Using DSWorld

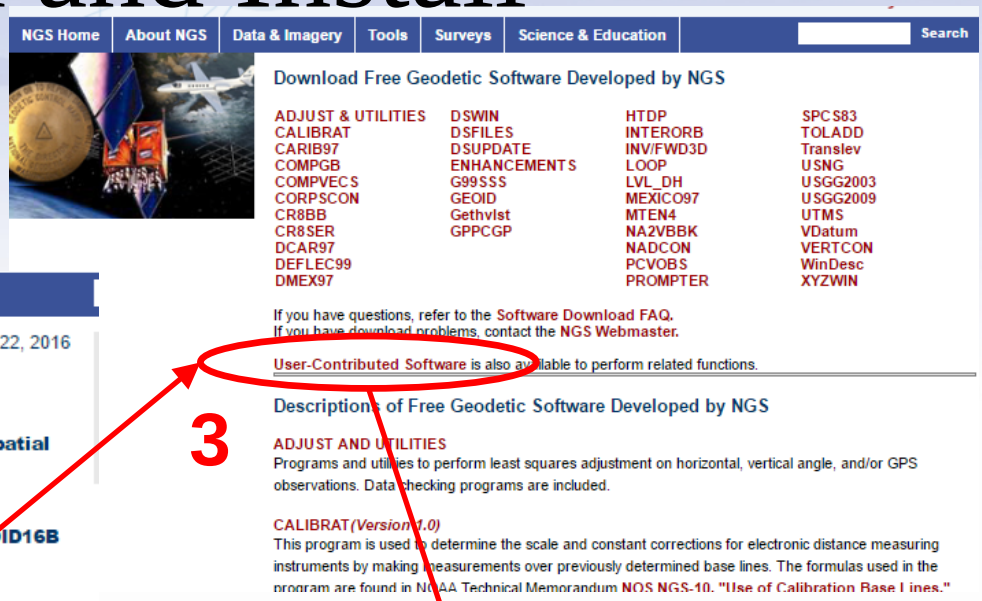
What is DSWorld

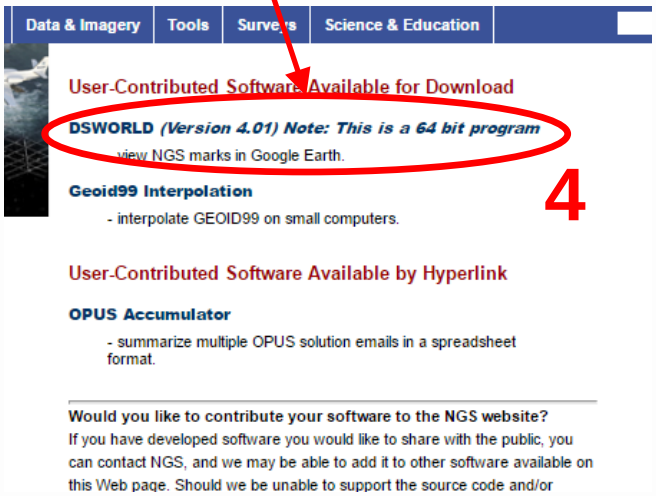
- **Description:**
- DSWorld was originally designed to display datasheet information in a "world view", hence its name.
- Since its inception, it has been greatly enhanced to the point of being a major interface with NGS and the NGS Integrated Database (IDB).
- It provides Land Surveyors, GIS professionals and the general public with important up-to-date geodetic control information at the click of a button.

What DSWorld Can do

- DSWorld allows users
  - To submit recoveries
  - Correct informational fields (state, county, etc.)
  - View locations of mark
  - Download datasheets
  - Rename and submit photographs
  - So much more – almost overwhelming!
  - We will focus on the use of DSWorld in mark maintenance and recovery.

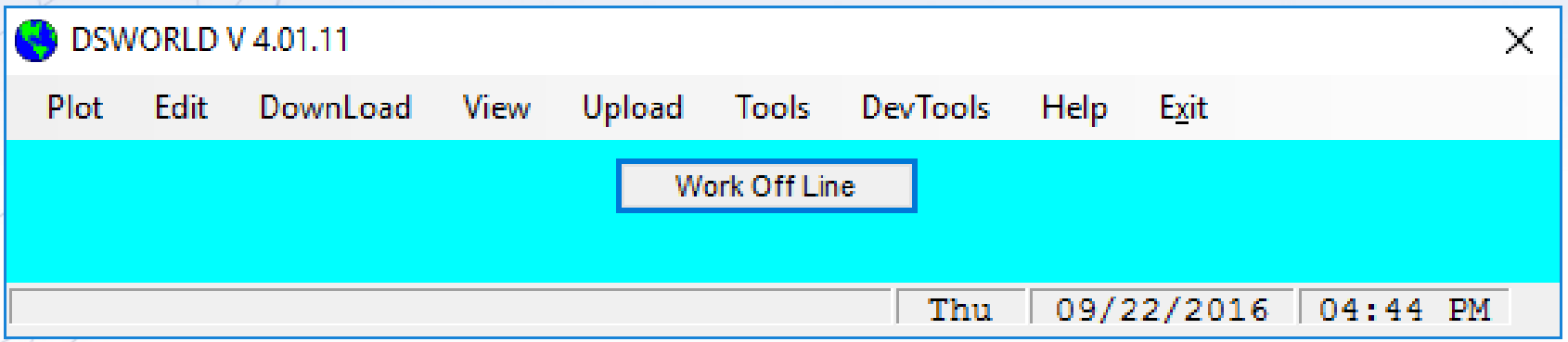
Download and Install



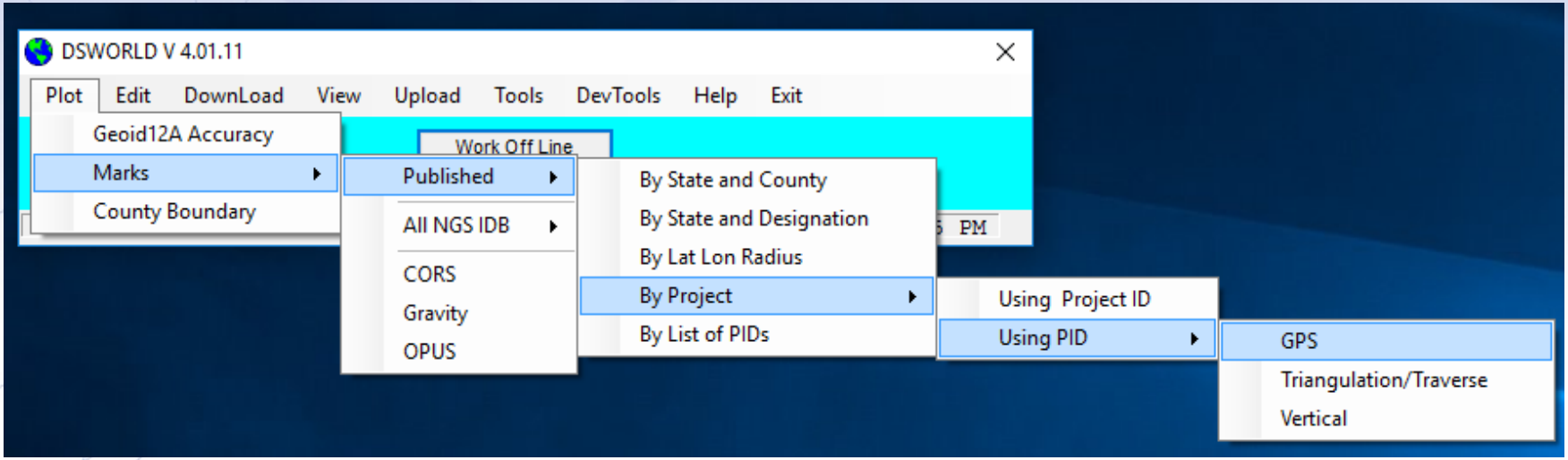


You also need to install Google Earth

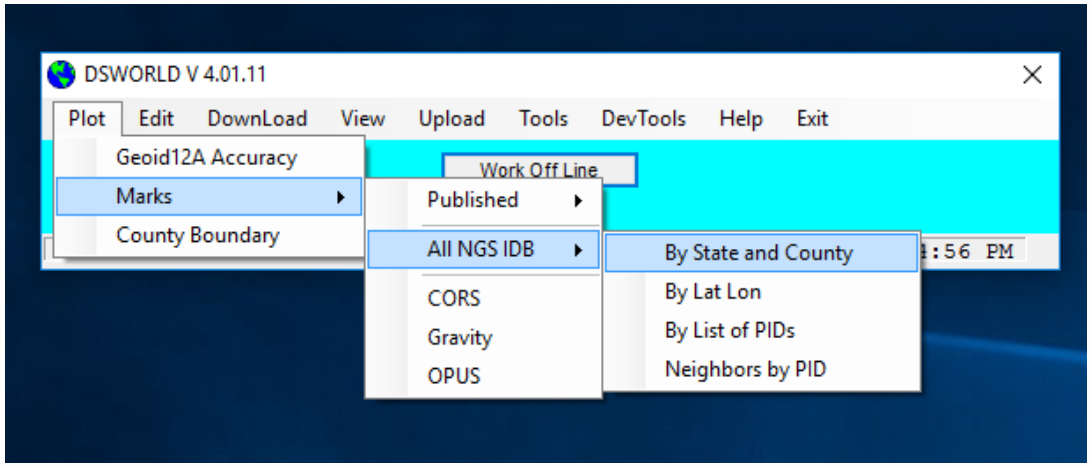
Interface


DSWORLD V 4.01.11
Plot
Edit
DownLoad
View
Upload
Tools
DevTools
Help
Exit
Work Off Line
Thu
09/22/2016
04:44 PM

PLOT


DSWORLD V 4.01.11
Plot
Edit
DownLoad
View
Upload
Tools
DevTools
Help
Exit
Geoid12A Accuracy
Marks
County Boundary
Work Off Line
Published
All NGS IDB
CORS
Gravity
OPUS
By State and County
By State and Designation
By Lat Lon Radius
By Project
By List of PIDs
Using Project ID
Using PID
GPS
Triangulation/Traverse
Vertical

OR:


