in the field throughout the year. The LAKE IPMT's geographic locality and many partnerships in the regional area enable year-round operations that maximize efficiency and the ability to control a diversity of invasive plant species.

Program Highlights

A Year with the Lake Mead IPMT

Due to its geographic location, variable climate, and elevational gradients, the LAKE IPMT conducts field projects year-round, typically dividing our 12-20 person crew to work on 2-3 different projects each week, serving multiple partners simultaneously. Work is often remote, sometimes requiring backcountry camping and long hikes to project sites.

Fall: Fall is the ideal time to treat perennial rhizomatous species such as camelthorn (*Alhagi maurorum*), leafy spurge (*Euphorbia esula*), and Russian knapweed (*Rhaponticum repens*) due to herbicide translocation to extensive root systems. The IPMT's fall 2022 work included treating Russian knapweed at Arches National Park in the remote upper salt wash that required many miles of hiking to cover the drainages, leafy spurge control at Broiliar Park, which is a remote meadow within the Coconino National Forest (NF), buffelgrass (*Cenchrus ciliaris*) at Organ Pipe Cactus National Monument, and tamarisk (*Tamarix spp.*) and Russian olive (*Elaeagnus angustifolia*) control projects at Canyonlands and Capital Reef (CARE) National Parks. The crew also made multiple trips to control camelthorn along seven miles of the lower Virgin River in Nevada partnering with the BLM, Clark County, and Lake Mead National Recreation Area (LAKE). Treatment during the winter is an effective means of managing these perennial species as well as avoiding the searingly hot summer temperatures within this region.



LAKE IPMT member treating invasive annual brome grasses and Russian thistle along the Pa'rus Trail at Zion National Park. NPS photo.

Program Highlights (cont.)

A Year with the Lake Mead IPMT (cont.)

Winter: From December through March the LAKE IPMT transitions to lower elevation projects including invasive plant control along the lower Colorado River from LAKE to the Mexico border. Winter dormancy is ideal for controlling tamarisk resprouts such as those along the Virgin River after mastication of dense tamarisk forests as part of a restoration process for the BLM and Clark County, Nevada. The IPMT also conducted tamarisk control at springs within LAKE and within the BLM Gold Butte National Monument. As part of a long term project at Mojave National Preserve (MOJA), the team is keeping Sahara mustard (*Brassica tournefortii*) out of the Kelso Dunes and from spreading throughout the park. The LAKE IPMT protects valuable habitats by controlling these species.

Spring: Spring work includes transplanting trees and shrubs at revegetation sites, treatment work, hiring staff, and conducting training. The LAKE IPMT made multiple trips to Joshua Tree National Park (JOTR) and MOJA to reduce hazardous fuel and conduct post wildfire rehabilitation by applying soil residual herbicides to control invasive annual brome grasses (*Bromus spp.*). Fountain grass (*Cenchrus purpurascens*) is also a focus of the team in remote and challenging terrain at JOTR and other locations during spring green up. In 2022, the IPMT added a new partner, the Maricopa County Parks in Arizona at Spur Cross Ranch Conservation Area. Rounding out spring field work, the team controlled Russian olive trees at CARE and Russian thistle (*Salsola tragus*) at BLM Ridgecrest and made multiple trips to Coconino NF, Spring Mountains National Recreation Area, and Zion National Park for early season invasive plant control.

Summer: From June through September the LAKE IPMT supports higher elevation partners like Great Basin and Bryce Canyon National Parks and several BLM Districts throughout NV. The team also conducts year round invasive plant control and revegetation at the Clark County Wetlands Park and Nature Preserve which has been a partner for 23 years.

One Year Ends and Another Begins: The LAKE IPMT demonstrates resourcefulness and flexibility through its work with many partners, year-round treatment schedule, and expertise in working in remote locations that are challenging to reach. The team provides excellent service to its partner parks and non-NPS partners resulting in a watershed approach to invasive species management and restoration.



LAKE IPMT member Caleb Dankle treating multiple invasive grass and forb species along a trail at Spur Cross Ranch Conservation Area for new partner Maricopa County, AZ. NPS photo.

Summary of Accomplishments

In fiscal year 2022, the LAKE IPMT served nine of its 17 partner parks, worked with five non-NPS partners, treated 10 species of invasive plants, and conducted other restoration efforts. The liaison hired seven new permanent field crew members. Crew leader Andy Pigg left the team in April after eight years of service to the LAKE IPMT, taking a promotion with partner Coconino NF.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	15
Total Hours for Youth Participants and Youth Employees	27,040

More Information

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Mid-Atlantic IPMT Annual Report: FY 2022



View of the Blue Ridge Mountains at Shenandoah National Park. NPS photo.

Background

The Mid-Atlantic Invasive Plant Management Team (MA IPMT), stationed at Shenandoah National Park (SHEN), began in 1999 as the Virginia Invasive Vegetation Management Team (VIVMT). The VIVMT supported nine National Park units located in Virginia. In 2003, to meet a growing need for invasive plant management, the MA IPMT was established along with six other teams. The team now provides invasive plant management support to 21 National Park Service units in Maryland, Pennsylvania, Virginia, and West Virginia. The parks served by the team range in size from 47 acres at Fort McHenry National Monument and Historic Site to over 193,000 acres at SHEN and include wilderness, natural areas, and suburban and urban environments in the Appalachian Mountains, Piedmont and Coastal Plain ecoregions.

The MA IPMT uses integrated pest management (IPM) strategies and best management practices to control invasive plants safely, effectively, and efficiently, to promote human and environmental health, and to protect valuable resources within the parks. The team works with each park to help achieve their long-term natural resource management goals and to act quickly when early detection and rapid response are required. These are accomplished through yearly visits for invasive plant control and maintenance, advising and providing technical assistance on vegetation management and restoration, and providing training to park staff and volunteers throughout the year.

Program Highlights

Cedar Creek and Belle Grove National Historical Park Meadow Restoration

After years of planning and preparation, the MA IPMT, in cooperation with Cedar Creek and Belle Grove National Historical Park (CEBE), implemented a meadow restoration project funded by a regional block grant to work towards three goals. They are to: 1) reduce the occurrence and density of invasive plants such as tall fescue (*Schedonorus arundinaceus*) and Chinese lespedeza (*Lespedeza cuneata*), 2) improve habitat for native wildlife and pollinators by increasing biodiversity and cover of native plant species, and 3) increase visitor awareness of the importance of biodiversity for wildlife and pollinator habitat.

To work towards the first two of these goals, the team chemically and mechanically treated invasive plants, and planted six native grass species and 15 native forb species on twenty acres, with plans to plant an additional 15 native forb species next year. The team then conducted vegetation monitoring to evaluate treatment effectiveness. Preliminary data analyses showed progress towards the project goals, with treated areas containing over twice as many species, greater cover of native species, and lower cover of invasive species than untreated areas. Additional treatments will continue for problematic species such as tall fescue and lespedeza, and monitoring will continue for three to five years to evaluate further progress towards the first two project goals.



The erosive power of water shaped the unique, flood-adapted plant communities at New River Gorge National Park. NPS photo.

Program Highlights (cont.)

Appalachian Flatrock Riverside Community Habitat Improvement

The Appalachian Riverside Flatrock Community is a unique ecosystem found along high-energy Appalachian rivers and is home to several plant species that are found exclusively in these ecosystems. The landscape was shaped by periodic severe flooding events that stripped soil from flat sandstone, creating a harsh environment that limits plant establishment, growth, and diversity. At New River Gorge National Park and Preserve (NERI), a reduction of intense floods due to human activity, such as upstream dams, has allowed soils to build up, creating conditions conducive to invasive and woody plant establishment and growth. These species threaten to displace the native plants that evolved in this ecosystem.

The MA IPMT and NERI staff collaborated to improve habitat for endemic species by treating invasive plants such as wineberry (*Rubus phoenicolasius*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), and Chinese privet (*Ligustrum sinense*). The removal of these plants creates room for native plants to expand, however, treatment effects will likely be temporary in the absence of periodic, intense scouring floods. Invasive plant removal and habitat improvement efforts will be ongoing to help maintain these sensitive plant communities.

Summary of Accomplishments

The MA IPMT completed the fifth year of treatment of the highly invasive wavyleaf basketgrass (*Oplismenus undulatifolius*) at the Elkton Community Center in Elkton, VA. The team worked with the Blue Ridge Partnership for Regional Invasive Species Management (BLPRISM) to control wavyleaf basketgrass growing along a network of multipurpose trails to reduce its spread to other areas of the community, Shenandoah National Park, and beyond. The team treated thirty or more acres of wavyleaf basketgrass in each of the five years. At the conclusion of the 2022 treatments, the wavyleaf basketgrass density was reduced to less than one percent of the original density. Yearly maintenance will be necessary to address seed germination from the remaining seed bank. BLPRISM will deploy volunteers or youth conservation corps to complete future work.



Mid-Atlantic IPMT staff members survey an area planted with native grasses and forbs at Cedar Creek and Belle Grove National Historical Park. NPS photo.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	8
Total Hours for Youth Participants and Youth Employees	3,300

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National Capital Region IPMT Annual Report: FY 2022



An incredible group of volunteers and local partners after an invasive plant removal event along Anacostia River in National Capital Parks-East in Washington, D.C. NPS photo.

Background

The National Capital Region Invasive Plant Management Team (NCR IPMT) supports National Park Service (NPS) units from the center of the District of Columbia to the foothills of the Appalachian Mountains. In addition to National Capital Region parks, the NCR IPMT assists non-NPS partners: the US Fish and Wildlife Service's National Conservation Training Center and the Virginia Department of Conservation and Recreation's Crow's Nest Natural Area Preserve.

The National Capital Region Invasive Plant Management Team:

- 1) Preserves habitats implementing early detection and rapid response framework,
- 2) Controls invasive plants impacting ecologically sensitive areas,
- 3) Restores native habitats by removing invasive plants and reestablishing native plants and natural processes,
- 4) Prevents the spread of invasive species through training and careful stewardship of tools and equipment, and
- 5) Works closely with partner parks and agencies to inventory and monitor invasive plants, train staff and volunteers, implement treatment and restoration efforts, and share resources and information.

The NCR IPMT serves NPS and partner units located in Virginia, Maryland, West Virginia, and the District of Columbia (DC).

Program Highlights

Community Volunteer Ambassador Leads Efforts to Expand Partnerships and Community Stewardship

In 2022, NCR IPMT built connections to local communities by fostering relationships with partner organizations through volunteer service projects. To enhance the team's capacity in this endeavor, the NCR IPMT hired its first Community Volunteer Ambassador (CVA) to serve as the point person for volunteer invasive plant removal projects around the Washington, DC area. The CVA internship program is possible through a youth partnership with Conservation Legacy, an organization that focuses on local impact, engaging youth, young adults, and veterans in conservation and service programs.

With support from the NCR IPMT, the CVA organized and conducted 37 volunteer events at NPS sites, including multiple locations in National Capital Parks-East and George Washington Memorial Parkway. Additionally, the CVA aided local partners with early detection and rapid response efforts, including the removal of two horned water chestnut (*Trapa natans*) plants, and fostered relationships with new partner groups such as Accokeek Foundation, Friends of Anacostia Park, and Ward 8 Woods.

The leadership from the CVA allowed NCR IPMT to engage with 670 people who contributed 2,115 hours of volunteer service. By conducting these projects in historically underserved communities these outreach efforts contributed to the NPS's goal of engaging more diverse and inclusive audiences.



English ivy (*Hedera helix*) threatens canopy trees at Shepherd Parkway in National Capital Parks-East in Washington, D.C. NPS photo.

Program Highlights (cont.)

Shepherd Parkway Project

Road construction and the disturbance that comes with it offers opportunities for invasive vegetation to thrive. Mitigating that disturbance ensures that negative impacts from the potential invasion do not spread into neighboring natural areas. National Capital Parks-East recognized this dynamic when they sought the help of NCR IPMT to offset negative impacts of a construction project adjacent to Shepherd Parkway.

After completion of the construction project, the team removed invasive vines to protect canopy trees, cut down invasive shrubs from the understory, and performed basal bark applications to control tree-of-heaven (*Ailanthus altissima*) as a prevention tool against a potential spotted lanternfly (*Lycorma delicatula*) invasion. This project also resulted in detection of an uncommon species, the invasive cutleaf blackberry (*Rubus laciniatus*). Prior to this project, cutleaf blackberry was only observed once within NCR parks.

The Shepherd Parkway is one of the few contiguous greenways in Southeast Washington, DC. It provides critical and connected habitat for urban wildlife. The parkway is also home to a historical Civil War fortification site and is a place to enjoy recreational opportunities at the litany of parks and playgrounds along it.

Summary of Accomplishments

In fiscal year 2022 the NCR IPMT returned to near full strength after several years of reduced capacity due to the COVID-19 pandemic. While the team started at full capacity with eight full-time field crew staff, the numbers dwindled because of several personnel departures through the course of the season. This forced the team to rely more heavily on the NCR Natural Resources and Science (NRS) biological science technician and NCR IPMT liaison to supplement the remaining field staff. Despite the personnel challenges, NCR IPMT was still able to complete 773 person days of invasive plant management across the 12 NCR park units. The team organized chainsaw safety, maintenance, and operations training as well as Operational Leadership Training for new staff.



Friends of Anacostia Park with NPS Staff and NCR IPMT Community Volunteer Ambassador at National Public Lands Day. NPS photo.

