

# The Changing Role of Agriculture in Point Reyes National Seashore



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## ***Executive Summary***

This document provides background information about the ecological, cultural, and economic values that agriculture provides to Point Reyes National Seashore (PRNS) and the Northern District of the Golden Gate National Recreation Area (GGNRA). It also presents ideas about how park staff and the public might redefine their relationship to agriculture at PRNS and GGNRA, in anticipation of the release of a new General Management Plan (GMP) in 2009.

Current county, regional and state policies, including those contained in the Marin Countywide Plan (County of Marin 2007) and Local Coastal Program (County of Marin 1980), and the historic record, support the continued existence and viability of aquaculture and agriculture at PRNS and GGNRA.

Agriculture at PRNS and GGNRA<sup>1</sup> represents 17 percent of Marin's overall agricultural production and 17 percent of its agricultural land base. Agriculture forms the cultural foundation for the look and sense of place of PRNS and GGNRA gateway communities such as Point Reyes Station, Olema and Bolinas. Agriculture at PRNS and GGNRA also provides essential ecosystem services. It helps maintain the complex vegetation mosaic found there, including its open grasslands, inhabited by many endangered plants and animals, while helping to manage fire fuels that would otherwise present a significant wildfire threat to surrounding communities.

This report provides specific recommendations to optimize the ecological value of PRNS and GGNRA agriculture and enhance partnerships with ranching tenants. Their implementation will help sustain important landscape patterns and processes, as well as living cultures within PRNS and GGNRA and its surrounding communities.

The future of agriculture at PRNS and GGNRA depends on many variables. Ranchers' interest in continuing their businesses, economic pressures and opportunities, regulations and many other factors will play a role. Ideally, not only will ranching continue at PRNS and GGNRA, but some of the lost agricultural acreage will be regained. Fundamental to this is keeping agricultural lands in agriculture, because one thing is certain—without the land, agriculture cannot exist.

If embraced as an interpretative opportunity, agriculture, including both historic and current practices, could be a positive addition to the other wonderful natural assets this unique national park provides. As highlighted in the 2007 NPS publication, *Stewardship Begins With People* (Diamant et al. 2007), other parks in the NPS system celebrate and support inspirational examples of working landscapes within national park boundaries. PRNS lands stand uniquely poised to represent the best of this growing movement.

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<sup>1</sup> This includes Pastoral Zone acreage at PRNS and agricultural land within the Northern District of GGNRA, which is managed by PRNS.

## **Section 1. Introduction**

In 1999 Point Reyes National Seashore (PRNS) started the process of updating its guiding document, the 1980 General Management Plan (GMP), which addresses agriculture at PRNS and the Northern District of Golden Gate National Recreation Area (GGNRA)(PRNS and GGNRA agricultural lands are hereinafter referred to as PRNS lands). During the ten years since the GMP update process began, several controversies regarding agriculture on PRNS lands have unfolded. These controversies pointed to the need to describe the significant ecological, economic, and cultural values that agriculture provides to the local landscape, culture, and economy and to look at agriculture's changing role on PRNS lands in this context.

This document describes current county, regional and state policies, including those contained in the Marin Countywide Plan and Local Coastal Program, economic statistics, research studies, and the historic record to support the continued existence and viability of agriculture on PRNS lands.

Agriculture has always been an integral part of the Point Reyes landscape, community, and economy. For thousands of years before the first Europeans settled at Point Reyes, Native Americans managed the landscape for the production of food, fiber, and other vital resources (Anderson 2005). Ranching began at Point Reyes when Mexican land grantees introduced the first cattle to the area in the mid-1800s. Dairying soon became the dominant agricultural land use in Point Reyes and Marin County, and row crop farming was also common until World War II (Livingston 1994, 2009).

Today, food production is no less important than it was 50, 100, or 1,000 years ago. With global climate change has come recognition that eating locally-produced food is one way we can reduce our carbon footprint. Producing local food depends on maintaining a critical mass of land on which to raise it and on support for crop diversification on local farms and ranches. Agriculture on PRNS lands represents 17 percent of Marin's overall agricultural production and 17 percent of the land base. The 2007 Marin Countywide Plan<sup>2</sup> calls for greater community food security by increasing the amount and diversity of locally-produced foods providing residents greater access to a healthy, nutritionally adequate diet.

In addition to food production, agriculture on PRNS lands provides essential ecosystem services. Point Reyes and GGNRA grasslands have been profoundly and negatively altered by the permanent introduction (both intentional and accidental) of myriad, highly competitive non-native plants. Now, with most native grazers extinct and fire frequency drastically reduced, livestock grazing is the only viable ecosystem process that can effectively manage these non-native weedy plants and keep shrubs from invading grasslands. Livestock grazing is also important for maintaining suitable habitat for a number of federally protected grassland plants and animals.

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<sup>2</sup> Marin Countywide Plan GOAL AG-3 Community Food Security.

## **Section 2. The Values of Agriculture**

### **Cultural Value**

The NPS publication, *Stewardship Begins With People* (Diamant et al. 2007) describes Point Reyes as... “a place that can reconnect people to their natural heritage through a richness of wilderness and recreational experiences; and a place that can also reconnect people to the food they eat, the landscapes where it is grown, and the honorable labor of producing it.”

The preservation of local traditions and significant cultural landscapes is an important element of the NPS mission and mandate (Sadin 2007). Local producers, and regional and national consumers, recognize Point Reyes and West Marin as a special place, one with authentic foods of exceptional quality. Both the Point Reyes and Olema Valley ranching districts have been determined eligible for listing on the National Register of Historic Places, and a cultural landscape report is currently being finalized by PRNS staff.

The future of agriculture on PRNS lands is an issue that strongly affects the very nature of Marin County. Many of the Marin Countywide Plan’s goals, policies and programs support the tenet that continuing a strong agricultural presence on PRNS lands is critical to Marin County agriculture as a whole. In fact, enhancing local agriculture, rather than simply protecting or maintaining it is the basis for many of the Countywide Plan policies.

