

Bill 144

Relating to Beekeeping & Apiaries



Big Island
Beekeepers
Association

Presentation to the Windward
Planning Commission

July 1st, 2024

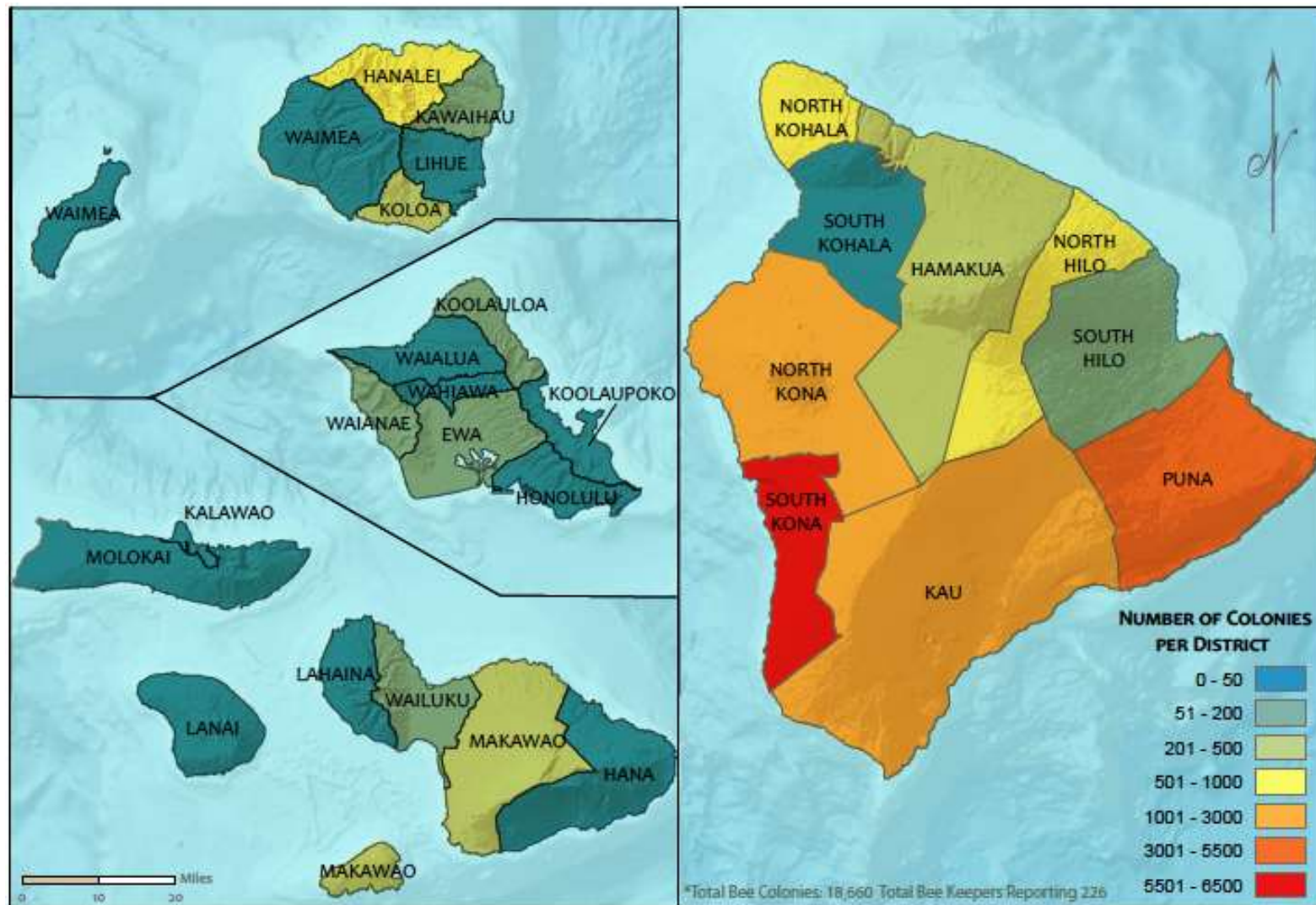
Introduction

- BIBA was established in April 1984
- Has been an excellent outreach to all levels of beekeepers
 - Monthly meetings
 - Educational + Exhibition booths
 - Intro to Beekeeping presentations
 - Promote beekeeping and education through an annual Statewide Honey Challenge
 - Maintain a learning apiary for the community

