

February 3, 2017

**VIA REGULAR MAIL & E-MAIL**

Lisa Gibson, Environmental Review Officer  
San Francisco Planning Department  
1650 Mission Street, Suite 400  
San Francisco, California 94103  
Email: lisa.gibson@sfgov.org

**RE: EIR Public Scoping Written Comment Letter**  
Southern Skyline Boulevard Ridge Trail Extension Project  
Case # 2016-016100ENV

Dear Ms. Gibson:

Please accept this comment letter on behalf of the Audubon Society (Golden Gate, Santa Clara Valley, and Sequoia Chapters), California Native Plant Society (Santa Clara Valley and Yerba Buena Chapters), Committee for Green Foothills, Native Plant Conservation Campaign, Nature in the City, and Sierra Club (San Francisco Bay and Loma Prieta Chapters). Each of our organizations appreciates the opportunity to comment on the scoping of the Southern Skyline Boulevard Ridge Trail Extension Environmental Impact Report (“Trail Extension”). While each organization has its own unique mission, we collectively strive to educate the public regarding the importance of protecting our wildlife and other natural resources. In accordance with this collective mission, we submit the following comments with regard to issues the Trail Extension EIR should address.

**I. Climate Change, Drought, and Increased Likelihood of Wildfire.**

The 2001 Peninsula Watershed Management Plan mentions neither climate change nor drought. Since 2001, the prevalence of climate change and the persistent threat of extreme drought evolved to become one of the Bay Area's most significant concerns. The Peninsula Watershed is not immune to the crippling effects of drought. In 2015, an unrelenting drought forced the Watershed to close due to the high risk of natural or anthropogenic-caused wildfire.

Our organizations hope the EIR addresses accelerated climate change and its likelihood to increase the frequency, duration, and intensity of droughts and other extreme weather events. The EIR should study the myriad ways extreme weather patterns affect Peninsula wildlife and Reservoir water quality. Importantly, the report should focus on the increased likelihood of wildfire and diminished reservoir water quality resulting from increased human activity. We are particularly concerned that the Watershed may have an inadequate or outdated fire management plan, especially in light of our knowledge of drought and climate change. To date, the Watershed has either no prescribed burning, vegetation treatment, or other fuel management programs that reduce wildfire risk, or has only very limited and inadequate programs for those fire-management procedures. As a result, the fuel buildup substantially increases the likelihood of a catastrophic wildfire. In addition to a significant loss of natural resources, a wildfire activates invasive plant seed banks suppressed by old growth conditions.

Extreme weather patterns may also include flooding which cause significant erosion due to stormwater overland flow, especially around roads and human clearings. The EIR should assess how

unrestricted access may exacerbate these and other hazards' impacts upon the Watershed. The EIR should therefore assess how water quality is affected by climate change, prevalent droughts, and proposed increased unrestricted human activity within the Watershed.

## **II. Scenic Easement.**

The Trail Extension Notice of Proposal references providing “unrestricted access for the entire length of the Bay Area Ridge Trail.” The EIR must consider whether this proposal is consistent with the May 2, 1969 Scenic Easement granted by the City and County of San Francisco to the Federal Government. Our organizations assert it is not. Any proposed use involving unrestricted access is inconsistent with the Scenic Easement. Further, the EIR should not consider any mitigation or alternative involving the unauthorized provision of unrestricted access to the Watershed.

The purpose of the Scenic Easement was to preserve the Watershed by limiting activities within it. To this end, the 1969 Scenic Easement precludes granting to the public any right to enter the Watershed “for any purpose.” Our organizations' interpretation of the 1969 Scenic Easement expressly precludes the unrestricted and unsupervised grant of public access to the Watershed. Alternatively, the existing docent program effectively limits and supervises public access to the Watershed, and is not inconsistent with the Scenic Easement. Any unrestricted and unsupervised use of the trail is inconsistent with the Scenic Easement, and is therefore infeasible and impermissible.

