

Mr. Eric Tattersall
Acting Chief, Conservation Planning & Recovery
U.S. Fish & Wildlife Service
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RE: Proposed Amendment to San Bruno Mountain Habitat Conservation Plan 73 Federal Register 20324

June 13, 2008

Dear Mr. Tattersall:

I am writing regarding the proposed amendment to the Habitat Conservation Plan as noticed in the 73 Federal Register 20324. Please allow me to offer my education and experience, and how these shape the opinion I express on the following pages.

Education and experience

My academic background is as an ecologist and as an entomologist. I received my undergraduate degree from U.C. San Diego in biology in 1994, majoring with an emphasis in ecology, animal behavior, and evolution. In 2003, I received my master's degree from San Francisco State University. My master's thesis at San Francisco State was based on the study of the ecology of the Mission Blue butterfly on San Bruno Mountain from 1997 - 1999. Specifically, I collected data regarding the distribution of its egg and larval stages at Buckeye and Owl Canyons, the Northeast Ridge, South San Francisco grasslands, and the summit around Radio Ridge. I found that the location of the Mission blue young was strongly influenced by the specific site and its ecology. Places on the mountain with a favorable mix of characteristics serve as butterfly 'nurseries', with dense aggregations of eggs and larvae. These places are sheltered, have an abundance of butterfly host plants, and ant symbionts that serve as caterpillar larvae 'care-givers'. My research indicates that the Northeast Ridge of San Bruno Mountain is one of these places.

In my graduate training, I took classes in general entomology, mycology, conservation biology, and plant taxonomy. As part of Professor John Hafernik's class, I identified and preserved specimens we had collected from surveys of San Francisco's natural areas and beyond. As the curator of the Entomology Museum at San Francisco State University, I maintained the collection, and interpreted its contents to visitors and students.

I first noted Callippe Silverspot adult presence in the grasslands of the Northeast Ridge while engaged in my master's research in 1998. I read the available research on their life history and ecology, and examined specimens at the California Academy of Sciences. As I continued my work in the grasslands, I became familiar with the botany, distribution, restoration and preservation of its larval host plant - *Viola pedunculata* - in the field and nursery setting. I intend to continue with my ecological research on the Callippe Silverspot to reveal unique aspects of its biology.

Since 2004, I have been a full time professor of environmental horticulture at City College of San Francisco. I teach classes in landscape design, plant propagation, xeriscape, and tree care. My main teaching interests are the importance of soil and water, and the role that plants play in relation to our human community.

As a biological consultant, I have surveyed for the Mission Blue butterfly in grasslands around the Bay Area. I surveyed the Marin Headlands in 2006 for the Golden Gate National Recreation Area. I have conducted surveys in Pacifica at Mariner's Pointe from 2004 to 2008, and at Milagra Ridge in 2003. As a biologist for the Natural Areas Program of San Francisco's Recreation and Parks Department, I documented the Mission Blue butterflies on Twin Peaks from 2000-2004, and developed the survey protocol which has been used ever since. Additionally, during this time, my duties included the management and restoration of San Francisco natural areas: educating the public, vegetation management (weeding), growing native plants for out planting, and surveying for plant, insect, and fungal diversity.

Since my master's thesis research on San Bruno Mountain ended in 1999, I have returned to visit the Northeast Ridge of San Bruno Mountain on many occasions to study its diverse flora and fauna, and to show visitors a prime example of intact butterfly grasslands. In the spring of 2007, I surveyed the grasslands of the Northeast Ridge for the host plants of the Callippe Silverspot and the Mission Blue, and documented their ecology. This report was published by the San Francisco Professional Gardener's Association, and a copy is enclosed herein.

My analysis of the impacts of the proposed HCP amendment is based on my education and research; my experience as a habitat restorationist and as a biological consultant; and my observations on San Bruno Mountain over the past eleven years. Moreover, it is supplemented by observations of the remaining Franciscan grasslands from Marin to Pacifica. I have reviewed the San Bruno Mountain Habitat Conservation Plan Amendment Environmental Assessment of October 2007 by Jones and Stokes (EA); the Analysis of Butterfly Survey Data and Methodology from San Bruno Mountain Habitat Conservation Plan (1982-2000) by Longcore, Lam and Wilson; the Year 2007 Vegetation Management Activities Report For Endangered Species Permit PRT-2-9818 by San Mateo County Parks Department (January 2008); and the internet sites about the Callippe Silverspot by U.C. Berkeley's Essig Museum, U.S. Fish and Wildlife Service, and Xerces Society. The analysis is divided into five parts: existing habitat, the process of butterfly decline, lack of research on San Bruno Mountain, mitigation restoration and management, and a feasible alternative.