General Bee Info

- 1 queen bee per colony of bees
- 103LB of honey per healthy colony annually in 2018
- Pollinate flowers 3-5 miles away
- Worker bees only live 6 - 7 weeks
- The Western Honey Bee *Apis Mellifera* and specifically the Italian subspecies honey bees are bred for honey production & lack of aggression





UNIVERSITY of HAWAII*
HILO

MANAGED BEE COLONY CONCENTRATION PER DISTRICT

SOURCE: DOA APIARY PROGRAM, VOLUNTARY BEEKEEPER REGISTRY, 2015

Statewide vs Hawaii Island

- Total beekeepers: 413
- Total Colonies: 20,698
- Total Commercial Operations: 5
- Total Sideliners: 27
- Total Hobbyist: 381

Total Queen Breeding Operations: 7

**(DOA State Registry program estimates) ended in 2018)*

Legalities & Implications

- It is illegal to import live bees into Hawaii, only drone (male bee) semen can be brought in

Haw. Rev. Stat. § 150A-6

- This means it is VITAL to keep local colonies healthy to sustain the genetics and numbers on the island.

Code of Federal Regulations

A point in time eCFR system



The Hawaii Bee Industry

Queen Breeding

Pollination Services

Honey & Other Products

1. Queen Breeding

The Mainland needs Hawaii's queen bees.



Hawaii is home to the top Queen bee producers in the world

- Supply 40% of the US mainland & 60% of Canada & International
- Over 600,000 queens are exported each year, with a value of \$25-\$40 each, for an annual revenue of \$20 million

When Spring hits on the Mainland & Canada, Hawaii is one of the only places where queens are ready to go, thanks to ideal year round conditions.

- No lag time when preparing for pollination season
- When natural disasters such as massive flooding hit the mainland, which can wash away colonies, beekeepers who need to quickly replenish their bee stock will often order queen bees from Hawaii."

Department of Ag Apiary Program

- The Apiary Program is the only government agency that conducts quarterly health inspections to facilitate queen honey bee exports in Hawaii.
- Processes international export certificates to Canada of queen bees (over 100 certificates processed each year during a 5-month period)
- Physically inspect ~650 hives annually to ensure 600,000 exported queen bees are free of diseases, exotic pests, etc.

2. Farm Sales Derived from Bee Pollination

- HAWAII- \$212 Million
- USA- \$15 - \$20 Billion
- Canada - \$7 Billion
- WORLD- \$217 Billion

Hawaiian Pollination Includes

Avocado, Blackberry, Blueberry, Citrus, Coconuts, Coffee, Cucumber, Dragonfruit, Grapefruit, Guava, Jackfruit, Lemons, Limes, Longan, Loquat, Lychee, Macadamia Nuts, Mango, Melons, Mulberry, Palm, Passionfruit, Pomegranate, Rambutan, Raspberry, Squash, Surinam Cherry, Tangelos



Big Island Pollination Services

Crops Pollinated By Bees
Breakdown by Districts/Zones on the Big Island by Acreage, 2012

Zone	Mac Nut Crops	Coffee	Specialty Crops	Tropical Fruit	Truck Crops
North <u>Kohala</u>	1100	-	6	89	16
South <u>Kohala</u>	-	-	5	-	457
<u>Hamakua</u>	778	-	61	395	249
North Hilo	20	-	22	335	410
South Hilo	3146	11	95	1245	1907
Puna	3783	27	4	762	298
<u>Ka'u</u>	5032	582	43	243	182
South Kona	6427	2588	12	26	23
North Kona	1053	2693	43	73	56

*Melrose, Jeffrey, Hawaii County Food Self-Sufficiency Baseline 2012, UH Hilo.

