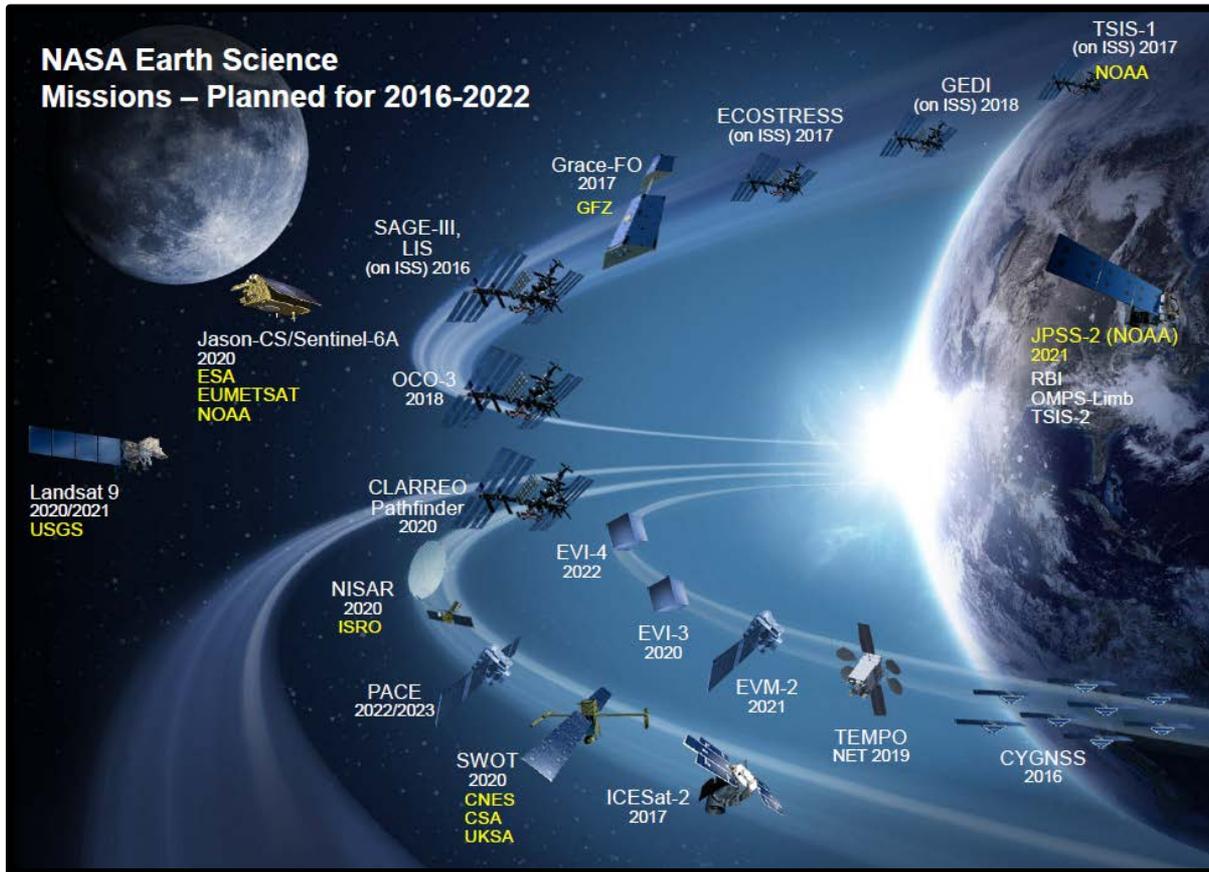


USGEO Satellite Needs Working Group (SNWG) and Process

Identifying High-Priority Federal Satellite User Needs



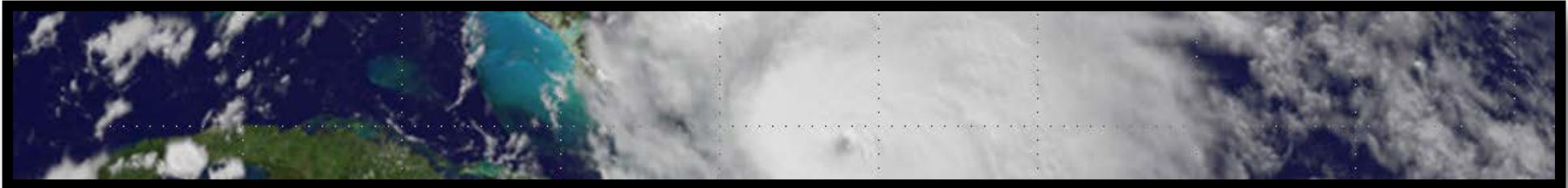
Courtesy of Steve Neeck, NASA

SNWG Co-Chairs: Glenn Bethel (USDA), Patrick Harr (NSF)

