2022 ANNUAL MEETING

SESSION RECAP

AGRICULTURE & WATER COMMITTEE

CSG | WEST

Discussion topics include climate risks and options for water, agriculture, and rangelands.

Drought and Other Climate Risks to Water, Agriculture, and Rangelands in the West

- **How and where we store water – surface water in reservoirs and groundwater in aquifers – are vital to informing effective, sustainable water use and management strategies.**
- **A systems-level understanding of where the water is going is essential. Satellite-based consumptive use maps are powerful tools but are currently under-utilized.**
- **Western water needs increased flow monitoring across irrigated systems.**
- **A complete understanding of water rights is critical.**
- **A clear understanding of water terminology is essential for good communication about water use.**
- **High variability of rangelands means there is no one approach for effective rangeland management.**

Changing climate stresses water, agriculture, and rangelands in new and sustained ways. The warming weather and decreased precipitation have exacerbated invasive and noxious weeds proliferation in some areas, creating stress on rangeland ecosystems and ranching dependent upon rangeland for forage and water.

Traditional water storage – snowpack, surface water reservoirs, and groundwater aquifers are impacted. Agricultural irrigation practices can influence reservoir and aquifer water quantity and quality. For example, highly efficient pivot irrigation (90% plus water use) means less water percolates for aquifer recharge. In contrast, the least efficient crop irrigation method – flood irrigation – is highly effective for aquifer recharge.

Where surface water reservoir conservation is critical, water-efficient pivot irrigation makes sense. Where aquifer recharge is a priority, other approaches to irrigate crops – while less efficient in consumptive use- return more water to the aquifer. Water use and management must therefore be conjoined with agricultural irrigation practices.

Rangelands are changing as the climate does. Ranchers are employing new or different approaches to livestock grazing depending upon the condition of the land. Rotational grazing practices are proving effective at protecting riparian rangeland areas and streams. creeks and rivers. Other sites benefit most from a “no management” approach. The ecosystem has balance and self-correcting mechanisms to contain potential threats – the absence of cheatgrass and sufficient forage for livestock and wildlife.

Local flexibility to manage climate threats is vital, coupled with expanded use of satellite monitoring of water and rangelands to detect – and adapt- to conditions on the ground.

Resource:

Managing Water Quantity and Quality in the West

Presenters:

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