

SEEDS for Restoration

Seeding Evaluation and Experimental Design Strategies

SEEDS for Restoration represents a self-contained, independently funded team of researchers and managers using innovative experimental designs, implementation, and monitoring to evaluate and compare seeding practices alongside ESR and BAER treatments.

BACKGROUND

Hundreds of post-wildfire rehabilitation and restoration treatments are applied across the western US each year. Unfortunately, some seedings fail to meet ecosystem recovery goals, which include biodiversity, pollinator, and wildlife needs. By pairing land management treatments and scientific experimentation, we can rapidly advance restoration practice by exploring novel seeding treatments that work in various Great Basin site conditions.

GOALS

Implementation of the SEEDS experimental restoration framework aims to move management options toward strategic treatments that increase success, reduce the need for repeated treatments, and reduce costs by:

- 1) installing seeding (drill and ATV broadcast) experiments using site-adapted seed across the Great Basin that are informed by local management and researcher knowledge (*experimentation with aerial broadcast seeding will require implementation by ESR program in coordination with SEEDS team);
- 2) monitoring a suite of integrated ecosystem processes (vegetation, soils, climate/weather, wildlife);
- 3) determining successful restoration outcomes; and
- 4) supporting adaptive management by incorporating experimental findings into future treatments.

EXPERIMENTAL SITE PARAMETERS

The following characteristics are desired for a SEEDS site:

- Recently burned (<2 yrs since wildfire) area of at least 1,000 acres in size occurring in the Snake River Plain, Northern Basin and Range, or Central Basin and Range level III ecoregions.
 - Low- to mid-elevation (< ~7,000 ft) sagebrush (*Artemisia tridentata*)-dominated vegetation with an annual precipitation of ~5-15 in.
 - Known existing and pre-wildfire plant community.
 - Known recent past fire and management history (e.g., grazing use records, herbicide treatments, seeding treatments from the past ~15 yrs).
- Area with biological/cultural clearances and NEPA documentation for ESR or BAER treatments.
- Area with low risk of heavy grazing, energy development or exploration, and vandalism.
- Area of 25 to 100 acres within the burn scar for the experimental installations (non-contiguous is okay).
- Currently (2024), the SEEDS team can install 1-2 sites/yr with plans to increase capacity in the future.

JOIN US

- Notify investigators of locations that meet the site parameters above ASAP following a wildfire (ideally at or before ESR or BAER planning stage). **If your site meets most of the above criteria, please get in touch.*
- Provide your local knowledge related to past site management, current site condition, your restoration ideas based on past successes/failures, and coordinate with the SEEDS team to implement experiments.

CONTACTS

Francis Kilkenny , PI, USDA FS, RMRS	francis.f.kilkenny@usda.gov	208.373.4376
Beth Newingham , co-PI, USDA ARS	beth.newingham@usda.gov	775.309.7211
Corey Gucker , Great Basin Fire Science Exchange	cgucker@unr.edu	208.373.4342

