

Technical Methodology for General Plan Land Use (2020-2024)

County of Hawai'i General Plan

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August 8, 2024

Introduction

Beginning in 2015, the County of Hawai'i Planning Department has been working to update to the General Plan document adopted in 2005. This update has included reviewing and revising the General Plan Land Use map which guides the intended future use of land within the County. This document is intended to provide details on the methodology used to determine appropriate future uses for existing urban, rural, agricultural, and open space areas of the County.

General Plan Land Use

The General Plan is a policy document with a future horizon of 20 years. To help guide growth and development, the General Plan includes a map of intended future use of land throughout Hawai'i County. In the adopted 2005 General Plan, this map is referred to as the Land Use Pattern Allocation Guide (LUPAG). As the County works to adopt the updated plan, the map of proposed future use is being referred to as the General Plan Land Use (GPLU) map to better tie to the General Plan document. GPLU is not the same as the zoning code, also referred to as Chapter 25 of the Hawai'i County Code. The intent of the GPLU is to guide decisions about potential uses of land in a comprehensive way to meet the needs of a growing population in the coming decades. Decisions about zoning and development should be informed by the GPLU and be consistent with the intended uses designated in the GPLU.

2019 Proposed Land Use Map and Revisions

Development of the GPLU for the update began with work in 2015. At that time, the County did extensive analysis to identify existing development, examined the future capacity for development in the County, explored a number of projected growth scenarios, and compared potential outcomes of different growth patterns. This analysis was shared with the public in a series of workshops in 2016 and 2017 to explore community choices of how growth occurs and how County services support different growth scenarios.

The outcomes of that work shaped the policy guidance for establishing a future land use plan designed to encourage growth in urban centers where services are existing or planned. In 2019, a version of the land use map¹ was shared with the public for review and comment. This document provides details on the methodology used to review public comments and revise the 2019 map resulting in the current proposed GPLU map as part of the General Plan 2045 under public review from September 18, 2023 through April 1, 2024.

¹ Future Land Use System Technical Report, Ian Varley, City Explained, Inc., March 10, 2020.



Beginning in the summer 2020, the County and Focused Planning Solutions LLC reviewed the comments to the 2019 proposed future land use map and recommended several revisions to the map at that time. Additionally, new sources of data were explored to help guide proposed revisions. From the review, several considerations were identified to be explored and addressed.

Consideration: The 2019 future land use designations removed Urban Expansion as a designation. Within Urban Growth Boundaries (UGB), LUPAG Urban Expansion areas were defaulted to urban uses, predominantly Low Density Urban. An unintended consequence of this method was some large shifts to urban uses in areas of the County with no planned development in the plan horizon and no existing or planned infrastructure to support such development.

Action: Review all LUPAG Urban Expansion designated areas to determine the criteria for proposed change in future land use. Properties designated as a specific change due to CDP guidance or other area plans were accepted as intended. Properties that were assigned the default urban uses were reviewed for consistency with State Land Use, CDP use, zoning, proposed conservation areas, or other potential plans. In CDPs with future centers identified, urban uses were assigned based on proximity to centers. The criteria used for determining appropriate land use designations:

- Assigned future land use is from an existing plan document.
- Earlier versions of LUPAG show a specific land use, not Urban Expansion.
- Comments from public review propose land uses and County concurs with consistency.
- Area is within a TOD or Center from CDPs.
- Property is under public ownership with intended future use
- Privately owned property has a known area plan
- Where no plan is identified, use existing data for agriculture use, SLUD, access to infrastructure, and/or zoning district to determine appropriate designations.

Following these steps, a determination was made for UE parcels.

Consideration: The 2019 future land use map introduced the Natural Areas designation as a broad category of open space with no intended agricultural use. LUPAG designations of Open and Extensive Agriculture were considered as appropriate candidates to transition to Natural Areas. About 25% of LUPAG is currently classified as Extensive Agriculture. In the 2019 plan, 45% of that land area changed to the Pastoral land use designation based on 2015 UH-Hilo agriculture study of pasture lands and 47% of LUPAG Extensive Agriculture was re-designated to Natural Areas. In current LUPAG, only about 1.4 % of the County is designated Open. About 36% of that land area was re-designated to Natural Areas. Some of these resulting Natural Areas were identified during the review as not consistent with existing or intended property use.

Action: Areas of the LUPAG map currently designated Extensive Agriculture that were proposed to transition to Natural Areas in the 2019 proposed land use plan were reviewed for their existing and planned uses. The following additional data sources were explored to better understand existing and intended future use:



- Carbon Assessment of Hawai'i landcover and habitat analysis (John Jacobi, 2015)
- Historic Lava Flows (HVO, All available years)
- 2015 UH-Hilo Agricultural Baseline crops and pasture data (SDAV, 2015)
- Federal and State Owned Lands from Hawai'i County assessor data

Landcover data was used to define more intentional boundaries for natural areas. The following criteria shaped decisions around the Natural Areas designation:

- State owned lands – retained Natural
- Bare Lands in landcover and historic lava flows – Classified as Natural
- Wetlands in landcover and Cemetery in County Parks – Classified as Natural
- Native dominant use in landcover – Classified as Natural
- Agriculture dominant use – Classified as Agriculture (includes developed, alien forests)
- Pastoral dominant use – Classified as Pastoral

Consideration: 2019 future land use was under review at the same time the 2018 Kīlauea Lower East Rift Zone (2018 LERZ) eruption recovery process was underway. At that time, the area impacted by the eruption was assigned a land use designation of Pending so as not to conflict with concurrent planning processes.

Action: The Pending designations in the 2018 LERZ impact area were reviewed to assign appropriate future uses that would not conflict with the recovery efforts and would appropriately convey the demonstrated risk of the location. The County land area also increased in this area by approximately 766 acres due to the lava flowing into Kapoho Bay and reshaping the coastline in that area. The lava flows were assigned Natural. Island areas surrounded by lava or kīpuka were assigned agricultural use designations to match agricultural studies for productive crop use and or pastoral uses. The Kapoho residential area was also under lava flow. The former urban uses in this area were assigned natural to match these conditions.

Consideration: Parks were not always showing as recreation or conservation.

Action: Data layers for County, State, and Federal Parks were cross-referenced with the proposed land use designations. Park areas not designated as recreation or conservation use were adjusted to match park boundaries. Parks in SLU conservation are noted as GPLU conservation, active parks with active use areas are noted as recreation, and public lands not in active use are noted as natural or conservation, such as PONC properties.

Consideration: Industrial land uses in LUPAG and the 2019 proposed future land use plan were often inconsistent or showed conflicting boundaries with zoning and other plans.

Action: All industrial areas designated in LUPAG, the 2019 proposed land use plan, zoning, CDPs, and other area plans were identified and reviewed to compare boundaries for consistency.



2021 & 2024 Proposed Land Use Map and Revisions

The revisions from the 2019 process were shared in an interactive mapping platform using Esri ArcGIS Online Story Maps. Story Maps provided a universally accessible location to see the proposed land use alongside many other relevant data sets for infrastructure, conservation, hazards, facilities, agriculture, native habitat, and transportation. The Story Map provided an effective way to review proposed changes and digitize comments directly in the mapping application. The County also began using the interactive document platform, Konveio, to review draft General Plan document products and gather community input.

In 2022, a series of working sessions were conducted to review the comments and the proposed changes. At this time, the name of the map was chosen to be the General Plan Land Use (GPLU) map to clarify the connection to the guiding document and purpose of the map. Some revisions to the designations were also made. The final proposed General Plan land uses are shown below in Table 1.

Table 1: General Plan Land Use Designations

General Plan Designation	Changes from 2019 Proposed Plan
Urban Land Use	
High-Density Urban	
Medium-Density Urban	
Low-Density Urban	
Urban Expansion	Added back – after discussion, it was decided to revisit this LUPAG designation
Light Industrial	
Heavy Industrial	
University	
Resort	
Rural Land Use	
Rural	
Agricultural Land Use	
Productive Agriculture	
Extensive Agriculture	Name Change – in the 2019 plan this was referred to as Pastoral Use
Natural	Name Change – in the 2019 plan this was referred to as Natural Areas
Open Space Land Use	
Recreation	
Conservation	



The 2022 working sessions were conducted to review land use designations categorically. Using a live working session format, questions were explored about map designations in real time, identifying areas to flag for review. Comments from the previous online review platform were also reviewed to determine appropriate responses and actions.

In sessions exploring urban designations, uses near centers and development plans were considered. Inclusion of the Urban Expansion designation as a proposed land use provided an opportunity to revisit appropriate locations for that use:

- Review areas of LUPAG within Urban Expansion.
- Look at undeveloped existing land use
- Exclude areas that are already at capacity, map those at the capacity
- Exclude state owned conservation, critical habitat, county parks.
- Within TODs, use the appropriate high or medium urban designations.

The next sessions explored rural and agriculture uses for consistency with State Land Use, zoning, and the 2020 UH-Hilo Agriculture data. Conservation and Natural areas were reviewed for consistency with State Land Use, native habitat landcover data, and area plans for conservation. These review sessions highlighted areas for potential changes to better align with intended criteria.

After incorporating recommendations to the GPLU map in the spring-summer 2023, an interactive mapping platform was designed to provide a single location for public users to review the proposed map and add comments. The mapping platform links to the Konveio General Plan document review platform directly, allowing users to derive document searches from the map and to query the map based on questions in the document. The public review process concluded on April 1, 2024. Over 200 comments were provided on the GPLU maps. From the public review process, a few considerations were identified and reviewed.

