OPUS Projects Manager Training

Step 2 : Uploading Data

ngs.opus.projects@noaa.gov

I've advanced to the second slide and I'm reading it.

- Can you read this slide and hear me as I read it?
- Can you access the web?
- Is everyone comfortable?
- Does anyone have any questions before we begin?

Outline

- Introduction
- Step 1 : Creating a Project
- ➢ **Step 2 : Uploading Data**
- Step 3 : Session Processing
- Step 4 : Network Adjustment

A few words before beginning.

OPUS Projects is a web-based utility implying that access to the internet and use of a web browser are required. JavaScript must be enabled in your browser and pop-up blocking may have to be turned off. If you have difficulty configuring your browser, contact your instructor or the OPUS Projects team.

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

The OPUS Projects look and feel.

The overall layout and appearance of OPUS Projects will be very similar to that shown here regardless of the browser you use. For this reason, the browser window's frame is not shown in the figures.

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

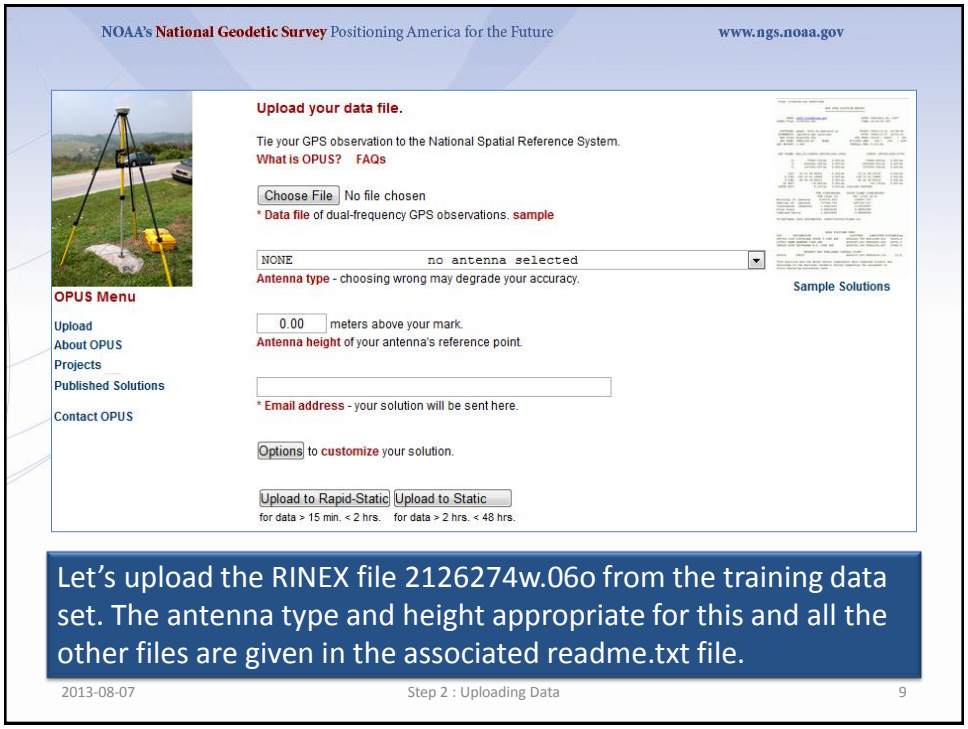
What's in this training?

This presentation shows how to upload data to a project. The format is as a series of steps like a cookbook. Like most cookbooks, the justification for and discussion of variations in those steps will be minimal. The intent is to get you started quickly, then leave you free to explore OPUS Projects on your own.

We assume familiarity with OPUS so some steps will be quite terse. If you are unfamiliar with OPUS, mention this your instructor during a break.

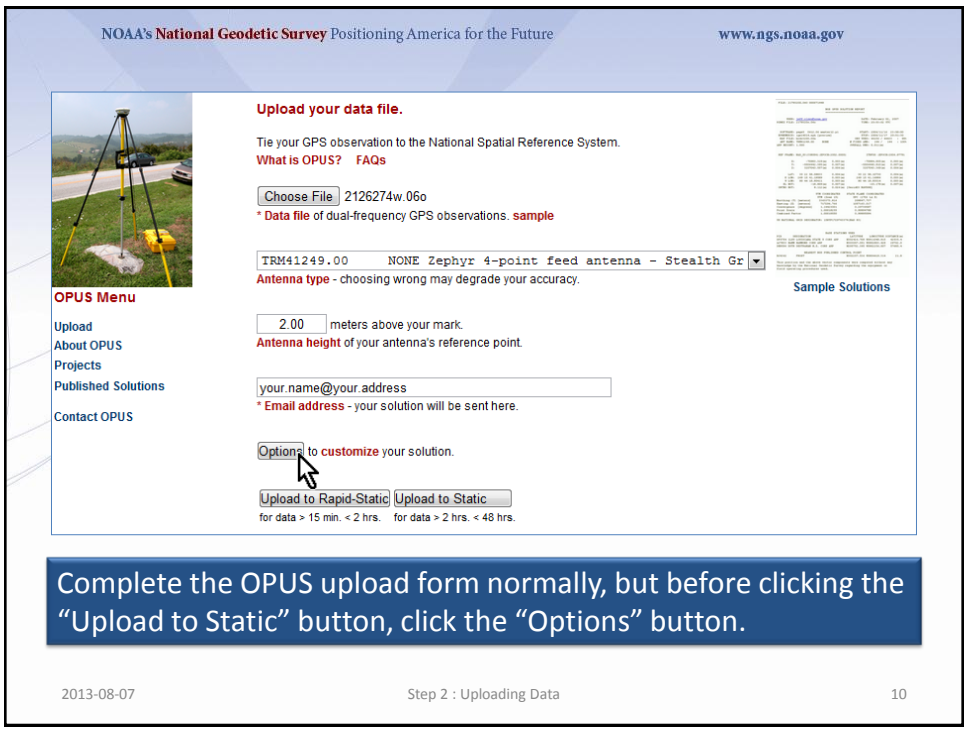
NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
OPUS: Online Positioning User Service
National Geodetic Survey
NGS Home
About NGS
Data & Imagery
Tools
Surveys
Science & Education
Search
Upload your data file.
Tie your GPS observation to the National Spatial Reference System.
What is OPUS? FAQs
Choose File No file chosen
* Data file of dual-frequency GPS observations. sample
NONE no antenna selected
Antenna type - choosing wrong may degrade your accuracy.
Sample Solutions
OPUS Menu
Upload
About OPUS
Projects
Published Solutions
Contact OPUS
0.00 meters above your mark.
Antenna height of your antenna's reference point.
* Email address - your solution will be sent here.
Options to customize your solution.
Upload to Rapid-Static
Upload to Static
Website Owner: National Geodetic Survey / Last modified by NGS.OPUS Wednesday, 22-Aug-2012 10:42:26 EST
NOS Home • NGS Employees • Privacy Policy • Disclaimer • USA.gov • Ready.gov • Site Map • Contact Webmaster
We'll start at the OPUS upload web page:
http://geodesy.noaa.gov/OPUS/
2013-08-07 Step 2 : Uploading Data 7

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
OPUS: Online Positioning User Service
National Geodetic Survey
NGS Home
About NGS
Data & Imagery
Tools
Surveys
Science & Education
Search
Upload your data file.
Tie your GPS observation to the National Spatial Reference System.
What is OPUS? FAQs
Choose File No file chosen
* Data file of dual-frequency GPS observations. sample
NONE no antenna selected
Antenna type - choosing wrong may degrade your accuracy.
Sample Solutions
OPUS Menu
Upload
About OPUS
Projects
Published Solutions
Contact OPUS
0.00 meters above your mark.
Antenna height of your antenna's reference point.
* Email address - your solution will be sent here.
Options to customize your solution.
Upload to Rapid-Static
Upload to Static
Website Owner: National Geodetic Survey / Last modified by NGS.OPUS Wednesday, 22-Aug-2012 10:42:26 EST
NOS Home • NGS Employees • Privacy Policy • Disclaimer • USA.gov • Ready.gov • Site Map • Contact Webmaster
At this time, only OPUS Static is allowed to upload to a project.
The conventional OPUS Static rules apply.
2013-08-07 Step 2 : Uploading Data 8



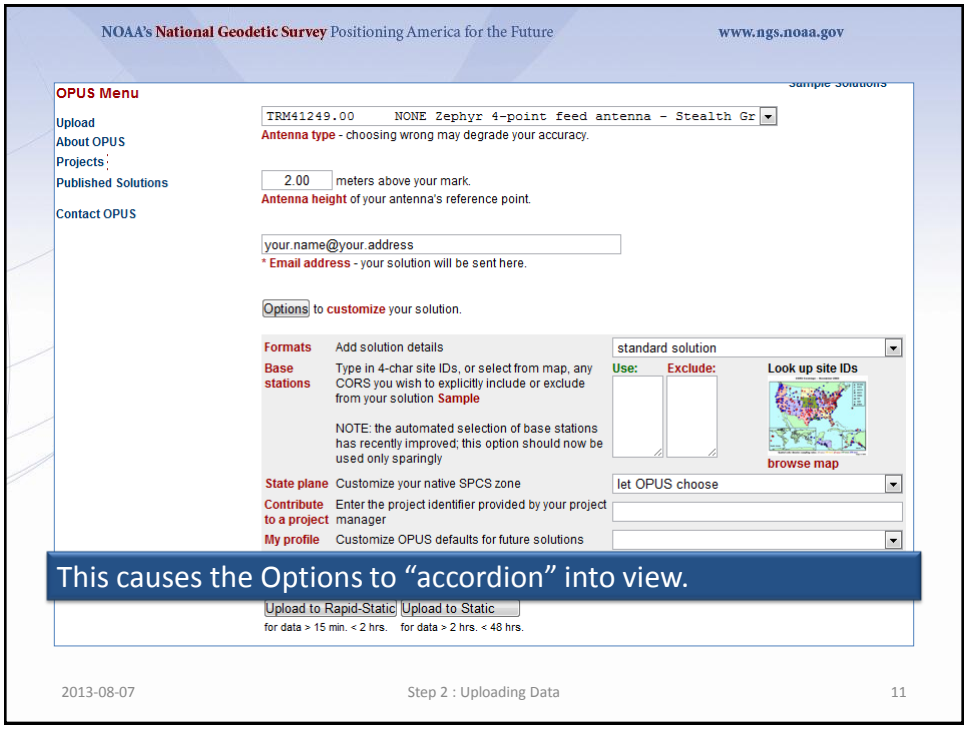
Let's upload the RINEX file 2126274w.06o from the training data set. The antenna type and height appropriate for this and all the other files are given in the associated readme.txt file.

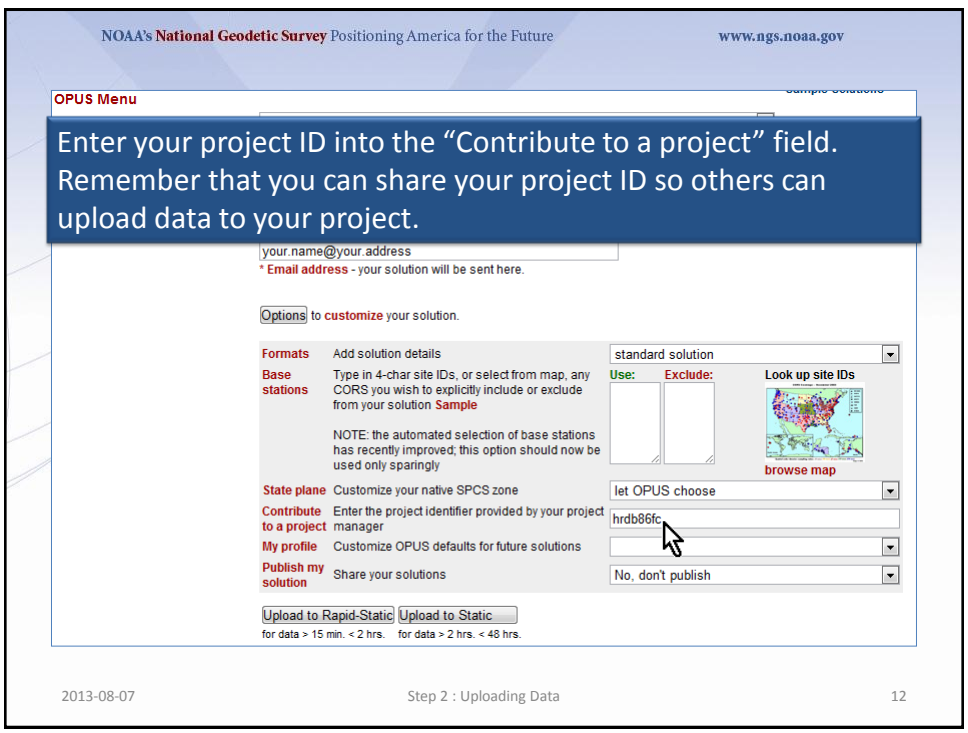
2013-08-07 Step 2 : Uploading Data 9



Complete the OPUS upload form normally, but before clicking the "Upload to Static" button, click the "Options" button.

