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WESTERN WEED ACTION PLAN

WESTERN WEED COORDINATING COMMITTEE

A Strategic Action Plan for the Sagebrush Biome

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This document was the vision of the participants of the Western Association of Fish and Wildlife Agencies (WAFWA), Western Invasive Weed Summit (2015 Summit), held in Boise, Idaho in the fall of 2015. Approximately 250 invasive plant species experts, private and federal land managers, biologists, administrators, and scientists attended the summit. One of the major outcomes of the 2015 Summit was the call to develop a multi-agency action plan to address the challenges and barriers created by the establishment and expansion of invasive plant species in the west. Without the collective wisdom of the 2015 Summit participants and their support for the development of the plan, this effort would not have been initiated. The resulting Action Plan is thus, based on information and experience from a broad range of agencies, both State and Federal, agricultural, and wildlife based. The final product is truly a collaborative effort of these diverse disciplines, uniquely linked by a common concern with the threat of invasive weed expansion into the sagebrush biome negatively, affecting the Western way of life, economy, and its native wildlife.

Acknowledgments

The contributions for this strategic action plan, which were provided by the agencies and organizations represented on the Western Weed Coordinating Committee. The Western Weed Coordinating Committee's Western Weed Management Strategic Action Plan Working Group are gratefully acknowledged. The working group included representatives from Idaho, Montana, Nevada, Oregon, Utah, and Wyoming, the Bureau of Land Management, U.S. Geological Survey, USDA Forest Service, U.S. Fish and Wildlife Service, and Department of the Interior. In addition, representatives of the Western Association of Fish and Wildlife Agencies and the Western Association of State Departments of Agriculture provided significant support and coordination with the working group throughout the development process.

Tiering from the dialog during the 2015 Summit, a diverse array of contributors provided recommendations, expertise, and feedback throughout the development process for the Strategic Action Plan development process, including Dave Burch (Montana), Tim Butler (Oregon), Alan Clark (Utah), Dawn Davis (U.S. Fish and Wildlife Service), Tim Prather (University of Idaho), Dave Pyke (U.S. Geological Survey), Allen Rowley (USDA Forest Service), Hilary Smith (Department of the Interior), San Stiver (Western Association of Fish and Wildlife Agencies), and Joe Tague (Bureau of Land Management). Funding for this effort came primarily from the USDA Forest Service, the Bureau of Land Management, and the U.S. Fish and Wildlife Service. Without the fiscal support of these agencies for the 2015 Summit and the subsequent products, the Strategic Action Plan would not have become a reality.

The following organizations have provided support and recognition for the Strategic Action Plan:

Western Weed Coordinating Committee
Western Association of State Departments of Agriculture
National Association of State Departments of Agriculture
Western Association of Fish and Wildlife Agencies
Sagebrush Executive Oversight Committee
Society for Range Management
Association of Fish and Wildlife Agencies
Federal Interagency Committee for the Management of Noxious and Exotic Weeds
The Wildlife Society
Western Society of Weed Science
Weed Science Society of America

Western Invasive Plant Management:

A Strategic Action Plan for the Sagebrush Biome

Executive Summary 2019

The Western Association of Fish and Wildlife Agencies (WAFWA) held a Western Invasive Weed Summit, with support from the U.S. Department of the Interior's U.S. Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM) and U.S. Department of Agriculture's Forest Service in Boise, ID, in the fall of 2015. Approximately 250 invasive species experts, private and Federal land managers, biologists, administrators, and scientists attended the summit.

One of the outcomes of the summit was the call to develop an action plan to address the challenges and barriers identified by the attendees in addition to those identified by the WAFWA Invasive Plant Management and Greater Sage-Grouse Conservation report (Ielmini 2015). This action plan is a blue print for actions to address invasive plants in the sagebrush biome. In the West, WAFWA works with its member States to provide leadership regarding the management of State wildlife under their authority, while the State departments of agriculture work through the Western Association of State Departments of Agriculture (WASDA) to provide the same leadership for the management of invasive plants and noxious weeds under the authority given to them through State statutes. At the Federal level, Federal agencies with research, regulatory, and management responsibilities for invasive plants and noxious weeds are coordinated through the Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW). Together, the member organizations of WAFWA and WASDA, State weed and pest coordinators/managers, and several Federal members of FICMNEW helped developed this strategic action plan under the leadership of the Western Weed Coordinating Committee.

