

October 30, 2014

Re: Georeferencing Standards for Quarry Permits (QP)

The Department of Natural Resources, Mineral Lands Division is currently in the process of building a new Quarry Materials System (QMS).

Introduction:

This guideline sets out the standards for the collection and submission of Global Positioning System (GPS) georeferenced information to be included as part of an application for a new QP and/or to provide ground truthed locational GPS data (UTM NAD 27) for an existing QP.

The submission of GPS locational data is intended as a step towards clarifying QP locations in advance of the planned move to a fully electronic, online QP application process. Once the new QMS is in production QP applications will be required to be submitted online only. Departmental staff located throughout the Province will be available to assist those who might have difficulties navigating the system.

Applications to Record a QP:

All applications for QP's applied for on or after January 1, 2015, must include GPS georeferenced coordinates (in UTM Nad 27 datum) for all posts. The application will require the applicant to provide the georeferenced coordinates and related information for the area and this information must be satisfactory to the Manager – Quarry Materials. Applications submitted without GPS georeferenced coordinates in UTM Nad 27 datum will not be processed.

Ground truthing existing QP:

For existing QP's that are issued prior to January 1, 2015, a period to supply GPS georeferenced coordinates (in UTM Nad 27 datum) will be granted until December 31, 2016. Failure to submit the information in this time frame will result in cancellation of existing QP's.

Data Collection Requirements

Following is an outline of the standard methodology to be used for the collection of all georeferenced coordinate data for a QP. It is a minimum standard.

1. GPS Quarry Fabric Targets (what needs to be georeferenced)
 - The coordinate locations of all corner posts (CP) need to be recorded
 - The coordinate locations of all directional posts (DP) need to be recorded Directional posts are located where the QP boundary changes direction
 - The QP boundaries will be considered as straight lines between all posts

- In the case of ground truthing existing QP's, where a post cannot be located, the estimated location of the post along with supporting evidence is required to be submitted
2. Receiver Type Used
 - Should be a unit capable of differential correction
 - Must be a unit capable of locational averaging
 - Unit must be capable of an accuracy of +/- 5m as per the manufacturer's device parameters.
 3. Required GPS Parameter Settings/Readings
 - NAD27
 - UTM Coordinates
 - Enable differential correcting

Field Data Collection Methodology:

Obtain Post Coordinate Data (waypoint)

- Locate the subject post (e.g. CP or a DP)
- Ensure the GPS receiver has sufficient time to connect with available satellites
- Place the GPS receiver on top of the post
- Position yourself to the north of the post when collecting the data so the receiver has an unobstructed (body not in the way) southerly view thereby increasing the chance of obtaining a good satellite signal
- Ensure that the GPS receiver is set to NAD27 and the correct UTM zone has been inputted
- Ensure the differential correction ability of the receiver is enabled

Further Information

For further information, please contact:

Gerald Kennedy
Manager – Quarry Materials
Department of Natural Resources
Mineral Lands Division, Quarry Materials Section
50 Elizabeth Avenue, 3rd Floor
St. John's, NL A1A 1W5
Tel: (709) 729-6447