

# DIGITAL WATERSHED MAPPING

AERIAL CARTOGRAPHICS OF AMERICA, INC.

*"Going Beyond all Maps and Boundaries"*



## ABOUT US

Aerial Cartographics of America, Inc. (ACA) is a full service professional aerial mapping firm located in Orlando, FL. Established in 1973, ACA has built a reputation as one of the premier mapping firms excelling at precision mapping products. With a large staff of professionally licensed surveying and mapping associates, ACA has the extensive experience and knowledge providing a full range of high quality products and services.

## Flood Plain Mapping

ACA provides precision topographic maps for the determination of ground and water surface profiles for floodplain delineation. These precision maps enable hydrologic and hydraulic modeling to manage water resources and update Digital Flood Insurance Rate Maps (DFIRM). Using the UCX Large Format Digital Mapping camera and the Riegl 680i 400Khz full waveform LiDAR sensor, ACA creates accurate 3D surface models that are hydro flattened to map critical water conveyances. The full wave form LiDAR performance enables ACA to get results in the most challenging vegetation, wetlands, and forest conditions.

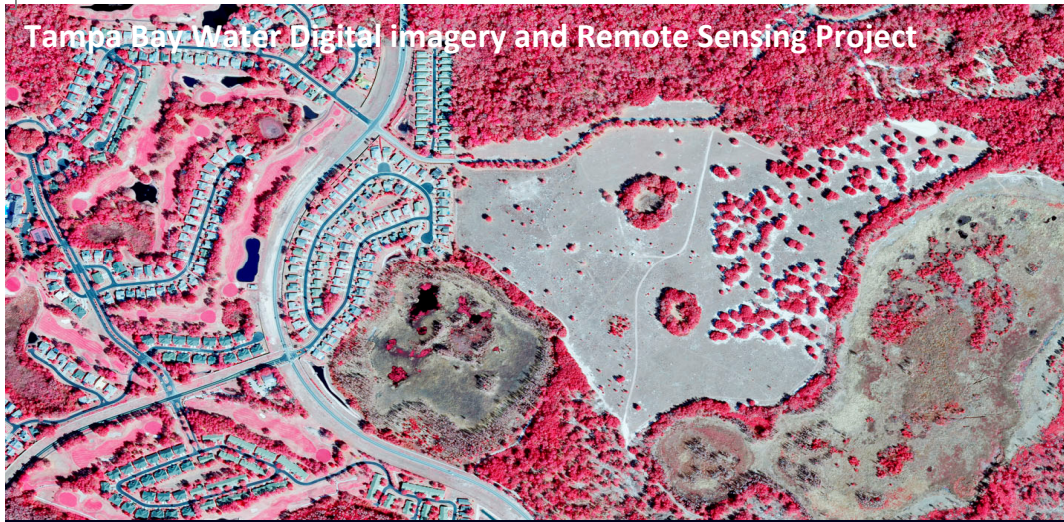
ACA's map products meet and exceed NSSDA and NMAS accuracy standards.

As licensed Professional Surveyors and Mappers, each watershed and floodplain mapping product includes a detailed survey and map report and full metadata file.

ACA also provides more advanced data fusion products with the incorporation of Color Infrared and Hyperspectral imagery. These 3D fused map products enable the highest form of analytical modeling and analysis of water bodies, ground surfaces, wetlands, vegetation, and forests, from the upland, to the river, to the ocean. ACA's experience in precision watershed map products is industry leading.

## PROJECT SOLUTIONS

- Coastal Areas
- Utilities
- Airports/Ports
- Transportation
- Rail Mapping
- Environmental/Vegetation Mapping
- Mines/Landfills
- Watershed Mapping



## RELEVANT EXPERIENCE

### Kissimmee River Vegetation Mapping

ACA provided vegetation mapping imagery of pools and the surrounding floodplain of the Kissimmee River Lower Basin using digital imagery with a 60% overlap. Using stereo photogrammetry 2D vegetation maps were created. The project encompassed floodplain areas in parts of Polk, Highlands, Osceola and Okeechobee Counties, Florida.



### Okefenokee Swamp LiDAR Project for USGS.

ACA acquired and processed full waveform LiDAR for 1684 square miles of swamp and wetlands in Charlton and Ware Counties, Georgia. Point density was a 4 ft point spacing, 40% overlap at 4000 ft altitude. Full wave form data returns averaged 7 to 10 returns across the vegetation and forests enabling more ground points vs. other technologies.



## MAPPING SERVICES

### Aerial Imaging & Elevation Data Acquisition

- Digital Aerial Imaging
- LiDAR Acquisition
- Simultaneous Imagery and LiDAR Acquisition
- Low Altitude Mapping Photography (LAMP)
- ABGPS & IMU Processing
- Photographic Reproduction
- Historical Photography Archive

### Photogrammetric Mapping

- Digital Mapping (Aerial Triangulation/Stereo compilation/Feature Extraction)
- Digital Terrain Modeling
- LiDAR Processing
- LiDARgrammetry
- Digital Orthophoto Production
- Data Fusion: Smart Orthos with X, Y, Z readout
- Impervious Surface Auto Calculation
- Intelligent 3D Surface Models, Bare Earth, Structures, Vegetation
- Airport Obstruction Surveys: FAA 16A, 17b, 18b Compliant
- Seagrass & Vegetation Mapping
- Volumetric Analysis

### GIS

- Data Capture/ Conversion
- Application Development
- FAA 18b Compliant

**WE ARE THE FULL DIGITAL SOLUTION FOR YOUR MAPPING AND GIS NEEDS**

