

Fishing Ecosystem Analysis Tool (FEAT)

FME Mapping File Arguments [X]

Enter a Start Date to Filter by:

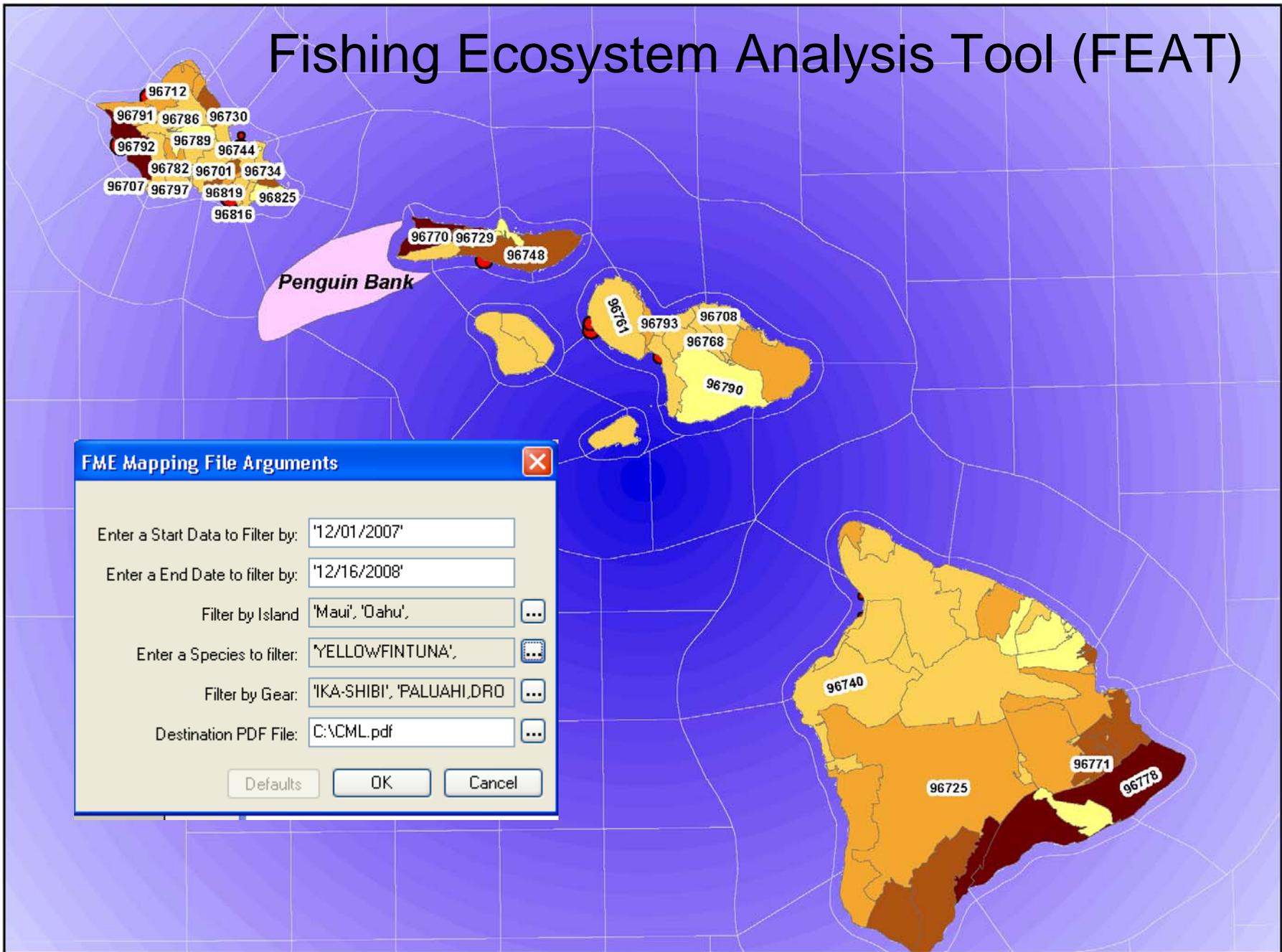
Enter a End Date to filter by:

Filter by Island: ...

Enter a Species to filter: ...

Filter by Gear: ...

Destination PDF File: ...



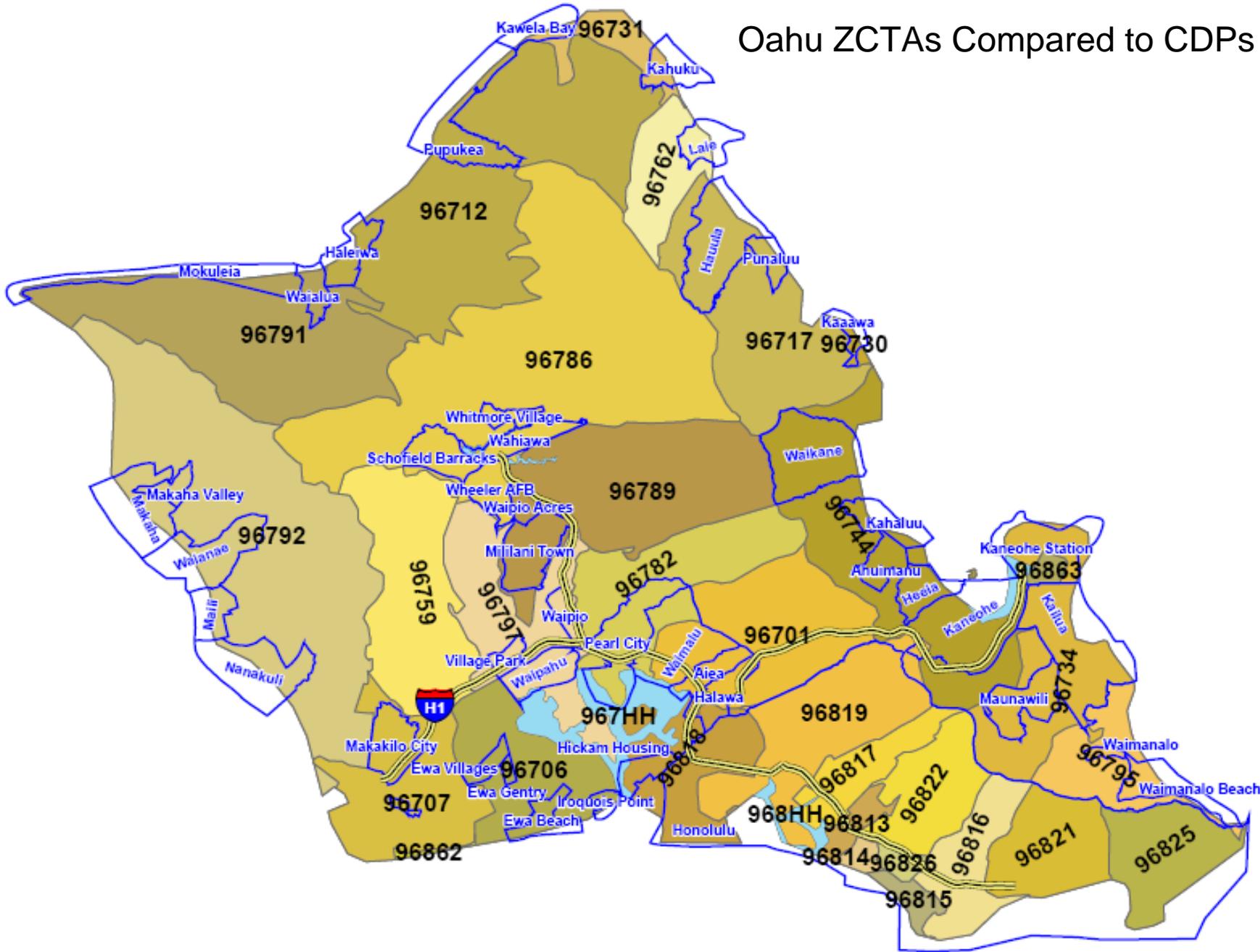
Outline

- Genesis: what was done 2005/2006 and associated issues
- Evolution: Improvements with FEAT
- Sample maps
- GeoPDF examples
- Google Earth examples
- What happens next?