PRNS lands provide a direct link between urban consumers and local food producers, as 2.5 million visitors experience the beauty of the area each year. It is a powerful conduit for educating the public about the importance of local food production and security. While conversations were initiated over 25 years ago to create an agricultural literacy center at PRNS, the potential goes largely untapped today. West Marin is a perfect model for demonstrating how preserving family farms contributes to social, economic and ecological sustainability at a local, regional and even national level. Several PRNS and GGNRA ranchers have been recognized for their environmental stewardship and innovation. There has been no shortage of ideas, as described in community forums and in conversations with park officials, on how to interpret the culture in agriculture. NPS programs that embrace the agricultural landscape as highlighted in Diamant et al. (2007) should be encouraged and adopted as a viable planning concept for PRNS lands.

Connecting consumers with the origin of their foods is just one small part of the cultural importance of agriculture on PRNS lands. Ranching at PRNS and GGNRA preserves a way of life upon which the American West was founded, but is unknown to most modern Americans. The ranching life is one of hard physical work, family, and reaping what nature has to offer; one that, for most people, is only learned about in history lessons. This way of life is still a strong part of the social fabric of West Marin.

A growing number of national parks are choosing to embrace their agricultural histories and celebrate their working landscapes. PRNS stands uniquely poised to represent the best of this growing movement.

### ***Ecological Value***

A history of grazing in California grasslands reveals that while livestock grazing is a relatively recent phenomenon, large and small animals have always grazed California grasslands, albeit in many different ways (Jackson and Bartolome 2007).

Virtually all of California's grasslands have been highly altered by the establishment of numerous non-native plant taxa over the past 240 ± years. Introduction of these non-natives has been both intentional and accidental, with the initial introductions occurring even before the first missions were built, and before Spanish missionaries brought livestock to California (Mensing and Byrne 1998). While past livestock grazing has certainly been a factor in the loss of native plant species on some of California's grasslands, today it has proven to be an important tool for conserving and restoring native species.

California grasslands have suffered great losses from development and conversion to other habitat types. In ungrazed grasslands, especially those that abut or intergrade with shrub lands, shrub invasion can result in vegetation type conversion, and thus, loss of the grassland species. Significant acreage has been lost to shrub invasion on PRNS lands in areas where grazing has been removed.

During the PRNS planning process in the late 1950s and early 1960s, most NPS officials and legislators supported the continuation of ranching to maintain the rural flavor of the peninsula and for aesthetic reasons (Sadin 2007). Today, the vital ecological role of grazing in maintaining the health of coastal grasslands is widely acknowledged and is among the principal reasons that livestock grazing should continue on PRNS lands. Two recent studies examined the effects of grazing in the coastal prairie. One evaluated cattle grazing in 25 locations along the coast from Mendocino to San Luis Obispo (Hayes and Holl 2003), the other examined tule elk grazing at Tomales Point in PRNS (Johnson and Cushman 2007). Both studies came to similar conclusions: grazed areas had greater abundance and species richness of native annual forbs and non-native annual grass and forb species. The findings fit with theoretical predictions that grazing removes biomass and opens up micro sites favorable to annual plants.

Threats to native biodiversity, including special-status species, are likely to increase with removal or decrease of grazing. Research and anecdotal information have shown that grazing is strongly linked to maintaining habitat for some special-status species on PRNS lands, while they have been inconclusive for others. In all cases though, grazing has proven compatible with preservation of the special-status species found at PRNS and listed in Table 1.

**Table 1. Special status plants that occur in grazed areas at PRNS** (Federally listed plant species per USNPS 2001, and California Native Plant Society plant species per Bob Soost, 2004)

Common name	Scientific name
<b><i>Federally listed as threatened or endangered</i></b>	
Sonoma alopecurus	<i>Alopecurus aequalis</i> var. <i>sonomensis</i>
Sonoma spineflower	<i>Chorizanthe valida</i>
Tiburon paintbrush	<i>Castilleja affinis</i> ssp. <i>neglecta</i>
Marin dwarf flax	<i>Hesperolinon congestum</i>
beach layia	<i>Layia carnosa</i>
Tidestrom's lupine	<i>Lupinus tidestromii</i>
<b><i>California Native Plant Society rare</i></b> <sup>3</sup>	
Point Reyes horkelia	<i>Horkelia marinensis</i>
Point Reyes meadowfoam	<i>Limnanthes douglasii</i> ssp. <i>sulphurea</i>

Sonoma alopecurus (*Alopecurus aequalis* var. *sonomensis*) is found in eight naturally occurring populations in Sonoma and Marin counties. The four sites in Marin County all occur at PRNS and are all grazed by cattle. One historic colony that was located near Bolinas disappeared following exclusion of cattle from the site (USFWS 2002).

The largest occurrence of Sonoma alopecurus at PRNS is on the recently acquired AT&T property, which has been grazed for many decades. The exotic invasive velvet grass (*Holcus lanatus*) is a potential threat to Sonoma alopecurus sites (Bartolome 2009). Several studies provide evidence that grazing can be an effective means of managing velvet grass invasion (Hayes and Holl 2003; Pitcher and Russo 1988).

Sonoma spineflower is found solely in a grazed pasture at PRNS. A master's thesis completed in 1992 on the ecology of Sonoma spineflower concluded that grazing of competitive, non-native plants had a positive influence on Sonoma spineflower survival (Davis 1992a and 1992b; USFWS 1998).

Tiburon paintbrush and Marin dwarf flax occur on serpentine grasslands, with six occurrences of Marin dwarf flax on GGNRA grazing lands. PRNS staff concluded that "Marin dwarf flax may benefit from a moderate level of cattle grazing through the reduction of taller competing vegetation as the flax is subject to shading by competing grasses or may be suppressed by buildup of thatch from previous year's herbage if left ungrazed." (USNPS 2001).

Beach layia and Tidestrom's lupine are found in dune habitats and do not appear to be dependent on grazing, though many of their occurrences are within grazed pastures (USNPS 2001). Point Reyes horkelia and Point Reyes meadowfoam are also found primarily within grazed areas (Bob Soost 2004).

