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DAVID Y. IGE
GOVERNOR

June 25, 2018

Suzanne Case, Chair
Department of Land and Natural Resources
State of Hawai'i
1151 Punchbowl Street
Honolulu, Hawai'i 96813

Dear Chair Case,

Subject: Acceptance of the Hā'ena State Park Master Plan
Final Environmental Impact Statement

I hereby accept the Final Environmental Impact Statement for the Hā'ena State Park Master Plan, as satisfactory fulfillment of the requirements of Chapter 343, Hawai'i Revised Statutes. The economic, social, cultural, and environmental impacts that will likely occur, should this project be implemented, are adequately described in the statement. The analysis, together with the comments made by reviewers, provide useful information to policy makers and the public.

My acceptance of the statement is an affirmation of the adequacy of that statement under the applicable laws. I find that the mitigation measures proposed in the environmental impact statement will minimize the negative impacts of the project. Further, I find the discussion of unresolved issues and potential for subsequent environmental review to be sufficient.

In implementing this project, I direct the Department of Land and Natural Resources and its agent to perform these or comparable mitigation measures at the discretion of the relevant agencies. The mitigation measures identified in the environmental impact statement are summarized in the attached document.

With warmest regards,

David Y. Ige
Governor, State of Hawai'i

Attachment

c: Office of Environmental Quality Control

18 - 693

AGENCY PUBLICATION FORM

Project Name:	Hā'ena State Park Master Plan
Project Short Name:	Hā'ena State Park Master Plan
HRS §343-5 Trigger(s):	<p>The use of State land and funds; the use of county lands or funds; a use within a shoreline area; a use within a Historic Site and District as designated in the Hawai'i and National Registers of Historic Places; the use of State lands classified as a Conservation District; and the modification of existing helicopter facilities within the State that may affect lands within a Conservation District, shoreline area, and registered historic site.</p> <p>In addition, the project may involve or impact State and/or County lands or funds relating to, connections to, and/or easements across, State or County facilities and lands including but not limited to infrastructure improvements for public roadways, water, sewer, utility, drainage, or other facilities. While the specific nature of each improvement is not known at this time, the EIS is intended to address all current and future instances involving the use of State and/or County lands or funds relating to the proposed park improvements.</p>
Island(s):	Kaua'i
Judicial District(s):	Hanalei
TMK(s):	(4) 5-9-008: 001, 5-9-001: 025 and 5-9-001: 022 (por.)
Permit(s)/Approval(s):	Compliance with Chapter 343, HRS; Compliance with Chapter 6E, HRS (Historic Preservation); Special Management Area Use Permit; Site Plan Approval; Conservation District Use Permit; Shoreline Setback Determination; Wetland Delineation Study and Determination and other Department of the Army permits; National Pollution Discharge Elimination System (NPDES) Permit; FAA Form 7480-1 Notice of Landing Area Proposal; Permit to Perform Work within a State Right-of-Way; Grading and Grubbing Permits; Building Permits; and dependent on extent of instream activities pursued, Stream Channel Alteration Permit; Stream Diversion Works and/or Petition to Amend Instream Flow Standard
Proposing/Determining Agency:	Department of Land and Natural Resources, Division of State Parks
<i>Contact Name, Email, Telephone, Address</i>	<p>Curt Cottrell, Administrator Email: curt.a.cottrell@hawaii.gov Telephone: (808) 587-0300 Department of Land and Natural Resources Division of State Parks P.O. Box 621 Honolulu, Hawai'i 96809</p>
Accepting Authority:	Governor of the State of Hawai'i
<i>Contact Name, Email, Telephone, Address</i>	<p>The Honorable David Y. Ige Governor, State of Hawai'i http://governor.hawaii.gov/contact-us/contact-the-governor/ Telephone: (808) 586-0034 Executive Chambers, State Capitol 415 South Beretania Street Honolulu, Hawai'i 96813</p>
Consultant:	PBR HAWAII & Associates, Inc.
<i>Contact Name, Email, Telephone, Address</i>	<p>Ms. Kimi Yuen, Principal kyuen@pbrhawaii.com Telephone: (808) 521-5631 Fax: (808) 523-1402 PBR HAWAII & Associates, Inc. 1001 Bishop Street, Suite 650 Honolulu, Hawai'i 96813</p>

Status (select one)**Submittal Requirements**

- DEA-AFNSI Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.
- FEA-FONSI Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.
- FEA-EISPN Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.
- Act 172-12 EISPN ("Direct to EIS") Submit 1) the proposing agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.
- DEIS Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.
- FEIS Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.
- FEIS Acceptance Determination The accepting authority simultaneously transmits to both the OEQC and the proposing agency a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
- FEIS Statutory Acceptance Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.
- Supplemental EIS Determination The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
- Withdrawal Identify the specific document(s) to withdraw and explain in the project summary section.
- Other Contact the OEQC if your action is not one of the above items.

