

# U.S. ARMY CORPS OF ENGINEERS HONOLULU DISTRICT (POH)

## TECHNICAL INTEGRATION BRANCH (TIB) – GIS CAPABILITIES

Sarah Falzarano, GISP  
Branch Chief



Makapuu Lighthouse built by USACE in 1909



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05-AUG-2022

# USACE POH MISSIONS WITH A GIS COMPONENT

- Military
  - Construction and Renovation
    - BIM into GIS
    - Building footprints, fencing, asphalt, transformers...
  - Army Real Estate
    - Acquisition, disposal, fee, lease...
  - Medical Facility Management
    - Maintain master drawings -> maintain BIM -> GIS indoors
- Civil Works
  - Navigation
    - Maintain Federal Channel depth
    - Maintain breakwaters
  - Flood Risk Management
    - Watershed studies
    - Dams and levees
- Environmental
  - Formerly Used Defense Sites
    - Cleanup of military munitions on private land
- Emergency Operations - hurricane and tsunami response



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## USACE POH GIS TECHNOLOGY

- Software
  - Esri
  - Bentley
  - AutoCAD
- Survey
  - Trimble mapping and survey grade
  - Single point and LiDAR
- SUAS
  - Quad and fixed wing BLUE systems
  - Governed by Army Regulation 95-1-1 (not FAA Part 107)



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# WORKING IN A DOD ENVIRONMENT

## CHALLENGES

- Restricted network
  - Software and hardware connections are restricted
- Bureaucracy
  - Limits vendors
  - Inflates price
  - Increases time for acquisition
- Limited ability to use the cloud
- Latest software takes time to approve
- Limited ability to use AGOL

## BENEFITS

- Safe from viruses and cyber attacks
- Enterprise license agreements

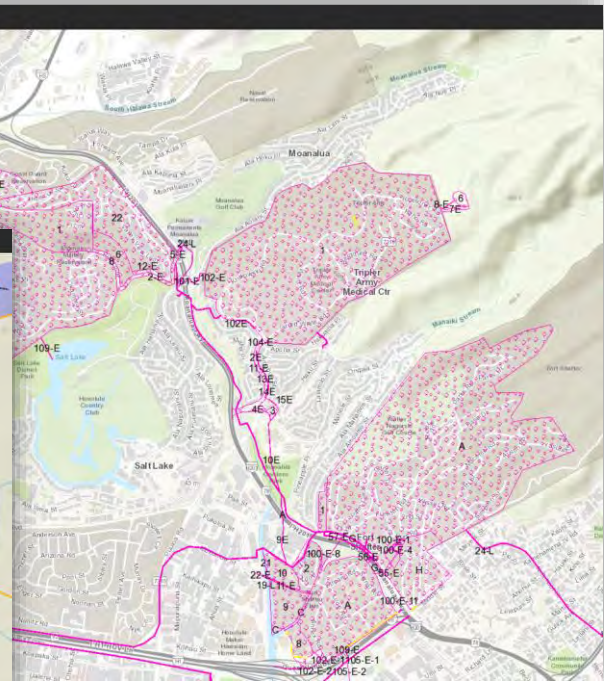
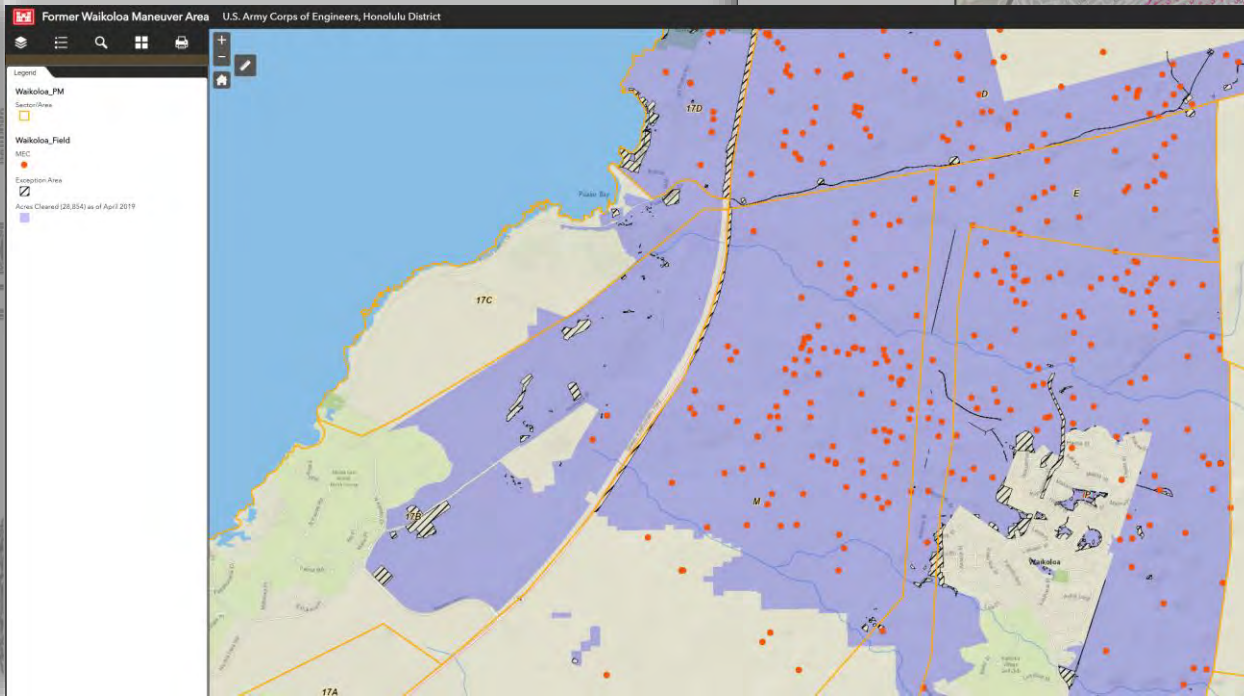
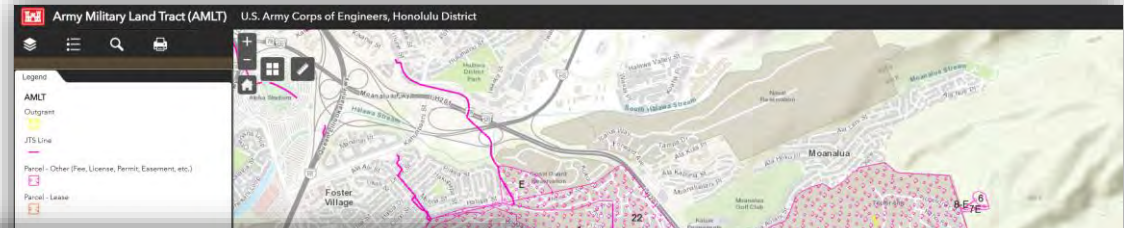


