Introduction

Wisconsin’s history of land purchases to support the timber industry, wildlife conservation, and outdoor recreation leaves the state with more than six million acres of public lands, which impact both the natural environment and human activities. These public lands provide essential habitats for wildlife and help protect biodiversity in wild ecosystems. They also provide socioeconomic benefits by stabilizing soil, moderating the effects of floods and droughts, maintaining air and water quality, protecting groundwater recharge areas, and regulating weather and climate. Additionally, they support tourism and outdoor recreation that connect people to nature, providing physical and mental health benefits. Conversely, public ownership can strain public coffers and change the makeup of surrounding communities. As such, there are differing views on the appropriate quantity of public land ownership and how public funds should be used to acquire and maintain these lands.

This edition of the Nelson Issue Brief presents works from scholars across the University of Wisconsin–Madison on public lands managed for conservation. Contributions include research on the importance of local leadership and participation in conservation, navigating the transfer of conservation easements between landowners, economic benefits of recreation on public lands, and the benefits of managed grazing.
Programs to Conserve Protected Public Lands Depend on Local Leadership and Participation

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Managing public lands for conservation is as relevant to Wisconsin as it is around the globe. A nonprofit organization called Community Conservation, based in Viroqua, Wisconsin, has been working on public land conservation in Nepal among other countries. Their work in Nepal shows that we can better conserve our own public lands in Wisconsin by including local voices and supporting local leaders and community members to play a greater role in protecting public lands where they live.

Current projects in Nepal include tiger tracking in community forests and helping communities create a wildlife corridor for tigers, elephants, and other wildlife to let them travel between large, protected areas. Wildlife corridors help species thrive and increase their populations while increasing biodiversity in these protected areas.

Nepal is a global leader in the conservation of biodiversity, featuring ecosystems from the Himalayas to tropical jungles. More than 23 percent of the land in Nepal is protected in national parks and wildlife reserves, while community forest groups manage 34 percent of the country’s forests. Primarily because of the community management of forest, Nepal’s forest cover has nearly doubled from 26 percent in 1992 to 45 percent in 2016.

Research shows it is essential to use participatory methods to understand local needs and to train community partners to manage and monitor these protected public lands and species. Success of these initiatives requires community participation to implement monitoring methods like camera trapping in their community forests and contributing their viewpoints about the value of balancing human needs and traditions with conservation. The short- and long-term success of these initiatives requires authentic engagement and reciprocal interactions with local people who can serve as conservation leaders and supporters of protected areas and community forests.

These lessons are relevant to Wisconsin: as in Nepal, regulations at the federal and state levels influence local decision-making to protect public lands, but are often enforced at a local level where officials have some de facto autonomy in determining their enforcement priorities. As in Nepal, it is not hard in remote rural landscapes for locals to evade regulations if they choose to do so.

While Nepal may be on the other side of the world, the lessons they teach us about the importance of community participation in the management of public lands are also important in Wisconsin. Local participation is critical everywhere in the world for long-term protection of ecosystems and biodiversity upon which humans depend.
Many new lands conserved in Wisconsin are conservation easements. They may be funded by the Knowles-Nelson Stewardship Fund or private donations. While media attention occurs when land is first conserved, we wanted to know what happens later when new landowners acquire land with a conservation easement.

As lands with conservation easements change ownership, the new owner of the land is subject to the agreement, needs to understand its terms, and hopefully becomes a steward of its conservation values. Our research demonstrates that trust, shared goals, meaning making, and power are important in the social relationships of nature conservation on private lands with conservation easements.

goals supported the conservation easement being more like a partnership than a policing relationship. Landowners expressed that personal relations with staff made them more comfortable with potentially off-putting legal language. When conservation organizations were able to share meaningful land histories to new landowners, the new landowners felt they were serving as flame-keepers for stories of the land, which can help them connect with a sense of place. We heard conservation professionals and landowners express a view that the other held greater power, with both leery of expensive legal action. Cultivating positive relationships requires personal, financial, and administrative capacity to engage individuals in achieving conservation goals. We found that prioritizing face-to-face connections and proactive planning for staff succession through digital record-keeping may enhance practices of relationship building.

These themes emerged from interviews we conducted with conservation professionals and landowners with conservation easements on their land.

To better understand social practices, relationships, and perspectives on conservation easements, we interviewed 10 national land conservation experts in the United States, 11 staff members from government agencies and land trusts who hold conservation easements in Wisconsin, and 17 landowners who bought or inherited land with a conservation easement in Wisconsin. We then identified important themes and practices that seemed to improve relationships between conservation professionals and successor landowners.

Relationships between landowners and the staff of natural resources organizations can sustain important public investments in protected areas to provide an array of societal benefits. Renewing this work with each subsequent generation will require creativity, commitment, and investment.