Project Summary

Provide a description of the proposed action and purpose and need in 200 words or less.

Hā'ena, the storied place of Pele, Hi'iaka, and Lohi'au on Kaua'i's North Shore, is also home to one of the State of Hawai'i's busiest state parks, Hā'ena State Park. Over 68 acres in area, the park contains significant cultural and ecological resources, as well as the trailhead to Kalalau Trail and the Nāpali Coast State Wilderness Park.

The Hā'ena State Park Master Plan emphasizes the restoration and revitalization of various cultural, historic, and natural resources including the ancient agricultural complex, hula complex, sand dunes, and stream ecosystem. Only a few new structures are proposed including a Welcome Hale that is envisioned as an open traditional Hawaiian hale, new restrooms, pedestrian paths, a hālau wa'a and cultural gathering area, and an improved main parking lot with entry turnaround and shuttle stop. Key management recommendations include: 1) the establishment of a Cultural Advisory Committee and a Community Advisory Committee; 2) adaptive management principles with regards to all management issues at the park; 3) an initial limit of 900 visitors entering the park during peak park hours and calculated on an average daily basis as opposed to a hard limit; 4) required staff and volunteer education; and 5) visitor orientation prior to park entry.

**HĀ'ENA STATE PARK MASTER PLAN
FINAL ENVIRONMENTAL IMPACT STATEMENT**

SUMMARY OF MITIGATION MEASURES
Attachment to the Governor's Acceptance

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This summary memorializes the mitigation measures proposed and accepted in the Final Environmental Impact Statement (FEIS) for the Department of Land and Natural Resources to implement for the Hā'ena State Park Master Plan.

The following is a reproduction from the FEIS of the summary of mitigation measures provided in Chapter 1, Section 1.9.2 (pages 1-10 through 1-23).

CLIMATE

The proposed Master Plan is not expected to have an impact on climatic conditions and no mitigation measures are anticipated.

GEOLOGY AND TOPOGRAPHY

The proposed Master Plan is not anticipated to have a negative effect on Kaua'i's geology, nor will it involve alteration to important geological features, such as the wet or dry caves within Hā'ena State Park. The Master Plan recommends shifting most of the visitor traffic away from the base of the cliff due to the potential for rockfalls, which will also reduce visitor impacts to Wai a Kanaloa (wet cave) as fewer people will access it.

One of the priority recommendations identified in the Master Plan is the restoration of the coastal dunes (Section 2.5.1.10). Restoration will have multiple benefits including shoreline protection, protection of the iwi kupuna interred within the dunes, removal of alien and invasive species, and the potential return of native wildlife. To avoid impacts to the coastal dunes, visitors will still be permitted to picnic on the beach, but not on the dunes. Other recreational activities such as driving on the sand will also be prohibited. The relocated lifeguard tower is proposed to be built up rather than excavated into the sand to mitigate subsurface impacts. Further, the public will be encouraged to access the beach via marked and cleared trails, rather than crossing over the dunes.

SOILS

Impacts to soils, such as soil erosion can occur during construction and over the life of a development due to rainwater runoff. Sediment from soil erosion can negatively impact freshwater habitat in streams and can smother coral reefs. Site work is proposed in previously disturbed areas due to the high possibility of encountering subsurface archaeology and minimized to the extent possible. This also minimizes the risk of soil sedimentation, both during construction and in the long term. During construction, best management practices for soil and erosion control will be implemented to contain and/or filter any runoff and to control sedimentation, erosion, and dust. Efforts will be made to minimize all large-scale grading, grubbing, and stockpiling of soil and limit such activity to the dry season whenever possible. Long-term soil and erosion control measures have also been designed into the Master Plan including an integrated water/wastewater/drainage system, bioswales and rain gardens,

and rainwater catchment cisterns to capture and filter stormwater runoff and to create the opportunity to use collected rainwater for on-site nonpotable water uses such as irrigation and toilet flushing.

GROUND AND SURFACE WATER

On-site wastewater disposal can potentially impact groundwater resources if not treated properly. The Master Plan recommends that all wastewater be treated with an aerobic system to a minimum R-2 water quality with aeration and non-chlorine treatment such as UV disinfection to improve effluent quality and minimize potential impacts. Treatment to R-1 water quality would further improve water quality of the effluent and allow additional uses of the effluent such as overground and drip irrigation.

The Master Plan also recommends the use of non-chemical disinfectants and cleaning products for maintenance, particularly in composting toilets if utilized, and environmentally-safe soaps that contain plant nutrients and biocompatible cleaners to minimize impacts to wastewater treatment processes and effluent quality. No withdrawals of groundwater are proposed at the park and potable water use from the County's water system is anticipated to be reduced due to the reduction in the number of visitors. Therefore, no mitigation measures to offset groundwater quantity are proposed.