## **III. Water Quality Degradation Related To Trespassers.**

Naturally, the primary concern of any use of the Watershed should be how it impacts water quality. The construction of trails permitting unrestricted access for users increases the likelihood of trespassers. Such trespasses include mountain biking and equestrians which will inevitably lead to a threat of water quality degradation. Our organizations desire the EIR to fully explore to what extent *both* on-trail and off-trail mountain biking, equestrian, and other uses will increase that threat of water quality degradation. Mountain bikers have poor reputations in the Bay Area for trespassing, for failure to follow regulations in areas similar to the Watershed, and for creating conflicts among other trail users. The EIR should therefore consider the likely range of authorized and unauthorized uses and their resulting impacts. The EIR should not solely consider those uses which will be sanctioned by new or preexisting regulations. This includes, but is not limited to, the consideration of how trespassers increase the threat of water quality degradation via soil erosion, introduce and spread of exotic species, and impact wildlife – particularly reclusive species.

## **IV. Sudden Oak Death.**

Much like climate change and drought, the 2001 Peninsula Watershed Management Plan neither addresses the risk of sudden oak death nor other emerging wildlife pathogens. Unrestricted public access will drastically increase the risk that sudden oak death will invade and spread through the Watershed. The EIR should fully consider how unrestricted public access to the Watershed will increase all human introduced risks such as sudden oak death.

Additionally, the EIR should assess how sudden oak death will impact the Watershed, how this may impact water quality and fire risk, and whether or not it is feasible to mitigate this impact while

still providing unrestricted access to the Watershed. At least three *Phytophthora* species are now found in the Watershed. Pathogens such as these affect a wide variety of native species as well as water quality.

**V. Impacts of Retaining Walls and Other Construction on Wildlife Migration.**

The Notice of Proposal indicates that the EIR will explore the construction of a 2,500 linear feet of retaining wall up to 8 feet high on the Northern Segment of the Trail. The EIR should consider the impacts that constructing walls, fences, and other structures in the Watershed will have on the migration of wildlife within the Watershed. Construction of barriers prevents animals (e.g. mountain lions, garter snakes, red legged frogs, newts, salamanders, bobcats, and deer) from accessing both the eastern and western portions of the Watershed. This will have a detrimental impact on the wildlife. It is critical that the extent of this impact be fully assessed.

**VI. Impacts of Unsupervised and Unrestricted Access on Docent Program Effectiveness.**

Our organizations applaud the success of the Watershed docent program and encourage its expansion. However, our organizations recommend that the EIR consider impacts associated with diminishing the effectiveness of the docent program by simultaneously providing unrestricted access. Any baseline for analysis must incorporate the docent program. The objective of the docent program is to provide limited public access to the Watershed in a manner that simultaneously educates and actively regulates against impermissible activities. Allowing unrestricted access to the Watershed is incompatible with the docent program. Unrestricted and unsupervised access undermines both the program's importance and ability to act as a *pro bono* regulatory authority. Reduced participation in the docent program will reduce education while increasing harmful environmental impacts. Accordingly, it is critical the EIR explore the environmental impacts related to providing public access in a manner that does not simultaneously educate and supervise – which the docent program currently provides.

**VII. Enforcement of Regulations.**

The EIR should assess how an inability to fund adequate park personnel and operations necessary to enforce regulations and ensure visitor safety will result in physical changes to the environment. The EIR should also consider whether rules and regulations may adequately mitigate the risk of environmental impacts from impermissible activities within the Watershed. The allowance of unrestricted access of the Watershed increases the likelihood of impermissible activities, such as off-road biking, fires, introducing invasive species, the use of drones, and littering. Each may negatively impact wildlife and water quality. However, unrestricted access increases the need for personnel to police the trails and enforce its regulations. Regulations unenforced are merely suggestions. Therefore, the EIR must consider the impacts associated with an inability to adequately fund required additional personnel and operations. In its analysis, the EIR should explore other reservoir and park (e.g. East Bay Municipal Utility District, East Bay Regional Park District<sup>1</sup>) regulatory enforcement, their effectiveness, and the costs required to adequately enforce its regulations.

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<sup>1</sup> We encourage consideration of the effectiveness and costs associated with regulatory enforcement at other Bay Area reservoirs and parklands, but note that these areas are qualitatively different than the Watershed. Unlike these other areas, the Watershed has been closed to unrestricted public access since the 19<sup>th</sup> Century and contains the State's most biodiverse natural resources. Consequently, a comparison between the Watershed and other reservoirs and parklands has limited application.

