

Suggestions for Preparing Effective Reviews for NSF

(Prepared by Geography and Spatial Sciences Program Directors)

You have been asked by the NSF to prepare a review of a proposal. The use of external reviewers is critical to the merit review process at NSF. You have been selected for your expertise, and we value the feedback you can provide the one or more advisory panels who will consider this proposal and all reviews, the GSS program directors, and the principal investigators. A well-crafted review contributes to a review process that is clear and transparent and offers constructive feedback to the PIs. Following are some specific hints on preparing effective reviews.

- NSF is well known for its merit review process. If you are new to reviewing for NSF, or if you have not provided us with a review for a while, it is worth your while familiarizing yourself with the merit review criteria, because NSF defines these criteria in specific ways.

We suggest you look at the relevant section of the NSF *Proposal and Awards Policies and Procedures Guide (PAPPG, NSF 17-1)* at

https://www.nsf.gov/pubs/policydocs/pappg17_1/pappg_3.jsp#IIIA to see the information provided for PIs. The review criteria are Intellectual Merit and Broader Impacts. If you are unsure how to proceed, you may want to organize your review so that you address all of these elements for each criterion, but such detailed classification is not required.

Note that GSS has some special program-specific review criteria that ask you to assess the potential large-scale, longer-term significance of proposed work as well as the likelihood the project will succeed. Please address these special criteria in the summary statement of your review unless you have clearly addressed them in the Intellectual Merit and/or Broader Impact sections.

NSF now asks reviewers to also address the data-management plan (DMP) that has been submitted as a supplementary document for this proposal. More information about the DMP is available at https://www.nsf.gov/pubs/policydocs/pappg17_1/pappg_2.jsp#IIC2j. Note also the specific text from the GSS solicitation regarding DMPs as specified in the review request letter.

- Reviewing for NSF is different from manuscript review, because many programs at NSF (including GSS) do not have a formal "Revise and Resubmit" category. This means that you need to really focus on the quality of the specific proposal that you are reading, not on the project you imagine this might become. Program officers cannot send a proposal back and say, "fix these three things and we will fund you" as editors can through journal peer review. PIs can take the feedback and rework their proposal and submit it again, but it will go through another full peer review process where it will be judged in comparison with other proposals in the new competition, not against its earlier version.
- One of the most important things about an effective review is to have your rating reflect your comments. The ratings are as follows:

Excellent: An outstanding proposal in all respects; deserves highest priority for support.

Very Good: A high-quality proposal in nearly all respects; should be supported if at all possible.

Good: A quality proposal, worth of support.

Fair: Proposal lacking in one of more critical aspects; key issues need to be addressed.

Poor: Proposal has serious deficiencies.

This means that if you have concerns about the proposal's research design or its methodology, then it should not be given an *Excellent* rating. *Excellent* means that it is a highly innovative idea that is well articulated in the proposal. We see too many reviews that come in with an *Excellent* rating but with a long list of issues and concerns regarding the proposed work. Such positive ratings when comments identify shortcomings and deficiencies in the proposals work can be very confusing to PIs. Realize that GSS funds only about 12% to 15% of the regular proposals it considers (and only about 20% of the doctoral dissertation research improvement proposals), so an *Excellent* rating should be reserved for a truly exceptional proposal.

Reviewers often want to assign a high rating because they are excited by the topic and its potential impact if a project is conducted successfully, but the rating should reflect your assessment of both the potential as well as the reality of how the project will be conducted based on how it is described in the proposal. In a similar way, please note that the GSS program-specific review criteria ask you to assess the potential larger-scope, longer-term significance of proposed work as well as the likelihood the project will succeed based on the proposal as written, not on what you think a better-written proposal would present.

- A good review is not just a summary of the proposal. Many reviewers feel the need to offer a synopsis. Such a summary can be included if you wish, but keep it short and focused. The bulk of the review should be more than a few sentences in length and should constructively address strengths and weaknesses of the proposal with respect to the merit review criteria. General statements that appear to be "cheerleading" for a specific topic or PI carry little weight in the review process, whereas thoughtful articulation of what is good (as well as what is not good) about the specific work that's outlined in the proposal are very valuable.
- Keep the tone of your review positive and constructive. Avoid using a brusque, rude, and/or dismissive tone in your comments. Offer suggestions, but don't state them as demands.
- Try to avoid misspellings and typos in your review comments (especially if you complain about their presence in the proposal). Please realize that FastLane cannot deal with specially formatted characters (like "smart quotes" and dashes) in its text boxes, and it will convert those symbols into question marks. We therefore suggest you turn off auto-formatting for all such special characteristics in your word processing program before you write the review, or you can carefully proofread your text after you have saved it and

exited FastLane once before signing back in to replace the rogue question marks that may appear in the text boxes.

- *Ad-hoc* reviews usually are solicited before advisory panels meet, and they offer expert input to the advisory panel members, who are likely to be generalists. Reviews therefore are most useful to us if they are submitted before the advisory panel meeting, which is why we provide a requested review-submission date. A review received after the panel meeting will still be helpful but in a more limited way. If you will not be able to submit a review prior to the requested date, please communicate with us as soon as possible.
- Be sure not to disclose your identity in the review. The NSF review process is highly confidential; PIs do not and should not know who their reviewers were. If you do want to provide feedback to the PI from your own experience (including providing them specific references) use language that is broad and generic and that does not flag the comments as coming from you.
- You are one of a number of reviewers (usually ranging from 3 to 8 in total), so do not feel that you have to address everything in the proposal if it goes beyond your expertise and comfort zone. If you believe that there are parts of the proposal that you are not comfortable commenting on, focus on the parts on which you can meaningfully comment.
- Don't hesitate to communicate with us at NSF. The request letter is a long, computer-generated form letter. It may seem to be mechanical, but please realize that there are real people here making decisions, and we are willing to communicate with you via e-mail or telephone. Check out the GSS website (https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505034) for a list of GSS program officers. Please be aware that you can use gss-info@nsf.gov to contact all GSS program officers with a single address.

Thanks for your willingness to review proposals for GSS and for the constructive advice and feedback you will provide us and the principal investigators.

=====
Thomas J. Baerwald
Geography and Spatial Sciences Program Director
Division of Behavioral and Cognitive Sciences
National Science Foundation
2514 Eisenhower Ave; Room W13134
Alexandria VA 22314 U.S.A.
Phones: 703-292-7301 (Direct line); 703-292-8740 (BCS Division)
Fax: 703-292-9068
E-Mail: tbaerwal@nsf.gov
=====