Summarized Data for 2022

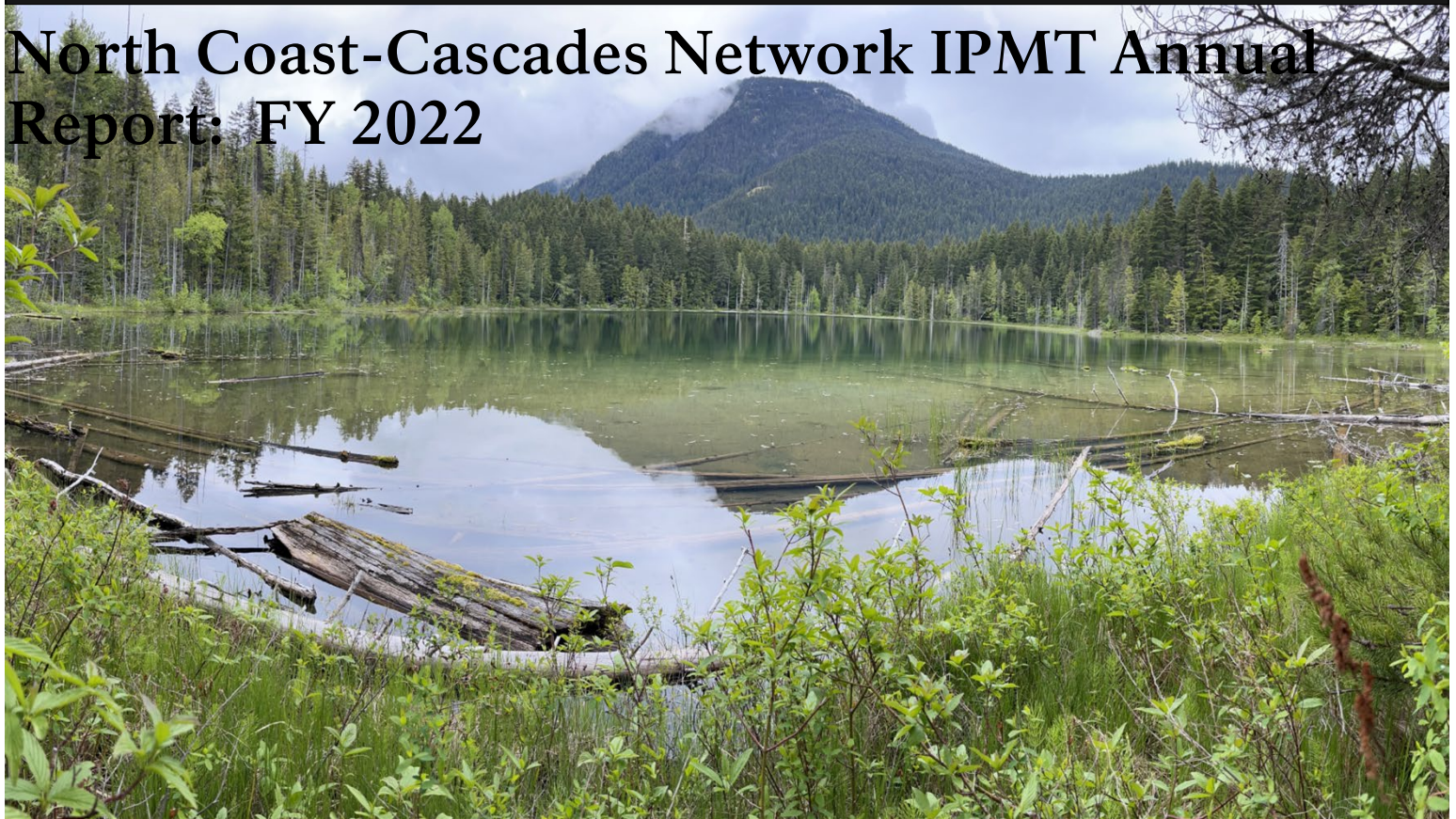
Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	10
Total Hours for Youth Participants and Youth Employees	14,153

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North Coast-Cascades Network IPMT Annual Report: FY 2022



Ridley Lake in North Cascades National Park Complex. NPS photo.

Background

From the towering peaks of North Cascades National Park Complex, west to the rainforest valleys of Olympic National Park, and south to the ecologically rich coastlines of Lewis and Clark National Historical Park, the North Coast-Cascades Network Invasive Plant Management Team (NCCN IPMT) provides unparalleled invasive plant mitigation for partners. In addition to the parks listed above, NCCN IPMT provides invasive plant control services to Ebey's Landing National Historic Reserve, Mount Rainier National Park, and San Juan Islands National Historical Park.

The team provides a range of services to partner parks using an ecosystem-based approach to invasive plant control including helping to design riparian restoration projects, setting up monitoring plots, collecting native seed, and managing populations of invasive plant species in a variety of environments. The team specializes in large-scale, comprehensive invasive plant control and is particularly effective at treating target populations in hard-to-reach areas and in the backcountry.

NCCN IPMT uses a range of newer technologies to achieve conservation goals including conducting research and working closely with industry specialists to ensure that methods and tools are the most up-to-date and the most environmentally friendly. For example, the team is moving towards winter applications of carefully calibrated pre-emergent herbicides to combat some invasive plant species that have long germination periods avoiding the need for multiple annual treatments.

Program Highlights

Ross Lake Reed Canarygrass Survey

Ross Lake National Recreation Area (ROLA) and North Cascades National Park (NOCA) are home to unique wetlands and lakes that harbor many important species of native plants, invertebrates, birds, and amphibians. Infestations of invasive reed canarygrass (*Phalaris arundinacea*) that line the perimeter of Ross Lake threaten these vulnerable aquatic habitats. NCCN IPMT and the national park units partnered with Seattle City Light (owner and operator of the Skagit River Hydroelectric Project within the Recreation Area) and Parks Canada (northern portion of Ross Lake is in Canada) to map out the extent of reed canarygrass in tributaries to Ross Lake.

NCCN IPMT conducted an extensive survey of a number of creeks, wetlands, and lakes in ROLA and NOCA in June and July 2022. The team hiked more than 100 miles in five days and scouted the majority of potential reed canarygrass habitats. Fortunately, excepting the Big Beaver wetland, a large wetland in a tributary to Ross Lake where the IPMT annually treats reed canarygrass, the scouted creeks and watersheds remain free of this invasive menace.

Efforts are ongoing to control existing reed canarygrass populations. The IPMT, ROLA, and NOCA remain hopeful that further incursions can be mitigated.



Threatened Yellow Sand verbena in dunes at San Juan Island National Historical Park. Photo credit Collin McAvinchey.



North Coast-Cascades Network IPMT and Lewis & Clark National Historical Park staff examine treatments of reed canary grass at the East Netul Tidal restoration project. NPS photo.

Program Highlights (cont.)

Canada Thistle Removal at San Juan Island National Historical Park

San Juan Island National Historical Park (SAJH) is famously home to two rare insects: the sand verbena moth (a Species of Greatest Conservation Need) and the island marble butterfly (federally listed as an endangered species). Both species inhabit the dunes and fields at American Camp, SAJH's southernmost holding.

Invasive Canada thistle (*Cirsium arvense*) and Himalayan blackberry (*Rubus bifrons*) have made significant incursions into habitats of both insects, with the sand verbena moth's eponymous host plant coastal sand verbena (*Abronia latifolia*) being particularly imperiled.

NCCN IPMT and SAJH staff have begun trial treatments of different herbicides to determine effective methods to control Canada thistle which is often growing intermixed with the sand verbena in dune sites. Preliminary results indicate judicious uses of triclopyr and aminopyralid may be key to controlling Canada thistle without harming native sand verbena plants.

The island marble butterfly's habitat is nearby the test plots and NCCN IPMT and SAJH resource management staff take extreme precautions to time treatment and site visits with the endangered butterfly's life history to minimize potential impacts.

Summary of Accomplishments

Each year, partner parks submit requests for NCCN IPMT support. Of these requests, the team guarantees accomplishment of each partner park's top priorities. In fiscal year 2022 as in years past, the team managed to accomplish almost every request made by each partner park.

The team continued to push back a number of invasive plant populations at partner parks; most notably poison hemlock (*Conium maculatum*) at Ebey's Landing, rush skeletonweed (*Chondrilla juncea*) at Lake Chelan National Recreation Area, reed canarygrass at Olympic National Park, and smooth brome (*Bromus inermis*) Mount Rainier National Park. Reduction in density and cover of these species are a measure of the NCCN IPMT's ability to improve native plant communities and habitat for animal species.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	6
Total Hours for Youth Participants and Youth Employees	6,280

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Northeast IPMT Annual Report: FY 2022



A drizzle on Twin Ponds, Katahdin Woods and Waters National Monument. NPS photo

Background

The Northeast Invasive Plant Management Team (NE IPMT), stationed at the Delaware Water Gap National Recreation Area (DEWA), was established in 2003 and serves over thirty partner parks in 10 states, from Delaware to Maine. The park units served by the NE IPMT range in size from nine to 100,000 acres, and are dedicated to the preservation and interpretation of both expansive natural lands and culturally significant landmarks.

The NE IPMT approaches invasive plant management through a combination of services including on-the-ground mechanical and chemical control, technical advice and assistance, and in-person and virtual trainings. The team works with partner parks to help prioritize treatment areas and to develop treatment plans that are achievable, cost effective, and focus on human and environmental safety.

In 2016, the NE IPMT established a small grants program to supplement site visits from the team and provide additional flexibility for partner parks to conduct invasive plant management in-house. Projects are selected for funding through a competitive proposal and ranking process that includes plan feasibility, use of best management practices, creative leveraging of resources, and engagement of youth and volunteers. The grant program has successfully supported partner parks in establishing and implementing their own invasive plant management strategies for both short- and long-term projects.

Program Highlights

The Start of an Invasive Plant Program at Katahdin Woods and Waters National Monument

Katahdin Woods and Waters National Monument (KAWW) was established in 2016 in rural northern Maine and covers over 87,000 acres of woodland, forest, and riparian habitat, most of which has been harvested for timber in the recent past. The park has made invasive plant management a priority despite the park's small staff and large acreage by dedicating staff time to surveys and treatments. KAWW also hosted the NE IPMT for a week in 2022.

During the visit, the team surveyed and assessed numerous areas of concern including along timber roads and at the construction site of the new visitor's center. The NE IPMT also conducted chemical treatments on known populations of invasive plants, including Japanese knotweed (*Fallopia japonica* var. *japonica*) and Morrow's honeysuckle (*Lonicera morrowii*). Fortunately, the park is relatively uninvaded, and a small amount of effort now can prevent these plants from becoming a big problem later. The NE IPMT also conducted staff training sessions on herbicide application, reviewed invasive species to watch out for with park staff, and provided gear and equipment to support the newly-established program.



*Treatment in progress for the early detection species Japanese angelica tree (*Aralia elata*) at the Delaware Water Gap National Recreation Area. NPS photo.



Northeast IPMT team leader treats common reed (*Phragmites australis ssp. australis*) bordering a kettle pond at Cape Cod National Seashore. NPS photo.

Program Highlights (cont.)

Early Detection Species Work at the Delaware Water Gap National Recreation Area

The NE IPMT’s host park DEWA includes 70,000 acres in New Jersey and northern Pennsylvania. It encompasses forests and mountains with the Delaware River running through its center. Due in part to high human population density and a long history of commercial and residential land use in and around the park, much of the area is heavily invaded by non-native plants. The NE IPMT increased treatments at DEWA in recent years because of park needs and to continue work in spite of travel restrictions.

The discovery of six new early detection rapid response (EDRR) species in the park in 2022 highlights the importance of addressing infestations early. These species are fig buttercup (*Ranunculus ficaria*), common reed (*Phragmites australis*), Amur cork tree (*Phellodendron amurense*), Japanese angelica tree (*Aralia elata*), linden viburnum (*Viburnum dilatatum*), and beech leaf disease. Documentation and treatment of EDRR species is vital to prevent the establishment and spread of invasive species new to an area. The early discovery and treatment of these species allows the NE IPMT to work towards eradication, even with the lifting of COVID-19 travel restrictions and increase in time spent treating at other parks.

Summary of Accomplishments

The NE IPMT provided a variety of services to partner parks in 2022. Operations were expanded by filling the long-vacant liaison position in the spring, allowing an expansion of direct treatments and technical assistance. In addition to year-round work at DEWA and day trips to five nearby parks, the team resumed overnight travel for the first time in years. This allowed longer trips to three partner parks to treat invasives and provide training and technical assistance. The team also helped create Invasive Species Priority Plans for two partner parks.

Through its grant process, the NE IPMT partially funded invasive plant projects in seven parks. Later in the year, additional funding for staff and supply purchases further supported management efforts and assisted partners in expanding their own programs.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	159
Total Hours for Youth Participants and Youth Employees	6,058

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Northern Great Plains IPMT Annual Report: FY 2022



NPS seasonal staff controlling saltcedar (*Tamarix ramosissima*) in Sage Creek Wilderness, Badlands National Park. NPS photo.

Background

The Northern Great Plains Invasive Plant Management Team (NGP IPMT) works with 14 partner parks in four states and two National Park Service (NPS) regions. The goal of the NGP IPMT is to help parks preserve native plant communities and historic landscapes by managing the spread of invasive plant species. The area served by the NGP IPMT is approximately 452,000 acres and is ecologically diverse, with vast grasslands, forests, and river systems.

Integrated pest management (IPM) strategies used to manage invasive plants include chemical, biological, mechanical, and cultural methods. Education and training in IPM are priorities of the team. The team works with park personnel to accomplish restoration activities, such as implementing prescribed fires, developing native plant materials, and seeding sites to restore desired resource conditions. The team also provides financial assistance to partner parks to help parks build internal capacity to manage invasive plant species.

Field crews for the NGP IPMT are based at either Badlands National Park or Theodore Roosevelt National Park and travel to other parks in the network. The IPMT also integrated members of the Montana Conservation Corps into the field crews to increase capacity and efficiency of operations. This allows youth on the Conservation Corps crews to engage in important and substantive work to further the NPS mission.

Program Highlights

Leveraging Partnerships

The well known saying “it takes a village” is not lost on NGP IPMT. With a substantial area and diverse ecosystems to help manage, being strategic with invasive species management is paramount. Through the use of contracts, NGP IPMT brings in additional boots-on-the ground to help with invasive species control efforts at several partner parks. One group in particular that NGP IPMT has had a fruitful collaboration with is the Montana Conservation Corps (MCC). MCC is a nonprofit organization that inspires young people through hands-on conservation service to be leaders, stewards of the land, and engaged citizens who can improve their communities.

