

Case Study

The Three Creeks Allotment Consolidation: changing western federal grazing paradigms

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Abstract: The federal government owns approximately 47% of all land in the western United States. In the state of Utah, about 64% of the land base is managed by the federal Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). The government has historically issued permits to owners of private lands to allow the owners to graze their livestock on public lands. The permits (allotments) are generally of 10-year duration and allow for an annual season of use. In some cases, continued and repeated historical annual grazing practices may not be ideal for permit holders and their communities, nor for the semi-arid western rangelands, wildlife, and livestock. In 2010, a group of ranchers holding federal permits with help from employees of the Utah Department of Agriculture and Food's Grazing Improvement Program, along with the BLM and the USFS, reexamined longstanding cultural and management paradigms. They engaged in a watershed-scale planning effort that encompassed grazing, wildlife, water quality, habitat, recreation, legal, and policy issues. Most notably, the planning process addressed the social dynamics of working with 36 different grazing permittees representing 10 different grazing allotments, and multiple government agencies. The process and its results, both referred to hereafter as the Three Creeks Allotment Consolidation (TCAC), consolidated the allotments of the permittees, providing for a new company to be the permittee and to manage the lands. The TCAC process, in conjunction with private lands, seeks to improve rangeland, enhance ecosystem services, and provide for increased economic sustainability. In this paper, I describe a dynamic process that may have implications for changing how federal grazing allotments are managed in the future. Specifically, I emphasize the role and importance of managing human dimensions when implementing grazing policies that blend public and private resources.

Key words: ecosystem services, grazing allotment, livestock grazing, management, permittee, private lands, public lands, rangelands, Utah, watershed planning, wildlife

THE U.S. GOVERNMENT owns 47 % of all land in the West. Jakus et al. (2017) reported that 64% of the Utah land base is managed by the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). However, the most productive lands in Utah in terms of forage production and agriculture value, along with the associated water rights, are owned by private individuals (Banner et al. 2009). Much of the public land is managed under the multiple-use doctrine. The complex mosaic of land ownership in the western United States and competing resource uses complicates the administration of public lands (Cawley and Freemuth 1997, Banner et al. 2009, Havstad et al. 2009, Jakus et al. 2017). The integrated management of this mosaic of public and private lands in Utah and the western United States is crucial to the success of livestock production for ranchers, local communities, and wildlife species such as the greater sage-grouse

(*Centrocercus urophasianus*; Connelly et al. 2004, Danvir et al. 2005, Dahlgren et al. 2015).

The federal government established a system of allotments across the public lands to allow for grazing of livestock. The federal land agencies lease land through permits that presently are typically structured to last 10 years (BLM 2015). The ranchers who operate on public allotments are called permittees. The allotment system evolved as a tool to regulate grazing and ameliorate practices that caused major issues across the landscape when no firm rules or structure were in place (Cawley and Freemuth 1997, Banner et al. 2009, Holechek et al. 2010, Payne 2011). The allotment system determined the dates to graze and the numbers of animals that would be allowed to graze (Banner et al. 2009).

Many of the pre-allotment problems resulted from ranchers' perceptions that they were in competition with other operators for the same

