**Supporting Statement   
for**

**CareerTrac, FIC**

OMB NO.: 0925-0568

Expiration: June 30, 2019

Date: February 27, 2018

Check off which applies:

* New
* Revision
* Reinstatement with Change
* Reinstatement without Change
* Extension
* Emergency
* Existing

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**Attachments**

Attachment 1. Screenshots of Data Collection forms used for Trainee Review/Updates

Attachment 2. Screenshots of the FIC CareerTrac database

Attachment 3. Screenshots of the NIEHS CareerTrac database

Attachment 4. Screenshots of the NIEHS Superfund (SRP) CareerTrac database

Attachment 5. Screenshots of the NIGMS CareerTrac database

Attachment 6. Screenshots of the NCI CRCHD Program CareerTrac database

Attachment 7. Screenshots of Trainee Interface

Attachment 8. PIA for the CareerTrac application (NIEHS)

**Section A**

**Introduction**

This is a revision request that seeks renewal of clearance (OMB NO.: 0925-0568

Expiration: June 30, 2019) for collecting career-related data for trainees funded or co-funded by the Fogarty International Center (FIC), National Institute of Environmental Health Sciences (NIEHS), National Institute of General Medical Science (NIGMS) and National Cancer Institute (NCI). The data collection system provides a streamlined, web-based application permitting principal investigators and their administrators to record career achievement progress by trainee on a voluntary basis. FIC, NIEHS, NIGMS and NCI Program Officers will use this data to monitor, evaluate and adjust grants to ensure desired outcomes are achieved, respond to congressional inquiries, and inform future strategic and management decisions regarding the grants program.

**A.1.Circumstances Requiring the Collection of Data**

The request for information is authorized by 42 U.S.C 287b, 42 U.S.C 286b-3, 42. U.S.C 285k, and by 42 U.S.C 2851.

CareerTrac, first cleared for data collection by OMB in 2006, was the first system at NIH to provide a system for tracking international trainees, and is more comprehensive in its approach to tracking outcomes than IMPACII, NIH’s main data system related to grants. The primary purpose of designing a robust trainee tracking system is to track and report short and long-term outputs, outcomes, and impacts of FIC, NIEHS, NIGMS and NCI, thereby making informed management decisions about health research training programs. Trainee tracking and evaluation are specific and critical components of the NIH and Institute-specific strategic plans.[[1]](#footnote-1) FIC, NIEHS NIGMS and NCI train many different types of individuals but have similar tracking needs.

***The Fogarty International Center (FIC) and the National Cancer Institute (NCI)***FIC and NCI have a specific need to track international trainees funded in their extramural program. International trainees differ greatly from U.S.-trainees and this creates additional data requirements to support appropriate analyses. International trainees conduct their research in institutions abroad but can be trained in the United States and/or abroad. The degree, certificate, or training they are granted can be from an overseas or domestic institution and the degree or certificate earned may or may not differ from those granted in the United States. International trainees may participate with several different mentors, both domestic and international. Frequently, international trainees publish their results in important national, regional, or international journals that may or may not be familiar to U.S scientists or be listed in U.S. databases such as PubMed. International trainees may lack social security numbers, which are often used to track U.S. trainees.

International research training programs are structured to build research capacity by training individual researchers. This structure requires a database that tracks complex metrics that indicate progress towards these program goals. Currently, several of FIC's international training programs focus on both traditional (chronic and infectious diseases) and non-traditional areas (bioethics and bioinformatics) of research important to developing countries. The focus of these NCI and FIC programs necessitates tracking traditional and non-traditional metrics such as publications, awarded degree, Institutional Review Boards (IRBs) formed, new databases developed, new curriculum initiated, new departments started, new career paths forged and new networks created. The Fogarty International Center's mission is “to advance the mission of the National Institutes of Health by supporting and facilitating global health research conducted by U.S. and international investigators, building partnerships between health research institutions in the U.S. and abroad, and training the next generation of scientists to address global health needs.” Operationally FIC accomplishes its mission through both research and research-training programs. In order to make informed management decisions about its training programs and to demonstrate the outputs, outcomes and impacts of its training programs FIC must be able to track its trainees using an accurate and up-to-date system. CareerTrac was initially developed by FIC after concluding that the NIH’s primary administrative and reporting database, IMPAC II, would not fit its needs.

In alignment with both the HHS Action Plan and the Trans-NIH priorities, National Cancer Institute Center to Reduce Cancer Health Disparities (NCI CRCHD) strives to improve the recruitment and retention of individuals from diverse backgrounds underrepresented in cancer and cancer health disparities research, including persons from underrepresented racial and ethnic groups, people with disabilities, and people from disadvantaged backgrounds. NCI CRCHD supports a number of funding mechanisms that promote effective training of students and scientists from high school level through investigator level. In order to ensure that these programs achieve the intended goals, tracking and monitoring of the candidates’ career and research progress are necessary and critical, and represent a key component of CRCHD’s Strategic Plan.