The partnership between NGP IPMT and MCC provides an opportunity for youth and young adult corps members to build invaluable resource management skills and experience environmental stewardship firsthand. One way NGP IPMT promotes skill building and stewardship for MCC corps members is by providing the opportunity for crews to assist with invasive species management. In 2022 MCC crews treated roughly 78 acres for invasive species across several parks. At Fort Laramie National Historic Site, MCC members chemically treated 57 acres of Scotch thistle (*Onopordum acanthium*), and at Fort Union National Monument and Knife River National Historic Site, crews treated five and nine acres of leafy spurge (*Euphorbia esula*) and Canada thistle (*Cirsium arvense*), respectively.



Partnering up on cut-stump treatments for early detection of saltcedar (*Tamarix ramosissima*) in Badlands National Park. NPS photo..



Open-grown musk thistle (*Carduus nutans*) in Badlands National Park. NPS photo.

Program Highlights (cont.)

Integrated Pest Management

Invasive species have long been a challenge for land managers globally, and the NPS is no exception. Multiple factors influence the success of an invasive plant treatment, including the timing of application, the extent of the invasion, and the tools used. Although invasive plant management is often associated with herbicide applications, multiple tools are required to effectively reduce these unwanted species. IPM is an approach to pest management that relies on a combination of tools which, in the case of invasive plants, can include, but are not limited to herbicide, manual, mechanical, biological, and cultural treatments.

Applying IPM principles is something that NGP IPMT takes seriously. In 2022, the MCC used a combination of treatment methods to combat invasive species challenges at Mount Rushmore National Memorial. The crew both chemically treated and hand-pulled common mullein (*Verbascum thapsus*) and a variety of thistle species in the aster family on over six acres. Additionally, the crew used mechanical treatment methods and hand-pulling for leafy spurge and Canada thistle on half an acre at Devil's Tower National Monument. By using multiple tools, NGP IPMT and MCC are better able to apply site-specific treatments to increase the likelihood of successful invasive plant control.

Summary of Accomplishments

In fiscal year (FY) 2022, the NGP IPMT, with assistance from the MCC, completed invasive plant control treatments in six NPS units. Members of the MCC interacted with staff from multiple parks and learn more about natural and cultural resources found in each park. In addition to purchasing a UTV for KNRI, the team also provided financial assistance to BADL to purchase an UTV trailer to haul equipment used for invasive plant control. In FY 2023, the team hopes to increase support to other partner parks as COVID-19 travel restrictions are loosened across NPS.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	4
Total Hours for Youth Participants and Youth Employees	320

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Northern Rocky Mountain IPMT Annual Report: FY 2022



The 2022 Northern Rocky Mountain Invasive Plant Management Team (NRM IPMT). Front Left, Liberty Cleveland (Montana Conservation Corps—MCC), Julia Lenart (MCC). Back Left, Henry Smalley (MCC), Andy Ringholz (NRM IPMT crew leader), Arley Canfield (NRM IPMT crew leader), Natalie Chiaperri (Yellowstone National Park biological science technician) and Paul Daniels (Glacier National Park biological science technician). Not Pictured Jesse Sanzo (Colorado National Monument biological science technician). NPS photo.

Background

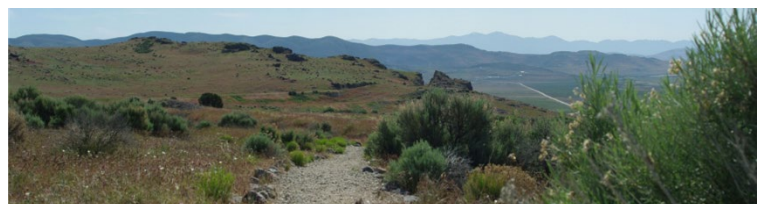
The Northern Rocky Mountain Invasive Plant Management Team (NRM IPMT) serves 25 National Park Service (NPS) units across Colorado, Idaho, Montana, northern New Mexico, Utah, and western Wyoming. The Northern Rocky Mountains Region is vast and diverse, encompassing high and low elevation sagebrush steppe, forests, sub-alpine meadows, high deserts, and wetland and riparian areas. Many parks in this network are relatively small (median size is 20,000 acres) and many do not have the capacity to address even their highest priority invasive species needs.

Since its inception in 2003, the NRM IPMT program emphasizes the systematic, long-term management and control of invasive plant species. It consists of a nine-person crew strategically divided into three smaller crews based at Yellowstone National Park, Glacier National Park, and Colorado National Monument (COLM). The NRM IPMT also partners with others to address distant parks. In fiscal year (FY) 2022, 18 partner parks received assistance from the team with 11 receiving multiple visits. Repeat visits are critical for many project areas to ensure all invasive plants are located and removed. Much of the team's effort is focused on controlling state listed noxious weeds and providing rapid response to new or particularly problematic invaders. This program relies heavily on the region's seasonal dichotomy, working lower elevation parks in Utah and Idaho early in the growing season and higher elevation parks later in the summer. Field efforts typically continue into the early fall to address perennial invasive plants as they enter dormancy.

Program Highlights

Addressing Rush Skeletonweed at Golden Spike National Historical Park

The IPMT made several visits to Golden Spike National Historical Park (GOSP) in FY 2022. The spread of rush skeletonweed (*Chondrilla juncea*) is a major concern among adjacent landowners and local county agencies. GOSP requested technical assistance from the IPMT to arrest the spread of this wind dispersed species. Utah Conservation Corps (UCC) members assisted a 4-person IPMT crew in surveying for and treating rush skeletonweed. The crews spent 243 hours surveying 510 acres and treating 7.11 acres infested by this species. More work is needed. As a follow up, IPMT partner Box Elder County Weed Department will establish insectaries at GOSP to house a root boring moth (*Bradynoba gilveolella*), which is an effective biocontrol agent of rush skeletonweed. The NRM IPMT will also partner with the UCC in FY 2023 for another round of herbicide treatments.



Golden Spike National Historical Park, Big Fill Loop Trail. NPS photo.



A Utah Conservation Corps member applies herbicide to rush skeletonweed (*Chondrilla juncea*) in Golden Spike National Historical Park. NPS photo.

Program Highlights (cont.)

Key Projects to Support Florissant Fossil Beds National Monument

The NRM IPMT assisted Florissant Fossil Beds National Monument (FLFO) with writing an Invasive Plant Management Plan and implementing management of invasive plants across the park. With the plan completed, the IPMT and an American Conservation Experience crew conducted a trio of herbicide treatments at FLFO. Crews focused on priority invasive plant species and providing treatment metrics for each management area enabling managers to analyze the efficacy of the treatments each year.

Several early detection and rapid response species occur at FLFO. In FY 2022, the crews found and treated 871 ft² of hoary alyssum (*Berteroa incana*) in two management areas and 435 ft² of leafy spurge (*Euphorbia esula*) in one management area. Leafy spurge cover decreased from two sites covering approximately 900 ft² in FY 2021 indicating that the timing and treatments used in previous years were effective. Finally, the crews surveyed a remote location within the park for musk thistle (*Carduus nutans*) finding and treating an infestation of 2,178 ft². Early eradication of these three invasive plant species is a priority for FLFO and the NRM IPMT before they become established and pose a serious threat to neighboring native plant communities.

Summary of Accomplishments

The NRM IPMT treated **XX** infested acres of invasive plants in 18 units of the NPS in FY 2022. In total, the team, park staff, and youth crews spent approximately 7,000 hours treating predominantly state and federally listed noxious weeds in partner parks served by the NRM IPMT program.

The NRM IPMT continues to strike a balance between contributing to long-term, large-scale control, early detection and removal of nascent populations, and opportunistic restoration of native species. Steering committee meetings are held annually to review and approve the strategic direction and financial plan of the team, ensure the team provides information that is relevant to management, and develop an invasive plant treatment schedule for the fiscal year.



Members from the American Conservation Experience and NRM IPMT take a minute to pose in front of a petrified redwood (*Sequoia affinis*) stump at Florissant Fossil Beds. NPS photo.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	29
Total Hours for Youth Participants and Youth Employees	5,400

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Pacific Islands IPMT Annual Report: FY 2022



The Pacific Islands IPMT (PI IPMT) provides NPS National Chainsaw Safety Program instruction, training, and evaluations for network parks, building a base of qualified operators. NPS photo.

Background

The Pacific Islands Invasive Plant Management Team (PI IPMT) serves six National Park Service (NPS) units in the Hawaiian Islands: Hawai'i Volcanoes and Haleakalā National Parks; Kaloko-Honokōhau, Pu'uhonua O Hōnaunau, and Kalaupapa National Historical Parks; and Pu'ukoholā Heiau National Historic Site. In 2022 the IPMT added services to the Ala Kahakai National Historic Trail that was established in 2000 to preserve, protect, and interpret traditional Native Hawaiian culture and natural resources. The trail is a 175-mile corridor encompassing a network of culturally and historically significant traditional thoroughfares.

The Hawaiian archipelago is extremely isolated, developing far from continents over millions of years before first settlement by Polynesian navigators. In fact, approximately 30% of the threatened and endangered plants and birds in the United States are endemic to Hawai'i. The early Polynesian voyagers brought a handful of new species with them on their canoes. Natural introductions occurred less than once every 30 thousand years, carried by winds, ocean currents, or on the wings of birds. An average of 20 new non-native species now become established annually, many becoming problematic invasive species.

The PI IPMT continues to work with parks and partners to manage invasive plants, restore ecosystems, prevent introductions, provide technical guidance, and develop expertise to support stewardship of natural resources in Hawai'i.

Program Highlights

Early Detection, Rapid Response (EDRR) and Consistent Effort

Successes in the Pacific Islands are due to years of focused and prioritized effort to control introduced plant species that have a high potential for invasiveness early after their introduction. Coordinated work among parks and the PI IPMT is essential when seeking solutions to nascent invasive plant problems.

A 2022 review of the invasive plant management program at Hawai'i Volcanoes National Park found that 23 species of high priority incipient invasive plant species have been eradicated from the park since the previous program evaluation a decade earlier. Eradicated species include ecologically harmful highly invasive plants such as castor bean (*Ricinus communis*), silverleaf cotoneaster (*Cotoneaster pannosus*), and narrowleaf firethorn (*Pyracantha angustifolia*). An additional 10 species are nearing eradication and are now at the monitoring stage. These previously infested sites are still being watched to detect new individuals emerging from the seedbank.

Commitment to surveillance and treatment schedules have been instrumental to program success. IPMT and park staff visit infestations at regular return intervals that are determined by species' reproductive biology, and NPS personnel treat plants before they reproduce. When populations are close to eradication, staff monitor at longer intervals ranging from six months to five years until eradication is confirmed.



A Kupu Intern stacks and treats freshly cut invasive Himalayan ginger (*Hedychium gardnerianum*) in Kīpahulu Valley of Haleakalā National Park on the Island of Maui. NPS photo.

Program Highlights (cont.)

Ginger Management in Diverse Rainforest at Haleakalā National Park

Over 50 years ago, surveys revealed that 90% of the plants in the Kīpahulu Valley Biological Reserve were endemic to Maui. This percentage has declined primarily due to the introduction and impacts of invasive plants and animals. One of these invasive plant species is Himalayan ginger (*Hedychium gardnerianum*). In 2022, the IPMT worked with park staff to treat over 10,000 plants, 30% of which were reproductive and multi-generational, on 46 acres. This year's work completed a 5-year revisit cycle in just three years in the 4,000 to 5,000 foot elevation band of Kīpahulu Valley, thus holding the line on the upslope advancement of this invasive species in Kīpahulu.

Restoring native plants to areas previously overrun by Himalayan ginger is a critical step to preventing reinvasion and rebounding numbers of rare and endangered species in Kīpahulu Valley. Following invasive plant control in 2022, over 400 rare plants were reestablished by staff in pockets of upper elevation forest. Ongoing research in the park examines how documented increases in temperature, changing dominant trade wind inversion patterns, and future rainfall may impact management strategies.

Summary of Accomplishments

The PI IPMT maintained its commitment to detect and contain the spread of Rapid 'Ōhi'a Death (ROD) on the Big Island of Hawai'i. ROD is caused by a highly invasive and catastrophic fungal pathogen infecting native 'Ōhi'a (*Metrosideros polymorpha*), the keystone forest tree in Hawai'i. Efforts included a partnership with the Spatial Data Analysis and Visualization Lab (SDAV) at the University of Hawai'i at Hilo and specialized chainsaw felling of infected ROD trees to limit infection spread. Other work included deploying SDAV's custom developed, high resolution helicopter mounted camera array to guide spray missions on fire-adapted invasive grasses. The work is expanding to other NPS units and species in Hawai'i. PI IPMT also continued to develop National Chainsaw Safety and Operations Program capacity, hosting four training cohorts and qualifying three additional instructor/evaluators.