Consideration: Some areas assigned Urban Expansion land use are currently developed as urban.

Action: Review existing development in Urban Expansion to identify areas that are built or at capacity and assign consistent urban designations.

Consideration: The Kona CDP identified areas at high elevation for consideration of protection to help with water protection, landslide risk, and native habitat.

Action: Review lands in the County above 2,500 feet elevation for possible Natural designation. Property in public ownership identified for Natural designation.

Consideration: Lands identified by the Public Access, Open Space, and Natural Resources Preservation Commission (PONC) should be designated as conservation lands.

Action: Map the PONC lands and reclassify to Conservation Land Use.

Consideration: The coastal buffer for the island was initially proposed to have Recreation as the universal designation. Many coastal areas are in SLUD Conservation areas.



Action: Review coastline for SLUD classification. Convert SLUD Conservation and Agriculture to GPLU Conservation. Confirm SLUD Urban as GPLU Recreation.

Results

Appendix B provides the graphic analysis of changes in land use from adopted LUPAG through the proposed GPLU. The land use comparisons demonstrate the County policy goals to increase Conservation and Natural uses, retain Productive Agriculture, reduce or more specifically define urban footprints, and provide more areas for Rural.



Appendix A – List of Additional Data and Sources

HVO, U. (All available years). Past and Present Lava Flows for Hawaii Island.

John Jacobi, U. P. (2015, 01 01). Carbon Assessment of Hawaii Habitat Status. Retrieved from <https://www.sciencebase.gov/catalog/item/592dee75e4b092b266efeb6e>

SDAV. (2015). 2015 Hawaii Statewide Agricultural Land Use Baseline layer.

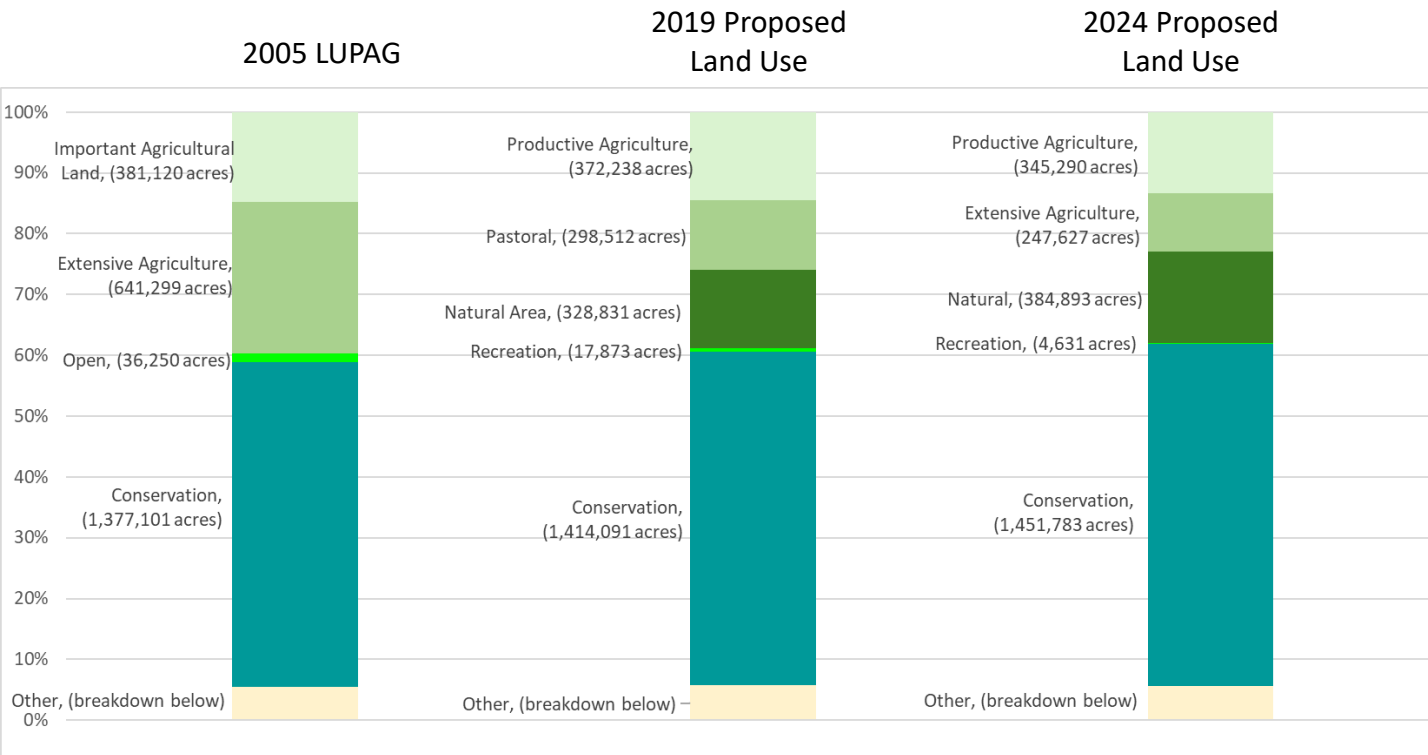


Appendix B: General Plan Land Use Changes by District



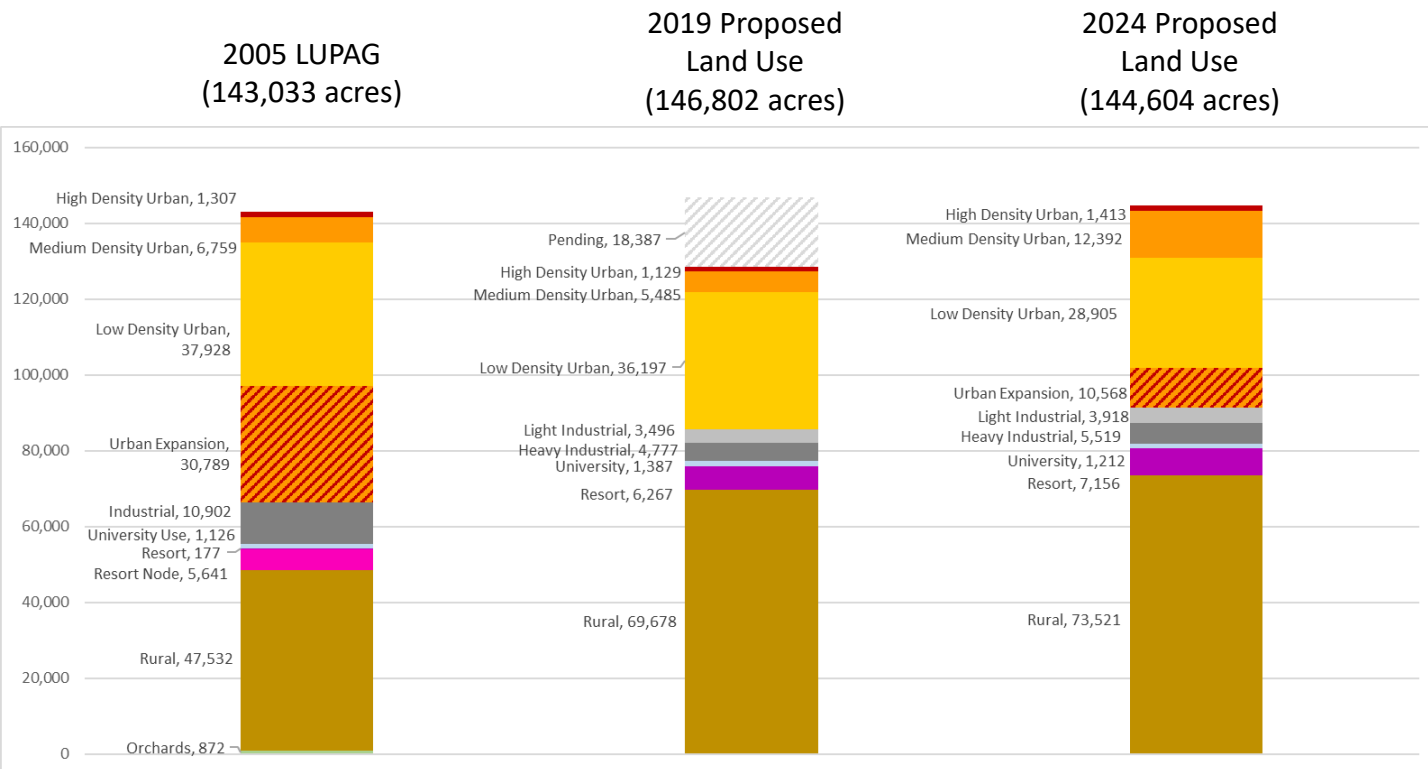
Hawai'i County

(approximately 2,578,828 acres)



