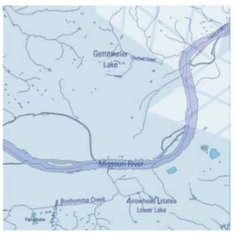
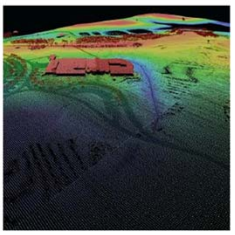
Overview of the 3D Elevation Program (3DEP) Broad Agency Announcement (BAA) Process





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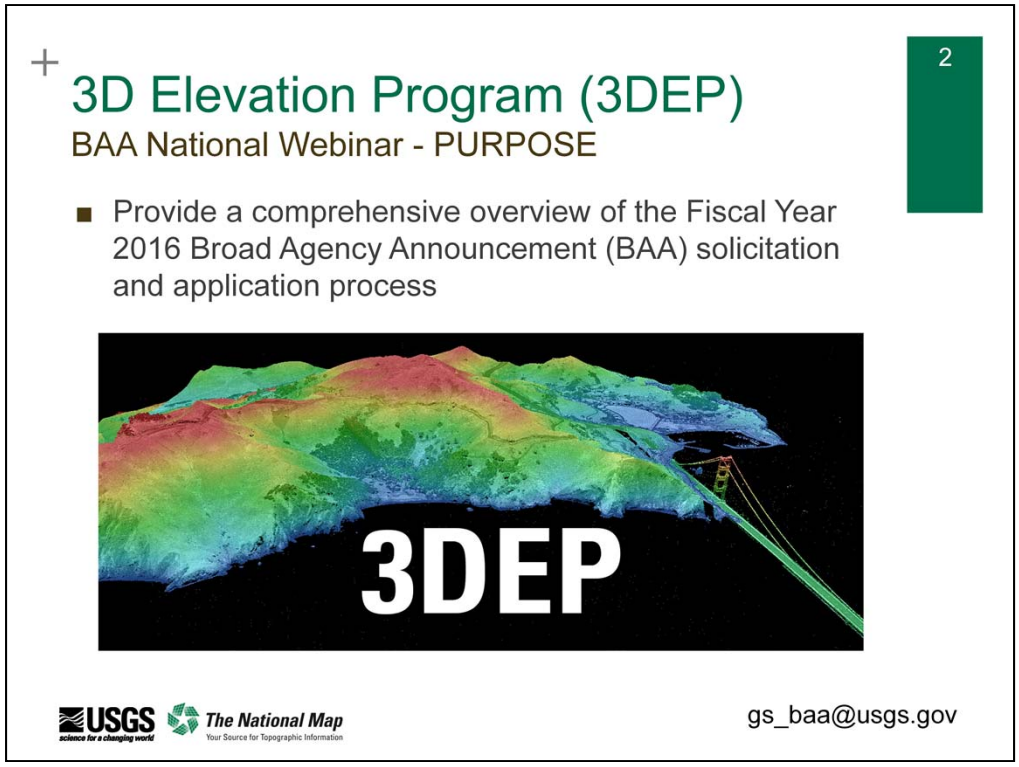
August 2016

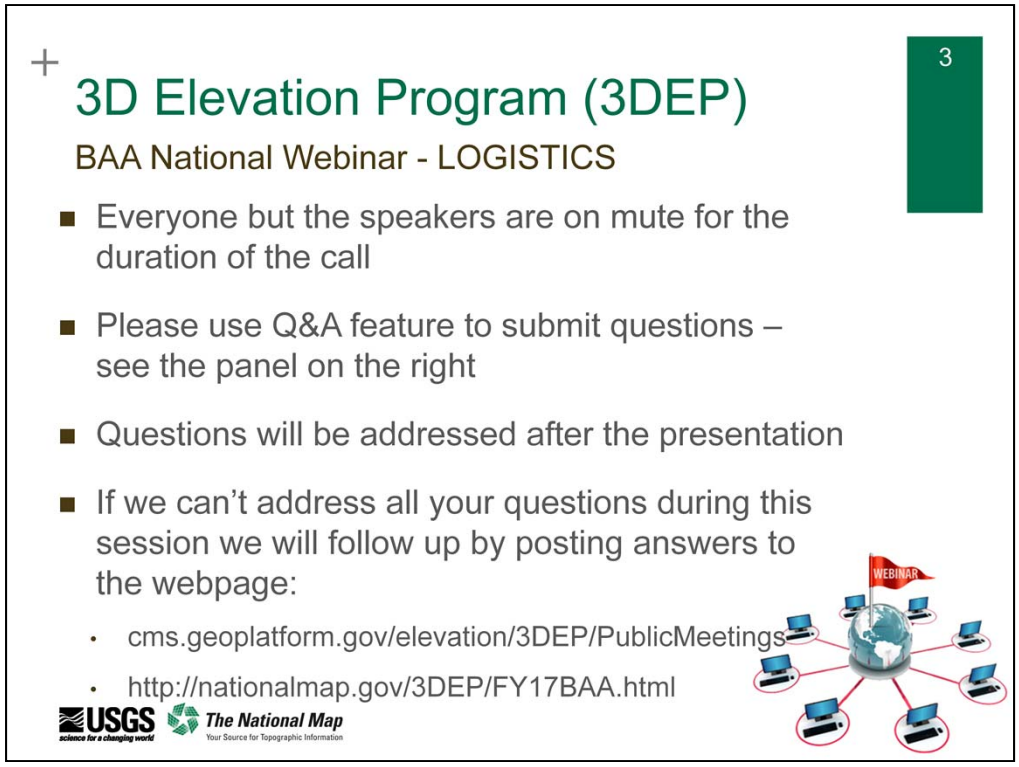


Good afternoon and welcome everyone to the 3D Elevation Program public webinar.

My name is Diane Eldridge, I am here today representing the 3D Elevation Program, where I serve as the 3DEP Data Acquisition Coordinator. Oversight for 3DEP is the responsibility of the US Geological Survey; operationally the program is managed and operates within the National Geospatial Program. I am joined by my colleague Ms. Allyson Jason; Allyson will be facilitating the Question and Answer portion of this afternoon's webinar.

We greatly appreciate your interest in the 3DEP program and are happy that you have taken the time to join us.

The purpose of today's webinar is to provide a comprehensive overview of the Fiscal Year 2016 Broad Agency Announcement (BAA) solicitation and application process



Before we dive into the agenda, let's cover a bit of housekeeping.

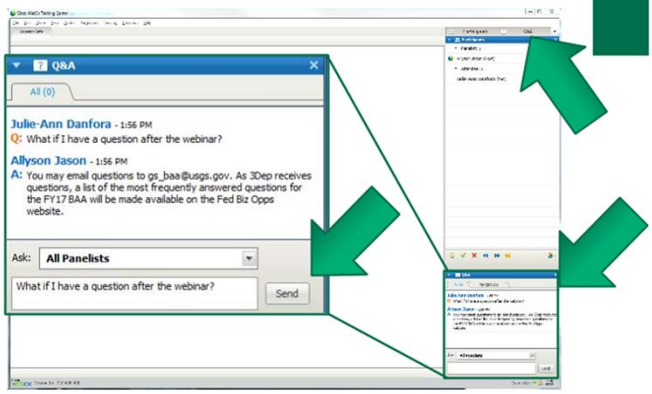
- Everyone but the speakers are on mute for the duration of the call
- Please use the Q&A feature to submit questions
- Questions will be addressed after the presentation
- If we can't address all the questions during this session we will follow up by posting answers on both of the webpages listed on the slide
- Throughout the submission window questions can be submitted to gs_baa@usgs.gov . You will see this e-mail address on the bottom right of a number of slides in this presentation. Responses to questions submitted to the baa mail box will be responded to individually and then generified and added to the list of BAA FAQs so that all may benefit from the additional information.
- To make a response generic we may say answer the original question … we would encourage Smith County whereas the generic response might be … we would encourage any county …

4

3D Elevation Program (3DEP)

BAA National Webinar - LOGISTICS

WebEx Q&A



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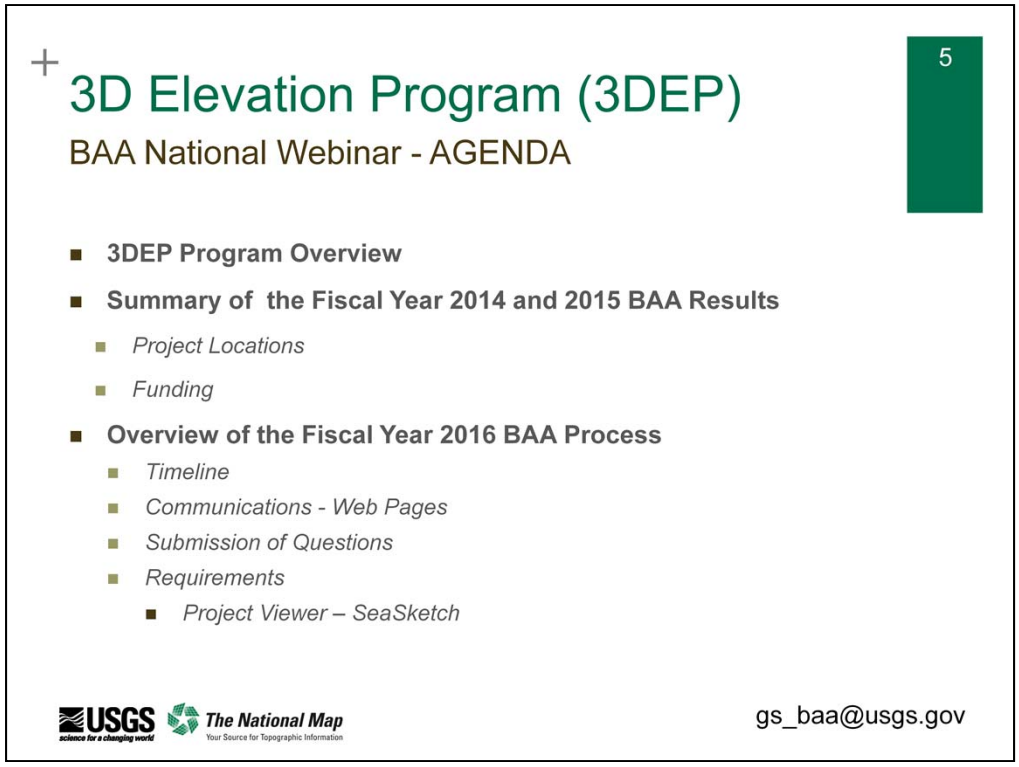
gs_baa@usgs.gov

I will pause a second so that Allyson can explain how to use the Q & A feature in Web-Ex Training. She will also explain her approach to grouping and prioritizing questions that come in during the presentation.



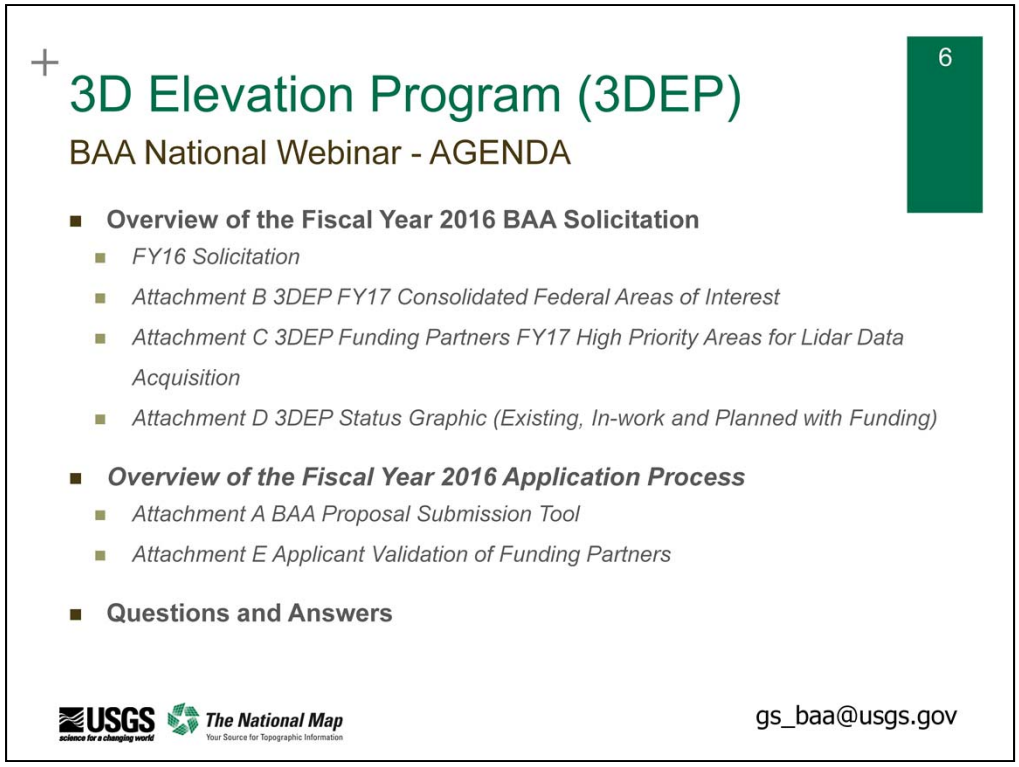
Moving on to the agenda, again we have a full presentation, designed to provide a comprehensive look at the 3DEP BAA process.

Our presentation will begin with a brief 3DEP Program Overview.

Next we will provide a summary of our FY14 and FY15 BAAs. This summary will assure that all applicants are aware of existing, in-work and planned data. For those new to the process it will inform you on the scope and size of successful BAA projects. For those familiar with the process this review will be timely as later in the presentation we will highlight the differences in the FY17 application process.

The primary purpose of today's meeting is to introduce and provide an overview of our Fiscal Year 2016 BAA process which will result in project awards in FY17 .

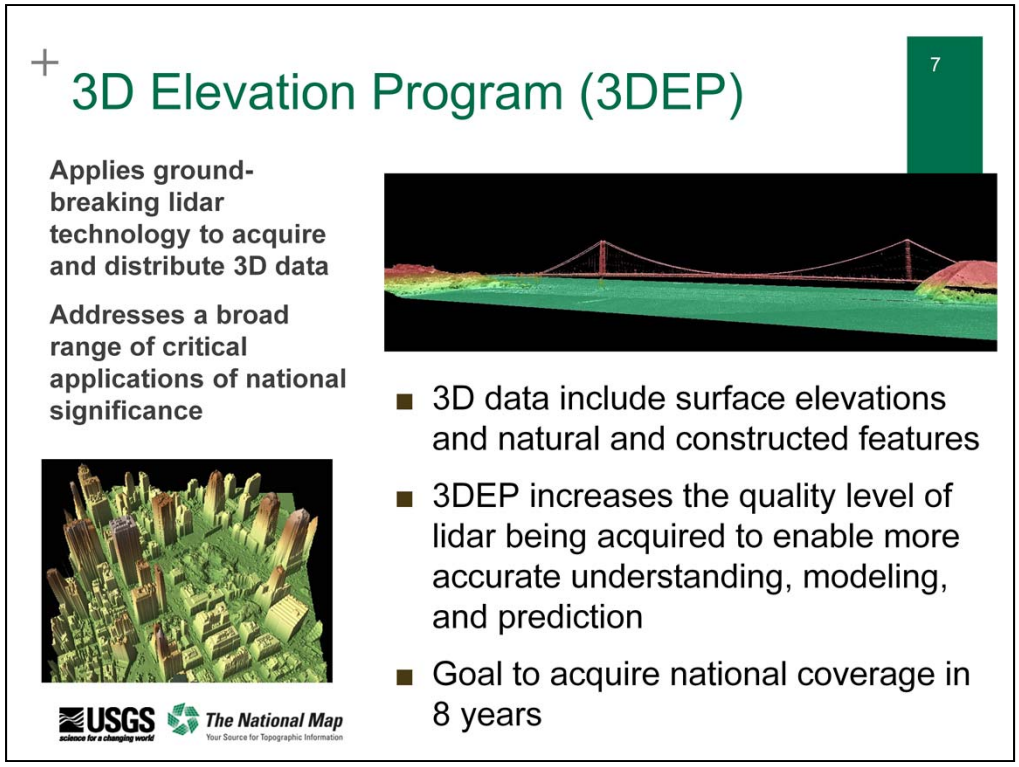
As part of this discussion, we will present the timeline, discuss the criteria for the selection of BAA projects, and point you to our Web pages which are the primary means of keeping you informed.



In addition we will review the individual components of the 2016 solicitation and walk you step by step through the application process.

Finally we will address your questions. The responses to any questions remaining at the conclusion of this webinar will be consolidated and posted to our websites.

So lets get started.



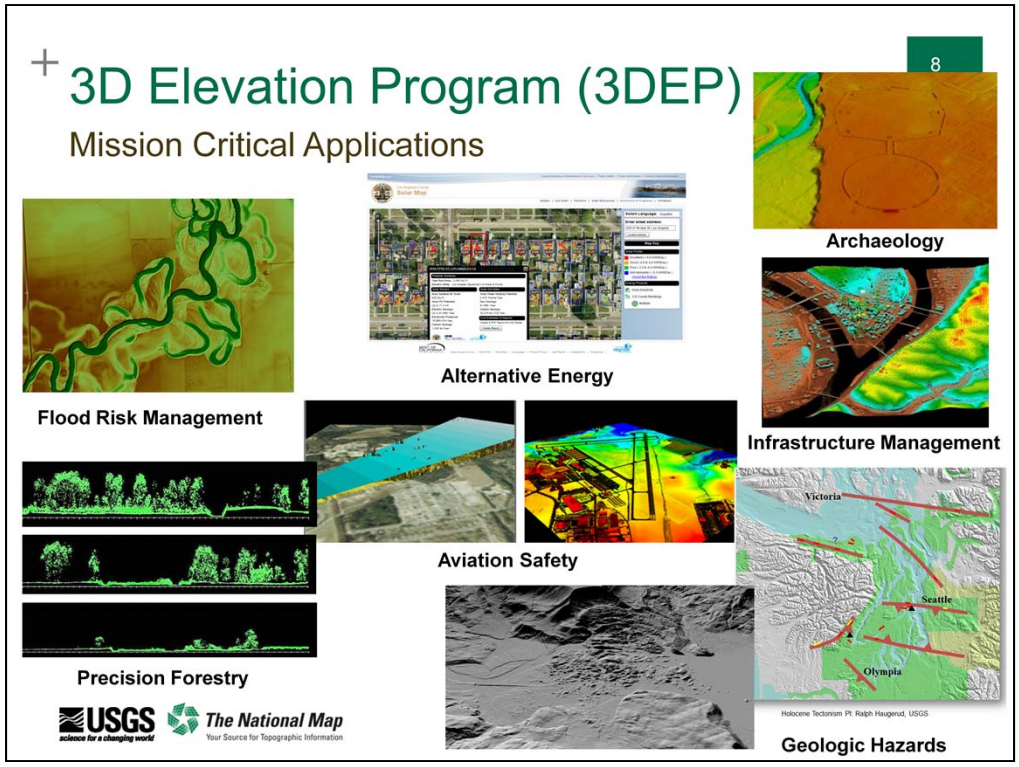
You may be familiar with the long history of the USGS in providing elevation data, first through contours on our topographic maps and later by digital data in the National Elevation Dataset.

