



Management of Saltcedar and Russian Olive on National Forest Lands

Directive

The Department of the Interior, Environment, and Related Agencies Appropriations Bill, 2023 (House Report 117-400), included the following language:

The Committee directs the Forest Service to consult with the Department of the Interior and other relevant federal agencies to consider the feasibility of establishing a pilot program to combat salt cedar and Russian olive trees in the West. Within 180 days of enactment of this Act, the Committee directs the Forest Service to provide a report detailing the parameters of a potential pilot program, including how the program would be scientifically based and take a watershed approach; performance metrics to track species removed annually; costs to support the program over seven fiscal years; the uniform policies and procedures to transparently carry out supporting grants; and plans to collaborate with local stakeholders and identify high-priority areas. As part of this report, the Forest Service should consider how a pilot program could build on and enhance existing Forest Service efforts for controlling salt cedar and Russian olive trees.

Introduction

After consultation with other federal and state agencies, the USDA Forest Service advises that developing a new pilot program targeting Saltcedar and Russian Olive invasions would be an unnecessary duplication of ongoing efforts by federal, Tribal, State, and local groups which already working collaboratively in the U.S. against these invasive species.

In the U.S., there are longstanding and broad-reaching programs and activities against Saltcedar and Russian Olive underway and operating within the capacity limits in each jurisdictional area. Private landowners, county and State agencies, Tribal governments, and Federal agencies are already fully engaged and collaborating at multiple levels and implementing programs and projects against Saltcedar and/or Russian Olive. These efforts continue to be prioritized and coordinated locally to meet land/water management objectives. An array of Federal and State laws, regulations, and policies provide the necessary legal authorities and support for action against Saltcedar and Russian Olive invasions, as well as the direction provided to Federal agencies addressing invasive species under Presidential Executive Orders 13112¹, and 13751².

The management activities against these invasive species span the full spectrum of integrated techniques, including the use of biological control, chemical control, mechanical/physical control, cultural control, and a host of restoration activities to improve resistance and resilience to invasions. Coordinated public and private partnerships work against invasive species have been operating across

¹ <https://www.govinfo.gov/content/pkg/FR-1999-02-08/pdf/99-3184.pdf>

² <https://www.federalregister.gov/documents/2016/12/08/2016-29519/safeguarding-the-nation-from-the-impacts-of-invasive-species>



the West. Federal and State agencies often provide financial support and technical assistance to private landowners to manage salt cedar and Russian Olive invasions on private and Tribal lands. Private industry has been an important partner in the development of innovative tools and techniques for land managers addressing Saltcedar and Russian Olive invasions.

Background

Invasive Salt Cedar and Russian Olive Trees

Invasive salt cedar and Russian Olive are two of a vast number of invasive plant species which impact the environment, human and animal health, and the economy of the United States (U.S.). Salt cedar, a perennial tree native to southern Europe, north Africa, and south Asia, was introduced to western North America in the mid-1800's to provide windbreaks and to prevent soil erosion in semi-arid and arid areas. The plants became naturalized in late 1800s. Russian Olive, also a perennial tree, is native to Europe and Asia. It was introduced into North America in the early 1900s as a landscaping tree because it was thought to be useful as a windbreak, soil stabilizer, and habitat provider. Autumn Olive, very similar to Russian Olive had a similar introduction history and is widespread in many areas in the Eastern U.S. Autumn Olive is native to China, Korea, and Japan, and was first introduced to the U.S. from Japan in 1830.

Salt cedar and Russian Olive are listed and regulated as “noxious weeds” in some states under regulations promulgated through the respective states’ Departments of Agriculture. Russian Olive is widespread throughout the U.S. as a tree, with populations varying from state to state. Salt cedar is also found widely, but most prevalent in southwestern states. An array of public and private organizations are addressing invasions of these species across the Western U.S. and beyond. The threats and impacts from salt cedar and Russian Olive are well-documented, and programs have been in place to manage these species invasions across the affected landscape, primarily in the Western U.S.

The U.S. Response to Salt Cedar and Russian Olive Invasions

At the federal level, the response to salt cedar and Russian Olive invasions, like other invasive species, is coordinated with guidance from the National Invasive Species Council, a government organization co-chaired by the U.S. Department of Agriculture, U.S. Department of the Interior, and the U.S. Department of Commerce. The invasive species management efforts of federal agencies under the National Invasive Species Council are supported by direction from Presidential Executive Orders 13112 and 13751, and an array of other federal directives, laws, regulations, and policies. In addition to the federal response to invasive species such as Saltcedar and Russian Olive, local, tribal, state, and private organizations supplement the federal response in detecting, preventing, and controlling invasions across the landscape.