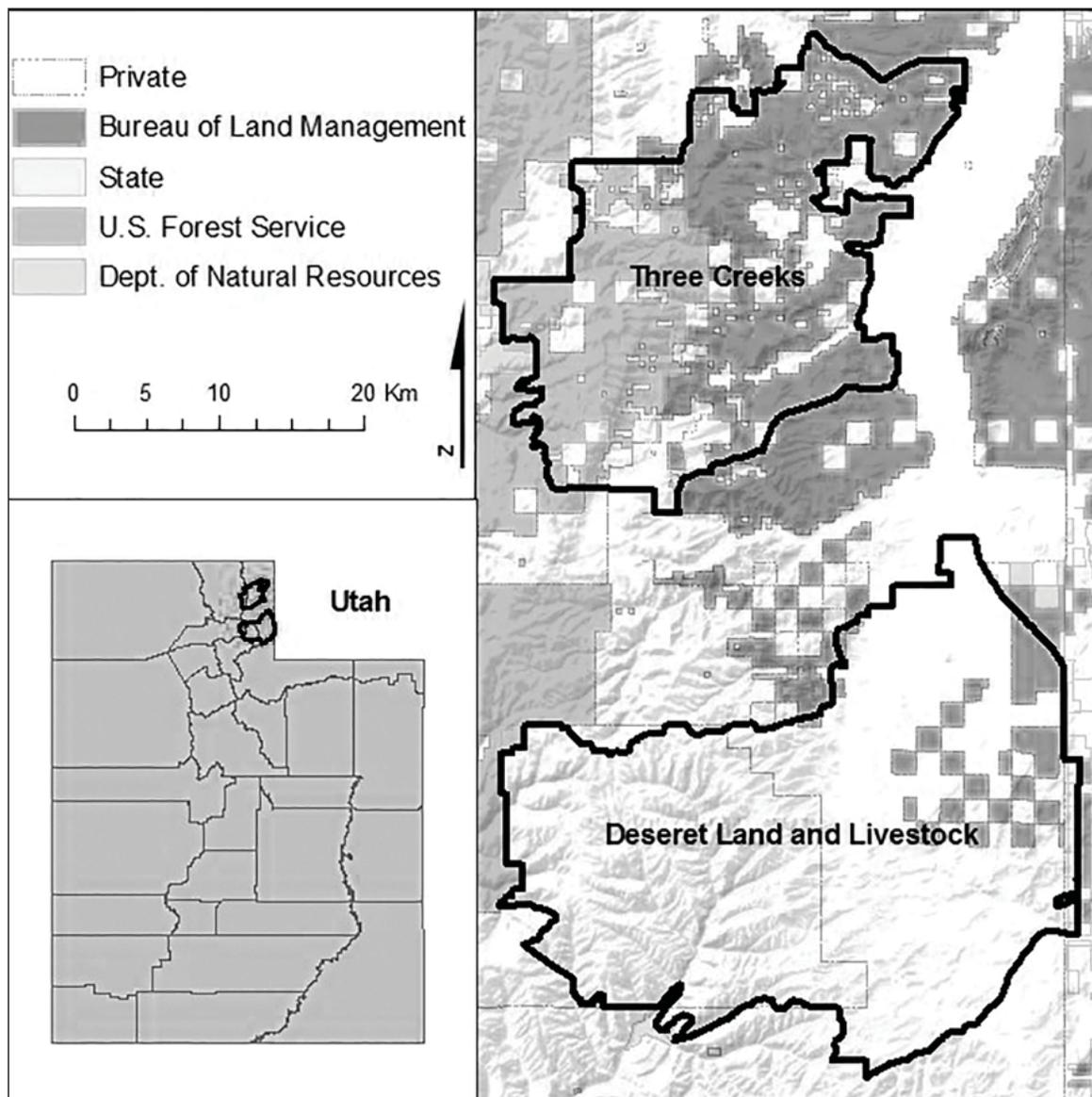


Figure 1. The Deseret Land and Livestock Ranch and the proposed Three Creeks Public Grazing Land Consolidation are located in northeastern Utah, USA.

forage resource (Abruzzi 1995). Because of this competition, the forage resources on public lands may not have been allowed to complete their life cycle (Holechek et al. 2010). This resulted in reduced ground vegetation cover that contributed to increased erosion and the subsequent degradation of the rangelands and riparian systems (Banner et al. 2009). Although the federal grazing allotment permit system helped to mitigate these issues, the management of public rangelands for multiple-uses remains a formidable public land management challenge (Cawley and Freemuth 1997, Havstad et al. 2009).

Many of these challenges have been attributed to the structure of grazing permit regulations and

the National Environmental Policy Act (NEPA) requirements that do not allow permittees the simple flexibility to make seasonal adjustments to the timing of grazing (BLM 2008, Stuebner 2011). Permittees are required to graze forage the same way year after year without major ability to alter the season of use, thus causing stress to plants (Banner et al. 2009, Payne 2011).

Most allotment management plans are updated using traditional ranges of grazing dates and not using the creativity of rangeland planning (Holechek et al. 2010). Thus, permittees who face challenges on their allotment, such as impaired riparian areas and water quality degradation caused by intensity and length

of grazing, are stuck with the inherent federal land management inflexibility. The inflexibility caused by the lengthy process to modify regulations and government procedures is a stronger force than the good intentions and valuable learned skills of the federal employees who are tasked to manage the land (Stuebner 2011). Permittees and agencies with progressive intentions and who want to help feel boxed in (Boies 2017, Straube 2017).

Inflexibility results in permittees having to deal with controversial strategies associated with allotment management. For example, a common administrative response to over-utilization of areas within an allotment is to decrease the number of head of livestock allowed to graze in an area within the allotment (Banner et al. 2009, Stuebner 2011, Boies 2017, Straube 2017). Other more creative solutions may exist. Negative personal accounts from permittees demonstrate the frustration they experience from inflexibility of grazing management agencies and the inability to solve problems with agencies. These reactive administrative steps may be harmful to the sustainability of the rancher as well as to the rural community where the economy is based on the grazing industry (Banner et al. 2009, Stuebner 2011, Boies 2017).