The 3D Elevation Program is our newest effort to provide national elevation data.

We believe this program is transformational because it applies ground-breaking lidar data to provide not only a higher resolution bare earth elevation surface, but it also provides us with 3-dimensional data of all the natural and constructed features. These data are transforming industries and creating new applications never before possible.

The program also calls for increasing the quality level of lidar data being acquired because it meets many more mission critical applications.

Our goal is to acquire national lidar coverage in 8 years, with ifsar data in Alaska.



For most of our presentations we like to demonstrate the many mission critical applications of 3DEP. Today we have limited time for this overview, so I am highlighting just a few of them.

Flood risk management is one of the uses that has the highest dollar value and societal benefits from 3DEP, and FEMA has been a big partner and supporter of 3DEP.

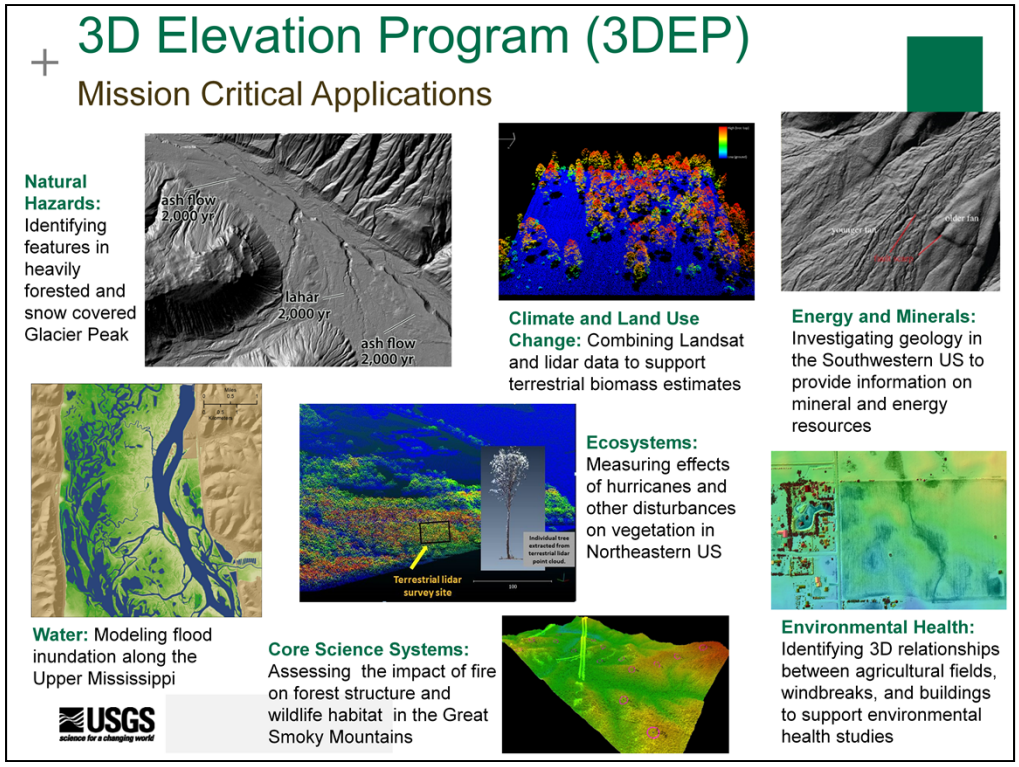
Other applications include, precision forestry and alternative energy – this example is a Los Angeles County application that is used to determine solar potential.

Lidar helps detect obstacles to air navigation for aviation safety

Geologic hazards is a critical application area for lidar – here we have an image of the tragic Oso WA landslide, and an image showing where lidar revealed previously unmapped faults.

3DEP is useful to archaeology and to infrastructure management which with our aging infrastructure is a growing national concern.

Again these are just a few of the important uses of 3DEP that remind us why this effort and our collaboration is so critical to the Nation.



As the program matures and additional data become available, program participants are discovering new and innovative ways to utilize the data.

The applications highlighted on this page represent utilization of the data within the USGS where each of the USGS mission areas have explored and discovered uses of lidar data to support their missions.

The USGS is not alone is our widespread use of the data. Each of the agencies contributing funding to the program have similarly discovered the value of the data and are experiencing an incredible return on investment for the dollars they commit to the program.

3DEP is a collective effort to develop partnerships to fund the program and accelerate the rate of acquisition to enable these benefits on a national level.

We like to call 3DEP a call for community action because it is an effort to address more than 600 mission-critical needs that were reported by 34 Federal agencies, 50 states, and a sampling of other organizations and documented in the National Enhanced Elevation Assessment of 2012.

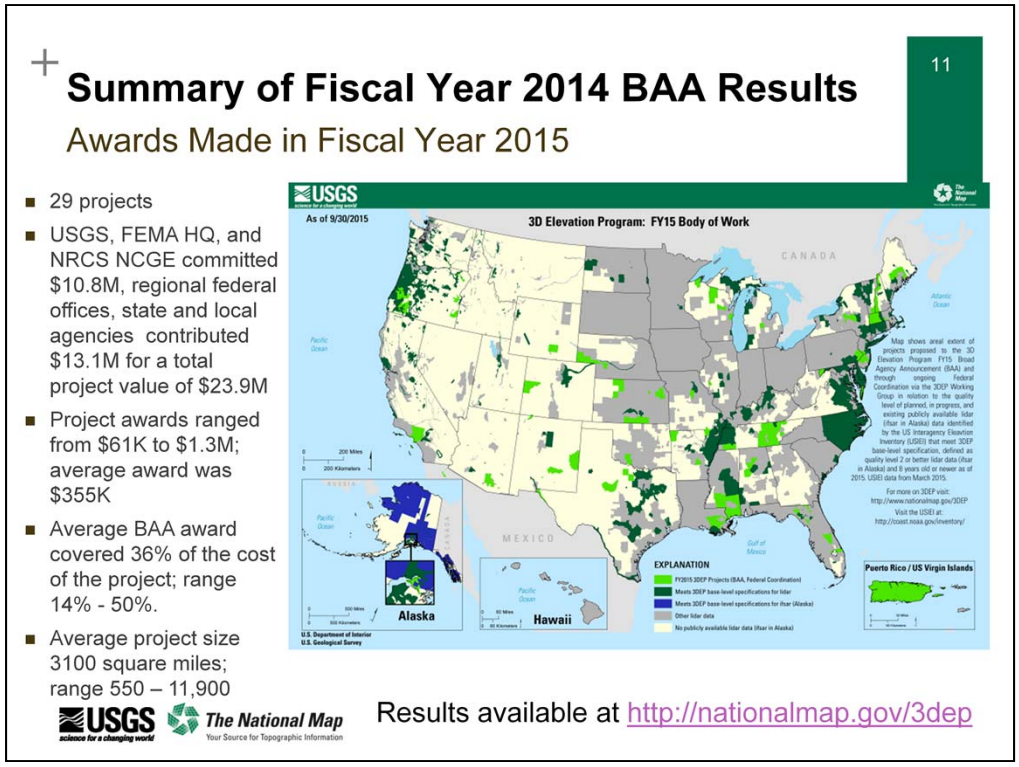
3DEP is designed to provide a 5 to 1 return on investment and a conservative dollar benefit of more than 690 million dollars annually if implemented in 8 years.

3DEP is also a call for community action because it is a partnership that depends on the collaboration of Federal, state, local, tribal and other partners to fund the data acquisition.

3DEP leverages the expertise and capacity of the private sector mapping firms that acquire the data for us through the USGS Geospatial Products and Services Contract, and through partner acquisitions.

By acquiring data in larger project areas, 3DEP will help all of the partners realize a cost efficiency gain we estimate to be about 25% lower costs.

And of course we will completely refresh our publicly available, national data holdings to replace the patchwork of quality and sources with consistent, new lidar and ifsar data products and services. In 2015 the program began delivering these new products and services through The National Map.



In July of 2014 the USGS issued the first Broad Agency Announcement to solicit funding partnerships for 3DEP. There was tremendous interest in the program, we received 72 pre-proposals and ultimately funded 29 projects which are displayed here on the graphic, shown in the bright green.

The federal offices (USGS, FEMA HQ and NRCS NCGE) that provide funds to support BAA awards collectively contributed $10.8M. BAA partners (regional federal agencies, state and local offices) contributed $13.1M to increase the value of the BAA projects to just under $24M.

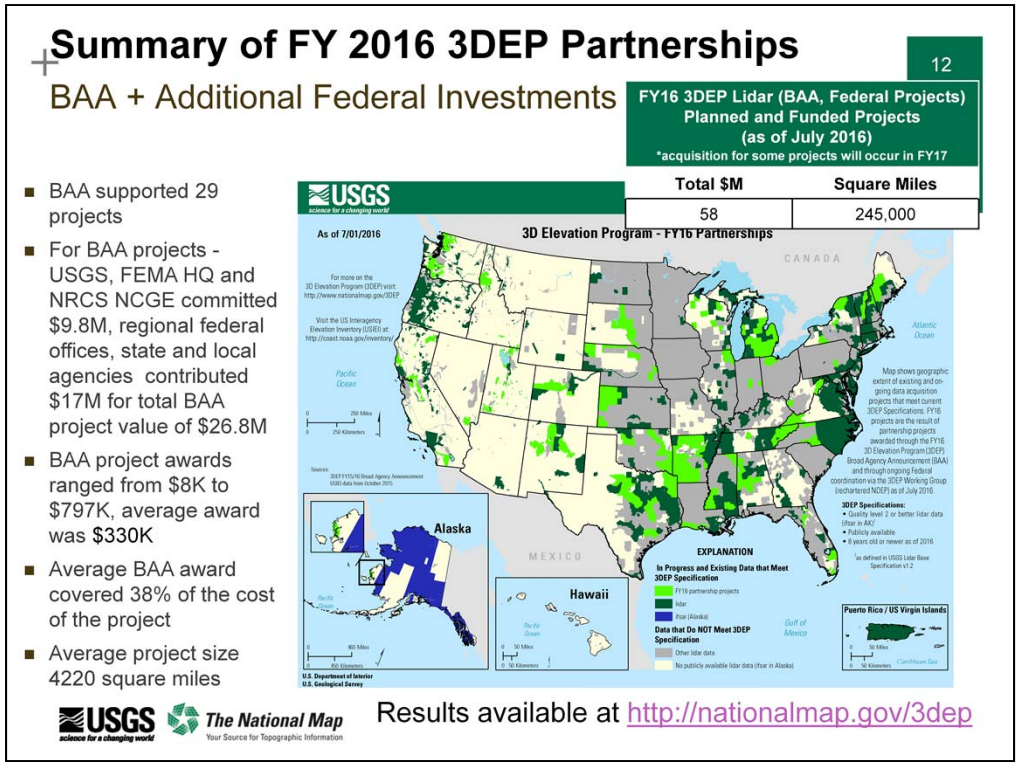
In 2015 project awards ranged from $61K to $1.3M, the average award was $355K.

The average BAA award covered 36% of the cost of the project, ranging from a low of 14% to our maximum contribution of 50%.

The average project size was 3100 square miles, with a range from 550 – 11,900 square miles. If you were to look closely at the data you would realize that the larger dollar amounts are aligned with the larger projects.

Because you may not be able to read the small print on the graphic, the gray represents all existing lidar data, the dark green represents existing data that meets 3DEP specifications, and again the lighter green represents the 95,000 square miles of new data that will be added to the national lidar holdings as a result of FY14 BAA partnerships.

For additional details on the FY14 BAA including a list of the organizations receiving awards you are encouraged to visit the website noted on the bottom of the slide.

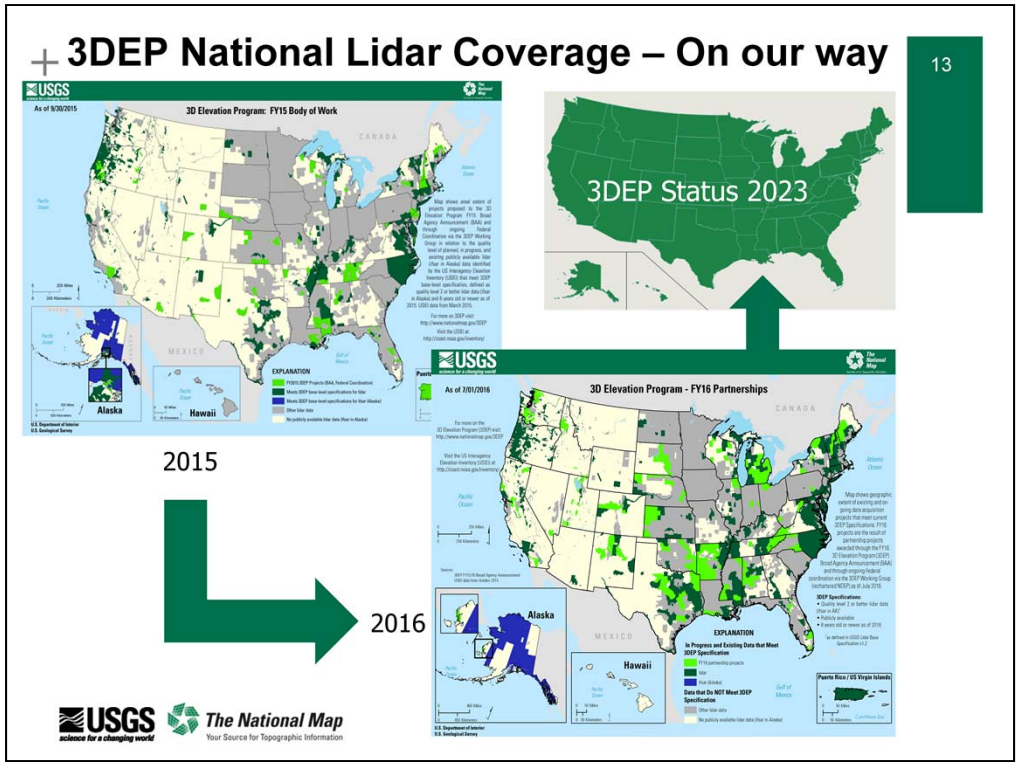


In FY16, our BAA numbers were very similar.

We supported 29 projects. The USGS, FEMA HQ and NRCS NCGE direct contributions to BAA projects has been consistent, however the **overall federal contribution to 3DEP rose significantly**. 3DEP BAA projects resulted in $26.8M of project work which will result in 123,000 square miles of new lidar data. As of July, total FY16 contributions to 3DEP projects by 3DEP stakeholders is up around $58M, supporting a total of 245,000 square miles of project work. These are preliminary figures that will be modified. Some new projects will be added prior to end of the FY; the final contracts for some of these projects will likely not be completed in FY16 but likely will be contracted before the end of the calendar year in preparation for the 2017 spring acquisition window.

The growth in federal contributions outpaced the growth in BAA submissions. Many federal acquisitions moved forward without state and local partners. For FY17 Federal agencies have worked hard to identify their high priority areas in sufficient time to include their AOIs in the BAA to advertise these partnership opportunities. We will look at those high priority areas in a few minutes.

The program was happy to see that our average project size has increased to 4220 square miles, an increase of over 1000 square miles over the FY15 average project size. The cost efficiencies gained with larger acquisitions reduce the cost of the project.

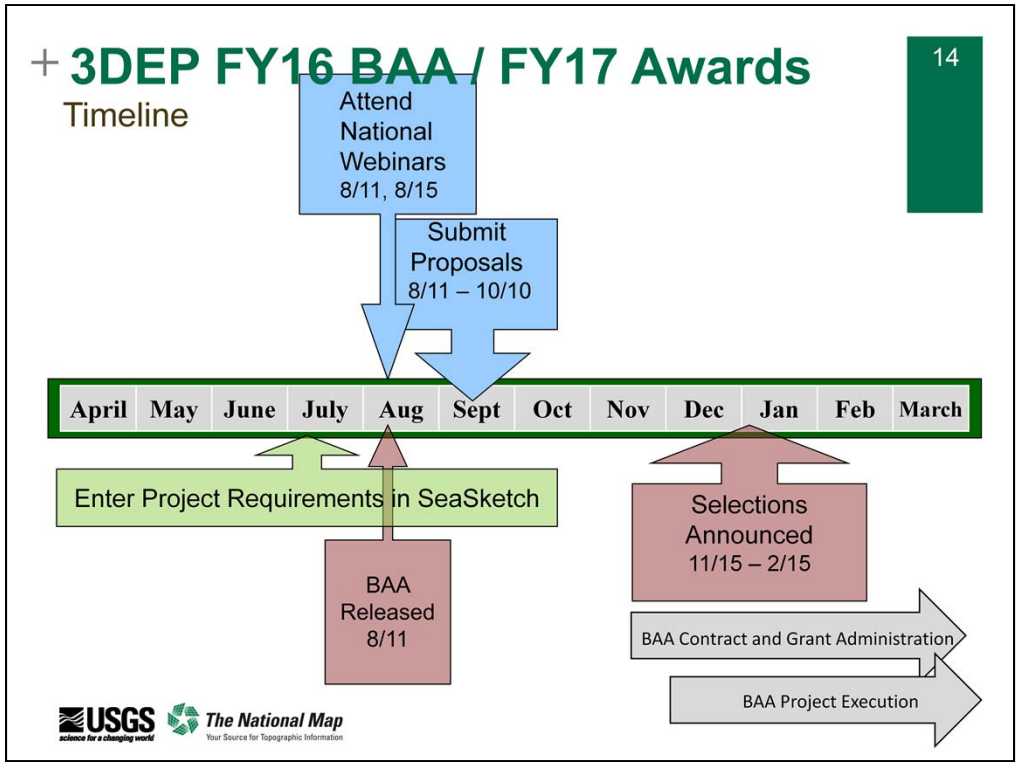


This slide represents the growth in the program over the last two years.

We can note significant increases in data being acquired in the Northwest, the South/ Southeast, the Mid-Atlantic and the Northeast. We are even beginning to see some acquisitions in the West. These data will be of immense value to these communities.

However as our goal is national coverage, there is still work to be done.

The BAA represents an opportunity to forge partnerships and take advantage of all available financial resources to acquire data to satisfy your requirements.



