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OPUS Projects Manager Training

Step 1 : Creating a Project

ngs.opus.projects@noaa.gov

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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?

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Outline

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

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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.

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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.

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What's in this training?

This presentation shows how to create a project and set its preferences in preparation for use. 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.

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Start at the OPUS Projects gateway page:
http://geodesy.noaa.gov/OPUS-Projects/.

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Click the "Create" button to start Creating a Project.

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You'll be taken to the "Create Project" page. Here you'll enter your email address, a title for and brief summary of your project. Let's work through these steps.

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Your email addresses must be less than 54 characters in length.

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You must be registered to create a project. This will be verified after you enter your email address and move to the next field.

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OPUS Projects Manager Training is the best way to be registered to create projects. Information upcoming classes can be found at http://geodesy.noaa.gov/corbin/calendar.shtml.

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After entering a registered email address, the "Create" button will be enabled and you can complete the form.

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Next, enter your project title. The project title must be less than 65 characters in length but, otherwise, has few restrictions. However, remember that short and simple are often better.

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The project type designates the project as a HtMod (Height Modernization), FAA (Aeronautical Survey Program) or Other type of project.

HtMod and FAA projects will receive additional scrutiny if published to insure they meet the specifications for those types of projects. Leave the type as Other for now.

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You can enter the approximate location by clicking on the map or typing directly into the entry fields. Let's set the approximate location by clicking on the map. The training data was taken in southern Louisiana.

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Similarly, you can enter the anticipated start date manually or use a pop-up calendar feature. Clicking on the entry fields causes a calendar to appear.

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If you prefer to enter the start manually, hitting the ESC key while the calendar is visible causes the calendar to disappear, then you can enter the date using a MM/DD/YYYY format.

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You can select the month and year using the controls at the top of the calendar. Clicking on a day number causes it to be entered into the field. This project started October 1, 2006
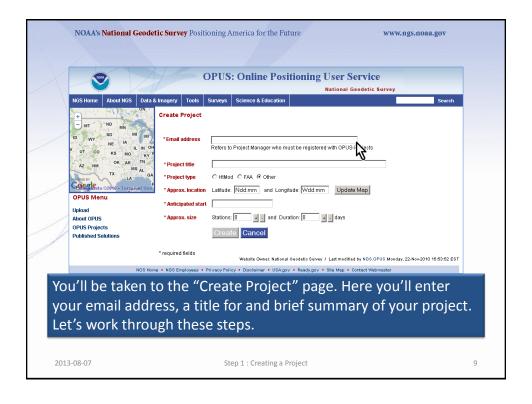
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You can type in the fields or click the increment/decrement buttons to complete the approximate size fields. The values are limited to 999 or less.

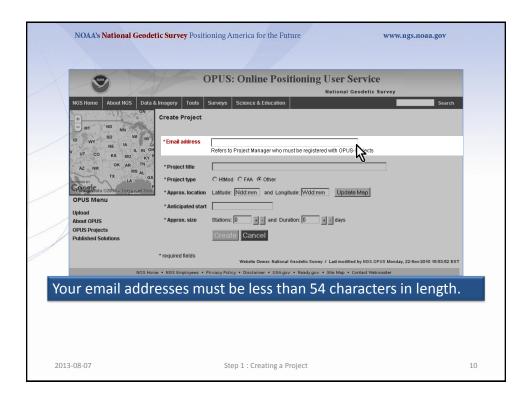2013-08-07   Step 1 : Creating a Project   24

When the form is complete, click Create.

After a moment, an introduction to your newly created project will be shown. It contains information necessary for you to work with your project. You'll also receive this information in email. Save this email for future reference.

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Your Project Was Successfully Created

Your New Project Was Successfully Created
Title: my project @ 2006-10-01

Project Manager
Email: your.name@your.address

Project Keywords
Project ID: HRDB86FC
Used to submit data to this project.

Manager Keyword: FF5D3ZMU
Provides access to project management functions.

Session Keyword: D_SSVK68
Provides access to process individual project sessions.

Reminders
These keywords were also emailed to you.
Be sure to save these keywords.
Keywords may be changed at the Project **manager's page**.
Use the OPUS Projects link on the **OPUS page** to access your Project.

Let's highlight the most critical information.

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Session Keyword: D_SSVK68
Provides access to process individual project sessions.

Reminders
These keywords were also emailed to you.
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Keywords may be changed at the Project manager's page.
Use the OPUS Projects link on the OPUS page to access your Project.

The project identifier, and the manager and session keywords are used to access to your project.

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These keywords were also emailed to you.
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Keywords may be changed at the Project manager's page.
Use the OPUS Projects link on the OPUS page to access your Project.

Your project identifier can be shared thereby permitting others to upload data to your project.

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Provides access to process individual project sessions.

Reminders
These keywords were also emailed to you.
Be sure to save these keywords.
Keywords may be changed at the Project **manager's page**.
Use the **OPUS Projects** link on the **OPUS page** to access your Project.

The project identifier and the manager keyword allow you, the project manager, complete access to all parts of your project.