Ridge Trail Extension EIR Scoping Comment Letter

Case No. 2016-016100ENV

February 3, 2017

These aforementioned concerns as well as others are more fully set forth in the attached Crystal Springs Fact Sheet on Wildland Recreation Problems. Our organizations look forward to continuing to follow the Trail Extension project and commenting in the future. Thank you for your consideration and please do not hesitate to contact Arthur Feinstein (Sierra Club; arthurfeinstein@earthlink.net), Sean Herman (Golden Gate Audubon Society; hermanse07@gmail.com), Bruce Rienzo (Sierra Club; bruce@oatc.com), or Lennie Roberts (Committee for Green Foothills; lennieroberts339@gmail.com) should you have any questions or concerns.

Sincerely,

/s/

Audubon Society – Golden Gate Chapter  
Audubon Society – Santa Clara Valley Chapter  
Audubon Society – Sequoia Chapter  
California Native Plant Society – Santa Clara Valley Chapter  
California Native Plant Society – Yerba Buena Chapter  
Committee for Green Foothills  
Native Plant Conservation Campaign  
Nature in the City  
Sierra Club – Loma Prieta Chapter  
Sierra Club – San Francisco Bay Chapter

Encl.

/sgh

# **ATTACHMENT**

Crystal Springs Fact Sheet on Wildland Recreation Problems

Potential Impacts of Opening Crystal Springs Watershed to  
Unlimited and Unsupervised Recreational Use

Emily Brin Roberson

California Native Plant Society

December 7, 2015

SUMMARY

1. Opening the Watershed to unsupervised use will damage soils and water quality. This damage is likely to be much greater than that anticipated in the 2002 Peninsula EIR. The current docent led system minimizes accidents and unintended uses of the Watershed. Data from academic studies, surveys of open space managers, and environmental impact statements all show that unsupervised people in wildlands:
  - create illegal, unregulated walking, biking and other trails in restricted and closed areas, particularly near water and views, leading to soil damage and erosion into waterbodies
  - break speed limits for bicycles, leading to soil damage and erosion
  - bring leashed and unleashed dogs into restricted areas, leading to soil damage
  - leave authorized areas and trails to urinate, defecate, picnic and engage in other activities which generate waste and pollution
2. Opening the Watershed will increase fire danger
  - In general, humans ignite 80-90% of all wildland fires. Thus, the introduction of unsupervised humans into a wildland ecosystem can increase the likelihood of ignition **4 to 9 times** (see Figure 1)
  - The Rim Fire which burned more than 250,000 acres near Hetch Hetchy reservoir was caused by an illegal campfire
  - Climate change is already increasing the size and frequency of wildfires worldwide
  - Wildland fire frequency and danger is greatest in densely populated areas such as the Peninsula (Figure 2)
3. Opening the Watershed will bring new flammable weeds and destructive diseases such as SOD, because people, horses and bicycles carry seeds and disease organisms throughout the Watershed, including into sensitive and protected areas via unauthorized trails.
  - The health of the Watershed is already compromised by Sudden Oak Death and at least one other deadly fungal disease.
  - Studies show that the number and abundance of invasive species is directly correlated with the intensity of use by recreationists
4. Opening the Watershed will damage water quality in the reservoir
  - Increased use by humans, horses, bicycles will all increase erosion and sedimentation into the reservoir both from authorized and unauthorized trails
  - Unsupervised humans and animals will litter, urinate and defecate in the Watershed. This waste will wash into the reservoir.
  - Unauthorized trails are concentrated near waterbodies, as is the soil damage and waste they generate
5. Opening the Watershed will damage habitat for imperiled and listed plants and animals. Outdoor recreation is 4<sup>th</sup> leading cause of species being listed, after non native species (which are spread by recreation), urbanization and agriculture. The reasons recreation imperils species habitat include:
  - Soil compaction and erosion
  - Generation of litter and human and animal waste
  - increased noise and startling of wildlife
  - changes in fire regimes
  - Creation of new barriers to free movement of wildlife within the Watershed