Big Island Pollination Services

Table Summary of Crop Acres on Hawaii Island, 2012

Crops	Acres
Aquaculture	165
Banana	436
Coffee*	6,128
Dairy * (for pasture grass lands)	3,362
Flowers & Foliage	1,700
Macadamia Nuts*	21,111
Papaya	2,709
Specialty Crops* (Palm- for seed*)	292
Taro	51
Tropical Fruits*(Lychee*, Rambutan*, Longon*, Mangosteen, Mango*, Dragon Fruit*, Avocado*, Oranges, other	3,168
Truck Crops*(Vegetables*, Melons*, Squash*, sweet potato*, leaf and root crops, etc.)	3,597
Total	42,744

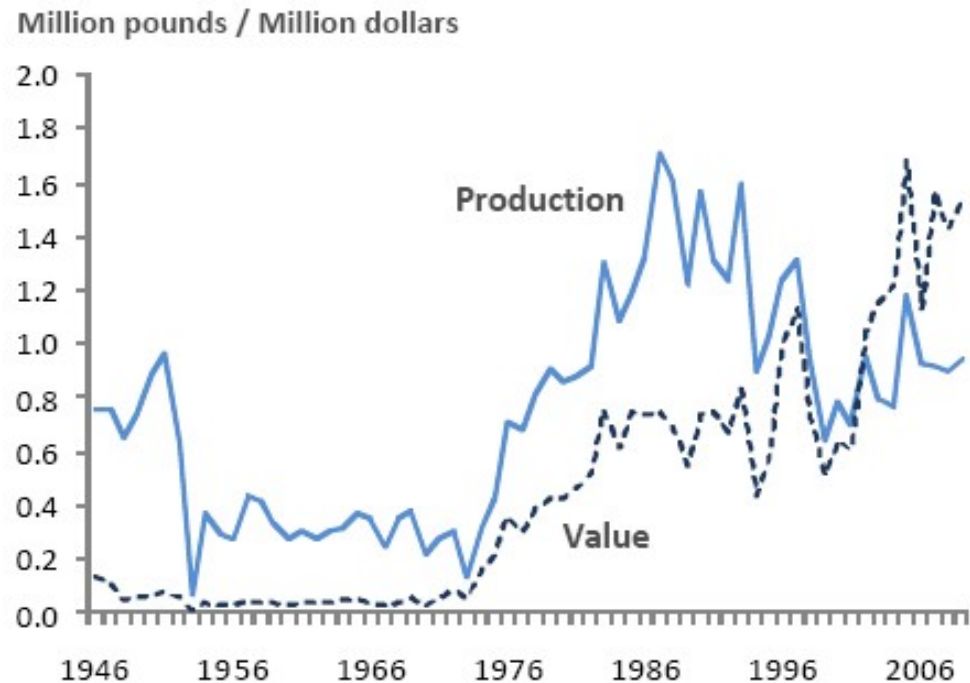
***Impacted by honey bee pollination (Total = 34,296 acres impacted, or 80% of total crop production.)**

*Melrose, Jeffrey, Hawaii County Food Self-Sufficiency Baseline 2012, UH Hilo.

