

1 Supporting Statement

IRRIGATION AND WATER MANAGEMENT SURVEY

OMB No. 0535-0234

A. JUSTIFICATION

This docket is being submitted to reinstate the Irrigation and Water Management Survey, formerly known as the Farm and Ranch Irrigation Survey (FRIS). This is a follow-on survey to the Census of Agriculture which is conducted every five years. This was last conducted in 2013. There are no significant changes to the methodology or procedures. The only change is the survey title. This change was made to be more inclusive of nursery and greenhouse growers.

- 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 increase in importance to U.S. policy makers. Demand from urban and rural uses for supplies of surface and ground water are increasing. The Irrigation and Water Management Survey provides one of the most complete and detailed profiles of agricultural irrigation in the United States.

The 2018 Irrigation and Water Management Survey will mark 35 years of irrigation data collected on water management practices and water uses in American agriculture. Irrigation surveys were conducted in 1979, 1984, 1988, 1994, 1998, 2003, 2008, and 2013 as supplements to the 1978, 1982, 1987, 1992, 1997, and 2002 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 2018 Irrigation and Water Management Survey will be obtaining data describing the irrigation activities of U.S. farm operations. Some of these activities are of current National concern, such as the use of chemigation, fertigation, and water-conserving practices of irrigators. The 2018 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 2017 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 is the only data that are complete, consistent, and accurate enough to be used for benchmarking on-farm irrigation measures over time.

Statistics are generated on acres irrigated by land use category, acres and yields of irrigated and non-irrigated crops, quantity of water applied, method of application by selected crops, 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 these data (in addition to that of the Census of Agriculture) in appraising the status and condition of water and water-use trends on non-federal lands. Also, NRCS uses these data to plan and evaluate a national water-conservation program.
- The United States Geological Survey (USGS) uses these data for preparing national water summaries 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 Interior is relying on these data for conducting feasibility studies of irrigation projects.
- Both the United States Congress and State legislative bodies use these 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 this survey information regarding water supplies and water use by State and water resource area to evaluate ground water withdrawals, especially the depletion of ground water reserves in the major irrigation areas.
- Irrigation system manufacturers and related businesses all use these data to monitor trends in equipment use, irrigation expansion, and other market production related activities.
- Land Grant Universities and other research organizations use these data to study irrigation technology development and adopt them to agricultural productivity.
- Growers use the economic cost-and-return data which is collected in the survey to determine the feasibility of investing in irrigation systems. Examples of these data include investing in irrigation equipment, facilities, and land improvements; figuring maintenance and repair expenditures of irrigation equipment and facilities; and estimating yields of irrigated versus non-irrigated crops.

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.**

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

In 2013, 9.51% 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 environmental and economic impacts of regulating water usage. This survey data is considered most reliable since only the producers reporting irrigated acres in the 2017 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 on irrigated and non-irrigated crop acreage and production for selected crops. 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 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 area. A toll-free telephone number will be provided for respondents desiring help in completing the questionnaire.

The Irrigation and Water Management Survey is limiting individual and overall burden by restricting questions to only those which have been widely requested by users, and by the use of screener questions for most sections, which allows the respondent to skip sections that do not pertain.

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 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. Lack of these data on at least a 5-year basis would hinder Federal agencies' ability to monitor the current farm programs and environmental regulations affecting the agriculture sector of the economy. The absence of this survey data would certainly affect irrigation policy decisions; federal programs, legislation, and impact studies would instead be subject to greater uncertainty and error.

The Irrigation and Water Management Survey is sampled from operations that reported irrigated acres on the Census of Agriculture. If this survey is conducted less frequently than every five years we would potentially have a less accurate population to draw the sample from, which would affect the weights and expansion of the data collected.

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 February 14, 2018 on pages 6508 - 6509. NASS received one public comment regarding the reinstatement of this survey from a Ms. Jean Public.

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.

The Advisory Committee on Agriculture Statistics reviews all of the Census of Agriculture programs and provides recommendations on content, forms design,

methodology, outreach, publications, etc. The Committee, appointed by the Secretary of Agriculture, consists of 25 members representing a broad range of interests, including agricultural economists, rural sociologists, farm policy analysts, educators, State agriculture representatives, agriculture-related business and marketing experts, and members of major farm organizations. The committee meets once or twice a year but frequent communication with the members is maintained; the most recent meeting was in November 2017. Extensive correspondence, discussions, and meetings took place during 2017 with representatives of ERS regarding questionnaire development. These individuals included Dr. Noel Gollehon, Dr. Glenn Schaible, Mr. Steve Wallander, and Mr. Marcel Aillery, all of whom can be reached at 202-694-5549.

