



## The Ackerson Meadow Restoration Project



### What is the purpose of this project?

Ackerson Meadow and South Ackerson Meadow make up the largest mid-elevation meadow complex in Yosemite National Park. The meadow complex spans onto U.S. Forest Service (USFS) lands of the Stanislaus National Forest. These scenic meadows are important habitat for the State endangered great grey owl and little willow flycatcher, as well as a suite of additional at-risk wildlife species. Currently, a large erosion gully network, up to 14 feet deep and 100 feet wide, is actively draining 90 acres of former wetlands in the meadow complex and threatening an additional 100 acres of wet meadow habitat. The gully network is a result of over a century of landscape manipulation including domestic water diversion, farming, ranching, and timber harvest. Yosemite National Park and the Stanislaus National Forest jointly propose to implement actions to reduce erosion and restore wetland functionality at Ackerson and South Ackerson Meadows. Additional goals of the project include:

- Protect intact wetlands from advancing gullies and headcuts and re-establish hydrologic conditions dominated by sheetflow and shallow dispersed swales.
- Restore the extent of functional wetlands in the Ackerson Meadow complex by re-establishing sustained high-water tables and an increased proportion of wetland plants.
- Restore high-quality habitat for at-risk wildlife species.
- Restore native wetland vegetation communities including special status plants, culturally important plants, forage for wildlife and livestock, and remove invasive species.
- Enhance ecosystem resilience to climate change.
- Facilitate ecological restoration by enabling tribal tending and gathering of traditional use plant materials.
- Provide functional grazing allotments on USFS-managed lands.
- Preserve wilderness character by limiting activities and tools to the minimum required to restore water tables, especially in designated wilderness.

## How would the NPS restore the meadow?

Yosemite and the Stanislaus are considering options to restore the meadow complex and have developed the following three action alternatives. They also considered but dismissed several options, as well as considered taking no action at this time. Through development of the environmental assessment, Yosemite and Stanislaus have determined the complete fill option as the preferred alternative.

- Alternative 1 (Preferred alternative). Completely fill the erosion gullies to the level of existing meadow terraces to restore original topography, hydrology, and vegetation. Fill material will be generated from a combination of nearby upland hillslope soil excavations and locally generated wood chips and biochar. Approximately 151,000 cubic yards of fill will be needed. This alternative will maximize the acres of protected and restored existing and former wetlands.
- Alternative 2. Encourage sediment deposition and re-direct erosive flow energy within the erosion gullies by installing more than 350 hand-built structures from natural materials. These hand-built structures include beaver dam analogs (BDA) and function to create a stair-step sequence of ponds about 4 feet deep over the length of active channels. This treatment will require hand tools and manual labor, no fill or heavy equipment will be needed. Annual long-term maintenance of structures will be required. This alternative would not fully restore the gullies to natural meadow topography, rather it would enhance the wetland and floodplains within the gully network and eventually form an inset floodplain. This alternative would protect and restore the least acres of existing wetlands and former wetlands. The park has also considered the introduction of beavers to the meadow for restoration purposes but considers that action infeasible at this time.
- Alternative 3. Apply individual prescriptions of the fill or hand-built alternatives to specific reaches of the gullies based on depth of incision to restore meadow hydrology and reconnect with the floodplain. This hybrid alternative would use soil from the same sources as the other fill alternatives in the deeper portion of the gullies and use BDAs in the areas where the gullies are less than 3-5 feet deep. This would require less fill than the full fill option and more fill than the intermittent fill option, and it would require annual long-term maintenance of the BDA structures. This alternative would protect and restore a moderate number of existing and former wetlands.

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## How can I comment and participate?

The Ackerson Meadow Rehabilitation Environmental Assessment is ready for your review. Please review the document and submit comments by July 8, 2021 on the NPS Planning, Environment, and Public Comment (PEPC) link at <https://parkplanning.nps.gov/ackerson>. Public participation is essential for the success of this and all other park projects.

## What are the next steps?

The planning team will review and address your comments after the comment period is over. They will complete agency consultation. When complete, the agencies will develop a decision document and release it to the public. We thank you for your interest in the Ackerson Meadow Restoration project.

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