One major set of funding mechanisms are the Administrative Supplements which support one candidate per supplement, including Diversity, Re-entry and CRCHD-specific Continuing Umbrella of Research Experiences (CURE) Supplements. Currently the RPPR Section B3 titled “Competitive Revisions/Administrative Supplements” only collects very limited information including supplement number, title, specific aims and an open text box accomplishment section limited to 700 characters. CareerTrac will help CRCHD collect structured information that is specific to the requirements of CRCHD programs and reflect the outcome metrics used to assess the effectiveness of the programs. This information is currently not available within IMPAC II database. Additional programs (R25, F, K, and R grants) are being added as part of this revision, based on the success of CareerTrac to date.

***The National Institute of Environmental Health Sciences (NIEHS)***

NIEHS needs to track outputs, activities and outcomes of trainees funded through its individual and institutional trainee grant and contract programs. NIEHS trainees are a range of intramural and extramural training programs, such as the Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Training Grant program (known as the T32 program), undergraduate research education programs and Superfund Research Program (SRP). CareerTrac can provide NIEHS with an integrated database of all trainees supported by both intramural and extramural programs. Our Director will have the “big picture” of training, which is a critical component of the Institute’s Strategic Plan (2012).

For extramural trainees, NIH captures pertinent data about trainees during their training process using trainee appointment forms (form PHS 2271). This information is captured electronically through the NIH’s xTrain interface. However, until recently, limited output, outcomes, and long term job information were captured by NIH data systems. At the same time, however, institutional training grant programs have been required to track trainees for 15 years after their appointment to a training grant. Until very recently, outcomes information provided by principal investigators in progress reports was only submitted as a PDF, and thus could not be used for evaluation purposes because it was not captured as structured data. In October 2016, NIH released new reporting requirements for T32 grants and progress reports and a new electronic interface (called xTRACT). The new requirements are required for competing applications due in May 2016. xTRACT is currently an optional interface that collects some outcome data. NIH anticipates that xTRACT will be required in the future but has not said when.

Prior to these new requirements from NIH, CareerTrac allowed principal investigators to use CareerTrac to complete three of twelve required reports. CareerTrac is now working with NIH to transfer relevant data from CareerTrac to xTRACT, update our reports to remove the now outdated report formats, and maintain only unique data in CareerTrac. A more detailed discussion of the potential overlap between CareerTrac and xTRACT for T32 programs is provided in section A.4 below, (Table 2). NIEHS also supports several R25 programs, focused on undergraduate education and we have added these grants and trainees to CareerTrac.

The NIEHS Superfund Research Program (SRP) has supported nearly 1400 trainees throughout its 25-year history. Appointment forms are not used in this program, so there was no systematic way to track SRP trainees prior to CareerTrac. Training outcome data in CareerTrac will help SRP improve their training programs and demonstrate an important component of their training mandate (as authorized in the Superfund Amendments and Reauthorization Act of 1986).

***The National Institute of General Medical Sciences (NIGMS)***

NIGMS, the NIH Institute responsible for the most trainees, joined the CareerTrac team. The Bridges to Baccalaureate, Bridges to Doctorate and Research Initiative for Scientific Enhancement (RISE) programs have been added. As part of this revision, NIGMS plans to add the Postbaccalaureate Research Education Program (PREP), Maximizing Access to Research Careers (MARC) and Initiative for Maximizing Student Development (IMSD) programs as well. Initially, some of the trainees were appointed using xTrain, and now all trainees are appointed using CareerTrac. Additional programs may be added in the future.

**Summary:** In the long term, FIC, NIEHS, NIGMS and NCI would also like to track trainees funded through other mechanisms (e.g. Superfund Program Trainees) that are not included in the IMPAC II database. Additionally, other NIH Institutes and Centers have trainees that follow both “models” (i.e. those tracked in IMPAC II and those that are not.) Therefore, a single system that allows FIC, NIEHS, NIGMS, NCI, and eventually other NIH Institutes and Centers, to track multiple types of trainees is desirable.

**A.2.Purposes and Uses of the Data**

NIH needs to understand the long term outcomes of its substantial investment in trainee development. The system will collect and facilitate analysis of the career achievements of trainees funded by FIC, NIEHS, NIGMS, and NCI grants, including career accomplishments achieved during or post training. Program officers will use the data to report on, analyze, and modify training programs; FIC, NIEHS, NIGMS, and NCI will use this data to inform management decisions about its health research training programs and to report on the outputs, outcomes and impacts of its programs; Evaluation and Policy officers will use the data to report to NIH and HHS administration. Additionally, the evaluation officers and staff will use the collected data to help analyze and evaluate programs. Trainee data may be used for bench marking and comparisons across programs or ICs. Submission of this data is voluntary.

In addition, it is envisioned that by developing a database of international trainees accessible to NIH program officers, the system may also facilitate implementation of global scientific projects by allowing Program Officers to identify international partnership opportunities, particularly for U.S. PIs or program alumni who desires collaboration with an individual who has expertise in a specific scientific area, international site or institution. CareerTrac users are also interested in facilitating partnerships, further training opportunities, and other networking.

