Rangeland Ecol Manage 63:167–175 | March 2010 | DOI: 10.2111/08-251.1

Forum

Designing Perpetual Conservation Agreements for Land Management

Adena R. Rissman

Author is Assistant Professor, University of Wisconsin at Madison, Madison, WI 53706, USA.

Abstract

Conservation initiatives on working ranches balance flexibility for land management with restrictions to ensure protection over time. Conservation easements are a common tool for range conservation, but the perpetual nature of their individually negotiated rights and restrictions may present a challenge for adaptive land management. The evolution of conservation easement approaches to land management was addressed in a review of 52 grazing easements created by The Nature Conservancy (TNC) in California rangelands between 1973 and 2006 as well as through interviews with TNC staff. Easement terms related to land management increased in complexity over time, particularly for purchased easements on private land. Easements commonly contained restrictions on riparian or wetland management (58%), residual dry matter (50%), and type of animal permitted (46%) but rarely restricted number of cattle or animal unit months (4%). Flexibility was provided by easement terms such as exceptions for drought years and reference to best management practices, the easement holder's administrative discretion, and easement amendment. Interviews with TNC staff revealed an iterative process in which conservation easements remain relatively fixed once they are established, whereas subsequent easements incorporate lessons learned from easement monitoring, enforcement, management, and applicable science. Conservation easements with an adaptive approach would link compliance terms with conservation goals, require monitoring of those terms, and have a mechanism for altering land management based on monitoring results. All three of these realms present challenges for the conservation easement structure. Improvements could be made in easement terms, ecological monitoring, and stewardship to improve the effectiveness and adaptability of this tool for maintaining ecological function on working ranches.

Resumen

Iniciativas de conservación en ranchos en operación balancean por un lado la flexibilidad del manejo de la tierra y por otro, las restricciones para garantizar su protección a través del tiempo. La conservación de los derechos limitados es una herramienta común para la conservación de la tierra, pero la naturaleza permanente de sus derechos individuales y las restricciones existentes podrían ser un reto para contar con un manejo de tierra flexible. Se hizo una revisión de cómo ha evolucionado el enfoque de la conservación sobre los derechos limitados para el manejo de la tierra sobre 52 derechos de pastoreo proporcionados por The Nature Conservancy (TNC) en los pastizales de California entre los años 1973 y 2006 así como a través de entrevistas con el personal del TNC. Los términos de los derechos relacionados con el manejo de la tierra incrementaron en complejidad a través de los años, particularmente debido a la compra de derechos en tierras privadas. Los derechos comúnmente contienen restricciones en el manejo de aéreas rivereñas o humedales (58%), materia seca residual (50%), y el tipo de animal permitido (46%) pero rara vez se limita el número de ganado o unidad animal por mes (4%). La flexibilidad fue proporcionada de acuerdo al tipo de derecho, así como años de sequia y en referencia a las mejores prácticas de manejo, a la discreción administrativa del titular de los derechos y de la modificación de los derechos. Entrevistas con personal de TNC revelaron un proceso iterativo en el cual la conservación de los derechos permanecen relativamente fijos una vez que son establecidos, mientras derechos subsecuentes incorporan las experiencias aprendidas del seguimiento de los derechos, ejecución, gestión y ciencia aplicable. La conservación de los derechos con un enfoque de adaptación podría unir los términos de cumplimiento con las metas de conservación; la obligación de dar seguimiento a esos términos; y proporcionar un mecanismo para alterar el manejo de la tierra basado en el seguimiento de resultados. Cada una de estas áreas representa un reto para la conservación de la estructura de los derechos. Se podrían hacer mejoras en condiciones de derechos, seguimiento ecológico y la administración para mejorar la eficacia y la adaptabilidad de estas herramientas para mantener la función ecológica en ranchos en operación.

Key Words: California oak woodlands, grazing policy, land conservation, land trusts, policy instruments, range management, residual dry matter, working landscapes

INTRODUCTION

Threats to rangelands from conversion to residential development have motivated significant public interest and investment in private rangeland conservation (Brunson and Huntsinger 2008). Conservation easements have become a primary land conservation tool in an era focused on voluntary, incentive-based solutions (Fairfax et al. 2005). Conservation easements

Research was funded in part by the National Science Foundation Graduate Research Fellowship Program and the Rodney Johnson and Katharine Ordway Stewardship Endowment from The Nature Conservancy.

At the time of the research, Rissman was a PhD Candidate, University of California at Berkeley, Berkeley, CA 94611, USA.

Correspondence: Adena R. Rissman, 1630 Linden Drive, University of Wisconsin at Madison, Madison, WI 53706, USA. Email: arrissman@wisc.edu

Manuscript received 21 December 2008; manuscript accepted 15 October 2009.

typically restrict development, mineral exploration, and other land uses that may negatively impact the purposes of the easement (Byers and Ponte 2005). When these restrictions are insufficient for protecting biodiversity and natural resources over the long term, conservation easements may also address land management. This presents an important question: How can conservation easements, which are perpetual agreements created at one point in time, provide the balance of specificity and flexibility necessary for protection and land management?