Background:

Satellite Needs Process Task Force

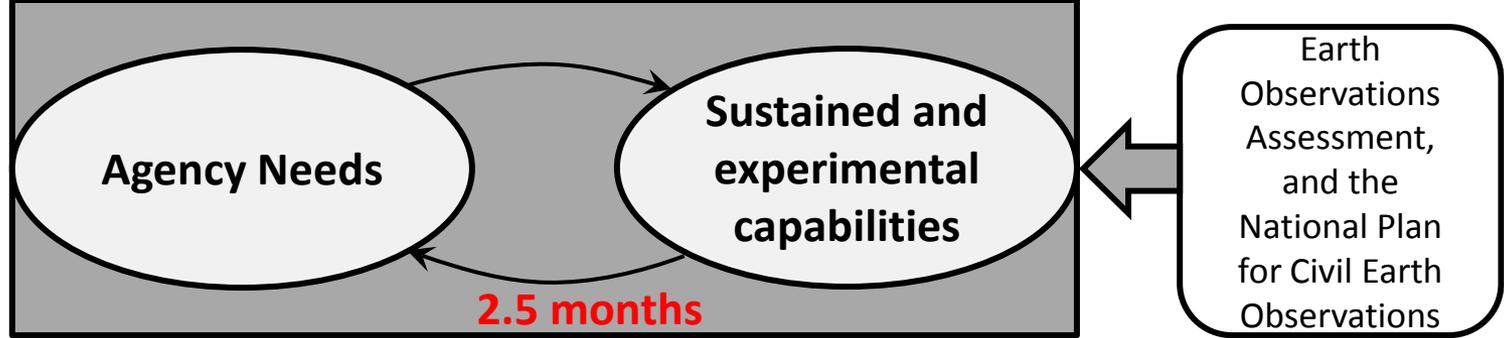
- Establish a process to collect **agency needs for sustained observations**.
 - Reflects a government-wide approach to developing Earth-observing satellites
 - Address **the current challenges agencies face in transitioning experimental observations into sustained observations** to support public services and research in the public interest.
 - Reduces uncertainty as to whether measurements will be continued
- Agencies will continue to need satellite data from NASA, and their **needs** should serve as input **to NASA decisions on which measurements to transition from experimental to sustained observations**.
- The USGEO Satellite Needs Process is primarily focused on the **transition of space-based observations from experimental to sustained status**
- Additionally, through this process, NASA and USGEO will coordinate to **identify unmet high-priority needs** for sustained measurements and ways to address them



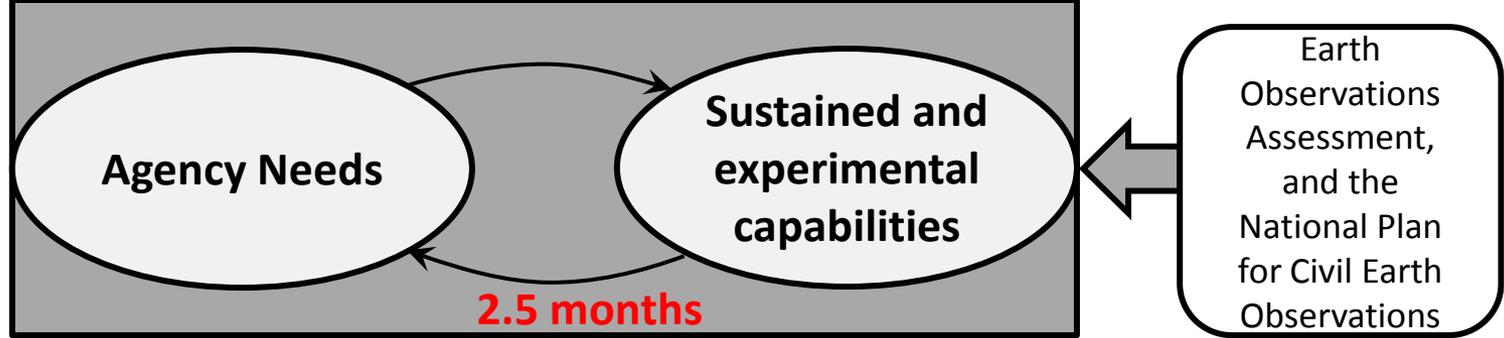
Annual Satellite Needs Process

- **Process** by which **Federal departments and agencies** can communicate their Earth observation **satellite** measurement or product needs to NASA and other providers of satellite observations.
- Information gathered during this process will be used to **influence decisions** on future sensors placed into orbit.
- It is the intent of USGEO to release a subset of the information collected to the public. Some fields will be removed before public release.