Federal agencies within the U.S. Department of Agriculture and the Department of the Interior, play a significant role in providing scientific/technical and financial support to Tribal, State, and local agencies to address problems associated with Saltcedar and Russian Olive. There has been extensive research and technology development related to the management of salt cedar and Russian Olive in the U.S. Studies have resulted in a significant amount of applied science that has helped address problems across



the landscape. In addition to the work of university and private sector researchers, federal research organizations (including U.S. Forest Service Research and Development, U.S. Geological Survey, Agricultural Research Service, and others), innovative tools and integrated pest management approaches have been produced to help land managers address salt cedar and Russian Olive invasions.

State and local governments, particularly State Departments of Agriculture, and non-government organizations are actively engaged in addressing salt cedar and Russian Olive infestations within their jurisdictions. Support and technical assistance programs for landowners have been established in all Western states, including support from government and non-government organizations. In the non-government arena, groups such as “RiversEdge West³” provide support for restoring riparian (riverside) ecosystems through education, collaboration, and technical assistance by replacing invasive plants (such as salt cedar and Russian Olive) with native plant species along 1000s of riverside acres across the West. In addition to native plant restoration, there are programs for educating community members and youth to foster long-term river stewardship, training restoration professionals and landowners, and investigating the best and emerging techniques to restore ecosystems to improve resilience against invasive species such as salt cedar and Russian Olive. State programs to support management efforts against Saltcedar and Russian Olive vary in scale and capacity. In Colorado, for example, the Colorado Legislature established the Colorado Noxious Weed Management Fund⁴ to provide additional financial resources for on-the-ground noxious weed management. Organized private interests, conservation districts, municipalities, and counties have been eligible to apply for assistance, provided that awarded funds are used to enhance weed management efforts within the State of Colorado. Additionally, the Colorado Noxious Weed Program continues to administer Federal noxious weed management funds provided by the U.S. Forest Service. These funds are devoted to managing noxious weeds on private lands in the vicinity of National Forests and Grasslands to prevent the spread of noxious weeds onto federal lands.

Coordination and collaboration of landscape-scale actions against invasive species such as salt cedar and Russian Olive is accomplished through continual dialog and partnerships between stakeholders, and through coordinating groups like the Western Weed Coordinators Committee, the North American Invasive Species Management Association, and the Federal Interagency Committee for the Management of Noxious and Exotic Weeds. The Forest Service plays an important role in each of these organizations at multiple levels.

Populations of Russian Olive and salt cedar are addressed at the local level through individual agency program operations, and landowner management priorities. Planning for the management of Saltcedar and Russian Olive occurs at multiple levels and across multiple jurisdictions; both public and private. By coordinating closely with local, Tribal and State entities, federal land management agencies like the Forest Service can implement a landscape approach to salt cedar and Russian Olive where populations exist.

³ <https://riversedgewest.org/>

⁴ <https://ag.colorado.gov/conservation/noxious-weeds/grants>



Forest Service Management of Salt Cedar and Russian Olive

The Forest Service's primary responsibility for salt cedar and Russian Olive invasions is focused on National Forests and National Grasslands, with additional technical and financial support for invasions located off Forest Service lands; invasions managed by local, Tribal, State, and private landowners. As noted earlier, the Forest Service provides federal funding to States for invasive plant management through federal grants administered through the agency's Forest Health Protection Program.

Forest Service management of invasive species is most often prioritized and conducted at the Forest level, allowing for priorities to be established and implemented locally in cooperation with stakeholders in local communities. However, the Forest Service works collaboratively with local, Tribal, State, private, and non-governmental organizations to address the threats from aquatic and terrestrial invasive species across the entire landscape, both on and off federal lands.

On National Forest System lands, the Forest Service and its partners target species such as Russian Olive and salt cedar using an integrated pest management approach which utilizes the full array of techniques and technologies. With support from the Forest Service and others, private landowners are engaged in managing invasive species such as salt cedar and Russian Olive to protect vital assets on their lands. Scientifically based environmental analysis and decision-making provides strategic and tactical foundations for planning Forest programs and projects against salt cedar and Russian Olive, among many other invasive species impacting the unit. Federal land management agencies incorporate invasive species management into their respective comprehensive land management plans for federal programs. Similar invasive species planning, and management approaches occur in Tribal, and State organizations to address invasions of salt cedar and Russian Olive on their lands respectively.