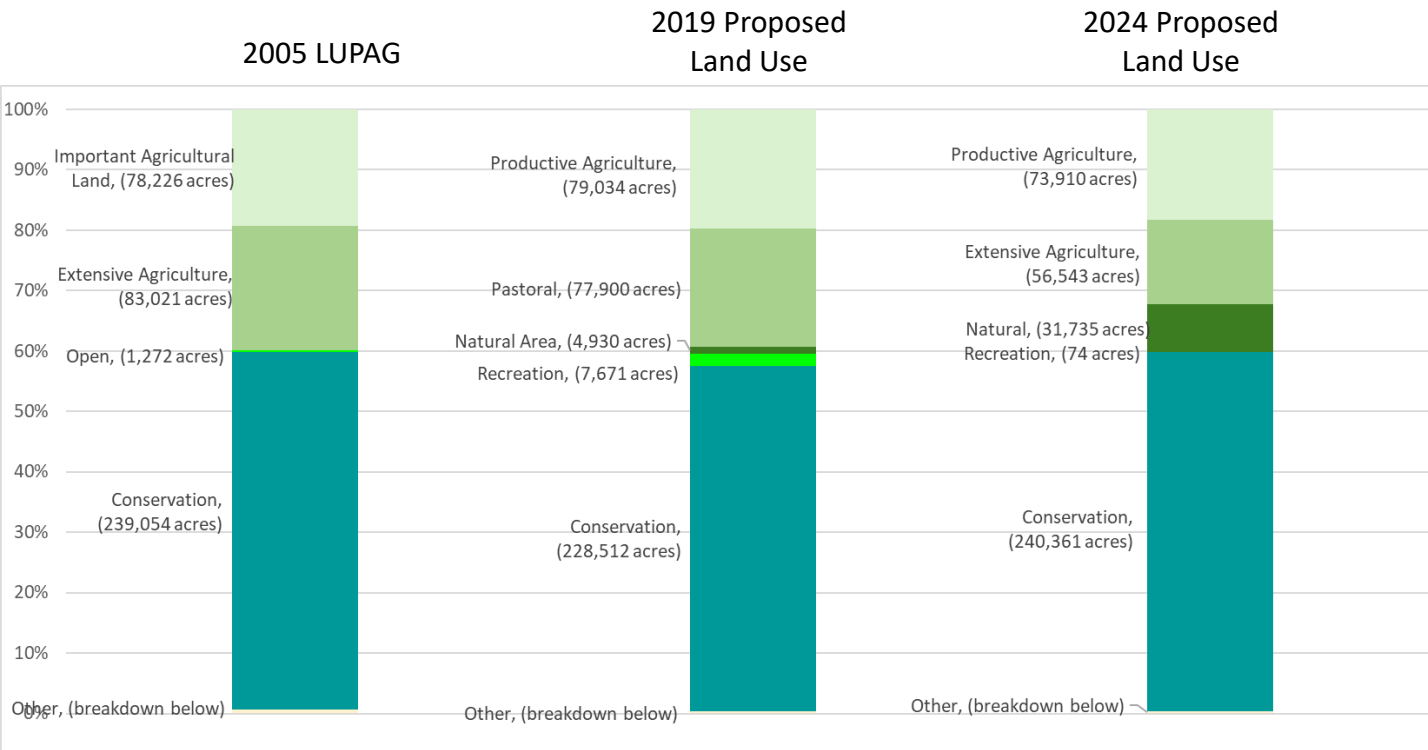
Hawai'i County

Breakdown of Other Land Use Types



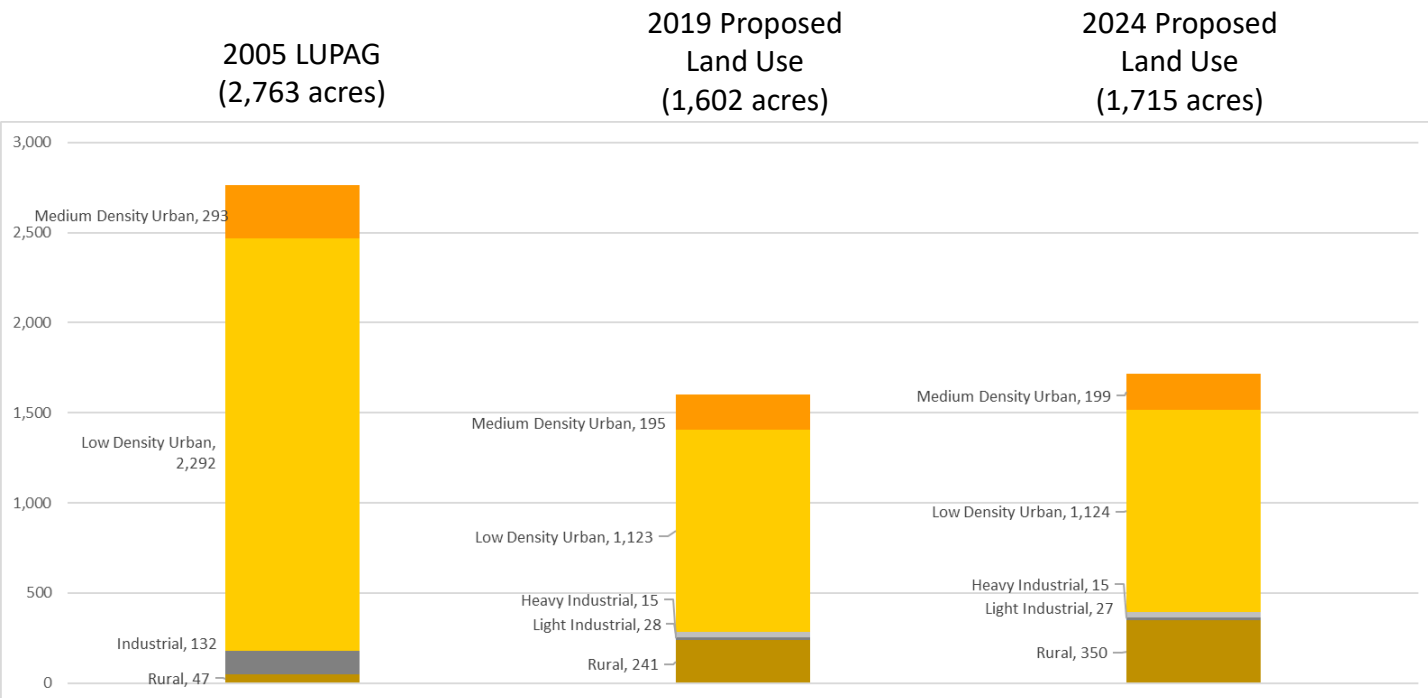
Hāmākua

(approximately 404,337 acres)