DSWORLD V 4.01.11
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Upload
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DevTools
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Marks
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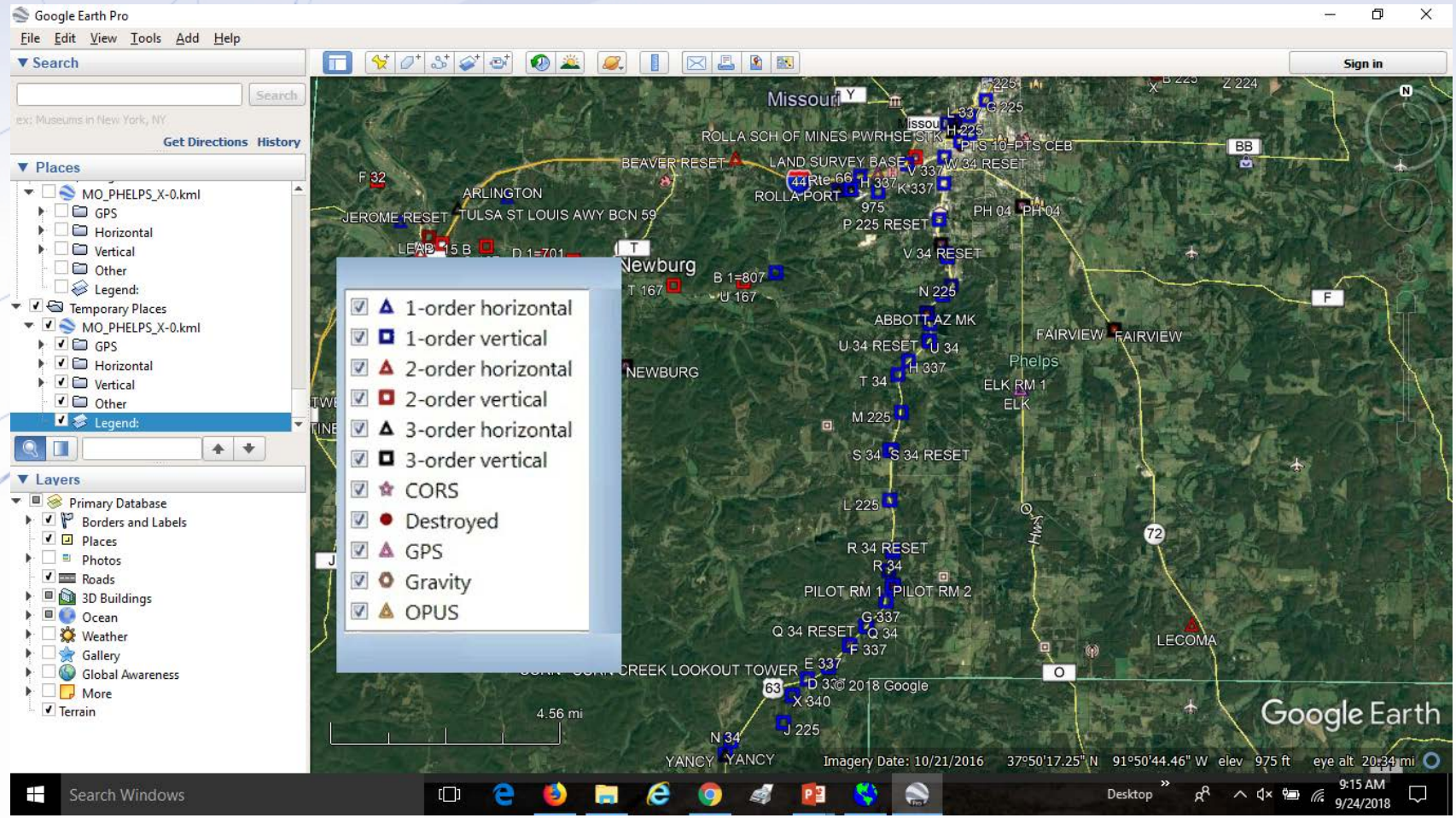
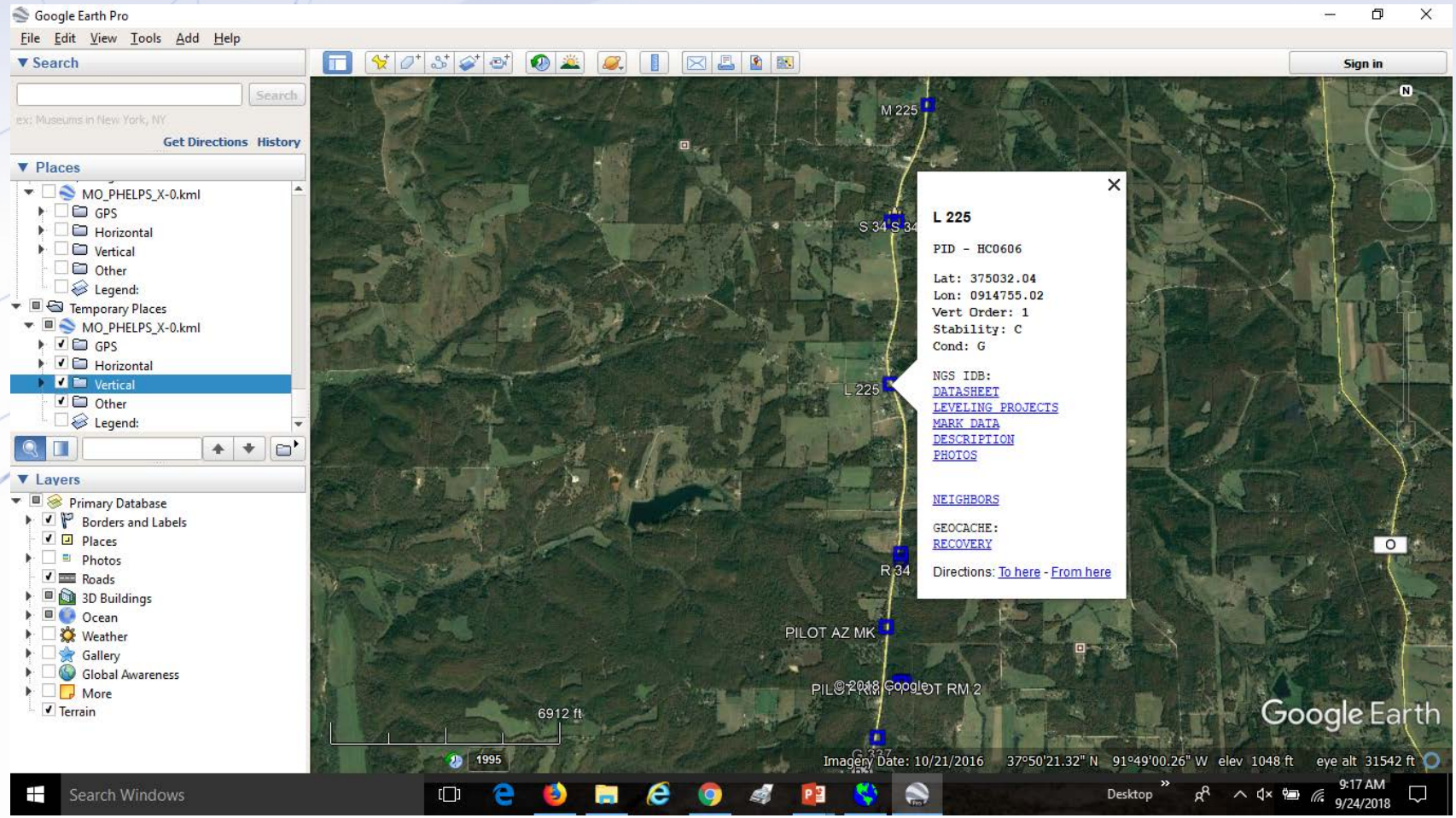
Work Off Line
Published
All NGS IDB
CORS
Gravity
OPUS
By State and County
By Lat Lon
By List of PIDs
Neighbors by PID

