

Updating NGS Benchmark Data

Though I enjoy benchmarking I've found posting my finds on GC.com is a little sterile. Recently I've also been reporting finds to the NGS (National Geodetic Survey) to update their database. This way I feel I'm doing something useful with the information and effort I invest. This article explains how I do it using GSAK and utilities I've written. You may prefer a different method. To learn more about benchmark hunting you can go [here](#) and [here](#).

A couple of terms

PID -- stands for Permanent Identifier.

Designation -- normally the words and characters manually stamped on the benchmark itself.

The PID is a unique identifier. Benchmarks may have the same Designation, so a unique identifier is required.

How I Hunt Benchmarks

First, I go to the NGS website to get benchmark data sheets. I [go here](#), select the county I'm interested in and copy the data from the window after it's displayed. [I see instructions on the Internet that say this site will make them into a file for download. I haven't figured out how.] I highlight the data in the window where it's displayed, paste it into Notepad and save it as a file named something like "Benchmarks Harris County." For a more complete explanation of these steps [go here](#). [If you want your entire state [go here](#).] I use a program named NGSGPX, which you can [download here](#) free ([direct download](#) of 2012 version), to convert it to a gpx file which I then load into GSAK. Previously I used the better known BMGPX utility but since I've gone to Windows 8 it no longer works right.

Next, I export the GSAK database as Version 1.1 gpx files [Though Version 1.1 is unusual and rarely used, this program uses it for historical reasons.] and process them with a program I wrote named 'Get GC Benchmark Logs' which you can [download here](#). This program changes the links in each entry from NGS records to GC.com benchmark pages and uses the Difficulty/Terrain ratings to indicate several things about the benchmark such as, was the last log a DNF, is the mark in GC.com, has it been logged in GC.com, etc. Finally, I reimport the new gpx file the program creates back into GSAK.

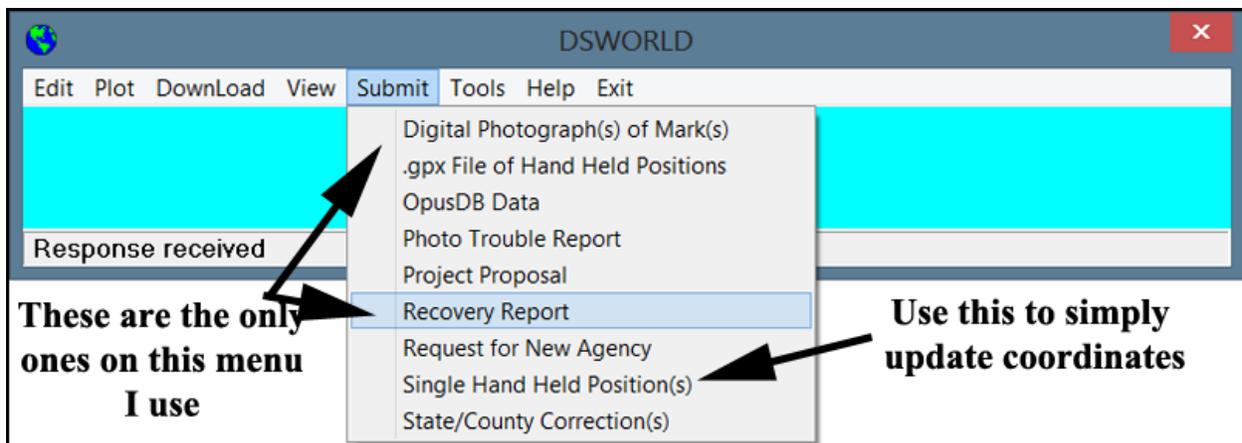
At this point you must export the benchmark data from this GSAK database to a device you can use to guide you to the benchmarks (A Nuvi, handheld GPSr, etc.) How to hunt benchmarks is beyond the scope of this article.

How to Update NGS Benchmark Data

Note 1: It's my understanding the NGS no longer wants reports of landmarks -- man made structures such as water towers, church steeples, chimneys, buildings, etc. With the advent of GPS they're no longer used.

Note 2: The NGS doesn't want Recovery Submissions more often than once a year, so check when your find was last submitted before submitting a new report.

To update the NGS database you must use a program called DSWorld which you *can* [download here \(direct download\)](#).



This is the main screen of WSWorld. The program does more than I use or understand. I only use the **View** menu to get a list of the recovery reports and photos I've submitted, the **Submit** menu to submit Recovery Reports & Photos as shown above and occasionally I use the **Download** menu to view a current benchmark Datasheet. The **Edit** menu has a form where you can create picture names, but I don't use it - partly because I don't completely understand it, partly because it creates phantom picture files on my desktop but mostly because I have a program I wrote that's more convenient for me.

