

Layer Name: Hawaii Cesspool Prioritization Tool (HCPT) Cesspools  
(*See also Cesspool Priority Census Blocks, Block Groups and Tracts layers*)

File Name: hcpt\_cesspools

Layer Type: point

Status: Complete

Geog. Extent: Islands of Kauai, Oahu, Maui, and Hawaii

Projection: Universal Transverse Mercator, Zone 4 (Meters)

Datum: NAD 83 HARN

*Please note - if you download data from the State's geoportal (<https://geoportal.hawaii.gov/>), the data is exported in WGS84 coordinates, although it is stored internally (in the State's geodatabase), served in the State's web services (<https://geodata.hawaii.gov/arcgis/rest/services>) and made available in the State's legacy download site (<https://planning.hawaii.gov/gis/download-gis-data-expanded/>) in UTM / NAD 83 coordinates.*

Description: Cesspools with risk factors and calculated prioritization scores for the islands of Hawaii, Kauai, Maui and Oahu (2022).

Provided to Statewide GIS Program by UH Water Resources Research Center (Johann Lall)  
November 2025.

**Note:** Molokai cesspool data will be provided in the State GIS environment at a later date; in the meantime it can be found a HCPT site, [here](#), or users can request the data directly from the Water Resources Research Center at the same site.

Abstract: This dataset presents spatially aggregated prioritization scores for geographic areas across Hawai'i at different scales: census tracts, block groups, block. Aggregate scores are based on the relative risk posed by cesspool locations within each geographic unit. Individual cesspool points were scored using multiple environmental and social risk factors (proximity to coastlines, drinking water wells, groundwater depth, soil suitability, sea-level rise zones, coral cover, coastal usage). The resulting point and polygon layers provide a prioritized view of which areas (at tract, block-group, and block scale) may warrant the most urgent attention for cesspool conversion efforts.

Source: UH Water Resources Research Center (Johann Lall)

Note: For additional information about sources and methods, please visit the following links:  
Hawaii Cesspool Prioritization Tool:

<https://seagrant.soest.hawaii.edu/cesspools-tool/>

[https://github.com/cshuler/Act132\\_Cesspool\\_Prioritization](https://github.com/cshuler/Act132_Cesspool_Prioritization)

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*Attributes listed on the following pages*

**Attributes:      Points:**

Field	Description
UI	Unique ID for each OSDS generated from latitude and longitude
X	X coordinate of OSDS in WGS84 degrees
Y	Y coordinate of OSDS in WGS84 degrees
Island	The island where the OSDS is sited
TMK	The 9-digit tax map key of the parcel where the OSDS is sited
BlockBk_ID	Census Block ID where the OSDS is sited
BlockGp_ID	Census Block Group ID where the OSDS is sited
Track_ID	Census Tract ID where the OSDS is sited
Flickr_ID	A unique identifier for each downstream coastal impact cell
Flickr_X	The x coordinate of each downstream coastal impact cell
Flickr_Y	The y coordinate of each downstream coastal impact+ cell
UserDays	The average number of user-days recorded by the Flickr photo sharing app for each location
Swim_beach	True if the cesspool drains to a location within 1km of a coastal lifeguard tower
dist2_coast_m	Distance to coastline in meters
dist2_MunWells_m	Distance to closest municipal well in CWRM database in meters
dist2_DomWells_m	Distance to closest domestic well in CWRM database in meters
dist2_Streams_m	<a href="https://geoportal.hawaii.gov/datasets/56046b3578064d989ffa485e4ed3dc46/explore">Distance to closest location on a stream in meters. Stream data from Hawai'i geoportal (https://geoportal.hawaii.gov/datasets/56046b3578064d989ffa485e4ed3dc46/explore)</a>
nrCS_DtoBrock	NRCS depth to bedrock or cemented pan
nrCS_FloodFreq	NRCS degree to which the soil is subject to flooding or ponding
nrCS_septic_dominant	NRCS suitability ranking that describes how well suited the given soil type are to handling septic system effluent. Not useful for Hawaii
nrCS_septic_least	NRCS least suitable for septic rank
nrCS_septic_most	NRCS most suitable for septic rank
nrCS_ksat_hi	NRCS soil unit high value of the distribution of saturated hydrologic conductivity values for the soil type (in ft/day)
nrCS_ksat_lo	NRCS soil unit low value of the distribution of saturated hydrologic conductivity values for the soil type (in ft/day)
nrCS_ksat_rep	NRCS soil unit representative value of the distribution of saturated hydrologic conductivity values for the soil type (in ft/day)
nrCS_rockFrag3in	NRCS soil unit percentage of the soil composed of rocks >3" in diameter
rainfall_in	The average annual rainfall of the land where OSDS is sited (inches/year )
slope_deg	Slope of land where OSDS is sited, calculated from 10 meter statewide elevation (in degrees)
OSDS_Density_perAcre	OSDS kernel density expressed as number of OSDS units per acre
dist2_Wetlands_m	Distance from the OSDS to wetlands in the national hydrologic database in meters
WT_elev_m	The water table elevation where OSDS is sited in meters
Elevation_m	Ground surface elevation where OSDS is sited from coastal LiDAR or 10 meter statewide elevation
Dep_to_Water_m	The depth from the ground surface to the water table where OSDS is sited (in m)
InSLR2030	<a href="https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/">True if the OSDS unit is sited inside of the projected Sea Level Rise zone for the year 2030 (from https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/)</a>
InSLR2050	<a href="https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/">True if the OSDS unit is sited inside of the projected Sea Level Rise zone for the year 2050 (from https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/)</a>