3. Honey & Other Products

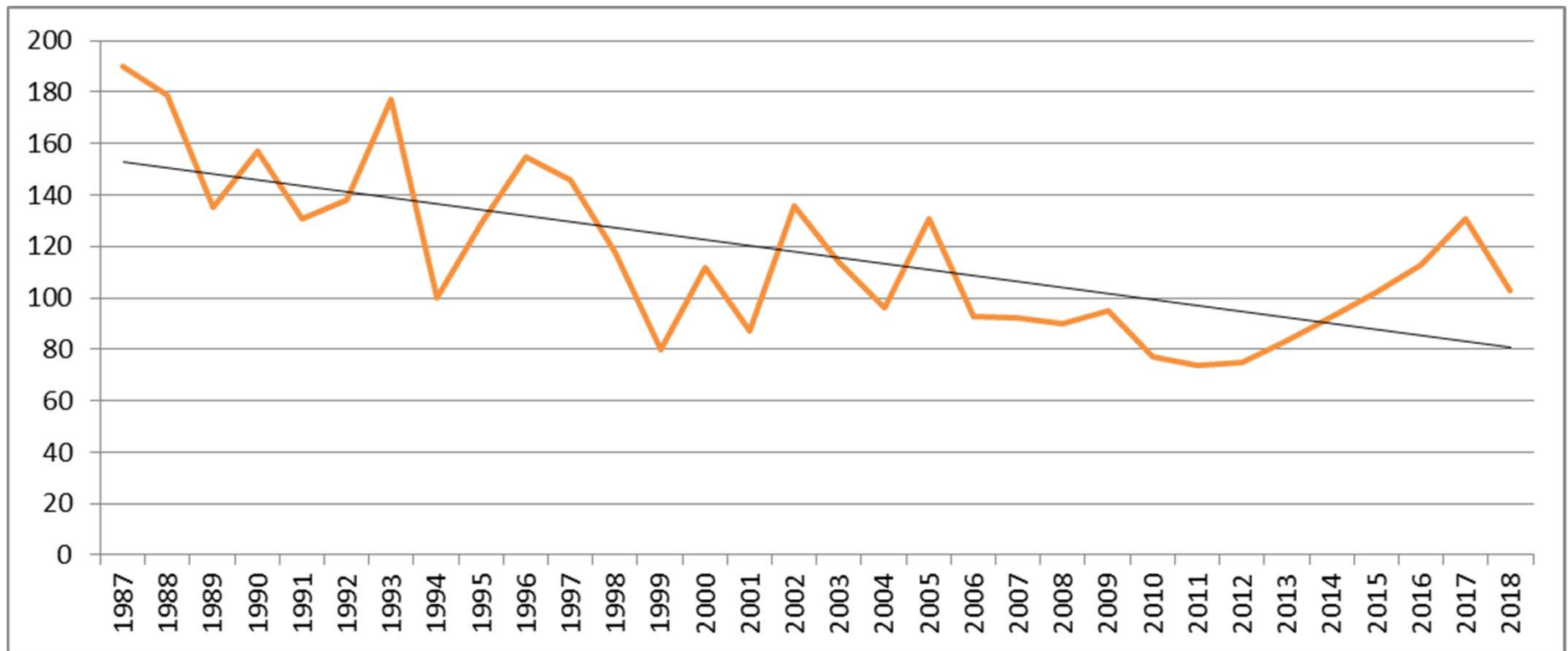
- Honey (\$4.12M)*₂₀₂₁
- Wax
- Propolis
- Pollen
- Cosmetics
- Pharmaceuticals
- Honey Wine, Beer, Spirits