The best time for permittees to ask the federal land management agencies for change is during their permit renewal process when a new NEPA study is initiated (BLM 2008, Payne 2011). For example, during the renewal process, the permittees may ask for cross fencing to create a greater number of pastures, for water pipelines to fill new troughs with water for livestock, or even to be allowed to drill new wells or develop new water sources. These practices help with distributing grazing, protecting and managing important wildlife habitat, improving riparian health and water quality, and protecting forage resources in the long-term, making grazing more sustainable (Holechek et al. 2010, Boies 2017).

However, because the federal agencies are required by law to do a new NEPA study for each grazing permit renewal, and because the BLM and USFS are behind schedule by multiple years to accomplish the NEPA process for these allotments, many permittees find themselves at a disadvantage. Even when the allotments are renewed and the permittee

gets permission to proceed with new grazing infrastructure, many permittees lack the financial and technical resources to complete the necessary improvements given the uncertainty surrounding the process (Stuebner 2011, Straube 2017).

In Rich County, located in northeastern Utah, the rangeland landscape is managed largely by the BLM and USFS with some private lands interspersed that are managed as part of public grazing allotments (Figure 1). As with most federal grazing permits, the rangelands are generally grazed May through September as large open pastures with little rest during the growing period of the vegetation (Rich County Resource Management 2002). The allotments are stocked at 0.20–0.40 animal unit months (AUM)/ha (Dahlgren et al. 2015).

Adjacent to these public rangelands is the Deseret Land and Livestock (DLL) ranch. Since 1983, DLL has used a prescriptive grazing strategy of rest-rotation grazing, utilizing several large herds of domestic cattle (*Bos taurus*). The herds are rotated through pastures to graze for 1- to 2-week periods from April to September under the rest-rotation grazing system. Up to 20% of DLL pastures receive a full year of rest after grazing and pastures are not grazed during the same growing period in subsequent years. The stocking rate on DLL is nearly double that of other Rich County allotments (0.63–0.83 AUM/ha), generating increased economic and rangeland health benefits (DLL 2011). The DLL also provides habitat benefits to the greater sage-grouse and other wildlife species (Danvir et al. 2005, Dahlgren et al. 2015).

The DLL has been touted as an example of what could be possible in Rich County and as a template for a proposed grazing management plan that could be replicated throughout the West (Rich County Resource Management 2002). However, to implement the DLL process, the ranchers and agencies would have to look past longstanding cultural and management traditions and other human dimensions and engage in a watershed-scale planning effort. The effort would encompass grazing, wildlife, water quality, habitat, recreation, legal and policy issues, financial risk, and multiple land ownerships (Moote and McClaran 1997).

In this case study, I describe the process

and community involvement in the Three Creeks Allotment Consolidation (TCAC). The process has implications for changing how some western rangelands may be managed in the future under the federal multiple-use doctrine. The process dealt with changes to the local dynamic and human involvement while addressing and focusing on important changes for long-term management success.

Study area

Deseret Land and Livestock is a privately operated ranch 870 km² in size with approximately 8% constituting of BLM inholdings. The TCAC area is a 569-km² collection of BLM (47%) and USFS (26%) grazing allotments intermixed with private (20%) and state (<7%) lands. The DLL and TCAC areas are approximately 13 km apart (Payne 2011). Livestock grazing by domestic cattle is the dominant land use across both areas.

The DLL has approximately 100 different pastures to utilize when developing its annual grazing plan (DLL 2011). About 75% of the pastures are upland dry range pastures that specifically grow during the early spring and late fall time periods. The other 25% of DLL pastures are irrigated meadows. The DLL usually has about 6 different herds of cattle that rotate among these pastures. One key factor of the DLL grazing plan is to rest approximately 20% of its pastures every year during the growing season (Danvir et al. 2005, Payne 2011). In the spring, the ranch only turns cattle out onto a pasture that was totally rested the year before. This protects the forage from repeated grazing during the rapid growth period. Another key to its grazing plan is that it will graze a pasture at a different time than it was grazed the year before so that the different forage species present will have a chance to grow and complete their life cycle without the competition of cyclic grazing pressure. All of these principles are the foundation to grazing management of time, timing, and intensity (Holechek et al. 2010).