Phelps County



Bench Mark-L 225

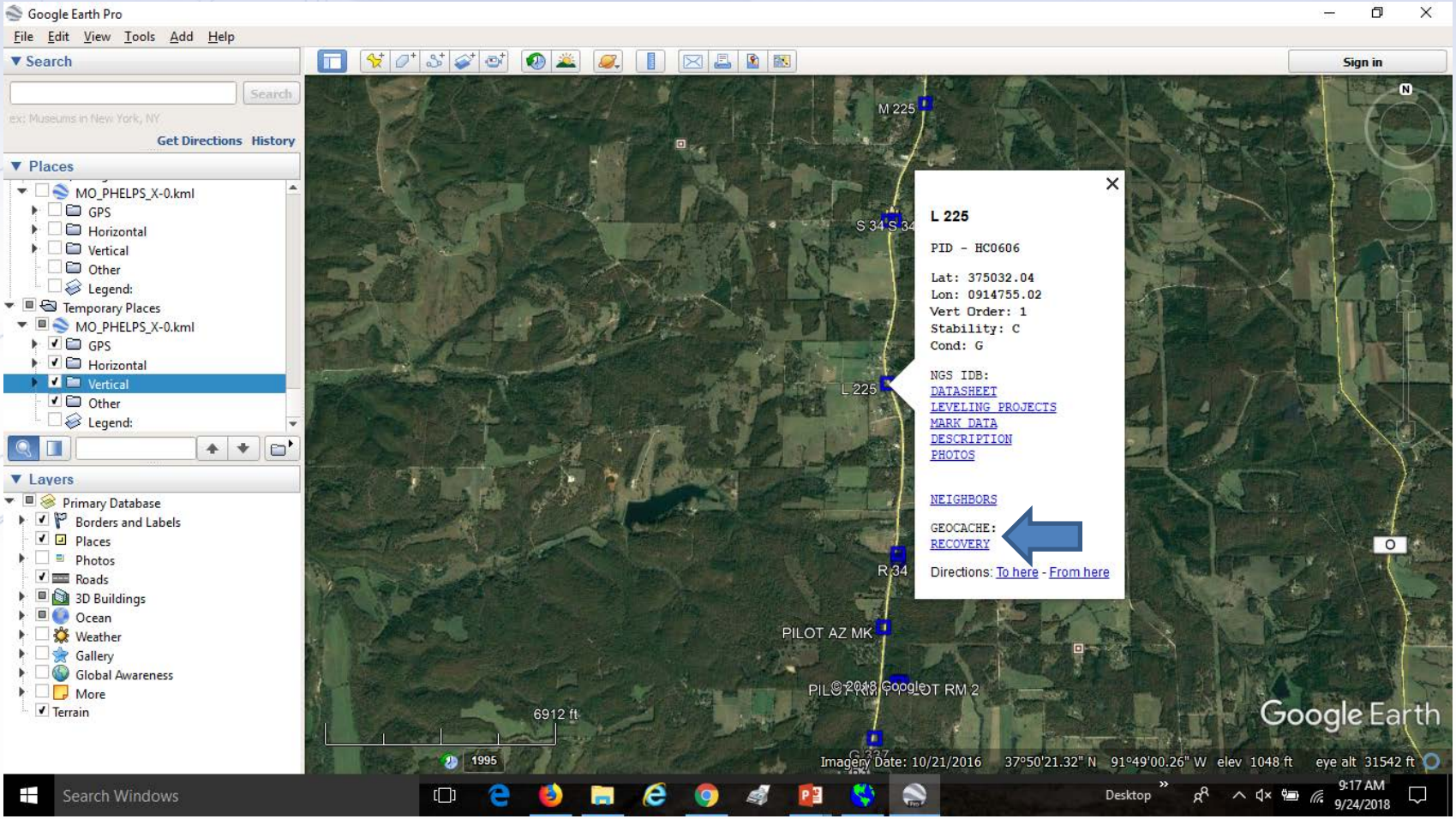


NGS Datasheet-L 225

See file dsdata.pdf for more information about the datasheet.

```
PROGRAM = datasheet95, VERSION = 8.12.5
1         National Geodetic Survey,    Retrieval Date = SEPTEMBER 24, 2018
 HC0606 ***********************************************************************
 HC0606  DESIGNATION -  L 225
 HC0606  PID         -  HC0606
 HC0606  STATE/COUNTY-  MO/PHELPS
 HC0606  COUNTRY     -  US
 HC0606  USGS QUAD   -  YANCY MILLS (1982)
 HC0606
 HC0606                          *CURRENT SURVEY CONTROL
 HC0606  ______________________________________________________________________
 HC0606* NAD 83(1986) POSITION- 37 50 32.04    (N) 091 47 55.02    (W)    HD_HELD1
 HC0606* NAVD 88 ORTHO HEIGHT -    333.264 (meters)      1093.38   (feet) ADJUSTED
 HC0606  ______________________________________________________________________
 HC0606  GEOID HEIGHT    -         -30.583 (meters)                       GEOID12B
 HC0606  DYNAMIC HEIGHT  -         333.015 (meters)      1092.57   (feet) COMP
 HC0606  MODELED GRAVITY -     979,872.7   (mgal)                         NAVD 88
 HC0606
 HC0606  VERT ORDER      -  FIRST     CLASS II
 HC0606
 HC0606.The horizontal coordinates were determined by differentially corrected
 HC0606.hand held GPS observations or other comparable positioning techniques
 HC0606.and have an estimated accuracy of +/- 3 meters.
 HC0606.
 HC0606.The orthometric height was determined by differential leveling and
 HC0606.adjusted by the NATIONAL GEODETIC SURVEY
 HC0606.in June 1991.
 HC0606
 HC0606.Significant digits in the geoid height do not necessarily reflect accuracy.
 HC0606.GEOID12B height accuracy estimate available here.
 HC0606
 HC0606.The dynamic height is computed by dividing the NAVD 88
 HC0606.geopotential number by the normal gravity value computed on the
 HC0606.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 HC0606.degrees latitude (g = 980.6199 gals.).
 HC0606
 HC0606.The modeled gravity was interpolated from observed gravity values.
 HC0606
 HC0606;                      North          East     Units  Estimated Accuracy
 HC0606;SPC MO C     -    223,153.9      561,732.2      MT  (+/- 3 meters HH1 GPS)
 HC0606
 HC0606_U.S. NATIONAL GRID SPATIAL ADDRESS: 15SXB0570588990(NAD 83)
 HC0606
 HC0606                               SUPERSEDED SURVEY CONTROL
 HC0606
 HC0606  NGVD 29 (??/??/92)  333.202   (m)           1093.18    (f) ADJ UNCH    1 2
 HC0606
 HC0606.Superseded values are not recommended for survey control.
 HC0606
 HC0606.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 HC0606.See file dsdata.pdf to determine how the superseded data were derived.
 HC0606
 HC0606_MARKER: DB = BENCH MARK DISK
 HC0606_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 HC0606_STAMPING: L 225 1949
 HC0606_MARK LOGO: CGS
 HC0606_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 HC0606+STABILITY: SURFACE MOTION
 HC0606_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 HC0606+SATELLITE: SATELLITE OBSERVATIONS - June 02, 2016
 HC0606
 HC0606  HISTORY     - Date      Condition         Report By
 HC0606  HISTORY     - 1949      MONUMENTED        CGS
 HC0606  HISTORY     - 19890718  GOOD              NGS
 HC0606  HISTORY     - 20160602  GOOD              DOA3LS
```

Bench Mark-L 225



GEOCACHES

Nearest
- Benchmarks
- Geocaches

😃 05/11/2005 [redacted] found HC0606 Visit Log

Found this one in good condition as described.

[Photos:]
L 225.JPG

😃 11/01/2003 [redacted] found HC0606 Visit Log

N 37° 50.534 W 091° 47.917
Alt 1096'

[Photos:]
L 225

Documented History (by the NGS)

01/01/1949 by CGS (MONUMENTED)

DESCRIBED BY COAST AND GEODETIC SURVEY 1949 7.7 MI S FROM ROLLA. ABOUT 7.7 MILES SOUTH ALONG U.S. HIGHWAY 63 FROM THE JUNCTION OF U.S. HIGHWAY 66 IN WEST ROLLA, AT THE T JUNCTION OF A GRAVEL ROAD LEADING WEST, 92 FEET NORTHWEST OF A FENCE CORNER, 75 FEET SOUTH OF THE CENTER LINE OF THE GRAVEL ROAD, 72.5 FEET SOUTHWEST OF THE CENTER LINE OF THE HIGHWAY, 68 FEET SOUTHEAST OF A FENCE CORNER, 30 FEET NORTHWEST OF A TELEPHONE POLE, 1.5 FEET NORTHEAST OF THE R/W FENCE, 2 FEET SOUTHEAST OF A WHITE WOODEN WITNESS POST, ABOUT 3 FEET ABOVE THE LEVEL OF THE HIGHWAY AND SET IN THE TOP OF A CONCRETE POST PROJECTING 4 INCHES.

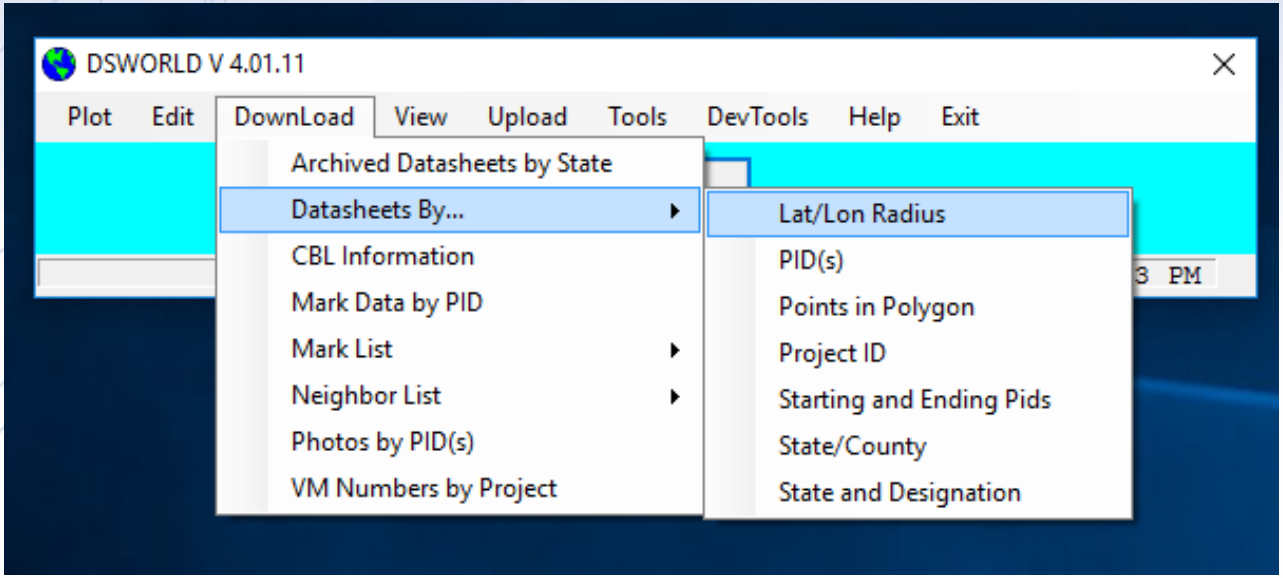
07/18/1989 by NGS (GOOD)

RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1989 RECOVERED IN GOOD CONDITION. A NEW DESCRIPTION FOLLOWS. 15.1 KM (9.4 MI) SOUTHERLY ALONG U.S. HIGHWAY 63 FROM ITS JUNCTION WITH INTERSTATE HIGHWAY 44 IN ROLLA, 22.9 M (75.1 FT) SOUTH OF THE CENTER OF COUNTY ROAD 233, 22.1 M (72.5 FT) SOUTHWEST OF THE CENTERLINE OF THE HIGHWAY, 0.9 M (3.0 FT) ABOVE THE LEVEL OF THE HIGHWAY, 0.2 M (0.7 FT) NORTHEAST OF A WITNESS POST, AND IN A CONCRETE MONUMENT THAT PROJECTS 0.03 M (0.1 FT) ABOVE THE GROUND SURFACE.

