Western Watersheds Project

Presentation to the National Academies of Sciences

Assessment of Native Seed Needs and Capacities

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Who We Are and What We Do

- Western Watersheds Project (WWP) works to influence and improve public lands management throughout the West with a primary focus on the negative impacts of livestock grazing on 250 million acres of western public lands, including harm to ecological, biological, cultural, historic, archeological, scenic resources, wilderness values, roadless areas, Wilderness Study Areas and designated Wilderness

- We have nearly 30 years of direct experience interacting with federal land management agencies on restoration, revegetation, and vegetation management projects. WWP consistently advocates for the use of appropriate native seed and plant materials along with comprehensive planning and post treatment management. Ensuring the long-term success of restoration efforts on degraded federal lands is paramount to our mission.

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At the Table

- Legislation and National Policy
  - Directly advocating for federal funding to support native seed and plant programs and policies through the annual appropriations process and legislation.
  - Meeting with agency and administration officials to advocate for policies that improve native ecosystems, fish and wildlife habitat, biodiversity, and climate resilience.
  - Proposing regulatory reforms to redirect agency priorities and guide management actions toward long-term ecological health.
- Local and Regional Participation
  - Participation by WWP state directors in all levels of agency planning processes for land use, vegetation management projects, livestock grazing, energy development, and mining.

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On the Ground

- WWP state directors and specialists carefully review and comment on treatment and seeding proposals.
- When necessary, WWP will appeal and/or litigate decisions that are inconsistent with land use plan direction, NEPA requirements, or other federal laws.
- Field visits and site monitoring are conducted pre and post treatment.
- State directions are involved in long-term monitoring of project areas and post treatment management decisions.
- This on the ground level participation informs and supports WWP's legislative and policy advocacy efforts to address needs and shortcomings of agency decision making and implementation of native seed and plant restoration projects.

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What are the barriers to effective restoration with native seed and plant materials?

- How decisions about vegetation management projects are made
  - Pre and post management planning
- The value of intact ecosystems
  - Preserving native seeds and diversity in situ
- Programmatic accountability
  - The best laid plans …

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It All Starts with Proper Planning

- Barrier: The agencies lack dedicated native plant and ecosystem restoration programs to guide management direction and decisions.
  - Projects are planned and carried out within various agency departments that are often disconnected or lacking input from specialists with specific expertise in native plant biology.
    - Range, fire, wildlife
    - Agency perceptions around native seed differ across political and jurisdictional boundaries.
  - Project purposes may vary greatly depending on which department is in charge but multiple use objectives exert a significant influence.
    - For example, range staff may design projects and choose seed mixes for fast germination and maximum forage production.
    - Emergency stabilization after fire typically favors the same characteristics. Decisions about seed mixes on grazing allotments are often made by or in consultation with range staff to support program activities and goals.

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- Consequences:
  - Project areas are often expanded beyond the areas that actually need treatment.
    - Due to time constraints and “emergency” conditions, post fire seeding projects often treat entire landscapes as a single site rather than taking into account different terrain, veg types, habitats, soils, etc. and using different methods as appropriate.
    - Pockets of resilience are overlooked and often destroyed during large mechanical treatments.
    - Treatments are viewed as an opportunity to expand forage opportunities for livestock.
    - Using emergency authorities allows managers to avoid comprehensive environmental review of projects and public input to achieve management objectives beyond the immediate need for emergency stabilization.
  - Post treatment management typically fails to account for the realities of native seed plantings which often need longer periods of rest for germination and establishment.
    - For example, range staff may be pressured to resume grazing as soon as possible which creates a bias against native seed and for non-natives or workhorse species that are more palatable to livestock and establish quicker.
    - Guidelines for the resumption of grazing are not sufficient and/or are not followed by range staff and permittees.

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Managing for Native Seed and Plants

- Barrier: The federal land management agencies lack policy and regulation to preserve reference areas for the purpose of establishing native seed banks in situ.
  - Land use planning generally fails to account for native seed and plant needs.
    - Determinations about suitability for management activities do not consider impacts to native seed sources needed for restoration efforts
    - Native seed and plant materials are considered only in the context of other program areas.
  - While models exist for appropriate and sustainable native seed collection (Seeds of Success) there is not universal application or coordination across land management agencies

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- Consequences:
  - Exclosures or other areas that fully protect native ecosystems as reference areas and native seed banks are generally lacking in many areas.
    - What does exist is typically by circumstance rather than by design.
    - Sites are not distributed among various geographies let alone seed transfer zones.
    - Rare plants are often only considered in the context of impacts from other management activities.
  - Uncoordinated and poorly regulated seed collection practices can lead to depletions of native seed supply and plants within intact reference ecosystems.

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Culture and Accountability

- Barrier: The agencies lack sufficient accountability mechanisms and metrics to determine success of restoration efforts
  - Managers rely on expedited environmental review mechanisms to speed project approval.
    - Public involvement in project design is severely limited.
    - Expert opinions from outside the agency are not considered.
    - Projects are viewed through a tight filter that excludes consideration of related management actions.
  - Short-term results override long-term ecological outcomes.
    - Performance is evaluated based on numbers of acres treated per year.
    - Project success is defined by short-term metrics.
      - Preventing the spread of invasives, soil erosion, quick germination.
      - How quickly the site can be returned to multiple use management.
    - Funding is often time limited and does not support long-term monitoring
  - There is a fundamental disconnect between the management of permitted activities and the success or failure of vegetation projects.
    - Destructive land use practices that may have led to the degraded conditions that necessitated treatment and restoration (increases in invasive weeds, compacted soils, destruction of biological soil crusts, etc.) tend to continue unabated after project completion.
    - The need to restore degraded habitat is not viewed as a failure by agency personnel to properly manage permitted activities but rather as an unavoidable aspect of the multiple use mission.

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- Consequences:
  - Poor project designs are repeated.
    - The desire to use shortcuts to avoid full environmental analysis creates a disincentive to change project design and methods.
    - The agencies lack the data and evidence to understand what leads to project failure or success and adapt planning.
    - There persists an mentality within the agency of “If it fails, we’ll just do it again.”
  - Long-term ecological impacts
    - Poor management practices after seedings can lead to additional consequences beside the failure of vegetation to establish including the loss of soil layers and eventual ecological state transitions.