The TCAC project is within a geographical area 13 km north of DLL. The area is a mosaic of different land ownerships, including federal grazing allotments and the associated permittees, state allotments, and private lands. The permittees are ranchers that have been

grazing their livestock on the allotments for multiple generations (Payne 2011). The TCAC project consists of 10 allotments: 5 allotments managed by the BLM and 5 allotments managed by USFS. The private lands that are owned by the permittees are grazed in conjunction with the rules in place in the management plans on the federal allotments. State-owned lands are also managed under the guidance of the grazing plans that the federal agencies put in place. In total, the TCAC area involves 36 different permittees who graze their livestock in a newly managed way.

Topographically, the areas are similar, characterized by steep canyons and wide ridges at higher elevations in the west and transitioning to open valleys along the eastern boundaries. Elevations ranged from 1,800–2,700 m. Soil orders are primarily Mollisols, Inceptisols, Aridisols, and Alfisols. Annual precipitation from 1981–2010 at the Cooperative Observer Program (COOP) stations in Randolph, Utah and Woodruff, Utah averaged 34.8 cm and 25.5 cm, respectively. These COOP weather stations are the closest to the TCAC project area (1.5 km) and DLL (13 km; Western Regional Climate Center 2016). Average temperatures are similar at both COOP weather stations and ranged from -12°C to 3.5°C between November and May and 1.5°C to 22.5°C between May and October.

Lower elevations in both areas are dominated by Wyoming big sagebrush (*Artemisia tridentata wyomingensis*) intermixed with rabbitbrush (*Chrysothamnus* spp. and *Ericameria nauseosa*) and spineless horsebrush (*Tetradymia canescens*). Higher elevations were characterized by mountain big sagebrush (*A. t. vaseyana*) and other common shrubs including black sagebrush (*A. nova*), snowberry (*Symphoricarpos* spp.), and antelope bitterbrush (*Purshia tridentata*).

Grasses common to both areas include bluebunch wheatgrass (*Pseudoroegneria spicata*), western wheatgrass (*Pascopyrum smithii*), needle-and-thread (*Hesperostipa comata*), and Sandberg bluegrass (*Poa secunda*). Mountain sagebrush mixed with stands of aspen (*Populus tremuloides*) and conifers is found at high elevations (Danvir et al. 2005). Basin big sagebrush (*A. t. tridentata*) patches are common in draws and valley bottoms across both study areas.

Almost all of the TCAC permittees are

Table 1. The Three Creek Allotment Consolidation Timeline (adapted from Payne 2011).

Dates 2001–2018	Action/Strategy
2001	Permits to graze on all but 3 Bureau of Land Management (BLM) allotments in Rich, Box Elder, and Tooele Counties were protested. The protest included a stay to prevent livestock grazing. An appeal committee was formed to overturn the protest.
2002	The Rich County Coordinated Resource Management (CRM) Group was organized.
Fall 2002	Kevin Conway, Utah Division of Wildlife Resources director, challenged permittees to consider a new management style. Legal representation was hired by permittees to fight the protest.
Spring 2003	The Department of the Interior Board of Legal Appeals lifted the stay, allowing permittees to graze their livestock on the protested allotments across Rich, Box Elder, and Tooele Counties.
Spring 2007	Bill Hopkin and Troy Forrest created project ideas and plans leading up to the TCAC project through the Utah Grazing Improvement Program.
Winter 2008	Meetings were held with range conservationists and key permittees to refine the TCAC project.
January 2009	An Operating Agreement was drafted for the new TCAC association.
Spring 2009	A resource inventory was initiated to evaluate water availability along with fence placement and conditions across the TCAC project area.
April 2009	A vote was held among permittees resulting in a 93.7% positive vote to proceed with the consolidation plan. Nominations for a chairman and board members were conducted.
Fall 2009	A resources inventory was completed.
Winter 2009	An informal plan was drafted to involve allotments, and budgets were developed for TCAC capital and maintenance requirements.
Spring 2010	Meetings were held to allow sheep permittees to address concerns about the distribution of animal unit month (AUM) assessment, fees which are different from cattle AUM assessments.
June 2010	Plans were developed for completing the National Environmental Policy Act (NEPA), permitting the process required for changing management and infrastructure on public lands. A scoping outline for the NEPA document was created for a plan of work. An environmental contractor was awarded the bid to complete NEPA.
Fall 2010	A legal review of the TCAC Operating Agreement and bylaws was conducted. A range consultant visited with the TCAC permittees regarding the proposed changes. A final TCAC vote formally initiated NEPA.
2010–2017	The NEPA preparation and review occurred. The permittees and other agencies are frustrated at the slow pace and inability to complete this project as it was originally planned.
April 2018	The signed NEPA decision is announced from the BLM and USFS as joint decision makers. A Finding of No Significant Impact was suggested.