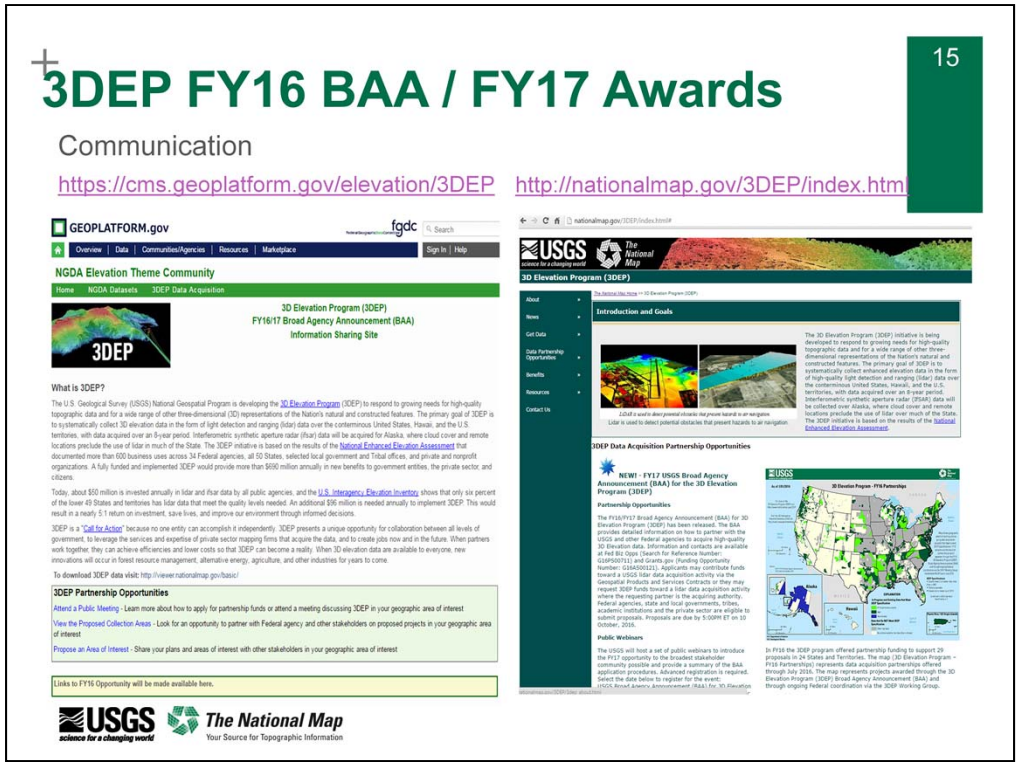
For those familiar with the Lidar acquisition process, you are aware that the entire project lifecycle, from formulation to product delivery is often 18 to 24 months, sometimes longer. This timeline focuses on the near term actions of gathering and reviewing requirements, submission of a BAA proposal and the selection and notification of a BAA partnership award.

The items in rose, along the bottom, are USGS actions. The items in blue across the top are your actions. The items is green apply to all stakeholders.

The BAA was posted August 11th to both FedBizOpps.gov and Grants.gov. The 3DEP team held public webinars on both August 11th and August 15th. The sessions will be recorded and the slides, the recording and the webinar and additional Q&A s will be posted on our websites. Proposals are due October 10th. While the BAA does remain open all year long, submission received by the initial deadline receive priority consideration for funding.

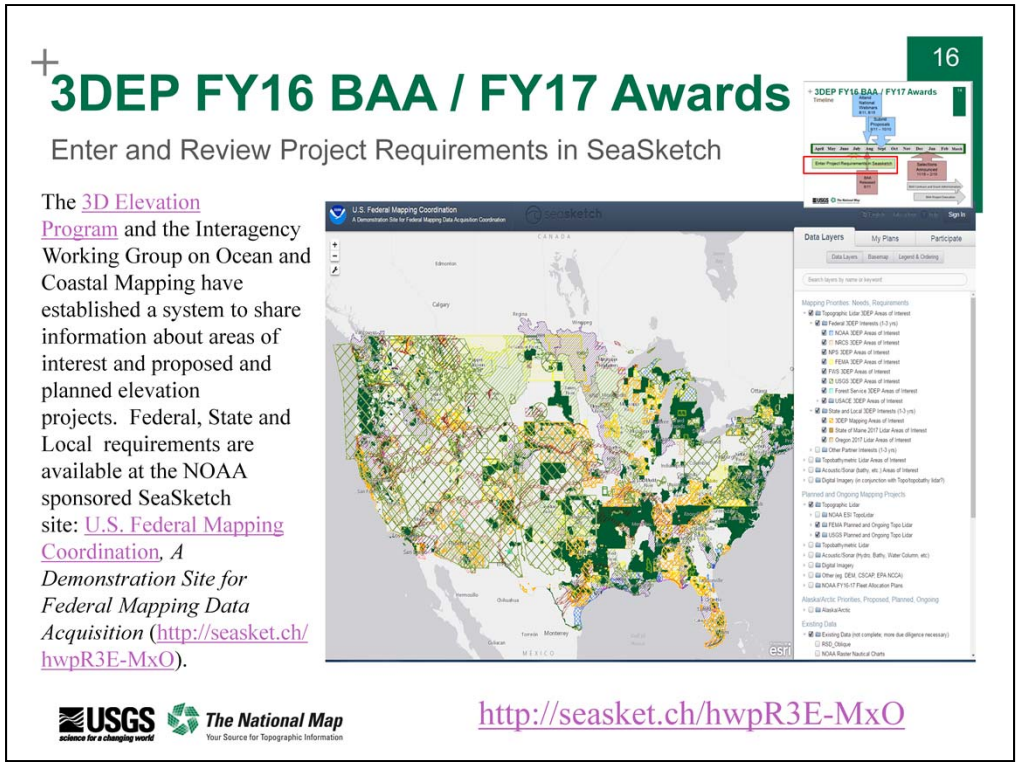
Initial project selections will be made beginning November 15. New this year, the USGS will be allowed to notify you as soon as your project has been recommended for award. What does this mean. It is likely that once again the federal government will be operating on a continuing resolution when our fiscal year begins on October 1st . During a CR, our ability to spend or commit funding is limited. While the evaluation team meets immediately following the initial deadline to review and prioritize projects, in the past we were not allowed to notify applicants of their status until we had the authority to spend money. This year we will be allowed to notify you that your project has been recommended for award pending the availability of funding. This will provide you early notification of our intent to fund your project so you may move forward with finalizing the details of your project and initiating the funding agreements needed to secure your funds.

Applicants choosing to make use of the Geospatial Products and Services Contracts (GPSC) will work with a 3DEP and/or GPSC POC to complete the required acquisition documents; applicants receiving cooperative agreements will work with a USGS grants specialist.



We are now going to move to a series of web pages and tools that will provide you detailed information on our FY17 program.

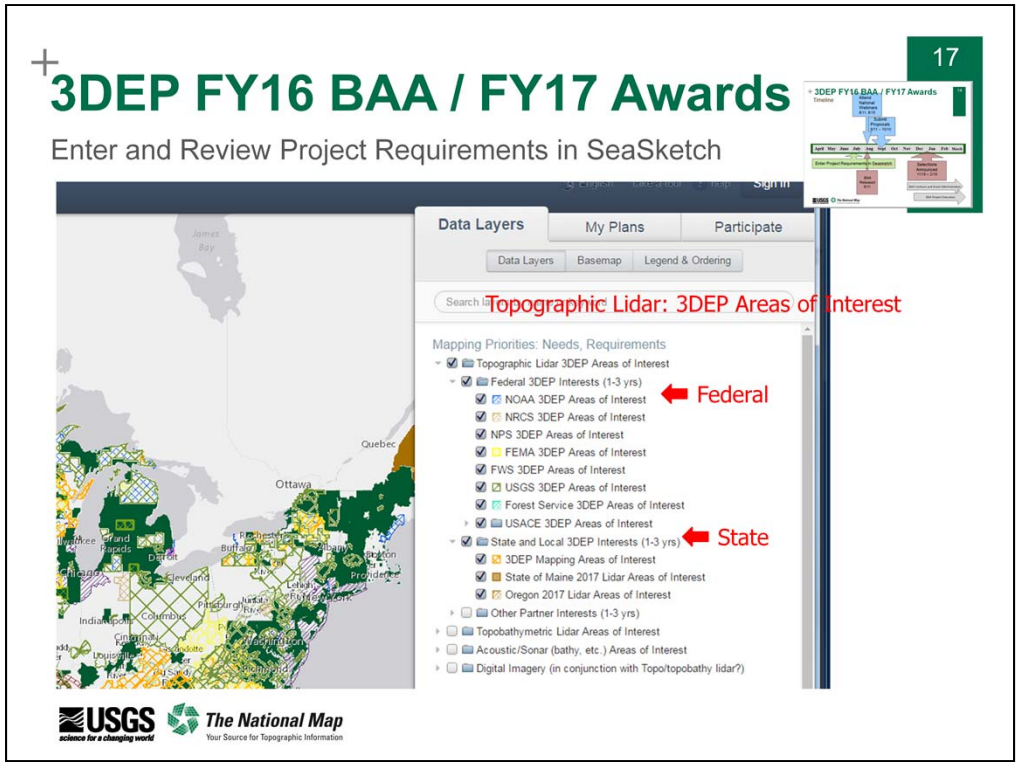
The 3DEP program posts information on our internal USGS 3DEP Web pages. In addition we share information on the Geospatial Platform. The pages are fluent and we encourage you to check back frequently for new content.



We have said it before and will say it again, 3DEP is a collaborative effort to acquire national data. To accomplish that goal stakeholders must have a means to post their requirements and review the requirements of others. 3DEP has chosen to utilize the NOAA sponsored SeaSketch Site to accomplish that goal.

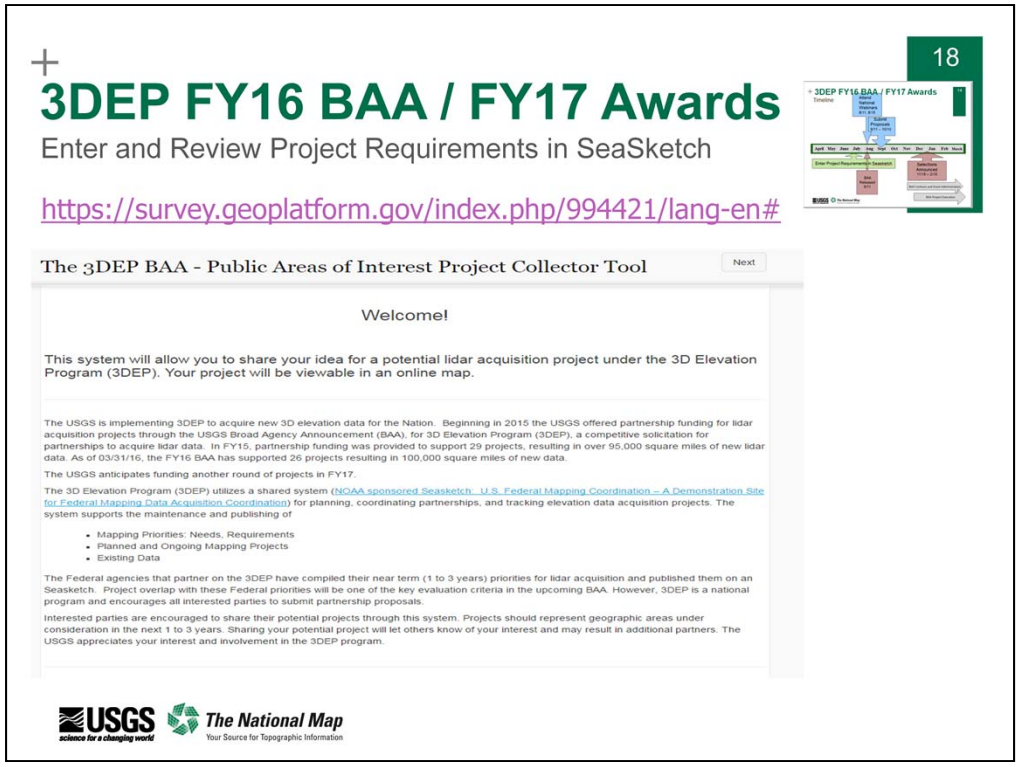
The 3D Elevation Program and the Interagency Working Group on Ocean and Coastal Mapping have established a system to share information about areas of interest and proposed and planned elevation projects. Federal, State and Local requirements are available at the NOAA sponsored SeaSketch site: U.S. Federal Mapping Coordination, *A Demonstration Site for Federal Mapping Data Acquisition* (http://seasket.ch/hwpR3E-MxO).

This mapping site is comprehensive, showing areas of interest, proposed, planned, in-work, and completed elevation and related projects.



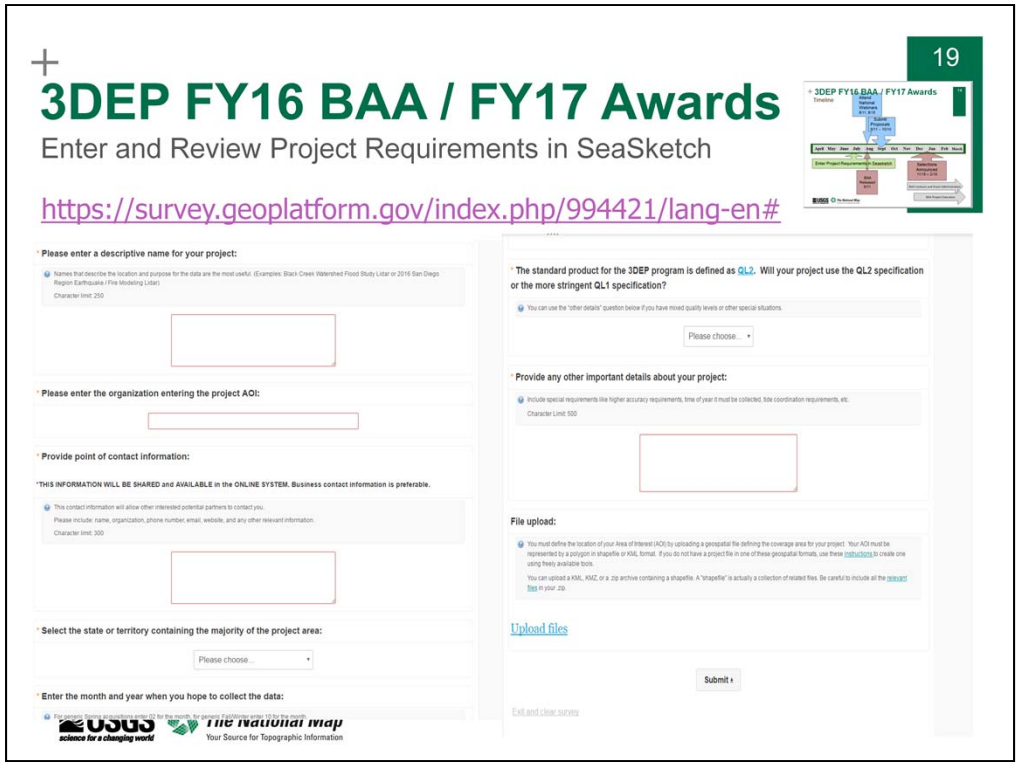
Federal Agencies annually update their High Priority Areas of Interest. Each Federal Agency is responsible for updating their requirements. State and Local agencies may enter their own requirements or may utilize the 3DEP Lidar Priorities Collector Tool to enter their Areas of Interest. AOIs entered into the project collector tool are collated into a service with a direct feed to SeaSketch (State and Local 3DEP Interest (1-3 years), 3DEP Mapping Areas of Interest.

The SeaSketch Viewer allows you to zoom in and turn layers on and off so you can focus on your specific AOI. We will review that function in a minute but first let me provide a few details on the 3DEP Lidar Priorities Collector Tool.



The link to the public project collector tool is noted here along the top of the slide. You can also find the link on our web pages. For those of you who have utilized the tool in the past, we do update the tool each year which results in a different urn. So if you had the url bookmarked you may need to update.

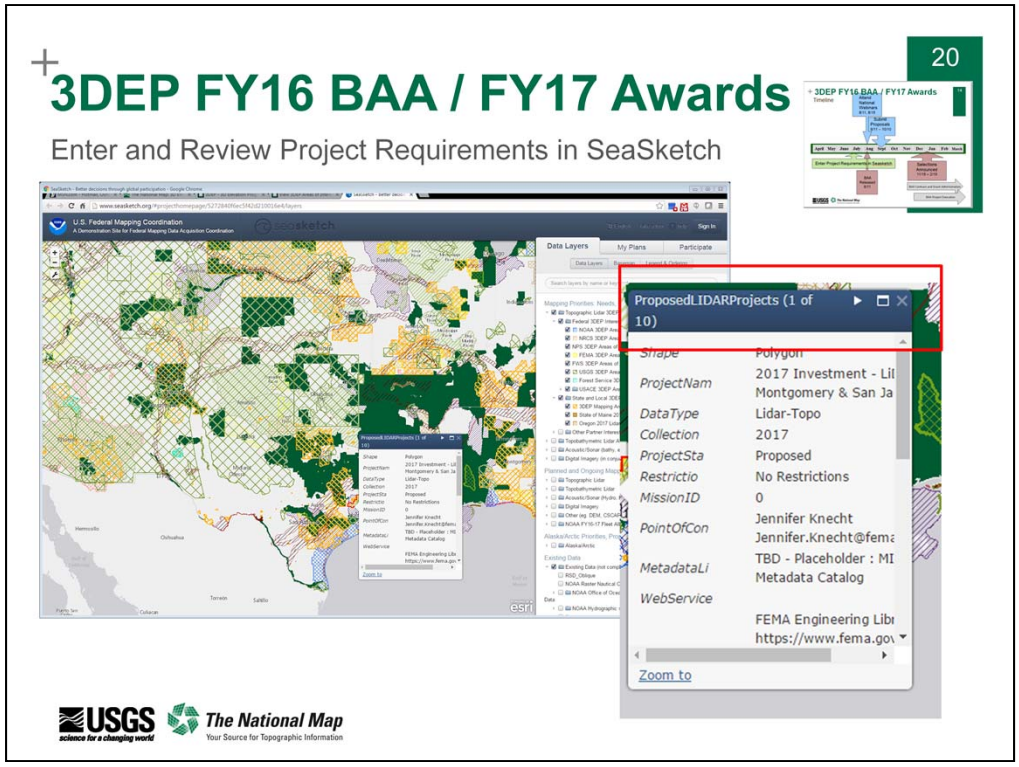
These opening remarks provide context for your project information.



The tool asks you several simple questions.

The questions are designed to provide basic information on your interest to enable others to review the project info to determine overlapping requirements.

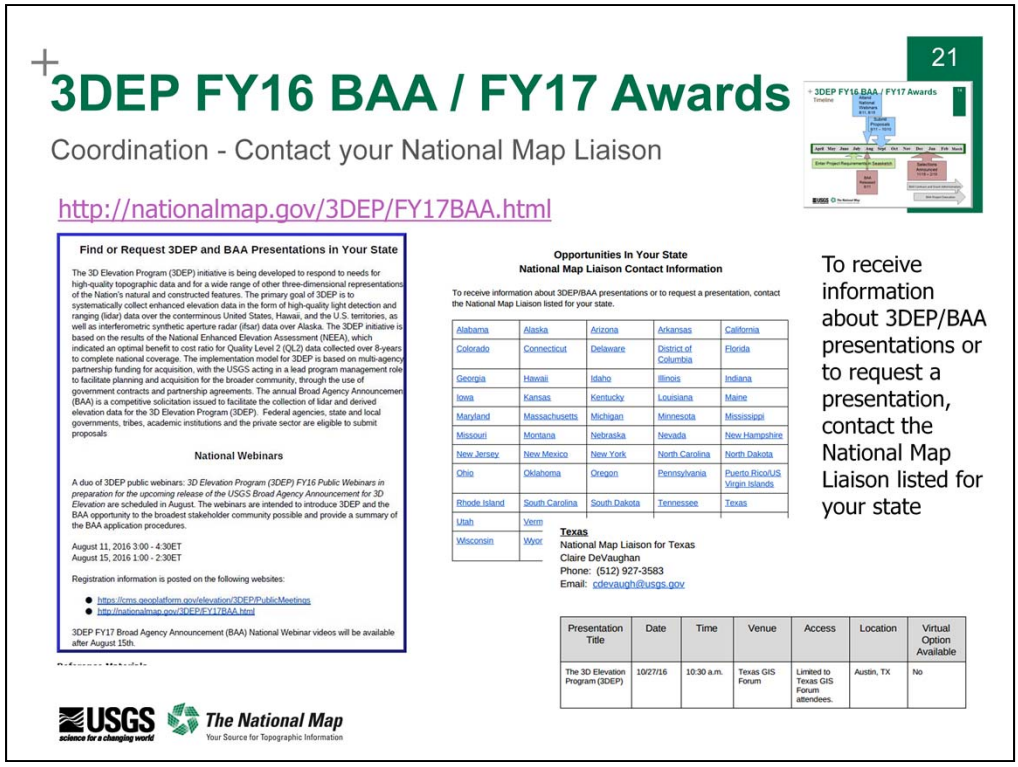
At the end you will be asked to upload a kml or shapefile, instructions are provided.



