# U.S. FISH AND WILDLIFE SERVICE

## *National Wildlife Refuge System*

## *FY 2024 Invasive Species Strike Team Annual Summary*

American Bison at
Rocky Mountain Arsenal
Image credit USFWS

www.fws.gov/program/national-wildlife-refuge-system

# PROGRAM OVERVIEW

## *The Need for Action*

Invasive species pose a serious threat to conservation, economic and recreation interests across the country. The single most effective way to reduce their long-term damage and costs is to stop them early—before they become established and spread out of control. Invasive species encroachment decimates native flora and fauna and pushes vulnerable species toward the brink of extinction and degrades habitat. hey also wreak havoc on human systems—clogging waterways, damaging infrastructure, reducing agricultural productivity, and limiting recreation opportunities. This destruction not only harms conservation efforts but has significant economic impact. Invasive species disrupt waterways, infrastructure and agricultural lands, leading to expensive repairs and lost productivity. They also severely impact recreational opportunities, especially those that depend on thriving wildlife populations, like hunting and fishing.

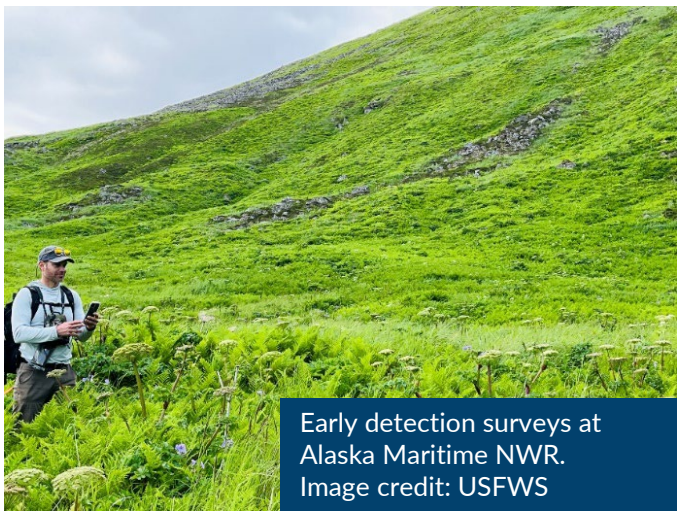
The National Wildlife Refuge System (NWRS) developed guidance for invasive species early detection and rapid response (EDRR) operations through its 2003 National Strategy for Management of Invasive Species. While a minimal amount of EDRR was occurring at individual sites in the NWRS, there was not a coordinated or effective EDRR program.

## *Our Approach*

The NWRS's Invasive Species Strike Team (ISST) program was established in response to the growing threat posed by invasive species to native habitats and wildlife. The program evolved from strategic decisions made by Refuge Chiefs in the early 2000s, with subsequent budget appropriations and regional allocations aligned to support these efforts.

The vision of the ISST program is to "Protect the natural resources of the National Wildlife Refuge System from the impacts caused by invasive species, primarily through EDRR principals, which include prevention, control, monitoring, restoration, and education."

ISSTs are funded through dedicated base allocations within the NWRS invasive species program and are intended to be flexible, mobile teams capable of responding quickly to newly detected invasions. From its inception, the ISST program's primary mission has been centered on EDRR, as explicitly stated in its founding guidance and subsequent congressional language and internal planning documents. This EDRR emphasis recognizes that the most effective and cost-efficient way to address invasive species threats is to prevent establishment through swift intervention. The ISST model is designed to serve as a national EDRR capability, filling a critical operational gap in the Refuge System's ability to manage invasive species before they become widespread. This core focus continues to define ISST priorities and shapes how resources are allocated, ensuring the program remains aligned with legislative intent and agency conservation goals. The ISST allocations are designed to support work within defined geographic areas, often in partnership with federal, state, tribal, and private stakeholders to maximize effectiveness.

