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The Continuously Managed Wild: Tule Elk at Point Reyes National Seashore

LAURA A. WATT*

1. INTRODUCTION: CONCEPTIONS AND IDEALIZATIONS OF THE WILD

In *Wilderness and the American Mind*, Roderick Nash explores the etymology of the word “wild,” which originally meant self-willed or uncontrollable. Wild, he writes, conveys the “idea of being lost, unruly, disordered, or confused. . . ungoverned or out of control.”¹ Things, creatures, or places that are truly wild can be chaotic and unpredictable. As a society, however, we are often deeply uncomfortable with actual wildness—despite the many threads of environmentalism that sing its praises. Peter Alagona points out that, even though the grizzly bear became extinct in California by 1930, *images* of grizzly bears are nearly ubiquitous across the state. The species is idealized as a magnificent representation of wildness and made into an allegory of ecological decline, although most agree daily life is much easier without having to look over your shoulder for an actual chaparral bear.² The same discomfort surfaces when calls to reintroduce predator species are dismissed as unrealistic, even when they are badly needed to stabilize overpopulations of other species, such as deer. And when existing predators turn up unexpectedly in backyards, they are often relocated or shot to limit any possibility of harm to us or our property, including livestock and household pets. We love the wild but prefer to avoid the unpredictability of wildness.

On the flip side, Alagona gives numerous examples of the idea that human engagement with wildlife somehow automatically makes it less wild, as when attempts to establish a captive breeding program for California condors in the 1970s and 1980s was resisted, on the basis that they were better off meeting “death with dignity” than ending up in a zoo. Biologists and activists

*Associate Professor and Chair, Department of Environmental Studies and Planning, Sonoma State University, Rohnert Park, CA 94928, USA. Email: laura.watt@sonoma.edu.

¹ RODERICK FRAZIER NASH, *WILDERNESS & THE AMERICAN MIND* 1 (5th ed. 2014).

² PETER ALAGONA, *AFTER THE GRIZZLY: ENDANGERED SPECIES & THE POLITICS OF PLACE IN CALIFORNIA* 40 (2013).

alike advocated for wilderness preservation in the rugged areas where the birds nested, ignoring the fact that many condors were successfully scavenging in valley pasturelands grazed by domesticated livestock. “This meant that *real* condors lived *only* in the wilderness,” Alagona writes, “and intensive scientific management by definition robbed them of their true, wild essence.”³

It is particularly striking how flummoxed we become when “the wild” does not behave according to plan. The ultimate irony of efforts to increase habitat protection for the adorable San Joaquin Valley kit fox, for example, is that a stable and growing population is living in urban Bakersfield, even while they are decreasing in the other, more “wild” parts of their range. Yet these city dwellers are more or less invisible to most conservation efforts, except as a source of additional genetic diversity for their cousins living in nature reserves.⁴ Similarly, many popular articles on condors proudly list the number “living in the wild” but not those that remain in captivity, even though they represent the majority.⁵ We cannot seem to get our heads around a rare or endangered species that adapts itself to modern life or that is being helped along by humans. Perhaps it falls too far outside of our idealization of these creatures as wild and is often interpreted as making them less wild.

And it is not just wild animals that are idealized. The protected landscapes of the national park system are commonly imagined as wild sanctuaries for thriving ecosystems, although, as Emma Marris observes, “a historically faithful ecosystem is necessarily a heavily managed ecosystem.”⁶ In other words, the places that look the most pristine are likely the least wild in the original sense of the word, and the most controlled.

Wildlife populations in particular have been extensively manipulated and regulated. Parks have long been managed to support large populations of game animals, both to delight visiting tourists and to serve as a source of game for hunters on surrounding lands. And the National Park Service (NPS) supported this goal for decades with a vigorous predator control program.⁷ Public hunting is generally not allowed in parks, and without any external controls on populations, herds of animals, such as elk or bison, frequently grew larger than local ecosystems could support and, in some cases, were fed rather than allowed to starve to death during harsh winters or other lean times. As Richard Sellars points out, “For many, spectacular scenery may create an impression of biological health. . . the public may take for granted [for example] that unimpaired natural conditions exist, especially in the larger

³ *Id.* at 131.

⁴ *Id.* at 195–196.

⁵ A NATIONAL GEOGRAPHIC website says that “[t]oday about 127 [condors] live in the wild.” It does not mention, however, that the total population is well over 400, including those in captivity. See *California Condor*, NATIONAL GEOGRAPHIC, <http://animals.nationalgeographic.com/animals/birds/california-condor/> (last visited July 9, 2015).

⁶ EMMA MARRIS, *RAMBUNCTIOUS GARDEN: SAVING NATURE IN A POST-WILD WORLD* 12 (2011).

⁷ RICHARD SELLARS, *PRESERVING NATURE IN THE NATIONAL PARKS: A HISTORY* (1997).

parks. [But while] to the untrained eye, *unoccupied* lands can mean *unimpaired* lands. . . scientists [will] quickly recognize that human activity has caused substantial biological change.”⁸

At Point Reyes National Seashore (PRNS), established on the coast just north of San Francisco in 1962, a small group of tule elk was reintroduced in 1978, after having been locally extinct since the 1850s. The herd, just ten individuals at first, struggled in its first few years in the park, but then in the 1990s, the population grew exponentially and threatened to exceed carrying capacity. For twenty years, the tule elk were limited to a single reserve, a 2,600-acre range on Tomales Point, at the northern end of the park and separated from neighboring dairy and beef ranches by a ten-foot-high fence. In 1998, a small group from this herd was relocated to an 18,000-acre designated wilderness in the southern half of the seashore, referred to by the NPS as the Limantour area. Soon after, a few individual elk turned up at a third location, near Drakes Beach on the western shore of the large bay and estuary at the center of Point Reyes (see Figure 1). These two new herds are free to wander at will and have been causing increasing problems for the seashore’s leased ranches in recent years.

