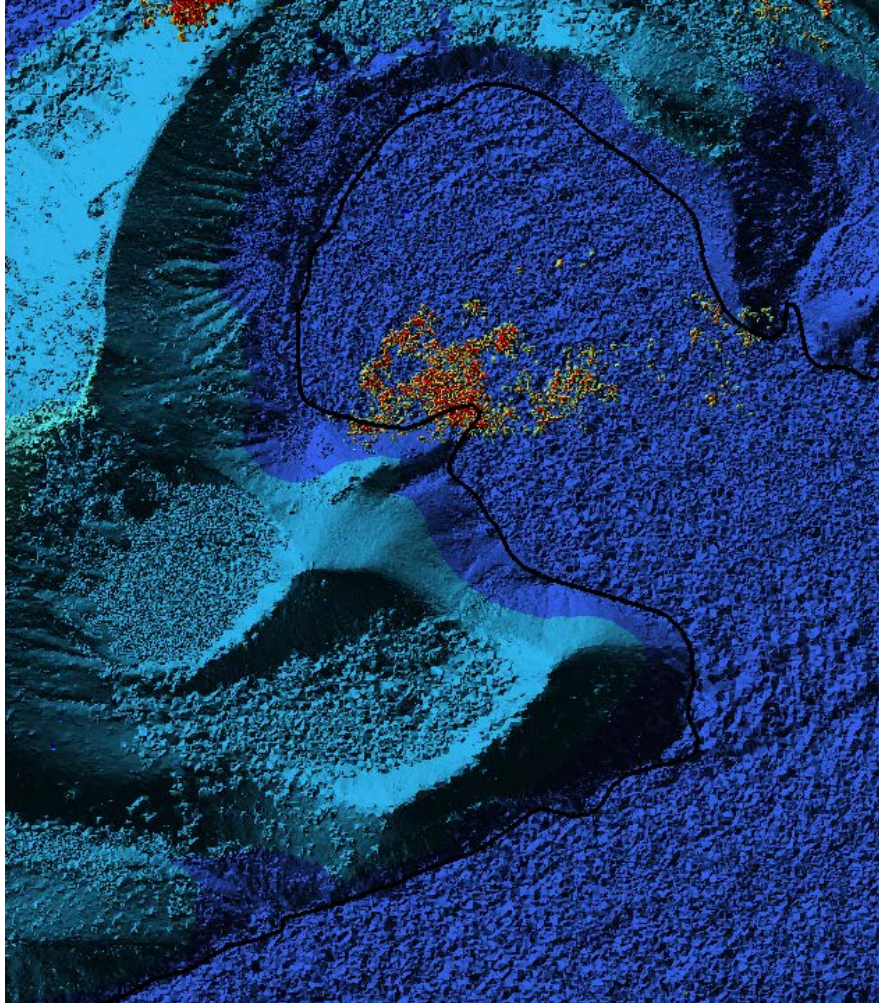


# Lidar Data for the Hawaiian Islands

Known and Available Data sets from 1999-2017



Compiled by Craig Clouet

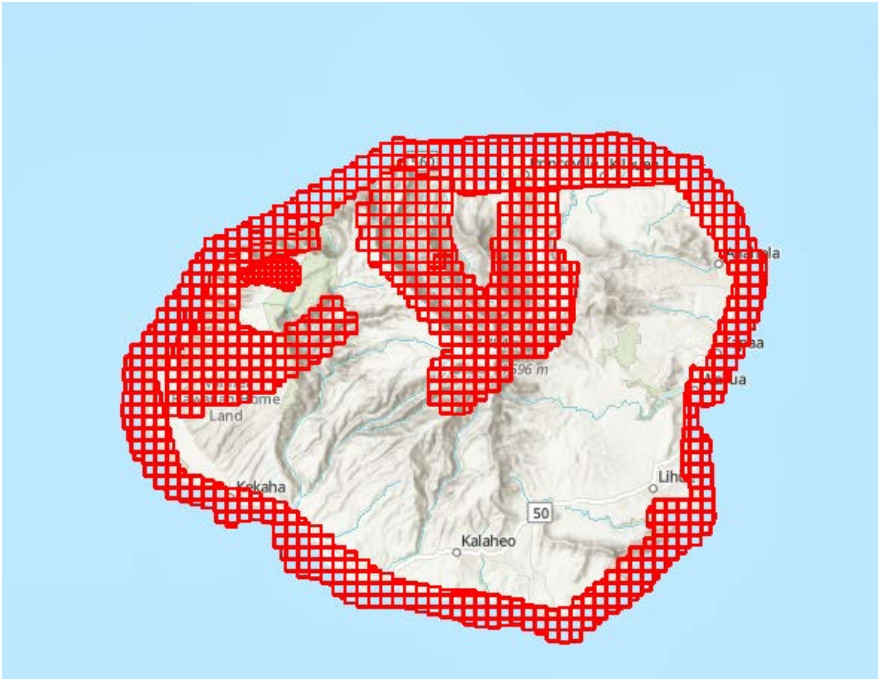
Esri



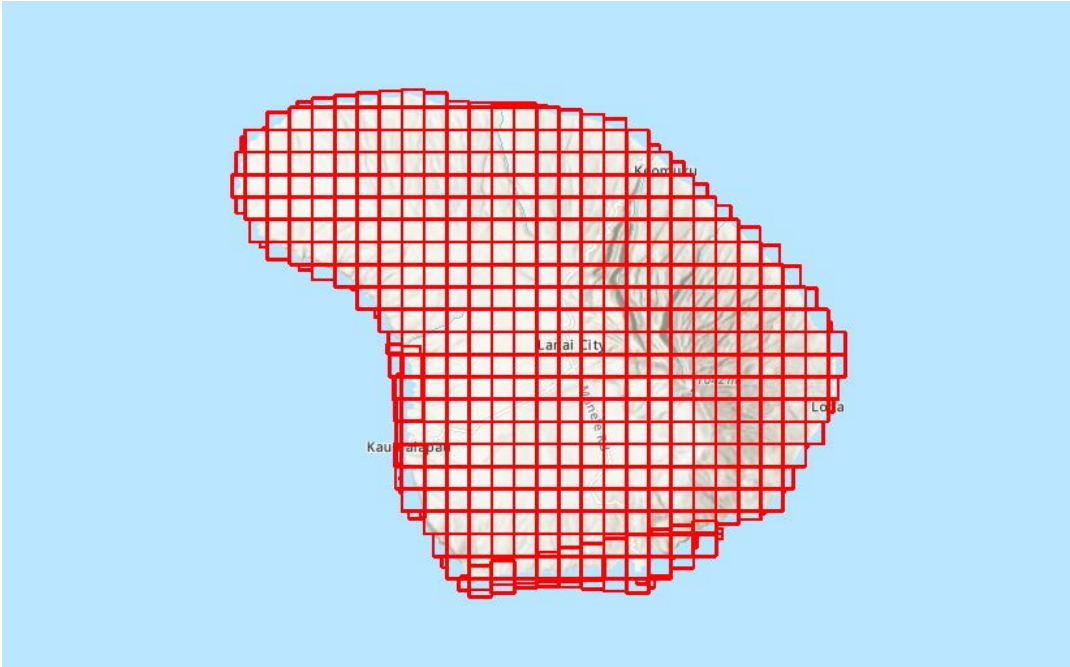
Hawaii Island LAS Data



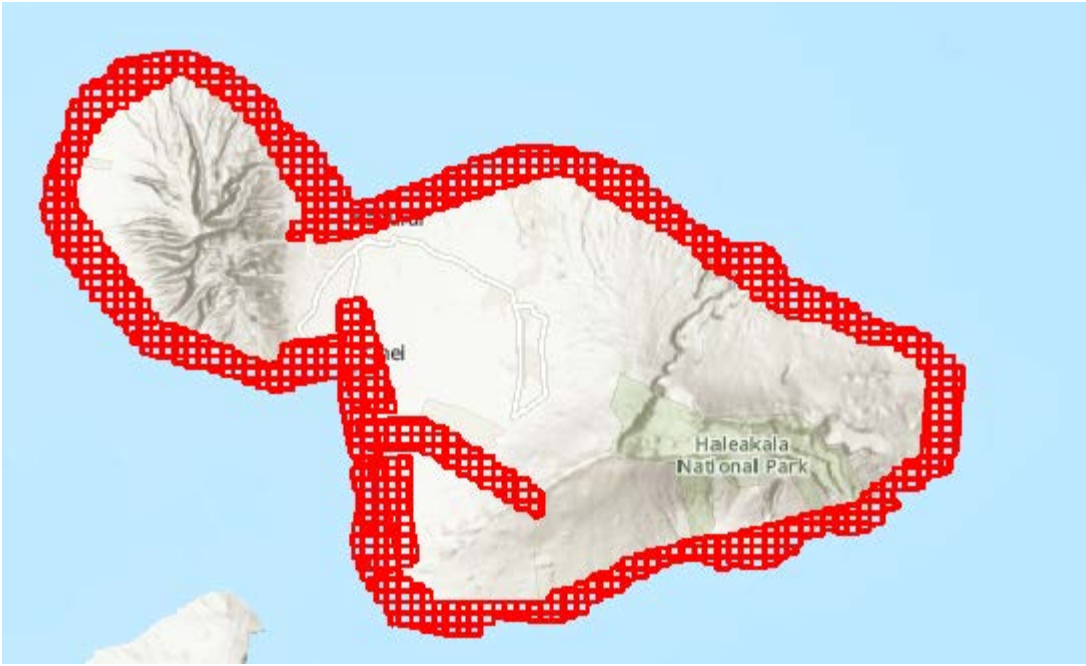
Kauai LAS Data



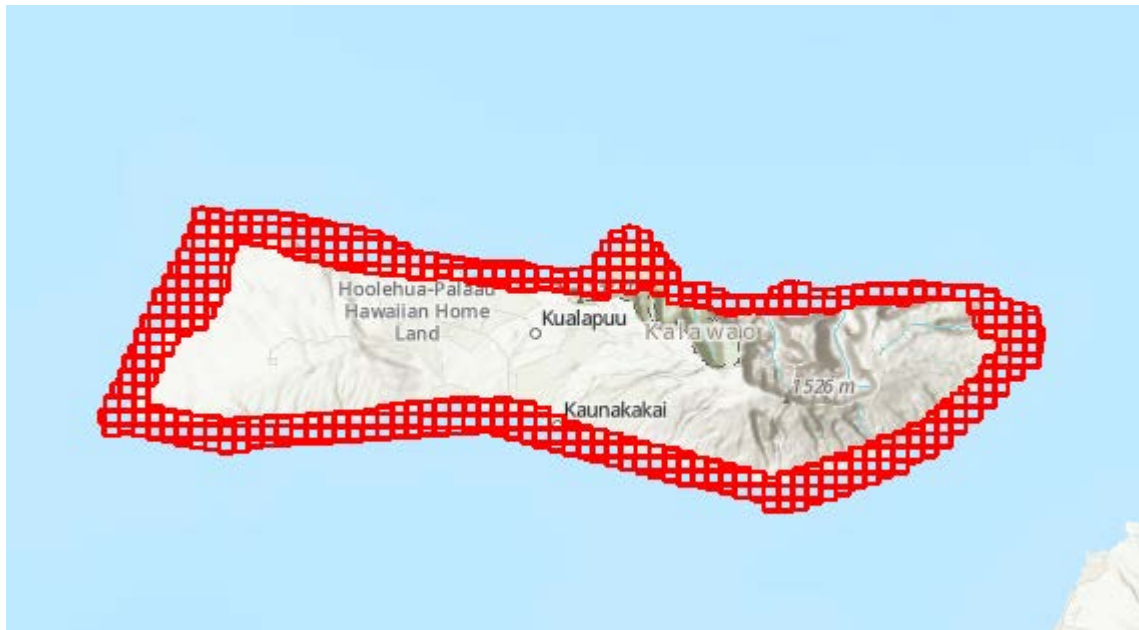
Lanai LAS Data



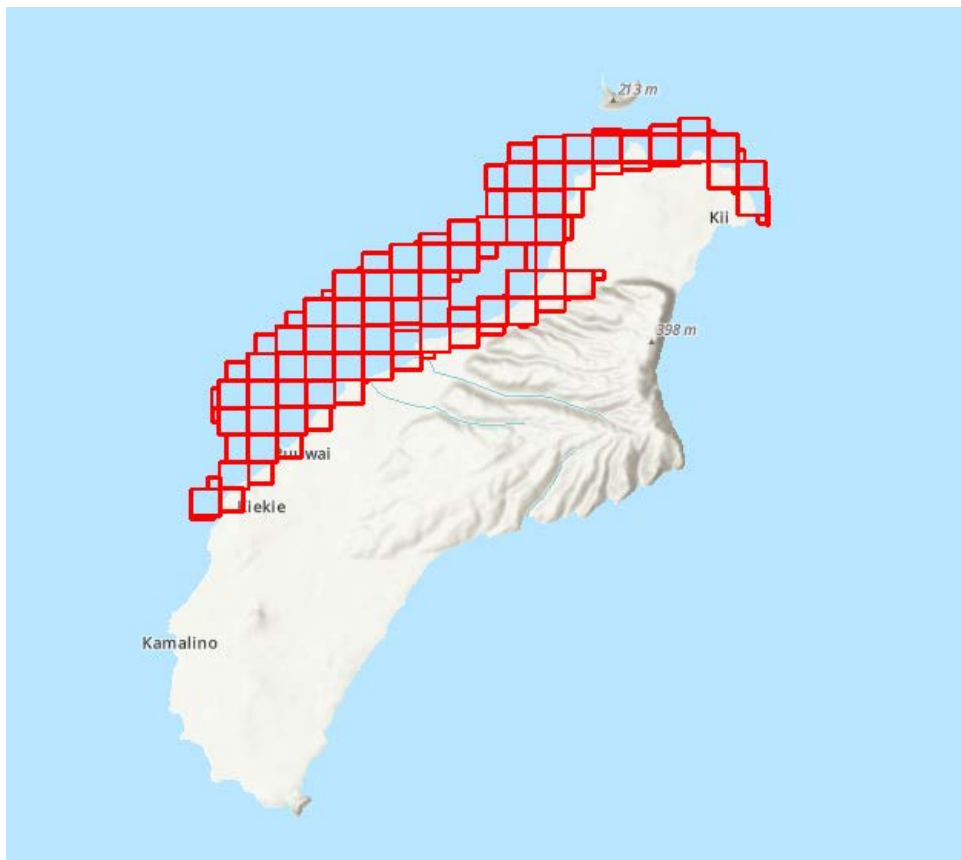
Maui LAS Data



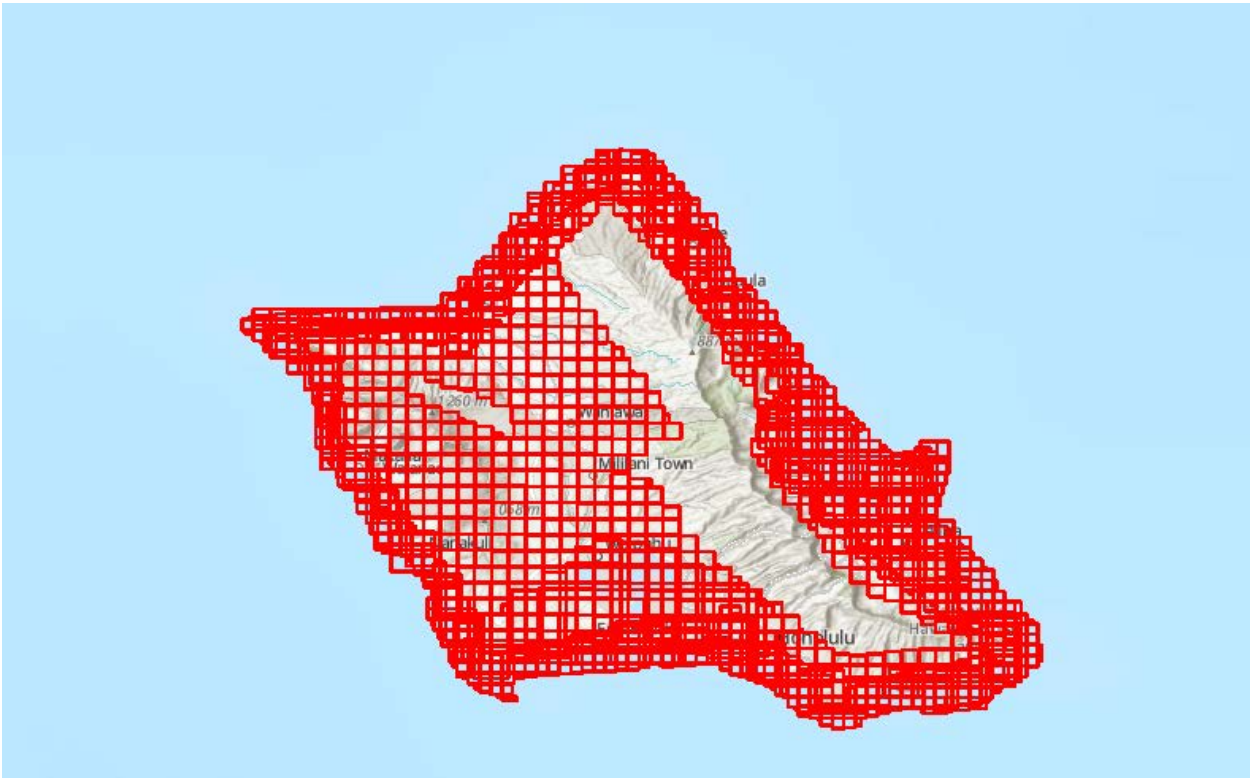
### Molokai LAS Data



### Niihau LAS Data



Oahu LAS Data

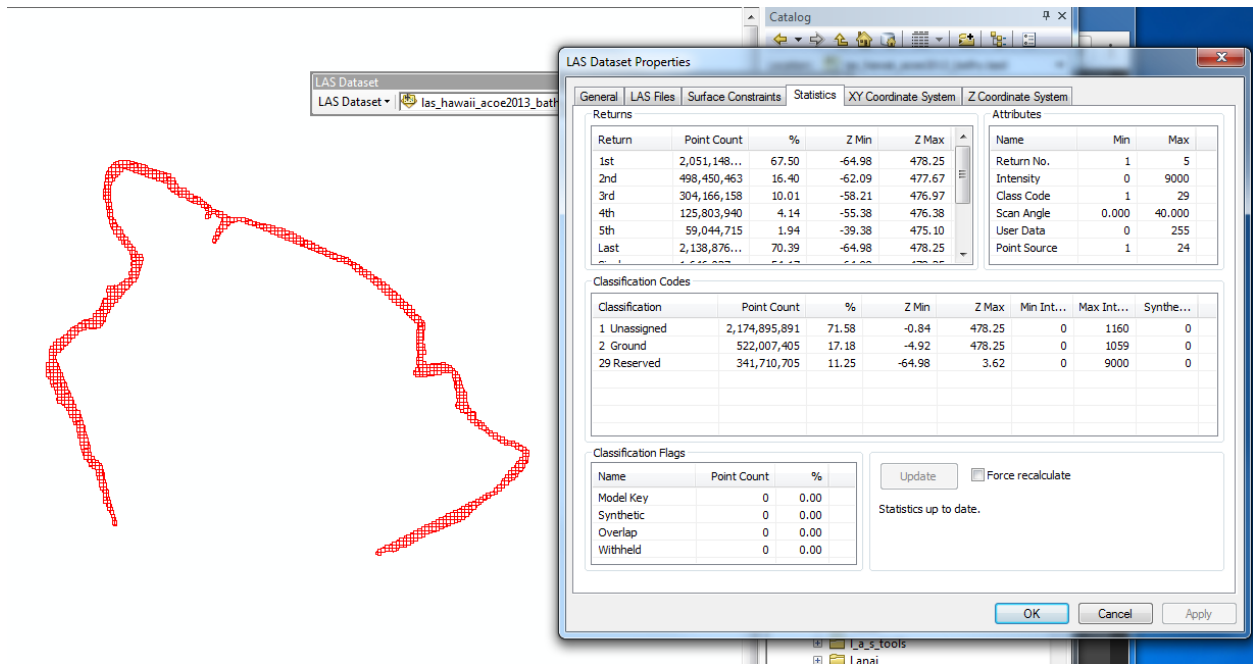


Island	LASdata	LASfiles	Pointcount
Hawaii	las_hawaii_acoe2013bathy	1050	3,038,614,001
Hawaii	las_hawaiiDC	1075	544,742,731
Hawaii	las_Hawaii_kilauea_a1	1	14,844,506
Hawaii	las_kona_extract_first	140	90,758,636
Hawaii	las_kona_extract_last	140	88,630,713
Hawaii	las_kona_ground_first	139	65,239,112
Hawaii	las_kona_ground_last	140	67,179,623
Hawaii	las_pelekane_noaa	11	1,124,720,789
Hawaii	las_waimea_a1_first	204	95,883,837
Hawaii	las_waimea_a1_last	204	101,183,559
Total			5,216,953,001
Kauai	las_dnlr_2017	49	434,271,598
Kauai	las_HI09_kauai	244	916,900,535
Kauai	las_HI13_huppert	146	995,581,661
Kauai	las_kauai_acoe2013_bathy	568	2,160,715,913
Kauai	Las_kauai_DOFAW_2017_L1	365	3,464,316
Kauai	Las_kauai_DOFAW_2017_L2	365	3,464,316
Total			4,507,469,707
Lanai	las_acoe2013_bathy	56	107,456,942
Lanai	las_lanai_a1	441	231,753,291
Total			339,210,233
Maui	las_maui_acoe2013	745	2,450,560,460
Maui	las_maui_femaArea_baldlast	15	2,060,770
Maui	las_maui_femaArea_extractlast	15	2,421,321
Maui	las_maui_femafema_bald	53	20,494,724
Maui	las_maui_femafema_extract	53	20,309,072
Maui	las_maui_prior1A_extract	50	14,558,488
Maui	las_maui_prior1A_ground	49	18,135,226
Maui	las_maui_prior1B_extract	43	14,220,409
Maui	las_maui_prior1B_ground	43	18,018,884
Maui	las_maui_psc	12	31,673,607
Total			2,592,452,961
Molokai	las_molokai_acoe2013bathy	484	1,241,843,222
