

**Natural Resource Impacts
Golden Gate National Recreation Area GMP/EIS
San Mateo County**

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
<p>Geologic Resources and Soils (including coastal resources and processes)</p>	<p>Summary Conclusion for EIS</p>	<p>The impacts to geologic resources and soils from the continued presence and maintenance of existing facilities (including structures, roads, and trails) under alternative 1 would be less than the no-action alternative because erosion caused by unsustainable trails and roads would be reduced or eliminated. Alternative 1 would develop a sustainable trail system and eliminate and rehabilitate unneeded and unsustainable roads and trails, as well as maintain all trails and roads to NPS standards. These activities would result in long-term, minor to moderate, beneficial, localized impacts on geologic resources and soils.</p> <p>New recreational development (including new visitor facilities and amenities at Rancho Corral de Tierra, Shelldance Nursery, and Sweeney Ridge; trails at Milagra Ridge, Sweeney Ridge, Phleger Estate, Rancho Corral de Tierra, Devil's Slide, and from Thorton State Beach to Mussel Rock) would have long-term, negligible to moderate, adverse, localized impacts on geologic resources and soils due to the permanent loss of soil function and integrity resulting from new development and increased erosion from facility construction and maintenance. In some areas, adverse impacts would be negligible to minor because the development would occur in previously developed or disturbed sites, such as at the Shelldance Nursery and Devil's Slide. In others, new development would cause minor to moderate adverse impacts to geologic resources and soils in areas that are considered undeveloped and wild, such as at Sweeney Ridge and Rancho Corral de Tierra.</p> <p>Visitor access and use would be greatly expanded under alternative 1, resulting in soil compaction and erosion; however, compared to</p>		

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
		<p>use patterns under the no-action alternative, only slight adverse impacts would be expected. Most impacts would be contained within defined visitor use areas and on trails. The impact, especially in areas off-trail, would be long-term, minor, adverse, and localized.</p> <p>Coastal geologic resources and processes would continue to be affected by the presence of facilities and structures located in geologically sensitive areas, such as at Devil's Slide - the impact would be long-term, moderate, adverse, and localized.</p> <p>Beneficial effects on geologic resources and soils would occur from the restoration of disturbed sites and creeks such as at Milagra Ridge, Mori Point, Phleger Estate, and Rancho Corral de Tierra. The impact of these activities would be long-term, minor to moderate, beneficial, and localized. Short-term, minor, adverse impacts (such as increased erosion or compaction in adjacent areas) would occur during construction activities.</p> <p>In general, expanded park programming and enhanced opportunities for participatory science and stewardship would have a beneficial effect on geologic resources and soils due to increased public understanding and support for resource protection and management – the impact would be long-term, minor, beneficial, and county-wide.</p> <p>Overall, the impact to geologic resources and soils from alternative 1 would be negligible. Adverse impacts would occur from the continued presence and maintenance of existing facilities, new recreational development, and expanded visitor use. Beneficial impacts would occur from the restoration of disturbed sites, creek restoration activities, and improved resource understanding and public support.</p>		

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
	<p>Devil's Slide is a highway that impacts coastal geologic processes</p>	<p>Creek restoration at Rancho would protect soils and eliminate erosion and impacts to coastal sedimentation budget</p> <p>Devil's Slide highway is converted to trail corridor and long-term impacts to natural processes are reduced</p>	<p>Creek restoration at Rancho (about 7,500 linear feet) would protect soils and eliminate erosion and impacts to coastal sedimentation budget</p> <p>Downgrading/converting of roads to trails (incl. about 8 miles in SM county) would provide long-term beneficial impacts</p> <p>Devil's Slide highway is converted to trail corridor and long-term impacts to natural processes are reduced</p>	<p>Creek restoration at Rancho would protect soils and eliminate erosion and impacts to coastal sedimentation budget</p> <p>Devil's Slide highway is converted to trail corridor and long-term impacts to natural processes are reduced</p>
<p>Water-related Resources (including stream character, water quality, watershed processes, wetlands, and floodplains)</p>	<p>Summary Conclusion for EIS</p>	<p>The impacts to water-related resources from the continued presence and maintenance of existing facilities (including structures, roads, and trails) under alternative 1 would be less than the no-action alternative because impacts to water quality caused by erosion from unsustainable trails and roads would be reduced or eliminated. Alternative 1 would develop a sustainable trail system and eliminate and rehabilitate unneeded and unsustainable roads and trails, as well as maintain all trails and roads to NPS standards. These activities would result in long-term, minor to moderate, beneficial, localized impacts on water quality. Short-term, minor, adverse impacts to water quality would occur from sedimentation and runoff during construction activities.</p> <p>New recreational development (including new visitor facilities and amenities at Rancho Corral de Tierra, Shelldance Nursery, and Sweeney Ridge; trails at Milagra Ridge, Sweeney Ridge, Phleger Estate, Rancho Corral de Tierra, Devil's Slide, and from Thornton State Beach to Mussel Rock) would have short-term, negligible to minor,</p>		