A PI IPMT Crew Leader and partner from Big Island Invasive Species Committee (BIISC) sampling a suspect ROD-infected tree for analysis on Hawai'i Island. NPS photo.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	518
Total Hours for Youth Participants and Youth Employees	24,674

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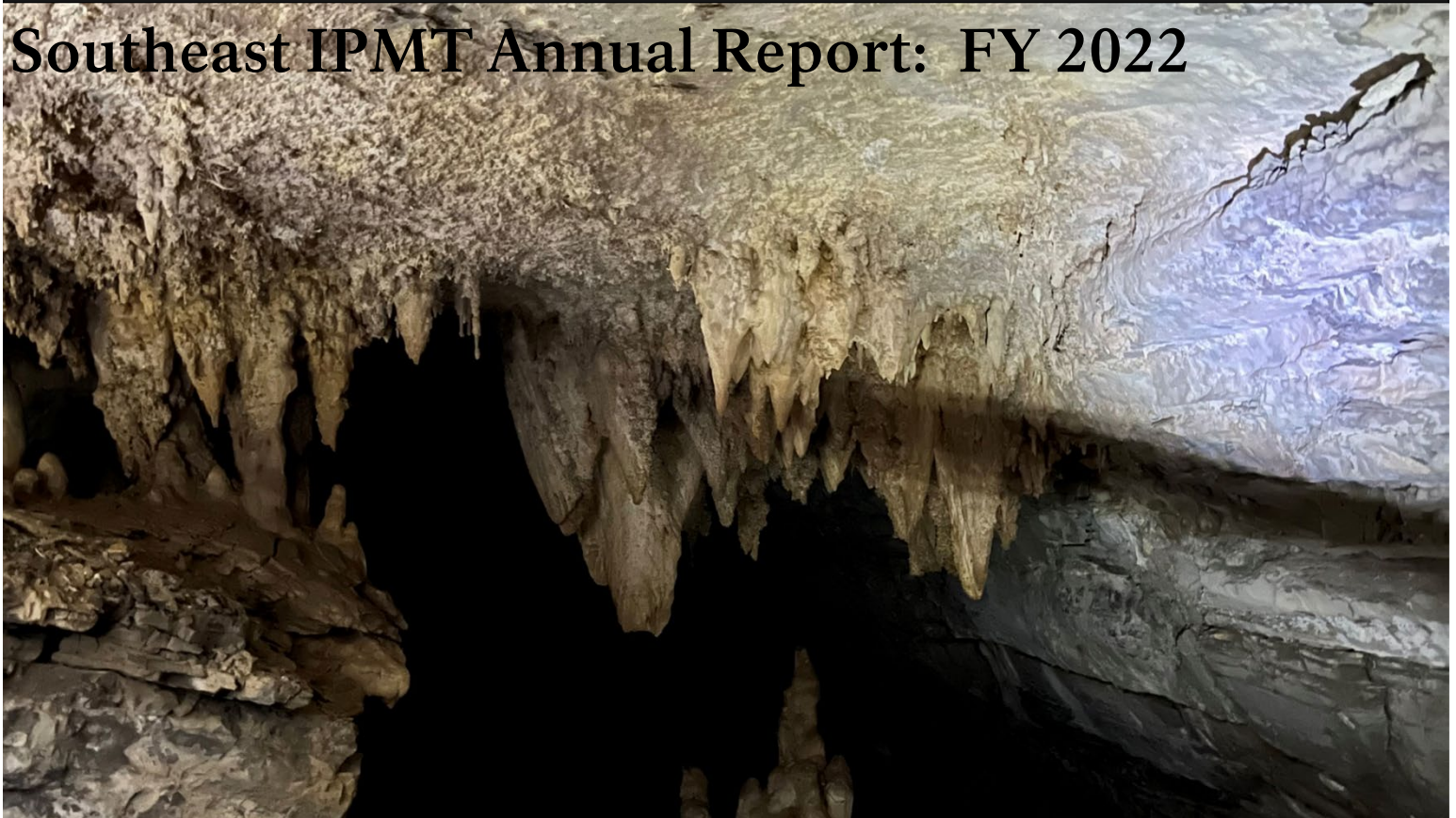
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Southeast IPMT Annual Report: FY 2022

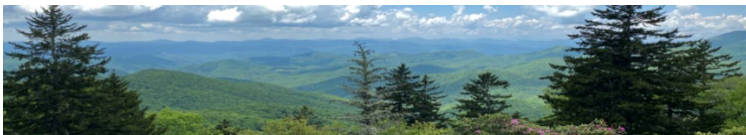


Underground at Mammoth Cave National Park. NPS photo.

Background

The Southeast Invasive Plant Management Team (SE IPMT) supports 20 national park units in seven states in Interior Region 2. The network of parks served by the SE IPMT lies within the Cumberland Plateau, Appalachian Highlands, and Piedmont physiographic provinces and includes unique ecosystems and cultural landscapes. From the cedar glades among several Civil War battlefield parks (i.e. Chickamauga & Chattanooga National Military Park (CHCH)) to the world's longest known cave system of Mammoth Cave National Park (MACA), natural and cultural resources are intertwined. Invasive plants threaten natural resources like federal and state listed plant and animal species as well as cultural resources. Using an integrated and adaptive resource management strategy, the SE IPMT meets long term management goals to protect these resources.

The SE IPMT, founded in 2003, is based in Asheville, North Carolina on the Blue Ridge Parkway. The program functions as a self-contained, mobile strike team composed of field crew leader Toby Obenauer and youth interns. Supervision of both the SE and Southeast Coast (SEC) IPMTs is now the responsibility of one liaison, Lauren Serra.



View from the Blue Ridge Parkway, North Carolina. NPS photo.

Program Highlights

Interns Protect Rare Plants Through Park Specific Projects

With partner park support, SE IPMT increased capacity through park-funded projects. At Kings Mountain National Military Park, the IPMT planted native, rare Georgia aster seedlings (*Symphotrichum georgianum*). IPMT staff synchronized planting with chemical treatments of invasive species to restore fire-suppressed grassland habitat in collaboration with the Quail Forever initiative. National Park Service (NPS) staff collected Georgia aster seed and propagated by a contractor, then outplanted by volunteers. An American Conservation Experience (ACE) intern monitored the health and survival of Georgia aster plants and removed competing woody vegetation from the restoration sites. The plants are surviving and new populations of Georgia aster have become established in the park.

Also, an ACE intern stationed at Carl Sandburg Home National Historic Site completed a project to protect the North Fork heartleaf (*Hexastylis rhombiformis*), a species of concern that is thriving in the park's riparian cove forest habitat. Park staff mapped plants in the spring, then the intern documented stem counts and summarized the data collected for this species. The IPMT removed invasive plants that threatened the North Fork heartleaf including Chinese wisteria (*Wisteria sinensis*) and oriental bittersweet (*Celastrus orbiculatus*). By sharing skillsets among partner parks and the SE IPMT, invasive plant treatment efforts were expanded to protect and restore rare plants and the critical ecosystems needed to maintain these species.



An American Conservation Experience intern based at Kings Mountain National Military Park maps rare Georgia aster plantings in a restored grassland. NPS photo.

Program Highlights (cont.)

Park Staff Join Together to Support Invasive Plant Management

Due to a delayed budget in FY22, the SE IPMT interns were not on staff until August which is midway through the growing season. To compensate for the lack of crew members, staff from partner parks joined the SE IPMT in the field. Park staff working within and outside of their own park boundaries ensured invasive plant treatments remained on schedule while receiving training in invasive plant identification and treatment techniques from the SE IPMT.

CHCH staff joined the SE IPMT, MACA staff, and the ACE crew at MACA on a variety of projects. Together they treated invasive woody species like Bradford pear (*Pyrus calleryana*) in natural areas and removed woody vegetation from a historic pond. Stones River National Battlefield (STRI) is home to globally rare limestone cedar glade ecosystems that support a unique assemblage of highly specialized plant species. In 2009, a tornado ravaged the park and caused disturbance that facilitated the encroachment of invasive woody plants. SE and SEC IPMT staff worked alongside STRI staff to remove Chinese privet (*Ligustrum sinense*) and Amur honeysuckle (*Lonicera mackii*). An STRI employee then assisted SE IPMT at Little River Canyon National Preserve to focus on the removal of kudzu (*Pueraria montana*) including at a site for early detection and rapid response.

Summary of Accomplishments

The SE IPMT served 19 parks across the SE, SEC, and Florida and Caribbean IPMT networks and treated more than 50 plant species. After several years, SE IPMT returned to Andrew Johnson National Historic Site to survey and treat invasive plants and assisted CHCH in restoration projects within grasslands and the imperiled cedar glade interface. The field crew leader provided two Recreational Off-Highway Vehicle Association UTV trainings and two National Chainsaw Safety Program trainings for park staff and interns. The liaison assisted with Russell Cave National Monument's Resource Stewardship Strategy. SE IPMT continued partnerships with the Appalachian Highlands and Cumberland Piedmont Inventory and Monitoring Networks and overlapping Fire Management Zones.



Southeast and Southeast Coast IPMT staff treat invasive plants in a limestone cedar glade at Stones River National Battlefield. NPS photo.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	20
Total Hours for Youth Participants and Youth Employees	3,506

More Information

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Liaison

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Southeast Coast IPMT Annual Report: FY 2022



Overlooking grassland restoration at Moores Creek National Battlefield. NPS photo.

Background

The Southeast Coast Invasive Plant Management Team (SEC IPMT) serves 15 National Park Service (NPS) units in North and South Carolina, Georgia, and Alabama. Partner parks range from protected seashores and forested wilderness to urban recreational areas and preserved cultural landscapes. Along the coast are the National Seashores from the lighthouses of Cape Hatteras (CAHA) to the wild horses of Cumberland Island, with historic Revolutionary and Civil War battle sites in between. Inland, the SEC IPMT serves parks like Chattahoochee River National Recreation Area (CHAT) in Atlanta metro area to the prehistoric settlements at Ocmulgee Mounds National Historical Park (OCMU). Congaree National Park (CONG), which encompasses one of the last remnants of intact old growth bottomland forest and designated wilderness, hosts the SEC IPMT.

The SEC IPMT began as a pilot project in 2005 and by 2010 was permanently funded through CONG's base operating budget. In 2020, the SEC IPMT's base funds were reallocated to Interior Region 2's Science and Natural Resources Management Division, along with personnel and oversight. Through a Letter of Understanding the program continues operations at CONG. Although funded differently than the majority of IPMTs, the SEC IPMT has similar goals for invasive plant management. The SEC IPMT is led by Lauren Serra (liaison) and Amorita Brackett (field crew leader). The SEC IPMT crew consisted of American Conservations Experience (ACE) interns; one based at CONG and two based at partner parks.

Program Highlights

Protecting Cultural and Natural Resources at Partner Parks

The SEC and Southeast (SE) IPMT staff and interns' work supports both cultural and natural resource protection and restoration. In 2022, the teams and an ACE crew treated invasive plants at Fort Frederica National Monument (FOFR) within the cultural landscape including woodlands and marshes. Target species included camphortree (*Cinnamomum camphora*), coral ardisia (*Ardisia crenata*), and Chinese wisteria (*Wisteria sinensis*). The ACE crew also cleared the historic viewshed along the shoreline near the fort. The SEC IPMT, with volunteers, supported invasive plant removal and plant propagation to restore CHAT's Crayfish Creek, a tributary of the Chattahoochee River that has been negatively impacted by hydrologic alterations and continued work on a long-term grassland restoration project under the System Unit Resource Protection Act. At CAHA, the park and SEC IPMT received a cost-share through the North Carolina Department of Environmental Quality's Aquatic Weed Control program to treat a common reed (*Phragmites australis*) infestation that SEC IPMT quarantined and is managing to stop its spread to the high-quality, native plant and animal dominated northern section of the project site. The SEC IPMT not only demonstrates the program's flexibility and importance as a resource for park units that protect both cultural and natural resources but also provides young people with resource management experience and training to prepare them for a future as land managers and stewards.



Southeast Coast and Southeast IPMTs join forces with an American Conservation Experience Crew to treat invasive plants at Fort Frederica National Monument. NPS photo.

Program Highlights (cont.)

The Benefits of Collaboration

The Southeast Coast Inventory and Monitoring Network (SECN) collects auditory information on bird and amphibian species at parks. In 2022, SECN had a staff shortage and requested assistance with deployment of Automated Recording Devices (ARDs) to capture vocalizations within five parks. Skilled in field work and with institutional knowledge of the parks, the SEC IPMT field crew leader installed the ARDs while also conducting invasive plant surveys and treatments. This was particularly valuable during the COVID-19 pandemic because it enabled the SEC IPMT to manage previously treated invasive plant infestations and evaluate new species occurrences during a time when travel was difficult. There was also a savings to both programs by sharing personnel and travel costs.

To access remote locations, the SEC IPMT field crew leader and park staff kayaked along the marsh at Canaveral National Seashore, a Florida and Caribbean IPMT park, and hiked extensively through CONG's floodplain forest collecting plant survey data. At FOFR, the field crew leader evaluated the efficacy of previous invasive plant treatments and retreated as needed. When the prime auditory season ended, SEC IPMT helped retrieve the ARDs for SECN staff to analyze the data. This collaborative effort benefited all involved.

Summary of Accomplishments

In 2022, the SEC IPMT provided assistance to 15 partner parks and an out-of-network Reconstruction Era National Historical Park and treated more than 50 invasive plant species. The SEC IPMT field crew leader was the technical supervisor for the SE and SEC IPMT employee hosted by OCMU, conducted invasive plant training with CHAT staff and volunteers, maintained Wilderness First Responder Certification, and served on CONG's Safety Committee. The liaison participated in SECN's annual steering committee meeting, Fort Pulaski National Monument's Natural Resource Condition Assessment, and the Southeast Region Grasslands Workshop, and was a member of the South Carolina Invasive Pest Council and the South Carolina Association of Naturalists. The SEC IPMT also continued collaboration and communication with the Fire Management Zone.



The Southeast Coast Inventory and Monitoring Network's Automated Recording Devices collect bird and amphibian auditory information at Canaveral National Seashore. NPS photo.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	45
Total Hours for Youth Participants and Youth Employees	6,374

More Information

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Southwest IPMT Annual Report: FY 2022



Conservation Legacy intern Savannah LaRosa-LoPresti sprays oxeye daisy (*Leucanthemum vulgare*) at Valles Caldera National Park. NPS photo.

Background

The Southwest Invasive Plant Management Team (SW IPMT) serves 46 National Park Service (NPS) units and adjacent landowners in six states throughout the southwest.

The SW IPMT's mission is to: collaborate with park staff, with other programs within the NPS, and with park neighbors, local communities and organizations, and other state and federal agencies, to restore the native ecosystems of our parks and surrounding lands. The SW IPMT assists parks and partners by serving as a regional resource to combat the invasion of non-native plant species and support the restoration of disturbed areas to functioning healthy ecosystems.

The SW IPMT supports many programs related to the international issues of invasive plants, ecosystem fragmentation, and habitat restoration. In addition to treating invasive plants, significant activities include research in control and restoration methods, production of appropriate native plant materials, and collaboration with communities and partners. The SW IPMT is working with and supports a diverse coalition of universities, land management agencies, non-profit organizations, and conservation groups to restore native plant biodiversity and the ecosystems that sustain the native flora and faunal heritage.

Program Highlights

Invasive Plant Treatment in the Riparian Habitat of Tumacacori National Historical Park

Lush native riparian vegetation along the Santa Cruz River at Tumacacori National Historical Park (TUMA) provides critical habitat for a wide variety of species. However, invasive tree species including tamarisk (*Tamarix chinensis*), tree-of-heaven (*Ailanthus altissima*), Chinaberry (*Melia azedarach*), and Siberian elm (*Ulmus pumila*) compete with important native tree species such as Fremont cottonwood (*Populus fremontii*), Goodding willow (*Salix gooddingii*), velvet mesquite (*Prosopis velutina*), Mexican elderberry (*Sambucus nigra ssp. canadensis*), velvet ash (*Fraxinus velutina*), and Arizona walnut (*Juglans major*). While Johnsongrass (*Sorghum halepense*) crowds out herbaceous riparian plant species.