2013-08-07 Step 2 : Uploading Data 10


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
OPUS Menu
Upload
About OPUS
Projects
Published Solutions
Contact OPUS
TRM41249.00 NONE Zephyr 4-point feed antenna - Stealth Gr
Antenna type - choosing wrong may degrade your accuracy.
2.00 meters above your mark.
Antenna height of your antenna's reference point.
your.name@your.address
* Email address - your solution will be sent here.
Options to customize your solution.
Formats
Add solution details
standard solution
Base stations
Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample
NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly
Use:
Exclude:
Look up site IDs
browse map
State plane
Customize your native SPCS zone
let OPUS choose
Contribute to a project
Enter the project identifier provided by your project manager
My profile
Customize OPUS defaults for future solutions
This causes the Options to "accordion" into view.
Upload to Rapid-Static
Upload to Static
for data > 15 min. < 2 hrs.
for data > 2 hrs. < 48 hrs.
2013-08-07
Step 2 : Uploading Data
11


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
OPUS Menu
Enter your project ID into the "Contribute to a project" field. Remember that you can share your project ID so others can upload data to your project.
your.name@your.address
* Email address - your solution will be sent here.
Options to customize your solution.
Formats
Add solution details
standard solution
Base stations
Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample
NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly
Use:
Exclude:
Look up site IDs
browse map
State plane
Customize your native SPCS zone
let OPUS choose
Contribute to a project
Enter the project identifier provided by your project manager
hrdb86fc
My profile
Customize OPUS defaults for future solutions
Publish my solution
Share your solutions
No, don't publish
Upload to Rapid-Static
Upload to Static
for data > 15 min. < 2 hrs.
for data > 2 hrs. < 48 hrs.
2013-08-07
Step 2 : Uploading Data
12

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

We'll leave the other options as they are. Now click the Upload button to have this data file uploaded to your project.

OPUS Menu

Contact OPUS

your.name@your.address
* Email address - your solution will be sent here.

Options to customize your solution.

Formats	Add solution details	standard solution	
Base stations	Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly	Use: / Exclude:	Look up site IDs browse map
State plane	Customize your native SPCS zone	let OPUS choose	
Contribute to a project	Enter the project identifier provided by your project manager	hrdb86fc	
My profile	Customize OPUS defaults for future solutions		
Publish my solution	Share your solutions	No, don't publish	

Upload to Rapid-Static (for data > 15 min. < 2 hrs.) Upload to Static (for data > 2 hrs. < 48 hr)

2013-08-07 Step 2 : Uploading Data 13

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

After clicking the upload button, the upload confirmation window will appear, but with some differences from "normal".

1. upload √ | 2. identify your mark | 3. describe ... | 4. publish ...

choose one: mark has a PID | mark is NEW to NGS | skip description
mark has a PID? Search the NGS database to find out.

Upload successful!
You will receive an email when processing is complete.

uploaded:		Solving with:	
data file	2126274w.06o	solution format	Extended
converted to	2126274w.06o (RINEX format)	base sta. used	--
antenna type	TRM41249.00 NONE	base sta. excluded	--
antenna height	2.00 meters	state plane zone	AUTO
email address	your.name@your.address		
processor	Static	project ID	hrdb86fc

2013-08-07 Step 2 : Uploading Data 14

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

You project ID will be listed (and should be visually confirmed) …

1. upload √ | 2. identify your mark | 3. describe … | 4. publish …

choose one: mark has a PID | mark is NEW to NGS | skip description

mark has a PID? Search the NGS database to find out.

Upload successful!
You will receive an email when processing is complete.

uploaded:		Solving with:	
data file	2126274w.06o	solution format	Extended
converted to	2126274w.06o (RINEX format)	base sta. used	--
antenna type	TRM41249.00 NONE	base sta. excluded	--
antenna height	2.00 meters	state plane zone	AUTO
email address	your.name@your.address		
processor	Static	project ID	hrdb86fc

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

… and you'll be able to provide a mark description.

1. upload √ | 2. identify your mark | 3. describe … | 4. publish …

choose one: mark has a PID | mark is NEW to NGS | skip description

mark has a PID? Search the NGS database to find out.

Upload successful!
You will receive an email when processing is complete.

uploaded:		Solving with:	
data file	2126274w.06o	solution format	Extended
converted to	2126274w.06o (RINEX format)	base sta. used	--
antenna type	TRM41249.00 NONE	base sta. excluded	--
antenna height	2.00 meters	state plane zone	AUTO
email address	your.name@your.address		
processor	Static	project ID	hrdb86fc

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

The data files included in the training are all from published marks; however, we encourage you to use them to try all three of these options during the training: PID, NEW and skip.

1. upload √ | 2. identify your mark | 3. describe ... | 4. publish ...

choose one: mark has a PID | mark is NEW to NGS | skip description

mark has a PID? Search the NGS database to find out.

Upload successful!
You will receive an email when processing is complete.

uploaded:		Solving with:	
data file	2126274w.06o	solution format	Extended
converted to	2126274w.06o (RINEX format)	base sta. used	--
antenna type	TRM41249.00 NONE	base sta. excluded	--
antenna height	2.00 meters	state plane zone	AUTO
email address	your.name@your.address		
processor	Static	project ID	hrdb86fc

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

Because it's a little more interesting, let's start by pretending this is a NEW mark. Click the "mark is NEW to NGS" button.

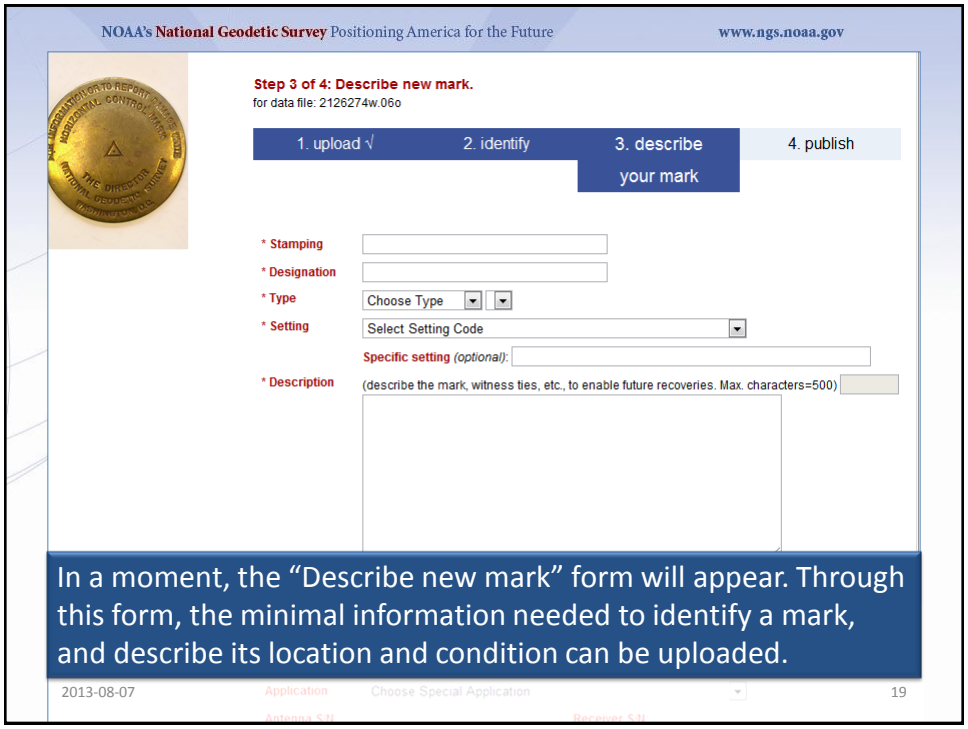
1. upload √ | 2. identify your mark | 3. describe ... | 4. publish ...

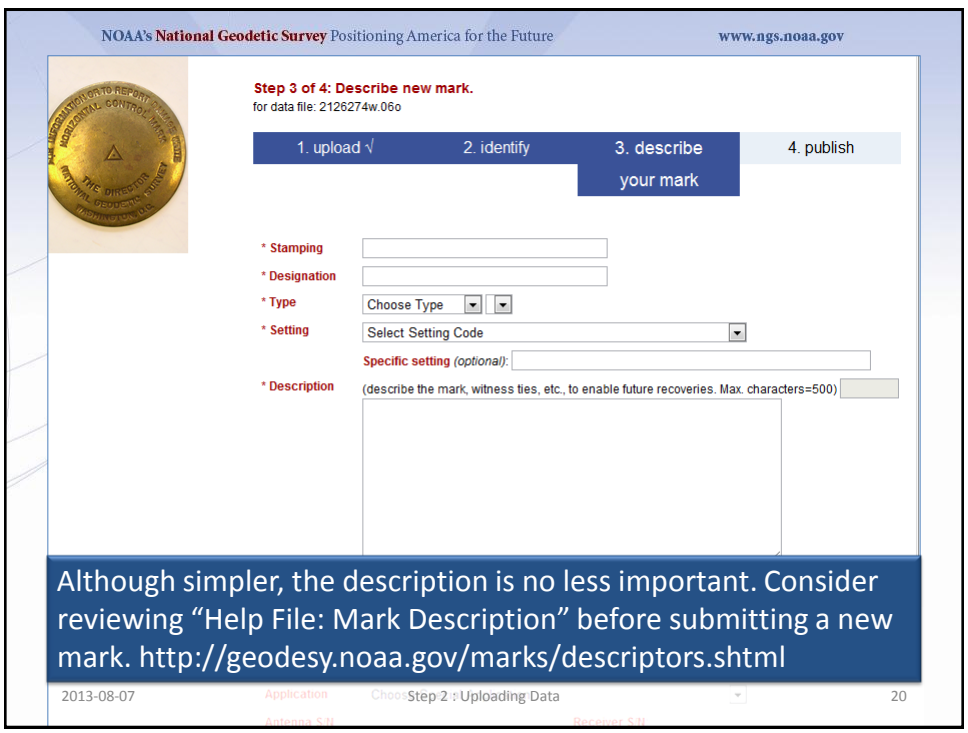
choose one: mark has a PID | mark is NEW to NGS | skip description

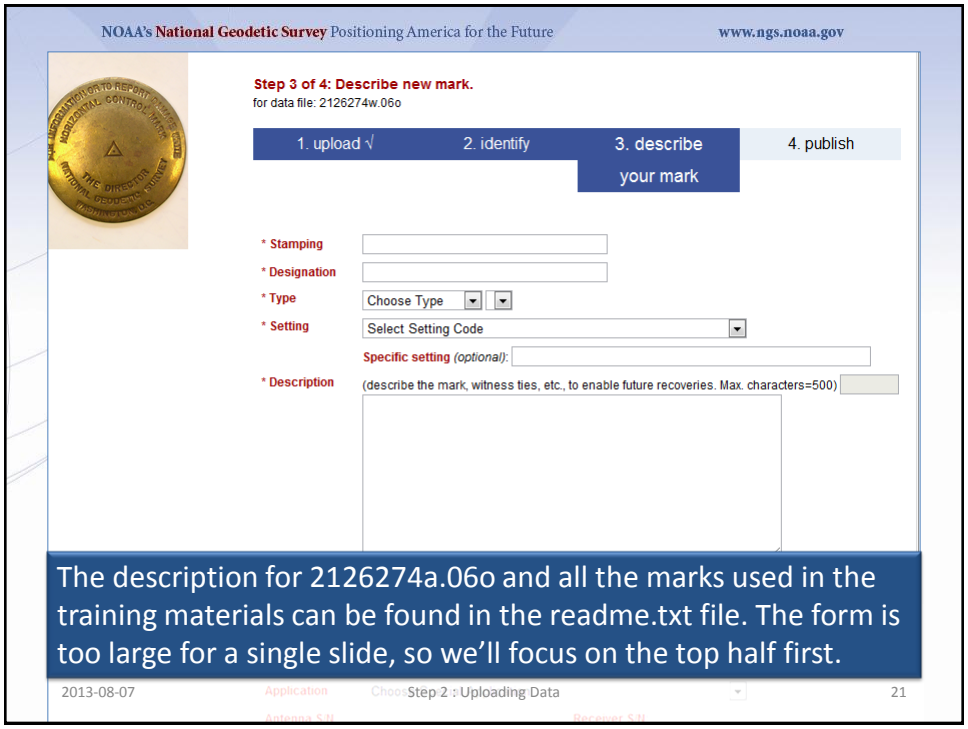
mark has a PID? Search the NGS database to find out.

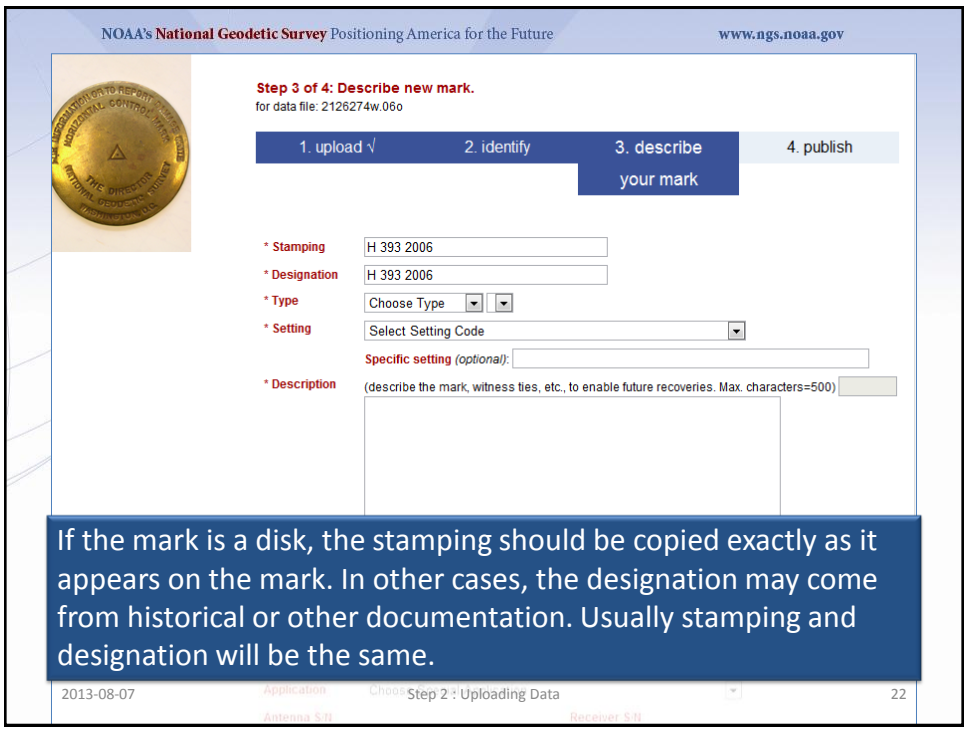
Upload successful!
You will receive an email when processing is complete.