The Master Plan does not propose any additional water diversions or change to the volume of water currently diverted from Limahuli Stream for irrigation. However, the Master Plan suggests investigating the potential of Limahuli Stream as a renewable source of energy through a microhydropower system. To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals. Also, as a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo'i production should it be pursued. Should any new or increased diversion of water from Limahuli Stream be desired, the appropriate permits will be required from the State Commission of Water Resource Management.

Other mitigation measures under consideration to ensure that the park elements do not contribute to the degradation of surface water resources include the installation of bioswales around the parking lot to filter stormwater before it is conveyed to drainages and the use of rain barrels to collect roof runoff for nonpotable water uses, such as irrigation and toilet flushing. The Master Plan also recommends the use of non-chemical disinfectants and cleaning products and as noted, environmentally-safe soaps that contain plant nutrients and biocompatible cleaners as well as the elimination of chemical pesticides and herbicides. All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.

Pedestrian paths throughout the parking lot and drop-off/pick-up areas should be surfaced with permeable pavers or pavements or natural soil hardeners to increase rainwater infiltration while providing a stable, ADA-accessible surface. This will stabilize the area while allowing rainwater to infiltrate into the ground to prevent ponding and soil erosion.

Further investigation will be necessary prior to detailed design of the parking lot to see if the 'auwai can be restored to serve the lo'i without extreme requirements or cost. If it is found that it can be restored, the grading and landscaping of this area should be done so that stormwater runoff from the parking lot is diverted away from the 'auwai and directed to flow across the grassed areas of the parking lot or towards the bioswales and adjacent landscaped areas, which could be designed as rain gardens.

Also, the design of the restored 'auwai should be carefully done so as not to hydraulically connect it to Limahuli Stream since Limahuli Stream is currently free of the invasive apple snail and the park's lo'i are known to have them.

During construction, best management practices to control sediment, erosion, dust, or polluting runoff from flowing into waterways will be employed to the maximum extent practicable. Certain construction activities within the park may trigger the need for a National Pollutant Discharge Elimination System permit.

WETLANDS

No new facilities are proposed within known wetlands. However, the Pedestrian Path may cross over potential wetland areas and the footings for this walkway will need to be installed in those areas. The NWI maps are non-regulatory and do not represent a precise delineation of wetlands. Therefore, State Parks will need to carefully design the proposed improvements to ensure that wetlands are avoided or can be appropriately mitigated.

Some members of the MPAC expressed a desire to restore the loko and wetland areas for endangered native birds and possible agricultural uses. Geometrician Associates believe it might be possible to restore the small wetlands on the property to create a native bird habitat. However, they do not recommend modifying these areas specifically to attract endangered birds or any federally listed species for practical and legal reasons. The proposed restoration of the loko and wetlands is expected to be beneficial to the environment, thus, no mitigation measures are anticipated at this time. In particular, wetland restoration could also help protect the park against the impacts of climate change and prepare it for sea level rise. If the loko are restored for agricultural uses, the Master Plan recommends against pesticide or herbicide use.

MARINE ENVIRONMENT AND BIOLOGICAL RESOURCES

In general, the Master Plan is not anticipated to have any impact on the natural marine processes, such as waves and currents. All of the proposed facilities are located outside of FEMA's delineated 100-year special flood areas subject to wave action. However, because the Master Plan proposes a limit on the average number of visitors to the park per day, the improvements and management strategies seek to have a net positive impact on the park's marine environment, including marine water quality and health of the coral reef. In addition, the reduction, detainment, and filtration of stormwater runoff, restoration and protection of the dune system and reefs, increased treatment and reuse of wastewater effluent and rainwater runoff, removal of the majority of cars along the highway near Kē'ē, reduction of soil erosion, and instruction on ocean-friendly visitor behavior are anticipated to have beneficial impacts on the marine environments and biota. Lighting plans and management plans will be carefully designed and implemented so that no light from the park is visible from the beach to minimize impacts to nesting sea turtles or their hatchlings seeking the ocean. In August 2015, the National Marine Fisheries Service (NMFS) issued a final rule revising the critical habitat for the Hawaiian monk seals to include the marine habitat fronting Hā'ena State Park from the 200-meter depth contour line, including the seafloor, through the water's edge and 5 meters into the terrestrial environment from the shoreline (50 Code of Federal Regulations Part 226). Therefore, any changes in these areas will require consultation with the NMFS.

TERRESTRIAL AND FRESHWATER FLORA AND FAUNA

The Master Plan proposes to improve the park's terrestrial flora by clearing invasive species and restoring native vegetation and native ecosystems throughout the park. The areas recommended, in order of priority, are the coastal strand, the ironwood and false kamani forest, the Limahuli riparian zone, and talus slopes. Restoration of the native flora would increase native plant conservation and opportunities to educate the public. This may also indirectly support native birds including endangered and threatened species without a formal effort to create an endangered species habitat. State Parks is also recommending a reduction in the number of daily visitors and requiring attendance at an educational session that would provide a brief overview of the park's extensive but sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park. Such a significant reduction in visitor use and better education on the park's resources will have a net positive impact for the park's flora and fauna.

