NNEMS

EPA's National Network for Environmental Management Studies Fellowship Program

Catalog for 2010

Student Fellowship Program

Visit the NNEMS Web site at *www.epa.gov/education/students.html*

United States Environmental Protection Agency

Office of Children's Health Protection and Environmental Education
Environmental Education Division (1704A)

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EPA's National Network for Environmental Management Studies Fellowship Program

Catalog for 2010

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Introduction

Background

The United States Environmental Protection Agency (EPA) established the National Network for Environmental Management Studies (NNEMS) Fellowship Program in 1986 to foster a growing interest among higher education students in environmental careers. The NNEMS program is a comprehensive fellowship program that provides students an opportunity to participate in a fellowship project that is directly related to their field of study. The NNEMS program is sponsored by the Environmental Education Division (EED) in EPA's Office of Children's Health Protection and Environmental Education (OCHPEE).

EPA has awarded more than 1,400 fellowships under the NNEMS program since its inception in 1986, and expects to award approximately 30 to 40 fellowships in 2010 for an estimated total of $400,000.

How to Use the NNEMS Catalog for 2010

The NNEMS Catalog for 2010 is divided into eight main sections:

- *Introduction* provides background information about the NNEMS program and identifies points of contact.
- *Overview of the NNEMS Program* describes the program and the types of fellowships offered, identifies the role of program coordinators, and discusses compensation.
- *How to Apply* lists the eligibility requirements and describes the application materials and application process.
- *Evaluation and Selection of NNEMS Fellows* discusses the evaluation of applications by staff of EPA and the notification process.
- *Procedures to Initiate and Complete a Fellowship* identifies step-by-step actions a student must take to initiate and complete a fellowship.
- *Guidelines for NNEMS Fellows* explains the program guidelines that a student selected for a fellowship must follow.
- *Frequently Asked Questions* lists questions asked by applicants during previous years, as well as those from students awarded fellowships.
- *Catalog of 2010 Fellowships* provides detailed descriptions of each of the fellowships offered in 2010, including information about the EPA office sponsoring the project, the location and duration of the project, as well as the desired educational level of the student.

Several appendices are included to assist students who are interested in applying for a NNEMS fellowship. *Appendix A, Application Materials*, provides complete application materials. *Appendix B, NNEMS Program Coordinators*, provides a list of the schools or educational institutions that have a designated NNEMS Program Coordinator. *Appendix C - IRS Publication 970: Tax Benefits for Education*, provides information about taxes on a fellowship award.

For Additional Information

Please contact:

Ms. Ginger Potter
NNEMS Program
Environmental Education Division (1704A)
Office of Children's Health Protection and
Environmental Education
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Telephone: 202-564-0443

or:

visit EPA's NNEMS Web site at:
www.epa.gov/education/students.html

Overview of the NNEMS Program

Purpose

The purpose of the NNEMS program is to:

- Provide students with practical research opportunities and experiences in EPA's program and regional offices and in its laboratories;
- Increase public awareness of and involvement in environmental issues;
- Encourage qualified individuals to pursue environmental careers; and
- Help defray the costs associated with the pursuit of academic programs related to the field of environmental protection, such as pollution control, science, engineering, technology, social science, and specialty areas.

Students selected for NNEMS fellowships are offered a unique opportunity to gain research and training experience directly linked to their undergraduate or graduate studies. NNEMS fellows conduct research projects to augment their academic studies, which EPA supports with financial assistance.

Fellowships

Under the NNEMS program, a range of fellowship activities are offered to help students increase their knowledge of environmental issues while refining their professional skills. Each year, the NNEMS program offers approximately 30 to 40 fellowships, developed and sponsored by EPA Headquarters in Washington, D.C. and in EPA's 10 regional offices and laboratories throughout the United States. The projects are specifically narrow in scope, allowing students to complete the fellowship while working full-time at EPA during the summer or part-time during the school year. Typically, the research is conducted at an EPA office or laboratory, although other arrangements can be made in certain circumstances.

The fellowships are organized among four categories:

- **Environmental Policy, Regulation, and Law**

  Fellowships offered in this category provide students an opportunity to review and evaluate existing policies and regulations, as well as conduct research related to the development of new policies. The projects may include a component that focuses on environmental compliance.

- **Environmental Management and Administration**

  The topics of fellowships in this category focus on environmental management goals.

- **Environmental Science**

  Fellowships in this category typically include direct participation in field studies and laboratory research. Environmental policy and regulation review requiring technical expertise is included in the Environmental Policy, Regulation, and Law category described above.

- **Public Relations and Communications**

  These types of fellowships include the review and analysis of public response to EPA policies and regulations, as well as general public opinion of environmental issues. The projects may include the development of communication tools; for example, pamphlets and informational materials.

Detailed descriptions of the fellowships offered this year are provided in the section, *2010 Fellowships*, which begins on page 19 and on the NNEMS Web site at ***www.epa.gov/education/NNEMS/2010projects.html***. Each fellowship is sponsored by an EPA project officer who serves as the main point of contact for the project.

Sample Project Description

Provided below is a sample project description from the NNEMS 2005 program. This example illustrates the content and format of the project descriptions that begin on page 19.

Project number

Title of project

Educational level of applicant

Mission and activities of the sponsoring office

Name of the office sponsoring the project

Location at which project will be conducted

Duration of the project

PROJECT NUMBER: 2005-301

Project Title

Diagnosing Causes of Impairment in Estuarine Systems

Sponsoring Office

National Health and Environmental Effects Research Laboratory/Atlantic Ecology Division

Office Mission/Responsibility

The mission of the Atlantic Ecology Division (AED) at Narragansett is to perform research to better understand and quantify the ecological effects of anthropogenic stressors on the coastal waters and watersheds of the Atlantic seaboard.

Desired Level of Education
Junior to Graduate Student

Project Location
EPA Region 1 – Narragansett, RI

Preferred Project Period
6/1/2005 to 5/31/2006

Project Officer
Rob Burgess
Kay Ho

Project Overview

Over the next several years, AED is responsible for developing diagnostic tools for assessing the causes of ecological impairment to estuarine and marine water bodies. This project involves conducting research which relates the effects of toxic chemicals, nutrients, pathogens, and clean sediments to these impairments. The focus of this research will be on ecosystems within the Narragansett Bay watershed.

The student will perform an independent and unique project involving the effects of anthropogenic stressors on estuarine and marine systems. Along with their independent project, the student will be involved in field sampling; preparing samples for analysis; and analyzing samples for toxicity, nutrients, dissolved oxygen, sediment grain size, and organic carbon.

The student's research project will include developing an experimental design, conducting the research, and completing a brief report.

Project Goals

The student's involvement in the project will allow him or her to experience all aspects of the scientific process, from the conception of his or her specific scientific question to the summarization of what his or her research means. Further, through his or her participation in AED's program, the student will gain useful and valuable experience in estuarine and marine field sampling and sample preparation and analysis.

Final Product of the Project

The student will develop a brief report summarizing the results of the project.

Activities to be undertaken by the student

EPA's goals for the student and project

Final product to be developed by the student

Name of the project officer

Compensation

All NNEMS fellowships are awarded directly to the individual students who are selected as fellows. The awards cannot be made to the educational institution at which the student is enrolled, although a student may request that EPA submit payment of a portion of his or her tuition costs directly to the institution. See *Payment of the Grant* on page 12 for more information.

Students selected for a fellowship receive a grant award in the form of a stipend. The grant is paid in monthly installments based on the duration of the project. Grant awards reflect an individual student's level of education, as well as the location and duration of the fellowship. Even though students selected to receive NNEMS fellowships are grantees and not federal employees, the formula for the appropriate stipend amount is based on the current General Schedule (GS)-04 through GS-09 federal pay scale, and includes standard government locality rates. Freshmen students, for example, will be paid at the GS-04 rate; advanced graduate students at the GS-09 rate. For example, grants awarded for a 3-month full-time period would range from approximately $7,400 to $12,600 per award. The stipend will be increased to compensate for costs associated with travel or training for fellowships that require these activities. Information about the 2009 GS pay scale by localities is available online at ***www.opm.gov/oca/09tables/indexGS.asp***. Please note that rates for 2010 will be adjusted according to the new GS scale.

There is no matching or cost sharing required of students awarded NNEMS fellowships.

Role of Program Coordinators

Many colleges, universities, and distance-learning organizations in the United States have identified NNEMS Program Coordinators. The Program Coordinators act as representatives of the NNEMS program by promoting the program on campus and assisting students in the preparation of their applications. For 2010, there are approximately 250 NNEMS Program Coordinators representing almost 200 educational institutions. A complete list of the NNEMS Program Coordinators is provided in *Appendix B, NNEMS Program Coordinators* and on the NNEMS Web site at ***www.epa.gov/education/NNEMS/2010pc.html***.

Please note: Any eligible student enrolled for academic credit at an accredited[1] 2- or 4-year college, university, or distance-learning institution may apply for a NNEMS fellowship, regardless of whether or not there is a NNEMS Program Coordinator at his or her university.

Disclaimer

EPA reserves the right to reject all applications for NNEMS fellowships and to make no awards or make fewer awards than anticipated. EPA also reserves the right to make additional awards under this announcement consistent with Agency policy, if additional funding becomes available. Any additional selections for awards will be made no later than August 2010.

[1] The 2- or 4-year college, university, or distance-learning institution must be accredited by a regional or national accrediting organization recognized by the U.S. Department of Education or the Council for Higher Education Accreditation.

How to Apply

The following section provides step-by-step instructions for how to apply for a NNEMS fellowship, identifies the eligibility requirements, lists the application materials, and provides an overview of the application process.

The Application Process

Applying for a NNEMS fellowship can be summarized in four steps:

Step 1: Carefully read the section below, *Eligibility Requirements,* to determine whether you meet all of the general requirements, as well as those identified for specific student levels. If you are eligible, continue on to Step 2.

Step 2: Review the 2010 project descriptions that begin on page 19. Identify the project(s) in which you are most interested, as well as those in which you have attained the desired level of education as specified by EPA. Please note that students are not allowed to develop or propose independent projects. If you would like additional information on or clarification of a specific project, please complete and submit the "Project-Specific Questions Form" that is available online at ***www.epa.gov/education/NNEMS/2010projects.html***. A response to your question will be provided by e-mail as soon as possible.

Step 3: Complete and submit a separate NNEMS application for each project identified under Step 2.

Step 4: Submit the completed application(s) by **February 5, 2010**.

A student selected for a NNEMS fellowship must complete additional documentation required by the federal government to apply for an official grant with EPA. The steps required to process a fellowship and the grant award are lengthy (see *Procedures to Initiate and Complete a Fellowship* on pages 10 and 11 for more details).

Eligibility Requirements

A NNEMS fellowship is available to any associate, undergraduate, or advanced student who meets the general requirements listed below, as well as those identified for associate, undergraduate, and advanced students.

General Requirements

At a minimum, all applicants must be:

- A citizen of the United States, its territories or possessions, or lawfully admitted to the United States for permanent residency. The U.S. Citizenship and Immigration Services defines lawful permanent residency as any person not a citizen of the United States who is residing in the United States under legally recognized and lawfully recorded permanent residence as an immigrant, also known as "Permanent Resident Alien," "Resident Alien Permit Holder," and "Green Card Holder." A lawful permanent resident must provide his or her Green Card number on his or her application.
- Enrolled for academic credit at a 2- or 4-year college or university, or distance-learning institution accredited by a regional or national accrediting organization recognized by the United States Department of Education or the Council for Higher Education Accreditation.[2]
- Pursuing an educational program directly related to pollution control or environmental protection for the duration of the fellowship.

Associate and Undergraduate Students

Students attending 2- or 4-year institutions or distance-learning institutions must meet the following requirements:

- 3.0 cumulative grade point average (GPA) based on a scale of 4.0 **at the time the application is due** (a GPA of 2.999 for example, is not sufficient), and
- Completion of at least four undergraduate courses related to the field of environmental studies.

Please note:
There are no exceptions to the requirement that applicants must have attained a 3.0 GPA at the time the application is due. Applicants whose GPA is below 3.0 based on the transcript enclosed with the application will not be eligible for consideration. For example, applicants with a GPA below 3.0 who submit applications in January with the expectation that their spring semester grades will increase their GPA to 3.0 are not eligible.

[2] Applicants are not required to be enrolled at the time the application is due, typically in late January or early February, but must be enrolled at the time of fellowship award, which is typically in April or May. For example, an applicant who graduated with an undergraduate degree a few years ago and is not currently enrolled in an academic program, may submit an application for a NNEMS fellowship if the applicant has applied to, been accepted at, and is enrolled in a graduate school or a doctoral program that will begin in the Fall of 2010. Please note that EPA is prohibited from awarding fellowships to applicants who have been accepted, but have not enrolled, in an academic program.

