1Supporting Statement A

Vulnerability to Water Insecurity, Hazards Planning and Responses
OMB Control Number 1028-NEW

Terms of Clearance: None

Justification

1. **Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.**

Water information is fundamental to national and local economic well-being, protection of life and property, and effective management of the Nation's water resources. The USGS works with partners to monitor, assess, conduct targeted research, and deliver information on a wide range of water resources and conditions including streamflow, groundwater, water quality, and water use and availability. This information collection will provide information to the USGS Water Resources Mission Area that will allow for understanding of vulnerability to water insecurity conditions and identify appropriate data for water management end-users. The 43 USC 31 Organic Act of March 3, 1879, authorizes the USGS to conduct this research and 42 USC 109B, Section 9 of the Secure Water Act directs the Secretary of Interior to consult with the USGS and ensure that strategies are developed to address potential water shortages, conflicts, and other impacts to water users and the environment of each service area – this information collection supports that work.

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. Be specific. If this collection is a form or a questionnaire, every question needs to be justified.**

The information will be used by the USGS – Water Resources Mission Area to,
1) develop metrics of social vulnerability to water insecurity; and
2) validate indicators of social vulnerability to water insecure conditions in key water-use sectors

Focus groups will be used to collect information in support of the two goals listed above.

<u>Focus Group Script:</u>

Note: The asterisk (*) indicates follow up prompts.

Thank you all for taking the time to be here today. I am _[name]_ and I serve as _[role]_ on the project team. With me is _ [name and role on team]_ who will take notes and provide any other assistance we may need. If you have questions related to logistics or Teams [or alternative collaboration platform] related questions, or if you have comments or questions throughout this meeting feel free to type it into the chat box and _ [note taker name]_ will help you out.

We want to welcome you and thank you for sharing your time and expertise to help us explore indicators of water insecurity. Your input will help to validate indicators identified from the scientific literature on water insecurity. This is one of several focus groups being held with our partners to support this process.
We will report responses in aggregate and will not identify individual respondents in any of our materials.

We'd like to begin with a short presentation on the motives for this focus group, we'll ask a few broad questions, then drill down on different topics. Is that okay?

[Wait for confirmation from respondents]

A few housekeeping notes. We don't know how familiar you are with Teams [or alternative collaboration platform] so let's go over some of the features you may use.

[Show slide with platform screen shot (hand raise feature, chat box…)]

Please share your video if you have the ability to do so and if you are comfortable doing so. The focus group is scheduled for 1 hr.

Are there any questions so far?

[Wait for responses]

With your permission we'd like to record this focus group. All recordings will be stored securely. They will only be used to generate transcripts of our conversation, and to ensure accuracy of those transcripts. Do you consent to us recording this focus group? Please use the link now being placed in the chat to anonymously indicate your response. Alternatively, you can type "agree" in the chat, your response there will be visible to everyone on the call.

[Wait for confirmation from respondents]

[If all respondents approve recording]

Thank you. I will start the recording now.

[If all respondents do not approve recording]

Thank you. We will work to take detailed notes on your responses.

We will now talk about the motives for holding these focus groups.

[Show PowerPoint slides to introduce project]

Are there any questions on this material so far?

[Wait for responses]

For the rest of the focus group, we will be using Mural, which is a more dynamic platform that uses virtual sticky notes. We will go over the features that you will be using for this activity.

[Show slide with Mural interface screen shot and explain how to access]

Please feel free to use the chat function on Teams or respond verbally by unmuting yourself.

Are there any questions so far?

[Wait for responses]

[Display background questions in Mural]

To help us keep the transcripts accurate and to get to know each other a little better, please answer the information under the Background section in this Mural board by placing a new sticky note under the prompt.

If you have questions at any point during this focus group, we also have a teammate monitoring the chat so feel free to answer there if you prefer.

Let's take 5 mins to answer these questions and then we'll come together and share.

Are there any questions on this?