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# INTERACTIVE ONLINE MAPS



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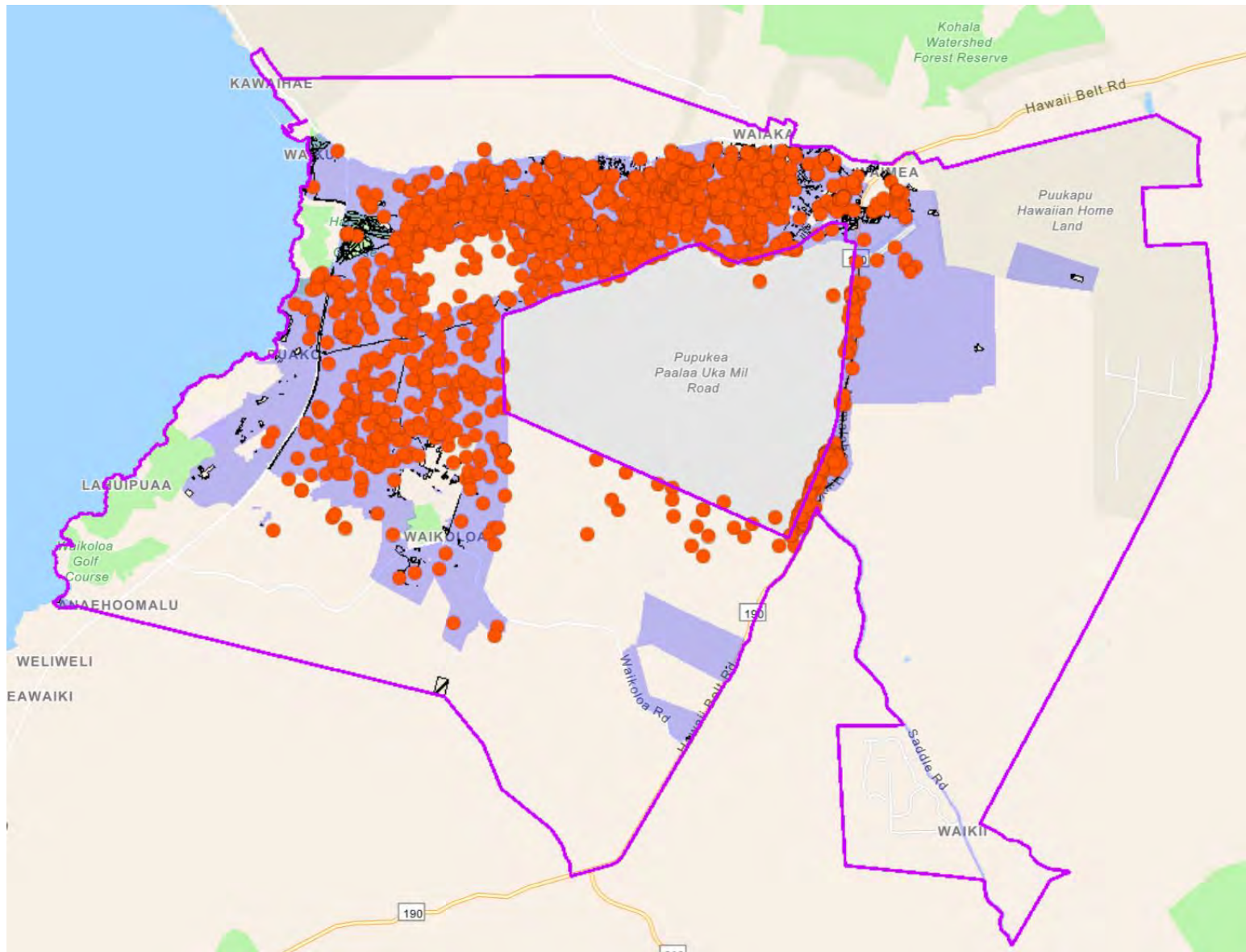