Advanced Students

Students enrolled in graduate or doctoral programs must meet the following requirements:

- Currently enrolled in a graduate or Ph.D. program or can provide proof of acceptance and enrollment to a graduate or Ph.D. program at the time of fellowship award[3], and
- Completion of at least one semester of graduate or Ph.D. work, or at least four undergraduate courses related to the field of environmental studies.

The following students are not eligible for a NNEMS fellowship:

- Federal employees, including those who are on "leave without pay" status.
- Undergraduate and graduate students who will graduate before the NNEMS fellowship is completed (students who complete their undergraduate studies before the end of a fellowship may apply if they are admitted and enrolled in a graduate program).
- Students enrolled in certificate programs.
- High school students.

Application Materials

Application packages are submitted in hard copy as explained below. All students who are interested in applying for a NNEMS fellowship must submit a complete application package (an original and two copies) that includes:

- A completed NNEMS Application Form.
- A completed Standard Form 424 – Application for Federal Assistance (SF 424).
- A résumé.
- An official transcript for each 2- or 4-year college or university, or distance-learning institution attended. Official transcripts should be opened and photocopied as one original and two photocopies of the transcript are required for each complete application. If submitting applications for more than one NNEMS project, only one original transcript is required. Applicants should include in the application package the envelope in which the original transcript was provided.
- A completed NNEMS Reference Form. The Reference Form should be prepared by a professor or advisor who knows the applicant well and can specifically discuss the student's aptitude and/or experience for the project. The Reference Form should be included with the application package; however, a reference submitted under separate copy will be accepted if it is postmarked on or before the application deadline. In this case, a note should be included in the application package indicating that the form is being sent separately.
- A completed and signed original NNEMS Disclosure and Waiver Statement.
- Verification of acceptance and/or enrollment in a graduate or Ph.D. program if the applicant is a graduating senior.

Applications must substantially comply with the application submission instructions and requirements or the application will be rejected. Applications deemed ineligible for funding consideration will be notified within 15 calendar days of the ineligibility determination.

The application package(s) may be submitted via mail, courier, or express delivery. Although multiple copies of the materials are required, they may be submitted in the same package.

Applicants must submit all application materials listed above. Blank application forms are included in *Appendix A, Application Materials*, and may also be obtained on the NNEMS Web site at ***www.epa.gov/education/students.html***. Students must submit a complete application package (one original application package and two copies) for each project for which they are applying. Students may also wish to contact the NNEMS Program Coordinator at their school (see *Appendix B, NNEMS Program Coordinators*) for additional information and assistance.

All NNEMS applications must be postmarked by February 5, 2010 and submitted by mail, courier, or express delivery to:

NNEMS Fellowship Program
Tetra Tech EM Inc.
1881 Campus Commons Drive, Suite 200
Reston, VA 20191

[3] Applicants are not required to be enrolled at the time the application is due, typically in late January or early February, but must be enrolled at the time of fellowship award, which is typically in April or May. For example, an applicant who graduated with an undergraduate degree a few years ago and is not currently enrolled in an academic program, may submit an application for a NNEMS fellowship if the applicant has applied to, been accepted at, and is enrolled in a graduate school or a doctoral program that will begin in the Fall of 2010. Please note that EPA is prohibited from awarding fellowships to applicants who have been accepted, but have not enrolled, in an academic program.

Submitting Confidential Information

In accordance with 40 Code of Federal Regulations (CFR) 2.203, applicants may claim all or a portion of their application/proposal as confidential business information. EPA will evaluate confidentiality claims in accordance with 40 CFR Part 2. Applicants must clearly mark applications/proposals or portions of applications/proposals they claim as confidential. If no claim of confidentiality is made, EPA is not required to make the inquiry to the applicant otherwise required by 40 CFR 2.204(c)(2) prior to disclosure.

Application Assistance and Communications

In accordance with EPA's Assistance Agreement Competition Policy (EPA Order 5700.5A1), EPA staff will not meet with individual applicants to discuss draft proposals, provide informal comments on draft proposals, or provide advice to applicants on how to respond to ranking criteria. Applicants are responsible for the contents of their applications/proposals. However, EPA will respond to questions from individual applicants regarding threshold eligibility criteria, administrative issues related to the submission of the proposal, and requests for clarification.

Submitting Multiple Applications

Students may apply for as many fellowships as desired. Complete application packages (one original and two copies) must be submitted for each fellowship project. Although multiple copies of the application materials are required, they may be submitted in the same package. Official transcripts may be photocopied if a student is submitting more than one application package. If more than one project application is submitted, the student must indicate the order of preference of each project on the Application Form.

Applications by Current NNEMS Fellows

A student who is currently holding a fellowship may apply for a new fellowship in 2010. The existing fellowship, however, must be completed and the fellowship ended (see *Procedures to Initiate and Complete a Fellowship* on pages 10 and 11) before a student will be considered eligible to receive and begin a new fellowship.

Submitting Applications for Consecutive Projects

Students may apply for consecutive projects, but the first fellowship must be completed before the second fellowship begins. For example, an applicant may apply for a project that ends in August as well as for a project that begins in September.

Deadline for Applying

The deadline for submissions of applications for 2010 fellowships is February 5, 2010. All materials must be postmarked on or before February 5, 2010 to be eligible for consideration. Applications postmarked after February 5, 2010 will not be accepted.

Mailing Address for Applications

Applications must submitted via mail, courier, or express delivery to:

NNEMS Fellowship Program
Tetra Tech EM Inc.
1881 Campus Commons Drive, Suite 200
Reston, VA 20191

Although multiple copies of the application materials are required, they may be submitted in the same package.

Confirmation of Application Receipt

Applications received with a postmark on or before February 5, 2010 will be reviewed by external reviewers to determine whether the application is complete and that the eligibility requirements have been met. During this time, applicants will receive an e-mail at the e-mail address identified in the "Current E-mail" and/or "Permanent E-mail" fields on page 1 of the NNEMS Application Form. If you do not receive a confirmation of application receipt e-mail within 30 calendar days of the application deadline, please visit EPA's NNEMS Web site at: ***www.epa.gov/education/students.html*** and click on the link to send an e-mail to the NNEMS Fellowship Program.

The deadline for submitting applications for 2010 fellowships is February 5, 2010. All hard-copy materials must be postmarked on or before February 5, 2010 to be eligible for consideration.

Evaluation and Selection of NNEMS Fellows

Evaluation of Applications

NNEMS fellowships are awarded annually on the basis of EPA's request for applications and established evaluation criteria. Every application submitted for a specific fellowship will first be reviewed by external reviewers to determine whether the eligibility requirements have been met. Applications that meet the eligibility requirements will subsequently be reviewed by panels comprised of EPA staff members. The panels review and evaluate each application based on the evaluation criteria listed below.

- Relevancy of the classroom experience of the student as it relates to the EPA fellowship (maximum score = 15 points)
- Student's understanding of the proposed EPA fellowship subject matter (maximum score = 10 points)
- Relevancy of work experience of the student (whether volunteer activities, internships, or paid jobs) as it relates to the EPA fellowship (maximum score = 10 points)
- Relevancy of the student's academic studies to the EPA fellowship (maximum score = 5 points)
- Leadership skills, written communication skills, and demonstrated success at working well in an office, laboratory, or field environment, as appropriate to the project (maximum score = 5 points)
- Potential for success, as reflected by academic records, letters of reference, and other relevant information (maximum score = 5 points)

Applications that are scored highly based on the evaluation criteria listed above by the panels of reviewers are then sent to the NNEMS staff and EPA project officers for consideration.

Selection and Notification of Award Status

Once EPA has made a decision about whom to award a fellowship, the EPA project officer will contact the student to offer the fellowship and discuss specific details about the fellowship. Discussions between the project officer and applicant are intended to produce a clear, mutual understanding of the details of the project and the results the student wishes to achieve from the project. The student should expect to discuss with the EPA project officer general information about the project, including:

- Specific location where the project will be conducted;
- Amount of the stipend to be paid to the student;
- Approximate duration of the project;

- Primary point of contact for the student;
- Names of the EPA staff with whom the student will be working;
- Access to telephone, e-mail, and the Internet; and
- General sources of information that will be made available to the students (for example, previous research studies, resources, etc.) and any non-monetary assistance that EPA may be able to provide to the student during the fellowship.

During the notification call, the EPA project officer will also review with the student the procedures he or she must follow to initiate and complete the fellowship as described in detail under *Procedures to Initiate and Complete a NNEMS Fellowship* on pages 10 and 11.

A background investigation for security purposes may be required of fellowship recipients, and personal information about the recipient will be required to complete these investigations. EPA reserves the right to terminate the fellowship agreement with a recipient if his or her background investigation reveals adverse information.

Student Acceptance of Award

A student selected for a NNEMS fellowship must complete additional documentation required by the federal government to apply for an official grant with EPA. The steps required to process a fellowship and the grant award are lengthy (see *Procedures to Initiate and Complete a Fellowship* on pages 10 and 11 for more details).

If a student is offered and accepts a fellowship, the NNEMS staff will send to the student a Fellowship Application Packet, instructions for completing the forms in the packet, and a copy of the Guidebook for NNEMS 2010 Fellows. **The forms must be completed and returned to the NNEMS staff within 2 weeks of receipt in order to begin the processing of the paperwork required of all fellowships**.

Notification of Non-Selection

Students who are not selected for a 2010 fellowship will be notified initially by e-mail within 15 calendar days after a decision of non-selection is made. An official notification letter will be sent to the student's address provided on the NNEMS Application Form.

Students selected to receive a NNEMS fellowship must complete and return the forms in the Fellowship Application Packet within 2 weeks of receipt of the forms from EPA.

Procedures to Initiate and Complete a Fellowship

This section describes the procedures that students who are selected to receive NNEMS fellowships must follow to initiate and complete fellowships.

How to Initiate a Fellowship

The steps required to process a fellowship and the grant award are lengthy. It is imperative that students follow the instructions provided by EPA and submit all materials on time. A student may not begin a fellowship until all of the required documents are submitted.

DEADLINES

Step 1: Complete and Submit the Fellowship Application Packet Forms

Within 2 weeks of receipt

A student selected for a NNEMS fellowship will receive a grant award in the form of a stipend. Because a NNEMS fellowship is a grant issued by a federal agency, the student must complete additional documentation required by the federal government. In addition to completing a NNEMS application, a student selected for a NNEMS fellowship must submit the forms described below to receive a fellowship grant.

An applicant selected to receive a fellowship will be notified by the EPA project officer. NNEMS staff will then mail the student an official Fellowship Application Packet that includes a Fellowship Application (EPA Form 5770-2), a Fellowship Facilities and Commitment Statement (5770-3), and a Fellowship Stipend Payment Enrollment Form (for students who would like their stipend payments made by direct deposit).

The Fellowship Application Packet forms must be completed, signed, and returned to the NNEMS staff within 2 weeks of receipt. A delay in the submittal of the paperwork will result in a delay in the fellowship start date.

Step 2: Processing of the Fellowship Application

Up to 6 weeks following receipt of the Fellowship Application Packet by EPA

Upon receipt of the completed Fellowship Application Packet forms, NNEMS staff will work with the EPA project officer to submit the necessary paperwork to EPA's Grants and Interagency Agreement Management Division (GIAMD) for approval and award of the grant. All the information that the student provided will be verified by GIAMD and entered into its computer files. The student's grant will be assigned a number and a grants specialist will process the student's forms and mail the acceptance documents to the student's permanent mailing address (as indicated on the Fellowship Application) for the student's signature. The processing of the grant may take up to 6 weeks to complete. The official notification of an award will be made by GIAMD. A Congressional notification period of 5 days must be observed before the acceptance documents are mailed to the student.