[Wait for responses]

Background Questions (These questions will be set up as the first section in Mural)

a) First Name __________
b) Last Name __________
c) Organization __________
d) Position __________
e) Email Address __________
f) Duty location __________
g) Organization Category
   - Congress
   - Federal
   - State Agency
   - Tribe
   - County
   - City, Town, Township
   - University
   - NGO
   - Private
   - Other: ___________________

h) Role Category (select all that apply)

- o Scientist/researcher
- o Natural resource manager
- o Policy maker/advisor
- o Regulator
- o Advocate
- o Consultant
- o Lobbyist
- o Landowner
- o Business owner
- o Press/reporter
- o Other: __________________

i) Sector (select all that apply)

- o Water resources
- o Water utility
- o Manufacturing
- o Energy/minerals
- o Agriculture
- o Municipal
- o Forestry
- o Fishing
- o Disaster/emergency manager
- o Land development/construction
- o Environment/conservation
- o Climate change adaptation
- o Transportation
- o Health
- o Tourism/recreation
- o Private citizen
- o Other: ________________

j) This agency/organization has responsibility for: (select all that apply)

- o Developing water related policy
- o Managing water resources
- o Monitoring water quality
- o Monitoring water use
- o Potable Water distribution
- o Agricultural use

- Hazard Response
- Other: ________________________

Thank you for sharing that information. We will now move on to a new section.

--[New Topic]---

[Display new section in Mural]

We want to learn more about the context in which you may use social vulnerability data in your work:

Section 1. Context for using water insecurity data

1) *Please tell us a little about the mission of your agency and the role your job plays in supporting this mission.*

2) *Do you consider socioeconomic data as a part of your job (For example in analyses and/or decision making)? Examples of socioeconomic data include age, gender, marital status, income, family structure, race, and ethnicity.*
   a. *[If no] Why is that?*
   b. *[If no] Do you think it would be helpful to include socioeconomic data in your workflows?*
      i. *[if no] skip to ranking section (section 3)*
   c. *[if yes] What conditions/factors determine when and how you use socioeconomic data?*
      i. *Are there guidelines or predetermined factors you consider?*
      ii. *Are there particular events/hazards that you look at?*

Thank you for sharing that information with us.

--[New Topic]---

Section 2. Water insecurity data use (cont.)

3) *Could you provide some examples of socioeconomic data that you use to help analysis/ decision-making?*
   a. *What is the purpose(s) of using that data?*

4) *Which types of data tend to be the most helpful for your needs?*
      i. *Why?*
   b. *What's least helpful?*
      i. *Why?*

5) *How often do you use that data for analysis/ decision making?*
    a. *Most helpful data*
    b. *Least helpful data*

6) *What sources are you using for your data? Where does the data you use come from?*

7) *What geographic scale do you typically use for your work?*

I'd like to summarize what I am hearing. I think there is consensus that [social factors a, b, c] are important or often assessed in your workflows but [social factors x, y, z] are not.

[Moderator and assistant summarize the key indicators mentioned and any differences in respondent opinion on usage and utility]

8) *Does that sound accurate? [get consensus on accuracy of summary from the respondents. Review any questions where respondents have significant disagreement with your summary]*

9) *Think about the questions/challenges you typically address and those you may need to address in future. Are there data that you currently don't have at your disposal that would be useful/ insightful for addressing those questions/challenges?*
    a. *Why would these data be so useful?*

Thank you for sharing.

Okay, let's shift to a more interactive activity.

---[New Topic]--

[Display section in Mural for the next activity]

In this section we will be working with social vulnerability indicators identified in previous USGS research.

Section 3. Ranking/ validating indicators

We are now displaying the results from a recent review of existing research on water insecurity indicators. These were drawn from scientific literature which measured factors of water insecurity in the western United States. [display figure].

Here are some definitions to help us get started. Additional definitions for the indicators that you will be presented next will be located [in the Mural board for this exercise].

An indicator is: A variable we can measure, and which represents a concept of interest such as age or family size.

We define water insecurity as: a situation where a population cannot maintain access to adequate quantities of water at an acceptable quality to sustain livelihoods, development, and human and ecosystem health.

Please take some time to examine these indicators and feel free to use the glossary to provide definitions for those that you are unsure about.

[Give participants about 3 mins]

In the diagram we arranged the indicators found in the meta-analysis based on the information supporting their use. The colors indicate different dimensions of vulnerability with which the indicators were associated.

