

## Commentary

# Partnerships create success for the Devil’s Garden wild horses

**LAURA K. SNELL**, University of California Cooperative Extension, Alturas, CA 96101, USA  
[lksnell@ucanr.edu](mailto:lksnell@ucanr.edu)

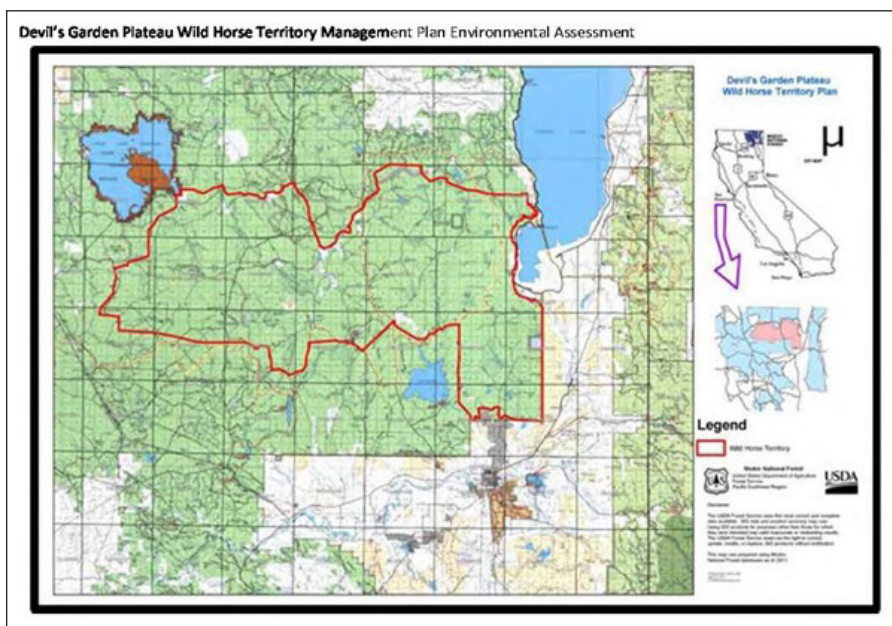
**Abstract:** Many wild horse (*Equus ferus caballus*) populations that inhabit designated federal land in the United States currently exceed management objectives. Overabundant wild horse populations can adversely impact the ecosystem, native wildlife, and other land uses. Unfortunately, there is not a universal solution, as each impacted area may differ ecologically, economically, socially, and politically. Wild horse management is not just a 1-time project but a long-term program where buy-in is needed from the federal and state agencies, local governments, and private partners. Local county governments and private partners can have important insights and significant influence on the development and success of local wild horse management strategies. The combined involvement of local government and stakeholders can have a wide range of benefits including increasing capacity for management, developing new management and placement techniques, and creating authentic program branding and outreach for better placement success. Partners can often complete projects in tighter time frames, find employees, and experience less government red tape in implementation. Buy-in from the local community can also decrease the amount of negative feedback during management implementation and create a support network to counteract the negative aspects of management. Located in the northeast corner of the state of California, USA, Modoc County recognized early on the need for local government participation in conversations and decisions surrounding wild horses and their management on the Devil’s Garden Plateau Wild Horse Territory (WHT). The county implemented a coordinated planning and government-to-government communication process starting in 2011 to engage the Modoc National Forest, which manages the WHT, in meaningful solution-based dialogue. This paper offers examples of unique collaborative opportunities and solutions that have been successfully used in Modoc County to develop and implement a wild horse management plan. In the years since it was adopted, this plan has halted population growth and started to return the population to the appropriate management level on the Devil’s Garden Plateau.

**Key words:** California, coordinated planning, Devils Garden Plateau, *Equus ferus caballus*, local government, Modoc National Forest, partnership, U.S. Forest Service, wild horses, wild horse territory

**WILD HORSES** (*Equus ferus caballus*; horses) inhabit landscapes on almost every continent. Schoenecker et al. (2021) estimated that in the United States alone, >300,000 horses inhabit ranges across multiple land jurisdictions. In most jurisdictions, horse populations require management because of their intrinsic growth rates, the fact that they have few natural predators, and their status as an introduced species (Garrott 2018). For these reasons, among others, land managers must implement measures to control population growth for horse health and to protect natural resources and ecosystems (National Research Council [NRC] 2013).