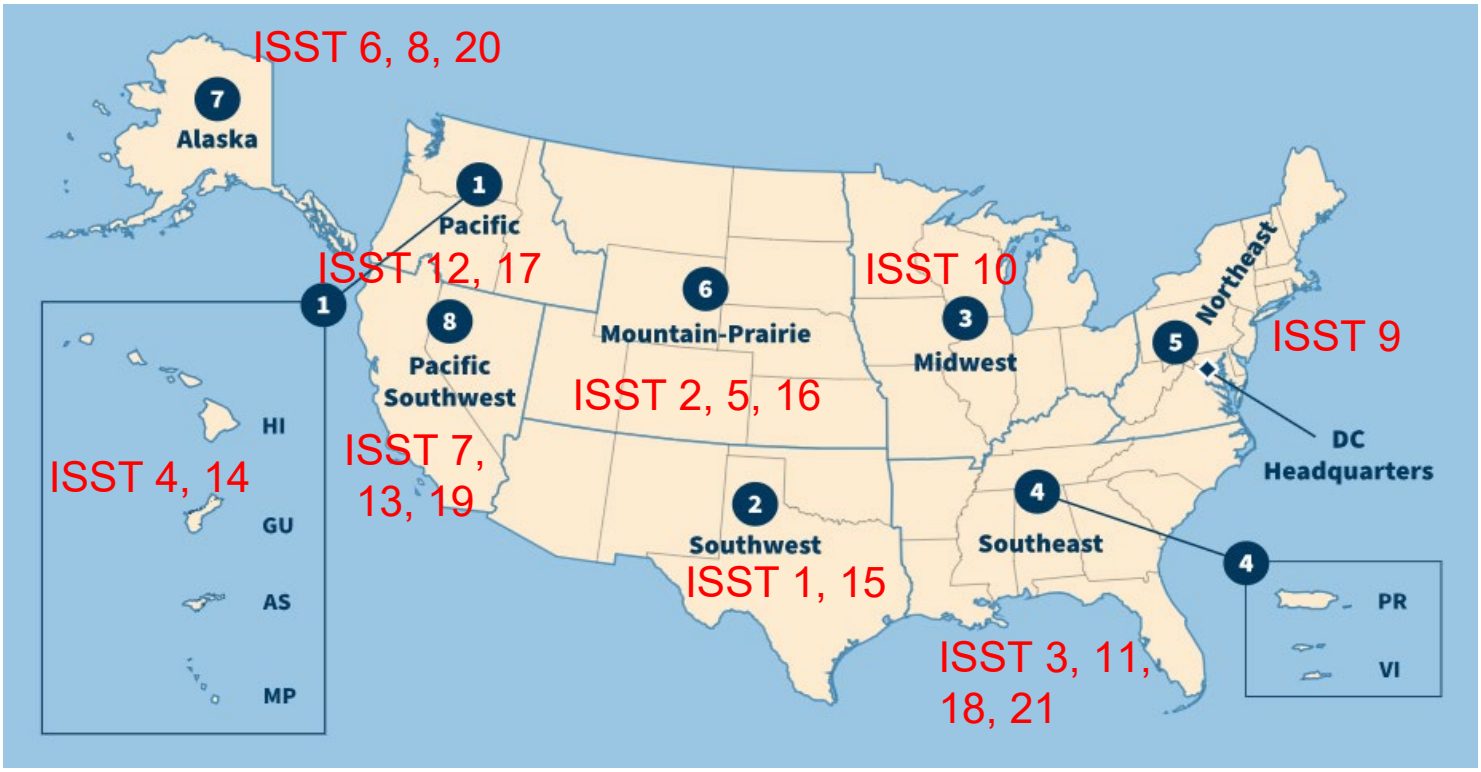


Early detection surveys at Alaska Maritime NWR. Image credit: USFWS

# PROGRAM STRUCTURE

## *ISST Distribution*

The initial three ISSTs were funded in fiscal year (FY) 2004. By the end of FY 2024, the ISST program had expanded to 21 teams nationwide (Figure 1). This growth reflects both the success and the continued need for EDRR capacity to address all taxa of invasive species across diverse landscapes. Since 2021, new ISSTs have been added following the priorities and processes outlined in the U.S. Fish and Wildlife Service's 2022 guidance document, *Prioritization of Invasive Species Strike Teams across the National Wildlife Refuge System*, which provides a framework for team development, performance evaluation, and integration into regional strategies. This expansion demonstrates the Service's commitment to maintaining a nimble, strategically deployed EDRR network that supports the conservation mission of the Refuge System. The ISST numbers indicate the order the team was created.




