IOS - Update on Pre-proposal Review Process

Dec 10, 2012 Webinar

- The new review process
  - What is it and why was it implemented?
- Panelist survey data
  - What do panel reviewers think about it so far?
- Core metrics data
  - How are beginning investigators and PIs from RUI institutions doing with the pre-proposal system?
- Guidance for proposal preparation
- Questions

What is the change?

- The Integrative Organismal Systems (IOS) Solicitation is *one of 3 new Solicitations* released by the Directorate for Biological Sciences - **NSF 13-506** (Replaces 11-572)
  - Molecular and Cellular Biosciences (MCB) Solicitation NSF 13-510 (Replaces 11-545)
  - Division of Environmental Biology (DEB) Solicitation NSF 13-508 (Replaces 11-573)

What is the change?

The IOS and DEB solicitations both:

1. Require a **pre-proposal** submission in January followed by **full proposal** deadline in August.

2. Full proposals can be submitted to the core programs ONLY if invited by the program based on review of a pre-proposal.

The MCB solicitation:

1. Does NOT require pre-proposals.

2. Moving to an Annual Deadline
   (Jan 30, 2013, Nov 15, Annually Thereafter).

The IOS core programs are:

Behavioral Systems Cluster:
> Animal Behavior

Developmental Systems Cluster:
> Plant, Fungal and Microbial Development
> Animal Development
> Evolution of Developmental Mechanisms

Neural Systems Cluster:
> Organization
> Activation
> Modulation

Physiological and Structural Systems Cluster:
> Symbiosis, Defense and Self-Recognition
> Processes, Structures and Integrity
> Organism-Environment Interactions

What types of proposals are affected by these new solicitations?

- All regular research proposals that were previously submitted through the NSF Grant Proposal Guide to Program Descriptions.

- Any proposal submitted through the Research at Undergraduate Institutions (RUI) solicitations must conform to the same, new solicitations.

Solicitations NOT affected by this change include (but are not limited to):

- Plant Genome Research Program (PGRP)
- CAREER
- Research Coordination Networks – RCN
- Doctoral Dissertation Improvement Grants - DDIG
- Assembling the Tree of Life - ATOL
- Dynamics of Coupled Natural and Human Systems - CNH
- Dimensions of Biodiversity
- Ecology and Evolution of Infectious Diseases – EEID

Also, ALL programs in IOS and DEB will continue to accept:

- Conference and workshop proposals
- EAGERs
- RAPIDs
- Supplements to existing awards
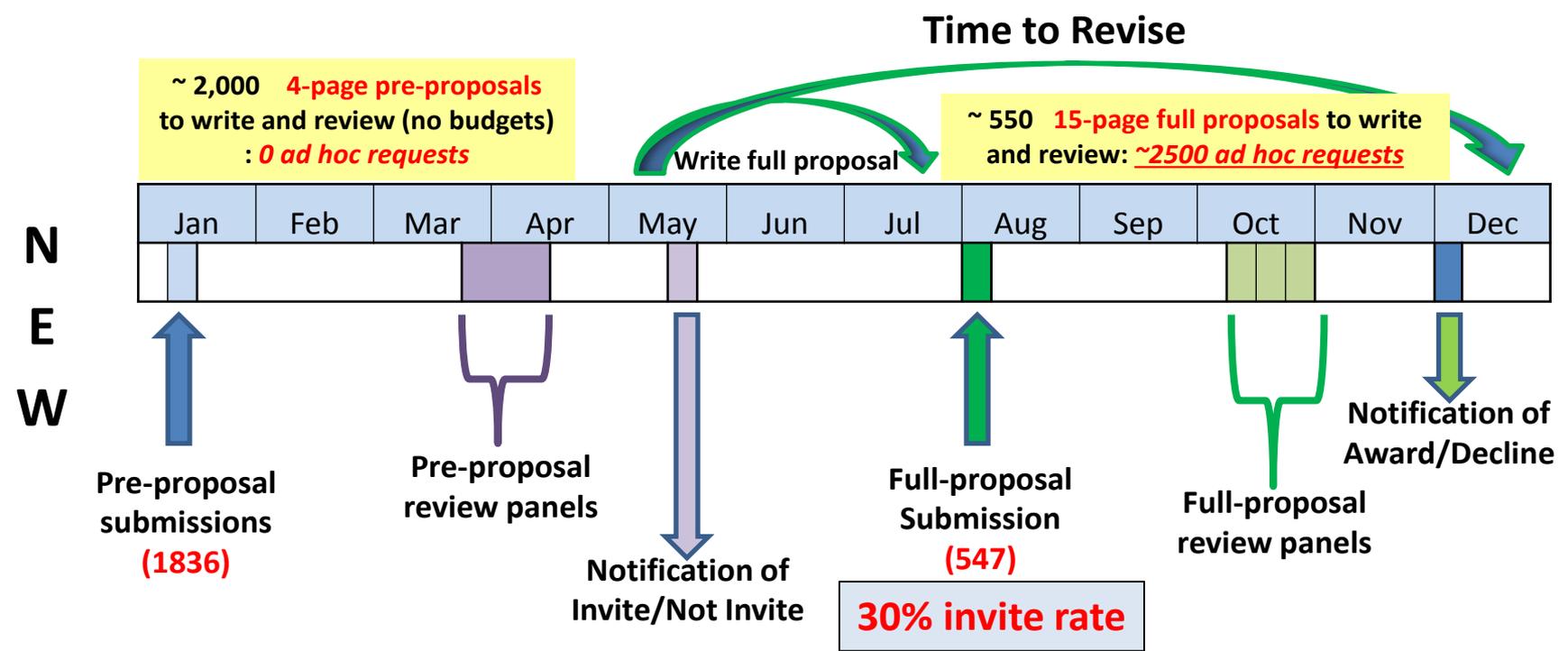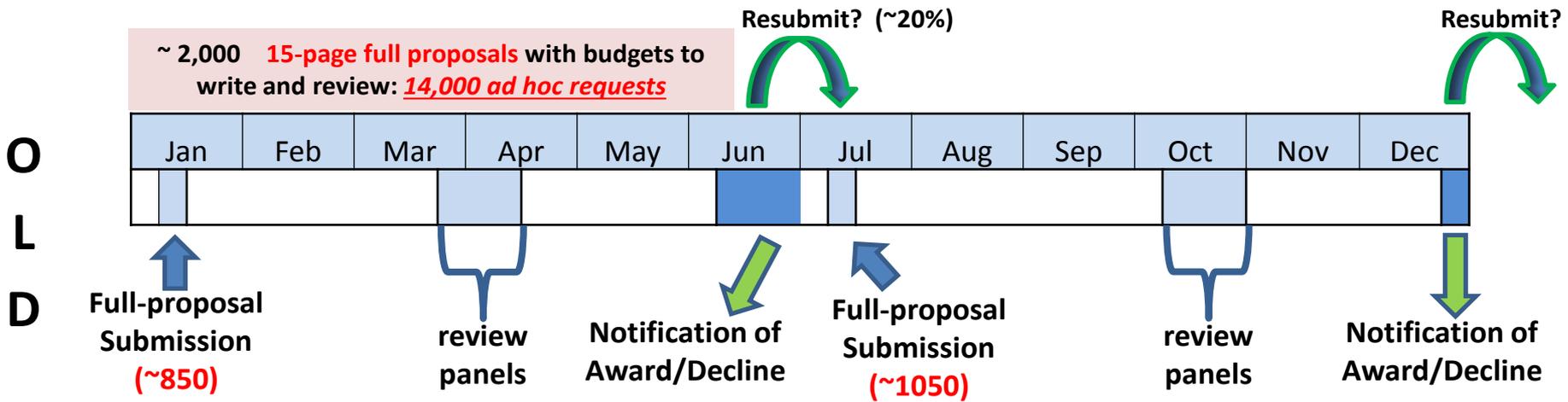
Why was the change made?