**Major changes to the CareerTrac system since last OMB submission**

* We are proposing to add a module that will allow trainees a “view/write only” access to update their data directly in the system (see screenshots, Attachment 7). This will eventually lead to the replacement of our existing Data Collection Form, which is used to provide updates to existing trainee records (see document, Attachment 1; burden included in Grantee estimate). Our rationale for this change is three fold. First, giving trainees direct contact with CareerTrac will likely improve the accuracy of the data in the system because they have the best knowledge of the information needed. Second, this access may actually reduce overall reporting burden because they can update the records when events occur, reducing the time needed for PIs and Administrators to track down the trainees for the information. Third, if given direct access, trainees will have better access to the information collected about them, keeping in spirit of having the right to review data, as specified in the Paperwork Reduction Act. Features of the new interface will include:
  + Trainees will login using “NIH Commons-ID” credentials or using emails validated by the PI using the existing login interface.
  + Trainees will be able to add education, in training and accomplishment records to their profile, or provide additional details for items collected by the NIH Commons. Only fields unique to CareerTrac will be collected.
  + The Principal Investigator of the grant will need to review and approve data submitted by trainees before data appears on reports in CareerTrac.
  + Trainees will not be able to access anyone else’s records in CareerTrac.
  + If the trainee is associated with more than one grant the records can be added to each grant.
  + Trainees will be able to export a single Excel file containing all information on file for each grant they are associated with.
* The National Library of Medicine left the CareerTrac partnership, no NLM trainees are represented in the system any longer.
* On the architecture side, we recently added a PI Dashboard page to the NIEHS tenant which leverages existing trainee data to display grant statistics for PIs to compare their grants to their overall tenant. Additionally, we added more granularity to Grant Numbers by including Support Year and Suffix Codes (APPL IDs) to the importing process and modified the Program Information interface for the NCI (CRCHD) tenant. Both these changes do not affect burden. Both may be expanded to all tenants in the future.

**A.3.Use of Information Technology to Reduce Burden**

CareerTrac, a web-based application, is in production and being used by FIC, NIEHS, NIGMS and NCI. The system supports the collection and reporting of this data, significantly reducing the burden of maintaining paper-based files and manually collating data for reporting. All PIs with access to the Internet are able to access the system from anywhere at any time. Drop-down selection list and radio button selections are leveraged to streamline and standardize the data collection. Extensive help files, tool tips and Frequently Asked Question pages provide clear instructions for providing information.

Optional data collection forms allow PIs to share what data are stored in CareerTrac for an individual trainee, and prompt the trainee to make updates that can easily be added to the system by the PI or his/her administrator (see Attachment 1). This is intended to promote data quality and completeness and also makes it much easier for the PI to give the trainee his/her right to review the data.

In addition, a PIA was completed for the joint CareerTrac application (NIEHS and FIC). The SORN is 09-25-0014 and the NIH Senior Official for Privacy previously approved the PIA in 2012 (see Attachment 8). An updated PIA was submitted and is pending approval as of February 2018 (No. P-5860043-506903).

**A.4.Efforts to Identify Duplication**

The initial OMB and renewal applications for CareerTrac (2006, 2009) did not identify any duplicate efforts. The initial system was developed for FIC’s international programs. International trainees are still not tracked in any other system at the NIH. Further, the diverse range of long-term trainee outcomes, both domestic and international, are not tracked in any other system at the NIH. Subsequently, databases with overlap have been identified, as described below.

Prior to developing CareerTrac, FIC found a trainee tracking system at the US Agency for International Development (USAID). That system served as a model for the original CareerTrac design.

Some NIH trainees are tracked during their training experiences in IMPAC II. However, very little information about the trainee is maintained in IMPAC II during their training. In 2008, a training reporting module was created in IMPAC II to provide reports of trainees during their training (counts, degree type, grant, tuition costs and stipend information is tracked.) Additionally, links to any subsequent grant applications and awards are provided, allowing analysis of two measures of trainee success. Since the 1970s the IMPAC II system has captured previous education; race, ethnicity; gender; disability; Ph.D. completion. More recently NIH has begun tracking non-PI roles on NIH and other PHS grants.

PI’s of institutional training grants (T32s) are required to track trainees for the previous 15 years (this policy was recently increased from 10 years). When CareerTrac was created, PIs submitted required data as a table embedded in a PDF, which did not allow any systematic analysis or facilitate evaluation. CareerTrac provided PI’s with a system that tracked their trainees in a way that we could analyze the data much more efficiently. CareerTrac allows NIH to track an expanded set of outcomes beyond research faculty appointment, such as working in a non PI capacity in academia, in a government science, health or regulatory agency, or in a related industry. Other outcome metrics related to non-NIH fellowships, patents, policies and publications can be captured easily in CareerTrac.