Despite the documented negative ecological effects of overabundant wild horses (NRC 2013, Garrott 2018, Davies and Boyd 2019), public stakeholders hold them in high regard (Scasta et

al. 2018). The measures implemented to manage free-roaming equids, particularly in the United States, may be impeded by public policies and litigation from groups who may disagree with management decisions (Norris 2018). Thus, the success of wild horse management options may hinge on actions that also develop, implement, and evaluate proactive public outreach programs that inform the public about tradeoffs or consequences that result from failure to deploy all management tools identified and available (Schoenecker et al. 2021, Frey et al. 2022). My purpose in writing this paper was to provide examples and insights into unique collaborations that have resulted in local solutions to better manage wild horse populations in Modoc County, California, USA. Although there is progress left to be made, a partnership between



**Figure 1.** The Devil's Garden Wild Horse Territory (WHT) is located on Modoc County, northeastern California, USA. Most of the WHT is within the Modoc National Forest, which is managed by the U.S. Forest Service (adapted from U.S. Department of Agriculture 2013).

the Modoc National Forest, Modoc County, Modoc County Farm Bureau, University of California Cooperative Extension, and others has paved the way for successful wild horse management on the Devil's Garden Plateau.

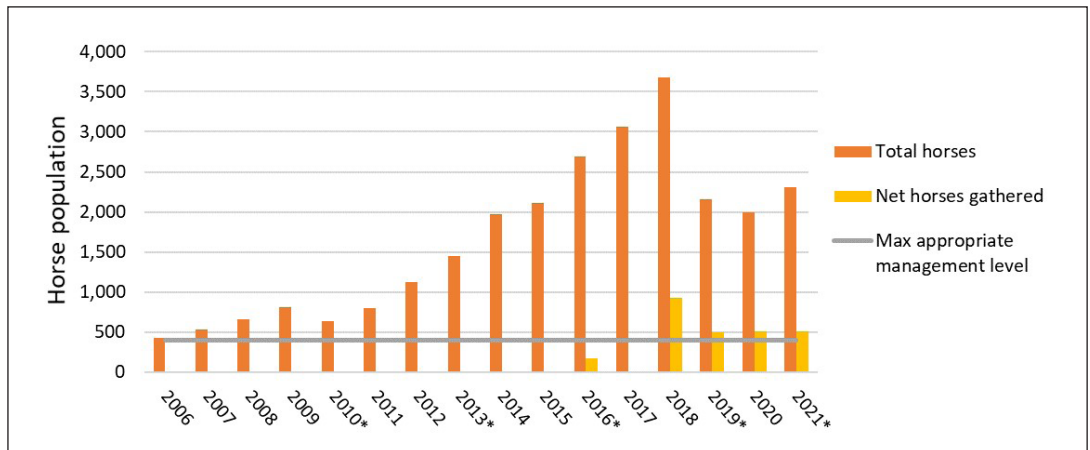
### Study area

Modoc County is located in the far northeast corner of California, bordered by Oregon and Nevada, USA (Figure 1). Over 70% of the county is federally managed lands with a population of <10,000 residents. Domestic horses (*E. caballus*) have about a 150-year history in Modoc County, stemming from when they were brought to the area for transportation, farming, ranching, mining, and cavalry purposes (Gooch 1993). Horses escaped from Native Americans and early settlers, were released after the mechanization of farming, and were later turned out on federal grazing permits on the Devil's Garden Plateau (Modoc National Forest 2020), where they were gathered by local people as needed until 1971.