- Increases in number and abundance of invasive weed and disease species
6. Many circumstances have changed since the 2001 Peninsula CEQA analysis which mandate a new analysis before any change in management can be contemplated.
- Population density in the Bay Area has increased nearly 10% since ~2000.
  - New technology in outdoor recreation increases its impacts. There are new and faster types of bicycles and “fatter” better gripping tires which cause more soil damage.
  - There are new popular GPS-centered outdoor treasure hunts called “geocaching” which open space managers cite as a growing source of adverse impacts.
  - Implementation of the Americans with Disabilities Act has become more widespread and there are new, higher – and more expensive – standards for compliance. Expectations for access to open space have increased.
  - There appears to be more hostility among outdoor users, leading to increased conflicts among users and between users and law enforcement personnel.

**FIGURES**

**Cause of U.S. wildfires: 2001-2012**

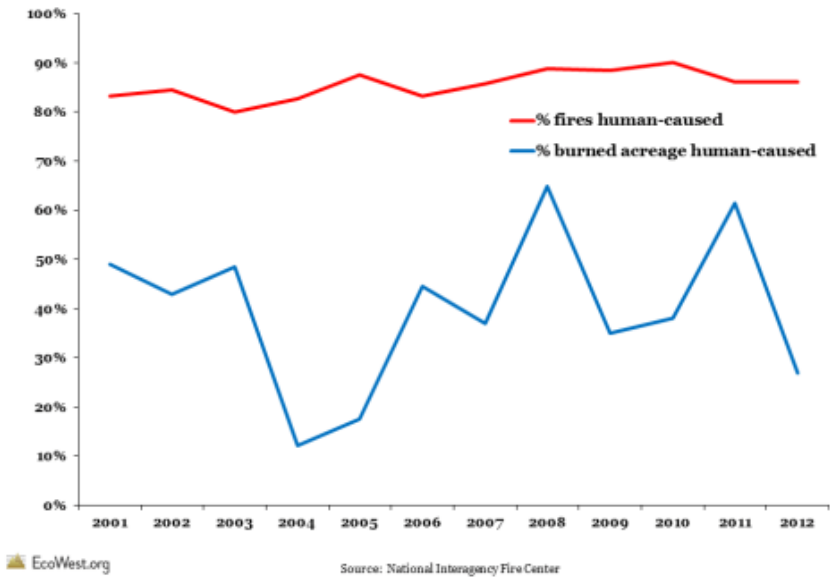
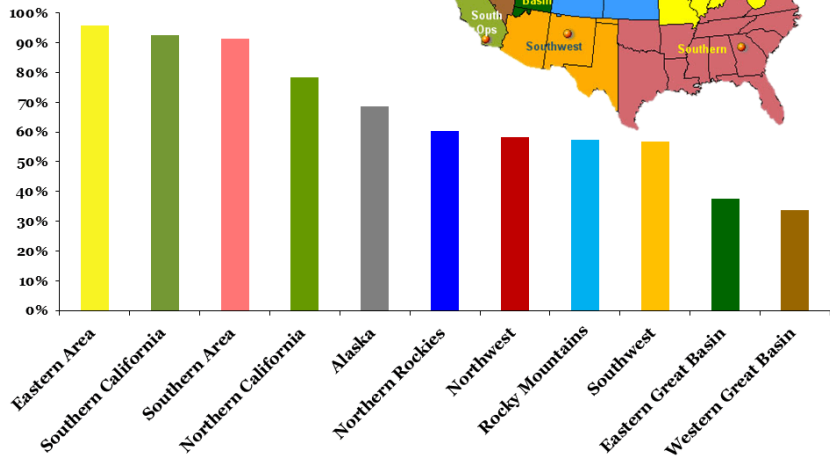


Figure 1. Ignition sources, human vs. lightning (EcoWest, 2013)

**Percent of fires human-caused  
2001-2010**



EcoWest.org

Source: National Interagency Fire Center

Figure 2. Human caused fires: geographic trends and population density (EcoWest, 2013; See also Stein et al., 2013)

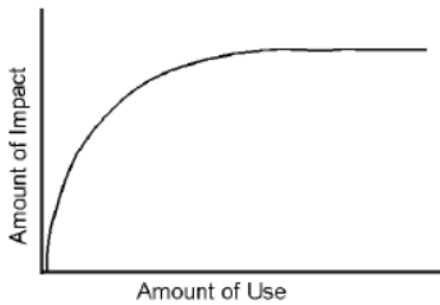


Figure 4. The relationship between frequency of use and intensity of impact is asymptotic.

