

Conservation Reserve Program

CLIMATE CHANGE MITIGATION ASSESSMENT INITIATIVE

Solicitation for Proposals

OVERVIEW AND OBJECTIVES

USDA is launching a multi-year monitoring and assessment effort to quantify the climate benefits of the Conservation Reserve Program (CRP) and improve USDA's existing models and conservation planning tools. CRP is a voluntary conservation program administered by the USDA Farm Service Agency. The program provides annual payments to landowners who commit to removing cropland from production, providing an opportunity to utilize CRP lands as climate solutions through restoration of soils and establishment of perennial vegetative cover. Land is enrolled in CRP for 10-15 years, with the option of re-enrollment, and a variety of conservation benefits and ecosystem services are generated throughout the duration of the CRP contract.

The primary goals of this effort are to:

- 1) Calibrate, validate, and further improve the quantification methodologies within the DayCent model and the COMET tools utilized by the USDA.
- 2) Allow USDA to better target the CRP program toward climate outcomes by estimating the climate benefits of CRP practices relative to cropping systems with and without working lands conservation practices in a similar landscape and soil type.

PROJECT SCOPE AND ELIGIBILITY

USDA is seeking proposals for projects to survey, sample, and measure over time the climate benefits of land across the U.S. enrolled in the following CRP practice types:

- 1) Predominantly perennial grass, including forbs and legumes
- 2) Tree
- 3) Wetland, including both mineral and organic soils and both floodplain and non-floodplain wetlands

This initiative is national in scope: **USDA will fund proposals that best represent the full scope and national footprint of the program with respect to these 3 practice types.** For all projects, soil samples and other data (vegetative cover, site conditions, and weather/climate) shall be collected, analyzed, and stored in a USDA-approved manner, and collated to quantify soil carbon sequestration (measure carbon stock changes over time).

A project can cover one or more of the above practice types. Projects should be for a 3-5-year term, with the potential for renewal. They should be a minimum of \$1 million and not exceed \$10 million.

Proposals are welcome from all types of organizations, including public, private, and nonprofit institutions and **must include** partners associated with Historically Black Colleges & Universities (HBCU), Tribal Colleges & Universities (TCU), and/or Hispanic-Serving Institutions (HSI) or organizations.

PROPOSAL REQUIREMENTS

The proposal should be no more than ten pages, covering the following key areas:

- **Site selection strategy**
 - Sites to be visited must be a nationally representative sample of current grass, tree, and/or wetland practice enrollments.
 - The sample of sites must be sufficiently diverse in terms of species mix and years enrolled.
 - The sample of sites must be stratified by Major Land Resource Areas (MLRAs) and then by soil taxonomic groups within those MLRAs. At least 3 soil taxonomic groups per MLRA must be included and at least 3 sites must be chosen to adequately represent each of those groups.
 - While not required, projects are encouraged to include a plan to gain access to and collect data from non-CRP cropped sites with similar agronomic conditions and/or sites implementing no-till or cover crop practices to facilitate a comparison or paired study.

- **Monitoring strategy**
 - Soil samples must be collected, analyzed, and stored in a manner stipulated by USDA.
 - Proposals should provide their recommended approach, keeping in mind the following:
 - Sites must be visited and field data collected at least every other year.
 - Soil samples must be collected at three depths:
 - 10 cm to provide additional information on soil carbon dynamics;
 - 30 cm to allow for direct comparison with DayCent model analysis and the National Inventory;
 - 100 cm to allow for assessment of deep carbon storage by perennial vegetation.
 - Vegetative survey and climate data must be collected.
 - While not required, data may also be collected regarding:
 - GHG emissions (e.g. nitrous oxide, methane);
 - Co-benefits of CRP such as wildlife habitat, soil erosion, water quantity and water quality.
 - While not required, proposals can outline plans to employ remote sensing or other technologies in addition to sample testing.

- **Use of the data to improve estimates of CRP outcomes**
 - The data must enable USDA to compare the climate benefits between practices in different regions to allow USDA to adjust climate incentive rates over time.
 - The data must inform the DayCent model or other approaches utilized by COMET-Farm.
 - While not required, the data may also be used to inform remote sensing approaches to estimate soil carbon.

- **Budget and administration**
 - Total budget and detailed breakdown by year and task, including salaries, other direct costs, subcontracting costs, and indirect costs (10% of total direct costs).
 - Personnel management plan, including partnerships with HBCUs, TCUs, HSIs, or organizations that serve or represent socially disadvantaged groups.
 - Data management plan.
 - Project timeline.
 - Investigators' relevant experience and credentials.

PROJECT DELIVERABLES

Projects must provide the following deliverables:

- Database of all site data collected in format compatible with the Agricultural Collaborative Research Outcomes System ([AgCROS](#))
- Soil and vegetation samples, appropriately stored for additional future testing
- An assessment approach, including quantification methodologies, sample-informed databases, scientific papers, and any associated computer code, that can be readily incorporated into existing models by year 3 (Calendar year 2024) and in year 5 (Calendar Year 2026)
- Publication of findings in a peer-reviewed scientific journal
- Regular project status meetings, semi-annual project evaluation meetings, and annual data set submissions to USDA
- Quarterly progress reports, including annual summary statistics of the site data, and
- Final report detailing everything accomplished

EVALUATION CRITERIA

The following criteria will be used to score and select proposals:

- Potential to improve the quantification and assessment of the CRP soil and perennial biomass carbon sinks by improving GHG estimates generated by the DayCent model and the modeling framework utilized to inform the National Inventory;
- Potential to inform CRP offer selection and incentive amounts, including extent to which partner can compare climate benefits of CRP to cropped systems with and without working lands conservation practices like conservation tillage and cover crops;
- Project scope and sampling intensity;
- Sampling effort beyond that of soil carbon and biomass, including co-benefits of CRP such as water quality and wildlife habitat;
- Experience with conducting similar assessments in terms of objective and/or scope, noting any existing databases, sampling methodologies, analytical/laboratory relationships and other strategic benefits provided by the applicant;
- Compatibility and synergies with existing networks, such as Long-Term Agroecosystem Research (LTAR), Nutrient Use and Outcome Network (NUOnet), Forest Inventory and Analysis (FIA) Program, and National Ecological Observatory Network (NEON);
- Involvement of Historically Black Colleges & Universities (HBCU), Tribal Colleges & Universities (TCU), and/or Hispanic-Serving Institutions (HSI) or organizations; and
- Cost efficiency.

KEY DATES

May 25, 2021	Solicitation announced
June 9, 2021	Q&A webinar 2 pm EST
July 2, 2021	Deadline for uploading proposals to the following link: Proposal Upload
July 22, 2021	Notification of selection by this date
Sept 30, 2021	Agreements signed and fully executed by this date

Please direct questions about this opportunity to Rich Iovanna, rich.iovanna@USDA.gov, with **CRP Climate Change Mitigation Assessment Initiative Question** on the subject line.