Seabirds are attracted to artificial lights and can be downed after circling the light source and tiring or colliding with the pole or other objects. Once grounded, they can be struck by motor vehicles or are easy prey for cats, dogs or other animals. Therefore, all exterior lights will be fully-shielded (completely opaque) and downward facing full-cut off fixtures with the lowest light level (lumens) possible, sufficiently large, and positioned so that the bulb is only visible from below to minimize distraction and disorientation of wildlife flying over the park. The use of artificial lights should be minimized or reduced as much as possible during the seabird fledging season of September to December, and during the sea turtle hatching period July to September, and yellow lighting invisible to honu should be used near the shoreline. Night time construction also should be avoided during this period. The lighting design plan will also ensure that no lights are visible from the beach to minimize impacts to nesting honu and their hatchlings seeking the ocean.

Endangered waterbirds and Hawaiian Nēnē are attracted to standing water, including the former loko and restored lo'i. To minimize predation of these birds by feral animals, measures to reduce the feral cat and rat population are proposed in the park. These measures include installation of animal-proof garbage receptacles and maintaining cooperation with the Humane Society, which at times had placed traps in the park for removal of feral cats. Additionally, the Master Plan recommends that, before any wetland restoration activities proceed, that an analysis of the costs, benefits, and liabilities associated with intentionally creating habitat for endangered waterbirds be conducted. However, if the loko and wetlands are restored, they may still attract native birds and other wildlife. Perimeter fencing shielded by landscaping can help protect these areas from predatory animals and care will be taken not to disturb nesting sites during construction.

The 'Ōpe'ape'a, endangered Hawaiian Hoary Bat, roosts in woody vegetation. If large trees or woody shrubs over 15-feet in height are trimmed or removed during the breeding, birthing and pupping season, in the months of June 1 through September 15, there is the risk of young bats being harmed or killed. To minimize impacts to 'Ōpe'ape'a, it is proposed that State Parks restrict any cutting of large shrubs or trees over 15-feet in height to periods outside of these months.

To preserve the native aquatic species present in Limahuli Stream, the Master Plan avoids making any alterations to the stream bed or banks except for the proposed restoration of the riparian resources and clearing of alien vegetation. None of the proposed facilities or activities are proximate to the stream. No changes to the existing stream crossing at the park entry are proposed. However, control measures to

prevent the spread of apple snails from the park's lo'i to Limahuli Stream should be included in any design or implementation of the 'auwai and irrigation systems for the Agricultural Complex. State Parks should also continue to cooperate with DLNR, Division of Aquatic Resources (DAR) to keep new alien fish out of the 'auwai and stream and in ridding the stream of periodic invasions of swordtails, guppies, and other alien fish. To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals.

NATURAL HAZARDS

The following summarizes the potential impacts and mitigation measures related to various natural hazards that may impact the park.

For all potential natural hazards, to facilitate evacuations in the event they are necessary, the helicopter landing pad is proposed to be retained with the Master Plan improvements. Emergency evacuation routes should also be planned and indicated on visitor brochures and materials. They can also be described and shown on maps included in the visitor orientation materials within the proposed Welcome Hale. Ocean safety and evacuation signs should be posted appropriately on paths and evacuation routes. The hardline phone at Kē'ē should be retained for emergencies and an additional emergency phone could be located at the Welcome Hale. If a shuttle system is developed as the main point of entry, an emergency evacuation plan will need to be developed specifically for the shuttle passengers. Staff training and visitor education sessions, as well as ongoing coordination, communication, and annual park evacuation drills with the County Fire and Police Departments are recommended management strategies proposed in the Master Plan to help improve emergency readiness and public safety.

Flood Hazards

All of the proposed facilities are recommended to be built outside of the special flood hazard areas Zones VE, AE, and A to minimize any potential impact from flood hazards. Evacuation routes should also be located outside of the special flood hazard areas.

Tropical Storms and Hurricanes

While it is difficult to predict such natural occurrences, it is reasonable to assume that future incidents are likely, given historical events and the FEMA Special Flood Hazard Areas along the coastline. Because of the nature of these events, there will typically be advanced warning of severe weather conditions and tropical cyclones. Therefore, the park can also be closed during these events and the public can be notified in advance of the approaching storms to avoid the area. State Parks can notify news and media outlets of park closures and utilize social media and email or text announcements to provide up-to-the-minute information to the public.

