**DELIVERY REPORT**

For the

**Fairfax, Fauquier, Frederick, and Jefferson County Acquisition and Classification for FEMA Region 3 FY 12 VA LiDAR**

**USGS Contract:**

**G12PD00040**

**Prepared for:**

**USGS**

**Prepared by:**

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**Report Date: November 29, 2012**

**Fairfax, Fauquier, Frederick, and Jefferson County Acquisition and Classification for FEMA Region 3 FY 12 VA LiDAR**

**–LiDAR Deliverables Overview Checklist**

**Raw Point Cloud Data**

LAS version 1.2

Georeferenced

GPS Times are included

Intensity values are included

Full swaths

1 file per swath, 1 swath per file, file size does not exceed 2GB

**Classified Point Cloud Data**

LAS Version 1.2

Correct Georeference Information

Contains GPS Times

Contains Intensity Values

Tile to 1500 x 1500 meter Tile Grid

Classified with class 1 – unclassified, class 2 – Bare-earth Ground, 7 – Noise, 9 – Water, 10 –

Ignored ground, 11 – Withheld.

**Bare Earth Surface (Raster DEM)**

Cell size of 1 meter

ERDAS .img File format

Georeference info included (xml files)

Tiled with no overlap

Reviewed for edgematching and artifacts

Free of void areas

Hydrographic features have been flattened according to SOW

**Survey Data**

Supplemental Ground Control and reports

Ground Control Quality Check points and reports (C.1.a(vii)(b))

Control and calibration points

**Metadata**

FGDC Compliant metadata for:

Deliverables (LAS, DEM, Lift, Breakline)

**Project Reports**

Collection Report detailing mission planning and flight logs.

Survey Report

Processing report

Project Report

Response Report

**Extents**

Tile grid from the LiDAR Deliverable

Project Boundary delivered as shapefile

**Breakline Data**

Breakline Data in GDB

Breakline Data as Shapefiles

# Raw Point Cloud Data

Raw Point Cloud Data has been included as part of this delivery. The Raw Point Cloud Data is delivered in LAS v1.2 with all required header information including: Georeference information, GPS times, and Intensity Values. The data is delivered as full swaths with one file per swath and a file size not exceeding 2GB. Swath files from mission o112046a, o112046b, o112048a, and o112048b, were previously delivered with lot five and were not included in this delivery.

# Classified Point Cloud

Classified point cloud data has been delivered tiled to 1500 x 1500 m tiles that are named tilename.las. The LAS prefix has been added to aid in organizing the data as multiple tiled datasets are being delivered. The final delivery consists of 2,150 LiDAR tiles that meet the project specified requirement.

# Bare Earth Surface (Raster DEM)

A total of 2,150 1500 x 1500 m tiled bare earth raster DEMs in ERDAS IMG format have been delivered for this project. All tiles have a cell size of 1 m and have been reviewed to ensure that they meet the project required specifications.

# Survey Data

All survey control data and accuracy assessment points will be submitted as a separate deliverable along with the Survey Report.

# Metadata

Project level metadata for each of the deliverables (LiDAR, Breaklines, DEM, and Lift) will be submitted as a separate deliverable. Metadata will be reviewed through the USGS metaparser tool to ensure that it is FGDC compliant.

# Project Report

A comprehensive project report will be submitted as a separate deliverable. The report will include the LiDAR acquisition and processing information along with detailed information on the production and quality control process used for the development of all deliverables.

# Extents

The project extents have been delivered for this project as a shapefile. The extents have been verified against that project boundary to ensure that there is full coverage for the project.

# Breakline Data

Breaklines have been delivered in an ESRI file geodatabase and as shapefiles. Breaklines were derived to meet the project specifications as outlined in the SOW.

# Other Comments

Intensity orthos in TIFF format with 1 meter cell size have been delivered with the project data. These datasets are internal products used to QC and create the final deliverables. They have been delivered as a supplemental product.