

INDICATORS OF PROGRESS

Indicators are quantifiable measures that assist in the tracking of progress. They are based on the defined goals of the Community Development Plan and help to determine if the goals are feasible and obtainable.

General Demographics

General trend indicators which give a quantitative "snapshot" of the community

Indicator: Population growth trend for Puna relative to the County

Data source: U.S. Census Bureau

Indicator: Ratio of full time residents to part time residents

Data source: State Department of Taxation

Indicator: Ethnic diversity

Data source: U.S. Census Bureau and County Research & Development

Indicator: Median household income

Data source: U.S. Census Bureau and County Research & Development

Theme: Mālama I Ka 'Āina

Historic, Cultural, and Scenic Resources

Goal 2.1.1.a: Structures and cultural sites that are significant to Puna's history and cultural traditions are preserved.

Indicator: Number of historical structures and cultural sites that are protected by management plans, easements, or other tools

Data source: State Department of Land and Natural Resources (Historic Preservation Division), County Planning Department (Historic Preservation Commission)

Goal 2.1.1.b: The design character and natural setting of older communities that are representative of Puna's historic development are perpetuated.

Indicator: Number of town/village centers for which design and development guidelines have been developed and/or enacted

Data source: County Planning Department

Goal 2.1.1.c: Areas of scenic and cultural interest are accessible to the public in a manner that does not detract from their aesthetic, natural and cultural value.

Indicator: Number of cultural or scenic sites where land has been acquired and/or improvements made to accommodate public access.

Data source: State Department of Land and Natural Resources (Historic Preservation Division), State Department of Land and Natural Resources (State Parks Division), County Planning Department (Historic Preservation Commission)

Goal 2.1.1.d: Awareness and appreciation of the host culture is expanded.

Indicator: Number of students and educational programs directly related to Hawaiian cultural awareness

Data source: State Department of Education, Kamehameha Schools, University of Hawaii at Hilo, Hawaii Community College

Indicator: Building code standards that have been adopted to allow traditional Hawaiian building design and construction methods

Data source: County Building Department

Goal 2.1.1.e: The native forests of Puna are revered as part of the native culture and are provided with permanent protection from degradation and loss.

Indicator: Acreage of protected native forest

Data source: State Department of Land and Natural Resources (Division of Forestry and Wildlife), Office of Hawaiian Affairs, County Planning Department

Goal 2.1.1.f Tourism in Puna is compatible with historic and natural resources and not intrusive into the area's communities.

Indicator: Puna resident attitudes toward visitor industry with respect to local activities

Data source: Hawai'i Tourism Authority (updates of *Survey of Resident Sentiments on Tourism in Hawai'i*)

Native Forests and Geological Features

Goal 2.2.1.a: The connection between intact native forests in Volcanoes National Park and nearby State forest reserves and natural area reserves is preserved while allowing for more limited orderly development of the residential and agricultural areas in between.

Indicator: The establishment and implementation of a Biosphere Reserve Buffer Zone and related guidelines

Data source: County Planning Department

Goal 2.2.1.b: Destruction of native forest through development activity is abated.

Indicator: The adoption of zoning or grading code standards and enforcement mechanisms to limit the amount of land clearance allowed on development lots

Data source: County Planning Department, Department of Public Works

Goal 2.2.1.c: The spread of invasive species through abandonment of previously cleared areas is reduced.

Indicator: Amount of cleared area that is not in active agricultural use or development use, and for which there is no current management program for the control of invasive species.

Data source: University of Hawai'i (Hawai'i Gap Analysis Program), State Department of Land and Natural Resources (Hawai'i Invasive Species Council)

Goal 2.2.1.d: Residents, those employed in the real estate and construction industries, and the general public are made more aware of the value of the native forest, the threats to that ecosystem, and actions that can be taken to sustain the forest.

Indicator: Number and type of educational programs designed to expand environmental awareness

Data source: County Planning Department, University of Hawaii at Hilo, Hawaii Community College, State Department of Education, Kamehameha Schools, County Department of Environmental Management

Aquifers and Coastal Waters

Goal 2.3.1.a: Aquifers that could be used for future community wells in high growth lower elevation areas are

protected from pollution by untreated wastewater disposal systems.

Indicator: Number of cesspools and septic tanks used for wastewater disposal within areas below 1,000 feet Mean Seal Level

Data source: State Department of Health (Wastewater Branch)

Goal 2.3.1.b: Coastal waters maintain and increase their quality.