Enter PID & move to another blank. Much of the rest will be filled in automatically

Date you found it. This is Nov 16th 2013. Double Clicking in this blank will insert today

Convert your coordinates to this format and put here

Select these

All of the Recovery Information is required

Your name & email

Your initials

Condition of mark

Click here to add explanatory text

Click Save then Close to submit

(F)lush (P)rojects (R)ecessed with surface mark is on

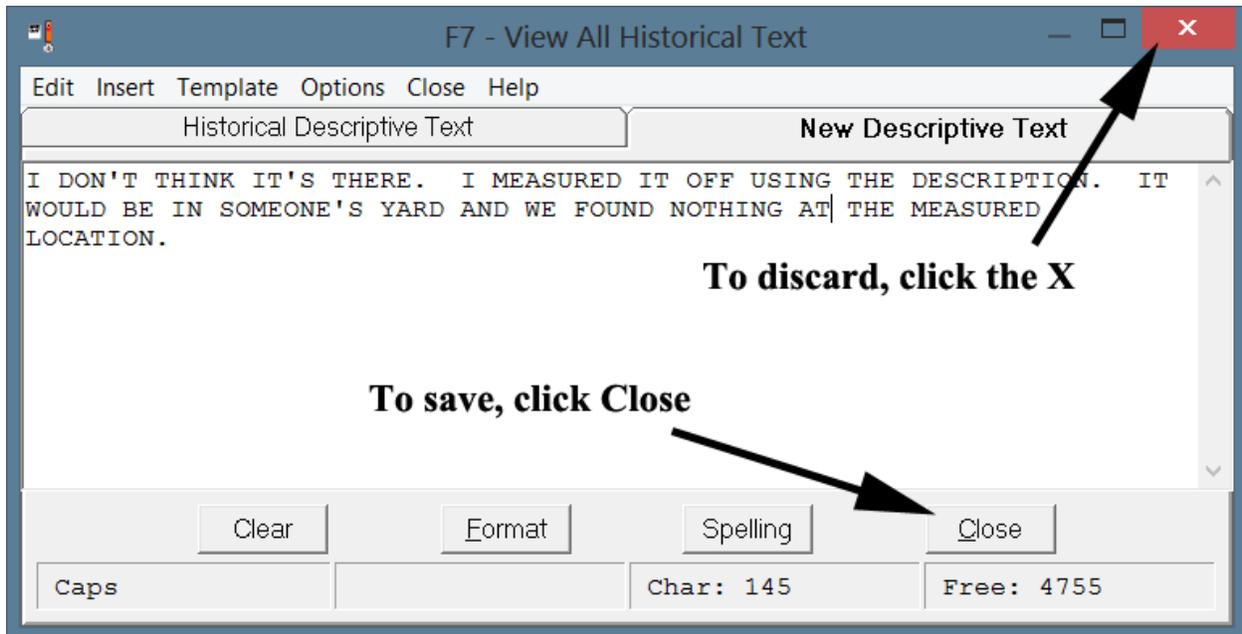
Normally, the blanks defined above are the only ones on the form you will need to deal with

This is the **Recovery Report** form. You shouldn't submit a Recovery Report if it's been less than a year since the last report. You can however submit a Single Hand Held Position report if the coordinates currently given for the mark are wrong. You can't use GC.com's coordinates for this comparison because they're almost 14 years old. Use the current ones from the data sheets which you will have if you've downloaded them recently using the procedure explained above at the beginning of this article. You can also submit pictures if there are none or if you think the existing ones are inadequate.

You will spend most of your time on this screen. NGS uses the term "recovery" to mean you've visited the benchmark, often called the Mark, and this form creates a report of your visit. After you enter the PID and press Enter or move to another entry most of the rest of the form will be filled in automatically. All of the information in the red outline, called the Recovery Information, is required. After you enter the personal part of this information it will all be remembered and automatically entered in the form. The date you visited the benchmark and its condition must be entered for each mark .

Normally, the entries pointed to in the Recovery Report form example above are the only ones you will fill out, but for marks that are rods you should also check **Cat:** (category) & **Type**. These are sometimes incorrectly identified as **(D)**isk instead of **(R)**od and the Type should be **(F)lange-Encased Rod** if the rod is in a LOGO box -- an aluminum housing with a hinged lid.