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.

All questionnaires include a statement that individual reports are kept confidential. The specific Census of Agriculture citation, Title 7 U.S. Code Section 2204(g), plus Title 18 Section 1905 and Title 7 Section 2276 provide for the 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.

Additionally, NASS and NASS contractors comply with OMB Implementation Guidance, "Implementation Guidance for Title V of the E-Government Act, Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA), (Public Law 107-347). CIPSEA supports NASS' pledge of confidentiality to all respondents and facilitates the agency's efforts to reduce burden by supporting statistical activities of collaborative agencies through designation of NASS agents; subject to the limitations and penalties described in CIPSEA.

The following CIPSEA Pledge statement will appear on all NASS census and census follow-on 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 provisions of Title

V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: www.nass.usda.gov/confidentiality. Response to this survey is required by law under Title 7 USC 2204(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 determined by the 2013 Farm and Ranch Irrigation Survey which averaged about 45 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 28,000, 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 phone follow up for those who do not respond to the mail requests.

Cost to the public of completing the questionnaire is assumed to be comparable to the hourly rate of those requesting the data. Reporting time of 25,777 hours are multiplied by \$27.50 per hour for a total cost to the public of \$ 708,867.50.

NASS uses the Bureau of Labor Statistics' [Occupational Employment Statistics](#) (most recently published on March 30, 2018 for the previous May) to estimate an hourly wage for the burden cost. The May 2017 mean wage for bookkeepers was \$19.76. The mean wage for farm managers was \$38.62. The mean wage for farm supervisors was \$24.11. The mean wage of the three is \$27.50.

2018 Irrigation and Water Management Survey (IWMS) 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 Notification Post card	30,000	1	10,500	10,500	2	350	19,500	19,500	1	325	675
First Mailing Questionnaire and Cover Letter ^{1/2}	30,000	1	10,500	10,500	60	10,500	19,500	19,500	2	650	11,150
Post Card 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 ^{1/2}	17,550	1	3,510	3,510	60	3,510	14,040	14,040	2	468	3,978
Phone Follow Up	14,040	1	4,212	4,212	45	3,159	9,828	9,828	2	328	3,487
Field Enumeration	9,828	1	3,440	3,440	45	2,580	6,388	6,388	2	213	2,793
Sub -Total	30,000		23,612	34,112		20,164	6,388	86,806		2,277	22,441
Tagged Records											
Presurvey Notification Post card	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	45	3,000	1,000	1,000	2	33	3,033
Sub -Total	5,000		4,000	5,750	47	3,058	1,000	4,250		87	3,145
Testing of Questionnaire											
Cognitive or Mail Test - Questionnaire and Cover Letter ^{1/2}	100	1	25	25	60	25	75	75	2	3	28
Post Survey Debriefing	250	1	100	100	45	75	150	150	2	5	80
Sub -Total	350		125	125		100	225	225		8	108
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	35,100		27,737	40,987		23,405	7,613	91,281		2,372	25,777

^{1/2}When the cover letter and instructions are mailed out with the questionnaire an additional 15 minutes is added to the burden to allow for the reading of these additional items.

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 cost to the government for the 2018 Irrigation and Water Management Survey is included in the appropriation for the 2017 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 2018 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 25,777 burden hours will be needed. Non-response burden is included in this calculation.

There is one primary program change that NASS will be using in this reinstatement. In 2013 NASS attempted two mailings followed by phone and personal interviews. This was in the hopes of reducing costs while collecting the same quality of data as previously reported. In 2018 NASS will be tagging approximately 5,000 records that will go straight to phone and field enumeration with the remaining 30,000 being attempted by 2 rounds of mail, 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 2018 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 2018 Irrigation and Water Management Survey:

	Start	Finish
Questionnaire Design	Jul., 2017	Aug., 2018
Systems Development	Jan., 2018	Dec., 2018
Sample Selection	Apr., 2018	Oct., 2018
Initial Mail-out		Jan., 2019
Follow-up Mailing (Form)		Feb., 2019
Telephone Follow-up	Apr., 2019	May, 2019
Process and Tabulate Data	Feb., 2019	Aug., 2019
Review, Analysis, and Summary	Jul., 2019	Aug., 2019
Review Tables and Prepare Release	Sep., 2019	Oct., 2019
Publication Date		Nov. 13, 2019

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 2018 Irrigation and Water Management Survey publication will have approximately 230 pages consisting of an introduction, approximately 48 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 2013 Farm and Ranch Irrigation Survey can be found at:

https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Farm_and_Ranch_Irrigation_Survey/

- 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.

May 2018