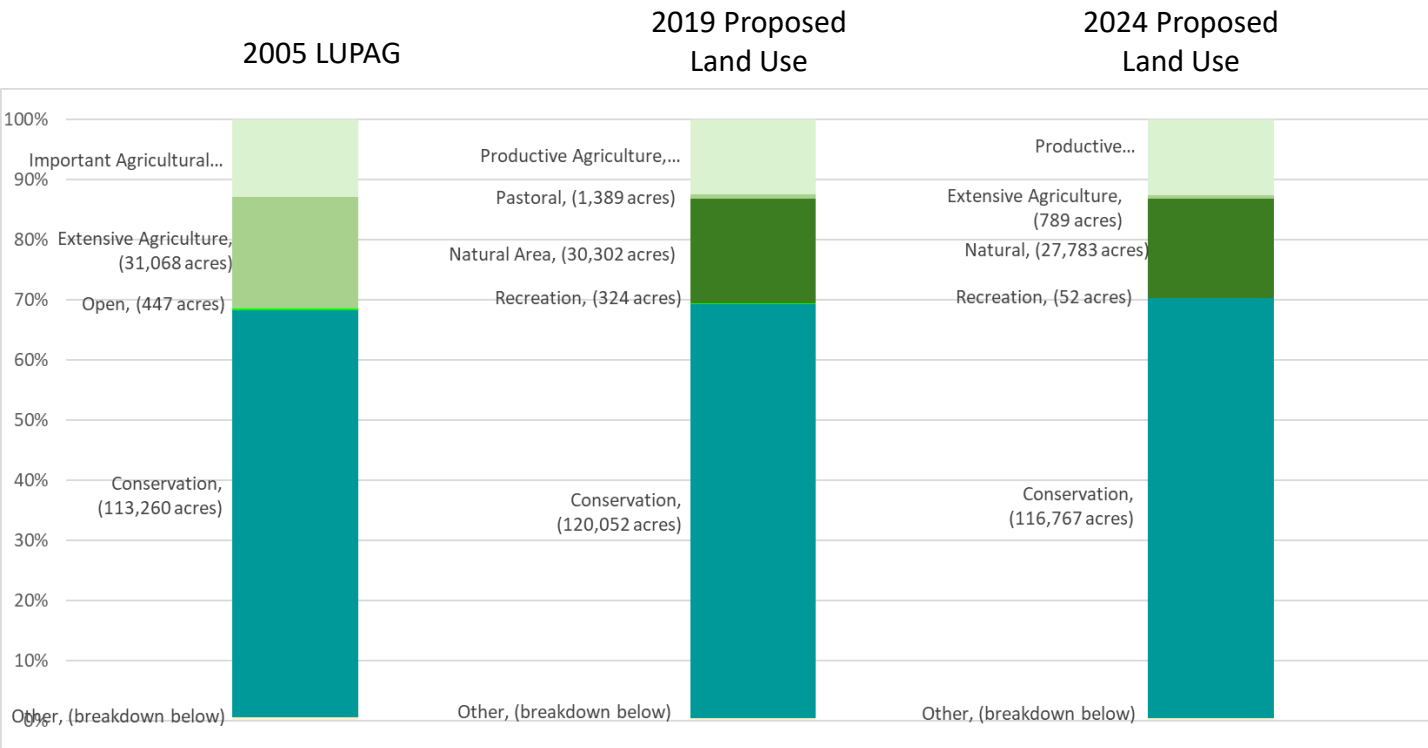


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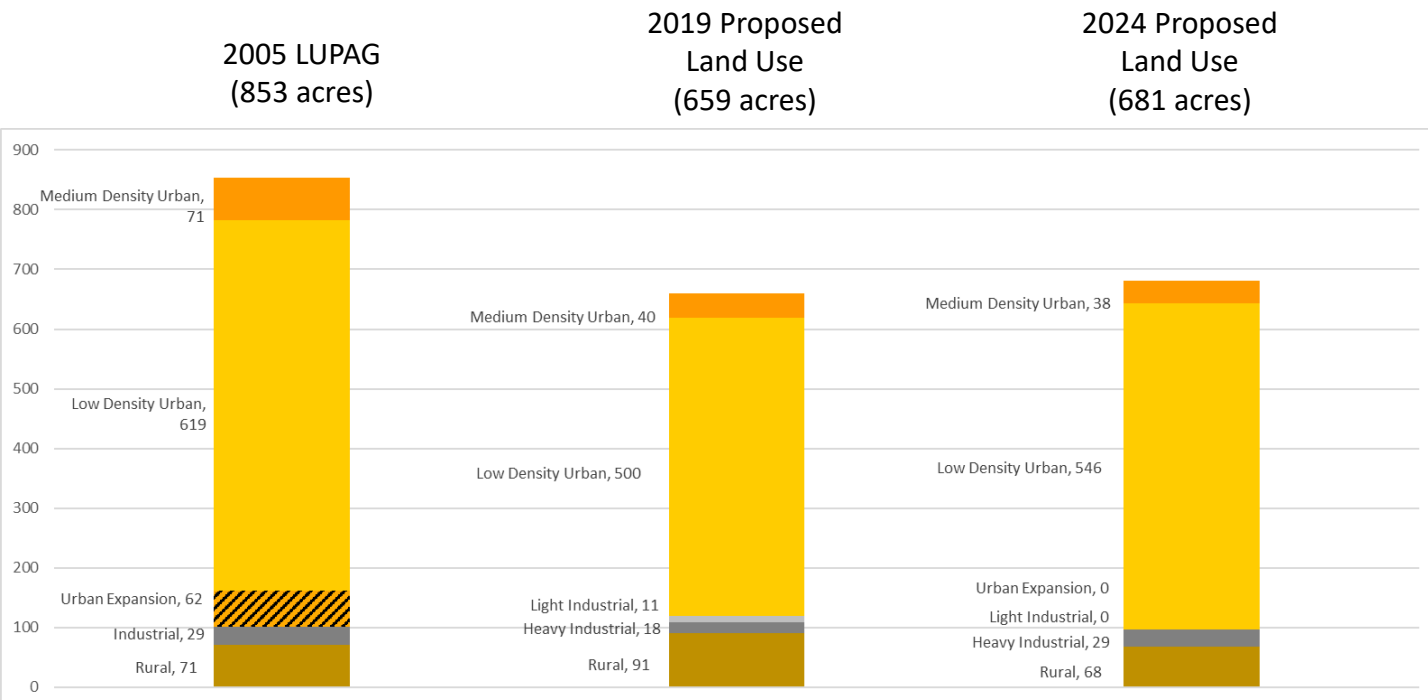
Breakdown of Other Land Use Types



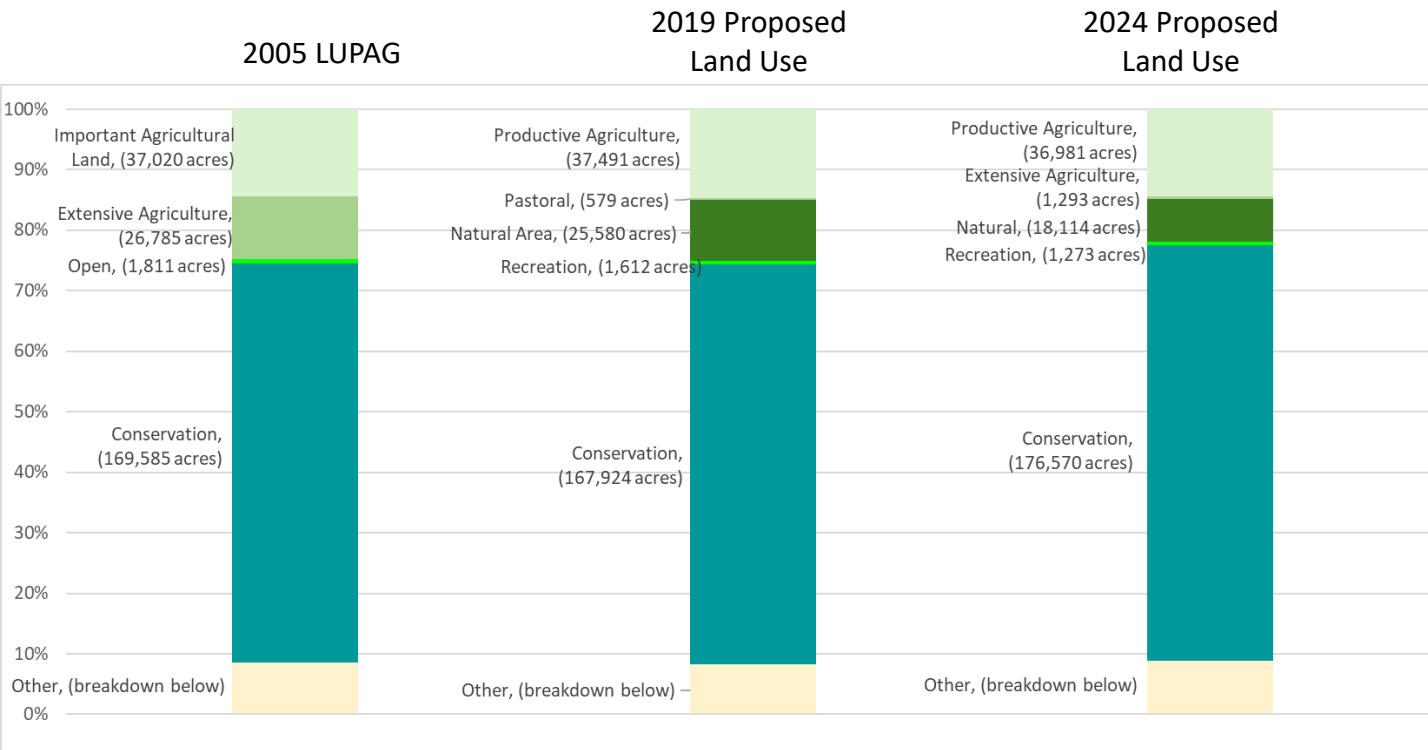
North Hilo (approximately 167,230 acres)



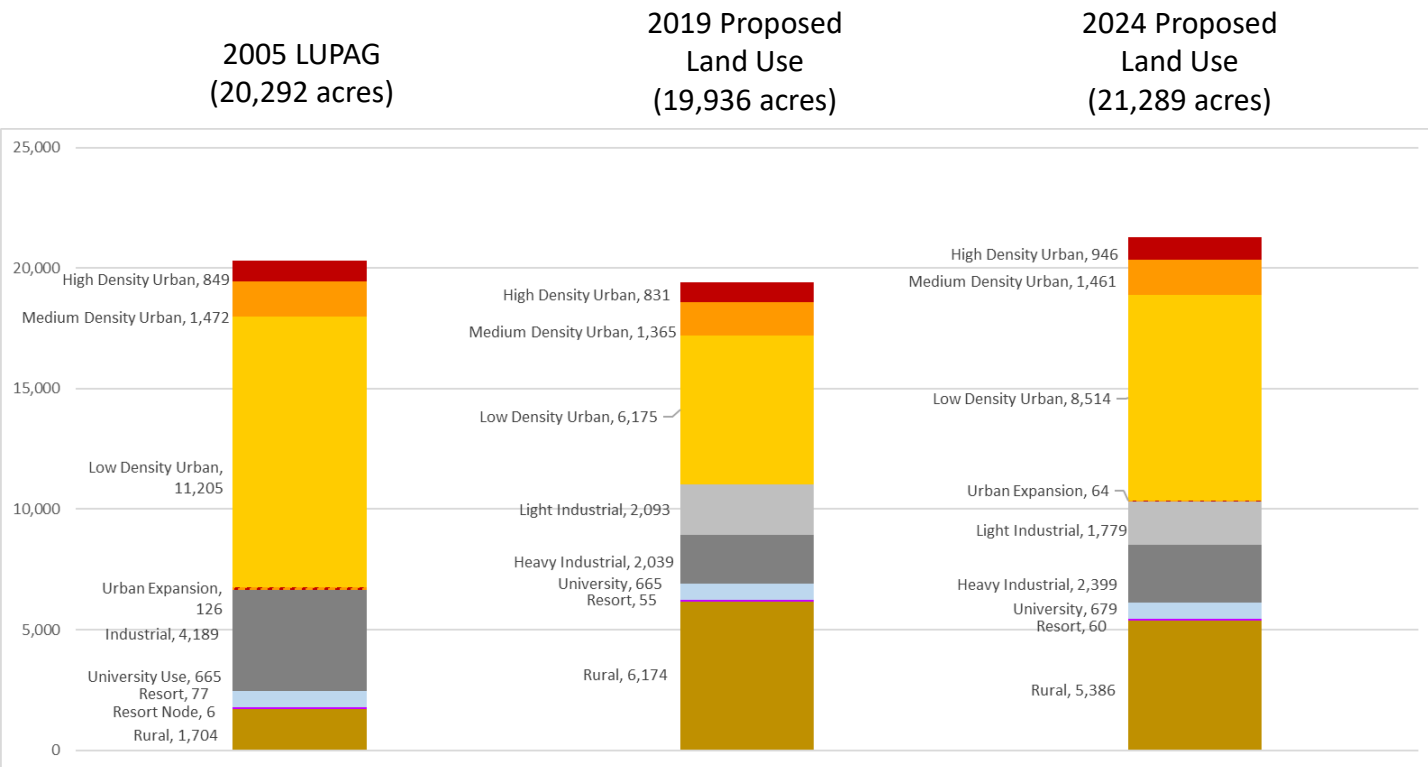
North Hilo Breakdown of Other Land Use Types