Tsunami

The land makai of the highway within Hā'ena State Park is located within the tsunami evacuation zone. An "extreme tsunami evacuation zone" has been added to all state civil defense maps and includes the entire park and portions mauka of the highway up to the pali. There are two different types of tsunami events for which State Parks will plan; locally generated tsunami give very little time to evacuate coastal

areas while distantly generated tsunami can take hours to make landfall. Evacuation plans and readiness plans should be developed by State Parks for both scenarios and all visitors should be educated on what to do during the required orientation session upon entering the park. Tsunami evacuation signs should be posted appropriately on paths and evacuation routes. Park staff will be trained and assist visitors in the evacuation. As recommended by State Civil Defense, a new siren should be installed in the park, potentially in the main parking lot. A subsequent letter from the Office of State Emergency Management/Civil Defense noted that siren coverage exists for the project site, but requested the existing siren to be upgraded to a 121db(c) omnidirectional siren. State Parks will work with the Hawai'i Emergency Management Agency to ensure adequate siren coverage at the park. A grassed helipad will be retained and cleared areas within the park may be used in case people need to be airlifted out of the area.

Shoreline Erosion

One of the first priorities identified in the Master Plan by both community members and biologists is dune restoration. The restoration of a native dune ecosystem would involve the removal of alien species and the planting of natives and Polynesian-introduced plants such as pōhuehue, naupaka, nanea, pōhinahina, nehe, pa'u-o-Hi'iaka, 'aki'aki grass, milo, hala and kou. Not only would they provide improved and more authentic vegetation but they could also be used to help reduce coastal erosion if carefully planted. Shoreline protection structures would be prohibited in favor of allowing the natural shore building processes to occur. Drainage improvements along the highway are also recommended in the Master Plan to prevent ponding, soil erosion, and beach washouts as has happened at Kē'ē during heavy rainfall events. State Parks will also consider resurfacing the former highway pavement with historically appropriate materials and implement creative design solutions that can improve drainage and minimize erosion in the surrounding areas.

Rockfall Hazard

The health and safety impacts of potential rockfalls are proposed to be mitigated by siting all of the major facilities and paths, including the Pedestrian Path to Kē'ē, outside of the potential rockfall hazard zones. Also, warning signs will be installed at appropriate locations along the highway between the turnaround and Kē'ē. Safety instructions and rockfall hazard warnings should be included in the visitor orientation prior to park entry. A dense native tree screen is also recommended along Kūhiō Highway, especially near the main parking lot, as trees may serve to catch or slow smaller rockfall events. Thus, tree removal north of the highway is also not proposed. The Master Plan elements also include features to restrict the public from standing immediately in front of the wet cave, Wai a Kanaloa, where the cliffs above are identified as Class A hazards should they choose to traverse the highway despite the rockfall warnings. Native and Polynesian-introduced landscaping are recommended as aesthetic and culturally appropriate screens for the safety devices or barriers.

ARCHAEOLOGICAL AND HISTORIC RESOURCES

There are significant archaeological and historical resources located at the park. Human use and development have the potential to disturb and damage archaeological and historic resources. At the forefront of the proposed Master Plan are preservation, restoration, and cultural use and reactivation of the park's historic and archaeological resources while providing quality opportunities for outdoor recreation. The entire western portion of the park surrounding Ka Ulu a Paoa Heiau has been designated as the Hula Complex and the restoration of the heiau based on historic information and surveys such as

Henry Kekahuna's 1959 drawing of the heiau are recommended in the plan. Similarly, the continued restoration of the Agricultural Complex, which spans the majority of the park's land, and historic structures such as the Allerton Caretaker's Cottage and Montgomery House are recommended along with the restoration of the other historic and archaeological sites scattered throughout the park such as Lohi'au's House Platform, the coastal dunes, and the loko. An archaeological sensitivity map was prepared at the outset of the project so that all new facilities proposed in the Master Plan could be located in previously disturbed areas to minimize impacts to archaeologically sensitive areas.

The plan also recommends that State Parks involve its archaeologists and staff whenever siting, designing, or installing any new park facility, especially when ground disturbance is required. Additional archaeological surveys and tests should be performed as necessary before undertaking projects requiring ground alteration or excavation. Ongoing efforts to identify and prioritize historic properties including archaeological resources in need of maintenance, restoration, and monitoring should be continued. The plan also recommends that alien plants and trees that undermine the archaeological sites be removed, as appropriate. State Parks archaeologists and staff should also conduct archaeological monitoring during any earth moving or ground disturbing activities in case there are inadvertent discoveries.

The primary programmatic action to mitigate impacts to archaeological resources will be to establish a Cultural Advisory Group (CAG) to help guide implementation of the Master Plan and management of all aspects of the park. Specifically, the Master Plan recommends that the CAG be consulted on management actions and construction projects as well as interpretive materials, and visitor programs. In addition, the reduction in the number of daily visitors and the visitor information materials provided prior to park entry will educate visitors about the park's archaeological and historic resources and the appropriate behavior and protocols around these sensitive resources.

