

POST- DISASTER STRATEGIC SEED RESERVE



SOUTHERN ROCKIES
SEED NETWORK

Our Mission: "To preserve the genetic integrity of our native flora through collaborative planning for plant materials development."

The post-disaster strategic seed reserve advances our mission while proactively planning for a timely, effective, and ecologically appropriate response to fires, floods and other natural disasters.

WHY DO WE NEED A SEED RESERVE?



Wildfires and floods pose some of the greatest threats to watersheds, life, and property along the Front Range of Colorado. However, the necessary quantity and diversity of seeds necessary to adequately restore our watersheds and create resilient landscapes following a disaster has been a challenge to provide in the short window of recovery following fires and floods. At the same time, the intensity and frequency of fires and floods is expected to grow over time in the Front Range.



The demand for ecotypic (i.e., locally adapted native plants) and for a greater diversity of native plant materials in our region is difficult to address by private industry or other traditional means due to the lack of unified and consistent demand.

Furthermore, the plant materials required to adequately restore watersheds and floodplains following a large-scale fire or flood are often unavailable, economically impractical, or do not always address the diverse needs of land managers.

Some of the plant materials concerns expressed by land management agencies during post-fire and post-flood recovery efforts include:

- Lack of a greater diversity of native seed and nursery stock needed to stabilize slopes and revegetate floodplains while providing greater ecosystem benefits (e.g., pollinator habitat, water quality, increased biodiversity, etc.);
- Lack of quantity of desired seed nursery stock within the short window of recovery following fires and floods; and
- Seed mixes that do not meet specific weed-free thresholds.

A Key Challenge to the wildfire and flood prone Front Range of Colorado is that no individual land manager or landowner knows when or where disaster will occur, and hence they cannot plan adequately for the tremendous quantity of seed needed to sufficiently restore their watersheds following a fire or flood. By developing a strategy that spans a broad geographical area and involves multiple landowners and agencies, the seed reserve program will work proactively to develop ample and diverse seed sources to meet the needs of disaster-impacted communities in any given year. Only by collaborating among a broad partnership can we resolve this challenge in a proactive manner.

As a non-profit organization whose mission is focused on collaborative plant materials development, the Southern Rockies Seed Network is in a unique position to facilitate this partnership and produce creative and impactful solutions to this unique challenge.

The First Step: Phase 1 Feasibility Study

Southern Rockies Seed Network will develop and manage a broad stakeholder group to determine the feasibility of creating an impactful strategic seed reserve to meet post-disaster restoration needs on the Front Range of Colorado.

The feasibility study will involve a broad range of impacted landowners, coalitions, water users, and land management agencies to evaluate the specific needs for post-disaster plant materials (e.g., type of material, species, quantity, timing, and weed concerns). Through interviews, surveys and planning meetings, we will gather perspectives and relevant information from an estimated 50 stakeholders. This process will clarify post-disaster plant materials needs and levels of interest in the reserve, outline potential funding mechanisms, and develop a clear program mission and goals.

The strategic seed reserve leverages regional resources to improve ecological outcomes such as increased biodiversity, reduced sedimentation of streams, and improved wildlife habitat on a watershed scale. A diverse plant community helps to build resilient landscapes that can better weather fires and floods.

SOUTHERN ROCKIES SEED NETWORK'S PLAN



Phase 1 Deliverables:

- Develop list of stakeholders (land management agencies, water users, landowners, coalitions, etc.) that support the development of a strategic seed reserve. These stakeholders will be directly involved in developing the strategic seed reserve *operational plan* in Phase 2.
- Produce a desired funding mechanism for the development and management of the seed reserve.
- Draft and deliver a final report to all stakeholders, outlining the findings of the feasibility study.
- Determine the logistical, financial, and administrative constraints and opportunities of a shared seed cleaning and storage facility in our region.
- **EXAMPLE FUNDING MECHANISM:** Develop a financial system that allows land managers and other impacted entities to invest in shares of the strategic seed reserve (e.g., 1 share = 1 acre of seed). This would allow users to withdraw a quantity of seed commensurate with the investment they have made into the reserve. In emergency situations, investors can sell their shares to a landowner in need at pre-determined prices



Phase 2: Develop Operational Plan

Once the feasibility of this project is determined, the next step is to facilitate a planning process that will lead to the development of an operational plan for the management and development of the strategic seed reserve. This phase will build on the stakeholder work completed in Phase 1 by building the support for the strategic seed reserve, fostering commitment of key stakeholders/users, and growing the body of stakeholders that will invest and in benefit from the strategic seed reserve.

Phase 2 Deliverables:

- Develop a map of Front Range *ecological recovery zones* that exhibit similar environmental and ecological characteristics such that we can develop appropriate broad-based seed mixes for post-disaster watershed restoration. The extent of these zones, and anticipated user needs in these zones, will drive the species lists and quantity of each species anticipated for within the overall strategic seed reserve. An example of an ecological recovery zone would be “Low elevation Ponderosa Pine community on sandy/gravelly soils.”
- Secure agreements with at least fifteen investors to develop the initial post-disaster strategic reserve.
- Develop a seed collection, increase, cleaning, storage, and distribution strategy. Importantly, this strategy will address the shelf life of all seed in the reserve by creating a mechanism that allows older seed to be released to the general restoration market while the strategic reserve is constantly renewed by new seed.
- Develop agreements with at least five growers to meet minimum program standards (weed content, quantity, and timing of delivery) of the strategic seed reserve.
- Draft and distribute the Strategic Seed Reserve Operational Plan.

The post-disaster strategic seed reserve program strengthens our collective ability to respond quickly and effectively in the face of fire and flood disasters, with the goal to create resilient plant communities in landscapes across the Front Range of Colorado.



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