The federally-threatened California red-legged frog (*Rana aurora draytonii*) and federally-endangered Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*), are found within grazed habitats on PRNS lands. Research and anecdotal information have

<sup>3</sup> California Native Plant Society (CNPS) rare, list 1B plants are species that CNPS give the highest priority for state and/or federal protection. List 1A includes species that are presumed extinct.

shown that grazing may have beneficial effects on both of these taxa, indicating that either decreasing or removing grazing may negatively impact them.

Myrtle's silverspot butterfly inhabits coastal dunes, prairie, and scrub. Habitat suitability depends on numerous factors, but two critical components are the presence of its larval host plant, the native dog violet (*Viola adunca*), and adult nectar plants including numerous native wildflowers, as well as common weeds such as bull thistle (*Cirsium vulgare*) and Italian thistle (*Carduus pycnocephalus*). Most of the Myrtle's silverspot butterflies documented at PRNS have been found in areas that are grazed either by cattle or by tule elk. Butterfly surveys done by PRNS staff in 2003 showed occurrences of Myrtle's silverspot on 13 ranches, all of which support livestock operations (Adams 2005). Recent research on Myrtle's silverspot (Adams 2004; USNPS 2007) documents that Myrtle's silverspot and cattle have co-existed for over a hundred years and that the density of the nectar sources was higher in grazed areas. Biologists studying the Myrtle's silverspot at PRNS recorded more butterflies in grazed dunes and grasslands than in ungrazed plant communities.

The California red-legged frog occurs throughout PRNS and GGNRA. High numbers of frogs are found in grazed areas at PRNS and GGNRA, as well as on other public and private Bay Area land holdings where stock ponds and cattle are prevalent. Of 76 frog sites at PRNS and GGNRA, most are in grazing areas, with 51 in livestock ponds, 11 in riparian areas, and 14 in ephemeral pools, wetlands and springs. Of these frog locations, only one is in an area where livestock are excluded (USNPS 2001).

Livestock grazing has been shown to be compatible with, or to actually enhance the habitat for these eight special-status species (See Table 1). In most cases, the way in which livestock grazing benefits these, and other special-status species, is by mitigating the negative effects of aggressive, highly competitive non-native plants. Livestock grazing is now being widely used by conservation organizations and resource agencies throughout California, such as the California Department of Fish and Game and The Nature Conservancy, to preserve and enhance habitat for rare plants and animals.

### ***Economic Value***

Marin County agriculture is unique within California. It combines the best of traditional practices and products with cutting edge innovation in production techniques and marketing. In Marin, longtime farm families producing conventional products operate next door to organic operations and small niche processing facilities. Marin is a leader in organic agriculture with over 20,000 certified organic acres, much of it in pasture. It was the first county government in California to provide organic certification to local farmers and ranchers.

Marin farmers and ranchers provide a variety of foods to the greater San Francisco Bay Area including beef, lamb, dairy products, poultry and eggs, shellfish, fruits and vegetables, and wine. Historically PRNS and GGNRA ranches produced a greater diversity of farm products than they do at present (Livingston 2009), but row crop farming at Point Reyes largely disappeared during World War II. Permits for ranching on

PRNS lands largely restrict agricultural tenants to beef and dairy production, with some recent allowances for diversification. Despite this, PRNS and GGNRA ranchers' economic contribution to Marin's direct gross agricultural income is significant, at roughly 17 percent, as illustrated by Table 2. Direct agricultural income produced by PRNS and GGNRA farmers and ranchers was computed from PRNS and GGNRA livestock numbers, animal values provided by local ranchers, and the Marin County Agricultural Commissioner for 2005.

**Table 2. 2005 Direct agricultural income from PRNS and GGNRA**

	Marin County Total	PRNS/GGNRA Total	PRNS/GGNRA Percentage
Direct dairy income, milk	\$31,255,031	\$5,523,440	18%
Direct dairy income, cull cows	\$ 3,115,210	\$ 360,000	12%
Direct beef income	\$ 4,620,469	\$ 937,872	20%
Direct aquaculture income	\$ 3,264,910	\$ 399,450	12%
<b>Total</b>	<b>\$42,255,620</b>	<b>\$7,220,762<sup>4</sup></b>	<b>17%</b>

Additionally, land in agricultural production at PRNS and GGNRA accounts for a significant portion of Marin's critical mass of agricultural land. Table 3 illustrates the contribution of PRNS and GGNRA agriculture in acreage, dairy number, both dairy and beef cattle numbers, and aquaculture production.

**Table 3. Agricultural acreage and livestock in Marin County, and on PRNS and GGNRA, lands**

	Marin County Total <sup>5</sup>	PRNS/GGNRA Total	PRNS/GGNRA Percentage
Acreage of agricultural land	165,064 <sup>6</sup>	28,064 <sup>7</sup>	17%
Number of dairies	27	6	22%
Number of mature dairy cattle	10,200	2,000	20%
Number of dairy heifers	14,270	2,000	14%
Number of beef cattle	9,000	2,340	26%
Pounds of shellfish <sup>8</sup>	508,624	138,958	27%

However, to understand the real value of agriculture at PRNS and GGNRA, the various economic strata that comprise it must be considered. The tremendous investment in stock animals and infrastructure required for the production of products and annual income should be taken into account. Table 4 shows stock animal values based on actual livestock numbers on PRNS lands and market values as of 2005.<sup>9</sup> Infrastructure

<sup>4</sup> Livestock and dairy income shown in Table 2 was derived from the approximately \$6.9 million worth of dairy and beef cattle owned by PRNS and GGNRA ranchers. Livestock feed produced on PRNS lands and utilized by PRNS and GGNRA ranches include silage and haylage valued at \$280,000 and pasture valued at \$839,260.

<sup>5</sup> Marin County Crop Report and State Fish and Game Shellfish figures 2005.

<sup>6</sup> This number represents the approximately 137,000 acres of privately owned agricultural land in Marin County plus the 28,064 acres of land in ranching at PRNS and GGNRA. The 137,000 acres includes all agriculturally zoned land, some of which is not in active production. Therefore, PRNS and GGNRA agricultural land actually accounts for more than 17% of land in production.

