NDSU OFFICE OF RESEARCH AND CREATIVE ACTIVITY

RCA UPDATE

September 8, 2020

Funding Opportunity Edition

Upcoming Limited Submission Program Deadlines

- NSF Major Research Instrumentation (MRI)
  Notification Deadline: September 15, 2020
- NSF Research Traineeship (NRT)
  Notification Deadline: September 15, 2020
- USDA-NIFA: Women and Minorities in STEM Fields Program
  Notification Deadline: September 15, 2020
- NIH Collaborative Program for Multidisciplinary Teams (RM1)
  Notification Deadline: September 22, 2020
- NSF National AI Research Institutes
  Notification Deadline: September 23, 2020

Approaching Deadline:

ND EPSCoR Funding Opportunities

ND EPSCoR is accepting proposals to fund STEM activities across seven broad categories:

- Equipment

- Equipment Repairs
- Undergraduate Research
- Seed Awards for collection of preliminary data.
- Seed Awards for faculty and students engaged in K-12 Outreach.
- External Proposal Reviews
- Development of online/virtual models for STEM laboratory courses.

More information and application instructions are posted on the ND EPSCoR website.

National Endowment for the Humanities (NEH)

The NEH has open opportunities for the following programs:

NEH: Archaeological and Ethnographic Field Research
This program makes awards to institutions and organizations conducting empirical field research to answer significant questions in the humanities. Archaeological methods may include field survey and field-based remote sensing, documentation or visualization, and/or excavations in support of answering research questions in all aspects of the human past, including but not limited to ancient studies, anthropology, art history, classical studies, regional studies, epigraphy, and other related disciplines. *Deadline: September 30, 2020*

NEH: Dialogues on the Experience of War
The National Endowment for the Humanities offers the *Dialogues on the Experience of War* program to support the study and discussion of important humanities sources about war. Dialogues is primarily designed to research military veterans; however, men and women in active service, military families, and interested members of the public may also participate. *Deadline: October 14, 2020*

NEH: Humanities Connections
This program seeks to expand the role of the humanities in undergraduate education at two- and four-year institutions. Awards support innovative curricular approaches that foster productive partnerships among humanities

faculty and their counterparts in the social and natural sciences and in pre-service or professional programs (such as business, engineering, health sciences, law, computer science, and other technology-driven fields), in order to encourage and develop new integrative learning opportunities for students. The Humanities Connections program includes two categories: **Planning** and **Implementation**.
Deadline: September 30, 2020

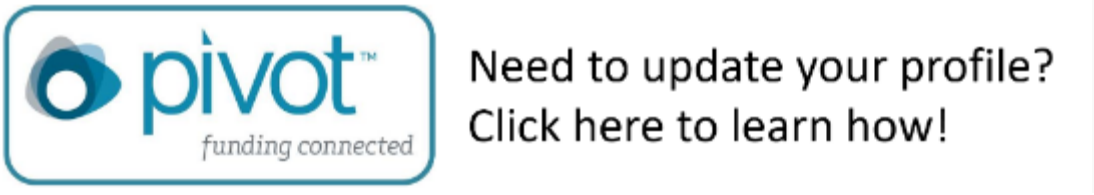
NEH: Public Scholars (Books), Scholarly Editions, and Scholarly Translations

- The Public Scholars program supports the creation of well-researched nonfiction books in the humanities written for the broad public. It does so by offering grants to individual authors for research, writing, travel, and other activities leading to publication. The 2021 application will be posted mid-October. *Application Deadline: December 16, 2020.*
- The Scholarly Editions and Scholarly Translations program makes awards to organizations to support the preparation of editions and translations of pre-existing texts of value to the humanities that are currently inaccessible or available only in inadequate editions or translations. Projects must be undertaken by at least two scholars working collaboratively. These grants support sustained full-time or part-time activities during the periods of performance of one to three years. The 2021 application will be available October 1, 2020. *Application Deadline: December 2, 2020.*

FUNDING OPPORTUNITIES

- Amazon: Research Awards
- American Philosophical Society: Franklin Research Grants
- Defense Established Program to Stimulate Competitive Research
- DOC-EDA: STEM Talent Challenge Program
- NETL: Faculty Research Program
- NIH: Collaborative Program for Multidisciplinary Teams (RM1)
- NIH: Maximizing Investigators' Research Award
- NIH: Tobacco Control Policies to Promote Health Equity
- NSF: Advancing Informal STEM Learning
- NSF: National Artificial Intelligence (AI) Research Institutes
- NSF: Biology Integration Institutes
- NSF: Civil Infrastructure Systems