The Free-Roaming Wild Horses and Burros Act (WFRHBA), passed in 1971 (Public Law 92-195), directed the establishment of 2 wild horse territories (WHTs) on the Devil's Garden Plateau, and the U.S. Forest Service (USFS) completed its first inventory of "wild horses"

in 1974. Between 1974 and 2006, the Bureau of Land Management (BLM) managed these horses under a national agreement, providing technical expertise and organizing gathers and placement. After negotiations on payments between the agencies failed, the USFS was left to manage the Devil's Garden WHT as well as other USFS WHTs across the country with little wild horse infrastructure left in the agency.

In 2013, the Devil's Garden WHT plan (plan) was signed. The plan established an appropriate management level (AML) of 206–402 horses for the territory as well as outlined monitoring and resource needs (USFS 2013). In 2017, a lawsuit resulted in the combination of the 2 territories into 1 larger territory, encompassing land that was privately owned in 1971 and home to endangered species such as the Modoc sucker (*Catostomus microps*; Figure 1). Over the past decade, the population of horses has increased significantly on the Devil's Garden, reaching nearly 10 times the upper AML (Figure 2). Horses have also exceeded the boundary of the approximately 101,171-ha territory to occupy an area of nearly 202,342 ha. This has led to an increase in the number of horses trespassing on private and tribal land, and venturing onto highways and housing developments.



**Figure 2.** Wild horse (*Equus ferus caballus*) population trends and gathers, 2006 to 2021, Devil's Garden Plateau Wild Horse Territory, Modoc County, California, USA. Years with asterisks are years where population surveys were completed by double count method via airplane. Between population surveys, a 20% population increase is used to estimate current population. Poor survey conditions (thunderstorms and poor visibility) in 2019 most likely led to a low population count, so an additional survey was completed in 2021 (adapted from U.S. Department of Agriculture 2013).

The Devil's Garden wild horse herd is currently the largest USFS herd totaling 2,311 in 2021. Increased populations led to an increase in competition between horses, wildlife, and permitted cattle (*Bos taurus*; Snell and Baldwin 2020) as well as the conflicts between multi-use objectives on U.S. public lands (Beever and Aldridge 2011). Through the historic California drought from 2013 to 2016, horse populations were growing rapidly on the Devil's Garden Plateau while precipitation was reaching record lows. This scenario prompted significant concerns from a diverse group of stakeholders to manage horses on the Devil's Garden.

## Methods

Local county governments can have significant influence on the development and success of wild horse management strategies. Modoc County officials recognized very early on that they needed to be part of the solution in regard to wild horse management. They utilized the coordinated planning and government-to-government communication process to engage the Modoc National Forest in meaningful solution-based dialogue. The first step toward management was developing a WHT management plan.

Modoc County along with the Modoc County Farm Bureau participated in early conversations about the USFS lack of capacity to write the detailed plan and collect the data needed for its development. In 2012, they proposed putting to-

gether a group of retired federal wild horse employees to help write the plan at a fraction of the cost and time estimate from the USFS. This effort was completed in 2013, litigated and upheld in court, providing the foundation for wild horse management of the Devil's Garden WHT.

Involvement of local government and stakeholders can have a wide range of benefits, including increasing capacity for management, developing new management and placement techniques, and creating authentic branding and outreach for better placement success. Partners can often complete projects in tighter time frames, find employees, and have less government red tape in implementation by utilizing stewardship agreements with federal agencies. Most of the projects and strategies outlined in this paper were primarily paid for using USFS funds, and local expertise and support provided project management and organization. The match for the agreement came mostly in the form of in-kind volunteer hours, mileage, and project management.

Buy-in from the local community can also decrease the amount of negative feedback during management implementation and create a support network to counteract the negative aspects of management. Outreach and education at the local level should not be taken for granted and instead bolstered to develop this support network. Common stigmas and rumors about the "fuzz tails," as they are locally called, included concerns about disease transmission and ag-

gression toward domestic horses and a general concern about their natural ability, genetic conditions, and whether they would be trainable.