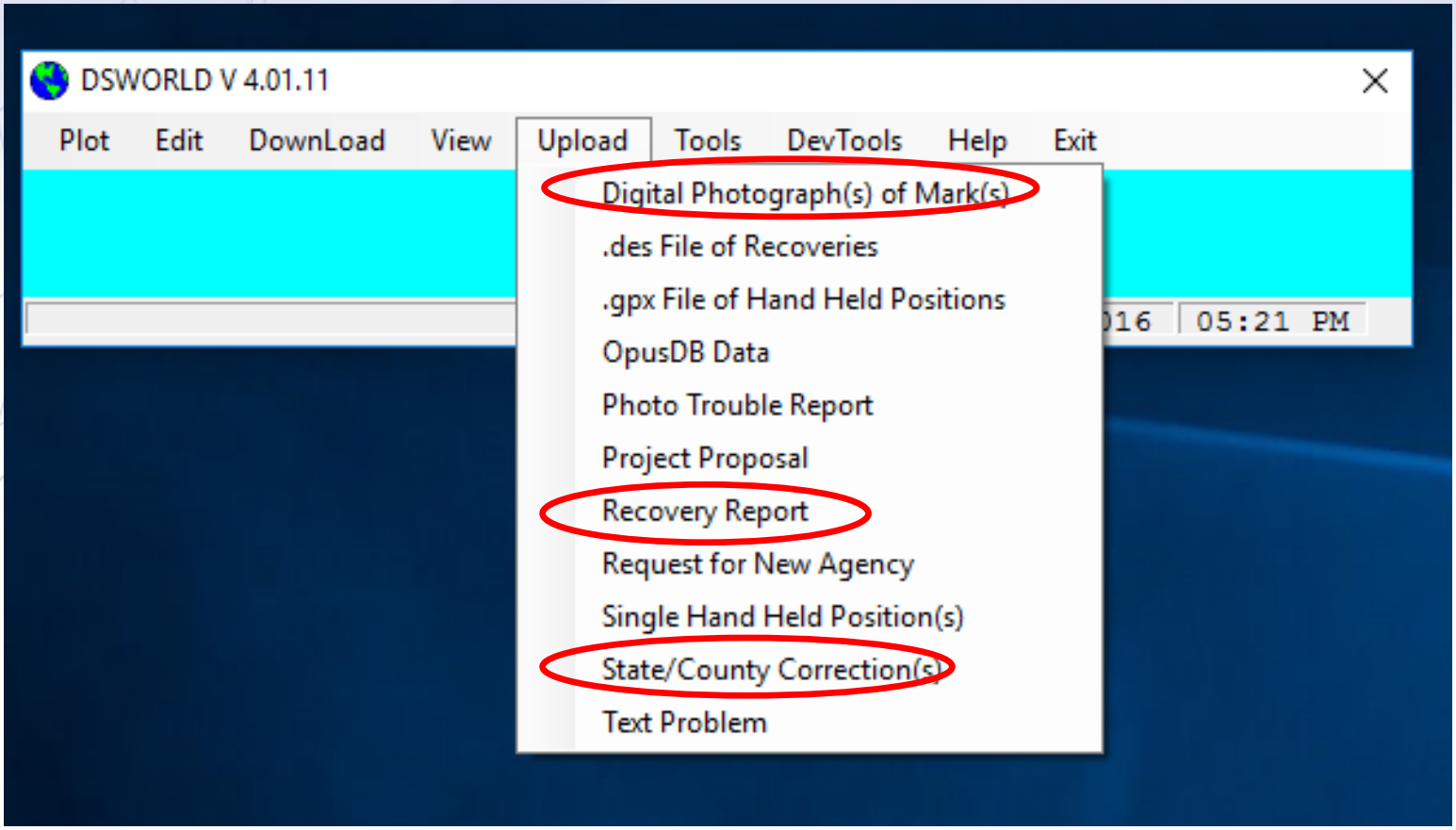
Near by BM's

Icon	PID	Dist	Designation	State	Type	Found	Last Log	d/l
	HC0606	0mi	L 225	MO	bench mark disk	05/11/2005		
	HC0609	1mi N	S 34 RESET	MO	survey disk	05/04/2004		
	HC0608	1mi N	S 34 RESET	MO	bench mark disk			
	HC0607	1mi N	S 34	MO	bench mark disk			
	HC0604	1mi S	R 34	MO	bench mark disk			
	HC0605	1.1mi S	R 34 RESET	MO	bench mark disk	05/04/2004		
	HC0603	1.4mi S	PILOT AZ MK	MO	azimuth mark disk	05/11/2005		
	HC0600	1.7mi S	PILOT	MO	triangulation station disk			
	HC0601	1.7mi S	PILOT RM 1	MO	reference mark disk			
	HC0602	1.7mi S	PILOT RM 2	MO	reference mark disk			
	HC0610	1.8mi N	M 225	MO	bench mark disk	05/11/2005		
	HC1107	2.1mi S	G 337	MO	metal rod	05/11/2005		
	HC0612	2.5mi N	T 34 RESET	MO	bench mark disk	05/04/2004		
	HC0611	2.6mi N	T 34	MO	bench mark disk			
	HC0613	2.6mi N	GAGING STATION	MO	survey disk	05/04/2004		
	HC0598	2.6mi S	Q 34	MO	bench mark disk			
	HC0599	2.6mi S	Q 34 RESET	MO	bench mark disk			
	HC1108	2.9mi N	H 337	MO	metal rod	05/11/2005		

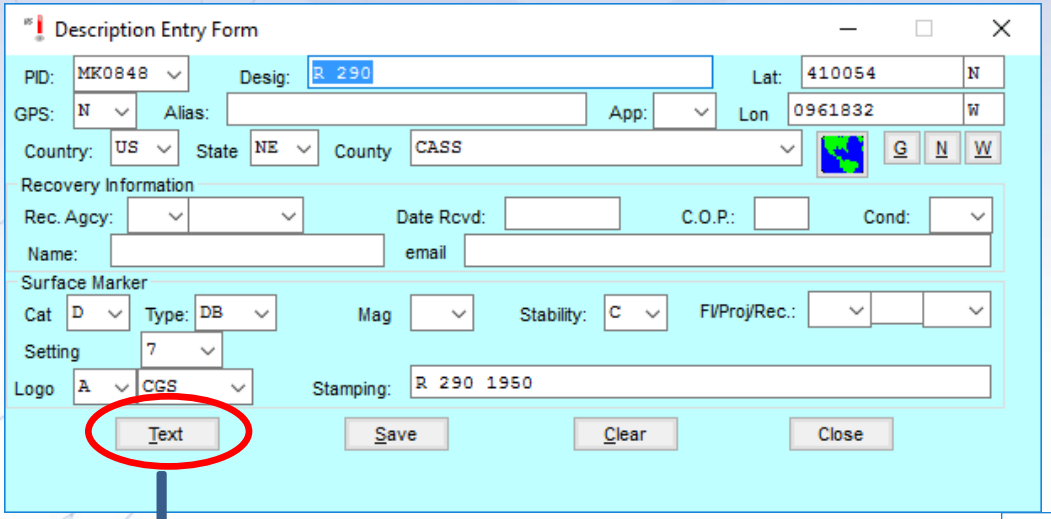
DOWNLOAD


DSWORLD V 4.01.11
Plot
Edit
DownLoad
View
Upload
Tools
DevTools
Help
Exit
Archived Datasheets by State
Datasheets By...
CBL Information
Mark Data by PID
Mark List
Neighbor List
Photos by PID(s)
VM Numbers by Project
Lat/Lon Radius
PID(s)
Points in Polygon
Project ID
Starting and Ending Pids
State/County
State and Designation
3 PM

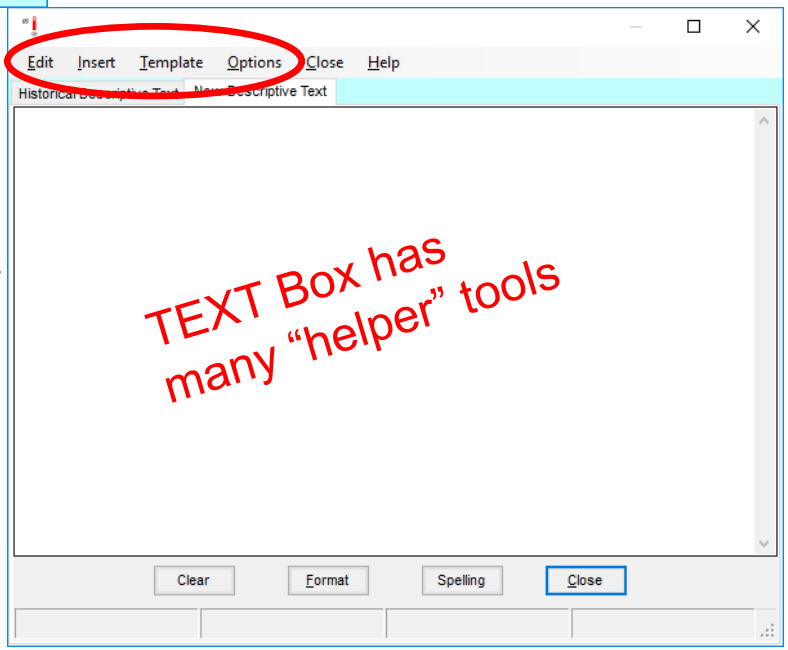
UPLOAD


DSWORLD V 4.01.11
Plot
Edit
DownLoad
View
Upload
Tools
DevTools
Help
Exit
Digital Photograph(s) of Mark(s)
.des File of Recoveries
.gpx File of Hand Held Positions
OpusDB Data
Photo Trouble Report
Project Proposal
Recovery Report
Request for New Agency
Single Hand Held Position(s)
State/County Correction(s)
Text Problem
05:21 PM

