
Supporting Statement for Office of Workforce Development for Teachers and Scientists (WDTS) Workforce Development Highlights

OMB No. 1910-NEW

Part A: Justification

*DOE F 360.10, Office of Workforce Development for Teachers and Scientists
(WDTs) Workforce Development Highlights Form*

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U.S. Department of Energy

Washington, DC 20585

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Introduction

Provide a brief introduction of the Information Collection Request. Include the purpose of this collection, note the publication of the 60-Day Federal Register Notice, and provide the list of forms within this collection.

The purpose of the information collection is to provide insight to the experience of participants in WDTS lab-based programs. Edited versions of the information submitted by respondents will be published to the WDTS website for prospective applicants to read and learn what it would be like to participate in WDTS lab-based programs.

The agency's 60-day notice was published in the Federal Register, Vol. 87, No. 220, page 68685, on November 16, 2022.

Forms within this collection: DOE F 360.10, Office of Workforce Development for Teachers and Scientists (WDTS) Workforce Development Highlights Form.

A.1. Legal Justification

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 information collection.

The information is collected to support outreach for the Science Undergraduate Laboratory Internship (SULI) program, Community College Internship (CCI) program, and Visiting Faculty Program (VFP), as authorized in the Energy and Water Development Appropriations Bill, 2022. These three programs provide lab-based research and technical experiences for undergraduate students and faculty. Outreach for these programs focuses on increasing the number of applicants to the programs, especially applicants from Minority Serving Institutions, community colleges, and other institutions under-represented in Office of Science research areas and the scientific enterprise more broadly. The collection instrument includes evidence-based questions, shown to elicit information that encourages applications from individuals of races and ethnicities under-represented in science.

DOE does not currently collect other information from past participants of the SULI, CCI, and VFP programs.

A.2. Needs and Uses of Data

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 information submitted by respondents will be published to the WDTS website and DOE social media accounts for prospective applicants to read and learn what it would be like to participate in WDTS lab-based programs. The collection instrument includes evidence-based questions, shown to elicit information that encourages applications from individuals of races and ethnicities under-represented in science. Therefore, this information collection will support outreach for WDTS programs, and especially

outreach to applicants from Minority Serving Institutions, community colleges, and other institutions under-represented in Office of Science research areas and the scientific enterprise more broadly.

Specifically, Questions 1-6 on the collection instrument collect basic identifying information (name, email, program name, lab name, and year of participation) to allow us to verify the respondent's past participation in our programs and to contact them if we have questions about their responses. Questions 7 and 8 collect information about the respondent's research while in our programs – this will provide prospective applicants with an accessible and engaging description of the types of research available through our programs.

The remaining questions, Questions 9 and 11 – 21 (Question 10 is used to direct the respondent to the subset of these questions relevant to their career stage), are modeled on a set of evidence-based questions developed by researchers at the University of Rochester and Bucknell University to encourage applications to science-based programs from individuals from underrepresented minority (URM) groups in science. Here, "URM" is defined as including students who self-identify as Black, Hispanic/Latino, Mixed Race, and/or Native American.:

- Focus groups found that five qualities URM students value in a "role model" are: (1) achieved success; (2) constant improvement and resilience; (3) moral character; (4) relatability; and (5) empathy and helpfulness (Aish, Asare, and Miskioglu 2017).
- Students responded positively to alumni profiles created with a survey designed to elicit the above five qualities (Aish, Asare, and Miskioglu 2018).
- When the survey was adapted to create leader profiles for voluntary peer-led recitations offered to supplement introductory STEM courses, the number of recitations students attended positively correlated with the number of times they visited the profile page, for both minority (Native American, Black, Hispanic, and Native Hawaiian) and majority (white and Asian) students (Trenshaw et al. 2019). This was true even for students whose assigned leader did not post a profile, and even though the majority of leaders were white or Asian men.
- Notably, in the semester the leader profiles were introduced, this was the first time in the 20+ years the peer-led recitations had been offered where more minority students attended than majority students (Trenshaw et al. 2019). The leader profiles were the only change made to the peer-led recitations that semester, suggesting the use of profiles showcasing "role model" qualities, even if the "role model" is from the majority group, is particularly effective for increasing URM student attendance. This outcome is additionally important because attendance at these recitations has historically been correlated with higher grades in the main course.