- **At NSF**
  - The number of proposals being submitted is increasing
  - The funding rates are decreasing
  - Workload is increasing
  - It is harder to find panel and ad hoc reviewers

- **In the Community**
  - PIs are writing more and more proposals to get funded
  - Reviewers are being asked to provide more and more ad hoc and panel reviews

The change was made so PIs could focus on their research, rather than on an endless cycle of writing and reviewing grant proposals

OLD

~ 2,000 **15-page full proposals** with budgets to write and review: *14,000 ad hoc requests*

Resubmit? (~20%)

Resubmit?

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Full-proposal Submission (~850)

review panels

Notification of Award/Decline

Full-proposal Submission (~1050)

review panels

Notification of Award/Decline

NEW

Time to Revise

~ 2,000 **4-page pre-proposals** to write and review (no budgets) : *0 ad hoc requests*

Write full proposal

~ 550 **15-page full proposals** to write and review: *~2500 ad hoc requests*

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Pre-proposal submissions (1836)

Pre-proposal review panels

Notification of Invite/Not Invite

Full-proposal Submission (547)

Full-proposal review panels

Notification of Award/Decline

30% invite rate

Benefits

- **Benefits to PIs**
  - **Shorter format so less time invested**
  - **Still get feedback early on**
  - **Better "odds" for full proposals**
- **Benefits to Institutions**
  - **No budget preparation for pre-proposals**
- **Benefits to the community**
  - **Fewer requests for reviews as only full proposals will be ad hoc reviewed**

Concerns and Potential Solutions

- **One cycle/year – 80% of PIs used to submit only once a year with the old system**
- **2 pre-proposals are allowed (PI or co-PI) with new system**
- **Beginning Investigators have additional opportunities with the CAREER program**
- **Other Opportunities – Mid-Career Supplements (See IOS DCL), International Collaborative Proposals with Israel (iCOB), EAGERS, RAPIDS, other solicitations…..**

Pre-proposal Panelist Surveys

- **Are 4 pages enough to evaluate research projects?**

Q4. As a reviewer, I found the content provided by these preliminary proposals to be adequate for evaluation under the merit review criteria. *{Likert Scale}*

Q4. Adequate for Evaluation
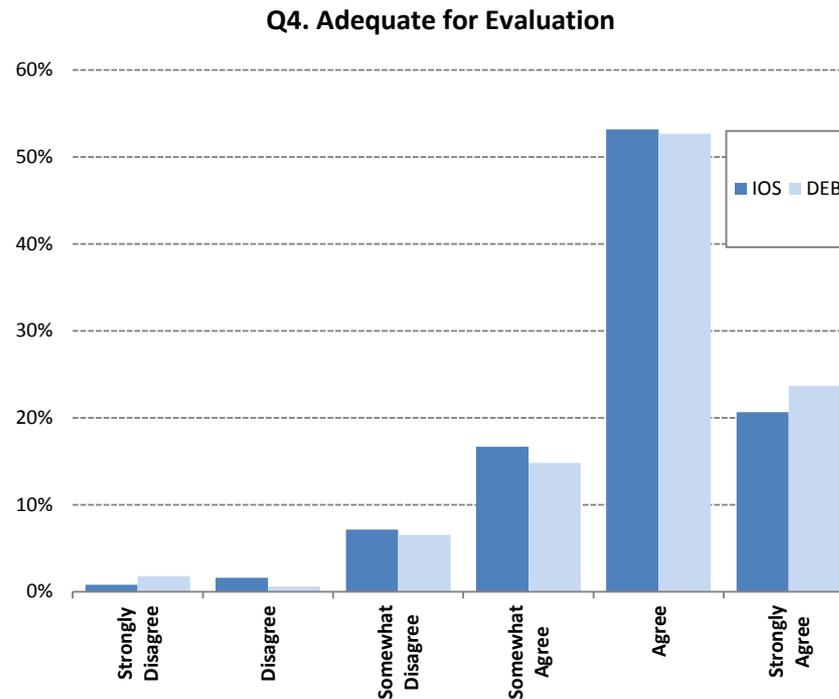
Pre-proposal Panelist Surveys

