

Volusia County, Florida: 2006 LiDAR Digital Elevation Model

Data format: LAS

Coordinate system: State Plane Coordinate System

Theme keywords: LiDAR, Terrain, Model, Elevation, Surface

Abstract: This dataset is a digital elevation model (DEM) over Volusia County, Florida, approximately 1,432 square miles, derived from LiDAR data acquired in early March of 2006. This dataset is comprised of 1,591 LiDAR files, based on the Volusia County 5,000' by 5,000' sheet index system, in the LAS file format. The raw data was collected at an average ground sample distance of 1-meter, and the bare earth was classified and used as a basis for the 2006 Volusia Countywide Digital Orthophoto Project. This data is not intended for engineering, design, water modeling, or any other purposes other than as stated within this document. This data is intended for orthophoto rectification purposes only.

FGDC and ESRI Metadata:

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Metadata elements shown with blue text are defined in the Federal Geographic Data Committee's (FGDC) [Content Standard for Digital Geospatial Metadata \(CSDGM\)](#). Elements shown with green text are defined in the [ESRI Profile of the CSDGM](#). Elements shown with a green asterisk (*) will be automatically updated by ArcCatalog. ArcCatalog adds hints indicating which FGDC elements are mandatory; these are shown with gray text.

Identification Information:

Citation:

Citation information:

Originators: Volusia County Public Works Department

Title:

Volusia County, Florida: 2006 LiDAR Digital Elevation Model

Publication date: 20060815

Publication time: Unknown

Edition: First

Geospatial data presentation form: model

Description:

Abstract:

This dataset is a digital elevation model (DEM) over Volusia County, Florida,

approximately 1,432 square miles, derived from LiDAR data acquired in early March of 2006. This dataset is comprised of 1,591 LiDAR files, based on the Volusia County 5,000' by 5,000' sheet index system, in the LAS file format. The raw data was collected at an average ground sample distance of 1-meter, and the bare earth was classified and used as a basis for the 2006 Volusia Countywide Digital Orthophoto Project. This data is not intended for engineering, design, water modeling, or any other purposes other than as stated within this document. This data is intended for orthophoto rectification purposes only.

Purpose:

The DEM was developed to support the 2006 Volusia Countywide Digital Orthophoto Imagery Project.

Language of dataset: English

Time period of content:**Time period information:****Single date/time:**

Calendar date: 20060815

Time of day: unknown

Currentness reference:

publication date

Status:

Progress: Complete

Maintenance and update frequency: As needed

Spatial domain:**Bounding coordinates:**

West bounding coordinate: -81.680128

East bounding coordinate: -80.733305

North bounding coordinate: 29.426977

South bounding coordinate: 28.612988

Keywords:**Theme:**

Theme keywords: LiDAR, Terrain, Model, Elevation, Surface

Theme keyword thesaurus: laser

Place:

Place keywords: Volusia County Florida

Use constraints:

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Point of contact:**Contact information:****Contact person primary:**

Contact person: Arden Fontaine

Contact organization: Volusia County Public Works Department

Contact position: Special Projects Manager

Contact address:

Address type: physical address
Address:
123 West Indiana Avenue, Room 402
City: Deland
State or province: Florida
Postal code: 32720
Country: USA

Contact voice telephone: 386-736-5965
Contact facsimile telephone: 386-740-5184

Contact electronic mail address: afontaine@co.volusia.fl.us

Hours of service: 8:00 am - 4:30 pm

Native dataset format: LAS

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Data Quality Information:

Logical consistency report:

The LiDAR DEM was developed in accordance with the contract LiDAR specifications.

Completeness report:

All elevation measurements within the bounding coordinates of this XML were used to derive this dataset.

Positional accuracy:

Horizontal positional accuracy:

Horizontal positional accuracy report:

The intended horizontal accuracy is consistent with features on digital orthophotographs that meet National Map Accuracy Standards at a scale of 1:1200. The accuracy of the DEM has not been tested.

Quantitative horizontal positional accuracy assessment:

Vertical positional accuracy:

Quantitative vertical positional accuracy assessment:

Lineage:

Source information:

Source citation:

Citation information:

Originators: Volusia County Public Works department, Woolpert, Inc.

Title:

2006 Volusia Countywide Digital Orthophoto Imagery Project

Publication date: 20060815

Publication time: Unknown

Edition: First

Geospatial data presentation form: model

Publication information:

Publication place: Deland, Florida

Publisher: Volusia County Public Works Department

Source time period of content:

Time period information:

Single date/time:

Calendar date: 20060815

Time of day: unknown

Source currentness reference:

publication date

Process step:

Process description:

The LiDAR data was acquired using a Leica ALS50 from an altitude of 1,000-meters above ground level to provide an average ground sample distance of 1-meter. The scanner field of view was 44-degrees, and the scan rate was 33-hertz. First and last return data was collected along with the signal return intensity. Two redundant airborne GPS bases stations were utilized during the data acquisition with maximum line-of-sight distance between the base station and aircraft of 20-km.