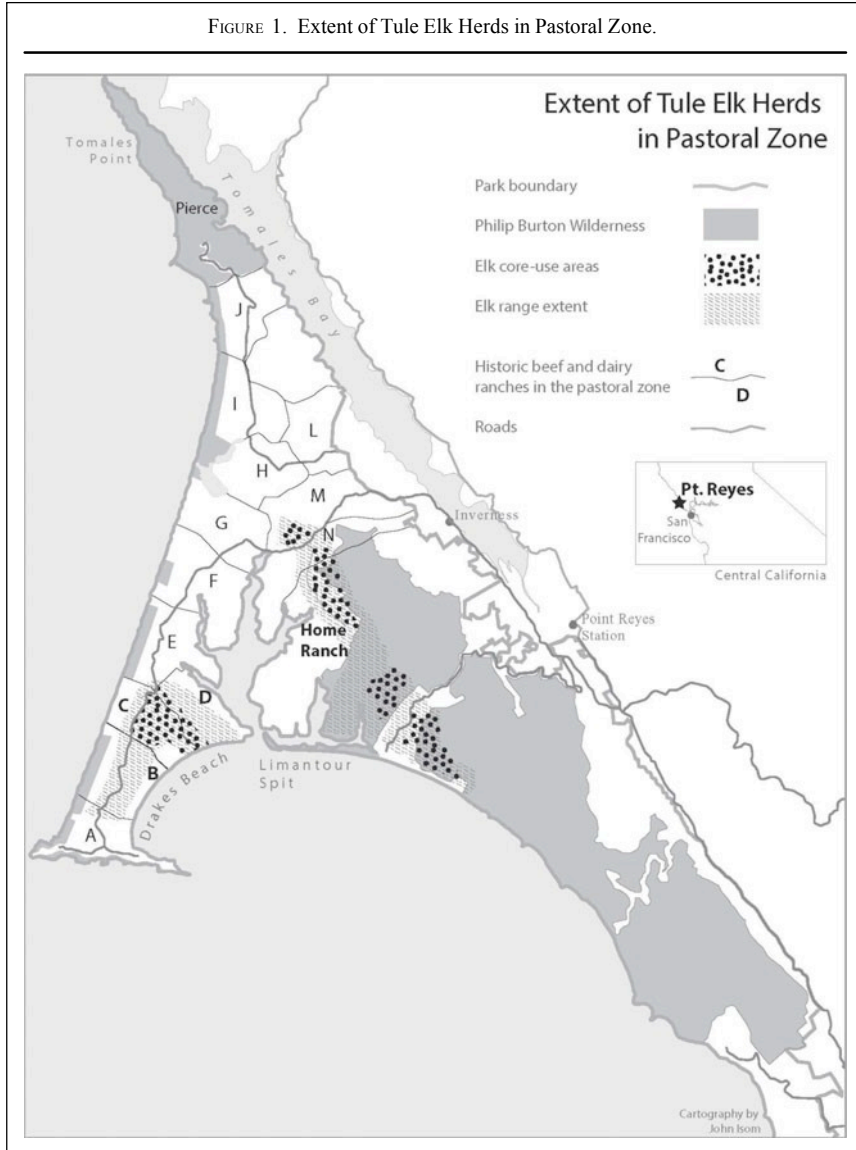
At stakeholder meetings for a ranch management planning process in November 2014, several environmental advocates called for an “unmanaged tule elk herd” at PRNS, a demand that is oxymoronic inasmuch as there has been no such thing as an unmanaged population of tule elk anywhere in California at any time since the 1870s. This article explores the history of the tule elk in California, especially its history at Point Reyes. It looks at shifting meanings of the term “wild” as it has been applied to the tule elk, vacillating between a “hands off” approach to management and an acknowledgment that management is essential to create or maintain an appearance of wildness, both for the animals and the landscapes in which they live. At Point Reyes, the question of which herds are more wild—those on Tomales Point behind a fence, or those raiding the cattle pastures in the pastoral zone—is symptomatic of a muddled approach to wildlife management that is putting the seashore’s historic ranching operations in danger.

2. EARLY HISTORY OF TULE ELK MANAGEMENT IN CALIFORNIA

Tule elk (*Cervus canadensis nannodes*) is a subspecies⁹ endemic to California, particularly the Central Valley, with an estimated population size that once

⁸ *Id.* at 287.

⁹ Tule elk, Roosevelt elk, and Rocky Mountain elk are distinct subspecies of elk. Tule elk have low genetic variability compared to other subspecies, most likely due to experiencing an extreme genetic bottleneck in the late 1800s. See E. P. Meredith et al., *Microsite Analysis of Three Subspecies of Elk (Cervus elaphus) in California*, 83 J. MAMMALOGY 801–808 (2007).



exceeded 500,000.¹⁰ This number had been reduced nearly to the point of extinction by market hunting, by the early Mexican-era hide and tallow industry and by conversion of much of the Central Valley wetlands to agriculture in the late 1800s, despite a seasonal ban on hunting imposed in 1852.¹¹ In the

¹⁰ DALE McCULLOUGH, *THE TULE ELK: ITS HISTORY, BEHAVIOR, AND ECOLOGY* 1–209 (1969).

¹¹ W. E. PHILLIPS, *THE CONSERVATION OF THE CALIFORNIA TULE ELK: A SOCIO-ECONOMIC STUDY OF A SURVIVAL PROBLEM* 14–17 (1976).

late 1870s, a lone and isolated population of two to ten individuals was found on a private cattle ranch near Bakersfield, in Kern County,¹² and protected by the ranch owner, Henry Miller. Their numbers ballooned to roughly 400 elk by 1914, when they were reported to be causing damage to crops and fences: eating alfalfa and other grasses on pastured lands and tearing apart barbed-wire fences as they moved from field to field on adjacent agricultural lands.¹³

As part of an effort to reduce the crop damage elk were causing locally, the U.S. Biological Survey and the California Academy of Sciences tried to transplant some of the Kern County elk to parks and private refuges around the state, eventually sending them to over twenty locations throughout California, including Sequoia National Park in 1905, Del Monte Park, Monterey, and Balboa Park, San Diego, in 1914–1915, and Yosemite National Park in 1920.¹⁴ This did little to solve problems in Kern County, however. After approximately 150 elk were removed from its free-roaming herd in 1914, the local population quickly rebounded to an estimated 350–400 head.¹⁵ Continued complaints from local operators about crop damage eventually led the Division of State Parks to purchase a 953-acre refuge near Tupman, Kern County. This “shifted the incidence of costs in maintaining elk from private landowners to the state government” and also enclosed the herd.¹⁶

While some relocation efforts were unsuccessful, those at Monterey and Yosemite did well but were soon causing damage to adjacent landowners’ gardens. The elk at Yosemite “were initially maintained in a 28-acre enclosure, [then] released for a while, but hazard to visitors led to their reconfinement.”¹⁷ The Tupman Reserve turned out not to be large enough to support its population of elk, and the herd there had to be maintained with alfalfa supplements.¹⁸ In 1933, biologist Joseph Grinnell lamented that none of the transplantings had resulted in “establishment under conditions of really wild freedom.”¹⁹ The

¹² Dale McCullough, Jon Fischer, & Jonathan Ballou, *From Bottleneck to Metapopulation: Recovery of the Tule Elk in California*, *METAPOPULATIONS AND WILDLIFE CONSERVATION* 375–376 (Dale McCullough, ed. 1996). Early records indicate that tule elk were extirpated from the San Francisco Bay Area by 1872. See McCreia Cobb, *Spatial Ecology and Population Ecology of Tule Elk (*Cervus canadensis nannodes*) at Point Reyes National Seashore, California 1* (2010) (unpublished Ph.D. dissertation, University of California Berkeley).

¹³ PHILLIPS, *supra* note 11, at 17–18.

¹⁴ McCullough, Fischer, & Ballou, *supra* note 12, at 377–378.

¹⁵ PHILLIPS, *supra* note 11, at 19.

