

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:

2012 Coastal Virginia NAIP Digital Ortho Photo Imagery

1.2. Summary description of the data:

This data set contains imagery from the National Agriculture Imagery Program (NAIP). NAIP acquires digital ortho imagery during the agricultural growing seasons in the continental U.S.. A primary goal of the NAIP program is to enable availability of of ortho imagery within one year of acquisition. NAIP provides four main products: 1 meter ground sample distance (GSD) ortho imagery rectified to a horizontal accuracy of within +/- 5 meters of reference digital ortho quarter quads (DOQQ's) from the National Digital Ortho Program (NDOP); 2 meter GSD ortho imagery rectified to within +/- 10 meters of reference DOQQs; 1 meter GSD ortho imagery rectified to within +/- 6 meters to true ground; and, 2 meter GSD ortho imagery rectified to within +/- 10 meters to true ground. The tiling format of NAIP imagery is based on a 3.75' x 3.75' quarter quadrangle with a 300 meter buffer on all four sides. NAIP quarter quads are formatted to the UTM coordinate system using NAD83. NAIP imagery may contain as much as 10% cloud cover per tile.

Original contact information:

Contact Org: Aerial Photography Field Office (APFO)

Phone: 801-844-2922

Email: apfo.sales@slc.usda.gov

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2012-06-03

1.5. Actual or planned geographic coverage of the data:

W: -78.971, E: -75.052, N: 39.372, S: 36.441

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)

Image (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:

NOAA Office for Coastal Management (NOAA/OCM)

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

NOAA Office for Coastal Management (NOAA/OCM)

2.4. E-mail address:

coastal.info@noaa.gov

2.5. Phone number:

(843) 740-1202

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?**4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):****5. Data Lineage and Quality**

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Process Steps:

- 2012-10-29 00:00:00 - Flight planning was performed in IGIPlan from IGI over a buffered boundary covering DOQQ extents provided by the USDA. A 500m reduced resolution NED DEM file was used to determine ground heights. A targeted flight altitude of approximately 30,000 feet above ground level was used. A minimum forward overlap of 60+ACU- and minimum side overlap of 30+ACU- were used. No ground elevation in the project area resulted in source pixel dimensions greater than 1.05m or less than 0.5m. Cessna Conquest aircraft were used for acquisition. Multiple Intergraph Digital Mapping Camera (DMC) systems were utilized in the data capture. The DMC is a digital frame camera that produces a central perspective image with a nominal focal length of 120mm projecting an image on a virtual CCD measuring 13,824 by 7,680 pixels. The pixels are 12um by 12um. Images from four panchromatic cameras modules, each with a 120mm lens projecting an image on a 7,168 by 4,096 CCD, are assembled to create the virtual frame. Images captured simultaneously from four 3,072 by 2,048 pixel multispectral (MS) cameras with 30mm lenses produce red, green, blue and near infrared images. These MS images are matched to the Pan virtual image using the Post Processing Software from Intergraph. All DMC systems used for capture have been calibrated by the manufacturer. The calibration includes measuring the radiometric and geometric properties of each camera. These data are used in the Post Processing Software to eliminate the radiometric and geometric distortion. The raw captured pixel resolution of the panchromatic virtual frame ranges from 0.60m to 1.04m across the project area depending on terrain height. Each pixel is assigned a 12 bit digital number (DN) by the analog to digital conversion performed after each exposure.

Each pixel is resampled during orthorectification to an output resolution of 1m at a bit depth of 8 for each image band. Four bands of data were captured for each image+ADs- Blue: 400-580 nm, Green: 500-650nm, Red: 590-675nm and Near infrared: 675-850 nm. The final product may only include the RGB data. All aerial imagery was collected with associated GPS data. When possible most imagery will also include IMU data collection. GPS/IMU data were captured with either an Applanix POS 510 system or IGI AEROCtrl. The GPS data was utilized to control the aerial triangulation process. All imagery was processed through an aerial triangulation in which the airborne GPS data was constrained to expected limits. Analysis was performed to assure that all image frames fit within a strip and between strips by evaluating the image and airborne GPS residuals. The final adjustments assure a high quality relative adjustment and a high quality absolute adjustment limited to the airborne GPS data accuracy. This process assures the final absolute accuracy of all geopositioned imagery. Both signalized and photo identified ground control were used to QC and control the IMU/GPS based aerial triangulation bundle block solution. For each project area the latest NED was downloaded from the USGS National Map Seamless Server website in late Spring 2012. Thirty Meter NED was used in all cases, and preferred over the available ten meter spacing to minimize image smearing and distortions that are exacerbated by a finer, but not more accurate DEM. A visual inspection of the NED using color cycled classification by elevation and a shaded relief was performed to check for gaps, corruption and gross errors. When available the NED was compared to known higher quality elevation sources to detect flaws. Between 20-60 construction points per frame derived from conjugant image measurements performed during aerial triangulation were projected to the NED. The predicted horizontal error for each point was added as an attribute in the SURDEX enterprise database. An operator reviews ortho seams in areas these predicted errors indicate horizontal error in excess of the contract spe

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.7. Data collection method(s)
- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
 - 7.1.1. If data are not available or has limitations, has a Waiver been filed?
 - 7.1.2. If there are limitations to data access, describe how data are protected
- 7.3. Data access methods or services offered
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/49500>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

NOAA Office for Coastal Management (NOAA/OCM)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

<https://coast.noaa.gov/dataregistry/>

<https://coast.noaa.gov/dataviewer/#/imagery/search/where:ID=6308>

https://coastalimagery.blob.core.windows.net/digitalcoast/VA_NAIP_2012_6308/index.html

7.3. Data access methods or services offered:

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

Office for Coastal Management - Charleston, SC

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage

relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.