Despite the many local success stories across the West, as the scale increases to statewide, regionwide, and nationwide levels, so do a number of barriers, which cause invasive species management programs to become more fragmented, inconsistent, and relatively ineffective at dealing with the significant problem of ecosystem degradation from invasive species. These barriers exist for not only invasive plant management programs, but for all programs battling other invasive taxa. Chronically inadequate investment in invasive species management programs at all levels has undermined the ability of managers to keep up with the rate of spread for most invasive species populations. From the review and analysis of WAFWA (Ielmini 2015) and the assessment from the Western Invasive Weed Summit (2015), several key challenges and barriers were identified that will affect the ability to manage invasive plant invasions and conserve and restore native sagebrush ecosystems for the continued values they create including but not limited to habitat, economic, agricultural resources, and recreational values.

These challenges also present opportunities for coordination and collaboration across the region. While there are numerous causes for the challenges facing the health and biodiversity of the region, this document focuses on solutions and creates action items that local, State, and Federal partners can support and implement. One of the most pervasive challenges/opportunities to the long-term viability of this landscape is the spread of invasive annual grasses and regulated noxious weeds, and their role in altering natural ecosystem dynamics,

including increasing wildfire frequency, intensity, and size, particularly in the Great Basin region and critical sage-grouse habitat.

This strategic action plan will be regularly updated to address the needs of partners managing invasive plants and noxious weeds. During the first phase, the plan was produced through a collaborative process and approved/supported by Federal agencies; State agencies; local government; nongovernmental groups; and Tribal, municipal, and private landowners as a framework for success. An adaptive process will guide future iterations of the plan to overcome challenges that may arise at multiple scales.

The goal of this strategic action plan is to identify and implement the actions that address the spread of invasive and noxious plants that affect the sagebrush ecosystem. This strategic action plan framework is set on the pillars of:

- Funding
- Policy and regulation
- Coordination, collaboration, and data sharing
- Research and reporting

This strategic action plan is intended to be a living document that is multifaceted attempt to allow adaptability and flexibility in implementation and support. Instead of using a white paper format, a tabular format was used to ensure that activity tracking, accomplishment reporting, and updates for each action and sub-action could be easily made in the future.

FUNDING

ACTION 1

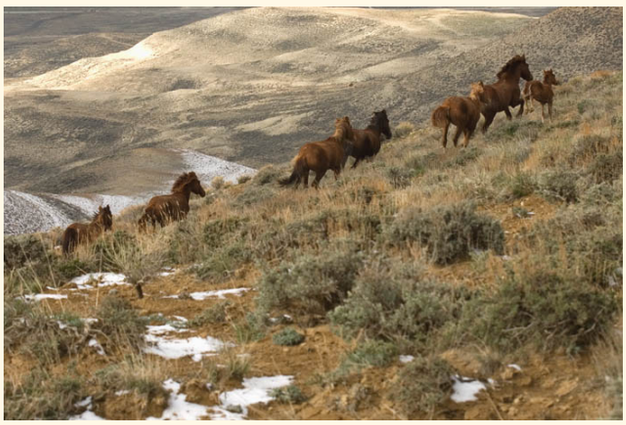
Review the broad range of conservation expenditures within the sagebrush biome to understand and identify in a funding "map" how resources are currently allocated and leveraged for invasive plants and regulated noxious weed management projects impacting the sagebrush biome at the Federal, State, and local level and identify strategies for how to allocate resources and capacity more effectively.