NMFS approves island definition of MSA/NS8 fishing community for Hawaii in 2003

- Broad scale for defining fishing community could lessen likelihood of finding social or economic significant impacts
- Increased importance of social analyses that are not place-based (studying bottomfish fishermen)
- Increased importance of identifying fishing patterns and relationships at smaller scales

Oahu ZCTAs Compared to CDPs



Improvements

- 2005-2006
- Old variables and capabilities
- ZCTA scale
- CML license holder density
- Catch variables (days fished, pounds landed)
- Socioeconomic variables (poverty, education, assistance, income)
- 2009
- Added HMRFS data
- More years of CML data
- Fish species, Gear type, Catch area location (state grids)
- Island scale
- Ability to update
- Improved usability
- No GIS required

Problems with GIS

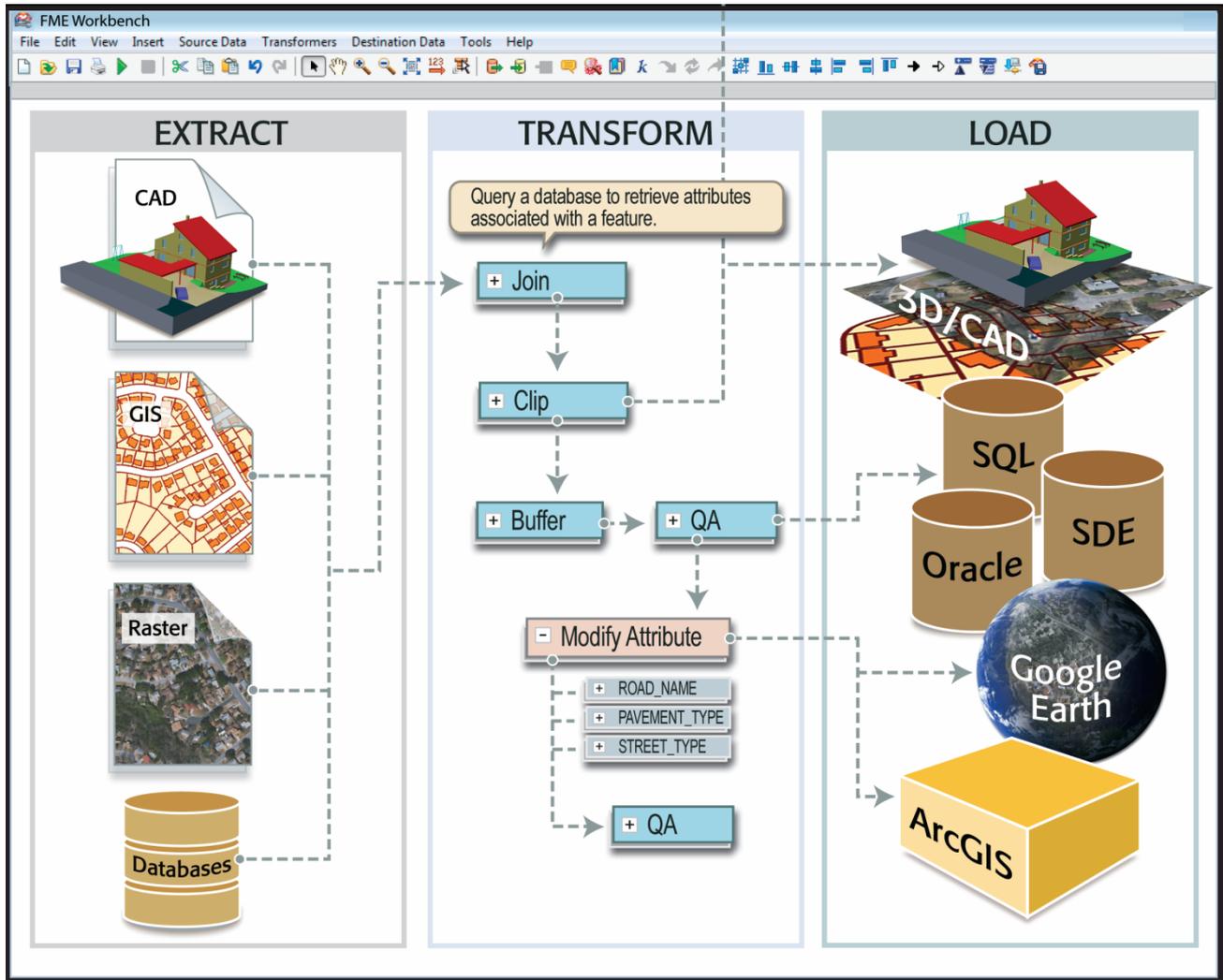
- Making a map using GIS can require large investment of time
- Requires expertise in GIS software
- Making changes to the map can be difficult
- Viewing map results may require GIS software

Introducing FEAT—

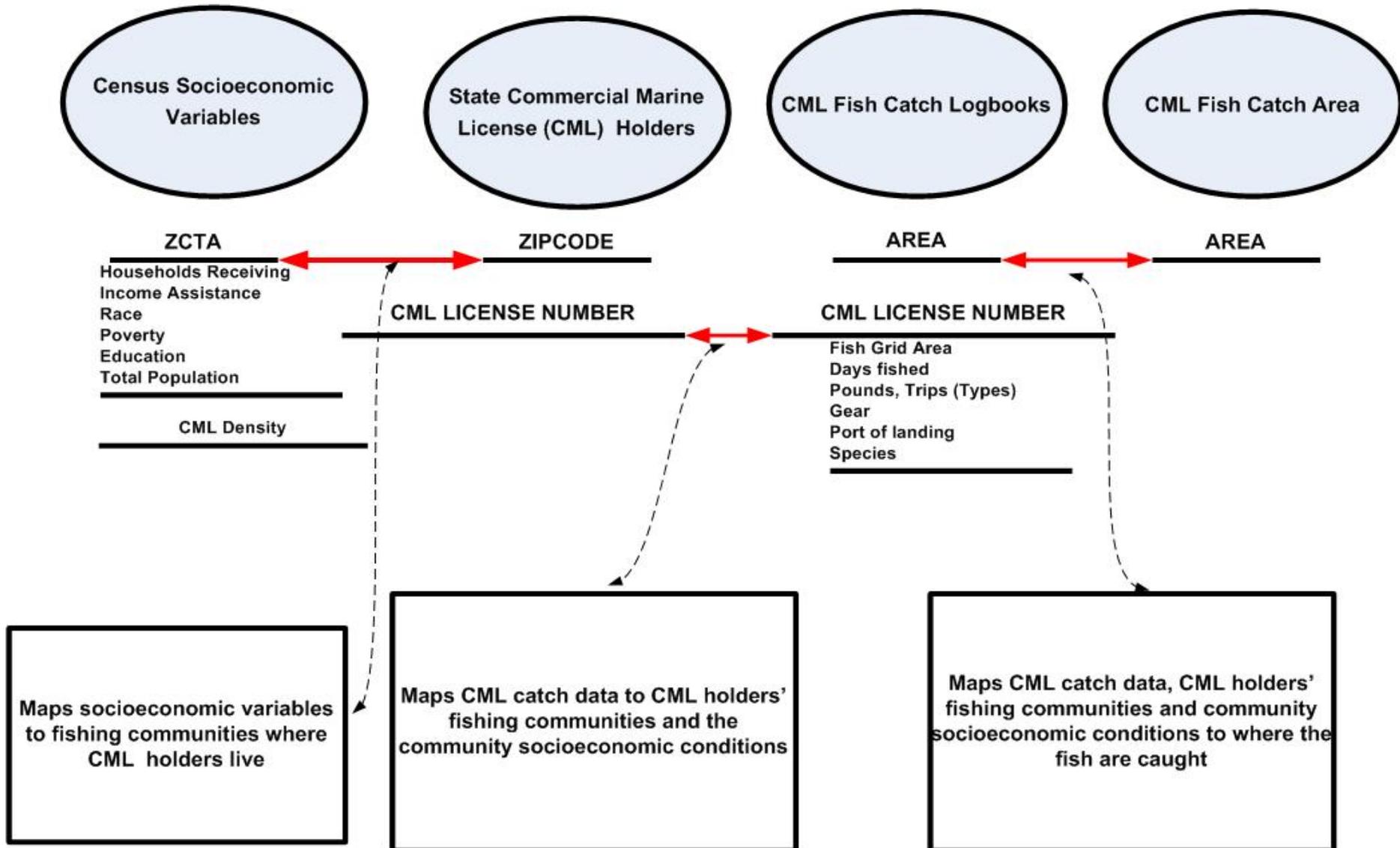
A solution for the easy creation of fish catch maps

