2026 USDA NIFA STRENGTHENING AGRICULTURAL SYSTEMS OVERVIEW

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SAS Purpose

Integrated Agricultural Approaches

SAS promotes systems-level agricultural approaches that tackle complex challenges through collaboration in **research**, **education**, and **extension**.

Program Goals

The program focuses on innovation, economic sustainability, and building resilient food and agricultural systems to meet national needs.

Impact and Capacity Building

The program aims to foster innovation, build capacity, and deliver measurable improvements benefiting producers, consumers, and communities.

Coordinated Agricultural Projects (CAP)

CAP grants fund large-scale, multi-institutional collaborations addressing broad, complex agricultural challenges.

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2026 Program Priorities

Applicants must address **one of two program area priorities:**

Strengthening Agricultural Systems (A9201) *($2.5M-$10M/project for 5 years)*
Deadline: March 26
Must focus on creating new and/or expanding existing markets for agriculture and forestry products to ensure a strong U.S. economy and protect the fuel and fiber supply
Projects must align with at least one sub-priority:
- New uses and expanding markets for agricultural and forestry products
- Solutions to pests and diseases of plants or animals
- Combating food- and diet-related chronic diseases

Artificial Intelligence for K–12 Food and Agricultural Sciences (A9231) *($1M-$2M/project for 5 years)*
Deadline: April 23
Focuses on building the **AI-literate agricultural workforce pipeline**, emphasizing:
- K–12 education and extension leadership
- AI tools, curriculum, educator training, and workforce preparation
- Broad accessibility of AI resources nationwide

Updated USDA Priorities

- Increasing Profitability of Farmers and Ranchers
- Expanding Markets and Creating New Uses of U.S. Agricultural Products
- Protecting the Integrity of American Agriculture from Invasive Species
- Promoting Soil Health to Regenerate Long-Term Productivity of Land
- Improving Human Health through Precision Nutrition and Food Quality

Projects responding to these areas, as well as developing and implementing advanced solutions in Artificial Intelligence (AI), mechanization, or automation for use in food and agriculture systems are encouraged.

Application Process

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Letter of Intent and Reviewer Alignment

Deadline: February 26 (optional)

Purpose of LOI

LOI helps program administrators secure reviewers with relevant expertise for fair and quality proposal evaluations.

LOI Content

LOI outlines key personnel and alignment with SAS priorities to guide review focus.

Benefits of Submitting LOI

Submitting LOI promotes appropriate expertise during the review cycles.

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Proposal Components

- Project Summary/Abstract
- Project Narrative (18 pages)
- Response to Previous Review (if applicable; 1 page)
- Bibliography & References Cited
- Facilities & Other Resources
- Equipment
- Key Personnel Roles (2-page limit)
- Logic Model (2-page limit)
- Documentation of Collaboration (e.g., partner letters and subcontract statements of work)
- Cooperation and Institutional Units Involved
- Management Plan (3-page limit)
- Data Management Plan (2-page limit)
- Mentoring Plan (3-page limit)

- Pre-prints (limited to 2)
- MSI Documentation (if applicable)
- Biographical sketch (2-pages/each)
- Current and Pending
- Conflict of Interest
- Budgets and Budget Justifications (lead and subcontract)

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Required Documents

Project Summary / Abstract

- 250-word Project Summary/Abstract modeled from <u>NIFA Template</u>

- **Must** demonstrate how the proposal aligns to the SAS subpriority areas:

  - Applicants to the **Strengthening Agricultural Systems** program must address one or more sub-priorities: New Uses and Expanding Markets for Agriculture and Forestry Products, Solutions to Pests and Diseases of Plants and Animals, Combating Food and Diet-Related Chronic Diseases

  - Applicants to the **Artificial Intelligence for K-12 Food and Agricultural Sciences** priority must state a primary AFRI priority area: Plant health and production and plant products; Animal health and production and animal products; Food safety, nutrition, and health; Bioenergy, natural resources, and environment; Agriculture systems and technology; or Agriculture economics and rural communities.