# FORMER WAIKOLOA MANEUVER AREA





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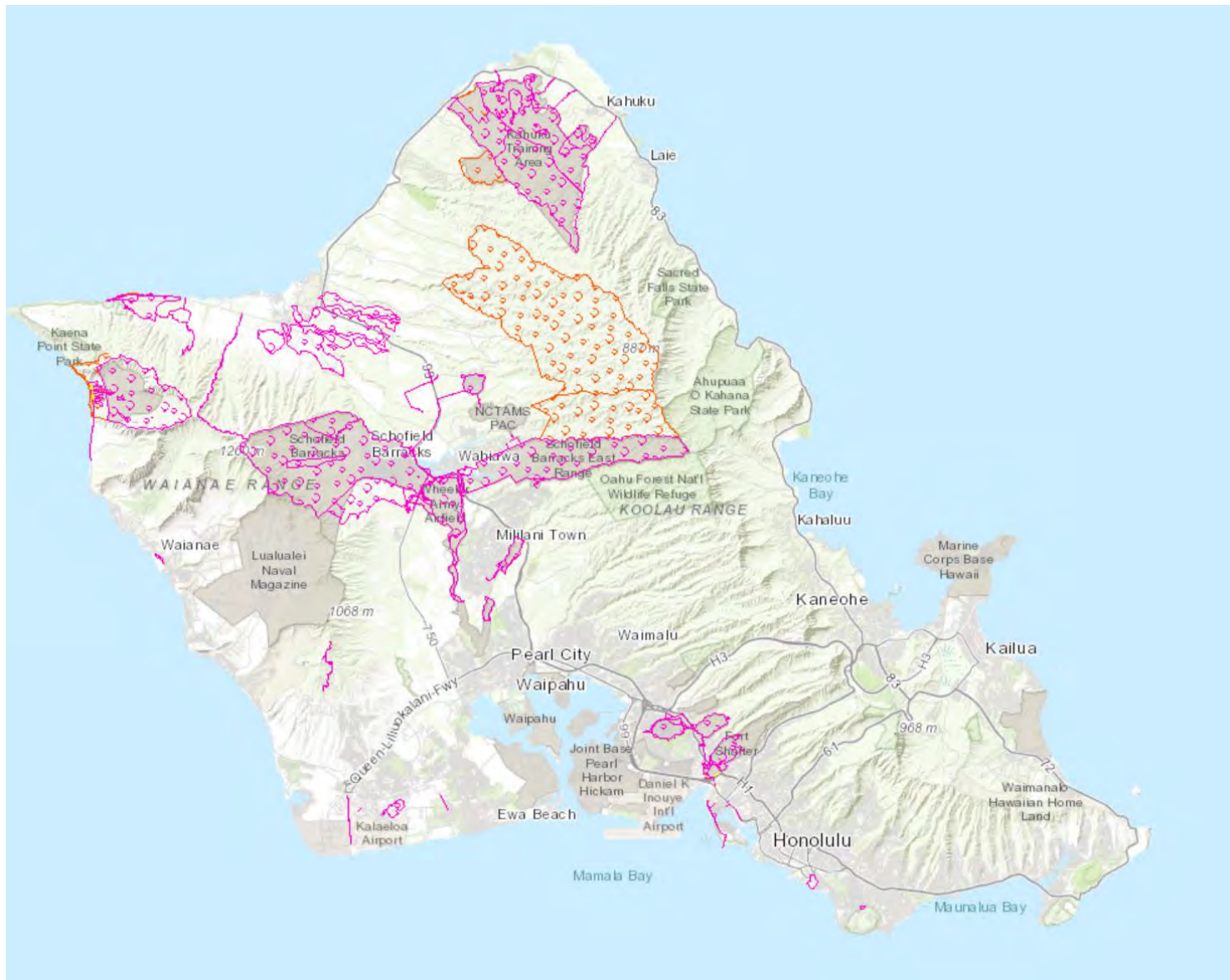