Step 3: Complete and Submit the Acceptance Documents

Within 3 weeks of receipt

Approximately 6 weeks after the Fellowship Application Packet forms have been submitted to EPA, the student will receive his or her grant award documents, which include a Fellowship Agreement (EPA Form 5770-8), Fellowship Activation Notice (EPA Form 5770-7), and EPA Completion of Studies Notice (EPA Form 5770-9). **The student may not start work with EPA until he or she has signed and returned the Fellowship Agreement. In addition, the student must have his or her EPA project officer sign the Fellowship Activation Notice on the student's first day with EPA and return it to GIAMD.**

- **Fellowship Agreement (EPA Form 5770-8).** The Fellowship Agreement is the written agreement (including any amendments) between EPA and the student awarded a fellowship. The amount of the fellowship award and the terms and conditions of the fellowship are provided in the Fellowship Agreement. The student must sign the form and return it to GIAMD at the address provided on the form within 3 weeks of receipt or within a timeframe approved by GIAMD. If the student does not return the Fellowship Agreement or request an extension of the acceptance time limit within 3 weeks, the proposed start date of his or her fellowship will be delayed. EPA will not be responsible for any costs incurred under a voided agreement.

continued on next page

	DEADLINES
Step 3 Continued...	
• **Fellowship Activation Notice (EPA Form 5770-7).** The Fellowship Activation Notice should be signed by the EPA project officer on the student's first day of work. The EPA project officer then should return the signed form to GIAMD. Once the signed Fellowship Activation Notice is received, GIAMD is responsible for sending the notice to EPA's Financial Management Center in Las Vegas, Nevada, to authorize payments to the student. If the Fellowship Activation Notice is not submitted to GIAMD within 90 days of the start of the fellowship, EPA will initiate action to terminate the fellowship agreement.	**First day of fellowship**
• **EPA Completion of Studies Notice (EPA Form 5770-9).** The EPA Completion of Studies Notice should be completed by the student, signed by the EPA project officer, and submitted by the student as indicated in "How to Complete a Fellowship."	**Last day of fellowship**
Step 4: Begin the Fellowship The student should begin the fellowship on the date and at the location arranged with the EPA project officer and specified in the Fellowship Agreement.	**Varies, as agreed by EPA project officer and student**

How to Complete a Fellowship

At the completion of a NNEMS fellowship, all NNEMS fellows are required to:

	DEADLINES
Step 1: Submit a Final Report of the Project A copy of the final report must be provided to the EPA project officer on the last day of the fellowship. Unless directed otherwise by the EPA project officer, the report should summarize the specific project undertaken by the student and the project results.	**Last day of fellowship**
Step 2: Submit the EPA Completion of Studies Notice (EPA Form 5770-9) The EPA Completion of Studies Notice (EPA Form 5770-9) must be completed by the student, signed by the EPA project officer, and submitted by the student to EPA's Financial Management Center in Las Vegas, Nevada, on the last day of the fellowship. The final payment for the balance of the fellowship award, if any, is typically mailed to the student within 2 weeks after the fellowship has officially ended.	**Last day of fellowship**
Step 3: Retain All Records The student is required to retain all records related to the fellowship for 3 years following the completion date identified on the EPA Completion of Studies Notice. Please note that EPA, the Inspector General, the Comptroller General of the United States, and any of their duly authorized representatives have the right of timely and unrestricted access to a student's documents, papers, or other records related to a fellowship in order to make audits, examinations, excerpts, transcripts, and copies of such documents. The rights of access in this paragraph are not limited to the required retention period but shall last as long as records are retained.	**3 years after completion of fellowship**

Guidelines for NNEMS Fellows

Provided below are the general rules and regulations that guide NNEMS fellows.

Payment of the Grant

Students selected for a fellowship receive a grant award in the form of a stipend. The grant is paid in monthly installments based on the duration of the project. EPA will not make payments under a fellowship agreement until the award official receives the signed Fellowship Activation Notice. Unless the fellowship provides another payment process, the student may request EPA to make the stipend payment as follows:

- A portion paid directly to the educational institution for tuition costs, or
- Payment to the student on a monthly basis or another basis approved by the EPA project officer and as stated in the Fellowship Agreement. The payment may be made directly to the student or by direct deposit. Students interested in direct deposit should complete the Fellowship Stipend Payment Enrollment Form that is included in the Guidebook for NNEMS 2010 Fellows. Once the form is completed and returned to EPA's Financial Management Center, the stipend payment will be made by direct deposit.

The first stipend payment is typically received approximately 4 to 6 weeks after the fellowship begins.

Tuition costs sent directly to the educational institution attended by the student are tax exempt. Students who prefer that their tuition costs be sent directly to their educational institution must make this request of their EPA project officer when initially accepting their fellowship offer.

Taxes

EPA does not withhold any taxes nor generate an Internal Revenue Service (IRS) Form W-2, Wage and Tax Statement; nonetheless, the stipend amount is taxable. Students must maintain a record of their stipend amount and file their own taxes. According to the rules of the IRS, portions of the stipend may be tax exempt. Tax-exempt funds for NNEMS fellowships include the portion of money sent directly to a student's school for tuition. These funds do not have to be reported to the IRS. The IRS recommends that students pay quarterly taxes on large stipend amounts in order to minimize the possibility of being assessed a penalty at the end of the year. Please see *Appendix C: IRS Publication 970: Tax Benefits for Education*, for detailed information and instructions for filing taxes on a fellowship award. Please contact your local IRS office if you have further questions.

Important Tax Information:

- **EPA does not withhold any taxes nor generate an IRS Form W-2**
- **The stipend amount is taxable, although the portion of the stipend used for tuition costs is tax exempt (see above, *Payment of the Grant*)**
- **Students are required to keep their own income records and file their own taxes**
- **Students will not receive an IRS Form W-2 from EPA.**

Benefits

A student selected for a NNEMS fellowship is an EPA grant recipient, not a federal employee. As such, the student will not accrue leave, will not be entitled to health or life insurance benefits, nor have taxes withheld from his or her stipend.

Travel and Housing

EPA is not responsible for a student's travel expenses to and from the project site nor for the student's housing costs. If selected for a NNEMS fellowship that is located away from home or school, students are responsible for making their own arrangements for travel and housing.

If a student is required to participate in official travel during the performance of a project, EPA will add to the stipend additional funds to cover associated travel costs. Because students will not be reimbursed for any unapproved travel costs, it is very important that students do not incur any travel expenses until the stipend has been increased to cover such costs.

NNEMS fellows may not drive a government-owned (EPA or General Services Administration [GSA]) vehicle; however, they may ride as passengers in government-owned vehicles.

If a student must travel for research purposes, he or she does so at his or her own risk; EPA is not responsible for any accidents that may occur. Please see the following section about liabilities for more information.

Liabilities

The issue of liability for injuries that result from the acts of NNEMS fellows arises with respect to two categories of injured persons: the NNEMS fellow and all others.

- In the case of a NNEMS fellow who is injured while performing his or her fellowship, it is important to recognize that the fellow is not a federal employee. Rather, as the recipient of a stipend that is comprised of grant monies, the student is a grantee. As such, the student is not entitled to compensation for on-the-job injuries under the Federal Employees Compensation Act (FECA), Section 5 of the United States Code (U.S.C.) §§ 9101 et seq. The government is not responsible for any accidents that may occur on site or during the course of required travel for a fellowship.
- In the event that a student's injury is the result of negligence on the part of an EPA employee, the student may be eligible for compensation under the Federal Tort Claims Act (FTCA), 28 U.S.C. §§ 1346, 2671-2680.[4]
- In instances in which a student injures others, in the execution of his or her research duties, the government generally is not liable under the FTCA for any injury that results from the student's negligent acts because the student is not a federal employee.

In summary, a student may be vulnerable to significant personal liability for any damages or injuries that may result from his or her acts. Consequently, EPA recommends that students be fully informed of their exposure to personal liability and suggests that students may wish to secure personal injury insurance. EPA project officers or managers should not place the students in hazardous situations or in situations in which a considerable potential for accident or injury exists.

Student Program Evaluation

In an effort to continuously improve the NNEMS program each year, EPA may contact NNEMS fellows by telephone or e-mail to determine their overall satisfaction with the NNEMS program and to request suggestions for improving the program in future years. Participation in the evaluation will take no more than a few minutes and is voluntary.

Confidential Business Information

NNEMS fellows are not permitted access to or use of Confidential Business Information (typically referred to as "CBI") or enforcement-sensitive information.

Resolution of Disputes

Assistance agreement competition-related disputes will be resolved in accordance with the dispute resolution procedures published in 70 FR (Federal Register) 3629, 3630, (January 26, 2005) which can be found at ***http://frwebgate.access.gpo.gov/cgi-bin/getpage.cgi?position=all&page=3629&dbname=2005_register***.

[4] The FTCA provides a cause of action against the United States to individuals who incur damage to property or suffer personal injury as a result of a negligent or wrongful act or omission of a government employee acting within the scope of his or her employment.

Frequently Asked Questions

Listed below are questions asked by applicants to the NNEMS program in previous years, as well as by students who received fellowship awards.

Q I am interested in applying for a NNEMS fellowship, but I do not have a NNEMS Program Coordinator at my school. May I apply?

A Yes, any eligible student may apply for a NNEMS fellowship, regardless of whether or not there is a NNEMS Program Coordinator at his or her university.

Q I am graduating in May 2010 and will be taking a year off before attending graduate school in the Fall of 2011. Am I eligible to apply for a fellowship scheduled to take place during the Summer of 2010?

A No, only students who are currently enrolled in undergraduate or graduate school at the time of fellowship award are eligible.

Q Is the NNEMS program open to international students who attend U.S. universities or colleges?

A No. The NNEMS program is only available for students who are citizens of the United States, its territories or possessions, or who are lawfully admitted to the United States for permanent residency. The U.S. Citizenship and Immigration Services defines lawful permanent residency as any person not a citizen of the United States who is residing in the United States under legally recognized and lawfully recorded permanent residence as an immigrant, also known as "Permanent Resident Alien," "Resident Alien Permit Holder," and "Green Card Holder." A lawful permanent resident must provide his or her Green Card number on his or her application.

Q I am an American citizen currently enrolled as a full-time graduate student at Cambridge University. Are American students pursuing graduate-level studies in the area of environmental management/environmental protection at Cambridge University eligible to apply for the NNEMS Fellowship Program?

A Yes. You are eligible to apply for a NNEMS fellowship because you are a U.S. citizen, Cambridge University is recognized by the U.S. Department of Education as a fully accredited academic institution, and you are enrolled in an academic program directly related to pollution control or environmental protection.

Q Are high school students eligible for the NNEMS Fellowship Program?

A No, only undergraduate and graduate students are eligible for NNEMS fellowships.

Q Do the project descriptions offered in the NNEMS Catalog remain the same each year, or are new projects offered each year?

A The number and types of projects change each year depending on EPA's departmental and program issues and priorities, as well as funding available for the fellowships.

Q Do applications have to be received or postmarked by the date of the deadline?

A The application packets must be postmarked on or before the date of the deadline. The deadline for the 2010 program is February 5, 2010.

Q May my academic advisor mail the NNEMS Reference Form required for the NNEMS application under separate cover, or must the reference be included in the original application packet?

A We prefer that the Reference Form be included in the application package, but your advisor may send the form directly to the NNEMS Fellowship Program. However, please be sure to note on your application packet that the form will be coming under separate cover. In addition, the form must be postmarked by the deadline and be clearly marked to correspond with your application.

Q If I request an original, sealed transcript, may I break the seal to make copies of the transcript as required?

A Yes. If you receive one original transcript from your university's records office, you may open the sealed envelope to make photocopies. Please include the envelope that contained the original transcript in the application package and note that it was opened to make the photocopies.

Q I am interested in applying for a NNEMS fellowship and would like to apply for multiple projects. Do I need to submit original transcripts for each of the projects?

A You must submit an original transcript and two copies of your transcripts for at least one of the projects for which you are applying. You are permitted to include copies of your transcript for other projects for which you are applying. See the section, *How to Apply*, on page 5 for detailed instructions on applying for a fellowship.

Q If I apply for more than one project, should each application be sent separately?

A No. All applications may be sent within the same package.

Q I have been selected for one of the projects for which I submitted an application, but have decided to decline the offer. Would I be penalized for the other project or projects for which I applied?

A No, you would not be penalized for declining a fellowship offer. The criteria for evaluating and selecting NNEMS fellows are based on determining who is the most qualified candidate who will meet the needs of the specific project.

Q How will I know if my NNEMS application(s) has been received?

A Students whose applications are received with a postmark on or before February 5, 2010 will receive an e-mail at the e-mail address identified in the "Current E-mail" and/or "Permanent E-mail" fields found on page 1 of the NNEMS Application Form. If you do not receive a confirmation of application receipt e-mail within 30 calendar days of the application deadline, please visit EPA's NNEMS Web site at ***www.epa.gov/education/students.html*** and click on the link to send an e-mail to the NNEMS Fellowship Program.

Q When do we find out whether we were selected for the NNEMS Program?