Total			1,241,843,222
Niihau	las_niihau_acoebathy2013	111	158,559,154
Total			158,559,154
Oahu	las_oahu_acoe2013_bathy	886	3,197,923,571
Oahu	las_oahu_harbor_first_bare	65	8,007,704
Oahu	las_oahu_harbor_first_extract	65	7,036,061
Oahu	las_oahu_harbor_last_bare	65	8,416,065

Oahu	las_oahu_harbor_last_extract	62	6,448,349
Oahu	las_oahu_noaa2013	485	2,453,123,978
Oahu	las_oahu_northshore_first_extract	129	68,828,656
Oahu	las_oahu_northshore_last_bald	129	43,792,009
Oahu	las_oahu_northshore_last_extract	129	69,536,195
Oahu	las_oahu_northwest_first_bald	102	24,978,038
Oahu	las_oahu_northwest_first_extract	102	26,901,349
Oahu	las_oahu_northwest_last_bald	102	24,675,190
Oahu	las_oahu_psc	47	100,533,243
Oahu	las_oahu_psc_coastal	63	68,611,112
Total			6,108,811,520
State Total			18,923,456,576

---





Data Type: LAS Dataset

Folder: F:\Hawaii\las\_hawaii\_acoe2013bathy

LAS Dataset: las\_hawaii\_acoe2013\_bathy.lasd

Z Range: -64.980000, 478.250000

LAS Files: 1050

Surface Constraints: 0

LAS points: 3,038,614,001

Classification code statistics:

1 Unassigned: 2,174,895,891

2 Ground: 522,007,405

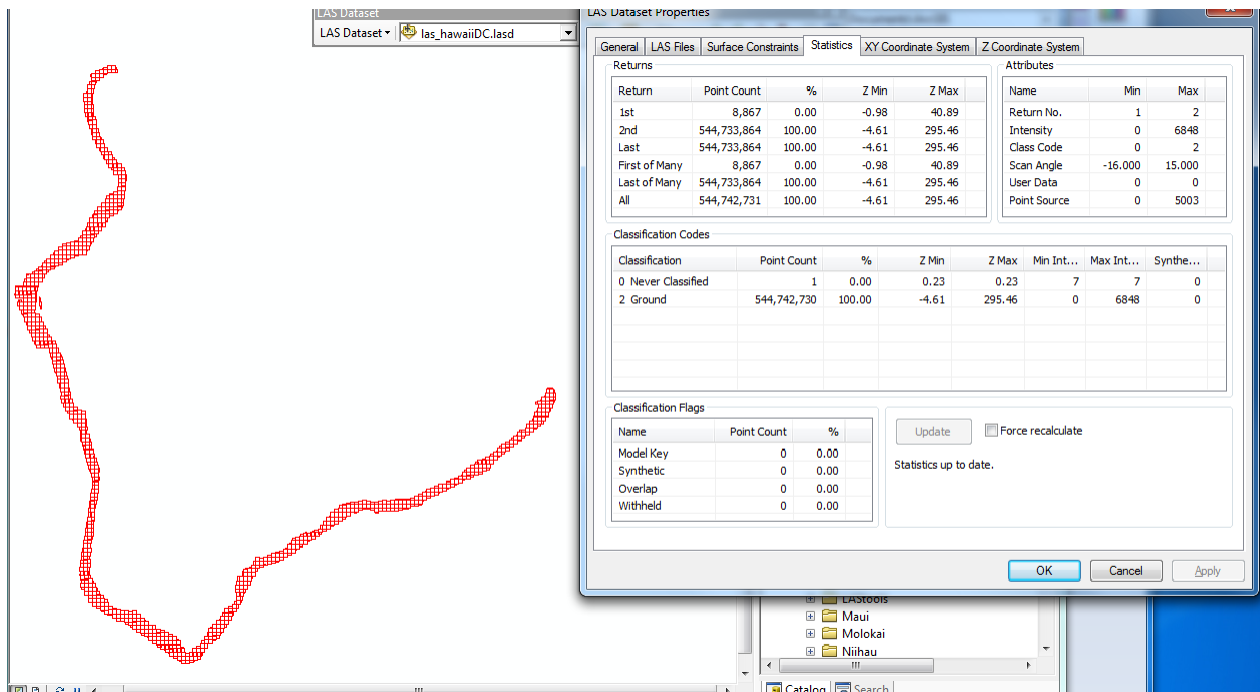
29 Reserved: 341,710,705

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Hawaii\las\_hawaiiDC

LAS Dataset: las\_hawaiiDC.lasd

Z Range: -4.607000, 295.460000

LAS Files: 1075

Surface Constraints: 0

LAS points: 544,742,731

Classification code statistics:

0 Never Classified: 1

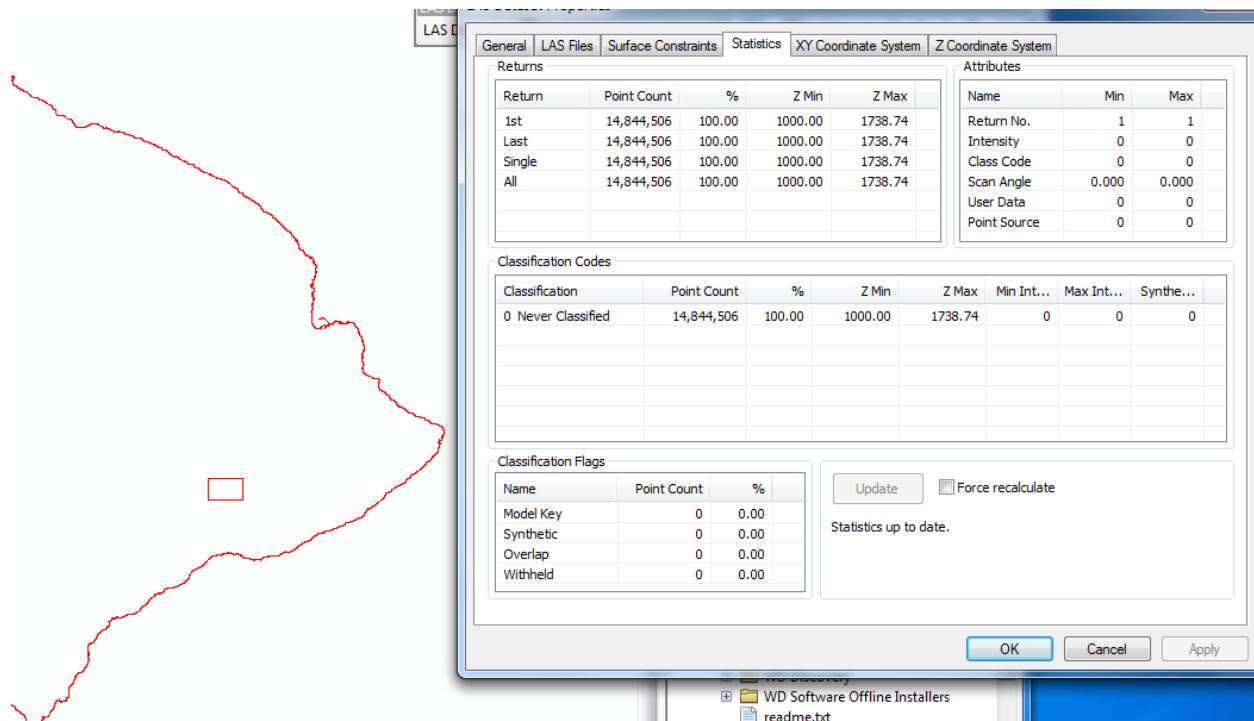
2 Ground: 544,742,730

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Hawaii\las\_kilauea\_a1

LAS Dataset: las\_hawaii\_kilauea\_A1.las

Z Range: 1000.000000, 1738.740000

LAS Files: 1

Surface Constraints: 0

LAS points: 14,844,506

Classification code statistics:

0 Never Classified: 14,844,506

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_5N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -153.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