In June of 2022, the SW IPMT worked with members of Tucson Audubon Society's Collaborative Audubon Treatment and Inventory Squad (CoATIS) and park staff member Tony Palmer to treat these invasive tree species and Johnsongrass at TUMA. The team and cooperators conducted basal bark application of triclopyr on smaller trees, hack-and-squirt application of imazapyr on larger trees, and foliar application of sulfosulfuron on Johnsongrass. This work made a significant step forward to improving native plant and animal communities in this important riparian system, and SW IPMT intern Marcelo Corona gained experience in effective management techniques and with mapping in dense riparian vegetation.



Tucson Audubon Society's Jaemin Wilson and Quinn Rainer pose with pulled bull thistle (*Cirsium vulgare*) at Bandelier National Monument. NPS photo.



Southwest IPMT intern Marcelo Corona stoops to spray tree-of-heaven (*Ailanthus altissima*) saplings in a riparian area at Tumacacori National Historical Park. NPS photo.

Program Highlights (cont.)

Burned Area Emergency Response

In August and September the SW IPMT collaborated with Tucson Audubon Society (TAS) to conduct Burned Area Emergency Response (BAER) invasive plant surveys and treatment in the Cerro Pelado Fire burned area at Bandelier National Monument and Valles Caldera National Preserve. The fire burned 1,771 acres in the two parks in April and May, including some critical habitat for endangered Jemez Mountain salamander. The SW IPMT and TAS quickly pivoted from planned projects to conduct the BAER work.

Most of the Cerro Pelado Fire in the parks burned within the 2011 Las Conchas burn scar. That earlier fire resulted in a seedbank of invasive thistles in the area. An above-average monsoon season in 2022 led to rapid post-fire germination and growth of the invasive thistle species, many of which were flowering by late summer, making hillside populations easier to spot when surveying dozer lines. The response team manually treated biannual musk (*Carduus nutans*) and bull (*Cirsium vulgare*) thistle by pulling, clipping, and bagging flowers and treated perennial Canada thistle (*Cirsium arvense*) and oxeye daisy (*Leucanthemum vulgare*) with herbicide.

The whole crew found it very encouraging to see the rapid regrowth and recovery of native species in the burned area, and were gratified to have the flexibility to rapidly respond to prevent invasive plant species from establishing new populations.

Summary of Accomplishments

In fiscal year (FY) 2022 the SW IPMT worked with 22 parks to treat invasive plants across approximately **xxx** acres and survey approximately **xxx** acres. To complete this work the program engaged 53 youth who contributed 7,649 hours. In FY 2022 SW IPMT continued its partnership with CoATIS, a collaborative that was established in 2020. SW IPMT funded two intern positions through TAS and Conservation Legacy. Satellite teams stationed in Albuquerque (Savannah LaRosa-LoPresti, Anna Wheeler) and Tucson (Marcelo Corona, Mike Turner, Marcus Jernigan) led the field work. SW IPMT also funded seed collection efforts through The Institute for Applied Ecology at Grand Canyon National Park and several crews with American Conservation Experience and Ancestral Lands Conservation Corps.

Summarized Data for 2022

Measure	Acres
Treated	XXX
Inventoried/Monitored	X,XXX
Gross Infested Area	XXX
Net Infested Area	XXX
Youth Engagement	
Total Number of Youth Participants and Youth Employees	55
Total Hours for Youth Participants and Youth Employees	7,649

More Information

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Marcus Jernigan
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Anna Wheeler
Crew Leader (520) 549-7755
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Petroglyph National Monument
6001 Unser Blvd NW
Albuquerque, NM 87120



FY2022 Invasive Plant Management Team – Program Participants

Alaska IPMT

Leadership

Anna O'Brien (Liaison- hired May 2020)
David Payer (Supervisor)

Crew

SCA interns: Isabella Pomperoy,
Decker Sisk, Morgan Valone,
Olivia Varga, Julianna (Jay)
Hamill, Quinn Anderson
Federal Seasonals: Claire Visconti,
Youth Conservation Corps: Van
Shank and Ava Pullins

Region/Network Support

Joel Cusick (field GPS support), Angie Southwold (GIS lead), Lee Wilson (budget), James Cato (Grants and Agreements Manager), Jessica Atkins (Grants and Agreements Manager), the regional office staff provide considerable support because the AK IPMT is coordinated out of it.

Park Support

Denali National Park and Preserve -
Wendy Mahovlic, Carl Roland,
Dave Schirokauer
Katmai National Park and Preserve
(also covers ALAG and ANIN) -
Kelsey Griffin, Robert Peterson,
Tammy Carmack
Kenai Fjords National Park -
Christina Kriedeman, Benjamin
Pister
Glacier Bay National Park and
Preserve - Martin Hutten

Klondike Gold Rush National Park
and Preserve - Elaine Furbish
Sitka National Historic Park – Olivia
Magni
Wrangell – St Elias National Park
and Preserve - Mark Miller
Yukon -Charley River National
Preserve- Danielle Knapp, Amy
Larson, Jeffery Rasic

Partners

Alaska Association of Conservation
Districts, Soil & Water Districts
Various statewide CWMAs
SCA
Chugach National Forest
USFWS
DOT - Fairbanks Division
University of Alaska, Anchorage,
Alaska

Volunteers

Limited – COVID-19

Steering Committee

Alagnak / Aleutian Islands / Katmai -
Troy Hamon, Resources Lead
Bering Land Bridge - Letty Hughes,
Resources Lead
Cape Krusenstern / Kobuk Valley /
Noatak (WEAR Parks) - Justin
Junge, Resources Lead (Detailed)
Denali - Carl Roland, Natural
Resources Lead
Gates of the Arctic / Yukon- Charley
Rivers - Jeff Rasic, Resources
Lead

Glacier Bay - Martin Hutten,
Terrestrial Ecologist
Kenai Fjords - Ben Pistor, Resources
Lead
Klondike Gold Rush - Elaine Furbish,
Natural Resource Manager
Lake Clark - Buck Mangipane,
Resources Lead
Sitka - Jessica Perkins, Resources
Lead
Wrangell-St Elias - Mark Miller,
Resources Lead
Alaska Regional Office - David
Payer, Regional Wildlife Biologist
Fire - Jennifer Barns, Fuels Manager
Alaska Leadership - Grant
Hilderbrand, Regional Resource
Lead

California IPMT

Leadership

Steve Buckley (Liaison)
Brent Johnson (Supervisor)

Staff Support

Cabrillo National Monument — Linh Anh
Cat, Lauren Pandoori
Channel Islands National Park – Ken
Convery, Annie Little
Crater Lake National Park – Jen Hooke, Jen
Gibson
Devils Postpile National Monument –
Monica Buhler
Golden Gate National Recreation Area —
Erik Grijalva, Alison Forrestel
Lassen Volcanic National Park — Tim
Marsh, Colleen Egan, Nancy Nordensten
Lava Beds National Monument (and Crater
Lake NP) – John Cannon
John Muir National Historic Site – Tori Seher
Pinnacles National Park — Amelia Ryan,
Andrew Harmon
Point Reyes National Seashore — Lorraine
Parsons, Dylan Voeller, Rachel
Hendrickson, Kristen Richardson

Redwood National Park – Stassia Samuels,
Laura Julian
Santa Monica Mountains National
Recreation Area — Joey Algiers, Antonio
Sanchez, Mark Mendelsohn, John Tiszler
Whiskeytown National Recreation Area —
Laura Shaskey, Tyler Self
Yosemite National Park — David Campbell,
Garrett Dickman, Trevor Denson, Athena
Demetry, Tim Kuhn

American Conservation Experience – Peter
Woodruff, Zoe Gordon, Chris Binder
California Botanic Garden – Naomi Fraga
California Invasive Plant Council – Doug
Johnson, Jutta Burger
California State Parks – Leah Gardner
Great Basin Institute — Melonie Brown,
Chris McCarron
Point Reyes National Seashore Association
— Michael Spaeth
University of California, Davis— Alison
Colwell, Dan Potter

Region/Network Support

Interior Regions 8, 9,10, 12 (Lower Colorado
Basin, Columbia-Pacific Northwest,
California-Great Basin, Pacific Islands)
Office – Denise Louie (Natural Resources
and Science Lead), Brent Johnson
(Vegetation Ecologist)
Californian Cooperative Ecosystem Studies
Unit – Ben Becker
MABO – Rachel Dell’Osso, Susan Veile
Fire and Aviation – Cedar Drake, Nelson
Siefkin, Eamon Engber

Park Support

Host Park – Redwood State and National
Parks, Steve Mietz (Superintendent), Dave
Roemer (Deputy Superintendent), Haley
Allen (Budget Analyst), Birgitta Osborne
(Admin Support), Christine Walters (Admin
Support), Liam Carey-Rand (IT), Eric
Sherman (IT), Leonel Arguello (Program
Manager, Resource Management and
Science)

Partners and Cooperators

American Conservation Experience
Cabrillo National Monument Conservancy
Cabrillo National Monument Foundation
Calflora
California Invasive Plant Council
California State Parks
California Wildlife Conservation Board
Golden Gate National Parks Conservancy
National Park Foundation
Pinnacles National Park Foundation
Point Reyes National Seashore Association
San Diego Urban Corps
San Francisco Public Utilities Commission
Santa Monica Mountains Fund
Sierra Institute for Community and Environment
University of California, Davis
Yosemite Conservancy
Youth Conservation Corps

Volunteers

Point Reyes National Seashore Association
Golden Gate National Parks Conservancy
Yosemite Conservancy
Youth Conservation Corps

Steering Committee

Lava Beds National Monument - Dave Hays (Natural Resources Program Manager)
Pinnacles National Park - Amelia Ryan (Ecologist)
Santa Monica Mountains National Recreation Area - Joey Algiers (Restoration Ecologist)
Sequoia and Kings Canyon National Parks - Andrew Bishop (Restoration Ecologist)
Pacific West Region - Brent Johnson (Vegetation Ecologist)

Florida / Caribbean IPMT

Leadership

Brian Lockwood (Liaison)
Shea Bruscia (Data Manager)

Region/Network Support

Interior Region 2 South Atlantic Gulf – Mark Frey (Branch Chief SNRMD), Kelly Irick (Terrestrial Branch Lead)
Interior Region 2 South Atlantic Gulf Comptroller Division – Hannah Strotman (Budget Analyst), Tywannia Howells (Deputy Comptroller)
Interior Region 2 South Atlantic Gulf Contracting Division – Will Vazquez (Contracting Officer)
South Florida and Caribbean Inventory and Monitoring Network – Irina Ford, Kim Dibble, Brooke Shamblin, Mario Londono

Park Support

Big Cypress National Preserve – William Snyder, Courtney Angelo
Biscayne National Park – Shelby Moneysmith, Vanessa McDonough, Amanda Bourque
Buck Island Reef National Monument/Christiansted National Historic Site/Salt River National Historic Park and Ecological Reserve – Kristen Ewen
Canaveral National Seashore – Kristen Kneifl, Jimi Sadle
DeSoto National Memorial – Wayne Boyd, Kristen Kneifl
Dry Tortugas National Park – Hillary Cooley
Everglades National Park – Hillary Cooley
Fort Matanzas National Monument, Castillo de San Marcos – Kurt Foote
Gulf Islands National Seashore – Jennifer Manis
San Juan National Historical Site – Felix Lopez
Timucuan Ecological and Historic Preserve, Fort Caroline – Steven Kidd
Virgin Islands National Park – Thomas Kelly

Partners and Cooperators

Florida Fish and Wildlife Conservation – Linda King, Dennis Giardina, Jackie Smith
Miami-Dade County – Dallas Hazelton, Gwen Burzycki
US Army Corps of Engineers – Jon Lane, Jessica Spencer
South Florida Water Management District – LeRoy Rodgers, Christen Mason, Christina Stylianos, Manny Porras

Steering Committee

Big Cypress National Preserve – Thomas Forsyth (Superintendent)
Biscayne National Park – Penelope Del Bene (Superintendent)
Buck Island Reef National Monument/
Christiansted National Historic Site/Salt River National Historic Park and Ecological Reserve – Angelita Alvino (Superintendent)
Canaveral National Seashore – Cinda Waldbuesser (Superintendent)
Desoto National Memorial – Stanley Bond (Superintendent)
Everglades National Park/Dry Tortugas National Park – Pedro Ramos (Superintendent)
Fort Matanzas National Monument/Castillo de San Marcos National Monument – Gordie Wilson (Superintendent)
Gulf Islands National Seashore – Darrell Echols (Superintendent)
San Juan National Historical Site- Myrna Palfrey (Superintendent)
Timucuan Ecological and Historic Preserve/Fort Caroline National Memorial – Chris Hughes (Superintendent)
Virgin Islands National Park – Nigel Fields (Superintendent)

Great Lakes IPMT

Leadership

Isaiah Messerly (Liaison), Daneil Jorgensen (Crew Leader), Rebecca Key (Data Manager), Tammy Keniry (Admin Officer),

Kelly Garrison (IT Support)

Region/Network Support

Interior Regions 3, 4, and 5 (Great Lakes/ Mississippi River Basin/ Missouri River Basin) - Carmen Thomson (GL-IPMT Supervisor)

Crew

Biological Technicians: Daniel Jorgensen (Crew Leader), Anna Kilian
Conservation Corps of MN. and IA: Renea McNemee

Park Crews

Mississippi National River and Recreation Area – Neil Smarjesse, Daniel Kruchten
Saint Croix National Scenic Riverway – Michael Rhoades, George Johnson, Jason Dowell, Annie Bahe
Pictured Rocks National Lakeshore – Theodore Roper, Desiree Panek

Park Support

See Technical/Steering Committee section
Additional Contacts: Lara Bender (PIRO), Scott Weyenberg (MWR-Fire), Chris Loudenslager (NOCO), Eric Gabriel (IATR), Katherine Frauen (IATR), John Arnold (KEWE).