As mentioned a couple of minutes ago, SeaSketch allows you to zoom in and navigate to your area of interest. We are zoomed in on Texas and the south-central US.

SeaSketch also allows you to select an AOI to get details on who entered that project information. This information will allow you to contact others with overlapping interest to identify partnership opportunities. In this particular example there are 10 overlapping Areas of Interest (as noted by the 1 of 10). Selecting the Arrow to the right of the 1 of 10 will cycle you through the overlapping projects.

Last year the USGS National Map Liaisons facilitated regional and/or state and local meetings to enable and encourage interested parties to gather together to discuss partnership opportunities. These meetings were successful at bringing partners together. However the program realized that coordination is ongoing and we had many requests to hold meetings throughout the year to allow partners the opportunity to identify funding within their agencies in sufficient time to prepare proposals. The National Map liaisons are available year round to facilitate meetings or webinars that inform and enable coordination among potential partners. On the next slide I will show you how to locate and request the services of your liaison.

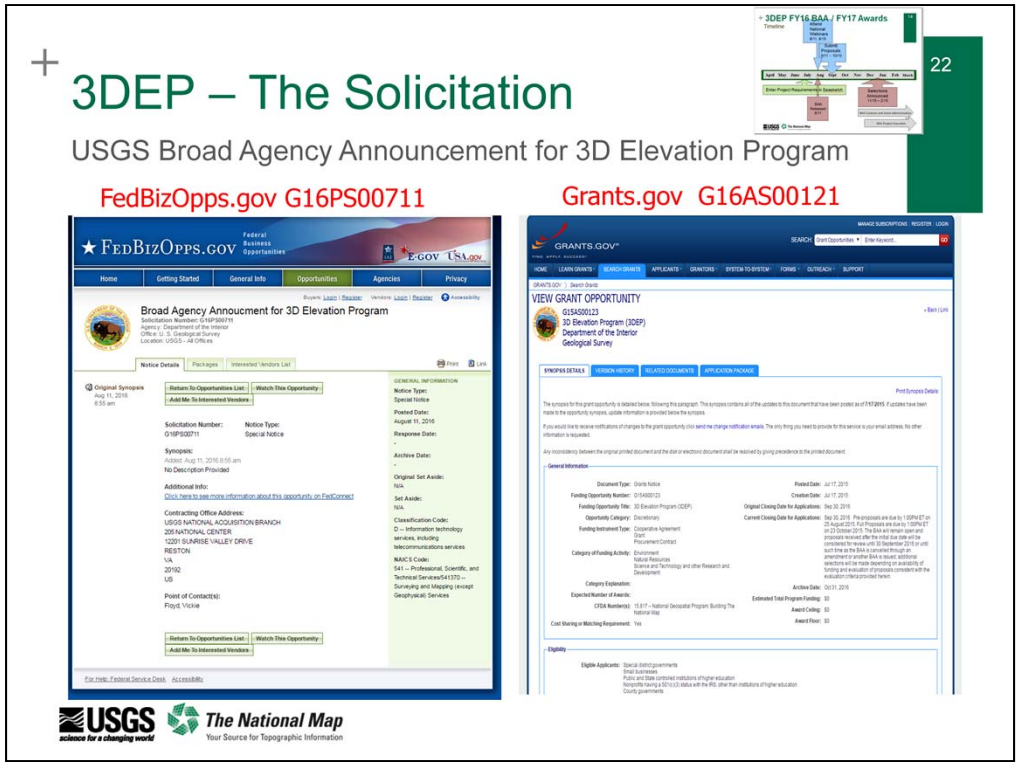


As we mentioned earlier, we communicate about our program through our web pages. Information on how to contact your liaison to request a meeting is found on our FY17 BAA Web page as noted here on the slide. Again these web pages will be listed as resources at the end of the presentation.

This page contains a link to the document noted on the left of the slide. Inside the document you will find a listing of the states, selecting the state will provide you the name and contact information of your national map liaison.

As we were zoomed in on Texas in the preceding slide, we will continue using Texas as an example. The liaison in Texas is Claire. It notes that she has an upcoming presentation at the Texas GIS forum, however it also notes that attendance at that event is limited to Forum attendees. If you were interested in a public meeting specific to a select region of Texas you may wish to contact Claire to discuss other opportunities to schedule such a gathering in Texas.

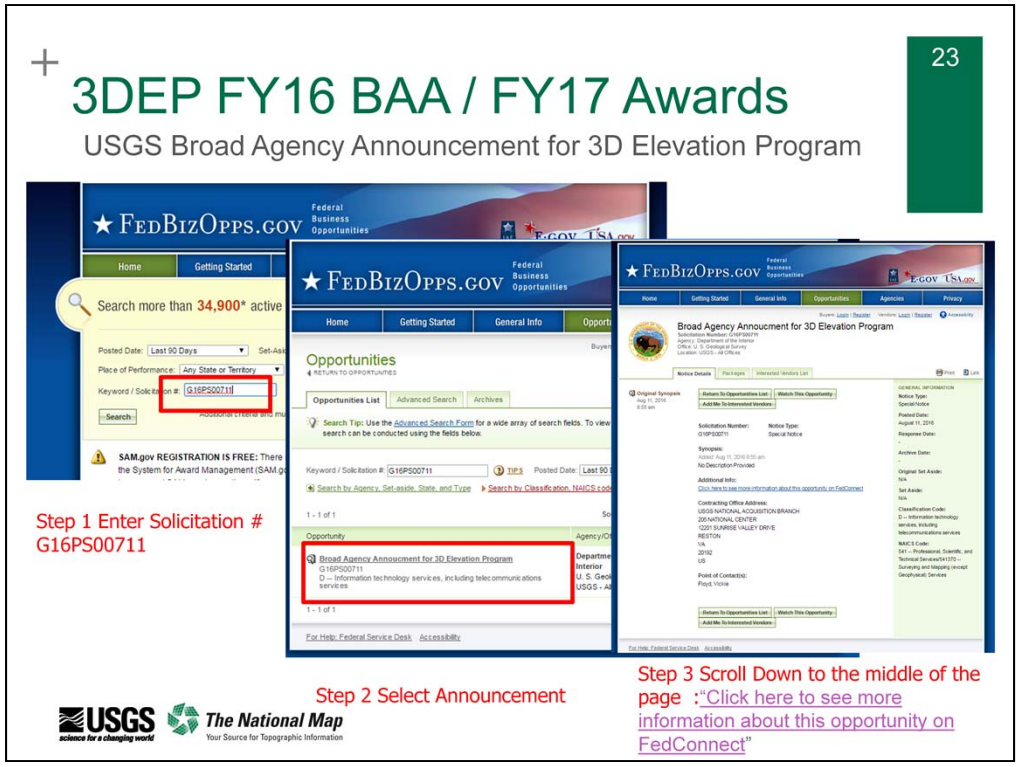
Please note that our liaisons have limited ability to travel but are masters at facilitating virtual meetings.



Continuing across the timeline … as I noted earlier the BAA was released August 11th .

The announcement is available through both FedBizOpps and Grants.gov.

These links provide you application instructions along with access to all of the appropriate application documents. As the procedure for downloading the attachments on the FedBizOpps site is not readily apparent, we will walk through it.



Go to the FedBizOpps website.

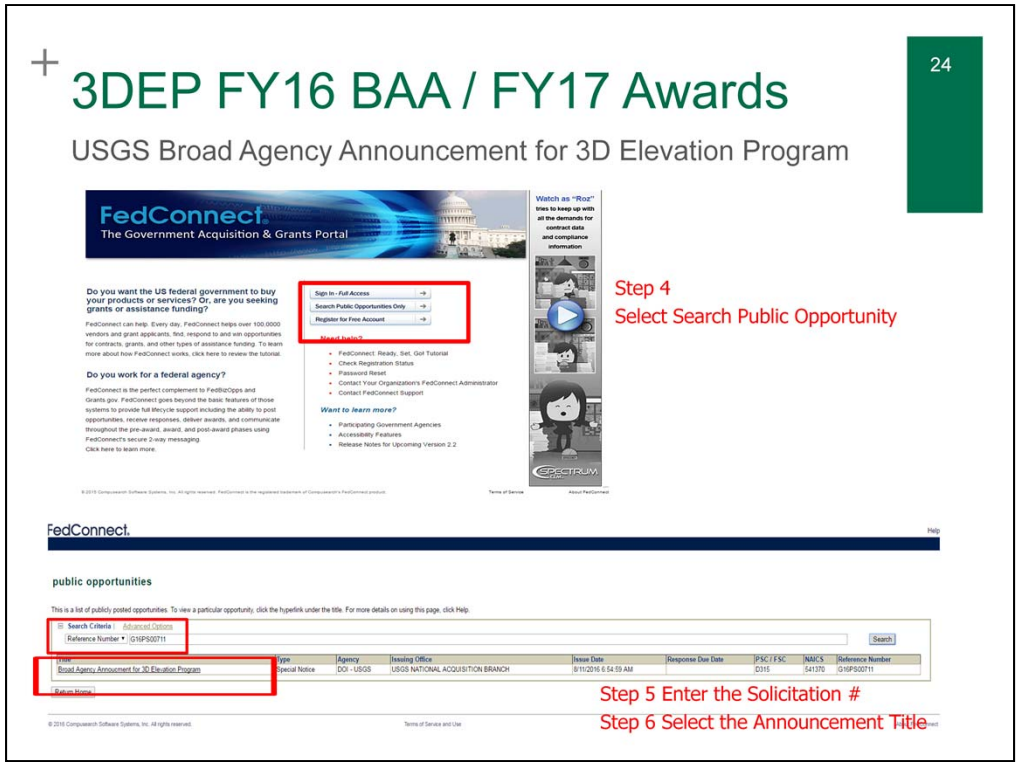
You will see an option for entering a Keyword or the Solicitation #. Enter the number G16PS00711 and Select the Search button.

You also have the option to enter keywords such as USGS 3D Elevation Program to direct you to the announcement.

As I entered the Solicitation # only one option appears. Select the Announcement, this will bring up the actual text.

Scroll down to the middle until you see Additional Info: Click here to see more information about this opportunity on FedConnect.

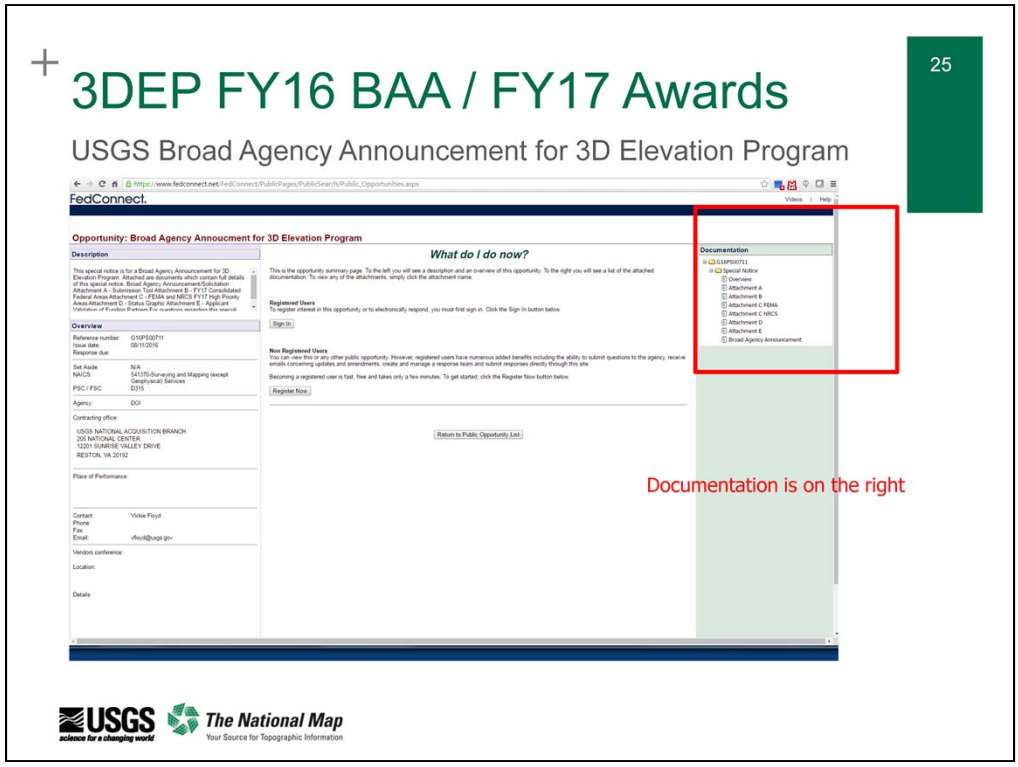
Click on this link which will take you to FedConnect.



In FedConnect you will see an option for “Search Public Opportunities” (the middle of the three options), which you select.

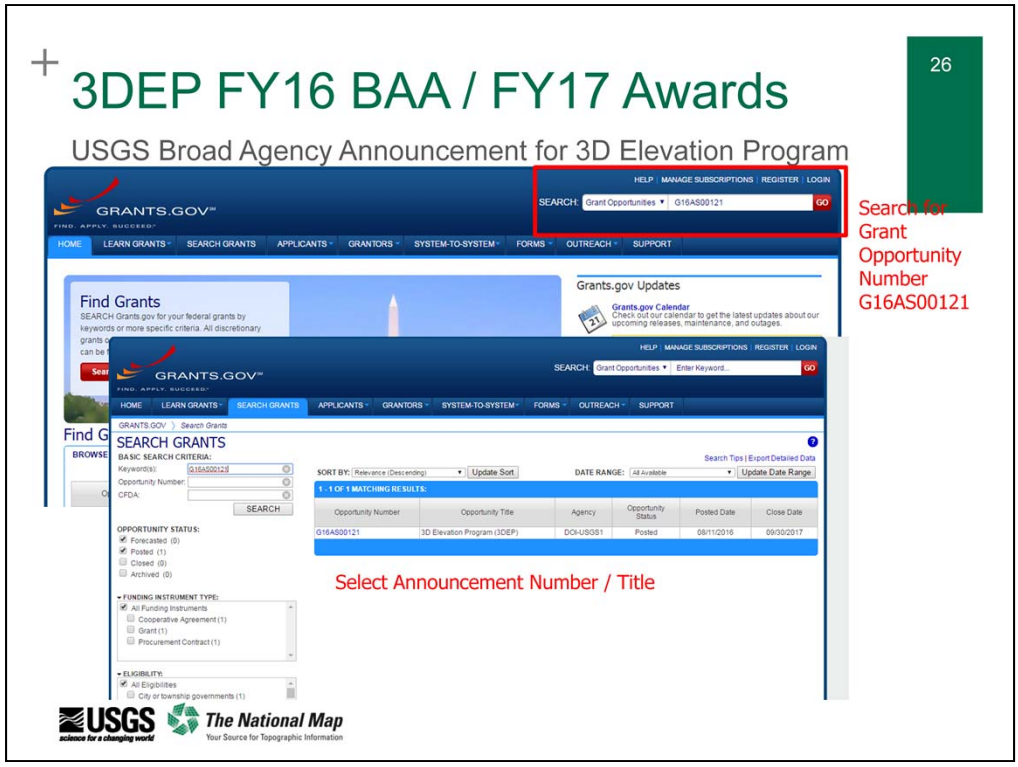
From there you will enter the Solicitation Number G16PS00711 which will bring up the Announcement Title.

When you select the title you are finally taken to the location where you can download the solicitation and all the documents.



The documentation is on the right.

There is one other option for securing the solicitation, two other options for securing the attachments.

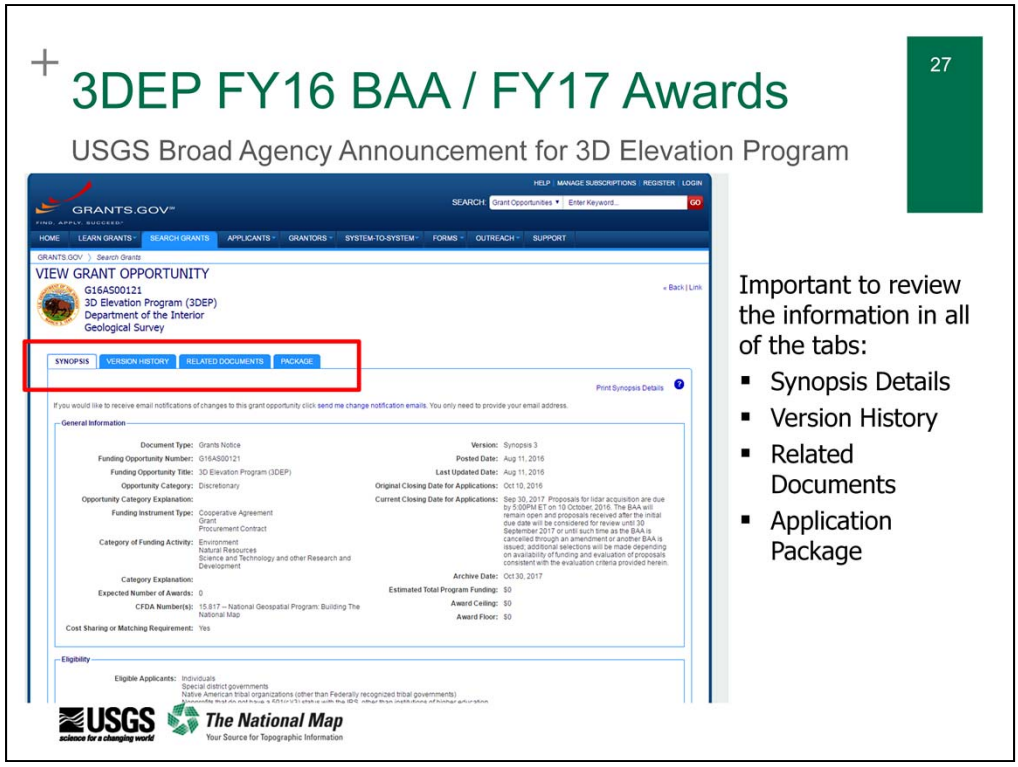


The information is also available in Grants.gov.