Demographic Characteristics	**Socioeconomic Status**	**Living Conditions**	**Exposure**
Age (e.g., total pop over 65, % pop below 18)	Education (e.g., % with less than high school education, % bachelors degree)	Lifelines & Infrastructure (e.g., road density, community water systems out of compliance)	Exposed areas/ facilities (% block groups within floodplain)
Race/ Ethnicity (Hispanic, Asian)	Income (total household income median income)	Land Use (% urban cover, % wetland)	Mitigation (crop insurance, irrigation coverage)
Family Structure (household size, female-headed households)	Wealth (% pop in poverty, households below poverty line)	Population (population density, total population)	Hazard Extent (impaired rivers, HABs distribution)
Gender (% female, % female labor force)	Employment (% unemployment, diversity of employment)	Resource Dependence (groundwater dependence, per capita water consumption)	Losses Suffered (property damage, flood deaths)
Language Proficiency (English language proficiency)	Occupation (% in service sector, agricultural employment)	Rurality (% rural, distance from metro area)	Preparedness (early warning systems, disaster prevention & preparedness - $/yr/capita)
Migration (immigrants, displacement risk)	Median Rent (median house rent)	Urbanization (inner-city neighborhoods, % urban)	# of Events (# cold spell days)
Social Dependence (% households receiving Social Security Benefits or Public Assistance)	House Value (mean housing unit value, median housing value)	Vehicular Access (% no car)	Other Physical Considerations (average temp erosion potential)
Citizenship (undocumented individuals, % citizens)	Literacy (literacy rate)	Housing Quality (poor quality homes)	Exposed Population (pop in floodplain)
Political Inclination		Housing Type	

(% conservative, % liberal)		(% mobile homes)	
Special Needs/ Disabilities (% disabled)			
Health	**Risk Perception**	**Land Tenure**	
Potable Water access (e.g., % units with municipal water, % housing units with exempt wells)	Awareness (e.g., hazard awareness, access to info)	Renters (e.g., % renter occupied housing units, % rent burden)	
Access to Healthcare (ratio pop without health insurance)	Prior Experience (prior flood experience, adverse event experience)	Home/Landowners (% owner occupied properties, private landowners)	
Food Insecurity (caloric intake/ food insecurity)	Risk Denial/ Acceptance (perceived likelihood of damaging event)	Tenure Length (length of tenure/ water rights, residence over 4 yrs.)	
	Trust in Officials (perception of gov effectiveness)		
	Social Capital (neighborhood cohesion, # of social networks)		

Now that you have examined this table, let's briefly discuss your view of the included vulnerability indicators.

10) *Are any of those listed indictors useful for your workflows/ decision-making?*
    a. *Do you use them?*
    b. *Are any of indicators that you use missing from this set?*

11) *Do you find any unhelpful or unsuitable for your data needs?*
    a. *[If yes]* Why?

Thank you. This is the end of our exercise today. Do you have any questions for us, or is there anything else that you would like to discuss?

Are there any other members of your organization or hazards network who may be interested in contributing to this activity? Please share in the chat box or email us later if you prefer.

Thank you so much for your participation today.

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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 and specifically how this collection meets GPEA requirements.

The focus groups will be conducted using an online video-conferencing platform, or in person depending on the interview participants access to technology and comfort level with technology. We will utilize the Mural and Slido platforms to facilitate participant engagement and ease of data collection in parts of this activity.

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.**

There is no duplication. A thorough literature review on the topic of vulnerability indicators in water security research has been conducted to provide necessary background information as well as ensure that our research is novel. Additionally, outreach across the USGS-Water Resources Mission Area, Rocky Mountain Region and North Central Climate Adaptation Center has been conducted to ensure duplicative efforts have not been planned elsewhere.

5. **If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.**

The collection of information does not impact small businesses.

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.**

This information collection is required to fulfill the objectives and technical requirements of two Water Resources Mission Area Programs – the Social & Economic Drivers Program and the Integrated Water Availability Assessments Program – part of the Congressionally sub-allocated budget program the Water Availability and Use Science Program. If the collection is not conducted, or is conducted less frequently, we will be unable to fulfill the objectives of the projects within these programs and will not meet the program specific technical requirements.