## *ISST Models*

To maximize the effectiveness of the program nationally, the regions currently implement ISST operations through one of three models based on regional capacity, the risk of invasion, and availability of partner support.

**Dedicated Team**
ISST lead oversees team and supplements capacity

**Partner Team**
Region utilizes external crews

**Competitive RFP**
Refuges apply to a regional RFP

## *Coordination*

The ISST program is nationally coordinated through the NWRS and is closely aligned with the Department of the Interior (DOI) and broader federal invasive species strategies. ISST coordination integrates national priorities such as those outlined in the DOI Invasive Species Strategic Plan and Executive Orders like E.O. 13112 and its update E.O. 13751, which emphasize early detection, rapid response, and interagency collaboration. The program supports interjurisdictional coordination with other DOI bureaus such as National Park Service (NPS) and Bureau of Land Management (BLM) and federal agencies such as the US Department of Agriculture's Animal and Plant Health Inspection Service – Wildlife Services (USDA APHIS-WS), especially where invasive species cross administrative or ecological boundaries. At the regional and local levels, ISSTs work closely with refuge staff, state and tribal partners, non-governmental organizations, and private landowners to plan and implement on-the-ground projects. Effective coordination across the agency ensures that ISSTs and our partners receive technical, logistical, and financial support, while maintaining operational flexibility to meet local needs and ecological conditions. The program's structure allows it to contribute directly to both administrative and agency-specific strategic goals, offering a cohesive framework that unifies efforts across jurisdictions and landscapes.

To ensure program efficiency, ISST activities are guided by proven decision frameworks including integrated pest management, risk assessments, suitability models, and prioritization tools. These decision frameworks help us prioritize, act strategically, and stay outcome-focused in invasive species management. The ISSTs scope of work has also supported prevention, mapping, effectiveness monitoring, containment, and active management of invasive species on and around refuges. Annual reporting is a critical requirement of the program, with ISSTs providing detailed data on project locations, treated species and acreage, personnel, and budgets to inform future investments.

Camas NWR
Image credit: USFWS

# PARTNERS IN ACTION

Partnerships are fundamental to the success of the ISSTs, enabling coordinated, landscape-scale responses to invasive threats. The ISSTs collaborate with a wide range of partners that are supported through diverse financial and administrative mechanisms, including cooperative and grant agreements, interagency agreements, and regionally or locally tailored Memoranda of Understanding (MOUs). At the national level, two key MOUs—one focused on island restoration and another focused on invasive species prevention—provide strategic frameworks that enhance ISST alignment with broader conservation goals and administrative priorities. These partnerships help pool resources, leverage expertise, and foster joint planning and implementation, ensuring that ISST efforts are integrated, efficient, and responsive to both ecological and community needs. We are grateful to all our partners whose collaboration, dedication, and shared commitment continue to advance the mission of protecting and restoring the nation's wildlife refuges and the lands and waters of our neighbors.

Volunteer groups at O'ahu National Wildlife Refuge Complex assisting with invasive species removal in sensitive coastal habitat, planting native species, and repurposing marine debris from the shoreline.
Image Credit: USFWS

# Fiscal Year 2024 Program Highlights

**$10.2M**
*Total Funding*

**54.5K**
*Acres of early detection surveys*

**57.5K**
*Acres of treated*

**3.4K**
***Acres** Restored*

**147**
*Rapid Response efforts implemented*

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Rocky Flats NWR
Image credit: USFWS

# Regional Summary

## Region 1 (Pacific) Annual Report: FY 2024

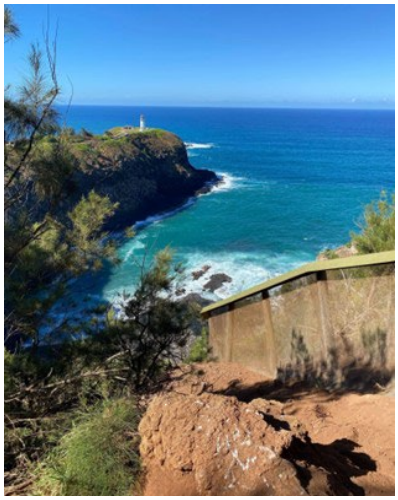
A Laysan albatross tends a chick at Midway Atoll National Wildlife Refuge in the Pacific.
Image: USFWS