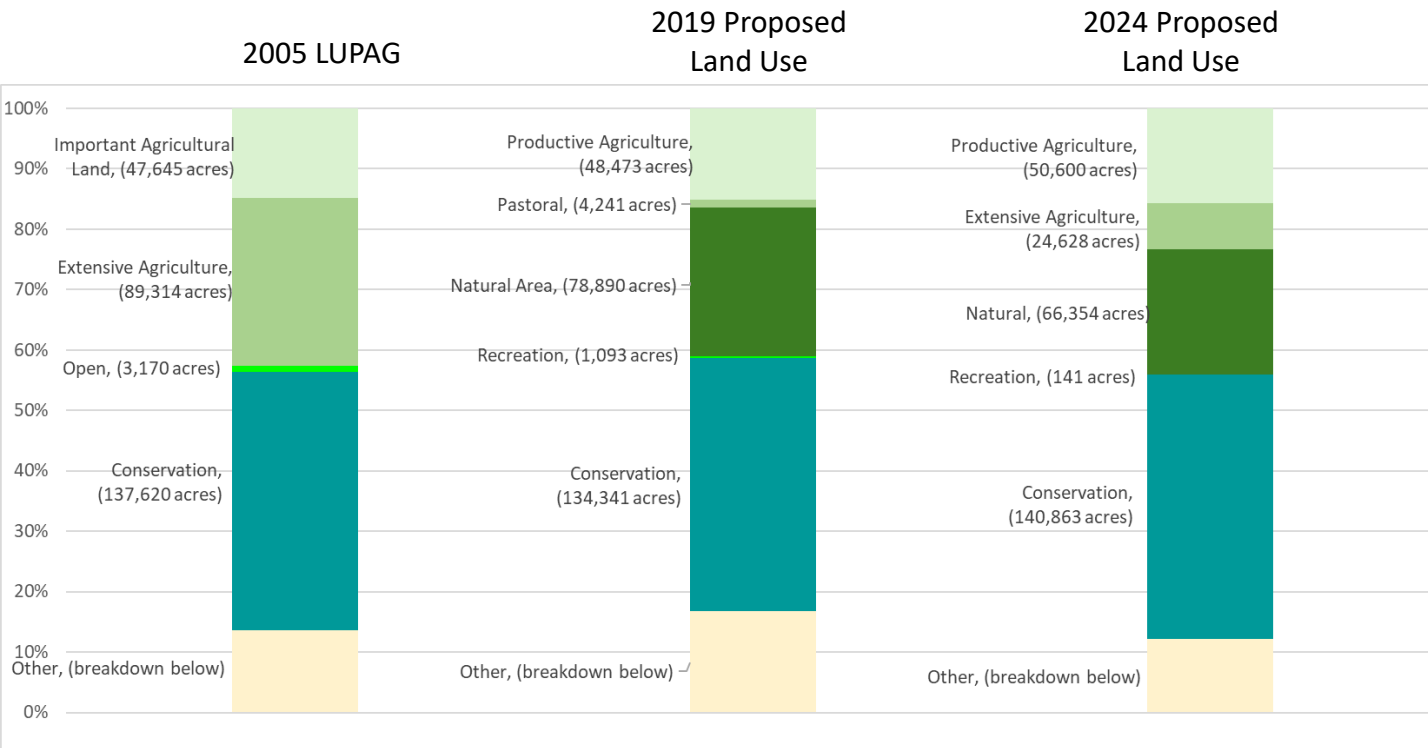
South Hilo (approximately 255,518 acres)



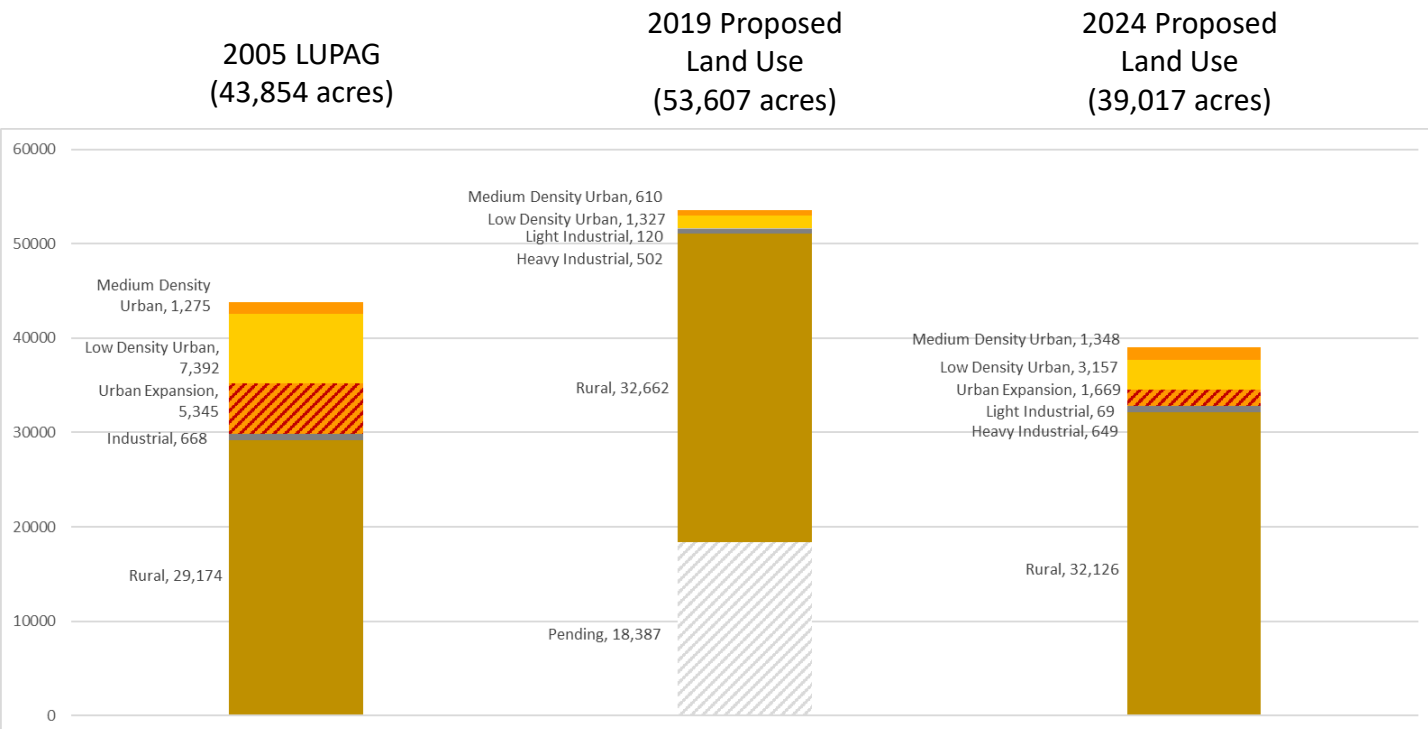
South Hilo Breakdown of Other Land Use Types



Puna
(approximately 321,604 acres)

