Ohio Statewide Imagery Program (OSIP)

The Ohio Geographically Referenced Information Program (OGRIP) continues to sponsor programs to better support the users of geospatial data within Ohio. Programs such as the Location Based Response System (LBRS) and our latest initiative — the Ohio Statewide Imagery Program (OSIP) — accomplish just this objective. The OSIP entails the entire land area of the State of Ohio, approximately 41,276 square miles.

The OSIP provides a common visual geographic framework that can be used by all levels of government, and enable more effective planning and response in case of man-made or natural emergencies. Current statewide imagery coverages for Ohio are comprised of a variety of products from differing acquisition dates. These products include:

- 1 Meter Digital Orthophoto Quarter-Quadrangle (DOQQs)—black and white imagery acquired between 1988-1999 through the National Digital Orthopohoto Program (majority of imagery was collected in 1994)
- 2000 10 Meter Spot imagery
- Imagery developed by individual counties at differing resolutions and dates

Because of security concerns, the demand for current imagery has increased dramatically over the last several years. This program will help meet security concerns within all levels of government as well as the private sector geospatial data user community.

Project Description

The State has entered into a single contract for both required and any optional Project Product Deliverables associated with OSIP. Federal, State and local government entities have the ability to purchase through this Contract to enhance the required product. Deliverables for the optional products are described in the Statement of Work associated with the Request for Proposal (RFP) as well as in this announcement.

Enhancements

The Contract enables all levels of government to leverage the base imagery acquisition services necessary to obtain the required product Deliverables for the State. If a State agency or county chooses to obtain an optional product enhancement that enhanced product will be delivered with the State's required Deliverable. The governmental entity will be responsible for the incremental cost for the enhancement, which consists of the amount of the final cost less the price quoted for the state's basic product as identified in the initial Cost Proposal.

Additional feature capture or resolution enhancement on behalf of governmental entities for Deliverables other than those identified in the Contract will require a separate agreement between the successful Contractor and participating counties or State agencies.

Required Products

Several public domain products are part of the deliverable to the State.

- PRODUCT 1 – Supporting Administrative and Technical By-Products Contractor will provide a Project Plan, ground control, flight mission, scanning, analytical triangulation (AT), digital elevation model (DEM), orthoimagery processing, quality assurance, and Project management.
- PRODUCT 2 – Statewide coverage of full color orthophotography at 1-foot pixel resolution, delivered in 2500x2500 foot grid tiles; delivered as 88 individual county coverages; in uncompressed TIFF file formats with world files; in the appropriate Ohio State Plane North and South zone.
- PRODUCT 3 – Statewide coverage of 1-foot resolution county mosaics in MrSID lossless compression format with world files in the appropriate Ohio State Plane North and South zones.
- PRODUCT 4 -- Final Digital Elevation Models (DEM) used for the orthophoto creation, delivered initially for the north half, and later the south half of Ohio, as well as by county. The DEM must be provided in ArcInfo GRID format, and a platform independent format (e.g., ASCII text) and be capable of supporting the generation of 5-foot contours statewide at an accuracy meeting National Map Accuracy Standards (NMAS).

See Program Note 1.

Optional Product Enhancements

- OPTIONAL PRODUCT A– Statewide coverage of 6-inch pixel resolution full color orthophotography delivered in 2500x2500 foot grid tiles; delivered as 88 individual county coverages; in uncompressed TIFF file formats with world files; in the appropriate Ohio State Plane North and South zones.
- OPTIONAL PRODUCT B– Statewide coverage of 6-inch pixel resolution full color county mosaics delivered as 88 individual county coverages with a minimum of one full tile overlap with surrounding counties; in MrSID lossless compression format in the appropriate Ohio State Plane North and South Zones.
- OPTIONAL PRODUCT C – Statewide DEM suitable for 2-foot contour generation. The DEM must be captured at a density level necessary to support 2-foot contours and a Triangulated Irregular Network (TIN) model. It shall be provided in ArcInfo GRID and USGS DEM format in appropriate Ohio State Plane North and South Zones.
- OPTIONAL PRODUCT D -- Statewide orthophotography coverage at 1-meter pixel resolution (resampled from 1' product), delivered in county mosaics that produce a set of tiled images for Ohio. Each county mosaic will overlap its surrounding counties, but there may be no overlapping "no-data" areas; delivered in MrSID generation III file format; in appropriate Ohio State Plane North and South Zones. The MrSID shall be in lossless compression with world files.
- OPTIONAL PRODUCT E -- Statewide orthophotography coverage at 1-meter pixel resolution (resampled from 1' product), delivered in USGS quarter quadrangle (3.75 minutes) tiles; delivered in MrSID Generation III file in lossless compression, with world files, and uncompressed TIFF file formats with world files; in UTM coordinates (Zones 16 and 17).
- OPTIONAL PRODUCT F– Statewide 1-meter Color IR orthoimagery delivered in 3.75 minute tiles in UTM coordinates (Zones 16 and 17).
- OPTIONAL PRODUCT G – Five (5)-foot Contours, including pricing for statewide 5' contours, processing DEM to bare-earth digital terrain model (DTM), adding breaklines and the calculation of contours.
- OPTIONAL PRODUCT H – Two (2)-foot Contours, including pricing for statewide 2' contours, processing DEM to bare-earth digital terrain model (DTM), adding breaklines and the calculation of contours.

See Program Note 2

Data Acquisition

Data will be captured and delivered in two phases. The northern portion of the state will be acquired in the spring of 2006 and the southern portion in the spring of 2007. Statewide imagery may not be captured in a single calendar year.