HONEY: Production and Value, State of Hawaii, 1946-2009



Pounds of Honey Produced per Colony

State of Hawaii – USDA NASS Survey 1987 - 2018

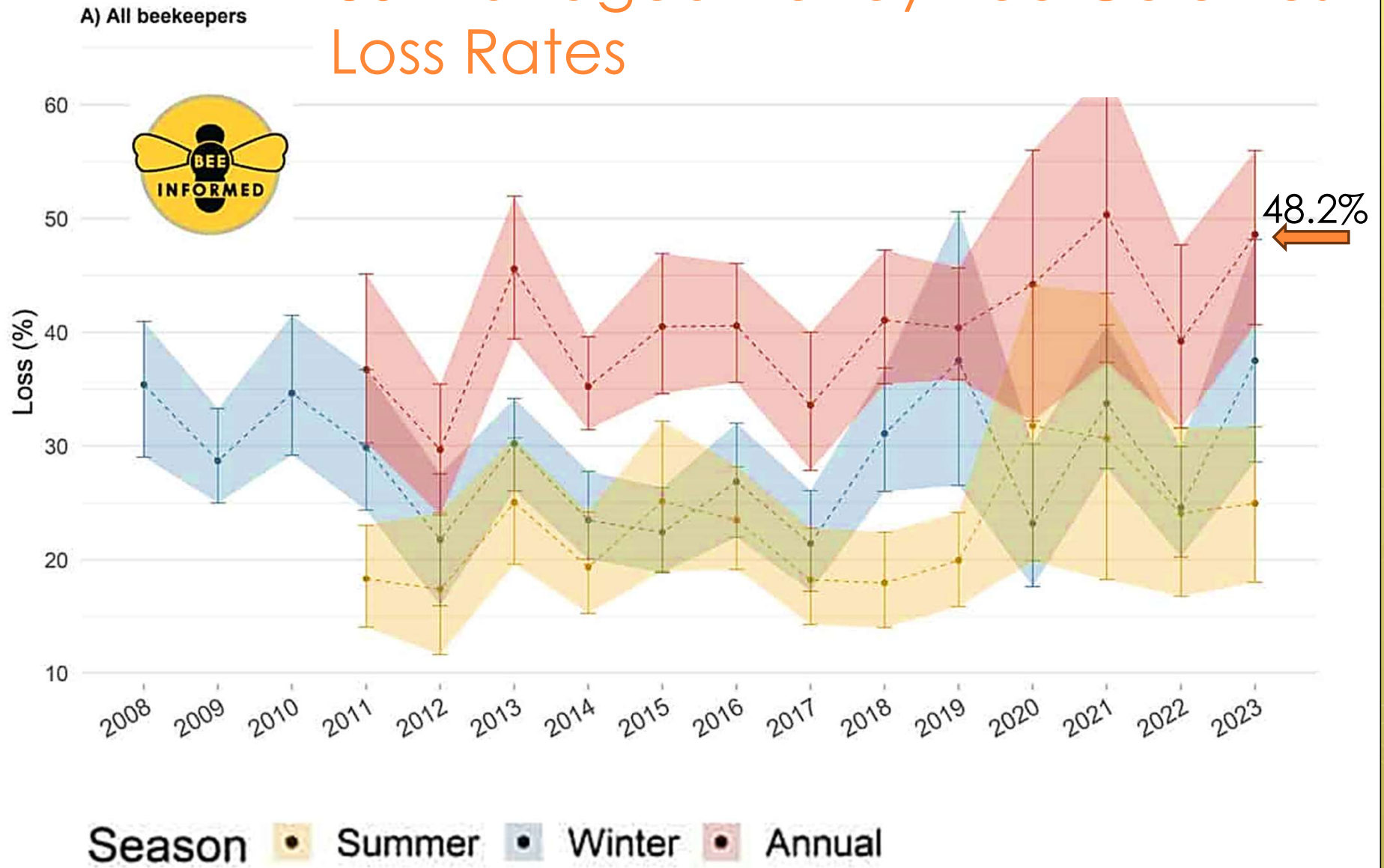


Bee Challenges

- We can't rely on "wild bees" like we used to for pollination
- Introduction of pests
 - Varroa Mite -2008
 - 59.8% of reported colonies Q2, 2018
 - Small Hive Beetles – 2010
 - 64% of reported colonies Q2, 2018
- Use of pesticides
- Climate change – heavy rains, volcanic activity, drought, etc.



US Managed Honey Bee Colonies Loss Rates



Reflects 314,360 colonies from 3,006 beekeepers

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Removing Apiaries from Zoning

- Will aid in securing food sovereignty and allow small businesses and families that rely on sales of honey, bee products, (bee pollinated) fruit and other crops to supplement income.
- It will also bring current beekeeper hobbyists into compliance

Lot Size & Bee Density

- Bee forage is the #1 indicator of whether a location can sustain bees.
 - A small lot in Puna can sustain a higher density vs an ocean front lot in Kona
- Restricting by lot size inadvertently discriminates against people who cannot afford a larger lot
- The Stakeholder group has agreed upon limiting it to 15 hives on lots smaller than 20,000 sq. feet for public wellbeing.