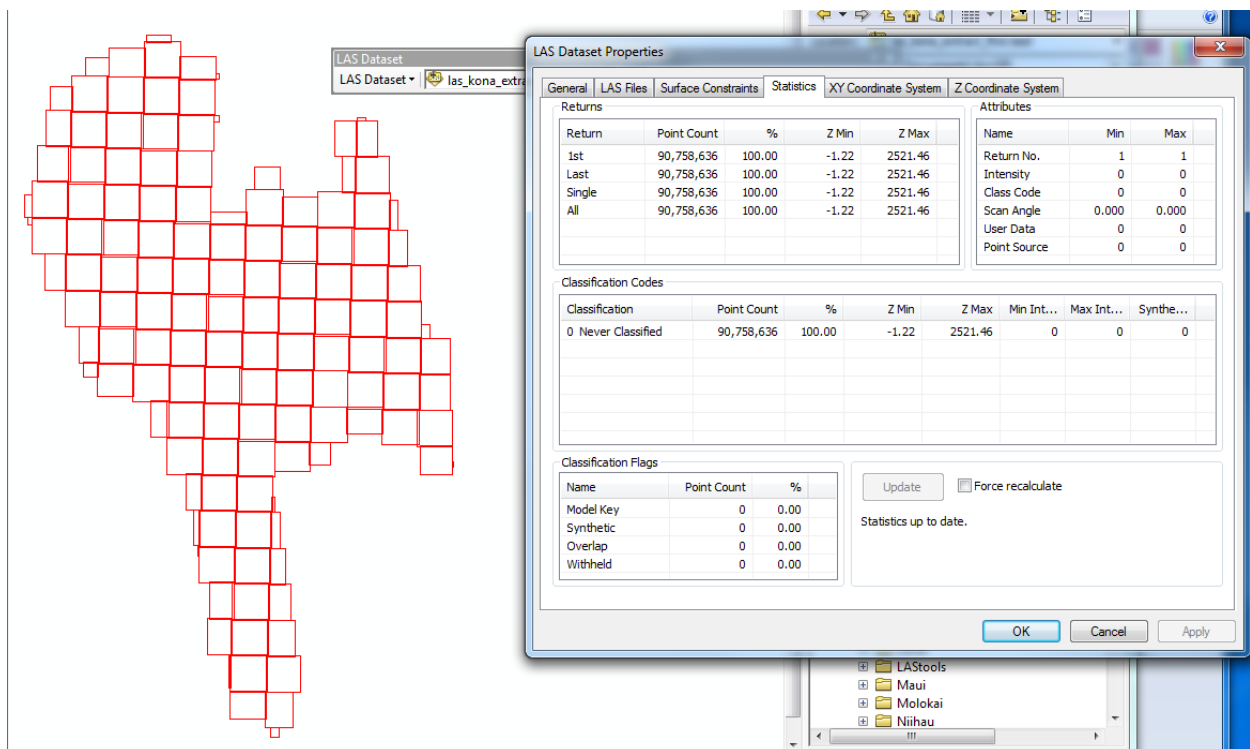
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Hawaii\las\_kona\_extract\_first

LAS Dataset: las\_kona\_extract\_first.lasd

Z Range: -1.220000, 2521.460000

LAS Files: 140

Surface Constraints: 0

LAS points: 90,758,636

Classification code statistics:

0 Never Classified: 90,758,636

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_5N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -153.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

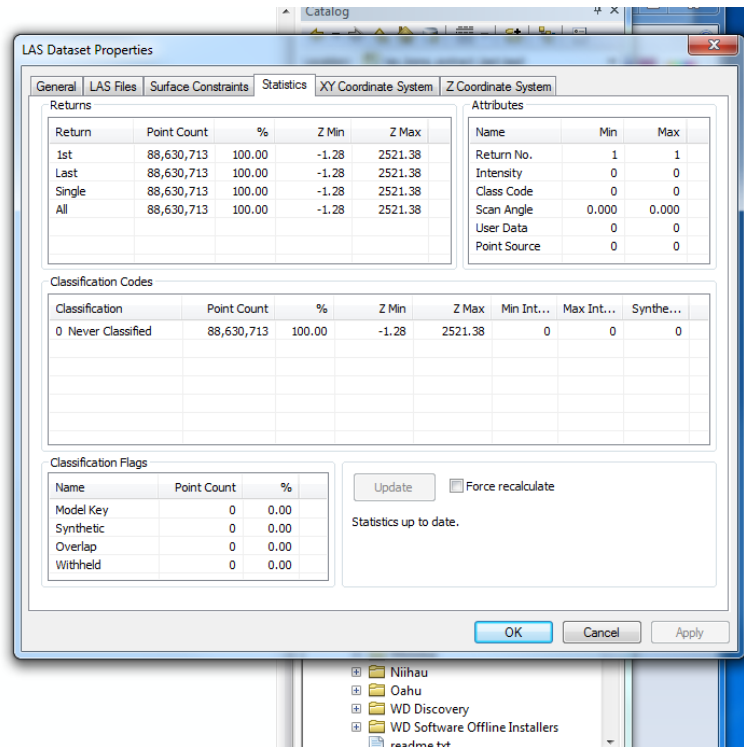
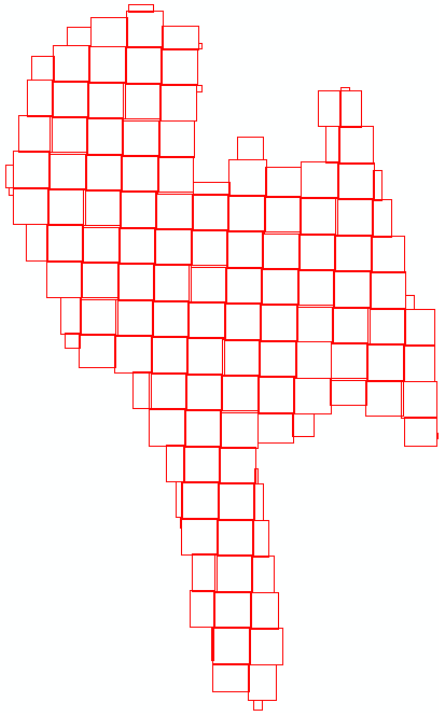
Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree

---



Data Type: LAS Dataset

Folder: F:\Hawaii\las\_kona\_extract\_last

LAS Dataset: las\_kona\_extract\_last.las

Z Range: -1.280000, 2521.380000

LAS Files: 140

Surface Constraints: 0

LAS points: 88,630,713

Classification code statistics:

0 Never Classified: 88,630,713

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_5N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -153.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

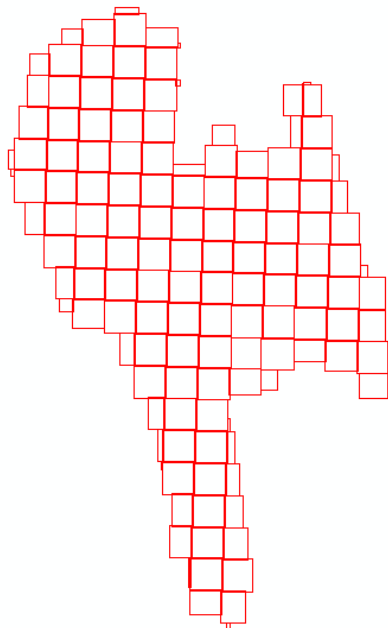
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	65,239,112	100.00	-1.28	2520.65
Last	65,239,112	100.00	-1.28	2520.65
Single	65,239,112	100.00	-1.28	2520.65
All	65,239,112	100.00	-1.28	2520.65

Attributes

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	65,239,112	100.00	-1.28	2520.65	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Hawaii\las\_kona\_ground\_first

LAS Dataset: las\_kona\_ground\_first.lasd

Z Range: -1.280000, 2520.650000

LAS Files: 139

Surface Constraints: 0

LAS points: 65,239,112

Classification code statistics:

0 Never Classified: 65,239,112

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_5N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -153.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

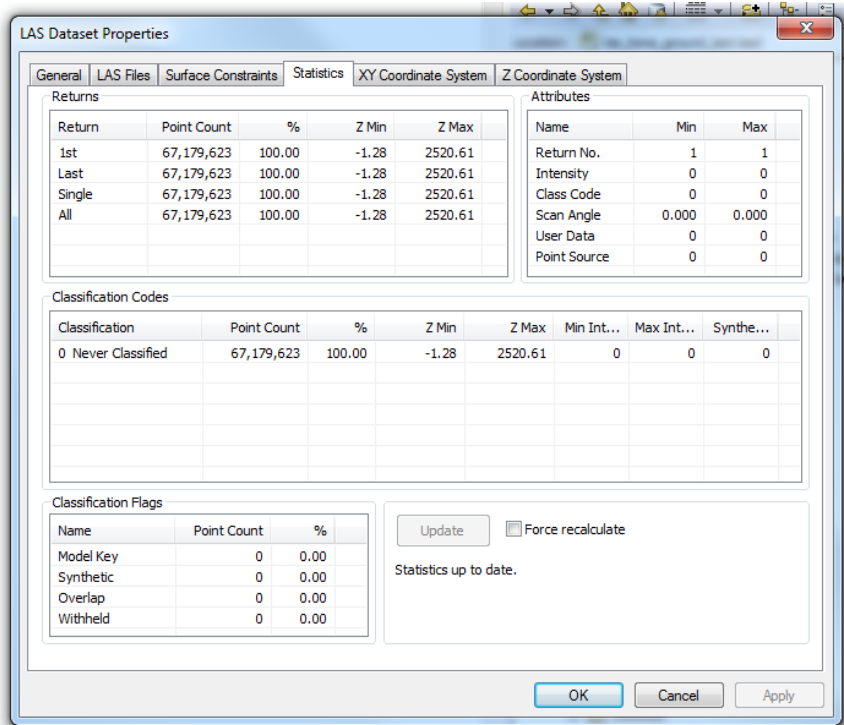
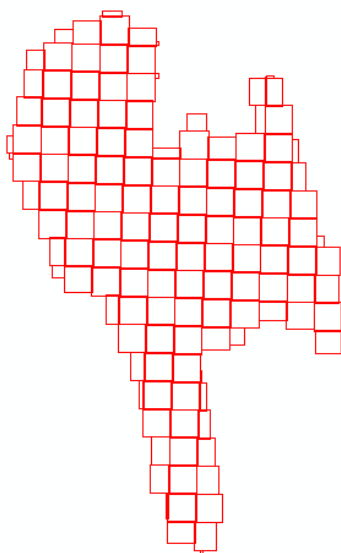
Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree

---





Data Type: LAS Dataset

Folder: F:\Hawaii\las\_kona\_ground\_last

LAS Dataset: las\_kona\_ground\_last.las

Z Range: -1.280000, 2520.610000

LAS Files: 140

Surface Constraints: 0

LAS points: 67,179,623

Classification code statistics:

0 Never Classified: 67,179,623

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_5N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -153.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

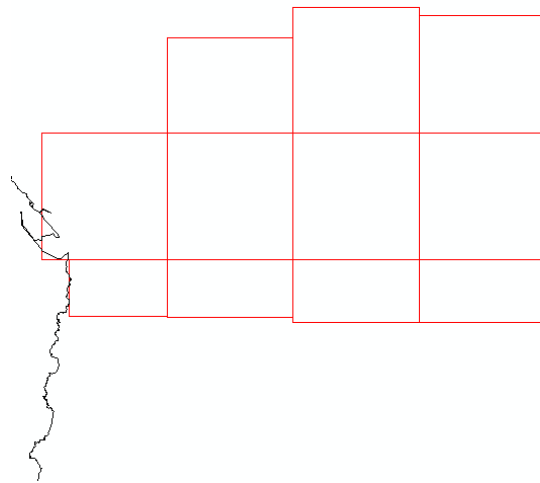
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



Return	Point Count	%	Z Min	Z Max
1st	1,107,909...	98.51	19.48	1600.30
2nd	15,126,808	1.34	19.56	1465.31
3rd	1,544,609	0.14	21.46	1461.83
4th	139,930	0.01	21.92	1458.31
Last	1,107,908...	98.51	19.48	1467.02
Single	1,092,781...	97.16	19.48	1467.02

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	285,039,211	25.34	19.48	1600.30	1	4088	0
1 Unassigned	193,475,201	17.20	23.85	1383.69	1	4085	0
2 Ground	488,107,479	43.40	23.77	1383.70	1	4088	0
3 Low Vegetation	130,977,912	11.65	24.03	1383.68	1	4088	0
4 Medium Vegetation	16,443,014	1.46	25.08	1380.75	1	4088	0
5 High Vegetation	9,842,938	0.88	26.28	1390.97	1	2558	0
6 Building	716,354	0.06	37.48	1274.08	1	1117	0

Name	Point Count	%
Model Key	124	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Data Type: LAS Dataset

Folder: F:\Hawaii\las\_pelekane\_noaa

LAS Dataset: las\_pelekane\_noaa.lasd

Z Range: 19.480000, 1600.300000

LAS Files: 11

Surface Constraints: 0

LAS points: 1,124,720,789

Classification code statistics:

- 0 Never Classified: 285,039,211
- 1 Unassigned: 193,475,201
- 2 Ground: 488,107,479
- 3 Low Vegetation: 130,977,912
- 4 Medium Vegetation: 16,443,014
- 5 High Vegetation: 9,842,938
- 6 Building: 716,354
- 7 Noise: 761
- 9 Water: 154
- 17 Bridge Deck: 4,494
- 18 High Noise: 113,271

Projected Coordinate System: NAD\_1983\_HARN\_UTM\_Zone\_5N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -153.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

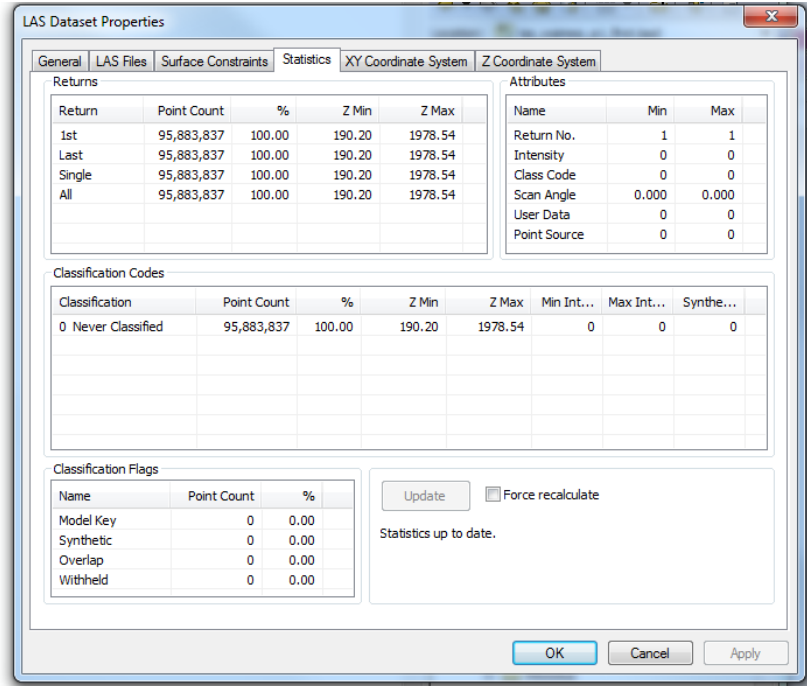
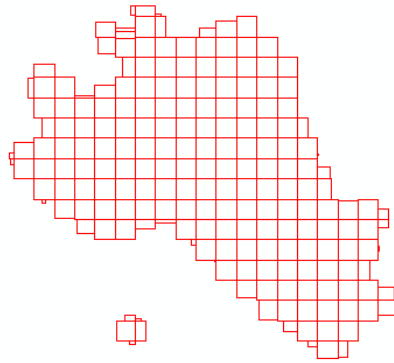
Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree

