

Lidar Fact Sheet: Brazoria County, Texas

Overview

The Brazoria County data set was received from the Texas Water Development Board (TWDB). It was reviewed by the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center at the macro level, which involves checking for format and point characteristics for approximately 5% of the tiles. In addition, the entire data set is reviewed to establish that bare-earth processing and proper classification of the points has been performed. This review did not include accuracy or data-processing (e.g., bare-earth quality, flightline mismatch, feature removal) assessments.

Data Attributes

The Texas county data were delivered as bare-earth processed data sets. However, no accuracy or qualitative assessment information was provided. The data acquisition occurred in 2006; multiple returns were recorded for each laser pulse along with an intensity value for each return. The data were processed to meet Federal Emergency Management Agency (FEMA) flood mapping standards (root mean square error of 18.5 centimeters in open, bare terrain). Point spacing is nominally on the order of 1.4 meters. For full metadata, follow this link:

www.csc.noaa.gov/crs/tcm/ldartdat/metatemplate/tx2006_brazoria_template.html

Review Results

According to the limited review, the data set on average appears to be of good quality. This determination is based on the issues listed in the sections below. Again, no accuracy assessment was performed.

Tile Review

The Brazoria County lidar data are complete and for the most part appear to be of good quality. The issues determined in this review are as follows:

1. Classification of water: for the most part, water points are classified as “Unclassified,” which is acceptable; however, this does not conform to the American Society for Photogrammetry and Remote Sensing (ASPRS) standard of Class 9. The user should also be aware that, in many tiles, water points have been classified as “Ground.” These “Ground” points occur in streams/ivers (San Bernard River) and lakes/ponds.
2. There is no flightline source information.

Bare Earth Point Density Review

Figure 1 below depicts the bare-earth point density per 2,500 square meter cell and per square meter. The issues determined in this review are as follows:

1. The data extend slightly offshore at the outflow of the San Bernard River in southern Brazoria County. There is, however, significant shoaling at the mouth of the river, which may indicate why the data include this area. (*Coastal Processes Study of San Bernard Mouth, Texas: Stability and Maintenance of Mouth*, Kraus and Lin, August 2002, <http://sanbernardriver.com/sanbernard/mouth/resources/mouthrpt.pdf>)
2. Also of note is the lower density of overlap points in approximately 10 swaths in the mid/lower one-third of the county. This may be a result of data-processing differences. The points may have been classified differently than the overlap points in the rest of the data set.
3. The three distinct areas of dark green (high bare-earth point density) in the middle of the data set and along the Matagorda County line may also be the result of data-processing differences. These areas correspond to open/non-vegetated fields; however much of this county is characterized in the same way and is not represented by dark green.
4. Salmon/red areas (low bare-earth point density) correspond to vegetated/forested areas, as well as some ponds/lakes.

For More Information

NOAA Coastal Services Center
Coastal Remote Sensing Program
(843) 740-1200 • www.csc.noaa.gov/crs/



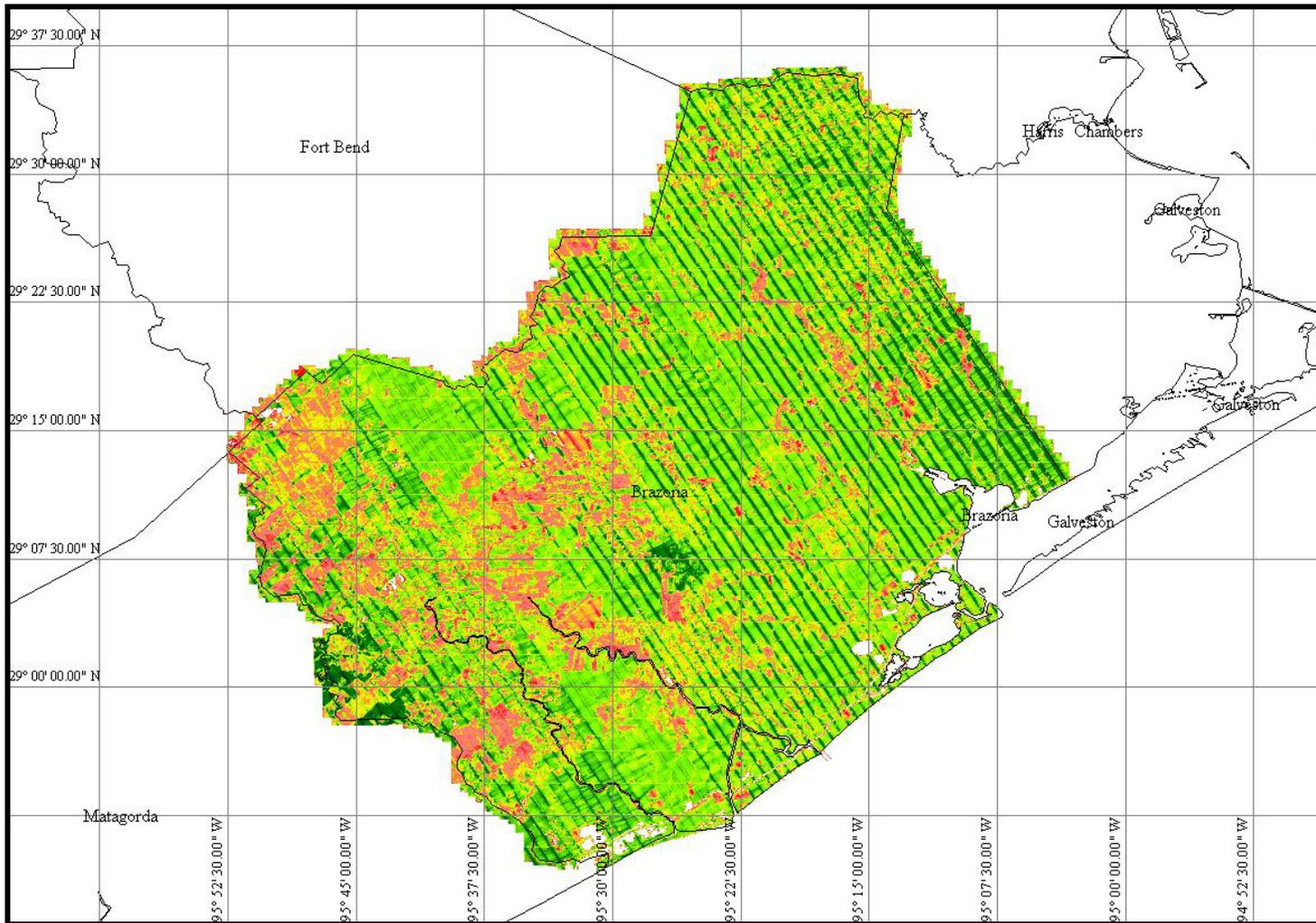


Figure 1. Bare-earth point count density (pts/2500 square meters) in Brazoria County.

Color	Points/2 500 m ²	Pts/meter ²
Red	0-199	0 - 0.0796
Light Red	200-399	0.08 - 0.1596
Orange	400-599	0.16 - 0.2396
Yellow	600-999	0.24 - 0.3996
Light Green	1000-1499	0.40 - 0.5996
Green	1500-2999	0.60 - 1.1996
Dark Green	3000-4999	1.20 - 1.9996
Blue	5000 +	2.00 +