Existing habitat

What will the impact be if and when development as proposed by the HCP amendment goes forward? The immediate impact will be the loss of endangered butterfly host plants. The EA estimates a loss of 2,514 *Viola pedunculata* plants - the larval host plant of the Callippe Silverspot. Based on my 2007 survey of the Northeast Ridge, at least 1,100 *Lupinus albifrons* plants, host plant of the Mission Blue butterfly, would also be destroyed. The butterfly larvae of both species that rest in or near the ground would be killed, as would any eggs laid on the plants. In the long term, the HCP amendment would cause the death of several thousand adult individuals of both species. In addition, all the other associated plants and invertebrates that rely on these grasslands as home will be destroyed. The geology and hydrology unique to this site will be altered.

The proposed action would continue development, fund human management activities for the future, and cause the take of the listed species and the destruction of habitat. The proposed action would destroy 19.64 acres of prime endangered species habitat, as well as the 1.07 acres referenced in the EA. In light of the endangered status of the Callippe Silverspot and the Mission Blue butterfly, this take and destruction is most definitely **significant**.

This action does not fulfill its own mandate or purpose to “Protect, conserve, and enhance the long-term survival of the Species of Concern, including the Callippe Silverspot and bay checkerspot, and their habitat for the continuing benefit of the people of the United States. (EA 1-6)”. Nowhere in this amendment is there the protection and conservation of existing Callippe Silverspot or Mission Blue habitat.

The Mission Blue and the Callippe Silverspot are endangered in part because their particular ecological needs are specific. They are not a cosmopolitan butterfly such as the Painted Lady which is found worldwide, its larvae feeding on an array of widespread plants like cheeseweed and thistles. Nor are they native butterflies that have fully adapted to non-native plants, thereby increasing their population and generations per year. An example of this is the anise swallowtail butterfly that lays its eggs on the urban weed fennel.

Based upon my research and experience, the Mission Blue only lays its eggs on a few species of wild lupines, and the Callippe is restricted to laying eggs on the Johnny jump up viola *Viola pedunculata*. These plants are patchy in distribution. The lupines favor rocky outcrops and thin soils, while the viola grows most abundantly on the Northeast Ridge in grasslands with wet soils accompanied by long petaled irises, buttercups *Ranunculus californica*, and native bunch grasses. Furthermore, Mission Blue larvae’s long term survival is linked to specific ant species that care for its larvae and protect it from predators. Both host plants (lupines and violas) are found only in the grasslands, itself a scarce vegetation community on the San Francisco peninsula.

The Northeast Ridge is one such intact grassland of the highest quality on San Bruno Mountain. It is protected from the fog and prevailing winds that shroud the westerly flanks of San Bruno Mountain. There are the soils favored by the lupines, and the gentle hill tops for adult Callippes to congregate and mate. It has an abundance of butterfly

host plants, numerous other plants to nectar on, and the Mission Blue symbiont ant *Prenolepis imparis* nests here also. All these features taken together, the Northeast Ridge is the ideal place for caterpillars, adults seeking mates, and females laying eggs. The Callippe Silverspot, the Mission Blue, and their larval host plants, are found nowhere else in the world but for the San Francisco Bay Area. San Bruno Mountain is their best remaining habitat.

Process of butterfly decline

If the land of the Northeast Ridge is graded and built upon, as proposed by this HCP amendment, the Callippe Silverspot and Mission Blue butterfly host plants will be destroyed. So will the butterflies that use the host plants to feed their young. The first butterfly to go extinct in the United States was the Xerces Blue in San Francisco. Its principal host plant deerweed, along with the sand dunes, were built over. The relative of the Mission Blue, the Phere's Blue, also went extinct in the 1940's and '50's when the dunes became houses.

The process of grading, construction, and building causes immediate destruction, and changes the contour of the land and flow of water. Examples of the disturbance that grading causes on grassland slopes are easy to observe. It has already occurred here at the Northeast Ridge: "Development of the first phase, which is substantially occupied, permanently disturbed 66.9 acres. In 2006 and 2007, the City of Brisbane and the USFWS agreed that Brookfield Northeast Ridge II LLC could proceed with the development of 17 single- family residential units north of Unit I (EA 2-1)".