Sub-action 1	Evaluate the distribution of funding spent on fire pre-suppression, pinyon juniper control, native plant restoration, and invasive plant/noxious weed management related to sagebrush management (including but not limited to monitoring, equipment, mapping, personal costs, contracting, seed, treatment methods etc.).
Sub-action 2	Evaluate the general funding distribution on State and Federal basis that is allocated to funding invasive species and noxious weeds.
Sub-action 3	Provide recommendations for how to more effectively allocate resources and capacity.
Sub-action 4	Work with State and Federal agencies to develop mechanisms to track year-end expenditures for the management of invasive plants and noxious weeds in the sagebrush biome. These reports will be collected, summarized, and used to help with further funding requests at multiple levels and for the reporting of progress.

ACTION 2

Develop new dedicated, durable, and consistent Federal and State funding for invasive plant/noxious weed management activities (e.g., prevention, early detection and rapid response, control/suppression/containment, restoration, monitoring, etc.) in the sagebrush biome.

Sub-action 1	Develop a national consolidated budget request for invasive species research and management which supports all Federal agencies under the National Invasive Species Council, in coordination with the Office of Management and Budget and the associated agency budget offices, for inclusion in the President's annual budget request to Congress. A sub-component of the national budget request will focus on invasive plant research and management activities within the sagebrush biome and include support for State-level cooperators.
Sub-action 2	Coordinate region-wide effort, governmental and non-governmental, to highlight the need for consistent and dedicated federal funding through the Farm Bill for invasive plant and noxious weed management. Identify efficient funding mechanisms for use and leveraging among State and Federal partners.
Sub-action 3	Identify barriers and implement a streamlined process for sharing funds among Federal agencies, States, and cooperating partners, to accomplish invasive species management needs across the West.
Sub-action 4	Evaluate how user-fees of recreational land users could be targeted and used to support programs related to invasive species management.



ACTION 3

Create a working group made up of local, State, Federal, and non-governmental members to evaluate and develop a new model/structure of capacity, partnerships, and processes to leverage funding in a timely and cost-effective manner for invasive plant and noxious weed management throughout the sagebrush biome.

Sub-action 1	Create an enhanced model or structure of capacity that builds from the current staff and resources, with this action plan's proposed new funding streams, and review of possible advantageous authorities such as Good Neighbor Authority and Service First.
Sub-action 2	Create regional/geographic incident command teams or “Invasive Species Early Detection and Rapid Response (EDRR) Strike Teams” that can support all partners across jurisdictions for assessment surveys, early detection and rapid response, control and containment treatments, and monitoring to help dealing with priority issues and to help provide training to build capacity at the local level that can become permanent in their absence.

ACTION 4

Review and evaluate the cooperative agreement and granting process to identify barriers. Provide recommendations for implementing a more streamlined process for moving funds among and between Federal agencies, State agencies, Tribes, and other cooperating partners to accomplish invasive species management goals.

POLICY AND REGULATION

ACTION 1	Find mechanisms and opportunities to comply with National Environmental Policy Act (NEPA) that facilitates invasive plant and noxious weed management within the sagebrush biome in a timely manner, including the development of Federal agency Categorical Exclusion (CEs) authority and programmatic analyses, planning templates, training, combined risk assessments, creation of inter-agency and intra-agency teams, etc.
Sub-action 1	Provide planning and NEPA training at the local level for invasive plant management projects, including training on programmatic environmental assessments so that stepdown NEPA (e.g., project-level determination of NEPA adequacy) is used for needs when categorical exclusions are lacking.
Sub-action 2	Track gaps in NEPA-compliant planning for invasive species/noxious weed management. Contact units that are not in compliance to encourage them to receive training (if necessary) and to develop a NEPA-compliant planning process for their projects. Prioritize landscape-scale assistance for NEPA compliance in high-priority areas that are at high-risk for invasive species.
Sub-action 3	Engage local government and non-government organizations in the creation and evaluation of NEPA-compliant planning documents that help prioritize and benefit increased invasive plant/noxious weed management in the sagebrush biome.
Sub-action 4	Increase capacity for NEPA compliance and development of Environmental Assessments (EA) throughout the sagebrush biome, including the use of cooperative agreements with State and county partners to support Federal planning, management, and assessment activities. Prioritize risk assessments for Federal agencies to collaboratively develop; share this information for use in supporting NEPA analysis/planning.
Sub-action 5	Update and/or create programmatic EAs in appropriate jurisdictions related to invasive plant management in high priority areas of the sagebrush biome.
Sub-action 6	Use Categorical Exclusion where possible and appropriate to implement early detection and rapid response (EDRR) programs against new invasive plant/noxious weed threats throughout the sagebrush biome.