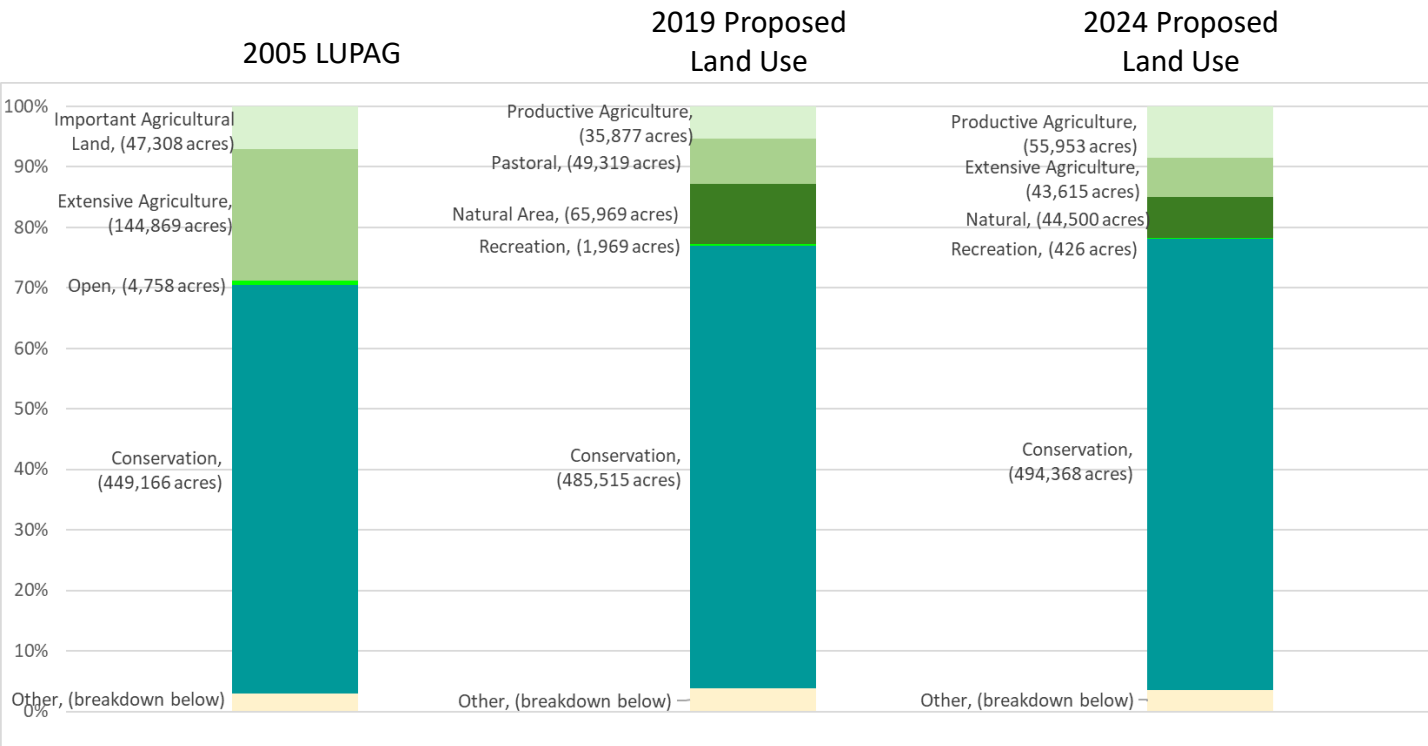


Puna
Breakdown of Other Land Use Types



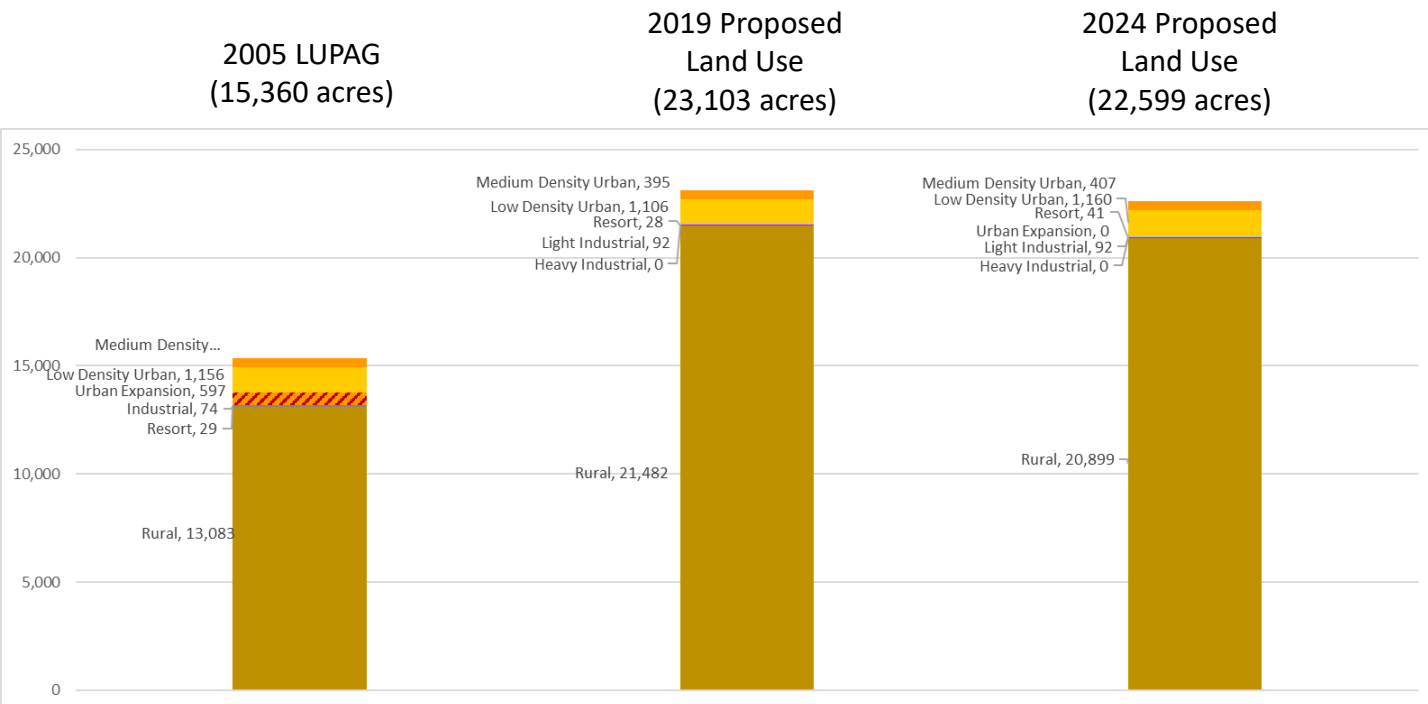
Ka'ū

(approximately 661,461 acres)