Forest Service policy emphasizes prevention, early detection and rapid response, control and containment, and restoration as components to include when planning invasive species management programs. As noted above, integrating mechanical/physical, chemical, biological, and cultural techniques into the design of programs and projects to manage salt cedar and Russian Olive invasions has been based on decades of research and applied science. These techniques and approaches against salt cedar and Russian Olive are utilized in each Forest Service Region. To accelerate action against these species, and provide consistency in management planning, the Forest Service has developed scientifically based management guidance for both salt cedar⁵ and Russian Olive⁶ in forests, woodlands, and rangelands that can be applied broadly across the affected landscape. The information provided in these guides also provides valuable recommendations for planning and implementing management programs against these species. Additional science-based information on salt cedar and Russian Olive biology and management techniques have been produced by other Federal and State research organizations and supplements the information available from the Forest Service.

Saltcedar and Russian Olive invasions on National Forest System lands are relatively small due to the types of landscapes managed by the agency. Forest Service inventory data for National Forest System

⁵ https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5410127.pdf

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lands from 2021 to present indicated salt cedar and Russian Olive infestations totaled only 7,273 acres and 768 acres, respectively. Generally, most salt cedar and Russian Olive infestations on Forest Service lands are found in the southwestern landscapes and northward into the southern Rockies, Intermountain West, Great Basin, and as far north as eastern Washington State and the Dakotas. Management of these invaders varies from region to region in the Forest Service. In the Southwest, the Forest Service has eleven National Forests in Arizona and New Mexico, and four National Grasslands located in northeastern New Mexico, western Oklahoma, and the Texas panhandle targeting salt cedar and/or Russian Olive.

Table 1. Forests in the USFS Southwestern Region reporting acres of salt cedar (**TARA**) and Russian Olive (**ELAN**) treated, 2022-2023 (**As of August 2023**).

National Forest	Acres Treated (ELAN)	Acres Treated (TARA)
Prescott National Forest	0.11	84.20
Santa Fe National Forest	11.6	11.60
Cibola National Forest	0.0	333.78
Coconino National Forest	0.0	0.75

Salt cedar and Russian Olive populations pose lesser risk to heavily forested landscapes, while rangelands and waterways in the West are extremely vulnerable to invasion and the threat increases in arid locations where water is limited. Forest Service efforts against salt cedar and Russian Olive have helped restore the health and functionality of upland and riparian areas impacted by those invasions, including restoration of native plant communities and associated fish and wildlife populations across watersheds. For example, the Thunder Basin National Grasslands have consistently actively managed the risk of invasion through some level of control of salt cedar and Russian Olive; most recently treating invasions on about 2,000 acres. On the Cimmaron and Comanche National Grasslands, the Forest Service has been conducting mechanical and chemical treatment for years and have included the use of biocontrol and prescribed burning to round-out the integrated approach to managing these species.

In addition to treatments on National Forests and National Grasslands, the agency provides funding and technical support on private, county, State, and Tribal lands. Much of this work has been done in partnership with other organizations. For example, in Montezuma County, Colo., the Forest Service has been working on Russian Olive and salt cedar control since 2019. The partnership funding support for this work has come from Forest Service Disaster Relief, Southwestern Water Conservation District, Water Supply Reserve Fund Grants, Colorado Water Plan, CDA Drought Stimulus, and the Colorado Parks and Wildlife. Similarly, the Forest Service provided the Nebraska Forest Service and Nebraska Department of Agriculture with \$180,000 to partner with the North Platte and Twin Rivers Natural Resource Districts to identify and treat salt cedar and Russian Olive, among other invasive species, along the North Platte River in western Nebraska. In Kansas, the Forest Service provided technical support with aerial surveys of riparian invaders across Western Kansas in the largest scale effort the state has ever undertaken.



Examples of Other Federal Agency Efforts Against Salt Cedar and Russian Olive

The Bureau of Land Management (BLM) has been working alongside its partners in the Colorado Plateau, the Great Basin, and Southwest U.S. to control and reduce the spread of salt cedar and Russian Olive for decades. Control methods include biological control, chemical application, and mechanical or physical removal of trees (prescribed burning). Another key component to these efforts is riparian restoration to stabilize streambanks and to improve an area's resilience to drought and further invasion of non-native species. Partners in this effort include Tribal, State, other Federal agencies, Soil and Water Conservation Districts, and non-governmental organizations such as Rivers Edge West.

Removal of salt cedar occurs and is supported by the Bureau of Reclamation in cases where river restoration is occurring. The Bureau of Reclamation has interests in a large number of riparian restoration projects. These projects are typically related to water delivery, water salvage, or avoiding impacts to endangered species. The Bureau of Reclamation is supporting restoration projects on the Truckee River, Trinity River, Las Vegas Wash, and Colorado River to name a few. A large amount of money has been directed towards these restoration projects, and it is estimated that \$1 billion has been spent just in the Southwest since the 1980s. The Bureau of Restoration primary interest is to ensure that they can continue to supply users with water and power and riparian restoration is a critical component to their operations.