residents of the very small rural towns found close to the TCAC project and have had to learn to live near each other and get along for their entire lives. Many of the allotments involved in the TCAC project have been operated as common allotments, meaning that many permittees operated together and have experience learning each other's personalities and styles (Payne 2011). The collaborative style of management is not entirely new to

the permittees. The major difference under the TCAC plan is that a new company made up of all 36 original permittees will be the permittee of the consolidated allotment and will manage the grazing instead of having multiple individual grazing permittees.

Methods

This paper is a qualitative assessment of the history and the human dimensions processes

used to address the public/private rangeland management issues in the TCAC area. I evaluated the TCAC process relative to the following factors: 1) ability to address emerging problems, 2) emphasis on cross-scale networks, 3) self-organization and governance arrangements capable of supporting cycles of learning-from-action (adaptive management), 4) decision-making through communication and negotiation, 5) the formation and deployment of social and human capital, and 6) learning-by-doing (Berkes 2004, Olsson et al. 2004, Folke et al. 2005, Stringer et al. 2006).

Results and discussion

Ability to address emerging issues

The TCAC planning process was validated with a joint BLM and USFS signed record-of-decision in late April 2018 (Table 1). The TCAC planning began in 2001 when the federal grazing permit renewals across northern Utah were appealed by groups who opposed domestic livestock on public lands (Rich County Resource Management 2002, Wilmot and Brunson 2007, Payne 2011). A federal judge granted a stay that temporarily restricted livestock from grazing on public lands. This stay was lifted later that year, allowing the livestock to continue grazing as usual on public lands (Payne 2011).

In response to the litigation, the Rich County public land permittees organized a Coordinated Resource Management (CRM) group that not only worked to get the appeal lifted but asked the permittees to look differently at their past management efforts (<https://utahcbcp.org/localworkinggroups/RichCounty/richcounty>). The permittees had to identify and implement changes that would not only address the concerns raised by the litigants, but also ensure economic and environmental sustainability of the local communities, the watershed, and wildlife (Rich County Resource Management 2002, Payne 2011).

The CRM also addressed several needed management changes on the allotments and identified hurdles within the regulatory and NEPA processes that resulted in the inability to make needed changes. The needed management changes included improving the distribution of animals over the grazing area. Also described by the CRM was the inability to manage differently to address impaired riparian areas and water

quality because of the burden of completing the NEPA process. Under past management, the allotments had no options for incorporating rest for proper regrowth of multiple species. Also, the individual allotments could not afford to complete a large management change because of minimal capital improvement funds (Payne 2011).

Emphasis on cross-scale networks

The Rich CRM group ultimately created a forum to build the network that led to the TCAC consolidation (Payne 2011). Although many people were involved, 1 member stood out in the beginning of the discussions: Kevin Conway. Conway was the director of the Utah Division of Wildlife Resources. He had spent considerable time on DLL and understood the benefits its higher level of grazing management had to the wildlife and overall health of the range. After his observations, he compared DLL to the lands west of Randolph, Utah and realized what wasn't happening on the public-owned lands and the wildlife found there. He subsequently challenged the Rich CRM group saying, "I want to know why the same form of management can't be done on public ground."

During that particular meeting, questions and concerns were raised by members of the audience and especially by the apprehensive grazing permittees. The biggest response was that there was no way the DLL style of management could work where they operate. "It's not possible, we can't do that," the permittees said. Director Conway responded by saying, "That's not good enough! We own that public land, and we ought to be able to make that happen" (Payne 2011).

Conway and the other group leaders challenged the CRM to think about what they would like to see if there were no restrictions and no federal agency mandates. Basically, what would be their wish to make good grazing management happen? From that meeting, the idea for consolidating public and private lands and the permittees' livestock herds like DLL was addressed. The CRM developed a concept to use 8–10 different current public land allotments west of Randolph as part of the overall grazing system among which they could rotate cattle and sheep. One of the most important things that happened was that

permittees were starting to catch the vision of the new idea.

The TCAC group proposed a new management style that would require the grazing permit process to be renewed under NEPA (BLM 2008). Because the ability to accomplish NEPA through the federal agency offices can be cumbersome (Stuebner 2011, Straube 2017), the agencies contracted with a private firm to complete the necessary environmental analysis. The analysis was under the direction and guidance of the BLM and USFS.