<sup>7</sup> Acreage under Special Use Permits for ranching as of 2009, per letter from Don Neubacher to Dave Lewis dated July 24, 2009.

<sup>8</sup> The aquaculture operation changed ownership in 2005.

<sup>9</sup> Actual livestock numbers on PRNS lands are taken from the number of animals authorized in the 2001 Biological Assessment (USNPS 2001) minus the inactive operations. Livestock values were calculated by interviewing local ranchers regarding 2005 market prices.

values are not available.

**Table 4. Investment value of stock animals at PRNS and GGNRA**

	Marin County Total	PRNS/GGNRA Total	PRNS/GGNRA Percentage
Value of beef cattle	\$ 3,078,000	\$1,783,080	58%
Value of mature dairy cattle	\$18,360,000	\$3,600,000	20%
Value of dairy heifers	\$ 8,446,500	\$1,534,000	18%
<b>Total</b>	<b>\$29,884,500</b>	<b>\$6,917,080</b>	<b>23%</b>

PRNS in 2006 commissioned an *Economic Impacts Study* from the consulting firm Bay Area Economics. This study, which used the IMPLAN input-output model, concluded “the park’s agricultural activities comprise a small percentage of total agricultural value in Marin and Sonoma counties, approximately 0.9 percent in 2005” (BAE 2006). The report diminishes the importance of agriculture on PRNS lands to Marin County by including Sonoma County agriculture, and its \$400,000,000 wine industry in the analysis. The report also omits income from the aquaculture operation at Drakes Estero, and fails to accurately account for direct annual ranching income<sup>10</sup> produced by PRNS and GGNRA agricultural families as shown in Table 2.

Shown below in Table 5 is the direct income for Marin County and PRNS aquaculture since 2005, as reported in the Marin County Crop Report. The PRNS figures are provided with permission from Drake’s Bay Oyster Company.

**Table 5. Marin County and PRNS shellfish direct income**

Year	Marin County Total	PRNS Total	PRNS Percentage
2005	\$3,264,910	\$ 399,450	12
2006	\$2,594,177	\$ 685,800	26
2007	\$2,632,930	\$1,097,724	42

In 2007 seven aquaculture companies located in Tomales Bay and Drake’s Estero produced a total of 739,996 pounds of shellfish. Sixty-three percent, or 466,533 pounds, was produced in PRNS (Moore 2009).

In addition to direct agricultural income, in 2005, PRNS and GGNRA ranches provided approximately 65 jobs, as well as a livelihood for another 25 family farmers who would otherwise need outside employment. In reality, multiple family members run most of the larger ranches on PRNS lands, increasing this number substantially.

In Marin over 50% of the farms and ranches report hiring farm labor, with 542 workers employed by producers with both part-time and full-time employees. Over \$7 million is spent on on-farm employee payroll (USDA NASS 2007). The PRNS and GGNRA ranching families have strong ties to their local communities. Bankers, accountants, veterinarians, milk testers, equipment retailers, feed mills, and milk haulers are all dependent on the maintenance of a strong agricultural community in Marin.

<sup>10</sup> These values are based on 2005 data, the year that the economic study analyzed.

Manufacturing, marketing, and distribution of milk and beef products employ another significant segment of the community.

Support for agriculture on PRNS lands is described in the Marin County Local Coastal Program Unit II (County of Marin 1980), illuminating its value to the local economy with this statement: “The economic activity associated with agriculture in the federal parks forms a significant part of Marin County’s total agricultural industry.”

### **Section 3. *The Changing Role of Agriculture***

#### ***Intention for Agriculture at PRNS and GGNRA***

The right for agriculture to continue on PRNS lands has been a topic of debate over the years. The 1962 legislation that created PRNS is not explicit on this matter and differing perspectives are demonstrated by testimony preceding the 1962 enabling legislation and legislation passed in the 1970s. However, the legislative testimony regarding establishment of PRNS and the 1962 creation of a Pastoral Zone<sup>11</sup> within it, points toward an expectation that agriculture would continue within the PRNS boundaries.

PRNS was originally proposed at 35,000 acres in size, and bills proposed in 1959 by Engle (S.2428) and Miller (HR. 8358) excluded the Pastoral Zone from ownership by the NPS, although it was included within the park boundary (Sadin 2007). When PRNS was established in 1962, the Pastoral Zone was identified as an island of privately owned rangeland, within which properties of 500 acres or more could not be condemned.

Under the original legislation, this island of ranches would have remained in private ownership if owners chose to continue ranching and opted not to sell, as a majority of them did. However, in 1970 Public Law 91-223 was enacted, increasing the Seashore’s land acquisition budget and also allowing condemnation of the privately owned Pastoral Zone lands. The threat of possible future condemnation led all of the remaining ranch families within the Pastoral Zone to sell their land to the Federal government, though most of them continued ranching under 20 to 25 year government agreements called reservations of use and occupancy (RUO) (Sadin 2007).

GGNRA was established in 1972 and included a number of active ranches in the Olema Valley, adjacent to the Point Reyes peninsula; the GGNRA ranches were purchased soon after.<sup>12</sup> In 1978, Public Law 95-625 amended the 1962 PRNS enabling legislation to establish a permit system for continuing agriculture beyond the terms of the RUOs, allowing the original ranch owners or lessees to continue ranching into the future. Agriculture on PRNS lands continues today under these special use permits (SUPs).

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<sup>11</sup> There is some confusion as to the exact acreage of the Pastoral Zone, which was 26,000 acres in size when the 1962 legislation was passed and it was still under private ownership. The Resource Management Plan, Point Reyes National Seashore, September 1994 documents only 20,600 acres within a “pastoral zone.”

<sup>12</sup> The Olema Valley is part of the Northern District of GGNRA and is now managed by PRNS, in an arrangement between the two park units.

Although dairy and beef ranching were the principal types of agriculture when both PRNS was created, the oyster farming in Drake's Estero was also considered to be an important use that should continue. A *Land Use Survey and Economic Feasibility Report for Point Reyes National Seashore*, part of the body of planning documents prepared in anticipation of the PRNS states: "Both the oyster production and the commercial fishery operations, in the thinking of the National Park Service planners, should continue under national seashore status because of their public values" (USNPS 1961).