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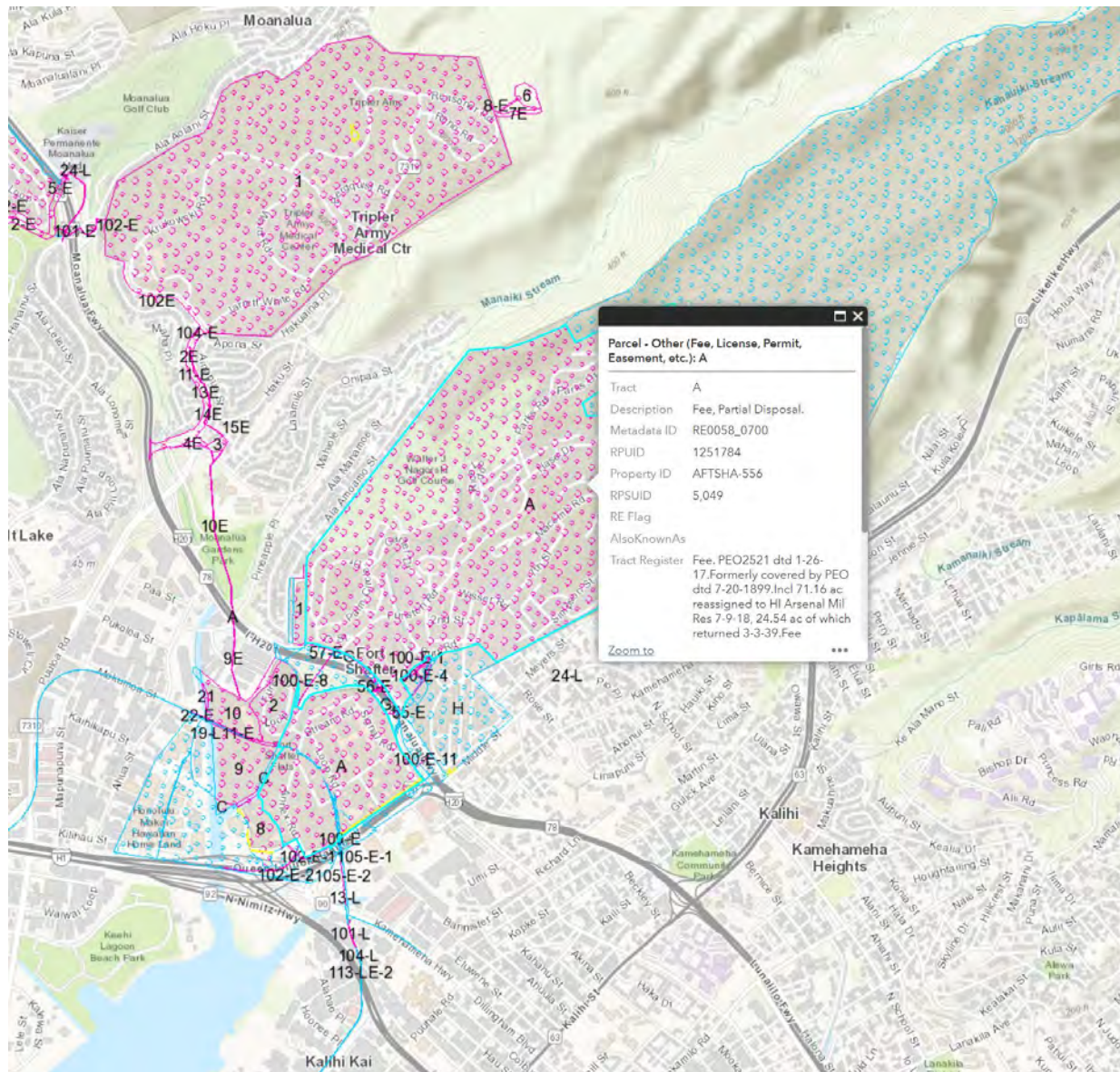