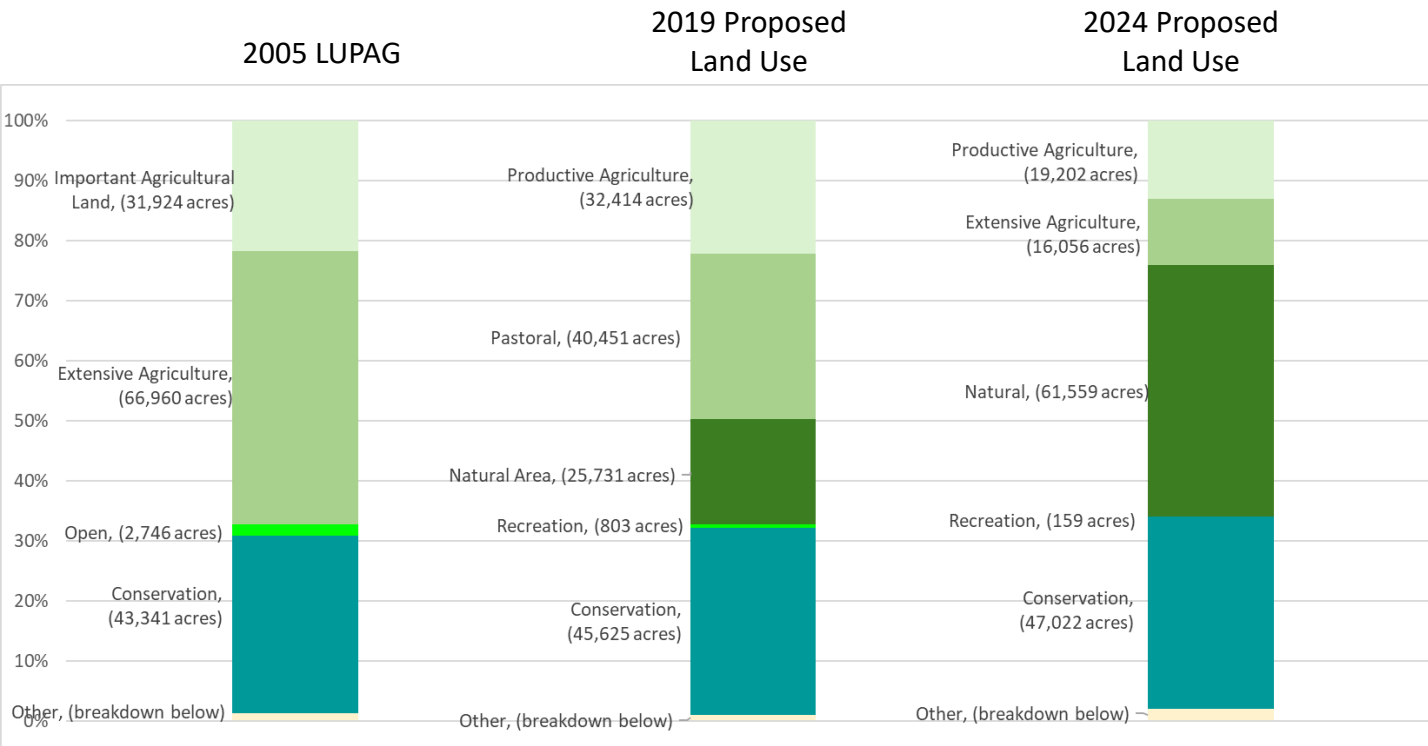


Ka'ū

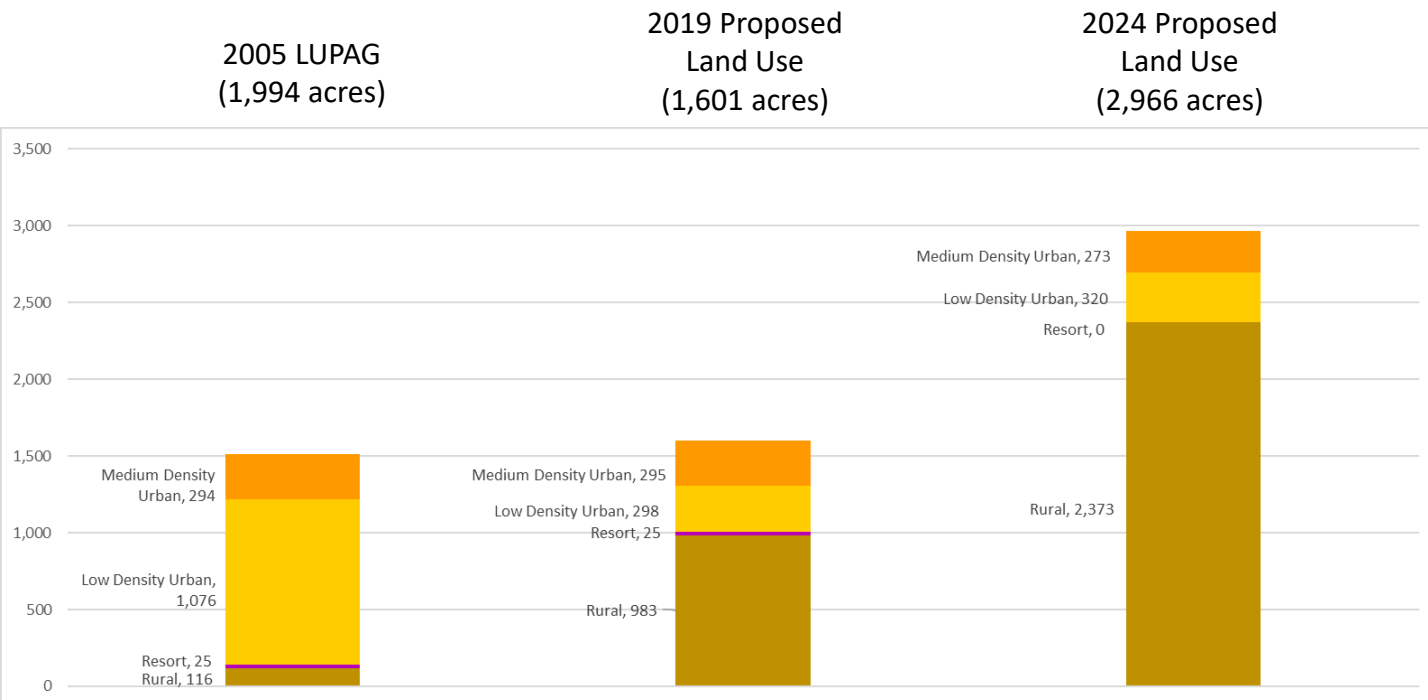
Breakdown of Other Land Use Types



South Kona (approximately 146,964 acres)

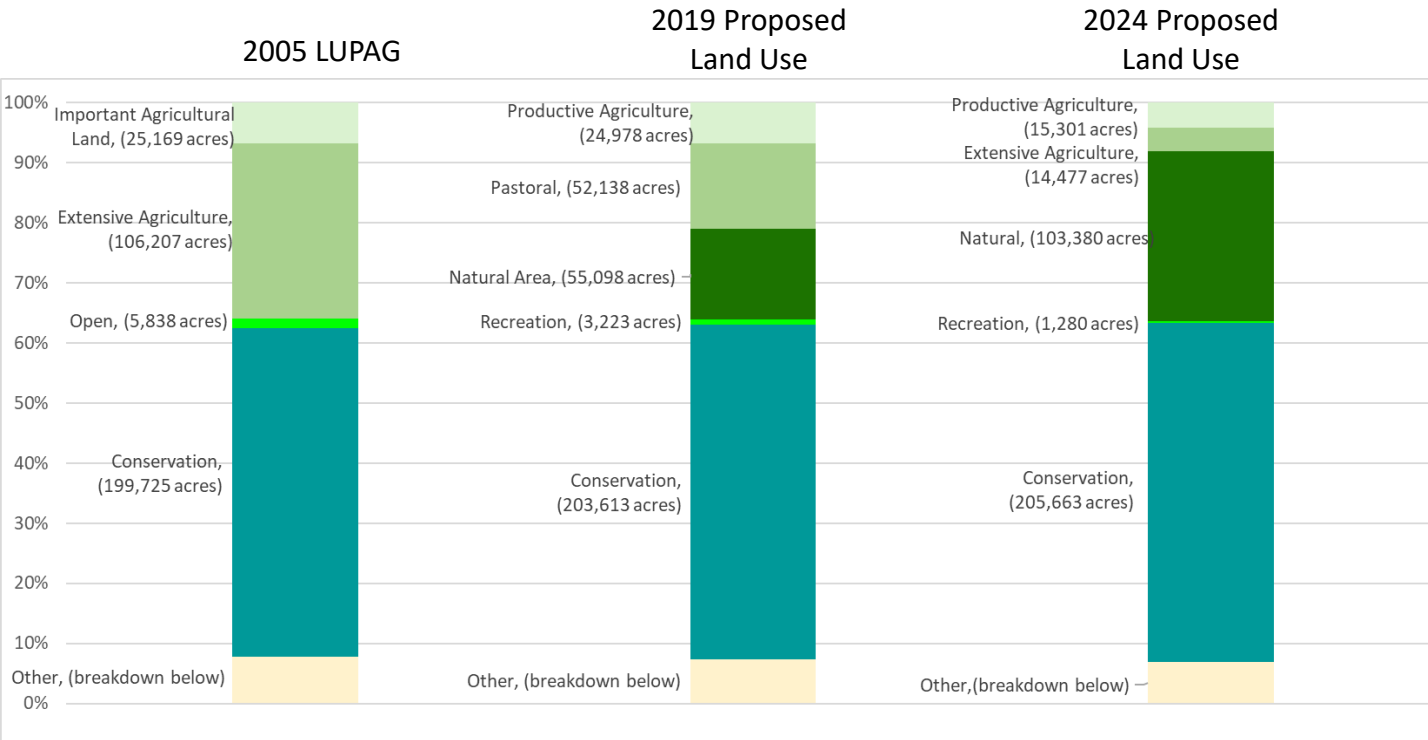


South Kona Breakdown of Other Land Use Types



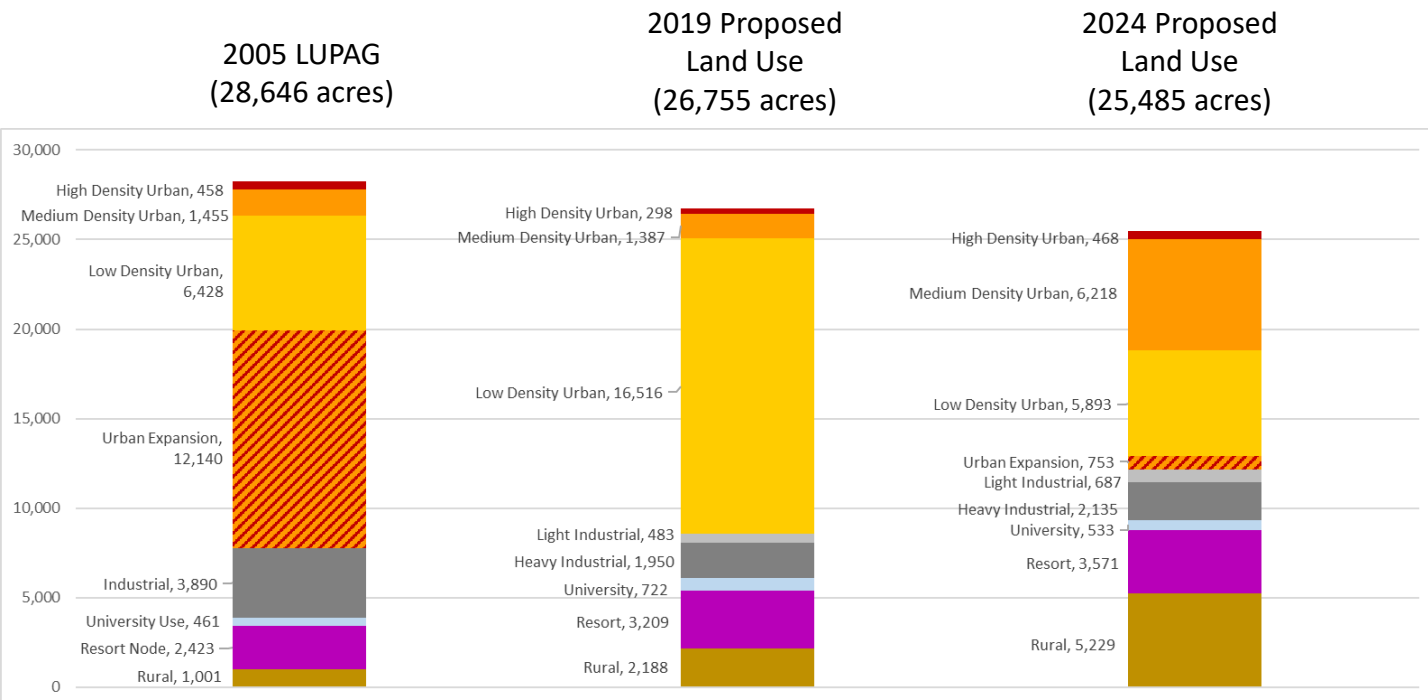
North Kona

(approximately 365,585 acres)