Testimony and bills predating the 1962 legislation illustrate the sentiment of several political figures regarding retention of agriculture within PRNS. At the 1960 Senate Hearing (in Kentfield) for the Engle bill (S. 2428), NPS Director Conrad Wirth described the Pastoral Zone lands and proposed that they be leased back to the ranchers for continued ranching, and George Collins, NPS Regional Chief of Recreation and Planning, supported the existing commercial oyster beds, describing them as "a very important activity" along with the oyster cannery, and stating that they would continue under national seashore status because of their public values<sup>13</sup> (Watt 2008).

At the 1961 Senate Hearing, when asked by a Senator if the pastoral zone would be kept in grazed rangeland in perpetuity, Wirth said: "Yes, sir."<sup>14</sup> The National Parks Association [now National Parks Conservation Association] also testified at this hearing in favor of preserving the pastoral zone and its ranching uses. They described the combination of dairy country and wild natural shore land as part of the charm of Point Reyes, and advocated for its preservation. At the 1960 Senate hearing, Harold Gilliam, a member of the Point Reyes Foundation, also spoke on behalf of preserving the rights of individual residents who want to continue living or ranching on their property and felt that this was compatible with preserving the scenic beauty of the area for the "crowded future" (Watt 2008).

On March 20, 1961, the Marin County Board of Supervisors recommended that only 20,000 acres be included in the proposed 53,000 acre PRNS because of the Board's strong concern that the dairy industry would be harmed if not destroyed by the lack of protection of agricultural lands in the 53,000 acre proposal. Congress responded appropriately and, in 1962, when the legislation finally passed, the House Committee report stated: "...the Committee has provided for the designation of a pastoral zone of 26,000 acres, which shall not be acquired by the Secretary without the consent of its owners as long as the land remains in its natural state or is used exclusively for ranching and dairying purposes."

In 1970, in order to give the federal government the power of condemnation to complete the Park, the Board of Supervisors, with the endorsement of the ranchers in question,

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<sup>13</sup> Note there are no longer commercial fisheries in PRNS

<sup>14</sup> At the 1976 wilderness bill hearing, co-sponsor Sen. Tunney stated: "Established private rights of landowners and leaseholders will continue to be respected and protected. The existing agricultural and aquacultural uses can continue."

supported an amendment which repealed the legislatively mandated pastoral zone with the clear understanding that agriculture was to remain as a permanent part of PRNS.

The Marin County Board of Supervisors has continued its strong support of agriculture on PRNS lands, as demonstrated by inclusion of numerous supporting policies and programs in the 2007 revision of the Marin Countywide Plan, including Policy AG-1.9: “Encourage continuation of agricultural operations and uses in the pastoral zones of the Point Reyes National Seashore and the Golden Gate National Recreation Area through long-term tenure agreements (leases) with agricultural operators.”

The NPS may intend to support the long-term agricultural continuation implied by this testimony, however the current five-year limit on most SUPs and restrictions on agricultural crops and products weaken long-term agricultural stability on PRNS lands.

### ***Approach to Managing Agriculture***

Despite the support by political entities for continued agriculture within PRNS, once former ranch lands came under federal ownership, agriculture was viewed as an oddity within a National Park culture that focuses on resource protection and visitor services. Additionally, the ecological benefits of grazing in California grasslands were not recognized at this time, so grazing was viewed and treated as a potentially damaging activity. In the numerous management plans<sup>15</sup> produced by the PRNS over the past 30 years, ranching is portrayed as something that may provide educational and aesthetic elements, rather than as an integral part of the park ecosystem. Where mentioned in these plans, agricultural practices are described as needing improvement, and PRNS range management documents focus on monitoring grazing use to “protect” resources from damage. It wasn’t until 2001 that a PRNS resource management document, the *Biological Assessment (USNPS 2001) on the Renewal of Livestock Grazing Permits in Point Reyes National Seashore and the North District of Golden Gate National Recreation Area Marin County, California* (the Biological Assessment) recognized the beneficial role of grazing in resource management.

Formal development of guidelines for managing livestock grazing within PRNS began in 1983 with production of *A Guide to Monitoring Livestock Use within the Pastoral Zone at Point Reyes National Seashore* by Paul Sugnet, a University of California at Berkeley graduate student and James Bartolome, an Associate Professor of Range Management (Sugnet and Bartolome 1983).

This initial range management document cited failure of PRNS to hire personnel trained specifically in range management and the frequent turnover of personnel in the resource management specialist’s position as reasons that past attempts to implement a range monitoring program had been unsuccessful.

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<sup>15</sup> These include: the 1976 Natural Resources Management Program, Point Reyes National Seashore, California (July 1981 revision); the Environmental Analysis for the 1980 PRNS General Management Plan; the 1993 Statement for Management; the 1994 Resource Management Plan; the 1999 Resource Management Plan.

Sugnet and Bartolome (1983) established a program for grazing management and recommended consulting with the Soil Conservation Service<sup>16</sup> on soil erosion issues, and undertaking field experiments in conjunction with the University of California to determine the response of desired forage species to various grazing systems. They recommended establishing permanent transects to monitor range trends, such as changes in species cover and composition over time. They also recommended increased communication with ranchers, stating: “A significant increase in communications between ranch operators and resource management must be made before effective management of the pastoral lands can be achieved. At present, resource management personnel know very little about the operation of the respective ranches.”

PRNS staff resources were specifically allocated to working with and monitoring ranching starting in the mid-1980s when, under then-superintendent Sansing’s management, the first range conservationist was hired in 1985 (Sadin 2007). In 1988 the NPS produced its first document specifically about range management titled *Range Management Guidelines* (USNPS 1988).<sup>17</sup> The document included background text and resource descriptions, discussed the effects of ranching, and included descriptions of what effect “heavy,” “moderate,” and “light” grazing defined by residual dry matter (RDM) standards, would have on soils and other resources. It also recommended resource protection measures, addressing in a very general way protection of threatened or rare species and their habitats; preservation of archaeological sites; identification and protection of significant natural resources in the pastoral zones; and management for the health and perpetuation of existing native plants and animals. It addressed livestock waste management, soil erosion, visual standards, weed management, and recovery of rangeland resources.