The Fishing Ecosystem Analysis Tool (FEAT) is a system for analyzing and spatially displaying commercial and recreational catch data in combination with the place-based approach to defining and measuring fishing communities envisioned by National Standard 8 of the Magnuson-Stevens Act.

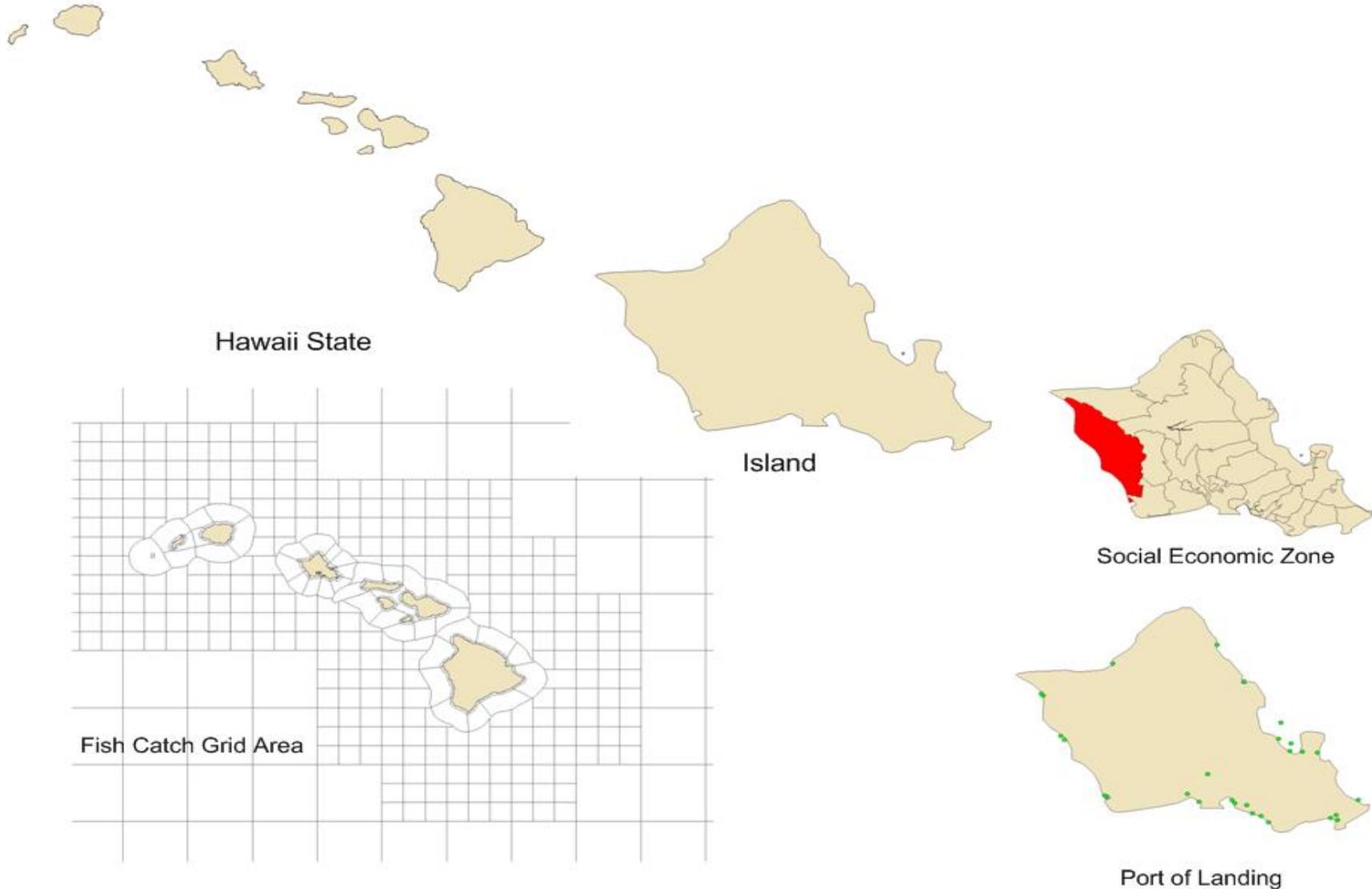
FME defined...



Exploring the Spatial Relationship between Hawaii Fishing Community Socioeconomic Conditions and Commercial Fish Catch

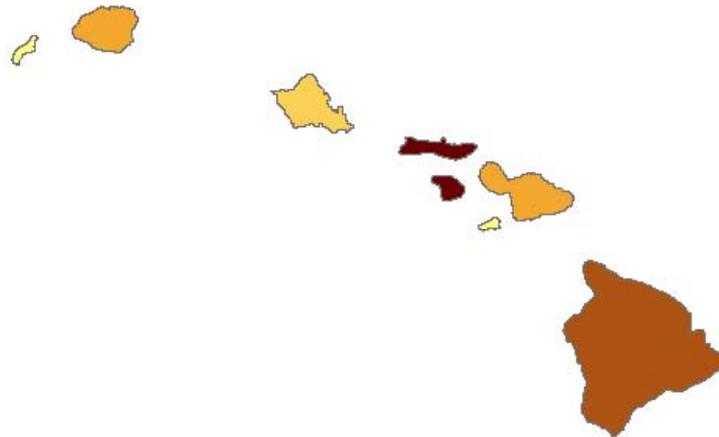


Levels of Spatial Analysis for linking social economic variables, fishing communities and fish catch data:

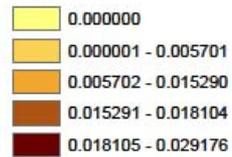


CML Examples

Percent of Population That Have Acquired
a State of Hawaii
Commercial Marine License