¹⁶ *Id.* at 19 and in Appendix 1 at 86–88. Following subdivision of the Miller and Lux Ranch in the 1920s, Henry Miller provided land for a temporary reserve in the 1930s when the state legislature balked at creating a reserve, “until the political maneuvering subsided and the Tupman Reserve was established.” McCullough, Fischer, & Ballou, *supra* note 12, at 376.

¹⁷ McCullough, Fischer, & Ballou, *supra* note 12, at 378.

¹⁸ *Id.* at 379.

¹⁹ Joseph Grinnell, *REVIEW OF THE RECENT MAMMAL FAUNA OF CALIFORNIA* 206 (1933).

last four free-ranging tule elk were collected in 1938 and became specimens at UC Berkeley's Museum of Vertebrate Zoology.²⁰

In the early 1930s, the Yosemite herd was moved again, across the Sierras to the Owens Valley, despite opposition by local cattle operators.²¹ The Owens Valley is not part of the subspecies' original range, but the elk adapted readily. The valley is also primarily under public ownership, allowing a fair amount of relatively unrestricted space for the free-ranging herd to roam. Yet, as in Kern County earlier, the population soon increased and began causing damage to nearby alfalfa fields and to fences on private ranchlands and leased pastures, and by displacing domestic livestock. In response, the California Department of Fish and Game (CDFG) allowed culling by licensed hunters in 1943, resulting in a harvest of 43 animals. A total of seven hunts were permitted between 1943 and 1969, usually with about a hundred times more applicants for permits than the number granted.²² By this time, the animals had separated into five distinct herds, totaling 270–290 individual animals and ranging across nearly 200,000 acres of land, owned mostly by the City of Los Angeles.²³ The herds were at or close to carrying capacity for the landscape, with “further substantial increases [likely leading] to depletion owing to lack of food.”²⁴

Since they almost disappeared in the 1870s and subsequently recovered, tule elk in California have always been a managed species. Even so-called free-range populations have been managed one way or another for over a century. Biologically, the animals have done well: “Unlike many other species, and despite inbreeding and loss of genetic diversity, the tule elk shows a remarkable capacity for population growth if protected from human killing. . . . The behavioral plasticity of the tule elk contributes to this success, but also leads to problems of agricultural damage.”²⁵ At almost every location where they have resided, there have been reported conflicts with local ranching or agricultural interests, chiefly damage to crops, rangeland, and fences. This makes intuitive sense. This is a species that prefers open-range habitat, avoids forested areas, and so is drawn to cultivated pastures with plentiful food and water supplies. There is no surprise, then, that the number of tule elk statewide is now over 4,000, in 22 separate locations and with herd sizes that are generally stable to increasing.²⁶

²⁰ McCullough, Fischer, & Ballou, *supra* note 12, at 378.

²¹ PHILLIPS, *supra* note 11, at 20–21.

²² *Id.* at 33.

²³ *Id.* at 34.

²⁴ *Id.* at 39. In 1952, CDFG's policy was to hold the herd to 125–275 head. This was revised in 1961 to allow a herd size of 250–300, with hunts allowed only when the population was larger than 300. Hunts occurred in 1961, 1962, and 1969, the last of which “caused a great uproar.” McCullough, Fischer, & Ballou, *supra* note 12, at 379–383.

²⁵ McCullough, Fischer, & Ballou, *supra* note 12, at 376–377.

²⁶ Cobb, *supra* note 12.

3. TULE ELK ARRIVE AT POINT REYES

In 1971, responding primarily to demands from Los Angeles-based wildlife activist Beula Edmiston for unrestricted range for the tule elk, and despite the long history of conflict in the Owens Valley,²⁷ the California Legislature adopted Senate Bill 722, sponsored by newly elected Marin County representative Peter Behr. At the time, the statewide population of tule elk was about 600, chiefly the free-ranging herds in the Owens Valley and at Cache Creek in Lake and Colusa Counties, plus the small captive population at the Tupman Refuge in Kern County. The Behr bill encouraged expansion of the statewide population to 2,000 and prohibited further hunting until they hit that number.²⁸

Later that same year, an interagency task force named PRNS, established nine years earlier in 1962, as one of four suitable reintroduction sites, was chosen from a list of 23 possible locations around the state.²⁹ Park historian Paul Sadin writes:

When discussions regarding the possibility of elk reintroduction to Point Reyes began, the biggest concern among locals and park staff was the *potential for disrupting peninsula dairy and grazing operations*. State Fish and Game officials wanted the reintroduced elk to remain inside an enclosure, because of problems that free-ranging elk had created in the agricultural sector of the Central Valley. (emphasis added)³⁰

NPS proposed releasing the elk onto Tomales Point, included in a designated wilderness in 1976, as a place where elk could be separated from neighboring ranchlands by an unusually high and sturdy fence.³¹ The fence was considered “necessary to keep the elk from competing with cattle for feed and knocking down ranchers’ fences in the pastoral zone of the national seashore.”³²

²⁷ Ms. Edmiston’s organization was called the Committee for the Preservation of Tule Elk. See Summer Brennan, *Elk Growth Threatens Seashore Zoning*, POINT REYES LIGHT, July 19, 2012.

²⁸ Cal. Leg., S.B. 722 (Behr), 1971 Reg. Sess., Cal. Stat. ch. 1250.

²⁹ McCullough pushed for Point Reyes as a location for tule elk when the seashore was first being proposed. Interview with Dale McCullough, Emeritus Professor of Wildlife Biology, University of California Berkeley, Kensington, Cal. (July 13, 2015) (on file with author).

³⁰ PAUL SADIN, *MANAGING A LAND IN MOTION: AN ADMINISTRATIVE HISTORY OF POINT REYES NATIONAL SEASHORE 244* (2007), available at http://www.nps.gov/parkhistory/online_books/pore/admin.pdf.

³¹ Three places at Point Reyes were initially identified as potential elk sites, “none of which included Tomales Point. Later reexamination of conditions at Point Reyes, focused by the suggestions of [Superintendent] John Sansing, led to identification of Tomales Point as the most suitable site for reestablishment of the elk.” Memo from Richard Myshak, Acting Assistant Secretary for Fish and Wildlife and Parks, U.S. Department of the Interior, to Albert Bianchi, Attorney for Mervyn McDonald’s lawyer (April 7, 1978) (on file with author). McDonald recalls that the elk were originally supposed to be on the other point, near the lighthouse, with a fence, but the ranchers in that area protested, so the site was changed to Pierce Ranch/Tomales Point. Interview with Mervyn McDonald, Marshall, Cal. (June 23, 2015) (on file with author).

³² Philip L. Fradkin, *No Room for Cows on Point Reyes*, AUDUBON, July 1978, at 102.