CareerTrac is designed to integrate with existing IMPAC II data as much as possible, and provide an opportunity to collect new, relevant trainee outcome data. CareerTrac staff are making every effort to ensure that any existing data stored in IMPAC II are automatically populated into CareerTrac. CareerTrac substantially reduces effort on the part of NRSA PIs, who currently have to maintain data that can be readily extracted from IMPAC II in external spreadsheets that require cumbersome manual updates. The goal is to reduce duplication of effort as much as possible, without sharing data inappropriately across platforms.

CareerTrac has overlap with three different databases, as described below (Exhibits 1 and 2):

In roughly 2010, the National Institute of Neurological Disorders and Stroke (NINDS) developed a data collection tool that assists Institutional Training Grant Directors (the “T32 program”) in collecting and storing the data needed to complete Tables required for applications, progress reports and competitive renewals. TTS has been retired.

In 2011, a database was developed by the NIH Office of Intramural Training and Education to track NIH trainees from multiple Institutes and Centers. This Trainee Alumni Database (OMB No. 0925-0299, Expiration Date 08/31/2016) encourages trainees to voluntarily provide contact information, NIH training history, education and employment information. As of 2015, the alumni database is still operational and remains substantially different from CareerTrac.

In 2014, the NIH Office of Extramural Research (OER) initiated an OMB renewal request for applications and progress reports (OMB 0925-0001 and 0925-0002, expiring 10/31/2018). The request covers revised data tables that applicants and grantees need to submit for certain kinds of trainees supported by NIH. Included in the request is a new system called xTRACT, which provides the option of collecting training-related data for applications and progress reports electronically. xTRACT primarily facilitates completion of the training grant application/progress report tables. The CareerTrac partners participated in the design of xTRACT and are working closely with OER to ensure that there is no duplicate data collection. Any data that the new xTRACT system will collect that is currently collected in CareerTrac, will be phased out of the CareerTrac data collection system after xTRACT is fully launched. These data will include information on Publications, Mentor, Project Title, Employment, Education/Prior Degree Info, and Source of support. Unique outcome data will continue to be collected in CareerTrac. Key system differences are described below (Exhibit 2):

**Exhibit 1.**

|  |  |  |
| --- | --- | --- |
| **Difference** | **NIH Alumni Database** | **CareerTrac** |
| Data source | Former/Current Trainees enter data into database (voluntary) | Pulls data from existing personnel records. Intramural PIs enter information on behalf of trainees. |
| Outcome/Achievements | Captures employment, subsequent education and networking contact information | Additionally, captures other outcomes such as publications, fellowships, and narrative accounts of training impacts. CareerTrac is also hoping to link trainees to subsequent applications and awards sought by linking them to data in IMPAC II. |
| Scope | Is designed for intramural fellows, no extramural training alumni captured. | Allows NIEHS to analyze and report achievements across all its trainee programs in a single integrated database, giving us unprecedented information to evaluate our training programs as a whole. |

**Exhibit 2.**

| **Difference** | **xTRACT** | **CareerTrac** |
| --- | --- | --- |
| Purpose | Provide electronic data entry for the new training data tables required for applications and progress reports. Captures only the data needed for the grant application and progress report tables. | Provide electronic data entry for a range of trainee outcomes and impacts to allow for program evaluation and improvement. Does not duplicate data entry for information collected in NIH Commons or the xTRACT module. Provides robust, structured framework for grantees to track trainee outcomes and achievements. Focuses on long term outcomes. |
| User base | Currently relevant for certain types of NIH training grant mechanisms: T32, TL1, T90, R90, and T15 | Only one CareerTrac tenant (NIEHS-T32 program) has any overlap with xTRACT. |
| Data sources | Pulls data from IMPAC II whenever possible; Users add other data required for NRSA Tables | Pulls data from IMPAC II whenever possible; users add long term outcome information.  New data is available from xTRACT in IMPAC II database is leveraged to the maximum extent possible and is not collected in CareerTrac |
| Unique outcome data | Single Employment classification: research-intensive, research-related, additional training, other | * Multiple Employment classifications: Sector (Government, Academia, Industry); Tenure status, Postdoc (yes/no); Research Emphasis (Research, Teaching, Clinical, etc.). * Scientific & Technical Emphasis (tenant specific fields to characterize research more deeply than trans-NIH method * Career Highlight (narrative) * Policies & Products * Honors * Posters * Students of former trainees |
| Data Analysis Capability | No data analysis capability in system | Provides ability to query and filter data, as well as export all data into excel files for easy data analysis by all users |
| Reporting | In its first iteration, only a limited number of specific table outputs are available – designed mainly for grant review and progress report purposes. | Provides versatile and robust reporting/exporting functionality for all data elements in the system. |

In summary, some data that CareerTrac collects are collected in other systems, but we are making every effort to leverage these data as appropriate. Since xTRACT has been available in FY16, we have worked to transfer existing data from CareerTrac to xTRACT and then to leverage xTRACT data for CareerTrac. Some challenges with interoperability have been identified, but we will continue to leverage xTRACT and all other NIH data sources to the maximum extent possible. This reduces data entry burden for our PI users.

**A.5.Small Business**

No small businesses will be involved in this collection.