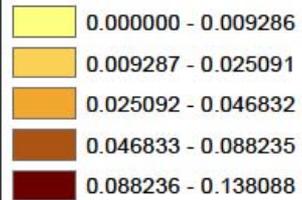
Legend



**Percent of Population That Have Aquired
a State of Hawaii
Commercial Marine License**



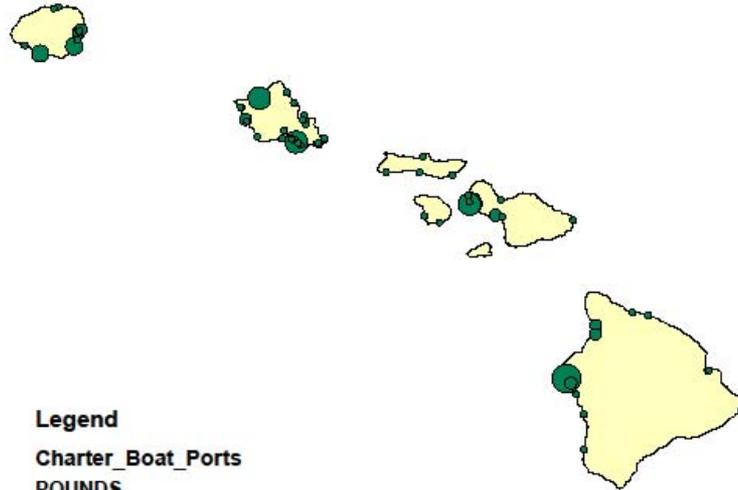
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Next Steps

- Add more years of data
- Move FEAT into production mode
 - Stakeholder Analysis
 - User Requirements
 - Implement at PIFSC
- Could be easily web based
- Could be implemented with other datasets (longline) and in other regions

Pounds landed by Charter Boat Only, 1999-2008



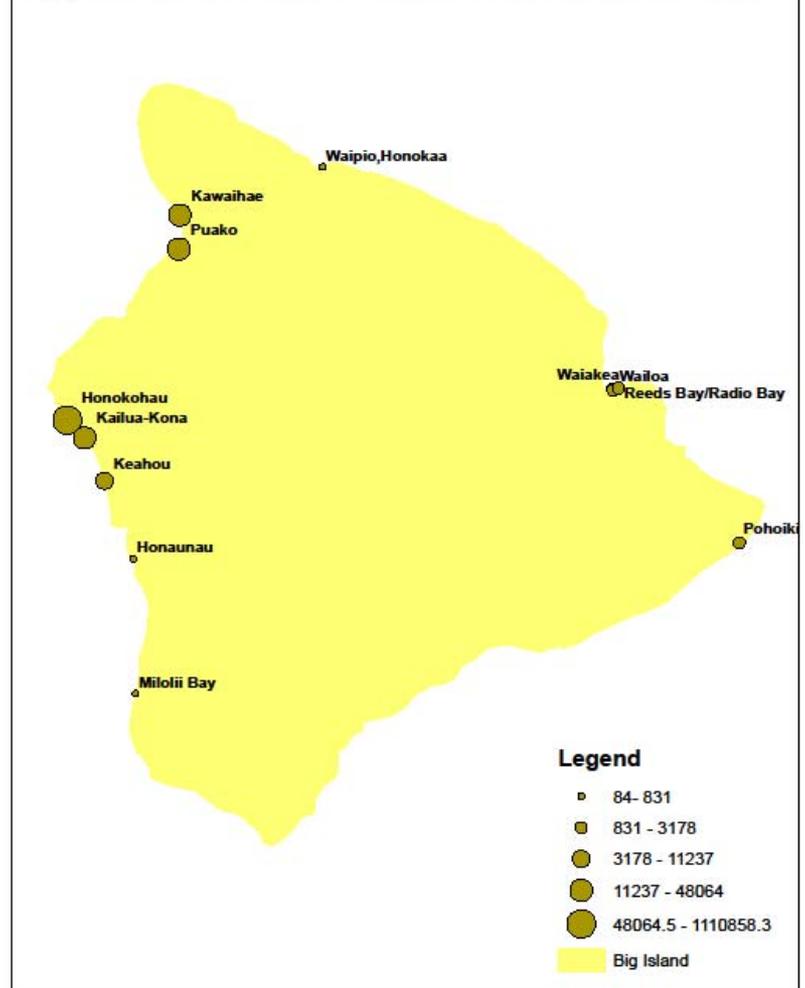
Legend

Charter_Boat_Ports POUNDS

- ◆ 25- 22777.8
- 22777.800001 - 93228.600000
- 93228.6 - 216469.1
- 216469.1 - 545269.
- 545269- 1110858