When Point Reyes National Seashore was established in 1962, it was intended primarily to provide beach access and recreation opportunities for the nearby population of the metropolitan Bay Area, even though the landscape had been in use for dairy and beef ranching since the 1850s. Initially, ranches were to be kept in private ownership, within a designated “pastoral zone.” But for a variety of reasons they had all been acquired by the NPS by the early 1970s.³³ The explicit intent of Congress in authorizing the acquisitions was that ranching activity remain part of the seashore: “At the time the initial authorizing legislation for Point Reyes National Seashore was enacted the federal government *in effect made a promise to the ranchers* in the pastoral zone that as long as they wanted to stay there, to make that use of it, they could do it. We must [now] keep our word to these people.”³⁴

An important new overlay was added to the Point Reyes story in 1976, first in August by a federal resolution identifying Point Reyes as a possible location for reintroduction of tule elk,³⁵ and then in October by the designation of a wilderness area across roughly one-third of the peninsula.³⁶ A new “untrammeled” version of the park’s history thus began to coexist with its human history, with visitors and park managers increasingly envisioned as the only appropriate people within the park.³⁷ Even so, the 1976 initiatives emphasizing the wild character of Point Reyes were followed in 1978 by congressional approval of a leasing mechanism whereby the working ranches could continue operating past the original terms of their acquisition.³⁸ Clearly, PRNS is a conflicted landscape, with Congress sanctioning both its wilder aspects and the continuity of agriculture.

The first herd of ten elk (two males and eight females) arrived at PRNS in 1978, relocated from the San Luis National Wildlife Refuge in the Central Valley, where they had been moved just four years earlier from their long-time home at the San Diego Zoo.³⁹ Notwithstanding the presence of a ten-foot-high fence separating the elk’s range from neighboring ranches, NPS Western

³³ This will be discussed further in LAURA A. WATT, *THE PARADOX OF PRESERVATION: WILDERNESS & WORKING LANDSCAPES AT POINT REYES NATIONAL SEASHORE* (forthcoming 2016).

³⁴ 116 CONG. REC. S3823 (daily ed. March 17, 1970) (statement of Sen. Bible) (emphasis added). He went on to say that “it is the firm intent of the Committee [on Interior and Insular Affairs] that the [statute] shall in no way operate to impair the integrity of the dairyman who wants to continue dairy farming. This explanation should make it very clear on this point.” *Id.*

³⁵ Pub. L. 94-389, 90 Stat. 1189 (1976).

³⁶ Pub. L. 94-567, 90 Stat. 2692 (1976).

³⁷ Laura A. Watt, *The Trouble with Preservation, or, Getting Back to the Wrong Term for Wilderness Protection: A Case Study at Point Reyes National Seashore*, 64 Y.B. ASSOC. PAC. COAST GEOGRAPHERS 55–72 (2002).

³⁸ Pub. L. 95-625, §318, 92 Stat. 3467 (1978).

³⁹ Tule elk had been living at the San Diego Zoo since 1915. McCullough, Fischer, & Ballou, *supra* note 12, at 384.

Regional Director Howard Chapman declared that the relocation realized the goal of “reestablishing a relatively wild, free roaming tule elk herd on Tomales Point.”⁴⁰ The animals were kept and fed in a temporary enclosure at Pierce Ranch, where the long-time ranch tenant was in the process of being evicted to make way for the elk. Several elk died in the second year, and several bulls developed malformed antlers, blamed on copper deficiencies. A number of sub adults also died due to likely infection by Johne’s disease, or paratuberculosis, which is thought to have been contracted from cattle.⁴¹ A population study estimated carrying capacity for Tomales Point at 140 individuals, the NPS believing that “once the elk reached that level, the population would naturally stabilize.”⁴²

After the drought of the late 1970s ended, however, the elk population began to soar at an exponential rate, from 93 individuals recorded by the NPS in 1988 to 254 individuals recorded by an elk census in 1994.⁴³ An independent scientific advisory panel was asked in 1993 to evaluate whether control of the population size was warranted and, if so, by what method. Their report concluded that earlier estimates of carrying capacity were artificially low because of the impacts of cattle grazing and that the sustainable number for the herd should be 346, in line with a range analysis conducted the same year.⁴⁴

The panel also indicated that while a passive, natural-regulation approach to management was possible, allowing the herd to reach a dynamic equilibrium with its surrounding plant community, the consequences of such a policy would be periodic swings of population size, up and down. In the downswings, reproduction would decrease, and mortality would increase. So the visiting public might see malnourished elk or dead and dying animals, and the elk could have an increased impact on vegetation and soils.⁴⁵ On the other hand, if a series of good years pushed the population to a higher level, more active interventions might have to include removal of individual animals, perhaps through culling by agency staff, allowing public hunting, translocating elk

⁴⁰ POINT REYES NATIONAL SEASHORE, TULE ELK MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT 8 (July 1998), available at http://www.nps.gov/pore/learn/management/upload/planning_tule_elk_mmp_ea_1998.pdf [hereinafter PRNS 1998 Plan].

⁴¹ Peter Gogan & Reginald Barrett, *Comparative Dynamics of Introduced Tule Elk Populations*, 51 J. WILDLIFE MGMT. 20–27 (1987).

⁴² Sadin, *supra* note 30, at 245. The original study was Peter Gogan, *Ecology of the Tule Elk Range, Point Reyes National Seashore* (1986) (unpublished Ph.D. dissertation, University of California, Berkeley).

⁴³ The 1988 numbers are from *Viewing Tule Elk*, Nat’l PARK SERVICE, http://www.nps.gov/pore/planyourvisit/wildlife_viewing_tuleelk.htm (last visited September 28, 2013). The 1994 and 1996 numbers are quoted in items appearing in the POINT REYES LIGHT on August 24, 2013 and November 7, 1996.

⁴⁴ Report of the Scientific Advisory Panel on Control of Tule Elk on Point Reyes National Seashore 7 (October 18, 1993), available at http://www.nps.gov/pore/getinvolved/upload/planning_tule_elk_report_scientific_advisory_panel_1993.pdf [hereinafter Panel Report (1993)].

⁴⁵ *Id.* at 5–6.

away from Tomales Point, or the use of an injectable contraception to prevent females from producing calves.

After the El Niño years of 1995–1997 yielded higher than average rainfall, herd size again expanded: to 380 in 1996, 465 in 1997, and 549 in 1998.⁴⁶ Researchers from state and federal agencies as well as UC Berkeley now documented higher survival rates for both adults and calves than observed in the Owens Valley herd and found no instances of predation on calves, despite numerous coyote sightings in the area. They concluded that the population showed little evidence of natural regulation and was likely to overshoot the area's carrying capacity during prolonged periods of drought, causing population die-backs. They also recommended a target population size for Tomales Point of 350 animals.⁴⁷

In May 1997, PRNS staff gave a presentation at a Citizens Advisory Commission meeting regarding the overlarge size of the elk herd on Tomales Point. According to the local paper, when commissioners learned that about a hundred calves had been born the previous year, “that was a wake up call” because they suddenly had “a 33 percent increase in population.”⁴⁸ The presentation listed four options for addressing herd size: immuno-contraception, chemical sterilization, relocating “surplus” elk to the Limantour Spit, and the shooting of “excess elk” by rangers. The PRNS superintendent told the group, “I see no easy solutions to the management of the elk... But it's important to create a long-term plan.”

