

1Supporting Statement A

CONSERVATION EFFECTS ASSESSMENT PROJECT

OMB No. 0535-0245

This supporting statement addresses the reinstatement of data collection efforts for the National Resources Inventory Conservation Effects Assessment Project (NRI CEAP) cropland assessment for a period of three years. The last CEAP information collection occurred in 2016. For the upcoming CEAP Surveys in 2024, 2025, and 2026, the NRI CEAP program will be at the continental US level (48 States). The target sample size will average 20,000 farm operators annually for the three-year period.

Data collected under this docket is under a cooperative agreement between the National Agricultural Statistics Service (NASS) and the Natural Resources Conservation Service (NRCS) in cooperation with the Iowa State University Center for Survey Statistics and Methodology (ISU-CSSM). Under this agreement NRCS will provide total funding for the NRI CEAP survey program, including: the cost of planning, development, testing, data collection, editing, summarization, etc.

The National Resources Inventory (NRI) Conservation Effects Assessment Project (CEAP) is a scientifically-based, longitudinal panel survey designed to assess conditions and trends of soil, water, and related resources of the Nation's non-Federal lands. The NRI CEAP survey is conducted for the USDA by NRCS in cooperation with ISU-CSSM and provides information to address agricultural and environmental issues at national, regional, and state levels. Data gathered in the NRI CEAP survey are linked to NRCS soil and climate databases. These linked data, along with NRI historical data, form the basis for unique modeling applications and analytical capabilities.

A. JUSTIFICATION

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.**

The primary function of NASS is to prepare and issue official State and national estimates of crop and livestock production, disposition, and prices. Auxiliary services such as statistical consultation, data collection, and summary tabulation are performed for other Federal and State agencies on a reimbursable basis. The goal of this NASS information collection is to obtain land management information that will assist NRCS in assessing environmental benefits of conservation

practices associated with implementation of various conservation programs such as the Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP), the Farmable Wetland Program (FWP), Agricultural Conservation Easement Program (ACEP), and other conservation programs. Tracking the environmental benefits of the practices implemented by these programs allows policy makers and program managers to evaluate and modify existing programs and design new programs to more effectively meet the goals of Congress.

The NRI CEAP was initiated by USDA in 2003 as a multi-agency effort to quantify the environmental effects of conservation practices on agricultural lands. The assessment was initiated in support of the 2002 Farm Bill, which substantially increased funding along with accountability for the added funding for conservation programs on agricultural lands. NRCS was designated the lead agency for the NRI CEAP. NRCS needs updated scientifically credible data on residue and tillage management, nutrient management, and conservation practices in order to quantify and assess impacts of current farming practices and to document changes.

Sample points will be drawn from the NRCS NRI database, using a stratified sample. Non-response adjustments are used in the post-survey weighting. The NRI sampling frame will be used for this project because it captures agricultural resources such as soil type(s), topography, and climate; critical factors in estimating benefits of conservation practices. Also important are the historical and linked data that exist for each NRI sample site. The assessment of benefits is not possible without augmenting the existing data with additional information on land management, the adoption of conservation practices, and conservation program participation.

NASS will collaborate with NRCS in the acquisition of this additional information by conducting a survey for a sub-sample of NRI sample units. The survey will utilize personal interviews with farm operators to administer a questionnaire that is designed to obtain field-specific data associated with the selected NRI sample units. These units are fields that encompass the NRI points and will be defined by enumerators at the time of the interviews. Specific questions are asked about physical characteristics of the field, farming activities, and conservation practices associated with the field. Information regarding participation in conservation programs will be obtained from the local NRCS field office.

Benefit measures will include soil quality enhancement, erosion reduction, reduction in nutrient and sediment losses from farm fields, soil carbon sequestration, and reductions of in-stream nutrient and sediment concentrations. Benefits will be estimated by applying transport models and other physical process models at sample sites associated with the NRI sampling frame; this methodology is explained in part B.1.

General authority for these data collection activities is granted under U.S. Code Title 7, Section 2204(a) which specifies that "The Secretary of Agriculture shall procure and preserve all information concerning agriculture which he can obtain ... by the collection of statistics ... and shall distribute them among agriculturists."

