



PPK Processing using the GCGC Reference Data Shop

The Gulf Coast Geospatial Center (GCGC) Reference data shop provides GNSS base station data files for each of its 52 Continuously Operating Reference Stations (CORS), with data continuously logged at each CORS at 1-second intervals. The reference coordinates of each CORS are relative to **NAD83 (2011)** and are established using the Online Positioning User Service (OPUS) through the National Geodetic Survey (NGS). These files can be used in Post-Processed Kinematic (PPK) positioning workflows as static base station data.

1. Access the reference data shop at rtn.usm.edu.
 - a. If you have not previously registered, select **Register** to create an account. Account setup will be confirmed via email.
 - b. Select **Login** if you are a previously registered user and log in using your email and password.
 - c. (To reset your password, contact gcgctech@usm.edu)
2. In the navigation menu (dialogue box on left side), select **Reference Data Shop**.
3. Select **Start a new order**.
4. Choose [Continuously Operating Reference Station \(CORS\)](#).

Reference Data Shop - Station Type

Please select the reference station type for your GNSS data generation:

• [Continuously Operating Reference Station \(CORS\)](#)

or

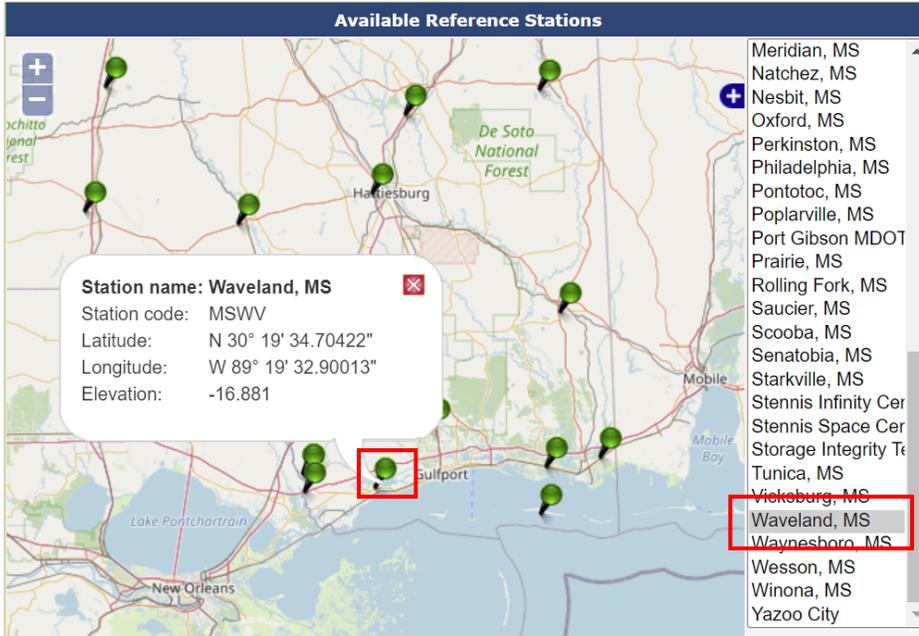
• [Virtual Reference Station \(VRS\)](#)

<< Back: Order

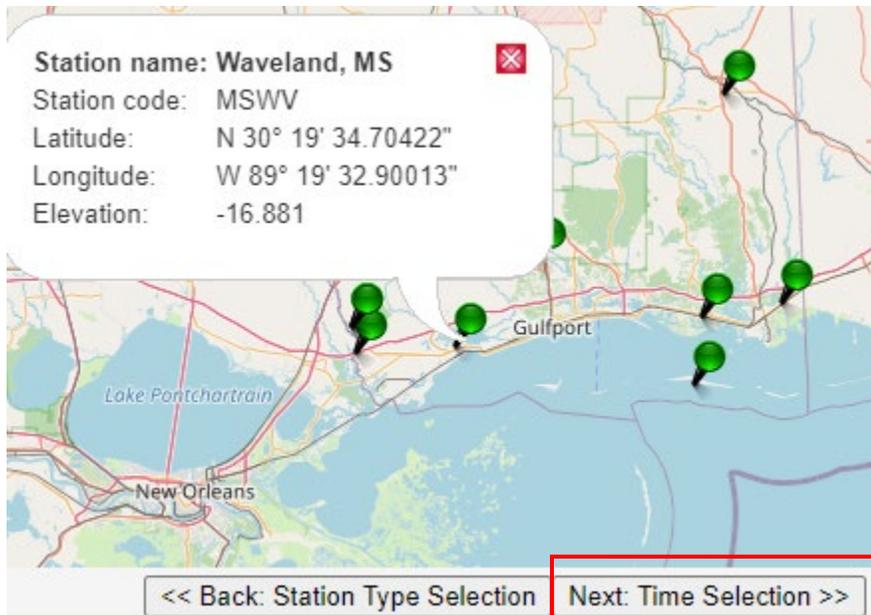
5. Use the map to select a reference station by clicking on the nearest green pin to your survey location, or by selecting a reference station from the list.

