

- Source water protection best management practices should be required of all agricultural activities to minimize the transport of pesticides, herbicides, and fertilizers into the underlying potable aquifers and into streams and nearshore waters.

4.2.2 Guidelines

- Confirm that adequate potable and nonpotable water is available before approving new residential or commercial development.
- Ensure that State and private well development projects are integrated into and consistent with City water source development plans.
- Support infrastructure improvements that provide for the efficient and secure transmission and delivery of quality water.
- Conserve the use of potable water by implementing the following measures, as feasible and appropriate:
 - Low-flush toilets, flow constrictors, rainwater catchment, and other water conserving devices in commercial and residential developments
 - Indigenous, drought-tolerant plant material and drip irrigation systems in landscaped areas
 - Use of reclaimed water for the irrigation of agricultural lands, parks, golf courses and other landscaped areas where this would not adversely affect potable groundwater supply or pose possible health and safety risks.

4.3 WASTEWATER TREATMENT

The majority of the homes in the North Shore area are served by individual cesspools and septic tanks/leachfield systems. The Pa‘ala‘a Kai Wastewater Treatment Plant (WWTP), a municipal facility in Waialua, was constructed in 1980 to serve 314 homes in the Pa‘ala‘a Kai subdivision. Effluent from the facility is discharged into injection wells. There are also 31 private treatment plants serving various apartment complexes with effluent disposal into injection wells. Of the 31 private WWTPs operating in 2008, 19 are located in Waialua, six are in Hale‘iwa, and six are in the Sunset Beach/Pūpūkea area. Privately operated injection wells are a convenient, long-term disposal alternative to the lack of a municipal sewage collection and disposal system. However, the nature of injection wells and the common lack of land space for replacement injection wells make them a costly and often unreliable method of discharge.

Research has indicated that approximately 40 percent of the cesspools in the Waialua-Hale‘iwa area have failed and require pumping on a frequent basis. Even when working properly,

1 cesspools remove only a small percentage of the pollutants contained in domestic sewage, with
2 groundwater carrying the remainder into the ocean. As a result, cesspools are considered a
3 potential health problem for recreational users of shoreline waters in this area.
4

5 An older wastewater plan for the North Shore²¹ recommended that a centralized subregional
6 wastewater treatment system (collection and conveyance system, treatment plant, and effluent
7 disposal by means of irrigation and rapid infiltration) be constructed to serve Waialua, Hale'iwa
8 and a portion of Kawaihoa. While there are currently no funds or community consensus in
9 support of a centralized system, the City is committed to working with the community to develop,
10 implement, or facilitate appropriate, effective, and environmentally sound wastewater treatment
11 systems that will not impact groundwater and ocean resources. An ocean outfall in the North
12 Shore area has been rejected by the community as an option due to environmental and
13 economic considerations. The City is currently in the process of preparing the North Shore
14 Regional Wastewater Alternatives Plan to evaluate various alternatives for providing small
15 regional wastewater treatment and disposal solutions for the North Shore region.
16

17 The Pūpūkea-Sunset Beach area is not currently part of the City's Waialua-Hale'iwa
18 Wastewater Service Basin, but should be included in future wastewater treatment plans in order
19 to protect the critical ocean environment in the area. Over the last few years, the State
20 Department of Health (DOH) has been slowly requiring upgrades for individual cesspools to
21 individual wastewater treatment systems in an effort to eventually eliminate all cesspools. All
22 wastewater plans must conform to applicable provisions of the DOH's Administrative Rules,
23 Chapter 11-62, "Wastewater Systems".
24

25 **4.3.1 Policies**

26
27 The following policies apply to wastewater treatment systems on the North Shore.
28

- 29 • Provide adequate public and private wastewater treatment facilities and improve the
30 existing wastewater management services on the North Shore to protect the North
31 Shore's water resources and the health of the community is the highest priority.
32
- 33 • Support alternative wastewater technologies that reflect the community's values and
34 rural character.
35

²¹ City and County of Honolulu. Final Environmental Impact Statement for Supplemental Waialua-Hale'iwa Wastewater Facility Plan. 1996.

1 **4.3.2 Guidelines**

- 2
- 3 • Use reclaimed water for irrigation and other uses, where feasible, in accordance with the
4 Guidelines for the Treatment and Use of Recycled Water (May 15, 2002) by the State
5 Department of Health and the No Pass Line established by the Board of Water Supply.
6 A “wetlands” treatment system could serve as wild bird refuges that could also be used
7 as a picnicking area and/or children’s fishing park.
 - 8
 - 9 • Replace outdated individual cesspools with septic tanks and individual wastewater
10 systems. Consider public programs or policies to support private conversion efforts.
 - 11
 - 12 • Discourage new residential, commercial or school uses in close proximity to wastewater
13 treatment facilities where odors may be objectionable.
 - 14
 - 15 • Identify appropriate areas and technologies for future wastewater facilities that maintain
16 the rural character and are proportionate to future population projections.
 - 17
 - 18 • Do not permit an ocean outfall for treated wastewater effluent in the North Shore area.
 - 19

20 **4.4 ELECTRICAL SYSTEMS**

21

22 Power to the North Shore is provided by Hawaiian Electric Company, and distributed
23 throughout the community through a system of subtransmission and distribution lines, as well as
24 distribution substations.

25

26 Hawaiian Electric is committed to increasing its renewable energy portfolio, and is engaged in a
27 broad spectrum of renewable energy-related initiatives and activities occurring on the North
28 Shore, including:

29

30 **Solar Water Heating.** Hawaiian Electric’s solar water heating program encourages households
31 statewide to install rooftop solar water heating systems.

32

33 **Biofuels.** Hawaiian Electric provides research funding for biofuels crop research, such as the
34 evaluation of promising oil crops.

35

36 **Photovoltaics.** The number of photovoltaic systems installed under net energy metering
37 increased significantly in 2007, and is expected to increase into the future. Through the Sun
38 Power for Schools program, Hawaiian Electric partners with the State Department of Education
39 to install photovoltaic systems at Hawai’i public schools. Waialua High School has been a past
40 participant in the Sun Power program.

1
2 In addition, private developers are in the process of implementing projects that use the region's
3 wind resources to generate electricity.

4
5 Communications for Hawaiian Electric have become an increasingly important and integral part
6 of the island's energy delivery system. Fiber optics, mobile radio, microwave radio, packet
7 radio, and multiple address system UHF radio links improve operations, control, and service of
8 the utility's electrical system. As the energy system grows and as future applications materialize
9 in the areas of metering and customer communication, supervisory control and data acquisition,
10 and mobile communications, the need to control, service, and monitor the facilities to ensure
11 system reliability and emergency communications capability becomes greater. Hawaiian
12 Electric has proposed plans to improve the mobile radio coverage with the addition of new
13 telecommunication sites and upgrades at existing sites throughout O'ahu including
14 communications sites in the North Shore area. The utility's long-range plan is to further improve
15 mobile radio communications, with the adaption of mobile data, and completion of a microwave
16 radio communications loop system around the island.

17
18 Additional policies and guidelines pertaining to electrical systems are included in Section 3.1.3.7
19 Scenic Resources and Scenic Views and Section 3.1.3.8 Utility Corridors and Greenways.

20 21 **4.4.1 Policies**

- 22
- 23 • Provide adequate and reliable electrical service.
- 24
- 25 • Locate and design system elements such as electrical power facilities, substations,
26 communication sites, and transmission lines to avoid or mitigate any potential adverse
27 impacts on scenic and natural resources.
- 28
- 29 • Locate powerlines underground.
- 30
- 31 • Promote the use of renewable energy sources and energy conservation measures.
- 32

33 **4.5 SOLID WASTE HANDLING AND DISPOSAL**

34
35 Solid waste collection and disposal systems on the North Shore consist of a City and County-
36 operated solid waste transfer facility at Kawaiiloa. Household refuse collection services are
37 provided by the City and County and private haulers. Municipal wastes are primarily processed
38 at the H-POWER facility or recycled. The Kawaiiloa Refuse Transfer Station is located on
39 Kawaiiloa Drive, and is an intermediate disposal site which accepts trash from City collection

1 vehicles, some private haulers, and small businesses. It also serves as a convenience center
2 for residents to dispose of their household solid waste.

3
4 Refuse generated by non-household sources is collected by private haulers and delivered to the
5 H-POWER facility. There is only one active landfill for O'ahu (Waimānalo Gulch) in the 'Ewa
6 area which accepts primarily noncombustible wastes. The Waimānalo Gulch landfill is
7 operating on a temporary permit extension, and the City is moving ahead with plans to expand
8 the existing site. The City has instituted recycling and other waste diversion programs in an
9 effort to expand the useful life of this landfill.

10
11 The City's Solid Waste Integrated Management Plan (November 2004) outlines a
12 comprehensive, unified approach to such vital issues as landfill and disposal facility siting,
13 expansion of existing services and facilities, specialized waste disposal (e.g., batteries, tires,
14 sewage sludge, medical and hazardous wastes), waste reduction, and recycling strategies.
15 There are no plans to create additional convenience center, transfer station, or landfill
16 operations on the North Shore.

17
18 As waste management and technological innovations occur, the North Shore can and should
19 play a part in the City's long-term efforts to establish more efficient waste diversion and
20 collection systems. However, since the region is not expected to contribute significantly to
21 future increases in O'ahu's solid waste management demands and does not contain sites
22 suitable for the processing or disposal of solid waste on an island-wide scale, it would be
23 inappropriate to consider any future landfills on the North Shore.

24
25 Littering and illegal dumping on agricultural lands and vacant lots is a chronic problem in parts
26 of the North Shore region. In addition, there is a shortage of regular maintenance crews to pick
27 up all the trash left on public beaches, parks, and highways.

28 29 **4.5.1 Policies**

30
31 The following policies apply to solid waste handling and disposal in the North Shore:

- 32
33 • Provide adequate resources for trash removal, cleanup of illegal dumps, and
34 enforcement of antidumping laws.
- 35
36 • Promote recycling and other source reduction programs dedicated to minimizing the
37 amount of solid waste generated.

1 **4.5.2 Guidelines**

- 2
- 3 • Expand recycling collection facilities and services, and public outreach and education
 - 4 programs that promote responsible waste management and source reduction.
 - 5
 - 6 • Encourage recycling of regional green waste by establishing green waste facilities in an
 - 7 appropriate location, possibly integrated with, or adjacent to the Kawaihoa Refuse
 - 8 Transfer Station.
 - 9
 - 10 • Expand the use of automated refuse collection in residential areas.
 - 11
 - 12 • Monitor and regulate illegal dumping and littering activities.
 - 13

14 **4.6 DRAINAGE SYSTEMS**

15

16 Flooding is a recurring natural hazard for the North Shore’s coastal areas due to the region’s

17 natural topography and the inadequate capacity of existing drainageways. All coastal areas in

18 the North Shore region are prone to flooding because of heavy *mauka* stream flows, high

19 waves, and tsunami activity. However, the low-lying areas surrounding Kaiaka Bay and

20 Waialua Bay are the most vulnerable to flooding, due to the watershed’s large size and the

21 number of streams and gulches that converge at the shoreline in this area (including Ki’iki’i

22 Stream, Paukauila Stream and the Anahulu River). Modifications to natural drainage patterns

23 and activities that increase storm runoff from the *mauka* areas – including stream

24 channelization, increased erosion and sedimentation, debris buildup/blockage to restrict stream

25 flow – further compound flood hazards in this area.

26

27 Recently completed or ongoing drainage system studies to address the community’s concerns

28 about flooding in the Waialua-Hale’iwa area include: (1) Hale’iwa Road Drainage Improvements

29 Engineering Study; (2) Kaukonahua Stream Dredging Study (from Otake Camp to Kaiaka Bay);

30 and (3) Kaiaka Bay Watershed Demonstration Project. In addition, the community supports a

31 comprehensive study of the Waialua-Kaiaka Bay watershed to address regional drainage and

32 flooding issues and coastal water quality.

33

34 Open and undeveloped lands generally benefit surface and storm water management systems

35 by providing large areas of highly infiltrative surfaces which support the natural absorption of

36 water. In general, existing storm water systems do not meet current City drainage standards.

37

1 **4.6.1 Policies**

- 2
- 3 • Improve drainage systems in the region to provide adequate protection from flooding
4 and protect the quality of nearshore waters.
 - 5
 - 6 • Encourage coordination between public agencies and private landowners to identify
7 needed drainage improvements and develop a phased plan for improvements.
 - 8
 - 9 • To the extent possible, integrate planned improvements to the drainage system into the
10 regional open space network.
 - 11
 - 12 • Maintain the waters of Waialua Bay, which is designated by the State Department of
13 Health as Class AA waters, in as natural and pristine state as possible.
 - 14
 - 15 • Administer and enforce zoning controls to restrict future development within identified
16 floodway, flood fringe, coastal high hazard, tsunami inundation areas, and general flood
17 plain districts.
 - 18 • Require property owners to elevate existing structures above the regulatory flood
19 elevation or relocate to sites beyond floodprone areas.
 - 20

21 **4.6.2 Guidelines**

- 22
- 23 • Require all structural and land improvements to provide adequate drainage and flood
24 mitigation measures to reduce storm runoff and flood hazard.
 - 25
 - 26 • Employ retention and detention methods that allow for the gradual release of
27 stormwater. Where feasible, use open spaces, including parking lots, landscaped areas,
28 and parks, to detain or allow ground infiltration of storm water flows to reduce their
29 volume, runoff rates, and the amounts of sediment and pollutants transported.
 - 30
 - 31 • Use detention/retention basins as passive recreational areas and to provide recreational
32 access for pedestrians and bicyclists.
 - 33
 - 34 • Retain natural gulches as flood plains and open space resources. Restrict development
35 within gulches, and prohibit grading or other disturbance of gulch walls.
 - 36
 - 37 • Emphasize control and minimization of nonpoint source pollution in drainage system
38 design. Where hardening of stream channels is unavoidable, improvements should
39 protect habitat, maintain rural character and aesthetic quality, and avoid degradation of

1 coastline and of stream and nearshore water quality, consistent with guidelines stated in
2 Section 3.1.2.4.