4. THE 1998 TULE ELK MANAGEMENT PLAN

A year later, in July 1998, PRNS duly produced a Tule Elk Management Plan and Environmental Assessment. The Tomales Point herd at this point was approximately 550 individuals, and the statewide population of tule elk was 3,200 and growing. One of five objectives listed in the plan was to establish a free-ranging elk herd at PNRS by 2005. This was not a new goal; Phillips had advocated for a free-ranging herd throughout the seashore in a 1976 socioeconomic study,⁴⁹ and the 1993 Scientific Advisory Panel made a similar recommendation.⁵⁰ McCullough thinks there was a sense at the time that local agriculture was fading economically, and so elk, which are prone to

⁴⁶ Judd Howell et al., *Population Dynamics of Tule Elk at Point Reyes National Seashore, California*, 66 J. WILDLIFE MGMT. 482 (2002).

⁴⁷ They found immune-contraception to be effective but were concerned about the impact of removing individuals from the gene pool, given the low genetic diversity in the herd. *Id.* at 489.

⁴⁸ Marian Schinske, *Park Advisors Given Options for Limiting Tule Elk Herd*, POINT REYES LIGHT, May 22, 1997.

⁴⁹ Although PHILLIPS, *supra* note 11, oddly ignored any potential impacts on the local agricultural economy in his analysis.

⁵⁰ Panel Report (1993), *supra* note 44, at 34.

wandering long distances, would spread across the landscape as ranches were phased out.⁵¹ In public, however, the PRNS superintendent insisted that “our plan [for the free-ranging herd at Limantour] clearly does not promote elk in agricultural lands.”⁵²

Implementation did not take long. In December 1998, 45 healthy elk were relocated via helicopter from Tomales Point to a 25-acre fenced range just north of Coast Camp on the west side of Inverness Ridge, to be quarantined and monitored for six months.⁵³ Several were given immuno-contraceptives, but not all. At the time, some residents expressed concern that the relocated elk would spread to private property on the east side of Inverness Ridge, and “several ranchers in the National Seashore said that they would like park staff to fence in areas so that cattle would not mix with the elk.”⁵⁴ In June 1, 1999, Seashore staff released 23 elk from their quarantine holding pen into the Philip Burton Wilderness near Limantour Estero.⁵⁵ Each released adult animal wore a uniquely identifiable radio transmitter collar designed to allow tracking of locations and early detection of mortality.⁵⁶ PRNS’s principal wildlife scientist had been quoted four days earlier as saying elk that wandered outside of their designated range would be “retrieved or possibly killed.”⁵⁷

The management plan also seemed clear on what the policy would be:

The Park Service has a responsibility to be a good neighbor to adjacent and nearby landowners. Anticipating the effects of tule elk management strategies on the property or perceptions of neighbors is an important consideration. Any depredations by elk on fences, crops, or other property would require mitigation actions to correct or avoid problems.⁵⁸

The Plan made “no effort” to hasten the closure of ranches within the seashore and did *not* list management of elk within the pastoral zone as a “management issue not covered by this Plan.”⁵⁹ The Plan’s Alternative B would

⁵¹ McCullough Interview, *supra* note 29.

⁵² Marian Schinske, *Tule Elk to Roam Huge Range in Park*, POINT REYES LIGHT, October 30, 1997. Citizens Advisory Commissioner Merritt Robinson is quoted as saying, “We made a promise to the ranchers that we wouldn’t damage their economic position. I want the park’s tule elk management plan to speak to this issue.”

⁵³ After extensive testing for the organism that causes Johne’s disease, 22 of the translocated animals were euthanized and complete necropsies performed. Elizabeth Manning et al., *Testing for Mycobacterium avium subsp. paratuberculosis Infection in Asymptomatic Free-Ranging Tule Elk from an Infected Herd*, 39 J. WILDLIFE DISEASES 323–328 (2003).

⁵⁴ Marian Schinske, *Helicopter Gives Elk Rides from Pierce Point*, POINT REYES LIGHT, December 3, 1998.

⁵⁵ Sadin, *supra* note 30, at 246.

⁵⁶ NAT’L PARK SERV., POINT REYES NATIONAL SEASHORE 2001 YEAR IN REVIEW 11, available at <http://www.nps.gov/pore/learn/management/upload/yearinreview2001.pdf>(2001).

⁵⁷ Stephen Barrett, 18 tule elk culled from Limantour, POINT REYES LIGHT, May 27, 1999, quoting Dr. Sarah Allen.

⁵⁸ PRNS 1998 Plan, *supra* note 40, at 13.

⁵⁹ *Id.* at 3–4, 15.

have allowed elk to free-range throughout the seashore, but that alternative was explicitly rejected, based on the high impact on land uses and agriculture, as well as the short-term nature of the solution. “If population control becomes a problem,” the Plan said, “it will occur on a much larger scale than at present.”⁶⁰

Under the preferred Alternative A, the Limantour area was chosen for relocation because it had “large acreage in natural zones with buffers from major highways, ranches, and lands outside the Seashore.” “Tule elk will be allowed to roam outside the area,” the Plan said, “as long as new home ranges are not established where conflicts with traffic corridors or neighbors are likely.”⁶¹ Moreover, since

“[d]amage to property could occur if elk move outside the Seashore onto private lands and consume crops or damage fences or other property. . . [the] Seashore will be ready to recapture or destroy problem animals should these situations arise, or establish partnerships with state and county agencies with the necessary skills and personnel to assist with the recapture. The Seashore should be prepared to provide funding for compensating property damage if necessary. It may be possible for the Seashore to modify parts of the habitat to help prevent such occurrences, or construct barriers to dispersal.”⁶²

The plan also directed the NPS to manage the elk herd adaptively, “revising this plan as necessary to best fit new situations and information.”⁶³

Within a year, however, several tule elk appeared at the former Horick Ranch, or D Ranch, which had just been forced out of operation by the NPS.⁶⁴ First, ranchers noticed two elk cows on the ranch near Drakes Beach in the summer of 2000. In the fall of the same year, one bull and one cow, both fitted with radio collars, turned up.⁶⁵ How they got there was, and remains, something of a mystery. A Park Service website says that “after relocation from Tomales Point to the Limantour area, several elk were observed to have traveled across Drakes Estero where they established a sub-herd near Drakes Beach.”⁶⁶ Ranchers were informed by PRNS staff that the elk swam across

⁶⁰ *Id.* at 51.

⁶¹ *Id.* at 46.

⁶² *Id.* at 49.

⁶³ *Id.* at 50.

⁶⁴ *See also* Watt, *supra* note 33.