UPLOAD – Recovery Report



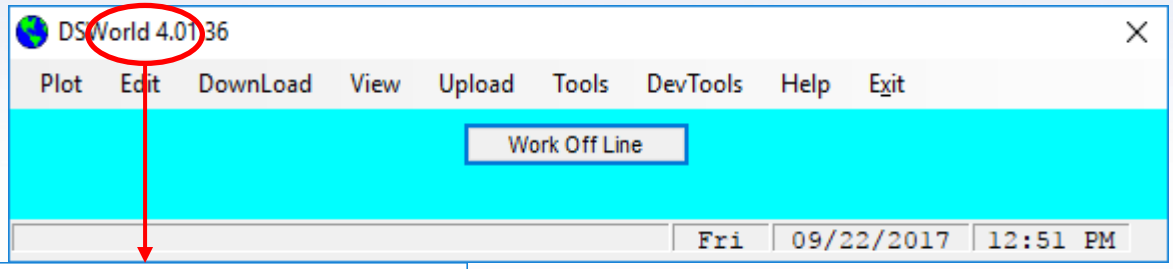
Dynamic and Context-Specific Entries

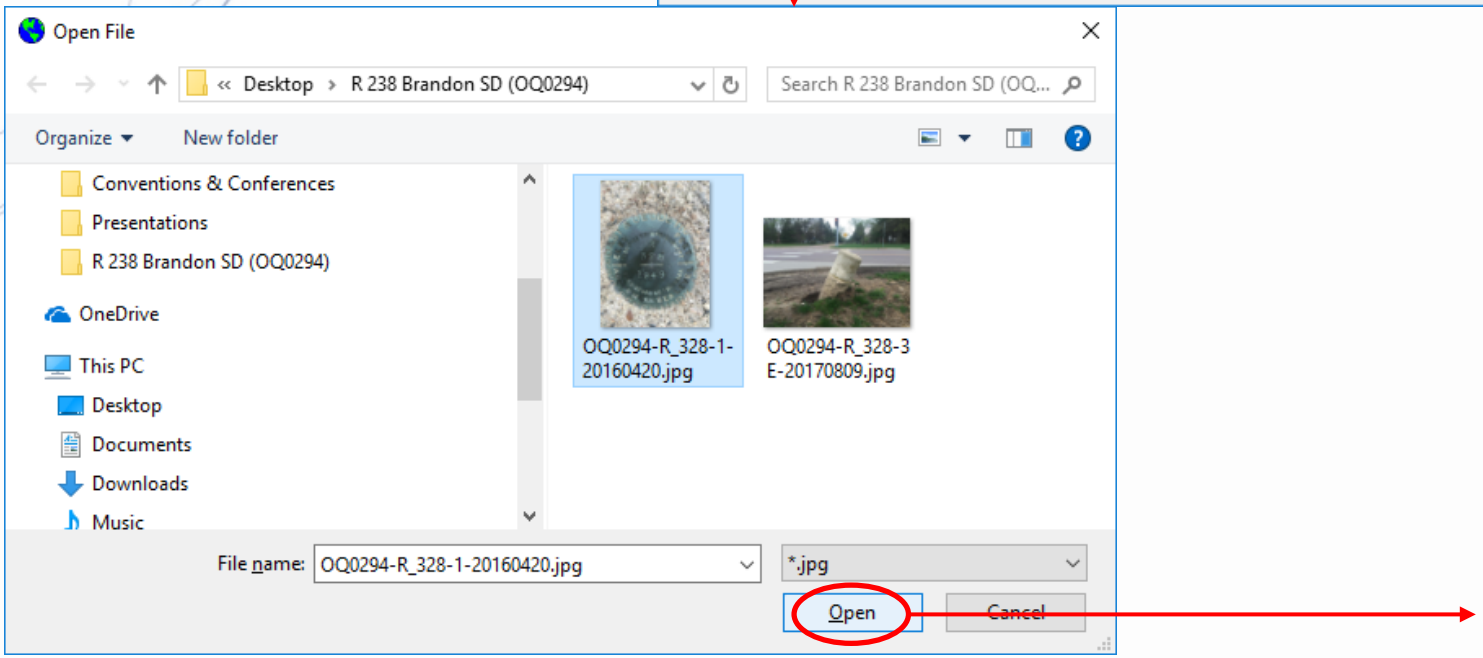


TEXT Box has many "helper" tools

PHOTOS

- *Edit* photos – name, resize, etc.



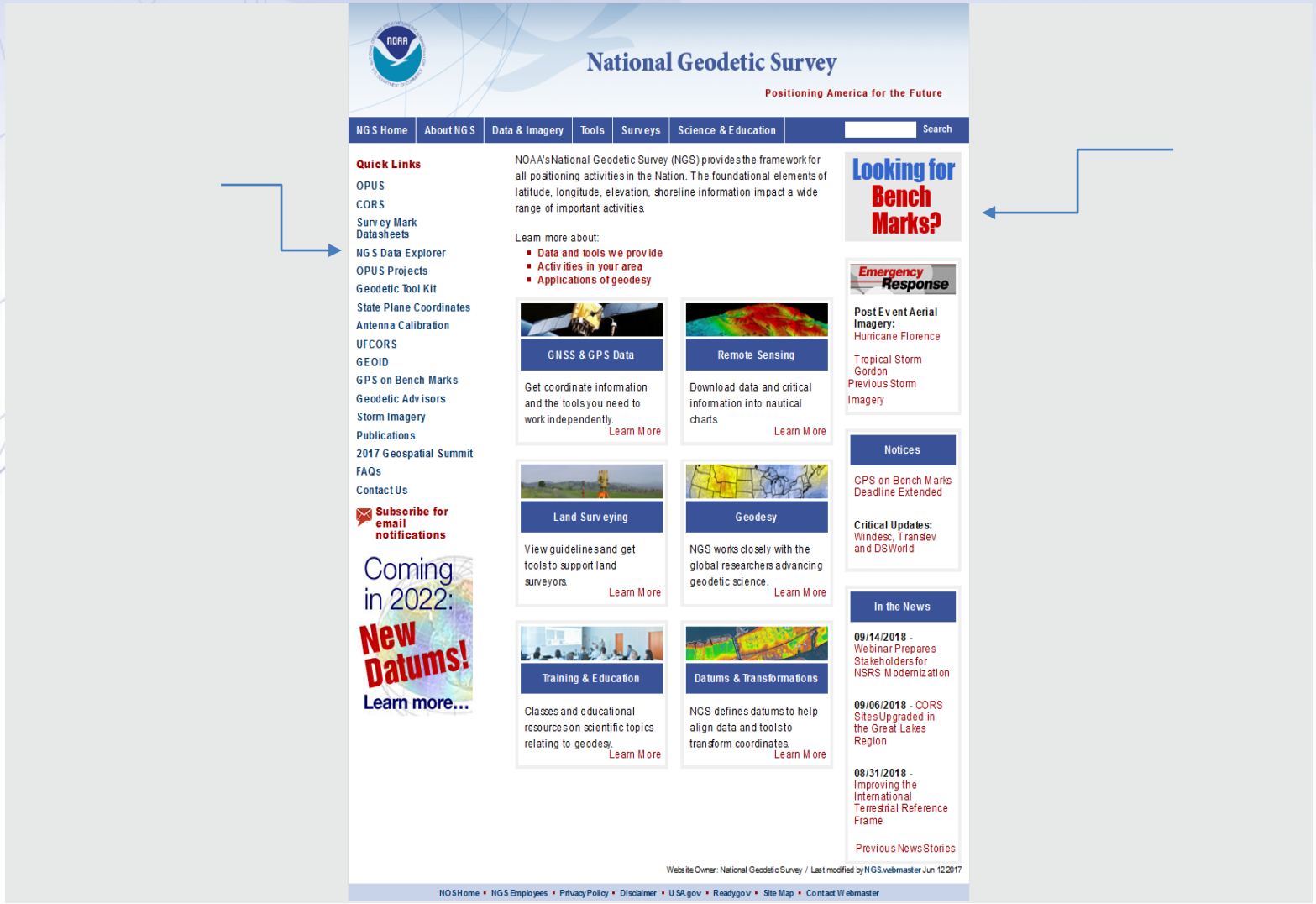


SAVE

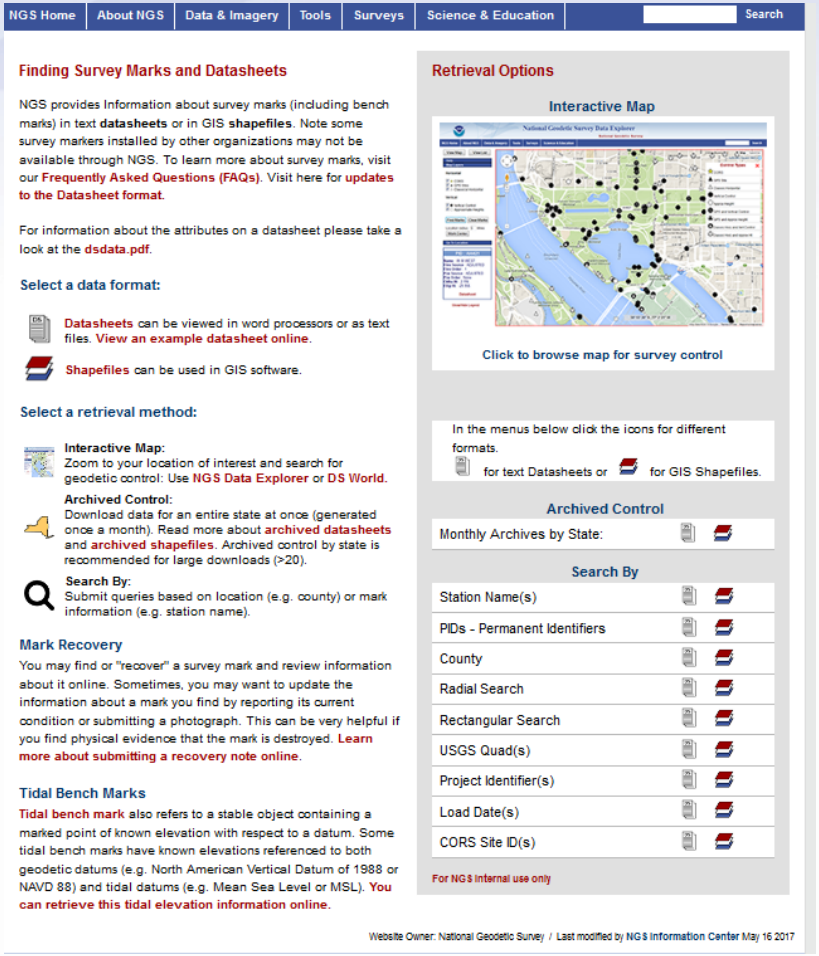
- When finished editing, click SAVE
- You will get a confirmation message
- The uploaded data will be inserted in the NGSIDB within 20 days. Maybe sooner.