Indicator: Measurement of nearshore water quality for fecal coliform, nutrients and coral reef health

Data source: State Department of Health (Water Quality Branch)

Goal 2.3.1.c: There is a strategy to address storm water runoff and localized flooding problems.

Indicator: Watershed management plans that address flooding for Volcano to Mountain View and Hawaiian Acres to Orchidland are developed and implemented

Data source: County Department of Public Works, Federal Emergency Management Agency, State Department of Land and Natural Resources (Engineering Division)

Shoreline Area

Goal 2.4.1.a: Exposure of development to the risks of shoreline subsidence and coastal flooding is reduced.

Indicator: Number of new developments within areas defined as at risk to shoreline subsidence and coastal flooding

Data source: County Planning Department, Federal Emergency Management Agency, State Department of Land and Natural Resources (Office of Conservation and Coastal Lands)

Goal 2.3.1.b: Shoreline biological, historical and cultural resources are adequately protected.

Indicator: Number of shoreline biological resources, historical structures, and cultural sites that are protected by management plans, easements, or other tools

Data source: State Department of Land and Natural Resources (Historic Preservation Division), County Planning Department

Theme: Managing Growth

Land Use Pattern

Goal 3.1.1.a: Puna retains a rural character while it protects its native natural and cultural resources.

Indicator: Number of land use approvals that meet Village Center or other special design district guidelines

Data source: County Planning Department

Goal 3.1.1.b: The quality of life improves and economic opportunity expands for Puna's residents.

Indicator: Number of new business and jobs within Puna

Data source: State Department of Business, Economic Development, and Tourism

Goal 3.1.1.c: Services and community facilities are more accessible in village/town centers that are distributed throughout the region, including the underserved subdivisions that have been experiencing higher levels of development growth.

Indicator: Number and type of land-use proposals that are located within designated Village Centers

Data source: County Planning Department

Goal 3.1.1.d: Exposure to high risk from natural hazards situations is reduced.

Indicator: Number of new developments within Volcano Hazard Zones 1 and 2 and/or within a designated shoreline subsidence or coastal high hazard area.

Data source: County Department of Public Works, County Building Department, County Planning Department

Indicator: New development code standards and/or zoning maps are adopted to mitigate or avoid damage from natural hazards.

Data source: County Department of Public Works, County Building Department, County Planning Department

Goal 3.1.1.e: Inappropriate and disproportionate County zoning can be adjusted in order to maintain and increase the quality of life and to preserve valued natural and cultural resources in the district.

Indicator: Number of acres of lands downzoned to reduce potential new large-scale subdivisions, or upzoned to promote development of designated village centers and industrial areas.

Data source: County Planning Department

Goal 3.1.1.f: Native vegetation, coastal and historic resources are provided new forms of protection.

Indicator: Number of acres of forests, historic resources, and coastal resources that are protected by management plans, easements, or other tools

Data source: County Planning Department, State Department of Land and Natural Resources, State Historic Preservation Division, State Division of Forestry and Wildlife

Goal 3.1.1.g: Reduced overall number of buildable lots in Puna.

Indicator: Number of developable lots within Puna

Data source: County Planning Department

Goal 3.1.1.h: Incentives, disincentives, regulations and other methods are used to diminish land speculation in Puna.

Indicator: Legislative measures that have been initiated directed at land speculation

Data source: County Council, State Legislature

Agriculture and Economic Development

Goal 3.2.1.a: Lands for agricultural use are preserved.

Indicator: Number of acres of agricultural land that are protected by management plans, easements, or other tools

Data source: County Planning Department

Goal 3.2.1.b: Quality agricultural land is dedicated to agricultural use in perpetuity.

Indicator: Number of acres of ALISH and IAL lands that are clearly delineated and protected by management plans, easements, or other tools
Data source: County Planning Department

Goal 3.2.1.c: Opportunities for diversified agriculture increase.

Indicator: Number of different agricultural commodities produced in Puna
Data source: State Department of Business, Economic Development, & Tourism

Goal 3.2.1.d: Puna's agricultural production emphasizes environmentally-friendly methods.

Indicator: Number of agricultural producers that are "organic" certified
Data source: Hawaii Organic Farmers Association, State Department of Agriculture

Goal 3.2.1.e: Puna agricultural products represent an increasing local market share.

Indicator: Amount of commodity revenue generated by Puna agricultural producers
Data source: State Department of Business, Economic Development, & Tourism

Goal 3.2.1.f: There are more agriculture-related employment training and local job opportunities for youth.