⁶⁵ Point Reyes Seashore Ranchers Association (PRSRA), History of Elk at Drakes Beach (July 5, 2011) (unpublished paper) (on file with author). Their presence was confirmed by PRNS wildlife biologist Natalie Gates, who noted during an October 21, 2000 Citizens Advisory Commission meeting that tule elk were “present at Tomales Point and in [the] Limantour area. In addition, three individuals are currently residing in the pastoral area.” Transcript, PRNS Citizens Advisory Commission Meeting 109 (October 21, 2000) (on file with the author).

⁶⁶ Point Reyes, *National Seashore, California, Tule Elk*, NAT'L PARK SERVICE, http://www.nps.gov/pore/naturescience/tule_elk.htm, (last visited March 2, 2014).

Drakes Estero.⁶⁷ It is unusual, however, for female tule elk to wander such distances on their own. All elk breed in harems, where a single dominant bull controls most of the females for much of the year.⁶⁸ And it is remarkable that the elk just happened to turn up at the former Horick Ranch, the *only* section of land along the entire shore of Drakes Estero that was no longer being leased. But regardless of how they arrived, they established a new, third herd of tule elk in the seashore.

The PRNS Annual Report for 2001 notes that “[s]ince their release, the new herd [at Limantour] has been carefully monitored to ensure animals remain within seashore boundaries, *do not interfere with cattle ranches within the park* and are not shedding the organism that causes Johne’s disease.”⁶⁹ But since tule elk and cattle are both grazing animals, they are bound to compete for forage. Furthermore, like the original population at Tomales Point, the free-ranging herds at both Limantour and the Horick Ranch began to increase. By early 2014, the herd sizes were 71 and 76,⁷⁰ respectively, and a 2010 study of their population dynamics estimated that, without intervention, both herds would likely increase to approximately 400 individuals by 2018. The same study predicted that “increased elk abundance is expected to lead to future conflicts between ranch owners and Pt. Reyes management. A proactive elk management plan is recommended.”⁷¹

5. CONFLICTS WITH THE RANCHES AND NPS INACTION

Just like past experience with tule elk and ranchlands in almost all other areas of California, problems soon arose. In 2005, at least one ranch asked PRNS staff about improved fencing to keep elk out of its pastures. A meeting was held in 2008 to discuss a fencing proposal, but nothing came of it. By 2010, the Spaletta family, who lease historic C Ranch plus a small portion of the former Horick or D Ranch, wrote to new Superintendent Cicely Muldoon, asking that free-ranging elk be moved off their leased pastures. The elk were not only eating their cattle’s forage, which had to be replaced with expensive

⁶⁷ PRSRA, *supra* note 65. Several ranchers reported seeing a trailer being unloaded in the early morning hours (e.g., in a letter from Roger Horick to the WEST MARIN CITIZEN, December 5, 2013), contributing to a belief that the elk were planted on the Horick Ranch, but there is no concrete evidence of this or of who might have done such a thing.

⁶⁸ Email to the author from Dale McCullough (July 15, 2015) (on file with author) (noting that perhaps because the elk were from Tomales Point originally and had “lived several generations without significant predator presence, . . . they may have lost some of their fear of being alone due to lack of experiential reinforcement of the ingrained behavior”).

⁶⁹ PRNS Year in Review 2001, *supra* note 56, at 11 (emphasis added). Had NPS not intended to maintain separation between the elk herd and the ranches, the report would have omitted its efforts to ensure conflict avoidance.

⁷⁰ Numbers appear in a News Brief item, POINT REYES LIGHT, March 6, 2014.

⁷¹ Cobb, *supra* note 12, at 150–151.

hay, but also were damaging fences and irrigation systems.⁷² Holes in the fencing left by the elk allowed the dairy cows to stray from their proper pastures and potentially to be bred at the wrong time or by the wrong bull. At least three heifers were gored by bull elk during the breeding season, two of which had died. The letter included documentation of over \$30,000 spent by the Spalettas in response to elk damage.⁷³ Elk have caused problems on seven of the eleven seashore ranches (six dairy, five beef) so far. Perhaps most importantly, most of the ranches are formally registered as organic operations, entailing limitations on how much supplemental feed their cattle can rely on in a given year. Ranchers worry that, if elk consume too much of their pasture, they could lose their organic certification and be forced out of business.⁷⁴

PRNS staff began recording observations of the Drakes Beach elk herd in September 2010, noting a herd of roughly 40 adult animals moving back and forth across C, D, and E Ranches on a daily basis.⁷⁵ The following January, the Spalettas' Special Use Permit renewal contained a reference to a Ranch Unit Plan, a document they had received a copy of six months earlier, but with no opportunity for input or suggestions.⁷⁶ This Ranch Unit Plan presumed the presence of free-ranging elk on the leased pastures. It also contained new language regarding "wildlife friendly fencing" and newly stipulated that livestock were no longer protected from wildlife. The Point Reyes Seashore Ranchers Association (PRSRA) then sent Muldoon a letter in June, asking the superintendent to attend their next meeting to address the issue of elk migration into the pastoral zone, and specifically asking that "this issue be addressed with the Association, as a group, not with us as individual ranchers." Twenty-three Association members, each a leasee at PRNS, signed the letter, arguing that "[t]his is a regional issue that is impacting some of the ranchers on a daily basis and will certainly impact all of the ranchers if left unresolved."⁷⁷

Muldoon's response was that "The particulars of the elk issue. . . will be discussed one on one with each ranching family as part of ongoing ranch plans and permit negotiations." The refusal to work with the ranchers as a group

⁷² While the ranchers lease the land and do not own the buildings or fences, they are responsible for what is called cyclical maintenance, or day-to-day maintenance and repair. These are double costs because repairing broken fences or irrigation pipes costs money and takes time away from other tasks.

⁷³ Letter from Spaletta Family to PRNS Superintendent Cicely Muldoon (October 28, 2010) (on file with author).

⁷⁴ *Id.*

⁷⁵ Tim Bernot, Free Range Elk Observations 9/24/10–3/1/11 (unpublished paper) (on file with author). These notes made by PNRS staff run through May 21, 2011, and document elk from the Limantour herd in several different pastures at the Home Ranch. John Dell'Osso, chief of interpretation at PRNS, later maintained that the elk typically moved onto ranch lands for only three months a year, in the fall. Mark Prado, *Rebounding Elk*, MARIN INDEPENDENT J., September 5, 2011.

⁷⁶ The family's existing ranch plan dated to 1998, but they were not contacted about the new Ranch Unit Plan. They received a copy on August 12, 2011, but it was withdrawn by PRNS on August 3, 2012.