Required Documents

Project Summary / Abstract

Important Consideration for Abstract Development:

- We anticipate funding approval may include review of Project Summaries by government appointees without subject matter expertise
  - *Write to an intelligent lay audience*
  - *Overly technical content or de-emphasized content (renewables, diversity, etc) must be avoided!*
- Reach out to OORIntake@purdue.edu or complete the OOR intake form to request a Project Summary review, and/or to request additional grant writing support

Required Documents

Project Narrative

- 18-page limit to include the following: (narrative template in Teams)

  - Resubmissions: Response to Previous Review - 1-page (not included in 18-page limit)

  - Required sections:

    - Introduction

    - Rationale and Significance

    - Approach

    - Dissemination and Communication

    - Project Evaluation

    - Previous AFRI award outcomes are required if the Project Director has previously received an AFRI award from NIFA with start date(s) within five years prior to the submission deadline for this program. Provide award number(s) and significant outcome(s) from each award addressing stakeholder needs beyond the life of the project (300 words per award)

    - Center of Excellence-specific information, if applicable

Required Documents

Project Narrative

- **Integrated projects only** (must include **research, education, and Extension**)
- Must demonstrate direct or indirect benefit to farmers, ranchers, producers, or forest landowners (include milestones/outputs)
- Emphasis on:

  - Planning for longevity (e.g., sustained impact)

  - Systems science (consider various aspects of the supply chain)

  - Strong stakeholder engagement and co-production of knowledge
- **Performance metrics** required to demonstrate scientific, agricultural, and economic impact
- Consider use of **flagged terms**
- Include social science/**economics**

- Draft Project Narrative template available in Teams site.

Required Documents

Bibliography & References Cited

Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication.

Logic Model

- Limited to 2 pages

- Must include elements detailing the activities, outputs, and outcomes of the proposed project.

- This information may be provided as a narrative or formatted into a logic model chart.

- The logic model planning process is a tool that should be used to develop a project before writing the application. See: https://www.nifa.usda.gov/grants/programs/data-science-food-agricultural-systems-dsfas/integrated-programs-logic-model-planning-process

Required Documents

Management Plan

- Limited to 3 pages

- Must include project governance, a stakeholder advisory board, involvement of an evaluator, and progress reporting.

- The plan must clearly articulate, with an organizational chart, how the project will be governed. A clear strategy must be put in place to enhance coordination, collaboration, communication, data sharing and reporting among members of the project team and stakeholder groups.

- The management plan must include an advisory group of principal stakeholders, partners, evaluators and professionals to assess and evaluate the quality, expected measurable outcomes, and potential impacts for the proposed research, education and extension.

- Template available in Teams site.

Required Documents

Data Management Plan

- Limited to 2 pages

- Applicants should clearly articulate how the project director (PD) and co-PDs plan to manage and disseminate the data generated by the project. Describe:

  - Expected Data Type

  - Data Format

  - Data Storage and Preservation

  - Data Sharing, Protection and Public Access

  - Roles, Responsibilities and Reporting

- Template available in Teams site.

- See also: https://www.nifa.usda.gov/grants/lifecycle/pre-award/data-management-plans

Required Documents

Mentoring Plan

- Limited to 3 pages that must describe:

    - past or proposed training of individuals who will serve as mentors including equipping, mentoring, or monitoring activities they have received or will receive to help them effectively mentor students and trainees during the project;

    - groups of students or individual trainees to be mentored on the project, including students grades 9-12, undergraduate students, graduate students, postdoctoral scholars, professionals and any other individuals to be trained or mentored on the project;

    - detailed mentoring activities to be delivered throughout the project to each distinct category or group of students and/or trainee participants, including those activities provided through research, education, extension or outreach efforts; and

    - expected outcomes derived from the mentoring activities and prospective impact(s) on the food and agricultural sciences.

- Template available in Teams site.

Required Documents

Facilities & Other Resources

- Provide adequate evidence that each institution in the application has a significant role and contributes to the project.
- Start discussions early with college leadership if you're requesting significant resources or space.

Equipment

Key Personnel Roles

- Limited to 2 pages
- Must include an estimate of the percent of time devoted to research, education, and extension activities for key personnel.

Required Documents

Documentation of Collaboration / Subaward Letters of Commitment and Statements of Work
- Include letters of support for collaborators involved that have agreed to render support or services.
- Letters of commitment (including proposed amount of subaward) and statements of work are required to be included in the application for each subaward.

Cooperation and Institutional Units Involved
- Identify each institutional unit contributing to the project and designate the lead institution or institutional unit when submitting a cooperative, multi-institutional or multidisciplinary application.
- Clearly define the programmatic roles, responsibilities, and budget for each institutional partner.