ACTION 2	Support and encourage Federal and State land management agencies to implement invasive plant/noxious weed management programs within the sagebrush biome, utilizing an Integrated Pest Management (IPM)/vegetation management approach.
Sub-action 1	Invite local invasive plant/noxious weed management area partners and experts to participate in management planning, fire and invasive assessment teams, sage grouse working groups, etc. throughout the sagebrush biome.
ACTION 3	Coordinate new pesticide risk assessments across Federal and State agencies to reduce redundancy and facilitate agency approval of new active ingredients.
Sub-action 1	Make pesticide-use risk assessments available in a central location (exchange) so that other agencies can use those assessments and adapt them to their purposes.
Sub-action 2	Incorporate existing pesticide-use risk assessments into Federal planning (NEPA) documents for increased efficiency.
Sub-action 3	Review current pesticide-use risk assessment protocols (Forest Service, Bureau of Land Management, and other Federal agencies) to identify redundancies and opportunities to improve efficiencies.
Sub-action 4	Identify agency-specific needs and combine into a common template for human health and safety, and ecological risk assessment protocols for Federal and State agencies.
ACTION 4	Support and encourage use of biological control agents when appropriate within context of other management tools in an Integrated Pest Management (IPM) approach to address invasive and noxious species.
Sub-action 1	Continue efforts to streamline the review and approval of new biocontrol agents by TAG (Technical Advisory Group for Biological Control Agents of Weeds), U.S. Fish and Wildlife Service, and USDA Animal and Plant Health Inspection Service.
Sub-action 2	Ensure current Federal and State biological control programs and policies address monitoring efficacy of biological control agent releases, agent spread, and the sharing of monitoring results.
Sub-action 3	Improve intergovernmental communication for coordinated releases of biological control agents with other invasive plant/noxious weed management efforts to ensure actions do not conflict.
ACTION 5	Strengthen and encourage participation with states and local weed management programs (e.g., Cooperative Weed Management Areas, etc.) for developing priority areas and operations for strategic and cost-effective invasive plant/noxious weed management.

COORDINATION, COLLABORATION AND DATA SHARING

ACTION 1

Maintain and support sharing of data on invasive plant and noxious weed populations, and their management, at the county, State, and Federal levels, and by other appropriate private groups to:

1) Identify existing information, management activities, and databases and define and establish a data exchange mechanism and data sharing objectives.

2) Develop common scientific standards, protocols and methods for invasive species risk assessment and treatment monitoring to be used throughout the sagebrush biome.

3) Develop region-wide/State-wide Memorandums of Understanding/Memorandums of Agreement between State and Federal land management agencies for record-keeping, data sharing, and invasive plant/noxious weed management reporting to increase the number and quality of annual accomplishment reports created throughout the sagebrush biome.

Sub-action 1	Identify current datasets, data needs, and data gaps. Review data availability and quality to identify gaps and needs for data sharing among geographical areas, States, Federal agencies, etc. Produce reports for specific geographical areas that identify persisting data gaps and other information needs.
Sub-action 2	Establish an adaptive management team that will review the invasive plant/noxious weed management reports and see where new actions or activities need to occur throughout the sagebrush biome.
Sub-action 3	Evaluate and expand North American Invasive Species Management Association invasive plant/noxious weed data collection standards.
Sub-action 4	Identify ways to share and link data across State and Federal agencies, Tribes, and other organizations.
Sub-action 5	Continue communication with the National Invasive Species Council for leadership and Federal support of data sharing efforts across the sagebrush biome.