To access the information go to Grants.gov.

In the upper right corner you will see an option to search for the grant opportunity. Enter G16AS00121 (note that the FedBizOpps and grants.gov numbers are different) A new screen will appear with the Announcement Title.

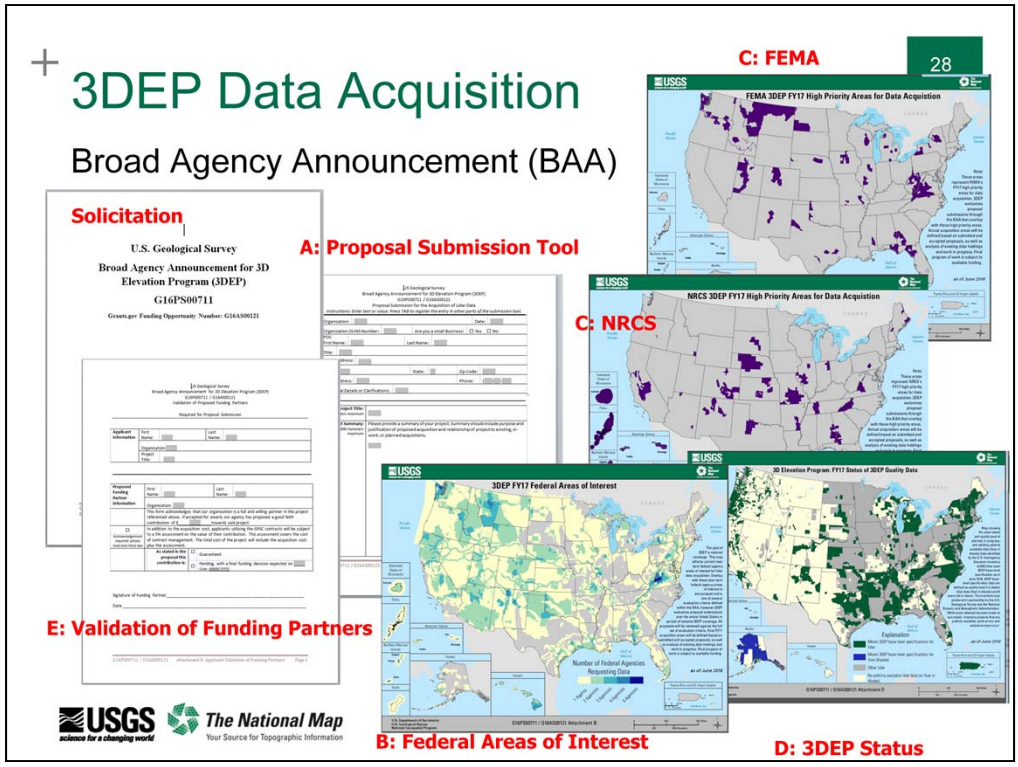
Continuing to Select the Announcement Number and Title will direct you to the opportunity details.



And you get to the detailed project information. It is important to review the information in each of the tabs. The “Synopsis Details” provides an overview of the opportunity. The “Version History” alerts you to any changes or updates to the solicitation. The “Related Documents” is where you will find all of the attachments. And very important for those selecting to apply for a cooperative agreement, the “Application package” details the process you must go through to apply for a cooperative agreement.

Some of you may have questions on when you need to use the grants.gov web site. The grants.gov website must be used by those of you who are requesting a cooperative agreement. Please hold that thought and we will return to that question in just a few minutes.

Lets take a quick look at the documentation:



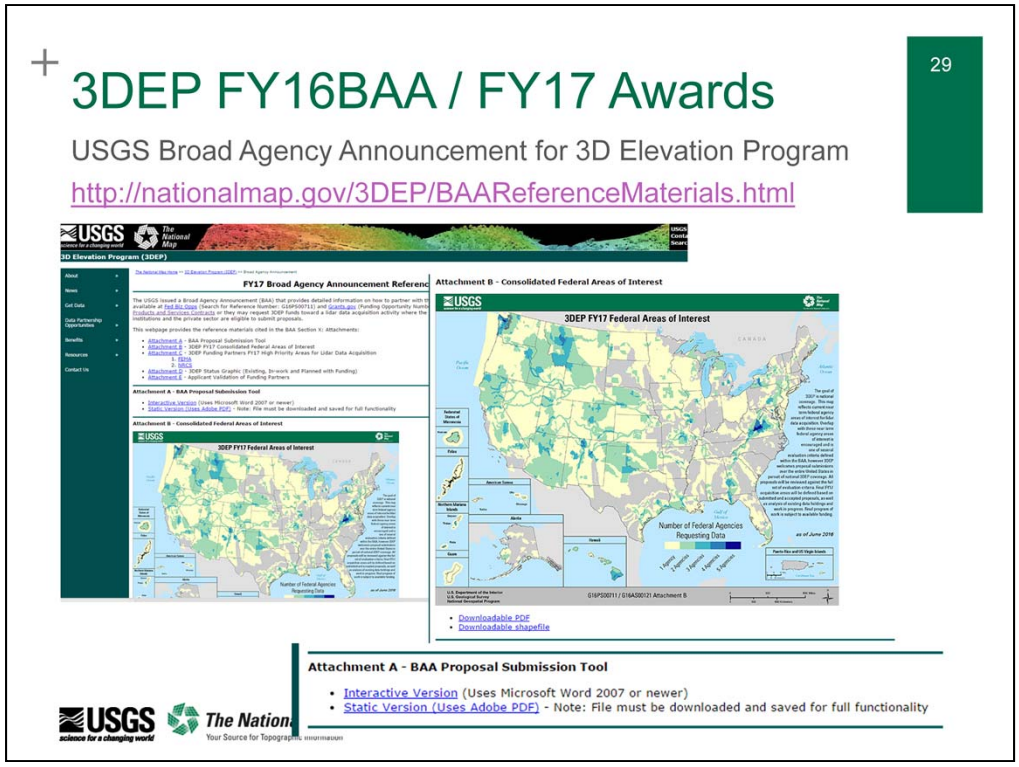
Which is all this.

The documentation consist of:

- The Solicitation
- Attachment A Proposal Submission Tool
- Attachment B 3DEP FY17 Consolidated Federal Areas of Interest
- Attachment C 3DEP Funding Partners FY17 High Priority Areas for Lidar Data Acquisition Part 1 (FEMA)
- Attachment C 3DEP Funding Partners FY17 High Priority Areas for Lidar Data Acquisition Part 2 (NRCS)
- Attachment D 3DEP Status Graphic (Existing, In-work and Planned with Funding projects)
- Attachment E Applicant Validation of Funding Partners

We will briefly touch on the importance of each of these documents.

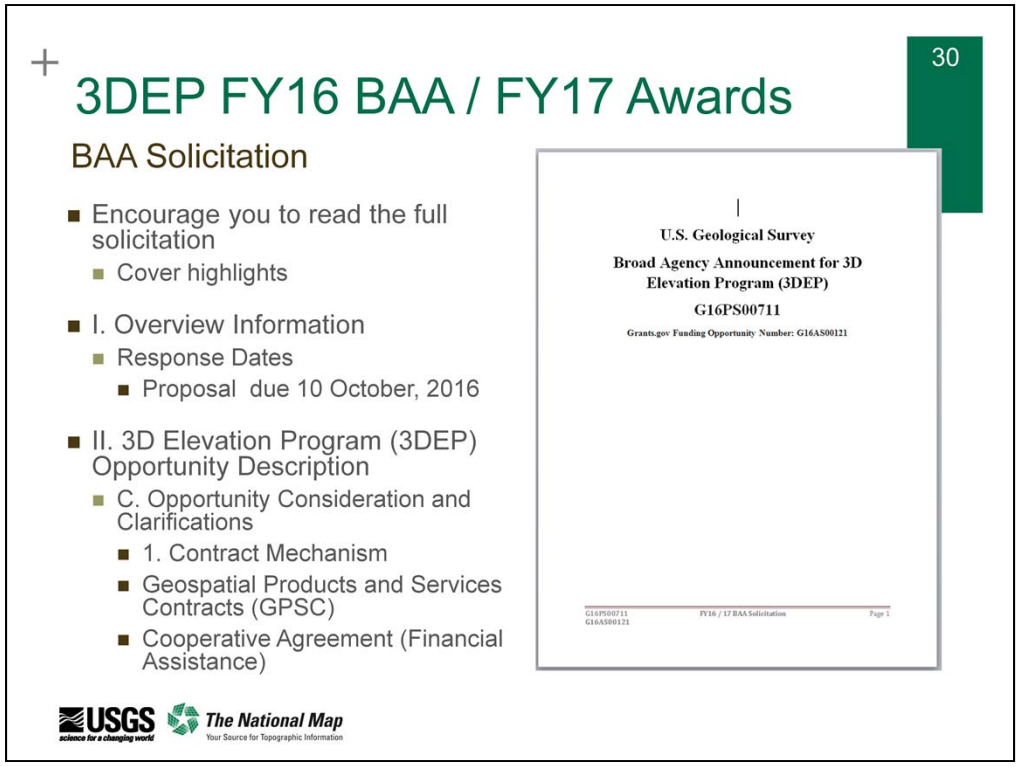
Bur first a quick note of the 3rd location from which you can download the attachments.



The Attachments are also available on our USGS web pages. Note the link above. A couple of important notes.

For the graphics – the attachments can be downloaded as a PDF or as a shapefile.

For the forms – two options will be available: The interactive version and a static version, both versions will be accepted and the type of form you use has no bearing on the consideration of your proposal for award.



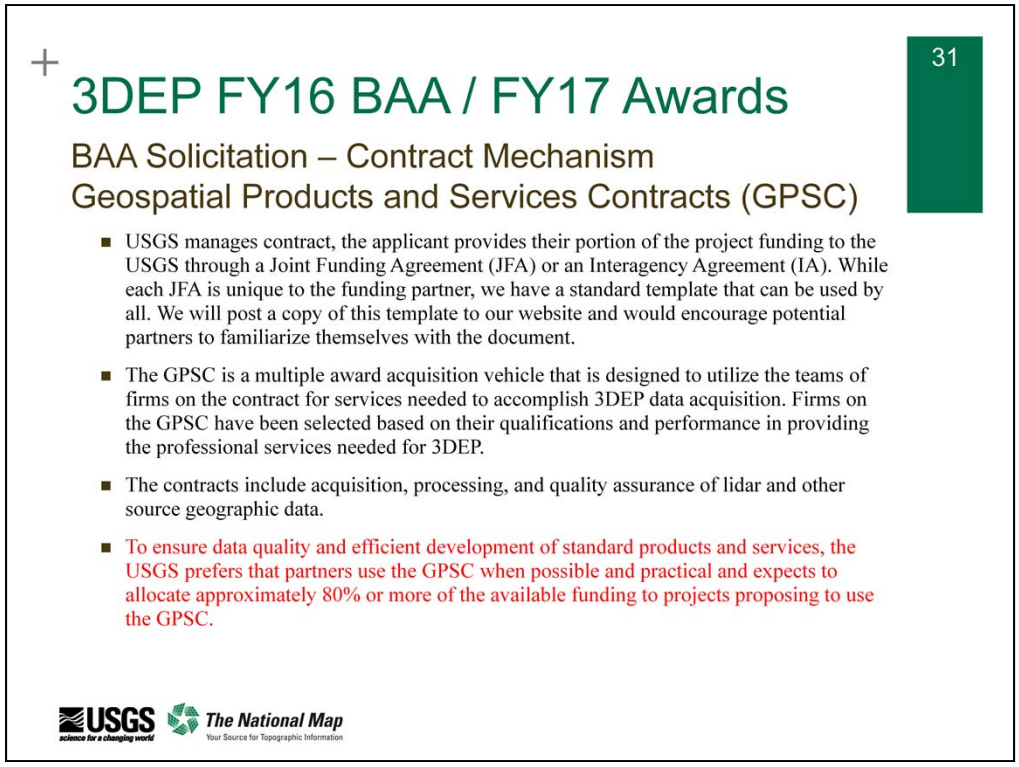
So lets take a look at the solicitation.

First of all we encourage you to read the full solicitation. Today's presentation will cover the highlights. Time does not allow us to cover every detail, however as an applicant you are responsible for all of the material included within the BAA.

What are the proposal deadlines. Full Proposals are due on October 10th. For those of you familiar with our program, you will note that we have eliminated the pre- proposal stage. Applicants are now only required to submit one proposal to be considered for award.

The program offers applicants two different contract mechanisms.

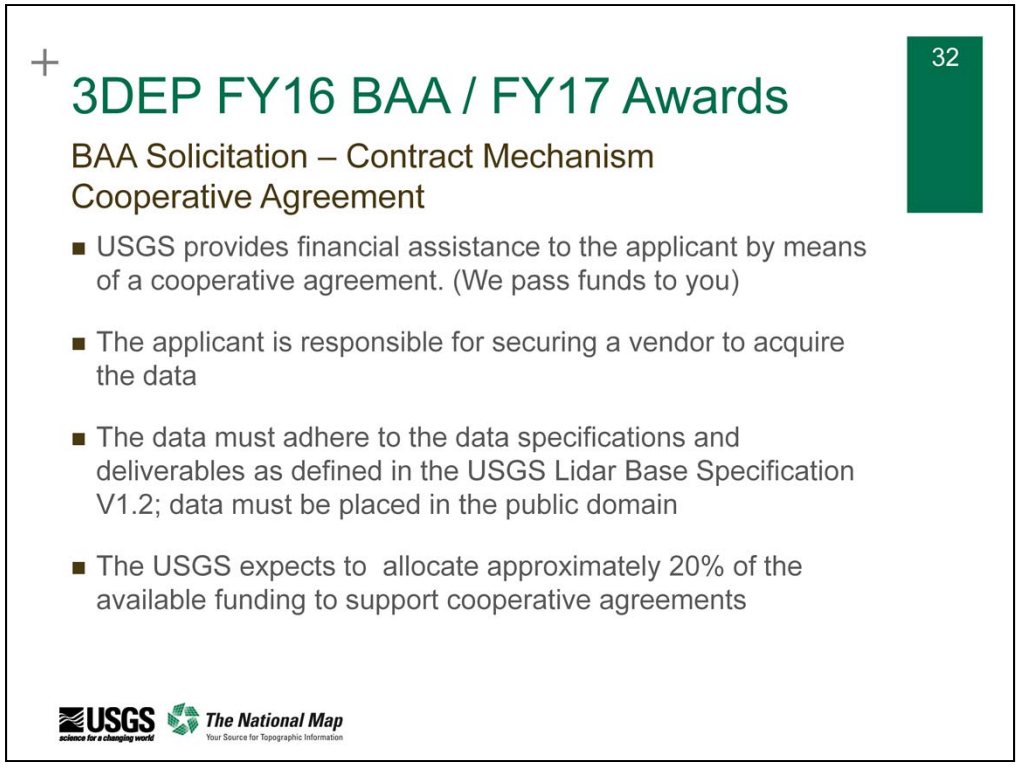
Applicants may choose to make use of the USGS Geospatial Products and Services Contracts or they may choose to apply for Financial Assistance in the form of a cooperative agreement



First the Geospatial Products and Services Contract

For this option:

(Read from above)



The second option is where the USGS provides financial assistance to the applicant by means of a cooperative agreement. (we pass funds to you)

(Read from above)

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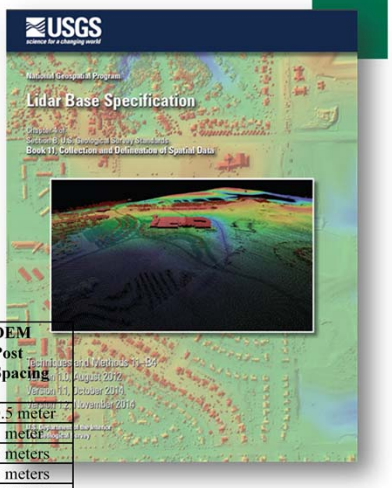
3DEP FY15 BAA / FY16 Awards

BAA Solicitation

- II. 3D Elevation Program Opportunity Description
  - D.3DEP Lidar Base Specifications, Project Deliverables and Upgrade Options
    - http://pubs.usgs.gov/tm/11b4
  - Must meet QL2 specifications



Quality Level	Source	Vertical Accuracy RMSEz	Nominal Pulse Spacing (NPS)	Nominal Pulse Density (NPD)	DEM Post Spacing
QL1	Lidar	10 cm	0.35 m	8 points/sq. meter	0.5 meter
QL2	Lidar	10 cm	0.7 m	2 points/sq. meter	1 meter
QL3	Lidar	20 cm	1.4 m	0.5 points/sq. meter	2 meters
QL4	Imagery	139 cm	N/A	N/A	5 meters
QL5	Ifsar	185 cm	N/A	N/A	5 meters

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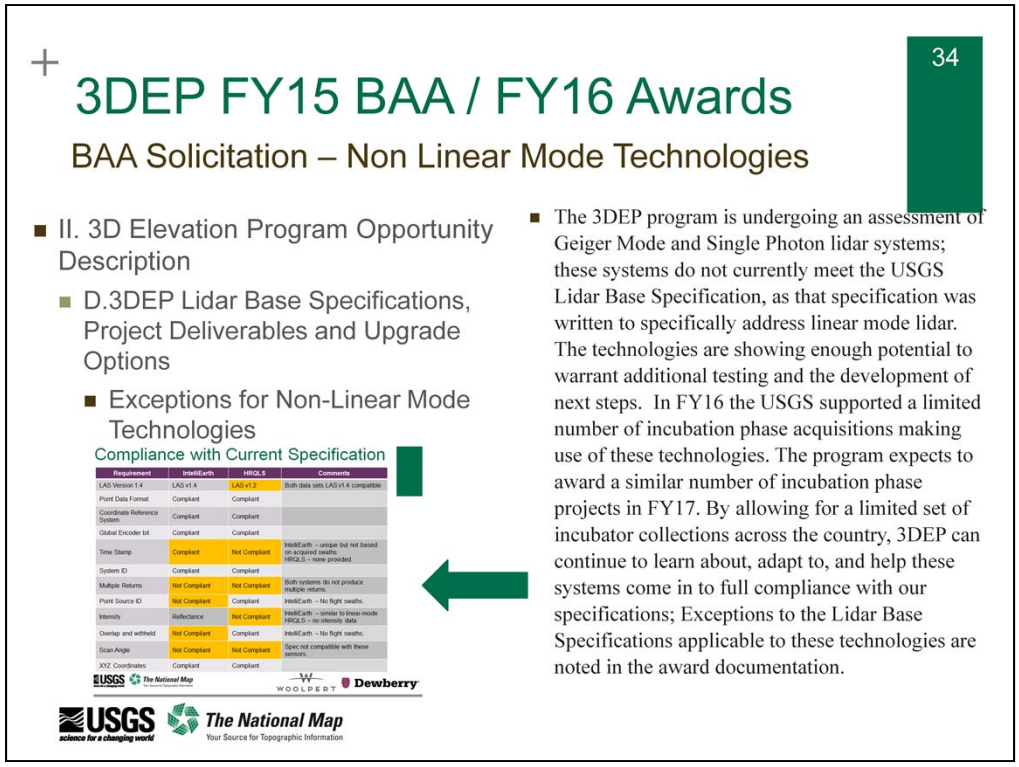
Continuing our walk through of the solicitation,

As we just mentioned all data must adhere to the Lidar Base Specification V1.2. This document is available for download form the link noted here. USGS technical experts are available to answer questions related to the specification.