The below table demonstrates how our questions map to the original role model profile questions:

Question	Role-model quality	Modeled after:
9. What was it like coming to a National Lab? Please describe how the Lab is similar and/or different to your home institution or community, both academically and socially. How did you handle the	Relatability	Trenshaw et al. 2019: What was it like coming to the U or R from your high school and/or community, socially and

transition?		academically? How did you manage each aspect of the transition?
Note: Question 10 will direct the respondent to the question below that is relevant to them.	N/A	Trenshaw et al. 2019: What do you aspire to become
11. What are your hopes for your career?		
15. What do you currently do, and where do you hope your career takes you?		
17. How did your VFP placement impact your career? Please describe any impacts on both your research and teaching, if applicable.		
Note: Question 10 will direct the respondent to the question below that is relevant to them.	Achieved success	Trenshaw et al. 2019: Thinking of a time you felt successful, describe what your success entailed in terms of courses of action, decisions, personal development, and outcomes.
12. Think of a time you experienced success during your internship. What did this success look like? <i>For example, you could discuss what actions you took or decisions you made that contributed to this success, or how you personally developed as a result this experience.</i>		
16. Think of a time you experienced success during your academic or professional career. What did this success look like? <i>For example, you could discuss actions you took or decisions you made that contributed to this success, or describe how you personally developed as a result of the experience.</i>		
Note: Question 10 will direct the respondent to the question below that is relevant to them.	Constant improvement and resilience	Trenshaw et al. 2019: Have you ever failed professionally/ academically? Share how you felt and explain how you dealt with it and worked past it.
13. Think of a time you experienced failure during your internship or academic career. How did you feel? How did you deal with the failure and work past it?		
17. Think of a time you experienced failure during		

your academic or professional career. How did you feel at the time? How did you deal with the failure and work past it?

14. Describe a concern you had while considering or applying to the internship. What advice would you give to help a student with the same concern today?	Empathy, helpfulness	Aish, Asare, and Miskioglu 2018: How do you give back to your family, friends and/or community?
20. (Optional) What personal connections in your life are most important to you? Did you make any important personal connections during your placement? If so, can you describe these connections and what they mean to you?	Empathy	Trenshaw et al. 2019: Do you have close connections (with family and/or others)? Share how you maintain and support these connections and what they mean to you.
21. (Optional) What are your values? How are your values expressed through your academic or professional career?	Moral character	Aish, Asare, and Miskioglu 2018: Describe the values you hold most strongly and a time when you significantly expressed these values.

Citations:

Aish, Nir, Philip Asare, and Elif Eda Miskioglu. 2017. "People like Me Increasing Likelihood of Success for Underrepresented Minorities in STEM by Providing Realistic and Relatable Role Models." In *2017 IEEE Frontiers in Education Conference (FIE)*, 1-4. Indianapolis, IN: IEEE. <https://doi.org/10.1109/FIE.2017.8190454>.

———. 2018. "People Like Me: Providing Relatable and Realistic Role Models for Underrepresented Minorities in STEM to Increase Their Motivation and Likelihood of Success." In *2018 IEEE Integrated STEM Education Conference (ISEC)*, 83-89. Princeton, NJ, USA: IEEE. <https://doi.org/10.1109/ISECon.2018.8340510>.

Trenshaw, Kyle F.; Aish, Nir; Miskioglu, Elif; and Asare, Philip, "Leaders Like Me" (2019). *Faculty Conference Papers and Presentations*. 53. https://digitalcommons.bucknell.edu/fac_conf/53

A.3. Use of Technology

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.

One hundred percent of the information will be collected via Microsoft Forms, an online survey tool. This will reduce the burden to the public by automating the submission of the form.

A.4. Efforts to Identify Duplication

Describe efforts to identify duplication.

DOE does not currently collect other information from past participants of the SULI, CCI, and VFP programs.

A.5. Provisions for Reducing Burden on Small Businesses

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

This information collection will not have a significant impact on small businesses; small businesses will not be asked to reply to this information collection.

A.6. Consequences of Less-Frequent Reporting

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.

The annual reporting frequency is one. Each past participant will be asked to submit the information a maximum of one time.

A.7. Compliance with 5 CFR 1320.5

Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines:

- (a) requiring respondents to report information to the agency more often than quarterly;**
- (b) requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- (c) requiring respondents to submit more than an original and two copies of any document;**
- (d) requiring respondents to retain records, other than health, medical government contract, grant-in-aid, or tax records, for more than three years;**
- (e) in connection with a statistical survey, that is not designed to product valid and reliable results that can be generalized to the universe of study;**
- (f) requiring the use of statistical data classification that has not been reviewed and approved by OMB;**
- (g) that includes a pledge of confidentiality that is not supported by authority established in stature of 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**

(h) 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 special circumstances for the collection.