CULTURAL RESOURCES

Construction, outdoor recreation, and visitor activities have the potential to undermine the cultural significance of a place if not mitigated. Development and recreational activities can also impact the cultural environment by limiting a cultural practitioner's ability to access sites of cultural importance. The Master Plan, therefore, takes the proactive approach of protecting and restoring the varied natural, cultural, and historic resources as they are all integral to the cultural values of this place. Visitor education of the cultural practices at the park and the appropriate behavior and protocols when encountering active cultural use will increase visitor sensitivity to these activities and mitigate potential conflicts. It also recommends the reduction in the number of visitors at the park so that an appropriate ambiance and space can be maintained for these cultural practices to take place. The Master Plan also includes the key recommendation that a Cultural Advisory Group is formed to advise State Parks and the potential future park management entity on all matters regarding the park including management actions, construction projects, behavior and access protocols, and interpretive signage and programs.

TRANSPORTATION AND PARKING

Access to Hā'ena State Park is dominated by the personal vehicle, whether rented or privately owned. The reduction in the number of daily visitors is anticipated to reduce the traffic and congestion currently occurring at the park as well as the demand for parking especially during peak hours. The parking lot is proposed to be divided into spaces for fee-paying visitors and non-fee-paying visitors, and these areas

can be adjusted with movable bollards and cordons depending on the number of cars for each user group. The division between the two can be adaptively managed weekly, daily, or even hourly throughout the day depending on demand. This design gives State Parks the flexibility to provide enough parking until the shuttle/transit system is operational and to adjust as needed the number of parking stalls that are available for the different user groups while also encouraging multimodal access to the park. Green vehicles such as electric vehicles that can be charged with renewable energy sources such as solar PV or vehicles that use alternative fuels and have low or no emissions are recommended to reduce the impact to air quality and consumption of fossil fuels.

Vehicle access beyond the main parking area to Kē'ē beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kē'ē Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. It will also reduce the potential conflicts between vehicles and pedestrians as the Pedestrian Path becomes the main visitor trail to Kē'ē and it will reduce roadway maintenance costs for the State.

The Master Plan also includes a combination of physical improvements and programmatic options that will have a positive impact on pedestrian and bicycle facilities. The new Pedestrian Path will provide increased educational opportunities via interpretive displays and greater visual access to the Agricultural Complex, Makana, wetlands, and loko for visitors. Bicycle racks are proposed near the Welcome Hale and at Kē'ē Beach.

There are both beneficial and negative impacts anticipated with respect to construction. Construction of the Pedestrian Path will involve setting footings for the path in the lo'i. Due to the proximity of archaeological resources and lo'i walls and the potential of unearthing subsurface materials during construction care must be taken. Archaeological surveying prior to path construction and archaeological monitoring during construction are recommended.

Other potential negative impacts include the possible disruption of community gardening activities in the lo'i and the physical bifurcation of the lo'i, complicating maintenance and operations. Proposed mitigation measures include expanding restoration of the agricultural complex to other phases (Phases II and III) and allowing the lo'i between the highway and Pedestrian Path to be used as an outdoor classroom for educational purposes and hands-on activities for visitor tours and school groups.

NOISE

It is expected that the proposed reduction in the number of visitors and the removal of through traffic on the highway will have a positive impact on noise levels in the park. During construction, there will be temporary noise impacts associated with construction equipment. Similarly, restoration work and ongoing maintenance may require the use of motorized equipment, but these impacts are expected to be temporary and can be scheduled during park closures. To help mitigate temporary construction noise, State Parks will work with contractors to ensure adherence to Department of Health (DOH) regulations as required under Chapter 11-46, HAR, including obtaining noise permits as required and the use of proper equipment and regular vehicle maintenance. Equipment mufflers or other noise attenuating equipment may also be employed as additional mitigation. All construction activities will be limited to daylight work hours.

AIR QUALITY

As with automobile noise, it is expected that the reduction in the number of vehicles driving along the highway to Kē'ē will result in less automobile emissions and dust. Emissions from operation of construction equipment and other vehicles involved in construction, restoration, and maintenance activities may temporarily affect the ambient air quality in the immediate vicinity. However, these effects will be minimized through proper maintenance of construction equipment and vehicles and scheduling of such activity during park closures or in areas away from visitor activity whenever possible. In addition, there may be a temporary adverse impact on air quality attributable to dust generated during project construction, maintenance, and removal of invasive plant species particularly during earthmoving activity. Best management practices that meet DOH's standards are anticipated to be employed as needed to mitigate dust during these activities.

Construction activities will comply with the provisions of Section 11-60.1-33, Hawai'i Administrative Rules (HAR) related to Fugitive Dust. Adequate measures to control dust during various phases of construction will be required to be implemented by any contractor employed by the DLNR to effect the project's development. Example measures to control fugitive dust include: providing adequate water sources at the site prior to start-up of construction activities; minimizing dust from shoulders and access roads; providing adequate dust control measures during non-work hours and prior to daily start-up of construction activities; and controlling dust from debris being hauled to and from the project site.

