Washington Native Seed Strategy Kick Off Meeting Summary

Welcome and Introduction – Cindy Nguyen (Ecostudies Institute)

Washington is a State of diverse ecosystems, ranging from coastal rainforest in the west to arid sagebrush steppe in the east, with the mountainous Cascade Range in between. This diversity leads to challenges in sourcing seed for restoration that is ecologically and biologically adapted to their worksite. The limitations on the quantity and diversity of native seeds available on the market limits the ability of land managers to respond to catastrophic events, especially in the face of climate change, while also making native seeds cost prohibitive to smaller entities and private landowners. The US Fish and Wildlife Service, working with the Ecostudies Institute, is addressing these issues by creating a state specific strategy, tiered off of the National Seed Strategy. This meeting is the first step in building a Washington Seed Strategy that will address the lack of biologically diverse and ecologically adapted native seeds by providing a common set of goals and actions to increase coordination and information sharing among the diverse collaborators in Washington State.

Summary of Initial Interviews

To gain an initial understanding of native seed use in Washington, thirty (*30*) land managers and seed producers were asked about their current seed use and what barriers they face when trying to obtain seed or, in the producer's case, barriers to obtaining wild seed and the risks of growing native seeds. Land managers included State, Federal, and Non-profit entities. Seed producers included small and large-scale seed farms and wild seed collectors. Consistently mentioned across the range of interviews were the need for increased education, funding and resources, and coordination.

Education- Education barriers include needing help with species selection, guidance on seed zones, and more reference systems for restoration. There needs to be a place to find information on how to write contracts with the right timing and length to sync with seed production and guidance on language that will close current loopholes for contractor seed purchases.

Funding and resources- There is a lack of both financial and physical capacity to get work done. There are problems from funding timing that is out of sync with seed production cycles. Funding inconsistency adds risk to native seed producers who often invest in time and money years before seeds are available to the market.

Coordination – Increasing coordination includes both connections between agencies and growers and information sharing. There needs to be a central location for finding and sharing information on seed selection, propagation techniques, restoration and seedling recruitment strategies. Coordination also includes a place for land managers to connect to people outside their own agencies and connect with seed producers that grow the species they are looking for.

Summary of RSVP survey

There were 130 responses to the survey with native seed users and producers from every region of the state. Respondents were asked to rank the barriers identified in the interviews from “highest impact” to “lowest impact”. The barrier with the highest impact is an overall lack of seeds. The second is a general lack of seed diversity. The barrier with the lowest impact is lack of support from their agency.

The overall lack of native seed is the highest ranked barrier in all regions. There is variation among regions on the second most impactful barrier showing that every region has its own context and nuance.

Implementing the National Seed Strategy in Washington – Erin Gray (USFWS)

The National Seed Strategy (NSS) was developed in 2015 by the Plant Conservation Alliance’s Federal Committee. The Plant Conservation Alliance is an expansive public-private partnership of made up of 17 Federal agencies and over 400+ non-federal partners. The NSS fosters collaboration to guide development, availability, and use of native seeds for timely and effective restoration. The NSS was created in response to a shortage of native seed following wildfires in 1999 and 2000. It was estimated that 74% of native species needed for restoration were unavailable at the time. The NSS serves as a guidance document to outline priorities and chart the course of collaborative work on a national level. The vision of the NSS is to get the right seed in the right place in the right time. The four goals are 1) create a nationwide network to ensure reliable, genetically appropriate seed, 2) identify research needs to improve native seed production and ecosystem restoration, 3) provide researched based tools for selecting and using appropriate seed, 4) develop communication strategies. Each goal has multiple objectives and actions. Next steps include Bipartisan Infrastructure Law funding for ecosystem restoration and resilience which holds implementing the National Seed Strategy as a priority. Building increased capacity and use of genetically appropriate native seed will require a collective effort from not only from the federal agencies, but from state, non-profit, private and Tribal partners, and we hope to work with you all to build our own collaborative Washington statewide seed strategy to benefit the unique needs in our state.