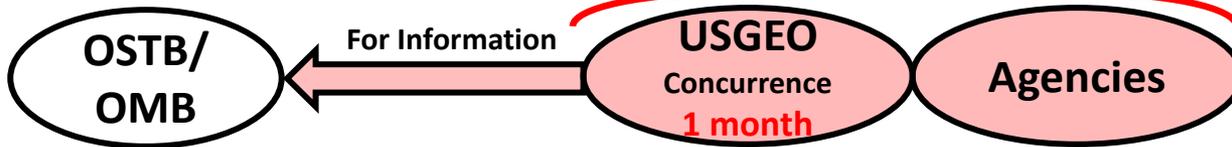
STAGE 1: User agencies identify high-priority needs for sustained and unmet satellite-based earth observations or products.



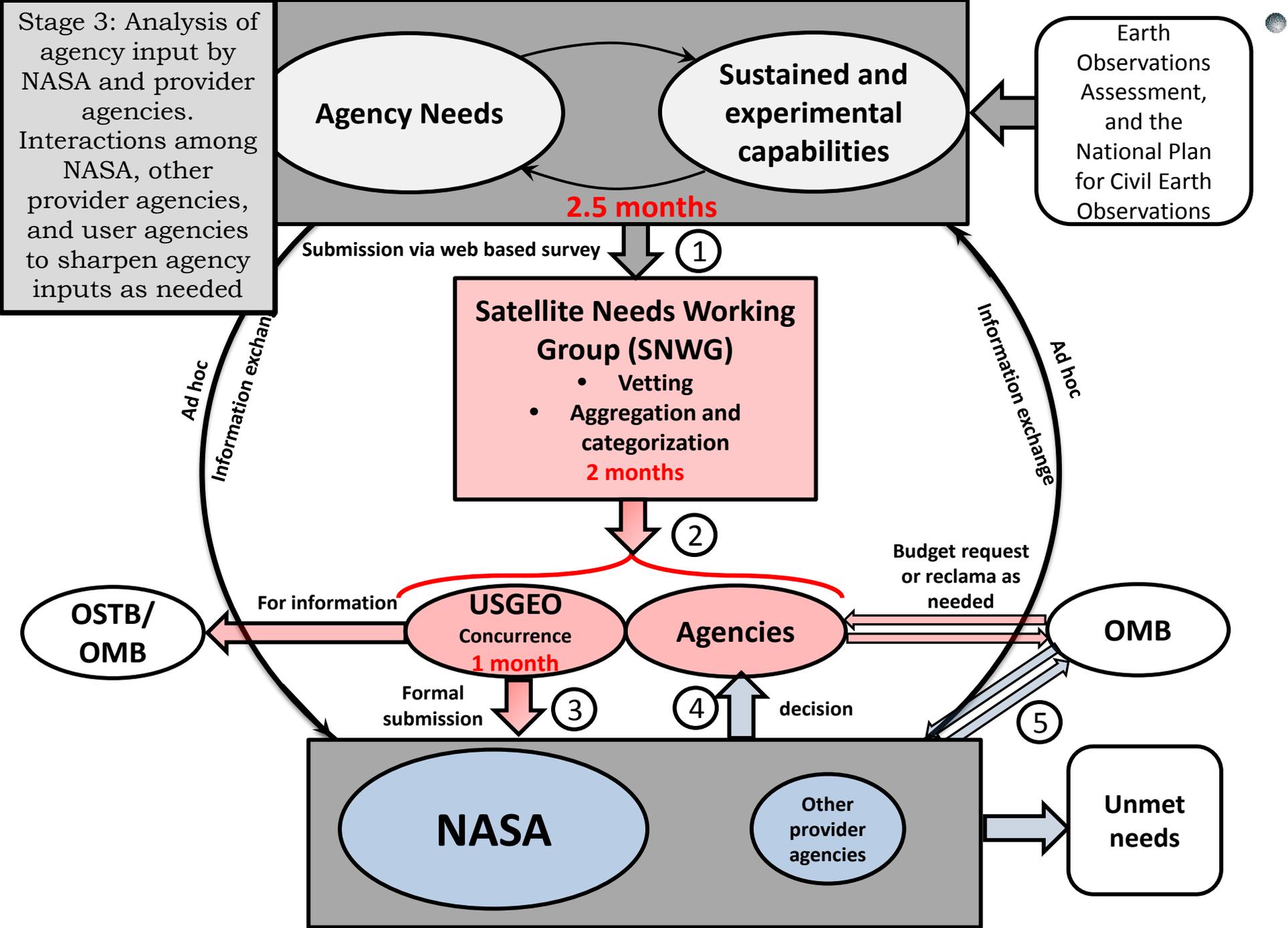
Submission via web based survey ①



②



STAGE 2: Submission by SNWG to USGEO and agencies for concurrence. Submission to OSTP/OMB for information