These guidelines also reiterated some of the concepts introduced by Sugnet and Bartolome (1983), including RDM, key area monitoring, and species composition monitoring to evaluate range condition and trend. Lastly, it provided guidelines for cultivation of forage crops on PRNS ranches.

Two years later a new version of the Range Management Guidelines was produced (USNPS 1990a), along with a Range Monitoring Handbook, (USNPS 1990b). The new Range Management Guidelines described range resources, resource protection measures, grazing and cultivation standards and cited “...the legislative mandate or charge to also continue agricultural activities.”

The Range Monitoring Handbook explained in detail procedures for carrying out annual monitoring as recommended by Sugnet and Bartolome (1983) and the Range Management Guidelines. These monitoring protocols were followed for about eight years, but with turnover in the range conservationist staff position monitoring became sporadic and little RDM and range condition monitoring have been performed since 1997 (J. Stewart 2009).

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<sup>16</sup> Now the Natural Resources Conservation Service.

<sup>17</sup> This title was misspelled on the cover as Range Magement Guidelines and the authors were not identified.

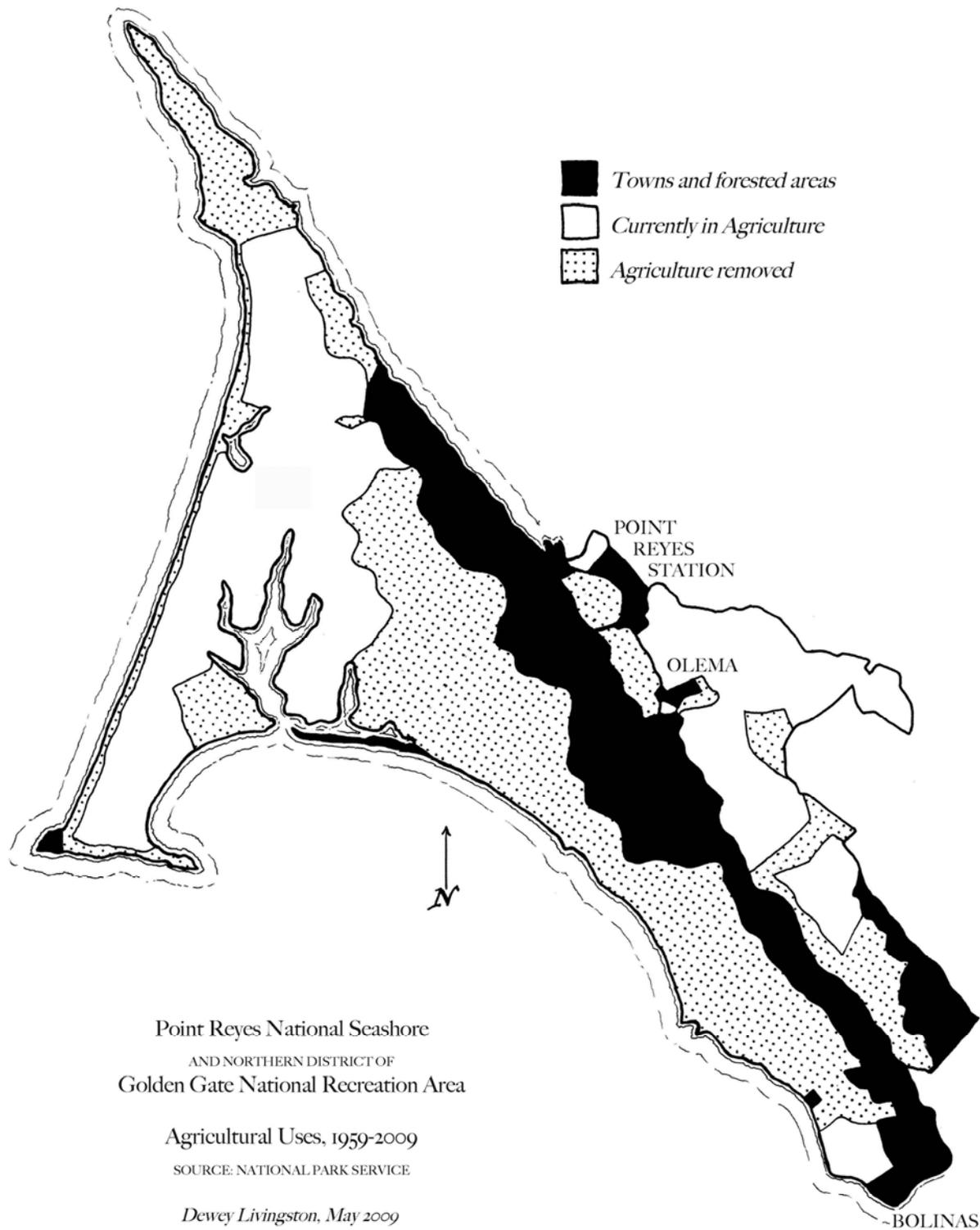


Figure 1

In 2001, in response to the threat of a lawsuit by the Center for Biological Diversity, PRNS, in consultation with the US Fish and Wildlife Service, prepared the Biological Assessment. The stated purpose of the Biological Assessment was “to review the proposed renewal of livestock grazing permits for areas managed by Point Reyes National Seashore to determine to what extent the proposed action may affect any of the Federally-listed Threatened or Endangered species...”. The Biological Assessment discusses the potential effects of cattle grazing on special-status plant and animal species, and draws conclusions about grazing effects on individual species. Most of the special-status animals are not subject to impacts by grazing, while many of the plant species, especially those that occur in grasslands, are. This document recognizes the compatibility of grazing with preservation of many special-status species.

Although communication between ranchers and PRNS resource management may have improved in the 26 years since Sugnet and Bartolome (1983) mentioned it in their range management guide, ongoing tension between some ranchers and the PRNS staff has resulted in lost opportunities for collaboration whereby ranching tenants are treated as integral partners in the resource management program.