National Seed Strategy in Action: BIL-BAR – Emily Orling (USFWS)

One example of National Seed Strategy implementation in Washington is utilizing Bi-partisan Infrastructure Law – Burned Area Response (BIL-BAR) funds to increase capacity of native seed in sagebrush steppe habitats of eastern Washington. BIL-BAR funding became available to DOI agencies in 2024 to increase the availability of appropriate plant materials for post-fire recovery. One goal is to build lasting capacity by developing production that will sustain itself. Collaboration is focused on creating landscape level, multi-agency, multi-partner projects. There are currently projects at work in the intermountain west, southeast, and Hawaii.

Sagebrush Steppe Plant Materials Project:

In the Inland NW; NPS, USFWS, and BLM cooperators received funds for plant materials development for wildfire recovery in the Columbia Plateau, Snake River Plain, Central Oregon, and the Klamath Basin. The project is funding several aspects of seed collection, native plant materials increase, production, and seed storage.In Idaho, the project includes a shared NPS/FWS seed collection team and stepped up seed production in the nursery at the Minidoka Wildlife Refuge. In Central Oregon/Klamath Basin, the project team isworking with the Tribal Stewards Youth Corps for seed collection and funding infrastructure for native plant materials production.In Washington, the team received funds to increase availability of seed for post-fire restoration. BLM hired Seeds of Success collection team for large production seed increase, plug production, and seed banking. The Washington Shrub Steppe Restoration and Resiliency Initiative (WSRRI) identified insufficient seed storage as a limitation across the Columbia Plateau. This funding will fund two seed coolers hosted by WDFW at Wells and Swanson Lakes Wildlife Areas available for use by partner organizations to store seed for post-fire recovery. The DOD Yakima training center received funding to expand their onsite native nursery where they produce seeds and plugs for post-fire restoration. Support will also be given to the Sustainability in Prisons Program to produce shrub and forb plugs for post-fire rehabilitation.

Additionally, there is funding for a term project manager to coordinate efforts across the three states.

This project in the Inland NW is just one example of BIL-BAR funded projects working toward implementing the National Seed Strategy, leveraging partnerships between private, public, and non-profit sectors to move towards a goal of increasing availability of native plant materials for restoration.

We hope that building a Washington State Seed Strategy will increase coordination of efforts like this across Washington.

California Seed Strategy – Cindy Nguyen (Ecostudies Institute)

The California seed strategy was spearheaded by the California Native Plant Society with an oversight committee consisting of Federal, State, and Private entities. It was released last year using the National Seed Strategy and Nevada Seed Strategy as a starting point. The California Strategy keeps the same goals as the National Strategy and uses unique objectives and actions to create a strategy that specifically addresses the needs of their state. California faces similar issues to Washington when it comes to the diversity and complexity of their eco-regions as well as their need to increase the number of native seed producers in certain regions. These are a few of the actions and objectives thatCalifornia incorporated into their strategy to tailor it to the need of their state.Goal 1 actions and objectives:

- Expanding Crop Improvement Agency requirements to cover native seed production while also increasing funding and capacity.
- Enact policies that require native seed for restoration, regulate SI seed, and incentivize production of native seed.
- Increase long term funding including capital required for seed producers to obtain SI quality assurance.
- Establish stewardship of native seed as a public good. Seed sourced from public lands and information from restoration will be accessible to the public allowing native seed users to access seed within ecological boundaries and across jurisdictional boundaries.

These actions and objectives create a more stable native seed market within the state and reduce the risk that native seed growers carry during production. Washington has a similar need for risk reduction and policies that encourage and enable producers to enter the market.