### *Background*

The Hawaii & Pacific Islands ISST (ISST #4, ISST #17), established in 2006, is one of the National Wildlife Refuge System's longest-running teams. Coordinated by the Pacific Island Refuges and Monuments Office in Honolulu, the team supports five refuge complexes across Oahu, Maui, Hawai'i Island, Kaua'i, and Guam. ISST biotechnicians and AmeriCorps interns carry out invasive species control projects ranging from plant removal to predator management, with annual work plans developed by each complex to address local priorities. The team collaborates across islands and convenes quarterly, allowing for shared expertise and joint efforts on larger landscape-level projects that protect native species, cultural resources, and ecosystem resilience.

The Pacific Northwest (ISST # 12) and Pacific Marine National Monuments (ISST # 14) ISSTs expand this strategic, rapid-response approach across vastly different ecosystems. In the Pacific Northwest, the ISST works with 46 national wildlife refuges in Oregon, Washington, Idaho, and northwest Nevada to manage invasive threats through seasonal field crews and complex-level teams. Efforts are guided by station-specific Invasive Species Prevention Plans and prioritize conservation of native habitats, wildlife, and ecological integrity. In the Pacific Marine Monuments, the ISST addresses invasive species on both land and underwater in areas like Papahānaumokuākea and Rose Atoll. Projects include novel techniques to control crown-of-thorns starfish, invasive algae, and other marine threats, while also protecting endangered species on remote island habitats highly vulnerable to rodents, invasive plants, insects, and pathogens.

# Regional Highlights



**Hawai'i & Pacific Islands ISST Highlight**

*Predator-Proof Fence Maintenance at Kīlauea NWR*

In 2023, the largest predator-proof fence in the U.S. was completed at Kīlauea NWR, protecting 168 acres of habitat. This year, the ISST implemented a management plan to maintain a 3-meter buffer inside and outside the 3.4 km fence, clearing invasive vegetation like Guinea grass to ensure fence integrity and prevent predator incursions. The team also collaborated with Pacific Rim Conservation to continue removing invasive cats, pigs, and rodents within and around the enclosure to protect native species.

**Pacific Northwest ISST Highlight**

*Bullfrog Eradication at Conboy Lake NWR*

In its fifth year, the bullfrog eradication project at Conboy Lake NWR removed over 13,000 bullfrogs and 30 egg masses to support recovery of the threatened Oregon spotted frog. Real-time data visualization guided adaptive management, contributing to a 3x increase in spotted frog egg masses—the highest count in 15 years. The team's data-driven approach continues to drive population declines of invasive bullfrogs across the Glenwood Valley.

**Pacific Marine National Monuments ISST Highlight**

*Rat Eradication at Wake Atoll NWR*

To protect native plants and seabirds, ISST personnel assisted with aerial rodenticide application and follow-up monitoring on Wake Atoll in 2024. Staff managed bait stations, maintained traps and game cameras, and supported public outreach. Canine detection teams played a key role in confirming eradication progress. With no rats detected since November 2024, the team is optimistic about achieving long-term success.

# More Information

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# Regional Summary

## Region 2 (Southwest) Annual Report: FY 2024

Sevilleta National Wildlife Refuge
Image: USFWS

### *Background*

The Arizona and New Mexico ISSTs (ISST #1) were among the original teams established in 2004 as part of the NWRS's rapid response capacity to address invasive species threats. Originally a single team, they were later split into two regionally tailored “half” teams. The Arizona ISST supports projects across eight national wildlife refuges, using youth corps interns and a collaborative team co-managed with the NPS to target invasive species like buffelgrass, stinknet, and bullfrogs. The New Mexico ISST works across seven refuges and two NPS units to manage 26 invasive plant species and five invasive animals, while restoring diverse habitats such as Chihuahuan Desert grasslands, riparian bosque, and shrub steppe ecosystems. These efforts benefit a wide range of imperiled wildlife, including the southwestern willow flycatcher, yellow-billed cuckoo, and New Mexico meadow jumping mouse.