- NSF: Major Research Instrumentation (MRI)
- NSF: Research Traineeship (NRT)
- NSF: Smart and Connected Health
- Robert Wood Johnson Foundation: Building a Culture of Health
- USDA-NIFA: Agriculture and Food Research Initiative Foundational and Applied Science
- USDA-NIFA: Women and Minorities in STEM Fields Program



Amazon: Research Awards

Amazon has opened a call for proposals in the following categories:

- AI for Information Security
- Alexa Fairness in AI
- Amazon Web Services (AWS) AI
- AWS Automated Reasoning
- Robotics

Awards are structured as unrestricted gifts to the principal investigator's academic institution or organization and as such, Amazon retains no intellectual property rights to the resulting work. Recipients are encouraged to publish outcomes and commit related code to open-source repositories. Recipients are assigned an Amazon research contact who offers consultation and advice along with opportunities to participate in Amazon events and training sessions.

Application window: August 17, 2020 – October 11, 2020

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American Philosophical Society: Franklin Research Grants

Franklin Research Grants of up to $6,000 will be awarded to help meet the costs of travel to libraries and archives for research purposes; the purchase of microfilm, photocopies, or equivalent research materials; costs associated with fieldwork; or laboratory research expenses. PhD candidates are not eligible to apply, but the society is interested in supporting the work of young scholars who have recently received their doctorate.

These awards are not intended to meet the expenses of attending conferences or the costs of publication. Applications require two letters of support.

For complete program guidelines, FAQs, and application instructions, see the American Philosophical Society website.

Upcoming deadlines: October 1, 2020; December 1, 2020

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Defense Established Program to Stimulate Competitive Research

The Department of Defense (DoD) announces the fiscal year 2020 (FY20) Defense Established Program to Stimulate Competitive Research (DEPSCoR). The aim of DEPSCoR is to improve the research capabilities at institutions of higher education (IHE) in eligible States/Territories to perform competitive basic research in science

and engineering that is relevant to the DoD mission and reflect national security priorities. The Basic Research Office anticipates approximately $7.2 million in total funding will be made available for this program to fund approximately twelve (12) awards up to $600,000 (total cost) each. Each award will be funded up to $200,000 (total cost) per year for three (3) years in the form of a grant.

The FY20 DEPSCoR competition seeks proposals addressing multiple topic areas, including:

1. Cognitive and Computational Neurosciences;
2. Materials with Extreme Properties;
3. Computational Architectures and Visualization;
4. Probability and Statistics;
5. Molecular Structure and Dynamics;
6. Social and Behavioral Science;
7. Biotronics;
8. Machine Learning, Reasoning, and Intelligence; and
9. Power Electronics & Electromagnetism, Adaptive & Machinery Controls and Advanced Machinery Systems.

This funding opportunity aims to create basic research collaborations between a pair of researchers, namely 1) Applicant/Principal Investigator (PI), a full-time faculty member who has never served as a PI on a prior DoD-funded award and 2) Collaborator/co-Principal Investigator (co-PI) who will provide mentorship to the Applicant and has served as a PI on a DoD-funded research award actively between 1 October 2013 and 30 September 2020. Both investigators must be in a tenure-track or tenured position at an IHE in an eligible State / Territory.

Registration Deadline: September 14, 2020
Whitepaper Deadline: September 21, 2020

Slides from a recent DEPSCoR webinar and answers to questions about the program are posted in the Grants.gov funding opportunity announcement, under “Related Documents.”

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DOC-EDA: STEM Talent Challenge Program

EDA is seeking applications from eligible applicants to create and implement innovative science, technology, engineering and mathematics (STEM) apprenticeship models that complement their respective region’s innovation

economy. The STEM Talent Challenge seeks to develop or expand regional workforce capacity to support high-growth, high-wage entrepreneurial ventures, industries of the future (which usually includes industries that leverage emerging technologies), and other innovation-driven businesses that have a high likelihood of accelerating economic competitiveness and job creation in their respective regions and in the United States. A 1:1 match is required.

Deadline: October 14, 2020

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NETL: Faculty Research Program

The Faculty Research Program offers qualified academic faculty an opportunity to collaborate with National Energy Technology Laboratory (NETL) principal investigators on research that is mutually beneficial to NETL and the participant at state-of-the-art NETL facilities. While typical appointments are part-time, some appointments are offered during the summer and as a sabbatical. Prior to the appointment, the NETL principal investigator and participant will define the scope of research and schedule the appointment period.