Goal 2 actions and objectives:

- Define “Native Seed” and establish guidelines for appropriate use. A definition of “Native” is important for closing contracting loopholes and encourage a wider variety of ecoregional seed.
- Conduct research on species that need seed zone and transfer guidelines specifically for California bioregions using more information than average temperatures and elevation.
- Guidelines for ensuring genetic diversity through number of generations in production, preventing hybridization, and unintentional trait selection.
- Provide training on Quality Assurance processes, state policy, procedures, and protocols. Specifically focus on underserved communities with local and online learning opportunities.
- Create a centralized location for up-to-date information on seed zones, transfer guidelines, funding opportunities, contracts, job training, working group meetings, BMP, etc.

These actions and objectives provide information a guidance to enable land managers and seed producers to make the best decisions when it comes to what seeds to use or produce for a given area. It creates agreed upon language and standards to close loopholes and help regions with new production avoid known pitfalls. Land managers and producers in Washington have also asked for better information and guidance when starting to work with native seeds.

Goal 4 actions and objectives:

- Build a California Native Seed Strategy website with updateable content. Include a streamlined process for partners to make changes.
- Determine how to measure progress and revise the Strategy.
- Develop key metrics and how they will be measured.

These actions and objectives ensure that the California Strategy is a living document, able to adapt and change in the face of changing research, challenges, and priorities. A Washington strategy will need similar flexibility as we enter a new world of climate change and shifting ecosystems.

California held a Statewide Kick-off in April 2024 to introduce their strategy to a statewide audience. While objectives from Goal 1 are already being implemented and restoration groups are referencing the Strategy as a guideline for their own policies,introducing the strategy after its creation has already resulted in the need for edits. Interest groups that weren’t consulted during the writing of the strategy are starting to point out where actions and objectives are flawed or not feasible without additional steps. We can do something different. By having wide and diverse input at the beginning of Strategy creation, including seed producers, collectors, and tribal voices, we can have a strategy with the ability for implementation

Mule Deer Foundation – Ryan Krapp

The Mule Deer Foundation is a keystone partner with the Forest Service and the Bureau of Land Management.They are one of many organizations that provide funding, volunteers, and planning support across jurisdictional boundaries allowing them to take a landscape level approach. Ryan is the full-time conservation planner for Forest Service Region 6 (Oregon and Washington) and is sharing his experience with native seed availability and capacity.

The Mule Deer Foundation is trying to develop a plan so volunteers can get out and plant in quick response to wildfires. Ryan has run into barriers trying to obtain seedling for Sagebrush and Bitterbrush. BFI Native Seeds, Plants of the Wild, and Derby Canyon Natives have all been very helpful and knowledgeable sources of seedlings but while funding is available, seedlings are not available or are from the wrong ecoregion. LT Murry Wildlife Area and the Washington Department of Fish and Wildlife have been collecting seeds with volunteers over the years and were able to provide seed with ecoregional genetics. The next step was reaching out to nurseries to grow the seeds in plugs.Prices ranged from $2.5-$5.5 dollars per plant. It was an eye-opening experience to realize the cost and time needed and how it hampered their ability to get plants out on the landscape fast enough.

The Mule Deer Foundation has been a big leader in Idaho, Wyoming, and Colorado in trying to get landscape-level plantings out on the ground. Volunteers and contract crews get 100,000 – 200,000 plants out on multiple "shovel ready" projects. They have identified that there is a lack of stock availability in Washington to get landscape-level work done. They are interested in having a strategy that can help them to do the same large-scale work in Washington and address the bottle necks of plant material sourcing and the process of getting landscape-level work done.

There would be a lot of use for an established program and funding sources to keep it going, or private funding to purchase plants at a discount for non-profit groups and add capacity agency wise to assist in getting plants out on the landscape where they are needed in time to respond before invasive annuals can take over an area.

Breakout Room Small Group Discussion – See Breakout Discussion Notes

Post Breakout Discussions

Economics

Surveys are needed to find the current demand for Native seed on private land that is not being met. Greater public education on native seed, restoration, fire, and climate change can go a long wat for getting more local support. This could help reduce the risk of production if there is a larger market to sell to than large scale land managers.