Reference Data Shop - Reference Stations

Choose one or more reference stations by clicking in the list or in the map. If you want to select multiple stations from the list, press and hold down the CTRL key and click with the mouse.



6. Select **Next: Time Selection** from the bottom of the Map dialogue box.



- Enter the desired **start date**, **start time** and **duration** for your reference file in **Coordinated Universal Time (UTC)**. The start time of your reference file should be before the start time of your survey, and the duration should be long enough so that the reference file encompasses the entire survey time from beginning to end. The time interval of GNSS observations in seconds can also be specified on this page.

Reference Data Shop - Date & Time Selection

You have selected the following reference station(s):

(MSWV) Waveland, MS

Please enter your desired observation period:

Observation Period

Date: ▼

Start time: 15 h 0 m 0 s = 9:00 am CST
= 10:00 am CST(DST)

Duration: h m

Interval: ▼ s

Time system: GPS

<< Back: Reference Stations
Next: Add to order >>

- Select **Next: Add to order**
- Review your reference file order(s) and select the order(s) to download before clicking **Next: Delivery Options**.

Reference Data Shop - Your current Order

The following items are currently in your order. You may add further items, remove items or proceed with delivery options and data generation.

	Station	Start time	End time	Duration (min.)	Interval (sec.)	Epochs	Est. Price*
<input checked="" type="radio"/>	(MSWV) Waveland, MS	1/12/2022 3:00 PM	1/12/2022 4:00 PM	60	1	3600	0.00
Total:				60		3600	0.00

Applying to selected item: More data for station More data for time period Remove

Login used for this order: mwaldron

^ Back to Overview
Cancel order
Add more stations
Next: Delivery Options >>

- Choose a **data delivery method** (immediate download, download at later time, or receipt of data via email). Then, choose a file format. **Supported file formats** include: RINEX 2.10, RINEX

2.11, RINEX 3.02, RINEX 3.03, RINEX 3.04, DAT, TGD, T01, AND T02. Then select **Next: Generate Data**.

Reference Data Shop - Delivery Options

You can choose to either download the generated reference data files or to send them to you by e-mail. In the latter case you don't have to wait until the files are generated, which may take some time, depending on the amount of requested data.

Download the data
 Notify me by e-mail when the data is generated
or
 Send me the data by e-mail

Choose the file format (all files will be packed into a single ZIP archive):

RINEX 3.04 ▾

<< Back: Current Order Next: Generate Data >>

11. If the data are downloaded rather than received via email, wait for the files to generate and click **Next: Order Details** to download the data.

Reference Data Shop - Data Generation

Your requested reference data files are being generated. Please wait...

Processing Status	
Files generated:	0 / 1
Current file progress:	<div style="width: 29%; background-color: yellow;"></div> 29 %
Total progress:	<div style="width: 26%; background-color: yellow;"></div> 26 %

Note that you don't have to remain on this page for the entire file generation process. You can go back to the overview or any other page and return later to download the data.

<< Back: Overview Cancel generation

Reference Data Shop - Data Generation

Data generation finished. You can now view the results and download the data on the next page.

<< Back: Overview Next: Order Details >>

12. Select the dataset(s) and select **Download** or **Send by e-mail**.

Reference Data Shop - Order #5

The following order items have been generated. You may view the details of each item, remove single items from the order or finally submit the order and download the whole package.

	Station	Start time	End time	Duration (min.)	Interval (sec.)	Epochs req./ available	Eff. Minutes	Price
<input checked="" type="radio"/>	MSWV) Waveland, MS	1/12/2022 3:00 PM	1/12/2022 4:00 PM	60	1	3600 / 3600	60	0.00
Total:				60		3600 / 3600	60	0.00

Applying to selected item:

By downloading the order you will be charged the above total price.

Login used for this order: mwaldron