## Results and discussion

After the plan was legally upheld, the partnership began working on planning for the first wild horse gather to be completed after over a decade and the first with the USFS as the lead agency. Multiple county departments, local and tribal experts, and federal staff came together to gather >200 horses off private and tribal land. Although the first gather was successful, as >200 horses were gathered, placement of the gathered wild horses was not well thought out, and most of the horses ended up being returned to the Devil's Garden.

The turn back of horses to an already greatly overpopulated territory was a disappointment, but the partnership continued to grow momentum, and a Wild Horse Working Group (WHWG) was established. Local experts, federal employees, government representatives, and others started meeting monthly to engage in solution-oriented conversations. Several management techniques that are still being used by the USFS came from this working group and are detailed below. All of the techniques had to abide by the WFRHBA and be allowed in the WHT management plan. Fertility control, as outlined in the plan, can be used after the population has reached AML but is also hindered by the inaccessibility of the WHT, horses being unaccustomed to humans and spooking easily, and heavy tree cover in most areas.

### Expanding the toolbox

The first step agreed upon was creation of the Double Devil's Wild Horse Corrals outside of Alturas, California. To try novel techniques and think outside the box, the USFS had to have control of and access to their gathered horses. The partnership was used to aid in the actual construction of the corrals, purchasing feed and vaccines, and finding corral staff through a stewardship agreement with the USFS and local outreach.

Focusing on the sale of horses with limitations that are >10 years of age or that have been offered for adoption 3 times was the first big placement success. Allowed since the original WFRHBA (Public Law 92-195, 1971), the sale of horses had not been widely used for some time. Horses were offered for \$25 USD for 30 days and then lowered to \$1 USD per horse. This approach fo-

cusced more on the historic purpose of Devil's Garden horses as working horses and provided trainers, ranchers, and others an opportunity to purchase and train horses without the hassle or stigma of the adoption process that had become increasingly difficult in recent years.

In rural communities, there was a concern over allowing the federal government access to private property while waiting a year for the title to a horse. During this year, the title transfer process if an adopter wanted to sell their horse is also cumbersome, and BLM rules still apply to include 1.8-m-high fencing. Devil's Garden horses are microchipped instead of freeze branded for this same purpose, showcasing the Devil's Garden horses as regular working horses for home or ranch. All buyers are still vetted by the USFS and sign documentation that they are aware of California law prohibiting horse slaughter. To this day, more people choose to purchase their horses from the Double Devil Corrals, although the federal adoption program is always available (Figure 3).

### Marketing the Devil's Garden brand

Another technique that came out of the WHWG was to create a marketable brand for the Devil's Garden wild horses, which along with a strong social media campaign, showcased the uniqueness of the herd and their qualities. Devil's Garden horses are typically stout, large-boned animals known for their easygoing temperament and variety of colors. A dedicated volunteer runs several Meta (formerly Facebook) pages, which are frequently updated with photographs of available horses so homes can be found for them. Utilizing Facebook in this way has generated widespread attention for these horses and has assisted in connecting those who have adopted or purchased a Devil's Garden horse with a wider community. This approach, coupled with outreach at local fairs and other events, has helped to make the Devil's Garden brand even stronger.

The Devil's Garden Colt Challenge is another success that came out of the working group. This youth program started in 2018 and has successfully placed weanling wild horses with 4-H and Future Farmers of America (FFA) youth from California. The program utilizes the government-to-government wild horse transfer written by congress in 2019 to transfer horses to



**Figure 3.** (Left) Wild horses (*Equus ferus caballus*) gathered from the Devil's Garden are often in poor body condition. This mare gathered in the fall of 2018 is 13 years old, in poor condition (2.5 Body Condition Score) and in foal like most mares gathered. Horses receive a health check, initial vaccines, and dewormer, and they are microchipped before placement (*photo courtesy of L. Snell*). (Right) The mare, now named "Farrah," was purchased using the sale authority for \$25 USD and delivered a colt in June 2019. They reside with the author outside of Alturas, California, USA (*photo courtesy of J. Milby*).