Partners and Cooperators

Conservation Corps of Minnesota and Iowa
Northwood Cooperative Weed Management Area
St. Croix Red Cedar Cooperative Weed Management Area
Grand Portage Reservation Tribal Council
Wild Rivers Conservancy
WisCorps

Steering Committee

Ice Age National Scenic Trail - Eric Gabriel, Superintendent

Sleeping Bear Dunes National Lakeshore -
Scott Tucker, Superintendent
Indiana Dunes National Park - Paul Labovitz,
Superintendent
Saint Croix National Scenic Riverway - Craig
Hansen, Superintendent
Keweenaw National Historical Park - Wyndeth
Davis, Superintendent
Isle Royale National Park - Denice Swanke,
Superintendent

Technical Committee

Apostle Islands National Lakeshore –
Peggy Burkman
Grand Portage National Monument – Brandon
Seitz
Ice Age National Scenic Trail – Dan Watson
Isle Royale National Park – Lynette Potvin
Indiana Dunes National Park – Laura Brennan
Keweenaw National Historical Park - Steve
DeLong
Mississippi River and Recreation Area – Neil
Smarjesse
North Country National Scenic Trail – Luke
Jordan
Pictured Rocks National Lakeshore –
Laura Waller
St. Croix National Scenic Riverway – Caitlin
Nagorka
Sleeping Bear Dunes National Lakeshore –
Kirk Acharya
Voyageurs National Park – John Snyder
MWR Fire Ecologist – Scott Weyenberg

Gulf Coast IPMT

Leadership

Dale McPherson (Liaison),
Shea Bruscia (Regional IPMT
Program Data Manager)

Region/Network Support

Interior Region 2 South Atlantic Gulf
Science and Natural Resources
Management Division - Mark Frey
(Division Lead), Kelly Irick

(Terrestrial Branch Lead),
Christopher Barrow (Regional
GIS Coordinator)

Interior Region 2 South Atlantic Gulf
Contracting Division - Celinda
Hicks (Contracting Officer), Alison
Smith (Agreements Officer),
Demetria Smith-Wilson (Lead
Contracting Officer)

Interior Region 2 South Atlantic Gulf
Comptroller Division – Hannah
Strotman (Budget Analyst),
Tywannia Howells (Deputy
Comptroller)

Interior Region 2 South Atlantic Gulf
Human Resources & Workforce
Management Division – Robin
Robinson (Security Specialist),
David Jordan (Management
Analyst)

Gulf Coast Inventory and Monitoring Network
– Martha Segura (Network Coordinator),
Jane Carlson (Ecologist)

Intern Support

Conservation Legacy – Brynna Loomans,
Rachel Walker
Virtual Student Federal Service – Caleb
Simak Hoover, Raquel Thatcher

Park Support

Big Thicket National Preserve Resource
Management (RM) – Whitney Howeth,
Andrew Bennett
Gulf Islands National Seashore RM – Bruce
Leutscher, Cody Haynes
Jean LaFitte National Historical Park
and Preserve RM – Guy Hughes,
David Fox
Natchez Trace Parkway RM –
Christina Smith, Deanna Boensch
Palo Alto Battlefield National Historical
Park RM – Rolando Garza
Padre Island National Seashore RM –
Shelley Todd, Charles Sassine

San Antonio Missions National Historical
Park Facility Management – David
Vekasy

Vicksburg National Military Park RM –
Rachel Davidson, Chuck Beightol

Partners and Cooperators

Conservation Legacy Stewards Individual
Placements Program - Patricia Silva,
Jessica Zukowski, Caroline Smith, April
Elkins Badtke

US Department of State (Virtual Student
Federal Service)

Steering Committee

Big Thicket National Preserve – Wayne
Prokopetz (Superintendent)

Gulf Islands National Seashore – Darrell Echols
(Superintendent)

Jean LaFitte National Historical Park
and Preserve – Chuck Hunt
(Superintendent)

Natchez Trace Parkway – Doug
Neighbor (Superintendent)

Palo Alto Battlefield National Historical
Park – Oralia Fernandez
(Superintendent)

Padre Island National Seashore – Eric
Brunnermann (Superintendent)

San Antonio Missions National Historical
Park – Christine Jacobs (Superintendent)

Vicksburg National Military Park – Carrie
Mardorf (Acting Superintendent)

Heartland Network IPMT

Leadership

Carmen Thomson (Regional I&M and IPMT
Program Manager)

Mike DeBacker (Network
Coordinator/Supervisory Ecologist)

Gareth Rowell (Data Manager)

Craig Young (Terrestrial Program Leader)

Crew

Jordan Bell (Project Manager)

Partners and Cooperators

Conservation Corps of Iowa
Watershed Conservation Corps

Region/Network Support

Midwest Region – Carmen Thomson (I&M
Program Manager)

Board of Directors

Arkansas Post National Memorial – Karen
Bradford (Superintendent)

Effigy Mounds National Monument – Jim
Nepstead (Superintendent)

Hopewell Culture National Historical Park –
Vacant (Superintendent, Chair)

Ozark National Scenic Riverways – Jason Lott
(Superintendent)

Tallgrass Prairie National Preserve – Randy
Bilbeisi (Superintendent)

Midwest Regional Office – Carmen Thomson
(Regional I&M Program Manager)

Technical Committee

Arkansas Post National Memorial – Kirby
McCallie

Buffalo National River – Melissa Trenchik

Cuyahoga Valley National Park – Chris
Davis

Effigy Mounds National Monument –
Jessica Salesman

George Washington Carver National
Monument – ?

Herbert Hoover National Historic Site – Seth
Goodspeed

Homestead National Monument of America –
Jesse Bolli

Hopewell Culture National Historical Park –
Bret Ruby

Hot Springs National Park – Vacant

Lincoln Boyhood National Memorial – Erin
Hilligoss-Volkman

Ozark National Scenic Riverways – Victoria
Grant

Pea Ridge National Military Park – Nolan Moore
Pipestone National Monument – Seth Hendriks
Tallgrass National Preserve – Kristen Hase
Wilson's Creek National Battlefield – Gary Sullivan

Lake Mead Inter-Regional IPMT

Leadership

Curt Deuser (Liaison), Andy Pigg and Corbin Gentzler (Operations Specialists), Tyler Jack and Hannah Andrascik (Lead Bio-Techs), Carlee Coleman (Data Manager 3/22-1/23)

Crew

James Roberts, Joseph Ingram, Matthew Gorentz, Grady Workman, John Myers, Lillian Setters, Maegan Stephenson, Riley Gronemeyer, Abigail Zastawny, Joshua Vogel, Jacob Pope, Antonio Garcia and Caleb Dankle.

Region Support

Interior Regions 8, 9, 10, 12 (Lower Colorado Basin, Columbia-Pacific Northwest, California-Great Basin, Pacific Islands) Office – Denise Louie, Brent Johnson
Interior Regions 6, 7, and 8 Office - John Mack

Lake Mead NRA Host Park Support

David Alberg (Chief of RM), Wendy Foster, Brad Morris and Kim James (Administrative Assistants), Scott Briggs (Budget Officer), Lila Klein (Admin Officer), Justin Pattison (Deputy Superintendent), Randy Lavasseur and Stan Austin (Acting Superintendents)

Park Support

Arches National Park and Canyonlands National Park (Southeast Utah Group): Liz Ballenger and Kelli Quinn.
Joshua Tree National Park: Jay Goodwin, Kristen Richardson and Jane Rodgers
Death Valley National Park: Ian Torrence,

Carol Fields and Mark Sappington
Bryce Canyon National Park: Eric Vasquez and Brett Cockrell
Capitol Reef National Park: Morgan Wehtje and Jim Roche
Great Basin National Park: Ben Roberts, Meg Horner, Julie Long
Mojave National Park: Andrew Kaiser and Debra Hughes
Zion National Park: Darrin Gobble, Rebecca Lieberg, and Cassidy Bromley
Lake Mead NRA: Carrie Norman, Matt D'Ambrosi, Kelly Wallace and Dave Alberg.
Parashant National Monument: Jennifer Fox
Pipe Spring National Monument: Brian Black
Manzanar National Historic Site: Jeff Burton, Dave Goto
Tule Springs Fossil Beds National Monument (not official partner): Erin Eichenberg and Derek Carter
Organ Pipe Cactus NM (not official partner): Jeanne Taylor

Partners and Cooperators

Bureau of Land Management:
Southern NV District: JJ Smith, Sean McEldery, Tarl Norman, Tyler Hecht, and Curtis Walker
Battle Mountain District: Kenneth Shedden and Robert Burdick
Elko District: Kyle Martin
California Ridgecrest District: Alex Neibergs and Marty Dickes
Winnemucca District: Michael McCampbell
US Fish and Wildlife Service - Cibola NWR: Melissa Fry, Linda Miller, Ryan Woody
USFWS Desert Complex: Christa Weise
USFWS Desert NWR: June Chiu
US Forest Service
Spring Mountains NRA: Kathryn Gulley and Juliet Wallis
Coconino NF: Amanda Roesch, Katherine Landry and Janie Agyagos

Bureau of Reclamation – Lower Colorado River MSCP Program: Jessica Stegmeier, Laken Anderson, and Jeremy Brooks
Clark County, Nevada Desert Conservation Program – Riparian River Reserves: Caryn Wright; Boulder City Conservation Easement: Stefanie Ferrazzano and Sara Carrizal
Clark County Wetlands Park and Nature Preserve – Liz Bickmore and Ben Jurand
Nevada Department Of Wildlife: Anthony Miller
Maricopa County Parks, Arizona: Juanita Armstrong-Ullberg

Mid-Atlantic IPMT

Leadership

Emily Booth (Liaison), Nathan Wender (Team Leader), Jonathan Mikolin (Field Leader/Data Manager)

Crew

Trevor Mount, Quinn Towery

Region Support

Interior Region 1 (North Atlantic Appalachian) Office – Casey Reese, Supervisor (Regional IPM Coordinator)

Park Support

Host Park – Shenandoah National Park – Patrick Kenney (Superintendent), Jim Schaberl (Chief, Natural and Cultural Resources), Jake Hughes (Biologist – Invasive Plants/Restoration)
Appomattox Courthouse National Historical Park – Brian Eick
Appalachian National Scenic Trail – James Von Haden
Assateague Island National Seashore – Bill Hulslander, Jonathan Chase
Booker T. Washington National Monument – Timothy Sims

Cedar Creek and Belle Grove National Historical Park – Karen Beck-Herzog, Jon Beck
Colonial National Historical Park – Dorothy Geyer
Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park – Sara Strickland
Gettysburg National Military Park and Eisenhower National Historic site – Zach Bolitho, Dafna Reiner, Christopher Davis
George Washington Birthplace National Monument and Thomas Stone National Historic Site – Melissa Cobern, Elizabeth Ottarson, Brian Wrabley
Hampton National Historic Site and Fort McHenry National Monument and Historic Shrine – James Hogan
Hopewell Furnace National Historic Site and Valley Forge National Historical Park – Amy Ruhe, Kate Jensen
New River Gorge National River, Bluestone National Scenic River, and Gauley River National Recreation Area – Bryan Wender, Doug Manning
Petersburg National Battlefield – Emmanuel Dabney
Richmond National Battlefield Park – Kristen Allen

Partners and Cooperators

Appalachian Trail Conservancy
Blue Ridge PRISM
Smithsonian Conservation Biology Institute
Potomac Appalachian Trail Club
Town of Elkton, VA
Town of Shenandoah, VA

Volunteers

PATC, Rob Lamar

National Capital Region IPMT

Leadership

Alex Voznitza (Liaison), Nate Finney (Team Leader)

Crew

Cara Giordano (Squad Leader), Wayne Heideman (Squad Leader), Allison Rodgers (intern), Andrea Sosa (intern), Erin Rogers (intern), Micah Moss (intern), Natalia Arcos Cano (intern), Sophia Edwards (intern), Stephanie Lamb (Community Volunteer Ambassador)

Region Support

National Capital Region – Pat Campbell (Chief of Natural Resources and Science)

National Capital Region – Diane Pavek (Research and T&E Coordinator)

National Capital Region – Elizabeth Matthews (Regional I&M Program Manager)

National Capital Region – Dorothy Borowy (Ecologist, Regional IPM Coordinator)

Park Support

Antietam National Battlefield – Joe Calzarette (Natural Resources Program Manager), Christopher Tawney (Biologist), Jane Custer (Chief, Resource Management)

Catoctin Mountain Park – Lindsey Donaldson (Chief, Resource Management), Becky Loncosky (Biologist)

Chesapeake and Ohio Canal National Historical Park – Andrew Landsman (Natural Resources Program Manager), Layne Strickler (Biological Science Technician)

George Washington Memorial Parkway – Brent Steury (Natural Resources Program Manager), Mireya Stirzaker (Biologist)

Harpers Ferry National Historical Park – Mia Parsons (Chief, Resource Management), Eric Kelley (Natural Resource Specialist), Nicole Keefner (Biological Science

Technician), Darlene Hassler (Cultural Resources Management Specialist)

Manassas National Battlefield Park – Bryan Gorsira (Natural Resources Program Manager), Allison Hay (Biologist), Wayne Heideman (Biologist)

Monocacy National Battlefield – Andrew Banasik (Superintendent), Alex Vindas Cruz (Chief, Resource Management)

National Capital Parks - East – Mike Commisso (Chief, Resource Management), Mikaila Milton (Biologist), Lara Hannon (Natural

Resources and Environmental Compliance Program Manager)

National Mall and Memorial Parks – Leslie Frattaroli (Natural Resource Specialist), Brittany Grouge (Environmental Compliance Program Manager), Catherine Dewey (Chief, Resource Management)

Prince William Forest Park – Gregg Kneipp (Chief, Resource Management), Kristen Shelton (Biologist)

Rock Creek Park – Nick Bartolomeo (Chief, Resource Management), Ana Chuquin (Botanist)

Wolf Trap National Park for the Performing Arts – Edgar Deskins (Integrated Resource Program Manager)

Partners and Cooperators

United States Fish and Wildlife Service – Phil Pannill (NCTC Land Manager)

Virginia Department of Conservation and Recreation – Michael Lott (Crow's Nest Manager/Northern Region Steward)