⁷⁷ Letter from PRSRA to Superintendent Cicely Muldoon (June 17, 2011) (on file with author).

was justified on the basis of the Federal Advisory Committee Act (FACA), requiring that a meeting with the PRSRA be

advertised in the *Federal Register* if the purpose of the meeting was for the agency to obtain advice, opinions or recommendations from the group acting in a collective mode. Consequently, our role at the July meeting will be to provide information about park activities, and listen to the attendees' individual views.⁷⁸

At the meeting, which took place on July 11, Muldoon talked about experimental fencing (lowering fences so that elk would not damage them) but insisted that she could not discuss overall policy with the group. Specific concerns could be discussed only in the context of individual permit negotiations. Moreover, any new plan or policy to remove elk from the pastoral zone would require environmental assessment under NEPA, above and beyond that undertaken for the 1998 management plan.⁷⁹

The assertion that FACA prohibits NPS staff from meeting or communicating with the Ranchers' Association as a group is incorrect because the statute does not apply to "meetings initiated with or by non-governmental organizations." And contrary to the claims about NEPA review, the environmental impacts of moving the elk to the designated wilderness area, regardless of what part of the seashore they came from, *had* already been studied in the 1998 Tule Elk Management Plan and Environmental Assessment, the result being a Finding of No Significant Impact.⁸⁰

The only concrete outcome of the meeting between PRSRA and NPS staff was some elk "hazing," chasing animals away from ranches, often with an off-road vehicle. This is predictably ineffective, because the startled elk simply return after a day or two. In September, the PRSRA wrote again, this time arguing that, unless the NPS enforced its own elk management policies, multigenerational ranching at Point Reyes would end. "We cannot believe that this is your intent," the letter said, "but your failure to enforce the PRNS elk management policy virtually ensures this outcome."⁸¹ The Association then also wrote to Senator Dianne Feinstein, asking for help in removing elk from

⁷⁸ Letter from Superintendent Cicely Muldoon to PRSRA (July 7, 2011) (on file with author). The PRNS 1998 Plan, *supra* note 40, FONSI at 2, said the NPS would "work to establish partnerships with organizations interested in the protection and interpretation of tule elk."

⁷⁹ Transcript of July 11, 2011 PRSRA meeting (on file with author). The experimental fencing was installed without notice a week earlier along the Drakes Beach road. Although elk damage was less likely, ranchers were concerned that cattle might also be able to jump over the lowered fences, allowing herds to mix or for cattle to get out onto the main road, where they might cause collisions with tourist vehicles and create rancher liability. The lowered section is just a small segment of miles of fencing, and it is not clear that the elk preferentially use it.

⁸⁰ The July 11 meeting also contained discussion of a firm PRNS policy under a previous superintendent, Don Neubacher, to monitor elk movements and remove animals from the pastoral zone.

⁸¹ Letter from PRSRA to Superintendent Cicely Muldoon (September 27, 2011) (on file with author).

the pastoral zone and getting the NPS to enforce existing elk management guidelines.⁸² Marin County Supervisor Steve Kinsey also wrote to Feinstein, asking that she alert Secretary of the Interior Ken Salazar to the serious nature of this ongoing problem and to the need for more effective measures to manage the elk.⁸³ Feinstein then requested a review of NPS actions, “to ensure that they are both compliant with the Elk Management Plan and [protect] the rights and property of ranching lessees.”⁸⁴

In response, the secretary reaffirmed that the National Park Service actively supports dairy and beef operations at Point Reyes, but repeated the agency’s previous assertion that the 1998 management plan did not address the issue of elk in the pastoral zone and did not address the issue of the lessees’ property rights, promising only that the NPS would “work with” ranchers to “address their concerns, preserve the unique ecological and cultural landscape of the Point Reyes peninsula, and continue to demonstrate that working ranches can be successful within the context of a national park.”⁸⁵ NPS staff cite this letter from Salazar as evidence that they cannot legally relocate elk from the pastoral zone.⁸⁶

In recent interviews, PRNS staff have stressed that the 1998 management plan did not specifically anticipate elk wandering into the pastoral zone. David Press, a wildlife specialist, said in 2013, for example, that the plan offers no guidance “if [elk] end up in areas of the park where they were not expected to roam.”⁸⁷ Yet tule elk’s tendency to be drawn toward pastoral lands has been documented in California for more than a hundred years and was unquestionably well understood by the scientists and NPS staff working on the 1998 plan. Both Judd Howell, formerly with the Biological Resources Division of the USGS but now retired and working as a private consultant, and Dale McCullough from UC Berkeley and also now retired, confirm both the general understanding that the elk were likely to migrate from Limantour onto the pastoral zone and that NPS staff specifically were aware of this, as well.⁸⁸ So the claim that the elk were not expected to roam is farfetched, and it remains unclear why a more straightforward discussion

⁸² Letter from PRSRA to Senator Dianne Feinstein (November 9, 2011) (on file with author).

⁸³ Letter from Marin County Supervisor Steve Kinsey to Senator Dianne Feinstein (March 9, 2012) (on file with author).

⁸⁴ Letter from Senator Dianne Feinstein to Secretary of the Interior Ken Salazar (March 20, 2012) (on file with author).

⁸⁵ Letter from Secretary of the Interior Ken Salazar to Senator Dianne Feinstein (May 18, 2012) (on file with author).

⁸⁶ Email to the author from PRNS Superintendent Cicely Muldoon (July 14, 2015) (on file with author).

⁸⁷ Ann Miller, *Elk Putting National Seashore Ranches at Risk, Part 2*, WEST MARIN CITIZEN, November 28, 2013.

⁸⁸ McCullough recalled “some pretty intense conversations” with former Superintendent Don Neubacher about his vision for free-ranging elk throughout the seashore and that Neubacher “certainly got on board.” He also clarified that most of the Point Reyes peninsula south of the Limantour Road, in the designated wilderness area, is actually quite poor tule elk habitat, composed mostly of forest and

of this probability was not included in the 1998 plan. Howell speculates that it was intended to avoid any political uproar by “kicking the can down the road.”⁸⁹

After a further year of inaction, the Ranchers’ Association sent another letter to Superintendent Muldoon, demanding in September 2013 that the seashore stop neglecting the problem:

Our organization has a long history of attempting to work with the Seashore on this issue, but none of the strategies employed thus far have reduced the impacts from the elk in the Pastoral Zone. It is time for the Seashore to comply with its own Elk Management Plan and permanently relocate this herd back to the Limantour wilderness area where it belongs.⁹⁰

This triggered a series of meetings with local elected officials, including Marin County Supervisor Steve Kinsey, California Assemblyman Marc Levine, and Congressman Jared Huffman, all of whom also pushed the NPS to act and, in some cases, asked for short-term relief for the ranchers negatively affected by the elk.

PRNS subsequently announced that a new Ranch Comprehensive Management Plan process would begin in spring 2014, ostensibly in response to Secretary Salazar’s November 2012 memo, forcing the Drakes Bay Oyster Company to cease operations and directing NPS to “pursue extending permits for the ranchers within those pastoral lands to 20-year terms.”⁹¹ Among other issues, the new planning process was to examine different options for managing the tule elk. The NPS conducted scoping meetings in June 2014 and two additional public workshops in November. A draft of the new plan is not expected until early 2016, and in the meantime, there is no change to the park’s management of the elk. Most ranchers are operating on only one-year lease extensions, as the NPS has insisted that it cannot renew any special-use permits until the new planning process is complete.