Indicator: Number of students enrolled in agricultural education programs
Data source: State Department of Education, University of Hawaii at Hilo, Hawaii Community College, Kamehameha Schools
Indicator: Number of persons employed in the agricultural industry
Data source: U.S. Census Bureau, State Department of Business, Economic Development, & Tourism

Goal 3.2.1.g: Local job growth is primarily in "green" industries such as agriculture, alternative energy, communications technology, eco-tourism and natural resources management.

Indicator: Number of businesses or jobs classified as agricultural, alternative energy, communications, eco-tourism, or natural resource management

Data source: County Planning Department

Social Services and Housing

Goal 3.3.1.a: Puna residents have improved access to emergency and primary medical care and preventive public health programs.

Indicator: Average distance an individual must travel to receive emergency medical care

Data source: County Planning Department, County Department of Research & Development

Goal 3.3.1.b: Substance abuse, domestic violence and other social problems are reduced.

Indicator: Number of instances of substance abuse, domestic violence, and other social problems

Data source: County Police Department, State Department of Health, State Department of Human Services

Goal 3.3.1.c: Puna residents have increased access to assistance programs to develop, repair or rent affordable housing.

Indicator: Number of units directed to those applying for housing assistance

Data source: County Office of Housing and Community Development, Hawaii Housing Finance & Development Corporation

Indicator: Dispersal methods for advertising housing assistance programs

Data source: County Office of Housing and Community Development, Hawaii Housing Finance & Development Corporation

Goal 3.3.1.d: Programs are available to assist those seeking housing in Puna.

Indicator: Number of units directed to those applying for housing assistance

Data source: County Office of Housing and Community Development, Hawaii Housing Finance & Development Corporation

Indicator: Dispersal methods for advertising housing assistance programs

Data source: County Office of Housing and Community Development, Hawaii Housing Finance & Development Corporation

Goal 3.3.1.e: Public education is better integrated into Puna's communities.

Indicator: Number of public schools in Puna

Data source: State Department of Education

Public Safety and Sanitation Services

Goal 3.4.1.a: All residents have an equitable level of service access to police, fire, and paramedical services.

Indicator: Average emergency service response time

Data source: County Planning Department, County Police Department, County Fire Department, EMS from Hilo

Goal 3.4.1.b: Free wireless internet is available district-wide.

Indicator: Number of wireless internet broadcast stations

Data source: County Planning Department

Goal 3.4.1.c: Infrastructure investments facilitate the growth management strategy described in Section 3.1.

Indicator: Linear feet on infrastructure improvements within designated Village Centers (roads, wastewater, potable water, electricity)

Data source: County Department of Public Works, State Public Utilities Commission, Hawaii Electric Light Company

Park and Recreation

Goal 3.5.1.a: Puna offers a variety of public recreational areas, reflecting the beauty and diversity of the natural setting, and recreational programs for people of all ages and physical abilities that are not currently available.

Indicator: Number of regional, district, community, and neighborhood parks

Data source: County Department of Parks and Recreation

Goal 3.5.1.a: There is an equitable dispersal of parks and recreation facilities readily accessible to most Puna residents.

Indicator: Number of regional, district, community, and neighborhood parks

Data source: County Department of Parks and Recreation

Indicator: Number of recreational facilities and programs available to residents

Data source: County Department of Parks and Recreation

Goal 3.5.1.a: The development of future parks supports the growth management goals, objectives and actions set forth in Section 3.1 of this plan.

Indicator: Acreage of park land and new park facilities located within or adjacent to designated Village Centers

Data source: County Planning Department, County Department of Parks and Recreation

Energy Sustainability

Goal 3.6.1.a: Puna has made significant progress towards achieving energy self-sufficiency by 2020.

Indicator: Percentage of energy consumed in Puna that is produced from natural energy sources within the district.

Data source: Hawaii Electric Light Company (HELCO)

Goal 3.6.1.a: A significant percentage of Puna households continue to live completely or partially off the electrical power grid.

Indicator: Number of residences or businesses that have installed on-site solar, wind or other alternative energy sources.

Data source: HELCO, County Department of Public Works (Building Permits)

Goal 3.6.1.a: Puna lowers its dependence on fossil fuel as an energy source, becoming a demonstration area for alternative sources, systems and fuels.