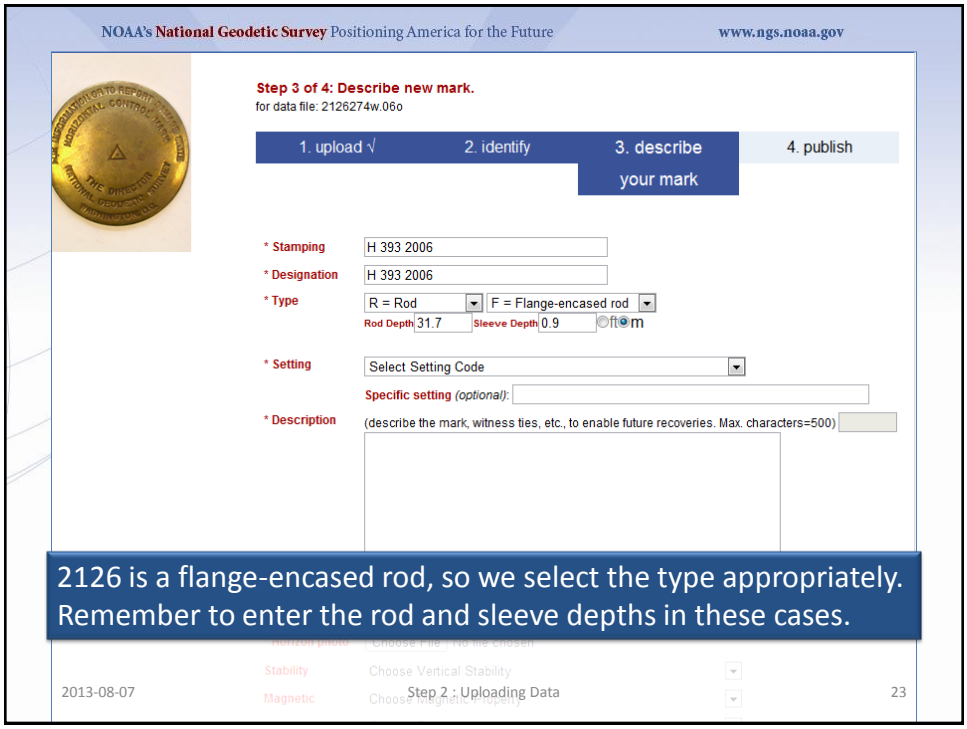
uploaded:		Solving with:	
data file	2126274w.06o	solution format	Extended
converted to	2126274w.06o (RINEX format)	base sta. used	--
antenna type	TRM41249.00 NONE	base sta. excluded	--
antenna height	2.00 meters	state plane zone	AUTO
email address	your.name@your.address		
processor	Static	project ID	hrdb86fc

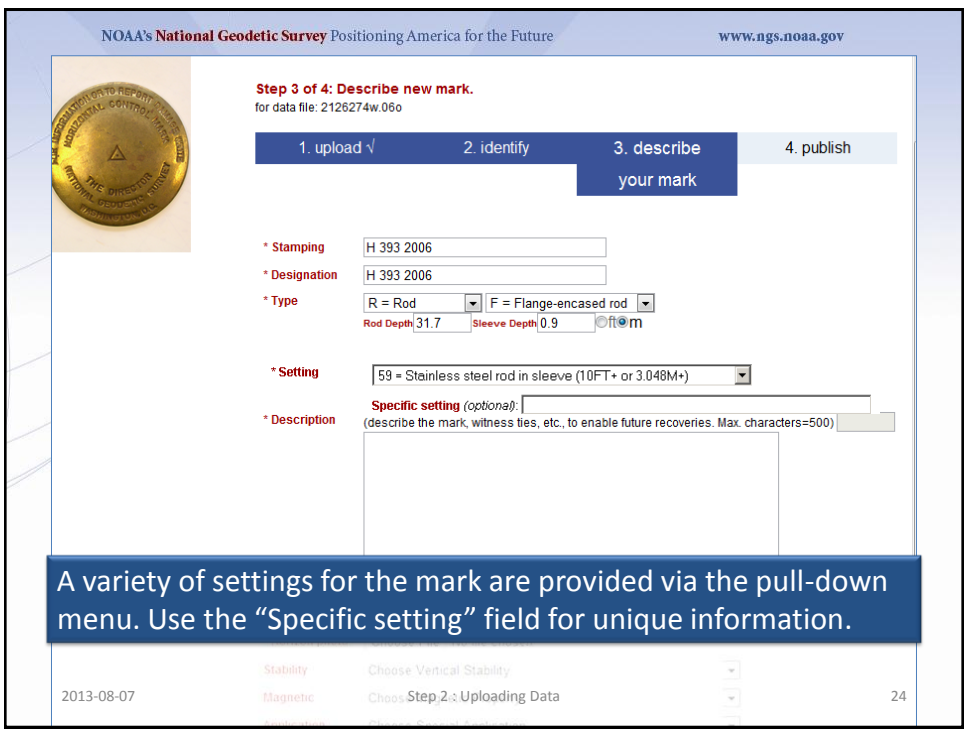

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Step 3 of 4: Describe new mark.
for data file: 2126274w.06o
1. upload √
2. identify
3. describe your mark
4. publish
* Stamping
* Designation
* Type
Choose Type
* Setting
Select Setting Code
Specific setting (optional):
* Description
(describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)
In a moment, the "Describe new mark" form will appear. Through this form, the minimal information needed to identify a mark, and describe its location and condition can be uploaded.
2013-08-07
19

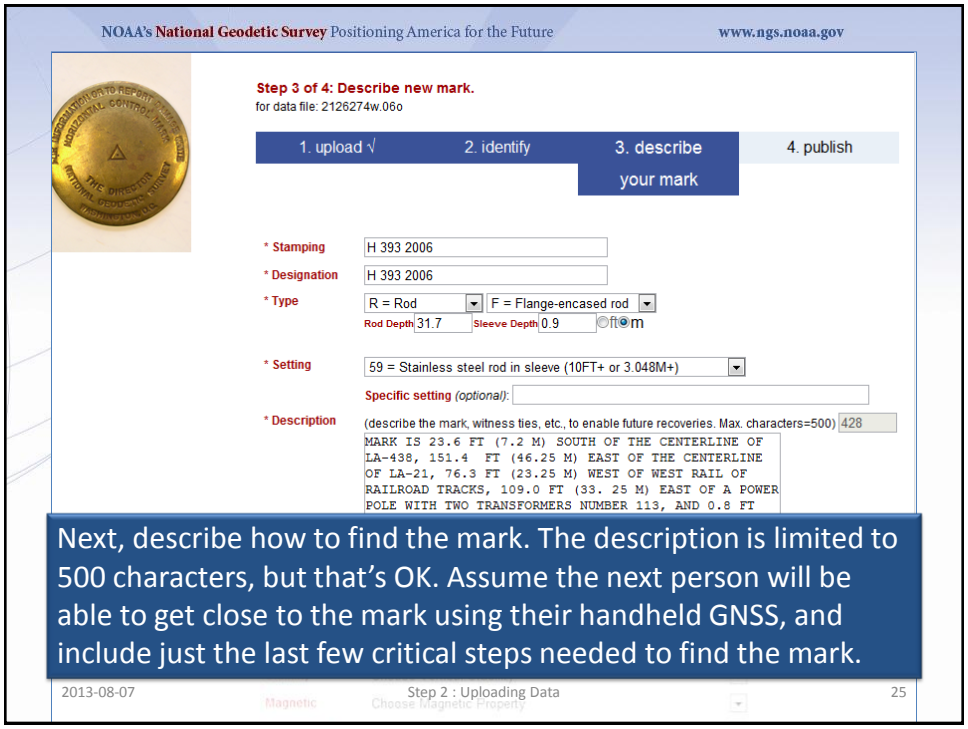

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Step 3 of 4: Describe new mark.
for data file: 2126274w.06o
1. upload √
2. identify
3. describe your mark
4. publish
* Stamping
* Designation
* Type
Choose Type
* Setting
Select Setting Code
Specific setting (optional):
* Description
(describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)
Although simpler, the description is no less important. Consider reviewing "Help File: Mark Description" before submitting a new mark. http://geodesy.noaa.gov/marks/descriptors.shtml
2013-08-07
20

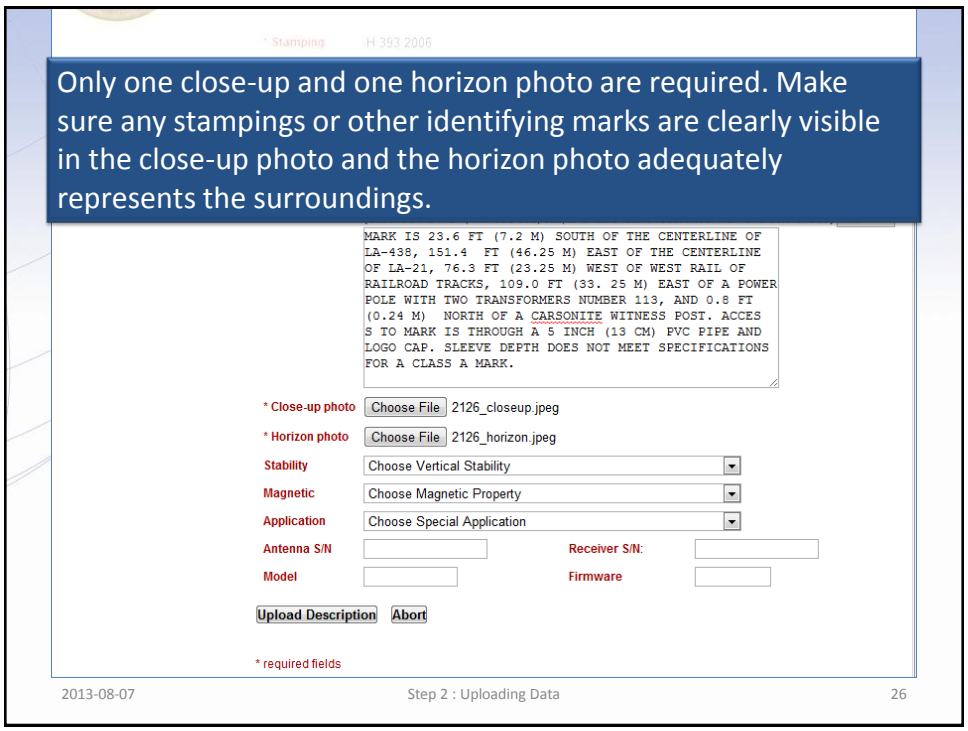

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Step 3 of 4: Describe new mark.
for data file: 2126274w.06o
1. upload √
2. identify
3. describe your mark
4. publish
* Stamping
* Designation
* Type
Choose Type
* Setting
Select Setting Code
Specific setting (optional):
* Description
(describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)
The description for 2126274a.06o and all the marks used in the training materials can be found in the readme.txt file. The form is too large for a single slide, so we'll focus on the top half first.
2013-08-07
Step 2 : Uploading Data
21


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Step 3 of 4: Describe new mark.
for data file: 2126274w.06o
1. upload √
2. identify
3. describe your mark
4. publish
* Stamping
H 393 2006
* Designation
H 393 2006
* Type
Choose Type
* Setting
Select Setting Code
Specific setting (optional):
* Description
(describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)
If the mark is a disk, the stamping should be copied exactly as it appears on the mark. In other cases, the designation may come from historical or other documentation. Usually stamping and designation will be the same.
2013-08-07
Step 2 : Uploading Data
22

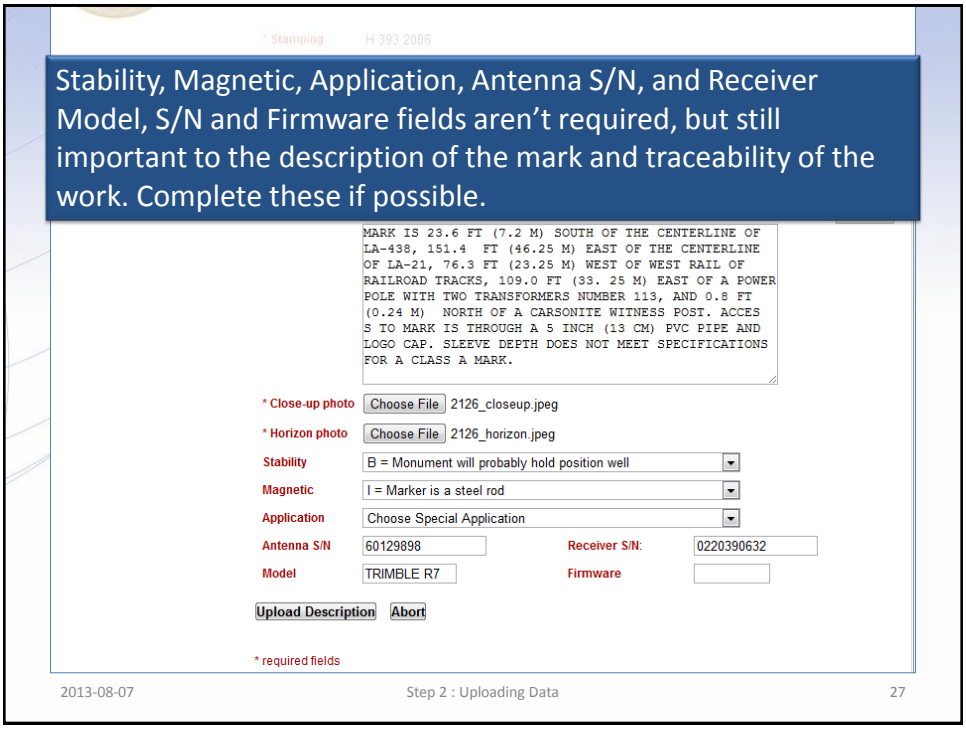

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Step 3 of 4: Describe new mark.
for data file: 2126274w.06o
1. upload √
2. identify
3. describe your mark
4. publish
* Stamping
H 393 2006
* Designation
H 393 2006
* Type
R = Rod
F = Flange-encased rod
Rod Depth 31.7
Sleeve Depth 0.9
ft m
* Setting
Select Setting Code
Specific setting (optional):
* Description
(describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)
2126 is a flange-encased rod, so we select the type appropriately. Remember to enter the rod and sleeve depths in these cases.
2013-08-07
Step 2 : Uploading Data
23