NCR-PRISM – Sara Tangren (NCR-PRISM Coordinator), Damien Ossi (DOEE, Wildlife Biologist), Patricia Pearl Greenberg (Fairfax County Park Authority, Invasive Management Area Program Manager), Ryan Colliton (Montgomery County Department of Parks, Principal Natural Resources Specialist), Mary Travaglini (Montgomery County, Organic Lawn and Landscape Program Manager), Corinne Stephens (Montgomery

County, Senior Natural Resources Specialist), Jorge Bogantes Montero (Anacostia Watershed Society, Natural Resource Specialist), Jeanne Braha (Rock Creek Conservancy, Executive Director)

Arlington County Department of Parks and Recreation – Jennifer Soles (Natural Resource Specialist), Alonso Abugattas (Natural Resources Manager)

Appalachian Conservation Corps – Maddie Interdonato (IP Program Manager)
Weed Warrior Volunteer – Glenn Tobin
Friends of Anacostia Park
Accokeek Foundation

Steering Committee

Antietam National Battlefield – Joe Calzarette
Catoctin Mountain Park – Becky Loncosky
Chesapeake and Ohio Canal National Historical Park – Andrew Landsman
George Washington Memorial Parkway – Mireya Stirzaker
Greenbelt Park - Vincent Gentilcore
Harpers Ferry National Historical Park – Eric Kelley
Manassas National Battlefield Park – Bryan Gorsira
Monocacy National Battlefield– Alex Vindas Cruz
National Capital Parks-East – Lara Hannon
National Mall and Memorial Parks – Catherine Dewey
Piscataway Park – Lara Hannon
Prince William Forest Park – Gregg Kneipp
Rock Creek Park – Nick Bartolomeo
Wolf Trap National Park for the Performing Arts – Edgar Deskins
NCR IPMT Liaison - Alex Voznitza
NCR Chief of Natural Resources and Science – Pat Campbell

NCR Ecologist/ Integrated Pest Management Specialist – Dorothy Borowy
NCR Research Coordinator – Diane Pavek
NCR Inventory & Monitoring Network Program Manager – Elizabeth Matthews

North Coast / Cascades Network IPMT

Leadership

Cheryl Decker (Liaison), Sophie Wilhoit (Crew Lead and Data Manager –OLYM), Collin McAvinchey (Crew Lead--OLYM), Miles Berkey (Crew Lead—NOCA)

Crew

Salvador Silahua, Samantha Fischbein, Josh Willman, Robert Lescarbeau —Seasonals

Region/Network Support

Interior Regions 8, 9,10, 12 (Lower Colorado Basin, Columbia-Pacific Northwest, California-Great Basin, Pacific Islands) Office – Denise Louie, Irina Irvine, Brent Johnson

Park Support

Host Parks: North Cascades National Park – Denise Schultz (Acting Superintendent) Don Striker (Superintendent), Ashley Rawhouser (Acting Chief of Resource Management);
Olympic National Park – Lee Taylor (Acting Superintendent), Jerald Weaver (Chief of Resource Management); Ebey's Landing National Historical Reserve—Annie Matsov (Acting Area Manager)

Partners and Cooperators

Clallum County Noxious Weed Control
Island County Noxious Weed Control
San Juan County Noxious Weed Control
Skagit County Noxious Weed Control

Olympic Peninsula knotweed working group
(CWMA)

Skagit CWMA

Washington State Extension Service

The Nature Conservancy, Mt Vernon office

Whidbey Island Poison Hemlock working group

Trust Board of Ebey's Landing National
Historical Reserve

Washington State Parks

Pacific Northwest Invasive Plant Council

Skagit Fisheries Enhancement Group

Quinault Nation

Quileute Nation

Washington Conservation Corps

Earth Corps

Pacific Rim Institute

Center for Natural Lands Management

North Sound Prairie Working Group

Steering Committee

Olympic National Park – Janet Coles

North Cascades National Park – Stacy
McDonough

Mount Rainier National Park – Beth Fallon, Kim
Popeck

Lewis and Clark National Historical Park –
Carla Cole, Kayla Fermin

Ebey's Landing National Historical Reserve –
Annie Matsov

San Juan Island National Historical Park – Sara
Dolan

Northeast IPMT

Leadership

Emily Booth (Liaison), Nicholas Stevenson
(Team Leader)

Crew

None

Region/Network Support

Interior Region 1 (North Atlantic

Appalachian) Office – Casey Reese,
(NER IPM Coordinator)

Park Support

Host Park: Delaware Water Gap National
Recreation Area, host park - Larry

Hilaire (Wildlife Biologist)

Acadia National Park – Jesse Wheeler
(Vegetation Program Manager)

Boston Harbor Islands National Recreation

Area - Marc Albert (Natural Resources),

Rachel Vincent and Joe Bozzo (Biotechs)

Cape Cod National Seashore - Stephen M.
Smith (Natural Resources)

Fire Island National Seashore - Jordan

Raphael (Natural Resources)

First State National Historic Park - Alan

McLoughlin, Sonja Werth (Biologist)

Flight 93 National Memorial - Stephen Clark,

Doug Snively, Brenda Wasler

Frederick Law Olmsted National Historic

Site – Aaron Erzinger (Gardener)

Gateway National Recreation Area - Patricia

Rafferty (Natural Resources)

Katahdin Woods and Waters National

Monument -Isabel Ashton (Integrated

Resources Manager)

Minuteman National Historic Park - Margie

Coffin-Brown (Natural Resources

Manager), Kiah Walker (Biologist), Ada

Fox (Biotech)

Morristown National Historical Park -Robert

Masson (Biologist)

Sagamore Hill National Historic Site – Gavin

Gardner (Natural Resources)

Saint-Gaudens National Historic Site - Steve

Mortillo (Integrated Resources), Rainey

McKenna (Visitor Experience and

Resource Stewardship Program

Manager)

Saratoga National Historic Park - Chris

Martin & Linda White (Natural Resources)

Saugus Iron Works National Historic Site -

Bill Fuchs (Natural Resources)

Upper Delaware Scenic and Recreational

River - Don Hamilton (Natural Resources)

& Andrew Weber (Ecologist)

Partners and Cooperators

Appalachian National Scenic Trail – Marian Orlousky (Appalachian Trail Conservancy (ATC))
CU Maurice River (partner organization of the Maurice National Wild and Scenic River)
Morristown National Historical Park - New Jersey Invasive Species Strike Team

Northern Great Plains IPMT

Leadership

Vacant (Liaison), Craig Young (Interior Regions 3, 4, 5 IPMT program oversight), Nancy Finley (Supervisor)

Crew

Montana Conservation Corps, Minnesota Conservation Corps

Region/Network Support

Interior Regions 3, 4, and 5 (Great Lakes/ Mississippi River Basin/ Missouri River Basin) – Carmen Thomson, supervisor (I&M Program Manager)

Park Support

Host Parks - Badlands National Park and Theodore Roosevelt National Park

Partners and Cooperators

Northern Great Plains I&M Network
NRCS Bismark Plant Materials Center – Wayne Duckwitz
USGS- Amy Symstad, Heather Baldwin
Northern Great Plains Fire Management- Wind Cave National Park

Volunteers

Montana Conservation Corps
Minnesota Conservation Corps

Steering Committee

Badlands National Park – Eddie Childers (Wildlife Biologist)
Ft. Union Trading Post National Historic Site – Alice Hart (Superintendent)
Midwest Region I&M-IPMT Program Manager – Carmen Thomson (I&M Program Manager)
Niobrara National Scenic River – Susan Cook (Superintendent)
Theodore Roosevelt National Park – Blake McCann (Natural Resource Program Manager)
Northern Great Plains Fire Management – Dan Swanson (Fire Ecologist)
Wind Cave National Park – Greg Schroeder (Natural Resource Program Manager)

Northern Rocky Mountain IPMT

Leadership

Steven Bekedam (Liaison till May 7, 2022, vacant since May 8 2022), Colorado National Monument Team Leader vacant during FY 22 field season, Andrew Ringholz (Yellowstone National Park Team Leader), Arley Canfield, (Glacier National Park Team Leader).

Crew

Paul Daniels (GLAC biotech), Natalie Chiapperi (YELL biotech), Jesse Sanzo (COLM biotech) Liberty Cleveland (MCC intern), Julia Lenart (MCC Intern), Henry Smalley (MCC Intern).

Regional Support

Interior Regions 6, 7, and 8 Office – John Mack (Biological Resources Lead), Brandie MacIntyre (Program Administrative Assistant), Deborah England (Budget Analyst)

Park Support

Host Parks - Colorado National Monument,
Glacier National Park, and Yellowstone
National Park
Bear Paw National Battlefield – Jimmer
Stevenson (Maintenance Foreman)
Bent's Old Fort NHS - Adam Heberlie
(Biological Science Technician)
Big Hole National Battlefield – Jimmer
Stevenson (Maintenance Foreman)
Bighorn Canyon National Recreation Area –
Ryan Felkins (Park Biologist)
Black Canyon of the Gunnison NP – Danguole
Bockus (Park Biologist)
Capulin Volcano NM – Adam Heberlie
(Biological Science Technician)
City of Rocks National Reserve – Shalene
Dickard (Chief, Integrated Resource
Management)
Colorado National Monument – Jessica
Resnik (Chief, Integrated Resource
Management)
Craters of the Moon National Monument and
Preserve – Linda Manning (Chief,
Integrated Resource Management)
Curecanti National Recreation Area –
Danguole Bockus (Park Biologist)
Dinosaur National Monument – Emily
Spencer (Natural Resource Specialist),
Florissant Fossil Beds National Monument –
vacant
Fossil Butte National Monument – Arvid Aase
(Museum Curator)
Glacier National Park – Dawn LaFleur (IPM
Biologist)
Golden Spike National Historic Site –
Brandon Flint (Park Superintendent)
Grant–Kohrs Ranch National Historic Site –
Jason F. Smith (Natural Resource
Specialist)
Grand Teton National Park – Jeanine Foley
(Vegetation Biologist)
Great Sand Dunes National Park – Dewane
Mosher (Park Biologist)
Hagerman Fossil Beds National
Monument – Linda Manning (Chief,
Integrated Resource Management)

John D. Rockefeller Memorial Parkway –
Jeanine Foley (Vegetation Biologist)
Little Bighorn National Battlefield – Wayne
Challoner (Park Superintendent),
Mariane Doane (Biologist)
Minidoka National Historic Site – Linda
Manning (Chief, Integrated Resource
Management)
Rocky Mountain National Park – Jim
Bromberg (Vegetation Ecologist)
Sand Creek Massacre National Historic Site –
Adam Heberlie (Biological Science
Technician)
Yellowstone National Park – Sue Mills
(Natural Resource Specialist), Brian Teets
(North District Crew Leader)

Partners and Cooperators

American Conservation Experience – Kean
Ruane
Montana Conservation Corps – Amanda
Pfaff, Angela Davis, Bryan Wilson
University of Montana, Marilyn Marler
Colorado Natural Heritage Program,
Colorado State University, Tom Baldvins
U.S. Geological Survey, Dr. Amy Symstad
Box Elder County, UT Noxious Weed Control
Utah Conservation Corps

Steering Committee

Bear Paw National Battlefield – Kathryn
(Katy) Matthews
Black Canyon of the Gunnison NP –
Danguole Bockus
Colorado National Monument – Jessica
Resnik
Glacier National Park – Dawn LaFleur
Grand Teton National Park – Jeanine Foley
Grant–Kohrs Ranch National Historic Site –
Jason Smith
Hagerman Fossil Beds National Monument –
Gilbert Moreno
Sand Creek Massacre National Historic Site –
Adam Heberlie
Yellowstone National Park – Sue Mills
NRM IPMT Liaison – Steven Bekedam

Regional Biological Resources Program
Lead – John Mack

Pacific Islands IPMT

Leadership

Jeremy Gooding (Liaison), Sierra McDaniel (Lead, Natural Resources Management, Hawai'i Volcanoes National Park), Paul Hosten (Chief, Integrated Resources Management Division, Haleakalā National Park), Dr. Rhonda Loh (Superintendent, Hawai'i Volcanoes National Park), Stacey Torigoe (Ecologist, Hawai'i Volcanoes National Park), Woody Mallinson (Natural Resource Program Manager, Haleakalā National Park)

Crews (Parks and Partners)

Hawai'i Volcanoes National Park Natural Resources Management: Jon Maka'ike and Dwayne Montoya-Aiona, Crew Leads and the entire NRM Crew

Haleakalā National Park Vegetation Management: Adam O'Neill, Biological Science Technician, Andrew DellaVilla, Biological Science Technician, Chris d'Avella, Horticulturist.

Data Manager: Leila Morrison (HALE), Danny Duda (HAVO, Pacific Cooperative Studies Unit).

Partner Parks - Resource Management Staff and Leads at Kalaupapa National Historical Park, Kaloko-Honokōhau National Historic Park, Pu'uhonua o Hōnaunau National Historic Park, & Pu'ukohōlā Heiau National Historic Site

Big Island Invasive Species Committee (BIISC) Forest Response Team

Friends of Hawai'i Volcanoes National Park - Guardians of the Trail

Hawai'i Volcanoes National Park Youth Rangers

Hawaiian Ocean View Estates (HOVE) Community Association

Region/Network Support

Interior Regions 8 ,9,10, 12 (Lower Colorado Basin, Columbia-Pacific Northwest, California-Great Basin, Pacific Islands) Office – Denise Louie (Natural Resources and Science Lead), Brent Johnson (Vegetation Ecologist & IPM Coordinator), Pacific Islands Office – Melia Lane-Kamahele (Manager)

Park Support

Haleakalā National Park – Awapuhi Dancil & David Rummel

Hawai'i Volcanoes National Park – Jill Lippert

Partners and Cooperators

Partner Parks - Haleakalā National Park, Hawai'i Volcanoes National Park, Kalaupapa National Historical Park, Kaloko-Honokōhau National Historic Park, Pu'uhonua o Hōnaunau National Historic Park, Pu'ukoholā National Historic Site

Associate Parks - Alakahakai National Historic Trail

University of Hawai'i at Mānoa (UHM) – Dr. Paul Krushelnycky, Researcher, Department of Plant and Environmental Protection Sciences.