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

Data collected in the NRI CEAP farm operator survey will be used in conjunction with previously collected NRI data on soils types, climate, and cropping history as input to field-level physical process models.

NRCS and Texas A&M AgriLife have developed a system of databases and models that can be used to assess the environmental benefits of conservation practices. The primary model that will be used for the NRI CEAP cropland assessment are the Erosion-Productivity Impact Calculator (EPIC) and Agricultural Policy Environmental eXtender Model (APEX). EPIC is a continuous simulation model developed to assess the movement of materials from farm fields, such as nitrogen, phosphorous, sediment, salt, and pesticides. The APEX model was developed to extend the EPIC model beyond the individual field to the whole farm and small watershed levels. The performance of the EPIC and APEX models have been well documented and widely used in policy analysis. For details, refer to <https://epicapex.tamu.edu/about/apex/>

APEX and EPIC operate on a daily time step, integrating daily weather data; soil characteristics; farming operations such as planting, tillage, and nutrient applications; and a plant growth model to simulate the growth and harvest of a crop. All farming operations that take place on the field throughout the year are taken into account. On a daily basis, the models track the movement of water; the cycling of nitrogen, phosphorus, and carbon; and soil erosion. The drainage area considered by EPIC is generally a homogeneous field-sized area of up to about 250 acres. Model outputs represent pollutant and water movement to the "bottom of the root zone" and "edge of the field." The wide variety of input options for data collected on soils, weather, and cropping practices, allows simulation of most crops on virtually any soil and climate combination.

APEX has components for routing water, sediment, nutrients, and pesticides across landscapes, into stream channels, and further downstream to the watershed outlet. Water quality, in terms of nitrogen, phosphorous, and pesticide residues, may be estimated for subareas within the watershed and at the watershed outlet.

As EPIC is a daily time step model, daily inputs are needed on every activity conducted in the production of a crop. The input data collected from surveys of

farm operators are necessary to realistically simulate material losses from farm fields. For more information on the EPIC and APEX models, see <https://epicapex.tamu.edu/about/epic/> and <https://blackland.tamu.edu/models/apex/>

Additional documentation and associated publications regarding NRI CEAP

Modeling methodology can be found at:
<https://www.nrcs.usda.gov/ceap/croplands>.

Impacts of Conservation Adoption on Cultivated Acres of Cropland in the Chesapeake Bay Region, 2003-06 to 2011
<https://www.nrcs.usda.gov/publications/ceap-crop-2013-ChesapeakeBay-full.pdf>

Conservation Practices on Cultivated Cropland - A Comparison of CEAP I and CEAP II Survey Data and Modeling
<https://www.nrcs.usda.gov/sites/default/files/2022-09/CEAP-Croplands-ConservationPracticesonCultivatedCroplands-Report-March2022.pdf>

Additional NRI CEAP cropland reports can be found at
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/>

- 3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

Electronic data collection will be used to help identify the operator of the selected farm fields in which the NRI points lie, and to determine if the selected field is in scope.

NRI sample points will be matched with the USDA Farm Service Agency (FSA) Common Land Use (CLU) geospatial database to determine the name of the farm operator. If the farm field has been registered with FSA, the name of the current operator will be available. This will reduce the amount of time spent in gathering operator information by field enumerators and will reduce respondent burden.

In order to determine if the selected point is in scope, field enumerators will make use of an iPad application prior to the start of each interview. The iPad application includes an aerial image of the field containing the NRI sample point and a series of screening questions. Once the enumerator has determined that the correct farm operator has been identified for the point and the field is in the land use of interest, the farm operator will draw off the borders of the selected field on the iPad aerial

image. The enumerator will get a message to either “Proceed with interview” or “Do not proceed with interview”, based on the screening information. In areas of the country where the iPad cannot connect to a viable signal, the NASDA enumerators will be able to conduct the screening portion of the questionnaire on paper.

Currently, only the screening phase is conducted with an iPad and the rest of the questionnaire is done on paper. The survey must be conducted by a Field Enumerator since the reference point is tied to a NRI sample point. The enumerator will have to show the farmer the aerial photograph of the target point and make sure that the data collected correlates with that point. The enumerator will also collect farm/field level land management data that is unavailable through remote sensing but by visual observation alone; this information cannot be collected online.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

NASS cooperates with State departments of agriculture, land grant universities, and other State and Federal agencies to conduct surveys. Wherever possible, surveys meet both State and Federal needs, thus eliminating duplication and minimizing reporting burden on the agricultural industry.