Figure 3. Relationship between the amount of impact and the amount of recreation use Cole, 2004. (cited in Van Winkle, 2014)





Potential Adverse Impacts of Opening Crystal Springs Watershed to  
Unlimited and Unsupervised Recreational Use  
Emily Brin Roberson  
California Native Plant Society  
December 7, 2015

1. People break rules if they can. Without docents, unsupervised recreation users will break the rules in the Crystal Springs watershed (Watershed). Environmental impacts cannot be predicted based on the assumption that rules will be followed once the Watershed is open to unsupervised use. Therefore:
  - (i) Cost projections must be based on staffing and maintenance levels that will be effective.
  - (ii) At the same time, risk assessments (for fire danger, water quality impacts, etc.) must be based on the actual staffing and funding that will be available.

Experience as well as academic studies of human behavior in parks confirm the inevitability of widespread rulebreaking:

- The 2013 Hetch Hetchy Rim Fire was started by illegal campfire
- Illegal mountain biking trails are causing widespread destruction of soils and conflicts with other users in the Bay Area and nationwide (Clark, 2014).
- A study of “informal trails” in a large wildland park in Portland, OR examined the creation and use of unauthorized trails and their impacts on park resources (Van Winkle, 2014). She mapped 382 unauthorized trails in the 5,000 acre park.
- “Informal trails, tend to follow less sustainable alignments and are generally unmonitored, resulting in greater erosion and soil compaction, and likely serve as vectors in the spread of non-native and invasive species.” (Van Winkle, 2014)
- “People will do what they think they can get away with” was one conclusion of a 2011 survey of Bay Area open space managers (EBRPD, 2011). In other words, if docent supervision is removed from the Crystal Springs Watershed, it does not matter what rules are put in place, people will break them.
- Unauthorized, illegal trail proliferation is likely in absence of Docent supervision in the Watershed (see e.g. EBRPD, 2011; GGNRA, 2011; Van Winkle, 2014; Clark, 2014)
- The Open Space Survey also concluded: self-regulation (such as is proposed for the Watershed) is generally not effective in publicly-managed park lands (EBRPD, 2011)
- PUC staff have acknowledged that current staffing levels are not adequate to effectively monitor or control invasive or listed species (Pers. Commun, 2014)

Therefore, environmental analyses, cost projections, and management decisions must be based on the understanding that comprehensive, diligent (and thus expensive) implementation and enforcement programs are prerequisite to the adherence to and effectiveness of resource protection rules.

2. Fire Danger. Unsupervised recreation users will dramatically increase fire risk in the Watershed.
  - Federal agencies report that humans ignite 80-90% of all wildland fires. Thus, the introduction of unsupervised humans into a wildland ecosystem can increase the likelihood of ignition 4 to 9 times (see Figure 1, NPS, EcoWest, 2013; Stein et al., 2013). Many of those ignitions are associated with automobiles and other machinery and so would be less likely to occur in the Watershed. However, many are also caused by smoking (tobacco and marijuana), campfires, and fireworks, all of which can and do invariably co-occur with unsupervised recreation.
  - The enormous Rim Fire near Hetch Hetchy reservoir was caused by an illegal campfire. As the 2015-16 rainy season approaches, the reservoir and water supply is once again at risk from landslides and other erosion of burned hillsides (Alexander, 2013). 2014 was a low rainfall year (drought), but 2015 is predicted to possibly produce high rainfall due to El Nino.