University of Hawai'i, Hilo (UHH) – Dr. Ryan Perroy, Associate Professor, Geography and Environmental Science

University of Hawai'i, Mānoa (UHM) – Dr. Shaya Hornarvar, Director/Associate Specialist, Pacific Cooperative Studies Unit

University of Florida (UFL) – Dr. James Leary, Assistant Professor, Center for Aquatic and Invasive Plants

KUPU – See: <https://www.kupuhawaii.org/> Plant Extinction Prevention Program (PEPP), Hawai'i – Hank Oppenheimer (Maui Nui PEPP Coordinator)

Hawaii Wildfire Management Organization (HWMO) – See:

<https://www.hawaiiwildfire.org>

East Maui Watershed Partnership (EMWP)- Hawai'i Department of Land and Natural Resources, Haleakalā Ranch, County of

Maui Department of Water Supply, The Nature Conservancy Hawai'i, East Maui Irrigation, University of Hawai'i PCSU, Haleakalā National Park

Three Mountain Alliance – University of Hawai'i PCSU, Hawai'i Department of Public Safety, Hawai'i Department of Land and Natural Resources, Kamehameha Schools, National Park Service, The Nature Conservancy, US Fish and Wildlife Service, USDA Forest Service, US Geological Survey, USDA Natural Resources Conservation Service

Volunteers

Friends of Hawai'i Volcanoes National Park Stewardship at the Summit Volunteer Program
Friends of Haleakalā National Park, Ron Nagata Ohana

Steering Committees

Maui Nui (Islands of Maui, Molokai, Lanai, & Kahoolawe) - Liaison Pacific Islands IPMT, Resources Management Chief Haleakalā National Park, Vegetation Manager Haleakalā National Park (Mallinson), Manager Molokai Invasive Species Committee, Resources Management Lead Kalaupapa National Historical Park (Linh Anh Cat), relevant subject experts as appropriate
Island of Hawai'i (Big Island): Resources Management Chief, Park Ecologist, and Pest Control Workers from Hawai'i Volcanoes National Park, Resources Management Leads Kaloko-Honokōhau and Pu'uhonua o Hōnaunau National Historical Parks, Jackson Letchworth (KAHO), Staff at Pu'ukoholā National Historic Site, subject experts as appropriate

Southeast IPMT

Leadership

Lauren Serra (Liaison), Toby Obenauer (Crew Leader), Shea Bruscia (Data Manager, Florida Caribbean IPMT)

Crew

William Culbertson, Logan Lilla, Casey Hayes (American Conservation Experience)

Region/Network Support

Interior Region 2 South Atlantic Gulf – Mark Frey (Acting Chief, Science and Natural Resources Management), Kelly Irick (Acting Branch Chief, Science and Natural Resources Management), Amorita Brackett (Southeast Coast IPMT), Brian Lockwood (Florida Caribbean IPMT), Josue Urbaz (IT Specialist)

Inventory & Monitoring Network - Brian Witcher (Appalachian Highlands Program Manager), Evan Raskin (Appalachian Highlands Assistant Data Manager/Biologist), Teresa Leibfreid (Cumberland Piedmont Ecologist), Clare Bledsoe (Cumberland Piedmont Biologist), Ellen Cheng (Quantitative Ecologist)

Fire Management – Alex Scronce (Wildland Fire Operations Specialist, KIMO), Wylie Paxton (Appalachian/Piedmont/Coastal Zone), Justin Shedd (Regional Wildland Fire GIS Specialist)

Park Support

Host Park - Blue Ridge Parkway – Bambi Teague (Supervisory Biologist), Chris Ulrey (Plant Ecologist), Tracy Swartout (Superintendent), Andy Otten (Landscape Architect-Project Specialist, Denver Service Center-Transportation)

Abraham Lincoln Birthplace National Historical Park – Jennifer Jones (Interpretation), Stacy Humphreys (Chief of Interpretation and Resources Management, Catherine Bragaw (Superintendent)

Andrew Johnson National Historic Site –Josh Hines (Supervisory Facility Operations Specialist), David Foster (Superintendent)

Appalachian National Scenic Trail

Big South Fork National River & Recreation Area / Obed Wild & Scenic River – Marie Tackett (Botanist), Niki Nicholas (Superintendent), Cody Karsner (Biological

Science Technician), Tyler Chitwood (Seasonal), Connor Kurz (Wildlife Technician), American Conservation Experience Conservation Corps
Carl Sandburg Home National Historic Site – Irene Van Hoff (Biological Science Technician), Polly Angelakis (Superintendent)
Chickamauga & Chattanooga National Military Park – Jim Szykowski (Chief of Resource Management), Kiel Rommel (Preservationist / TTAP Supervisor), Brad Bennett (Superintendent), and Abbey Vander Sluice, Hannah McLaren, Emily Mathis, Chance Williams (Historic Preservation Team Interns)
Cumberland Gap National Historical Park – Jenny Beeler (Biologist), Charles Sellers (Superintendent)
Fort Donelson National Battlefield – David Hamby (Chief of Heritage Preservation & Maintenance), Brian McCutchen (Superintendent)
Great Smoky Mountains National Park – Kris Johnson (Supervisory Forester), Cassius Cash (Superintendent), American Conservation Experience Conservation Corps
Guilford Courthouse National Military Park – Vicki Boyce (Maintenance), Mike Lewter (Maintenance Supervisor), James Hill (Superintendent)
Little River Canyon National Preserve / Russell Cave National Monument – Mary Shew (Resources Management Specialist), Shawn Waddel (Biological Science Technician), Steve Black (Superintendent)
Mammoth Cave National Park – Tim Pinion (Chief of Science and Resources Management), Brice Leech (Natural Resources Specialist), Barclay Trimble (Superintendent)
Shiloh National Military Park – Marcus Johnson (Natural Resource Management), Dale Wilkerson (Superintendent)
Southern Campaign of the American Revolution Parks Group - Cowpens National

Battlefield / Kings Mountain National Military Park / Ninety Six National Historic Site - Diana Bramble (Superintendent, COWP/KIMO), Adam Baker (Maintenance, COWP) and Grey Wood, George McCarty (Maintenance, NISI)
Stones River National Battlefield – Brenda Pennington (Superintendent), Randy Anderson (Facilities and Natural Resources Manager), Brenda Pennington (Superintendent)

Partners and Cooperators

American Conservation Experience
Appalachian Trail Conservancy
Arboretum at Chapel Hill
Federal Highways Administration – NPS Denver Service Center
North Carolina Forestry Commission
North Carolina Invasive Plant Council
North Carolina Native Plant Society (i.e. Cullowhee)
South Carolina Cogongrass Taskforce
South Carolina Exotic Pest Plant Council
South Carolina Native Plant Society
Town of Marshall, NC
USDA APHIS – Columbia, SC
USDA National Forests of NC

Volunteers

Interior Region 2's Science and Natural Resources Management Division – Dylan Lockwood, Joseph Lamb

Steering Committee

Big South Fork National River & Recreation Area / Obed Wild & Scenic River – Marie Tackett
Chickamauga & Chattanooga National Military Park – Jim Szykowski
Cowpens National Battlefield / Kings Mountain National Military Park – Diana Bramble
Cumberland Gap National Historical Park – Jenny Beeler
Little River Canyon National Preserve / Russell Cave National Monument – Mary Shew

Southeast Coast IPMT

Leadership

Lauren Serra (Liaison), Amorita Brackett (Crew Leader), Shea Bruscia (Data Manager, Florida Caribbean IPMT)

Crew

Michaela Palmieri - MOCR, Miles Gorman - HOBE, Cody Cox - HOBE, Isabella Hackney – FOPU, Marcus Ryan Brazell - FOPU, Alex McTavish – OCMU (American Conservation Experience), Julieanne Montaquila – SECN I&M (Scientist in Parks)

Region/Network Support

Interior Region 2 South Atlantic Gulf – Mark Frey (Acting Chief, Science and Natural Resources Management), Kelly Irick (Acting Branch Chief, Science and Natural Resources Management), Toby Obenauer (Southeast IPMT), Southeast IPMT Crew (American Conservation Experience Interns), Brian Lockwood (Florida Caribbean IPMT), Welles Tisdale (GIS Specialist)

Inventory & Monitoring Network - Brian Gregory (Southeast Coast Program Manager/Aquatic Ecologist), Forbes Boyles (Southeast Coast Botanist), Ellen Cheng (Quantitative Ecologist)

Appalachian/Piedmont/Coastal Fire Management Zone – Wylie Paxton and the Fire Effects Crew, Rob Klein (Fire Ecologist), Justin Shedd (Regional Wildland Fire GIS Specialist)

Park Support

Host Park - Congaree National Park – K Lynn Berry (Superintendent), David Shelley (Chief of Resource Stewardship and Science), Theresa Yednock (Biological Science Technician), Eric Frey (Biologist), Laura Tyler (Administrative Officer), Alice DaRosa (Administrative Support Assistant), and John Torrence, Leona McManus (Maintenance), Charles Aznive (Chief of Maintenance), Jonathan Manchester (Interpretation Park

Ranger), Greg Cunningham (Chief of Interpretation, Education and Visitor Services), Jason Johnson (Chief Ranger), Kacey Kai (Seasonal Interpretation Park Ranger), Youth Conservation Corps

Cape Hatteras National Seashore / Fort Raleigh National Historic Site / Wright Brothers National Monument – Dave Hallac (Superintendent), Meaghan Johnson (Chief of Resource Management and Science National Parks of Eastern North Carolina), William P Thompson (Supervisory Biological Science Technician)

Cape Lookout National Seashore – Jeff West (Superintendent), Jon Altman (Biologist), American Conservation Experience Conservation Corps

Chattahoochee River National Recreation Area - Read (Biologist), Ann Honious (Superintendent), Annie Couch (Crayfish Creek Project)

Cumberland Island National Seashore – Doug Hoffman (Biologist), Michael Seibert (Chief of Resources), Gary Ingram (Superintendent)

Fort Frederica National Monument – Michael Seibert (Chief of Resources), Steve Theus (Site Manager)

Fort Pulaski National Monument – Melissa Memory (Superintendent), Candice Wyatt (Biological Science Technician), Emily Forlenza (Facility Manager)

Fort Sumter and Fort Moultrie National Historical Park / Charles Pinckney National Historic Site – Tracy Stakely (Superintendent), Kate Funk (Curator)

Horseshoe Bend National Military Park – Barbara Tagger (Superintendent), and Brian Robinson, Steve Crowder (Maintenance)

Kennesaw Mountain National Battlefield Park – Patrick Gamman (Superintendent), Carlos Hurston (Facility Manager)

Moore's Creek National Battlefield – Matthew Woods (Superintendent)

Ocmulgee Mounds National Historical Park – Carla Beasley (Superintendent), Christina Valdes (Biological Science Technician)

Out-Of-Network Park Support

Kings Mountain National Battlefield - Alex Scronce (Interior Region 2, Forestry Technician), James Nichols (American Conservation Experience Intern)
Reconstruction Era National Historical Park – Scott Teodorski (Superintendent)

Frederica National Monument – Michael Seibert

Fort Pulaski National Monument – Melissa Memory

Moores Creek National Battlefield – Matthew Woods

Partners and Cooperators

American Conservation Experience
Garden Club of America – Weed Wrangle
Georgia Forestry Commission, Forest Health
Kennesaw Mountain Trail Club
North American Invasive Species Management Association
North Carolina Coastal Federation - Phragmites Work Group
North Carolina Department of Environmental Quality, Aquatic Weed Control Program
North Carolina Department of Transportation
North Carolina Invasive Plant Council
North Carolina State University, College of Natural Resources
Old-Growth Bottomland Forest Research and Education Center
Palmetto Garden Club
South Carolina Association of Naturalists
South Carolina Department of Natural Resources, Heritage Trust Program
South Carolina Department of Parks, Recreation & Tourism
South Carolina Exotic Pest Plant Council
South Carolina Native Plant Society, Upstate Chapter

Volunteers

Congaree National Park – Corinna Brackett, Larissa Brackett
Kennesaw Mountain National Battlefield Park – Danny Leigh (Kennesaw Mountain Trail Club)

Steering Committee

Chattahoochee River National Recreation Area – Ann Honious
Congaree National Park – K Lynn Berry
Cumberland Island National Seashore / Fort

Southwest IPMT

Leadership

Jason Martin (Liaison), Michael Turner (Deputy Liaison, Crew Lead), Anna Wheeler (Crew Leader/GIS), Marcus Jernigan (Botanist/GIS)

Crew

American Conservation Experience, Southwest Conservation Corps (Conservation Legacy and Ancestral Lands Programs), Tucson Audubon Society Coati Crew

Regional/Network Support

Interior Regions 6, 7, and 8 Office John Mack, supervisor (Natural Resources Division, Biological Resource Program Manager), Adam Strong (IPM Coordinator)

Park Support

Host Park 1 – Desert Research Learning Center/Sonoran Desert Inventory and Monitoring Program – Andy Hubbard (Program Manager)
Host Park 2 – Petroglyph National Monument (Nancy Hendricks, Superintendent)

Partners and Cooperators

US National Park Service, Inventory and Monitoring Program (Federal)
Borderlands Restoration
Institute for Applied Ecology–Southwest Program
US Fish and Wildlife Service
US Forest Service
Bureau of Land Management

US Geological Survey
University of Nevada, Las Vegas
American Conservation Experience
Southwest Conservation Corps
Pueblo of Santa Ana Garden Center
National Phenology Network
USDA Forest Service's Human Health and
Ecological Risk Assessments for commonly
used Herbicides and Pesticides
Weed Research and Information Center
Sonoran Desert Museum
Tucson Audubon Society
Southwest Vegetation Management Assoc.
Southwest Seed Partnership

Steering Committee

Lisa Baldwin (SAPU)
Jeffery Conn (SAGU)
Grenade Fielder (LAMR)
Jeannine McElveen (PEFO)
Sarah Milligan (BAND)
Alternates
Paul Morley (MEVE)
Christopher Ryan (AMIS)
Mike Medrano (TAMU)
At Large
Jason Mateljak (SOPN)
John Mack (IMR)