In the beginning of the TCAC planning process, the permittees were apprehensive about the cost of changing to something new. They also worried about the private property within the project area and what might happen with the control over it. Many of the permittees asked, “How do we manage this much more work?”

To help answer questions and resolve permittees’ concerns, the Utah Department of Agriculture’s Grazing Improvement Program (GIP) stepped up to assist in finding cost-share assistance to complete the project (<http://www.ag.utah.gov/animals.html?id=273:grazing-improvement&catid=64>). The GIP assisted the permittees in planning the project, answered budget questions, and reviewed the proposed cost. The GIP championed the solicitation of funds to be used for the project and assisted from the start with project management to keep the momentum moving forward. One of the most important GIP contributions to the project was to identify and provide a key individual in the local community for the permittees to work with and demonstrate a long-term commitment to the project and nurture the newly established network.

Another important accomplishment to note during the TCAC process was the increased amount of maintenance being performed in preparation for the grazing system change. The maintenance projects consist of replacing old nonfunctional or deteriorated pipeline and trough systems, rebuilding old nonfunctional fences, maintaining ponds, and paying for hired fence maintenance and herding (Table 1). All of these projects had been completed without needing a new NEPA process and greatly improved the current management of the allotments, even with the consistent annual problems that occur. Many partners

have committed their support for cost-share incentives to ensure a successful project outcome, which have helped the permittees accept the change to a new management style.

Adaptive management

The TCAC grazing management plan was based on principals learned from Deseret Land and Livestock (DLL 2011). The plan is a science-based plan developed from pre-project monitoring conducted to evaluate the production of the range. It coordinates that with an outlined 5-year grazing plan that incorporates rest for regrowth in the overall system. The monitoring also documents the conditions on the range, such as cover by lifeforms and evaluated basic habitat needs in connection with calculated AUM available for harvest by livestock and wildlife.

The TCAC plan proposed that the cattle would be divided into 2 herds of about 1,600 head each. It is also planned to facilitate running 3 bands of sheep (*Ovis* spp.) during the summer time in the high, rocky, steep elevations where cattle are difficult to herd. Winter time bands of sheep will continue to graze as they always have. In all, the livestock for this project account for a proposed total of 17,218 AUM as planned through current stocking rates. The TCAC plan included other aspects, which are different from some longstanding traditions. The range will incorporate growing season rest on approximately 20% of the area. This is something that has not been done since the time the pioneers arrived in the valley with their livestock (Rich County Resource Management 2002).

The TCAC process identified new solutions to address old problems. The intent of the TCAC plan is to demonstrate good land stewardship by switching to a rest-rotational grazing system across 55,037 ha similar to the rest-rotational grazing system used by DLL. It will involve better planning efforts by the BLM, USFS, the Utah School and Institutional Trust Lands (SITLA), and its private land owners. It will involve 36 different permittees and their 3,200 head of cattle and 5 bands of sheep. The pasture system will incorporate all previous allotment fences with a nominal amount of new cross-fencing to make a planned total of 31 pastures among which livestock will be rotated,

something that has never been done before on public lands.

No other projects are known that offer a mix of so many different types of land ownership matched with as many different individuals involved in a grazing management plan on public lands. There are projects that are large in size, have multiple pastures, or that have a common management plan with the BLM and USFS, but none involved the complexities of the TCAC collaborative process with so many people and all the different factors. The TCAC project was a leap of faith for the permittees who hoped for the best outcome. Although patterned after the neighboring DLL ranch, DLL has only 1 owner and is mostly private land (Payne 2011).

Shared decision-making

Many variations of plans were made in developing the grazing system and how it benefits multiple resources across a watershed scale, but one also must ask: What about the project's livestock producers? What do they think about the plan? How does this affect them? Are they willing to make the change? How would other range managers organize something like this at this scale?

During draft stages of the TCAC process, other proposals were also considered to fix the recurring problems. Eventually, votes were taken from the permittees to see about moving ahead with the project as it is now approved. At the start, the BLM and USFS asked for at least a 75% positive vote to move ahead with the project, and TCAC participants responded with an approximate vote of 92% go ahead with the project (Table 1). The permittees voted with apprehension, but they didn't have many other options (Payne 2011). With the positive vote, additional plans were developed and more time was spent writing in-depth planning documents. Subsequently, additional meetings were held with the permittees to reaffirm their commitment to change management and accomplishing the TCAC project (Table 1). Another vote was taken with the understanding that the permittees were deciding to initiate the NEPA process to renew their grazing permits. The vote was held again according to the AUM of each permittee, and it resulted in a 95% positive vote (Payne 2011).