- Fire suppression for the Rim fire cost over \$100 million, according to the SF Chronicle. Restoration costs for the Rim Fire run to tens of millions of dollars, \$43 million from FEMA alone, according to the FEMA website.
  - The current historic draught has created some of the driest fuel in the history of the Bay Area.
  - Studies have found that urbanization has reduced the number of foggy days in southern California. If this is also true in the Bay Area, lack of fog may also exacerbate low fuel moisture. (Williams, et al., 2015)
  - Federal data show that human-caused ignitions of wildlands increase as the surrounding population density increases (see graph 2, Stein et al., 2013). The Peninsula is very densely populated.
  - Many invasive weeds in the Bay Area are annual grasses and other highly flammable species.
  - Climate change has increased fire danger worldwide. [A 2015 study](#) (Jolly et al., 2015) in the journal Nature confirms that wildfires worldwide are larger, more numerous, and their season is longer every year; and that it is all a direct consequence of climate change. Hotter and drier conditions, beginning earlier each spring, have over 30 years doubled the area of the planet's surface that is vulnerable to wildfire; and have lengthened by 18% the average length of fire seasons worldwide.
  - The Nature study specifically states "If these fire weather changes are *coupled with ignition sources and available fuel*, they could markedly impact global ecosystems, societies, economies and climate." (emphasis added) (Jolly et al., 2015)
3. Non-native invasive weeds and other pests: Trails are pathways for invasion of weeds and diseases that compromise ecosystem health.
- A 2015 global review invasive species literature found "the abundance and richness of non-native species are significantly higher in sites where tourist activities take place than in control sites.", particularly when tourism takes the form of outdoor recreation (Anderson, et al., 2015).
  - Problematic invasive species include: diseases (e.g. sudden oak death, already present in the Watershed), flammable weeds (e.g. annual grasses), and numerous aquatic plants and animals that can impact water delivery systems
  - The informal trails study found that the presence of (unauthorized) informal trails "leads to significant changes in Forest Park plant communities that favor invasive and ruderal species", particularly close to the trails. (Van Winkle, 2014)
  - Facilitation of the spread of invasive species into natural areas by informal trails is two-fold: seeds are transported by users and wildlife along the trail corridor, and the disturbance to native vegetation and soil creates an opening for these seed to establish. (Van Winkle, 2014)
4. Water Quality: Trails cause soil damage, erosion, sedimentation, and deposition of garbage and human waste, impacting water quality and ecosystem health
- Erosion/sedimentation: "recreation managers (and regulatory agencies) have observed that trails and associated recreation use tend to elevate sediment levels in adjacent waterways. ....The sediments that enter into drainages and creeks can have an adverse effect on water quality, thereby endangering plant and animal species in riparian habitats (e.g., federal and /or state listed species such as California red-legged frog, Coho salmon)." (EBRPD, 2011)
  - "Water quality/sedimentation control solutions need to begin at the planning and design phases and continue to be monitored after completion of construction (EBRPD, 2011)
  - Human waste. The informal trails study found that bathroom stops, party spots, waste dumping, and camps make up 28% of all informal trails. (Van Winkle, 2014)
  - Informal trails impact wildlands even when lightly used. A few user passes rapidly affects soil and vegetation in the form of increased compaction, decreased soil moisture, and decreased vegetation (Figure 3). (Van Winkle, 2014)
  - The most common observed associations with informal trails are (i) water-related (e.g. creek access) comprising 19% of informal trails and (ii) human waste disposal comprising 29% of all informal trails (for the "human waste" category, this was commonly toilet paper, but could also include: trash, clothing, animal waste bags, or other waste products). (Van Winkle, 2014)

