

## DPH-14 Report on Point Classification

The USGS Lidar Base Specification Version 1.3 states: "The minimum classification scheme required for lidar data is listed in Table 5. Additional classes may be required on specific projects. The following requirements apply to point classification: (1) All points not identified as withheld shall be properly classified. (2) No points in the classified LAS deliverable may remain assigned to class 0. Model key points, if calculated, shall be identified using the key point bit flag as defined in LAS specification version 1.4–R13 (ASPRS, 2011). Model key points may, in addition, be identified using class 8 at the discretion of the data producer. No classification code or value may be used to identify overage (overlap) points. All overage (overlap) points shall be identified using the overlap bit flag, as defined in LAS specification version 1.4–R13 (ASPRS, 2011)."

**Table 5.** Minimum light detection and ranging data classification scheme.

| Code | Description   |
|------|---|
| 1    | Processed, but unclassified   |
| 2    | Bare earth  |
| 7    | Low noise   |
| 9    | Water   |
| 17   | Bridge deck   |
| 18   | High noise  |
| 20   | Ignored ground<br>(typically breakline proximity)                     |
| 21   | Snow<br>(if present and identifiable)                                 |
| 22   | Temporal exclusion<br>(typically nonfavored data in intertidal zones) |

The purpose of this section is to report total numbers of points for each class within the LAS files.

# DPH-14 Report on Point Classification - Class Totals

The purpose of this section is to list the number of points in each classification so that the user can determine if any points exist in unintended classes.

[Data Source - Y:\Mapping\Projects\65220171\\_USGS-TX\\_West\\_Texas\Production\Final\\_Client\\_Deliverables\Lot8\\_utm13\point\\_cloud\tilecls](#)