- **Is overall experience the same, better or worse as a panelist?**

Q5. As a reviewer, did you notice a change in the overall experience of the preliminary proposal panel review process (including reading proposals, writing reviews, attending panel, etc.) compared to previous BIO full proposal panels? *{Yes/No}*

If so, do you think the experience changed for better or worse? *{Better/Worse}*

Q5. Was there a change in overall experience?

- No
- Yes, Better
- Yes, Worse

65%

15%

20%
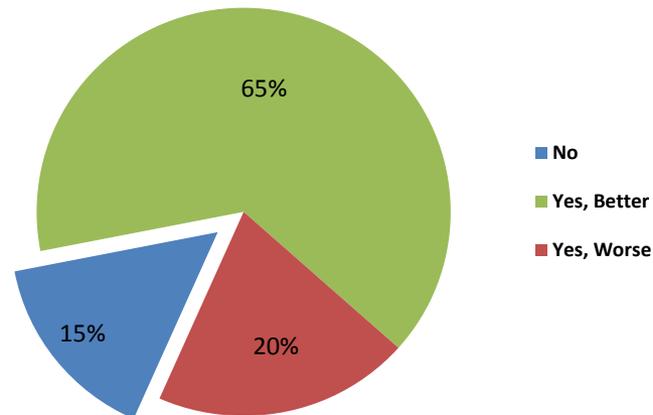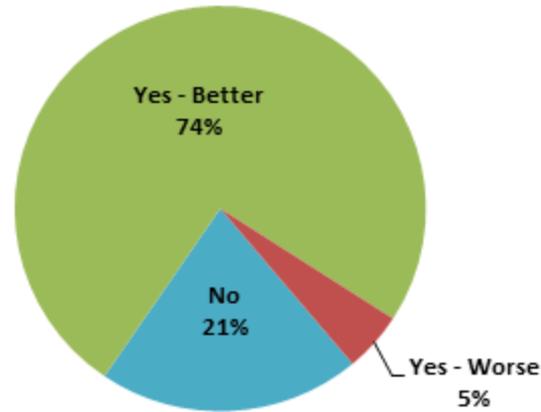
Pre-proposal Panelist Surveys