San Francisco for Example...

SF has no lot size or density restriction as beekeeping is seen as “important to the economy and welfare of the people of the State of California. Protection and promotion of this important industry is in the interest of the people of CA”

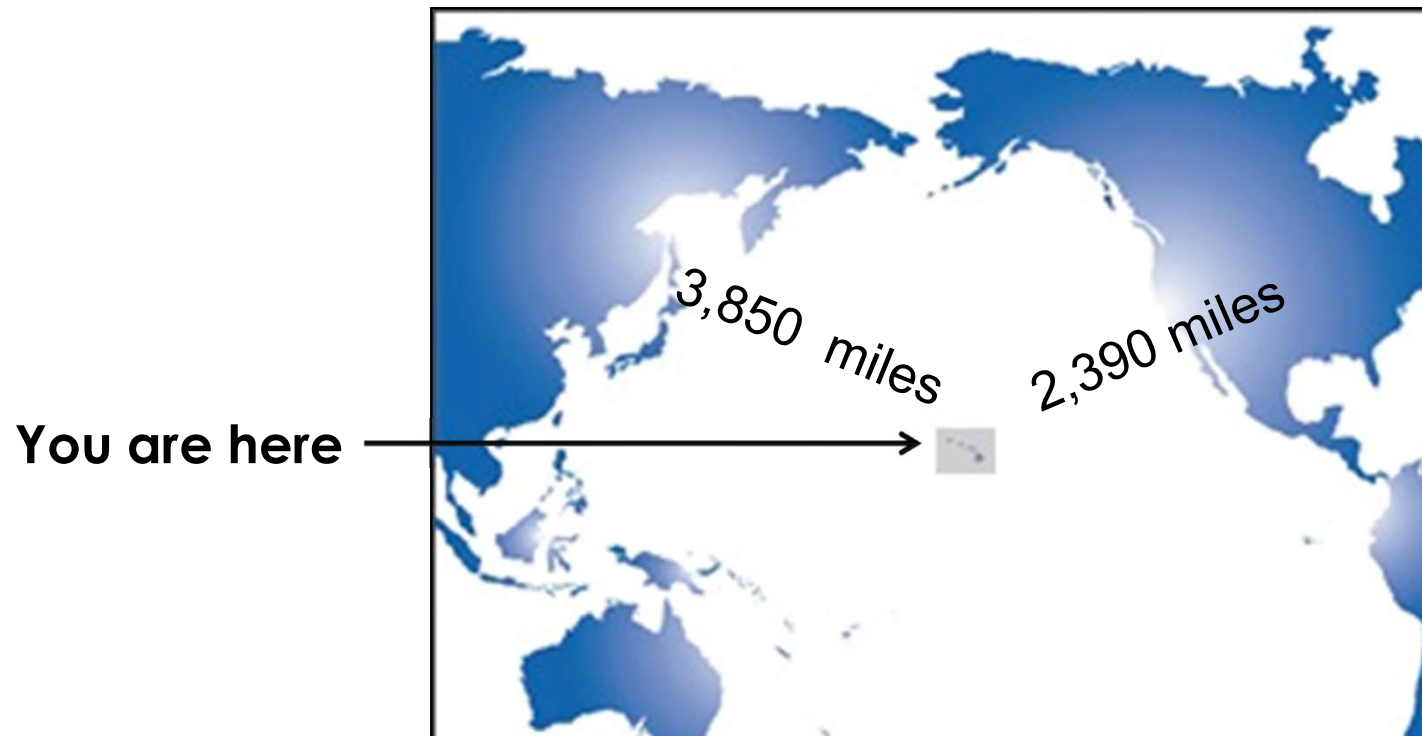


If San Francisco can do it, why not Hilo?

