

Supporting Statement

FARM AND RANCH IRRIGATION SURVEY

OMB No. 0535-0234

A. JUSTIFICATION

This docket is being submitted to reinstate the Farm and Ranch Irrigation Survey, a follow-on survey to the Census of Agriculture which is conducted every five years. This was last conducted in 2003. The only significant change to the methodology or procedures is the addition of a separate questionnaire version for the Horticulture Irrigation Survey. In 2003, we did not use a separate questionnaire that was customized for nursery or greenhouse growers. Nor did we target that industry, the majority of our sample was targeted on field crop production. We have created a shorter questionnaire that has been customized for the floriculture and nursery industry to help reduce the burden on them.

- 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 Farm and Ranch Irrigation Survey (FRIS) is an integral part of the 2007 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).

The Nation's water situation continues to increase in importance to U.S. policy makers. An inadequate supply of surface water; overuse of ground water; concern about water quality; and competition for available water supplies are all national issues.

In an article released by the U.S. Geological Survey in March 2004 they reported "Irrigation remained the largest use of freshwater in the United States and totaled 137 billion gallons/day for 2000. Since 1950, irrigation has accounted for about 65 percent of total water withdrawals, excluding those for thermoelectric power. Historically, more surface water than ground water has been used for irrigation. However, the percentage of total irrigation withdrawals from ground water has continued to increase, from 23 percent in 1950 to 42 percent in 2000.

Surface water was the primary source of water in the arid West and the Mountain States. Ground water was the primary source of water in the Central States. California, Idaho, Colorado, and Nebraska combined, accounted for one-half of the total irrigation withdrawals. California and Idaho accounted for 40 percent of surface-water withdrawals. California and Nebraska accounted for one-third of ground-water withdrawals.

California, Nebraska, Texas, Arkansas, and Idaho accounted for 53 percent of total irrigated acreage. California, Nebraska, and Texas accounted for 40 percent of the irrigated acreage using sprinkler and micro-irrigation systems. California alone accounted for 72 percent of the irrigated acreage by micro-irrigation systems. Sprinkler and micro-irrigation systems were associated with slightly more than 50 percent of total irrigated acreage.”

The 2008 Farm and Ranch Irrigation Survey will mark 30 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, and 2003 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; FRIS 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.

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 the 2008 Farm and Ranch Irrigation Survey (FRIS) 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 Farm and Ranch Irrigation Survey is the only data that are complete, consistent, and accurate enough to be used for bench-marking on-farm irrigation measures over time.

The FRIS 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 2008 FRIS will play an important part in providing critically needed data to address these types of issues. The 2008 FRIS will also incorporate a second version of the questionnaire that will be directed at horticultural producers. In previous years, NASS has primarily targeted field crop operations.

The FRIS generates statistics 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 FRIS 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 FRIS provides. Some of the data users are listed below.

- The Economic Research Service (ERS) of the United States Department of Agriculture (USDA) relies on FRIS 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 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 FRIS 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.

- Farmers and ranchers use the economic cost-and-return data which is collected in FRIS 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.

- With the addition of the Horticulture version of the FRIS questionnaire, the floriculture and nursery industries will be able to see irrigation and water usage data broken out for their industry for the first time this year.

The absence of FRIS 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.**

Telephone interviews will be used for data collection of non-respondent cases. This will provide data for an important segment of our mail list and reduce the time needed for respondents to reply. Many farms and ranches are equipped with electronic means of reporting and NASS is prepared to respond to any data submitted by electronic mail. A Web-based data collection instrument will be available for the FRIS, to collect 2008 data.

- 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 FRIS provides an accurate and unbiased source of information to assess environmental and economic impacts of regulating water usage. The FRIS data is considered most reliable since only the producers reporting irrigated acres in the 2007 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 FRIS. 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 FRIS questionnaire with the goal of minimizing overall respondent burden. FRIS 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.

FRIS is limiting individual and overall burden by restricting questions to only those which have been widely requested by users, and by permitting respondents the option of providing estimates where actual record data are not readily available.

- 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, FRIS 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 FRIS data would certainly affect irrigation policy decisions; federal programs, legislation, and impact studies would instead be subject to greater uncertainty and error.

The FRIS 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 March 13, 2008 on pages 13530-13531. Only one public comment was received which did not require a response.

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 February 2008.

Extensive correspondence, discussions, and meetings took place during 2007 and 2008 with representatives of ERS regarding questionnaire development. These individuals included Dr. Noel Gollehon, Dr. Glenn Schaible, Mr. Roger Claasen, Mr. Mark Ribaud, Mr. Marcel Aillery, and Mr. C. S. Kim, 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. U.S. Code Title 18, Section 1905 and U.S. Code Title 7, Section 2276 provides 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.