The data collected during farm operator interviews for the NRI CEAP are being collected primarily for NRCS. Some data will be obtained from the NRCS county offices, eliminating the need to collect these data elements from producers. However, field-level data on all activities conducted in the production of the crop must be obtained from farm operators; they are not available from any other source.

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.

This information collection will not have a significant economic impact on small entities.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

Congress and the Office of Management and Budget have indicated that the environmental impacts of conservation programs designated in the U.S. Farm Bill should be measured consistently, quantitatively, and credibly. This information is needed in order to make informed decisions about future conservation programs.

A three-year snapshot of field management practices for each survey point is necessary to collect sufficient information in order for the Erosion – Productivity Impact Calculator (EPIC)/ Agricultural Policy Environmental eXtender Model (APEX) modeling process to accurately assess environmental benefits.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner inconsistent with the general information guidelines in 5 CFR 1320.5.

There are no special circumstances associated with this information collection.

8. Provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8 (d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments.

The Notice soliciting comments was published in the Federal Register on September 25, 2023, on pages 65652 - 65653. Two comments were received: One from someone preferring to be anonymous in support of the ICR and the other from Jean Public. Both are included in this submission.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record-keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

NRI CEAP incorporates peer review and comments from recognized experts in the conservation community, and scientists and modelers within and outside of government. Findings are presented at professional meetings and workshops.

An external peer review of the NRI CEAP was conducted in 2006 by the Soil and Water Conservation Society (SWCS). A blue-ribbon panel composed of academics and leaders of nongovernmental organizations and State agencies was charged with conducting the review, for the purpose of making NRI CEAP more useful and credible and to assure that NRI CEAP's products have utility for policymakers, program managers, and the conservation community.

Results of the review may be found in the report "Final Report from the Blue Ribbon Panel Conducting an External Review of the U.S. Department of Agriculture Conservation Effects Assessment Project.", available online at: <https://www.swcs.org/resources/publications/blue-ribbon-panel-conducting-a-review-of-ceap>.

Specific to this project, NASS developed and implemented a cognitive, pre-test of the survey instrument in October and November, 2023 and used producer input to improve the data collection process. NASS tested several different layouts of the questionnaire to see if we could improve the flow of the survey; to improve response rates and reduce respondent burden. Our findings showed that the layout of the questionnaire and the order of the questions used in the previous approval were still the best approach to collecting this type of data. However, the testing did show that enumerator training needed to be expanded. NASS discovered some variances in farming and conservation practices that were specific to different regions being tested. Consultation on the questionnaire was provided by modelers from Texas A&M AgriLife and by pest management experts within NRCS. Statisticians at ISU-CSSM conducted the sample design for NRI CEAP. FSA records are being utilized to obtain initial operator information, which increases efficiency and lowers burden on respondents.

To provide policy and technical guidance to those directly implementing NRI CEAP and to assure the scientific credibility and public acceptance of national and watershed assessments of the environmental benefits of conservation practices, NRCS solicited reviews of the survey instrument from several individuals outside of NRCS to justify the questions asked in the survey and to reduce respondent burden with unnecessary questions or a lengthy survey. Reviewers included:

- Noel Gollehon, Engineer, Water Policy Economics, ngollehon@comcast.net
- Luca Doro, Research Scientist, Texas A&M University, Temple Research and Extension Center, luca.doro@brc.tam.us.edu
- Maria Bowman, Research Agricultural Economist (Conservation Liaison), USDA Economic Research Service, Maria.Bowman@usda.gov.
- Wes Hanson, Agricultural Economist, USDA Office of Chief Economist, wes.hanson@usda.gov
- Mindy Selman, Senior Analyst in Environmental Markets, USDA Office of Chief Economist, mindy.selman@usda.gov
- Cameron Douglass, Agronomist, USDA Office of Chief Economist, Office of Pest Management Policy, cameron.douglass@usda.gov

In 2006, NASS attempted to integrate the NRI CEAP survey with the Agricultural Resource Management Survey (ARMS III, OMB # 0535-0218) in order to reduce respondent burden and potentially reduce data collection costs. This proved to be too difficult to do and did not produce the savings we had hoped for. The two surveys will be conducted independently in the future.