Preprints
Limited to 2 preprints

MSI Documentation
If applicable, provide letter identifying percentage of applicable minority students.

Required Documents

CV

- Limited to 2 pages, excluding publications
- Include ORCID and digital object identifier (DOI) of all publications
- Suggested template provided in Teams

COI lists

- Required for all personnel who have submitted a Biographical Sketch in the R&R Senior/Key Personnel Profile
- NIFA template provided in Teams

Current & Pending

- Current and Pending Support information is only required for personnel with PD or Co-PD indicated as their Project Role on the R&R Senior/Key Person Profile.
- NIFA template provided in Teams

Matching and Budget

Matching Requirement and Compliance

Matching Fund Requirements

Commodity-specific, non-national projects require dollar-for-dollar match from non-federal sources, either cash or in-kind.

No Match for National Scope

Projects of national scope and/or non-commodity-specific do not require matching funds, easing budget constraints.

Compliance and Documentation

Applicants must state matching status clearly in the budget justification and review subaward budgets for compliance.

Early Coordination

Coordination with leadership and partners ensures matching commitments are feasible and documented properly.

Budget Structure and Cost Considerations

Goal: budget demonstrates a genuinely integrated system in which **research**, **education**, and **extension** are mutually reinforcing, appropriately resourced, and aligned with the proposal narrative.

Budget Categories

Budgets must separate costs by **research**, **education**, and **extension** activities. No more than 2/3 of the budget may be spent on any one category.

Indirect Cost Limits

Indirect costs are limited to the lesser of 30% of Total Federal Funds or Purdue's Negotiated Indirect Cost Rates. Costs in each project category (R/E/X) have different Purdue IDC rates (57%, 38%, 50%, etc.), so allocating costs appropriately is important.

Sub-award Documentation

Early subaward documentation receipt and review is necessary to ensure sub-award budgets comply with budget categorizations and indirect cost limits.

Budget Structure and Cost Considerations

Personnel and Effort Allocation

Key personnel effort must be clearly detailed, estimating time for each project component (R/E/X) as these are tied to efforts described in the Key Personnel Roles table.

Travel and Data Management Costs

- Travel for project directors is required for an annual SAS meeting.
- Data management expenses are allowable but must be reasonable and tied to the efforts described in the data management plan.

Budget Justification and Compliance

The budget justification must explain cost assumptions and provide rationale when matching funds are not required. Example SAS justification template available in Teams, and Pre-Award will provide a customized template for each proposal.

Evaluation

Evaluation – AFRI SAS

Common Questions:

- What is evaluation? What does it do?
- How can evaluation help my project?
- How does it apply to AFRI SAS?
- What resources are available to help me?

What is evaluation? What does it do?

What does evaluation *do*?

Evaluation is essential part of strategic design	▪ Improve or transform objects, programs, systems.
Evaluation produces knowledge	▪ Document the quality, merit, value of objects, programs, systems.
Evaluation improves quality of objects, programs, systems	▪ Engage, involve, empower stakeholders.

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ELRC Evaluation and Learning Research Center

Evaluation – AFRI SAS

How can evaluation help my project?

- Clarify and Articulate Goals and Objectives
- Link Activities to Outcomes – making the logic for activities explicit
- Identify sources of evidence
- Develop plan for data collection, analysis, interpretation
- Foster continuous reflection and project improvement
- Provide data to show project progress and success

Done well, evaluation provides a powerful tools for proposal development, project management, continuous improvement, community engagement, and sharing project success/value.

Evaluation – AFRI SAS

How does it apply to AFRI SAS?

AFRI SAS projects MUST include a plan for achieving project objectives that includes:

- Milestones showing progress towards goals
- Outcome/Success indicators for research, education, and extension
- Plans for measuring progress and success

Evaluation – AFRI SAS

Integrated Project Applications Must ensure that:

- Expected results or outcomes are clearly stated, measurable, and achievable within the allotted time frame;
- Proposed research fills knowledge gaps that are critical to the development of practices and programs to address the stated problem or issue;
- Proposed extension leads to measurable, documented changes in learning, actions, or conditions in an identified audience or stakeholder group; and
- Proposed education (teaching) has an impact upon and advances the quality of food and agricultural sciences by strengthening institutional capacities and curricula to meet clearly delineated needs and train the next generation of scientists and educators

Evaluation – AFRI SAS

What resources are available to help me?