- 3
- 4 • Design drainageways to control 100-year floods. Any future work performed within the
5 100-year floodplain shall adhere to the requirements of the Federal Emergency
6 Management Agency (FEMA) and meet all flood-proofing requirements.
- 7
- 8 • Regularly maintain and clean drainageways and flood mitigation structures of debris to
9 ensure that they achieve the purpose for which they were designed.
- 10
- 11 • Employ best management practices to minimize runoff from existing conservation and
12 agricultural land uses, and other areas that may generate sediment and debris.
- 13
- 14 • Repair and maintain related agricultural irrigations systems and infrastructure.
- 15
- 16 • Develop a drainage master plan for the Waialua watershed to address erosion and flood
17 protection concerns.
- 18
- 19 • Conduct public outreach and education programs that explain the potential for flooding
20 and efforts to minimize the effects of flooding.
- 21

22 **4.7 SCHOOL FACILITIES**

23
24 Primary (K-6) and secondary (7-12) educational opportunities on the North Shore are provided
25 by the Department of Education (DOE) and individual private schools. At present, there are four
26 public schools in the North Shore Sustainable Communities Plan area: three primary (K-6)
27 schools and one combined intermediate (7-8) and high (9-12) school. Private schools in the
28 region include St. Michael's School (Preschool-8), Sunset Beach Christian School (K-8), and the
29 proposed Aloha Ke Akua High School. The 2007-2008 enrollment and capacity, and 2013-2014
30 projected enrollment for the DOE schools are shown in Table 4-4.

**Table 4-4
Public School Enrollment and Capacity, North Shore**

School	2007-2008 Enrollment	2007-2008 Capacity	2013-2014 Projected Enrollment
Elementary			
Hale'iwa Elementary	167	566	140
Sunset Beach Elementary	387	466	381
Waialua Elementary	521	580	529
Intermediate and High School			
Waialua High and Intermediate	649	1040	569

SOURCE: DOE Facilities Development Branch, August 2007.

2
3

4 DOE enrollment projections are utilized for facilities and program planning. The projections for
5 individual schools reflect current migration patterns within the school service area. Adjustments
6 are made in the school service area for new housing developments, birth statistics, changes in
7 service boundaries, changes in school organization, and attendance of students from outside
8 the school service area by district exception. Recent enrollment figures show that all the DOE
9 schools are operating near or below capacity. Waialua Elementary is operating near capacity,
10 while other schools may have more space to accommodate additional students from outside the
11 school's service boundary. Future residential developments in the area will have an impact on
12 the area schools, although there are currently no major projects planned or under construction.

13

14 The DOE currently does not project any new schools for the North Shore. Temporary
15 classrooms may be used to handle future enrollment increases at the various schools. In many
16 communities where meeting spaces, recreation facilities and social halls are limited (the North
17 Shore included), public schools often supplement their primary role for classroom education,
18 and assume important secondary functions as cultural and recreational centers during
19 nonschool hours. School cafeterias are used as meeting facilities for community groups and
20 organizations, youth groups and health and fitness classes. School playing fields and
21 playgrounds are used for youth sports programs and are often gathering places for families with
22 young children. Some schools also serve as the community's primary emergency shelter during
23 emergency events or disaster situations. Recognizing the multipurpose role of public schools
24 as community gathering places, the City prefers that school facilities be designed and operated
25 as community centers with shared recreation, athletic and meeting facilities.

1
2 Although existing DOE policies allow school principals to permit outside use of school facilities
3 during nonschool hours and weekends, financial limitations have affected the DOE's ability to
4 design facilities as community centers. In addition, DOE has experienced operational problems
5 where schools and parks are colocated. School programs require separate spaces to assure
6 student safety and adequate space for physical education and athletic activities, making it
7 impractical to allow community use of the facilities during school hours. DOE programs are
8 given priority, and the sharing of facilities is only accommodated when the outside programs do
9 not adversely affect student education. Nevertheless, a long-term goal should be to have
10 school facilities appropriately designed to take advantage of opportunities to serve different
11 functions.

12 13 **4.7.1 Policies**

14
15 Policies for school facilities are as follows:

- 16
17 • Provide and maintain quality school facilities that serve the needs of the community.
- 18
19 • Integrate school facilities with other community uses.

20 21 **4.7.2 Guidelines**

22
23 The following guidelines should be followed in planning and operating public schools in the
24 North Shore:

- 25
26 • Confirm the adequacy of school facilities before approving new residential development.
27 Approve new residential developments only after the State Department of Education
28 confirms that adequate school facilities, either at existing schools or at new school sites,
29 will be available at the time new residential units are occupied.
- 30
31 • Design DOE schools as community centers to facilitate community use after school
32 hours.
- 33
34 • Colocate elementary and intermediate schools with parks, and coordinate facility design
35 with the State DOE and the City DPR whenever possible to avoid duplication of parking
36 and athletic, recreation, and meeting facilities.
- 37
38 • Coordinate the development and shared use of athletic facilities such as swimming
39 pools, gymnasiums, and playfields and courts with the DOE where the joint use of such

1 facilities would maximize use and reduce duplication of function without compromising
2 the schools' athletic programs.

- 3
- 4 • Promote facility design and construction that allows for school buildings to be used as
5 public hurricane shelters.
- 6
- 7 • Support the DOE's request for school impact fees from developers of residential projects
8 to ensure that adequate school facilities are in place at the time new residential units are
9 occupied.
- 10

11 **4.8 PUBLIC SAFETY FACILITIES**

12

13 **Police Protection.** The North Shore Sustainable Communities Plan area is considered part of
14 the Honolulu Police Department's (HPD) District 2. District 2, which includes Wahiawā, is
15 divided into 13 patrol beats. Beats are defined areas patrolled by one or more officers during
16 the course of a work shift with definitions based on geographic area, type of population, and
17 calls for police service. Approximately 5 or 6 officers are needed to staff one beat on a 24-hour
18 basis. Currently, there are four police beats covering the North Shore. The HPD has estimated
19 that an additional two beats will be needed to serve the North Shore over the next 20 years.

20

21 Police service for the Helemano Military Reservation is provided by federal authority, and has
22 little effect on HPD operations.

23

24 **Fire Protection.** The Honolulu Fire Department operates fire stations at Sunset Beach and
25 Waialua-Hale'iwa. The Fire Department's long-range goals and objectives for the North Shore
26 include: (1) relocation of the Waialua Fire Station out of an established flood and tsunami
27 inundation zone; (2) facility expansion to operate as a regional fire station providing emergency
28 fire and medical services and logistical supply support in times of emergency situations where
29 supply lines are cut off; (3) installation and activation of a new water tanker to assist in areas
30 where water sources are limited or nonexistent; and (4) improvements to the Anahulu Bridge to
31 accommodate the increasing weights of HFD equipment. The Fire Department continues to
32 monitor development trends and service needs to determine the requirement for new fire
33 stations. HFD is currently considering the long-term potential for new stations at Kawailoa and
34 Kawela. Land acquisition for any future stations will be dependent upon development
35 timetables.

36

37 **Ocean Safety.** The Emergency Services Department, Ocean Safety and Lifeguard Services
38 Division provides lifeguard services for the following ocean safety towers on the North Shore:
39 Sunset Beach, 'Ehukai, Ke Waena, Waimea Bay, and Hale'iwa Ali'i Beach. There is an

1 increasing demand to establish permanent lifeguard services at Laniākea, Chun’s Reef and
2 Velzyland.

3
4 There are approximately 30 water safety officers assigned to the North Shore. In addition to
5 personnel at lifeguard towers, they conduct daily patrols from rescue crafts and also patrol from
6 Waimea Bay to Sunset Beach on all-terrain vehicles. The number of water safety officers within
7 the district will fluctuate seasonally, with more officers assigned to the area during the high surf
8 season in the winter and less during the summer months. It is noted by Ocean Safety officials
9 that rescue craft patrols will play a larger role in extending lifeguard services in response to new
10 or expanded beach parks in the region.

11
12 **Civil Defense.** The Civil Defense system for the City and County of Honolulu is the
13 responsibility of the Department of Emergency Management (DEM). The DEM is responsible
14 for monitoring, warning, evacuating and securing (if necessary) the vulnerable areas of the
15 entire North Shore.

16
17 The North Shore is susceptible to natural hazards such as tsunami, tropical storms, high surf
18 and hurricanes. In the event of these hazardous conditions, residents need to evacuate to
19 shelter facilities. There are two public hurricane shelter facilities for the North Shore
20 Sustainable Communities Plan area -- Waialua High and Intermediate School and Sunset
21 Beach Elementary School. In addition, Waialua Recreation Center is used for high surf, flood
22 and other required evacuations. The Outdoor Warning Siren system for the North Shore area
23 was completely upgraded in 2007.

24
25 Flooding is the most common and recurring hazard. Under heavy, continuous rain and flooding
26 conditions, DEM plans are in place to evacuate large portions of Hale’iwa and Waialua, if
27 required, and include additional evacuation options in the event Wilson Dam were to fail.

28
29 According to DEM, planning for the area must include preparedness education and the
30 provision of adequate warning devices, designation of adequate transportation routes for
31 evacuee movement, and suitable shelters where evacuees can seek refuge. The DEM
32 recommends that any new public buildings such as schools and recreation centers be required
33 to consider emergency shelter capabilities as a secondary use of the building.

34 35 **4.8.1 Policies**

36
37 Policies for all public safety facilities are as follows:
38

- 1 • Promote an integrated approach to public safety on the North Shore, which will enable
2 police, fire, ocean safety, civil defense, and emergency medical efforts to share
3 resources and information, as appropriate.
4
- 5 • Encourage the development of safe, crime-deterrent public and private environments.
6
- 7 • Provide adequate staffing and facilities to ensure effective and efficient delivery of basic
8 government service and protection of public safety.
9

10 **4.8.2 Guidelines**

- 11
- 12 • Include visitor demands and needs when allocating public safety resources.
13
- 14 • Sponsor public education programs to increase awareness about public safety issues.
15
- 16 • Identify, improve and service transportation networks (via signage, traffic control
17 personnel and equipment) to ensure efficient evacuee movement.
18
- 19 • Support highway improvements that would reduce emergency vehicle response times
20 and facilitate emergency personnel movement through traffic.
21
- 22 • Expand lifeguard services at beaches with high visitor demands, such as Laniākea,
23 Chun's Reef, and Velzyland.
24
- 25 • Confirm the availability of adequate police and fire protection before approving new
26 development.
27
- 28 • Increase police presence, including car and bicycle patrols and community policing
29 efforts, especially in high-theft areas such as beach parks. Support the availability of
30 adequate staffing and funding to enable this.
31
- 32 • Establish facilities which police officers could use as a local base of operations.
33
- 34 • Support the physical improvements and infrastructure upgrades needed to ensure
35 adequate fire protection.
36
- 37 • Use crime-preventive principles in the planning and design of communities, open
38 spaces, circulation networks, and buildings.
39

- Design new public buildings such as schools and recreation centers to serve a secondary function as an emergency shelter.

4.9 OTHER COMMUNITY FACILITIES

Antennae have been around as long as we have had radio and television services. Antennae associated with communication purposes have grown tremendously since the introduction of mobile communication devices in the early 1980s. While the telecommunication industry has provided more convenient communication capabilities for individuals, it has also increased public agencies' ability to provide faster and more efficient response to those in need, particularly during times of emergency.

While the benefits of the telecommunications industry cannot be disputed, communities have opposed new antennae due to aesthetic impacts, especially related to public views and neighborhood character. Their visibility has increased, particularly where antennae are mounted on freestanding towers.

The public has also raised concerns about the environmental effects of electromagnetic field exposure associated with radio transmission, as evidenced by the presence of antennae. However, the Federal Communications Commission (FCC) is responsible for evaluating the human environmental effects of radio frequency emissions, assuming that the provider is in compliance with the Commission's radio frequency rules.

4.9.1 Policies

The following are policies governing the utilization of antennae

- Encourage collocation of antennae; towers should host the facilities of more than one service provider to minimize their proliferation and reduce visual impacts.
- Mount antennae onto existing buildings or structures so that public scenic views and open spaces will not be negatively affected. However, except for the occupant's personal use, antennae on single-family dwelling roofs in residential districts are not appropriate.
- Use "stealth" technology (e.g., towers disguised as trees) especially on freestanding antenna towers in order to blend in with the surrounding environment and minimize visual impacts.

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5. IMPLEMENTATION

Implementation of the City's Development and Sustainable Communities Plans is a major challenge for the City's planners, engineers, and other technical and policy-level personnel, as well as elected officials who determine the allocation of City resources. The plans seek to implement a vision for the future by providing wider guidance for decisions and actions related to land use, public facilities, and infrastructure as well as for zoning matters. As a result, many of their provisions reflect the consultations which occurred throughout the planning process with pertinent implementing agencies and community representatives. It should be noted that implementation will depend on each department's priorities and availability of resources.

Many municipal jurisdictions throughout the United States have instituted comprehensive planning programs that emphasize a proactive community-based planning and implementation process. These local governments seek to establish a strong link between planning policies and guidelines, and specific organization, funding, and actions needed to implement a variety of public and private projects and programs. The following sections of this chapter are intended to strengthen the linkage to implementation to realize the vision of the future presented in this plan.

Implementation of the North Shore Sustainable Communities Plan will be accomplished by:

- Initiating zoning map and development code amendments to achieve consistency with the policies and guidelines of the Sustainable Communities Plan;
- Guiding public investment in infrastructure through Functional Plans and Special Area Plans which support the vision of the Sustainable Communities Plan;
- Reviewing zoning and other development applications based on how well they support the vision for the North Shore;
- Incorporating Sustainable Communities Plan priorities through the Public Infrastructure Map and the City's annual budget process; and
- Conducting a review of the vision, policies and guidelines, and Capital Improvement Program (CIP) priority investments of the North Shore Sustainable Communities Plan every five years and recommending revisions as necessary.

1 Chapter 5 is organized under the following headings:
2

3 SECTION

4 5.1 PUBLIC FACILITY INVESTMENT PRIORITIES

5 5.2 DEVELOPMENT PRIORITIES

6 5.3 SPECIAL AREA PLANS

7 5.4 FUNCTIONAL PLANNING

8 5.5 REVIEW OF ZONING AND OTHER DEVELOPMENT APPLICATIONS

9 5.6 FIVE-YEAR SUSTAINABLE COMMUNITIES PLAN REVIEW

10 5.7 IMPLEMENTATION MATRIX
11

12 **5.1 PUBLIC FACILITY INVESTMENT PRIORITIES**

13
14 The vision for the North Shore requires the cooperation of both public and private agencies in
15 planning, financing, and constructing infrastructure. The City must take an active role in
16 planning infrastructure improvements, including improvements for wastewater treatment,
17 drainage, parks and public access, and roadways.
18

19 **5.2 DEVELOPMENT PRIORITIES**

20
21 Projects to receive priority in the approval process are those which:
22

- 23 • Involve land acquisition and improvements for public projects that are consistent with the
24 Sustainable Communities Plan's vision, policies, and guidelines;
25
- 26 • Involve applications for zoning and other regulatory approvals which are consistent with
27 the Sustainable Communities Plan's vision, policies, and guidelines; and
28
- 29 • Are located on vacant usable parcels within the Community Growth Boundary as shown
30 on the Land Use Map in Appendix A.
31

32 **5.3 SPECIAL AREA PLANS**

33
34 For areas requiring particular attention, Special Area Plans provide more detailed policies and
35 guidelines than the Development and Sustainable Communities Plans. The form and content of
36 Special Area Plans depend on what characteristics and issues need to be addressed in greater
37 detail in planning and guiding development or use of the Special Area.
38

39 Special Area Plans can be used to guide land use development and infrastructure investment in
40 Special Districts, Redevelopment Districts, or Resource Areas. Plans for Special Districts would

1 provide guidance for development and infrastructure investment in areas with distinct historic or
2 design character or significant public views. Plans for Redevelopment Districts would provide
3 strategies for the revitalization or redevelopment of an area. Plans for Resource Areas would
4 provide resource management strategies for areas with particular natural or cultural resource
5 values. There are no Special Area Plans proposed in the North Shore Sustainable
6 Communities Plan area.