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
		<p>adverse, localized impacts on water quality from increased erosion and sedimentation, and the potential for chemical contamination resulting from inadvertent spills from heavy equipment at construction sites. Similar impacts to water quality could occur over the long-term due to the increased potential for urban pollutants to runoff from parking lots and other developed features.</p> <p>Visitor access and use would be greatly expanded under alternative 1, potentially resulting in some increase in erosion along trails and at primary visitor use areas that could have impacts on water quality – the impact would be long-term, negligible to minor, adverse, and localized.</p> <p>Beneficial effects on stream character, water quality, wetlands, floodplains, and watershed processes would occur from the restoration of disturbed sites and creeks, such as at Milagra Ridge, Mori Point, Phleger Estate, and especially particularly at Rancho Corral de Tierra. Incised creek banks that adversely impact floodplain function by restricting creek sinuosity would be restored, thereby expanding and enhancing wetlands and improving water quality. The overall stream character would be improved by creating a more natural water coarse that would reduce the potential for erosion, re-create the natural hydrologic regime, and contribute to improvements in restoring watershed processes. The impact of these activities would be long-term, moderate, beneficial, and localized.</p> <p>In general, expanded park programming and enhanced opportunities for participatory science and stewardship would have a beneficial effect on water-related resources due to increased public understanding and support for resource protection and management – the impact would be long-term, minor, beneficial, and county-wide.</p> <p>Overall, the impact to water-related resources from alternative 1 would be long-term, minor to moderate, beneficial, and localized. Adverse</p>		

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
		<p>impacts would occur from the continued presence and maintenance of existing facilities, new recreational development, and expanded visitor use. Beneficial impacts would occur from the restoration of disturbed sites, creek restoration activities, and improved resource understanding and public support.</p>		
		<p>Restoration/expansion of creek corridors would benefit riparian system, improve stream character, water quality, expand floodplains, etc.</p>	<p>Restoration/expansion of creek corridors would benefit riparian system, improve stream character, water quality, expand floodplains, etc.</p> <p>Downgrading/converting of roads to trails would provide long-term beneficial impacts to water quality due to limiting sediment sources and erosion</p> <p>Removal of 4 horse stables at Rancho would improve water quality</p>	<p>Restoration/expansion of creek corridors would benefit riparian system, improve stream character, water quality, expand floodplains, etc.</p>
Air Quality/ Carbon Footprint	Summary Conclusion for EIS			
Vegetation and	Summary Conclusion for EIS	The impacts to vegetation and wildlife from the continued presence and maintenance of existing		