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Email: your.name@your.address

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Project ID: HRDB86FC
Used to submit data to this project.

Manager Keyword: FF5D3ZMU
Provides access to project management functions.

Session Keyword: D_SSVK68
Provides access to process individual project sessions.

Reminders
These keywords were also emailed to you.
Be sure to save these keywords.
Keywords may be changed at the Project manager's page.
Use the OPUS Projects link on the OPUS page to access your Project.

The project identifier and session keyword offer limited access to your project's session and mark pages. This is useful if another person is to help with data processing for example.

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Your Project Was Successfully Created

Your New Project Was Successfully Created
Title: my project @ 2006-10-01

Project Manager
Email: your.name@your.address

Project Keywords
Project ID: HRDB86FC
Used to submit data to this project.

Manager Keyword: FF5D3ZMU
Provides access to project management functions.

Session Keyword: D_SSVK68
Provides access to process individual project sessions.

Reminders
These keywords were also emailed to you.
Be sure to save these keywords.
Keywords may be changed at the Project **manager's page**
Use the OPUS Projects link on the OPUS page to access your Project.

The project's preferences can be accessed from the manager's page. These should be reviewed at creation so a convenient link to the manager's page is provided. Let's go there now by clicking the link.

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You'll be taken to the manager's page for your empty project.

Before proceeding, let's take a few moments to familiarize ourselves with the general layout of this page. We'll discuss the details in later steps of the training.

At the top of the page, you may see notices about OPUS. Very rarely, a message specific to your project may appear here too. In these rare cases, no other project will see those messages.

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The manager and session pages are built around a Google Map Services™ interactive map to help orient you in the project and region. As data are uploaded, icons representing the project's marks and included CORS will appear on the map.

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The names of the marks and CORS will also be listed in tables to the right of the map.

Buttons to "pop up" controls are on the other side of the map.

Let's continue with this lesson now. Click the "Preferences" button to pop up a window with those controls.

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A new window containing the preference controls will appear. For ease of viewing, we'll zoom in and focus on each section of this window individually.

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The "Project Title, ID and Keywords" section is used to change those values. Note the rules for the ID and keywords. Some find these randomly generated strings challenging and prefer something more memorable. Changing these will cause an updated copy of the email introducing your project be sent to you. We'll leave them for now.

Sometimes the project will send emails to the you. You can create a list of addresses using the "CC Manager Email" controls so others also received these emails.

The "Data & Solution Quality Thresholds" cause icons and table entries to be flagged if a mark's solution results exceed a threshold thereby indicating potential problems.

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These thresholds are also applied to the OPUS solutions when project data files are uploaded. If an OPUS solution exceeds a threshold, a separate email describing the condition is sent to the address on the upload form.

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It is your responsibility to make your field teams aware of this possibility and that receiving one of these warnings does <u>not</u> mean the data file was omitted from the project.

This is a good time to set these values to your project's specifications, if any.

For training purposes only, let's change the maximum height uncertainty to 0.060 m; the latitude and longitude uncertainties to 0.030 m.

The "Data Processing Defaults" are just that; default values and selections appearing in the project's processing forms. Like all defaults, they can be changed at the time of processing. These values are reasonable for most processing tasks, but let's select NORMAL for the "Constraint Weights".

Data Processing Defaults
These are the defaults used in data processing. They can still be changed on a case-by-case basis during processing setup.

Output Ref Frame: LET OPUS CHOOSE
Output Geoid Model: LET OPUS CHOOSE
GNSS: G (GPS-only)
Tropo Model: Piecewise Linear
Tropo Interval (s): 7200
Elevation Cutoff (deg): 15.0
Constraint Weights: LOOSE NORMAL TIGHT
Network Design: USER QRS MST TRI

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The "Session Definition" section gives you some control over how data files are grouped together to form sessions for processing. These values can only be changed <u>before</u> session processing has begun. After processing has begun, this section is disabled and an explanatory message appears. In almost all cases, these values should not be changed; however, if you feel a need to change the definition, consult with the OPUS Projects team prior to making any changes.

Session Definition
A data file is assigned to a session based upon its overlaps in time with other files. These parameters control how much overlap is required for a file to be assigned to a session.