A Most candidates are notified of their acceptance in April or May. Students who are not awarded fellowships are initially notified by e-mail in late April or early May, or within 15 calendar days after a decision of non-selection. An official notification letter will be sent to the address indicated on the NNEMS Application Form where the student would like materials to be sent.

Q I just started work on my project. When can I expect my first stipend check?

A You should get your first check within 4 to 6 weeks after returning the signed Fellowship Agreement and the signed Fellowship Activation Notice to GIAMD (see *Procedures to Initiate and Complete a Fellowship* on page 10). The Fellowship Agreement should be signed and returned immediately upon receipt, and the Fellowship Activation Notice should be signed by your EPA project officer and submitted to GIAMD on your first day of work.

Q I have been receiving my stipend checks monthly, but I've noticed that no taxes are being deducted. Are fellowships taxable?

A Yes. While EPA does not withhold any taxes, nor generate an IRS Form W-2, Wage and Tax Statement, the stipend amount is taxable. Students must maintain a record of their stipend amount and file their own taxes. According to the latest IRS rules, portions of the stipend may be tax exempt. Tax-exempt funds include, for example, the portion of money sent directly to a student's school for tuition and supplies. These funds do not have to be reported to the IRS. The IRS recommends that students pay quarterly taxes on large stipend amounts to minimize the potential for a penalty at the end of the year. *Appendix C - IRS Publication 970: Tax Benefits for Education* provides information about filing taxes on the fellowship award. Please contact the IRS for any further information related to the filing of taxes on a fellowship grant.

Q My project report has been finalized, and I've given a copy to my project officer and the NNEMS staff. May I copyright the report or have it published in a periodical?

A Yes. Because NNEMS students are grantees, you have copyright authority without having to seek the approval of the federal government as discussed in 40 CFR, Subchapter B - Grants and Other Federal Assistance, Part 30, Subpart C - Post Award Requirements, 30.36. Please consult the CFR for limitations and exceptions to this authority.

Q What if a project description is described minimally? How can I develop my Proposed Research Plan in response?

A If you would like additional information on or clarification of a specific project, please complete and submit the "Project-Specific Questions Form" that is available online at ***www.epa.gov/education/NNEMS/2010projects.html***. A response to your question will be provided by e-mail as soon as possible.

Catalog of 2010 Fellowships

Described on the following pages are the NNEMS fellowships being offered in 2010. As discussed in detail in the *Overview of the NNEMS Program* section, the fellowships are organized under four categories:

- **Environmental Policy, Regulation, and Law**
  Fellowships offered in this category provide students an opportunity to review and evaluate existing policies and regulations, as well as conduct research related to the development of new policies. The projects may include a component that focuses on environmental compliance.

- **Environmental Management and Administration**
  The topics of fellowships in this category focus on environmental management goals.

- **Environmental Science**
  Fellowships in this category typically include direct participation in field studies and laboratory research. Environmental policy and regulation review requiring technical expertise is included in the Environmental Policy, Regulation, and Law category described above.

- **Public Relations and Communications**
  These types of fellowships include the review and analysis of public response to EPA policies and regulations, as well as general public opinion of environmental issues. The projects may include the development of communication tools; for example, pamphlets and informational materials.

The fellowships are organized by category and listed in numerical order by project number. Each entry presents a description of the fellowship and identifies the EPA office that is sponsoring the fellowship, the location at which the fellowship will be conducted, the timeframe for the project, the desired educational level of the student, and the name of the EPA project officer.

Provided on the following pages is a matrix that identifies for each project offered in 2010 the project number, category, desired educational level of the student, location, and duration of the project.

2010 Fellowships Matrix

Project Number	Desired Level of Education: Freshman	Sophomore	Junior	Senior	Graduate Student	Ph.D. Student	Project Location	Preferred Project Period: 2010 May	June	July	Aug.	Dec.	2011
Environmental Policy, Regulation, and Law													
2010-101			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-102			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-103			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-104					•	•	EPA Headquarters - Research Triangle Park, NC						
2010-105			•	•	•	•	EPA Region 3 - Philadelphia, PA						
2010-106			•	•			EPA Region 3 - Philadelphia, PA						
2010-107			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-108			•	•	•	•	EPA Region 10 - Seattle, WA					2/28/2011	
2010-109			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-110			•	•	•	•	EPA Headquarters - Research Triangle Park, NC						
2010-111					•	•	EPA Headquarters - Research Triangle Park, NC						
2010-112					•	•	EPA Headquarters - Research Triangle Park, NC						
2010-113					•	•	EPA Headquarters - Research Triangle Park, NC						
2010-114	•	•	•	•			EPA Headquarters - Research Triangle Park, NC						
2010-115	•	•	•	•	•	•	EPA Headquarters - Research Triangle Park, NC						
2010-116	•	•	•	•			EPA Headquarters - Research Triangle Park, NC						
2010-117			•	•	•	•	EPA Region 2 - New York City, NY						
2010-118					•	•	EPA Headquarters - Research Triangle Park, NC						
Environmental Management and Administration													
2010-201	•	•	•	•			EPA Headquarters - Washington, DC				12/3/2010		
2010-202	•	•	•	•	•		EPA Region 10 - Seattle, WA						
2010-203					•	•	EPA Region 3 - Philadelphia, PA						
2010-204			•	•	•		EPA Headquarters - Research Triangle Park, NC						

Continued on next page

2010 Fellowships Matrix

Project Number	Desired Level of Education: Freshman	Sophomore	Junior	Senior	Graduate Student	Ph.D. Student	Project Location	Preferred Project Period: 2010 May	June	July	Aug.	Dec.	2011
Environmental Management and Administration (continued)													
2010-205			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-206			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-207			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-208	•	•	•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-209					•		EPA Region 2 - Stamford, CT				12/17/2010		
Environmental Science													
2010-301			•	•	•		EPA Region 2 - New York City, NY						
2010-302	•	•	•	•	•	•	EPA Headquarters - Arlington, VA						
2010-303			•	•	•	•	EPA Headquarters - Arlington, VA						
2010-304					•		EPA Headquarters - Research Triangle Park, NC						
2010-305			•	•			EPA Headquarters - Research Triangle Park, NC						
2010-306					•		EPA Headquarters - Research Triangle Park, NC						
2010-307					•		EPA Headquarters - Research Triangle Park, NC						
2010-308						•	EPA Region 3 - Baltimore, MD						9/10/2013
2010-309			•	•			EPA Region 3 - Lancaster, PA						5/10/2012
2010-310			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-311					•	•	EPA Headquarters - Research Triangle Park, NC						
2010-312			•	•	•		EPA Region 3 - Philadelphia, PA						
2010-313			•	•	•		EPA Region 3 - Philadelphia, PA						
Environmental Science													
2010-401					•		EPA Headquarters - Arlington, VA						
2010-402			•	•	•		EPA Headquarters - Research Triangle Park, NC						
2010-403					•	•	EPA Headquarters - Research Triangle Park, NC						

2010 Fellowships

Environmental Policy, Regulation, and Law

PROJECT NUMBER: 2010-101

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
David Mintz

Project Title:

Automation of Air Quality Data Products for NAAQS Reviews

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Assessment Division

Office Mission:

The primary mission of EPA's Office of Air Quality Planning and Standards (OAQPS) is to preserve and improve air quality in the United States. As a national EPA headquarters office located in Research Triangle Park, North Carolina, OAQPS compiles and reviews air pollution data; develops regulations to limit and reduce air pollution; assists states and local agencies with monitoring and controlling air pollution; makes information about air pollution available to the public; and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

OAQPS is responsible for reviewing the National Ambient Air Quality Standards (NAAQS). Under this project, the fellow will work with OAQPS staff to identify and automate several products (maps, graphs, and tables) by linking a Statistical Analysis System (SAS) process directly to source data via a Web application. Users of the Web-based application will be able to select multiple parameters (for example, pollutants, time periods, and thresholds) and generate data products dynamically. The automated process will improve the ability to provide standard data products quickly. This project is a unique opportunity to use cutting-edge technology to satisfy routine business needs.

Project Goals:

The student working on this project will gain practical experience with SAS/Graph, SAS/IntrNet, SAS Macros, Structured Query Language (SQL), and Oracle databases. The student will also develop skills in problem solving, communication, data presentation, and project management. When the project has been completed, the student will have participated in automation of the process for developing many of the standard air quality data products needed for the NAAQS review process.

Final Product of the Project:

This project's final product will be Web-based tools that can be used by air quality analysts.

PROJECT NUMBER: 2010-102

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Tesh Rao

Project Title:

Estimates of Emissions of Particle Mass and Species

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Assessment Division

Office Mission:

The primary mission of EPA's Office of Air Quality Planning and Standards (OAQPS) is to preserve and improve air quality in the United States. As a national EPA headquarters office located in Research Triangle Park, North Carolina, OAQPS compiles and reviews air pollution data; develops regulations to limit and reduce air pollution; assists states and local agencies with monitoring and controlling air pollution; makes information about air pollution available to the public; and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

This project will involve looking at emissions of fine particulate matter (PM2.5) within the United States and the speciation into chemical constituents, especially elemental and organic carbon (EC and OC). The focus of the project is to better understand how elemental carbon emissions were derived from PM2.5 estimates. Much of this project involves work with the SPECIATE database, which is EPA's repository of total organic compound (TOC) and PM speciation profiles of air pollution sources. This work is important in several ways, as carbon emissions play a major role both in PM National Ambient Air Quality Standards (NAAQS) issues (health) as well as the global climate. This project will build on the findings of earlier work. Specifically, the fellow may investigate the items below, though it is fully understood that the final report may cover only a subset of this list of research and analysis items. Data analysis, collaborative discussions, survey of the literature, and team meetings are all key elements expected to play a role in arriving at a final report for this project.

- Weight emissions by a radiative forcing metric, to obtain a better understanding of how the mass of emissions translates into effects on global climate change and investigate whether this new weighting scheme causes the sectors that are climate friendly for mitigation purposes (as outlined in the final report).
- Investigate and improve the control efficiency data element in the National Emissions Inventory for PM2.5 emissions. Investigate the literature that was used to generate carbon profiles for major source categories and develop documentation on the relevancy of how carbon was estimated from PM2.5 (size fraction, testing, and efficiency issues).
- Use monitoring data to help ensure the quality of elemental carbon emission estimates by sectors that have been implicated as important to climate in the final report mentioned.
- Trace the emission estimates of PM2.5 back to its source to better understand how the testing was done and what impacts it may have on the size fraction that is actually measured, how condensable estimates were developed, and how activity levels were applied to emission factors to arrive at PM2.5 emission estimates. Research done to date clearly shows that the collection efficiency of PM is a function of size fraction collected. This issue should be investigated closely for the electric generating units/boiler sector that EPA's Office of Research and Development (ORD) currently has under way in this area; that information should be used to check how PM emissions for that sector are estimated in the National Emission Inventory and then translated to black carbon emissions through SPECIATE.

Project Goals:

The student will acquire and enhance his or her knowledge about PM2.5 emissions. It is also expected that the fellow will gain experience working with various EPA offices (ORD, Sector Policies and Programs Division, Health and Environmental Impacts Division, Office of Air and Radiation, Office of Transportation and Air Quality, Office of Administration and Policy) in a collaborative way to obtain information, discuss work plans, and mutually share and discuss work that would be beneficial to the work under this project.

Final Product of the Project:

Expected outputs from this work will include development of maps, tables, and graphs to support work that is being done. A final report is expected to be finished at the end of the project that clearly outlines methods, analyses, final tables, graphs, and maps, and computer code developed to support the work that was completed. The report will encompass the investigations performed and the results of these analyses and may include, but is not limited to:

- A description of the assessment techniques used;
- Findings of the analyses presented in the appropriate format (text, tables, graphs, maps, and related designs); and
- Recommendations for generating future estimates of PM2.5 and species (particularly organic carbon).

PROJECT NUMBER: 2010-103

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Douglas Solomon

Project Title:

Statistical Analysis of 2008 National Emission Inventory

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Assessment Division

Office Mission:

The primary mission of EPA's Office of Air Quality Planning and Standards (OAQPS) is to preserve and improve air quality in the United States. As a national EPA headquarters office located in Research Triangle Park, North Carolina, OAQPS compiles and reviews air pollution data; develops regulations to limit and reduce air pollution; assists states and local agencies with monitoring and controlling air pollution; makes information about air pollution available to the public; and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

The National Emissions Inventory (NEI) is EPA's compilation of estimates of air pollutants discharged on an annual basis and their sources. The compilation includes emissions estimates submitted by state, local, and Tribal air pollution control agencies, estimates calculated by EPA, and emissions obtained from other sources. EPA is maintaining emission inventory data for the 2008 NEI. Under this project, the fellow will design and implement statistical analyses of these data. The statistical analyses may include, but are not limited to:

- Gap analyses to identify missing sources or pollutants;
- Trend analyses to examine emission changes over time;
- Comparative analyses to examine differences in data submitted from various organizations or locations (or both); and
- Outlier analyses to examine extreme values based on various statistical tests.