# ARMY MILITARY LAND TRACT



# ARMY MILITARY LAND TRACT





# ARMY MILITARY LAND TRACT



some freely and voluntarily, and for the uses and purposes therein set forth. And the said Pinnamma wife of the said W. M. L. has, on an examination separate and apart from her husband, further acknowledged to me that she executed the same freely and voluntarily, without fear, compulsion or constraint of her said husband.

Elmer E. Put low depute to take acknowledgements District of Kona, Island of Oahu.  
 Recorded & compared this 3<sup>rd</sup> day of April A. D. 1894 at 10:27 o'clock A. M.  
*Wm. G. Thomas*

## Minister of Interior to Oahu Railway & Land Co Stamped 1894

This Indenture made this 4<sup>th</sup> day of February 1891 by and between James A. King Minister of the Interior of the Republic of Hawaii, party of the first part, and The Oahu Railway and Land Company a Corporation duly incorporated under the laws of the Hawaiian Government, party of the second part: Witnesseth.

That for and in consideration of the sum of Twenty Five Thousand and Twenty Five Dollars paid into the Hawaiian Exchequer by the said party of the second part the receipt whereof is hereby acknowledged, the said party of the first part as such Minister of the Interior as aforesaid, acting for and on behalf of the Government of the Republic of Hawaii and by and with the authority vested in him by law, does hereby give, grant, bargain, sell and convey unto the said party of the second part and its successors and assigns, the following tract of land situate in the District of Kona, Island of Oahu:

1. Part of Kuuili. Beginning at the point where the located center line



## SMALL UNMANNED AERIAL SYSTEM (SUAS)

- Governed by Army Regulation 95-1-1 instead of FAA Part 107
- Fully approved “blue” aircraft
- Permission to fly over USAG-HI property

Sensefly eBee TAC



Parrot Anafi USA



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# SUAS APPLICATION: MEASURING X, Y, Z DISTANCE