Established in 2022, the Texas Gulf Coast ISST (ISST #15) focuses on restoring the western Gulf coastal plains, supporting nine invasive species projects across seven refuges and complexes. Projects address species such as invasive annual grasses, Brazilian peppertree, Chinese tallow, bluestems, and apple snails, helping to protect critical habitat for the Eastern Black Rail, ocelot, whooping crane, and monarch butterfly. Although congressional direction emphasized buffelgrass and cheatgrass, these species are not widely prioritized in Texas, and only limited funds have been directed toward them regionally. The team operates under a localized Request for Proposals (RFP) process, with leadership provided on a collateral-duty basis, ensuring targeted and efficient support to on-the-ground management needs.

# Regional Highlights

**Arizona ISST Highlight**
The Arizona ISST has led regional efforts to contain the spread of stinknet, a fast-spreading invasive plant threatening southern Arizona's ecosystems and public health. By forming collaborative working groups at key management gateways, including partners such as NPS, BLM, DOD, US Customs and Border Protection, and the Arizona Department of Transportation, the team has coordinated early detection and rapid response efforts. These efforts have successfully slowed stinknet expansion at the urban-wildland interface and enabled treatment of key infestations to protect refuge lands from the widespread impacts seen in central Arizona.

**New Mexico ISST Highlight**
The New Mexico ISST supported Bitter Lake NWR in investigating seed predation affecting the endangered Wright's marsh thistle. Suspecting an invasive weevil, the team conducted spring 2024 surveys with an entomologist and found native seed predators instead of the feared bio-control species. This work is informing management strategies to improve plant reproduction and will contribute to scientific understanding through a planned publication on the insect community associated with this rare thistle.

**Texas Gulf Coast ISST Highlight**
In its first field season, the Texas Gulf Coast ISST successfully carried out early detection and treatment of Japanese climbing fern on 1.5 acres of the Brazos River Unit at San Bernard NWR. The team treated all known occurrences and documented actions for follow-up. While additional infestations may exist, continued monitoring and surveys are planned for summer 2025 to stay ahead of this invasive threat.

# More Information

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# Regional Summary

## Region 3 (Midwest) Annual Report: FY 2024

Big Stone National Wildlife Refuge
Image: USFWS

### *Background*

The Region 3 ISST program began in FY2020 (ISST #10) and supports invasive species EDRR efforts across refuges in the upper Midwest. In FY2024, the region increased the amount of ISST funding available for fieldwork by transitioning the regional invasive species coordinator position to base invasive species funds. To allocate FY2024 ISST funds, the Region issued a RFP to field stations that allowed advance timing for early hiring and coordination with partners. Proposals were scored using a weighted system, and results were reviewed by NWRS leadership. Ten projects were selected and announced in October 2024, supporting the Region's commitment to restoring native habitats and protecting priority species from the impacts of invasive plants and animals.

## *Regional Highlight*

The Midwest Region uses a Microsoft Form to compile reports for ISST funded projects. The form requests narrative descriptions for project updates, challenges encountered, and future project tasks/challenges. The form also provides an opportunity to upload project images and reports (e.g., thesis, link to partner report, etc.). In addition, all management actions associated with ISST funded project in the Midwest Region must be recorded in the Management Actions Tracking System (MATS). This includes treatments (points, lines, and/or polygons) for mechanical and chemical treatments. Other management actions including grazing and planting (seeds or seedlings) can be recorded in the MATS as well along with areas searched for invasive species.

## *More Information*

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Mingo National Wildlife Refuge
Image: USFWS

# Regional Summary

## Region 4 (Southeast) Annual Report: FY 2024

Alligator Lake at Bon Secour NWR
Image: USFWS

### *Background*

Region 4 supports four Invasive Species Strike Teams (ISSTs), with two dedicated to South Florida–Everglades (ISSTs #3 and #21) and two covering the rest of the region (ISSTs #11 and #18), including Arkansas, Georgia, Kentucky, Louisiana, the Carolinas, North Florida, and the Caribbean. The South Florida ISSTs, established in 2004 and 2022, focuses on invasive terrestrial plants and reptiles using competitive RFPs, IDIQ contracts, and cooperative agreements. The teams provide technical support, manage contracting, and represent the Service in regional invasive species partnerships. In FY24, five projects were funded across four South Florida refuges, treating over 6,100 acres of habitats ranging from sawgrass marsh and mangroves to pine flatwoods and maritime hammock.