---



Data Type: LAS Dataset

Folder: F:\Hawaii\las\_waimea\_a1\_first

LAS Dataset: las\_waimea\_a1\_first.lasd

Z Range: 190.200000, 1978.540000

LAS Files: 204

Surface Constraints: 0

LAS points: 95,883,837

Classification code statistics:

0 Never Classified: 95,883,837

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_5N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -153.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

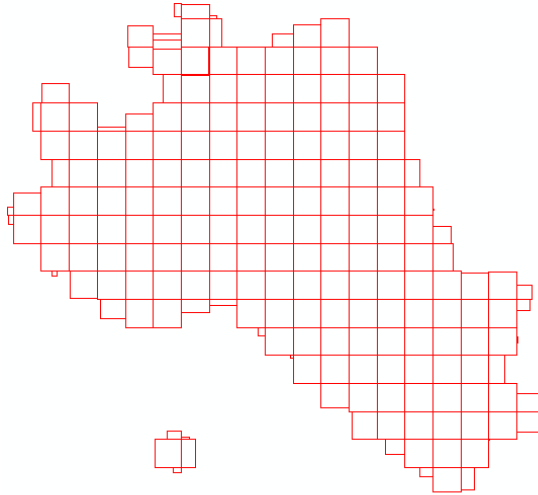
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



Return	Point Count	%	Z Min	Z Max
1st	101,183,559	100.00	191.61	1978.53
Last	101,183,559	100.00	191.61	1978.53
Single	101,183,559	100.00	191.61	1978.53
All	101,183,559	100.00	191.61	1978.53

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	101,183,559	100.00	191.61	1978.53	0	0	0

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Data Type: LAS Dataset

Folder: F:\Hawaii\las\_waimea\_a1\_last

LAS Dataset: las\_waimea\_a1\_last.lasd

Z Range: 191.610000, 1978.530000

LAS Files: 204

Surface Constraints: 0

LAS points: 101,183,559

Classification code statistics:

0 Never Classified: 101,183,559

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_5N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -153.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

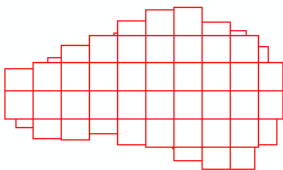
Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree

Kauai



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	258,735,439	59.58	529.58	1195.28
2nd	119,718,532	27.57	529.51	1186.31
3rd	43,098,829	9.92	429.77	1185.04
4th	10,863,130	2.50	529.86	1182.95
5th	1,855,668	0.43	530.47	1179.88
Last	232,033,206	53.43	429.77	1187.48

Attributes

Name	Min	Max
Return No.	1	5
Intensity	11	255
Class Code	1	7
Scan Angle	-30.000	26.000
User Data	0	57
Point Source	1	55

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
1 Unassigned	111,897	0.03	537.17	1186.36	11	141	0
2 Ground	12,981,207	2.99	529.51	1173.19	11	255	0
3 Low Vegetation	44,869,403	10.33	529.57	1185.38	11	255	0
4 Medium Vegetation	39,618,975	9.12	530.54	1179.10	11	255	0
5 High Vegetation	336,676,973	77.53	533.82	1187.48	11	255	0
7 Noise	13,143	0.00	429.77	1195.28	11	152	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

G:\  
G:\SoH-Manc

Data Type: LAS Dataset

Folder: F:\Kauai\las\_dlnr\_2017

LAS Dataset: las\_dlnr\_2017.lasd

Z Range: 429.770000, 1195.280000

LAS Files: 49

Surface Constraints: 0

LAS points: 434,271,598

Classification code statistics:

1 Unassigned: 111,897

2 Ground: 12,981,207

3 Low Vegetation: 44,869,403

4 Medium Vegetation: 39,618,975

5 High Vegetation: 336,676,973

7 Noise: 13,143

Projected Coordinate System: NAD\_1983\_HARN\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

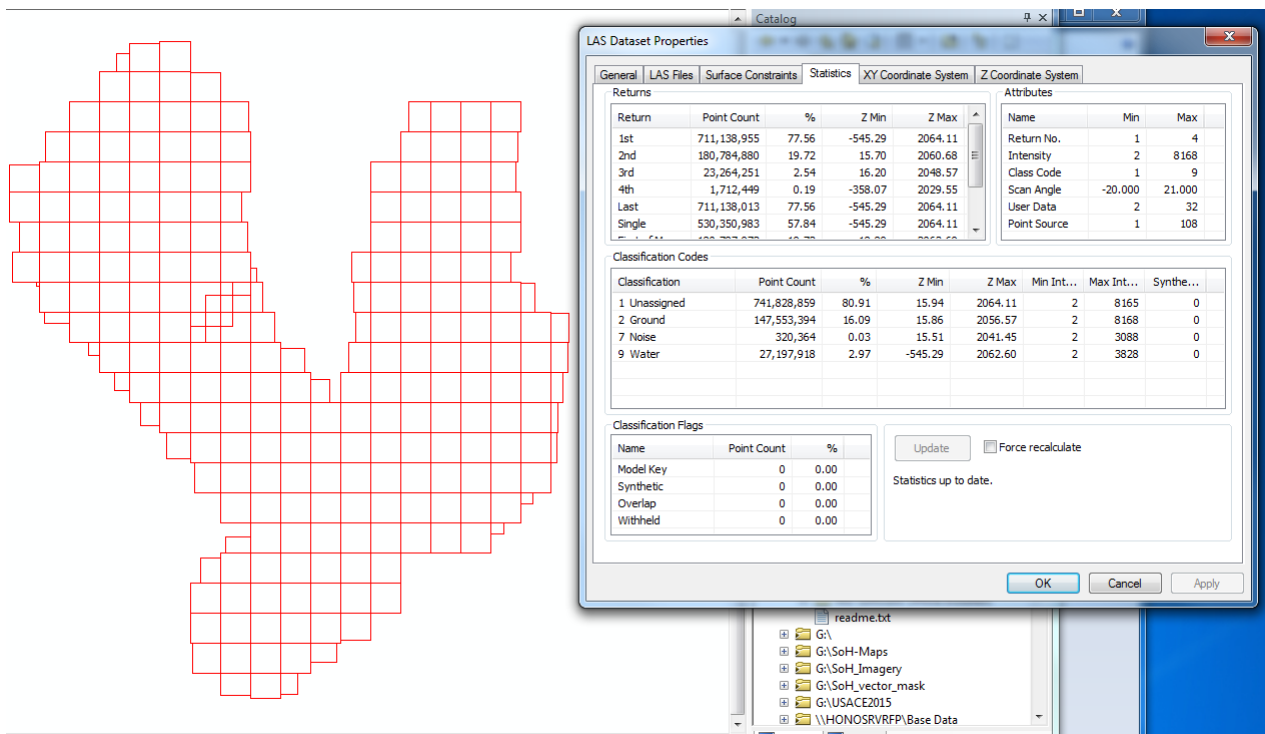
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Kauai\las\_HI09\_kauai

LAS Dataset: las\_HI09\_kauai.lasd

Z Range: -545.290000, 2064.110000

LAS Files: 244

Surface Constraints: 0

LAS points: 916,900,535

Classification code statistics:

1 Unassigned: 741,828,859

2 Ground: 147,553,394

7 Noise: 320,364

9 Water: 27,197,918

Projected Coordinate System: WGS\_1984\_UTM\_Zone\_4N



Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

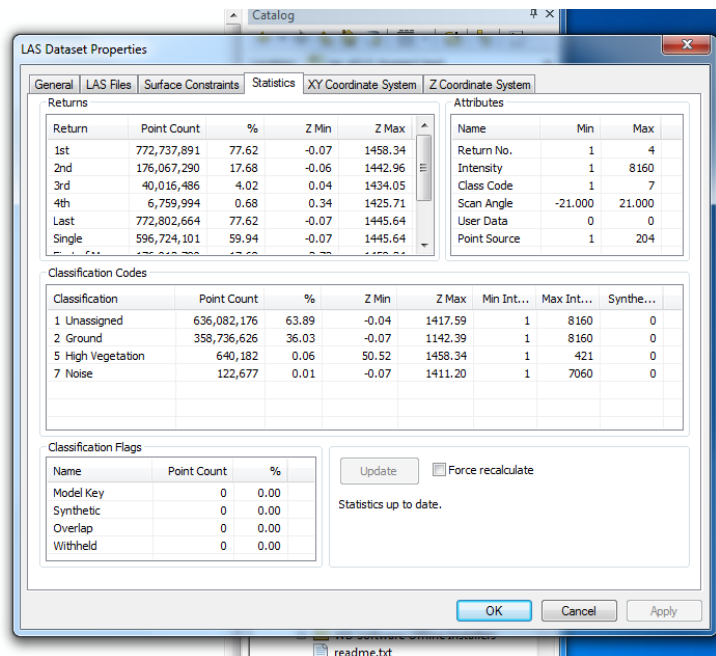
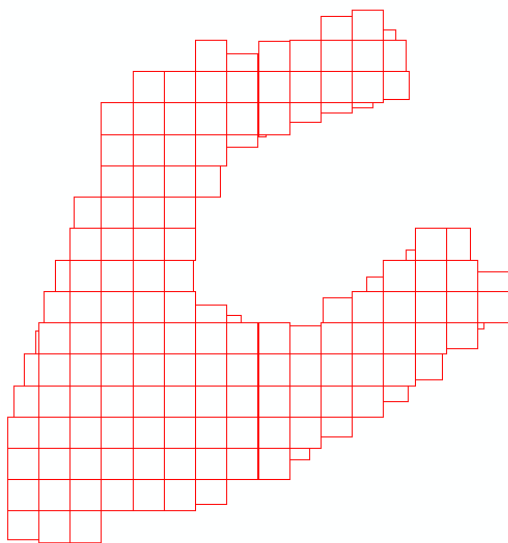
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_WGS\_1984

Datum: D\_WGS\_1984

Prime Meridian: 0

Angular Unit: Degree



Return	Point Count	%	Z Min	Z Max
1st	772,737,891	77.62	-0.07	1458.34
2nd	176,067,290	17.68	-0.06	1442.96
3rd	40,016,486	4.02	0.04	1434.05
4th	6,759,994	0.68	0.34	1425.71
Last	772,802,664	77.62	-0.07	1445.64
Single	596,724,101	59.94	-0.07	1445.64

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
1 Unassigned	636,082,176	63.89	-0.04	1417.59	1	8160	0
2 Ground	358,736,626	36.03	-0.07	1142.39	1	8160	0
5 High Vegetation	640,182	0.06	50.52	1458.34	1	421	0
7 Noise	122,677	0.01	-0.07	1411.20	1	7060	0

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Data Type: LAS Dataset

Folder: F:\Kauai\las\_HI13\_huppert

LAS Dataset: las\_HI13\_Huppert.lasd

Z Range: -0.070000, 1458.340000

LAS Files: 146

Surface Constraints: 0

LAS points: 995,581,661

Classification code statistics:

1 Unassigned: 636,082,176

2 Ground: 358,736,626

5 High Vegetation: 640,182

7 Noise: 122,677

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

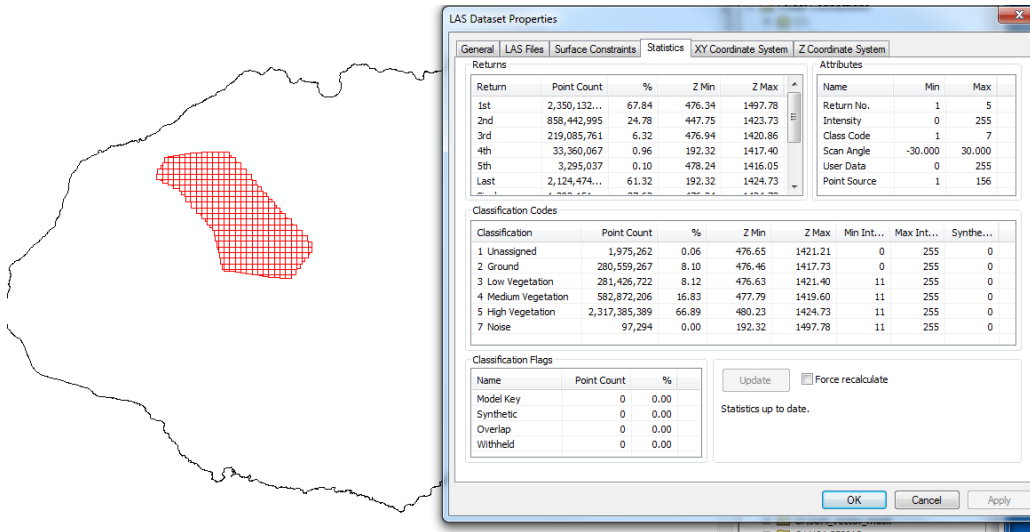
Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree

---



Data Type: LAS Dataset

Folder: F:\Kauai\las\_DOFAW\_2017\_I1

LAS Dataset: las\_DOFAW\_2017\_I1.las

Z Range: 192.320000, 1497.780000

LAS Files: 365

Surface Constraints: 0

LAS points: 3,464,316,140

Classification code statistics:

1 Unassigned: 1,975,262

2 Ground: 280,559,267

3 Low Vegetation: 281,426,722

4 Medium Vegetation: 582,872,206

5 High Vegetation: 2,317,385,389

7 Noise: 97,294

Projected Coordinate System: NAD\_1983\_HARN\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

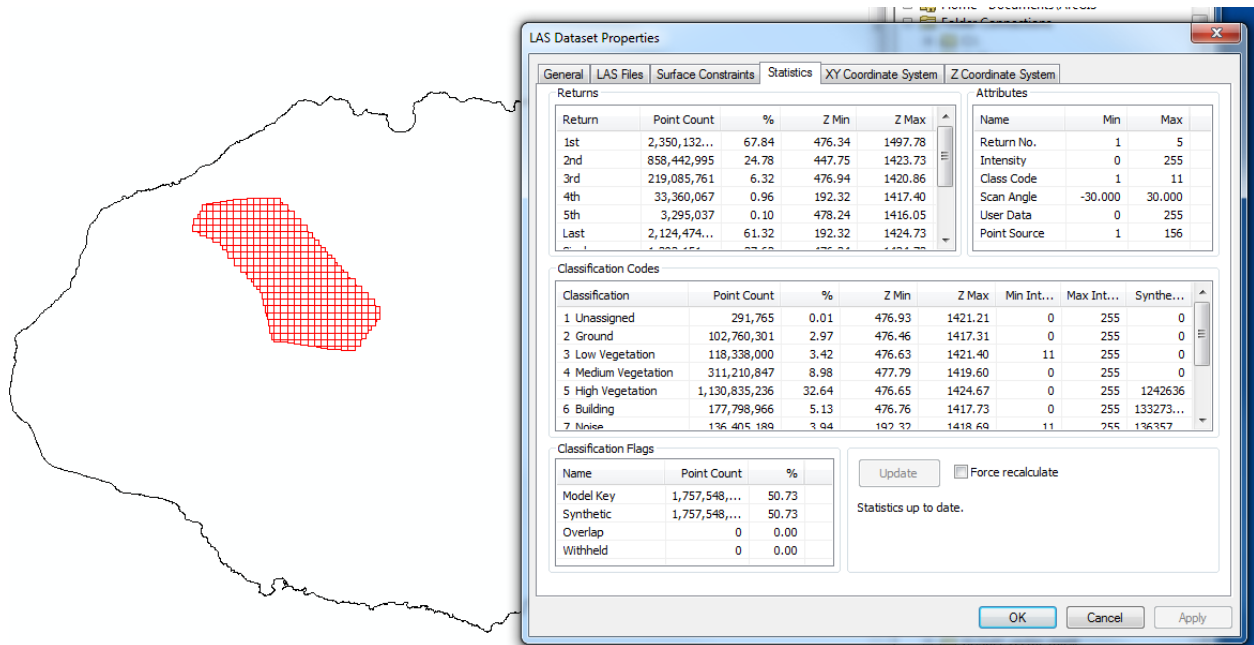
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Kauai\las\_DOFAW\_2017\_I2