8 **5.4 FUNCTIONAL PLANNING**

9
10 Functional planning is the process through which various City agencies determine needs,
11 assign priorities, establish timing and phasing, and propose financing for projects within their
12 areas of responsibility that will further the implementation of the vision articulated in the
13 Development and Sustainable Communities Plans. This process may take a variety of forms,
14 depending upon the missions of the various agencies involved, as well as upon requirements
15 imposed from outside the City structure, such as federal requirements for wastewater
16 management planning. Typically, functional planning occurs as a continuous or iterative activity
17 within each agency.

18
19 The functional planning process involves annual review of existing functional planning
20 documents and programs by the City agencies responsible for developing and maintaining
21 infrastructure and public facilities or for provision of City services. As a result of these reviews,
22 the agencies then update, if required, existing plans or prepare new long-range functional
23 planning documents that address facilities and service system needs. Updates of functional
24 planning documents are also conducted to assure that agency plans will serve to further
25 implement the Development and Sustainable Communities Plans as well as to provide
26 adequate opportunity for coordination of plans and programs among the various agencies.

27
28 The number and types of functional planning documents will vary from agency to agency, as will
29 the emphasis and contents of those documents. A typical agency may develop a set of core
30 documents such as:

- 31
- 32 • A resource-constrained long-range capital improvement program. A “resource-
33 constrained” program is one which identifies the fiscal resources that can be reasonably
34 expected to be available to finance the improvements.
 - 35
 - 36 • A long-range financing plan, with identification of necessary new revenue measures or
37 opportunities.
 - 38
 - 39 • A development schedule with top priorities for areas designated for earliest
40 development.

- 1
- 2 • Service and facility design standards, including level of service guidelines for
 - 3 determining adequacy.
- 4

5 Other documents may also be developed as part of an agency’s functional planning activities,
6 such as master plans for provision of services to a specific region of the island. In some cases,
7 functional planning activities will be undertaken in cooperation with agencies outside the City
8 structure, such as the transportation planning activities that are conducted in association with
9 the O’ahu Metropolitan Planning Organization.

10

11 Functional planning is intended to be a proactive public involvement process which provides
12 public access to information about infrastructure and public facility needs assessments,
13 alternatives evaluations, and financing. Outreach activities should involve Neighborhood
14 Boards, community organizations, landowners, and others who may be significantly affected by
15 the public facilities and infrastructure projects or programs to be developed to further implement
16 the policies of the Development and Sustainable Communities Plans.

17

18 The functional planning process should be characterized by opportunities for early and
19 continuing involvement, timely public notice, public access to information used in the evaluation
20 of priorities, and the opportunity to suggest alternatives and to express preferences. The
21 functional planning process provides the technical background for the Capital Improvement
22 Program and public policy proposals which are subject to review and approval by the City
23 Council.

24

25 **5.5 REVIEW OF ZONING AND OTHER DEVELOPMENT**

26 **APPLICATIONS**

27

28 A primary way in which the vision of the North Shore Sustainable Communities Plan will guide
29 land use is through the review of applications for zone changes and other development
30 approvals. Approval for all development projects should be based on the extent to which the
31 project supports the vision, policies and guidelines of the Sustainable Communities Plan.

32

33 Projects which do not involve “significant” zone changes will be reviewed by the Department of
34 Planning and Permitting for consistency with the vision, policies and guidelines of the North
35 Shore Sustainable Communities Plan during the zone change application process. Projects
36 which meet the criteria for a “significant” zone change are required to prepare an environmental
37 assessment or environmental impact statement following the provisions of Hawai’i Revised
38 Statutes, Chapter 343. The criteria to establish a zone change as “significant” in need of HRS,
39 Chapter 343 environmental review is defined in the North Shore Sustainable Communities Plan
40 adopting ordinance.

1 **5.5.1 Adequate Facilities Requirement**

2
3 All projects requesting zone changes shall be reviewed to determine if adequate public facilities
4 and infrastructure will be available to meet the needs created as a result of the development.
5 Level of service guidelines to define adequate public facilities and infrastructure requirements
6 will be established during the CIP process.
7

8 In order to guide development and growth in an orderly manner as required by the City's
9 General Plan, zoning and other development applications for new developments should be
10 approved only if the responsible City and State agencies confirm that adequate public facilities
11 and utilities will be available at the time of occupancy, or if conditions the functional agency
12 indicates are necessary to assure adequacy are otherwise sufficiently addressed.
13

14 The Department of Planning and Permitting will review the project for consistency with the North
15 Shore Sustainable Communities Plan's vision, and summarize any individual agency's findings
16 regarding public facilities and utilities adequacy which are raised as part of the EA/EIS process.
17 The Department will address these findings and any additional agency comments submitted as
18 part of the agency review of the zone change application and recommend conditions that should
19 be included in the unilateral agreement or development agreement to insure adequacy of
20 facilities.
21

22 **5.6 FIVE-YEAR SUSTAINABLE COMMUNITIES PLAN REVIEW**

23
24 The Department of Planning and Permitting shall conduct a comprehensive review of the North
25 Shore Sustainable Communities Plan and report its findings and recommended revisions to the
26 Planning Commission and the City Council five years after adoption and every five years
27 thereafter. It is intended that the Community Growth Boundary will remain fixed through the
28 2035 planning horizon.
29

30 **5.6.1 Adoption of the Sustainable Communities Plan and Existing**
31 **Land Use Approvals**

32
33 This Sustainable Communities Plan will go into effect upon adoption by ordinance. Land use
34 approvals granted under existing zoning, unilateral agreements, and approved urban design
35 plans will remain in force and guide entitlement decisions until any zoning action to further
36 implement the vision and policies of the North Shore Sustainable Communities Plan is initiated.
37 If an EA or EIS is accepted in the course of a Sustainable Communities Plan land use approval
38 for a project, it should be acceptable to meet the requirement for an initial project EA/EIS when
39 zone change applications are submitted for subsequent phases of the project, unless the project
40 scope and land uses are being significantly changed from that described in the initial EA/EIS.

5.7 IMPLEMENTATION MATRIX

This section provides a summary of the specific physical improvements and actions identified in Chapters 3 and 4 of this Plan to help organize and facilitate plan implementation.

Table 5-1 presents the implementing actions, the related plans, regulatory code or action, and the public or private entities responsible for implementing the action. The table is organized by land use category, with the categories listed according to the order of Chapters 3 and 4. A key to the abbreviations used in the table follows at the end of the table.

- The first column of the table –Policies and Guidelines – is comprised of the guideline statements for each land use category. Policy statements are used if the land use category does not include guidelines (e.g., Electrical Systems).
- The second column – Program – relates each statement to a specific regulatory code, functional plan or other action. The term “project review” indicates the review of discretionary land use approvals, such as State land use, zoning and special management area use permits. In some instances, To Be Determined (TBD) was used to indicate that the related code/plan/action was not clear. TBD actions are intended to be identified and developed by the agencies responsible for implementation.
- The third column – Agency – identifies the public and/or private entities responsible for the implementing the policy or guideline. Although many of the implementing actions fall under DPP’s jurisdiction, some actions are the responsibility of other Federal, State or City departments or public agencies, while a few have been assigned to private entities or individual landowners.
- The fourth column identifies the role of the agencies involved in implementation. The three categories identified include implementation, regulation or advocacy.

1
2

**Table 5-1
Implementation Matrix**

Policies/Guidelines	Program	Agency	Role
Open Space and Natural Environment – Mountain Areas			
1. Maintain, protect and restore native forests and ecosystems within the State Conservation District and lands designated Preservation on the <u>North Shore Sustainable Communities Plan</u> Land Use Map. Ensure the protection of State conservation lands, especially those on the Ka'ena coastline and Mokolē'ia foothills.	Conservation District Management Plan, Watershed Management Plan	DLNR BWS	Implementer Advocate
2. Reclassify important watershed areas which are designated but unused State Agricultural or Urban Districts to the State Conservation or City Preservation Districts.	Land Use Ordinance	DLNR DPP	Implementer Implementer
3. Identify and protect endangered species habitats, native ecosystems, and other important ecologically sensitive areas, including the natural area reserves and forest reserves, from such threats as fire, alien species, feral animals, and human activity.	TBD	DLNR	Implementer
4. Identify mountain areas within the AG-2 General Agricultural District that are suitable for rezoning to P-2 General Preservation District.	Land Use Ordinance	DPP	Implementer
5. Avoid the establishment of utility corridors and other uses that would disturb areas with high concentrations of native species.	TBD	DLNR	Regulator
6. Encourage coordination of natural resource protection and management efforts between the State DLNR and private landowners, as well as with the U.S. Military, especially where the Kahuku and Kawaihoa Training Areas overlap with environmentally sensitive areas.	Conservation District Management Plan	DLNR U.S. Army private entities	Implementer Advocate Advocate
7. Acquire and maintain public access easements to trail heads and public campgrounds, including parking and signage at trailheads, where appropriate. Such access should be required, as appropriate, for any new development.	TBD	DLNR Na Ala Hele Program	Implementer Implementer
8. Support State efforts to seek opportunities for cooperative agreements with private landowners to gain access to trails leading to public lands.	TBD	DLNR	Implementer
9. Implement recommendations in the State's Na Ala Hele Program Plan to maintain and enhance <i>mauka</i> trail systems.	TBD	DLNR	Implementer
10. Identify historic trails and old government roads of cultural and recreational value to the public.	TBD	DLNR	Implementer
Open Space and Natural Environment – Shoreline Areas			
11. Preserve rare and sensitive coastal resources including coastal strand vegetation, sand dunes, and anchialine pools. Establish buffer zones around these areas where necessary.	TBD	DLNR DPP	Regulator Regulator

Policies/Guidelines	Program	Agency	Role
12. Prohibit off-road vehicle, motorcycle and bicycle use in ecologically sensitive areas, including coastal dunes and shoreline beaches. Identify and maintain recreational areas specifically designated for such use.	TBD	DLNR DPP DPR	Implementer Regulator Implementer
13. Protect nearshore coral reefs and other marine life from damaging activities such as soil erosion, nonpoint source pollution, dredging of coral reefs, and alterations to nearshore water circulation.	Hawaii Coastal Nonpoint Pollution Control Program Management Plan, Storm Drainage Standards	DLNR CZM Program DPP DDC	Regulator Regulator Regulator Advocate
14. Establish access where justified by public demand, traditional use patterns, high quality recreational resources, or to circumvent barriers that exist along the shoreline	TBD	DPR DDC DPP	Implementer Implementer Regulator
15. Improve and expand public access to the shoreline at approximately ½-mile intervals with vehicular and bicycle parking and lateral access along the shoreline.	TBD	DPR DDC DPP	Implementer Implementer Regulator
16. Implement the recommendations of the State of Hawai'i's Coastal Nonpoint Pollution Control Program and utilize best management practices in agricultural land use and operations to avoid or minimize chemical runoff and other "nonpoint" contaminants in shoreline areas.	Hawaii Coastal Nonpoint Pollution Control Program Management Plan	CZM Program DOH TMDL Program	Implementer Regulator
17. Support research to determine causes of coastal erosion and identify appropriate management strategies to avoid future erosion hazards.	Coastal Erosion Management Plan	DLNR DPP	Implementer Advocate
18. Encourage interagency coordination and public/private cooperation in developing and implementing beach management plans, with an emphasis on nonstructural approaches.	Coastal Erosion Management Plan	DLNR DDC	Implementer Implementer
19. Discourage development or activities which result in beach loss, and encourage development practices or activities such as increased shoreline setbacks which result in beach preservation or enhancement.	CZM Program, Land Use Ordinance, Project Review	Office of Planning DLNR DPP	Implementer Implementer Regulator
20. Require buildings along the shoreline to adhere to the City's and Federal Emergency Management Agency (FEMA) minimum building elevations and structural guidelines. In addition, adopt development standards that require new structures to incorporate building styles compatible with coastal hazards such as coastal erosion, tsunami and hurricane overwash.	Land Use Ordinance, Building Code, Project Review	DPP	Regulator
21. Discourage visual obstructions such as walls and fences along the coastal highway to maintain and enhance existing panoramic views identified on the Open Space Map. Clear shrubs and vegetation on vacant State- and County-owned properties that would maintain views of the ocean from public roadways along the shoreline.	Land Use Ordinance, Project Review	DLNR DOT DPP DFM	Regulator Implementer Regulator Implementer

Policies/Guidelines	Program	Agency	Role
22. Implement active protection and management practices that preserve and enhance native and other resident fish and aquatic species populations and habitats, including nearshore coral reefs. Efforts to enhance opportunities for commercial and recreational fishing should use management practices and techniques that sustain fish populations and habitat quality so as to maintain a quality aquatic environment for public enjoyment.	TBD	DLNR	Implementer
23. Place sand from channel, stream, and harbor mouth dredging projects on local beaches in accordance with Hawai'i Revised Statutes Chapter 205A.	TBD	USACE DLNR	Implementer Implementer
Open Space and Natural Environment – Wetlands			
24. Preserve and maintain all North Shore wetlands and wildlife habitats. When considering future activities/construction in the vicinity of biologically sensitive areas such as wetlands, the preferred sequence will be to: avoid ecologically sensitive areas entirely; minimize potential project impacts; and require mitigation that will offset the loss of resources.	Project Review	DLNR DPP	Regulator/Advocate Regulator/Advocate
25. Support the restoration and protection of 'Uko'a Marsh. Protection can be achieved through fee acquisition, land banking, cooperative agreements with public agencies and private landowners, conservation easements, or other strategies.	TBD	DLNR Kamehameha Schools	Advocate Implementer
26. Support efforts to restore Loko Ea Fishpond as an interactive, productive and functioning aquaculture resource. Promote the development of a cultural learning center providing both visitors and residents opportunities to experience the unique environment around Loko Ea Pond and 'Uko'a Marsh. Possible activities may include tours of a working aquaculture farm, as well as cultural and environmental education programs that teach traditional and modern aquaculture techniques and the history of the Pond and its adjacent areas. Walkways extending north to 'Uko'a Pond could provide opportunities for interpretive nature walks.	TBD	DLNR Kamehameha Schools	Advocate Implementer
Open Space and Natural Environment - Natural Gulches, Streams, and Drainageways			
27. Preserve the aesthetic and biological values of the natural gulches, streams, and drainageways as part of the North Shore's open space system. Where feasible, establish wildlife habitat protective buffer zones and/or setbacks along rivers, streams, and shoreline areas. Where possible, provide public access to these open space and recreational resources.	Watershed Management Plan, Land Use Ordinance, Project Review	DLNR BWS DPP DPR	Regulator/Implementer Advocate Regulator Implementer