SCENIC RESOURCES

Beneficial impacts to the park's scenic resources are anticipated due to various measures proposed in the Master Plan. Limited vehicle access beyond the main parking area will reduce the number of cars along the highway at the base of the pali and thereby improve the views. Visitors will access the park by foot along the Pedestrian Path, allowing views to the lo'i and Wai a Kanaloa without interruption by parked vehicles. Makana also will be visible from the Pedestrian Path; it is currently not visible from the highway. New view corridors and lookouts are also proposed in the Master Plan (see Figure 28).

INFRASTRUCTURE

The following describes the potential impacts and mitigation measures related to park infrastructure. The overall reduction in the number of daily visitors is expected to have beneficial impacts to the infrastructure services required at the park. Further discussion follows with regards to each system.

Water

The existing 3-inch water main within the park is expected to be sufficient for the proposed Master Plan improvements since the number of daily visitors will be reduced compared to current conditions. The new facilities will be designed to be as efficient as possible and may utilize collected rainwater and recycled water for nonpotable water uses such as toilet flushing, dust control, and irrigation. The proposed integrated water system will involve dual water systems, which will be carefully designed and operated to prevent the cross-connection of the two systems including backflow prevention. Both systems including any non-potable spigots and irrigated areas will be clearly labeled. The two systems must be physically separated by air gaps or reduced-pressure backflow prevention devices to avoid contaminating the potable water supply. Backflow devices must be tested periodically and will comply with Chapter 11-21, HAR, Cross-Connection and Backflow Control. More efficient use of the site's historic 'auwai, may help capture and divert precipitation to desired locations. The Master Plan suggests

redesigning the Kūhiō Highway culverts so that rainwater that passes beneath it flows more naturally and can be filtered and used in the 'auwai system. Although continued restoration of the Agricultural Complex could also increase water demands, another alternative voiced by the Hui is to plant culturally appropriate crops that are less water intensive as was done historically in dry periods.

Wastewater

Due to the remoteness of the park, no connection to any public sanitary sewer systems will be made and all wastewater will be treated and disposed of on-site. The Master Plan proposes that any new wastewater system include an aerobic treatment system that brings wastewater to an R-2 water quality level at a minimum and to reuse the effluent to minimize impacts to the sensitive natural and cultural resources at the park. The recycled water can then be used for nonpotable uses such as subsurface irrigation, dust control, and toilet flushing. As noted by the DOH, the project is located in a critical wastewater disposal area as determined by the Kaua'i County Wastewater Advisory Committee and no new cesspools are permitted. All individual wastewater systems proposed for the park will be set back as required from State surface waters such as wetlands. All wastewater plans must conform to applicable provisions of the DOH Administrative Rules Chapter 11-62, "Wastewater Systems" and that the DOH reserves the right to review the detailed wastewater plans for conformance to applicable rules.

Drainage

The addition of impervious surfaces to a site can result in a decrease in water quality and an increase in surface water volume during rain events. To mitigate the increase in impervious surfaces and related impacts, the Master Plan proposes to develop an integrated water/wastewater/drainage system to maximize the efficiencies of the use of water resources available on-site and to minimize surface runoff while improving water quality to the greatest extent practicable. This includes the installation of rainwater catchment cisterns on all the major facilities, which will help reduce the quantity of runoff. The collected water is recommended to be used for nonpotable water uses such as irrigation or toilet flushing. In addition, bioswales will be installed downslope of the parking areas to allow runoff to be detained and filtered naturally by native and/or Polynesian-introduced landscaping before percolating into the ground and serving the dual purpose of creating an aesthetically pleasing environment while managing site drainage. If the 'auwai are able to be restored, this will further divert rainwater runoff to the lo'i, reducing the total amount of water draining from the site. To prevent further washouts of Kē'ē Beach, drainage improvements should also be made along the highway to filter and redirect runoff. All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.

Electrical and Communication Systems

Due to the park's limited access to infrastructure and the dispersed locations of some of the proposed facilities, all facilities requiring power are recommended to be designed to be energy efficient and to use renewable energy resources to fill the remaining demand. This includes solar hot water heating and photovoltaic as well as microwind and microhydropower sources. As a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo'i production should it be pursued. To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals.

In order to maintain communications and provide for public safety during emergencies, the existing hardline pay phone and emergency phone at Kē'ē Beach should be maintained. For similar reasons, hardline telephone service should be considered at the turnaround and Welcome Hale if desired. The remote and mountainous location limits wireless communications but wireless services should also be considered for visitor convenience and may be required for certain parking management technologies.