Project Goals:

The goal of this project is for the fellow to develop a robust understanding of the data in the Draft 2008 NEI through the use of various statistical analyses.

Final Product of the Project:

The fellow will develop a report documenting the statistical analyses undertaken and the results of these analyses. The report may include, but is not limited to: (1) a description of the analytical techniques used; (2) findings of the analyses presented in the appropriate format (text, tables, graphs, maps, and similar designs); and (3) an overall assessment of the data.

PROJECT NUMBER: 2010-104

Desired Level of Education:
Graduate Student to Ph.D. Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 9/1/2010

Project Officer:
Yvonne Johnson

Project Title:

Using Voluntary Programs for Regulatory Requirements

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Outreach and Information Division

Office Mission:

The Outreach and Information Division serves as the principal focus for management and transfer of air pollution control information; outreach to states, local governments, tribes, industry, small business, and the public; and voluntary and innovative approaches to reduce air pollution. In carrying out these functions, the division manages design, development, maintenance, and evaluation of outreach programs and information systems (including hardware and software) to distribute key air pollution control information to government and non-government clients and the public at large. The division also develops voluntary and innovative approaches to encourage pollution prevention and superior environmental performance over traditional regulatory approaches.

Project Overview:

EPA has been encouraging state and local air quality managers to use voluntary programs to reduce air pollution in nonattainment areas under the Sustainable Skylines Initiative (SSI). EPA has also developed guidance and policies on how to use emission reductions that result from implementation of voluntary programs to meet regulatory requirements, such as attainment and maintenance plans required under the Clean Air Act for various criteria pollutants. Communities have difficulty in applying the national, general guidance to their particular situation. Under this project, the fellow will research Clean Air Act criteria pollutant program requirements and community voluntary programs. The fellow will work with staff in the Outreach and Information Division as they develop and apply program-specific guidance for voluntary programs being implemented under the SSI that will allow these communities to use the emission reductions achieved under the SSI for regulatory purposes. Although these will be pilot projects, the guidance developed by the Outreach and Information Division will assist many other areas of the country to use these voluntary programs to meet their regulatory obligations.

Project Goals:

The fellow will gain critical insight into the Clean Air Act criteria pollutant program requirements and community voluntary programs. The fellow will have the opportunity to develop technical skills applicable to legal requirements as well as skills needed to advance program guidance that would have national applications.

Final Product of the Project:

The fellow will develop a final report based on his or her research on Clean Air Act criteria pollutant program requirements and community voluntary programs.

PROJECT NUMBER: 2010-105

Project Title:

Functional Assessment Methods and Their Use in the Regulatory Program

Sponsoring Office:

Region 3, Office of Environmental Programs,
Environmental Assessment and Innovation Division

Office Mission:

The Office of Environmental Programs is responsible for implementation of the Wetlands Program under Section 404 of the Clean Water Act (CWA) and the National Environmental Policy Act (NEPA) Program. The office integrates regulatory responsibilities and activities in innovative ways to maximize environmental benefits.

Desired Level of Education:
Junior to Ph.D. Student

Project Location:
EPA Region 3 - Philadelphia, PA

Preferred Project Period:
6/1/2010 to 8/20/2010

Project Officer:
Jessica Martinsen

Project Overview:

The CWA was signed into law with the goal of maintaining and restoring the biological, chemical, and physical integrity of waters of the United States. Section 404 of the act establishes a program to regulate placement of dredge or fill material into waters of the U.S. The regulatory program is jointly administered by EPA and the U.S. Army Corps of Engineers. EPA develops and interprets policy, guidance, and environmental criteria to evaluate permit applications; reviews and provides comments on individual permit applications; and enforces provisions of Section 404. This program is dynamic and evolving. The CWA Section 404 program recently promulgated regulations (The Mitigation Rule, 2008) that require affected aquatic resources to be compensated by replacing the lost functions of the resource. Under this project, the fellow will research and describe stream and wetland functional assessment methods used across EPA Region 3. The fellow will then analyze and evaluate the methods to determine the best applicability of each.

Project Goals:

The fellow will acquire and enhance his or her knowledge in stream ecology and learn about what the federal and state governments do to regulate those aquatic resources. The fellow will also gain valuable insight into the role of different stakeholders in the process. The experience will enhance the student's understanding of environmental laws, regulations, and policies.

Final Product of the Project:

The fellow will develop a narrative describing the most used functional assessment approaches and their applicability and develop a matrix to compare the various tools.

PROJECT NUMBER: 2010-106

Desired Level of Education:
Junior to Senior

Project Location:
EPA Region 3 - Philadelphia, PA

Preferred Project Period:
6/1/2010 to 8/20/2010

Project Officer:
Jessica Martinsen

Project Title:

Environmental Impact Assessment Resource Planning and Review

Sponsoring Office:

Region 3, Office of Environmental Programs,
Environmental Assessment and Innovation Division

Office Mission:

The Office of Environmental Programs is responsible for implementation of the Wetlands Program under Section 404 of the Clean Water Act (CWA) and the National Environmental Policy Act (NEPA) Program. The office integrates regulatory responsibilities and activities in innovative ways to maximize environmental benefits.

Project Overview:

NEPA requires that any project involving a federal action use a systematic, interdisciplinary approach to evaluate the action and alternative actions. This evaluation takes into consideration environmental, social, and economic issues. The key purpose of this analysis is to integrate environmental values into the decision making process. There are three levels of analysis, depending on whether an undertaking could significantly affect the environment. These three levels include categorical exclusion determination (Cat Ex); preparation of an environmental assessment/finding of no significant impact (EA/FONSI); and preparation of an environmental impact statement (EIS). Furthermore, EPA is required under Section 309 of the Clean Air Act to review and rate all EIS documents.

Working with the NEPA Team, the fellow will review NEPA projects in energy and transportation. The fellow will research issues related to energy development and transportation infrastructure planning and implementation and will learn about specific environmental issues related to a particular project or sector of projects. In addition, the fellow will provide research related to specific EISs from project proponents, such as energy development (gas, coal, nuclear, and electric transmission line proposals). The fellow may also work with the NEPA Team as it develops and implements a strategy to integrate stormwater management control measures early in the project development process.

Project Goals:

The fellow will acquire and enhance his or her knowledge of environmental science, including issues associated with land development and energy resource extraction, habitat fragmentation, wetland protection, hydrology, water quality degradation, and stormwater management. The fellow will gain valuable insight into the roles of different stakeholders in the process and the impacts of these projects on communities. Finally, the experience will enhance the fellows understanding of environmental laws, regulations, and policies.

Final Product of the Project:

The fellow will provide a research report about NEPA projects and develop a presentation for the NEPA Team. Additional related project products may include briefing documents and issue papers.

PROJECT NUMBER: 2010-107

Project Title:

Air Quality System Transaction Editor

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Outreach and Information Division, National Air Data Group

Office Mission:

The mission of the Office of Air Quality Planning and Standards (OAQPS) is to preserve and improve the air quality of the United States. OAQPS is responsible for the development and implementation of regulation to protect the nation's air quality with respect to stationary sources.

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Robert Coats

Project Overview:

This project will involve development of a tool for managing air quality monitoring data based on Microsoft Excel 2003 or Open Office. The Air Quality System (AQS) supports input and output of air quality monitoring data and metadata in a specific set of data formats; these formats include delimited transactions and XML documents. This project will involve the development of an Excel-based environment with the capabilities to both read and write each of the AQS file and transaction formats and to allow creation of new transactions (rows in a worksheet), update transactions that have been previously read or created, or delete transactions that have been previously read or created. Furthermore, to ensure data quality, the tool will allow validation of transactions against reference information extracted from AQS. To accomplish this goal, the tool will incorporate capabilities to read this reference information in data formats exported by AQS. The project will also include development of optional capabilities, time permitting, such as reading and writing AIR-Now transaction formats. Potential applicants must have college-level coursework or equivalent Microsoft Excel Visual Basic for Applications (VBA) programming experience.

Project Goals:

The fellow will gain critical insight into the issues and complexities of environmental data management through development of a product to manage the various types of data associated with ambient air quality monitoring.

Final Product of the Project:

The fellow will develop a software tool for managing air quality monitoring data.

PROJECT NUMBER: 2010-108

Desired Level of Education:
Junior to Ph.D. Student

Project Location:
EPA Region 10 - Seattle, WA

Preferred Project Period:
6/1/2010 to 2/28/2011

Project Officer:
Lisa McArthur

Project Title:

Sustainable Materials Management in the Pacific Northwest

Sponsoring Office:

Region 10, Office of Air, Waste and Toxics

Office Mission:

The mission of the Office of Air, Waste and Toxics is to be a steward of the environment to protect air quality, control toxics, and manage waste.

Project Overview:

The fellow will: (1) support the Waste Materials Management and Stewardship Team in its mission to support more use of sustainable material and waste management in the Pacific Northwest and Alaska; (2) work with the team to integrate materials management into climate change discussion, policies, and programs; (3) research and assist in the development of case studies of effective sustainability, recycling, and green building practices and how they relate to climate change; (4) participate in a Web-based educational series on effective sustainability, recycling, and green building practices and programs; and (5) meet with state, local, and Tribal partners to research how these improved environmental practices have been integrated into their businesses. To be successful at this project, the fellow selected should have strong oral and written communication skills, an understanding of sustainability, and a passion for environmental work. Specific assignments will include interviewing partners to learn about green practices, participating in field work, and conducting research, as well as working closely with a high-energy and collaborative team.

Project Goals:

The goal of this project is for the fellow to gain understanding in a new and exciting area of work - sustainable materials management and to be aware of the impact that materials management can have on our climate footprint. Upon completion of this project, the fellow will be able to translate their understanding into effective communications.

Final Product of the Project:

The final product will have a written and oral component and will demonstrate the fellow's ability to conduct effective research and find superior environmental outcomes.

PROJECT NUMBER: 2010-109

Project Title:

Assessing the Impact of Voluntary Programs on Regulatory Compliance

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Outreach and Information Division, Community and Tribal Programs Group

Office Mission:

The mission of the Office of Air Quality Planning and Standards (OAQPS) is to preserve and improve the air quality of the United States. OAQPS is responsible for development and implementation of regulations to protect the nation's air.

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Holly Wilson

Project Overview:

Voluntary programs to reduce air pollution from Area Sources located in urban environments have been implemented. The Collision Repair Campaign (CRC) is one such effort. The CRC assists auto body repair shops to attain early compliance with the Surface Coating National Emissions Standards for Hazardous Air Pollutants (NESHAP) prior to its effective date. The fellow selected for this project will research and develop methods to assess the statistical validity of the short-term and long-term impacts of the CRC by building on existing small-scale studies. It will involve balancing multiple technical, policy, and statistical considerations to generate meaningful data. This work will require both technical and creative skills to adapt a program that can be replicated in other areas.

Project Goals:

The fellow will gain insight into the relationships between the regulatory and voluntary programs, and community action. The fellow will also obtain experience in working across other EPA offices, such as the Office of Enforcement and Compliance Assistance (OECA), and with the Office of Management and Budget (OMB) to incorporate their perspectives.

Final Product of the Project:

The fellow will provide a final report discussing the development of a prototype statistical evaluation tool that can be extended to other areas.

PROJECT NUMBER: 2010-110

Desired Level of Education:
Junior to Ph.D. Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Juan Santiago

Project Title:

Greenhouse Gas Permitting for Nontraditional Emissions Sources

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Policy Division, Operating Permits Group

Office Mission:

The Office of Air Quality Planning and Standards (OAQPS) compiles and reviews air pollution data, develops regulations to limit and reduce air pollution, assists states and local agencies with monitoring and controlling air pollution, makes information about air pollution available to the public, and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

A variety of sources emit greenhouse gases, including large power plants and many smaller sources that burn fossil fuels for energy. In the event that Congress enacts legislation, or separate authority to regulate greenhouse gas emissions is used, sources of greenhouse gas emissions, some of which have not traditionally been subject to regulation, may be required to obtain air pollution permits. Under this project, the fellow will research and characterize affected sources that emit greenhouse gases and review outreach materials that provide information for state and local permit agencies and nontraditional emissions sources on obtaining pollution permits for greenhouse gas emissions.