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
<p>Wildlife (including plant communities, wildlife and wildlife habitat, and ecologically sensitive areas)</p>		<p>facilities (including structures, roads, and trails) under alternative 1 would be less than the no-action alternative because impacts to vegetation and wildlife habitat caused by erosion from unsustainable trails and roads would be reduced or eliminated. Alternative 1 would develop a sustainable trail system and eliminate and rehabilitate unneeded and unsustainable roads and trails, as well as maintain all trails and roads to NPS standards. These activities would result in long-term, minor to moderate, beneficial, localized impacts on vegetation and wildlife. Short-term, minor, adverse impacts to vegetation would occur from injury or loss of plants during construction activities; however, the area would be re-planted with native plants and the natural habitat would be reclaimed. Similarly, short-term adverse impacts to wildlife, such as displacement and flushing, would occur during construction, but the long-term effects would be to improve wildlife habitat and vegetation resources.</p> <p>New recreational development (including new visitor facilities and amenities at Rancho Corral de Tierra, Shelldance Nursery, and Sweeney Ridge; trails at Milagra Ridge, Sweeney Ridge, Phleger Estate, Rancho Corral de Tierra, Devil's Slide, and from Thorton State Beach to Mussel Rock) would have long-term, minor, adverse, localized impacts on vegetation and wildlife due to the permanent loss of plants and wildlife habitat. As mentioned above, short-term adverse impacts would also occur during periods of human presence and construction activity, causing flushing and displacement of wildlife from the affected areas.</p> <p>Visitor access and use would be greatly expanded under alternative 1, potentially resulting in some increase in the trampling of plants along trails and at primary visitor use areas – the impact would be long-term, minor, adverse, and localized.</p> <p>Beneficial effects on vegetation and wildlife would occur from the restoration of disturbed</p>		

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
		<p>sites and creeks, such as at Milagra Ridge, Mori Point, Phleger Estate, and especially particularly at Rancho Corral de Tierra. Rehabilitating disturbed sites by restoring soil integrity and planting native material would improve vegetation and wildlife habitat, providing improvements to resting, feeding, and nesting habitats. Similarly, restoring creeks and waterways would improve riparian plant communities and the diversity of habitats available to aquatic and terrestrial organisms. The impact of these activities would be long-term, moderate, beneficial, and localized.</p> <p>In general, expanded park programming and enhanced opportunities for participatory science and stewardship would have a beneficial effect on vegetation and wildlife due to increased public understanding and support for resource protection and management – the impact would be long-term, minor, beneficial, and county-wide.</p> <p>Overall, the impact to vegetation and wildlife from alternative 1 would be long-term, minor to moderate, beneficial, and localized. Adverse impacts would occur from the continued presence and maintenance of existing facilities, new recreational development, and expanded visitor use. Beneficial impacts would occur from the restoration of disturbed sites, creek restoration activities, and improved resource understanding and public support.</p>		

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
	<p>No creek restoration</p> <p>About 254 acres of exotic plant management needed at Rancho property</p> <p>Keep all 4 horse stables</p> <p>Continue habitat improvements for snake and frog at Mori Point</p> <p>Devil's Slide is a highway that affects geologic processes and adversely affects nesting seabird habitat</p>	<p>Minor new trail development from Thornton State Beach to Mussell Rock</p> <p>Creek restoration at Rancho (about 7,500 linear feet) would protect soils and eliminate erosion and impacts to coastal sedimentation budget</p> <p>About 254 acres of exotic plant management needed at Rancho property</p> <p>About 20 acres of earth contouring and native planting at Milagra Ridge</p> <p>Keep all 4 stables but improve BMPs and relations with operators</p> <p>Significant new development at Rancho (stewardship center, hiker's hut, trailhead, camping, etc) in lower portion of property where disturbed sites exist; however, new minor to moderate impacts would occur from reduction of habitat</p> <p>Restore 518 acres of redwood forest at Phleger Estate; adverse impacts from trails and trailheads</p> <p>Native plant nursery at Sheldance Nursery would provide plant stock that would benefit park restoration for veg and wildlife</p> <p>New/improved trails, primitive camping, and a hiker's hut at Sweeney Ridge would cause impacts</p> <p>Continue habitat improvements for snake and frog at Mori Point</p> <p>Visitor access to Devil's Slide is provided in vicinity of nesting sea birds</p> <p>Promoting visitor access and trail connections in the watershed would impact listed species and habitat</p>	<p>Minor new trail development from Thornton State Beach to Mussell Rock</p> <p>Creek restoration at Rancho (about 7,500 linear feet) would protect soils and eliminate erosion and impacts to coastal sedimentation budget</p> <p>Downgrading/converting of roads to trails or removal of fire roads (incl. about 8 miles in SM county, Sweeney Ridge) would provide long-term beneficial impacts on habitat with short-term adverse impacts due to displacement, etc.</p> <p>About 254 acres of exotic plant management needed at Rancho property</p> <p>About 20 acres of earth contouring and native planting at Milagra Ridge</p> <p>Removal (or relocation away from creek corridors) of 4 horse stables at Rancho would restore about 115 acres to native habitat</p> <p>Limited new development at Rancho (trailhead, equestrian facilities) in lower portion of property where disturbed sites exist</p> <p>Restore 518 acres of redwood forest at Phleger Estate; adverse impacts from trails and trailheads</p> <p>Native plant nursery at Sheldance Nursery would provide plant stock that would benefit park restoration for veg and wildlife</p> <p>Continue habitat improvements for snake and frog at Mori Point</p> <p>Visitor access to Devil's Slide is highly managed or seasonally closed to protect nesting sea birds</p> <p>Partner to limit visitor access and promote restoration and habitat management for listed species as part of UNESCO Biosphere Reserve</p>	<p>Minor new trail development from Thornton State Beach to Mussell Rock</p> <p>Creek restoration at Rancho (about 7,500 linear feet) would protect soils and eliminate erosion and impacts to coastal sedimentation budget</p> <p>Downgrading/converting of roads to trails (incl. Sneath Lane) would provide long-term beneficial impacts on habitat with short-term adverse impacts due to displacement, etc.</p> <p>About 254 acres of exotic plant management needed at Rancho property</p> <p>About 20 acres of earth contouring and native planting at Milagra Ridge</p> <p>Keep all 4 stables but improve BMPs and relations with operators</p> <p>Significant new development at Rancho (stewardship center, hiker's hut, trailhead, camping, etc) in lower portion of property where disturbed sites exist; however, new minor to moderate impacts would occur from reduction of habitat</p> <p>Restore 518 acres of redwood forest at Phleger Estate; adverse impacts from trails and trailheads</p> <p>Native plant nursery at Sheldance Nursery would provide plant stock that would benefit park restoration for veg and wildlife</p> <p>Continue habitat improvements for snake and frog at Mori Point</p> <p>Visitor access to Devil's Slide is provided in vicinity of nesting sea birds</p> <p>Promoting visitor access and trail connections in the watershed would impact listed species and habitat</p>