Research and Development Areas:

- Carbon Management
- Chemical Reaction Engineering
- Combustion Science
- Computational Research
- Environmental Science
- Fuel Cell Research
- Geosciences
- High Temperature/High Pressure Science
- Materials Performance
- Methane Hydrates Research
- Process Development
- Reciprocating Engines Research
- Remote Sensing
- Sensors and Controls
- Separations Science
- Surface Science

Applications are accepted on a rolling basis.

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NIH Collaborative Program for Multidisciplinary Teams – Limited Submission Program

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

NIH RM1: Notify RCA by 9/22/2020, 5:00 p.m. if you are interested in submitting to this program.

This National Institutes of Health (NIH) funding opportunity announcement (FOA / PAR-20-103) is designed to support highly integrated research teams of three to six PD / PIs to address ambitious and challenging research questions that are important for the mission of the National Institute of General Medical Sciences (NIGMS) and are beyond the scope of one or two investigators. Collaborative program teams are expected to accomplish goals that require considerable synergy and managed team interactions. Project goals should not be achievable with a collection of individual efforts or projects. Teams are encouraged to consider far-reaching objectives that will produce major advances in their fields. Applications that are mainly focused on the creation, expansion, and / or maintenance of community resources, creation of new technologies or infrastructure development are not appropriate for this FOA.

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NIH: Maximizing Investigators' Research Award (R35)

The Maximizing Investigators' Research Award (MIRA) program provides support for the research in an investigator's laboratory that falls within the mission of the National Institute of General Medical Sciences (NIGMS). The goal of MIRA is to increase the efficiency of NIGMS funding by providing investigators with greater stability and flexibility, thereby enhancing scientific productivity and the chances for important breakthroughs. The program will also help distribute funding more widely among the nation's highly talented and promising investigators. MIRA grants will

generally be for 5 years, for both established investigators and early stage investigators.

- Established investigators who currently hold an R01-equivalent grant or who wish to renew a MIRA should apply to PAR-19-367.
  Deadline: January 19, 2021; May 17, 2021
- Early stage investigators may apply through PAR-20-117.
  Deadline: October 2, 2020; October 4, 2021

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NIH: Tobacco Control Policies to Promote Health Equity

The purpose of this announcement is to support observational or intervention research focused on reducing disparities in tobacco use and secondhand smoke (SHS) exposure in the U.S. Specifically, this program aims to stimulate scientific inquiry focused on innovative state and local level tobacco prevention and control policies. The long-term goal of this program is to reduce disparities in tobacco-related cancers, and in doing so, to promote health equity among all populations. Applicants submitting applications related to health economics are encouraged to consult NOT-OD-16-025 to ensure that the research projects align with NIH mission priorities in health economics research.

- R01 - Clinical Trial Optional [PAR-20-302]
- R21 - Clinical Trial Optional [PAR-20-303]

Deadline: November 12, 2020

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NSF: Advancing Informal STEM Learning

The Advancing Informal STEM Learning (AISL) program [NSF 20-607] seeks to advance new approaches to and evidence-based understanding of the design and development of STEM learning opportunities for the public in informal environments; provide multiple pathways for broadening access to and engagement in STEM learning experiences; advance innovative research on and assessment of STEM learning in informal environments; and engage the public of all ages in learning STEM in informal environments.
The AISL program supports six types of projects: (1) Pilots and Feasibility Studies, (2) Research in Service to Practice, (3) Innovations in Development, (4) Broad Implementation, (5)Literature Reviews, Syntheses, or Meta-Analyses, and (6) Conferences.

An individual may be included as a Principal Investigator (PI) /co-PI on no more than three (3) proposals submitted to the program deadline.

Deadline: January 12, 2021

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NSF: National Artificial Intelligence (AI) Research Institutes - Limited Submission

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

NSF AIRI: Notify RCA by 9/23/2020, 5:00 p.m. if you are interested in submitting to this program.

The National AI Research Institutes program [NSF 20-604] – a joint effort of NSF, USDA-NIFA, DHS S&T, DOT FHWA, and several industry partners – will fund Institutes comprising scientists, engineers, and educators united by a common focus on advancing the research frontiers in AI. AI Research Institutes will have as their primary focus the advancement of multidisciplinary, multi-stakeholder research on larger-scale, longer-time-horizon challenges in AI research than are supported in typical research grants. They will accelerate the development of transformational technologies by grounding that research in critical application sectors that can serve as motivation for foundational research advances and provide opportunities for the effective fielding of AI-powered innovation.
In this round of Institutes, proposals are being solicited in the following high-priority areas:

1. Human-AI Interaction and Collaboration;
2. AI Institute for Advances in Optimization;
3. AI and Advanced Cyberinfrastructure;
4. Advances in AI and Computer and Network Systems;
5. AI Institute in Dynamic Systems;
6. AI-Augmented Learning;
7. AI to Advance Biology; and
8. AI-Driven Innovation in Agriculture and the Food System.

