

1 Supporting Statement

IRRIGATION AND WATER MANAGEMENT SURVEY

OMB No. 0535-0234

A. JUSTIFICATION

This docket requests the reinstatement of the Irrigation and Water Management Survey. The survey is a follow-on to the Census of Agriculture that is conducted every five years and was last completed in 2018. There are no significant changes to the methodology or procedures.

- 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 Nation's water situation continues to be a focus point for U.S. policy makers. The supply and demand of surface and ground water is of interest to both urban and rural users. The Irrigation and Water Management Survey provides one of the most complete and detailed profiles of agricultural irrigation in the United States.

The 2023 Irrigation and Water Management Survey will mark 44 years of irrigation data collected on water management practices and water uses in American agriculture. Irrigation surveys have been conducted since 1974 as supplements to the quinquennial Censuses of Agriculture. This survey, supplementing basic irrigation data collected in the census, is conducted on a sample basis; the survey can provide comprehensive analyses of irrigation, production, and operator information with less respondent burden and cost than if this information were gathered as part of a census collection.

The 2023 Irrigation and Water Management Survey will obtain data describing the irrigation activities of U.S. farm operations. Some of these activities are of current National interest, such as the chemigation, fertigation, and water-conserving uses and practices of irrigators. The 2023 Irrigation and Water Management Survey will play an important part in providing critically needed data to address these types of issues.

The Irrigation Survey is an integral part of the 2022 Census of Agriculture and is conducted every five years under the authority of the Census of Agriculture Act of 1997 (Public Law 105-113) where participation is mandatory. This law requires

the Secretary of Agriculture to conduct a census of agriculture in 2002 and every fifth year thereafter (prior to 1997 the census was conducted by the Department of Commerce).

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.

The primary purpose of this survey is to provide detail data relating to on-farm irrigation activities for use in preparing a wide variety of water-related local programs, economic models, legislative initiatives, market analyses, and feasibility studies. The Irrigation and Water Management Survey data are the only data that are complete, consistent, and accurate enough to be used for bench-marking on-farm irrigation measures over time.

Statistics are generated on acres irrigated by land use category, quantity of water applied, method of application by selected crops, acres equipped with irrigation systems/equipment, acres irrigated, quantity of water used by source, acres irrigated by type of water distribution system, and the number of irrigation wells and pumps. Economic measures included in this survey are cost of water purchased, capital expenditures and labor, irrigation maintenance and energy costs, and a measurement of factors which irrigators use to judge when to irrigate.

Numerous government agencies, research organizations, irrigation industries, Land Grant Universities, and many farm operators/managers are extensively using the data this survey provides. Some of the data users are listed below.

- The Economic Research Service (ERS) of the United States Department of Agriculture (USDA) relies on irrigation data to assist policy makers and to provide essential data for economic models which are used to analyze the impact of alternative farm policies on the irrigated sector.
- The Natural Resource Conservation Service (NRCS) of the USDA uses the data (in addition to that of the Census of Agriculture) for appraising the status and condition of water and water-use trends on non-federal lands. Also, NRCS uses the data to plan and evaluate a national water-conservation program.
- The United States Geological Survey (USGS) uses the data for preparing national water summaries, which are used by the Environmental Protection Agency, the Army Corps of Engineers, and other agencies for developing water-related programs.

- The Bureau of Reclamation of the United States Department of the Interior relies on the data for conducting feasibility studies of irrigation projects.
- Both the United States Congress and State legislative bodies use the data for formulating and assessing natural resource legislation.
- State water resource agencies use the survey results to develop programs and prepare descriptive information.
- Planning agencies use the survey information regarding water supplies and uses by States and water resource regions in order to evaluate ground water withdrawals and their depletions in major irrigation areas.
- Irrigation system manufacturers and related businesses use the data to monitor trends in equipment use, irrigation expansion, and other market production related activities.
- Land Grant Universities and other research organizations use the data to study irrigation technology development and adoption rates in order to promote agricultural productivity.
- Growers use the economic data to determine the feasibility of investing in irrigation systems. Examples of these data include investing in irrigation equipment, facilities, and land improvements; and figuring maintenance and repair expenditures of irrigation equipment and facilities.

The absence of the Irrigation and Water Management Survey data would certainly affect irrigation policy decisions. Federal programs, legislation, and impact studies would instead be subject to greater uncertainty and error.

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.

Respondents will have the option of reporting either electronically through a web based data collection instrument or by mail. Non-respondents will be contacted by using a computer assisted telephone interview (CATI) or computer assisted personal interview (CAPI) for data collection.

In 2018, 10.7% of the responses were submitted through the NASS web based instrument.

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.

Agricultural and other policymakers make important decisions to protect both water quality and quantity. The Irrigation and Water Management Survey provides a unique, accurate, and unbiased source of information to assess the environmental and economic impacts of regulating water usage. The survey data is considered very reliable since only the producers which reported having irrigation or land equipped for irrigation in the 2022 Census of Agriculture will be sampled. This type of data collection is only possible through NASS's list of farm operations.