6. CONCLUSION: HOW WILD IS WILD?

According to Dale McCullough, recently reported “die-offs” of elk do not involve huge numbers of adult animals suddenly dropping dead from starvation

brushlands, whereas tule elk are an open-land species. “I knew eventually they would spread out onto the ranches and cause conflict.” McCullough Interview, *supra* note 29.

⁸⁹ Interview with Judd Howell, consulting wildlife biologist, H. T. Harvey & Associates, Point Reyes Station, Cal. (July 2, 2015) (on file with author).

⁹⁰ Letter from PRSRA to Superintendent Cicely Muldoon (September 19, 2013) (on file with author).

⁹¹ Memo from Secretary of the Interior Kenneth Salazar to the director of the National Park Service, regarding Point Reyes National Seashore – Drakes Bay Oyster Company 2 (November 29, 2012) (on file with author).

or thirst.⁹² He estimates that at least half the losses, maybe more, are due to lack of replacement, where calves are either not being born or are not surviving their first month.⁹³ The absence of replacement calves is harder to “see” than corpses dotting the landscape, which is perhaps why news of the die-off was treated so sensationally. Die-offs that have “wild” causes are somewhat more difficult to foresee than those stemming from human control of herd size via culling or contraception, but the likelihood of population decline in the face of California’s current intense drought was clearly anticipated years ago by scientists.⁹⁴ News about the drop in numbers at Tomales and Limantour (the Drakes Beach herd, which spends the most time on cultivated lands, has continued to increase) has nonetheless been exploited by environmental activists, who have attempted to spin the story politically, using public sympathy for dying “wild animals” to create pressure, ironically, for a policy that would create even more “wildlife.” But removing the elk fence from Tomales Point, allowing those animals to roam more freely for food or water, and possibly driving the ranches out of business would not resolve the management conundrum.

The Tomales Point herds, because their movement onto ranches is limited by the elk fence, are ecologically fairly “natural,” in that their population will fluctuate up and down in response to vegetation availability and particularly its seasonality (i.e., lots of grass in the winter but almost nothing near the end of the dry season), as long as the public is willing to accept the down-cycles in numbers, which perhaps the recent outbursts in the press show the public is increasingly unwilling to accept.⁹⁵ On the flip side, the herds at Limantour and Drakes Beach are much less natural, inasmuch as they are being artificially supported by the ranchers’ fertilized fields and managed water supplies.⁹⁶ Their numbers are not constrained in any meaningful way by natural resources and will, therefore be governed one way or another only by what managers do. As McCullough put it, “There is nothing to stop the expansion of these southern herds except human interference. . . . If ranchers are improving the range, that will be even more attractive to the elk than the natural vegetation, especially during the dry season.”⁹⁷

The herd living on the former D Ranch of about a thousand acres and spilling over from there on a regular basis onto working leased ranches are

⁹² Peter Fimrite, *Conservationists Upset as Much of Point Reyes Elk Herd Dies*, SAN FRANCISCO CHRONICLE, April 19, 2015 (reporting a drop in the Tomales Point herd from 540 in 2012 to 286 in 2014).

⁹³ McCullough Interview, *supra* note 29.

⁹⁴ See PHILLIPS, *supra* note 11; Howell et al., *supra* note 46.

⁹⁵ Without artificial water sources, the carrying capacity at Tomales Point would be substantially reduced.

They are either old stock ponds or springs developed by former ranchers into year-round water sources.

⁹⁶ In fact, during the same two years the Tomales Point herd declined by 47 percent, the free-ranging herds located at least part-time in the pastoral zone increased by 32 percent. Fimrite, *supra* note 92.

⁹⁷ Email from McCullough (July 15, 2015), *supra* note 68.

nevertheless romantically referred to by the NPS and environmentalists as “free ranging,” while the animals in the Tomales Point Wilderness Reserve of about 2,600 acres are described as “fenced in” or “enclosed.” As a practical matter, then, how freely elk at Point Reyes can move within a more or less limited space seems to be the key factor determining whether they are considered wild or not, even though they are all living in a landscape that has been substantially tamed and controlled since the middle of the nineteenth century.

Thus the politics of tule elk management at Point Reyes, where the elk, it is important to note, are not endangered or threatened at present, are bound to seem fairly bizarre to most students of wildlife law and policy. They revolve around wild animals that actually seem to prefer and thrive better on cultivated ranch lands, with carefully husbanded pastures and water sources, than in protected areas designated as wilderness, which are increasingly brushy and have little water, especially in drought years.⁹⁸

Thus, the distinction between wild and non-wild is and has been for some time very much a moving target at Point Reyes. The literature on wild animals tells us that much the same is true elsewhere. Historically, state officials have accepted the need for human management of the tule elk. Again, there is nothing exceptional about this. Lots of other large mammals in California, and in other states, are similarly managed through hunting or culling, including the iconic wild bison in Yellowstone National Park. And demand for tule elk hunting tags across California is enormous. Of the 22 locations around the state where there are tule elk, hunting is allowed at 18 of them (eight in the Owens Valley alone), and in 2014, there were over 33,000 applications for only 316 tags.⁹⁹ Over the past 15 years, however, as the preceding account establishes, the NPS has willfully ignored the necessity for active elk management at Point Reyes, instead operating under an intentionally hands-off policy, presuming that because the elk can plausibly but incorrectly be portrayed as wild animals, any human intervention somehow makes them less so and less fitting residents of a national park.

It is not at all clear to me, nor I think to others, that effective management of tule elk at Point Reyes ought to be swayed by romanticized notions of animals as wildlife, ideas that ignore the reality of the species’ history in California, where tule elk have been continuously managed at least since the Miwok and other tribes burned the landscape to create better forage for elk and

⁹⁸ PHILLIPS, *supra* note 11, at 90 notes that while tule elk generally tend to avoid human activity, “when dependent on a cultivated area (for example, alfalfa during a drought), they will not let the presence of man interfere with their feeding for long. He will only drive them away temporarily.”

⁹⁹ See California Department of Fish and Wildlife, Wildlife Branch—Game Management, 2014 Elk Hunt Statistics, online at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=95655&inline> (last visited May 18, 2015).

to draw them to their hunting grounds.¹⁰⁰ Calls for removal of the ranches at Point Reyes also fly in the face of their well-established status as a recognized heritage resource, not to mention their role in the local economy, as well as the declared intention of Congress that the creation and operation of PRNS will protect the working landscape. The prioritization of tule elk at Point Reyes that are “wild” ignores their long history of being managed and controlled, as well as the necessity of continuing that control. Free-ranging or not, these animals live in a cultivated landscape, and pretending that they will ever be free from human intervention only makes clear-headed management more difficult to implement.

¹⁰⁰ “The environment we are seeing at Point Reyes today is probably characterized, in large part, by a highly transformed vegetation that is the product of both the termination of Native burning and more recent fire suppression policies.” Email from Kent Lightfoot, professor of anthropology, University of California Berkeley, to Michael Newland, Anthropological Studies Center, Sonoma State University (January 21, 2015) (on file with author).