There are existing models for funding that can help reduce the risk to producers. A contractor could be hired to research what methods there are already and if any could be tweaked for native seed contracting. Could we modify an existing program, so it's not limited to contracting for agricultural crops? There are several contracting tools already available through the Federal government: USFS (BPA), BLM (IDIQ). Washington used to have a native plant purchasing program that worked well until Department of Enterprize changed things.

There needs to be more conversations on how to have financial security for growers of all sizes, so they don't have to shoulder all the risk of native seed production. It would be beneficial for the Strategy to have funding mechanisms and examples on how folks can encourage them in their own agencies as well as a list of active programs.

Price can change dramatically depending on how restrictive you are on your genetics. Will need both large- and small-scale producers to account for needs and budgets.

Climate Resilience and Eco Zones

There needs to be conversation about a unified approach to genetic management around jointly identified seed zones. Growers will need to know if they are growing seed that can be put on a larger landscape where demand exists, and buyers know what seed will work in their area and where to get it. The forest service has seed transfer zones that are smaller than Eco Region III but not quite Eco Region IV. There are some species that have not had genetic work done and surrogate species are used (such as trees) and research hasn't been done outside of agency lands. The USFS Rocky Mountain Research Station did transfer research on workhorse grass species to create transfer zones in their region. In Western Washington the work has not been done. There is contradiction in the huge variability of cold snaps and heatwaves. There is a need to know the adaptiveness of certain populations.

Part of the job of this group will be to determine what the resolution will be for our state and our regions to inform both producers and users. There are great starting points and tools in place, but we may need more conversations since we are developing something more specifically for our state.

Guidance

Guidance can't be done species by species alone. We need to have some general guidance. This will be a Strategy and not a decision-making document. The goal is to build partnerships and resources to make informed decisions, including the creation and use of a shared language on where seed comes from without dictating where seed has to be used.

USFS provincial seed zone map from a combination of silviculture and genetics programs using high quality PRISM climate data and 250 common garden studies. We recognize that this is not the whole picture. It gives information for land managers to use their localized knowledge. There are different goals for different land areas. Land managers can choose what flexibility they want to have when it comes to their genetics. In recent assisted migration studies, there are suggestions that you should maintain your current genetics but also use 20% from the next dryest zone. Their thinking is from a conifer perspective (15 year until seeding).

Research/Information Sharing

Researchers have the potential to address the questions that folks have. Could the Strategy be used to identify the most unknowns where research can be brought into play? There may be types of questions that Universities and other researcher can answer. Connecting researchers into the knowledge gaps and how they can best share their information so it can be useful to land managers and seed producers.

Ecologists use listservs (Ecolog) to connect with each other Colorado – Colorado Open Space Alliance message board to share needs, job openings. There are good models for information sharing.

Other Questions

Are there any kinds of accelerated seed tests out there? TZ (tetrazolium) testing is pretty rapid. It can be cost-prohibitive if you are testing many species and many accessions.

Seed Orchards – could riparian buffers double as seed orchards where seeds can still be harvestable?

This could be a very good strategy. On private lands (mitigation contracting) deliberately replanted areas patchier in species composition than normal so in the future they could go back to the sites and collection could be easier. It saved time but it wa still too difficult to do mechanized harvest. There are hand collecting techniques that can help speed up harvest.

Wrap up/Next Steps

It has been energizing to see all of the support and excitement there is around the creation of a Washington State Seed Strategy. Information and ideas shared in the breakout groups and the post meeting discussion will be used to create a set of goals and objectives that address the barriers to native seed use and production as well as strengthen and build upon the collaboration and community that is already doing great work in our state. We will continue to hold statewide meetings to share progress and gather input during the strategy creation process. We will be seeking additional help from those with the desire and capacity to take on a greater role in writing the strategy by joining an advisory or focus specific working group. Please be on the lookout for follow-up emails with ways to stay involved.

Thank you to everyone who gave their time during interviews, surveys, and meetings. Thank you to our partners at the US Fish and Wildlife Service for their funding and leadership.