A limited number of States, in cooperation with NASS, publish State crop reports which also contain information irrigated crops and irrigation activities. However, the data are not as detailed as that of the Irrigation and Water Management Survey. U.S. summaries of these data are not possible and consistent data for irrigating States are not available.

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.

NASS has designed the Irrigation and Water Management Survey questionnaire with the goal of minimizing the overall respondent burden. The survey uses a sampling approach to obtain the needed data (instead of seeking detailed irrigation information from all census of agriculture respondents) and limits the survey sample to only the size needed to yield valid data for a State or water resource region. A toll-free telephone number will be provided for respondents desiring help with completing the questionnaire.

The Irrigation and Water Management Survey is limiting the individual and overall burden by limiting the asked questions to only those which have been widely requested by users. The survey also uses screener questions for most sections, which prompts the respondent to skip sections that do not pertain to their operation.

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.

Currently, the Irrigation and Water Management Survey is conducted only every five years as a follow-on study to the census of agriculture. In 1983, the Office of Management and Budget (OMB) conducted an extensive review of the census of agriculture program and determined that a 5-year period between data collections for the census of agriculture was justified. If the period of time between surveys was increased or if the survey was dropped completely, it would hinder the Federal agencies' ability to monitor the current farm programs and their environmental regulations' impacts on the agricultural sector of the economy. The absence of such data would affect irrigation policy decisions; federal programs, and legislation while impacting other irrigation related studies. Many agencies and individuals depend on the data and anticipate its release every 5 years for their own programs and businesses to function. The loss of such consistent data would have both an immediate and a rippling effect, causing greater uncertainty and errors throughout the irrigation sector.

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 how this information is collected.

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 March 1, 2023 on page 12,910.

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.

Extensive correspondence, discussions, and meetings took place during 2022 with representatives of ERS regarding questionnaire development. These individuals included Mr. Steve Wallander, Mr. Nicholas Potter, Mr. Aaron Hrozencik, and Mr. Marcel Aillery, all of whom can be reached through David Donaldson (Branch Chief – RRED-CEB) at 816-412-4138.

Additional feedback was collected from both the public and private sectors when revising and improving the current report form for the Irrigation and Water Management survey. Updates and additional irrigation items of interest were added after consulting the following individuals:

- Matt Lindsey, Director of Agricultural Services at Revolution
 - o Email: mlindsey@revolutioncompany.com
 - o Phone: (800) 277-9172
- Joseph H. Massey, Research Agronomist at USDA-ARS
 - o Email: joseph.massey@usda.gov
 - o Phone: (870) 680-8317
- Christopher G. Henry, Ph.D., Professor and Water Management Engineer at the University of Arkansas
 - o Email: cghenry@uada.edu
 - o Phone: (870) 673-2661
- Michele L. Reba, Ph.D., Research Hydrologist at USDA-ARS
 - o Email: michele.reba@usda.gov
 - o Phone: (870) 819-2708
- Drew M. Gholson, Ph.D., Assistant Professor at Mississippi State University
 - o Email: drew.gholson@msstate.edu
 - o Phone: (662) 686-9311

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 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. 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 CIPSEA Pledge statement will appear on all future 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 required by law under Title 7 USC 22014(g) Public Law 105-113.

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.

The time required to complete the Irrigation and Water Management Survey questionnaire is expected to be similar to that of previous years, which averaged about 60 minutes. Time will vary since farms vary in acreage irrigated, number of crops irrigated, and inventory of irrigation facilities and equipment.

Total response is estimated to be approximately 28,025, which is based on using a sample size of 35,000 with an estimated response rate of 80 percent. Response burden hours are shown in the table below.

The initial mailings will contain the questionnaire, a cover letter, a questionnaire instruction booklet, and a return envelope. For non-respondents, the follow up mailing will contain another copy of the questionnaire, a cover letter, and a return envelope. There will be a phone follow up for those who do not respond to the mail requests.

Cost to the public for completing the questionnaire is assumed to be comparable to the hourly rate of those requesting the data. Reporting time of 29,289 hours are multiplied by \$40.51 per hour for a total cost to the public of \$ 1,186,497.39

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.