ACTION 2

Convene State, Federal, Tribal, and private conservation leaders to work together to highlight purpose, needs, opportunities, and benefits of a "Sagebrush Biome Invasive Plant and Noxious Weed Management Initiative." The initiative would continue to highlight the invasive species message, identify highest priority needs, and provide financial and policy support and coordination for all stakeholders to address common issues and priority needs by leveraging resources among all partners.

Sub-action 1	Identify steps and organizations required for gaining financial and policy support at Secretarial, Gubernatorial, and local levels.
Sub-action 2	Develop and utilize communication strategy products to educate State and Federal legislators about the importance of the sagebrush ecosystem, the extent and scope of invasive species threat, and the economic and environmental impacts to State, Federal, Tribal, and private landowners.
Sub-action 3	Call on the National Invasive Species Council to foster national support and recognition of the magnitude of invasive species issues for conservation and restoration of sagebrush ecosystem region.
Sub-action 4	Review and evaluate invasive species legislative efforts at the State and Federal levels for relevancy, conflicts, or opportunities for the sagebrush ecosystem invasive plant/noxious weed issues and solicit input from local, State, and national stakeholders.

ACTION 3

Work collaboratively to incorporate and implement invasive plant management priorities for sagebrush conservation within and across programs at the Federal, State, and local levels using strategies such as:

1) The development of Memorandums of Understanding between State and Federal agencies.
2) Supporting and expanding Cooperative Weed Management Associations (CWMA) across the landscape.
3) Integrating invasive plant management concepts and priorities within existing working groups.
4) Establishing new partnerships and collaborations throughout the sagebrush biome.
5) Increasing invasive plant management planning efforts for sagebrush conservation and rangeland management, and for other land management activities.
6) Increasing support for sagebrush biome related plans for restoration of rangeland health and addressing the invasive plant-wildfire threat.

Sub-action 1	Support and increase opportunities and programs that utilize existing mechanisms in place (e.g., CWMA) and other partnerships to leverage support within watersheds and landscape-scale projects (e.g., provide State or Federal grants for establishment of landscape-scale partnerships, similar to the Pulling Together Initiative) for invasive plant management in the sagebrush ecosystem.

Sub-action 2	Facilitate local, watershed, or regional efforts to define invasive plant management priorities by collaboratively evaluating feasibility of control, invasiveness, level of impact (e.g., fire risk, wildlife habitat threat, economic risk, etc.), ecological condition, current distribution and abundance of invasions, and disturbance.
Sub-action 3	Identify and implement cost-effective invasive plant/noxious weed management strategies in the highest priority areas, such as: 1) Prevention of invasive plants/noxious weeds in uninvaded areas to protect high-value resources. 2) Early detection and rapid response against new invasive plant/noxious weed invasions in areas at greatest risk to eliminate establishment of new invasions. 3) Containment of large infestations to protect priority sagebrush restoration areas, areas at risk of fire, and other critical sites identified throughout the sagebrush biome.
Sub-action 4	Ensure that State Departments of Agriculture invasive species representatives are included in State and Federal regional sagebrush conservation teams. (WASDA).
Sub-action 5	Review Integrated Rangeland Fire Management Strategy and identify commonalities and gaps relative to challenges or opportunities for implementation and to leverage resources and capacity for invasive plant management in the sagebrush ecosystem.

ACTION 4

Develop and support a communication campaign with strategies to raise awareness and to increase support for invasive plant management activities throughout the sagebrush biome at national, State, local, and Tribal level. The communication campaign should target governmental and non-governmental organizations, private landowners, and the general public. Integrate social sciences into invasive plant management programs to address the perceptions, motivations, and social obstacles that have impaired the implementation and success of invasive plant management in the sagebrush biome.