This massive disturbance is also present at the South San Francisco grasslands next to Highway 101 and Terrabay developments. Engineers may be able to construct retaining walls and divert water such that soil does not fall into the backyards of houses, and that erosion does not cause flooding. However, they cannot keep the mountain slope from sliding down to find its repose and thereby changing the entire vegetation matrix and community in its wake. In these grasslands, seeds of California buckwheat, fescues, and checkerspots are unable to establish and keep pace with the falling slope; plants that disperse along construction activities and that can grow quickly in the nutrient poor slopes take up the vacuum left. These are mainly the invasive plants such as French broom and oxalis. As an analogy, if you take away the low buttress that holds up the pillars of a church or a mosque, or take a big notch off the cane supporting an old man, the upper portions will come down.

After grading, the once porous land that filtered water to large aquifers underground, and was the home of billions of subterranean creatures such as ants, beetles, arboreal salamanders, fungi, and caterpillar larvae, is compacted and dead. All biodiversity is destroyed.

With construction comes the associated dust and piling of excess materials on wherever it is convenient for the contractors. The land and its creatures are the last priorities when the work has to be done on a deadline, and the working staging area is minimal. More often than not, additional damage occurs beyond the original scope of the

project. The last action is the installation of a variety of irrigation and landscaping which brings in plants, soils, insects, and fungi from nurseries around the state and beyond.

When land around endangered butterfly species is encircled with houses, roads and human traffic, its quality and use as a habitat diminishes. There is a slow deterioration of butterfly habitat around the vicinity of the dwellings. It is best described as a dead zone that favors human adapted plants, animals, and invertebrates (annual grasses, garden snails, Argentine ants, mice and rats). The zone extends hundreds of yards beyond the marked boundaries of the houses. Butterfly habitat in such a setting is said to be like an island in a sea of urbanization. When butterfly populations are isolated from one another, there is little chance for butterflies to fly from one area to another to colonize new areas, select host plants to lay eggs on, or to find mates and exchange genetic heritage.

Survival for the butterflies from year to year is always a balance between natural forces, and the interactions between organisms. Survival is exacerbated if the weather is poor for flying, global climate change causes extremes in temperature, fungal or animal pests strike the host plants, or if there is an outbreak of parasitoids that lay eggs in the caterpillars and feed on them. This situation is further exacerbated in close proximity to human dwellings. Dogs playing fetch render the land compacted and devoid of host plants; snails and slugs crawl out from the established landscaping to consume tender shoots of host plants; excess runoff from sprinklers and fertilizers encourage the growth of annual grasses such as bromes and oats; people spray roundup indiscriminately to keep out weeds and the resultant chemicals drift into the wildlands; dumped garbage attracts and breeds rodents, wild life 'lovers' give large amounts of seeds, bread, and nuts to feed a small variety of birds and rodents.

The proposed action at Northeast Ridge would isolate the Callippe Silverspot population at the Northeast Ridge, and continue the fragmentation of endangered species butterfly habitat. It would restrict the flow of Callippe Silverspot movement at the western end of the ridge. Based on my experience, Guadalupe Canyon Parkway is not a viable flight corridor for the Callippe Silverspot butterfly. Its danger to butterflies is not only the vehicular traffic, but also the frequent wind tunnels and the lack of vegetation protection and cover. The west part of the Northeast Ridge is their one possible route should they cross down to the southeast ridge population - they would fly along the canyons of the Devil's Arroyo, the quarry and Owl and Buckeye Canyons, until they reach the southern grasslands. There is no other path of dispersal. Callippe Silverspot on the Northeast Ridge meet Guadalupe Parkway and houses if they head north, houses and the bay if they head east, houses and the industrial park if they head south. With this proposed action, they would become increasingly trapped on the Northeast Ridge.

Keep in mind that butterflies have short life spans, and that in any given year there are only so many good flight days due to wind and inclement weather. A Callippe Silverspot is estimated to live three weeks, while the Mission Blue lives around two weeks. Within this limited window of time and space, Callippes must find a mate while scouting the hilltops, and females will then lay eggs on the violas. The Mission Blue butterflies are not known to disperse far from their larval sites from year to year. The added barrier of houses and their accompanying death zones will cause the gradual and consistent decline of the Northeast Ridge butterfly populations over time.