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Step 3 of 4: Describe new mark.
for data file: 2126274w.06o
1. upload √
2. identify
3. describe your mark
4. publish
* Stamping
H 393 2006
* Designation
H 393 2006
* Type
R = Rod
F = Flange-encased rod
Rod Depth 31.7
Sleeve Depth 0.9
ft m
* Setting
59 = Stainless steel rod in sleeve (10FT+ or 3.048M+)
Specific setting (optional):
* Description
(describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)
A variety of settings for the mark are provided via the pull-down menu. Use the "Specific setting" field for unique information.
2013-08-07
Step 2 : Uploading Data
24

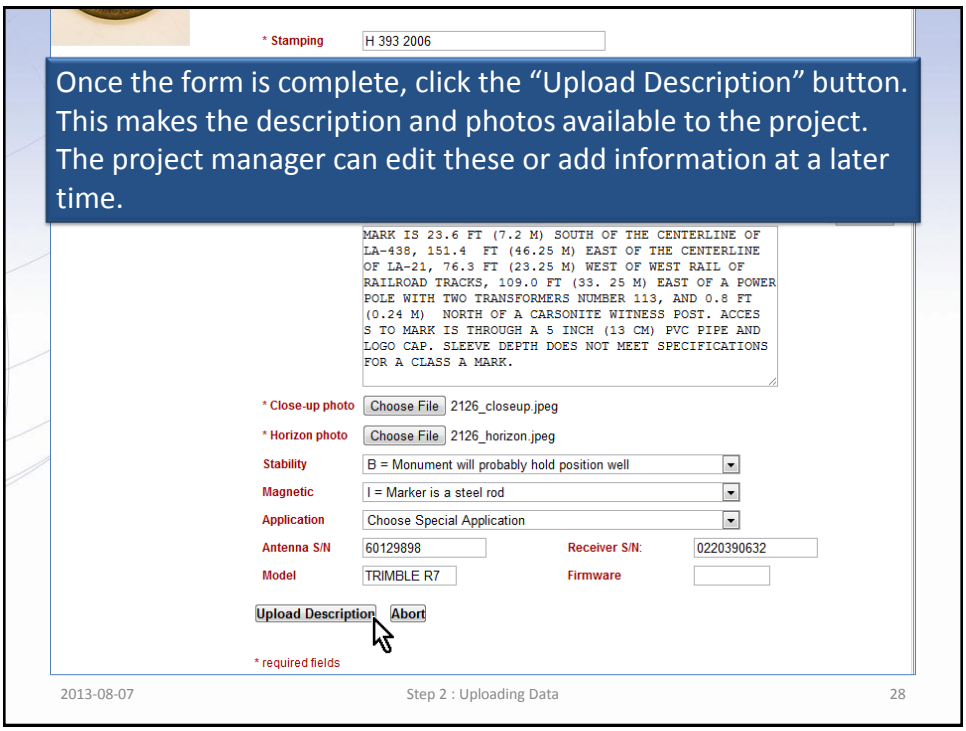

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Step 3 of 4: Describe new mark.
for data file: 2126274w.06o
1. upload √
2. identify
3. describe your mark
4. publish
* Stamping
H 393 2006
* Designation
H 393 2006
* Type
R = Rod
F = Flange-encased rod
Rod Depth 31.7
Sleeve Depth 0.9
ft m
* Setting
59 = Stainless steel rod in sleeve (10FT+ or 3.048M+)
Specific setting (optional):
* Description
(describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500) 428
MARK IS 23.6 FT (7.2 M) SOUTH OF THE CENTERLINE OF LA-438, 151.4 FT (46.25 M) EAST OF THE CENTERLINE OF LA-21, 76.3 FT (23.25 M) WEST OF WEST RAIL OF RAILROAD TRACKS, 109.0 FT (33. 25 M) EAST OF A POWER POLE WITH TWO TRANSFORMERS NUMBER 113, AND 0.8 FT
Next, describe how to find the mark. The description is limited to 500 characters, but that's OK. Assume the next person will be able to get close to the mark using their handheld GNSS, and include just the last few critical steps needed to find the mark.
2013-08-07
Step 2 : Uploading Data
25

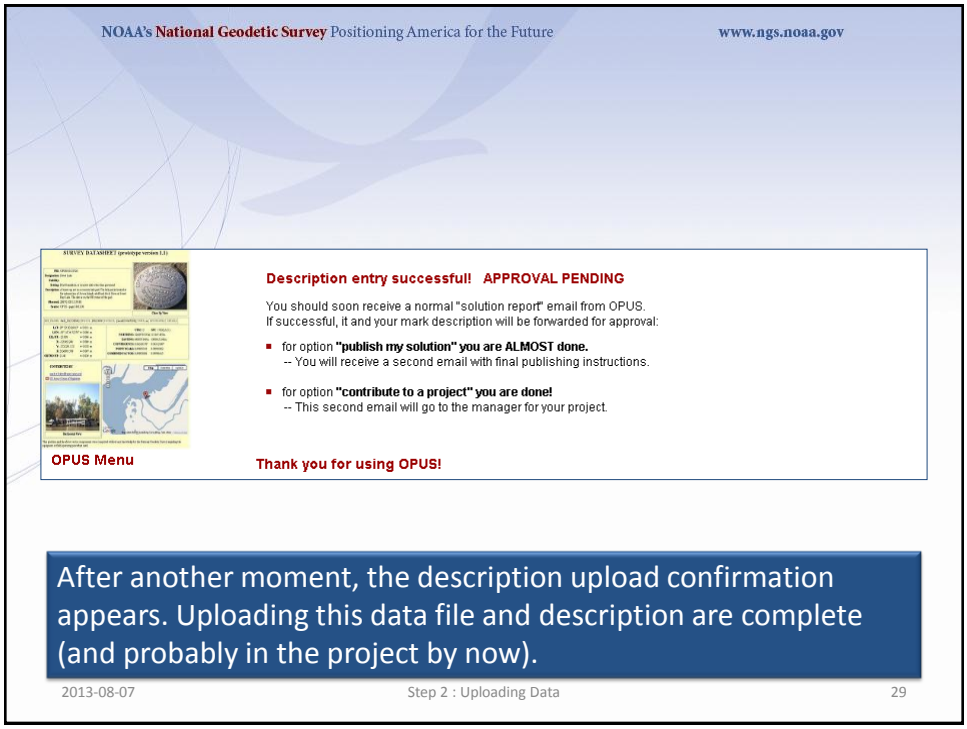

Only one close-up and one horizon photo are required. Make sure any stampings or other identifying marks are clearly visible in the close-up photo and the horizon photo adequately represents the surroundings.
MARK IS 23.6 FT (7.2 M) SOUTH OF THE CENTERLINE OF LA-438, 151.4 FT (46.25 M) EAST OF THE CENTERLINE OF LA-21, 76.3 FT (23.25 M) WEST OF WEST RAIL OF RAILROAD TRACKS, 109.0 FT (33. 25 M) EAST OF A POWER POLE WITH TWO TRANSFORMERS NUMBER 113, AND 0.8 FT (0.24 M) NORTH OF A CARSONITE WITNESS POST. ACCES S TO MARK IS THROUGH A 5 INCH (13 CM) PVC PIPE AND LOGO CAP. SLEEVE DEPTH DOES NOT MEET SPECIFICATIONS FOR A CLASS A MARK.
* Close-up photo
Choose File
2126_closeup.jpeg
* Horizon photo
Choose File
2126_horizon.jpeg
Stability
Choose Vertical Stability
Magnetic
Choose Magnetic Property
Application
Choose Special Application
Antenna S/N
Receiver S/N:
Model
Firmware
Upload Description
Abort
* required fields
2013-08-07
Step 2 : Uploading Data
26

Stability, Magnetic, Application, Antenna S/N, and Receiver Model, S/N and Firmware fields aren't required, but still important to the description of the mark and traceability of the work. Complete these if possible.

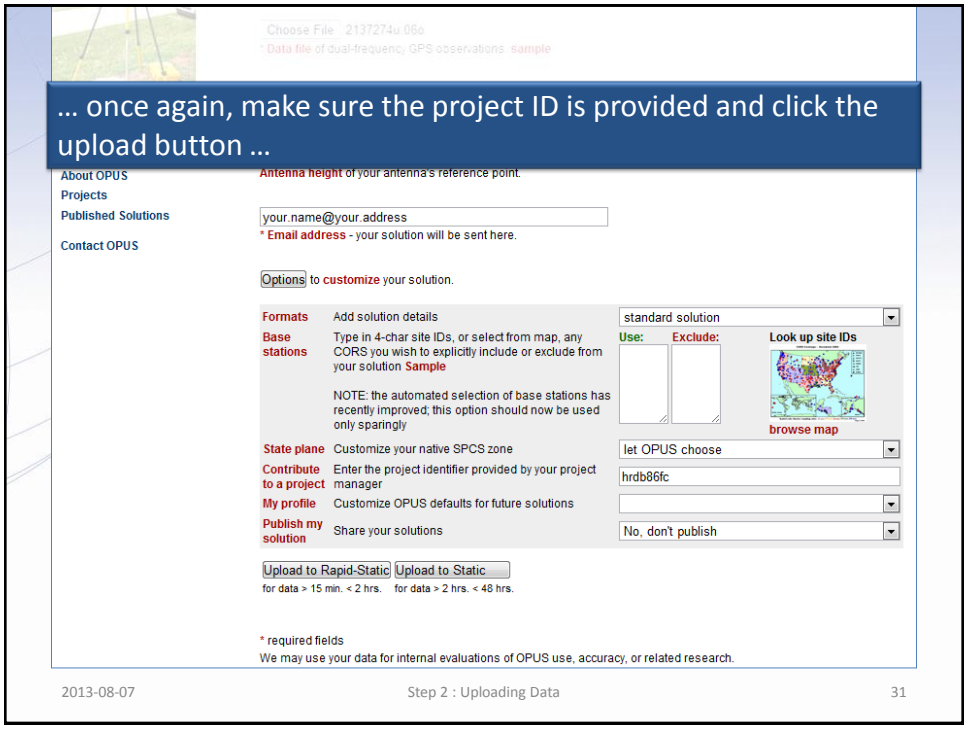


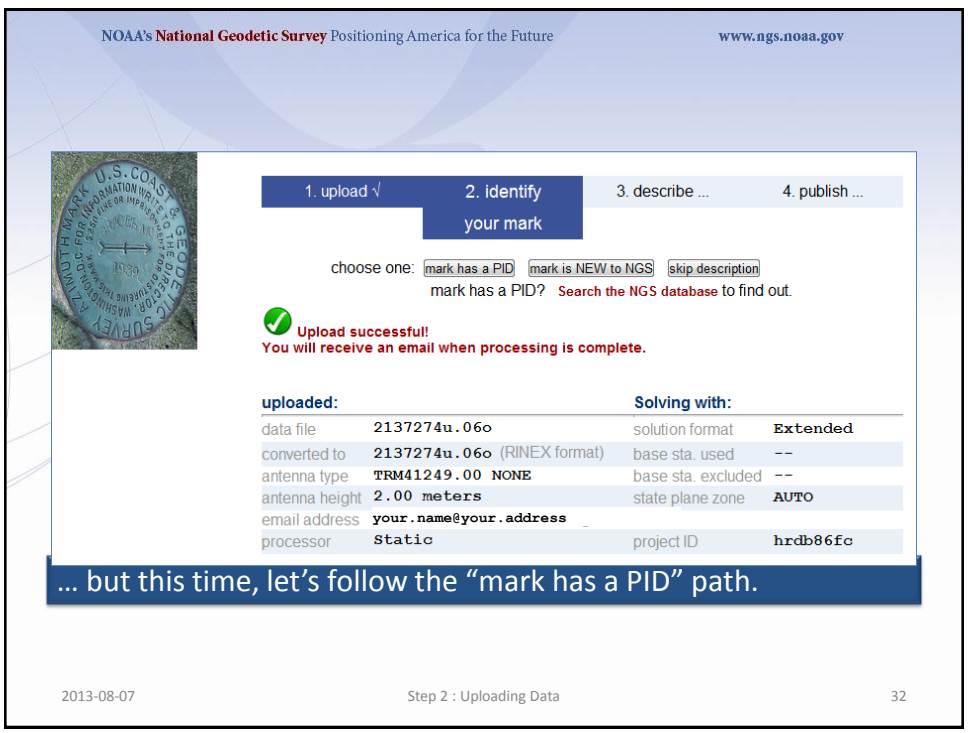
Once the form is complete, click the "Upload Description" button. This makes the description and photos available to the project. The project manager can edit these or add information at a later time.




NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Description entry successful! APPROVAL PENDING
You should soon receive a normal "solution report" email from OPUS.
If successful, it and your mark description will be forwarded for approval:
for option "publish my solution" you are ALMOST done.
-- You will receive a second email with final publishing instructions.
for option "contribute to a project" you are done!
-- This second email will go to the manager for your project.
OPUS Menu
Thank you for using OPUS!
After another moment, the description upload confirmation appears. Uploading this data file and description are complete (and probably in the project by now).
2013-08-07
Step 2 : Uploading Data
29

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Upload your data file.
Tie your GPS observation to the National Spatial Reference System.
What is OPUS? FAQs
Choose File 2137274u.06o
* Data file of dual-frequency GPS observations. sample
TRM41249.00 NONE Zephyr 4-point feed antenna - Stealth Gr
Antenna type - choosing wrong may degrade your accuracy.
Sample Solutions
OPUS Menu
Upload
About OPUS
Projects
Published Solutions
Contact OPUS
2.00 meters above your mark.
Antenna height of your antenna's reference point.
your.name@your.address
* Email address - your solution will be sent here.
Options to customize your solution.
Formats
Add solution details
standard solution
Base stations
Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample
NOTE: the automated selection of base stations has recently improved; this option should now be used
Use:
Exclude:
Look up site IDs
Let's upload another file, 2137274u.06o, but follow a slightly different path. Complete the upload form normally …
2013-08-07
Step 2 : Uploading Data
30


Choose File 2137274u.06o
* Data file of dual-frequency GPS observations, sample
… once again, make sure the project ID is provided and click the upload button …
About OPUS
Projects
Published Solutions
Contact OPUS
Antenna height of your antenna's reference point.
your.name@your.address
* Email address - your solution will be sent here.
Options to customize your solution.
Formats
Add solution details
standard solution
Base stations
Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample
NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly
Use:
Exclude:
Look up site IDs
browse map
State plane
Customize your native SPCS zone
let OPUS choose
Contribute to a project
Enter the project identifier provided by your project manager
hrdb86fc
My profile
Customize OPUS defaults for future solutions
Publish my solution
Share your solutions
No, don't publish
Upload to Rapid-Static
Upload to Static
for data > 15 min. < 2 hrs.
for data > 2 hrs. < 48 hrs.
* required fields
We may use your data for internal evaluations of OPUS use, accuracy, or related research.
2013-08-07
Step 2 : Uploading Data
31


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
1. upload √
2. identify your mark
3. describe ...
4. publish ...
choose one: mark has a PID mark is NEW to NGS skip description
mark has a PID? Search the NGS database to find out.
Upload successful!
You will receive an email when processing is complete.
uploaded:
data file 2137274u.06o
converted to 2137274u.06o (RINEX format)
antenna type TRM41249.00 NONE
antenna height 2.00 meters
email address your.name@your.address
processor Static
Solving with:
solution format Extended
base sta. used --
base sta. excluded --
state plane zone AUTO
project ID hrdb86fc
… but this time, let's follow the "mark has a PID" path.
2013-08-07
Step 2 : Uploading Data
32

Step 3 of 4: Describe recovered mark.
for data file: 2137274u.06o

1. upload √ | 2. identify | 3. describe your mark | 4. publish

* Enter the mark's PID
Find PID: BJ1784

* Close-up photo: Choose File 2137_closeup.jpeg

* Horizon photo: Choose File 2137_horizon.jpeg

Mark condition: Good condition / Poor, disturbed, mutilated, requires maintenance

Description
(Amend existing description, if necessary. Max. characters=500) 41
RECOVERED AS DESCRIBED IN GOOD CONDITION.

The description for a recovered mark is simpler still. Provide the PID, new photos, the mark's condition and additional descriptive text.

What a field member would see.

Let's review the emails that would be sent to a person uploading data to your project.

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

```
FILE: 2126274w.06o OP1369236601254

                          NGS OPUS SOLUTION REPORT
                          ========================

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy

      USER: your.name@your.address                DATE: May 22, 2013
RINEX FILE: 2126274w.06o                          TIME: 15:33:11 UTC


  SOFTWARE: page5  1209.04 master12.pl 082112      START: 2006/10/01  22:07:00
 EPHEMERIS: igs13950.eph [precise]                  STOP: 2006/10/02  01:45:00
  NAV FILE: brdc2740.06n                       OBS USED:  8062 /  8267   :  98%
  ANT NAME: TRM41249.00     NONE             # FIXED AMB:    39 /    41   :  95%
ARP HEIGHT: 2.00                            OVERALL RMS: 0.013(m)


 REF FRAME: NAD_83(2011)(EPOCH:2010.0000)              IGS08 (EPOCH:2006.7507)

         X:         18197.041(m)    0.005(m)             18196.361(m)    0.005(m)
         Y:      -5473864.221(m)    0.007(m)          -5473862.729(m)    0.007(m)
```

The project team member uploading the data files will still get the OPUS solution report. The report will also be available to you, the project manager.

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

```
The RINEX file listed below did not meet all the currrent threshold limits
for submission to ...

PROJECT:    hrdb86fc
RINEX FILE: 2137275u.06o
ANTENNA:    OK      TRM55971.00     NONE
ARP HGT:    OK      1.500 m

RMS:        OK      0.016 m
EPHEMERIS:  OK      igs13951.eph
OBS USED:   OK      91.6%
FIXED AMB:  WARNING 76.1% < 80% fixed ambiguities threshold.
LAT RANGE:  OK      0.012 m
LON RANGE:  OK      0.013 m
HGT RANGE:  OK      0.013 m
```

However, the project team member might also receive a second email if the OPUS solution doesn't meet the project's solution quality threshold preferences. The highlighting is mine.

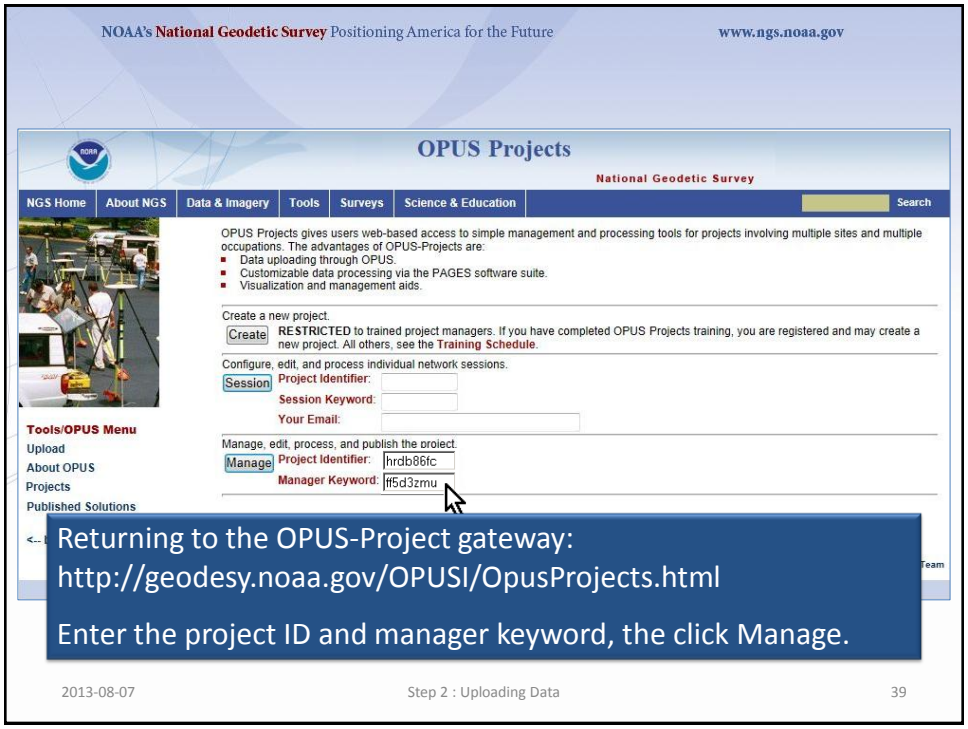
2013-08-07 Step 2 : Uploading Data 36

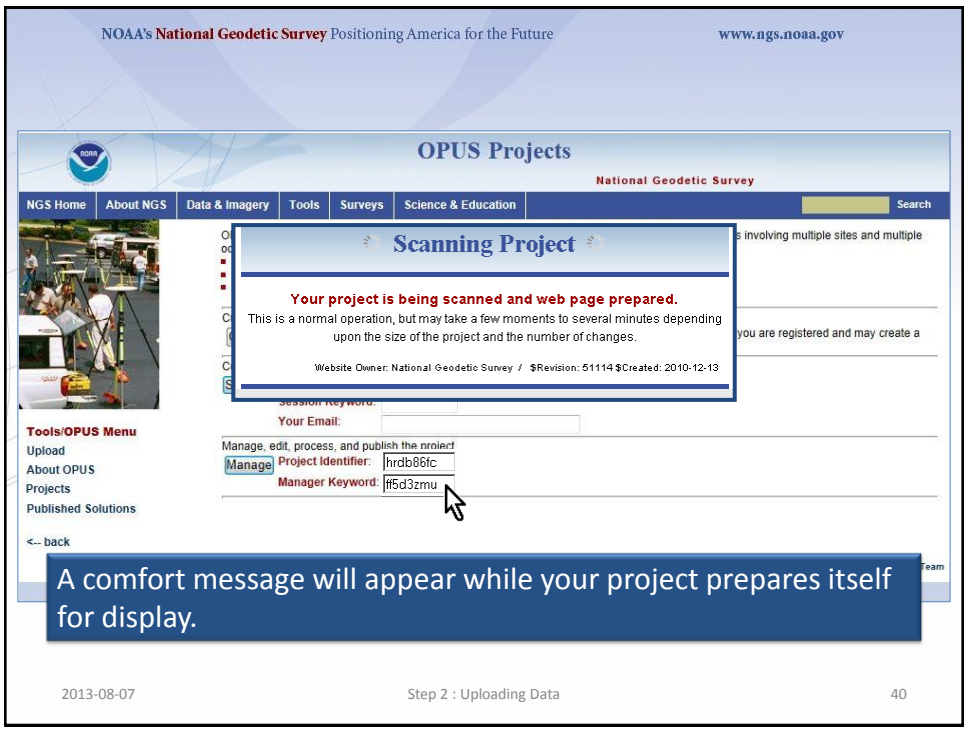
```
The RINEX file listed below did not meet all the currrent threshold limits
for submission to ...

PROJECT:    hrdb86fc
RINEX FILE: 2137275u.06o
ANTENNA:    OK      TRM55971.00     NONE
ARP HGT:    OK      1.500 m

RMS:        OK      0.016 m
EPHEMERIS:  OK      igs13951.eph
OBS USED:   OK      91.6%
FIXED AMB:  WARNING 76.1% < 80% fixed ambiguities threshold.
LAT RANGE:  OK      0.012 m
LON RANGE:  OK      0.013 m
HGT RANGE:  OK      0.013 m
```

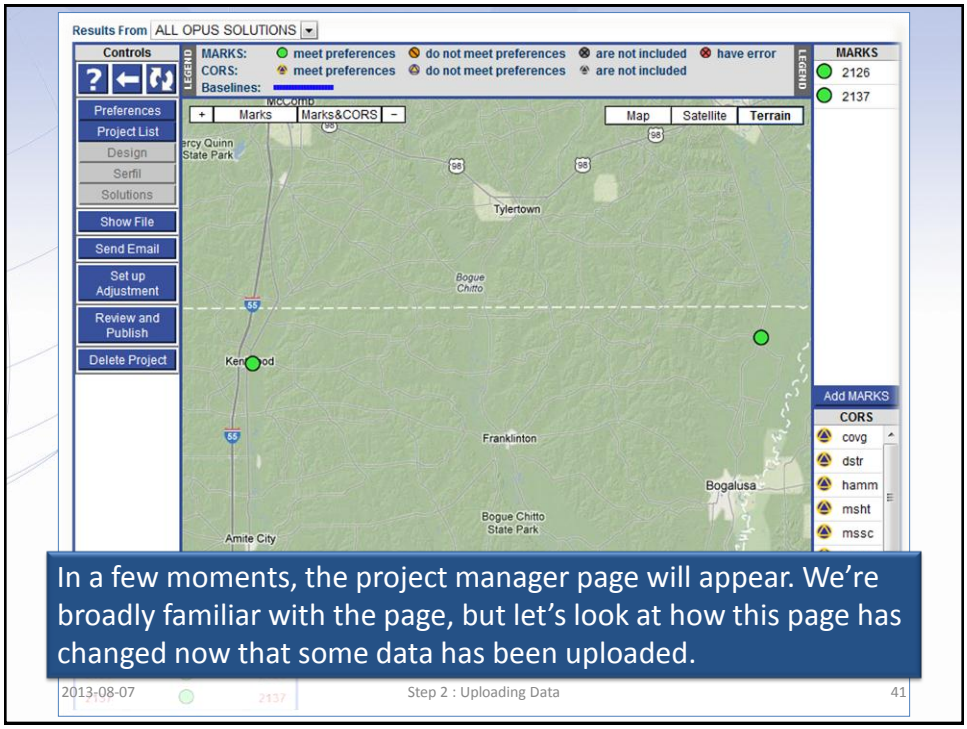
Part of your job as project manager, is to prepare your field teams for this eventuality. This does not mean this data was omitted from the project. It simply means that this solution will be flagged for easier identification.

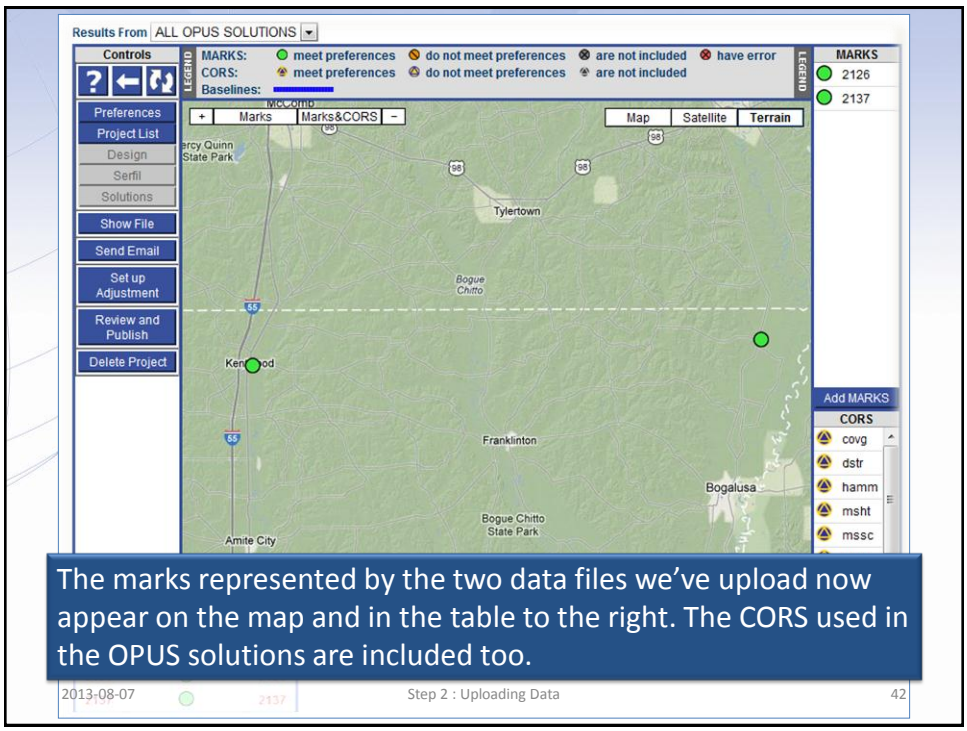
Let's look at what we've got so far.

