**PROJECT SUMMARY**

Follow instructions in shaded text. Delete shaded text before submission.

Page limit: 1 page.

Compatible with NSF PAPPG 23-1.

**General:** The Project Summary should be informative to other persons working in the same or related fields, and, insofar as possible, understandable to a scientifically or technically literate lay reader. It should not be an abstract of the proposal.

**OVERVIEW**

1. Briefly describe any background information necessary to understand the long-term objectives of the research.
2. Describe the activity that would result if the proposal were funded, including the long-term objectives of the research.
3. Provide the aims that will support these objectives, including methods that will be employed.

**INTELLECTUAL MERIT**

1. Address what is currently known, and more importantly, what is not known in the field.
2. Describe how the proposed activities will advance knowledge and understanding in your own scientific field and/or across other fields in creative and transformative ways.
3. Enumerate the qualifications of the PI and the institutional resources available to support the project.

**BROADER IMPACTS**

1. Discuss specific plans to benefit society, contribute to the advancement of scientific knowledge, and contribute to the achievement of specific, desired societal outcomes.
2. Explain how these plans will benefit society, contribute to the advancement of scientific knowledge, and contribute to the achievement of specific, desired societal outcomes.

*From NSF PAPPG 22-1:*

**Such outcomes include**, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the U.S.; use of science and technology to inform public policy; and enhanced infrastructure for research and education.