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 Farm and Ranch Irrigation Survey questionnaire is expected to be similar to that determined by the 2003 Farm and Ranch Irrigation Survey which averaged about 45 minutes. The time required to complete the Horticulture Irrigation Survey is expected to be approximately 20 minutes based on field testing of nine operations, conducted in July 2008. 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 28,000, which is based on using a combined 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, an Industry Testimonial letter, a Fact Sheet, and an Electronic Data Reporting (EDR) mail instruction sheet. For non-respondents, the follow up mailing will contain another copy of the questionnaire and a cover letter. There will be phone follow up for those who do not respond to the mail requests.

Survey	QID	Sample Size	Freq	Responses				Non-response				Total Burden Hours
				Resp. Count	Freq x Count	Min./ Resp.	Burden Hours	Nonresp Count	Freq x Count	Min./ Nonr.	Burden Hours	
Questionnaires												
Farm and Ranch Irrigation Survey (FRIS)	08-A062	25,000	1.00	20,000	20,000	45	15,000	5,000	5,000	1	83	15,083
Horticulture Irrigation Survey (HIS)	08-A062.1	10,000	1.00	8000	8,000	20	2,667	2,000	2,000	1	33	2,700
Total		35,000		28,000			17,667				117	17,783
Publicity Materials for ALL surveys												
Initial Mail Out Letter ^{1/2}	n/a	35,000	1.00	14,000	14,000	20	4,667	21,000	21,000	1	350	5,017
Industry Testimonial Letter ^{1/}	n/a											
Fact Sheet ^{1/}	n/a											
EDR mail Access Instruction Sheet ^{1/}	n/a											
Follow-up Letter ^{2/}	n/a	21,000	1.00	14,000	14,000	4	933	7,000	7,000	1	117	1,050
Total		35,000		28,000			5,600				467	6,067
Quality Control Survey (Telephone Only) - Recontact operators to verify quality of NASDA enumerators.												
Quality Control Worksheet FRIS (phone only)		500	1.00	500	500	5	42	0	0		0	42
Quality Control Worksheet HIS (phone only)		500	1.00	500	500	5	42	0	0		0	42
Total		1,000		1,000			83				0	83
Totals		35,000	1	28,000	28,000		23,350	7,000	7,000		583	23,933
Average Burden per Respondent		0.68381										

^{1/} The initial mailing consists of the questionnaire, cover letter, industry testimonial, fact sheet and EDR instruction sheet.

^{2/} The response rate for the initial mailing is estimated at 40%. Overall a 60% response rate is expected from mailing; the remainder of the completed reports will be obtained by EDR, telephone and field enumeration.

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 23,933 hours are multiplied by \$24 per hour for a total cost to the public of \$ 574,392.

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

There is no cost burden to respondents.

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 2008 Farm and Ranch Irrigation Survey is included in the appropriation for the 2007 Census of Agriculture. The total cost of FRIS is estimated at \$2,198,000. This amount is spent in a two year period, \$300,000 the year prior to data collection, and the remaining \$1,898,000 during the collection and processing year. The approximate cost breakdown is as follows: federal personnel \$1,465,000; NASDA field and phone enumerators \$210,000; data processing \$500,000; and printing, training, and other miscellaneous costs \$23,000.

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).

The new burden request for the reinstatement of this information collection is 23,933 hours. The 2008 primary FRIS sample has remained the same as the 2003 (25,000) sample. The additional version of the questionnaire that is targeted at the horticultural operations has added 10,000 operations to the sample master. Total burden has increased from 15,250 in 2003 to 23,933 in 2008. The increase in total hours of 8,683 is due primarily to two main factors; the inclusion of burden associated with the publicity materials used in the two mail attempts and in part to the addition of the horticultural questionnaire version.

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 2008 FRIS & Horticulture Irrigation Survey:

	Start	Finish
Questionnaire Design	Jun., 2007	Jul., 2008
Systems Development	Jan., 2008	Dec., 2008
Sample Selection	Oct., 2008	Nov., 2008
Initial Mail-out	Jan., 2009	
Follow-up Mailing (Form)	Mar., 2009	
Telephone Follow-up	Mar., 2009	May, 2009
Process and Tabulate Data	Feb., 2009	Jun., 2009
Review, Analysis, and Summary	Jul., 2009	Aug., 2009
Review Tables and Prepare Release	Sep., 2009	Oct., 2009
Publication Date	Nov., 2009	

To aid telephone and field follow-up by enumerators, each will receive an Enumerator's Manual (table of contents is attached). To aid statisticians in the edit and analysis of

reported data, Field Offices will receive a Survey Administration Manual (table of contents is attached).

The 2008 Farm and Ranch Irrigation Survey publication will contain data from both irrigation surveys (Farm and Ranch and the Horticulture). The publication will have approximately 224 pages consisting of an introduction, approximately 45 tables, a summary, an appendix with copies of the two questionnaires, and a drainage area map. Data will be published for 50 States and 18 water resource areas. The publication will include estimates and the relative standard errors for the estimates for selected characteristics by State and region.

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.

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