A.8. Summary of Consultations Outside of the Agency

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 5CFR 320.8(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 in response to the comments. Specifically address comments received on cost and hour burden. Describe efforts to consult with persons outside DOE 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 report.

The agency's 60-day notice was published in the Federal Register, Vol. 87, No. 220, page 68685, on November 16, 2022. No comments were received in response to this notice.

In addition, consultations were made through regular monthly program management meetings with DOE national lab education and human resources staff who administer WDTS programs. These representatives were asked to provide their views on what questions to include in the information collection, the clarity of the instructions, and whether the amount of burden to be imposed was reasonable. The information collection was revised based on this feedback. These consultations will continue at least once every three years, although given the nature of the regular monthly communication between WDTS and national lab staff administering WDTS programs, the consultations will likely be more frequent.

In addition to the above consultations, nine past participants were invited to test the information collection form. These tests provided the basis for the estimated burden hours.

A.9. Payments or Gifts to Respondents

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

No payments or gifts will be provided to respondents.

A.10. Provisions for Protection of Information

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

The purpose of the information collection is to share the experience of past WDTS program participants with potential applicants. Given this purpose, respondents are not assured confidentiality and are instead informed that their submissions will be published to the WDTS website and DOE social media.

A.11. Justification for Sensitive Questions

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 DOE 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.

There are no questions of a sensitive nature included in the information collection.

A.12A. Estimate of Respondent Burden Hours

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, DOE should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample fewer than 10 potential respondents is desirable.

Table A1. Estimated Respondent Hour Burden

Form Number/Title (and/or other Collection Instrument name)	Type of Respondents	Number of Respondents	Annual Number of Responses	Burden Hours Per Response	Annual Burden Hours	Annual Reporting Frequency
DOE F 360.10/Office of Workforce Development for Teachers and Scientists (WDTS) Workforce Development Highlights Form	Past WDTS program participants	100	100	1	100	1
TOTAL		100	100		100	

Nine past participants were invited to test the information collection form in Microsoft Forms. These test submissions provided the basis for the estimated burden hours. Microsoft Forms automatically records the time required for each submission. From this, a median response time was calculated.

A.12B. Estimate of Annual Cost to Respondent for Burden Hours

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. Instead, this cost should be included under ‘Annual Cost to Federal Government’.

Table A2. Estimated Respondent Cost Burden

Type of Respondents	Total Annual Burden Hours	Hourly Wage Rate	Total Respondent Costs
Past WDTS program participants	100	61.22	\$6,122
TOTAL	100		\$6,122

Hourly wage rate for past WDTS internship participants was estimated based on the March 2022 Bureau of Labor Statistics news release on Employer Costs for Employee Compensation (https://www.bls.gov/news.release/archives/ecec_06162022.htm). The total compensation rate, including costs for wages, salaries, and benefits, for full-time private industry workers in professional and related occupations was selected. This category was selected based on WDTS program data that shows most past participants go on to careers in private industry.

A.13. Other Estimated Annual Cost to Respondents

Provide an estimate for the total annual cost burden to respondents or recordkeepers resulting from the collection of information.

There are no additional estimated annual costs to respondents.

A.14. Annual Cost to the Federal Government

Provide estimates of annualized cost to the Federal government.

No additional staffing resources are required to administer the information collection or publish the responses to the WDTS website and DOE social media. These activities are part of existing staff's day to day functions.

A.15. Reasons for Changes in Burden

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

This is a new collection.

A.16. Collection, Tabulation, and Publication Plans

For collections whose results will be published, outline the plans for tabulation and publication.

The information collection will be administered on occasion, corresponding to when a new cohort of WDTS program participants complete their appointments. Responses will be published on occasion to the WDTS website and to DOE social media. No statistical methods will be employed – responses will be published as individual stories, intended to inspire future applications.

A.17. OMB Number and Expiration Date

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

We are not seeking approval to not display the expiration date for OMB approval of the information collection.

A.18. Certification Statement

Explain each exception to the certification statement identified in Item 19 of OMB Form 83-I.

There are no exceptions to the certification statement identified in Item 19 of OMB Form 83-I.