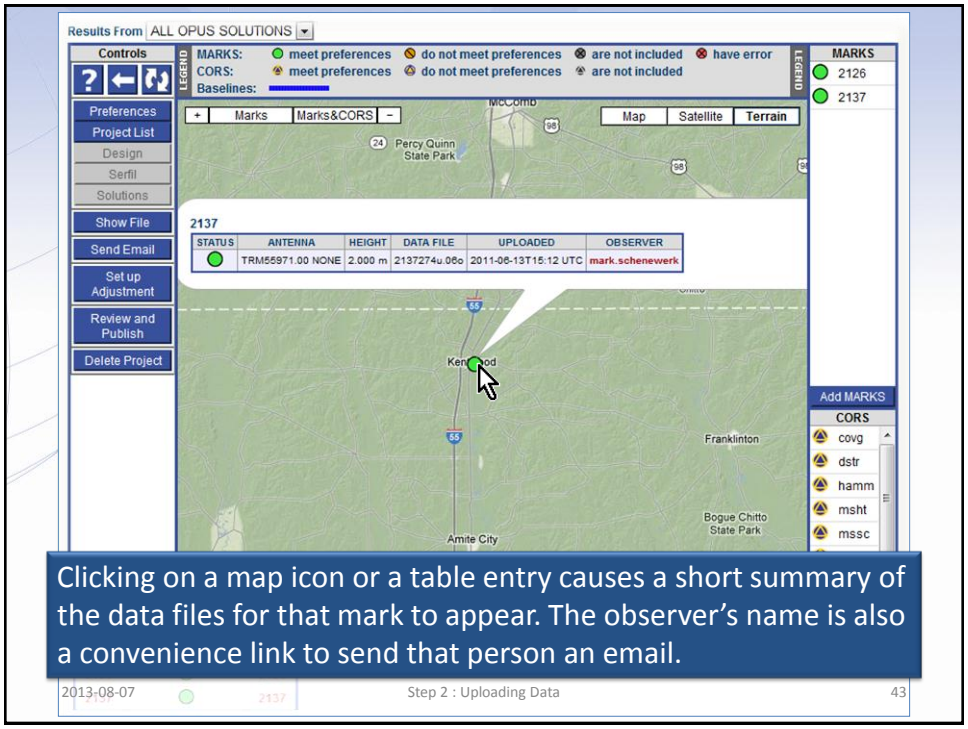
Before we upload any more data, let's look at what we've got so far with the understanding that this mimics what you might see after the first day of an active project.

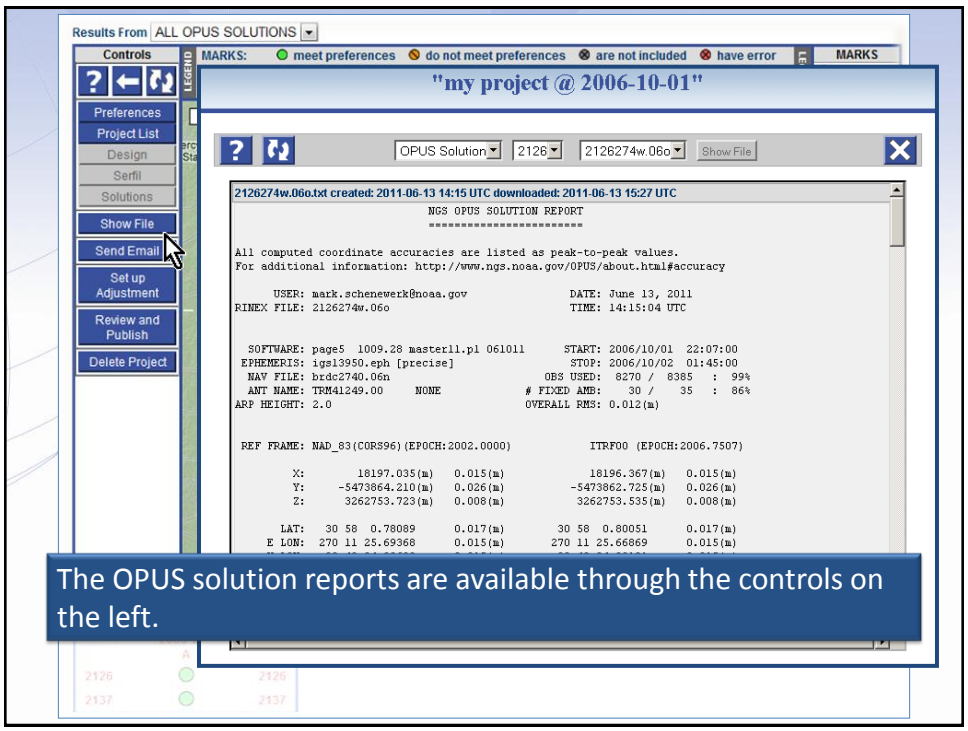

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
OPUS Projects
National Geodetic Survey
NGS Home
About NGS
Data & Imagery
Tools
Surveys
Science & Education
Search
OPUS Projects gives users web-based access to simple management and processing tools for projects involving multiple sites and multiple occupations. The advantages of OPUS-Projects are:
Data uploading through OPUS.
Customizable data processing via the PAGES software suite.
Visualization and management aids.
Create a new project.
Create
RESTRICTED to trained project managers. If you have completed OPUS Projects training, you are registered and may create a new project. All others, see the Training Schedule.
Configure, edit, and process individual network sessions.
Session
Project Identifier:
Session Keyword:
Your Email:
Manage, edit, process, and publish the project.
Manage
Project Identifier:
hrdb86fc
Manager Keyword:
ff5d3zmu
Tools/OPUS Menu
Upload
About OPUS
Projects
Published Solutions
Returning to the OPUS-Project gateway:
http://geodesy.noaa.gov/OPUSI/OpusProjects.html
Enter the project ID and manager keyword, the click Manage.
2013-08-07
Step 2 : Uploading Data
39

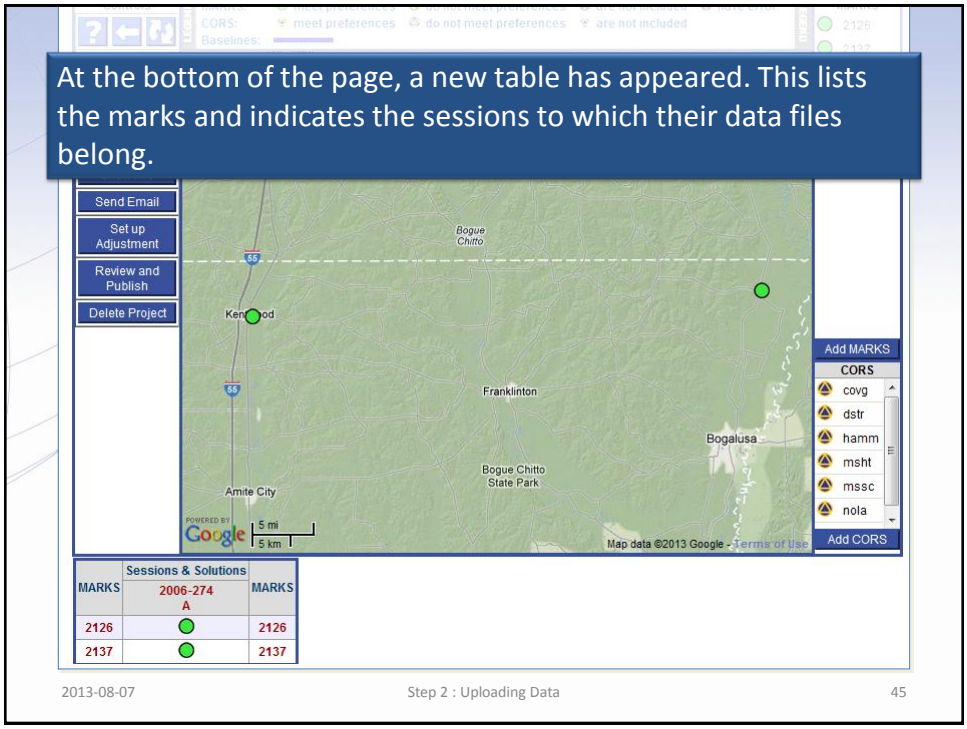

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
OPUS Projects
National Geodetic Survey
NGS Home
About NGS
Data & Imagery
Tools
Surveys
Science & Education
Search
Scanning Project
Your project is being scanned and web page prepared.
This is a normal operation, but may take a few moments to several minutes depending upon the size of the project and the number of changes.
Website Owner: National Geodetic Survey / $Revision: 51114 $Created: 2010-12-13
Your Email:
Manage, edit, process, and publish the project.
Manage
Project Identifier:
hrdb86fc
Manager Keyword:
ff5d3zmu
Tools/OPUS Menu
Upload
About OPUS
Projects
Published Solutions
<-- back
A comfort message will appear while your project prepares itself for display.
2013-08-07
Step 2 : Uploading Data
40

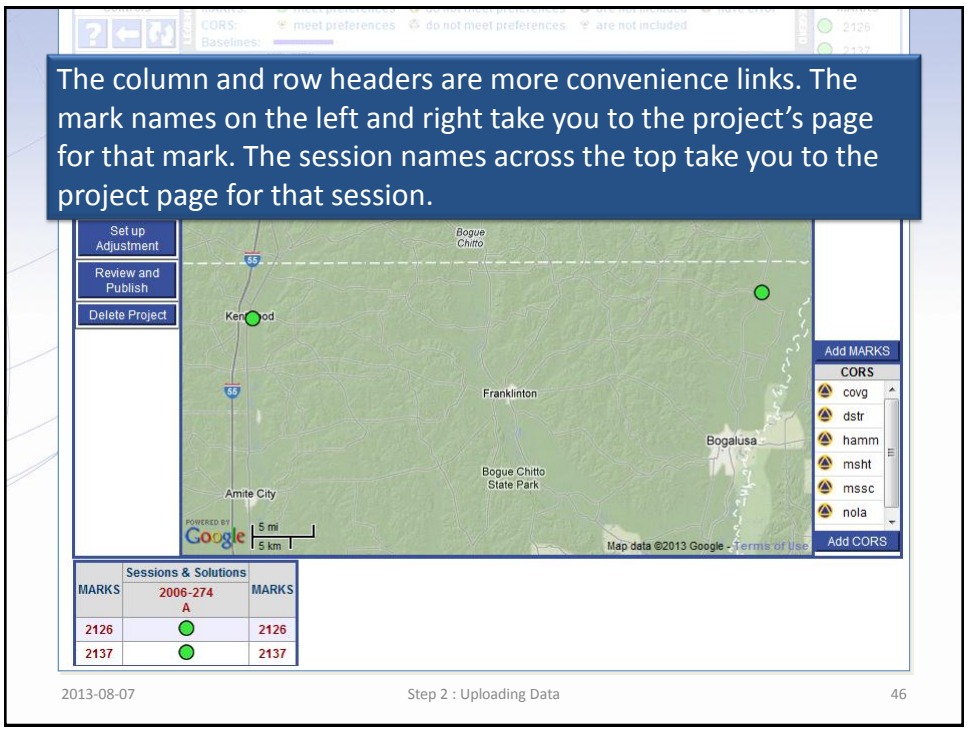

Results From ALL OPUS SOLUTIONS
Controls
Preferences
Project List
Design
Serfil
Solutions
Show File
Send Email
Set up Adjustment
Review and Publish
Delete Project
MARKS: meet preferences do not meet preferences are not included have error
CORS: meet preferences do not meet preferences are not included
Baselines:
LEGEND
Marks
Marks&CORS
Map
Satellite
Terrain
Tylertown
Franklinton
Bogalusa
Bogue Chitto State Park
Amite City
MARKS
2126
2137
Add MARKS
CORS
covg
dstr
hamm
msht
mssc
In a few moments, the project manager page will appear. We're broadly familiar with the page, but let's look at how this page has changed now that some data has been uploaded.
2013-08-07
Step 2 : Uploading Data
41