### ***Resulting Land Loss***

Today, at approximately 17 percent<sup>18</sup> of Marin’s agricultural land base, federal lands being farmed and administered by PRNS continue to play a critical role in maintaining the viability of Marin County agriculture. PRNS and GGNRA ranchers continue to provide a substantial portion of Marin’s agricultural products and income, despite the fact that the agricultural land base within PRNS and GGNRA has been drastically reduced since these park units were created.

Virtually all of the lands both within and outside of the PRNS Pastoral Zone were productive ranches at the time this park was created and much of GGNRA’s acreage was also in active agricultural use. Beyond the initial loss of rangeland due to conversion to parkland (See figure 1), lands specifically designated for agricultural use<sup>19</sup> have been reduced by approximately 2,500 acres due to PRNS management decisions.<sup>20</sup> The 1,382-acre Wilkins Ranch, which was within GGNRA but was not zoned for agricultural use, has also been removed from ranching.

Clearly loss of agricultural land within PRNS is a serious problem. Ranch acreage losses within the PRNS pastoral zone and GGNRA lands zoned for pastoral landscape management have resulted from the closure of entire ranches as well as by whittling away portions of remaining ranches. Some of this loss has been due to evictions or cancellation of permits, some has been due to families leaving the ranching business, and some agricultural land has been taken out of production by PRNS for resource management purposes.

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<sup>18</sup> This proportion has decreased in recent years due to lands being removed from agriculture.

<sup>19</sup> Lands within PRNS’s Pastoral Zone were designated for agricultural use by enabling legislation and GGNRA’s agricultural lands were zoned for “Pastoral Landscape Management “ in USNPS 1980b.

<sup>20</sup> This includes a portion of the former Horick (D) Ranch, a portion of the Murphy (Home) Ranch, a portion of the K Ranch, the former Jewell Ranch, the former Desouza Ranch, portions of the Stewart Ranch, the Tacherra Ranch, and other minor acreages.

Regardless of the reasons, these agricultural land losses have had a significant negative effect on agricultural production, as well as on the critical mass and stability of local agriculture. As land is taken out of ranching, the cost and availability of support services and supplies are incrementally affected. Eventually, some support businesses cease to operate, increasing the burden for ranchers who choose to keep ranching. Because the ranch profit margin is extremely slim, increased travel to access services or supplies, or increased shipping costs to markets can mean the end of a family's business, and that in turn affects others.

#### **Section 4: *Recommendations for the Future of Agriculture***

Clearly, West Marin's very nature depends on continuation of a strong agricultural community, including the many contributions of PRNS and GGNRA ranchers. Issues identified in this report can be resolved with improved communication and a renewed commitment to supporting ongoing agriculture within the national parks, as was envisioned when PRNS was formed. Senator Dianne Feinstein has been responsive to concerns about the future of agriculture on PRNS lands. On January 6, 2009, following a meeting between herself and the ranchers, Senator Feinstein wrote a letter to all PRNS and GGNRA ranchers expressing her support:

"What came through loud and clear at these meetings were three things: first, that Special Use Permits which allow you to operate at Point Reyes need to be issued for longer periods of time than five years. Second, that many of you would like the opportunity to diversify your operations in an effort to stabilize your income. And third, it was very apparent that the National Park Service needed to do a better job of communicating with ranchers and facilitating communications among interested groups in the West Marin area."

Developing and implementing a new vision for long-term agriculture on PRNS lands will take hard work. It will also require a change in attitude for some, as well as extensive give and take by both parties. The involvement of Senator Feinstein indicates support for agriculture on PRNS lands from the highest level of government, and the examples set by other national parks as showcased in Diamant et al. (2007) demonstrate that such partnerships are possible.

The following issue statements and proposed solutions identify potential actions to improve the relationship between agriculture on PRNS lands and the NPS, and to strengthen long-term agriculture viability, in the context of reviewing the upcoming draft GMP.

##### ***Restructuring SUPs***

Long-term agricultural stability is not supported by the current five-year term and production limitations of the ranch SUPs, the agreement by which PRNS and GGNRA ranchers operate on federal land.

The issue of excessively short SUPs was recognized nearly 30 years ago in the Local Coastal Program Unit II: “The problem with special use permit arrangements is that they provide no security to the ranchers. Without a clearer understanding that agriculture will be permitted to continue in the federal parks in the future, the ranchers are reluctant to invest in maintenance and capital improvements” (County of Marin 1980).

*Increasing SUP Length.* Longer SUP terms would give agriculture on PRNS lands a more stable future. Currently, most ranchers have no assurance that they will be able to continue their businesses on the land where many of them have lived and worked for generations, beyond the five-year term of their SUP. This is a disincentive for making capital improvements to buildings and livestock management infrastructure such as fencing and water sources. The expense of cyclic maintenance such as painting buildings, water system upkeep, and other minor repairs can be reasonably justified within a five-year time frame. However, more substantial capital improvements, such as cross fencing and livestock water developments that cannot be amortized over a five-year period require ranchers to place significant capital at risk while failing to provide any assurance that they will be able to recoup their investments in such improvements.

*Formalizing Agricultural Diversification in SUPs.* SUPs should allow for some level of agricultural diversification, including educational tours. Small-scale row crop farming, production of different livestock species, and allowance of agricultural processing and sales would afford ranch families the same stability as other Marin farmers and ranchers and provide the local community with diversity of local foods. Marin County, in its Countywide Plan Policy AG-2.3, indicates its support for agricultural diversification.<sup>21</sup>

### ***Regaining and Maintaining the Agricultural Land Base***

Removal of significant acreage from agricultural production has reduced the ability of PRNS and GGNRA ranchers to produce food and threatens the critical mass of Marin’s agricultural land. Marin County’s concern for this issue is addressed in Countywide plan policies that support preservation of agricultural production and address both land and aquaculture leaseholds with Policies AG-1.8 and AG-2.7 respectively: “Encourage private and public owners of lands that have traditionally been used for agriculture to keep land in agricultural use by continuing existing agricultural uses, developing compatible new agricultural uses, and/or leasing lands to agricultural operators; support maricultural usage of tidelands and onshore production areas. The need for mariculture sites in coastal waters should be aligned with the need to provide for other uses, such as commercial fishing, recreational clamming and boating, and protection of coastal native wildlife species, water, and visual resources.”