- **Is workload for panelists reduced or increased?**

Q6. As a reviewer, did you spend more time preparing for this preliminary proposal panel than you did for previous full proposal panels? *{Yes/No}*
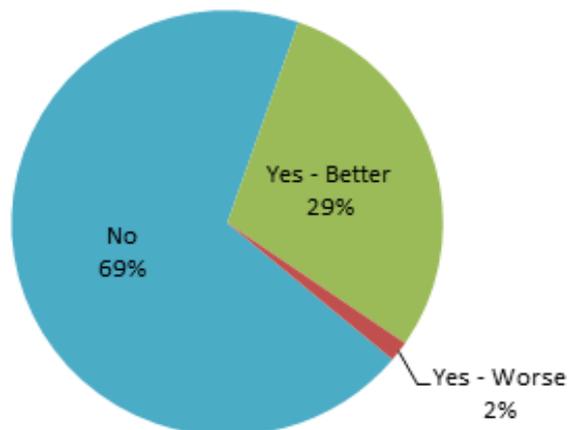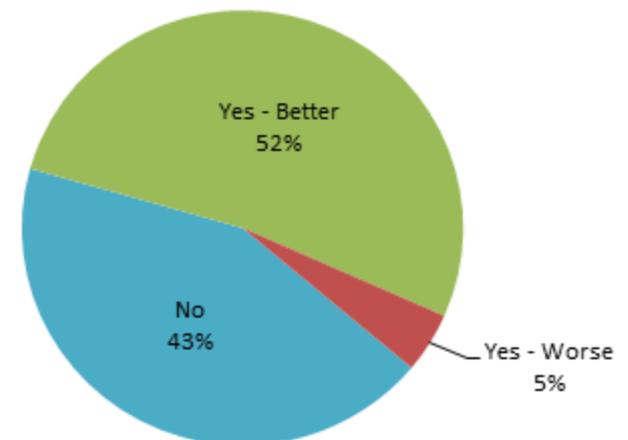
Q6. Increased Panel Prep Time
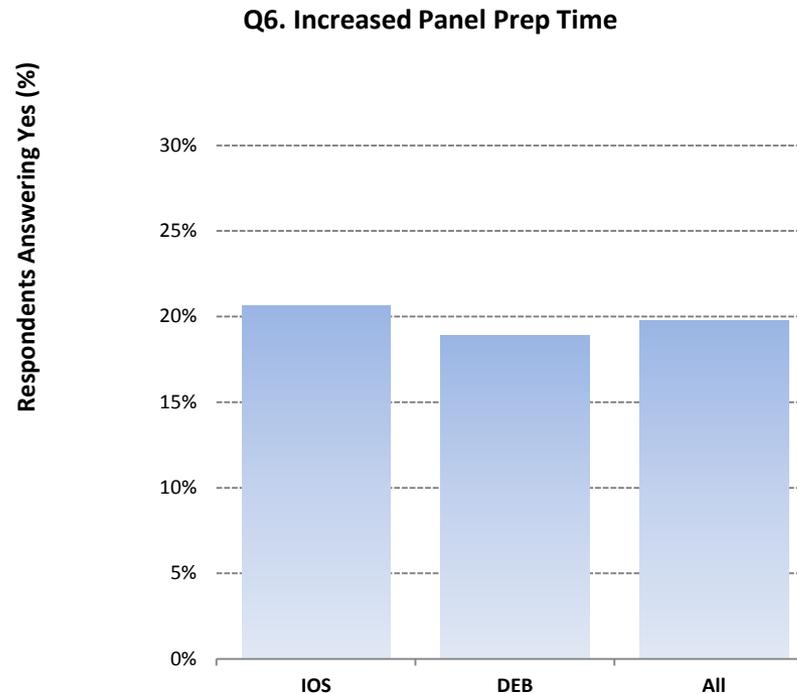
Full-proposal Panelist Surveys

Change in Overall Experience - IOS

Yes - Better 74%
No 21%
Yes - Worse 5%

Change in Intellectual Merit - IOS

No 69%
Yes - Better 29%
Yes - Worse 2%

Change in Broader Impacts - IOS

Yes - Better 52%
No 43%
Yes - Worse 5%

How are Beginning Investigators Performing with the New System?

Since we do not yet have award information for the first round, we compared the percentages of proposals the panels ranked as "High Priority" from Beginning Investigators between the old and new review systems.

	Fiscal Year	% of High Priority Proposals from BIs	% of Proposals Submitted by BIs
Old System	2009	17.80	24.28
	2010	16.67	23.39
	2011	16.56	23.79
	2012	15.15	22.99
New System	2012 pre proposals	15.42	24.89
	2013 full proposals	16.67	22.33

How are RUI Investigators Performing with the New System?

Here we compared the percentages of proposals the panels ranked as "High Priority" from RUI Investigators between the old and new review systems.