- So informal trails disproportionately impact water bodies and water quality because litter and human waste is deposited adjacent to them.
  - Even if official trails are located far from creeks and water bodies in order to protect them, recreation users will make trails to water bodies anyway.
5. Listed species.
- Fully one third of the words Cactus species are at risk of extinction due to illegal harvest and trade from the wild (Beament, 2015). Other plant species are also increasingly at risk.
  - Impacts from outdoor recreation and tourism are the fourth leading reason that species are listed by the federal government as threatened or endangered, behind threats from nonnative species, urban growth and agriculture. (Anderson, 2015; Solomon, 2015)
  - The Wildlife Conservation Society found fivefold declines in detections of bobcats, coyotes and other midsize carnivores in protected areas in California that allowed quiet recreation activities like hiking, compared with protected areas that prohibited those activities. (Solomon, 2015)
  - Running, canoeing, cycling and similar activities negatively affected birds in nearly 90 percent of 69 studies that researchers reviewed in 2011. (Solomon, 2015)
  - Informal illegal walking and biking trails traverse and damage areas intentionally protected from human activity, such as listed species habitat.
6. Dogs: No matter what the managers promise, if the Watershed is opened and docents are removed, people will break the rules and bring dogs into the Watershed. All studies reviewed for this Compendium reported widespread rule breaking by wildland users (shortcutting off established trails, deposition of litter, urine, feces and other waste, speeding, trespassing into closed areas, etc.). It is not logical to assume that dog owners will be the sole exception to this pattern.
- In the Golden Gate National Recreation Area, in 2007 alone, over 800 warnings were issued regarding dogs illegally off leash or in closed areas (GGNRA, 2011. Appendix G)
7. Population and Demography: The Bay Area’s population is growing rapidly and its projected demographics predict ever increasing demand for outdoor recreation, particularly in “challenging terrain” where steep slopes increase landslide and erosion hazard.
- in 2014, Bay Area population was 7.5 million according to Census estimates. In 2000, close to the date of the 2001 EIR, it was 6.8 million, an increase of nearly 10%. (Artz and Blasky. 2015, Arroyo, 2015)
  - Demographic changes: The Open Space Survey projected: “By 2020, it is projected that California’s young adult group (ages 18–40) will be the most populous in the state, and will be more mobile, dependent on technology (EBRPD, 2011)
  - Moreover, as technology advances, new forms of recreational pursuits will appear and existing activities, such as biking and geocaching (an activity using global positioning systems), will continue in popularity and expand as technology allows for the development of customized equipment to accommodate use in increasingly challenging terrain.” (EBRPD, 2011)
8. Other Changed Circumstances since 2001 Peninsula EIR that make it necessary for a new EIR to be prepared
- New uses of open space e.g. “geocaching”. Geocaching is an outdoor treasure hunting activity for users of hand-held Global Position System (GPS) (EBRPD, 2011)
  - “many new subtypes of mountain biking have evolved and are in practice in Bay Area parks and open spaces including crosscountry (XC) riding, all-day endurance biking, free riding, downhill riding, and a variety of technical obstacle-focused activities.” (EBRPD, 2011, see also Clark, 2014)
  - Americans with Disabilities Act (ADA). From the Open Space Survey: “In accordance with the provisions of the ADA, all newly-designed pedestrian facilities, including trails, should be accessible wherever feasible. This .... is placing growing pressure on open space land management agencies to develop narrow natural surface trails to meet new standards;”. The requirements can increase the

- costs of trails (both initial costs and maintenance to maintain ADA compliance). The requirements may also increase the environmental impacts of the trails (EBRPD, 2011).
- Changes in the culture of some outdoor recreationists appear to have increased conflicts between law enforcement and some user groups as well as among user groups:
    - For dogs, at the GGNRA, law enforcement personnel must work in pairs. “It is assumed by staff that any contact with a dog owner regarding dog walking regulation compliance will be confrontational” (GGNRA, 2011, p. 287)
    - For bicycles, higher speeds, steeper slopes and better-gripping “fat” tires have to increased soil damage and conflicts with other users (Clark, 2014)
    - “Trail Rage” is now a new documented problem. For example in Marin, a news reports documented conflicts between bikers and horses and hikers, particularly the elderly. One hiker told reporters “I feel like some of the younger mountain bikers aren’t respectful,” (Alexander, 2015)
    - The Open Space Survey found that high speed biking is a problem throughout Bay Area. Managers are forced to use ATV and bike patrols, radar guns and other labor and cost-intensive methods to attempt to stop bike speeding. (EBRPD, 2011)
  - Terrorism, crazy people:. People are increasingly destructive as well as hostile. Should we give people easier access to our water supply? For example 6.4 mass shootings/year between 2000-2006. Between 2007 and 2013, there were 16.4 mass shootings/year. (Ehrenfreund and Goldfarb, 2015).

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