■ Hawaii

Big Island Pounds Landed for Charter Boats



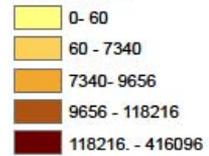
Days Fished Summed by Island



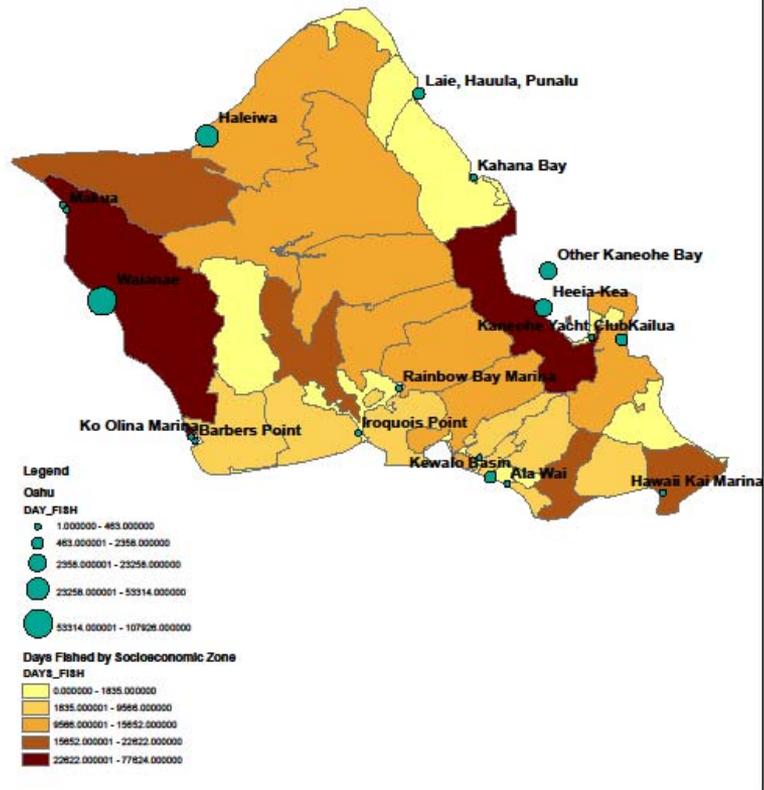
Legend

SEZ_ISLAND_FISHING

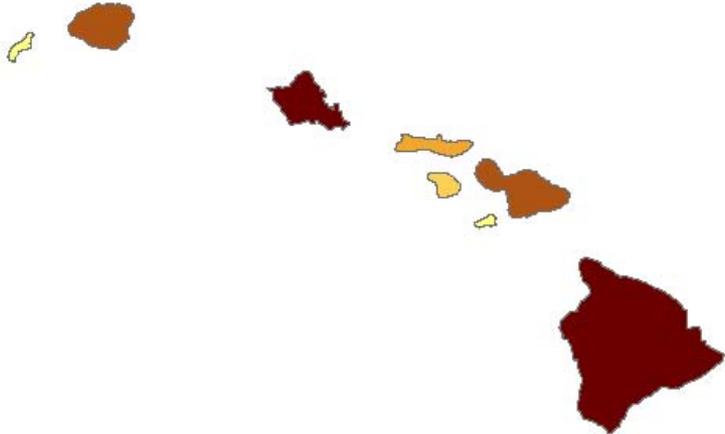
DAYS_FISH



Days Fished by Socioeconomic Zone and Port Oahu



Pounds Landed Summed by Island



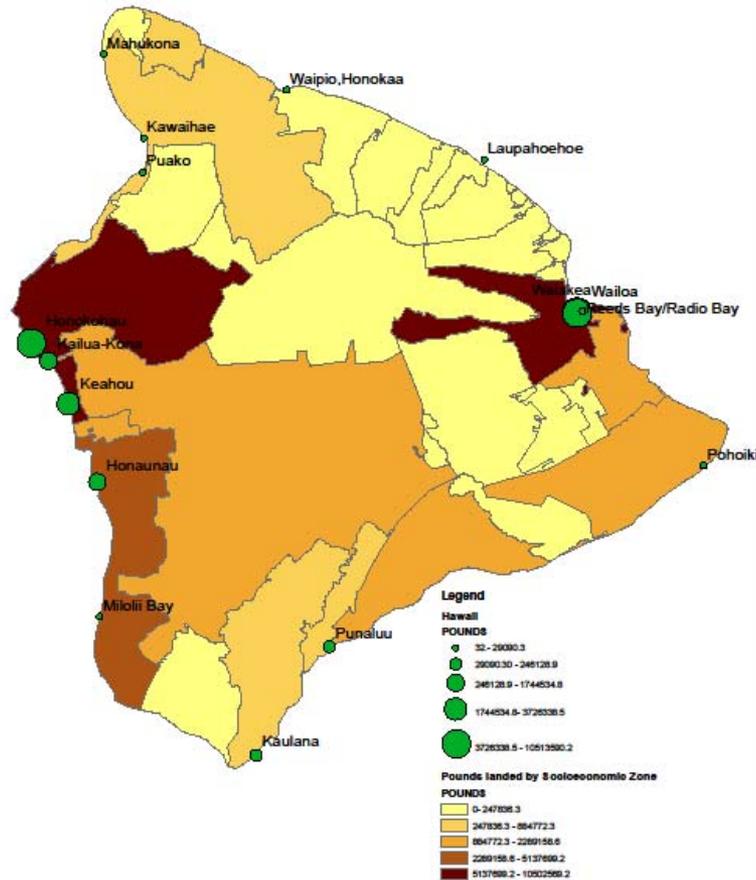
Legend

SEZ_ISLAND_FISHING

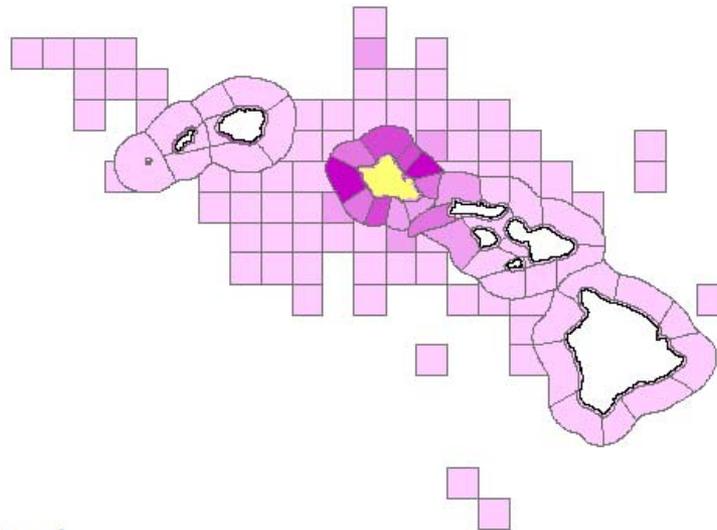
POUNDS

0.000000 - 1577.000000
1577.000001 - 216115.800000
216115.800001 - 288704.200000
288704.200001 - 7500725.900000
7500725.900001 - 38328857.400000