Modoc County and then to youth enrolled in the program and is run through the University of California Cooperative Extension program in Modoc County and the Modoc County Farm Advisor Office. Youth receive the title to their horse after a health and wellness check and can compete for prizes in the June Colt Challenge in the obstacle course, halter, and showmanship classes (Figure 4). Youth have approximately 6 months with their horse prior to the competition, and the classes are a combination of 4-H standards and the TIP (training incentive program) requirements from the Mustang Heritage Foundation. The top prize is \$1,000 cash with total prizes awarded in >\$3,000 each year. Youth can then decide to sell or keep their horse at the end of the project, but it is done independently of the program.

The Modoc National Forest has funded the cash awards for the past 2 years, and 52 horses have been placed in the program with an additional 50 horses placed to family members and friends. Weanlings from the Devil's Garden gathers are reserved for the Colt Challenge, giving youth a unique opportunity that is not available to others. Youth receive general horse care education through the 4-H or FFA horse project as well as experience in horse training, communication, problem solving, and more throughout the program. The Colt Challenge program was conceptualized to reduce barriers to access seen in other youth mustang challenge programs by taking out the hassle of

the "adoption" and title transfer procedures, instead treating this opportunity like a supervised agriculture experience ("SAE" experience in FFA) or livestock project (which includes domestic horse projects). This program builds on over a century of youth development success in the 4-H and FFA programs and recognizes the heritage of these horses' working ancestry.

Several other short-term projects such as a Devil's Garden Mustang Training Program, which ran from 2017 to 2019 (similar to the TIP program), and transportation organization and supplementation have also helped to place horses. There is no single right answer to wild horse placement, but providing flexible, placement-friendly options has facilitated success on the Devil's Garden. The WHWG did not intend to reinvent the wheel but to simplify some of the already existing opportunities available for placement and promotion. These were all done at very little cost to the tax payer and utilized local partnerships and talents.

Communicating with state and national elected officials on a regular basis about our projects and successes has increased our reach and lets them know they are supported in making management decisions. These regular updates led to an "adopt a horse" button on our congressman's homepage, the only known congressional member to have these resources on their homepage. Even these small changes can lead to increased placement and program success. Positive and supportive comments are just as important to all levels



**Figure 4.** A 4-H participant with Bill Wilson, rancher from Modoc County, California, USA, during the obstacle course competition at the 2020 Colt Challenge. Bill Wilson, a permittee on the Devil's Garden, volunteered as a judge for the first Colt Challenge while having livestock numbers decreased due to an overpopulation of wild horses on his permit (*photo courtesy of L. Mendoza*).

of wild horse management and policy makers as they are making decisions when gathers are starting or management plans are being written.

Since the construction of the Double Devil Wild Horse Corrals in 2018 and implementation of the many tools and programs outlined above, the Modoc National Forest has been able to place all horses gathered into the local corrals each year (roughly 350 horses). The remaining horses gathered are received by the BLM in their holding corrals and no longer fall under the jurisdiction of the Modoc National Forest. The Double Devil Corrals keep the older, typically “unadoptable” horses, and younger horses are transferred to the BLM (except weanlings for the Colt Challenge). At the time of this writing, the USFS and partners are preparing for the 2021 wild horse gather to start September 1. Wild horses will be available at the Double Devil Wild Horse Corrals the following winter, and applications for the 2022 Colt Challenge are being accepted for youth in California.

These horses are often candidates for long-term holding, a management technique that the USFS is not interested in using. The ability to

place >300 horses yearly with an average age of 12 has been a major success for the partnership. Success is also recognized through bringing wild horse populations down to the appropriate management level and then maintaining that population in the long term.