The “Rest of Region” ISSTs, established in FY20, FY22 (with a congressional directive to control nutria), and FY23, focus on aquatic plants, feral hogs, nutria, and invasive trees like Chinese tallow and privet. In FY24, 20 projects were funded totaling $1.6 million, with ISSTs contributing $953,077. Projects targeted invasive species that threaten key habitats and imperiled species, such as removing feral hogs from ephemeral wetlands critical for the endangered Frosted Flatwoods Salamander and suppressing nutria around Louisiana’s marsh restoration sites. The Region’s strategy prioritizes collaborative, adaptive approaches and regional-scale treatments that maximize conservation outcomes for native species and ecosystems.

# Regional Highlights

**Nutria Eradication and Control**

Now in its third year, the nutria ISST supported the Gulf Coast nutria control program, with a primary focus in coastal Louisiana. The team included six new and two returning field staff, plus two stationed in the Mississippi Delta addressing isolated populations of nutria. A new Partners for Fish and Wildlife Coordinator, added in January 2025, is expanding efforts on private lands and strengthening collaboration with local landowners.

Exclosure constructed on Breton NWR to inform vegetation response to nutria control.
Image: USFWS

**South Florida–Everglades**

In March 2024, the new ISST biologist joined the program and was based out of Crocodile Lake NWR, focusing on invasive animal and plant control, especially Burmese pythons, which threaten endangered species like the Key Largo woodrat and cotton mouse. Using radio-collared opossums to detect python predation events, the team removed nine pythons, contributing to a total of 66 captures in FY24. Additional efforts included trapping 11 feral cats and removing 91 green iguanas, tokay geckos, and knight anoles.

# More Information

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# Regional Summary

## Region 5 (Northeast) Annual Report: FY 2024

Terns at Monomoy NWR
Image: USFWS

### Background

Region 5 launched its ISST (ISST #9) program in FY2020 as part of a national expansion of the NWRS ISST program. In FY2024, the Region used its ISST allocation to support interns and biological technicians from partners like American Conservation Experience (ACE) and NorthWoods Stewardship Center, increasing invasive species mapping and management capacity across 24 refuges and complexes. These crews focused on inventory, light management, volunteer coordination, and prevention efforts. Additional funding supported invasive species management at 14 refuges, with allocations made through a competitive RFP process based on site-specific needs in management, early detection, and outreach. Despite this progress, refuge staff continue to face capacity challenges. Limited personnel and maintenance support strain efforts to supervise interns, coordinate volunteers, and respond to off-refuge infestations. Contracting for invasive species management has become increasingly difficult due to fewer bidders and rising costs, underscoring the need for permanent biological technicians and staff trained in herbicide application and equipment operation. Strengthening in-house capacity remains critical for sustaining long-term invasive species prevention and restoration across the region.

## Regional Highlights

Region 5 made notable progress in invasive species management and restoration in FY24. At Great Meadows NWR's O'Rourke Unit, integrated treatments—including herbicide application and mowing—began to control spotted knapweed, reed canary grass, and common reed, with support from Native Plant Trust and a local farmer to re-establish native habitats. At Montezuma NWR, drone spraying was successfully used to treat Phragmites, offering a cost-effective model for aerial treatments.

Additionally, cooperative agreements with ACE and NorthWoods helped bolster refuge capacity and build skills among early-career conservationists. Forty-three refuges completed invasive species prioritization and inventory work. The Region also began planning invasive Norway rat control on Monomoy NWR through a partnership with USDA APHIS-WS and local collaborators.

## More Information

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USFWS staff control pull spotted knapweed on Maine Coastal Island NWR. Image: USFWS

# Regional Summary

## Region 6 (Mountain-Prairie) Annual Report: FY 2024

Charles M. Russell NWR
Image: USFWS

### *Background*

Region 6 supports the Upper Missouri-Yellowstone-Columbia (MOYOCO) ISST (ISST #2), one of the original 2004 teams, operated in Montana until 2021; now managed regionally through a region-wide RFP. The North Dakota ISST (#5), established in 2006, allocates funds directly to complexes to address widespread infestations using seasonal crews. The Annual Grass ISST (#16), created in 2023, was incorporated into a revised FY24 RFP process designed to improve coordination, transparency, and understanding of project goals across programs.