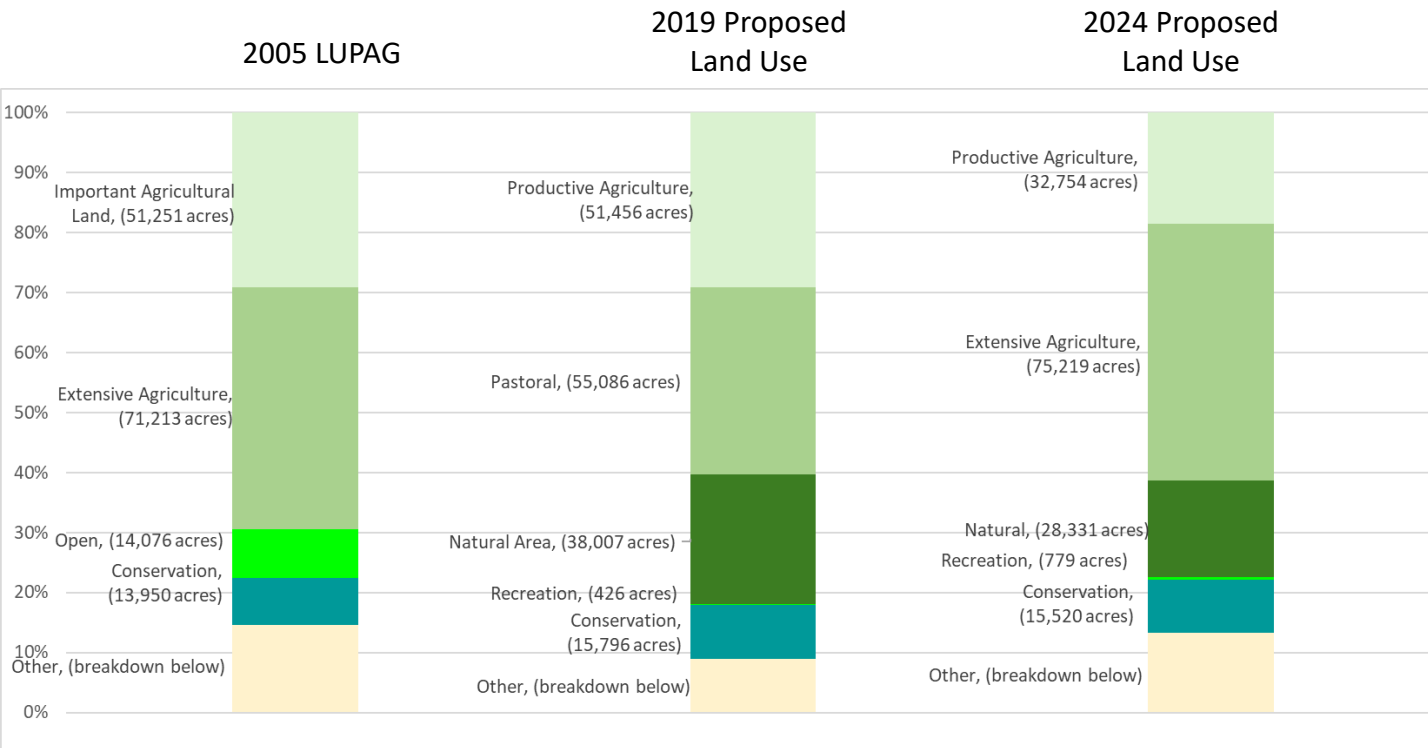
North Kona

Breakdown of Other Land Use Types



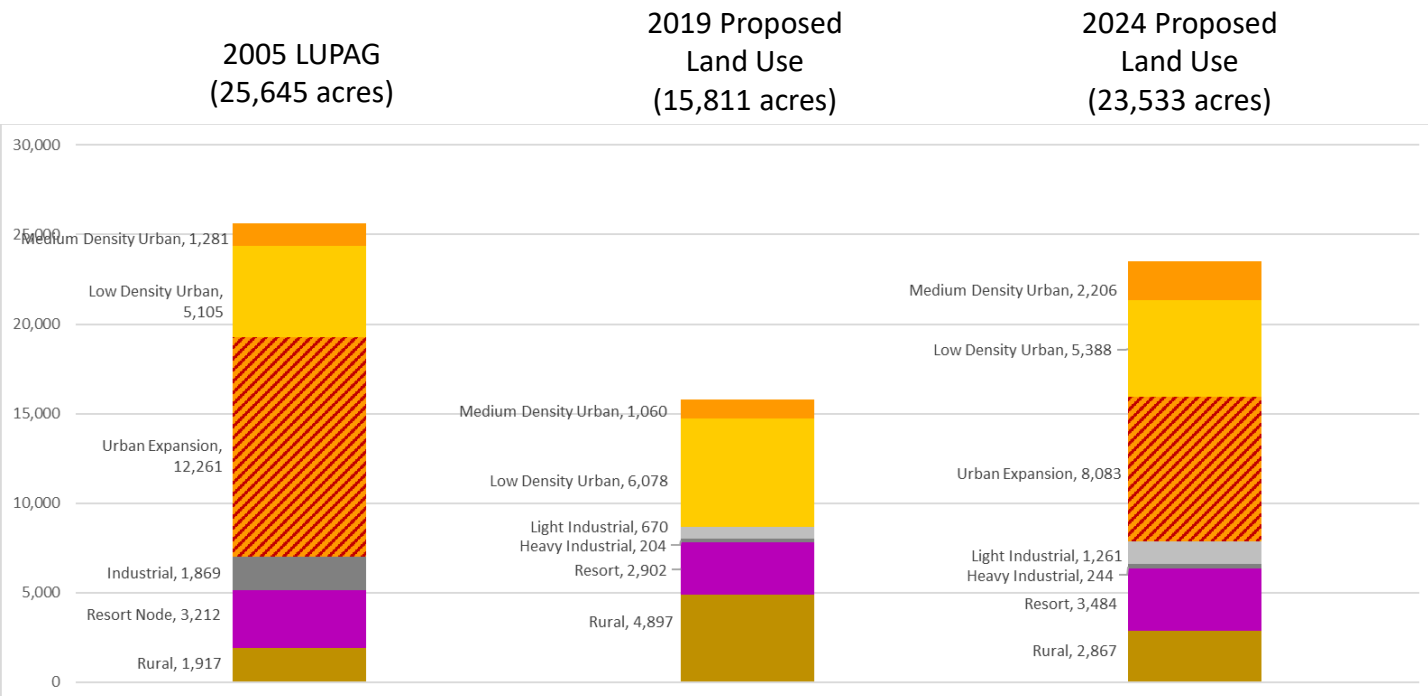
South Kohala

(approximately 176,135 acres)



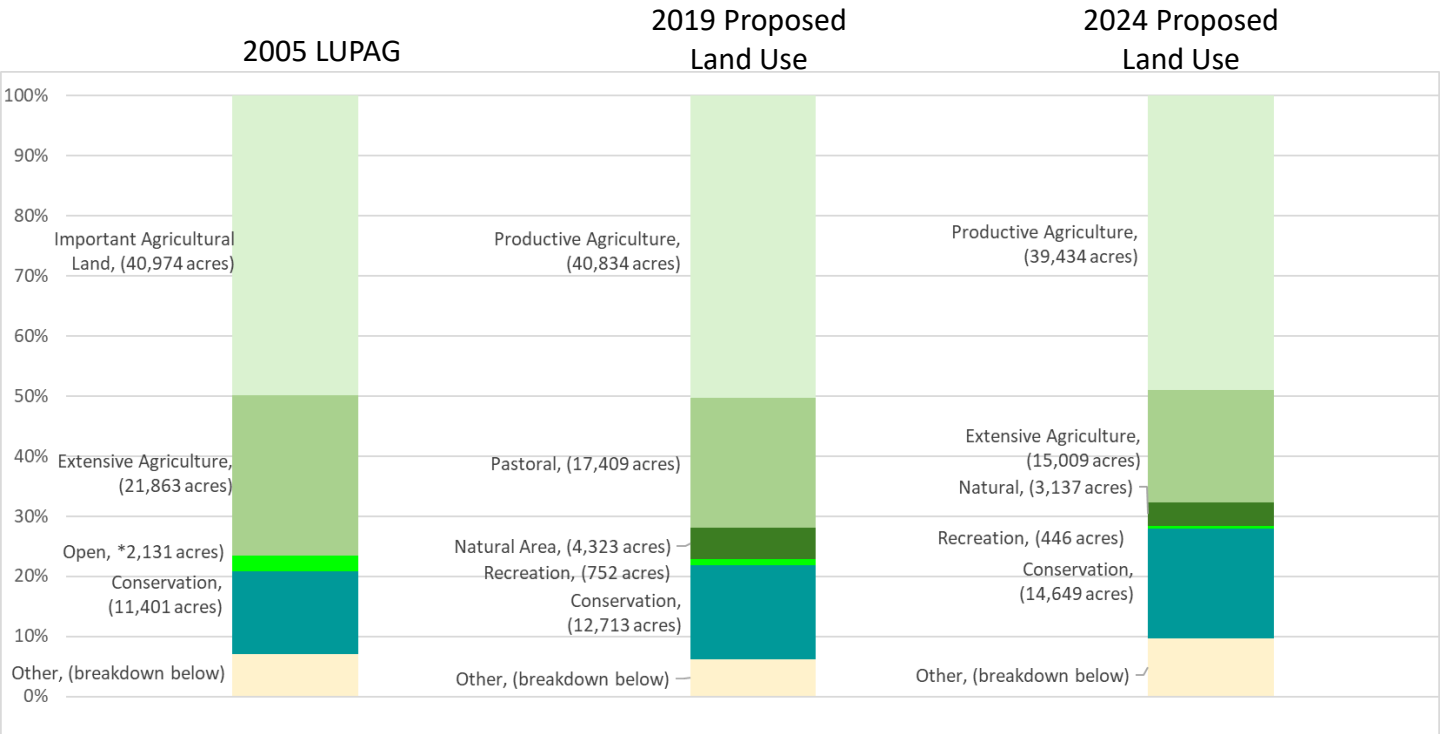
South Kohala

Breakdown of Other Land Use Types



North Kohala

(approximately 79,993 acres)



North Kohala

Breakdown of Other Land Use Types