The LiDAR data was reduced using Grafnav (Waypoint Consulting) for GPS post-processing, PosProc (Applanix Crop) for IMU processing, ALS50 Post Processor (LH Systems) to initial LiDAR processing, TerraScan (Terrasolid) for initial point classification, and proprietary Woolpert developed software for refining the point classification and QC.

The LAS files contain 3 classifications: 1 = default which contains non ground features such as buildings, cars, trees, bridges, etc.; 2 = bare earth; and 5 = non ground from first return which contains trees, powerlines, etc..

Process software and version: GrafNav, PosProc, TerraScan

Process date: 20060815

Process contact:

Contact information:

Contact person primary:

Contact person: Chris O'Neill

Contact organization: Woolpert, Inc.

Contact position: Technical Operations Manager

Contact address:

Address type: physical address

Address:

11315 Corporate Boulevard, Suite 115

City: Orlando

State or province: Florida

Postal code: 32817

Country: USA

Contact voice telephone: 407-381-2192

Contact facsimile telephone: 407-384-1185

Contact electronic mail address: chris.oneill@woolpert.com

Hours of service: 8:00 am - 5:00 pm

Cloud cover: none

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Spatial Data Organization Information:

Direct spatial reference method: Point

Point and vector object information:

SDTS terms description:

SDTS point and vector object type: Point

ESRI terms description:

Feature description: Laser return

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Spatial Reference Information:

Horizontal coordinate system definition:

Coordinate system name:

Projected coordinate system name: State Plane Coordinate System, Florida East Zone (9001)

Geographic coordinate system name: Geodetic Reference System of 1980 (GRS80)

Planar:

Grid coordinate system:

Grid coordinate system name: State Plane Coordinate System

State Plane Coordinate System:

SPCS zone identifier: 0901

Transverse mercator:

Scale factor at central meridian: 1-1/17000

Longitude of central meridian: 82 00 00

Latitude of projection origin: 24 20 00

False easting: 200000

False northing: 0

Planar coordinate information:

Planar coordinate encoding method: coordinate pair

Coordinate representation:

Abscissa resolution: 0.000064

Ordinate resolution: 0.000064

Planar distance units: survey feet

Geodetic model:

Horizontal datum name: North American Datum of 1983/1990 HARN

Ellipsoid name: Geodetic Reference System 80
Semi-major axis: 6378137.0
Denominator of flattening ratio: 298.257222100088

Vertical coordinate system definition:

Altitude system definition:

Altitude datum name: North American Vertical Datum of 1988
Altitude distance units: feet
Altitude encoding method: Explicit elevation coordinate included with horizontal coordinates

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Entity and Attribute Information:

Detailed description:

Entity type:

Entity type label: Point

Entity type definition:

Point feature derived from LiDAR shot

Entity type definition source:

Woolpert, Inc.

Attribute:

Attribute label: intensity

Attribute definition:

Measure of reflectance of Lasert shot

Attribute definition source:

Woolpert, Inc

Overview description:

Dataset overview:

This dataset is a digital elevation model (DEM) over Volusia County, Florida, approximately 1,427 square miles, derived from LiDAR data acquired in early March of 2006. This dataset is comprised of 1,591 LiDAR files, based on the Volusia County 5,000' by 5,000' sheet index system, in the LAS file format. The raw data was collected at an average ground sample distance of 1-meter, and the bare earth was classified and used as a basis for the 2006 Volusia Countywide Digital Orthophoto Project. This data is not intended for engineering, design, water modeling, or any other purposes other than as stated within this document. This data is intended for orthophoto rectification purposes only.

Entity and attribute overview:

Refer to LAS Specification version 1.1

Entity and attribute detail citation:

see process steps within this metadata record for specific methodology

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Distribution Information:

Distributor:

Contact information:**Contact person primary:****Contact person:** Arden Fontaine**Contact organization:** Volusia County Public Works Department**Contact position:** Special Projects Manager**Contact address:****Address type:** mailing address**Address:**

123 West Indiana Avenue, Room 402

City: Deland**State or province:** Florida**Postal code:** 32720**Country:** USA**Contact voice telephone:** 386-736-5965**Contact facsimile telephone:** 386-740-5184**Contact electronic mail address:** afontaine@co.vlusia.fl.us**Hours of service:** 8:00 am - 4:30 pm**Distribution liability:**

Users must assume responsibility for determining the usability of this data.

This data is not intended for engineering, design, water modeling, or any other purposes other than as stated within this document. This data is intended for orthophoto rectification purposes only.

Available time period:**Time period information:****Single date/time:****Calendar date:** 20060815[Back to Top](#)

Metadata Reference Information:**Metadata date:** 20060815**Language of metadata:** English**Metadata contact:****Contact information:****Contact person primary:****Contact person:** Arden Fontaine**Contact organization:** Volusia County Public Works Department**Contact position:** Special Projects Manager**Contact address:****Address type:** mailing address**Address:**

123 West Indiana Avenue, Room 402

City: Deland
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Contact electronic mail address: afontaine@co.volusia.fl.us

Hours of service: 8:00-4:30

Contact instructions:

Monday-Friday

Metadata standard name: FGDC Content Standards for Digital Geospatial Metadata

Metadata time convention: local time

Metadata use constraints:

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