**A.6.Consequences of Not Collecting the Information**

Without regular, periodic updates to trainee data, NIH will not be able to document the impacts and outcomes of awarded grants. Meeting regulatory compliance requirements and responding to Congress in an accurate and timely manner will be difficult. Ultimately, FIC, NIEHS, NIGMS and NCI will be unable to make informed management decisions about its grants programs without this data.

**A.7.Special Circumstances Justifying Inconsistencies with Guidelines in 5 CFR 1320.6**

This project fully complies with all guidelines of 5 CFR 1320.5 (Controlling Paperwork Burdens on the Public General Information Collection Guidelines). There are no circumstances that require deviation from these guidelines.

**A.8.Consultation Outside the Agency**

The 60-day Federal Register notice was published on November 9, 2017 (82 FR 52062). No comments were received.

The system has been in full production with FIC PIs since December 2008. The PIs from all tenants have been asked to comment on the system several times. Their comments regarding the ease of use of the system and the type of data being collected have been incorporated into enhancements of the application. Our strategy has been to continually involve users from all tenants to provide feedback and help improve the system. Tenant administrators at each IC work with users to provide updates to help files, FAQs and collect ideas for improvement. Feedback from these grantees is regularly incorporated into the system as well.

**A.9.Payments or Gifts to Respondents**

Respondents will not be paid for participating in this collection and will not receive any gifts in return for participation. Participation is completely voluntary.

**A.10.Assurances of Privacy**

The NIH Privacy Officer has reviewed CareerTrac and determined that the system is subject to the Privacy Act.

CareerTrac falls under the NIH **System of Records Notice (SORN)** 09-25-0014, Federal Register Notice Vol. 67, No. 187, September 26, 2002. The trainees are informed about the nature and usage of the data collected. While PIs enter the data into CareerTrac, they may contact trainees to obtain information about their professional accomplishments. Trainees provide the data voluntarily and can opt to decline to provide the requested information.

CareerTrac data is available to PIs, Principal Investigator Administrators (PIA), Project Officers (PO), and other NIH staff, such as Evaluation Officers. The following information may be disclosed individually or in aggregate for "routine uses": current training status, returned to home country, area of training, country of origin, work e-mail, degrees earned through NIH funded programs, accomplishments that are public products, and trainee career highlights. Datasets stripped of personal identifiers may be created for NIH evaluation purposes (similar to the concept of “public use datasets” for hospitalization data). Gender and minority status will not be disclosed on an individual basis. Trainees who are not appointed using the X-Train data interface may elect to “not agree” to be tracked in the database. In that case, their information will be filed as “anonymous” and they will not be tracked as an individual. The following CareerTrac information will not be made publicly available: employment status, phone, fax, year of birth, or biographical data.

**Routine uses of records maintained in the system include, but are not restricted to the following categories of users and purposes:**

1. FIC, NIEHS, NIGMS and NCI, HHS and Congress for reporting and evaluation purposes;
2. The PI and Collaborators for the purpose of monitoring the program, submitting progress reports and grant applications, and writing journal articles describing the programs;
3. FIC and NIEHS co-funding partners and co-sponsors of FIC and NIEHS programs for the purpose of reporting progress and conducting evaluations of the programs; and
4. Interested public, for example, for the purpose of convening a scientific meeting in a particular country to which former trainees will be invited.

The application is hosted in NIEHS's data center, which is certified and accredited for moderate risk applications and includes several processes for securing and protecting the individually identifiable data. Due to the long-term, on-going nature of this program, records may be maintained indefinitely. All existing NIH guidelines for retention and destruction of Individually Identifiable Data will be adhered to. All confidentiality controls for Moderate Risk systems from the NIST 800-53 are followed. The system has a current and active accreditation. Information on specific IT security controls may be obtained from the IT Security Plan for the NIEHS General Support System. Listed below are some of the key security controls employed:

|  |
| --- |
| * Card reader access is required for access to the NIEHS Data Center. |
| * All doors are alarmed for breakage or tampering. |
| * The data center is monitored 24x7. |
| * Visitors are logged and escorted at all times by an authorized person while in the data center. |
| * Procedures are in place to renew all data center access on a quarterly basis. |
| * Procedures are in place for deactivating card reader access for terminated employees/contractors. |
| * Procedures are in place to remove terminated employee/contractor IDs on all systems. |
| * Virus scanning software is installed on all servers and is continuously executed. |
| * File system access control lists are restrictive to prevent unauthorized access. |
| * Firewalls restrict access to servers. |
| * Strong password controls are enforced. |
| * Procedures are in place to apply patches when vulnerabilities and fixes are published. |
| * Routers and firewalls on the data center network detect and defend against Denial of Service (DoS) |
| * A combination of incremental backups and snapshots of data foremost systems with an identified need are made daily. |
| * Server configuration standards, general operating procedures, maintenance procedures, software/hardware change control procedures are documented online. |

**A.11.Questions of a Sensitive Nature**

CareerTrac does not collect sensitive data.