LAS Dataset: las\_DOFAW\_2017\_I2.lasd

Z Range: 192.320000, 1497.780000

LAS Files: 365

Surface Constraints: 0

LAS points: 3,464,316,140

Classification code statistics:

- 1 Unassigned: 291,765
- 2 Ground: 102,760,301
- 3 Low Vegetation: 118,338,000
- 4 Medium Vegetation: 311,210,847
- 5 High Vegetation: 1,130,835,236
- 6 Building: 177,798,966
- 7 Noise: 136,405,189
- 8 Model Key/Reserved: 298,270,640
- 9 Water: 1,188,353,708
- 11 Road Surface: 51,488

Projected Coordinate System: NAD\_1983\_HARN\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

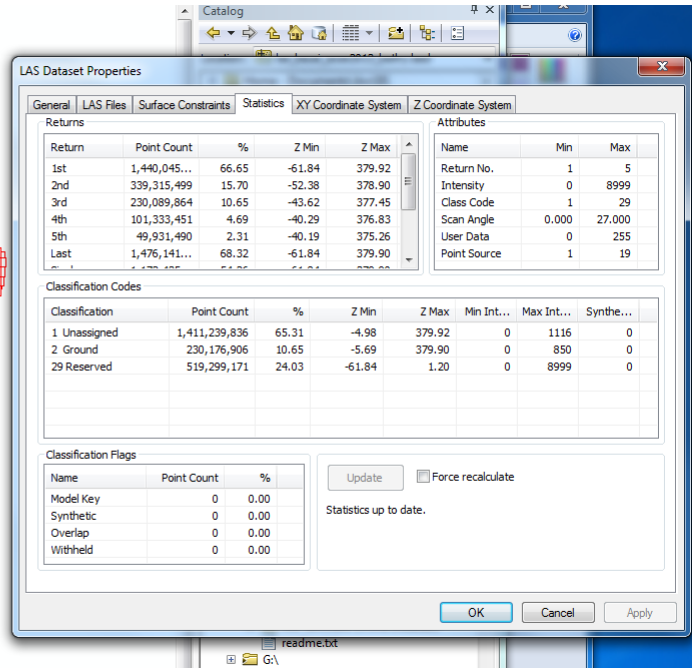
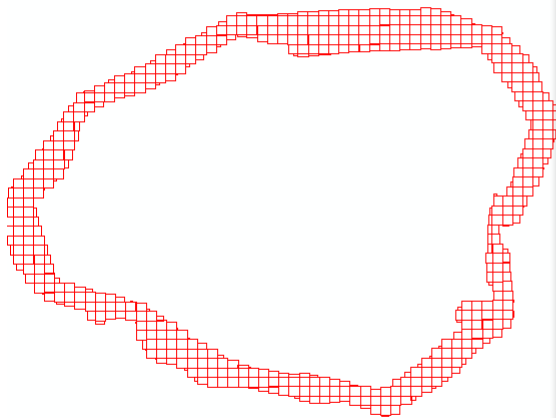
Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree

---



Data Type: LAS Dataset

Folder: F:\Kauai\las\_kauai\_acoe2013\_bathy

LAS Dataset: las\_kauai\_acoe2013\_bathy.lasd

Z Range: -61.840000, 379.920000

LAS Files: 568

Surface Constraints: 0

LAS points: 2,160,715,913

Classification code statistics:

1 Unassigned: 1,411,239,836

2 Ground: 230,176,906

29 Reserved: 519,299,171

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree

## Lanai

The screenshot shows a 3D point cloud of Lanai with a red wireframe bounding box. Overlaid on this is the 'LAS Dataset Properties' dialog box. The 'Statistics' tab is active, displaying the following data:

Return	Point Count	%	Z Min	Z Max
1st	81,436,559	75.79	-63.10	250.95
2nd	15,432,064	14.36	-55.35	250.14
3rd	6,867,228	6.39	-49.06	249.42
4th	2,711,286	2.52	-27.97	247.23
5th	1,009,805	0.94	-25.37	234.70
Last	81,567,098	75.91	-63.10	250.20

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
1 Unassigned	61,129,503	56.89	-0.06	250.95	0	953	0
2 Ground	27,364,110	25.47	-0.18	250.14	0	856	0
29 Reserved	18,963,329	17.65	-63.10	0.11	0	8998	0

Classification Flags	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

The 'Attributes' tab shows the following data:

Name	Min	Max
Return No.	1	5
Intensity	0	8998
Class Code	1	29
Scan Angle	0.000	0.000
User Data	0	255
Point Source	1	16

The 'Update' button is highlighted, and the 'Force recalculate' checkbox is checked. The 'Statistics up to date.' message is visible.

Data Type: LAS Dataset

Folder: F:\Lanai\las\_acoe2013\_bathy

LAS Dataset: las\_lanai\_acoe2013\_bathy.lasd

Z Range: -63.100000, 250.950000

LAS Files: 56

Surface Constraints: 0

LAS points: 107,456,942

Classification code statistics:

1 Unassigned: 61,129,503

2 Ground: 27,364,110

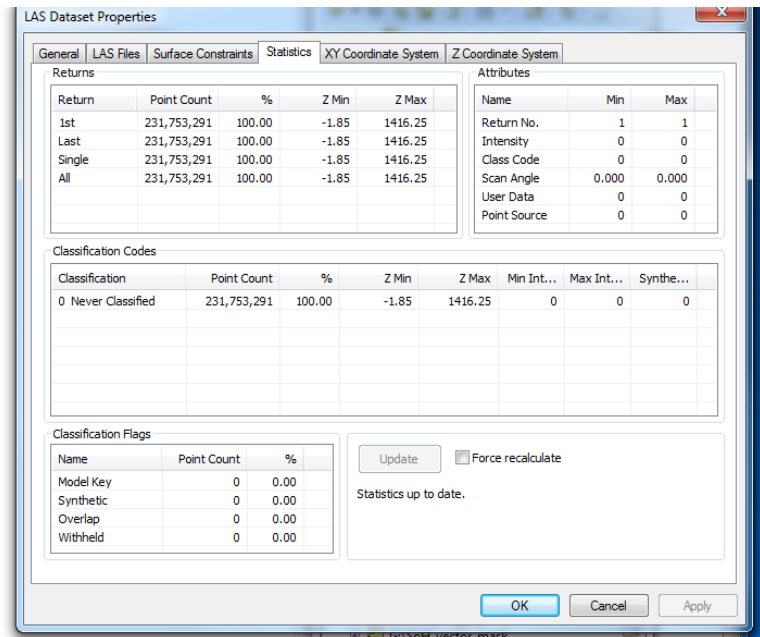
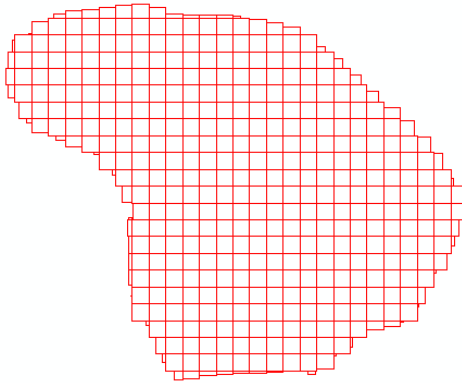
29 Reserved: 18,963,329

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Lanai\las\_lanai\_a1

LAS Dataset: las\_lanai\_a1\_ground.lasd

Z Range: -1.850000, 1416.250000

LAS Files: 441

Surface Constraints: 0

LAS points: 231,753,291

Classification code statistics:

0 Never Classified: 231,753,291

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000



Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

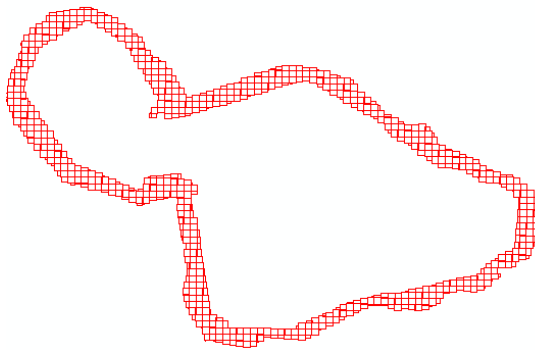
Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree

Maui



LAS Dataset Properties

General LAS Files Surface Constraints Statistics XY Coordinate System Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	1,595,977...	65.13	-60.12	391.37
2nd	417,038,721	17.02	-53.98	390.41
3rd	268,260,087	10.95	-47.02	389.49
4th	115,690,829	4.72	-34.93	388.20
5th	53,593,157	2.19	-31.42	387.20
Last	1,628,839...	66.47	-60.12	391.37

Attributes

Name	Min	Max
Return No.	1	5
Intensity	0	9000
Class Code	1	29
Scan Angle	0.000	0.000
User Data	0	255
Point Source	1	24

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
1 Unassigned	1,726,353,166	70.45	-17.46	391.37	0	1033	0
2 Ground	313,355,193	12.79	-18.62	377.58	0	922	0
29 Reserved	410,852,101	16.77	-60.12	4.19	0	9000	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Maui\las\_maui\_acoe2013

LAS Dataset: las\_maui\_acoe2013bathy.lasd

Z Range: -60.120000, 391.370000

LAS Files: 745

Surface Constraints: 0

LAS points: 2,450,560,460

Classification code statistics:

1 Unassigned: 1,726,353,166

2 Ground: 313,355,193

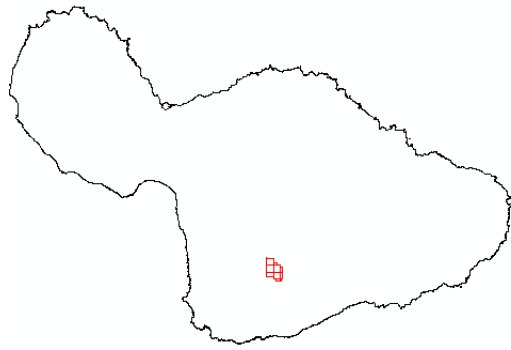
29 Reserved: 410,852,101

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	2,060,770	100.00	1642.71	2241.83
Last	2,060,770	100.00	1642.71	2241.83
Single	2,060,770	100.00	1642.71	2241.83
All	2,060,770	100.00	1642.71	2241.83

Attributes

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	2,060,770	100.00	1642.71	2241.83	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Mau\las\_maui\_femaArea\_baldlast

LAS Dataset: las\_maui\_femaArea\_baldlast.lasd

Z Range: 1642.710000, 2241.830000

LAS Files: 15

Surface Constraints: 0

LAS points: 2,060,770

Classification code statistics:

0 Never Classified: 2,060,770

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

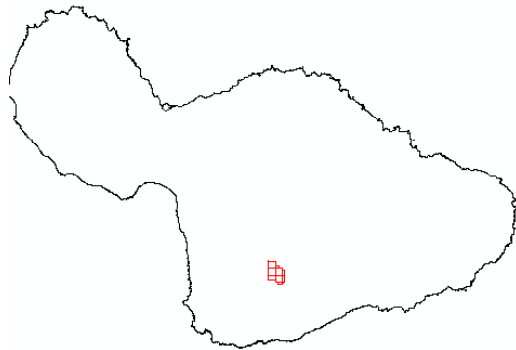
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Return	Point Count	%	Z Min	Z Max
1st	2,421,321	100.00	1644.55	4320.21
Last	2,421,321	100.00	1644.55	4320.21
Single	2,421,321	100.00	1644.55	4320.21
All	2,421,321	100.00	1644.55	4320.21

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	2,421,321	100.00	1644.55	4320.21	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Maui\las\_maui\_femaArea\_extractlast

LAS Dataset: las\_maui\_femaArea\_exrtactlast.lasd

Z Range: 1644.550000, 4320.210000

LAS Files: 15

Surface Constraints: 0

LAS points: 2,421,321

Classification code statistics:

0 Never Classified: 2,421,321

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

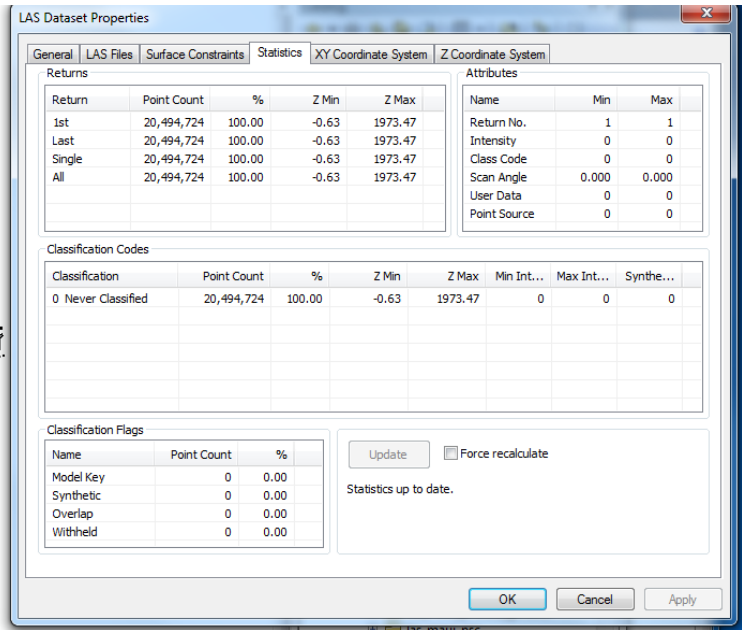
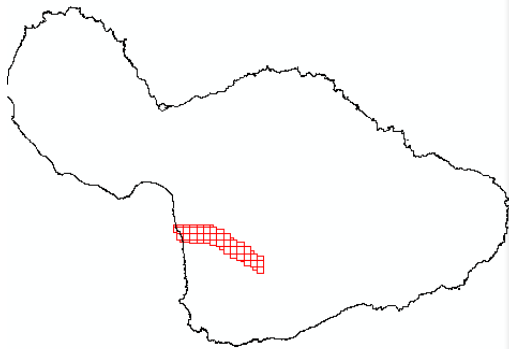
Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree

---



Data Type: LAS Dataset

Folder: F:\Maui\las\_mau\_i\_femafema\_bald

LAS Dataset: las\_mau\_i\_femafema\_bald.lasd

Z Range: -0.630000, 1973.470000

LAS Files: 53

Surface Constraints: 0

LAS points: 20,494,724

Classification code statistics:

0 Never Classified: 20,494,724

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

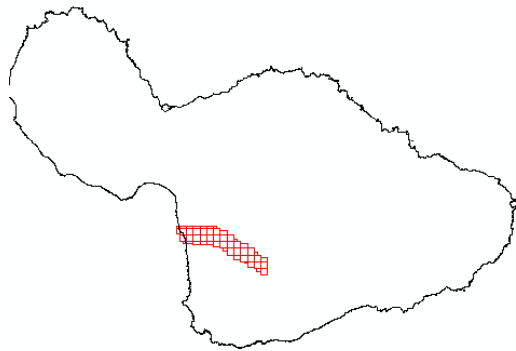
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	20,309,072	100.00	-0.30	2007.76
Last	20,309,072	100.00	-0.30	2007.76
Single	20,309,072	100.00	-0.30	2007.76
All	20,309,072	100.00	-0.30	2007.76

Attributes

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	20,309,072	100.00	-0.30	2007.76	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Maui\las\_mau\_i\_femafema\_extract

LAS Dataset: las\_mau\_i\_femafema\_extract.lasd

Z Range: -0.300000, 2007.760000

LAS Files: 53

Surface Constraints: 0

LAS points: 20,309,072

Classification code statistics:

0 Never Classified: 20,309,072

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

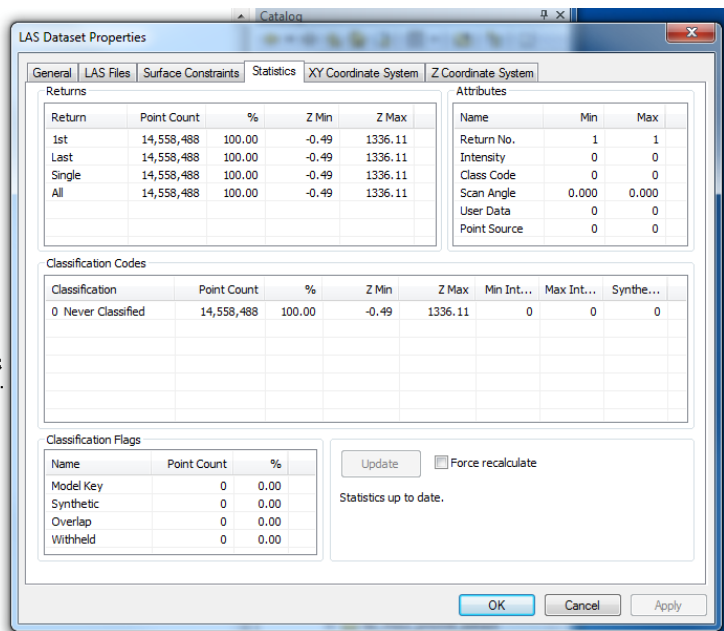
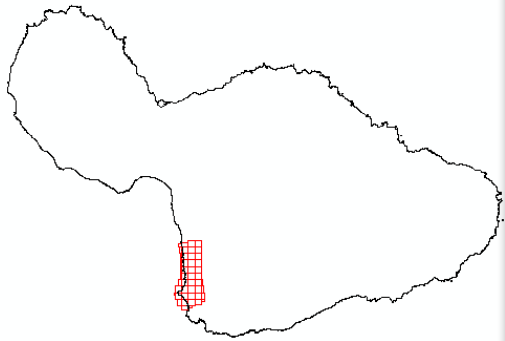
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Maui\las\_mau\_i\_prior1A\_extract

LAS Dataset: las\_mau\_i\_prior1A\_extract.lasd

Z Range: -0.490000, 1336.110000

LAS Files: 50

Surface Constraints: 0

LAS points: 14,558,488

Classification code statistics:

0 Never Classified: 14,558,488

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

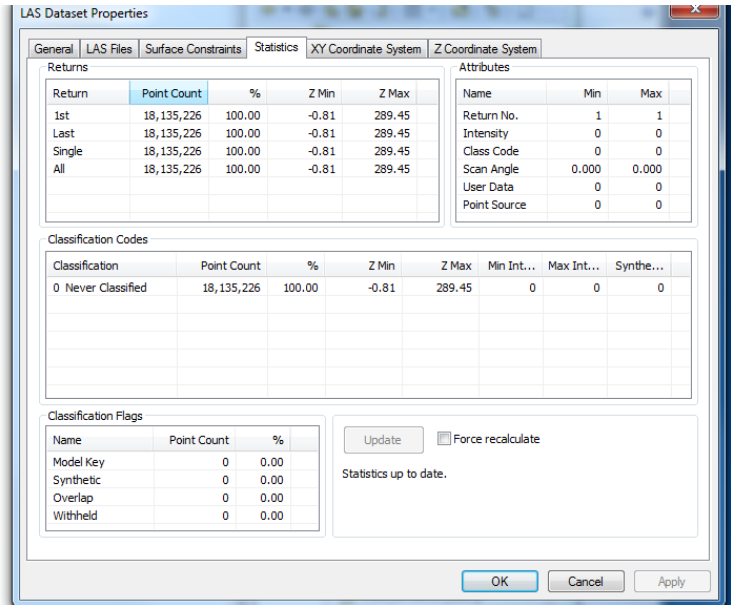
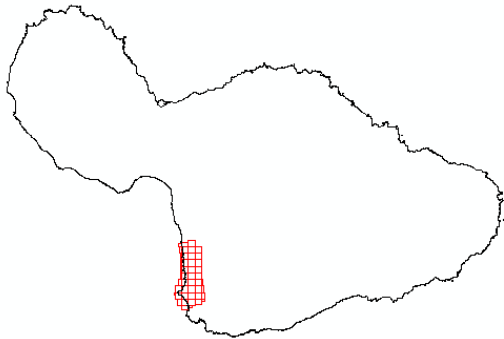
Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree

---





Data Type: LAS Dataset

Folder: F:\Maui\las\_mau\_i\_prior1A\_ground

LAS Dataset: las\_mau\_i\_prior1A\_ground.lasd

Z Range: -0.810000, 289.450000

LAS Files: 49

Surface Constraints: 0

LAS points: 18,135,226

Classification code statistics:

0 Never Classified: 18,135,226

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

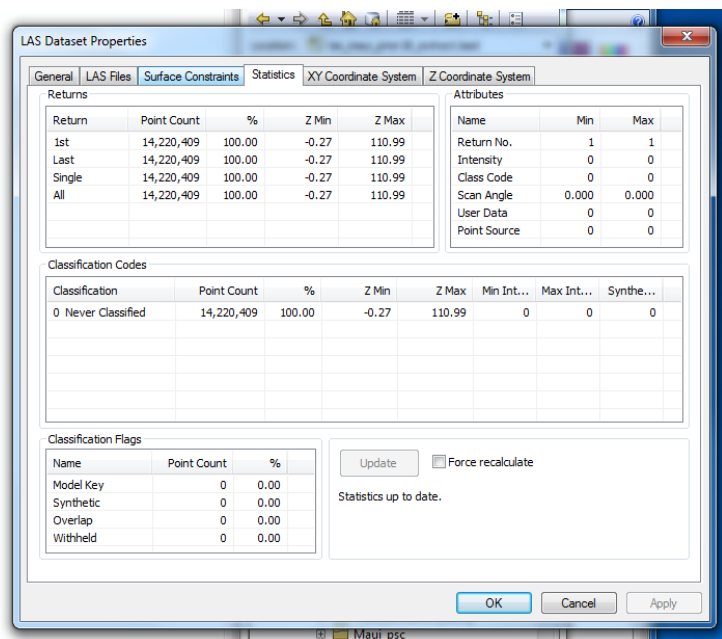
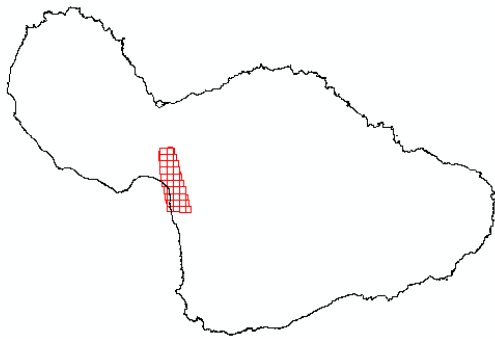
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Maui\las\_maui\_prior1B\_extract

LAS Dataset: las\_maui\_prior1B\_extract.lasd

Z Range: -0.270000, 110.990000

LAS Files: 43

Surface Constraints: 0

LAS points: 14,220,409

Classification code statistics:

0 Never Classified: 14,220,409

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

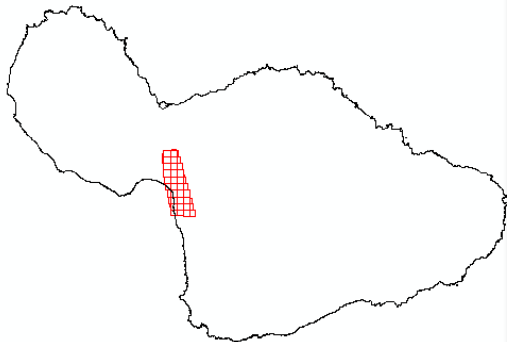
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	18,018,884	100.00	-0.73	105.51
Last	18,018,884	100.00	-0.73	105.51
Single	18,018,884	100.00	-0.73	105.51
All	18,018,884	100.00	-0.73	105.51

Attributes

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	18,018,884	100.00	-0.73	105.51	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Maui\las\_mau\_i\_prior1B\_ground

LAS Dataset: las\_mau\_i\_prior1b\_ground.lasd

Z Range: -0.730000, 105.510000

LAS Files: 43

Surface Constraints: 0

LAS points: 18,018,884

Classification code statistics:

0 Never Classified: 18,018,884

Projected Coordinate System: NAD\_1983\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

Linear Unit: Meter (1.000000)

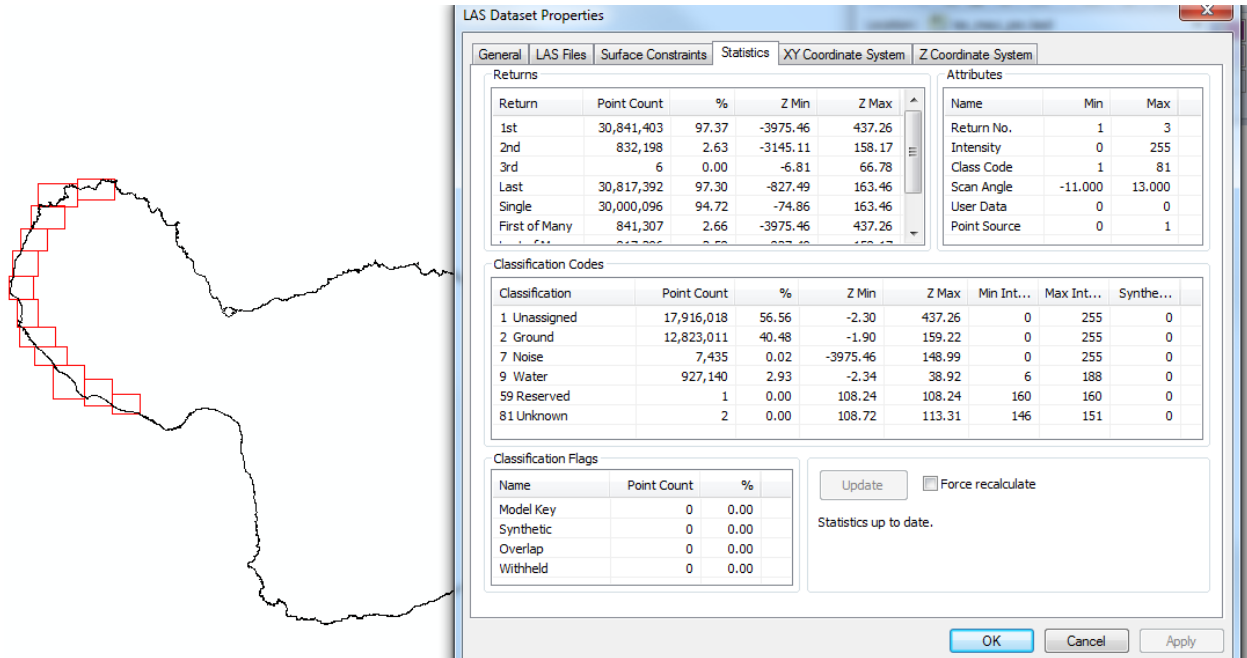
Geographic Coordinate System: GCS\_North\_American\_1983

Datum: D\_North\_American\_1983

Prime Meridian: 0

Angular Unit: Degree

---



Data Type: LAS Dataset

Folder: F:\Mau\las\_maui\_psc

LAS Dataset: las\_maui\_psc.lasd

Z Range: -3975.458000, 437.260000

LAS Files: 12

Surface Constraints: 0

LAS points: 31,673,607

Classification code statistics:

1 Unassigned: 17,916,018

2 Ground: 12,823,011

7 Noise: 7,435

9 Water: 927,140

59 Reserved: 1

81 Unknown: 2

Geographic Coordinate System: GCS\_WGS\_1984

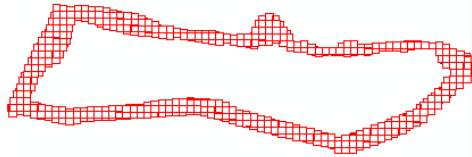
Datum: D\_WGS\_1984

Prime Meridian: 0

Angular Unit: Degree

---

Molokai



LAS Dataset Properties

General LAS Files Surface Constraints Statistics XY Coordinate System Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	883,022,924	71.11	-63.56	484.25
2nd	170,599,273	13.74	-54.30	483.78
3rd	112,151,564	9.03	-41.71	483.13
4th	51,293,594	4.13	-33.75	482.32
5th	24,775,867	2.00	-25.07	481.77
Last	884,837,585	71.25	-63.56	484.24

Attributes

Name	Min	Max
Return No.	1	5
Intensity	0	9000
Class Code	1	29
Scan Angle	0.000	42.000
User Data	0	255
Point Source	1	19

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
1 Unassigned	616,741,226	49.66	-1.06	484.25	0	1146	0
2 Ground	140,929,213	11.35	-1.19	484.18	0	884	0
29 Reserved	484,172,783	38.99	-63.56	2.58	0	9000	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Molokai\las\_molokai\_acoe2013bathy

LAS Dataset: las\_molokai\_acoe2013\_bathy.lasd

Z Range: -63.560000, 484.250000

LAS Files: 484

Surface Constraints: 0

LAS points: 1,241,843,222

Classification code statistics:

1 Unassigned: 616,741,226

2 Ground: 140,929,213

29 Reserved: 484,172,783

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

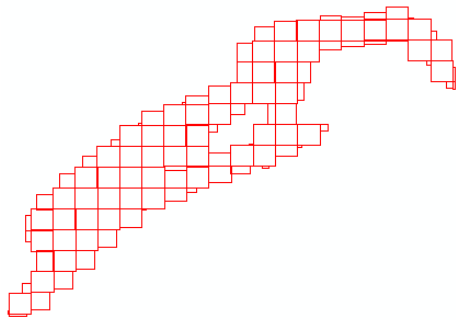
Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree

---

Niihau



LAS Dataset Properties

General LAS Files Surface Constraints Statistics XY Coordinate System Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	119,618,309	75.44	-58.93	84.85
2nd	16,035,013	10.11	-51.83	84.03
3rd	12,934,530	8.16	-38.01	82.94
4th	6,211,714	3.92	-36.56	79.06
5th	3,759,588	2.37	-34.04	77.50
Last	123,890,092	78.13	-58.93	81.07

Attributes

Name	Min	Max
Return No.	1	5
Intensity	0	8999
Class Code	1	29
Scan Angle	0.000	0.000
User Data	0	255
Point Source	1	16

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
1 Unassigned	57,772,013	36.44	0.36	84.85	0	892	0
2 Ground	17,659,020	11.14	-56.45	79.39	0	8717	0
29 Reserved	83,128,121	52.43	-58.93	4.24	0	8999	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

Data Type: LAS Dataset

Folder: F:\Niihau\las\_niihau\_acoebathy2013

LAS Dataset: las\_niihau\_acoe2013\_bathy.lasd

Z Range: -58.930000, 84.850000

LAS Files: 111

Surface Constraints: 0

LAS points: 158,559,154

Classification code statistics:

1 Unassigned: 57,772,013

2 Ground: 17,659,020

29 Reserved: 83,128,121

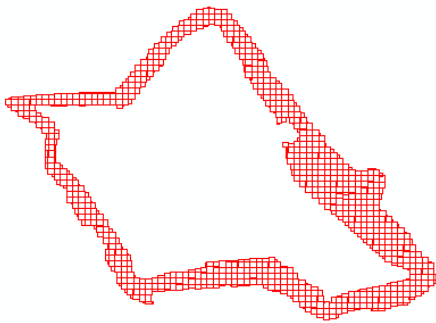
Geographic Coordinate System: GCS\_WGS\_1984

Datum: D\_WGS\_1984

Prime Meridian: 0

Angular Unit: Degree

Oahu



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	2,524,916...	78.95	-60.91	358.05
2nd	366,487,238	11.46	-58.98	357.00
3rd	194,912,670	6.09	-52.29	355.49
4th	78,988,250	2.47	-48.67	354.29
5th	32,619,033	1.02	-31.06	351.87
Last	2,543,995...	79.55	-60.91	358.05

Attributes

Name	Min	Max
Return No.	1	5
Intensity	0	9000
Class Code	1	29
Scan Angle	0.000	41.000
User Data	0	255
Point Source	1	29

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
1 Unassigned	1,519,152,011	47.50	-6.19	357.87	0	1202	0
2 Ground	313,224,909	9.79	-7.47	358.05	0	1084	0
29 Reserved	1,365,546,651	42.70	-60.91	3.81	0	9000	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_acoe2013\_bathy

LAS Dataset: las\_oahu\_acoe2013\_bathy.lasd

Z Range: -60.910000, 358.050000

LAS Files: 886

Surface Constraints: 0

LAS points: 3,197,923,571



Classification code statistics:

1 Unassigned: 1,519,152,011

2 Ground: 313,224,909

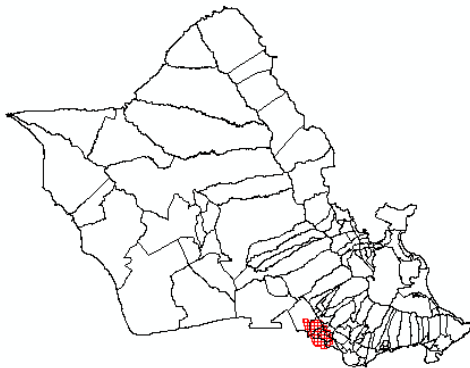
29 Reserved: 1,365,546,651

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



LAS Dataset Properties

General LAS Files Surface Constraints Statistics XY Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	8,007,704	100.00	-2.79	204.40
Last	8,007,704	100.00	-2.79	204.40
Single	8,007,704	100.00	-2.79	204.40
All	8,007,704	100.00	-2.79	204.40

Attributes

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	8,007,704	100.00	-2.79	204.40	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_harbor\_first\_bare

LAS Dataset: las\_oahu\_harbor\_first\_bare.las

Z Range: -2.790000, 204.400000

LAS Files: 65

Surface Constraints: 0

LAS points: 8,007,704

Classification code statistics:

0 Never Classified: 8,007,704

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

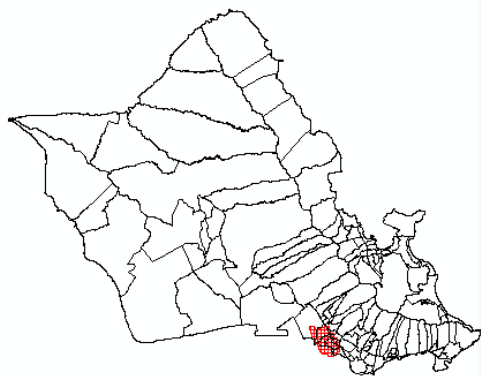
Linear Unit: Foot\_US (0.304801)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



Classification Properties

General LAS Files Surface Constraints Statistics XY Coordinate System Z Coordinate System

Return	Point Count	%	Z Min	Z Max
1st	7,036,061	100.00	-0.49	2451.37
Last	7,036,061	100.00	-0.49	2451.37
Single	7,036,061	100.00	-0.49	2451.37
All	7,036,061	100.00	-0.49	2451.37

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	7,036,061	100.00	-0.49	2451.37	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_harbor\_first\_extract

LAS Dataset: las\_oahu\_harbor\_first\_extract.lasd

Z Range: -0.490000, 2451.370000

LAS Files: 65

Surface Constraints: 0

LAS points: 7,036,061

Classification code statistics:

0 Never Classified: 7,036,061

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

Linear Unit: Foot\_US (0.304801)

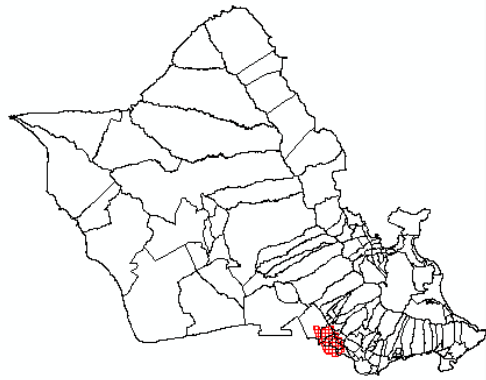
Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree

---



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	8,416,065	100.00	-2.82	231.27
Last	8,416,065	100.00	-2.82	231.27
Single	8,416,065	100.00	-2.82	231.27
All	8,416,065	100.00	-2.82	231.27

Attributes

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	8,416,065	100.00	-2.82	231.27	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_harbor\_last\_bare

LAS Dataset: las\_oahu\_harbor\_last\_bare.lasd

Z Range: -2.820000, 231.270000

LAS Files: 65

Surface Constraints: 0

LAS points: 8,416,065

Classification code statistics:

0 Never Classified: 8,416,065

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

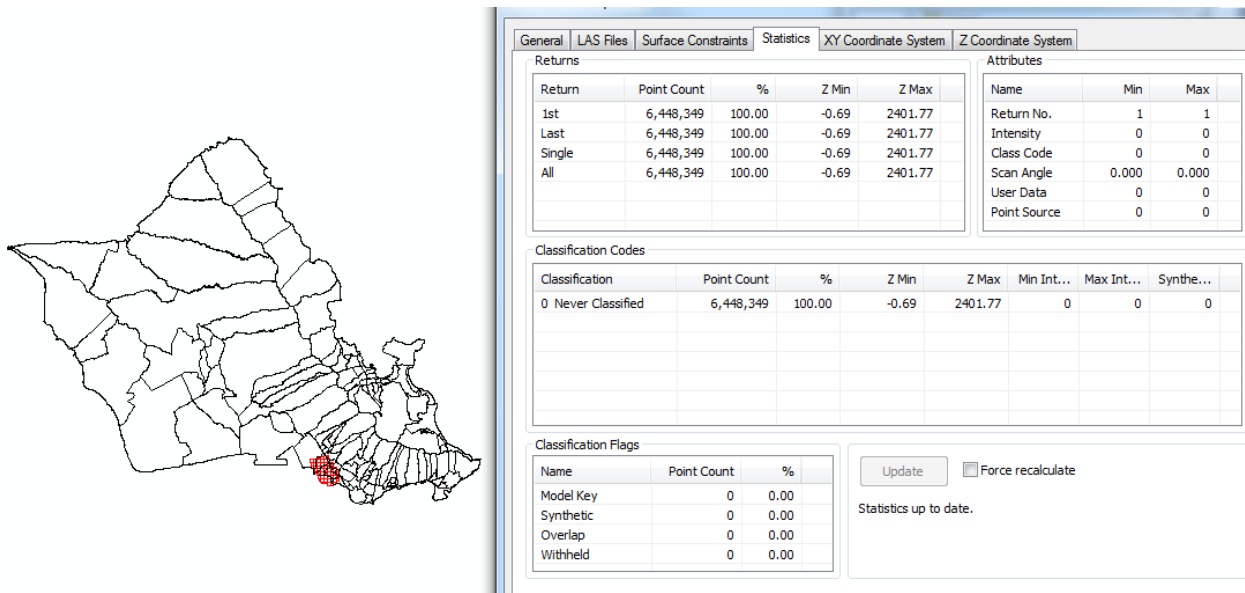
Linear Unit: Foot\_US (0.304801)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_harbor\_last\_extract

LAS Dataset: las\_oahu\_harbor\_last\_extract.las

Z Range: -0.690000, 2401.770000

LAS Files: 62

Surface Constraints: 0

LAS points: 6,448,349

Classification code statistics:

0 Never Classified: 6,448,349

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

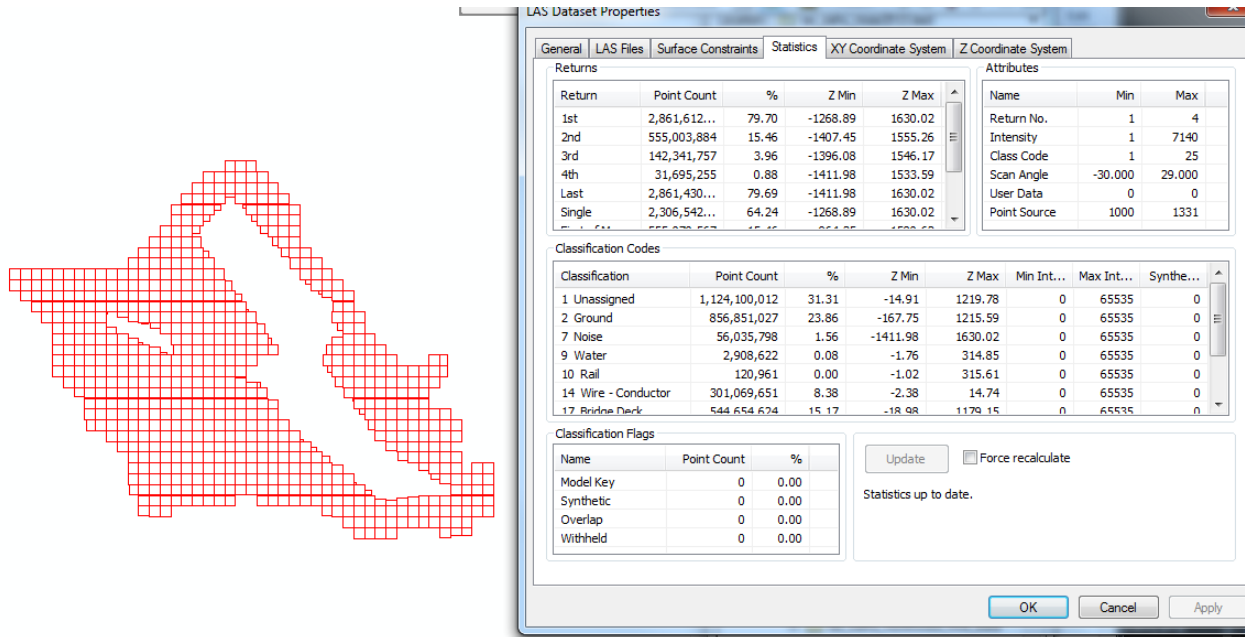
Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

Linear Unit: Foot\_US (0.304801)

LAS OAHU NOAA 2013



Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_noaa2013

LAS Dataset: las\_oahu\_noaa2013.lasd

Z Range: -1330.860000, 1630.020000

LAS Files: 485

Surface Constraints: 0

LAS points: 2,453,123,978

Classification code statistics:

1 Unassigned: 771,792,787

2 Ground: 653,570,272

7 Noise: 30,936,597

9 Water: 1,694,061

10 Rail: 80,381

14 Wire - Conductor: 126,625,262

17 Bridge Deck: 377,698,651

18 High Noise: 460,336,894

25 Reserved: 30,389,073

Projected Coordinate System: NAD\_1983\_2011\_UTM\_Zone\_4N

Projection: Transverse\_Mercator

False\_Easting: 500000.00000000

False\_Northing: 0.00000000

Central\_Meridian: -159.00000000

Scale\_Factor: 0.99960000

Latitude\_Of\_Origin: 0.00000000

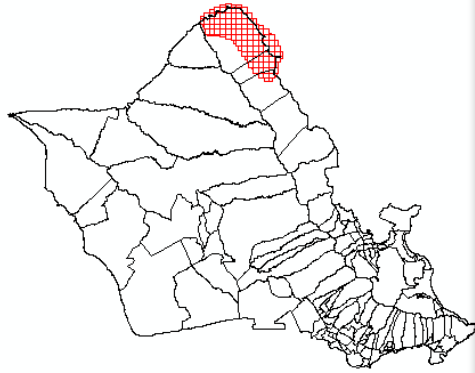
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_NAD\_1983\_2011

Datum: D\_NAD\_1983\_2011

Prime Meridian: 0

Angular Unit: Degree



General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Return	Point Count	%	Z Min	Z Max
1st	68,828,656	100.00	-6.72	866.92
Last	68,828,656	100.00	-6.72	866.92
Single	68,828,656	100.00	-6.72	866.92
All	68,828,656	100.00	-6.72	866.92

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	68,828,656	100.00	-6.72	866.92	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate  
Statistics up to date.