- Expected results or outcomes are clearly stated, measurable, and achievable within the allotted time frame.

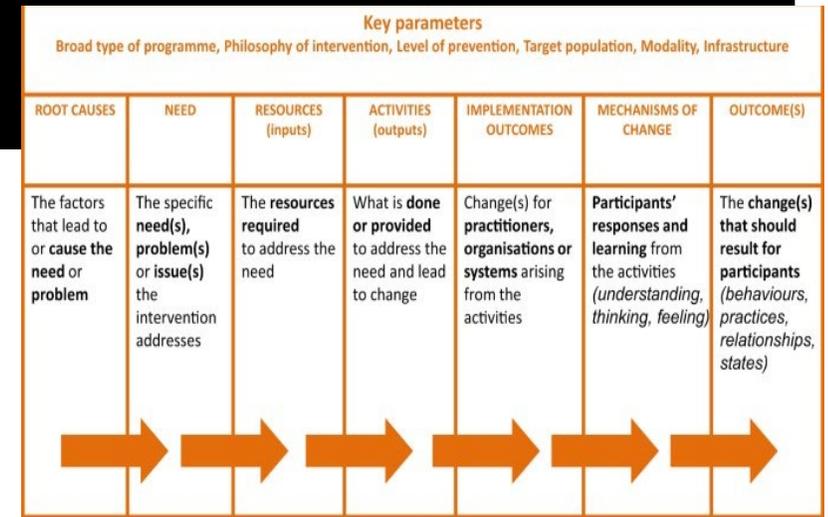Logic Models, theory of change, results framework, log frame.
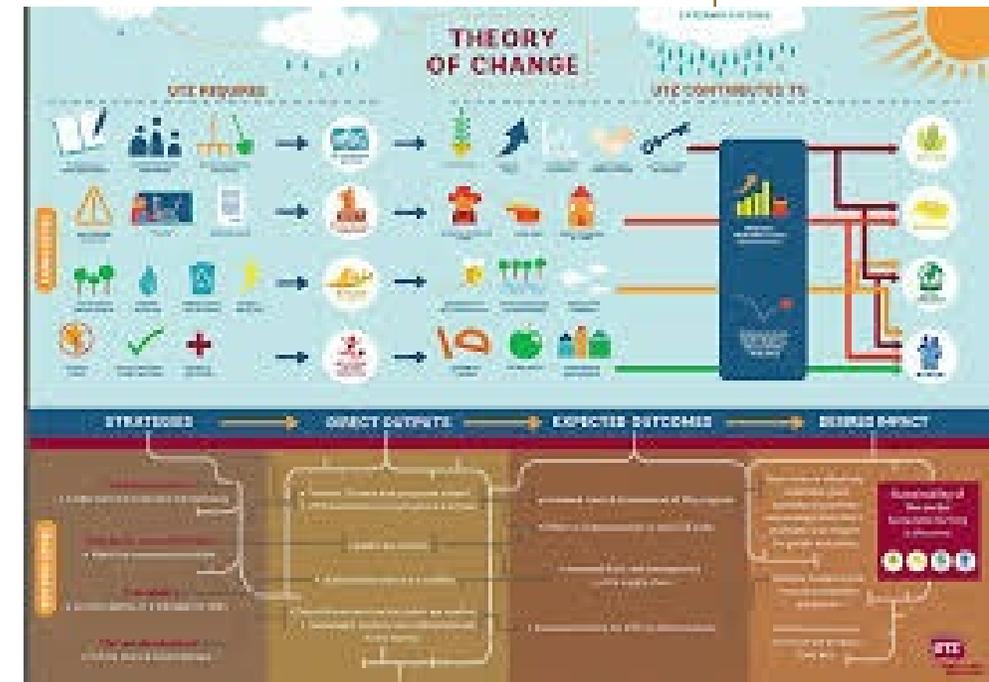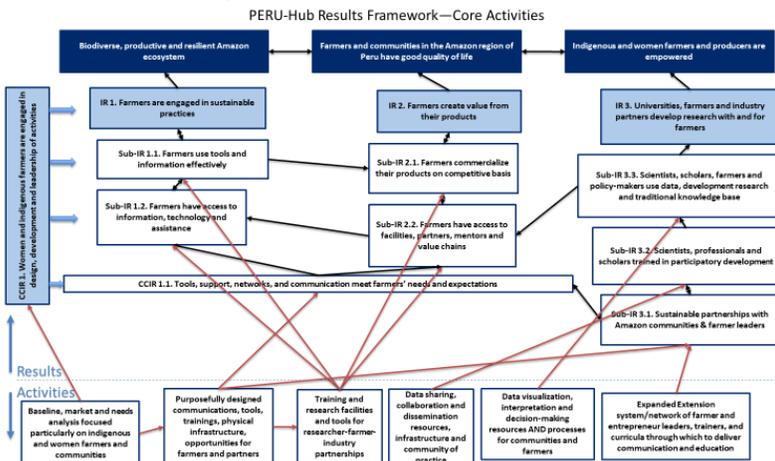Different ways of making explicit:
Context
Prior knowledge
Logic, mechanisms, assumptions
Expected outputs and outcomes