The region spans eight states and over 5 million acres of diverse ecosystems, including prairies, wetlands, riparian areas, sagebrush, and montane forests. With more than 130 national wildlife refuges and hundreds of waterfowl production areas, the region supports large-scale conservation across both public and private lands. Region 6's ISSTs use integrated pest management and restoration strategies to target 33 invasive plant species across priority landscapes.

# *Regional Highlights*

**USGS Hydrology Dashboard**

A partnership with US Geological Survey led to the creation of an interactive dashboard for North and South Dakota that integrates soil, surface, and groundwater data to improve pesticide decision-making. Now live, this tool is streamlining the pesticide proposal and review process by giving refuge staff immediate access to localized hydrology data. With an additional $120,000 in funding, the tool will expand to include Kansas and Nebraska in 2025—four high-priority states based on pesticide use and agricultural pressures.

**Conservation Corps Deployment**

Nearly $233,000 was invested in Conservation Corps partnerships, increasing invasive species field capacity across the region. This included funding through the Region 6 Youth Partnership Program, which supported a targeted project in Kansas. These investments expanded the workforce for on-the-ground control and provided early-career conservationists with hands-on restoration experience.

**Regional Invasive Species Management Trainings**

In its first year, the Regional Invasive Species Program hosted two hands-on training sessions in Denver, CO and Pingree, ND, equipping over 50 Service staff, seasonal hires, and volunteers with practical skills in invasive species control, pesticide safety, and restoration practices. As a result, refuges across the region increased field readiness and consistency in applying integrated pest management techniques.

# *More Information*

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# Regional Summary

# Region 7 (Alaska) Annual Report: FY 2024

Arctic NWR
Image: USFWS

## *Background*

The Alaska Region began receiving Invasive Species Strike Team (ISST) funding in 2019, with the establishment of ISST #6, after previously managing invasive species solely through base allocations. As of FY24, three ISSTs support outreach, prevention, and EDRR efforts across Alaska's vast and remote landscapes. The Northern Alaska ISST (ISST #6) covers refuge lands north of the Alaska Range, including Tetlin, Yukon Flats, and Arctic NWRs. This team collaborates with partners such as the Fairbanks Soil and Water Conservation District and the Alaska Department of Natural Resources to survey and manage high-priority species like Elodea, white sweetclover, and bird vetch. The team also operates within the DOI-prioritized "Gravel to Gravel" landscape, with additional funding from the Infrastructure Investment and Jobs Act to enhance cross-boundary coordination and rapid response.

The Southern Alaska ISST (ISST #8), established in 2020, supports refuges including Kenai, Kodiak, and Alaska Peninsula-Becharof, and partners with regional Soil and Water Conservation Districts for EDRR and outreach. It addresses terrestrial and aquatic species such as European green crab and orange hawkweed. The Islands ISST (ISST #20), formed in 2023, focuses on over 2,300 islands in Alaska Maritime and Kodiak NWRs, piloting rapid detection protocols for invasive mammals and plants and advancing rat eradication efforts through an Environmental Impact Statement in partnership with USDA APHIS. All three teams enhance Alaska's ability to detect, prevent, and respond to invasive threats in some of the nation's most ecologically sensitive and remote environments.

## *Regional Highlights*

**Northern Alaska ISST**

In 2024, the region received Infrastructure Investment and Jobs Act (IIJA) funding to bolster early detection and rapid response (EDRR), including support for the newly established Northern Alaska CISMA—the first in the state with a dedicated coordinator. As a direct result, 16 lakes at Arctic NWR were surveyed for Elodea for the first time, with no infestations detected, helping preserve the integrity of these critical freshwater systems.

**Southern Alaska ISST**

The Southern Alaska team advanced EDRR and outreach in Southwest Alaska by working with Alaska Native communities around Togiak NWR. The team's 2024 visit led to the discovery of a significant creeping buttercup infestation within the Togiak Wilderness and built a foundation for co-stewardship with villages across the refuge. Increased engagement from local communities and refuge staff is strengthening place-based knowledge sharing and enhancing invasive species detection capacity across this remote landscape.