Policies/Guidelines	Program	Agency	Role
28. Minimize soil erosion, runoff of pesticides, fertilizers and other nonpoint source contaminants into streams, wetlands, and marine habitats. In addition to stream setback, utilize erosion control devices, integrated pest management plans, and revegetation of disturbed areas. Incorporate erosion control measures and best management practices, as recommended in the State Coastal Nonpoint Pollution Control Program, to prevent pollution of wetlands, streams, estuaries, and nearshore waters.	TBD	DLNR DOA DPP DPR	Regulator/Implementer Implementer Regulator Implementer
29. Limit uses in these areas to conservation uses, compatible recreational uses such as hiking, traditional hunting, fishing, gathering, religious and cultural practices, and controlled diversion for agricultural purposes. Avoid development in ecologically sensitive areas; if activities are allowed, minimize impacts and implement mitigative measures that will fully offset any loss of resources.	Land Use Ordinance, Project Review	DLNR LUC DPP	Regulator Regulator Regulator
30. Preserve and maintain the natural streams and drainageways within the developed areas by designating them as part of the open space system. To the extent possible, limit any modifications to natural gulches and drainageways, unless they are necessary for flood protection, to preserve water quality and protect aesthetic and biological resources.	Watershed Management Plan, Land Use Ordinance, Project Review	DLNR BWS DPP DPR	Regulator Advocate Regulator Advocate
31. If modifications are necessary, mitigate impacts on biological habitats by using stream-side vegetation, rip-rap boulder lining of stream banks, v-shaped bottom channels to maintain a stream flow during low rainfall periods, and other designs to promote aeration.	Land Use Ordinance, Storm Drainage Standards	DPP ENV DDC	Regulator Implementer Implementer
32. Integrate planned improvements to the North Shore drainage system into the regional open space network by emphasizing the use of retention basins and recreational access in the design approach.	Storm Drainage Standards	DLNR DPP ENV DDC	Advocate Regulator Implementer Implementer
Open Space and Natural Environment - Scenic Resources and Scenic Views			
33. Conduct planning with attention to preservation of natural open space, protecting coastal and <i>mauka</i> views from public roadways, and conserving important viewsheds.	Project Review	DLNR DPP	Regulator Regulator
34. When view reductions may come from agricultural activities which intrude into viewplanes or otherwise degrade or diminish scenic qualities, the protection of roadway views should be balanced with the operating requirements of agriculture.	Project Review	DLNR DPP	Regulator Regulator/Advocate
35. Evaluate the impact of land use proposals on the visual quality of the landscape, including viewplane and open space considerations.	Project Review	DLNR DPP	Regulator Regulator/Advocate
36. Site new antennas, telecommunication equipment and alternative energy systems in appropriate locations to minimize their impact on visual resources. Encourage site clustering and techniques that blend the equipment into the natural landscape.	Land Use Ordinance, Project Review	DLNR DPP	Regulator Regulator/Advocate

Policies/Guidelines	Program	Agency	Role
37. Discourage the use and installation of overhead utility lines and poles. Strong consideration should be given to placing replacement and new transmission lines underground. Undergrounding utility lines will enhance viewplanes and increase highway safety. Whenever possible, relocate or place underground overhead utilities that significantly obstruct public views. If unavoidable, locate any future overhead utilities on the <i>mauka</i> side of the public coastal highway.	Utilities Undergrounding Plan, Project Review	PUC HECO Telecommunications providers DDC DPP	Regulator Implementer Implementer Implementer Advocate
38. Minimize the adverse effects of artificial lighting on wildlife and human health by balancing the need of outdoor lighting for night utility, security, and desire for reasonable architectural expression with the need to conserve energy and protect the natural environment.	Land Use Ordinance, Project Review	DPP	Regulator
39. Adopt outdoor night lighting standards that encourage efforts to minimize glare and stray light, and reinforce the differences between urban and rural communities.	Land Use Ordinance	DPP	Implementer
Open Space and Natural Environment - Utility Corridors and Greenways			
40. Provide sufficient easement width for the major trunk lines and transmission lines for utility systems, when their alignment is not within a road right-of-way, to permit the growth of trees within the easement.	TBD	HECO Telecommunications providers DPP DDC	Implementer Implementer Advocate Advocate
41. When overhead transmission lines are located within or adjacent to a road right-of-way, there should be sufficient width to permit the growth of trees adjacent to the transmission line, consistent with the applicable operations, maintenance, and safety requirements. The purpose of the landscaping is to divert attention from the overhead lines and, preferably, obscure views of the overhead line from the travelway and adjacent residential areas.	TBD	HECO Telecommunications providers DOT DPP DDC DTS	Implementer Implementer Advocate Implementer Advocate Regulator
42. Permit the use of utility easements for pedestrian and bicycle routes. Encourage coordination between utility companies, landowners, pertinent agencies, and the community to ensure that safety, liability, and maintenance issues are adequately addressed.	TBD	HECO Telecommunications providers DOT DPP DDC DTS	Implementer Implementer Implementer Advocate Implementer Implementer
43. Encourage the use of indigenous vegetation that is slow growing and thus minimizes the need to use herbicides for vegetation control.	TBD	HECO Telecommunications providers DDC	Implementer Implementer Implementer

Policies/Guidelines	Program	Agency	Role
Agriculture - Agricultural Lands			
44. Promote technologies that support alternative energy sources, including solar, wind, and wave power. Allow community and agency review of individual proposals to ensure compatibility and suitability.	TBD	PUC HECO DPP	Regulator/Advocate Implementer/Advocate Regulator/Advocate
45. Enforce permitted uses on agricultural lands to ensure that the use is contributing to meaningful and credible agricultural production on the same or nearby properties.	Code Enforcement	LUC DPP BFS	Regulator/Advocate Regulator/Advocate Advocate
46. Cluster and locate dwellings near similar uses to preserve open space, maximize the use of productive agricultural lands, and reduce infrastructure costs, when planned as part of an agricultural activity.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
47. Design and site buildings and other facilities that are accessory to an agricultural operation to minimize the visual impact on nearby areas and views from arterial and major collector roads.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
48. Adopt development standards and permitting procedures that simplify and streamline the permitting requirements for uses that support the growth of agriculture, including agricultural support facilities and agriculture-based tourism.	Land Use Ordinance, Project Review	DPP	Implementer
49. Maintain adequate physical buffers between agricultural land uses and surrounding land uses.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
50. Base any subdivision of agricultural lands on the most appropriately sized, viable economic unit for agricultural production.	Subdivision Rules, Project Review	DPP	Regulator
51. Identify and implement – as an immediate high priority action item at the State and County levels – appropriate economic incentives designed to promote and facilitate the growth of diversified agriculture.	TBD	DBEDT DOA City OED	Implementer Implementer Implementer
52. Support agricultural research and development activities targeted towards increasing operational efficiencies, economic returns, and the effective utilization of agricultural lands and supporting infrastructure, which enables sustainable usage of agricultural resources.	TBD	DOA private entities	Implementer Implementer
53. Assist residents to develop skills in agriculture and related specialized industries so that residents can seek local employment in the area.	TBD	DOA DCS UH	Implementer Advocate Implementer
54. Support a mentor program for area teens to learn about agricultural practices, economics, and business so that interest and commitment to agriculture may continue on to future generations.	TBD	DOE DCS DPR UH	Implementer Implementer Advocate Advocate
55. Support the expansion and diversification of aquaculture in the region, including the continued cleanup of the former Dillingham Quarry site in Mokulē'ia and expansion of existing aquaculture operations in the area.	TBD	DOA UH private entities	Implementer Advocate Implementer

Policies/Guidelines	Program	Agency	Role
56. Identify potential sites for aquaculture or mariculture parks.	TBD	DOA private entities	Implementer Implementer
57. Encourage agricultural producers to develop Conservation Plans in conjunction with the West O'ahu Soil and Water Conservation District to manage and protect natural resources.	TBD	DOA WO SWCD private entities	Advocate Implementer Implementer
58. Assist governmental agencies and landowners to upgrade and maintain existing infrastructure networks, including roads and irrigation systems.	TBD	DFM DDC	Advocate Advocate
59. Improve the quality of irrigation water from Lake Wilson.	Wastewater Facility Plan	DOH ENV	Advocate Implementer
60. Work with the State to identify and protect Important Agricultural Lands (IAL) as defined by Act 183 (2005).	IAL, Act 183 (2005)	DOA Dept. of Taxation DPP private entities	Advocate Advocate Implementer Implementer
Agriculture – Agricultural Support Facilities			
61. Develop agricultural support facilities in Waialua and Kawaihoa.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
62. Ensure that permitted agricultural support facilities do not adversely affect agricultural production in the area or present health hazards or nuisances to adjacent areas.	Land Use Ordinance, Project Review, Code Enforcement	DPP	Regulator/Advocate
63. Require all agricultural support facilities in the region to maintain a direct relationship to local agricultural production.	Land Use Ordinance, Project Review, Code Enforcement	DPP	Regulator/Advocate
64. Site and design facilities to minimize development impacts and maximize the amount of farmland preserved.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
Agriculture – Agriculture-Based Tourism			
65. Allow agricultural, recreational and educational programs, and limited outdoor recreational or other uses if the activity is complementary to the primary agricultural use of the land and it does not interfere with the agricultural use of the site.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
66. Monitor tourism-related activities conducted on agricultural lands to ensure that such activities do not adversely impact on-site or adjacent agricultural activities or other resources.	Code Enforcement	DPP	Implementer
67. Provide technical and business development support for visitor-related proposals.	TBD	DBEDT DOA City OED	Implementer Implementer Implementer
68. Identify and develop a convenient, suitable location in or near Hale'iwa and/or Waialua Town to establish a farmers' market where farmers can market products locally.	TBD	private entities	Implementer

Policies/Guidelines	Program	Agency	Role
69. Identify and develop a permanent site in the Sunset Beach vicinity to promote the North Shore Country Market.	TBD	private entities	Implementer
70. Develop an agricultural museum that includes a demonstration area showing various crops in different stages of growth and processing.	TBD	private entities	Implementer
Agriculture – Agriculture-Based Tourism			
71. Develop Hale'iwa Beach Park Mauka as a community-based park to expand active recreational facilities for North Shore residents.	Park Master Plan	DPR DDC	CIP CIP
72. Acquire Pu'uiki Park for community use.	Park Master Plan	DPR DDC	CIP CIP
73. Expand Waialua District Park by acquiring agricultural land across Goodale Avenue.	Park Master Plan	DPR DDC	CIP CIP
74. If new residential development occurs, it should provide land for open space and recreation purposes at a minimum of two acres per 1,000 residents. Community-based parks (and associated service radius) include miniparks (1/2 mile), neighborhood parks (1/2 mile), community parks (one mile), and district parks (two miles).	Project Review	DPP DPR	Regulator/Advocate Implementer
75. Locate community and neighborhood parks which emphasize intensive uses such as ball fields, playing courts, and community buildings in or adjacent to the neighborhoods or communities they serve, in order to maximize accessibility.	Park Facilities Functional Plan	DPR DDC	Implementer Implementer
76. Provide more youth activities, programs and facilities on the North Shore.	Park Facilities Functional Plan	DPR	Implementer
Parks and Recreation – Mauka Areas			
77. Expand public access to the upland or <i>mauka</i> areas for appropriate types of recreational activities that are low-impact, resource-sensitive and do not compromise significant environmental resources and important agricultural activities. These would include nature-based activities such as picnicking, camping, hiking, mountain biking, hunting and the appreciation of scenic, natural and cultural resources.	TBD	DLNR DPR DDC	Implementer Implementer Implementer
78. Acquire and maintain public and/or private campgrounds and hiking trails in the <i>mauka</i> areas.	TBD	DLNR DPR DDC	Implementer Implementer Implementer
79. Develop a system of <i>mauka</i> trails and paths to interconnect the major recreational areas of the North Shore for use by nonmotorized transportation modes, e.g., walking, biking, horseback riding.	TBD	DLNR DPR DDC	Implementer Implementer Implementer
80. Coordinate planned private and public actions pertaining to trails and access. Identify historic trails and old government roads of cultural and recreational value to the public.	TBD	DLNR DPR	Implementer Implementer

Policies/Guidelines	Program	Agency	Role
Parks and Recreation - Beach Parks and Shoreline Areas			
81. Limit new developments along the shoreline to parks and other compatible open space uses.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
82. Improve and expand public access to the shoreline at approximately one-half mile intervals in rural areas of the North Shore, or at closer intervals where justified by public demand, traditional use patterns, the quality of the recreational resources, emergency services response time, or to bypass natural barriers that impede public access to the shoreline.	Park Facilities Functional Plan, Project Review	DPR DPP	Implementer Regulator/Advocate
83. Maintain and expand lateral access along the coast, especially in areas with high recreational or scenic value, including the shoreline along Sunset Beach and Kawaihoa where access to popular sandy beaches and surf spots are in demand.	Park Facilities Functional Plan	DPR DFM	Implementer Implementer
84. Limit uses within beach parks and nearshore ocean area uses to preserve overall environmental quality, rural character, scenic views, and open space.	Land Use Ordinance, Project Review	DPP	Regulator
85. Provide adequate public parking and related support facilities (such as rest rooms and showers) at popular beach parks, including lifeguard equipment storage facilities in anticipation of increased lifeguard services needed at those parks. Improvements are planned for North Shore beach parks at Pu'uiki Beach, Laniākea, Chun's Reef, Kawaihoa, Leftovers, Uppers, Kahawai, Banzai Rock, Kaunala, and Waiale'e.	Park Facilities Functional Plan, Park Master Plans	DPR DDC	Implementer Implementer
86. Acquire shoreline properties as opportunities arise or obtain public use easements and maintenance agreements with private landowners, especially lands adjacent to existing public parks.	Park Facilities Functional Plan	DPR DFM	Implementer Implementer
Parks and Recreation - Maintenance and Management of Parks, Recreation Areas and Recreational Resources			
87. Provide sufficient resources – including funding and manpower – to ensure that public facilities are adequately maintained.	Operations Budget	DLNR DPR DFM BFS	Advocate Implementer Implementer Implementer
88. Identify limitations on recreational resources and implement policies to regulate and mitigate impacts to these resources.	TBD	DLNR DPR DPP	Implementer Implementer Regulator/Advocate
89. Establish and enforce rules and regulations to mitigate conflicts among recreational activities.	Code Enforcement	DLNR DPP	Implementer Implementer
90. Engage public and private organizations in partnership with government agencies to maintain recreational resources.	Facility Management Plans	DLNR DPR	Implementer Implementer