- NGS wants users to use DSWorld – rather than the on-line recovery tool.

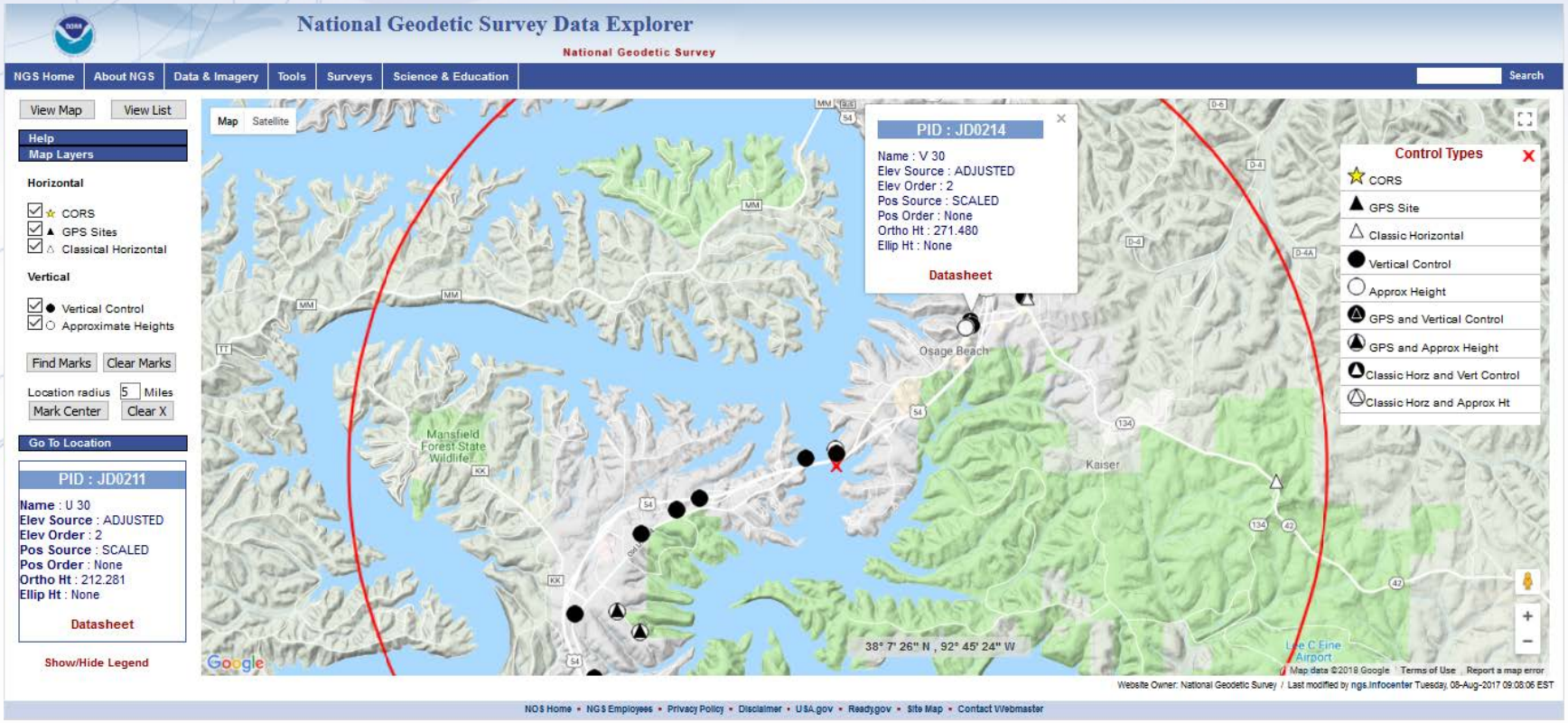
NGS DATA EXPLORER



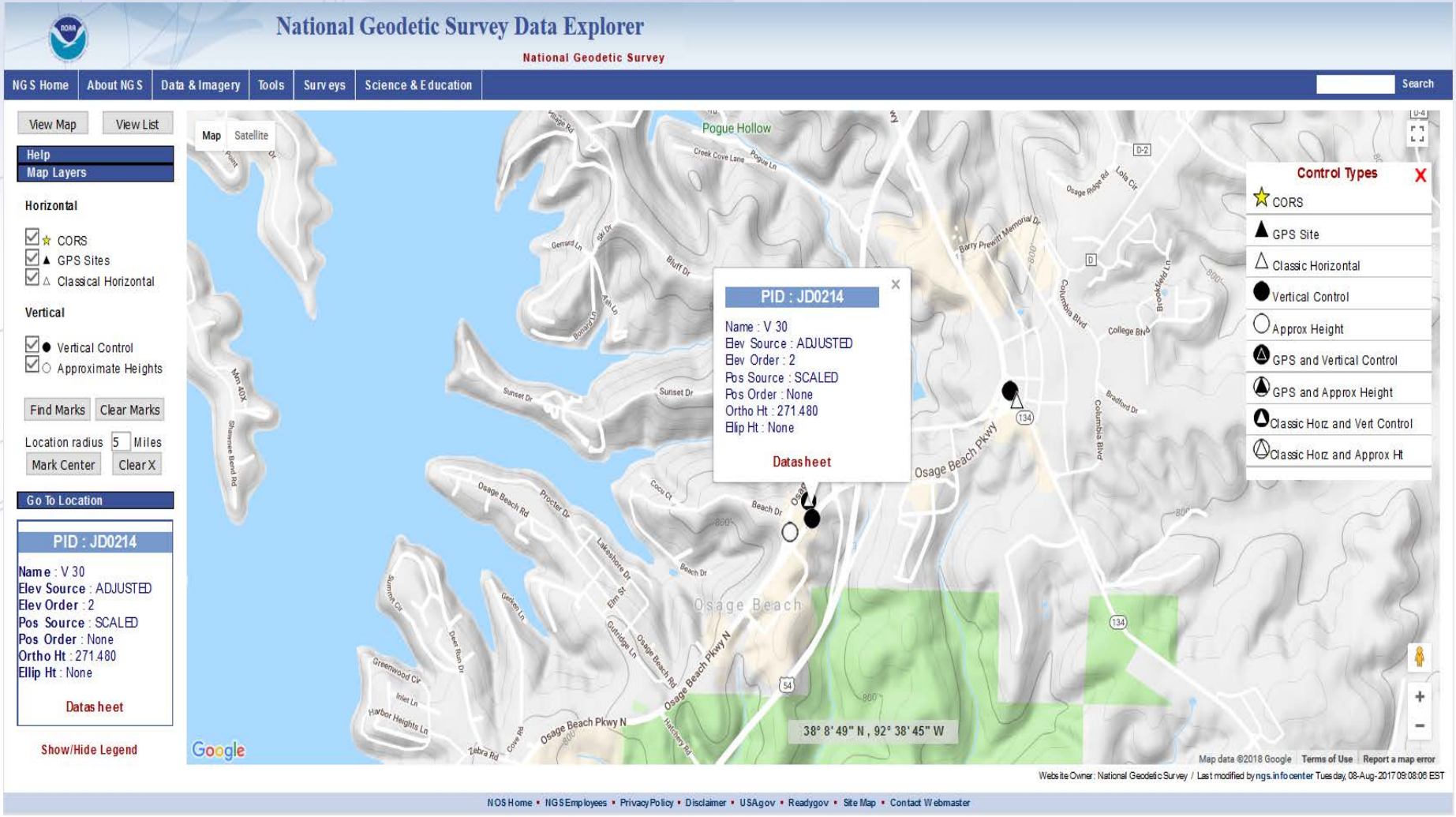
NGS DATA EXPLORER



5 Mile Radius Search



Bench Mark- V 30



View List

View Map | View List

Help

Map Layers

Horizontal

- ☑ ★ CORS
- ☑ ▲ GPS Sites
- ☑ △ Classical Horizontal

Vertical

- ☑ ● Vertical Control
- ☑ ○ Approximate Heights

Find Marks | Clear Marks

Location radius 5 Miles

Mark Center | Clear X

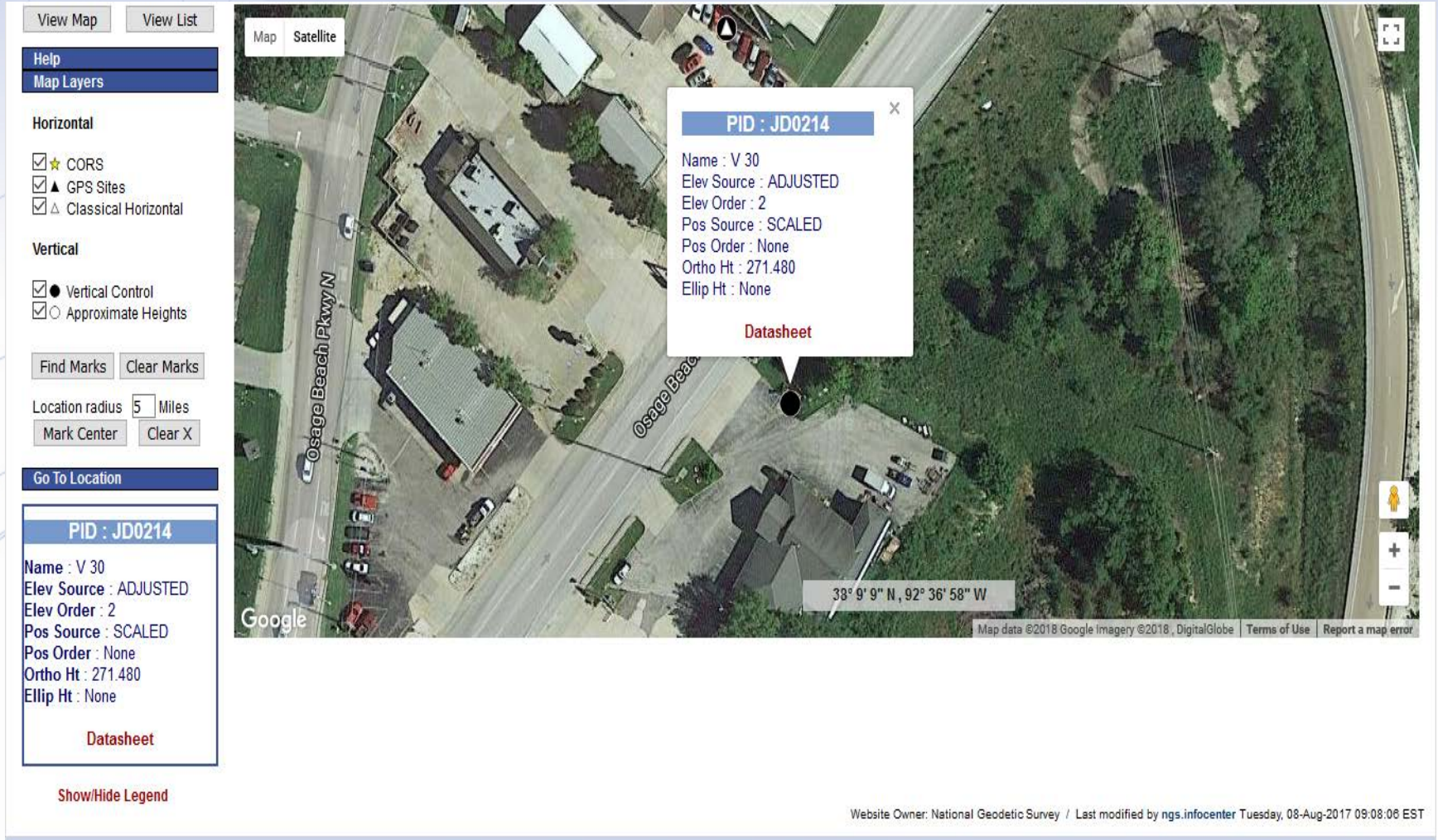
Go To Location

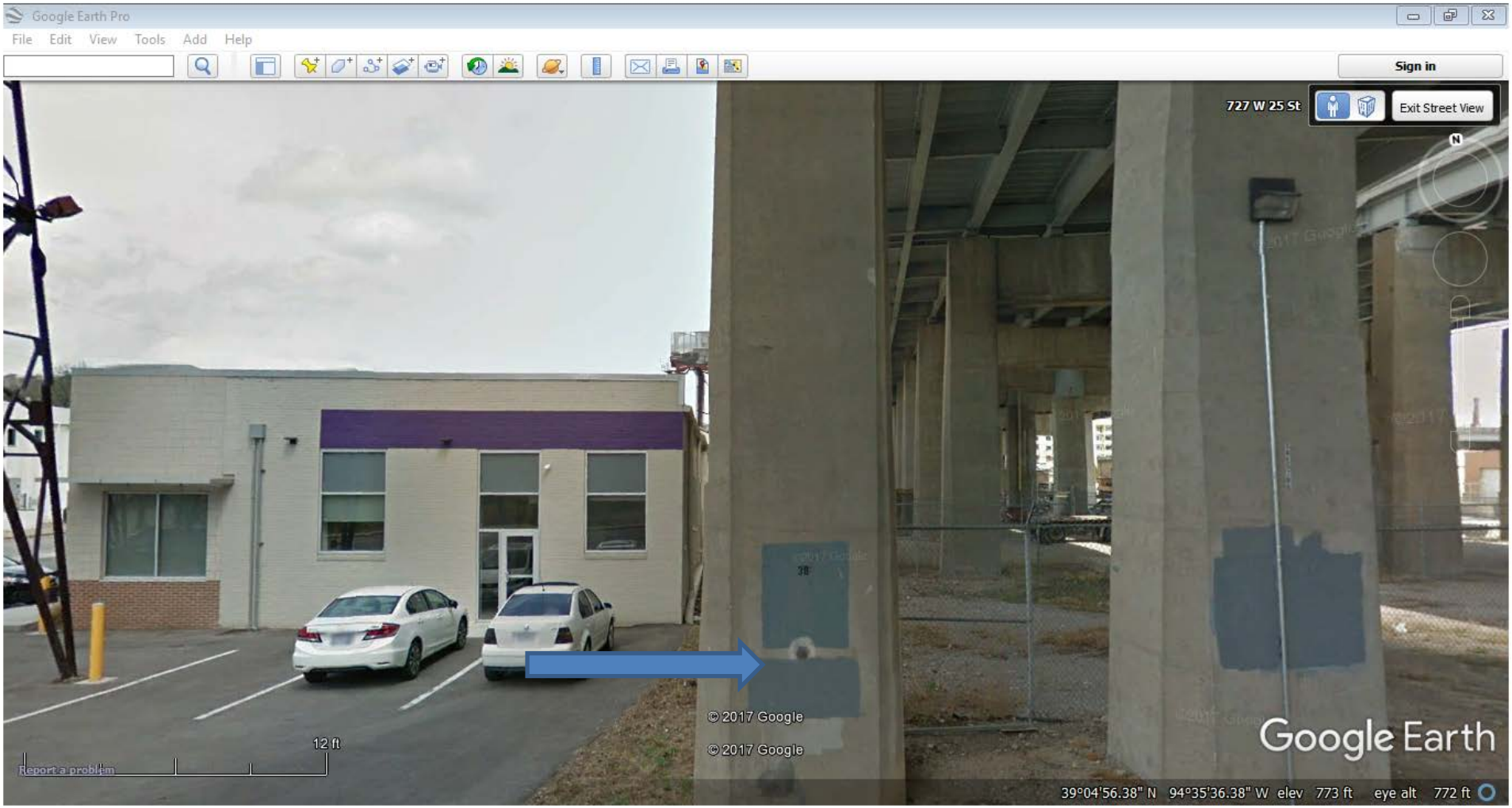
Site Info

Mouse over plotted marks to view information here.

JD0206	851.9	Vertical Control	ADJUSTED	2	SCALED	None	259.769	None
JD0207	T 30	Vertical Control	ADJUSTED	2	SCALED	None	249.932	None
JD0208	T 30 RESET	Vertical Control	RESET	3	SCALED	None	253.70	None
JD0209	TTS 161 B	Vertical Control	ADJUSTED	2	HD_HELD2	None	241.713	None
JD0210	696.1	Vertical Control	ADJUSTED	2	SCALED	None	212.254	None
JD0211	U 30	Vertical Control	ADJUSTED	2	SCALED	None	212.281	None
JD0212	TT 160 B	Vertical Control	ADJUSTED	2	HD_HELD2	None	273.375	None
JD0213	TTS 160 B RESET	Approximate Height	VERTCON	None	HD_HELD2	None	272.83	None
