

Springs Ecosystem Science: 2018 Symposium, Workshop, and Training

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Topic: Springs Ecosystem Management and Restoration

Title: Collaborative Springs Restoration Case Study on the North Rim of the Grand Canyon

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Abstract:

Water resources in the arid Southwest are inherently contentious given the multiple uses and tendencies for overallocation. Threatened by overuse and sensitive to disturbance, springs are among the most imperiled waters across this region. Springs ecosystems are biodiversity hotspots, culturally significant sites, and key components of overall landscape health. These ecosystems provide critical water resources and, on public lands, are often shared among human, wildlife, and livestock uses. Despite their importance, efforts to understand springs conditions, threats, and appropriate management approaches are still in their early stages. Many of the springs across the Colorado Plateau are impacted by pollution, trampling, non-native species invasions, and water diversion developments. With increasing water demands and intensifying drought driven by climate change, efforts to protect and restore springs are paramount.

Central to the Grand Canyon Trust's mission is the protection and restoration of the Colorado Plateau. Through collaborative efforts to restore springs we not only have an opportunity to protect water resources and improve landscape health under increasingly arid conditions, but also an opportunity to build partnerships among stakeholders and to engage the broader public in conservation advocacy. We present case studies of our volunteer-powered work to gather information on and restore four developed but significant springs on public lands in the greater Grand Canyon watershed. Through collaboration with land and wildlife managers, springs experts, dedicated volunteers, and the local rancher, our work thus far has improved native plant dominance and wildlife water access while balancing livestock water use. The success of these collaborative efforts is further demonstrated through ongoing monitoring and over 2,000 hours of on-the-ground volunteer engagement. It has also led to the expansion of committed efforts among many partners to advance springs assessment, restoration, and protection across a broader landscape. We hope that these efforts can serve as pilot studies for restoration approaches at developed springs and can help forward the planning and implementation of collaborative conservation across the Colorado Plateau.