Project Goals:

The fellow will gain critical insight into sources of greenhouse gas emissions and the U.S. air pollution permit system.

Final Product of the Project:

The fellow will develop a final report and make presentations summarizing the results of completed activities to EPA staff and management, as well as others, as appropriate.

PROJECT NUMBER: 2010-111

Desired Level of Education:
Graduate Student to Ph.D. Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Paul Almodovar

Project Title:

International Air Quality Analysis and Strategy Development

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, Climate, International and Multimedia Group

Office Mission:

The Office of Air Quality Planning and Standards (OAQPS) compiles and reviews air pollution data, develops regulations to limit and reduce air pollution, assists states and local agencies with monitoring and controlling air pollution, makes information about air pollution available to the public, and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

Air quality in the United States can be affected by air pollution transported from other countries, and global climate is influenced by emissions across the globe. Many countries depend on outside help for guidance in assessing air pollution problems and developing air quality management programs. OAQPS supports EPA's international mission in a number of areas, including participating in negotiations under the Long Range Transboundary Air Pollution (LRTAP) Convention and other multi-lateral environmental agreements; supporting air quality management capacity building in China, Mexico, and other countries; preparing air quality training materials and programs for international audiences; and conducting modeling, monitoring, and performing data analysis to address transboundary transport concerns. Guided by the selected fellows interests and background, this project will include participation in specific international projects. These projects could include: (1) analysis of international air quality issues and approaches related to capacity building work with China; (2) assessment of the health and climate impacts of fine particle emissions from residential cook stoves and other emissions sources in developing countries; (3) participation in an assessment of air quality management needs in Indonesia; (4) support for international research on mercury emissions; (5) support for research related to the Gothenburg Protocol under the LRTAP Convention; and (6) analysis of the impacts on Arctic warming from black carbon and ozone precursor emissions in the U.S. and North America. This project will include reviewing relevant reports and technical papers and participating in meetings with technical and policy staff.

Project Goals:

The fellow will gain insight into international air pollution issues and be exposed to EPA, federal government, and bilateral and multilateral international programs that address air quality and air quality and climate interactions.

Final Product of the Project:

The fellow will prepare a final report or briefing addressing international air pollution issues.

PROJECT NUMBER: 2010-112

Desired Level of Education:
Graduate Student to Ph.D. Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Doug Grano

Project Title:

Linkages between Air Quality and Climate Change

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, Climate, International and Multimedia Group

Office Mission:

The Office of Air Quality Planning and Standards compiles and reviews air pollution data, develops regulations to limit and reduce air pollution, assists states and local agencies with monitoring and controlling air pollution, makes information about air pollution available to the public, and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

As states, local agencies, and tribes move forward to develop and implement programs to improve air quality and address climate change, it is important to have a good understanding of the interactions among global climate, air quality, and regional climate. Tropospheric ozone, black carbon, and sulfates are strongly linked to both climate and air quality. Knowledge of linkages between climate and air quality will help develop effective programs to further improve air quality while also addressing impacts of these programs on climate change. The fellow selected for this project will design and implement a research project involving linkages between climate and air quality and related policy issues. Relevant policy questions that may be of interest include: (1) How might air quality management strategies be adapted in a changing climate? (2) What effects will air quality programs in the United States have on the climate? (3) What opportunities are there to devise and implement strategies that improve both climate and public health? (4) How can capacity for integrated climate and air quality assessments be improved (such as air quality, economic, health, and ecological), especially in light of differences in temporal and geographic scales between greenhouse gases and traditional air pollution? (5) What are the health and climate impacts of fine particle emissions from residential cook stoves and other emissions sources in developing countries? (6) What are the impacts on Arctic warming from black carbon and ozone precursor emissions in the U.S.?

The fellow will meet with experts across EPA (including in the Office of Air and Radiation and the Office of Research and Development), government, and experts in academia to gather relevant peer-reviewed data and literature and to conduct policy-relevant analysis.

Project Goals:

The fellow will gain critical insight into U.S. air pollution issues, linkages between climate and air quality (for example, science, economics, and policy), and potential policy implications.

Final Product of the Project:

The fellow will write and present a paper describing the research into the linkages between climate and air quality.

PROJECT NUMBER: 2010-113

Desired Level of Education:
Graduate Student to Ph.D. Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Kimber Scavo

Project Title:

Nonattainment Area Boundaries for NO_2 Standards

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Policy Division, State and Local Programs Group

Office Mission:

The Office of Air Quality Planning and Standards (OAQPS) compiles and reviews air pollution data, develops regulations to limit and reduce air pollution, assists states and local agencies with monitoring and controlling air pollution, makes information about air pollution available to the public, and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

A proposal to revise the national ambient air quality standards (NAAQS) for nitrogen dioxide (NO_2) has recently been issued by EPA. If the NAAQS is revised, then areas of the United States that do not attain the revised NAAQS must be identified. The boundaries of these nonattainment areas must encompass the area that is violating the NAAQS and nearby areas that are contributing to the violation. States will then work toward limiting emissions from sources of pollution in these areas to attain the standards. Under this project, the fellow will research available information on sources of NO_2 pollution and NO_2 air pollution characteristics and work with OAQPS as they develop principles that establish nonattainment area boundaries. The research will include indentifying NO_2 source and dispersion characteristics and the implementation of air quality standards.

Project Goals:

The fellow will gain critical insight into NO_2 air pollution issues, including source and dispersion characteristics, and the U.S. system for managing air quality. The fellow will also gain insight into the implementation of air quality standards.

Final Product of the Project:

The fellow will be expected to develop a final report and to make presentations that summarize the results of activities completed to EPA staff and management, as well as others, as appropriate.

PROJECT NUMBER: 2010-114

Desired Level of Education:
Freshman to Senior

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Rhea Jones

Project Title:

Outreach for Air Quality Area Designations

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Policy Division, Geographic Strategies Group

Office Mission:

The Office of Air Quality Planning and Standards (OAQPS) compiles and reviews air pollution data, develops regulations to limit and reduce air pollution, assists states and local agencies with monitoring and controlling air pollution, makes information about air pollution available to the public, and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

The national ambient air quality standards (NAAQS) for criteria pollutants are reviewed every 5 years. If a NAAQS is revised, areas of the United States that violate the revised NAAQS must be identified via a process called air quality designations. The NAAQS for several pollutants - including ozone, lead, nitrogen dioxide, and sulfur dioxide - have recently been revised. Under this project, the fellow will conduct research on U.S. air pollutants and pollution issues, as well as the activities undertaken by EPA and state and local air pollution agencies to manage air quality to achieve national standards. The fellow will also work with OAQPS staff as they plan and produce outreach and communications materials on air quality designations for state and local air pollution.

Project Goals:

The fellow will gain critical insight into U.S. air pollution issues and activities undertaken by EPA and state and local air pollution agencies to manage air quality to achieve national standards.

Final Product of the Project:

The fellow will be expected to develop a final report and to make presentations that summarize activities completed to EPA staff and management, as well as others, as appropriate.

PROJECT NUMBER: 2010-115

Desired Level of Education:
Freshman to Ph.D. Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Rhea Jones

Project Title:

Reducing Light Pollution

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Policy Division, Geographic Strategies Group

Office Mission:

The Office of Air Quality Planning and Standards (OAQPS) compiles and reviews air pollution data, develops regulations to limit and reduce air pollution, assists states and local agencies with monitoring and controlling air pollution, makes information about air pollution available to the public, and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

EPA is responsible for protecting long-range visibility that may be affected by air pollutants. Air pollutants have the ability to both scatter and absorb light. They thus affect the ability of humans to clearly see distant objects, including scenic vistas and national monuments. However, night-sky visibility is affected less by traditional air pollutants, and more by artificial lighting around streets and buildings. Under this project, the fellow will research strategies for reducing light pollution that affects night-sky visibility that simultaneously conserve energy and reduce emissions of traditional air pollutants. The fellow will also research the effect of air pollutants and artificial lighting on night-sky visibility.

Project Goals:

The fellow will learn about the effect of air pollutants and artificial lighting on night-sky visibility and how to implement green strategies for reducing light pollution.

Final Product of the Project:

The fellow will be expected to develop a final report and to make presentations that summarize the results of activities completed to EPA staff and management, as well as others, as appropriate.

PROJECT NUMBER: 2010-116

Project Title:

Registering Emissions Sources for Air Pollution Permitting on Tribal Lands

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Policy Division, New Source Review Group

Office Mission:

The Office of Air Quality Planning and Standards (OAQPS) compiles and reviews air pollution data, develops regulations to limit and reduce air pollution, assists states and local agencies with monitoring and controlling air pollution, makes information about air pollution available to the public, and reports to Congress on the status of air pollution and the progress made in reducing it.

Desired Level of Education:
Freshman to Senior

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Raj Rao

Project Overview:

EPA is developing rules that govern permitting of air pollution sources located on sovereign Tribal lands. One of the challenges in establishing and carrying out permitting rules on Tribal lands is identifying the sources of emissions that potentially would require air pollution permits. Under this project, the fellow will research air pollution issues on Tribal lands, and how the United States air pollution permit system applies to sovereign Tribal nations. The fellow will work with staff of OAQPS as they characterize affected sources and produce outreach materials for these sources on obtaining pollution permits.

Project Goals:

The fellow will gain critical insight into air pollution issues on Tribal lands, and how the United States air pollution permit system applies to sovereign Tribal nations.

Final Product of the Project:

The fellow will be expected to develop a final report and to make presentations that summarize the results of activities completed to EPA staff and management, as well as others, as appropriate.

PROJECT NUMBER: 2010-117

Desired Level of Education:
Junior to Ph.D. Student

Project Location:
EPA Region 2 - New York, NY

Preferred Project Period:
5/24/2010 to 8/27/2010

Project Officer:
Reema Loutan

Project Title:

Voluntary Clean Diesel Fellow Program

Sponsoring Office:

Region 2, Division of Environmental Planning and Protection, Air Programs Branch

Office Mission:

The mission of the Air Programs Branch is to work with EPA's Office of Air and Radiation and the Region 2 states to protect and enhance the quality of the region's air resources and protect human health and the environment from airborne pollutants. This mission is carried out by implementing the Clean Air Act, as amended in 1990.

Project Overview:

Under this project, the fellow will have the opportunity to research: (1) the types and magnitude of air pollution resulting from mobile sources; (2) the various mobile source sectors (light-duty and heavy-duty on-road vehicles, construction equipment, airport ground support equipment and marine vessels, locomotives, and other sources); and (3) the technologies and policies that are being implemented to reduce air pollution from mobile sources. Activities will focus on EPA's voluntary programs and also on the reduction of mobile source air pollution through federal, state, and local regulatory measures. The fellow will review existing data sources managed by EPA, the states, and other public and private entities. The fellow will develop mediation skills and an understanding of the potential benefits associated with dynamic interaction with a variety of stakeholders at various levels of government, environmental organizations, and private entities.

Specific learning opportunities may include, but are not limited to: (1) participation in EPA's voluntary mobile source reduction programs under EPA's National Clean Diesel Campaign programs (Clean Construction, Clean School Bus, Clean Ports, and SmartWaySM Transport Partnership), EPA's voluntary diesel retrofit program, and the Northeast Diesel Collaborative; (2) familiarization with existing databases and files managed by EPA and the states, with the goal of identifying air emission reductions from various mobile source categories; (3) education on new or innovative control technologies being implemented on mobile sources elsewhere to evaluate the potential applicability to other mobile emission source types; (4) acquiring skills necessary for identifying and quantifying mobile source emission reductions; (5) active participation in the Northeast Diesel Collaborative's mobile source sector workgroups; and (6) interaction on a regular basis with staff and interns in other EPA regional offices on implementation of diesel collaboratives around the country.

Project Goals:

The fellow will receive practical training and experience through the investigation and identification of innovative air emission reduction opportunities from various mobile source sectors. The fellow will learn how EPA fosters partnerships to achieve measurable air quality benefits through activities such as application of clean diesel technologies to existing vehicles and engines.

Final Product of the Project:

The student will design a pilot project to address the impacts of port growth and increase of freight movement on communities adjacent to ports.

PROJECT NUMBER: 2010-118

Desired Level of Education:
Graduate Student to Ph.D. Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Linda Chappell

Project Title:

Researching Innovative Climate and Air Quality Benefit and Cost Methods

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, Air Benefits and Cost Group

Office Mission:

EPA's Office of Air Quality Planning and Standards (OAQPS) develops regulatory and voluntary strategies for improving air quality. The Air Benefits and Cost Group supports this mission by estimating the economic benefits and costs of achieving air quality standards, including consideration of impacts of climate change on air quality.