*Regaining Ranch Land.* As noted earlier, approximately 3,880 acres of PRNS lands have been removed from ranching, beyond the initial losses due to formation of PRNS

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<sup>21</sup> **Support Small-Scale Diversification.**

Diversify agricultural uses and products on a small percentage of agricultural lands to complement existing traditional uses, help ensure the continued economic viability of the county agricultural industry, and provide increased food security.

and GGNRA. These lands have been removed from agriculture without formal review or knowledge of how resources would be affected, but apparently cannot be put back into production without review by various federal agencies. For example, grazing was removed from the entire 536-acre Jewell Ranch by PRNS in 1997 “in an effort to reduce significant threats to coho salmon” (Neubacher 2008), although removal of grazing from the entire ranch was not necessary for protection of Lagunitas Creek. During the 2008 drought, one of the GGNRA ranching permittees requested use of the Jewell Ranch pastures so he would not be forced to sell cattle due to lack of forage. This request was denied by PRNS, with the reason that this ranch was not reviewed for grazing by necessary federal agencies including the National Marine Fisheries Service and U.S. Fish and Wildlife Service.

A process for restoring ranching on PRNS lands removed from agriculture could be initiated during the GMP process, whereby the original PRNS pastoral zone acreage and GGNRA lands zoned previously used for ranching could be reclaimed for agriculture. This restoration could be part of a larger shift in PRNS management philosophy to embrace the working landscape component of the park.

#### *Planning for Ranch Succession.*

“Encouraging and supporting transfer through inheritance, sale, or lease of agricultural properties to future generations of ranchers and farmers” is as important on public lands as it is on those that are privately owned.<sup>22</sup> Removal of PRNS lands from agricultural use over the years has chipped away at Marin’s critical mass of agricultural land, affecting all of Marin agriculture. Some ranch lands have been lost to production when family members died or retired, as explained by Sadin (2007): “When a ranch operator retires or dies, and no family member steps in to succeed them, the park will have to decide whether and how to keep that dairy or cattle operation going.”

PRNS should develop a succession plan for ranches that would identify a process for continuing agriculture on each ranch, so that death or retirement of individual ranchers does not result in loss of production, ecological degradation of grasslands, and deterioration of ranch buildings.

#### ***Ranchers as Partners***

A sense of separation between some agricultural tenants and NPS management has resulted in lost opportunities for developing partnerships with ranching tenants who could be integrated into the resource management program. Additionally, this has led some tenants to fear for the future of their ranching operation.

#### *Develop Improved Communication.*

In 1983 Sugnet and Bartolome recommended increased communication with ranchers “before effective management of the pastoral lands can be achieved.” Inadequate communication between ranchers and PRNS management remains a major issue today, as indicated by Senator Feinstein who, in her January 6, 2009 letter to PRNS and GGNRA ranchers, said that the NPS needs to do a better job of communicating

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<sup>22</sup> Marin Countywide Plan Policy AG-2.11

with ranchers and facilitating communication among interested groups in the West Marin area.

Ranchers operating within the park need and deserve regular and objective feedback on their management practices. Many of the concepts and procedures called for in the three main PRNS range management documents would provide this and give the public confidence that PRNS range resources are being properly managed. It is hoped that regular monitoring following established procedures will once again be used to evaluate ranching and that monitoring results will be shared openly with ranchers so that solutions to any noted problems can be resolved in a timely manner.

Park Superintendent John Sansing made it a priority to establish and maintain a strong working relationship with park ranchers. Several times a year he and Chief Ranger LeeRoy Brock met with the agricultural community to discuss dairy and grazing issues, permit processes, water use, and other pertinent topics (Sadin 2007). The Point Reyes Seashore Ranchers Association was created in 2001 to facilitate a healthy relationship between the permittees and the NPS.<sup>23</sup> One of its intended goals is to provide a forum for joint discussion, as had been the case during the Sansing administration. Regularly scheduled meetings between ranchers and PRNS management should be reinstated.

#### *Utilizing Ranchers in Resource Management.*

Over the past decade, recognition that properly managed livestock grazing provides essential ecosystem services has led numerous public landowners and private conservation organizations to return ranching to conservation lands or to develop partnerships with existing grazing tenants. For example, the California Department of Fish and Game has returned livestock grazing to two of its ecological reserves on the Santa Rosa Plain to enhance habitat for several endangered vernal pool plant species. The Nature Conservancy, the world's largest private land conservation organization, utilizes livestock grazing as a tool for management and ecological restoration on many of its lands.

Partnerships between PRNS resource management staff and PRNS grazing tenants could put grazing to use in specific areas as a tool to enhance habitat of species that would benefit. Additionally, ranching tenants could be utilized in efforts to restore native grasses, by growing seed and helping manage newly seeded areas.<sup>24</sup>

#### **Conclusion**

PRNS management focus and priorities for its lands have evolved over time. As PRNS enters its fifth decade, it is poised to potentially transform the management and interpretation of the park's cultural and historic resources in new ways. Both Park Superintendents (Sansing and Neubacher) championed the movement of PRNS away

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<sup>23</sup> Point Reyes Seashore Ranchers Association printed materials.

<sup>24</sup> A native grass restoration project on the Historic D Ranch in 2003 involved collection of native grass seed that was sent to a native seed grower on the Central Coast to grow out for seed production. The seed was then sent back to PRNS and planted in 2004. The success of this project could have been enhanced by utilizing PRNS ranchers from the project inception.

from an insular and isolated unit to a park that welcomes collaboration, partnership, and positive community interactions.

The next decade promises a continued redefinition of PRNS and GGNRA. It is hoped that the idea of a working landscape where private operators can continue commercial operations on public lands, providing ecological and cultural services to the surrounding community, will be encouraged and implemented.

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