**A.12 Estimates of Response Burden**

Hour burden estimates are based on feedback from users. Respondents are expected to enter data for various numbers of trainees. Typical users can complete a record entry in 30 minutes or less, including time to gather the required data. A few records are more complex and require additional time.

**A.12.1. Number of Respondents, Frequency of Response, and Annual Hour Burden**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Respondents** | **Number of Respondents** | **Number of Responses per Respondent** | **Average Time per Response (in Hrs)** | **Annual Hour Burden** |
| Individual: FIC Grantee | 80\* | 90 | 30/60 | 3,600 |
|
| Individual: NIEHS Grantee | 60 | 45 | 30/60 | 1,350 |
|
| Individual: NCI Grantee | 264 | 22 | 30/60 | 2,904 |
| Individual: NIGMS Grantee | 80 | 150 | 30/60 | 6,000 |
| Individual: Superfund Grantee | 20 | 105 | 30/60 | 1,050 |
| Individual: Trainee | 5,000 | 1 | 15/60 | 1,250 |
| **Total** | 5,504 |  |  | 16,154 |

\*In the previous submission, the number of respondents for FIC grantees was incorrectly entered as 50 and the total was off, but the burden estimate of 3,600 was correct. These inadvertent errors have now been corrected.

**A.12.2. Estimates of Annualized Cost to Respondents for the Hour Burdens**

The CareerTrac team has determined that in most cases, administrators, not PIs, are responsible for entering the majority of data into the system. Therefore, the $40 hourly wage rate reflects the wage estimate for administrative staff rather than scientific staff. We used the median annual salary for a Large Department Business Manager from HigherEdJobs.[[2]](#footnote-2)

For the new trainee category, we used the 2017 NIH predoctoral stipend level as the average wage. Many of our trainees are in High School or College, some are predocs and some are postdocs. We chose the $24,000 predoctoral stipend as a conservative average; and this translates to $12/hour.[[3]](#footnote-3)

**A.12.2 Annualized Cost to Respondents**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Respondent** | **Number of Respondents** | **Total Annual Hour Burden** | **Wage Rate** | **Respondent Cost** |
| Individual: FIC Grantee | 80 | 3,600 | $40 | $144,000\* |
| Individual: NIEHS Grantee | 60 | 1,350 | $40 | $54,000 |
| Individual: NCI Grantee | 264 | 2,904 | $40 | $116,160 |
| Individual: NIGMS Grantee | 80 | 6,000 | $40 | $240,000 |
| Individual: Superfund Grantee | 20 | 1,050 | $40 | $42,000 |
| Individual: Trainees | 5,000 | 1,250 | $12 | 15,000 |
| **Total** | 5,504 | 16,154 |  | **$611,160** |

\*In the previous submission, we made inadvertent calculation errors based on incorrect entries to the number of respondents in Table A12-1. These errors have been corrected in this table, and account for some of the apparent burden increase to FIC.

**A.13.Estimate of Total Capital and Startup Costs/Operation and Maintenance Costs to Respondents or Record Keepers**

There are no Capital Costs or Operating and Maintenance Costs to report. The data collection system is a web-based application available to respondents at no cost using their existing desktop hardware and software.

**A.14.Estimates of Costs to the Federal Government**

The costs below are the additional costs required supporting this data collection. Existing computer facilities and equipment are being utilized at no additional cost to NIH. The estimated cost to develop, test and implement the data collection system assumes a minimum ten-year life expectancy for the application, with technology refreshes accounted for in the annual cost to maintain the data collection system.

**A.14. Annualized Cost to the Federal Government**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cost Descriptions** | **Grade/Step** | **Salary** | **% of Effort** | **Fringe (if applicable)** | **Total Cost to Gov’t** |
| **Federal Oversight** |  |  |  |  |  |
| Project Director | GS15-6 | 141,240 | 15% |  | 21,186 |
| NIEHS Support Staff | GS7-4 | 29,193 | 10% |  | 2,919 |
| NIEHS Tenant Admin | GS12-2 | 75,683 | 5% |  | 3,784 |
| NIEHS PO | GS14-10 | 133,796 | 2% |  | 2,676 |
| NIEHS PO | GS14-6 | 120,072 | 2% |  | 2,401 |
| NIEHS PO | GS14-5 | 116,641 | 5% |  | 5,832 |
| FIC Business Owner | GS14-5 | 123,406 | 3% |  | 3,702 |
| FIC CT Admin | GS12-1 | 77,490 | 11% |  | 8,524 |
| FIC PO | GS14-10 | 141,555 | 3% |  | 4,247 |
| NIGMS CT Admin | GS14-5 | 123,406 | 10% |  | 12,341 |
| NIGMS Business Owner | GS15-10 | 160,300 | 2% |  | 3,206 |
| NIGMS PO | GS14-5 | 123,406 | 3% |  | 3,702 |
| CRCHD CT Admin | GS14-1 | 108,887 | 8% |  | 8,711 |
| SRP Admin | GS12-9 | 92,773 | 5% |  | 4,639 |
| SRP PO | GS13-5 | 98,709 | 3% |  | 2,961 |
|  |  |  |  | **Total** | **90,831** |
| **Contractor Cost** |  |  |  |  |  |
| Project manager |  | 100,000 | 100 |  | 100,000 |
| Developers  (1 at 80% 1 at 20%) |  | 200,000 | 100 |  | 200,000 |
|  |  |  |  |  | **300,000** |
|  |  |  |  |  |  |
| Travel |  |  |  |  | **2,500** |
| Other Cost |  |  |  |  |  |
|  |  |  |  |  |  |
| **Total** |  |  |  |  | **393,331** |