**Islands ISST**

In FY24, the Islands Strike Team made major strides in island biosecurity and invasive species control. They initiated an Environmental Impact Statement for rat eradication on four Aleutian Islands, secured $1M in pending grant funding for Great Sitkin Island, and received $448K in IIJA funds to support applied research. The team also piloted a rapid assessment protocol across 38 islands, creating a baseline inventory to guide future response and conservation efforts across Alaska's ecologically vital island ecosystems.

## *More Information*

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# Regional Summary

## Region 8 (Pacific Southwest) Annual Report: FY 2024

Ma-le'l Dunes, Humboldt Bay National Wildlife Refuge
Image: Bob Wick

### *Background*

The Pacific Southwest Region (Region 8) established its Regional Invasive Species Program in 2020 to coordinate strategic, collaborative efforts to manage invasive species across National Wildlife Refuges (NWRs). Led by an Invasive Species Coordinator and supported by an IPM Coordinator, Data Manager, and youth partner Research Associates from the Great Basin Institute, the program builds on earlier Inventory & Monitoring (I&M) efforts. I&M staff pioneered invasive species prioritization workshops and helped develop the Invasive Plant Prioritization Tool (IPPT), both still in use. The region has received three Invasive Species Strike Team (ISST) allocations—ISST #7, #13, and #19—to support this work.

Strike team and base funds are distributed annually through a competitive grant program for prevention, early detection, rapid response, research, and long-term management. Projects may request up to $250,000 for strike team work and $100,000 for base-funded efforts, with flexibility to combine funding sources and implement multi-year agreements. While funds must be obligated within a year, project implementation timelines often vary. This approach allows Region 8 to support impactful invasive species projects that enhance ecosystem resilience and biodiversity across the region's diverse refuges.

## Regional Highlights

**Caulerpa prolifera Eradication at San Diego Bay NWR**
Following the 2023 detection of invasive *Caulerpa prolifera* in Coronado Cays, strike team-funded surveys confirmed its presence on submerged lands within San Diego Bay NWR, threatening native eelgrass beds critical to fish habitat and endangered Eastern Pacific green sea turtles. In response, the Refuge and R8 Coordinator partnered with the Southern California Caulerpa Action Team to implement a rapid response and eradication plan. Over $1 million—including $267,661 in strike team funds—has supported benthic barrier treatments and ongoing control by a private contractor. This collaborative effort is actively protecting one of California's most vital eelgrass ecosystems from further degradation.

**Yellow Bush Lupine Removal at Humboldt Bay NWR**
To restore 300 acres of coastal dune habitat at the Wadulh Unit, Humboldt Bay NWR used $199,800 in ISSTfunds to launch California's first large-scale eradication of invasive yellow bush lupine, which displaces native dune mat communities that support endangered plants. By 2024, 70 of 85 targeted acres were cleared using mechanical treatment and sand capping. This effort complements $12 million in partner-funded habitat restoration, with continued monitoring and replanting through 2026 and annual follow-up events with Friends of the Dunes to ensure long-term success.

**Feral Pig Management at San Luis NWR Complex**
Strike team funds enabled San Luis NWR Complex to address a newly emerging feral pig population threatening habitat for species like the endangered riparian brush rabbit. Staff developed a monitoring protocol, camera trap network, and a comprehensive management plan and Environmental Assessment. Through an agreement with USDA Wildlife Services, 46 pigs were removed using trapping and targeted removal methods. The project has slowed further habitat damage and will continue with active control efforts through 2025.

## More Information

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# PROJECT REPORTS

Each region receiving ISST funding must submit an annual report within three months of the fiscal year's end. These reports follow a standardized template aligned with the NWRS's invasive species program framework and goals. The template incorporates definitions developed and refined by program members to support consistent interpretation across regions. Regional reports summarize key accomplishments, including projects initiated or completed within that fiscal year, with the goal of illustrating the range of ISST-supported activities. While not exhaustive, these summaries include representative examples from each ISST in the region. Individual regional ISST annual reports are available on ServCat at: https://iris.fws.gov/APPS/ServCat/ and through the National Invasive Species Program Coordinator or the Regional Invasive Species Program Coordinator.

Before and after consecutive years of managing invasive Giant salvinia on Black Bayou Lake NWR
Image: USFWS

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Moosehorn NWR
Image credit: USFWS