IMPACT TOPIC	Current Conditions and Management	Alternative 1: Connecting People with the Parks – NPS Preferred	Alternative 2: Preserving and Enjoying Coastal Ecosystems	Alternative 3: Focusing on National Treasures
Federal and State-listed Species (including California red-legged frog, San Francisco garter snake, steelhead)	<p>Summary Conclusion for EIS</p> <hr/> <p>Continue habitat improvements for snake and frog at Mori Point</p> <p>Tentative NEPA conclusion: long-term, minor beneficial impacts</p> <p>Tentative ESA determination: no effect; may affect, not likely to adversely affect; may affect, likely to adversely affect</p>	<p>Creek restoration at Rancho would reduce exotic veg and provide improved habitat, especially for anadromous fishes that used to be connected to ocean</p> <p>Habitat improvements for snake and frog at Mori Point</p> <p>Partner with Caltrans on fish passage improvements for anadromous species (steelhead, coho)</p> <p>Promoting visitor access and trail connections in the watershed would impact listed species and habitat</p>	<p>Downgrading/converting of roads to trails would provide long-term beneficial impacts on habitat with short-term adverse impacts due to displacement, etc.</p> <p>Habitat improvements for snake and frog at Mori Point</p> <p>Partner with Caltrans on fish passage improvements for anadromous species (steelhead, coho)</p> <p>Partner to limit visitor access and promote restoration and habitat management for listed species as part of UNESCO Biosphere Reserve</p>	<p>Habitat improvements for snake and frog at Mori Point</p> <p>Partner with Caltrans on fish passage improvements for anadromous species (steelhead, coho)</p> <p>Promoting visitor access and trail connections in the watershed would impact listed species and habitat</p>
Marine Resources (including vegetation and wildlife)	<p>Summary Conclusion for EIS</p> <hr/>	<p>Fish passage improvements for anadromous species (steelhead, coho) and restoration of creeks and spawning habitat</p>	<p>Fish passage improvements for anadromous species (steelhead, coho) and restoration of creeks and spawning habitat</p>	<p>Fish passage improvements for anadromous species (steelhead, coho) and restoration of creeks and spawning habitat</p>