Policies/Guidelines	Program	Agency	Role
Parks and Recreation - Site Design of Recreational Facilities			
91. Incorporate natural and/or cultural features of the site and use landscape materials that are indigenous to the area, where feasible, into the design of recreation facilities and areas.	Project Review	DPP DDC	Implementer/Advocate Implementer
92. Locate uses that generate high noise levels away from existing and planned residential areas.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
93. Design and site improvements and landscaping to enhance the rural character and the aesthetic value of open space elements and natural resources.	Project Review	DPP DDC	Regulator/Advocate Implementer
94. Provide pedestrian and bicycle pathways from surrounding streets to parks, to facilitate convenient access to the parks.	Project Review, Bicycle Master Plan	DOT DTS DPP DDC	Implementer Implementer Regulator/Advocate Implementer
95. Site parks and recreational attractions intended for regional or island-wide uses along or near regional roadways.	Land Use Ordinance, Project Review, Park Facilities Functional Plan, Park Master Plans	DLNR DPP DPR	Implementer Regulator/Advocate Implementer
96. Minimize environmental impacts (such as siltation, pesticide and fertilizer runoff) of recreational facilities and activities. Expansive recreational facilities, such as community and regional parks, should comply with State Department of Health guidelines related to ground and nearshore water quality.	Project Review, Facility Maintenance Plans	DPP DPR private entities	Regulator/Advocate Implementer Implementer
Parks and Recreation - Recreational Activities that Support the North Shore's Economy			
97. Promote recreational and specialty events such as surf meets, fishing tournaments, bike tours, races and other competitions which contribute to the North Shore's economy. Such events shall meet State and City rules and regulations for park and ocean uses to avoid conflict with recreational uses.	TBD	City OED private entities	Advocate Implementer
98. Manage impacts to the recreational resource and surrounding communities (such as noise, parking, traffic, etc.) associated with special events.	Project Review	DOT DPR DTS	Regulator Regulator Regulator
99. Promote instructional programs, training clinics and other activities that cater to the health and recreation industry and which will not impact the North Shore's rural character.	TBD	private entities	Implementer
100. Explore the potential of equestrian activities, such as trail rides and riding adventures, as an adjunct to the area's attractions.	TBD	private entities	Implementer

Policies/Guidelines	Program	Agency	Role
101. Support equine activities through a variety of means, including establishment of well-designed, safe riding trail networks linking destinations in the rural communities and in the <i>mauka</i> areas that have long been used by riders. Cooperative agreements for the development and maintenance of such networks should be forged through public-private partnerships.	TBD	DLNR private entities	Advocate Implementer
Historic and Cultural Resources			
102. Implement in situ preservation and appropriate protection measures for sites that have high preservation value because of their good condition or unique, historic, cultural and archaeological features, and for which the State Historic Preservation Division has recommended such treatment.	Chapter 6E, HRS TBD	DLNR	Regulator/Advocate
103. Consider the particular qualities of a site and its relationship to its physical surroundings when determining the appropriate treatment for a site. Determine appropriate preservation measures, site boundaries and setbacks, and development restrictions on a site-by-site basis in consultation with the State Historic Preservation Division.	Chapter 6E, HRS	DLNR DPP	Regulator/Advocate Regulator/Advocate
104. Include input from all pertinent community resources in the development of a site preservation plan.	TBD	DLNR DPP	Implementer Advocate
105. Include sight lines and view planes that are significant to the original purpose and value of the site in criteria for adjacent use restrictions.	TBD	DLNR	Regulator
106. Determine the appropriateness of public access on a site-by-site basis in consultation with the State Historic Preservation Division, Hawaiian cultural organizations, and the owner of the land on which the site is located.	TBD	DLNR DPP	Regulator/Advocate Regulator/Advocate
Residential Communities – Rural			
107. Utilize a traditional density of one unit per acre with lots ranging in size from one to three acres, although alternative layouts that promote clustering are encouraged. Limit buildings to two stories or 25 feet, although the height may vary according to required flood elevation, slope, and roof form.	Land Use Ordinance, Project Review	DPP	Regulator
108. Ensure compatibility between country-district uses and adjacent agricultural lands, natural resources, views, or cultural features.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
Residential Communities – Rural Residential			
109. Densities range from five to eight units per acre, or up to 10 units per acre for alternative development options which enhance rural character and maximize consolidated, usable open space. Lot sizes range from 5,000 square feet to 10,000 square feet, allowing the application of optional design standards. For smaller lot developments of less than 5,000 square feet, alternative clustering is encouraged.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate

Policies/Guidelines	Program	Agency	Role
110. Use rural development standards to determine appropriate scale and character, smaller building footprints, greater setbacks, and more landscaping (use of hedges to create walls and grassed front yards, and rural roadways with no sidewalk, curbs, and gutters).	Land Use Ordinance, Subdivision Rules, Project Review	DPP	Regulator/Advocate
111. Avoid monotonous rows of garages and driveways along neighborhood street frontages by employing features such as varied building setbacks and shared driveways.	Land Use Ordinance, Subdivision Rules, Project Review	DPP	Regulator/Advocate
112. Plan and design new or infill housing development, as well as modifications to existing homes, to be generally compatible with the predominant form and character of existing homes on adjacent properties and with the neighborhood as a whole.	Land Use Ordinance, Subdivision Rules, Project Review	DPP	Regulator/Advocate
113. Use plantation architectural features such as pitched roofs in varied forms, exterior colors and finishes, building orientation, floor plans and architectural details to provide visual interest and individual identity and accentuate the rural setting. In general, buildings are to be less than two stories or 25 feet, although the height may vary in response to required flood elevation, slope, or other physical site constraints.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
114. Support affordable housing initiatives in areas designated for new housing development.	Land Use Ordinance, Zone Change Unilateral Agreement, Housing Development Programs	HPHA DPP DCS	Implementer/Advocate Regulator Implementer/Advocate
Residential Communities – Low-Density Apartment			
115. Maintain the existing apartment district boundaries.	Land Use Ordinance, Project Review	DPP	Regulator
116. Densities range from 10 to 20 units per acre. Buildings should not be more than three stories or exceed 40 feet in height.	Land Use Ordinance, Project Review	DPP	Regulator
117. When possible, enhance the compatibility of development within apartment district uses with adjacent residential uses.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
118. Employ building form, orientation, location of entries and landscape screening that reflects single-family residential character and provides greater privacy and individual identity for housing units.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
119. Ensure compatibility of building scale, roof form and the quality of materials with those of adjacent residential areas.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
Residential Communities – Special Needs Housing			
120. Locate special needs housing within or near Hale'iwa or Waialua Towns within close proximity to public transit, community services and commercial activities, but not so clustered together to create a significant change to neighborhood character, especially as viewed along collector roads.	Land Use Ordinance, Project Review, Housing Development Programs	HPHA DPP	Implementer/Advocate Regulator

Policies/Guidelines	Program	Agency	Role
121. As an exception to standard density situations, special needs housing may have densities of up to 20 units per acre, not including beds in skilled nursing facilities, if they consist primarily of smaller dwelling units with residential scale and character. Proposals for special needs housing should be subject to community and agency review.	Land Use Ordinance, Project Review	DPP	Regulator
122. Limit building heights in line with the region's rural character.	Land Use Ordinance, Project Review	DPP	Regulator
123. Ensure compatibility of building scale, roof form, and materials with adjacent residential areas.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
Commercial Areas – Hale'iwa Country Town			
124. Limit building heights to two stories, and employ building design elements which reflect the architectural characteristics of the early 1900-period architecture identified in the Hale'iwa Special District Design Guidelines.	Land Use Ordinance, Project Review	DPP	Regulator
125. Incorporate generous, functional, public and open spaces reflective of the town's agricultural heritage.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
126. Encourage commercial and related activities that are conducive to the pedestrian character to locate at the sidewalk level along Kamehameha Highway. Encourage less pedestrian-dependent and conducive activities (such as manufacturing areas for products and compatible light industrial uses, residences, services, etc.) to locate behind or above commercial activities so as not to detract from the commercial retail character of Kamehameha Highway.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
127. Focus the town's commercial core around a mix of compatible activities such as recreation, marine-related enterprises, farmers' markets, historic and cultural attractions, "clean" light industrial, small businesses and offices, civic and governmental services, businesses and retail activities for both residents and visitors.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
128. Upgrade drainage, wastewater, and water infrastructure within Hale'iwa Town, as needed.	Infrastructure Facility Plans	ENV DDC BWS	Implementer Implementer Implementer
129. Support home-based businesses and "Mom and Pop" type stores within the town center.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
130. Concentrate new development near existing built areas emphasizing redevelopment and infill along Kamehameha Highway, <i>makai</i> of the Hale'iwa Joseph P. Leong Highway (Hale'iwa Bypass Road). Provide adequate landscaped buffer adjacent to the bypass.	Landscape Plan, Land Use Ordinance, Project Review	DOT DPP	Implementer Regulator/Advocate
131. Ensure that commercial uses adjoining the Kamehameha Highway corridor include support facilities such as parking lots and rest rooms that can adequately accommodate the planned commercial activities.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate

Policies/Guidelines	Program	Agency	Role
132. Support the expansion and enhancement of Hale'iwa Harbor. If possible, integrate the harbor's attractions and facilities with commercial activities in Hale'iwa Town.	TBD	DLNR	Implementer
133. Expand indoor recreational and educational facilities and programs (museums, movie theater, gym, and cultural performance theaters) and historical, cultural, and arts programs to further enrich Hale'iwa's civic core.	TBD	DPR DDC private entities	Implementer Implementer Implementer
134. Provide improved, expanded, and continuous pedestrian walkways linking commercial establishments within Hale'iwa, including connections between farmers' markets or other kinds of agricultural product and retail outlets, and open space and environmental resources (such as beach parks, Hale'iwa Harbor and Loko Ea Pond).	Capital Improvement Program, Project Review	DOT DTS DPP	Implementer Advocate Regulator/Advocate
135. Enhance the attractiveness and general landscaped open space character of the area by providing roadway improvements, street trees, streetlights, street furniture, and signage compatible with the rural character of Hale'iwa Town.	Capital Improvement Program, Project Review	DOT DTS DPP	Implementer Advocate Regulator/Advocate
136. Continue to use and support production of a visitors' map showing attractions and services in Hale'iwa.	TBD	private entities	Implementer
137. Maintain Kamehameha Highway as a two-lane thoroughfare through Hale'iwa Town.	O'ahu Regional Transportation Plan	OMPO DOT DTS	Advocate Implementer Advocate
138. Consolidate off-street parking to areas behind buildings, while retaining existing on-street parking wherever possible and appropriate. As needed, parking should be rearranged to accommodate the pedestrian walkway system along Kamehameha Highway.	Capital Improvement Program, Project Review	DTS DPP private entities	Advocate Regulator/Advocate Implementer
139. Provide signage and other forms of orientation to help direct motorists through the town to major facilities and to off-street parking facilities.	Capital Improvement Program,	DOT DTS DPP	Implementer Implementer Regulator/Advocate
140. Improve conditions for transit and bicycling through Hale'iwa Town by providing better designed and located bus stops, and a designated bike lane through the town.	Capital Improvement Program, Bicycle Master Plan	DOT DTS	Implementer Implementer
141. Enhance Weed Junction and Kamehameha Highway/Joseph P. Leong Junction, which are entry points to Hale'iwa, in a manner which conveys their gateway functions through appropriate design, landscaping, signage and painting.	Capital Improvement Program	DOT private entities	Implementer Implementer
142. Encourage private and community-based initiatives to protect and enhance the streams, wetlands, and other natural resources within Hale'iwa Town. Retain the agricultural use adjacent to Weed Junction and the Preservation designation at Loko Ea Pond.	TBD, Land Use Ordinance	DLNR ENV DPP	Implementer Advocate Regulator/Advocate

Policies/Guidelines	Program	Agency	Role
Commercial Areas – Waialua Country Town			
143. Ensure new developments are consistent with the <u>Waialua Town Master Plan</u> recommendations for the town center.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
144. Integrate neighborhood parks and community-oriented recreation areas into new residential development.	Land Use Ordinance, Project Review, Parks Master Plan	DPP DPR DDC	Regulator/Advocate Implementer implementer
145. Locate churches and public facilities in or near the town.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
146. Retain large, readily accessible open spaces where outdoor recreation facilities and neighborhood gardens create open vistas and green spaces. Retain open space entrances to the town core, including Weed Junction, Thompson Corner, and Waialua Beach Road, with Waialua Park as the entrance to the country town district.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
147. Incorporate significant historic features from the plantation era and earlier periods into new developments, where feasible and appropriate. Existing buildings of historical, cultural and/or architectural significance, such as the surviving elements of the Waialua Mill, should be preserved and maintained through rehabilitation and adaptive reuse. Where feasible, adapt and highlight these structures as landmarks and icons representative of Waialua's plantation town history.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
148. While buildings in the commercial core may be two stories in height, one-story heights should be emphasized, in keeping with the area's historic scale and to preserve the prominence and views of existing mill structures.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
149. New commercial buildings should be similar in architectural character, scale and materials to historic structures such as the former Waialua Sugar Company offices and the Waialua Library.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
150. Use design guidelines described in the <u>Waialua Town Master Plan</u> to promote and develop a special image for Waialua's commercial and industrial core that reflects the town's historic character and reinforces the town's role as the cultural and business center for Waialua. Encourage renovations and new construction in accordance with the design guidelines.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
151. Provide pedestrian and bicycle access between surrounding residential neighborhoods and Waialua's commercial core.	Local Circulation Plan, Bicycle Master Plan, Project Review	DOT DTS DDC DPP	Implementer Implementer Implementer Regulator/Advocate
152. Encourage infill development and new commercial development around Kealohanui Street to strengthen the town core and provide the critical mass necessary in developing a healthy town center.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate

Policies/Guidelines	Program	Agency	Role
153. Direct new residential development outside but adjacent to the town core, as generally indicated on the Land Use Map.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
154. Locate industrial uses around the former sugar mill (see Section 3.7 Industrial Areas for applicable policies and guidelines).	Land Use Ordinance, Project Review	DPP private entities	Regulator/Advocate Implementer
155. Promote agricultural support activities at the agricultural support area adjacent to the mill site.	Land Use Ordinance, Project Review	DPP private entities	Implementer Implementer
156. New housing units should incorporate rural features (such as small building footprints, larger setbacks, and more landscaping) and be sited and organized to give a strong sense of community.	Land Use Ordinance, Project Review, Housing Development Programs	HPHA DPP DCS	Implementer Regulator Implementer
157. Work with developers to establish housing programs that place high priority on the needs of existing Waiialua residents.	TBD	HPHA DCS	Implementer Implementer
158. Provide job or entrepreneurial opportunities for area residents, and make available training programs for new jobs and businesses.	TBD	DCS private entities	Implementer Implementer
159. Promote historical and cultural attractions such as museums or activity centers that illustrate the history of the community or feature current agricultural operations near the mill site to encourage visitors to Waiialua Town.	TBD	private entities	Implementer
160. Encourage computer-oriented, high technology business, health care, and medical services to locate in Waiialua.	TBD	private entities	Implementer
161. Provide for safe and pleasant pedestrian circulation along the storefronts. As it redevelops, emphasize pedestrian circulation along Kealohanui Street. Retain a distinctive pedestrian-oriented commercial area for residents and visitors through the use of signage, street furniture, and street tree plantings to encourage walking and biking.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
162. Support production of a map showing services in Waiialua and attractions in the region, such as Ka'ena Point and nearby beach parks.	TBD	private entities	Implementer
163. Promote Kealohanui Street as a pedestrian-oriented promenade in Waiialua.	Project Review	DPP	Regulator/Advocate
164. Link proposed pedestrian walkways to the Waiialua Town core, including linkages to proposed farmers' markets and other kinds of agricultural product and retail outlets.	Project Review, Capital Improvement Program	DPP DTS DDC	Regulator/Advocate Implementer Implementer
165. Provide convenient parking that should be landscaped and screened from roadways.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
166. Enhance Waiialua Beach Road and Farrington Highway as gateways to Waiialua Town through signage and landscaping.	Capital Improvement Program	DOT DTS DDC	Implementer Implementer Implementer

Policies/Guidelines	Program	Agency	Role
167. Plant street trees to enhance the pedestrian experience and to create a strong streetscape image. A detailed street tree and planting plan should be developed and implemented as part of the right-of-way plan.	Land Use Ordinance, Project Review, Capital Improvement Program	DPP DTS DDC	Regulator/Advocate Implementer Implementer
Commercial Areas – Rural Community Commercial Center			
168. Limit rural community commercial centers to existing zoned areas between Pūpūkea Road and Pāhoe Road that currently serve the commercial needs of residents and visitors.	Land Use Ordinance, Project Review	DPP	Regulator
169. Design rural community commercial centers to provide a compact and efficient organization of various commercial services which primarily serve the immediate community.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
170. Architectural scale and character should respect the surrounding natural features, and adjacent residential areas. Buildings should reflect a rural character compatible with surrounding open spaces and adjacent residential use.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
171. Limit building heights to no more than two stories.	Land Use Ordinance, Project Review	DPP	Regulator
172. Locate parking behind buildings or provide parking that is landscaped. Parking should be visually screened from the street and adjacent residential lots, by planting a landscaped screen of trees and hedges along street frontages and property lines and planting shade trees throughout the parking lot.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
173. Incorporate pedestrian and bicycle facilities, including bicycle paths and storage racks, and off-site improvements such as crosswalks.	Project Review	DPP	Regulator/Advocate
174. Site bus stops in close proximity to rural community commercial centers.	Bus Facilities and Systems Plans, Project Review	DTS	Implementer
Commercial Areas – Country Stores			
175. Design country stores to be small-scale, freestanding, compact commercial facilities. Prohibit country stores from expanding to larger, continuous commercial strip types of developments along arterial roads.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
176. Limit country stores primarily to retail uses that provide services to the surrounding community.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
177. Architectural scale and character should respect the surrounding natural features, and adjacent residential areas. Buildings should reflect a rural character compatible with surrounding open spaces and adjacent residential uses.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
178. Limit building heights to one story.	Land Use Ordinance, Project Review	DPP	Regulator

Policies/Guidelines	Program	Agency	Role
179. Locate parking behind buildings, or provide parking that is landscaped. Parking should be visually screened from the street and adjacent residential lots, by planting a landscaped screen of trees and hedges along street frontages and property lines and planting shade trees throughout the parking lot.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
180. Promote pedestrian and bicycle access to country stores.	Project Review	DPP	Regulator/Advocate
181. Assist business owners with maintaining their financial stability to ensure that country stores remain in operation.	TBD	City OED DBEDT	Advocate Advocate
Industrial Areas			
182. Maintain adequate open buffer zones between industrial activities and residential districts.	Land Use Ordinance, Project Review	DPP	Regulator
183. Minimize impacts (views, noise and smells) and reduce the visibility of large building masses, machinery elements, parking, storage areas, industrial equipment and operation areas through proper site planning and landscape plantings.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
184. Encourage uses which have few environmental impacts and those which complement the development scale of the surrounding community.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
185. Allow low-impact, service industrial uses in enclosed buildings within the Hale'iwa and Waialua Country Town Districts, so as not to detract from the pedestrian-oriented commercial/retail character of roadways, such as Kamehameha Highway, Kealohanui Street, and Goodale Avenue. These could include manufacturing of clothing, arts and crafts and surfboard repair.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
186. Building height and form should reflect the contexts of their sites. At the Waialua Mill site, they should follow guidelines reflecting the Mill's image. In Hale'iwa Town, they should follow the Hale'iwa Special District Design Guidelines. In Waialua Town, they should be consistent with guidelines of this document and the <u>Waialua Town Master Plan</u> . In general, buildings should be designed to reflect the architectural character of Hale'iwa or Waialua Town. Basic design principles, texture, construction materials, and colors should be compatible with the styles from the era and surrounding buildings.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
187. Where taller vertical structures are required as part of an industrial operation, site and design such structures to minimize impacts on view planes and reduce visibility from scenic vistas, public roadways, residential areas, commercial areas, parks, and other significant open space areas.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
188. Limit industrial uses located along the shoreline to water-dependent activities (such as boat repair and maritime-related activities). Consider environmental, visual, and noise impact during the permit application process.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate

Policies/Guidelines	Program	Agency	Role
189. Maintain and upgrade infrastructure to support industrial facilities.	Infrastructure Facility Plans	ENV DDC BWS	Implementer Implementer Implementer
Visitor Accommodations			
190. Allow visitor accommodations in Hale'iwa Town to help restore and promote the historic character of the town.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
191. Design visitor accommodations to be consistent with the Hale'iwa Special District Design Guidelines. In general, visitor accommodations should be small in scale (limited to two stories in height), be compatible with the architectural style and character of Hale'iwa Town, and observe the same building envelopes and design standards of adjacent buildings.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
192. Provide convenient and safe access for pedestrians and vehicles.	Capital Improvement Program, Land Use Ordinance, Project Review	DOT DTS DPP	Implementer Implementer Regulator
193. Incorporate mixed use that caters to pedestrian activity located on the ground floor and visitor accommodations provided on the upper floor.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
194. Provide adequate off-street parking which is landscaped and screened from public roadways.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
195. Address the streetscape and provide a setting that is conducive to pedestrian activity, when located along pedestrian-oriented streets.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
196. Ensure that existing and/or proposed infrastructure can adequately accommodate the proposed development and associated visitor population.	Project Review	DPP	Regulator/Advocate
197. Minimize impacts (noise, traffic, parking, visual) on surrounding activities/properties and from public roadways.	Land Use Ordinance, Project Review	DPP	Regulator/Advocate
197A. Prohibit the granting of new permits, including nonconforming use certificates for B&B and vacation rental operations on the North Shore.	Land Use Ordinance, Project Review, TBD	DPP	Regulator/Implementer
Institutional Uses			
198. Colocate neighborhood or community parks with elementary or intermediate schools and coordinate design of facilities when efficiencies in development and use of athletic, meeting and parking facilities can be achieved.	Park Facilities Functional Plan, Park Master Plans	DPR DDC DOE	Implementer Implementer Advocate
199. Colocate social, social service institutions, and other public service agencies to provide convenient one-stop services to the region.	Facility Master Plans	DDC	Implementer

Policies/Guidelines	Program	Agency	Role
Military			
200. Encourage all government agencies (City, State, and Federal) to coordinate efforts with the U.S. military, especially where the Kahuku and Kawaihoa Training Areas overlap with environmentally sensitive areas.	Conservation District Management Plan	DLNR	Advocate
201. Encourage the military to provide appropriate infrastructure services to support military uses on their lands and minimize any potential impacts to the region.	Base Master Plan	U.S. Army	Implementer
202. Work with the military to allow use of Drum Road as an emergency access bypass route during natural disasters or other emergency incidents.	TBD	U.S. Army DOT	Implementer Implementer
203. Encourage low-rise military facilities that support educational and recreational programs and are compatible with the region on military reservation lands such as Dillingham Airfield.	Base Master Plan	U.S. Army	Implementer
Transportation Systems			
204. Establish rural streetscape design and development standards within residential areas consistent with the rural character of the region. Allow for rural elements that reduce the amount of impervious surfaces, such as minimum pavement widths to support traffic demands and emergency vehicle access, shared driveways, reduced parking requirements, more landscaping, and grassed swales as an alternative to sidewalks with curbs and gutters.	Land Use Ordinance, Subdivision Rules	DPP	Implementer/Regulator
205. Emphasize accessibility from residential streets to bus routes, parks, schools and commercial centers. Design roadways to facilitate the use of alternative transportation forms, including bicycle and pedestrian travel, and personal motorized devices.	Land Use Ordinance, Subdivision Rules	DPP	Regulator
206. Provide scenic lookout points to minimize hazards created by slower sight-seeing traffic and to enhance the appreciation of the region's scenic resources.	TBD	DOT	Implementer
207. Provide appropriately sited and designed off-street parking areas at popular beach parks wherever feasible, including parking in support parks <i>mauka</i> of the highway.	Park Master Plans	DPR DDC	Implementer Implementer
208. Study the safety and feasibility of developing passing zones on Kamehameha Highway and Kaukonahua Road from Hale'iwa/Waialua to Wahiawā to reduce traffic delays due to slower moving vehicles, and to improve safety conditions.	TBD	DOT	Implementer
209. Provide safety improvements along Kaukonahua Road and Kamehameha Highway from the Joseph P. Leong Highway (Hale'iwa Bypass Road) to Wahiawā and beyond. Promote the development of emergency runaway vehicle ramps on Kamehameha Highway and Kaukonahua Road, from Wahiawā to Hale'iwa/Waialua.	TBD	DOT	Implementer

Policies/Guidelines	Program	Agency	Role
210. Approve new residential and commercial development only if the State DOT and the City DTS certify that adequate transportation access and services can be provided.	Project Review	DPP	Implementer
211. Continue to include the daily visitor population that visits the North Shore in determining allocations of resources and facilities for the North Shore.	Capital Improvement Program	DLNR DPR DFM BFS BWS	Implementer Implementer Implementer Implementer Implementer
212. Promote the use of transportation demand management strategies, including measures such as ride-sharing (car/van pooling), improved bus service and routes, the use of non-vehicular travel modes, modified work hours and teleworking to reduce commutes.	TBD	DOT DTS	Implementer Implementer
213. Protect the natural resources of Ka'ena Point from potentially damaging vehicular traffic. Prohibit construction of a roadway around Ka'ena Point.	Ka'ena Point Natural Area Reserve Management Plan, Land Use Ordinance	DLNR	Implementer/Advocate
214. Provide pedestrian-friendly walkways, off-street parking, bus pull-outs, tour bus maneuvering areas, and drainage improvements in Hale'iwa Town.	Capital Improvement Program, Land Use Ordinance, Project Review, Facility Improvement Plans	DOT DTS DPP DDC	Implementer Implementer Regulator/Advocate Implementer
215. Improve the main roadways within Hale'iwa and Waialua Country Town Districts with shade trees, landscaping, sidewalks, street furniture, and signage to promote pedestrian orientation within these country towns.	Capital Improvement Program, Project Review	DOT DTS DPP	Implementer Implementer Regulator/Advocate
216. Create a regional pedestrian/bikeway system linking the parks, schools and town centers in Hale'iwa and Waialua with outlying communities.	Bicycle Master Plan	DOT DTS	Implementer Implementer
217. Coordinate bikeway development with responsible State and City agencies and private landowners to ensure that safety, liability, and a mixture of use issues are adequately addressed.	Bicycle Master Plan	DOT DTS	Implementer Implementer
218. Locate bus stops to be convenient and accessible to residential areas and hubs of community activity.	Bus Facilities and Systems Plans, Project Review	DTS	Implementer
219. Design bus shelters to provide weather protection for bus passengers and complement the natural setting.	Bus Facilities and Systems Plans, Project Review	DTS	Implementer
220. Explore the possibility of a Historic Hale'iwa Trolley as an alternative for visitors to experience the North Shore.	TBD	DTS private entities	Advocate Implementer
221. Encourage the State to upgrade, maintain, and expand the boating facilities at Hale'iwa Harbor to meet the needs of recreational and commercial fishing and leisure boating activities.	Facility Master Plan	DLNR	Implementer
222. Maintain small aircraft, general aviation and other recreational, commercial, or other military uses at Dillingham Airfield in cooperation with the U.S. Army. As necessary, upgrade and maintain facilities to support airfield use.	Facility Master Plan	DOT	Implementer

Policies/Guidelines	Program	Agency	Role
223. Limit uses in the vicinity of Dillingham Airfield to those that are compatible with aircraft noise levels and overflights from the airfield.	Land Use Ordinance, Project Review	DPP	Regulator
224. Identify and maintain former cane haul roads and other <i>mauka</i> roads to provide for the safe and quick evacuation of residents and the movement of emergency response personnel (e.g., fire, police, ambulance) in the event that the primary highways become impassable due to natural disasters or other emergency incidents. Investigate the use of the following for safety and emergency access: the cane haul road system <i>mauka</i> of Farrington Highway in Mokolē'ia; the roads connecting with Drum Road including cane haul road (Twin Bridge Road) in Hale'iwa, Kawailoa Road, Ashley Road, Pūpūkea Road and Motocross/Kaunala Road. COMSAT/Girl Scout Camp (Paumālū) Road does not connect with Drum Road and would be for evacuation use only.	Capital Improvement Program	DTS DEM	Implementer Implementer
Water Systems			
225. Confirm that adequate potable and nonpotable water is available before approving new residential or commercial development.	Project Review	LUC BWS	Regulator Implementer
226. Ensure that State and private well development projects are integrated into and consistent with City water source development plans.	Watershed Management Plan	BWS	Implementer
227. Support infrastructure improvements that provide for the efficient and secure transmission and delivery of quality water.	Water System Infrastructure Plans	BWS	Implementer
228. Conserve the use of potable water by implementing the following measures, as feasible and appropriate: low-flush toilets, flow restrictors, rainwater catchment and other water conserving devices in commercial and residential developments; indigenous, drought-tolerant plant material and drip irrigation systems in landscaped areas; and reclaimed water for the irrigation of agricultural lands, parks, golf courses and other landscaped areas where this would not adversely affect potable groundwater supply or pose possible health and safety risks.	Building Code, Project Review, Water Supply System and Management Plan	DPP BWS ENV	Regulator/Advocate Advocate Implementer
Wastewater Treatment			
229. Use reclaimed water for irrigation and other uses, where feasible, in accordance with the <u>Guidelines for the Treatment and Use of Recycled Water</u> (May 15, 2002) by the State Department of Health and the No Pass Line established by the Board of Water Supply. A "wetlands" treatment system could serve as wild bird refuges that could also be used as a picnicking area and/or children's fishing park.	Water Supply System and Management Plan, Wastewater Management Plan	BWS ENV	Advocate Implementer
230. Replace outdated individual cesspools with septic tanks and individual wastewater systems. Consider public programs or policies to support private conversion efforts.	Water Quality Management Plan	DOH ENV	Advocate Advocate
231. Discourage new residential, commercial or school uses in close proximity to wastewater treatment facilities where odors may be objectionable.	Zoning/Project Review	DPP	Regulator/Advocate

