

The Geographic Information Systems Department

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Established in June 2002, the GIS Department at the NWA is staffed by a GIS Manager and three GIS Officers. It is located in the Planning and Research Directorate of the NWA, appropriately at the corporate office. From inception, the GIS department has implemented a number of projects which simultaneously shows its evolution over the last seven years. For the first two years the unit pioneered by Miss Edmarine Lowe-Ching, was able to acquire the high powered hardware and ESRI software that were required to develop NWA GIS. She is also responsible for establishing NWA's membership on the Land Information Council of Jamaica while concurrently building the agency's GIS data library with crucial datasets such as:

- 2000 IKONOS Images
- NWA Main Road Network
- All Island Traffic Count Locations
- All Island Bridge Locations
- 1:50,000 and 12,500 Topographic map sheets
- Base Data Files:
 - Administrative boundaries
 - Population Data
 - Geology and Soils
 - Public Facilities
 - Land Use and Coverage

Additionally, strong relationships with other governmental and private GIS agencies were formed, where data sharing understandings along with bartering became synonymous with requests for GIS services. It is from this perspective that the staff of the GIS department has evolved and developed their functions and role in the GIS community of Jamaica. Not only have they been able take part in ongoing GIS events and activities that the LICJ plans annually but they have also provided a variety of GIS services to a wide range of external and internal clients.

How NWA uses GIS

GIS is used extensively by the NWA in managing and executing multiple tasks which encapsulates effectively the agency's mission and vision. The ESRI suite of products that are currently used and maintained by the NWA has provided a multitude of resources to proficiently

support the response to and development efforts of critical workflows and business processes of the NWA, some of which are outlined below:

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- Road Safety: The key indicator for the NWA's performance. Relies heavily on the advanced integrative mapping and planning capabilities of the GIS department achieved through use of the software
- Traffic Management: By modeling proposed traffic flows and other new traffic developments before implementation.
- Ground Truthing: Helps planners or engineers to due preliminary site investigations, before going on site/project locations
- Hazard response and mitigation: Identifies Landslide Prone Areas and Flood Prone Areas to assist in the removal of debris and other deposits if areas are affected.
- Development control and planning: Quality checks maps sent in by developers of proposed developments or proposed major events location.
- Location Planning: Used to identify and asses the most suitable locations for new roads and the suitability of access for subdivisions and proposed developments.
- Change Detection: Used to determine changes in Land Use, Road Dimensions, and Waterways
- GPS mapping features such as Bridges and Roads to provide actual their real world location which aids in Project Planning and their maintenance
- Maintains a spatial database of the agency's island wide road network to effectively facilitate forward planning and project implementation.

Fee Structure for GIS Products

POLICIES:

- The GIS department will be able to supply the following products on request
- All requests will be given an up-front estimate by GIS personnel
- All requests will be paid for up-front before any services are completed or data transferred
- Custom map requests are subject to an hourly fee of **\$3000.00/hr** thereafter to a maximum of **\$21,000.00**; in addition to the map size fee shown below.
- Digital data can be delivered via CD/DVD, e-mailed (if the file size permits) or posted to an FTP site. All digital data transferred will include a disclaimer text file for accuracy and responsibility; also metadata about our projection and resolution information.

MAPS:

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<u>SIZE PAPER</u>	<u>BOND PAPER</u>	<u>PHOTO PAPER</u>
A-size (8.5" x 11")	\$25.00	\$30.00
B-size (11" x 17")	\$50.00	\$100.00
C-size (17" x 22")	\$150.00	\$200.00
D-size (22" x 34")	\$250.00	\$300.00
E-size (34" x 44")	\$400.00	\$450.00
Custom	Based on size	Based on size

DIGITAL DATA FILES (Non- NWA data is not for sale)

<u>GIS DATA</u>	<u>COST</u>	<u>DISTRIBUTED FORMAT</u>
Main Road Network	\$2500.00 / parish or part thereof	.SHP, GEODATABASE , DWG
Traffic Counts	\$2500.00 / per count location	.SHP, GEODATABASE , DWG
Bridges	\$2,000.00 / per bridge location	.SHP, GEODATABASE , DWG

The cost for any of these services is payable at the NWA Corporate Office by either cash or manager's cheque before or on the date your request is completed. For further information please contact the GIS Department at the telephone numbers 511-4045-7. Or email us at aliciagayle@nwa.gov.im.