**A.15.Changes in Burden**

With increasing participation and success of CareerTrac, participation and burden have continued to increase. In the most recent submission approved 13,470 burden hours, with an associated respondent cost of $484,800. The current submission requests a total of 16,154 burden hours and an associated respondent cost of $611,160.

The largest contribution to changes in the burden estimate is the expansion of the NIGMS tenant to include the Postbaccalaureate Research Education Program (PREP), the Maximizing Access to Research Careers (MARC) and Initiative for Maximizing Student Development (IMSD) programs. NIGMS is the NIH institute with the largest training programs. These three programs foster research training and the development of a strong and diverse biomedical research workforce through a variety of programs, mainly at the undergraduate, graduate levels. On average these programs appoint ten new trainees per year and track them for fifteen years.

Another change to the number of respondents, but having smaller effect on the burden hours and cost is the addition of a write-only Trainee Interface that will utilize existing in-training and accomplishment data collection fields (see Attachment 7). Information entered by trainees will be dependent on the review and approval of the PI before it is officially saved to the system. We anticipate that up to 5,000 trainees across the tenants would be likely to access the system in any given year. We intend to pilot this approach with the CRCHD tenant in FY18 (~1,000 trainees) to ensure that burden is within our estimates before we expand to the entire program. If successful, the pilot project will be expanded to other tenants, and will replace the Data Collection Form currently used to update existing records (see Attachment 1; burden for this form is included in Grantee estimate). Each trainee is expected to provide needed data in under 15 minutes. We’ve tested our proposed instrument internally and the average data entry time for first time response was 13 minutes.

The NLM tenant withdrew from the partnership so we have removed their estimates from our calculations.

The NIEHS, Superfund, and FIC tenants’ burden hour estimates have not changed. The cost estimate for FIC has increased because of a calculation error in the prior submission.

CRCHD is adding R25, F, K, and R grants but these do not affect the initial burden estimates for the system. Their hours and estimates remain the same.

We also seek approval for new data fields as follows. A majority of the fields listed below are optional. And it is possible that some tenants may opt out of collecting them. In most cases, the additions enable CareerTrac to automatically generate required tables and will significantly reduce any additional time needed to produce those tables manually (which is what happens currently). Many of the additions are the direct result of requests made by the principal investigators during a collaborative discussion of how to define the most important outcome metrics of their programs.

First, we would like to expand previously approved, tenant-specific fields to all other tenants:

* *In training data:*
  + *Career Level*. Tenants customize dropdown list, e.g. High School Student, Undergraduate School, Graduate School, etc. (required)
  + *Grant Type*. Tenants customize dropdown list, e.g. Diversity Supplement, Re-entry Supplement, CURE Supplement, etc. (optional)
  + *Training activities.* Unstructured data about Didactic Activities and structured data about Career Skills (dropdown options: Grantsmanship, Communication Skills, Writing Skills, Time Management, Job Search, Leadership, Broaden Perspectives, Other) (optional)
  + *Research Project Details.* Open ended data about Goals and Aims; Research Activities, Key findings and Impact of Findings (optional)
  + *Research Type*. Dropdown menu includes Basic, Behavioral/Population, Clinical, Translational (required)
  + *Subproject ID*. Unstructured data (optional)
  + *Subproject Title*. Unstructured data (optional)
  + *Training Director*. Unstructured data (optional)
  + *Honors*. Tenants customize dropdown list, e.g. KC Donnelly Award, SRP Annual Meeting Speaker, Wetterhahn Award, etc. (optional)
* *Program Information (entirely optional)*
  + *Program Goals and Impact*. Unstructured data (optional).
  + *Recruitment Strategies*. Unstructured data (optional).
  + *Selection Process/Criteria*. Unstructured data (optional).
  + *Mentor Matching Process*. Unstructured data (optional).
  + *Individual Mentored Research Project for Trainees?* Radio button options include yes/no (optional)
  + *Research Skills for Trainees Knowledge and Expertise*. Unstructured data (optional).
  + *Didactic Lessons*. Unstructured data (optional).
  + *Professional Development*. Unstructured data (optional).
  + *Networking Opportunities for Trainees*. Unstructured data (optional).
  + *Training for Mentors*. Unstructured data (optional).
  + *Family Involvement*. Unstructured data (optional).
  + *Community Involvement*. Unstructured data (optional).
  + *CURE Trainee Tracked?* Radio button options include yes/no (optional).
  + *Tracing Duration*. Unstructured data (optional).
  + *Tracking Method*. Unstructured data (optional).
  + *Evaluation Activities*. Unstructured data (optional).
  + *Outcome*. Unstructured data (optional).