Examples of this process are evidenced in the historical past by the extirpation of Callippe Silverspot at Twin Peaks (EA 3-12) and throughout San Francisco where it was first collected. The Mission Blue, once abundant in San Francisco and first collected at Twin Peaks, is now no longer an inhabitant in San Francisco. Just recently it was declared extirpated at Twin Peaks. This is also an ongoing process that is happening to the Mission Blue populations in Pacifica. What was a contiguous and navigable landscape is now cut up by barriers and dangers. The primary cause of the decline of the Callippe Silverspot is the loss of habitat from human activities (EA 3-12), and it is for this reason that the existing habitat must be conserved. Moreover, it is imperative that we know more about the biology and ecology of the Callippe Silverspot and the Mission Blue on San Bruno Mountain.

Lack of research on San Bruno Mountain

To the best of my knowledge, there has been minimal biological study on the ecology of the Callippe Silverspot on San Bruno Mountain, especially over the last twenty five years. Until I did my master's thesis on the Mission Blue, there had been no studies of its juvenile ecology in the field, and no scientific research about its biology for fifteen years. A similar vacuum exists regarding the Callippe. The 1982 HCP research was concerned mainly with the population of adults and their movement. Scientists netted thousands of adults, marked them with permanent markers, then caught them again. In this way they determined how many there were, and how far the butterflies dispersed. Prior entomologists from the beginning of the nineteenth century until the 1950's were more interested in adult collection and their taxonomy in relation to other species. They preserved adults in cases, compared specimens, and documented morphological variation and geography.

In the EA, there are no discussion of research goals or methodologies, only rough maps, repetition of past reports from consultants, and poorly made assumptions about the future. There is no way to tell who did the surveys, when, what was measured, and how they did what they did. The data gathered is incomplete, and does not describe the ecology of the site. What we do have are confusing data about the abundance of butterflies and host plants.

The distribution of the Callippe Silverspot host plant *Viola pedunculata* mapped by the EA is unclear. The text states, "Figure 3-3 shows the distribution of the Callippe Silverspot on the mountain", while the actual figure 3-3 states "Grassland that supports Callippe Silverspot habitat". Do the maps indicate adult sightings, or grasslands that have viola? Obviously, not all the grasslands have viola, or offer the same topographical features of shelter, protection, and hilltops for mating. The maps do not tell us exactly what the habitat is, where it is, or in what abundance or density.

In Figure 3-4 is depicted the "Distribution of Viola on San Bruno Mountain, 2005". The legend shows red cross hatches for the *Viola* followed by "(120 acres)". There is nothing further to indicate how many plants per area (density) are within the cross hatched areas. Exactly what sort of habitat is indicated? How many violas are present on

the ground to merit cross hatching? Have Callippe Silverspots butterflies been observed in the cross hatches? In what numbers?

Figure 3-5 is the “Distribution of Viola on Northeast Ridge 2005” where *Viola pedunculata* is documented as occupying 35.4 acres. At the northern edge of the Northeast Ridge where it meets the Guadalupe Parkway it is not clear what vegetation type is there, being a cross hatched yellow and black. How many plants are on the 35.4 acres? How is the distribution of plants in space?

Later, based on averages of three years of viola plant counts, the EA states that “there are approximately 133.5 acres of viola habitat throughout the mountain, of which 24.8 acres are on the Northeast Ridge. (EA 4-30)”. Moreover, that “proposed 2007 VTM would result in the loss of approximately 2,514 viola plants or 3.1 acres of viola habitat (including the loss of 0.8 acres of viola habitat which occurred during the recent infrastructure grading.)”. Relevant aspects of Table 4-4 of the EA is copied below for clarity in reading:

Table 4-4. Comparison of Viola Habitat Impacted by 1989 and 2007 VTMs

1989 Development	2007 Development Proposal	Proposal
Estimated number Of viola plants Impacted	5,830	2,514
Estimated acres of Viola habitat Impacted	8.6	3.1

The 1989 plan shows approximately 678 viola plants per acre of habitat, while the 2007 plan shows 810 plants per acre. There is no source cited for the data for 1989 plant counts; the 2007 proposal is for the average of three years of data. Based on the 2007 counts and the 24.8 acres of viola habitat on the northeast ridge (EA 4-30) I arrived at the number of EA estimated plants: 20,088 viola plants. The proposed action would therefore destroy over 12.5% of the viola population outright, then cause the decline of the remaining violas over time. This is significant.