2023 Irrigation and Water Management Survey (Formerly FRIS) Estimated Total Burden

Survey	Sample Size	Waves of Data Collection	Responses				Non-response				Total Burden Hours
			Resp. Count	Waves x Count	Min./ Resp.	Burden Hours	Nonresp Count	Waves x Count	Min./ Nonr.	Burden Hours	
IWMS Questionnaires - Data Collection											
Non-Tagged Records											
Presurvey Pressure Sealer	30,000	1	10,500	10,500	2	350	19,500	19,500	1	325	675
First Mailing Questionnaire and Cover Letter	30,000	1	10,500	10,500	60	10,500	19,500	19,500	2	650	11,150
Pressure Sealer Reminder/Thank you	19,500	1	1,950	1,950	2	65	17,550	17,550	1	293	358
Second Mailing Questionnaire and Cover Letter	17,550	1	3,510	3,510	60	3,510	14,040	14,040	2	468	3,978
E-Mail Reminder	14,040	1	2,808	2,808	60	2,808	11,232	11,232	2	374	3,182
Phone Follow Up	11,232	1	3,370	3,370	60	3,370	7,862	7,862	2	262	3,632
Field Enumeration	7,862	1	1,887	1,887	60	1,887	5,975	5,975	2	199	2,086
Sub -Total	30,000		24,025	34,525		22,490	5,975	95,660		2,571	25,061
Tagged Records											
Presurvey Pressure Sealer	5,000	1	1,750	1,750	2	58	3,250	3,250	1	54	112
Phone and Field Enumeration	5,000	1	4,000	4,000	60	4,000	1,000	1,000	2	33	4,033
Sub -Total	5,000		4,000	5,750	62	4,058	1,000	4,250		87	4,145
Testing of Questionnaire											
Cognitive or Mail Test - Questionnaire and Cover Letter	-	0	0	0	0	0	0	0	0	0	0
Post Survey Debriefing	-	0	0	0	0	0	0	0	0	0	0
Sub -Total	-		-	-		-	-	-		-	-
Quality Control Survey (Telephone Only) - Recontact operators to verify quality of NASDA enumerators.											
Quality Control Worksheet IWMS (phone only)	1,000	1	1,000	1,000	5	83	0	0		0	83
Sub -Total	1,000		1,000	1,000		83	0	0		0	83
Totals ^{2/}	35,000		28,025	28,025		26,631	6,975	99,910		2,658	29,289

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 collection of information.

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 cost to the government for the 2023 Irrigation and Water Management Survey is included in the appropriation for the 2022 Census of Agriculture. The total cost of this survey is estimated at \$3,200,000. This amount will be spent over a 3 year period, approximately \$400,000 the year prior to data collection for testing and development, \$2,600,000 during the collection and processing year, and \$200,000 the year after data collection for archiving data and documenting lessons learned for future surveys. The approximate cost breakdown is as follows: personnel \$2,650,000; data processing \$500,000; and printing, training, and other miscellaneous costs \$50,000.

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 2023 Irrigation and Water Management Survey is a reinstatement of a previously conducted survey, there is no current inventory of burden hours. From the calculations in item 12 an estimated 29,289 burden hours will be needed. Non-response burden is included in this calculation.

In order to reduce costs and increase web-based response, NASS will be mailing a pressure sealed envelope in November 2023, which will contain instructions for accessing and completing the questionnaire online prior to the January 2024 mailout. Additionally, NASS will be tagging approximately 5,000 records, as was done in 2018, that will go straight to phone and field enumeration with the remaining 30,000 being attempted by a pre-survey mailing with web completion instructions, two rounds of questionnaire mailing, and then follow-up enumeration for non-respondents.

The operations that are tagged fit into 5 categories:

- Indian Reservations,
- Operations that were previously inactive on the NASS List Frame, but were reported as active on the 2022 Census of Agriculture,
- Operators that have multiple operating arrangements or multiple locations,
- Operators that are sampled for both the IWMS and the ARMS III (0535-0213) survey,

- Special Handling – operations that the Field Offices feel that they are best done in person due to the uniqueness or complexity of their operating arrangement.

These tagged records required special handling in the previous survey, so NASS felt it would be best to enumerate these operators rather than conduct these by mail or internet.

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.

Approximate time schedule for the 2023 Irrigation and Water Management Survey:

	Start	Finish
Questionnaire Design	Mar., 2023	Aug., 2023
Systems Development	Jan., 2023	Dec., 2023
Sample Selection	Apr., 2023	Sep., 2023
Presurvey – Pressure Sealer		Nov., 2023
Initial Mail-out		Jan., 2024
Follow-up Mailing (Form)		Feb., 2024
Telephone Follow-up	Apr., 2024	May, 2024
Process and Tabulate Data	Feb., 2024	Aug., 2024
Review, Analysis, and Summary	Jul., 2024	Aug., 2024
Review Tables and Prepare Release	Aug., 2024	Oct., 2024
Publication Date		Nov. 14, 2024

To aid telephone and field follow-up by enumerators, each will receive an Enumerator’s Manual. To aid statisticians in the edit and analysis of reported data, Regional Field Offices will receive a Census Administration Manual.

The 2023 Irrigation and Water Management Survey publication will have approximately 275 pages consisting of an introduction, approximately 50 tables, a summary, an appendix with a copy of the questionnaire, and a drainage area map. Data will be published for 50 States and 20 water resources regions. The publication will include estimates and the relative standard errors for the estimates for selected characteristics by State and region.

The 2018 Farm and Ranch Irrigation Survey can be found at:

https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Farm_and_Ranch_Irrigation_Survey/index.php

- 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.**

There is no request for approval of 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.

April 2023