	Fiscal Year	% of High Priority Proposals from RUI Investigators	% of Proposals Submitted by RUI Investigators
Old System	2009	3.41	3.38
	2010	2.01	2.69
	2011	3.83	5.13
	2012	2.02	3.64
New System	2012 pre proposals	5.47	8.39
	2013 full proposals	6.79	8.65

Preliminary Proposal Format

- Cover sheet
  - Title must begin with "IOS Preliminary Proposal:"
  - <u>Apply to Solicitation</u> **NSF 13-506** and not the GPG!!
  - Check Pre-Proposal Checkbox
  - Enter $2 for amount requested (No budget is required)
- Project Summary Page (**NEW FORMAT for 2013**)
- Project Description (5 Pages Total):
  - Personnel Page (PI, co-PIs, Senior Personnel)
  - Project Narrative limited to 4 pages
- Biographical Sketches (***No COI Information, i.e., Collaborator/Mentor, etc.***)
- References Cited (3 pages)
- Combined Conflict of Interest Spreadsheet (Use template, submit as Single copy document and email to IOScoispreadsheet@nsf.gov) Template can be found at http://www.nsf.gov/bio/ios/ioscoitemplate.xlsx
- *Appendices or other supplementary documents are **NOT** allowed*

Preliminary Proposal Content

- Similar to a full proposal the narrative of a pre-proposal should address the:
    - **Main idea** or set of concepts that the PIs intend to address
    - **Significance** of those questions or rationale for why one would want to address the issues
    - **Specific questions**, hypotheses or aims the PI intends to pursue to be able to address the issues
    - **Research approaches** or experimental plan
    - **Ability of the team** to conduct the research
    - **Broader impacts (Separate Section now required in all Project Descriptions!)**

A strong pre-proposal….

..made a strong and a believable case that the proposed research and broader impact activities are feasible and likely produce large advances in the field.

..included enough detail to enable reviewers to evaluate it, including essential preliminary data where appropriate, and describing expected outcomes and interpretations.

A strong full-proposal… was one that maintained high enthusiasm for the proposed activities even after the full implementation plan was articulated in detail.

Basis for Invite/Not Invite Decisions

- **Advice of the pre-proposal panel**
  - Are the ideas innovative or potentially transformative?
  - Are the ideas conceptually well grounded?
  - Are the experimental approaches and experimental design feasible and logically linked to the central ideas?
  - Are the PIs well qualified and experienced enough with the approaches to be able to conduct the research?
  - What risks are involved and can they be overcome?
  - What is the potential impact of the science and broader impacts?
  - Is there a convincing and significant effort made towards broader impacts?

- **Portfolio balance**
  - Existing awards in the program
  - Diversity with regard to career level, under-represented groups, geographic location and institution type

Changes to the Proposals

- <u>Project Summary</u> will contain the following required separate Statements
  1. Overview of the Project
  2. Statement on *Intellectual Merit*
  3. Statement on *Broader Impacts*

- <u>Project Description</u> must contain a separate section with a discussion of the *Broader Impacts*

Revisions to Review Guidance

- Set of five Merit Review Elements **to be considered in the review of both criteria**
  1. Potential to advance knowledge within or across fields; and benefit society
  2. Extent to which proposed activities explore creative, original, or potentially transformative concepts
  3. Well reasoned/organized plan? Mechanisms to assess success?
  4. *Qualifications of PI/Team/Institution to conduct activities*
  5. *Are there adequate resources available to the PI to carry out proposed activities*

QUESTIONS?

- This Webinar will be posted as presented for on-demand viewing at a later time
    - *Webinar URL*
    - *Link to Solicitation –URL http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=503623&ods_key=nsf13506*

    - *Link to FAQ – URL http://www.nsf.gov/pubs/2013/nsf13009/nsf13009.jsp?*

- Email questions to any IOS Program Director:
    - see IOS website for addresses: http://www.nsf.gov/staff/staff_list.jsp?org=IOS&from_org=IOS

- *Concerns can also be directed to:*
    - *IOS Division Director – Jane Silverthorne jsilvert@nsf.gov*
    - *Assistant Director for Biological Sciences – John Wingfield jwingfie@nsf.gov*