Solid Waste

Although fewer users to the park will likely result in less trash generated at the park, State Parks will recommend that all visitors carry in what they carry out. Also, new trash receptacles will be provided at key locations so that waste disposal is convenient to park users. Recycle bins are recommended to be installed along with trash receptacles and all receptacles are proposed to have animal-proof lids to minimize foraging by feral cats, dogs, rats and chickens and reduce the potential for windblown debris. Daily maintenance and removal of trash and recyclables is recommended to be continued at the park to minimize the amount of solid waste at the park that may be windblown or washed into ocean, stream, and other sensitive natural and cultural environments. There may be hazardous substances, pollutants, or contaminants to be present in the soils in the areas where there were abandoned vehicles. However, no work is anticipated in these areas at this time. State Parks will work with the State HEER Office to determine the appropriate actions to comply with the relevant environmental laws if applicable should any work occur in those areas.

COMMUNITY CHARACTER AND POPULATION

Because the Master Plan is not recommending a change in the use of the park, the proposed Master Plan is not anticipated to have any effect on the rural community character of the area nor impact the population characteristics of Hā'ena. No mitigation measures are planned as the potential impacts are anticipated to be minimal due to the overall reduction in the daily number of people at the park.

ECONOMY

The proposed limit on the number of people entering the park may reduce the number of people who visit the North Shore and may therefore negatively impact the local economy and North Shore businesses. However, the economic impact could be mitigated by visitors who plan their visit to the North Shore in advance and potentially take greater advantage of other North Shore attractions when the park is at capacity. They may also shift their time to other areas on Kaua'i which will benefit businesses in other parts of the island.

The proposed new fees for visitor entry, parking, and shuttle tickets may generate enough new income to support an increase in interpretive and caretaking activities. Construction of facilities will stimulate purchase of materials (generating excise tax revenues) and employment for labor (generating income tax revenues). The reduction in the number of daily visitors at the park may also reduce the number of lifeguards required at Kē'ē Beach. However, as noted, the overall employment at the park is recommended to be increased in other areas, or may shift the requirements for lifeguards to the County beach park, which will help offset the loss.

POLICE AND FIRE PROTECTION

The Master Plan will reduce the number of park users who may require police, fire and emergency rescue resources including the number of day hikers on the Kalalau Trail (hikers without permits). State

Parks will work with the County Police and Fire Departments to comply with requirements of the Kaua'i County Fire Code including emergency access by fire apparatus, ambulance, and other emergency vehicles as required. Due to the remote location of the park and the potential for hazardous conditions, emergency evacuation plans and rescue plans for various natural hazards should be developed as discussed in Sections 2.5.2 and 3.10 to help improve coordination of public safety and park staff response efforts in times of emergencies.

The Master Plan calls for the lifeguard stand to be moved north of its current location, but this will be a positive impact as it will allow better visibility of the entire Kē'ē Lagoon for lifeguards. A helicopter landing area will be maintained at the park and can be used for emergency landings. The emergency evacuation drills should be performed with State Civil Defense, Kaua'i fire and police departments annually, at a minimum, to ensure readiness.

SCHOOLS

The proposed Master Plan is not anticipated to add a significant demand on public school facilities. However, many of the proposed educational and interpretive programs are expected to support the area's educational resources by providing opportunities for hands-on activities covering a range of topics spanning the natural, cultural, and archaeological realms of study.

HEALTH CARE SERVICES

The Master Plan developments and management measures are not anticipated to create any greater demand on regional health care services. It is anticipated that the reduced number of visitors as well as improved visitor education, improved signage, and location of facilities away from the rockfall hazard area will result in beneficial impacts to public health and potentially required health care services.

RECREATIONAL FACILITIES

An objective of the Master Plan is to balance outdoor recreational uses with the protection and preservation of the park's natural and cultural features, enriching the experience for all. Existing outdoor recreational opportunities such as swimming, sunbathing and snorkeling along with access to the Kalalau Trail are proposed to continue. In addition, a picnic area is proposed to be added at the end of the highway pavement at Kē'ē. The Pedestrian Path will facilitate walking and sightseeing and possibly bicycling in the park. Table 9 provides a list of the existing and proposed recreational activities anticipated to be permitted at the park.

The probable reduction in total number of visitors per day will create both positive and potentially negative impacts if not mitigated. Limiting the number of visitors may have the positive effect of enhancing the recreational experiences within the park. However, negative effects may be the distribution of recreational demand to other facilities on the North Shore and island-wide, especially the nearby Hā'ena Beach Park. State Parks should monitor use of Hā'ena County Park to judge if the recreational demand is shifted from one facility to the other. If so, an adjustment to the number of visitors allowed per day to Hā'ena State Park might be considered as a mitigating measure. If a shuttle is employed, a mitigation measure may be to include a stop at Hā'ena Beach Park to alleviate traffic and congestion at the County park as well.