Coverage

The Project encompasses the entire land area of the state of Ohio, approximately 41,276 square miles.

- Entire perimeter of the State must be buffered by a minimum distance of 1,000 feet.
- Riparian boundaries marked by the Ohio River (the states of West Virginia to the southeast, and Kentucky to the south and southwest) must be buffered by a minimum distance of 1,000 feet or to the opposite river bank, whichever is greater.
- Lakeshore areas along Lake Erie must be buffered beyond the apparent shoreline a minimum distance of 2,500 feet.
- Lake Erie Islands within the state of Ohio must be buffered by 2,500 feet.

The base orthophotography products must include all 88 counties at 1-foot pixel resolution.

Ground Control

The Contractor will be responsible for establishing ground control of sufficient density and accuracy to meet the accuracy requirements of the deliverable orthophotography and elevation data at the resolutions indicated. The Contractor must determine whether or not to panel the control points. The State will review the control diagrams, indicating the anticipated vertical and horizontal accuracies, before imagery collection begins.

Many counties have well established ground control developed during previous mapping projects. The Contractor should not assume that control exists, but it could be beneficial to use existing control if possible. The Contractor will be responsible for determining the availability and/or quality of any existing ground control.

Any control established for use in the Project will be a Deliverable. An FGDC compliant metadata file must accompany the survey data.

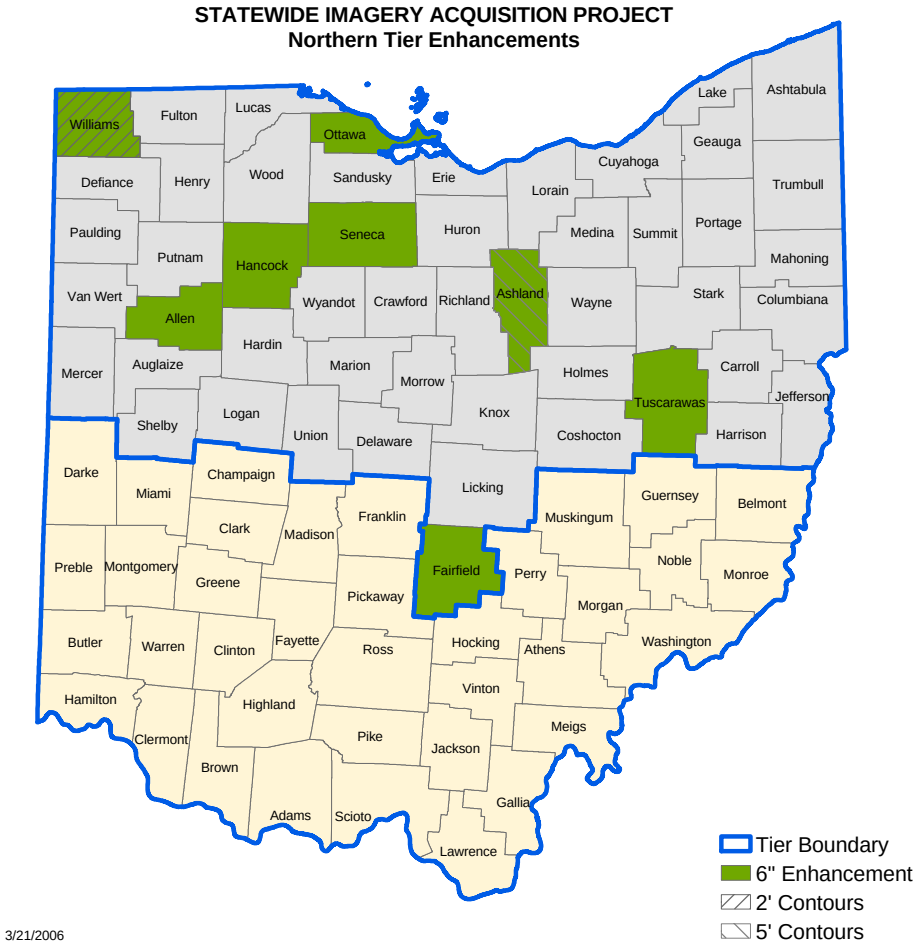
Metadata

FGDC Content Standard for Digital Geospatial Metadata Version 2 (FGDC-STD-001-1998) compliant metadata is required for each orthophotography project, including a separate metadata file for each individual county coverage.

Project Duration

This project will span three fiscal years. This will provide the ability for several state agencies to spread the costs of the agreed upon funding amount over the several fiscal years. The schedule breakout of the project by fiscal year is below:

Fiscal Year 2006 (7/1/05-6//30/06)	**Fiscal Year 2007 (7/1/06-6//30/07)**	**Fiscal Year 2008 (7/1/07-6//30/08)**
North Half Spring Imagery Capture	Delivery of North Half Imagery	Delivery of South Half Imagery
	South Half Spring Imagery Capture	



OSIP Program Notes

1) As a result of economies realized by the scale of the Ohio Statewide Imagery Program the state has taken the decision to obtain LiDAR data for the entire state with average post spacing of two meters. The LiDAR data will be used to develop a highly accurate DEM that will improve the overall accuracy of the 1' statewide imagery product while at the same time improving the accuracy of any future derivative products. Both bare-earth and first return data will be provided to state and county government through OSIP.

2) As of 8/21/2006 state agencies and northern tier counties have committed to purchasing the following product enhancements:

- Eight counties have committed to purchasing 6" imagery products,
- Two counties have committed to contour development, and

An ODNR lead consortium has committed to capturing Color Infrared photography for the entire state.