The tension between specificity and flexibility and the development of proxies for compliance is a theme throughout environmental policy and law (Fiorno 2006). Public agencies have long struggled with aligning permitted activities and economic uses with broad statements of purpose amidst changing public attitudes and mandates (Dana and Fairfax 1980). Public land grazing permits are one example of attempts to balance control and flexibility and set standards for grazing use (Nicoll 2007). Conservation easements attempt to strike this balance on private lands, posing similar dilemmas as on public lands, but in a different institutional, political, and economic context. Conservation easements are a particularly appealing tool for private rangelands because they are typically voluntary, maintain private ownership and traditional range uses, and provide a cash payment or tax reduction to help ranches remain viable economically (Anella and Wright 2004). The use of conservation easements has blossomed since the 1980s. Conservation easements are land use agreements between a landowner and a nonprofit organization or government easement holder (Gustanski and Squires 2000). They are individually negotiated and therefore have a ''limitless'' variety of terms related to permitted and restricted uses, tailored to specific landowners and properties (Barrett and Nagel 1996). Conservation easements typically include a statement of purposes, the rights and obligations of each party, and restrictions on land use. *The Conservation Easement Handbook* suggests that vague or ambiguous terms should be avoided and ''detailed terms reduce the risk of conflicting interpretations'' (Byers and Ponte 2005). But written agreements cannot anticipate all potential future events so a process for adaptation will always be required (Boyd et al. 2000). The nonprofit or government conservation easement holder is tasked with monitoring and enforcing easement terms.

Conservation easements are required to be perpetual to qualify for federal tax deductions. Perpetual restrictions offer a promise of protecting land for the future although even the goal of preventing development may prove problematic with changing societal goals (Mahoney 2002; Korngold 2007) and environmental or economic conditions (McLaughlin 2005). The extension of conservation easements beyond open space protection into ecological protection and land management poses an additional set of challenges (Merenlender et al. 2004). How can easement terms be written now that will ensure sustainable management over the long run? What mechanisms for flexibility are needed? How can conditions be monitored and enforced? These issues are particularly difficult when easements aim to protect species and habitats in nonequilibrium rangeland systems that may benefit from active management (Westoby et al. 1989; Marty 2005).

Empirical studies have begun to explore the influence of conservation easements on land management although no studies have previously examined rangeland conservation easements (Boyd et al. 2000; Mashour et al. 2005; Rissman et al. 2007a). Few studies have differentiated among conservation easements, and it is unknown how landowner characteristics and funding mechanisms influence easement terms. This research focused on the approach of a well-established easement holder to solving a difficult problem: drafting perpetual easements to incorporate land management terms for biodiversity protection and ecological function. The Nature Conservancy (TNC) is one of the country's largest nonprofit conservation easement holders (Rissman et al. 2007a). Conservation easements created by TNC in California rangelands were assessed to understand 1) easement terms on rangeland management and mechanisms for flexibility, 2) easement and landowner characteristics associated with easement terms, and 3) the implications of easement drafting, monitoring, and enforcement for adaptive range management.

Recently established easements were hypothesized to be more complex than older easements, incorporating detailed and quantitative terms related to grazing, invasive species, and prescribed fire. Mechanisms for flexibility were expected to increase over time along with the specificity in easement terms. Donated easements were expected to be less specific than easements that were purchased, retained by TNC when it transferred land, or exacted as part of a government regulatory requirement (i.e., Lippmann 2004) because easement holders may have less leverage in negotiating donated easements. Conservation easements on privately owned land were expected to be more specific than easements on public or nonprofit-owned land. Easements over larger land areas were anticipated to be more detailed because of greater potential for multiple land uses and habitat features. Increases in specificity were hypothesized to occur over time as a result of TNC learning from previous experiences in which landowner actions on properties with nonspecific easements could not be addressed.

Finally, the potential for conservation easements to incorporate an adaptive management approach was analyzed relying on easement terms, monitoring reports, and interviews with TNC staff. Understanding the evolution of easements can illuminate needed modifications to a tool not originally designed for land management, as well as the changing expectations of conservation investments on private land.

METHODS

Study Area

California oak woodlands and grasslands have a Mediterranean climate with cool, wet winters and warm, dry summers. California rangelands are dominated by nonnative annual grasses but they continue to support high endemic plant and animal diversity (Pavlik et al. 1991). California rangelands are over 80% privately owned and cattle ranching is the primary commercial use (Huntsinger and Fortmann 1990). Many ranchers earn the majority of their income off-ranch and acquisition of ranches for recreational and amenity values is common (Brunson and Huntsinger 2008). Conservation of working ranches has gained increasing recognition in Califor-