Policies/Guidelines	Program	Agency	Role
232. Identify appropriate areas and technologies for future wastewater facilities that maintain the rural character and are proportionate to future population projections.	Wastewater Management Plan	DOH ENV	Advocate Implementer
233. Do not permit an ocean outfall for treated wastewater effluent in the North Shore area.	Wastewater Management Plan	DOH ENV	Advocate Implementer
Electrical Systems			
234. Provide adequate and reliable electrical service.	Utilities Plan	HECO	Implementer
235. Locate and design system elements such as electrical power facilities, substations, communication sites, and transmission lines to avoid or mitigate any potential adverse impacts on scenic and natural resources.	Utilities Plan, Project Review	HECO Telecommunications providers DPP	Implementer Implementer Regulator/Advocate
236. Locate powerlines underground or away from Kamehameha Highway.	Utilities Undergrounding Plan	HECO Telecommunications providers DDC	Implementer Implementer Implementer
237. Promote the use of renewable energy sources and energy conservation measures.	Building Code	HECO DPP	Implementer Regulator/Advocate
Solid Waste Handling and Disposal			
238. Expand recycling collection facilities and services, and public outreach and education programs that promote responsible waste management and source reduction.	Solid Waste Management Plan	ENV	Implementer
239. Encourage recycling of regional green waste by establishing green waste facilities in an appropriate location, possibly integrated with or adjacent to the Kawaihoa Refuse Transfer Station.	Solid Waste Management Plan	ENV	Implementer
240. Expand the use of automated refuse collection in residential areas.	Solid Waste Management Plan	ENV	Implementer
241. Monitor and regulate illegal dumping and littering activities.	Solid Waste Management Plan	ENV	Implementer
Drainage Systems			
242. Require all structural and land improvements to provide adequate drainage and flood mitigation measures to reduce storm runoff and flood hazard.	Storm Drainage Standards, Project Review	DPP	Regulator
243. Employ retention and detention methods that allow for the gradual release of stormwater. Where feasible, use open spaces, including parking lots, landscaped areas, and parks, to detain or allow ground infiltration of storm water flows to reduce their volume, runoff rates, and the amounts of sediment and pollutants transported.	Storm Drainage Standards, Project Review	DPP	Regulator
244. Use detention/retention basins as passive recreational areas and to provide recreational access for pedestrians and bicyclists.	Storm Drainage Standards	DLNR DPP DFM private entities	Advocate Regulator Implementer Implementer

Policies/Guidelines	Program	Agency	Role
245. Retain natural gulches as flood plains and open space resources. Restrict development within gulches, and prohibit grading or other disturbance of gulch walls.	State Land Use Law, Land Use Ordinance	DLNR LUC DPP	Implementer Regulator Regulator
246. Emphasize control and minimization of nonpoint source pollution in drainage system design. Where hardening of stream channels is unavoidable, improvements should protect habitat, maintain rural character and aesthetic quality, and avoid degradation of coastline and of stream and nearshore water quality, consistent with guidelines stated in Section 3.1.2.4.	Storm Drainage Standards	DLNR DPP DDC DFM	Advocate Regulator Implementer Implementer
247. Design drainageways to control 100-year floods. Any future work performed within the 100-year floodplain shall adhere to the requirements of the Federal Emergency Management Agency (FEMA) and meet all flood-proofing requirements.	Grading Ordinance, Subdivision Rules	DPP	Regulator
248. Regularly maintain and clean drainageways and flood mitigation structures of debris to ensure that they achieve the purpose for which they were designed.	Facility Maintenance Plan	DFM	Implementer
249. Employ best management practices to minimize runoff from existing conservation and agricultural land uses, and other areas that may generate sediment and debris.	Storm Drainage Standards	DLNR DOA ENV	Regulator/Advocate Advocate Regulator
250. Repair and maintain related agricultural irrigation systems and infrastructure.	Facility Maintenance Plan	DOA private entities	Implementer Implementer
251. Develop a drainage master plan for the Waialua watershed to address erosion and flood protection concerns.	TBD	DLNR ENV	Advocate Implementer
252. Conduct public outreach and education programs that explain the potential for flooding and efforts to minimize the effects of flooding.	Hazard Mitigation Plan	DOH DEM	Implementer Implementer
School Facilities			
253. Confirm the adequacy of school facilities before approving new residential development. Approve new residential developments only after the State Department of Education confirms that adequate school facilities, either at existing schools or at new school sites, will be available at the time new residential units are occupied.	Project Review	LUC DOE DPP	Regulator Advocate Regulator
254. Design DOE schools as community centers to facilitate community use after school hours.	School Master Plan	DOE DPR	Implementer Advocate
255. Colocate elementary and intermediate schools with parks, and coordinate facility design with the State DOE and the City DPR whenever possible to avoid duplication of parking and athletic, recreation, and meeting facilities.	School Master Plan, Project Review	DOE DPP DPR	Implementer Regulator/Advocate Implementer

Policies/Guidelines	Program	Agency	Role
256. Coordinate the development and shared use of athletic facilities such as swimming pools, gymnasiums, and playfields and courts with the DOE where the joint use of such facilities would maximize use and reduce duplication of function without compromising the schools' athletic programs.	Park Master Plan, School Master Plan	DOE DPR DDC	Implementer Implementer Advocate
257. Promote facility design and construction that allows for school buildings to be used as public hurricane shelters.	School Master Plan, Project Review	DOE DPP DPR DEM	Implementer Advocate Implementer Advocate
258. Support the State DOE's request for school impact fees from developers of residential projects to ensure that adequate school facilities are in place at the time new residential units are occupied.	Project Review	LUC DPP	Regulator/Advocate Regulator/Advocate
Public Safety Facilities			
259. Include visitor demands and needs when allocating public safety resources.	Capital Improvement Program	DES DEM HFD HPD	Implementer Implementer Implementer Implementer
260. Sponsor public education programs to increase awareness about public safety issues.	TBD	DES DEM HFD HPD	Implementer Implementer Implementer Implementer
261. Identify, improve and service transportation networks (via signage, traffic control personnel and equipment) to ensure efficient evacuee movement.	Capital Improvement Program	DOT DTS DEM	Implementer Implementer Advocate
262. Support highway improvements that would reduce emergency vehicle response times and facilitate emergency personnel movement through traffic.	Capital Improvement Program	DOT DTS	Implementer Advocate
263. Expand lifeguard services at beaches with high visitor demands, such as Laniākea, Chun's Reef, and Velzyland.	TBD	DES	Implementer
264. Confirm the availability of adequate police and fire protection before approving new development.	Project Review	DPP	Regulator
265. Increase police presence, including car and bicycle patrols and community policing efforts, especially in high-theft areas such as beach parks. Support the availability of adequate staffing and funding to enable this.	TBD	HPD	Implementer
266. Establish facilities which police officers could use as a local base of operations.	TBD	HPD	Implementer
267. Support the physical improvements and infrastructure upgrades needed to ensure adequate fire protection.	Facility Master Plans	HFD	Implementer
268. Use crime-preventive principles in the planning and design of communities, open spaces, circulation networks, and buildings.	Building Code, Project Review	DPP	Regulator

Policies/Guidelines	Program	Agency	Role
269. Design new public buildings such as schools and recreation centers to serve a secondary function as an emergency shelter.	Project Review	DDC	Implementer
Other Community Facilities			
270. Encourage colocation of antennae; towers should host the facilities of more than one service provider to minimize their proliferation and reduce visual impacts.	Land Use Ordinance Project Review	DPP LUC	Regulator Regulator
271. Mount antennae onto existing buildings or structures so that public scenic views and open spaces will not be negatively affected. However, except for the occupant's personal use, antennae on single-family dwelling roofs in residential districts are not appropriate.	Land Use Ordinance Project Review	DPP LUC	Regulator Regulator
272. Use "stealth" technology (e.g., towers disguised as trees) especially on free-standing antenna towers in order to blend in with the surrounding environment and minimize visual impacts.	Land Use Ordinance Project Review	DPP LUC	Regulator Regulator

APPENDIX A: OPEN SPACE, LAND USE, AND PUBLIC FACILITIES MAPS

The North Shore Sustainable Communities Plan includes three colored maps:

- Open Space Map
- Land Use Map
- Public Facilities Map

These maps illustrate the North Shore’s long-range vision for the future and the major land use, open space, and public facility policies that are articulated in the plan. In examining them, the reader should keep in mind that:

- These maps are general and conceptual.
- They are illustrative of the plan’s policy statements, presented in the text of this report.

These policy statements, which appear in the preceding chapters, are considered to be the most important elements of the plan. The maps are considered illustrations of the policies. However, it is recognized that the maps may be more accessible and more interesting than the written policies. This section of the plan, therefore, presents a brief explanation of the contents of each of these maps.

Elements common to each of the three maps include the Community Growth Boundary and four land use designations: “Preservation,” “Agriculture,” “Parks,” and “Military.” Descriptions of each are presented below. Common information particular to each map is presented under each map topic.

These maps are not parcel specific, but illustrate generalized categories or groups of land uses within the region. Because they are not parcel specific, the lines depicted by these boundaries do not indicate precise or abrupt demarcations. Rather, the geographic extent or actual magnitude of permissible or appropriate uses depicted within these boundaries should be evaluated and determined in concert with relevant sections of the plan’s text and specific site characteristics. This is particularly true of land use designations within a community boundary.

The extent or magnitude of land uses depicted within a boundary may be limited by actual on-site or adjacent conditions such as slope or other topographic constraints, soil type, existing

1 drainageways, flood or rockfall hazard, or the presence of natural or cultural resources.
2 Conversely, the actual appropriate extent of uses prescribed by a specific boundary may extend
3 beyond the indicated boundary by virtue of appropriate physical characteristics, compatibility
4 with adjacent land uses, and physical accessibility, including access to the site from existing
5 roads. In such cases the physical extent of those uses would be defined by actual site
6 constraints similar to those which would constrain uses within those boundaries.

8 **COMMUNITY GROWTH BOUNDARY**

9
10 The Community Growth Boundary defines, protects, and contains the intended extent of the
11 “built-up” or “settled” areas of rural communities. Its purposes are to provide adequate lands to
12 support established communities, to protect such communities from more intense form of
13 development, and to preserve lands outside the boundary for agriculture or other resource or
14 open space values. Areas within this boundary characteristically consist of relatively small,
15 dispersed residential communities and towns. In the North Shore Sustainable Communities
16 Plan area, the Community Growth Boundary includes the built areas of Mokulē‘ia, Waialua,
17 Hale‘iwa, Kawaioloa, and Sunset Beach/Pūpūkea.

18
19 At the Mokulē‘ia, Waialua, and Hale‘iwa communities, the Community Growth Boundary, from
20 west to east, generally follows Crozier Drive and a portion of Waialua Beach Road
21 encompassing the residential uses of Mokulē‘ia and Waialua. Thereafter, it follows Farrington
22 Highway to Thompson Corner, encompassing the adjoining AG-2 General Agricultural District
23 and the Hukilau Loop residential subdivision. Thereafter, the boundary follows Kaukonahua
24 Road to Weed Junction, to Kamehameha Highway, the Joseph P. Leong Highway, and then
25 follows the Hale‘iwa Special District boundary at Hale‘iwa Beach Park.

26
27 In the area of Kawaioloa, from west to east, the Community Growth Boundary generally
28 encompasses the residential uses at Papailoa Road, then follows Kamehameha Highway to and
29 encompassing the residential uses at Punalau Place and Ikuwai Place, and then along the toe
30 of the slope and including the residential zoning district *mauka* of Kamehameha Highway.
31 Thereafter, it follows Kamehameha Highway and encompasses the residential zoning district at
32 ‘Ili‘ohu Place.

33
34 At the Sunset Beach and Pūpūkea communities, from west to east, the Community Growth
35 Boundary includes the residential uses north of Waimea Bay, then *mauka*, encompassing the
36 Pūpūkea highlands community, then *makai* to and following the toe of slope. Thereafter, the
37 Community Growth Boundary encompasses the rural and residential zoning districts from
38 Sunset Beach to Kaunala Beach.

1 **PRESERVATION**

2
3 Preservation lands include those lands not valued primarily for agriculture, but which form an
4 important part of a region’s open space fabric. They possess natural, cultural, or scenic
5 resource values, and include important wildlife habitat, cultural sites, significant landforms,
6 views, or hazard areas. They include the following types of land:
7

- 8 • Land necessary for protecting watersheds, water resources and water supplies.
- 9
- 10 • Lands necessary for the conservation, preservation and enhancement of sites with
11 scenic, historic, archaeological or ecologic significance.
- 12
- 13 • Lands necessary for providing and preserving parklands, wilderness and beach
14 reserves, and for conserving natural ecosystems of endemic plants, fish and wildlife, for
15 forestry, and other related activities to these uses.
- 16
- 17 • Lands having an elevation below the maximum inland line of the zone of wave action,
18 and marine waters, fishponds and tide pools of O’ahu unless otherwise designated on
19 the development plan land use map.
- 20
- 21 • All offshore and outlying islands of O’ahu unless otherwise classified.
- 22
- 23 • Lands with topography, soils, climate or other related environmental factors that may not
24 be normally adaptable or presently needed for urban, rural or agricultural use.
- 25
- 26 • Lands with general slopes of 20 percent or more which provide for open space amenities
27 and/or scenic values.
- 28
- 29 • Lands susceptible to floods and soil erosion, lands undergoing major erosion damage
30 and requiring corrective attention by the State or Federal Government, and lands
31 necessary to the protection of the health, safety and welfare of the public by reason of
32 soil instability or the lands’ susceptibility to landslides and/or inundation by tsunami and
33 flooding.
- 34
- 35 • Lands used for national, state or city parks.
- 36
- 37 • Lands suitable for growing of commercial timber, grazing, hunting, and recreation uses,
38 including facilities accessory to such uses when said facilities are compatible with the
39 natural physical environment.
- 40

1 **AGRICULTURE**

2
3 Lands with agricultural value by virtue of current agricultural use or high value for future
4 agricultural use, including those areas identified as “Prime,” “Unique,” or “Other” Important lands
5 on the Agricultural Lands Important to the State of Hawai’i (ALISH) maps. “Agriculture” includes
6 lands suitable for crop growing, grazing and livestock raising, flower cultivation, nurseries,
7 orchards, aquaculture, or similar activities.