Pounds Landed by Socioeconomic Zone Big Island



Oahu Fishermen Home Range Pounds Summed, 1999-2008



Legend

 Oahu

Fishermen's Home Range, Pounds summed

 0 - 103729

 103730 - 465640

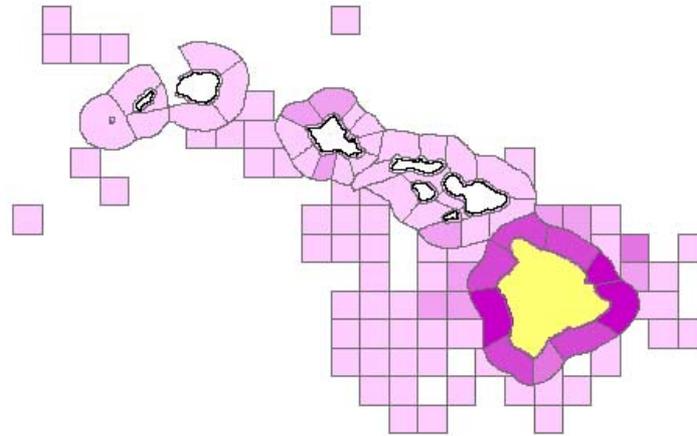
 465641 - 1419887

 1419888 - 2745211

 2745212 - 4001269

 Hawaii

Big Island Fishermen Home Range Pounds Summed, 1999-2008



Legend

 Hawaii

Fishermen's Home Range, Pounds summed

 0 - 16596

 16597 - 69720

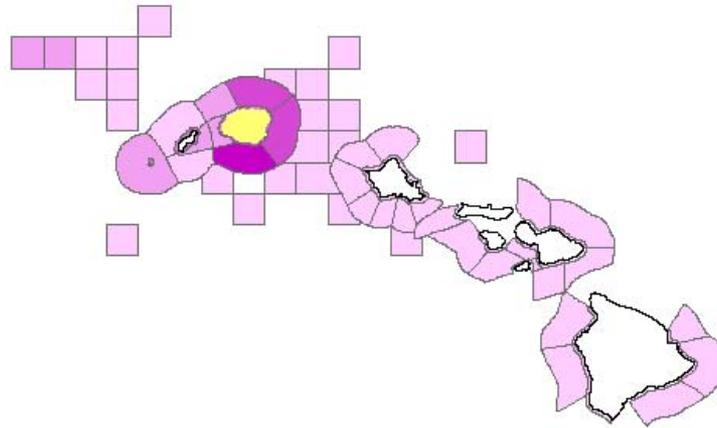
 69721 - 264972

 264973 - 1440287

 1440288 - 8730720

 Hawaii

Kauai Fishermen Home Range Pounds Summed, 1999-2008



Legend

 Kauai

Fishermen's Home Range, Pounds summed

 0 - 65971

 65972 - 196423

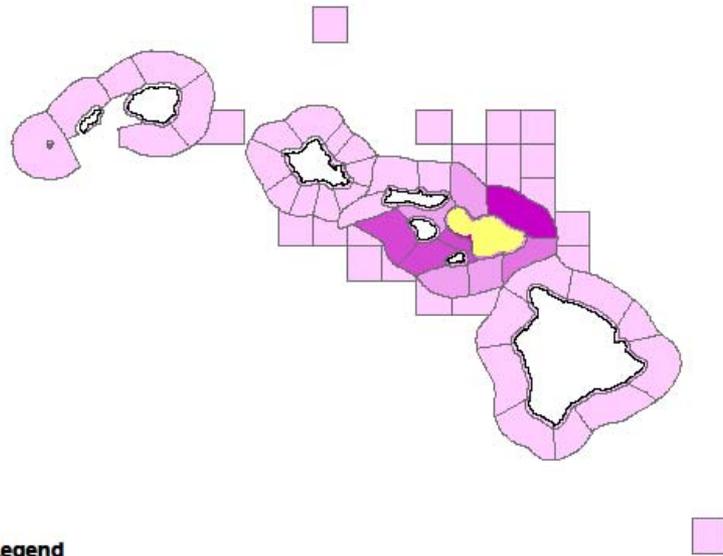
 196424 - 396273

 396274 - 1033122

 1033123 - 1685771

 Hawaii

Maui Fishermen Home Range Pounds Summed, 1999-2008

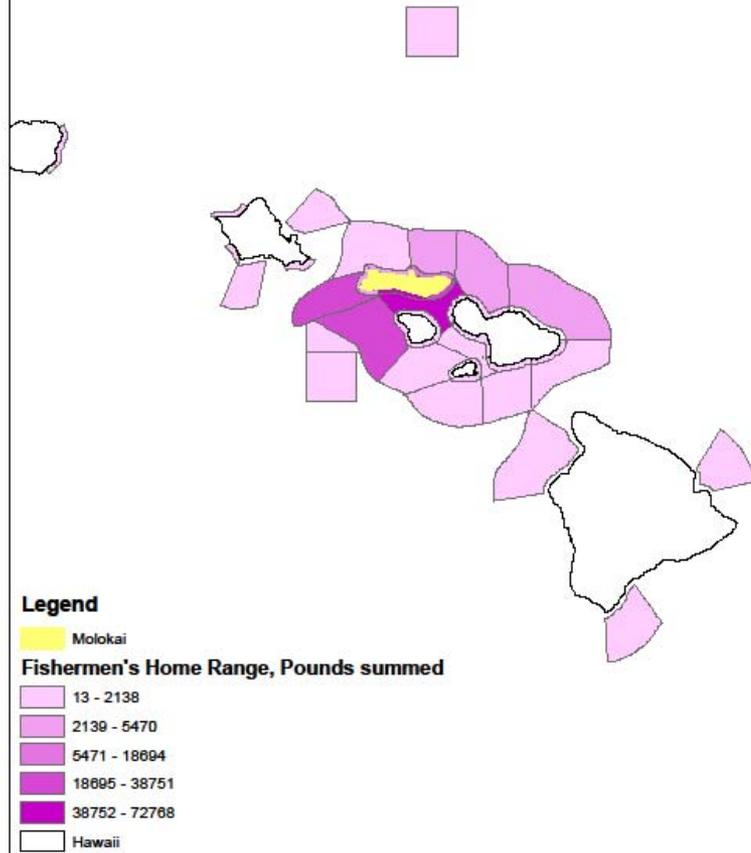


Legend

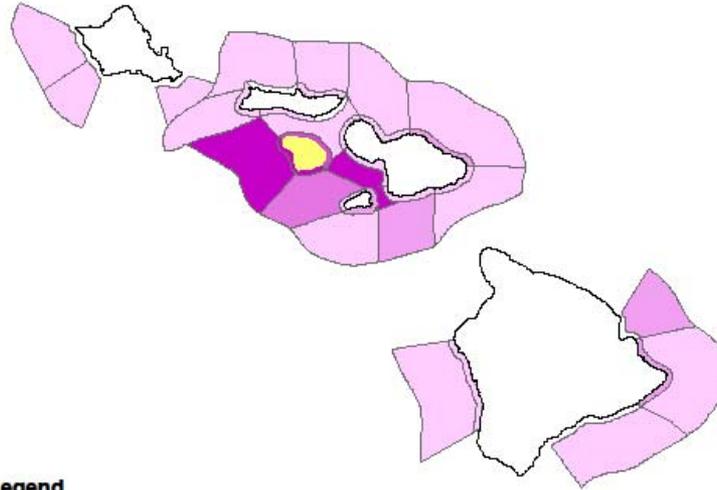
Fishermen's Home Range, Pounds summed

- 0 - 31273
- 31274 - 157764
- 157765 - 350871
- 350872 - 582979
- 582980 - 964834
- Maui
- Hawaii

Molokai Fishermen Home Range Pounds Summed, 1999-2008



Lanai Fishermen Home Range Pounds Summed, 1999-2008



Legend

 Lanai

Fishermen's Home Range, Pounds summed

POUNDS

 0 - 385

 386 - 1419

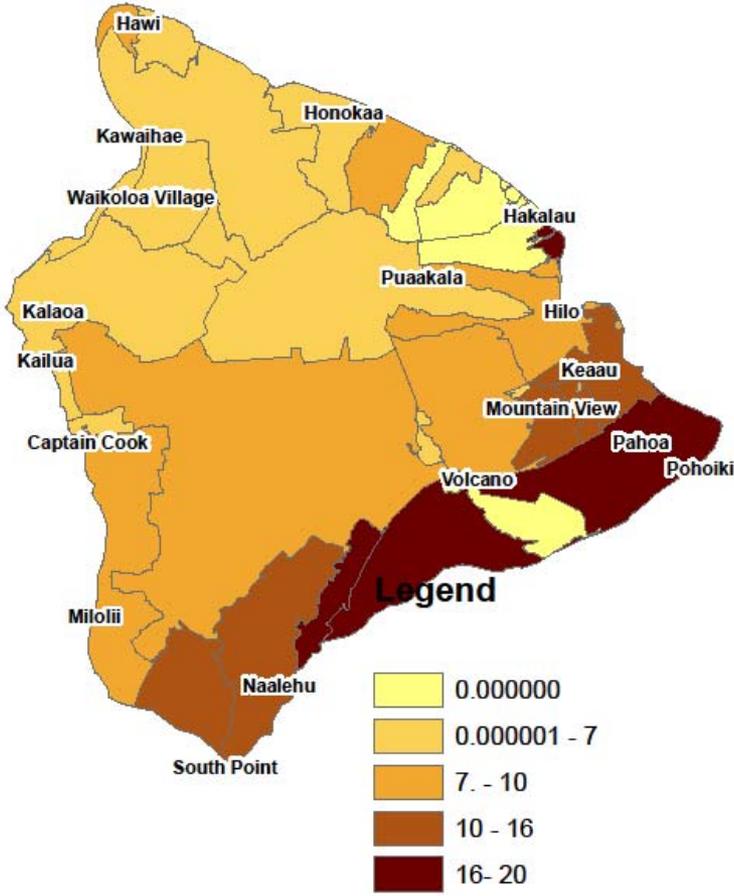
 1420 - 4544

 4545 - 9852

 9853 - 101248

 Hawaii

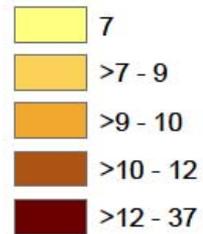
Percent of Households Receiving Income Assistance



Percent of Population that is Native Hawaiian
or Other Pacific Islander (One Race Alone)



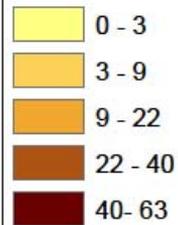
Legend



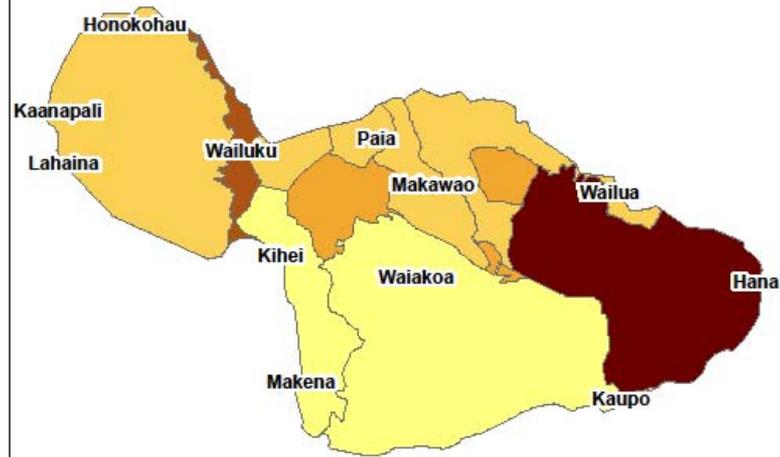
**Percent of Population that is
Native Hawaiian
or Other Pacific Islander (One Race Alone)**