Minimum Data Duration (s): 1800
Minimum Session Overlap Multiplier: 0.5

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The "Mark Co-location Definition" gives you some control over how data files are associated with a mark. You see here that data files whose OPUS solution positions fall within 1 m of one another will be grouped together. However, RINEX and some other format specifications use a mark identifier string as the first four characters of the file name. If you are confident that this will be the case and <u>be correct</u> for all your project's data files, select "Mark ID". Here again, this definition can not be changed after session processing has begun.
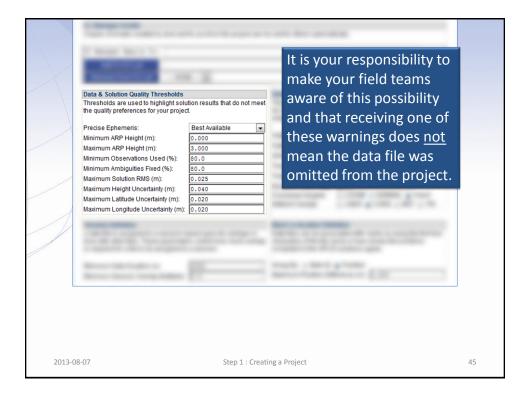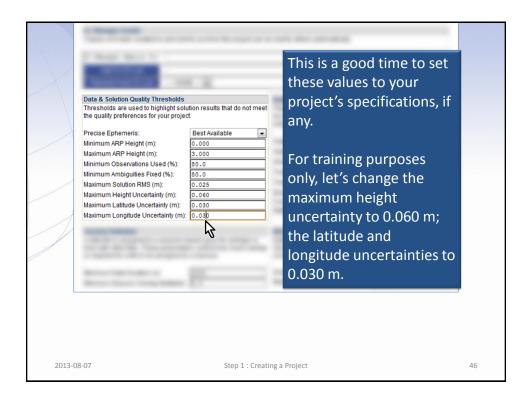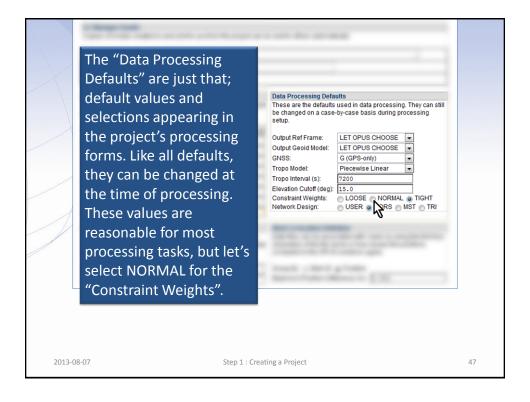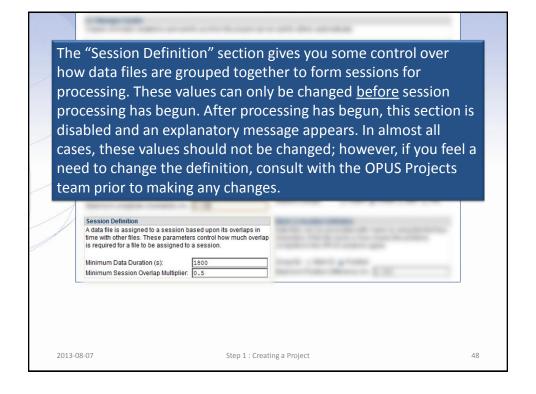
Mark Co-location Definition
Data files can be associated with marks by using the first four characters of the file name or how closely the positions computed in the OPUS solutions agree.

Group By: ○ Mark ID ● Position
Maximum Position Difference (m): 1.000

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Results From ALL OPUS SOLUTIONS ▼

Save Changes and Close

Project Title, ID and Keywords
A project title, ID and keywords are required. The project title can be almost any string, but brevity is recommended. On the other hand, the ID and keywords have restrictions:
- The project ID <u>must</u> be unique to your project.
- The ID and keywords are <u>not</u> case sensitive.
- The ID and keywords can <u>not</u> contain more than eight characters.
- The ID and keywords can <u>only</u> contain letters, numbers, the dash and underscore characters.

Project Title: my project @ 2006-10-01
Project ID: hrdb86fc   Confirm: hrdb86fc
Manager Keyword: ff5d3zmu   Confirm: ff5d3zmu
Session Keyword: d_ssvk68   Confirm: d_ssvk68

CC Manager Emails
Copies of emails created by and sent to you from the project can be sent to others automatically.

CC Manager Emails To:
Add To CC List
Remove From CC List — NONE — ▼

Data & Solution Quality Thresholds
Thresholds are used to highlight solution results that do not meet the quality preferences for your project.

Precise Ephemeris: Best Available ▼
Minimum ARP Height (m):   0.000
Maximum ARP Height (m):   3.000
Minimum Observations Used (%): 80.0
Minimum Ambiguities Fixed (%): 80.0
Maximum Solution RMS (m):   0.025
Maximum Height Uncertainty (m): 0.040

Data Processing Defaults
These are the defaults used in data processing. They can still be changed on a case-by-case basis during processing setup.

Output Ref Frame: LET OPUS CHOOSE ▼
Output Geoid Model: LET OPUS CHOOSE ▼
GNSS: G (GPS-only) ▼
Tropo Model: Piecewise Linear ▼
Tropo Interval (s): 7200
Elevation Cutoff (deg): 15.0

Once you've reviewed the preferences and made necessary changes, click the "Save Changes and Close" button to apply these preference to your project.

Website Owner: National Geodetic Survey / Last modified by the OPUS Projects Team

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Results From ALL OPUS SOLUTIONS ▾

| Controls | | MARKS: | ○ meet preferences | ◉ do not meet preferences | ◎ are not included | ⊗ have error | MARKS |
| 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

Add MARKS
CORS

Your project is now ready for data uploading to begin.

Add CORS

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OPUS Projects Manager Training

Step 1 : Creating a Project

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