Project Overview:

Under this project, the fellow will explore innovative methods of incorporating climate change impacts and policies into cost-benefit analysis of air regulations. Such research could focus on: (1) methods of addressing alternative baseline scenarios to incorporate climate impacts or policies; (2) methods to estimate the benefits of climate and air quality impacts that have previously not been quantified or valued; (3) cost impacts for new regulatory or technology choices to reduce emissions of greenhouse gases; and (4) new economic impact methods for incorporating the effects of climate change or impacts of climate policies on affected industries and the national economy.

Project Goals:

The fellow can expect to increase his or her knowledge of environmental health science, microeconomics, climate and air quality modeling, and policy analysis. Research completed under this fellowship could inform a master's thesis or Ph.D. dissertation. After the project is complete, the fellow will have accomplished one of the following: (1) identified a new method to address alternative baseline scenarios to incorporate climate impacts or policies; (2) identified a new method to estimate a specific climate and air quality benefit endpoint that has previously not been quantified or valued; (3) identified a method to address cost impacts for new regulatory or technology choices to reduce emissions of greenhouse gases; or (4) identified new economic impact methods for incorporating the effects of climate change or impacts of climate policies on affected industries and the national economy.

Final Product of the Project:

The fellow will develop a final report and presentation that summarizes his or her findings.

PROJECT NUMBER: 2010-201

Desired Level of Education:
Freshman to Senior

Project Location:
EPA Headquarters - Washington, DC

Preferred Project Period:
6/14/2010 to 12/3/2010

Project Officer:
Erin Collard

Project Title:

Urban Waters Initiative

Sponsoring Office:

Office of Water, Office of Wetlands Oceans & Watersheds

Office Mission:

Office of Wetlands Oceans & Watersheds (OWOW) is one of five offices in the Office of Water within EPA's Washington Headquarters offices. The office provides leadership, policy direction, and financial support to the 10 regional offices and to states, Tribes, and territories that implement EPA's programs. OWOW works collaboratively with a vast array of partners to protect and restore the aquatic ecosystems of marine and fresh waters.

Project Overview:

The Urban Waters Initiative (UWI) will reconnect and revitalize urban water bodies by engaging communities in activities that foster increased understanding and ownership of these waters and promote a holistic watershed approach to address water quality concerns within these urban communities. Through this initiative, EPA will engage urban communities to address key issues such as safe public access, water quality, water use, and urban community priorities by building on existing Agency programs and infrastructure. This new initiative is dynamic and evolving. The fellow will work with the divisions within OWOW to research and assess Agency programs that have applicability for the new UWI. The fellow will work with OWOW staff as they develop a platform to track and measure OWOW program and policy contributions to the UWI and participate with the UWI team in strategic planning meetings and other program development-related exercises. The fellow will also be a part of the Web 2.0 Urban Waters Connect team and research current OWOW tools and training as they related to the new UWI.

Project Goals:

The fellow will: (1) acquire and enhance his or her knowledge of collaborative techniques for civic governance and applicable programs within the Office of Water; (2) gain valuable insight into the role of stakeholders in the process of implementing a new Agency initiative that centers on urban water issues, environmental justice, and disadvantaged communities; (3) acquire and enhance his or her knowledge on the merits and weaknesses of various methods of program evaluation and linking performance to strategic goals and measures; and (4) gain knowledge of environmental programs and policies.

Final Product of the Project:

The fellow will develop a reporting mechanism that integrates the various Agency programs into the UWI. Additionally, the fellow will develop a compendium of tools designed and implemented by the Web 2.0 Urban Waters Connect team.

PROJECT NUMBER: 2010-202

Project Title:

Risk Management Program Facility Data Analysis

Sponsoring Office:

Region 10

Office Mission:

The primary mission of the Emergency Response Unit is to prevent, prepare for, and respond to emergency incidents that could affect human health and the environment.

Desired Level of Education:
Freshman to Graduate Student

Project Location:
EPA Region 10 - Seattle, WA

Preferred Project Period:
6/7/2010 to 8/27/2010

Project Officer:
Sally Hanft

Project Overview:

The Clean Air Act Risk Management Program was created to prevent and prepare for releases of toxic and flammable substances that have the potential for catastrophic consequences. The Risk Management Program requires facilities that produce, handle, process, distribute, or store greater than a threshold quantity of any listed toxic or flammable extremely hazardous substance to develop a risk management program, prepare a Risk Management Plan (RMP), and submit the RMP to EPA. The Risk Management Program is used to monitor and inspect the compliance of facilities with an RMP. The fellow will perform research and assist in the analysis of the prioritization methodology for facilities with accidental releases. The project may also involve data analysis of the RMP Access Database with the National Database on identifying trends in facility compliance. The fellow will have the opportunity to interact with other federal, state, and local government agencies and will be exposed to the broader mission of the Emergency Response Unit.

Project Goals:

The fellow will gain knowledge of EPA's RMP, Emergency Planning and Community Right-to-Know Act, and other emergency response programs concerning the prevention of chemical releases that could affect the environment and the public. The fellow will enhance his or her skills in writing, communication, data analysis, and presentations and will participate in briefings, meetings and field work. The fellow will understand the challenges posed to EPA and the regulated community as they relate to enforcing and complying with the Risk Management Program and prioritizing methods for compliance.

Final Product of the Project:

The fellow will develop a report and present his or her findings on the prioritization methodology of facilities and trends in facility compliance.

PROJECT NUMBER: 2010-203

Desired Level of Education:
Graduate Student to Ph.D. Student

Project Location:
EPA Region 3 - Philadelphia, PA

Preferred Project Period:
6/1/2010 to 8/31/2010

Project Officer:
Michael D'Andrea

Project Title:

Environmental Planning and Management Using Real-Time Data

Sponsoring Office:

Region 3, Office of Policy and Management

Office Mission:

The Office of Policy and Management assists the regional administrator in managing the regional office. It is responsible for human resources; equal employment opportunity; special emphasis programs, which include the diversity program; administrative and financial management; strategic planning; policy and regulatory development; contracting and procurement; information systems; facilities; telecommunications; and grants and audit management.

Project Overview:

With ever-increasing technological advances, opportunities for real-time environmental measurement are possible that could greatly accelerate the effectiveness of decision processes. One such technology, embedded sensor networks, could dramatically increase the amount of accurate, timely data available for environmental planning and analysis. Regional academic institutions, industry, and think tanks are among the organizations pioneering these efforts. EPA is in a unique position to partner with these organizations to revolutionize EPA's environmental management capabilities. The fellow will work with the Region 3 Planning and Analysis Branch to research real-time environmental measurement technologies, including embedded sensor networks, and how they relate to environmental planning and analysis. The fellow will research financial, logistical, and organizational challenges for implementation of real-time technologies. The fellow will also research regional data infrastructure and the nexus with current accountability systems, including EPA's Annual Commitment System.

Project Goals:

At the completion of this project, the fellow will have knowledge of real-time environmental measurement technologies, including embedded sensor networks, and understand how they relate to environmental planning and analysis. The fellow will learn about environmental management and potential technologies that accelerate decision-making processes. The fellow also will learn how to establish partnerships and implement improvements in an interagency environment.

Final Product of the Project:

The fellow will provide a report on environmental management capabilities and deliver a presentation to senior regional leadership.

PROJECT NUMBER: 2010-204

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Benjamin Collins

Project Title:

The Development, Testing, and Querying of Databases

Sponsoring Office:

Office of Administration and Resources Management-RTP

Office Mission:

The Office of Administration and Resources Management-RTP (OARM-RTP), under the supervision of a director, provides services to all of the programs and activities at RTP. The Director, OARM-RTP, supervises the Divisions of Facility Management Support, Information Resources Management, and Human Resources Management. The director also serves as the contact for the OCFO/FMD/RTP Financial Management Center, OEI/National Computer Center, and OAM/RTP Procurement Operations Division relative to building management issues for RTP. In addition, the OARM-RTP Office Director is responsible for budgeting and strategic planning for all organizational components of the office.

Project Overview:

Environmental management involves management of the interaction between people and their impact on the environment. The three main issues that affect managers are those that involve politics (networking and relationships), programs (projects and information technology [IT]), and resources (money, facilities, and software). As with all management functions, effective management tools, standards, and systems are required. Information resources management encompasses information technology and integrated management in its protocol to reduce environmental impact. This methodology explores a wider approach and stresses the importance of interdisciplinary assessment.

The process of developing software and guidance is technically complex as the functionality expands the broad scope of various facets. Under this project, the fellow will participate in the testing phase of custom database development. The fellow's research could focus on the overall understanding of management of the interaction between people and their impact on the environment, or on software, testing functionality, analysis of data, and technical writing. These processes are useful in developing software and guidance documents and in adhering to environmental management protocol.

Project Goals:

The fellow working on this project can expect to increase his or her knowledge of the software development lifecycle, software functionality, beta testing, quality assurance review, usability testing, technical writing, and management of the interaction between people and their impact on the environment. Research completed under this fellowship could inform a master's thesis or PhD dissertation.

Final Product of the Project:

The fellow will develop a final report summarizing his or her findings.

PROJECT NUMBER: 2010-205

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Benjamin Collins

Project Title:

Resources Database Development and Data Analysis

Sponsoring Office:

Office of Administration and Resources Management-RTP

Office Mission:

The Office of Administration and Resources Management-RTP (OARM-RTP), under the supervision of a director, provides services to all of the programs and activities at RTP. The Director, OARM-RTP, supervises the Divisions of Facility Management Support, Information Resources Management, and Human Resources Management. The director also serves as the contact for the OCFO/FMD/RTP Financial Management Center, OEI/National Computer Center, and OAM/RTP Procurement Operations Division relative to building management issues for RTP. In addition, the OARM-RTP Office Director is responsible for budgeting and strategic planning for all organizational components of the office.

Project Overview:

The need for environmental management can be viewed from a variety of perspectives. EPA has incorporated IT technology to secure a highly qualified workforce of scientists and administrative staff to manage the interaction of personnel and environmental impact. It is important to have a good understanding of the interactions among the local community, university, public and private sector workforce, and the current organizational workforce in pursuit of the Agency's mission of environmental quality, meaning the conservation of the environment for the environment's sake, as well as the conservation of the environment for humankind's sake.

Under this project, the fellow will study the linkages among community, qualified personnel, and the environment, as well as the balance between economic growth and environmental quality so as to maximize the welfare of the community. To facilitate this process, the fellow will develop a resources (track personnel status activity) database. The software functionality will expand the broad scope of various facets of human resources services. The fellow will design and implement a conceptual framework research project to identify the specific data to track to include requirements via standards and regulations.

The fellow will meet with experts to gather relevant data. The fellow's research could focus on the overall understanding of the human resources shared service center work, an overview of software development, testing software functionality, data development, and analysis of the data. These processes are imperative in the overall understanding of personnel services and the development of a tool to identify and track personnel work status.

Project Goals:

The fellow working on this project can expect to increase his or her knowledge of the linkages among community, qualified personnel, and the environment, as well as the balance between economic growth and environmental quality so as to maximize the welfare of the community. In addition, the fellow will increase his or her knowledge of the software development lifecycle; software functionality; quality assurance review; communication with various levels of office personnel; data identification; and data management. Research completed under this fellowship could inform a master's thesis, PhD dissertation, or other educational requirement.

Final Product of the Project:

The fellow will develop a final report summarizing his or her findings.

PROJECT NUMBER: 2010-206

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Benjamin Collins

Project Title:

Development of Databases for Environmental Impact as it Relates to Energy Consumption

Sponsoring Office:

Office of Administration and Resources Management-RTP

Office Mission:

The Office of Administration and Resources Management-RTP (OARM-RTP), under the supervision of a director, provides services to all of the programs and activities at RTP. The Director, OARM-RTP, supervises the Divisions of Facility Management Support, Information Resources Management, and Human Resources Management. The director also serves as the contact for the OCFO/FMD/RTP Financial Management Center, OEI/National Computer Center, and OAM/RTP Procurement Operations Division relative to building management issues for RTP. In addition, the OARM-RTP Office Director is responsible for budgeting and strategic planning for all organizational components of the office.

Project Overview:

Environmental management involves management of the interaction between people, their work and activities, and the impact on the environment. The three main issues that affect managers are those that involve politics (networking and relationships), programs (projects, information technology [IT], environmental management systems [EMS]), and resources (money, facilities, and software).