7. **Explain any special circumstances that would cause an information collection to be conducted in a manner:**

* **requiring respondents to report information to the agency more often than quarterly;**
* **requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
* **requiring respondents to submit more than an original and two copies of any document;**
* **requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;**
* **in connection with a statistical survey that is not designed to produce valid and**

reliable results that can be generalized to the universe of study;

* **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
* **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
* **requiring respondents to submit proprietary trade secrets, or other confidential information, unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

There are no circumstances that require us to collect the information in a manner inconsistent with OMB guidelines.

8. **If applicable, 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 in response to the PRA statement associated with the collection over the past three years, and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.**

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 recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every three years — even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

We published a 60-Day *Federal Register* notice 87 FR 54240 on September 2, 2022. We did not receive any comments in response to that notice.

We consulted with subject matter experts across the US Geological Survey to ensure the completeness, understandability, and conciseness of the information collection instrument. The titles of those individuals and summary of feedback received is provided in the table below.

Table 1 Commenters on the survey or announcement

U.S. Geological Survey Water Mission Area Social Scientist Reviewed focus group questions. Provided	U.S. Geological Survey Water Mission Area Physical Scientist/Geographer

feedback on the specifics of questions asked in the survey. Suggested changes to wording of some questions and to the format of the Mural exercise which were accepted.	Reviewed the focus group questions. Suggested adjustments to improve clarity and ease interpretation of questions across multiple respondent groups.

9. **Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.**

We will not provide 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.**

The USGS does not provide an assurance of confidentiality. However, respondents will remain anonymous beyond the research team. Assurance will be provided in the form of an informed consent document presented to respondents before information is collected as well as display of the Privacy Act Statement on all written materials and stated verbally as part of focus groups.

11. **Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.**

Respondents will not be asked 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. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
- **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.**
- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here.**

We are using the Bureau of Labor Statistics *Employer Costs for Employee Compensation*, USDL-23-1971, published on 09/12/2023, to determine our dollar value for burden hours. The value used is $41.03 per hour for public respondents (private industry) and $58.25 for State, local and Tribal government respondents.

Table 2 Respondent burden

Participant / Activity	Number of Responses	Minute per response	Burden Hours	Dollar Value for Burden Hr
Public individual participates in focus group	250	60	250	$10,258
Subtotal	**250**	**60**	**250**	**$10,258**
State, Local, Tribal govt participates in focus group	500	60	500	$29,125
Subtotal	**500**	**60**	**500**	**$29,125**
Total	**750**	**120**	**750**	**$39,383**

13. **Provide an estimate of the total annual non-hour cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected in item 12.)**
    - **The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information (including filing fees paid for form processing). Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**
    - **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**
    - **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

We have not identified any non-hour cost burden associated with this collection.

14. **Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information.**

We used the Office of Personnel Management Salary Table 2023-GS to determine the hourly wage rate for all personnel that will be involved in conducting focus groups, and analyzing and interpretating the resulting data. To calculate benefits, we multiplied the hourly rate by 1.6 to account for benefits.

Table 3 Federal Government Expenses

Position	Grade/ Step	Hourly Rate	Annual Hrs	Fully Loaded Hr Rate	Total Labor Value
Physical Scientist (Atlanta locality pay)	12/2	$43.31	100	$69.30	$6,930
Physical Scientist (Rest of US)	12/1	$39.69	150	$63.51	$9,526.5
Student Contractor (Rest of US)		$35.64	350	$57.02	$19,957
Social Scientist (Rest of US)	12/4	$43.66	100	$69.86	$6,986
Data Scientist (Washington-Baltimore-Arlington)	12/2	$46.64	100	$74.62	$7,462
Physical Scientist (Rest of US)	9/2	$28.28	300	$45.25	$13,575

Table 4 Other Federal Government Expenses

Journal publication costs	$1,000
Conference Registration	$1,000

The total cost to the government for this information collection is $66,437 (rounded).

15. **Explain the reasons for any program changes or adjustments in hour or cost burden.**

This is a new information collection.

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.**

We anticipate publishing the findings of this information collection as a scientific journal article – with accompanying U. S. Geological Survey data release via the Science base online platform, a summary report for participating stakeholders, and presentations at scientific conferences (e.g., American Geophysical Union [AGU]).

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.**

We will display the OMB Control Number and expiration date on appropriate materials.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

There are no exceptions to the certification statement.