### Management implications

The management successes realized in Modoc County have not gone without a certain amount of challenge from wild horse advocacy and animal rights groups who would like wild horses to remain on the land unmanaged. These views largely conflict with the leading science in rangeland management, as both environmental and economic studies have shown that left unmanaged, wild horse populations have the potential to significantly degrade ecosystems and jeopardize local economies. Thus, leaving them unmanaged is not a viable option for long-term sustainability. Therefore, utilizing local government and diverse stakeholder groups to inform decisions and create partnerships has proved successful in not only placing horses but promoting Devil's Garden Wild Horses across the

country. It has created a network of supporters that have developed a wild horse management program, not just a 1-time success story. This diverse local partnership continues to meet and address the long-term management of wild horses on the Devil's Garden Plateau.

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### Literature cited

- Beever, E. A., and C. L. Aldridge. 2011. Influences of free-roaming equids on sagebrush ecosystems, with a focus on greater sage-grouse. Pages 273–290 in S. T. Knick and J. W. Connelly, editors. Greater sage-grouse: ecology and conservation of a landscape species and its habitats. Studies in avian biology. Volume 38. University of California Press, Berkeley, California, USA.
- Davies, K. W., and C. S. Boyd. 2019. Ecological effects of free-roaming horses in North American rangelands. *BioScience* 69:558–565.
- Frey, S. N., J. L. Beck, J. D. Scasta, and L. Singletary. 2022. U.S. public opinion of reproductive control options for free-roaming horses on western public lands. *Human–Wildlife Interactions* 16(2).
- Garrott, R. A. 2018. Wild horse demography: implications for sustainable management within economic constraints. *Human–Wildlife Interactions* 12:46–57.
- Gooch, S., editor. 1993. The Journal of the Modoc County Historical Society—Ranching and Farming Issue. Maverick Publications, Alturas, California, USA.
- Modoc National Forest. 2020. Resource management. Modoc National Forest, California, USA, <<https://www.fs.usda.gov/modoc>>. Accessed March 3, 2020.
- National Research Council. 2013. Using science to improve the BLM wild horse and burro program: a way forward. National Academy Press, Washington D.C., USA.
- Norris, K. A. 2018. A review of contemporary U.S. wild horse and burro management policies relative to desired management outcomes. *Human–Wildlife Interactions* 12:18–30.
- Public Law 92-195. 1971. The Wild Free-Roaming Horses and Burros Act of 1971. Bureau of Land Management, U.S. Department of the Interior, Washington, D.C., USA.
- Remington, T. E., P. A. Deibert, S. E. Hanser, D. M. Davis, L. A. Robb, L. A., and J. L. Welty. 2021. Sagebrush conservation strategy—challenges to sagebrush conservation. U.S. Geological Survey open-file report 2020–1125, 327.
- Scasta, J. D, J. D. Hennig, and J. L. Beck. 2018. Framing contemporary U.S. wild horse and burro management processes in a dynamic ecological, sociological, and political environment. *Human–Wildlife Interactions* 12:31–45.
- Schoenecker, K., S. King, and T. A. Messmer. 2021. The wildlife profession's duty in achieving science-based sustainable management of free-roaming equids. *Journal of Wildlife Management* 85:1057–1061.
- Snell, L. K., and R. A. Baldwin. 2020. Current trends and management of wild horses on the Devil's Garden. Pages 1–5 in D. M. Woods, editor. Proceedings of the 29th Vertebrate Pest Conference, paper no. 62.
- U.S. Department of Agriculture. 2013. Environmental assessment: Devil's Garden Plateau Wild Horse Territory management plan. U.S. Department of Agriculture and U.S. Forest Service, Washington D.C., USA.

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*Associate Editor: Terry A. Messmer*

**Laura K. Snell** has been the University of California Cooperative Extension livestock and natural resource advisor in Modoc County for >7 years and Modoc County director since 2017. She received her B.S. degree in water science and M.S. degree in agronomy with a range science specialty from the University of Nebraska, Lincoln. She specializes in navigating the public/private land interface working collaboratively with public and private land managers, policy makers, and the public on issues such as wild horse management, post-fire grazing, water quality and quantity, and rural development. She has been involved in the Society for Range Management, Wildlife Society, Public Lands Council, and several local advisory groups. She enjoys helping clientele address local problems with on-the-ground solutions and mentoring the next generation of land managers.