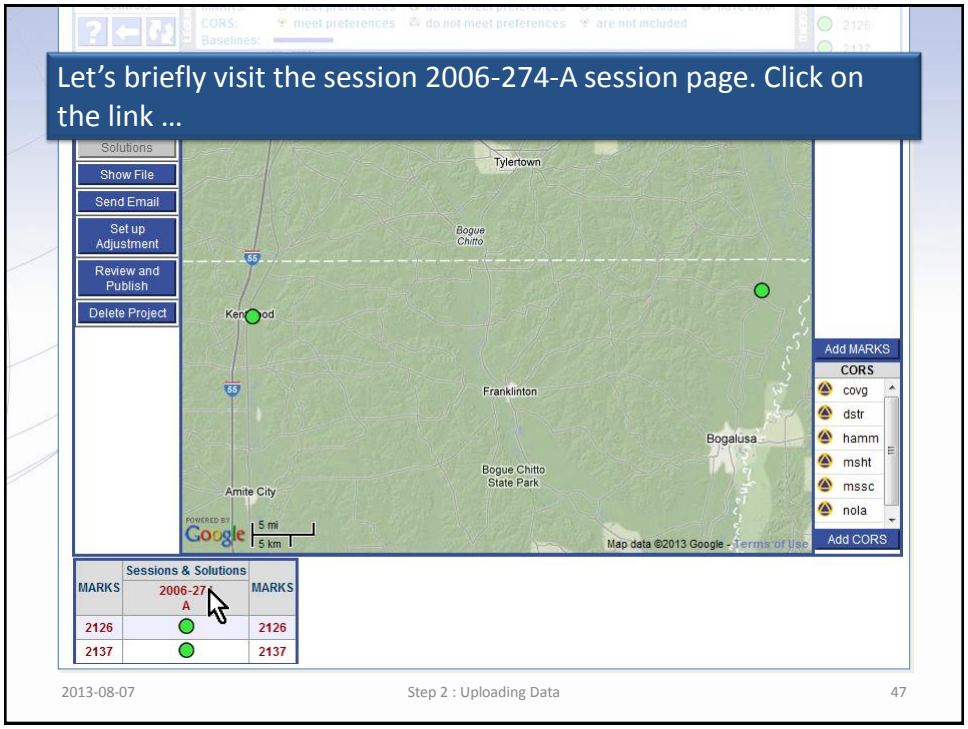

Results From ALL OPUS SOLUTIONS
Controls
Preferences
Project List
Design
Serfil
Solutions
Show File
Send Email
Set up Adjustment
Review and Publish
Delete Project
MARKS: meet preferences do not meet preferences are not included have error
CORS: meet preferences do not meet preferences are not included
Baselines:
LEGEND
Marks
Marks&CORS
Map
Satellite
Terrain
Tylertown
Franklinton
Bogalusa
Bogue Chitto State Park
Amite City
MARKS
2126
2137
Add MARKS
CORS
covg
dstr
hamm
msht
mssc
The marks represented by the two data files we've upload now appear on the map and in the table to the right. The CORS used in the OPUS solutions are included too.
2013-08-07
Step 2 : Uploading Data
42

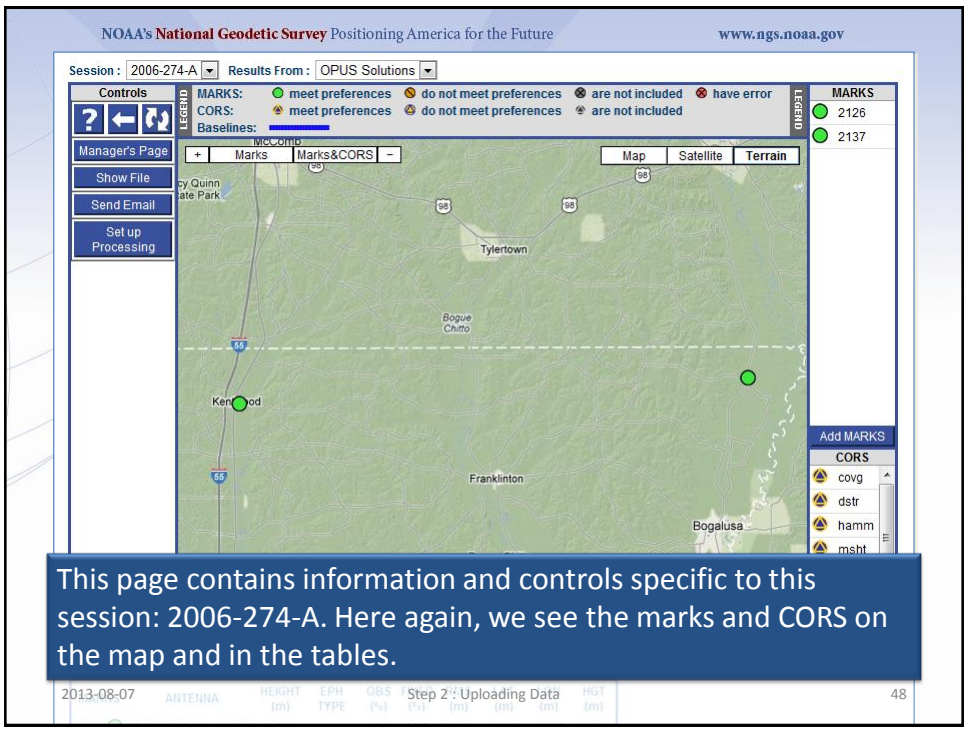

Results From ALL OPUS SOLUTIONS
Controls
MARKS: meet preferences do not meet preferences are not included have error
CORS: meet preferences do not meet preferences are not included
Baselines:
Preferences
Project List
Design
Serfil
Solutions
Show File
Send Email
Set up Adjustment
Review and Publish
Delete Project
Marks
Marks&CORS
Map
Satellite
Terrain
Percy Quinn State Park
2137
STATUS ANTENNA HEIGHT DATA FILE UPLOADED OBSERVER
TRM55971.00 NONE 2.000 m 2137274w.06o 2011-06-13T15:12 UTC mark.schenewerk
Franklinton
Bogue Chitto State Park
Amite City
MARKS
2126
2137
Add MARKS
CORS
covg
dstr
hamm
msht
mssc
Clicking on a map icon or a table entry causes a short summary of the data files for that mark to appear. The observer's name is also a convenience link to send that person an email.
2013-08-07
Step 2 : Uploading Data
43

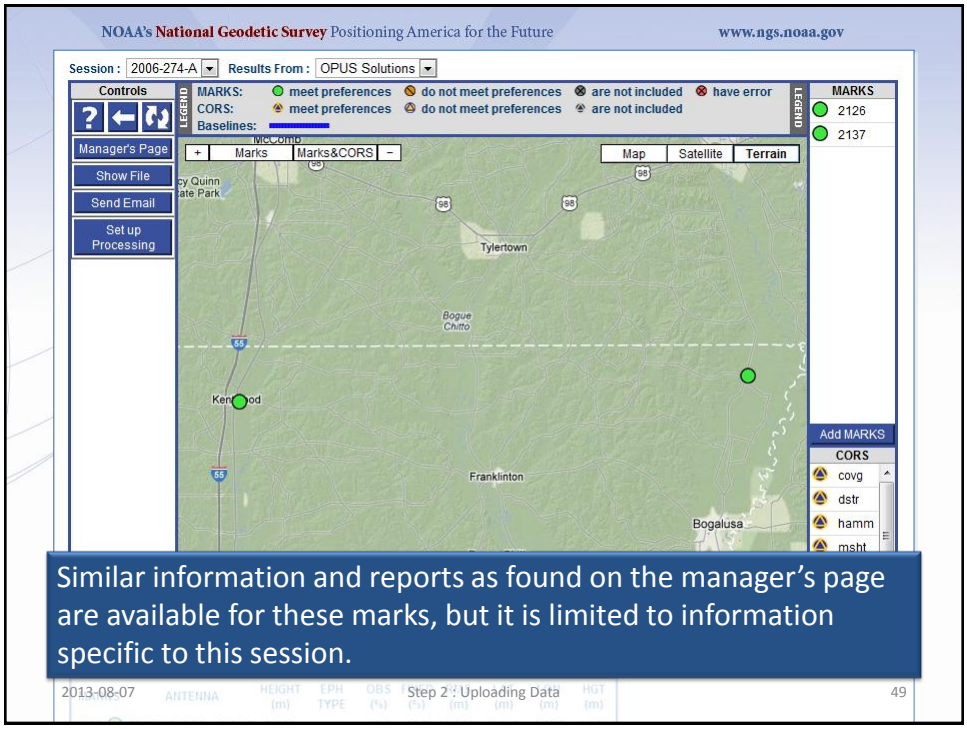

Results From ALL OPUS SOLUTIONS
Controls
MARKS: meet preferences do not meet preferences are not included have error
Preferences
Project List
Design
Serfil
Solutions
Show File
Send Email
Set up Adjustment
Review and Publish
Delete Project
"my project @ 2006-10-01"
OPUS Solution
2126
2126274w.06o
Show File
2126274w.06o.txt created: 2011-06-13 14:15 UTC downloaded: 2011-06-13 15:27 UTC
NGS OPUS SOLUTION REPORT
All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: http://www.ngs.noaa.gov/OPUS/about.html#accuracy
USER: mark.schenewerk@noaa.gov DATE: June 13, 2011
RINEX FILE: 2126274w.06o TIME: 14:15:04 UTC
SOFTWARE: page5 1009.28 master11.pl 061011 START: 2006/10/01 22:07:00
EPHEMERIS: igs13950.eph [precise] STOP: 2006/10/02 01:45:00
NAV FILE: brdc2740.06n OBS USED: 8270 / 8385 : 99%
ANT NAME: TRM41249.00 NONE # FIXED AMB: 30 / 35 : 86%
ARP HEIGHT: 2.0 OVERALL RMS: 0.012(m)
REF FRAME: NAD_83(CORS96)(EPOCH:2002.0000) ITRF00 (EPOCH:2006.7507)
X: 18197.035(m) 0.015(m) 18196.367(m) 0.015(m)
Y: -5473864.210(m) 0.026(m) -5473862.725(m) 0.026(m)
Z: 3262753.723(m) 0.008(m) 3262753.535(m) 0.008(m)
LAT: 30 58 0.78089 0.017(m) 30 58 0.80051 0.017(m)
E LON: 270 11 25.69368 0.015(m) 270 11 25.66869 0.015(m)
MARKS
The OPUS solution reports are available through the controls on the left.

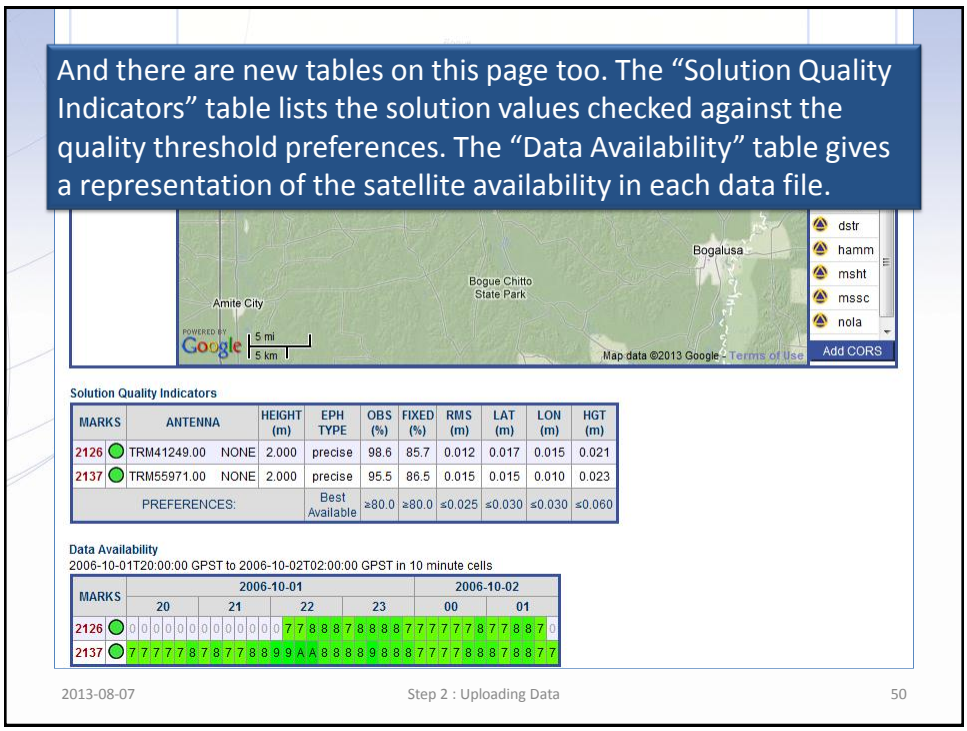

At the bottom of the page, a new table has appeared. This lists the marks and indicates the sessions to which their data files belong.
Send Email
Set up Adjustment
Review and Publish
Delete Project
Bogue Chitto
Franklinton
Bogalusa
Bogue Chitto State Park
Amite City
Add MARKS
CORS
covg
dstr
hamm
msht
mssc
nola
Add CORS
Map data ©2013 Google - Terms of Use
Sessions & Solutions
MARKS
2006-274 A
2126
2137
2013-08-07
Step 2 : Uploading Data
45


The column and row headers are more convenience links. The mark names on the left and right take you to the project's page for that mark. The session names across the top take you to the project page for that session.
Set up Adjustment
Review and Publish
Delete Project
Bogue Chitto
Franklinton
Bogalusa
Bogue Chitto State Park
Amite City
Add MARKS
CORS
covg
dstr
hamm
msht
mssc
nola
Add CORS
Map data ©2013 Google - Terms of Use
Sessions & Solutions
MARKS
2006-274 A
2126
2137
2013-08-07
Step 2 : Uploading Data
46


Let's briefly visit the session 2006-274-A session page. Click on the link …
Solutions
Show File
Send Email
Set up Adjustment
Review and Publish
Delete Project
Tylertown
Bogue Chitto
Franklinton
Bogalusa
Bogue Chitto State Park
Amite City
Add MARKS
CORS
covg
dstr
hamm
msht
mssc
nola
Add CORS
Sessions & Solutions
MARKS
2006-274-A
2126
2137
2013-08-07
Step 2 : Uploading Data
47


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Session : 2006-274-A
Results From : OPUS Solutions
Controls
Manager's Page
Show File
Send Email
Set up Processing
MARKS: meet preferences do not meet preferences are not included have error
CORS: meet preferences do not meet preferences are not included
Baselines:
Marks
Marks&CORS
Map
Satellite
Terrain
Tylertown
Bogue Chitto
Franklinton
Bogalusa
MARKS
2126
2137
Add MARKS
CORS
covg
dstr
hamm
msht
This page contains information and controls specific to this session: 2006-274-A. Here again, we see the marks and CORS on the map and in the tables.
2013-08-07
Step 2 : Uploading Data
48


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Session : 2006-274-A
Results From : OPUS Solutions
Controls
Manager's Page
Show File
Send Email
Set up Processing
MARKS: meet preferences do not meet preferences are not included have error
CORS: meet preferences do not meet preferences are not included
Baselines:
Marks
Marks&CORS
Map
Satellite
Terrain
Tylertown
Franklinton
Bogalusa
MARKS
2126
2137
Add MARKS
CORS
covg
dstr
hamm
msht
Similar information and reports as found on the manager's page are available for these marks, but it is limited to information specific to this session.
2013-08-07
Step 2 : Uploading Data
49


And there are new tables on this page too. The "Solution Quality Indicators" table lists the solution values checked against the quality threshold preferences. The "Data Availability" table gives a representation of the satellite availability in each data file.
Bogalusa
Bogue Chitto State Park
Amite City
Map data ©2013 Google
dstr
hamm
msht
mssc
nola
Add CORS
Solution Quality Indicators
MARKS ANTENNA HEIGHT (m) EPH TYPE OBS (%) FIXED (%) RMS (m) LAT (m) LON (m) HGT (m)
2126 TRM41249.00 NONE 2.000 precise 98.6 85.7 0.012 0.017 0.015 0.021
2137 TRM55971.00 NONE 2.000 precise 95.5 86.5 0.015 0.015 0.010 0.023
PREFERENCES: Best Available ≥80.0 ≥80.0 ≤0.025 ≤0.030 ≤0.030 ≤0.060
Data Availability
2006-10-01T20:00:00 GPST to 2006-10-02T02:00:00 GPST in 10 minute cells
MARKS 2006-10-01 2006-10-02
20 21 22 23 00 01
2126
2137
2013-08-07
Step 2 : Uploading Data
50

The row headers in these tables are convenience links to the individual mark pages, just as on the manager's page. Let's visit the page for mark 2126.