LIMITED SUBMISSION: An organization may submit no more than two proposals to this solicitation as lead institution. Organizations wishing to contribute to more Institute proposals are encouraged to participate as non-lead organizations in Institute proposals in a manner that helps to create significant new research capabilities in new centers of AI leadership throughout the country. **An individual may be designated as senior personnel (which includes but is not limited to PI or co-PI) on at most one project team submitting to this solicitation.**

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NSF: Biology Integration Institutes

The NSF Directorate for Biological Sciences program for Biology Integration Institutes (BII) supports diverse and collaborative teams of researchers investigating questions that span multiple disciplines within and beyond biology. The goal is to stimulate creative integration of disparate fields using innovative experimental, theoretical, and modeling approaches to discover underlying principles operating across multiple levels of life, from molecules to cells, organisms, species, ecosystems, biomes and the entire Earth. Funding will be at a higher level and for a longer time frame than is typical for standard NSF awards. The Institutes must enable an environment conducive to integration of research, infrastructure, resources, and training, explore new modes of collaboration, and prepare the next generation of biological scientists to be leaders who pursue multidisciplinary research throughout their careers. These next generation leaders should be able to help transform the scientific enterprise to become fully inclusive. Institutes may be localized at one organization or may span multiple organizations; they may comprise a single group of collaborators or incorporate additional researchers as the project evolves. While this solicitation focuses on the integration of biological subdisciplines, any field beyond biology may be included as needed to address the overarching biological theme.

Each Institute must identify a Research Theme, centered around a compelling and broad biological question poised for breakthroughs by collaboration across biological subdisciplines. The Theme must be larger in scope than research projects typically submitted to core programs in the BIO Directorate. While it does not have to span all biological subdisciplines, it should span more than one subdiscipline and be compelling across the subdisciplines spanned.

Deadline: January 13, 2021

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NSF: Civil Infrastructure Systems

The Civil Infrastructure Systems (CIS) program supports fundamental and innovative research in the design, operation and management of civil infrastructure that contributes to creating smart, sustainable and resilient communities at local, national and international scales. This program focuses on civil infrastructure as a system in which interactions between spatially- and functionally- distributed components and intersystem connections exist. All critical civil infrastructure systems are of interest, including transportation, power, water, pipelines and others.

The CIS program encourages potentially disruptive ideas that will open new frontiers and significantly broaden and transform relevant research communities. The program particularly welcomes research that addresses novel system and service design, system integration, big data analytics, and socio-technological-infrastructure connections. The program values diverse theoretical, scientific, mathematical, or computational contributions from a broad set of disciplines.

While component-level, subject-matter knowledge may be crucial in many research efforts, the program does not support research with a primary contribution pertaining to individual infrastructure components such as materials, sensor technology, extreme event analysis, human factors, climate modeling, structural, geotechnical, hydrologic or environmental engineering.

Deadline: Full Proposals are accepted at anytime.

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NSF: Major Research Instrumentation – Limited Submission Program

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

NSF MRI: Notify RCA by 9/15/2020, 5:00 p.m. if you are interested in submitting to this program.

The National Science Foundation Major Research Instrumentation (MRI) Program [NSF 18-513] serves to increase access to multi-user scientific and engineering instrumentation for research and research training in our Nation's institutions of higher education and not-for-profit scientific / engineering research organizations. An MRI award supports the acquisition or development of a multi-user research instrument that is, in general, too costly and / or not appropriate for support through other NSF programs. **Cost sharing of precisely 30% of the total project cost is required.**

Based on the NSF 18-513 solicitation, an MRI proposal may request support for either the acquisition or development of a research instrument.

- Track 1: Track 1 MRI proposals are those that request funds from NSF greater than or equal to $100,000 and less than $1,000,000. Two proposal submissions are allowed per organization.
- Track 2: Track 2 MRI proposals are those that request funds from NSF greater than or equal to $1,000,000 up to and including $4,000,000. One proposal submission is allowed per organization.

LIMITED SUBMISSION: The MRI program requires that an MRI-eligible organization may, as a performing organization, submit or be included as a significantly funded subawardee in *no more than three MRI proposals*. Each performing organization is limited to a maximum of three proposals in the “Tracks” as defined above, with no more than two submissions in Track 1 and no more than one submission in Track 2.

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NSF: Research Traineeship - Limited Submission Program

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

NSF NRT: Notify RCA by 9/15/2020, 5:00 p.m. if you are interested in

submitting to this program.