Distance ▾ Distance: 7.2331 m; Height difference: -3.1377 m

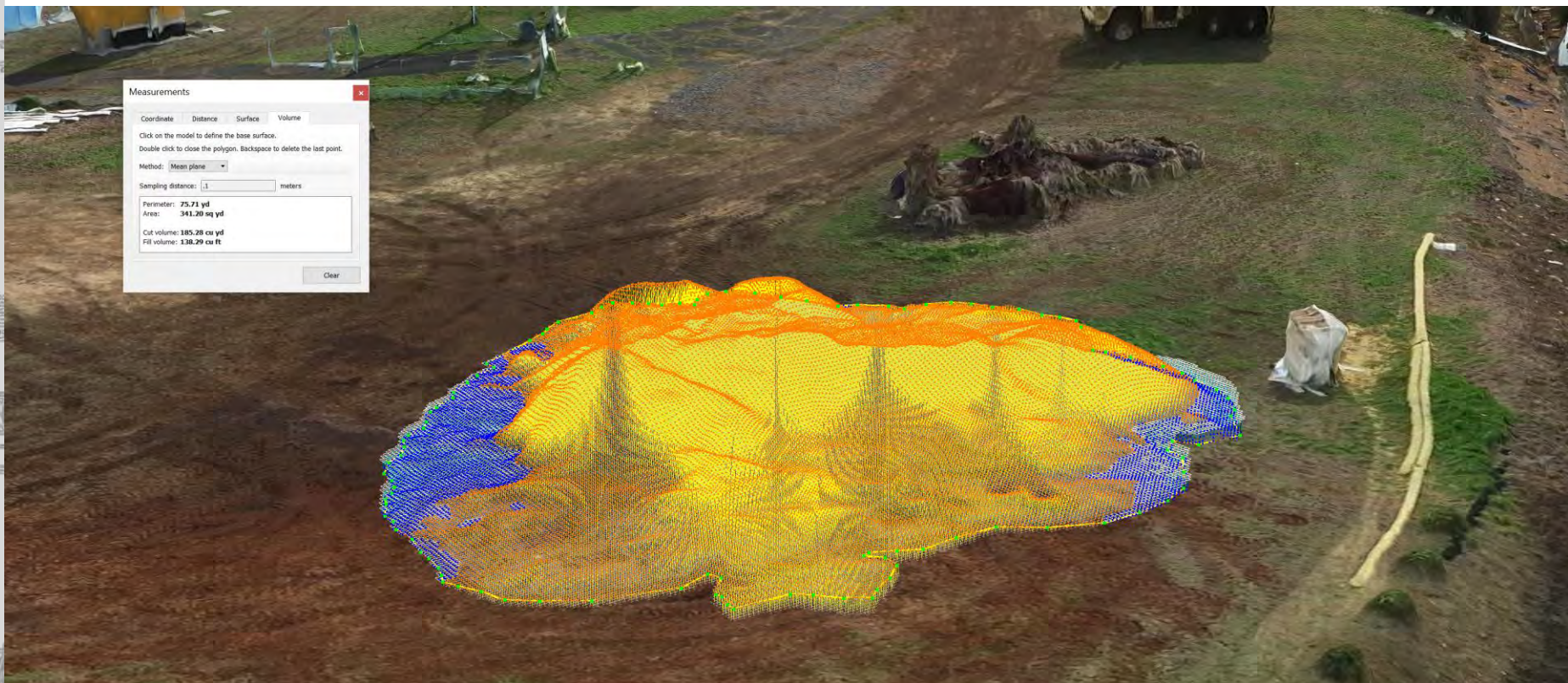


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# SUAS APPLICATION: MEASURING FILL