After the vote was cast, the permittees asked the Rich County commissioners to use their authority to petition the BLM and USFS to initiate the NEPA process to change grazing management for the TCAC area. The commissioners followed through with this, and NEPA was initiated in 2011 with an accompanying Memorandum of Understanding (MOU) that spelled out how the BLM and USFS would work as co-leads on the NEPA process in creating an environmental analysis (EA) together. The NEPA process was followed to get an EA but it was not done without frustration and enormous challenges to the permittees (Payne 2011). The promise from the BLM and USFS of a finished EA within a year to 18 months took 8 years (Table 1).

Since the process started, there have been a number of personnel changes at the BLM and USFS management levels. New staff employees at the agencies have had to be familiarized with the TCAC process. These changes contributed to delaying the NEPA process. The TCAC process was also changing agency internal organization and management paradigms. In hindsight, the project proponents suggested it may have been better for the federal agencies to have acted separately in creating the EA because they each have their own processes to follow (BLM 2008).

In the past, the most challenging factors that faced the individual allotments that had multiple operating permittees generally were the social issues. Those social issues arose when individual permittees completed the majority share of the work and other permittees didn't follow through with their share of the responsibility (Payne 2011). An example might be the maintenance of a fence or water system. The result was that the shared or "common" allotment got in trouble as a group, and everyone felt the repercussions of the inactions of the permittees who didn't complete their share of the work. It was difficult socially in a small town to address those situations when permittees did not want to ruin their relationship or their family's relationship with a neighbor or the neighbor's family (Payne 2011).

The cultural changes planned for the TCAC allotments include hiring full-time herders for cattle, fence contractors to take care of all annual maintenance on the entire management unit, and hired water maintenance personnel to make sure that the annual and day-to-day

responsibilities are completed. The hired labor will know their responsibilities and can be replaced with other contractors if their performance is sub-par.

Another issue addressed was the governance of the consolidated allotment. The group created a business structure with a board responsible for overall management. The board will direct contracted labor to ensure the success of the project. The board is composed of cattle permittees, a sheep producer, and 1 member representing the Randolph Land and Livestock Company and Holdings, LLC (Limited Liability Corporation), which owns most of the private lands and almost all of the water rights to be used for this grazing project.

Formation and deployment of social and human capital

The permittees have created the Three Creeks Grazing, LLC that will hold the federal grazing permits. Each former permittee is now a member of the LLC. The LLC is expected to strengthen management with a common voice for change. Positive change should occur more rapidly (Payne 2011). Time spent by federal agencies in administering the permits should be decreased by their having to work with only one permittee instead of 36.

The LLC structure will require that each of the members lease to the LLC base property that corresponds to the livestock they are running as part of the grazing permits. Each member owns a percentage share based on their AUM compared to the total AUM the company controls. The LLC operates under an agreement that outlines how it will run and provides provisions to ensure rules are followed. The operating agreement was adopted and approved by the members themselves and is not a government document.

This is 1 example of allowing local management to do the right thing with grazing resources without undue imposition of one-size-fits-all rules and multiple layers of bureaucratic involvement. It makes it possible for permittees to be able to work with each other to achieve beneficial results and not always through an office, which in this case is >2 hours away in Salt Lake City or Ogden, Utah.

An economic analysis of the previous allotments that made up the TCAC area reported

that they previously contributed \$2 million to Rich County (Ward et al. 2012). Multiplier effects increased this contribution to \$3.2 million or about 6% of the entire rural county's economy. Production agriculture contributes about \$24.3 million or 50% of gross regional product to the local economy. Federal, state, and local tax revenue total just over \$1.4 million, which is a powerful argument for continued grazing. Increased revenues through improved grazing management can have a great effect on a rural county's economy (Ward et al. 2012). It is expected that Rich County will realize an economic benefit because of the project.

One of the most important aspects of the project was the continuity achieved by the designation of a project champion that followed the project from planning to implementation. The TCAC champion is among the few members of the original group that helped plan the project. The champion relocated to the small community of Randolph and is part of day-to-day life with all of the permittees and their families. He has been a consistent face that the permittees can come to with questions and concerns. He has done many projects over time with the permittees that created relationships of trust and goodwill, helping the permittees feel comfortable in moving forward with this project. He has a lot of common interest with the permittees and is a good fit for the role that he has played.