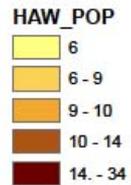
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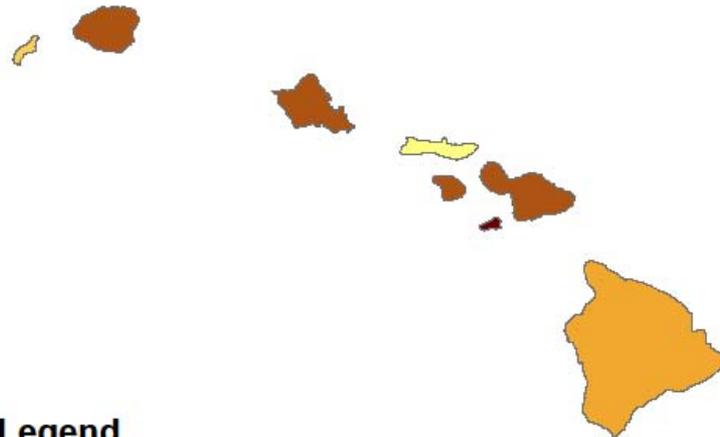
Percent of Population That are Native Hawaiian or other Pacific Islander Only



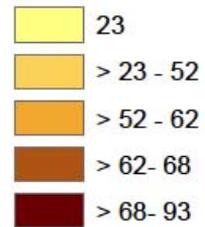
Legend



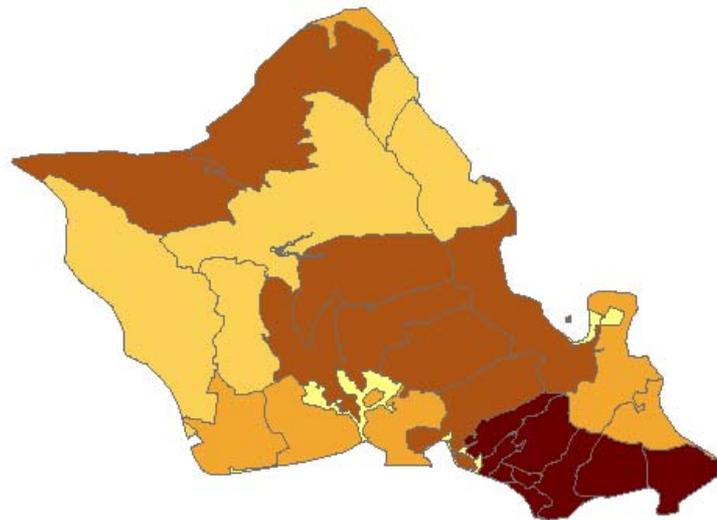
Percent of Persons Age 25 Years and Older with Bachelor's Degree or Higher



Legend



Percent of Persons Age 25 Years and Older with Bachelor's Degree or Higher



Legend

BACH_DEG

0 - 8

8 - 55

55 - 63

63 - 70

70 - 82

HMRFS Examples

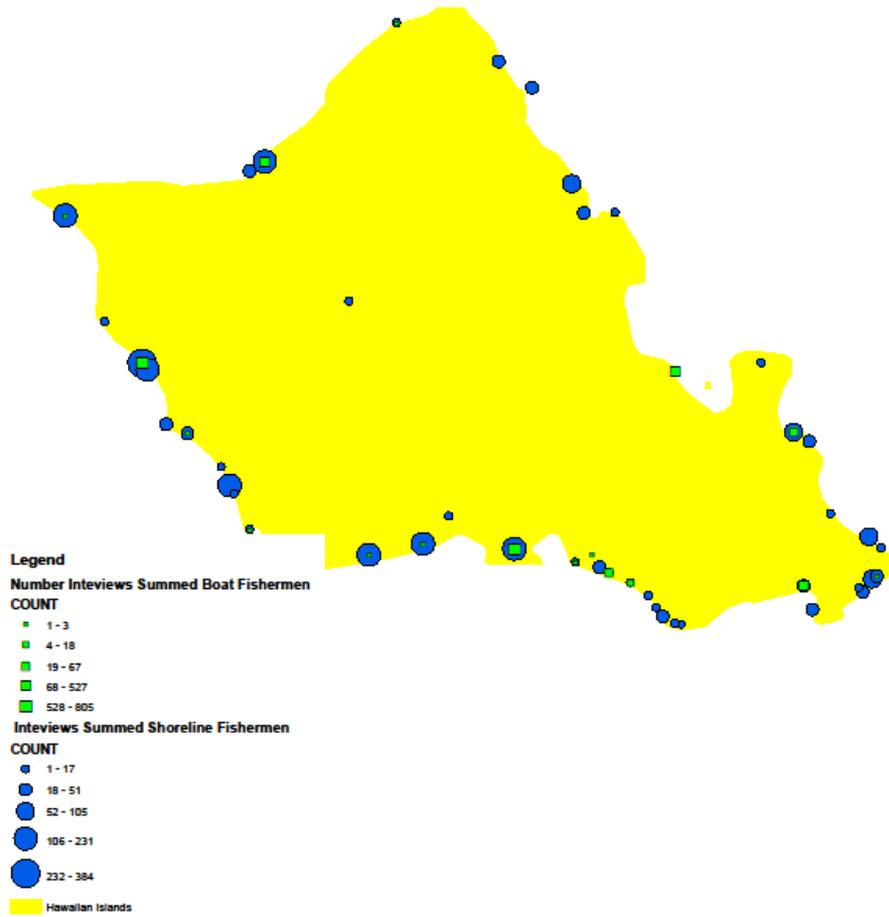
HRMFS Interview Site Locations 2002-2008