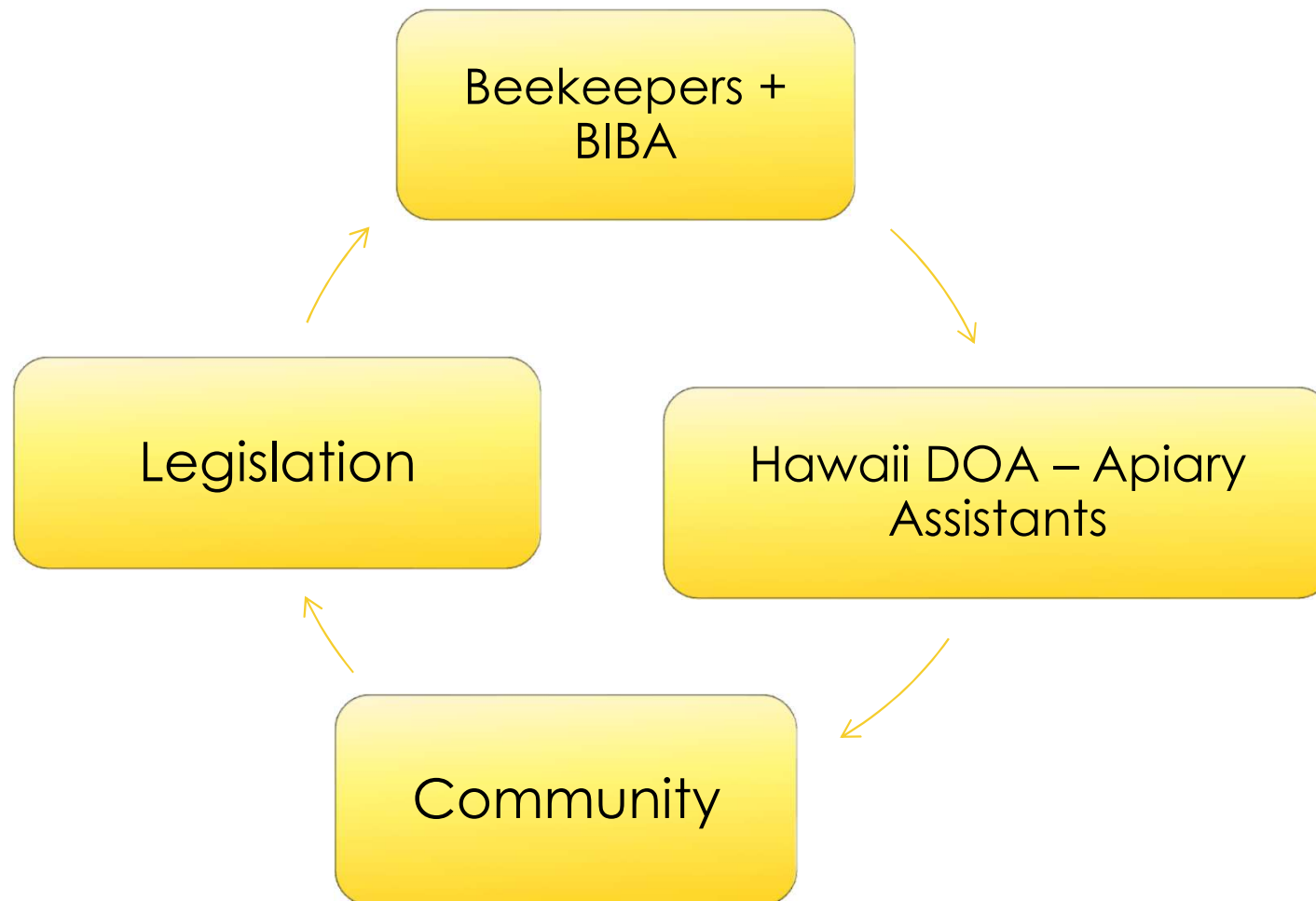


NBC News @ W. Hotel, SF

Self-Sufficiency



Achieving Cohesion



Bee the Change

MAHALO!