The National Science Foundation (NSF) Research Traineeship (NRT) program [NSF 19-522] is designed to encourage the development and implementation of bold, new, and potentially transformative models for STEM graduate education training. The NRT program seeks proposals that explore ways for graduate students in research-based masters and doctoral degree programs to develop the skills, knowledge, and competencies needed to pursue a range of STEM careers. The program is dedicated to effective training of STEM graduate students in high priority interdisciplinary research areas, through the use of a comprehensive traineeship model that is innovative, evidence-based, and aligned with changing workforce and research needs. The NRT program addresses workforce development, emphasizing broad participation, and institutional capacity building needs in graduate education. Strategic collaborations with the private sector, non-governmental organizations (NGOs), government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners are encouraged.

LIMITED SUBMISSION: Based on the NSF 19-522 solicitation, an eligible organization may participate in *two proposals* per competition. **Participation includes serving as a lead organization, non-lead organization, or subawardee on any proposal.** Organizations participating solely as evaluators on projects are excluded from this limitation.

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NSF: Smart and Connected Health - Connecting Data, People, and Systems

The goal of the interagency Smart and Connected Health (SCH): Connecting Data, People and Systems program is to accelerate the development and integration of innovative computer and information science and engineering approaches to support the transformation of health and medicine. Approaches that partner technology-based solutions with biomedical and biobehavioral research are supported by multiple agencies of the federal government including the National Science Foundation (NSF) and the National Institutes of Health (NIH). The purpose of this program is to develop next-generation multidisciplinary science that encourages existing and new research communities to focus on breakthrough ideas in a variety of areas of value to health, such as networking, pervasive

computing, advanced analytics, sensor integration, privacy and security, modeling of socio-behavioral and cognitive processes and system and process modeling. Effective solutions must satisfy a multitude of constraints arising from clinical/medical needs, barriers to change, heterogeneity of data, semantic mismatch and limitations of current cyber physical systems and an aging population. Such solutions demand multidisciplinary teams ready to address issues ranging from fundamental science and engineering to medical and public health practice.

Deadline: December 11, 2020

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Robert Wood Johnson Foundation: Building A Culture of Health

The Robert Wood Johnson Foundation has two open calls for proposals related to building a Culture of Health:

- Evidence for Action: Investigator-Initiated Research to Build a Culture of Health
- Pioneering Ideas: Exploring the Future to Build a Culture of Health

A Culture of Health is broadly defined as one in which good health and well-being flourish across geographic, demographic, and social sectors; public and private decision-making is guided by the goal of fostering equitable communities; and everyone has the opportunity to make choices that lead to healthy lifestyles.

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USDA-NIFA: Agriculture and Food Research Initiative Foundational and Applied Science

The Agriculture and Food Research Initiative (AFRI) Foundational and Applied Science Program supports grants in six AFRI priority areas to advance knowledge in both fundamental and applied sciences important to agriculture. The six priority areas are:

1. Plant Health and Production and Plant Products;
2. Animal Health and Production and Animal Products;

3. Food Safety, Nutrition, and Health;
4. Bioenergy, Natural Resources, and Environment;
5. Agriculture Systems and Technology; and
6. Agriculture Economics and Rural Communities.

Research-only, extension-only, and integrated research, education and / or extension projects are solicited in this Request for Applications (RFA).
See Foundational and Applied Science RFA for specific details.

Deadlines vary by program area.

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USDA-NIFA: Women and Minorities in STEM Fields Program (WAMS)

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

USDA WAMS : Notify RCA by 9/15/2020, 5:00 p.m. if you are interested in submitting to this program.

The National Institute of Food and Agriculture (NIFA) requests applications for WAMS to support research and extension activities that increase the number of women and underrepresented minorities from rural areas who will pursue and complete a postsecondary degree in science, technology, engineering or mathematics (STEM) disciplines. WAMS-funded project activities must support the creation, adaptation, and adoption of learning materials and teaching strategies to operationalize what is known about how students learn. WAMS-funded projects shall also focus on imparting both technical knowledge as well as 'soft' skills such as communication, team work, and problem solving, as these are abilities expected by employers.

For this program, NIFA will support projects with a target audience of K-14 students (kindergarten through twelfth grade plus two years of post-secondary school (e.g., vocational technical institutions or community or junior colleges).

Four-year undergraduate, graduate, and post-doctoral focused projects will not be awarded under this grant announcement.

LIMITED SUBMISSION: Each eligible, individual institution, independent branch campus, and branch institution of a State system may submit one application as an individual institution.

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Have questions, ideas, or suggestions for the RCA Update?

Contact Us