Agency Needs not Agency Requirements

- SNWG reporting does not constitute a detailed requirements analysis.
- Needs are an expression of agency need as it relates to public services or research in the public interest.
- All **High Priority** continuity and unmet Needs should be submitted.
- Ideally, continuity and unmet Needs should not be combined.
- The Needs will be used as a starting point for dialogs between NASA and the agencies.



Collection of Agency High-Priority Needs

On-line survey

U.S. Group on Earth Observations (USGEO) Satellite Needs Working Group

Federal High-Priority Satellite Needs

* Required

**Please note that the Satellite Needs Form follows the
Instructions.**

Background:

The Satellite Needs Working Group (SNWG) was chartered as an interagency working group by action of the National Science and Technology Council (NSTC), Committee on Environment, Natural Resources, and Sustainability (CENRS), U.S. Group on Earth Observations (USGEO) Subcommittee. The SNWG supports an annual Satellite Needs process by which Federal departments and agencies can communicate their Earth observation satellite measurement or product needs to NASA and other providers of satellite observations.

The SNWG federal high-priority satellite needs collection process was initiated in response to the President's Budget for Fiscal Year 2016 which reflects the decision to make NASA responsible for the acquisition of the space segment for all U.S. Government-owned civilian Earth-observing satellites except National Oceanic and Atmospheric Administration (NOAA) weather and space weather satellites. The Administration further recognized that user agencies will continue to need satellite data from NASA, and that their needs should serve as input to NASA decisions on which measurements to transition from experimental to sustained observations.

Fillable pdf

USGEO Satellite Needs Working Group

Reporting Federal High-Priority Satellite Needs

This form can be used for reference and/or internal data collection but all final submittals must come through the online form at: [U.S. Group on Earth Observations \(USGEO\) Satellite Needs Working Group](http://remotesensing.usgs.gov/rca-eo/documents/Satellite%20Needs%20Collection%20Survey.pdf)

The Satellite Needs Working Group (SNWG) was chartered as an interagency working group by action of the National Science and Technology Council (NSTC), Committee on Environment, Natural Resources, and Sustainability (CENRS), U.S. Group on Earth Observations (USGEO) Subcommittee. The SNWG supports an annual Satellite Needs process by which Federal departments and agencies can communicate their Earth observation satellite measurement or product needs to NASA and other providers of satellite observations.

The SNWG federal high-priority satellite needs collection was initiated in response to the President's Budget for Fiscal Year 2016 which reflects the decision to make NASA responsible for the acquisition of the space segment for all U.S. Government-owned civilian Earth-observing satellites except National Oceanic and Atmospheric Administration (NOAA) weather and space weather satellites. The Administration further recognized that user agencies will continue to need satellite data from NASA, and that their needs should serve as input to NASA decisions on which measurements to transition from experimental to sustained observations.

The SNWG developed the attached form for agencies to identify their high-priority needs for both sustained and unmet satellite Earth observation measurement or product needs. Information gathered during this process will be used by satellite provider agencies, and possibly the private sector, to influence decisions on future sensors placed into orbit.

To help NASA and other satellite data providers gain a better understanding of agency data needs, the SNWG asks that department/agencies to complete the form for each high-priority need. The information provided will be compiled by the SNWG. The SNWG compilation will flag similar needs from multiple agencies but will not alter data or provide any prioritization among agencies. Following compilation and aggregation, the SNWG will provide the data to USGEO with a copy to the OMB, which is for information only. Following the SNWG submission to USGEO, the

[http://remotesensing.usgs.gov/rca-eo/documents/Satellite Needs Collection Survey.pdf](http://remotesensing.usgs.gov/rca-eo/documents/Satellite%20Needs%20Collection%20Survey.pdf)

<https://docs.google.com/forms/d/1OsaGEIraYcgR0hH1JRpQbbyccbHMYX-HWeta9KxY/viewform>

Collection of Agency High-Priority Needs

- 1. Agency and Contacts**
 - 2. Context for Satellite Measurement of Product Need**
 - 3. Satellite Measurement or Product Need**
 - 4. Value of the Measurement**
 - 5. Additional Comments**
- Key is to provide sufficient detail such that NASA can sufficiently understand the context and details of the need.**



Context for Satellite Measurement or Product Need

- Department/Agency strategic objective supported by measurements and products (e.g. goal, mandate, responsibilities, etc.).
- Usability of existing measurements and products
- Users
- Assume that the NASA staff have no knowledge of your agency. Document the agency mandated responsibilities and how space-based remote sensing can or does aid your mission.