JD0214	V 30	Vertical Control	ADJUSTED	2	SCALED	None	271.480	None
JD0215	898.7	Vertical Control	ADJUSTED	2	SCALED	None	273.996	None
JD0216	836.7	Vertical Control	ADJUSTED	2	SCALED	None	255.103	None
JD0217	W 30	Vertical Control	ADJUSTED	2	SCALED	None	254.975	None
JD0220	X 30	Vertical Control	ADJUSTED	2	SCALED	None	238.883	None
JD0221	X 30 RESET	Approximate Height	VERTCON	None	SCALED	None	239.52	None
JD0222	25 J	Vertical Control	ADJUSTED	2	HD_HELD1	None	205.425	None
JD2565	BAGNELL MAN UNION ELEC TANK	Classic Horizontal	None	None	ADJUSTED	3	None	None
JD2566	RIVER VIEW	Classic Horizontal	SCALED	None	ADJUSTED	3	277.	None
JD2567	KAISER	Classic Horizontal	SCALED	None	ADJUSTED	1	308.	None
JD2790	LINNPORT	GPS and Approximate Height	VERTCON	None	ADJUSTED	3	264.9	233.2484
JD2791	LINNPORT AZ MK	GPS and Approximate Height	VERTCON	None	NO CHECK	3	261.	229.3264
JD2799	RIVER VIEW AZ MK 3	Classic Horizontal and Vertical Control	RESET	3	NO CHECK	3	272.86	None

Satellite View




Google Earth Pro
File Edit View Tools Add Help
Sign in
727 W 25 St
Exit Street View
N
© 2017 Google
© 2017 Google
12 ft
Report a problem
Google Earth
39°04'56.38" N 94°35'36.38" W elev 773 ft eye alt 772 ft