The 3DEP program collects data to the QL2 specs noted above. The 3DEP goal is to secure funding to provide a nationally consistent dataset. Our funds our designated to support a QL2 collection. However we acknowledge that some partners desire more detailed data. Upgrades to QL1 are available however the applicant is responsible for the cost of the upgrade.



The USGS continues to receive questions about the inclusion of new technologies within the portfolio of systems acceptable to 3DEP

Read from above

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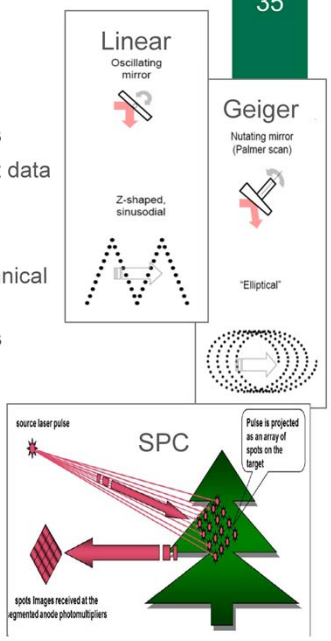
Emerging lidar platforms

- Geiger Mode and Single Photon Counting (SPC) lidar are becoming more widely used and requested by 3DEP partners
  - Higher altitude equates to broader coverage, more efficient data acquisition
  - Greater point density
- Assessment of data from these platforms identified initial technical challenges that impact immediate adoption by 3DEP
  - Non-compliance with current lidar acquisition specifications
  - Range walk
  - Foliage penetration
  - Absolute accuracies
- Both companies say these are legacy issues that have been or will be resolved
- USGS will continue to assess these technologies in an incubation period, with the goal to mature these technologies for operational use in 3DEP



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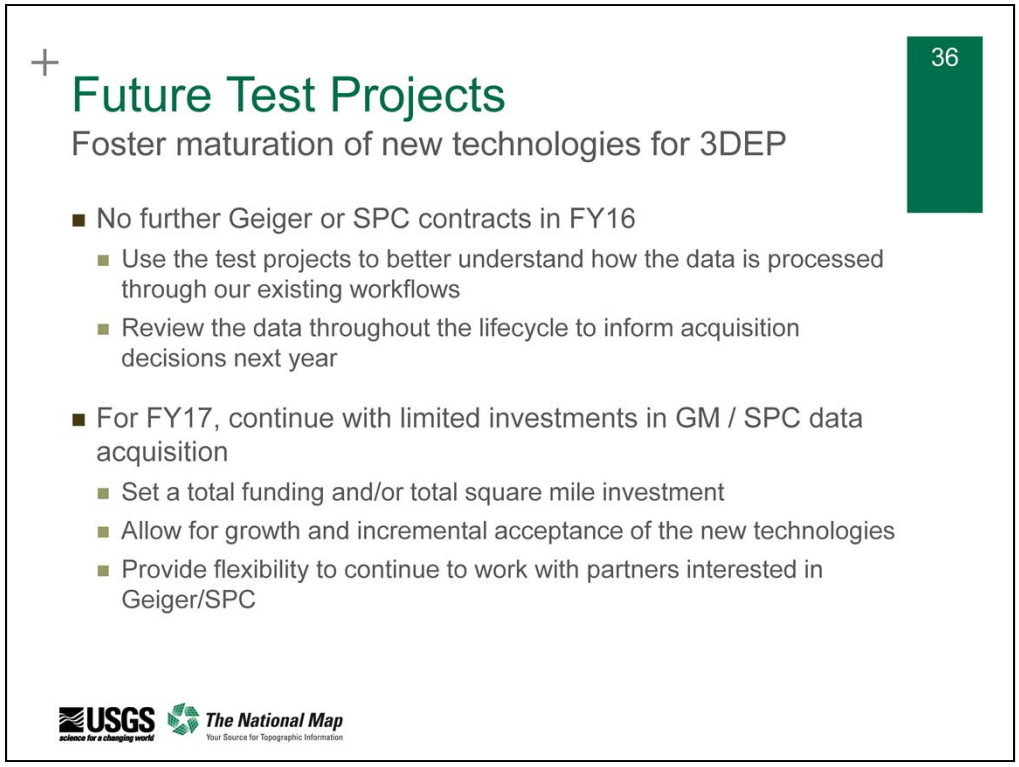
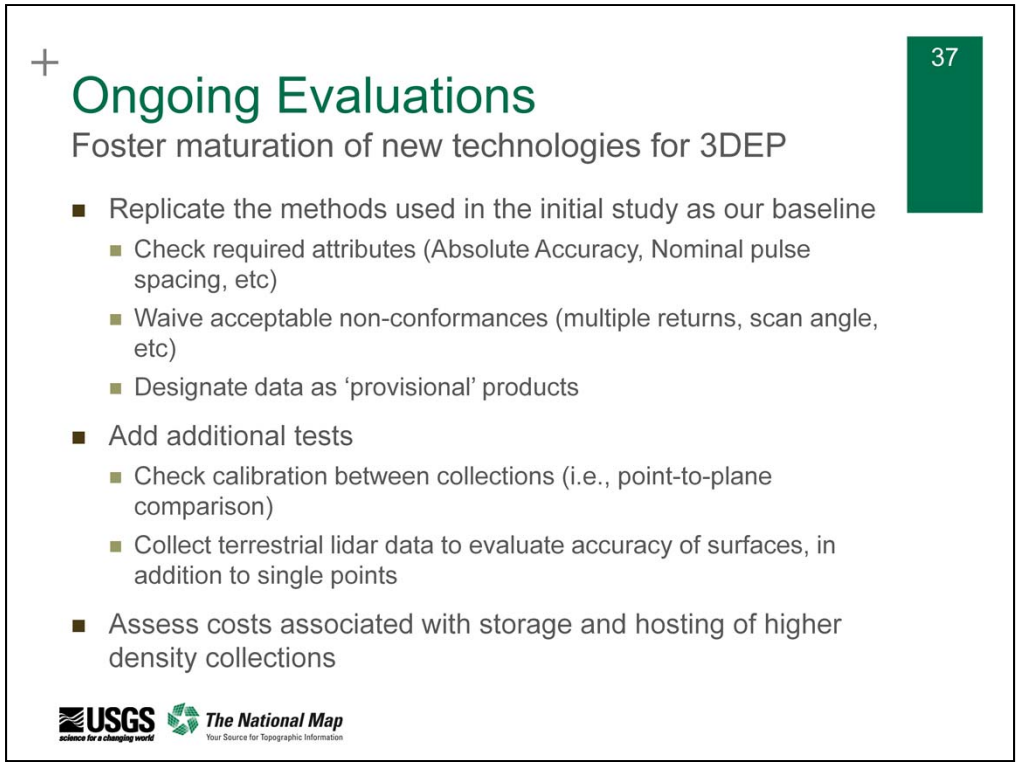
Just a few additional notes on these technologies



In 2016, we supported three projects, selecting projects in different geographic areas and with diverse landscapes (urban, open areas with limited vegetation, forested areas). Evaluation of these data will determine the utility of these technologies to acquire data to 3DEP specifications over diverse landscapes.

We were not in a position to support all FY16 applications who wished to use one of these new technologies. Applicants were provided feedback that encouraged them to either put in a new submission requesting the use of traditional linear mode lidar systems or resubmit in the future as the technologies continue to mature.



Today's presentation is not designed to provide a detailed discussion of these or other emerging technologies.

However our program is proactively engaged in fostering the maturation of new technologies for 3DEP.

We continue to work with our industry partners on the evaluation of all emerging technologies.

You are also reminded that the 3DEP program must assess the cost of storage and hosting higher density collections.

Managing our 3DEP technology portfolio

- Position 3DEP to proactively assess and evaluate new technology
  - Sensor technologies
  - Processing, storage, and delivery architecture
- Communicate our needs/requirements in a technology agnostic way - regardless of platform we need data that can collect:
  - 2x3D measurements per square meter
  - Be vertically accurate to within 10 cm RMSE
  - Resolve both bare earth and non bare earth features
- Specification is a living document to allow innovation while retaining standard, consistent 3D data nationwide

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Managing our 3DEP technology portfolio

- Ongoing evolution in technologies we may want to leverage
  - SfM (structure from motion)
  - Topobathy sensors
  - Multi-wavelength lidar (Optech's TITAN)- 3 lasers, 3 detectors
  - Waveform lidar
  - Lidar from other kinematic platforms (UAS, mobile mappers)
  - Imagery-derived elevation models
- Need a transparent, repeatable process to answer the question: **Does this instrument produce data that meets 3DEP requirements both technically and programmatically?**

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3DEP FY16 BAA / FY17 Awards

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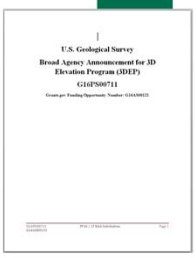
BAA Solicitation


U.S. Geological Survey
Broad Agency Announcement for 3D Elevation Program (3DEP)
G16PS00711

- IV. Eligibility Information
  - B. Cost Share, Minimum non-Federal Match for Cooperative Agreements, Project Scope

The implementation model for 3DEP is based on multi-agency partnership funding for acquisition. Applicants **must** commit to a cost share for their project to be considered for funding. Cost share (funds contributed by applicant) is an evaluation factor against which proposals are rated. The greater the applicant's cost share, the greater the score for this factor. In 2016, the average BAA award covered 38% of the total project cost, resulting in an average cost share of 62% by award recipients. Project awards ranged from $8,388 to $797,472, with an average award of $330,261.

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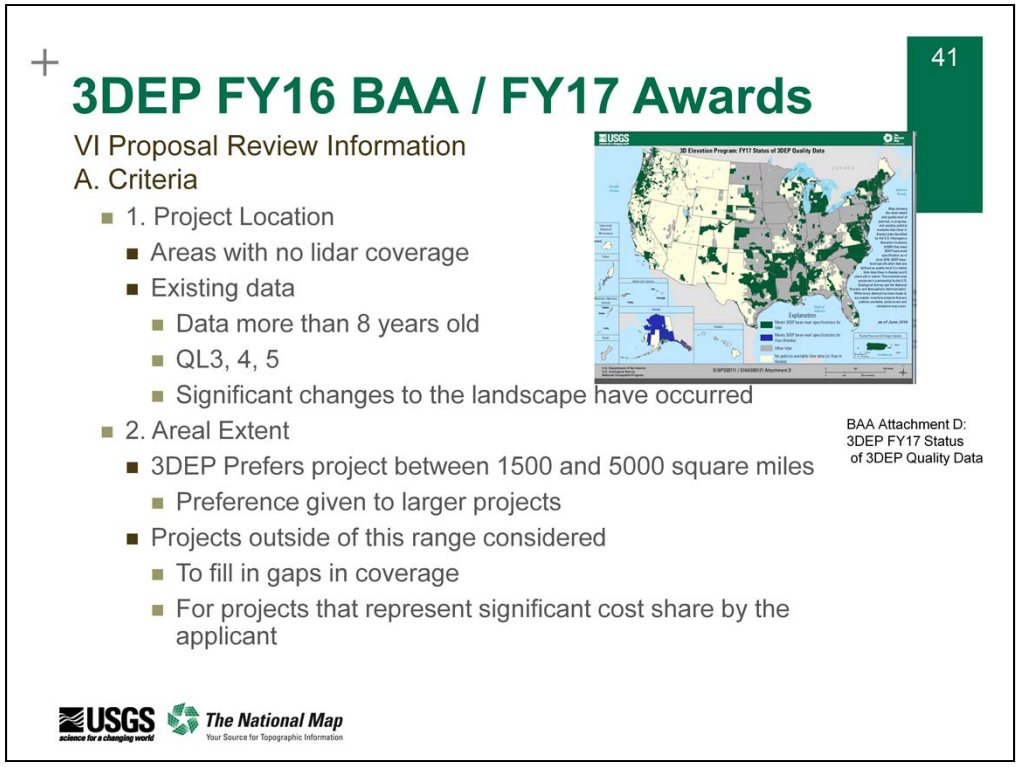
Returning to our discussion of the BAA criteria, cost share is an important evaluation criteria

(Read from above)



Project Location is an important criteria. The program's first consideration is to acquire data in geographic areas where no lidar data exist.

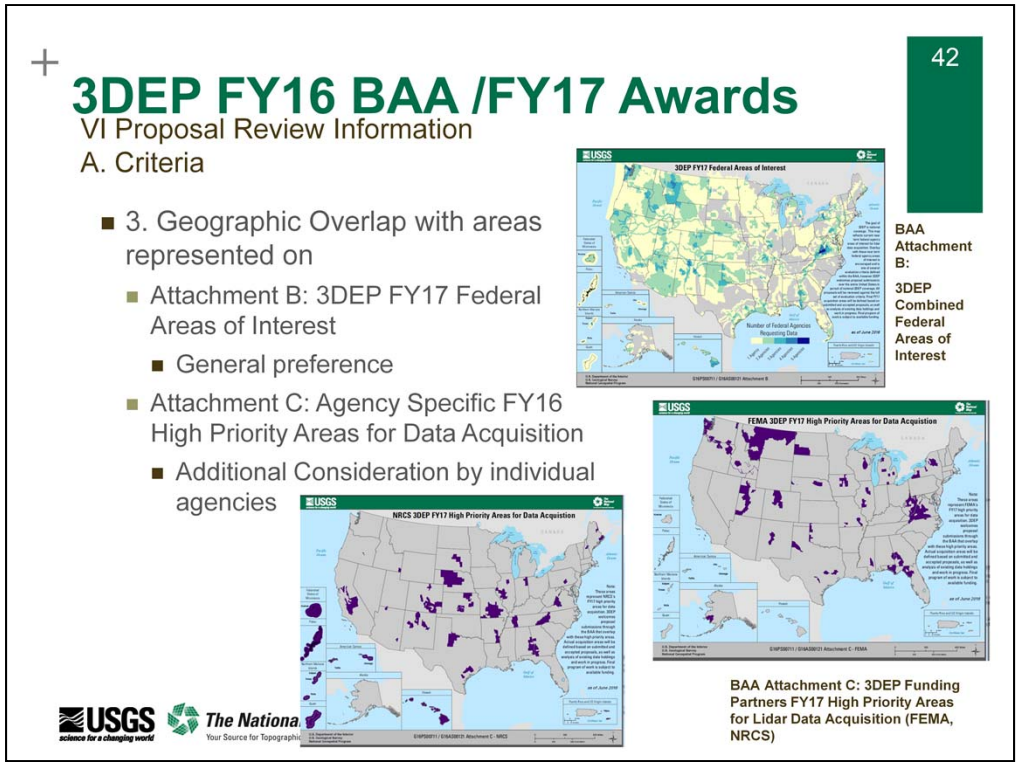
The program will consider new acquisitions if the existing lidar data is:

- Older than 8 years
- QL3, 4 or 5
- Or if the proposed acquisition covers areas over which significant changes to the landscape have occurred.

The program also looks at Areal Extent.

The program prefers projects between 1500 and 5000 square miles. Within this range preference is given to larger projects.

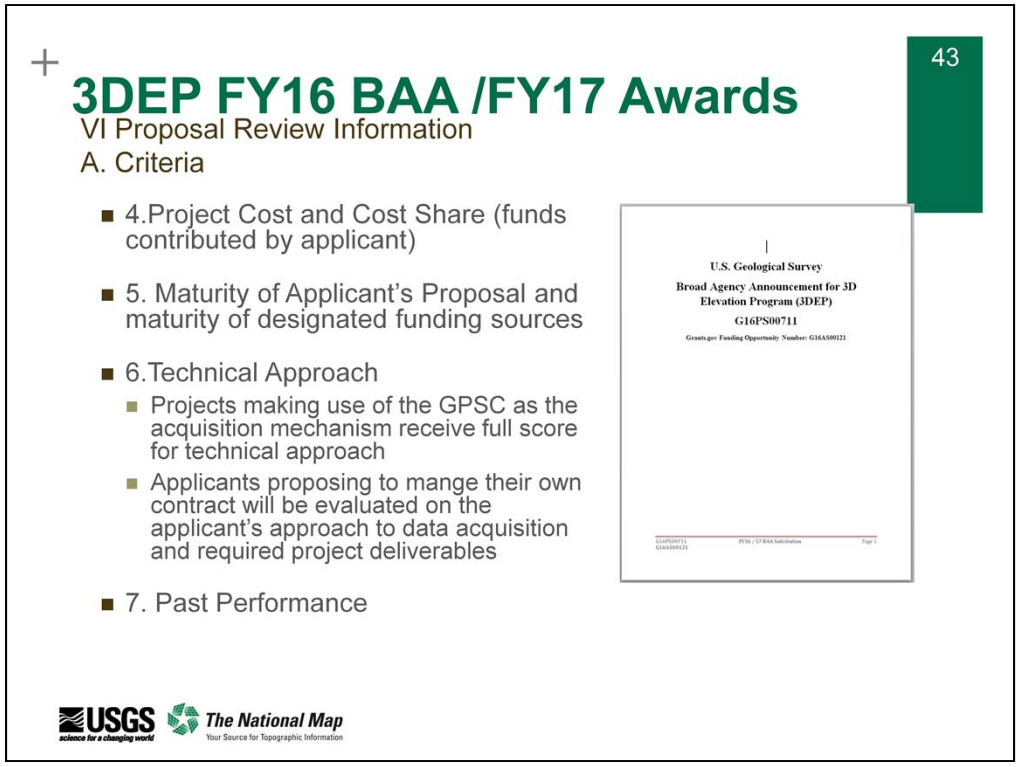
The program will consider projects outside of this range to fill in gaps in coverage or for projects that bring considerable funding (large cost share) to the table.



An additional criteria is geographic overlap with areas represented on either Attachment B – the 3DEP Combined Federal Areas of interest or Attachment C – the agency specific FY17 high priority areas for data acquisition.

General preference is given to project areas that overlap any of the federal areas of interest, however we do want to note that as 3DEP is a national program we encourage proposals over any portion of the US to include our territories.

Both FEMA and the NRCS have provided funds to the USGS in support of the 3DEP program to be used to help fund projects submitted through the BAA. While both agencies are united in their support for national coverage, they are particularly looking for BAA proposals that align (overlap or are adjacent to) with their high priority areas for data acquisition. Both FEMA and NRCS have active regional and state offices with interest in the acquisition of lidar data. We would encourage you to reach out to those POCs (available through SeaSketch) to look for partnership opportunities. Federal agencies participate in the BAA through both their state and regional offices and through their national offices.