Indicator: Amount of energy produced or revenue generated by alternative fuel sources and systems

Data source: Puna Geothermal Venture, HELCO, vendors of individual wind and solar power production equipment (sales volume in Puna)

Goal 3.6.1.a: There are incentives for the use of renewable energy sources.

Indicator: List of different incentives offered to residents who choose to utilize alternative energy sources and systems
Data source: State Public Utilities Commission, State Department of Business, Economic Development, and Tourism (Energy Office)

Theme: Transportation

Traffic Demand Management

Goal 4.1.1.a: The percentage of single-occupancy vehicles during peak commute periods is reduced.

Indicator: Number of single-occupancy vehicles during peak commute periods
Data source: U.S. Census Bureau

Goal 4.1.1.b: The percentage of residents who commute to employment or travel for services outside of Puna is reduced.

Indicator: Number of residents who commute to employment outside of Puna
Data source: U.S. Census Bureau

Goal 4.1.1.c: Reliance on fossil fuels for transportation is reduced.

Indicator: Percent change in vehicle miles driven per capita by Puna residents.
Data source: U.S. Census Bureau

Mass Transit

Goal 4.2.1.a: Mass transportation options are increased for all Puna residents.

Indicator: Number of bus routes and frequency of buses offered throughout Puna
Data source: County Mass Transit Agency
Indicator: Number of mass transit services offered
Data source: County Mass Transit Agency

Goal 4.2.1.b: Transit service and improvements reinforce and complement the development of village/town centers.

Indicator: Number and location of transit service stops
Data source: County Mass Transit Agency

Goal 4.2.1.c: A greater percentage of commuters use mass transit.

Indicator: Number of persons utilizing mass transit

Data source: County Mass Transit Agency

Roadway Network

Goal 4.3.1.a: There are adequate emergency and evacuation routes and connectivity throughout Puna's roadway network.

Indicator: Number of dead-end roads

Data source: County Planning Department, County Department of Public Works

Indicator: Number of designated emergency and evacuation routes

Data source: County Planning Department, County Department of Public Works

Goal 4.3.1.b: Improvements are phased so that short-term actions support and lead toward projects that will take a longer time to implement.

Indicator: Number of road improvement projects implemented

Data source: County Department of Public Works, State Department of Transportation

Goal 4.3.1.c: Roadways are pedestrian and bicycle friendly.

Indicator: Linear miles of roadways with bicycle and pedestrian facilities

Data source: County Department of Public Works, State Department of Transportation

Goal 4.3.1.d: Traffic congestion and traffic-related health risks are reduced.

Indicator: Average commute time

Data source: State Department of Transportation, County Planning Department

Indicator: Number of reported traffic accidents

Data source: State Department of Transportation, County Police Department

Highways

Goal 4.4.1.a: Highways have design features that improve traffic safety and reduce collisions, particularly at intersections.

Indicator: Number and type of traffic safety improvements to major highways

Data source: County Department of Public Works, State Department of Transportation

Goal 4.4.1.b: Highway design is more aesthetically pleasing and compatible with the natural and rural character of Puna.

Indicator: Number and type of highway beautification and landscaping projects

Data source: County Department of Public Works, State Department of Transportation

Goal 4.4.1.c: Increased County and community influence over highway planning and design decisions.

Indicator: Number of persons who attend community meetings and public hearings related to highway planning and construction

Data source: County Department of Public Works, State Department of Transportation

Non-motorized Travel and Scenic Byways

Goal 4.5.1.a: There are safe walking and bicycling routes to schools, parks and bus stops.

Indicator: Linear miles of walking/bicycling paths

Data source: County Department of Public Works, County Department of Parks and Recreation, County Mass Transit Agency, State Department of Transportation

Goal 4.5.1.b: There are safe pedestrian crossings on Highways 130 and 11, particularly Highway 130.

Indicator: Number of pedestrian crossing improvements

Data source: County Department of Public Works, State Department of Transportation

Goal 4.5.1.c: Puna has a network of contiguous scenic trails between and within subdivisions for walking, bicycling, and horseback-riding.

Indicator: Linear miles of trails

Data source: County Department of Public Works,
State Department of Land and Natural
Resources (Na Ala Hele Program)

Goal 4.5.1.d: Village/town centers incorporate walking
and bicycling paths.

Indicator: Linear miles of walking/bicycling paths
within and connecting to designated Village
Centers

Data source: County Planning Department

Goal 4.5.1.e: Routes are designated and improved as
scenic byways.

Indicator: Linear miles of scenic byways

Data source: County Department of Public Works,
State Department of Transportation