The federal agency employees rarely have the opportunity to feel that connection and that kind of success because they are in distant cities about 2 hours away. They do not develop the same type of relationships and frequently move to other positions elsewhere. As stated above, a good project champion is critical to the success of the project. That person can be the lead permittee, a state employee in the right place and in the right program to lead as in the case of the TCAC, or even a private consultant who deeply understands all of the issues involved.

Learning by doing

The TCAC has been an iterative process best characterized by shared learning (Berkes 2004). Since its inception in 2001, TCAC proponents and stakeholders have learned together and adapted to new challenges (Table 1). The TCAC process evolved from a group of concerned

individual permittees into 1 large management unit that will be led by a board of directors of a grazing company that will represent the voices of all 36 of its members.

The Three Creeks Grazing, LLC members had a local example from which they gained insights and learned lessons in making their management organization for the grazing company. Two prior allotments—a BLM allotment and a USFS allotment—had a cooperative management plan in the past to operate both allotments and run their livestock together. The 2 permittees used guidance from the GIP to learn the requirements and then used their imagination and skills to create a small grazing LLC that satisfied the permitting requirements. No grazing AUM were lost when the permits were transferred to the LLC. The members of this small group eventually became members of the Three Creeks Grazing, LLC.

The TCAC participants formed the Three Creeks Grazing, LLC and signed away their permits to the LLC where they each are members. They will operate their same original livestock numbers. The permittees will have a strong and more unified voice and the ability to formally work together as a legally recognized entity. The TCAC participants were able to learn from the example of the 2 smaller allotments that formed an LLC and overcome their initial fears. They made improvements to the group structure along the way.

A benefit to the unified group is that they will be able to pool their resources and have a more robust capital structure to complete projects. The group will also be able to make simple management adjustments within their group instead of always being tasked with receiving permission from the BLM or USFS. An example of this would be that two members of the company can swap grazing numbers as long as the total amount does not exceed the permitted total. For example, if 1 permittee wants to graze another member's amount of the overall permit, it is possible to do so without asking for permission from the BLM and without the cumbersome amount of paperwork to follow behind it. They would just receive quick permission through the board of directors.

Other projects that are similar to the Three Creeks Allotment Consolidation offer insights into the value of the ability to communicate

effectively. Another large grazing area that was molded into a different and more progressive style of grazing occurred on the Cumberland Allotment located in southwest Wyoming, across the border from Rich County, Utah (Payne 2011). The permittees that graze livestock on this allotment are almost all individuals from Rich County, Utah. They were faced with management challenges and were asked to fence their large grazing area into 4 pastures using 2 different cross-fences. They were asked to rotate their 10,000 head of cattle among the pastures. Most of the permittees on the allotment grumbled about the fences and the extra work involved with the proposal. They were all at a meeting together talking about implementing the changes when a lifelong seasoned rancher of Rich County who was also a permittee stood up and said, "Well boys, I've been out here a long time and I've seen this place with and without fences. The fact is, I'm still here and I'm still grazing" (Payne 2011).

When the patriarch of the group stood up and spoke openly and frankly about the new fencing, he alone had the ability to alter the opinions of the entire group with his 1 comment. The fences were put in and people in the group have come to appreciate them and what they have done for the range.

Just like the case of the Cumberland allotment and the old patriarch rancher, the TCAC process has moved along with supportive comments from respected leaders in the group, who have an uncanny ability to sway the opinion of many people. Those same leaders have also been valuable silent examples to other members. The formation of the LLC has marshalled and leveraged the organizational skills and business acumen of its members. It has provided the effective organizational management to accomplish more for the greater good of its members. The TCAC project and formation of the LLC has made a huge difference for certain individuals who have now taken advantage of the opportunities of extra project funding for maintenance activities.

Management implications

Since the 1940s, livestock AUM permitted on federally managed land in Utah has decreased by almost 77%. Livestock numbers at the

start may not have been at optimum levels for sustainable use, but the federal agencies' preferred tool to manage the range was to reduce AUM numbers. This has had economic consequences for many rural communities. The TCAC project has changed the management paradigm for federal agencies and challenged permittees and local government leaders to find better ways to manage grazing on public land to preserve and promote the economic viability of grazing to rural economies. The TCAC participants know their process can provide an example to guide federal agencies and permittees in changing past traditional rules, attitudes, and practices to accomplish what needs to be done on the land. The TCAC model provides private and public land managers with a new innovative framework to address similar land issues in the Intermountain West.

Implementation of the watershed scale plan developed through the TCAC process will improve the rangeland and water quality and benefit wildlife, recreation, livestock grazing, and other uses of the land.

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