Key parameters
Broad type of programme, Philosophy of intervention, Level of prevention, Target population, Modality, Infrastructure

ROOT CAUSES	NEED	RESOURCES (inputs)	ACTIVITIES (outputs)	IMPLEMENTATION OUTCOMES	MECHANISMS OF CHANGE	OUTCOME(S)
The factors that lead to or **cause the need** or **problem**	The specific **need(s)**, **problem(s)** or **issue(s)** the intervention addresses	The **resources required** to address the need	What is **done or provided** to address the need and lead to change	Change(s) for **practitioners, organisations or systems** arising from the activities	**Participants' responses and learning** from the activities *(understanding, thinking, feeling)*	The **change(s)** that should **result for participants** *(behaviours, practices, relationships, states)*

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Evaluation – AFRI SAS

What resources are available to help me?

Proposed research fills knowledge gaps that are critical to the development of practices and programs to address the stated problem or issue;

Advisory Committee comprised of experts relevant to problem/field – academic, industry, government, stakeholders…
    Critical Friend review
    Expert Guidance
    Feedback
    Support

Must have clear expectations, communication, and effective management to function well.
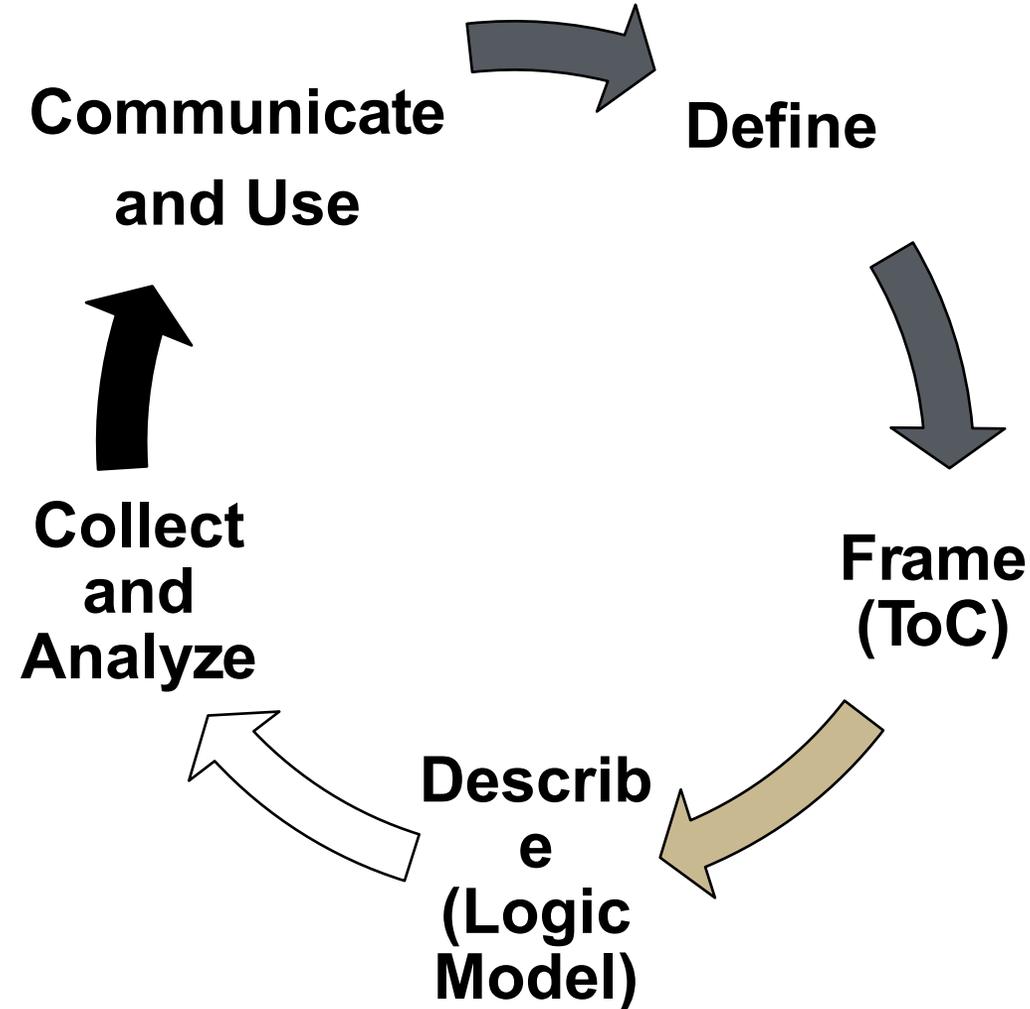
Evaluation – AFRI SAS