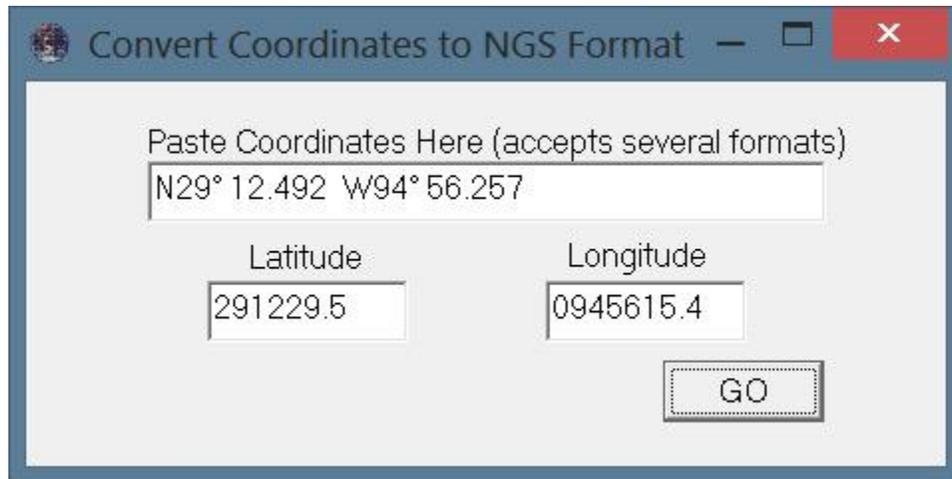
You can add explanations of abnormal things you discover by clicking the **Text** button.



This is the Text form. I don't use any of the menus, but from the **Insert** menu you may learn the kinds of things you want to comment on. I usually add notes if the condition of the mark is not Good, and in a few other situations such as when something special is required to reach it. I don't normally report DNFs unless I have reason to believe the mark has been destroyed or covered by paving and I explain that situation here. Even if I suspect it has been destroyed I report it as a DNF and explain in the Text why I think it's no longer there. If you report it as destroyed you must have a picture of the area where it was. When using this form you should keep comments short, concise, and professional -- no extraneous remarks that aren't informing others of issues with the mark. If you decide to write a new instruction for how to find the mark you should measure distances not make estimates. I've never done this. I've explained that objects referred to in the current description no longer exist, that street names have changed (and explained the old and new name), and that company names in the current instruction have changed from this to this. But, I have never rewritten an entire instruction because of the amount of work involved.

While visiting the mark location you record its coordinates using your hand held GPSr (sometimes called an HH by NGS), and three pictures. Some marks have precisely measured coordinates. You cannot update/change these. You can recognize them because they have a light gray background rather than white and have several digits after the decimal rather than just one or two. I record these coordinates anyway and post them on GC.com because GC's data is 14 years old and measured coordinates may have been added to the NGS data sheets since then. I guess you could check for measured coordinates and see if they match the GC ones, but it's easier for me to just post mine.

I made a utility that converts one-line coordinates from your GPSr or GSAK to the format required by the Recovery Report form. You can [download it here](#).



This is my utility to convert traditional one-line coordinates to NGS format

Preparing Photos for Upload

Pictures are encouraged but are not required in order to submit a Recovery Report. The NGS would like you to take three pictures. One close-up showing the mark and its identifying words and stampings. One from eye level above the mark showing its immediate surrounds and setting. And, one horizontally showing its location relative to nearby buildings, monuments, highways, towers, etc. Below I give examples of pictures I make for a mark. NGS requires a very specific naming convention for pictures. If your pictures do not conform to this convention DSWorld will not upload them. You can read about this naming convention in the **Help** menu or on the NGS website. In the **Edit** menu of DSWorld there's a form you can use to prepare pictures for upload. As I mentioned earlier, I don't use this form. I made a utility (shown below) I find more convenient for preparing picture names.

OR

Either enter PID & Name/description individually

Enter both together separated by a space

Double Clicking will enter today's date

Clicking GO will add formatted photo name to Windows Clipboard

If you use my 'Get GC Benchmark Logs' program and GSAK you can Right click on a benchmark entry, and click Edit -- the PID & Name are highlighted and ready to copy and paste into the upper right-hand box of this form. Otherwise you can use the separate PID and Name boxes on the upper left. 'Direction' is the direction you were facing when you took the picture. The Date is the date you visited the mark. If you double click in this box it will automatically enter today's date. When you click OK it will put the correctly formatted name onto your Windows Clipboard ready for pasting into the photo name. You can [download it here](#).



Horizontal



Eye-Level/Standing



Closeup