The rest of the criteria:

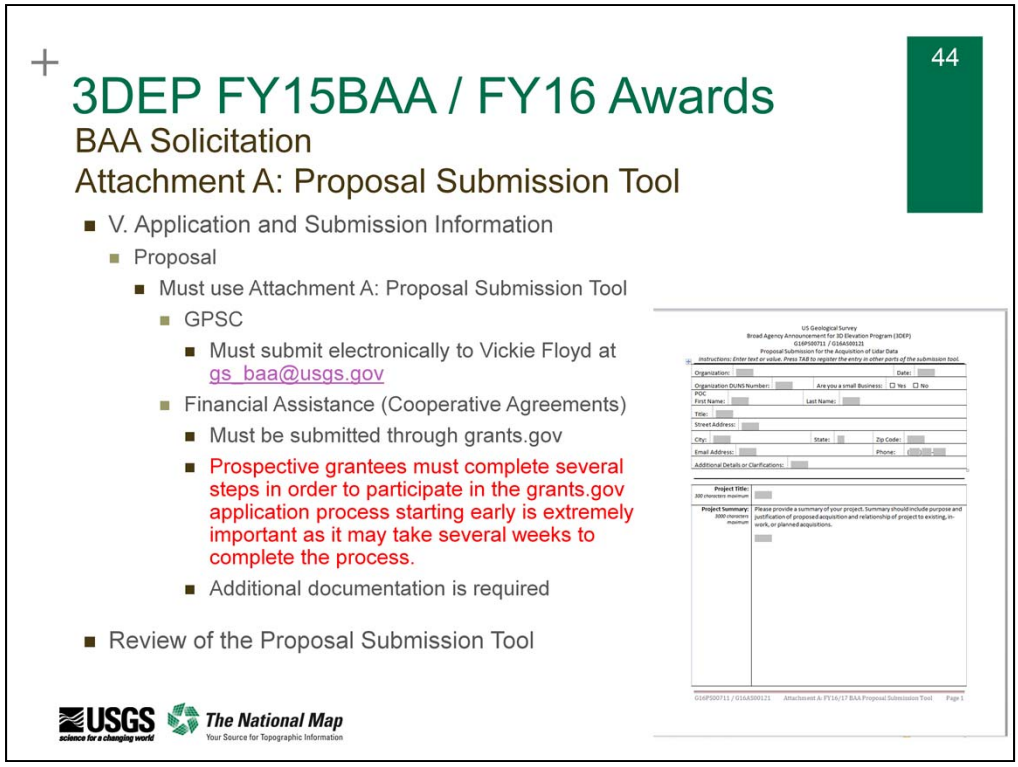
We will consider overall project cost and the applicant's proposed cost share.

We will look at the maturity of the applicant's proposal and the maturity of the designated funding sources.

We will look at the Technical Approach. Projects making use of the GPSC as the acquisition mechanism receive full score for technical approach. Applicants proposing to mange their own contract will be evaluated on the applicant's approach to data acquisition and the required project deliverables.

Finally we reserve the right to look at the past performance of both the applicant and the vendor they are proposing to use to acquire the data (part of the technical evaluation)

Project Cost, cost share and the maturity of your funding will be noted in the application forms- so lets take a look at these.



Just a note on the proposal submission.

Those proposing to use the GPSC submit their proposals to the USGS contracting office at the e-mail noted above gs_baa@usgs.gov).

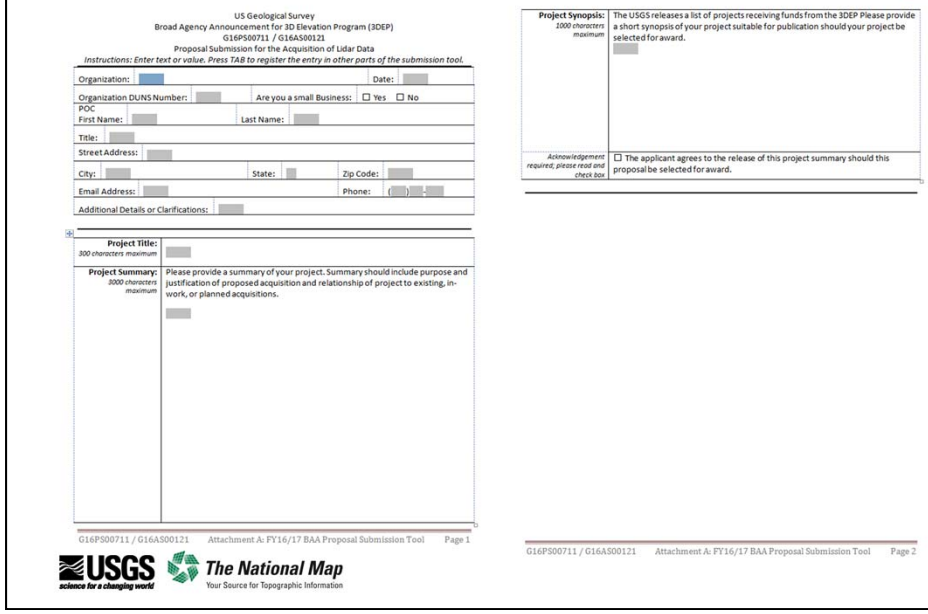
Those requesting financial assistance must submit their proposal through grants.gov.

Prospective grantees (generic term for those applying for a cooperative agreement) must complete several steps in order to participate in the grants.gov application process SO starting early is extremely important as it may take several weeks to complete the process.

For cooperative agreement applicants, In addition to the proposal template, additional documentation is required . You will recall that when we were looking at the grants.gov site their was a tab called “Application Package”. Applicant’s applying for a cooperative agreement must follow the instructions located in this tab.

3DEP FY16BAA / FY17 Awards

BAA Solicitation Attachment A: Proposal Submission Tool



US Geological Survey
Broad Agency Announcement for 3D Elevation Program (3DEP)
G16PS00711 / G16AS00121
Proposal Submission for the Acquisition of Lidar Data

Instructions: Enter text or value. Press TAB to register the entry in other parts of the submission tool.

Organization: Date:
Organization DUNS Number: Are you a small Business: ☐ Yes ☐ No
POC First Name: Last Name:
Title:
Street Address:
City: State: Zip Code:
Email Address: Phone:
Additional Details or Clarifications:

Project Title: *300 characters maximum*	
Project Summary: *3000 characters maximum*	Please provide a summary of your project. Summary should include purpose and justification of proposed acquisition and relationship of project to existing, in-work, or planned acquisitions.

G16PS00711 / G16AS00121 Attachment A: FY16/17 BAA Proposal Submission Tool Page 1

Project Synopsis: *1000 characters maximum*	The USGS releases a list of projects receiving funds from the 3DEP Please provide a short synopsis of your project suitable for publication should your project be selected for award.
Acknowledgement required; please read and check box	☐ The applicant agrees to the release of this project summary should this proposal be selected for award.

G16PS00711 / G16AS00121 Attachment A: FY16/17 BAA Proposal Submission Tool Page 2

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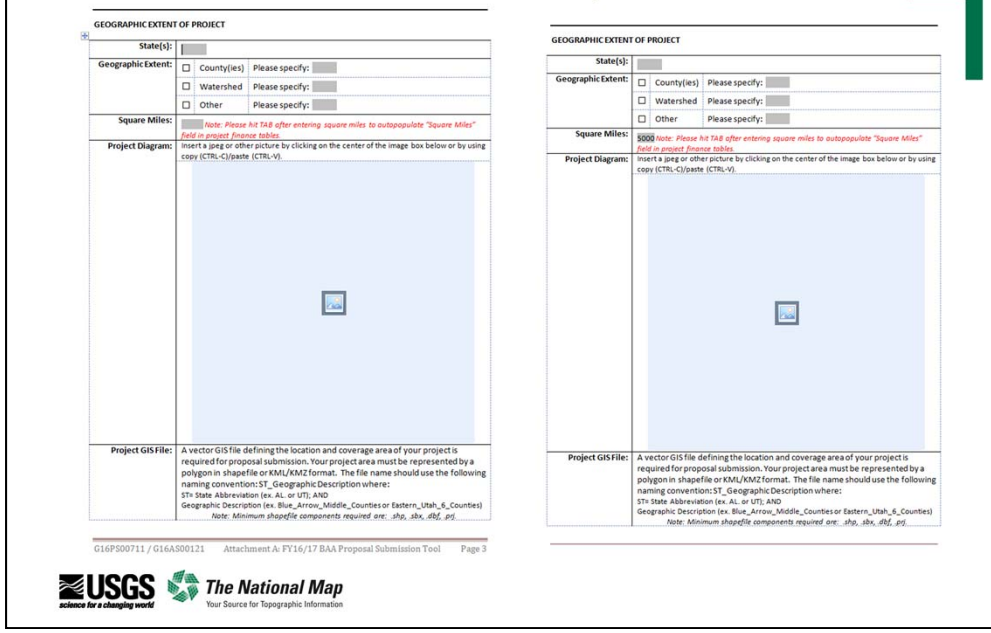
Walk through the proposal submission tool

3DEP FY16BAA / FY17 Awards

BAA Solicitation Attachment A: Proposal Submission Tool



GEOGRAPHIC EXTENT OF PROJECT

State(s):		
Geographic Extent:	☐ County(ies)	Please specify:
	☐ Watershed	Please specify:
	☐ Other	Please specify:
Square Miles:		*Note: Please hit TAB after entering square miles to autopopulate "Square Miles" field in project finance tables.*
Project Diagram:	Insert a jpeg or other picture by clicking on the center of the image box below or by using copy (CTRL-C)/paste (CTRL-V).	
Project GIS File:	A vector GIS file defining the location and coverage area of your project is required for proposal submission. Your project area must be represented by a polygon in shapefile or KML/KMZ format. The file name should use the following naming convention: ST_Geographic Description where: ST= State Abbreviation (ex. AL. or UT); AND Geographic Description (ex. Blue_Arrow_Middle_Counties or Eastern_Utah_6_Counties) *Note: Minimum shapefile components required are: .shp, .sbx, .dbf, .prj.*	

G16PS00711 / G16AS00121 Attachment A: FY16/17 BAA Proposal Submission Tool Page 3

GEOGRAPHIC EXTENT OF PROJECT

State(s):		
Geographic Extent:	☐ County(ies)	Please specify:
	☐ Watershed	Please specify:
	☐ Other	Please specify:
Square Miles:	5000	*Note: Please hit TAB after entering square miles to autopopulate "Square Miles" field in project finance tables.*
Project Diagram:	Insert a jpeg or other picture by clicking on the center of the image box below or by using copy (CTRL-C)/paste (CTRL-V).	
Project GIS File:	A vector GIS file defining the location and coverage area of your project is required for proposal submission. Your project area must be represented by a polygon in shapefile or KML/KMZ format. The file name should use the following naming convention: ST_Geographic Description where: ST= State Abbreviation (ex. AL. or UT); AND Geographic Description (ex. Blue_Arrow_Middle_Counties or Eastern_Utah_6_Counties) *Note: Minimum shapefile components required are: .shp, .sbx, .dbf, .prj.*	

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Continue the walk through of the proposal submission tool. The blank template is on the left, a template with the square miles entered is on the right.

3DEP FY16BAA / FY17 Awards

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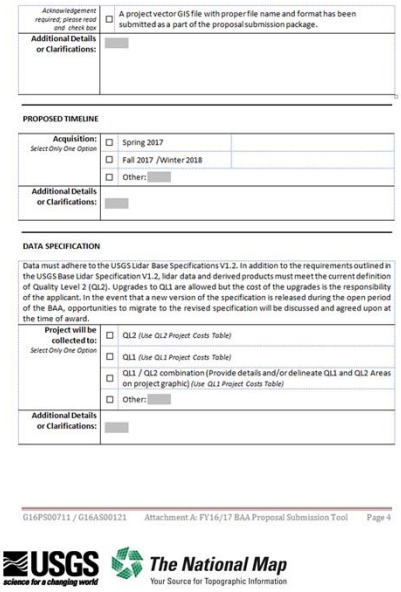
BAA Solicitation Attachment A: Proposal Submission Tool



Acknowledgement required; please read and check box	☐	A project vector GIS file with proper file name and format has been submitted as a part of the proposal submission package.
Additional Details or Clarifications:		

PROPOSED TIMELINE

Acquisition: *Select Only One Option*	☐	Spring 2017
	☐	Fall 2017 /Winter 2018
	☐	Other:
Additional Details or Clarifications:		

DATA SPECIFICATION

Data must adhere to the USGS Lidar Base Specifications V1.2. In addition to the requirements outlined in the USGS Base Lidar Specification V1.2, lidar data and derived products must meet the current definition of Quality Level 2 (QL2). Upgrades to QL1 are allowed but the cost of the upgrades is the responsibility of the applicant. In the event that a new version of the specification is released during the open period of the BAA, opportunities to migrate to the revised specification will be discussed and agreed upon at the time of award.

Project will be collected to: *Select Only One Option*	☐	QL2 *(Use QL2 Project Costs Table)*
	☐	QL1 *(Use QL1 Project Costs Table)*
	☐	QL1 / QL2 combination (Provide details and/or delineate QL1 and QL2 Areas on project graphic) *(Use QL1 Project Costs Table)*
	☐	Other:
Additional Details or Clarifications:		

G16PS00711 / G16AS00121 Attachment A: FY16/17 BAA Proposal Submission Tool Page 4

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Continue the walk through of the Proposal Submission Tool

3DEP FY16BAA / FY17 Awards

BAA Solicitation Attachment A: Full Proposal

DATA DELIVERABLES

Standard 3DEP deliverables are defined in the USGS Lidar Base Specification V1.2

Final Project Deliverables:	Standard period of performance for lidar acquisition projects is 12 to 24 months. Project deliverables are **required** at the end of the performance period.	
Acknowledgement required; please read and check box	☐	The applicant agrees to provide all project deliverables to the USGS without use restrictions upon final acceptance of the project deliverables from applicant's contractor.
Additional Products and Services: *Select Only One Option*	Additional products and services are available. The cost of additional products is the responsibility of the applicant	
	☐	The applicant does not require any additional products or services
	☐	The applicant anticipates the need for additional products and services generated from the lidar data. For those applicants proposing to use the Geospatial Products and Services contracts, additional products may be selected after award during the task order estimation process. The costs of the products will be identified at that time and if the applicant requires these products, the cost of the products will be added to their funding agreement. For applicants proposing to manage their own contract for data acquisition, the cost of these products should not be included in your 3DEP funding request

APPROACH TO DATA ACQUISITION

Mechanism: *Select Only One Option*	☐	**USGS Geospatial Products and Services Contract (GPSC)** Applicant enters into agreement with the USGS GPSC to procure data. The USGS National Geospatial Program's preferred method of data acquisition is through the GPSC, a multiple award acquisition vehicle that is designed to utilize the teams of firms on the contract for services needed to accomplish 3DEP data acquisition.
	☐	**Cooperative Agreement** Applicant manages data procurement (detail technical approach below).
Technical Approach (Cooperative Agreement): *3000 characters maximum*	Please provide a qualifications statement describing your proposed technical approach for acquiring and performing quality assurance of lidar data and derived products. Include information on your approach to selecting a vendor. If a vendor has already been selected please provide a brief summary of the vendor's experience and past performance as related to the acquisition and processing of lidar data that meets USGS Base Lidar Specification V1.2	

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Your Source for Topographic Information

Continue the walk through of the proposal submission tool

3DEP FY16BAA / FY17 Awards

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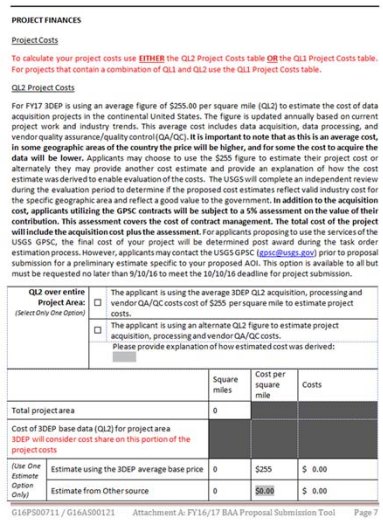
BAA Solicitation Attachment A: Full Proposal



PROJECT FINANCES

Project Costs

To calculate your project costs use **EITHER** the QL2 Project Costs table **OR** the QL1 Project Costs table. For projects that contain a combination of QL1 and QL2 use the QL1 Project Costs table.

QL2 Project Costs

For FY17 3DEP is using an average figure of $255.00 per square mile (QL2) to estimate the cost of data acquisition projects in the continental United States. The figure is updated annually based on current project work and industry trends. This average cost includes data acquisition, data processing, and vendor quality assurance/quality control (QA/QC). **It is important to note that as this is an average cost, in some geographic areas of the country the price will be higher, and for some the cost to acquire the data will be lower.** Applicants may choose to use the $255 figure to estimate their project cost or alternately they may provide another cost estimate and provide an explanation of how the cost estimate was derived to enable evaluation of the costs. The USGS will complete an independent review during the evaluation period to determine if the proposed cost estimates reflect valid industry cost for the specific geographic area and reflect a good value to the government. **In addition to the acquisition cost, applicants utilizing the GPSC contracts will be subject to a 5% assessment on the value of their contribution. This assessment covers the cost of contract management. The total cost of the project will include the acquisition cost plus the assessment.** For applicants proposing to use the services of the USGS GPSC, the final cost of your project will be determined post award during the task order estimation process. However, applicants may contact the USGS GPSC (gpsc@usgs.gov) prior to proposal submission for a preliminary estimate specific to your proposed AOI. This option is available to all but must be requested no later than 9/10/16 to meet the 10/10/16 deadline for project submission.

QL2 over entire Project Area: *(Select Only One Option)*	☐	The applicant is using the average 3DEP QL2 acquisition, processing and vendor QA/QC costs cost of $255 per square mile to estimate project costs.
	☐	The applicant is using an alternate QL2 figure to estimate project acquisition, processing and vendor QA/QC costs.
		Please provide explanation of how estimated cost was derived:

		Square miles	Cost per square mile	Costs
Total project area		0		
Cost of 3DEP base data (QL2) for project area 3DEP will consider cost share on this portion of the project costs				
(Use One Estimate Option Only)	Estimate using the 3DEP average base price	0	$255	$ 0.00
	Estimate from Other source	0	$0.00	$ 0.00

G16PS00711 / G16AS00121 Attachment A: FY16/17 BAA Proposal Submission Tool Page 7

- For FY17, 3DEP is using an average figure of $255 per square mile to estimate overall costs. This figure is updated annually based on current project work and industry trends
- It is important to note that as this is an average national figure, in some geographic areas of the country the price will be higher and in some areas the cost to acquire the data will be lower
- Applicants may choose to use the $255 to estimate their costs or they may provide an alternate estimate provided by a vendor or obtained through interaction with our commercial partnership team (GPSC)
- Applicants utilizing the GPSC will be subject to a 5% assessment on the value of their contribution (the cost of contract management)

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gs_baa@usgs.gov

Continue the walk through of the proposal submission tool.

This information is explained in detail on page 7 of the solicitation. We encourage you to read it in detail. Should you have any additional questions, please submit your questions to gs_baa@usgs.gov.

3DEP FY16BAA / FY17 Awards

BAA Solicitation Attachment A: Full Proposal

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PROJECT FINANCES

Project Costs

To calculate your project costs use **EITHER** the QL2 Project Costs table **OR** the QL1 Project Costs table. For projects that contain a combination of QL1 and QL2 use the QL1 Project Costs table.