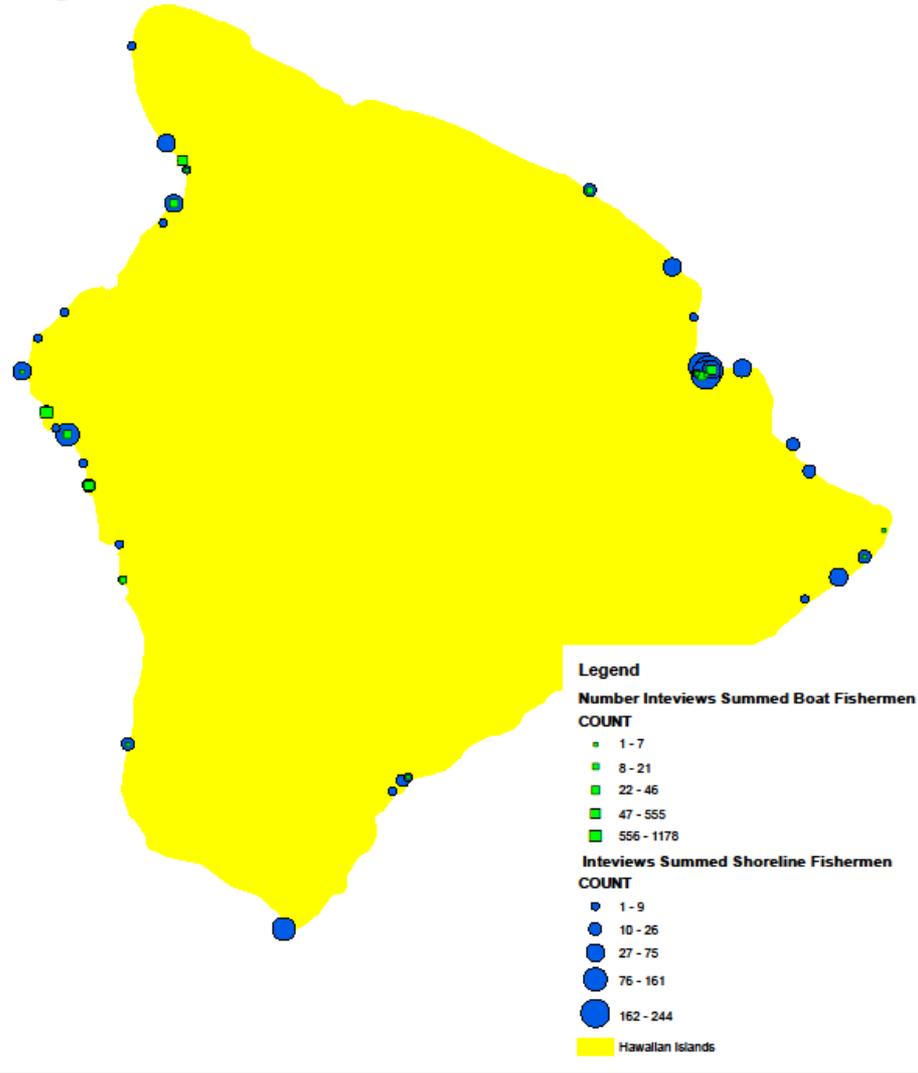
Legend

- HRMFS Interview Sites
- Hawaiian Islands

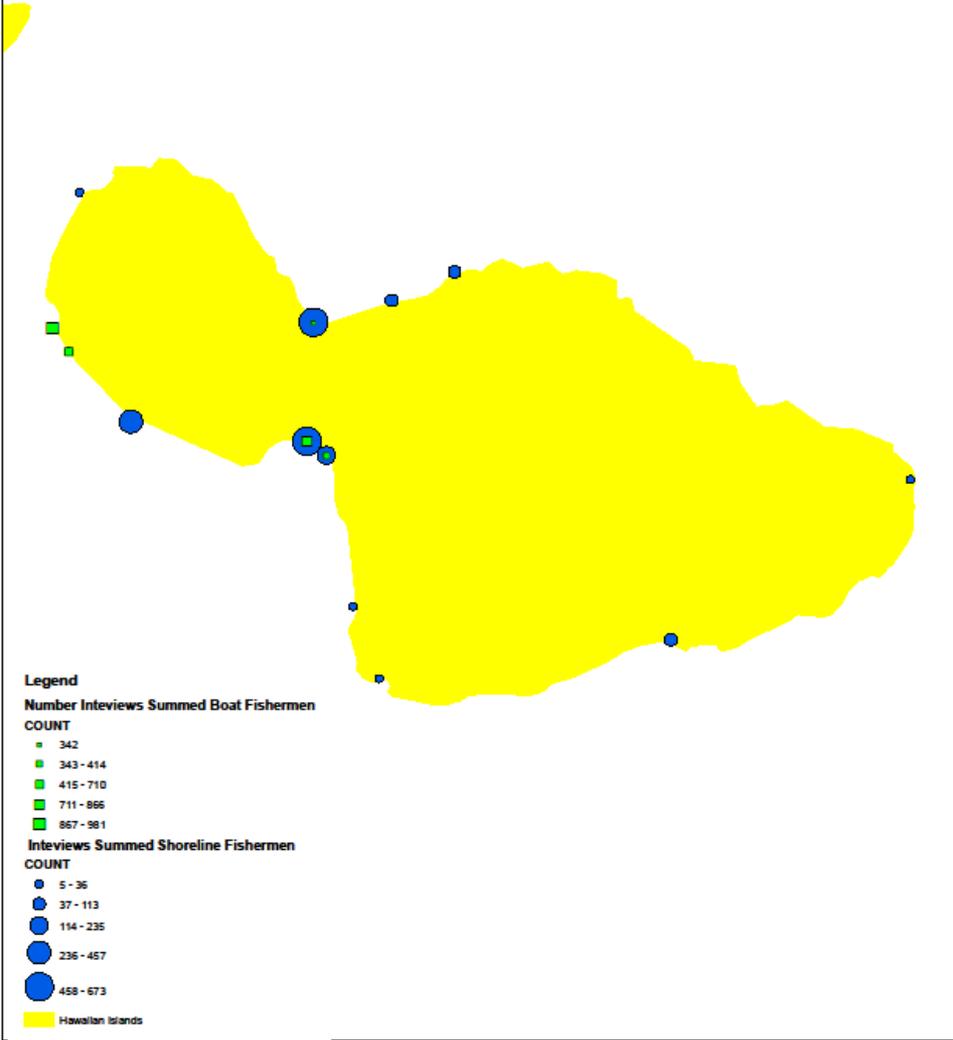
Oahu HRMFS Interview Site Locations 2002-2008



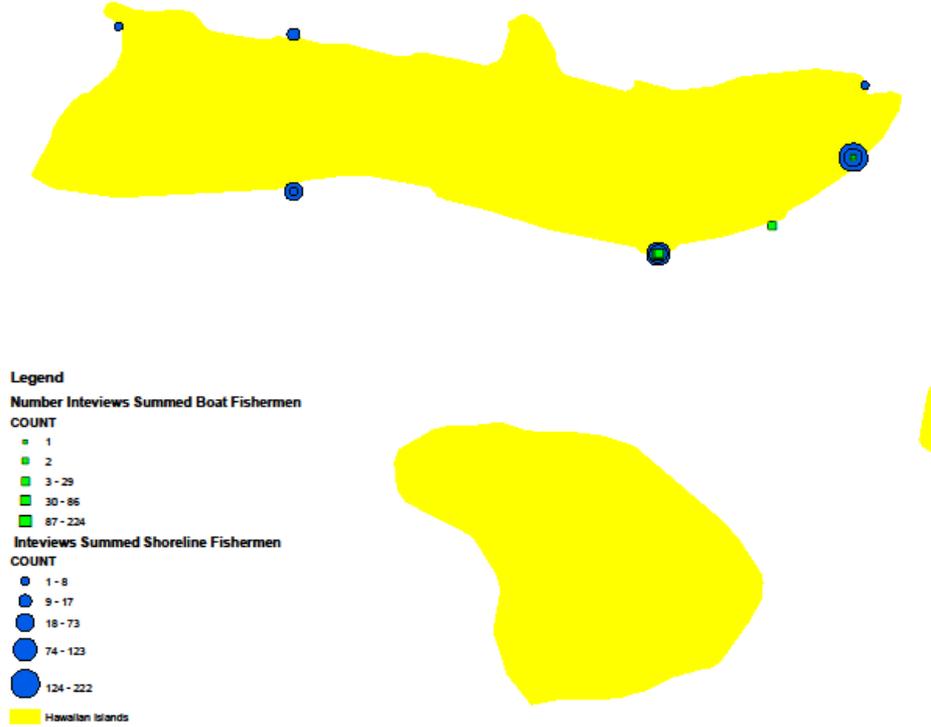
Big Island HRMFS Interview Site Locations 2002-2008



Maui HRMFS Interview Site Locations 2002-2008



Molokai HRMFS Interview Site Locations 2004-2008



Kauai HRMFS Interview Site Locations 2002-2008