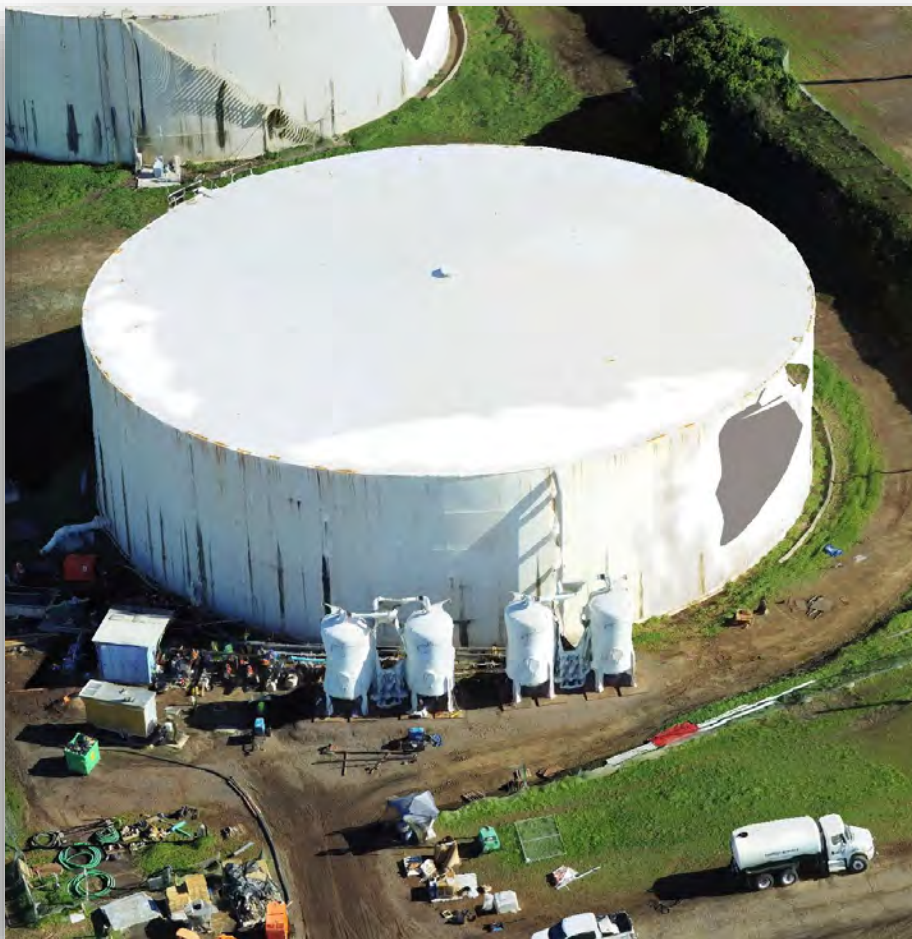


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# SUAS APPLICATION: CHANGE ANALYSIS



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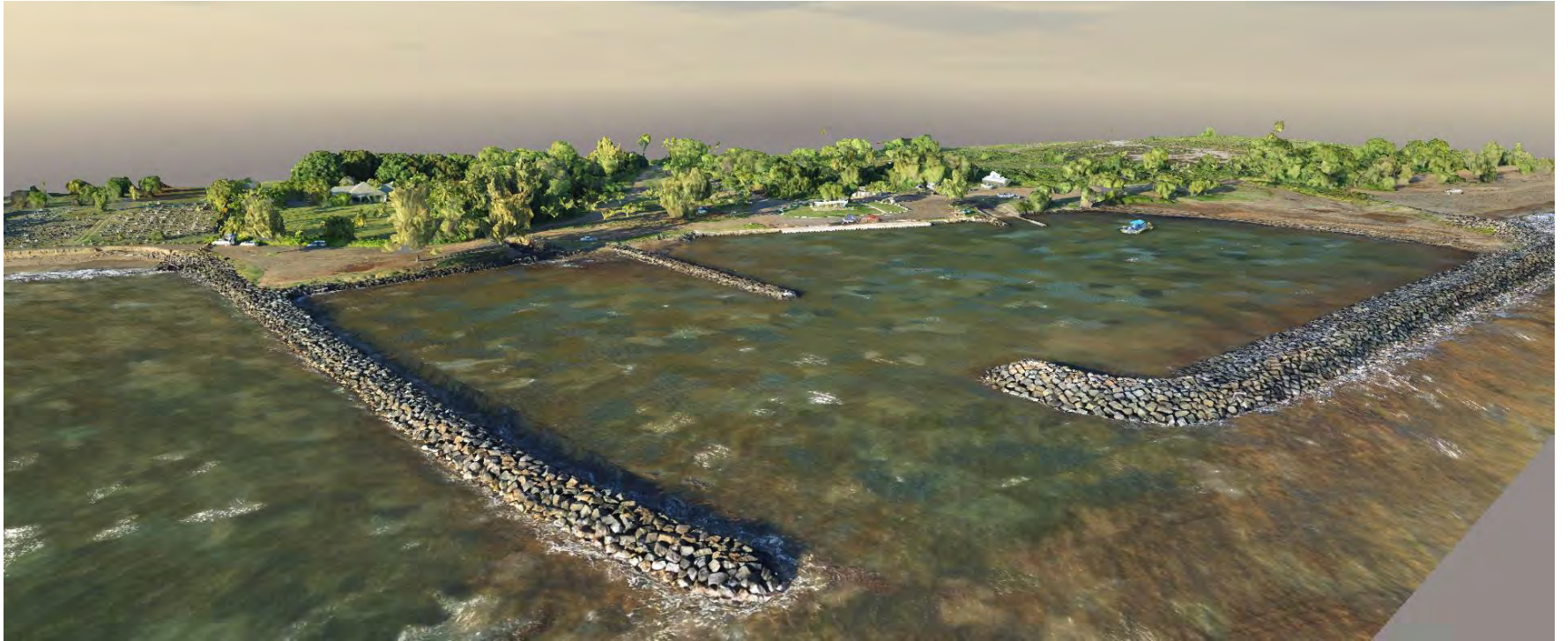




# SUAS APPLICATION: FACILITY MANAGEMENT







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# QUESTIONS

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