What resources are available to help me?

- Proposed extension leads to measurable, documented changes in learning, actions, or conditions in an identified audience or stakeholder group; and
- Proposed education (teaching) has an impact upon and advances the quality of food and agricultural sciences by strengthening institutional capacities and curricula to meet clearly delineated needs and train the next generation of scientists and educators

Faculty member with evaluation expertise in the area
Independent Evaluation Consultant
University-Based Evaluation Center

What Should Your Evaluator Do?

A circular cycle diagram with the following stages connected by arrows:
- Define
- Frame (ToC)
- Describe (Logic Model)
- Collect and Analyze
- Communicate and Use

Evaluation – AFRI SAS

Can ELRC Help?

ELRC works with faculty across Purdue, the country, and the world on evaluation projects big and small – including a wide wide-array of USDA projects:

Partnering with ELRC requires:
- Commitment to evaluation as a tool for designing, managing, and assessing the outcomes of a project. (continuous improvement and outcomes)
- Collaboration and Communication
- Funding

Key Timelines and Deadlines

Timeline for Proposal Efforts – SAS Priority

Week of February 22

- ASAP: Start FP record in PERA to initiate pre-award support. **Please note, due to the significant complexity and coordination requirements associated with this specific NOFO, along with current Pre-Award Specialist capacity, SPS may need to limit the number of submissions with Purdue as lead on SAS priority proposals should interest exceed available support capacity. This will ensure appropriate compliance review, adequate institutional oversight, and high-quality, competitive proposals.*
- By 2/26: Submit Letter of Intent to ensure appropriate reviewers are available for your content
- By 2/26: Submit initial budget to SPS partner, including allocations by institution
- With leads, draft budget #1 size and scope by area (research, education, extension—don't forget overarching needs including management and assessment)
- Finalize all academic partners, close to final industrial, non-profit or stakeholder partnerships in place
- Go over list of supplementary docs, personnel docs, and subaward docs and their deadlines with team
- Ask leads to draft detailed outline of section
- Start thinking about assessment, mentoring, management and data management plan

Timeline for Proposal Efforts – SAS Priority

Week of March 1

- Continue working with pre-award on budget iterations; draft budgets from sub-awards due 3/5

- Sketch out logic model and conceptual graphics

- Identify who will create graphics / identify funds if external support is needed

- Pull together outline of all sections, as PI, revise as needed, lead team meeting to discuss

- Check in on progress of all supplementary docs

- Finalize personnel list

- All team start drafting Statements of Work

- Start preparing drafts of sections

- Meet with all leads to finalize budget and ensure partner institutions are submitting their final budget documentation

Timeline for Proposal Efforts – SAS Priority

Week of March 8

- By 3/10: Sub-award budgets and documents must be received.
- By 3/12: Budget is final. Incomplete budget after this point will require approval to move forward.
- All supplementary individual documents should be completed
- Finalize DMP, MP, Mentoring plan, Logic model, Key Personnel Roles with Level of Effort
- Review progress on graphics
- First draft of 18-page narrative, with bibliography and references complete

Timeline for Proposal Efforts – SAS Priority

Week of March 15

- By 3/19: Submit all remaining administrative docs (individual personnel docs, budget justification, documentation of collaboration, facilities, equipment, key personnel roles, cooperation and institution units involved). Missing documents will require approval to move forward.