Within the area I surveyed at the Northeast Ridge in 2007, in prime Callippe grassland, the violas were found here and there in little clumps at a density of about 90 – 120 plants per acre (369 plants over approximately 3-4 acres). My experience is that violas are not distributed evenly in large masses across the grassland as summarized by

the EA. The report by Longcore et al. mentioned above, also shows that violas are concentrated in some areas of the grassland more than others. The violas are located in small patches in limited numbers; they were most abundant on the south facing slopes, in wet soils where also grows long petaled iris and *Ranunculus californica*. The ecology of the viola is as specific as the endangered butterflies. A vegetation survey of other remaining Franciscan grasslands such as Bayview Hill in San Francisco is a good demonstration of the spottiness with which violas occur. At the Northeast Ridge of San Bruno Mountain, the violas are concentrated in the midst of the proposed action next to, above, and below the grove of Eucalyptus trees.

Mitigation restoration and management

There is no mitigation offered that can replace Callippe Silverspot habitat. The proposed HCP Amendment will result in the loss of soil and the seed bank, changes in the underlying water table and flow of water, death of existing plants and invertebrates, and the destruction of habitat for birds and mammals. All the ancient connections that bind these together are lost permanently. The greatest mistake made by the original Habitat Conservation Plan was the assumption that habitat, with its complex interaction of plants and animals, could be created from scratch. Review of the history of the HCP, since 1982, demonstrates that it has not been possible to successfully create butterfly habitat.

A restoration site is often either a human constructed site or a continually managed one, one more akin to a garden of natives rather than a wild place. By definition, a wild place more or less takes care of itself, and needs little human attention. This is the end goal of restoration. The Northeast Ridge in its current state is still in a state of 'wild'ness provided it is not further encroached upon and destroyed.

In some restoration areas such as on San Bruno Mountain and Milagra Ridge, workers and volunteers have outplanted nursery grown lupines for Mission Blues to lay eggs on. This is not new habitat, but merely supplementing the existing population of lupines. It is not beneficial in all cases, as introduced fungal infections from potting soils can enter the native soils. Additionally, human caused die back of planted lupines has been reported in several instances. It is my experience that nurseries growing native plants cannot replace the genetic and evolutionary gold mine of nature, nor can dozens of field workers yielding weed wrenches and herbicides.

As for the larval host plants of the Callippe Silverspot, restoration nurseries have been unable to grow the violas, much less plant them out into the wild. Its seed are few, hard to collect, and do not germinate well in the nursery. The existing plants in the field are irreplaceable. In order to conserve populations of the Callippe Silverspot on San Bruno Mountain, all of its remaining habitat must be conserved.

It is repeated numerous times in the EA that "scrub is rapidly encroaching upon the grasslands, and that the grasslands are being overtaken by weeds". The EA's unsupported proposition is that without dollars from the Brookfield Homes Endowment, the Northeast ridge grasslands of San Bruno Mountain would soon be nothing more than

a patch of weeds, useless to butterflies. It is repeated in advertisement fashion that “Impacts to the Callippe Silverspot under the proposed 2007 VTM are mitigated to **not significant** through Brookfield Northeast Ridge II LLC’s commitment to preserve the dispersal corridor along Guadalupe Canyon Parkway, preserve high value hilltopping habitat at Callippe Hill, and dedicate endowment funding for increased management of invasive plant species (EA 4-37 and others)”.

“With no additional funding, continuation of the current management program would result in the continued loss of grassland habitat and likely eventual decreases in butterfly distribution. (EA 2-15)”

“Over the last 25years, management efforts on the Mountain have not been able to keep pace with observed landscape level changes that are occurring from 1) the expansion of coastal scrub over large areas of grassland; and 2) the influx and expansion of herbaceous and grass weeds within the native grasslands – especially on drier and lower elevation slopes (TRA Environmental Sciences, Inc. 2007) (EA 3-6)”

While there have been changes in San Bruno Mountain’s vegetation communities, more management dollars to fight this process is limited in what can be accomplished. Succession is a dynamic process, not a straightforward one. On the slopes of San Bruno Mountain, grasslands do not automatically go to scrub, and scrub to forests, as paid managers would sometimes have one believe. Vegetation communities are also where they are due to geography and exposure, water above and below ground, soil structure and content. It is no coincidence that oaks are located in San Bruno Mountain’s protected canyons, willows are along the waterways, and grasslands are often on the ridges.