| Class | Total          | MKP | WH         | Class | Total | MKP | WH | Class | Total | MKP | WH | Class | Total | MKP | WH |
|-------|----------------|-----|------------|-------|-------|-----|----|-------|-------|-----|----|-------|-------|-----|----|
| 0     | 00             | 00  | 00         | 64    | 00    | 00  | 00 | 128   | 00    | 00  | 00 | 192   | 00    | 00  | 00 |
| 1     | 2,590,846,538  | 00  | 23,000,543 | 65    | 00    | 00  | 00 | 129   | 00    | 00  | 00 | 193   | 00    | 00  | 00 |
| 2     | 30,821,641,349 | 00  | 00         | 66    | 00    | 00  | 00 | 130   | 00    | 00  | 00 | 194   | 00    | 00  | 00 |
| 3     | 00             | 00  | 00         | 67    | 00    | 00  | 00 | 131   | 00    | 00  | 00 | 195   | 00    | 00  | 00 |
| 4     | 00             | 00  | 00         | 68    | 00    | 00  | 00 | 132   | 00    | 00  | 00 | 196   | 00    | 00  | 00 |
| 5     | 00             | 00  | 00         | 69    | 00    | 00  | 00 | 133   | 00    | 00  | 00 | 197   | 00    | 00  | 00 |
| 6     | 00             | 00  | 00         | 70    | 00    | 00  | 00 | 134   | 00    | 00  | 00 | 198   | 00    | 00  | 00 |
| 7     | 67,455         | 00  | 00         | 71    | 00    | 00  | 00 | 135   | 00    | 00  | 00 | 199   | 00    | 00  | 00 |
| 8     | 00             | 00  | 00         | 72    | 00    | 00  | 00 | 136   | 00    | 00  | 00 | 200   | 00    | 00  | 00 |
| 9     | 5,437,002      | 00  | 00         | 73    | 00    | 00  | 00 | 137   | 00    | 00  | 00 | 201   | 00    | 00  | 00 |
| 10    | 00             | 00  | 00         | 74    | 00    | 00  | 00 | 138   | 00    | 00  | 00 | 202   | 00    | 00  | 00 |
| 11    | 00             | 00  | 00         | 75    | 00    | 00  | 00 | 139   | 00    | 00  | 00 | 203   | 00    | 00  | 00 |
| 12    | 00             | 00  | 00         | 76    | 00    | 00  | 00 | 140   | 00    | 00  | 00 | 204   | 00    | 00  | 00 |
| 13    | 00             | 00  | 00         | 77    | 00    | 00  | 00 | 141   | 00    | 00  | 00 | 205   | 00    | 00  | 00 |
| 14    | 00             | 00  | 00         | 78    | 00    | 00  | 00 | 142   | 00    | 00  | 00 | 206   | 00    | 00  | 00 |
| 15    | 00             | 00  | 00         | 79    | 00    | 00  | 00 | 143   | 00    | 00  | 00 | 207   | 00    | 00  | 00 |
| 16    | 00             | 00  | 00         | 80    | 00    | 00  | 00 | 144   | 00    | 00  | 00 | 208   | 00    | 00  | 00 |
| 17    | 531,970        | 00  | 00         | 81    | 00    | 00  | 00 | 145   | 00    | 00  | 00 | 209   | 00    | 00  | 00 |
| 18    | 1,328          | 00  | 00         | 82    | 00    | 00  | 00 | 146   | 00    | 00  | 00 | 210   | 00    | 00  | 00 |
| 19    | 00             | 00  | 00         | 83    | 00    | 00  | 00 | 147   | 00    | 00  | 00 | 211   | 00    | 00  | 00 |
| 20    | 196,620        | 00  | 00         | 84    | 00    | 00  | 00 | 148   | 00    | 00  | 00 | 212   | 00    | 00  | 00 |
| 21    | 00             | 00  | 00         | 85    | 00    | 00  | 00 | 149   | 00    | 00  | 00 | 213   | 00    | 00  | 00 |
| 22    | 00             | 00  | 00         | 86    | 00    | 00  | 00 | 150   | 00    | 00  | 00 | 214   | 00    | 00  | 00 |
| 23    | 00             | 00  | 00         | 87    | 00    | 00  | 00 | 151   | 00    | 00  | 00 | 215   | 00    | 00  | 00 |
| 24    | 00             | 00  | 00         | 88    | 00    | 00  | 00 | 152   | 00    | 00  | 00 | 216   | 00    | 00  | 00 |
| 25    | 00             | 00  | 00         | 89    | 00    | 00  | 00 | 153   | 00    | 00  | 00 | 217   | 00    | 00  | 00 |
| 26    | 00             | 00  | 00         | 90    | 00    | 00  | 00 | 154   | 00    | 00  | 00 | 218   | 00    | 00  | 00 |
| 27    | 00             | 00  | 00         | 91    | 00    | 00  | 00 | 155   | 00    | 00  | 00 | 219   | 00    | 00  | 00 |
| 28    | 00             | 00  | 00         | 92    | 00    | 00  | 00 | 156   | 00    | 00  | 00 | 220   | 00    | 00  | 00 |
| 29    | 00             | 00  | 00         | 93    | 00    | 00  | 00 | 157   | 00    | 00  | 00 | 221   | 00    | 00  | 00 |
| 30    | 00             | 00  | 00         | 94    | 00    | 00  | 00 | 158   | 00    | 00  | 00 | 222   | 00    | 00  | 00 |
| 31    | 00             | 00  | 00         | 95    | 00    | 00  | 00 | 159   | 00    | 00  | 00 | 223   | 00    | 00  | 00 |