9. Explain any decision to provide any payment or gift to respondents.

There are no payments or gifts to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

Questionnaires include a statement that individual reports are confidential. U.S. Code Title 18, Section 1905; U.S. Code Title 7, Section 2276; and Title III of Pub. L. No. 115-435 (CIPSEA) provide for confidentiality of reported information. All employees of NASS and all enumerators hired and supervised under a cooperative agreement with the National Association of State Departments of Agriculture (NASDA) must read the regulations and sign a statement of compliance.

The following confidentiality pledge statement will appear on all NASS questionnaires.

The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection and Statistical Efficiency Act of 2018, Title III of Pub. L. No. 115-435, codified in 44 U.S.C. Ch. 35 and other applicable Federal laws. For more information on how we protect your information please visit: <https://www.nass.usda.gov/confidentiality>. Response to this survey is voluntary.

11. Provide additional justification for any questions of a sensitive nature.

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I. Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories.

Response burden hours are shown in the table below. The projected response rate was based on a targeted response rate of 80%.

Cost to the public of completing the questionnaire is assumed to be comparable to the hourly rate of those requesting the data. The annual, estimated reporting time of 17,173 hours is multiplied by \$40.51 per hour for a total cost to the public of \$695,678.23.

NASS uses the Bureau of Labor Statistics' [Occupational Employment Statistics](#) (most recently published on April 25, 2023 for the previous May) to estimate an hourly wage for the burden cost. The May 2022 mean wage for bookkeepers was \$22.81. The mean wage for farm managers was \$40.29. The mean wage for farm supervisors was \$28.28. The mean wage of the three is \$30.46. To calculate the fully loaded wage rate (includes allowances for Social Security, insurance, etc.) NASS will add 33% for a total of \$40.51 per hour.

Estimated B			
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13. Provide an estimate of the total annual cost burden to respondents or record-keepers resulting from the collection of information.

There are no capital/start-up or ongoing operation/maintenance costs associated with this information collection.

14. Provide estimates of annualized cost to the Federal government; provide a description of the method used to estimate cost which should include quantification of hours, operational expenses, and any other expense that would not have been incurred without this collection of information.

The annual estimated cost to Federal government for the CEAP survey is \$15,933,333.

Estimated Annual Cost for CEAP Surveys 2024-2026

Year	Cost	Sample Size
2024	\$16,000,000	12,000
2025*	\$15,200,000	24,000
2026*	\$16,600,600	24,000
Totals	\$47,800,000	0
Annual Averages	\$15,933,333	20,000

* Estimated Costs

The cost estimates for 2024 and 2025 are calculated based on the cost estimate for 2023 with adjustments for the change in sample size and anticipated inflation.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I (reasons for changes in burden).

Since the 2024 National Resources Inventory Conservation Effects Assessment Project is a reinstatement of a previously conducted survey, there is no current inventory of burden hours. From the calculations in item 12 an estimated 13,080 burden hours will be needed. Non-response burden is included in this calculation.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

There will not be any publications directly from these surveys. Data will be combined with related databases and entered into transport and other physical models. This will be combined with performance reporting data from NRCS to obtain an estimate of the environmental benefit of conservation practices. The below schedule is for the 2024 survey (Year 1)

Survey design.....	Sept 2023 – Nov 2023
Sample selection.....	Nov 2023 – Jan 2024
Questionnaire design.....	Sept 2023 – Jan 2024
Materials to field offices.....	May 2024 – June 2024
Enumerator Training.....	Aug 2024
Data Collection.....	Nov 2024 - Feb 2025
Data entry and edit.....	Nov 2024 – Mar 2025
Analysis by NRCS.....	Apr 2025 – Mar 2026
NASS highlights.....	Fall 2025

Above Tasks repeated.....Annual

A report will not be published by NRCS until all three years of the survey have been collected, edited, modeled, weighted, and analyzed. A publication is expected in Fall 2028.

- 17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

No approval is requested for non-display of the expiration date.

- 18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions" of OMB Form 83-I.**

There are no exceptions to the certification statement.

January, 2024