QL2 Project Costs

For FY17 3DEP is using an average figure of $255.00 per square mile (QL2) to estimate the cost of data acquisition projects in the continental United States. The figure is updated annually based on current project work and industry trends. This average cost includes data acquisition, data processing, and vendor quality assurance/quality control (QA/QC). **It is important to note that as this is an average cost, in some geographic areas of the country the price will be higher, and for some the cost to acquire the data will be lower.** Applicants may choose to use the $255 figure to estimate their project cost or alternately they may provide another cost estimate and provide an explanation of how the cost estimate was derived to enable evaluation of the costs. The USGS will complete an independent review during the evaluation period to determine if the proposed cost estimates reflect valid industry cost for the specific geographic area and reflect a good value to the government. **In addition to the acquisition cost, applicants utilizing the GPSC contracts will be subject to a 5% assessment on the value of their contribution. This assessment covers the cost of contract management. The total cost of the project will include the acquisition cost plus the assessment.** For applicants proposing to use the services of the USGS GPSC, the final cost of your project will be determined post award during the task order estimation process. However, applicants may contact the USGS GPSC (gpsc@usgs.gov) prior to proposal submission for a preliminary estimate specific to your proposed AOI. This option is available to all but must be requested no later than 9/10/16 to meet the 10/10/16 deadline for project submission.

QL2 over entire Project Area: *(Select Only One Option)*	☐	The applicant is using the average 3DEP QL2 acquisition, processing and vendor QA/QC costs cost of $255 per square mile to estimate project costs.
	☐	The applicant is using an alternate QL2 figure to estimate project acquisition, processing and vendor QA/QC costs. Please provide explanation of how estimated cost was derived:

		Square miles	Cost per square mile	Costs
Total project area		0		
Cost of 3DEP base data (QL2) for project area 3DEP will consider cost share on this portion of the project costs				
(Use One Estimate Option Only)	Estimate using the 3DEP average base price	0	$255	$ 0.00
	Estimate from Other source	0	$0.00	$ 0.00

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PROJECT FINANCES

Project Costs

To calculate your project costs use **EITHER** the QL2 Project Costs table **OR** the QL1 Project Costs table. For projects that contain a combination of QL1 and QL2 use the QL1 Project Costs table.

QL2 Project Costs

For FY17 3DEP is using an average figure of $255.00 per square mile (QL2) to estimate the cost of data acquisition projects in the continental United States. The figure is updated annually based on current project work and industry trends. This average cost includes data acquisition, data processing, and vendor quality assurance/quality control (QA/QC). **It is important to note that as this is an average cost, in some geographic areas of the country the price will be higher, and for some the cost to acquire the data will be lower.** Applicants may choose to use the $255 figure to estimate their project cost or alternately they may provide another cost estimate and provide an explanation of how the cost estimate was derived to enable evaluation of the costs. The USGS will complete an independent review during the evaluation period to determine if the proposed cost estimates reflect valid industry cost for the specific geographic area and reflect a good value to the government. **In addition to the acquisition cost, applicants utilizing the GPSC contracts will be subject to a 5% assessment on the value of their contribution. This assessment covers the cost of contract management. The total cost of the project will include the acquisition cost plus the assessment.** For applicants proposing to use the services of the USGS GPSC, the final cost of your project will be determined post award during the task order estimation process. However, applicants may contact the USGS GPSC (gpsc@usgs.gov) prior to proposal submission for a preliminary estimate specific to your proposed AOI. This option is available to all but must be requested no later than 9/10/16 to meet the 10/10/16 deadline for project submission.

QL2 over entire Project Area: *(Select Only One Option)*	☐	The applicant is using the average 3DEP QL2 acquisition, processing and vendor QA/QC costs cost of $255 per square mile to estimate project costs.
	☐	The applicant is using an alternate QL2 figure to estimate project acquisition, processing and vendor QA/QC costs. Please provide explanation of how estimated cost was derived:

		Square miles	Cost per square mile	Costs
Total project area		5000		
Cost of 3DEP base data (QL2) for project area 3DEP will consider cost share on this portion of the project costs				
(Use One Estimate Option Only)	Estimate using the 3DEP average base price	5000	$255	$1,275,000.00
	Estimate from Other source	5000	$0.00	$ 0.00

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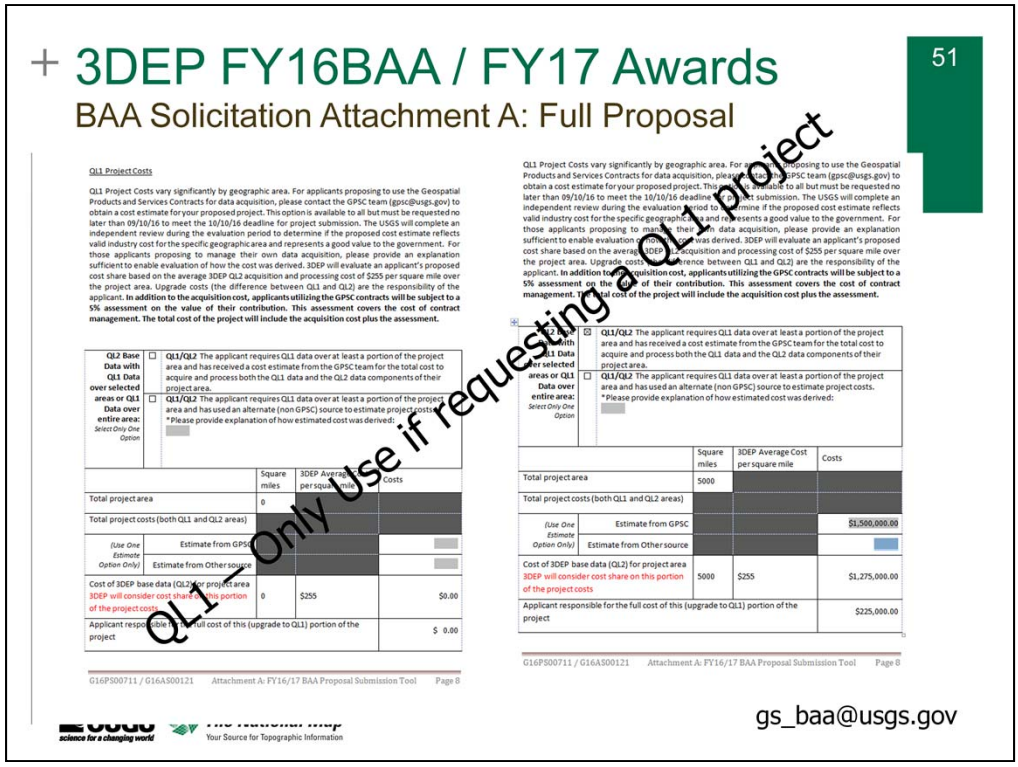
gs_baa@usgs.gov

Continue the walk through of the proposal submission tool. Blank form on the left, an example form on the right illustrating the generation of the estimated cost for a 5000 square mile project,



Continue the walk through of the proposal submission tool.

The QL1 table is used only by those applicants requesting an update to QL1 data. Detailed information is available on page 8 of the solicitation. Should you have questions we encourage you to contact your National Map Liaison who can facilitate your interaction with the USGS commercial partnerships team regarding the potential cost for your project.

You can also submit your questions to gs_baa@usgs.gov

3DEP FY16BAA / FY17 Awards

BAA Solicitation Attachment A: Full Proposal

Proposed Funding

Applicant shall enter the proposed funding partners, the amount each partner proposes to contribute to the project and the total funding available from partners. The applicant is also asked to provide the certainty of each partner's contribution. Each proposed funding partner must complete Attachment E – *Validation of Funding Partner*. The attachments shall be included as part of the submission package.

Total Estimated Project Cost ***(from previous page)*****:**	$ 0.00			
Funding Partner(s)	**Proposed Contribution for Lidar Data Acquisition, Processing, QA/QC**	**% Cost Share for 3DEP Base Data**	**Certainty of Contribution** (Guaranteed, Pending)	**If funding is 'Pending'-** (not yet guaranteed)**; note date** (MMM YYYY) **when funding decision will be final.**
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
Funding Partner Totals *(from above)*	$ 0.00	%		
Cost of 3DEP base data (QL2) for project area (from previous page) 3DEP cost share calculated on this portion of the project costs	$ 0.00			
Funds Requested from 3DEP	$ 0.00	%		

Proposed Funding

Applicant shall enter the proposed funding partners, the amount each partner proposes to contribute to the project and the total funding available from partners. The applicant is also asked to provide the certainty of each partner's contribution. Each proposed funding partner must complete Attachment E – *Validation of Funding Partner*. The attachments shall be included as part of the submission package.

Total Estimated Project Cost ***(from previous page)*****:**	$1,275,000.00			
Funding Partner(s)	**Proposed Contribution for Lidar Data Acquisition, Processing, QA/QC**	**% Cost Share for 3DEP Base Data**	**Certainty of Contribution** (Guaranteed, Pending)	**If funding is 'Pending'-** (not yet guaranteed)**; note date** (MMM YYYY) **when funding decision will be final.**
Partner 1	$50000.00		Guaranteed	
Partner 2	$80000.00		Pending	12 /2016
Partner 3	$175000.00		Guaranteed	
Partner 4	$100000.00		Guaranteed	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
	$		Choose One	
Funding Partner Totals *(from above)*	$825,000.00	65%		
Cost of 3DEP base data (QL2) for project area (from previous page) 3DEP cost share calculated on this portion of the project costs	$1,275,000.00			
Funds Requested from 3DEP	$450,000.00	35%		

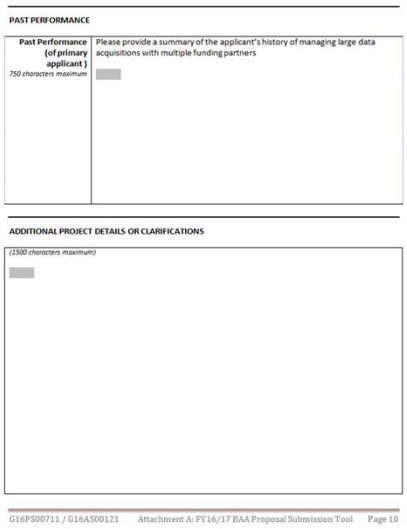
gs_baa@usgs.gov

Continue the walk through of the proposal submission tool.

Blank template on the left. Sample template on the right illustrating the addition of 4 partners with varying contributions in support of our sample 5000 square mile project.

+ 3DEP FY16BAA / FY17 Awards

BAA Solicitation Attachment A: Full Proposal



PAST PERFORMANCE

Past Performance (of primary applicant) *750 characters maximum*	Please provide a summary of the applicant's history of managing large data acquisitions with multiple funding partners

ADDITIONAL PROJECT DETAILS OR CLARIFICATIONS

(1500 characters maximum)

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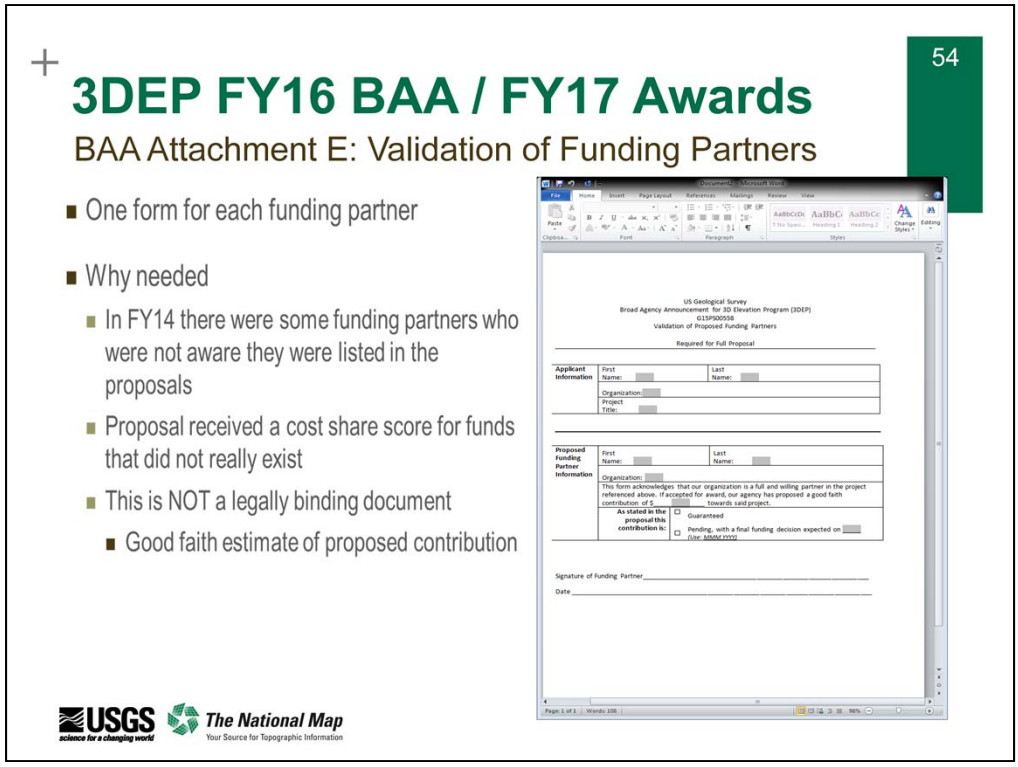
Continue the walk through of the proposal submission tool



While reviewing the full proposal form we referenced Attachment E.

Applicants must submit one form for each of the funding partners listed in their proposal.

This assures the 3DEP team that each of the proposed funding partners is aware that they are included in the proposal package and requires that they acknowledge the proposed amount of their contribution.

It is important to note that this form does not obligate the funds, it is not a legally binding document. It is simply a good faith estimate of your proposed contribution.

Why is this necessary. In our initial year we had some funding partners listed in proposals that were either unaware of their inclusion or were listed but really had only a remote possibility of coming up with funds. In a competitive process it is important that the applicant present a realistic picture of the proposed funding package.

3D Elevation Program (3DEP)

Resources

USGS 3DEP Web Pages
http://nationalmap.gov/3DEP

3D Elevation Program (3DEP) FY16/17 Broad Agency Announcement (BAA) Information Sharing Site https://cms.geoplatform.gov/elevation/3DEP

BAA Reference Materials Page
http://nationalmap.gov/3DEP/BAAReferenceMaterials.html

NOAA sponsored SeaSketch site: U.S. Federal Mapping Coordination, *A Demonstration Site for Federal Mapping Data Acquisition*
http://seasket.ch/hwpR3E-MxO

The 3D Elevation Program Initiative – A call for Action
http://pubs.usgs.gov/circ/1399/

USGS NGP Lidar Base Specification V1.2
http://pubs.usgs.gov/tm/11b4/pdf/tm11-B4.pdf

For Further Information Contact: 3D Elevation Program:
gs_baa@usgs.gov

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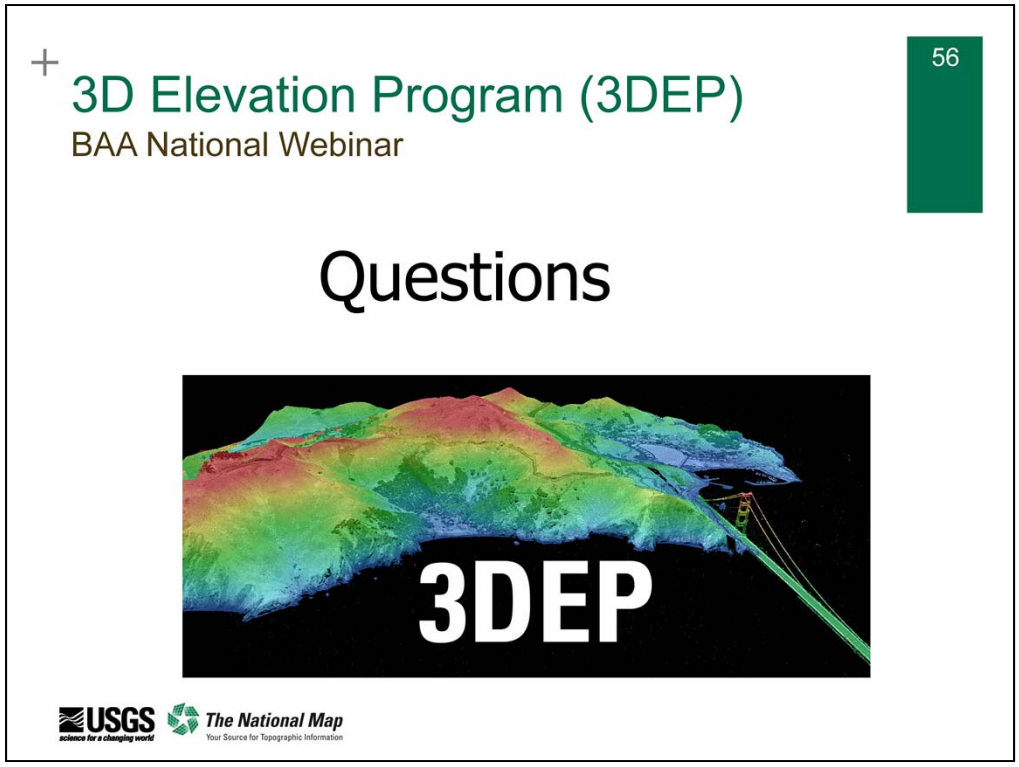
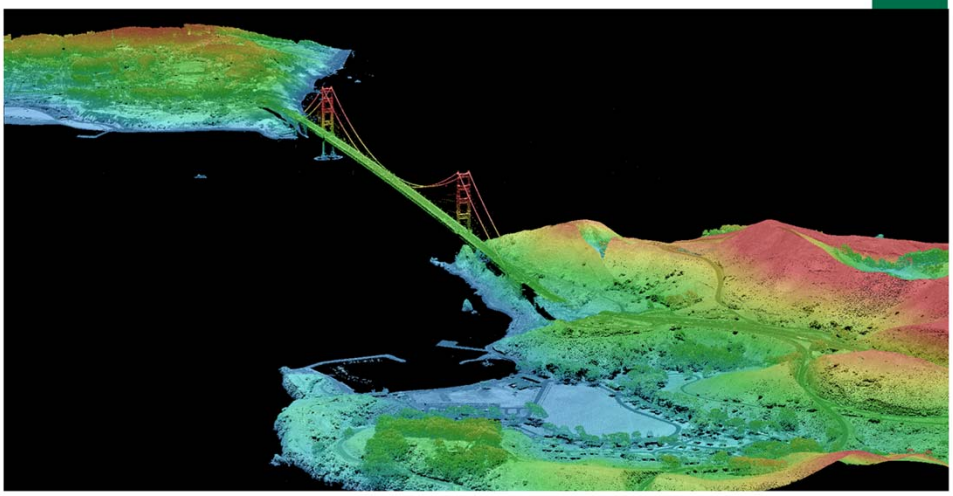


That ends the formal presentation, we will now address questions. Note that responses to the questions asked on both of our national webinars will be documented and presented on our 3DEP web pages. The written responses may be more through then our initial response to provide an opportunity for the 3DEP program to provide background and/or contextual information necessary to completely respond to your question.

Allyson Jason from our USGS 3DEP team will now facilitate the Question and Answer session.

Thank you!



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