Public lands and waters provide a variety of societal benefits in conserving significant ecosystems, but they also provide tangible economic benefits. These can involve the direct sale of commodities (timber, minerals, and grazing leases), but also the amenity uses of public lands. Two primary amenity-based benefits involve (1) land value premiums of private lands located near public lands and (2) the use of public lands for outdoor recreation. Outdoor recreation on public lands often provides the economic basis for local tourism.

Estimating the local economic impacts of public lands and waters for outdoor recreation entails estimating the money visitors spend on traveling to these public places. This involves accounting for the importance of public sites to travel decisions and visitor profiles that include spending patterns, origins, destinations, and demographic characteristics. Seasonality is of particular importance as most short-term travel for outdoor recreation is based on weather.

Timing and duration of travel varies by the type of outdoor recreation. Monthly visitation estimates from Devil’s Lake State Park are shown in Figure 1. Note that Devil’s Lake tends to draw visitors in the summer and fall months, and that over time, recreational use has steadily grown.

Research suggests that local economic impacts associated with recreational visits to public lands and waters far exceed the annual costs associated with managing and holding lands in public ownership. In 2013, it was estimated that visitors to the Wisconsin State Parks and Trails System spent more than one billion dollars on travel to the system. Drawing visitors from distant points of origin is key to local economic stimulus and development. Results of this study suggested that of the one billion dollars spent locally, more than half ($580 million dollars) was spent near the recreational site and originated from outside the region — thus infusing new currency into gateway communities.

The extent to which local economic impacts of public lands and waters affect nearby gateway communities varies by recreational site, visitation level, and local economic conditions. Differing types of public lands and waters have widely varying visitation profiles. For example, publicly owned lakes, parks, and trails have relatively higher recreational visitor pressures (and tourism experiences) while publicly owned rivers, forests, wildlife refuges, and grazing lands have generally lower, yet still significant, recreational use pressures.

Figure 1. Monthly visitation estimates of Devil’s Lake State Park – 2002 through 2018. Source: WDNR BPR 2020 data
Managed Grazing to Enhance Wisconsin’s Public Grasslands
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Grasslands cover about 40 percent of Earth’s land surface and are critical to human welfare and well-being. Perennial grasslands direct much of their energy to roots which, over thousands of years, have built soils that are the most productive farmland in the world. Most of today’s agriculture sows annual crops whose shallow roots, bare soil, and harvests extract and leak the stored nutrients and energy of the prairie into products and the environment. Well-managed grazed grasslands replenish soils while providing for our wants and needs. But when grasslands are continuously grazed and not managed well, they become less productive, leak nutrients, and erode soil similar to annual cropping systems.

About 100,000 acres of publicly owned Wisconsin Department of Natural Resources (WDNR) grasslands are managed mainly for biodiversity and recreation. Fire and/or grazing are critical to controlling invasives and woody species in grasslands of Wisconsin — but burning can be tricky and costly, especially as human settlement moves closer to these grasslands.

We worked with the WDNR and local graziers to explore the feasibility of applying managed grazing by private graziers on seven state wildlife and habitat restoration areas between 2016 and 2018 (Figure 2, back cover).

Grazing public lands helped achieve conservation goals in some areas and could work well for graziers. We found that sites more suitable for grazing had a) high potential for habitat improvement, b) lack of shrub management alternatives, and c) low risk to livestock. “Successful” partnerships occurred when graziers and land managers a) acknowledged tradeoffs, b) were flexible with respect to grazing management specifications, and c) communicated with transparency and built trust.

As societal demand for more sustainable food drives more perennial grassland agriculture, grassland grazings inherently lower yields (compared to concentrated animal feeding operations feeding annual grains) and will increase pressure for grazing on public lands to meet demand for grass-fed meat and dairy. It is critical that public-private grazing and haying arrangements are crafted for mutual benefit to individual producers and the public good.

“Win-win” solutions are possible with well-managed grazing, where production and conservation are complementary, but approaches will differ from place to place. Grasslands managed to conserve rare and endangered plants should not be grazed, while grasslands dominated by a few common plant species can be grazed to increase plant diversity and ecosystem health. Within grazed areas, some zones should be excluded from grazing for particular wildlife habitat and vegetation regrowth after grazing. Adaptive management and transparent communication among partners can achieve grazing management that enhances public grasslands in Wisconsin and beyond.

Figure 1. Wisconsin perennial grassland cover 2021. Map by Delaney Gobster
Figure 2. Highland steers grazing at Hook Lake Wildlife Area (a), Holstein heifers grazing at the Johnson property in Western Prairie Habitat Restoration Area (b), Red Angus cow-calf pairs grazing at Buena Vista Wildlife Area (c), and notice of livestock grazing from Hook Lake Wildlife Area (d).