In their own relatively intact state, wildland sites have an organism - like quality that allows them to resist invasion, heal themselves from damage, and incorporate new elements into their existing ecology. What they most need to survive are lack of fragmentation, distance from the dead zones of human civilization, and time to adjust to new and novel organisms.

I have noted little habitat restoration work done for the benefit of endangered butterflies at the Northeast Ridge over the past eleven years. The only human ‘management’ at the Northeast Ridge I have observed have been negative: four wheel drive vehicles driving through the grasslands as part of monitoring; and the repeated paving of gravel over the fire road near what is nicknamed cow ravine. This destroyed an important cluster of the *Lupinus formosus* host plant, as well as Mission Blue caterpillars.

Management is something that occurs after the fact. After destruction and construction has already taken place, and the decline has begun. This is an opportunity to prevent the damage from taking place beforehand, and work on mending the collateral damages of civilization. The protection, attention, and care we give to our endangered butterflies at this point are not adequate to ensure their long term survival. This destructive proposed action under the guise of conservation and enhancement is a demonstration of this fact.

Another feasible alternative exists

It is important to ask “How can we make a wise investment in the future of our society?” in this time of tremendous environmental destruction and heightened awareness and consciousness of our planet. It is not “How many homes can we build here and get away with it?” or “How can we twist words and facts around to show that we are having **no significant** impact on the planet?” or “How can we buy our way into the future with endowments making us ‘**net beneficial**’?” or “How much money can we mine out of destroying nature’s creation that has taken millennium?”. Rather, to further the purpose of conservation and recovery of listed species, the questions that must be answered are “How can we best protect, educate and steward the natural world that has been our gift to live in?”, and “How can we share this vision with the Bay Area, the United States, and the world as a whole to gather widespread support?”

The continued development of the Northeast Ridge is the collective destruction of a biological, ecological, and cultural heritage that is ancient, priceless, and precious beyond words. The amendment must not be approved based on the premise that the Northeast Ridge of San Bruno Mountain was always a “planned parcel” as seen by the HCP. Today, we have a better understanding and love for the complexity and importance of the Franciscan landscape. We can reverse gears and make the conservation of this ecological treasure house a first priority.

In protecting the Northeast Ridge from further development, no money will flow into the pockets of developers, vendors, and construction workers. The local governments will also miss out on revenue from taxes and additional residences. What must be put forward is a new vision of San Bruno Mountain, and our societal relationship to nature. Money must be solicited from other sources to protect and guard the mountain. This investment in the future will bring respect and support, and lead to funding and cash flow in the long term. Imagine eco tours in our own backyard highlighting the rarest and most unique environment in the world. Visualize school children learned in the ways of plant taxonomy and plant chemistry; non invasive scientific research on rare butterflies; landscape architects and design classes using the mountain as a source of inspiration and knowledge. As evidenced by the GGNRA event Big Year in Endangered Species, this ecological knowledge is slowly spreading.

The butterflies are a symbol and keystone of the San Francisco Bay Area, they are our panda, our rhinoceros, our snow leopard, our elephant. To honor their presence here is to root ourselves in this landscape, and give a little something back to mother nature herself. A local naturalist Norm Gershenz of the Center for Ecosystem Survival invented the save a rainforest acre; collecting pocket change fed into parking meters. He raised millions for conservation in places like Palau and Costa Rica. Conservation in places many people will never see or experience. Why not push for the conservation of biodiversity right here in the midst of a vibrant, ‘green’, and educated urban metropolis? If the will and vision are there, the money will follow. There does not have to be a loser, the landowner and developers must be fairly compensated for their inability to build any further on San Bruno Mountain. There are many other places that have already been ruined, that would be well served by new construction and renovation. We must be firm about what can and

cannot be created by the human hand. We must set priorities that commit to conservation, education, and stewardship, and demonstrate our collective wisdom.

I ask you to consider the alternative not provided by the environmental assessment, and that is to opt for the full protection of the Northeast Ridge at this moment in time. No more grading, building, and destruction of endangered butterfly habitat. We must allow for a broader vision for the human community that guides our relationship to the natural world. I urge that you consider the biological and monetary value of the Northeast Ridge, the impact of the proposed action, and how an investment in butterfly habitat will pay off down the line in spiritual, educational, and monetary ways. Good luck.

Sincerely,

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