Satellite Measurement or Product Need

- Document the specific technical attributes for:

- Data Continuity
- Data Continuity with improvements

- **or-**

- Unmet Need

Attributes

Geographic Coverage

Spatial Resolution

Temporal Frequency

Spectral Characteristics

Data Latency

Conditions for Sampling

(e.g. day/night)

(3d) Spatial Resolution (e.g. 30m)—the horizontal or vertical distance between Earth observations or the horizontal distance between grid points in a uniformly spaced Earth observations data set (required)

(3d) Spatial Resolution: Indicate horizontal or vertical distance between satellite-based observations or horizontal distance between grid points in a uniformly spaced satellite data set (e.g. 30 m). This information is required. Indicate current spatial resolution you want continued in (3d1) Data Continuity. If current resolution needs to be improved, indicate desired improvement in (3d2) Data Continuity with Improvement. If need is unmet, indicate desired resolution in (3d3) Unmet Need.

(3d1) Data Continuity

30 meters Landsat 8 OLI for Bands 1-7 and 100 m TIRS

(3d2) Data Continuity with Improvements

15 meters OLI for Bands 1-7 and 60 m TIRS

(3d3) Unmet Needs

Your answer

Satellite Measurement or Product Need

- Document the specific technical attributes for:

- Data Continuity
- Data Continuity with improvements

- **or-**

- Unmet Need

Attributes

Geographic Coverage

Spatial Resolution

Temporal Frequency

Spectral Characteristics

Data Latency

Conditions for Sampling

(e.g. day/night)

(3d) Spatial Resolution (e.g. 30m)—the horizontal or vertical distance between Earth observations or the horizontal distance between grid points in a uniformly spaced Earth observations data set (required)

(3d) Spatial Resolution: Indicate horizontal or vertical distance between satellite-based observations or horizontal distance between grid points in a uniformly spaced satellite data set (e.g. 30 m). This information is required. Indicate current spatial resolution you want continued in (3d1) Data Continuity. If current resolution needs to be improved, indicate desired improvement in (3d2) Data Continuity with Improvement. If need is unmet, indicate desired resolution in (3d3) Unmet Need.

(3d1) Data Continuity

(3d2) Data Continuity with Improvements

(3d3) Unmet Needs

Your answer

Unmet Need: when nothing in space currently satisfies an agency need.

Time Line

| | |
|---|--------------------|
| Kick-off meeting at NASA | June 17, 2016 |
| Cut off for submitting needs Stage 1 | September 1, 2016 |
| SNWG send submissions back to agencies for senior review | September 12, 2016 |
| Agency review due back to SNWG | October 7, 2016 |
| SNWG passes needs to USGEO Subcommittee for concurrence | November 1, 2016 |
| USGEO submission to NASA Stage 2 | December 1, 2016 |
| NASA completes analysis of needs, provides feedback including unmet needs to SNWG | June 1, 2017 |
| NASA budget submission to OMB (note that NASA may not be the only agency satisfying agency needs and in that case there may be a different timeline) Stage 3 | September 1, 2017 |

Satellite Needs Working Group

**Census Bureau,
Department of Energy (DOE)
Department of Homeland Security (DHS)
Department of State
Environmental Protection Agency (EPA)
Federal Emergency Management Agency
(FEMA)
National Aeronautics and Space
Administration (NASA)
National Oceanic and Atmospheric
Administration (NOAA)
National Science Foundation (NSF)
U.S. Agency for International Development
(USAID)
U.S. Department of Agriculture (USDA)
U.S. Geological Survey (USGS)**

Acknowledgments

**USGS:
Development and hosting the on-line
survey document and the fillable PDF
document.**

**NASA – Earth Sciences Division:
Extensive advice on how to optimize the
type and form of agency-supplied input
through detailed, timely, and helpful
evaluation of the prototype SNWG
process.**



Questions?

- If you have questions in the future, please send them to your SNWG agency representative.
- Or contact the SNWG Co-Chairs:
Pat Harr pharr@nsf.gov
Glenn Bethel glenn.bethel@fas.usda.gov