National Geodetic Survey Data Explorer

National Geodetic Survey

View Map | View List

Help

Map Layers

Horizontal

- ☑ ★ CORS
- ☑ ▲ GPS Sites
- ☑ △ Classical Horizontal

Vertical

- ☑ ● Vertical Control
- ☑ ○ Approximate Heights

Find Marks | Clear Marks

Location radius 5 Miles

Mark Center

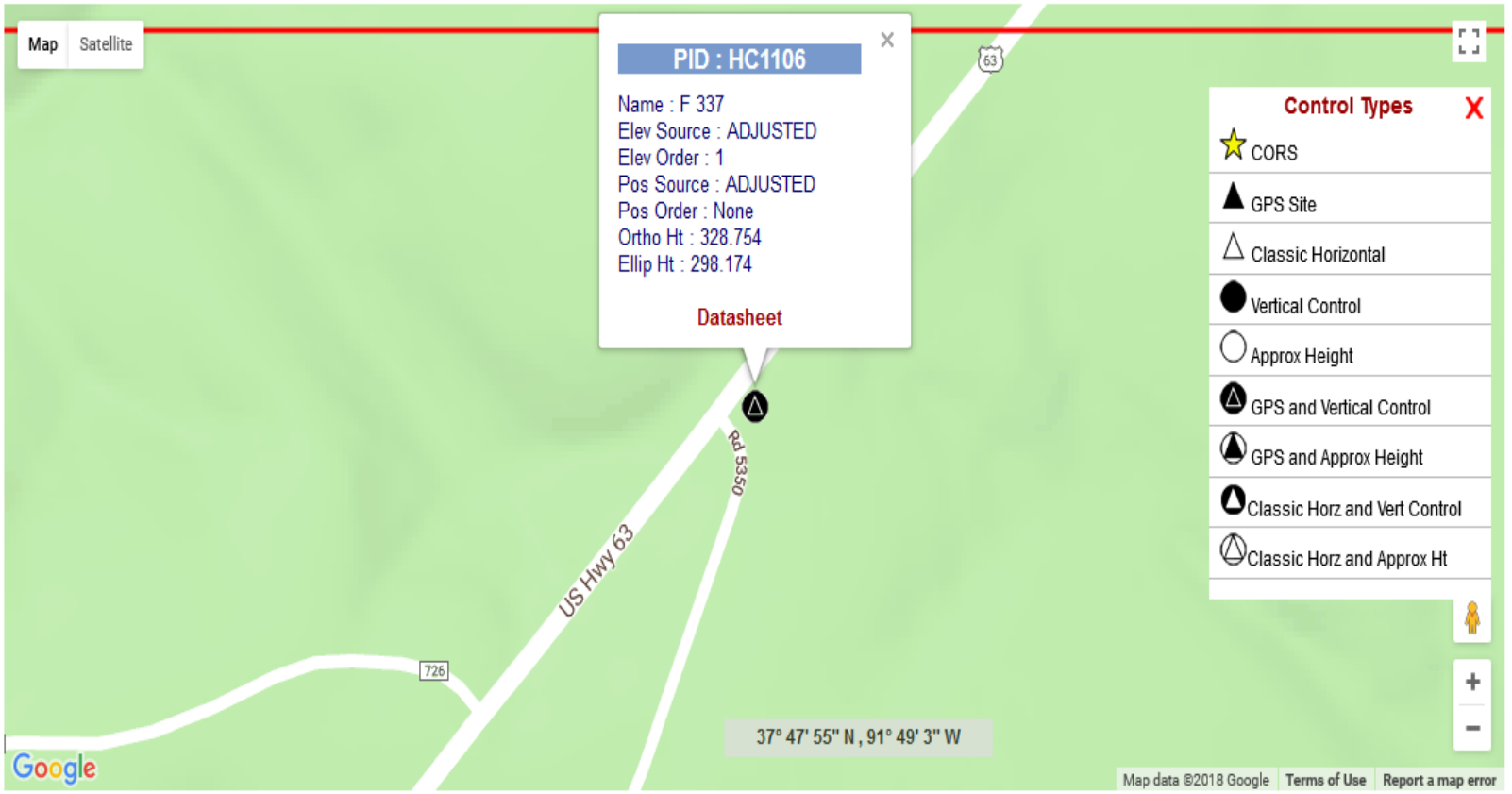
Go To Location

PID : HC1106

Name : F 337
Elev Source : ADJUSTED
Elev Order : 1
Pos Source : ADJUSTED
Pos Order : None
Ortho Ht : 328.754
Ellip Ht : 298.174

Datasheet

Show/Hide Legend



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Pos Source : ADJUSTED
Pos Order : None
Ortho Ht : 328.754
Ellip Ht : 298.174

Datasheet

Show/Hide Legend

The NSRS of Tomorrow (2022)

Primary elements:

- The geometric North American Terrestrial Reference Frame of 2022 (**NATRF2022**)
  plus the Caribbean, Pacific, and Mariana plates
- The North American-Pacific Geopotential Datum of 2022 (**NAPGD2022**)

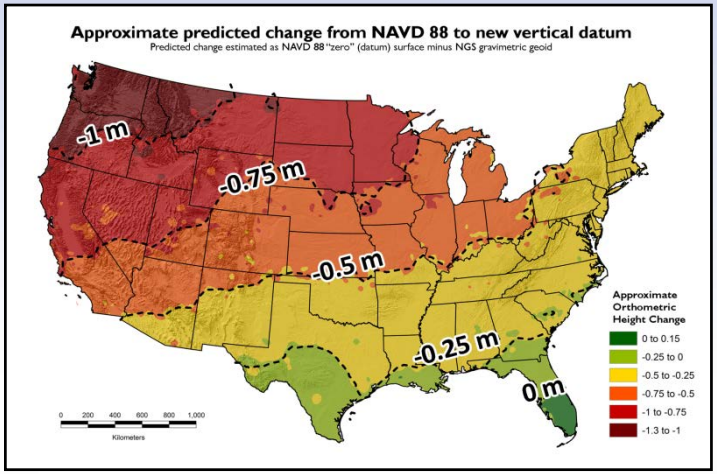
New reference system is:

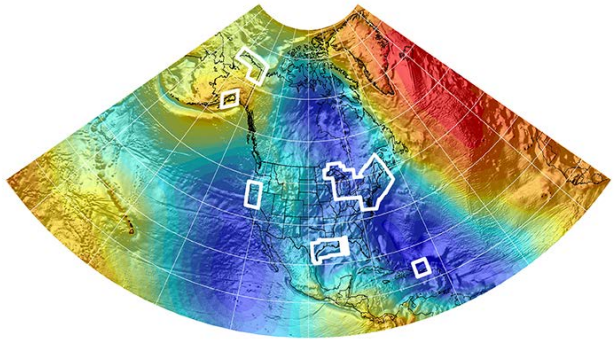
- Geocentric and defined by relationships to a global/international ideal frame;
- Time-dependent; and
- Primarily accessed via GPS technology and a newly refined semi-dynamic geoid model

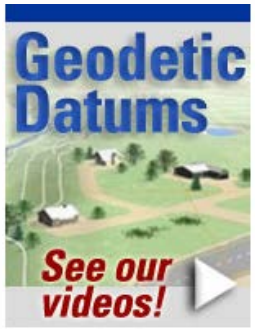
New Datums Are Coming in 2022!

- NOAA's National Geodetic Survey will release new geometric (horizontal) and geopotential (vertical) datums in 2022
- The realization of the new datums will be through GPS/GNSS receivers and will replace the current datums:

  NAD 83(geometric) and NAVD 88 (geopotential)
- Target: 2-centimeter accuracy relative to sea level (orthometric heights) using GPS/GNSS and a geoid (gravity) model from NGS' GRAV-D project.
- NGS will provide the tools to transform between the new and old datums.

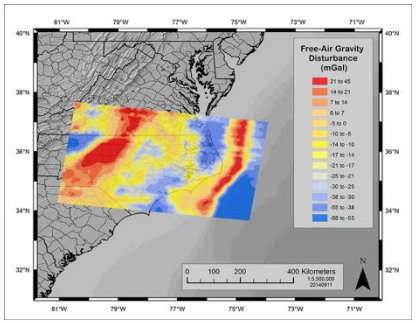




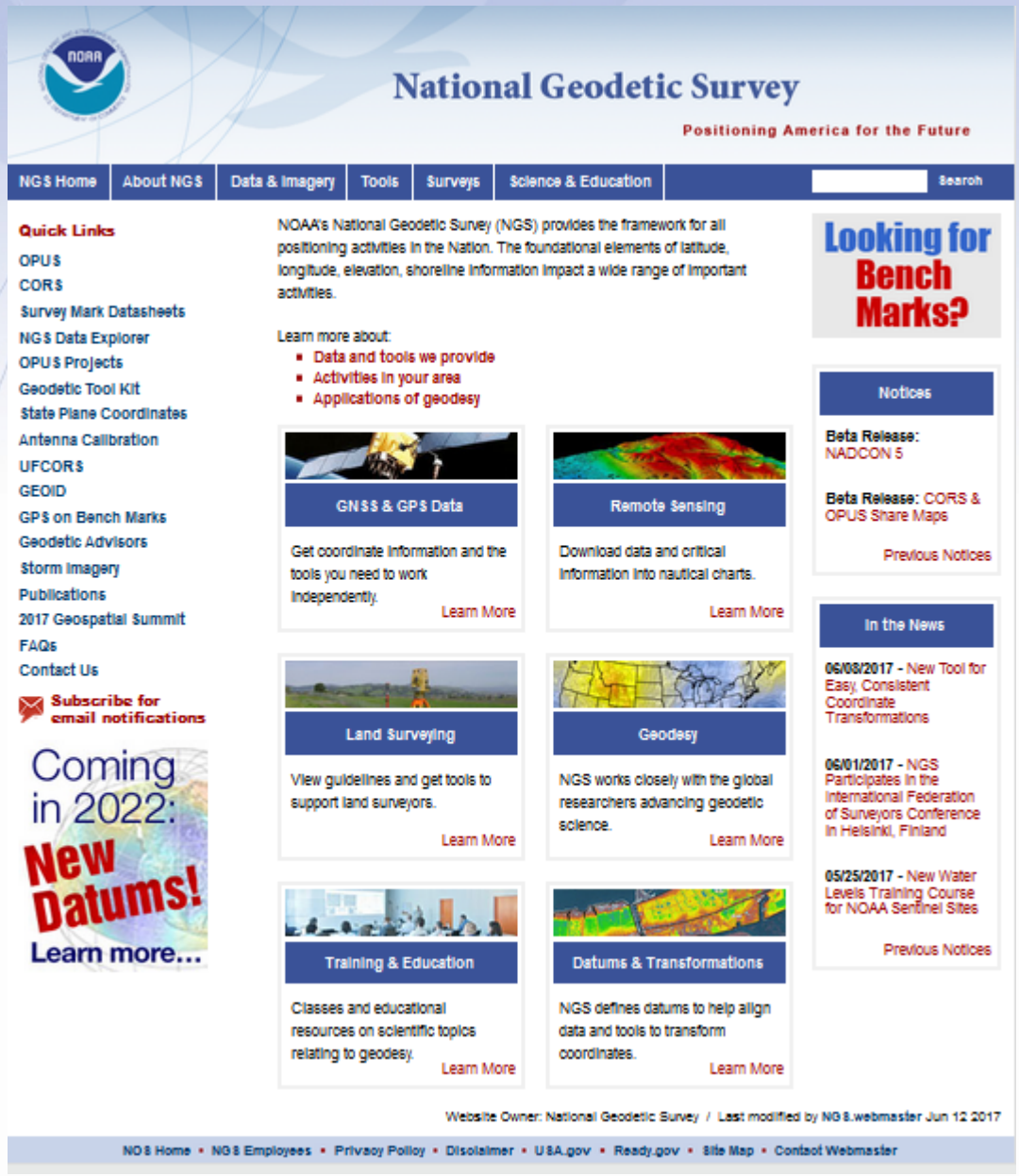


MORE INFO:

New Datums Webpage and Videos:
lwww.ngs.noaa.gov/datums/newdatums/index.shtml



Thanks for Attending



brian.ward@noaa.gov
240-997-1283
www.ngs.noaa.gov