| 32    | 00             | 00  | 00         | 96    | 00    | 00  | 00 | 160   | 00    | 00  | 00 | 224   | 00    | 00  | 00 |
| 33    | 00             | 00  | 00         | 97    | 00    | 00  | 00 | 161   | 00    | 00  | 00 | 225   | 00    | 00  | 00 |
| 34    | 00             | 00  | 00         | 98    | 00    | 00  | 00 | 162   | 00    | 00  | 00 | 226   | 00    | 00  | 00 |
| 35    | 00             | 00  | 00         | 99    | 00    | 00  | 00 | 163   | 00    | 00  | 00 | 227   | 00    | 00  | 00 |
| 36    | 00             | 00  | 00         | 100   | 00    | 00  | 00 | 164   | 00    | 00  | 00 | 228   | 00    | 00  | 00 |
| 37    | 00             | 00  | 00         | 101   | 00    | 00  | 00 | 165   | 00    | 00  | 00 | 229   | 00    | 00  | 00 |
| 38    | 00             | 00  | 00         | 102   | 00    | 00  | 00 | 166   | 00    | 00  | 00 | 230   | 00    | 00  | 00 |
| 39    | 00             | 00  | 00         | 103   | 00    | 00  | 00 | 167   | 00    | 00  | 00 | 231   | 00    | 00  | 00 |
| 40    | 00             | 00  | 00         | 104   | 00    | 00  | 00 | 168   | 00    | 00  | 00 | 232   | 00    | 00  | 00 |
| 41    | 00             | 00  | 00         | 105   | 00    | 00  | 00 | 169   | 00    | 00  | 00 | 233   | 00    | 00  | 00 |
| 42    | 00             | 00  | 00         | 106   | 00    | 00  | 00 | 170   | 00    | 00  | 00 | 234   | 00    | 00  | 00 |
| 43    | 00             | 00  | 00         | 107   | 00    | 00  | 00 | 171   | 00    | 00  | 00 | 235   | 00    | 00  | 00 |
| 44    | 00             | 00  | 00         | 108   | 00    | 00  | 00 | 172   | 00    | 00  | 00 | 236   | 00    | 00  | 00 |
| 45    | 00             | 00  | 00         | 109   | 00    | 00  | 00 | 173   | 00    | 00  | 00 | 237   | 00    | 00  | 00 |
| 46    | 00             | 00  | 00         | 110   | 00    | 00  | 00 | 174   | 00    | 00  | 00 | 238   | 00    | 00  | 00 |
| 47    | 00             | 00  | 00         | 111   | 00    | 00  | 00 | 175   | 00    | 00  | 00 | 239   | 00    | 00  | 00 |
| 48    | 00             | 00  | 00         | 112   | 00    | 00  | 00 | 176   | 00    | 00  | 00 | 240   | 00    | 00  | 00 |
| 49    | 00             | 00  | 00         | 113   | 00    | 00  | 00 | 177   | 00    | 00  | 00 | 241   | 00    | 00  | 00 |
| 50    | 00             | 00  | 00         | 114   | 00    | 00  | 00 | 178   | 00    | 00  | 00 | 242   | 00    | 00  | 00 |
| 51    | 00             | 00  | 00         | 115   | 00    | 00  | 00 | 179   | 00    | 00  | 00 | 243   | 00    | 00  | 00 |
| 52    | 00             | 00  | 00         | 116   | 00    | 00  | 00 | 180   | 00    | 00  | 00 | 244   | 00    | 00  | 00 |
| 53    | 00             | 00  | 00         | 117   | 00    | 00  | 00 | 181   | 00    | 00  | 00 | 245   | 00    | 00  | 00 |
| 54    | 00             | 00  | 00         | 118   | 00    | 00  | 00 | 182   | 00    | 00  | 00 | 246   | 00    | 00  | 00 |
| 55    | 00             | 00  | 00         | 119   | 00    | 00  | 00 | 183   | 00    | 00  | 00 | 247   | 00    | 00  | 00 |
| 56    | 00             | 00  | 00         | 120   | 00    | 00  | 00 | 184   | 00    | 00  | 00 | 248   | 00    | 00  | 00 |
| 57    | 00             | 00  | 00         | 121   | 00    | 00  | 00 | 185   | 00    | 00  | 00 | 249   | 00    | 00  | 00 |
| 58    | 00             | 00  | 00         | 122   | 00    | 00  | 00 | 186   | 00    | 00  | 00 | 250   | 00    | 00  | 00 |
| 59    | 00             | 00  | 00         | 123   | 00    | 00  | 00 | 187   | 00    | 00  | 00 | 251   | 00    | 00  | 00 |
| 60    | 00             | 00  | 00         | 124   | 00    | 00  | 00 | 188   | 00    | 00  | 00 | 252   | 00    | 00  | 00 |
| 61    | 00             | 00  | 00         | 125   | 00    | 00  | 00 | 189   | 00    | 00  | 00 | 253   | 00    | 00  | 00 |
| 62    | 00             | 00  | 00         | 126   | 00    | 00  | 00 | 190   | 00    | 00  | 00 | 254   | 00    | 00  | 00 |
| 63    | 00             | 00  | 00         | 127   | 00    | 00  | 00 | 191   | 00    | 00  | 00 | 255   | 00    | 00  | 00 |

**Bold** – point counts in 'Minimum classified point cloud classification scheme' (see table on previous page)

**##** – point counts in Classes beyond the minimum

**##** – disallowed point counts per USGS spec

**##** – not all Class 0 points flagged as Withheld