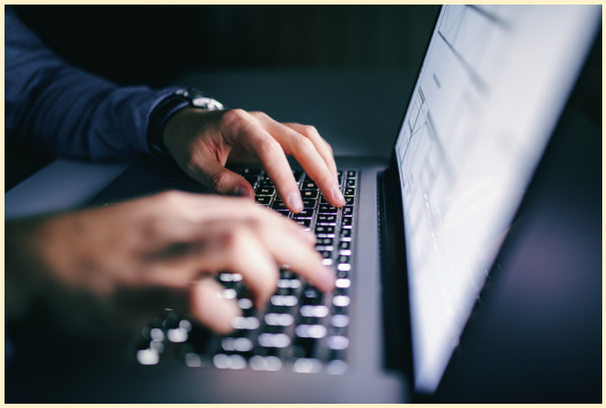
Sub-action 1	Identify target audiences and develop key messages with common concepts, language, and definitions that illustrate how the problem affects different partners, why they should care and how they can participate, etc.
Sub-action 2	Identify the governmental (county/State/Federal), non-governmental, and private landowner perspectives as metrics of success with respect to successful invasive plant management.
Sub-action 3	Identify factors of motivation for stakeholders to get involved and participate in invasive plant management throughout the sagebrush biome.

ACTION 5	Create/maintain a database that contains the status of land units in terms of ability/capacity to implement invasive or noxious species management. (Western Weed Coordinating Committee (WWCC) resolution on this topic).

RESEARCH

ACTION 1

Facilitate and encourage the development and use of consistent invasive plant/noxious weed data-recording metrics (spatial, tabular, and otherwise), and promote the sharing of such data across county, State, Federal, Tribal, and private organizations. Support the use of shared data to develop and improve decision-support tools for land managers at all levels. Such decision-support tools should take into account pre-fire and post-fire vegetation management practices that could reduce the impacts on the desired vegetative community following wildfire throughout the sagebrush biome.



Sub-action 1	Utilize common metrics and existing databases to share records of invasive plant/noxious weed occurrences (inventory/survey data), treatment locations, pertinent environmental information, and metrics of near-term management success.
Sub-action 2	Use planning tools and other decision-support tools to prioritize treatment locations and management strategies to meet invasive plant/noxious weed management objectives, including when and where to implement invasive plant management strategies (e.g., prevention, early detection and rapid response, control/suppression, containment, restoration, etc.).

ACTION 2

Identify both foundational knowledge and knowledge gaps surrounding desired native species establishment, particularly on sites impacted by invasive annual grasses.

Sub-action 1	Produce and implement a decision-support tool which can transfer foundational knowledge/science on native plant restoration approaches to land managers and can identify knowledge gaps (based on empirical data and driven by sound science) associated with seeding successes/failures for major native plant functional groups (particularly perennial bunchgrasses and sagebrush).
Sub-action 2	Summarize native plant restoration knowledge gaps and compile foundational knowledge within categories to include: 1) Native plant materials selection, development, and utilization (Including seeds and seedlings). 2) Ecological site and land use factors. 3) Interaction and impacts of management actions on the plant community. 4) Soil/plant amendments.
Sub-action 3	Integrate State and Federal research activities to support the implementation of the National Seed Strategy.

ACTION 3

Complement and explore existing management knowledge with innovative research and technology to restore the sagebrush biome.

Sub-action 1	Explore mechanisms for establishing public/private partnerships to move technologies from lab to field.
Sub-action 2	Support financial scale-up of research, technologies, and proof-of-concept trials at large spatial scales at State, regional, and national levels.

ACTION 4

Prioritize the development and implementation of metrics for assessing the potential for native/desirable plant communities to recover or respond positively following wildfire, invasive plant/noxious weed control, or a combination of the two.

ACTION 5

Support and refer to the Science Actionable Plan for optimizing, implementing, and leveraging research efforts at multiple scales.
http://integratedrangelandfiremanagementstrategy.org/wp-content/uploads/2016/10/IRFMS_Actionable_Science_Plan.pdf

Sub-action 1 Expand and prioritize research funding (at State and Federal levels) to implement activities identified in the Science Actionable Plan.