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_northshore\_first\_extract

LAS Dataset: las\_oahu\_northshore\_first\_extract.lasd

Z Range: -6.720000, 866.920000

LAS Files: 129

Surface Constraints: 0

LAS points: 68,828,656

Classification code statistics:

0 Never Classified: 68,828,656

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000



Latitude\_Of\_Origin: 21.16666667

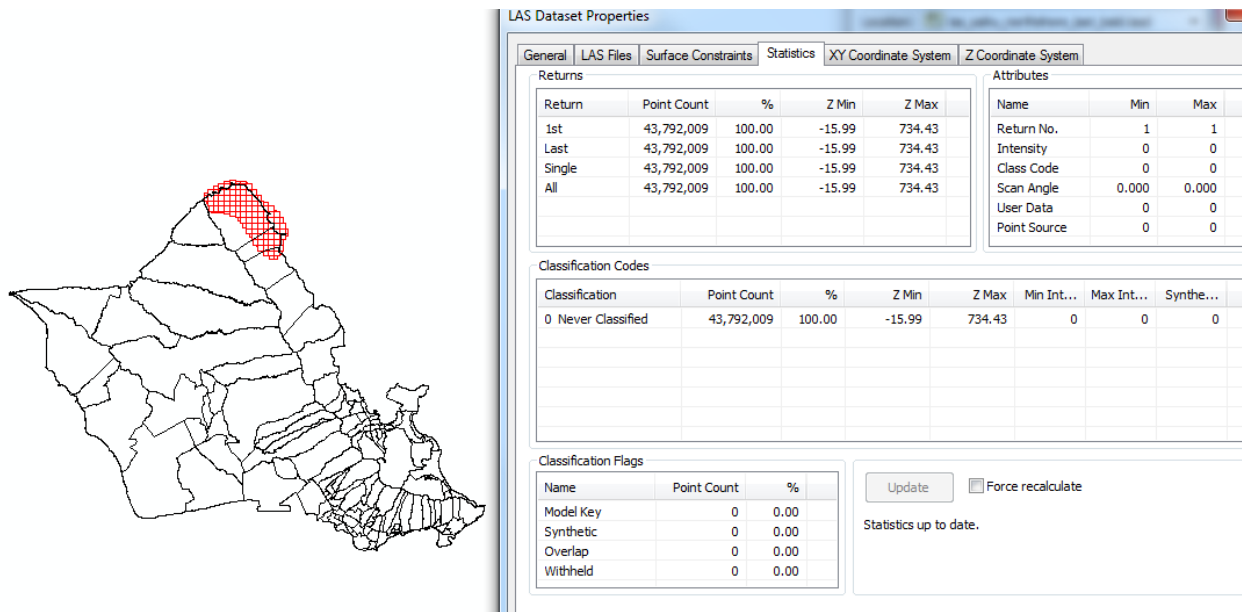
Linear Unit: Foot\_US (0.304801)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_northshore\_last\_bald

LAS Dataset: las\_oahu\_northshore\_last\_bald.lasd

Z Range: -15.990000, 734.430000

LAS Files: 129

Surface Constraints: 0

LAS points: 43,792,009

Classification code statistics:

0 Never Classified: 43,792,009

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

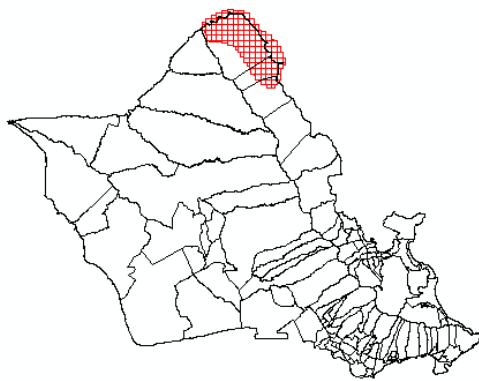
Linear Unit: Foot\_US (0.304801)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



General LAS Files Surface Constraints Statistics XY Coordinate System Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	69,536,195	100.00	-6.92	866.92
Last	69,536,195	100.00	-6.92	866.92
Single	69,536,195	100.00	-6.92	866.92
All	69,536,195	100.00	-6.92	866.92

Attributes

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	69,536,195	100.00	-6.92	866.92	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_northshore\_last\_extract

LAS Dataset: las\_oahu\_northshore\_last\_extract.lasd

Z Range: -6.920000, 866.920000

LAS Files: 129

Surface Constraints: 0

LAS points: 69,536,195

Classification code statistics:

0 Never Classified: 69,536,195

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

Linear Unit: Foot\_US (0.304801)

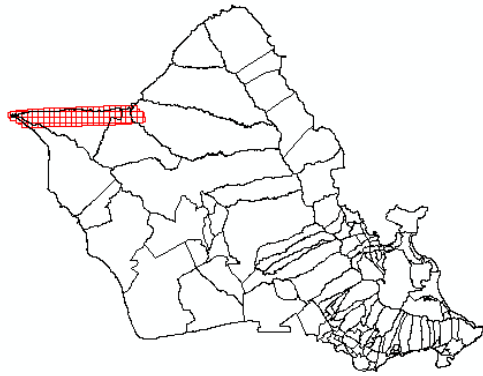
Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree

---



LAS Dataset Properties

General | LAS Files | Surface Constraints | Statistics | XY Coordinate System | Z Coordinate System

Return	Point Count	%	Z Min	Z Max
1st	24,978,038	100.00	-6.45	1653.33
Last	24,978,038	100.00	-6.45	1653.33
Single	24,978,038	100.00	-6.45	1653.33
All	24,978,038	100.00	-6.45	1653.33

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	24,978,038	100.00	-6.45	1653.33	0	0	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_northwest\_first\_bald

LAS Dataset: las\_oahu\_northwest\_first\_bald.lasd

Z Range: -6.450000, 1653.330000

LAS Files: 102

Surface Constraints: 0

LAS points: 24,978,038

Classification code statistics:

0 Never Classified: 24,978,038

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

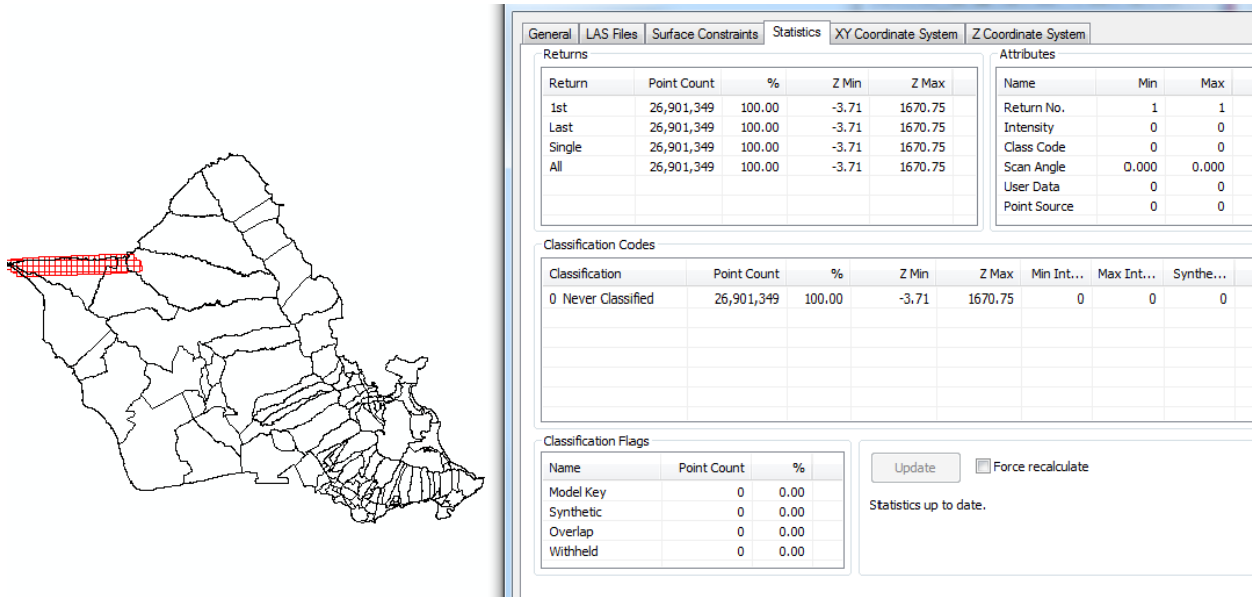
Linear Unit: Foot\_US (0.304801)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_northwest\_first\_extract

LAS Dataset: las\_oahu\_northwest\_first\_extract.lasd

Z Range: -3.710000, 1670.750000

LAS Files: 102

Surface Constraints: 0

LAS points: 26,901,349

Classification code statistics:

0 Never Classified: 26,901,349

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

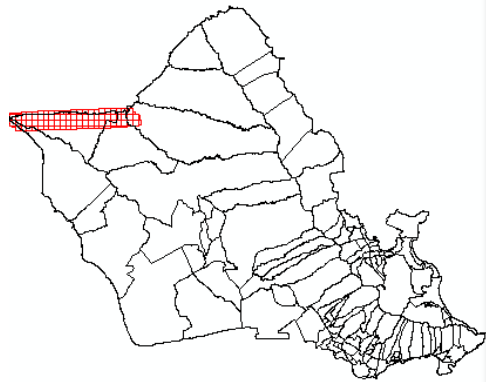
Linear Unit: Foot\_US (0.304801)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree



Return	Point Count	%	Z Min	Z Max
1st	24,675,190	100.00	-7.25	1653.49
Last	24,675,190	100.00	-7.25	1653.49
Single	24,675,190	100.00	-7.25	1653.49
All	24,675,190	100.00	-7.25	1653.49

Name	Min	Max
Return No.	1	1
Intensity	0	0
Class Code	0	0
Scan Angle	0.000	0.000
User Data	0	0
Point Source	0	0

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
0 Never Classified	24,675,190	100.00	-7.25	1653.49	0	0	0

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_northwest\_last\_bald

LAS Dataset: las\_oahu\_northwest\_last\_bald.lasd

Z Range: -7.250000, 1653.490000

LAS Files: 102

Surface Constraints: 0

LAS points: 24,675,190

Classification code statistics:

0 Never Classified: 24,675,190

Projected Coordinate System: NAD\_1983\_HARN\_StatePlane\_Hawaii\_3\_FIPS\_5103\_Feet

Projection: Transverse\_Mercator

False\_Easting: 1640416.66666667

False\_Northing: 0.00000000

Central\_Meridian: -158.00000000

Scale\_Factor: 0.99999000

Latitude\_Of\_Origin: 21.16666667

Linear Unit: Foot\_US (0.304801)

Geographic Coordinate System: GCS\_North\_American\_1983\_HARN

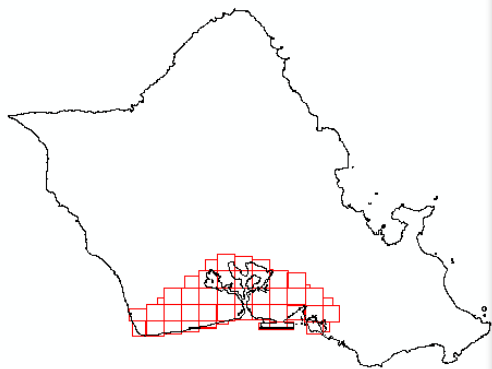
Datum: D\_North\_American\_1983\_HARN

Prime Meridian: 0

Angular Unit: Degree

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LAS OAHU PSC



General LAS Files Surface Constraints Statistics XY Coordinate System Z Coordinate System

Returns

Return	Point Count	%	Z Min	Z Max
1st	2,861,612...	79.70	-1268.89	1630.02
2nd	555,003,884	15.46	-1407.45	1555.26
3rd	142,341,757	3.96	-1396.08	1546.17
4th	31,695,255	0.88	-1411.98	1533.59
Last	2,861,430...	79.69	-1411.98	1630.02
Single	2,306,542...	64.24	-1268.89	1630.02

Attributes

Name	Min	Max
Return No.	1	4
Intensity	1	7140
Class Code	1	25
Scan Angle	-30.000	29.000
User Data	0	0
Point Source	1000	1331

Classification Codes

Classification	Point Count	%	Z Min	Z Max	Min Int...	Max Int...	Synthe...
1 Unassigned	1,124,100,012	31.31	-14.91	1219.78	0	65535	0
2 Ground	856,851,027	23.86	-167.75	1215.59	0	65535	0
7 Noise	56,035,798	1.56	-1411.98	1630.02	0	65535	0
9 Water	2,908,622	0.08	-1.76	314.85	0	65535	0
10 Rail	120,961	0.00	-1.02	315.61	0	65535	0
14 Wire - Conductor	301,069,651	8.38	-2.38	14.74	0	65535	0
17 Bridge Deck	544,654,674	15.17	-18.98	1179.15	0	65535	0

Classification Flags

Name	Point Count	%
Model Key	0	0.00
Synthetic	0	0.00
Overlap	0	0.00
Withheld	0	0.00

Update  Force recalculate

Statistics up to date.

OK Cancel Apply

Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_psc

LAS Dataset: las\_oahu\_psc.lasd

Z Range: -497.106000, 530.250000

LAS Files: 47

Surface Constraints: 0

LAS points: 100,533,243

Classification code statistics:

1 Unassigned: 52,606,483

2 Ground: 45,043,886

7 Noise: 21,847

9 Water: 2,861,027

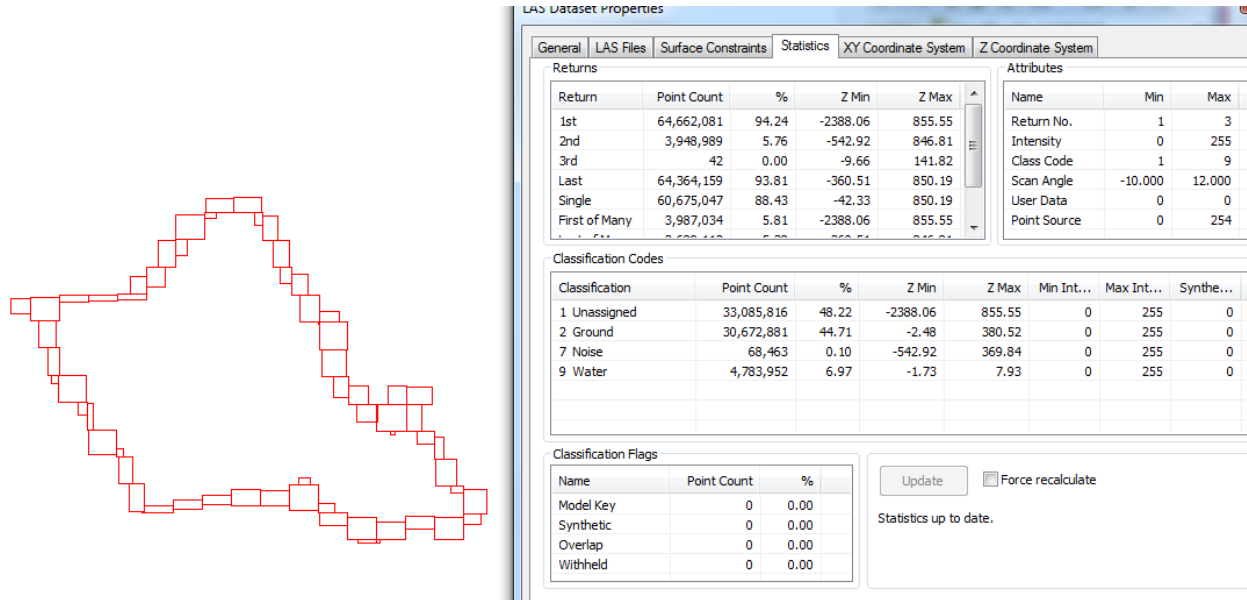
Geographic Coordinate System: GCS\_WGS\_1984

Datum: D\_WGS\_1984



Prime Meridian: 0

Angular Unit: Degree



Data Type: LAS Dataset

Folder: F:\Oahu\las\_oahu\_psc\_coastal

LAS Dataset: las\_oahu\_psc\_coastal.lasd

Z Range: -2388.062000, 855.547000

LAS Files: 63

Surface Constraints: 0

LAS points: 68,611,112

Classification code statistics:

1 Unassigned: 33,085,816

2 Ground: 30,672,881

7 Noise: 68,463

9 Water: 4,783,952

Geographic Coordinate System: GCS\_WGS\_1984

Datum: D\_WGS\_1984

Prime Meridian: 0

Angular Unit: Degree

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