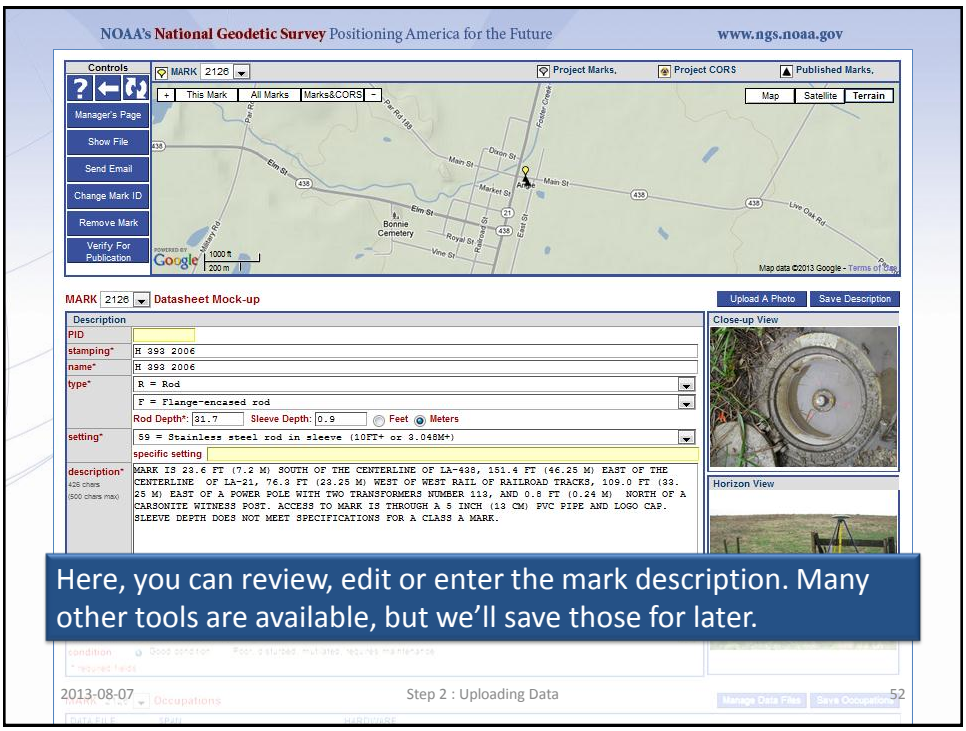
Solution Quality Indicators

MARKS	ANTENNA		HEIGHT (m)	EPH TYPE	OBS (%)	FIXED (%)	RMS (m)	LAT (m)	LON (m)	HGT (m)
2126	TRM41249.00	NONE	2.000	precise	98.6	85.7	0.012	0.017	0.015	0.021
213	TRM55971.00	NONE	2.000	precise	95.5	86.5	0.015	0.015	0.010	0.023
PREFERENCES:				Best Available	≥80.0	≥80.0	≤0.025	≤0.030	≤0.030	≤0.060

Data Availability

2006-10-01T20:00:00 GPST to 2006-10-02T02:00:00 GPST in 10 minute cells

MARKS	2006-10-01				2006-10-02	
	20	21	22	23	00	01
2126	0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 7 8 8 8 7 8 8 8 8 7 7 7 7 7 7 8 7 7 8 8 7	0
2137	7 7 7 7 8 7 8 7 7 8 8 9 9 A A	8 8 8 8 9 8 8 8 7 7 7 7 8 8 8 7 8 8 8 7 7	



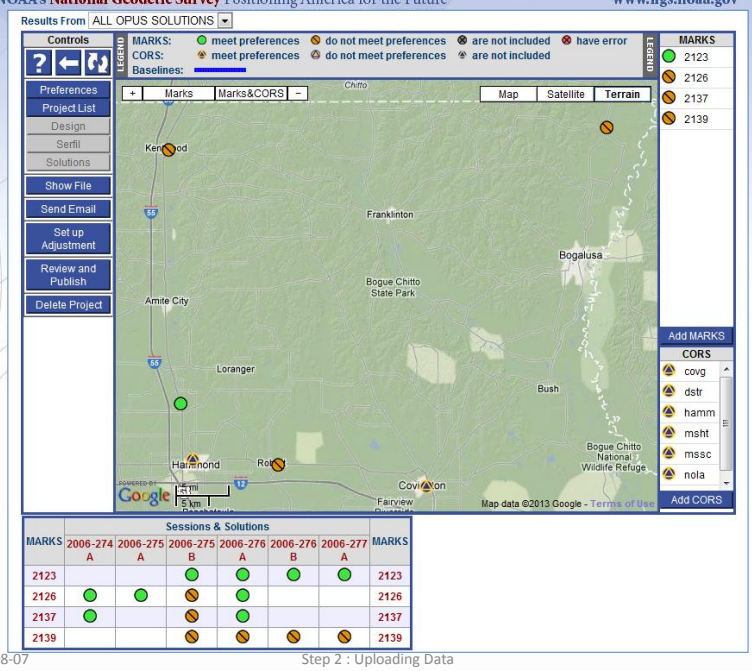
Here, you can review, edit or enter the mark description. Many other tools are available, but we'll save those for later.

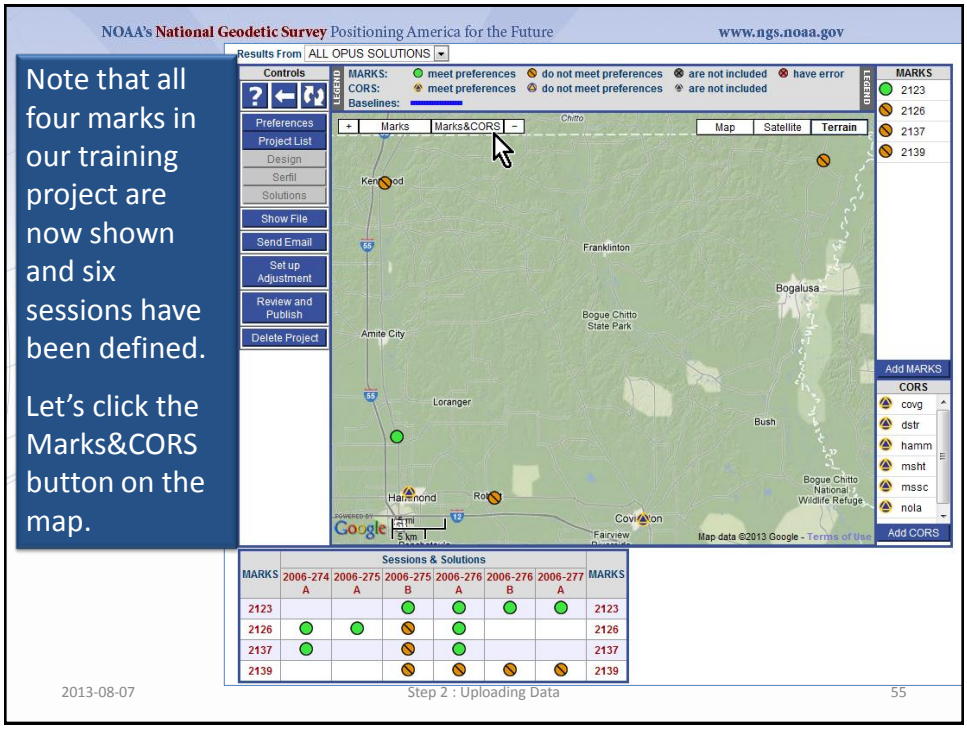
NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

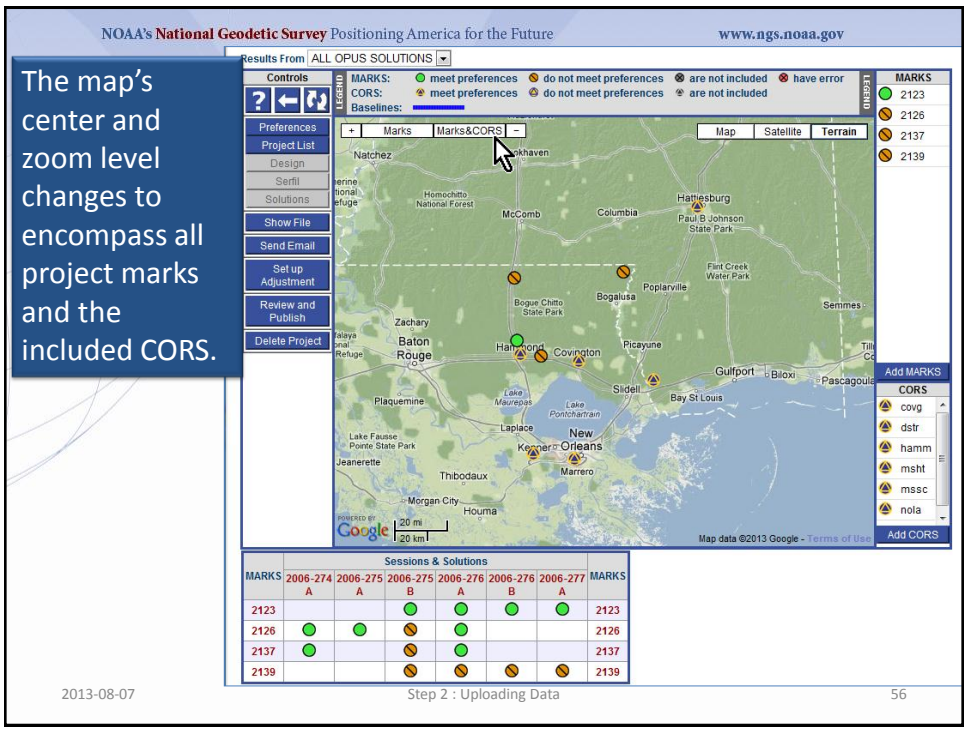
Let's look a little farther ahead.

Let's jump to the point where all project data has been uploaded.

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov




NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Note that all four marks in our training project are now shown and six sessions have been defined.
Let's click the Marks&CORS button on the map.
Results From ALL OPUS SOLUTIONS
Controls
Preferences
Project List
Design
Serfil
Solutions
Show File
Send Email
Set up Adjustment
Review and Publish
Delete Project
MARKS: meet preferences do not meet preferences are not included have error
CORS: meet preferences do not meet preferences are not included
Baselines:
Marks
Marks&CORS
Map
Satellite
Terrain
MARKS
2123
2126
2137
2139
Add MARKS
CORS
covg
dstr
hamm
msht
mssc
nola
Add CORS
Sessions & Solutions
MARKS 2006-274 A 2006-275 A 2006-275 B 2006-276 A 2006-276 B 2006-277 A MARKS
2123 2126 2137 2139
2013-08-07
Step 2 : Uploading Data
55


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
The map's center and zoom level changes to encompass all project marks and the included CORS.
Results From ALL OPUS SOLUTIONS
Controls
Preferences
Project List
Design
Serfil
Solutions
Show File
Send Email
Set up Adjustment
Review and Publish
Delete Project
MARKS: meet preferences do not meet preferences are not included have error
CORS: meet preferences do not meet preferences are not included
Baselines:
Marks
Marks&CORS
Map
Satellite
Terrain
MARKS
2123
2126
2137
2139
Add MARKS
CORS
covg
dstr
hamm
msht
mssc
nola
Add CORS
Sessions & Solutions
MARKS 2006-274 A 2006-275 A 2006-275 B 2006-276 A 2006-276 B 2006-277 A MARKS
2123 2126 2137 2139
2013-08-07
Step 2 : Uploading Data
56

Let's take a short break.

The preliminaries are now complete. Let's take a break, stretch our legs and clear our heads.

Use this break to verify that you can access the project provided with this training, and that the training project has all mark data and metadata loaded.

If you are new to OPUS, take this opportunity to try re-loading one or more of the data files.

OPUS Projects Manager Training

Step 2 : Uploading Data

Mark Schenewerk
mark.schenewerk@noaa.gov
816-994-3067