InSLR2100	True if the OSDS unit is sited inside of the projected Sea Level Rise zone for the year 2100 (from <a href="https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/">https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/</a> )
In_WellCZ_B	True if the OSDS is within well capture zone B
In_WellCZ_C	True if the OSDS is within well capture zone C
RFish_rank	Ranking for fish habitat and recovery potential (Foo et al., 2021)
Coral_rank	Ranking for coral cover and recovery potential (Donovan et al. 2020)
In_2017_CP_zone	Binary qualifier: 1 if the point was in one of the older priority zones from Whittier 2017
Wave_pwr	Wave power in KW/m at beach that OSDS drains to
dist2_Strm_WtInd_m	Distance to nearest stream or wetland in meters

Note: Coastal Impact Cells are coastal impact zones between 250 meters and 500 meters in length, used to analyze coastal environmental factors and impacts, and tied to individual cesspool parcels upstream / mauka. For more information, please visit websites linked on Page 1 of the metadata.

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Dr. Christopher Shuler  
UH Water Resources Research Center  
Email: [cshuler@hawaii.edu](mailto:cshuler@hawaii.edu); Phone: 808-956-7848

Layer Name: Hawaii Cesspool Prioritization Tool (HCPT) Cesspools **Priority Census Blocks**  
(*See also HCPT Cesspools, Cesspool Priority Census Tracts and Block Groups layers*)

File Name: hcpt\_cesspools\_priority\_blocks

Layer Type: polygon

Status: Complete

Geog. Extent: Islands of Kauai, Oahu, Maui, and Hawaii

Projection: Universal Transverse Mercator, Zone 4 (Meters)

Datum: NAD 83 HARN

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Description: Aggregated cesspool prioritization by Census Block for the islands of Hawaii, Kauai, Maui and Oahu (2023)

Provided to Statewide GIS Program by UH Water Resources Research Center (Johann Lall)  
November 2025.

**Note:** Molokai cesspool data will be provided in the State GIS environment at a later date; in the meantime it can be found a HCPT site, [here](#), or users can request the data directly from the Water Resources Research.Center at the same site.

Abstract: This dataset presents spatially aggregated prioritization scores for geographic areas across Hawai'i at different scales: census tracts, block groups, block. Aggregate scores are based on the relative risk posed by cesspool locations within each geographic unit. Individual cesspool points were scored using multiple environmental and social risk factors (proximity to coastlines, drinking water wells, groundwater depth, soil suitability, sea-level rise zones, coral cover, coastal usage). The resulting point and polygon layers provide a prioritized view of which areas (at tract, block-group, and block scale) may warrant the most urgent attention for cesspool conversion efforts.

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*Attributes listed on the following pages*

**Attributes: Polygons:**

<b>Field</b>	<b>Description</b>
BlockBk_ID	Census Block GeoID
Final_Prio	Priority score calculated from factors for cesspools w/in each Census Block
OSDS_count	Number of cesspools in the Census Block
In_2017_CP	Fraction of OSDS within a 2017 cesspool prioritization zone
Final_Cat	Category ranking: <b>High</b> if in top 10% of all Census Blocks <b>Medium</b> if in 10% to 50% quantile of all Census Blocks <b>Low</b> if in the bottom half of all Census Blocks
Fin_Rank	Numerical Category Ranking: <b>1</b> if in top 10% of all Census Blocks <b>2</b> if in 10% to 50% quantile of all Census Blocks <b>3</b> if in the bottom half of all Census Blocks

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Layer Name: Hawaii Cesspool Prioritization Tool (HCPT) Cesspools **Priority Census Block Groups**  
(*See also HCPT Cesspools, Cesspool Priority Census Tracts and Blocks layers*)

File Name: hcpt\_cesspools\_priority\_blockgrps

Layer Type: polygon

Status: Complete

Geog. Extent: Islands of Kauai, Oahu, Maui, and Hawaii

Projection: Universal Transverse Mercator, Zone 4 (Meters)

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Description: Aggregated cesspool prioritization by Census Block Group for the islands of Hawaii, Kauai, Maui and Oahu (2023)

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**Attributes: Polygons:**

<b>Field</b>	<b>Description</b>
BlockGp_ID	Census Block GeoID
Name_ID	Label field containing Census Block Group number and number of cesspools
Final_Prio	Priority score calculated from factors for cesspools w/in each Census Block
OSDS_count	Number of cesspools in the Census Block Group
In_2017_CP	Fraction of OSDS within a 2017 cesspool prioritization zone
Final_Cat	Category ranking: <b>High</b> if in top 10% of all Census Block Groups <b>Medium</b> if in 10% to 50% quantile of all Census Block Groups <b>Low</b> if in the bottom half of all Census Block Groups
Fin_Rank	Numerical Category Ranking: <b>1</b> if in top 10% of all Census Block Groups <b>2</b> if in 10% to 50% quantile of all Census Block Groups <b>3</b> if in the bottom half of all Census Block Groups

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Layer Name: Hawaii Cesspool Prioritization Tool (HCPT) Cesspools **Priority Census Tracts**  
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File Name: hcpt\_cesspools\_priority\_tracts

Layer Type: polygon

Status: Complete

Geog. Extent: Islands of Kauai, Oahu, Maui, and Hawaii

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Description: Aggregated cesspool prioritization by Census Tract for the islands of Hawaii, Kauai, Maui and Oahu (2023)

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Attributes: Polygons:

Field	Description
Track_ID	Census Tract GeoID
Name_ID	Label field containing Census Tract name and number of cesspools
Final_Prio	Priority score calculated from factors for cesspools w/in each census tract
OSDS_count	Number of cesspools in the tract
In_2017_CP	Fraction of OSDS within a 2017 cesspool prioritization zone
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