

Urban 'Āina: Community Driven Indigenous Urban Design

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Background

This project was conducted by Graduate students at the University of Hawai'i Urban and Regional Planning Department. Through these classes, students worked to support; the farmer, Anthony DeLuze, the landowner, Kamehameha Schools, the farm's neighbors, Pearlridge shopping center and the community.

Though this process, students learned; how to approach community, how to listen and how to apply their gifts. The students' multidisciplinary backgrounds contributed support by means of scientific research, data collection and database management and oral history documentation. Long lasting relationships were built and catalyzed by attending and sweating along side each other at the community workdays.

Asset Map



Input and Output mapping exercise as result of community organization interviews.

This figure is an analysis of the inputs and outputs of Ka'ōnohi Farms based on conversations with key stakeholders such as Ka'ōnohi Farms mahi'ai and Kamehameha Schools- Innovations. Many of these were also through graduate student observations and understanding of the place. This asset map depicts what Ka'ōnohi farms takes in and what it provides in return.

Thermal Map



Map of temperatures of Ka'ōnohi and surrounding Pearlridge Shopping Center

From this Map we can see that Ka'ōnohi Farms reduces the areas temperature by roughly 3 degrees on average. The farm is able to reduce the thermal pollution of the surround mall area.

Inputs

The land is owned by Kamehameha Schools and is currently being leased to the farmer. The farmer brings over 30 types of Hawaiian Kalo (taro) but the planting knowledge that was passed on to him by his teacher Uncle Jerry Konanui.

"Committed for the long term to cultivating food... that would enhance our independence from the importation of life-supporting goods and services." -Kamehameha Schools



Left: Ka'ōnohi Farms, Moku o Ewa. Middle: Uncle Jerry Konanui who still heavily influences the work done at Ka'ōnohi today. Left: Planted rows of Kalo.

Ka'ōnohi, Ewa Moku

Ka'ōnohi Farm is located on the south side of O'ahu. It is located adjacent to Pearlridge Mall and Sumida watercess farm. The 2.5 acre farm was mapped using ArcGIS and polygons helped the farmer track and manage farm production. The students used Google forms to create a "Farm Tracker" to record observations in specific patches.



Water Flow and Quality

Farm water systems.

Students were able to interview the farmer and use modern hydrology instrumentation to record; water quality, flow and freshwater springs around the farm. The map above shows traditional 'auwai (water irrigation ditches), as well as proposed loko wai. Below, the students show how Ka'ōnohi farm serves as a sink for run-offs due to it's location in relation to the topography.

Topography map showing Ka'ōnohi as a sink for runoffs.

Multiple Springs Averages:
Temperature: ~71 Fo
Dissolved Oxygen: ~90%
Flowing at 8.83 Gal/Min
Natural Spring Water

Conclusions

As result of this work we show the great importance of a traditional taro farmer to our island but more specifically to our urban spaces. Impacts of the farm such as water filtration, heat retention and native habitat restored provides the broader community with tangible benefits. However, the intangibles such as traditional knowledge transferred, spiritual connections made provide our urban populations the ability to help give identity back to this important unique spring fed taro patch.



Currently, the Ka'ōnohi is building their traditional hale. This past weekend was a day of debarking mangrove, planting posts and lashing of the olokea (scaffolding). Over 30 people, from 5 months to 80 years old shared in the work and had the opportunity to connect to place. We appreciate the farm so much for holding this space for so many ohana to create stories and memories. The farm truly exemplifies the importance of 'Āina to the community.

Mahalo to all of those who were involved; Hō ʻōla Hou iā Kalauao, Kamehameha Schools, Pearlridge Center, Kua ʻāina Ulu ʻ Auamo (KUA), and UH-Manoa PLAN 616 and 661.