Second, we propose to add new data fields to all tenant data entry screens. Specifically:

* *Personal data*
  + *Alternative Name/Maiden Name.* Unstructured data (optional).
* *In education records* 
  + *Degree Status.* Dropdown menu includes In-Progress, Completed (required).
  + *Is this [Post-Bac] program funded by [PREP]?* Radio button options include yes/no. (required) [items in brackets may be customized by tenant]
  + *Is this a biomedical program?* Radio button options include yes/no. (required)
  + *Month degree received.* (dropdown contains a list of 12 months) (required)
* *In-training*
  + *Appointment Type.* Dropdown menu includes New, Reappointment, Amendment, etc. (optional)
  + *ORCID ID.* Unstructured data (optional)
  + *Current Academic Plans.* Unstructured data (optional)
  + *Did the trainee withdraw from the training program?* Radio button options include yes/no. (required)
  + *Reason for Withdrawal.* Tenants can provide dropdown list, e.g. Student Initiated, Transferred to Another Program, Terminated from the Program, etc. (required, if conditions met)
  + *Explanation of Withdrawal.* Unstructured data (optional)
  + *Withdrawal Date* Dropdown menus include list of 12 months, and list of years. (required, if conditions met)
  + *Additional Support During Training* Unstructured data (optional)
  + *Additional Support Program Type* Tenants can provide dropdown list, e.g. RISE, B2B, B2D.
* *Accomplishments*
  + *Summer Research Experience*. Dropdown menus include start date and end date (month and year) (required). Unstructured data fields include Project Title (required), Mentor (required), and Institution (required)
  + *Employment Department*. Unstructured data (optional)
  + *Employment Position Type*. Dropdown menu includes Part-Time, Full Time (required)
  + *Employment Is this a Faculty Position?* Radio button options include yes/no (required)
  + *Employment Is this a Biomedical Position?* Radio button options include yes/no (required)
  + *Employment Initial Position*. Radio button options include yes/no. (required)
  + *Employment Current Position*. Radio button options include yes/no. (required)
  + *Fellowship Number*. Unstructured data (optional)
  + *Posters/Presentations Description*. Tenants can provide dropdown list, or use as unstructured data field.
* *New Program Information fields* 
  + *Participant Positions Awarded per Notice of Award*. Unstructured data (required).
  + *Unfilled Positions*. Unstructured data (required).
  + *Participants Appointed (Unique Individuals)*. Unstructured data (required).
  + *New Participants Appointed*. Unstructured data (required).
  + *Funding Cycle*. Tenants can customize as dropdown or unstructured (optional).

**A.16.Plans for Publication, Analysis, and Schedule**

NIH Program managers will use the data collected in this system for program analysis and to produce annual management reports, with the objective of verifying and demonstrating that program objectives are being achieved. The results of this analysis and supporting reports will be published annually in Program Reports. Examples of reports for each program include:

* Awarded degrees (by Grant, Program, Country, Region, Discipline)
* Type of training (by Grant, Program, Country, Region, Discipline)
* Trainee Return Rate by Grant, Program, Country, Discipline
* Trainee Accomplishments: Publications, Posters, Policy, Products, Employment, Career Highlights, teaching, new funding, further education

This information collection will not employ statistical methods.

|  |  |  |
| --- | --- | --- |
|  | **A.16 Project Time Schedule** | |
| **Activity** |  | **Time Schedule** |
| Record Trainee Data in CareerTrac |  | Immediately after OMB approval; at least annually thereafter. |
| Validate record entries |  | 3 months after OMB approval; at least annually thereafter. |
| Review program results |  | 6 months after OMB approval; at least annually thereafter. |
| Prepare management reports |  | 9 months after OMB approval; at least annually thereafter. |
| Publish reports |  | 10 months after OMB approval; at least annually thereafter. |

**A.17.Approval to Not Display Expiration Date**

OMB Expiration Date will be displayed on the survey instruments.

**A.18 Exceptions to Item 19 of OMB Form 83-I**

No exceptions are sought from the Paperwork Reduction Act or from form 83-I.

1. HHS Strategic Plan: <http://www.hhs.gov/about/strategic-plan/index.html>;

   NIH Strategic Plan: <http://www.nih.gov/sites/default/files/about-nih/strategic-plan-fy2016-2020-508.pdf>;

   FIC Strategic Plan: <http://www.fic.nih.gov/about/pages/strategic-plan.aspx> ;   
   NIEHS Strategic Plan: <http://www.niehs.nih.gov/about/strategicplan/>;

   NIGMS Strategic Plan: <http://publications.nigms.nih.gov/strategicplan/>; [↑](#footnote-ref-1)
2. <https://www.higheredjobs.com/salary/salaryDisplay.cfm?SurveyID=33> [↑](#footnote-ref-2)
3. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-17-084.html> [↑](#footnote-ref-3)