8
9 Under the State Constitution, the State is to identify important agricultural lands (IAL). Once
10 identified, these lands cannot be rezoned except under a “super majority” vote. To date, IAL
11 lands have not been identified. In 2005, Act 183 was adopted to address this mandate. It
12 established a two-step process: first, incentives to assure the long-term use and protection of
13 IAL. Second, with adequate state funding, the counties would prepare maps identifying IAL
14 lands to be adopted by the State Land Use Commission. Act 233, enacted in 2008, adopted the
15 incentive programs. To date, no state funding has been appropriated to the counties for the
16 mapping. Lands identified for agricultural purposes by this SCP can serve as the basis for the
17 county mapping process.

18
19 **PARK**

20
21 Public and private parks and recreational facilities, including beach parks, playgrounds,
22 playfields, and district parks.

23
24 **MILITARY**

25
26 Lands for military and military support purposes, excluding military-owned lands that are leased
27 or licensed to others on a full-time basis for nonmilitary uses.

28
29 **A.1 OPEN SPACE MAP**

30
31 The Open Space Map is intended to illustrate the region’s major open space patterns and
32 resources as outlined in Chapter 3. It highlights major open space elements and resources,
33 including agricultural and preservation lands, major parks, important “panoramic” views, natural
34 stream corridors and drainageways, and rural communities within the Community Growth
35 Boundary.

1 **A.2 LAND USE MAP**

2
3 This map illustrates the desired long-range land use pattern for the North Shore Sustainable
4 Communities Plan area. It supports the plan's vision and policies. The map includes the
5 following terms:

6
7 **A.2.1 Rural**

8
9 Single-family homes on large lots. On-site development is characteristically low-intensity,
10 typically consisting of single-family detached home, ancillary structures, if necessary, low site
11 coverage, nonurban development standards, and a large predominance of landscaped open
12 space.

13
14 **A.2.2 Rural Residential**

15
16 Single-family homes in country settings on medium-sized to large lots, on which rural
17 development standards are employed and provisions for pedestrian circulation, landscaping,
18 and open space are emphasized. "Rural Residential" also includes minor pockets of existing
19 apartment areas in Mokolē'ia, and future apartment districts adjacent to Waialua and Hale'iwa
20 town centers. These apartment lands are not mapped but are cited and elaborated in the text.

21
22 **A.2.3 Rural Community Commercial Center**

23
24 A small cluster of small-scale, low-rise commercial and service businesses which serve
25 primarily the immediate community. Its primary visual appearance is rural. Buildings are
26 generally compatible in scale and form with adjacent residential areas.

27
28 **A.2.4 Country Town**

29
30 A small-scale, low-rise, mixed-use center of commerce and community activity in rural character
31 and setting in which principal establishments are oriented to the street. Land use mixtures may
32 include retail, office, and dining establishments, compatible service businesses and light
33 industry, and residential uses. Commercial activity is concentrated along street frontages in
34 typically "Mainstreet" settings.

1 **A.2.5 Industrial**

2
3 Facilities for processing, construction, manufacturing, transportation, wholesaling, storage, or
4 similar economic activities, and accessory or supporting facilities which directly enhance their
5 viability.

6
7 **A.3 PUBLIC FACILITIES MAP**

8
9 The Public Facilities Map illustrates the major infrastructure needed to implement the vision for
10 the North Shore. It shows the location of existing facilities and conceptual location for some of
11 the future required infrastructure facilities.

12
13 It is not meant to be amended between revisions of the Plan and should not be confused with
14 the Public Infrastructure Map (PIM) used in the Capital Improvement Program budget process.
15 Major public facilities which are to be funded through the City Capital Improvement Program
16 budget appropriation must be shown on the PIM. The PIM is not part of the North Shore
17 Sustainable Communities Plan, and is adopted and amended by resolution.

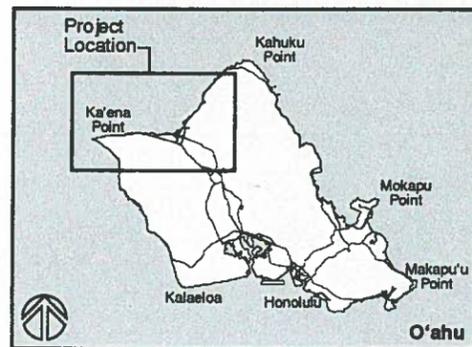
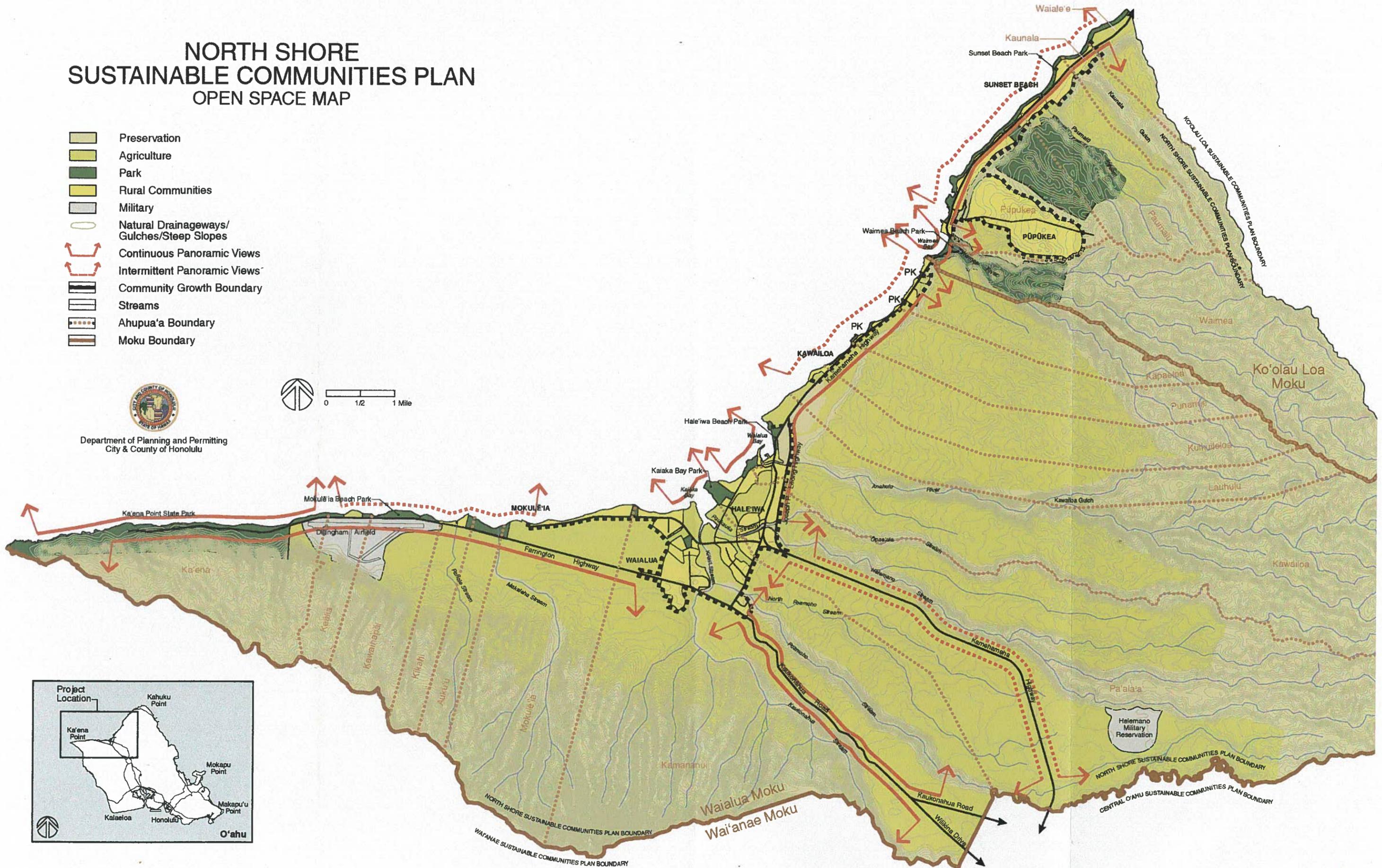
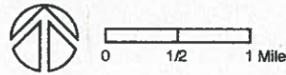
18
19 Projects which are not listed in the North Shore Sustainable Communities Plan or not shown on
20 the North Shore Sustainable Communities Plan maps can still be added to the PIM by Council
21 resolution if the Council finds them to be consistent with the vision and policies of the North
22 Shore Sustainable Communities Plan.

NORTH SHORE SUSTAINABLE COMMUNITIES PLAN OPEN SPACE MAP

-  Preservation
-  Agriculture
-  Park
-  Rural Communities
-  Military
-  Natural Drainageways/
Gulches/Steep Slopes
-  Continuous Panoramic Views
-  Intermittent Panoramic Views
-  Community Growth Boundary
-  Streams
-  Ahupua'a Boundary
-  Moku Boundary

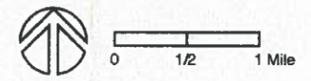


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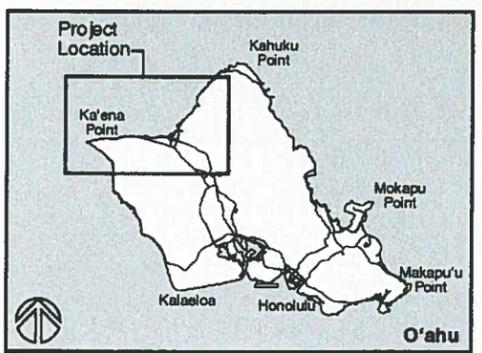
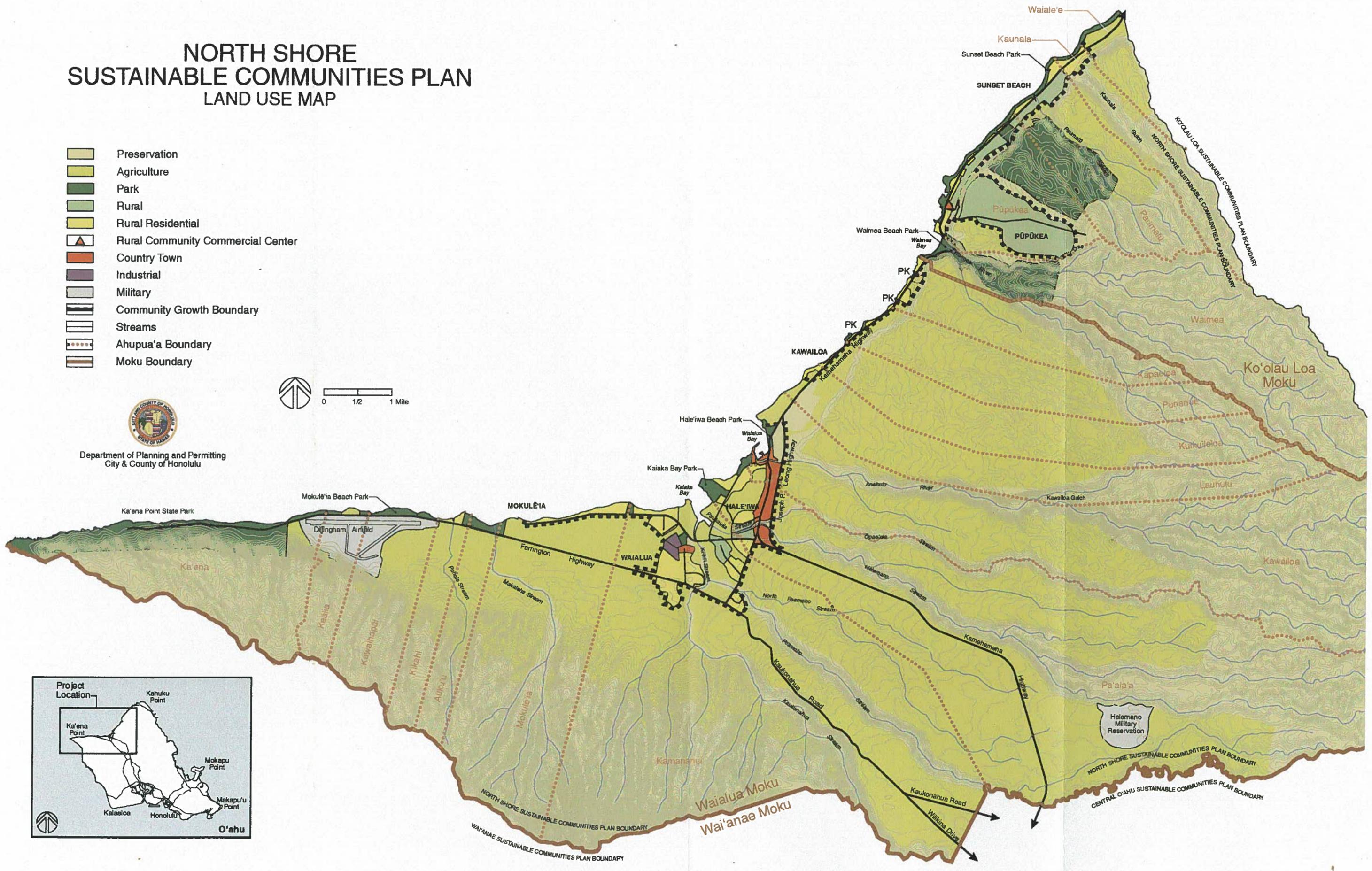


NORTH SHORE SUSTAINABLE COMMUNITIES PLAN LAND USE MAP

-  Preservation
-  Agriculture
-  Park
-  Rural
-  Rural Residential
-  Rural Community Commercial Center
-  Country Town
-  Industrial
-  Military
-  Community Growth Boundary
-  Streams
-  Ahupua'a Boundary
-  Moku Boundary



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NORTH SHORE SUSTAINABLE COMMUNITIES PLAN PUBLIC FACILITIES MAP

-  Preservation
-  Agriculture
-  Park
-  Rural Communities
-  Military
-  Community Growth Boundary
-  Streams
-  Ahupua'a Boundary
-  Moku Boundary

- | EXISTING | FUTURE | |
|---|---|---|
|  |  | Wastewater Treatment Plant |
|  | | Refuse Transfer Station |
|  | | Elementary School |
|  |  | Intermediate & High School |
|  | | Small Boat Harbor |
|  | | Airfield |
|  | | Agricultural Support |
|  | | Highways, Arterial & Collector Streets (Improvements) |
|  |  | Bikeways (Based on Draft O'ahu Bike Plan; July 2009
Check Draft Bike Plan for detailed facilities) |



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