- Finalize graphics

- Review next to final project narrative

Week of March 22

- By 3/24: All remaining pieces submitted (project summary/abstract, project narrative, references, data management plan, logic model, management plan, preprints)

Firm Deadlines – SAS Priority

TASK/DOCUMENT	DUE DATE	NOTES
Letter of Intent Due	2/26/2026	Optional, strongly encouraged
First Draft Overall Budget	3/5/2026	Should include draft budgets from subs
Final Subaward Documents	3/10/2026	Budget, justification, SOW
Final Budget SPS Deadline*	3/12/2026	Budget
Admin Stage SPS Deadline*	3/19/2026	All admin documents due
Science Stage SPS Deadline*	3/24/2026	All science documents due
Submission Deadline	3/26/2026	Final application due

*Due to the scale, complexity, and multi-institutional nature of the SAS proposals, SPS requires firm deadline adherence to allow adequate time for collaboration and institutional review. Anything received after these deadlines will require completion and approval of an exception form to be able to submit.

Review Process

Review Process & Notes

Rigorous Peer Review

SAS proposals undergo a thorough peer review ensuring fairness, transparency, and alignment with program priorities.

Evaluation Criteria

Proposals are evaluated on qualifications of the personnel and proposed project management, project relevance, scientific merit, integration of research and education, stakeholder engagement, and measurable outcomes.

**Pay careful attention to follow all requirements as NIFA intends to screen applications more thoroughly leading to more Return without Review results.

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Resources

Graphics Support

College of Agriculture Faculty: Access to BioRender

BioRender will be hosting a webinar **Wednesday, February 25th** at 1pm.
The webinar will cover the following:

- What makes a strong graphical abstract
- Layout & story flow best practices
- Using color intentionally
- Color psychology & accessibility
- Effective lines and arrows

Register for the webinar **here**

For questions, contact Rhonda Haan (rhaan@purdue.edu)

DOCUMENT RESOURCE TABLE

SAS Component	Resource(s)
Proposal Planning	Keep on track with the <u>Timeline for SAS Progress</u>. Refer to the <u>SPS document checklist</u> for all required components and due dates.
Project Summary/Abstract	~ 250 words addressing relevance of project to Program Area/Program Area Priority goals. <u>See NIFA templates.</u> Project Summaries may be read by political appointees assessing for project alignment with national priorities. An ability to communicate to a non-technical audience is paramount. Request a Grant Writer review by emailing <u>OORIntake@purdue.edu</u>.
Project Narrative	Suggested <u>outline</u> for the 18-page Narrative. Refer also to the <u>NOFO</u>, the <u>App Guide</u>, and <u>Additional Information Part IV.C</u>. Check the list of <u>flagged terms</u> while writing.
Mentoring Plan	<u>Template</u> for the 3-page Mentoring Plan. Although targeted for a different agency, consider using the Office of Research NSF Mentoring Plan <u>self-help tool</u> to think through your mentoring strategy.
Management Plan	<u>Template</u> for the 3-page Management Plan. See also Office of Research Management Plan Strategies <u>self-help tool</u>.
Data Management Plan	<u>Template</u> for the 2-page DMP. See also the <u>NIFA DMP resources page</u>.
COI & CP	See <u>NIFA templates</u>.
Biographical sketch	<u>Template</u> for the 2-page CV.
Logic Model	2-page limit. Include the elements of a logic model detailing the activities, outputs, and outcomes of the proposed project. The logic model planning process is a tool that should be used to develop your project before writing your application. This information may be provided as a narrative or formatted into a logic model chart. See the NIFA <u>logic model planning process webpage</u>.
Budget and Justification	Work with Pre-Award to develop integrated budget. See the Office of Research Large Center Budget Considerations <u>self-help tool</u> for guidance. Pre-Award will provide a budget justification template customized for your proposal based on this general <u>SAS Budget Justification Template</u>. Use <u>Document-Budget Alignment Checklist</u> to confirm all proposed work adequately resourced and that budget and justification reinforce overall proposal.

Questions?

Office of Research SIR team: <u>OOR intake form</u>

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QUESTIONS?

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