As with all management functions, effective management tools, standards and systems are required. Moving in the direction of a reducing our environmental footprint leads EPA to approach identifying energy conservation from an "awareness to promote participation" perspective. Under this project, the fellow will collect relevant data that will provide the necessary output to substantially reflect the goal. The process of developing energy conservation practices as well as a database is technically complex. The data collection and software functionality expand the broad scope of various facets. The fellow will design and implement a conceptual framework research project to identify the specific data to track to include those that are required via EMS standards and regulations. The fellow will meet with experts to gather relevant data. The fellow's research could focus on the overall understanding of the interaction between people, their work and activities, and their impact on the environment, the EMS road map, energy data collection and analysis, software functionality, and the development of energy conservation practices. These processes are useful in the development of a tool to identify and display energy consumption, increase awareness of their role in energy conservation, and promote energy conservation practices at work and home.

Project Goals:

The fellow working on this project can expect to increase his or her knowledge of the software development lifecycle, software functionality, quality assurance review, purpose of energy consumption performance metrics; communication with various levels of office personnel; development of energy consumption performance metrics; energy consumption performance metric underlying data identification; and energy consumption performance metric data management. Research completed under this fellowship could inform a master's thesis or other educational requirement.

Final Product of the Project:

The fellow will develop a final report summarizing his or her findings.

PROJECT NUMBER: 2010-207

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Benjamin Collins

Project Title:

Development and Querying of AutoCAD/Energy Databases

Sponsoring Office:

Office of Administration and Resources Management-RTP

Office Mission:

The Office of Administration and Resources Management-RTP (OARM-RTP), under the supervision of a director, provides services to all of the programs and activities at RTP. The Director, OARM-RTP, supervises the Divisions of Facility Management Support, Information Resources Management, and Human Resources Management. The director also serves as the contact for the OCFO/FMD/RTP Financial Management Center, OEI/National Computer Center, and OAM/RTP Procurement Operations Division relative to building management issues for RTP. In addition, the OARM-RTP Office Director is responsible for budgeting and strategic planning for all organizational components of the office.

Project Overview:

Facility management and support are composed of, but not limited to, general administrative services, building operations, maintenance, engineering, utility operations, energy conservation, and environmental management systems. EPA provides management of solar-powered roofs, solar-powered street lights, laboratory space, office space, electrical equipment, generators, and countless other facility-related operations. The need for automated processes is becoming more prevalent to ensure efficiency in this management and support function.

The process of developing and querying of AutoCAD databases is widely used in the engineering arena and it is technically complex as the software functionality expands the broad scope of various facets. Under this project, the fellow will work with EPA staff to: (1) review and identify electrical equipment via electrical as-built-drawings; (2) conduct research in the development of a sub-metering project; and (3) update and maintain data via an AutoCAD database. Additional work will require the fellow to research energy conservation reports in the National Energy database. The fellow's research could focus on the overall understanding of software development; data manipulation; data analysis; facility data management; and AutoCAD functionality.

Project Goals:

The fellow working on this project can expect to increase his or her knowledge of the software development lifecycle, software functionality, quality assurance review, AutoCAD drawings; purpose of AutoCAD layering function; facility data identification; facility data management; and energy conservation. Research completed under this fellowship could inform a master's thesis or other educational requirement.

Final Product of the Project:

The fellow will develop a final report summarizing his or her findings.

PROJECT NUMBER: 2010-208

Desired Level of Education:
Freshman to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Shawna Green Whitehurst

Project Title:

Correspondence Automation and Tracking Computer Software

Sponsoring Office:

Office of Environmental Information–RTP, Office of Technology Operations & Planning, National Computer Center

Office Mission:

The Office of Technology Operations and Planning (OTOP) is part of EPA's Office of Environmental Information (OEI). OTOP manages EPA's information technology (IT) infrastructure, supporting the Agency's information systems and information products. OTOP also develops and implements IT policies, plans, and strategies for information security, investment management, and workforce training and development.

Project Overview:

Environmental management involves management of the interaction between people and their impact on the environment. The three main issues that affect managers are those that involve politics (networking), programs (projects) and resources (money and facilities).

As with all management functions, effective management tools, standards, and systems are required. Workflow systems are designed to automate, standardize, and streamline necessary business processes. The sponsoring office plans to increase organizational productivity by integrating comprehensive standard operating procedures with automated workflow capabilities. Under this project, the fellow will participate in the development of a small to medium custom database application using complete software development lifecycle process. Work accomplished will comply with established standard operating procedures and adhere to Agency business practices. Research efforts could focus on the overall understanding of the interconnected and network of relationships of this environment, available software tools and technologies, and application testing and analysis to certify functionality. Additional work could include technical writing.

Project Goals:

The fellow working on this project can expect to increase his or her knowledge of the software development lifecycle, software functionality, beta testing, quality assurance review, usability testing and technical writing. Research completed under this fellowship could inform a master's thesis or other education requirement.

Final Product of the Project:

The fellow will develop a final report summarizing his or her findings.

PROJECT NUMBER: 2010-209

Desired Level of Education:
Graduate Student

Project Location:
EPA Region 2 - Stamford, CT

Preferred Project Period:
5/10/2010 to 12/17/2010

Project Officer:
Mark Tedesco

Project Title:

Assessment of Habitat Restoration Need in Long Island Sound National Estuary Program Area

Sponsoring Office:

Region 2, Long Island Sound Office

Office Mission:

The mission of the Long Island Sound office is to coordinate implementation of the Long Island Sound Comprehensive Conservation and Management Plan developed under the National Estuary Program.

Project Overview:

Long Island Sound (LIS) is an estuary of national significance and part of the National Estuary Program (NEP). In 2006, the Long Island Sound Study Policy Committee set targets for restoration of habitat as follows: (1) protect or restore 300 acres of coastal habitat; and (2) open 50 miles of riverine migratory corridors for fish passage between 2006 and 2011. Federal, state, and local partners are working toward reaching these targets; however, the actual magnitude, in acres or miles, of degraded wetlands and river migratory corridors has not been evaluated or documented. Although the LIS NEP has been successful in restoring lengths of river for fish passage and in restoring tidal wetlands and other coastal habitats, it is not yet known how the amounts restored to date compare with the total amounts that can be restored. Also unknown is the extent to which tidal wetlands will be able to migrate inland under conditions of sea level rise attributable to climate change.

Under this project, the fellow will populate a geographic information system (GIS) database with completed river migratory corridors projects and other river features to develop a clear picture of the total river miles that are open to fish passage and the remaining miles that are blocked. The restoration mileage to date will be assessed in light of past and future targets and the total number of river miles that require and are available for restoration will be calculated. The fellow will also review a catalog of potentially degraded tidal wetlands using aerial photography and GIS. The method of this review will include: (1) the identification and calculation of acreage degraded by Phragmites australis, an invasive species, and other degradation agents; (2) assessment of which of these sites may have tidal flow restraints that are contributing to Phragmites infestation; (3) calculation and comparison of the total acreage of tidal wetlands with the acreage degraded; and (4) identification of wetlands where adjoining upland sites could provide areas for wetland migration under sea level rise conditions.

Project Goals:

The fellow will gain experience working with professionals dedicated to habitat protection in New York and Connecticut. The fellow will also gain experience using remote sensing, such as aerial photograph analysis to evaluate landscape conditions; using GIS to organize, display, and evaluate environmental data; working closely with career professionals in natural resource restoration; communicating with diverse project partners; and understanding the challenges in natural resources protection and restoration on a landscape scale. There may be limited opportunities for field work assisting biologists with fish passage projects, tidal wetland monitoring, or other outdoor activities.

Final Product of the Project:

Under supervision, the fellow will complete and develop GIS data layers and related metadata, perform calculations of river miles and acreages, and present the results using mapping tools and a written narrative. The fellow may be requested to present results orally to interested parties.

PROJECT NUMBER: 2010-301

Project Title:

Management of an Enterprise Spatial Database to Support Environmental Decision Making

Sponsoring Office:

Region 2, Policy, Planning, and Evaluation Branch

Office Mission:

The Policy, Planning, and Evaluation Branch is responsible for developing the analytical and policy formation capabilities of Region 2 by initiating special studies, reports, and investigations. One focus area of the branch is coordination of the region's geographic information system (GIS) capability, including acquiring GIS data and maintaining them in an enterprise geodatabase to help improve environmental decision-making.

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Region 2 - New York, NY

Preferred Project Period:
6/1/2010 to 8/31/2010

Project Officer:
Grace Smith and Linda Timander

Project Overview:

Environmental programs involve complex cross-media analysis; GIS and spatial analysis are critical tools for effective environmental decision making. Data to support GIS analysis for environmental protection come from a wide variety of sources, including federal, state, local, academic, and commercial. The search, acquisition, documentation, and maintenance of critical data in an enterprise database to support EPA Region 2's mission is a challenging process. The region's enterprise database currently holds several hundred unique data layers, but data gaps remain, and new data to support programmatic uses such as wetlands protection, environmental compliance, environmental impact analysis, and climate change assessment are becoming available on a regular basis. The fellow will research environmental data in the Region 2 enterprise database, work with staff of Region 2 as they search for important spatial databases that are not currently in the enterprise database, and conduct reviews and analysis of data in the database.

Project Goals:

The fellow will acquire and enhance knowledge of methods to discover, document, and process a wide variety of spatial data to support environmental decisions. The fellow will also develop and enhance expertise in use of relational databases and desktop GIS software.

Final Product of the Project:

When this project is complete, the fellow will provide a final report or presentation on the techniques and methods used to evaluate spatial data needs, acquire needed data, and integrate data into an enterprise database.

PROJECT NUMBER: 2010-302

Desired Level of Education:
Freshman to Ph.D. Student

Project Location:
EPA Headquarters - Arlington, VA

Preferred Project Period:
6/7/2010 to 8/27/2010

Project Officer:
Cheryl Johnson and Linda Fiedler

Project Title:

Use of Innovative Treatment Technologies to Address Dense Nonaqueous Phase Liquids at Superfund Sites

Sponsoring Office:

Office of Superfund Remediation and Technology Innovation, Technology Innovation Program

Office Mission:

The Technology Innovation Program advocates development and application of new treatment and characterization technologies by government and industry to contaminated waste sites.

Project Overview:

Dense Nonaqueous Phase Liquids (DNAPL), particularly those that contain chlorinated hydrocarbons, continue to be a challenge to remediate at contaminated sites. Numerous cleanup approaches have been demonstrated, such as in situ thermal, chemical, and biological methods. Recently, these technologies have been refined and have been used successfully at some sites, including Superfund sites. For this project, the fellow will perform research on available innovative approaches for treating DNAPL contamination at sites. The fellow will review current treatment methods and case studies of Superfund sites where the methods have been applied. Sources of information will include published literature and Web sites, as well as practitioners, such as remedial project managers, technology vendors, and consulting engineers.

Project Goals:

When this project is complete, the fellow will have learned valuable information on the state-of-the-practice for remediating DNAPLs. The fellow will become proficient in scientific and engineering principles associated with contaminated site cleanup, as well as the general challenges and process of cleaning up contaminated sites.

Final Product of the Project:

The fellow will prepare a paper on available innovative approaches for treating DNAPL contamination at sites. The paper will include a summary of current treatment methods and detailed case studies of Superfund sites where the methods have been applied. The paper can be used to support academic requirements for a master's degree or doctoral thesis. In addition, the fellow will prepare a presentation for office staff on the findings of the report.

PROJECT NUMBER: 2010-303

Project Title:

Green Remediation

Sponsoring Office:

Office of Superfund Remediation and Technology Innovation, Technology Innovation Program

Office Mission:

The Technology Innovation Program advocates development and application of new treatment and characterization technologies by government and industry to contaminated waste sites.

Desired Level of Education:
Junior to Ph.D. Student

Project Location:
EPA Headquarters - Arlington, VA

Preferred Project Period:
6/7/2010 to 8/27/2010

Project Officer:
Cheryl Johnson

Project Overview:

EPA's Office of Superfund Remediation and Technology Innovation has made significant progress in identifying options to reduce the environmental footprint of the work required to cleanup contaminated sites. Through the spring of 2010, numerous cleanup projects will have been completed where green remediation best practices have been implemented. The fellow will assist in the quantitative evaluation of the returns on investments made at these projects, which may include engineering or econometric analysis. For further technical and policy information on green remediation, applicants can visit the Green Remediation Focus Area on EPA's CLU-In Web site (http://cluin.org/greenremediation).

Project Goals:

The goal of this project is to identify and write case studies on green remediation technologies as they relate to best practices that have been implemented. The fellow will obtain experience in advanced green remediation technology practices.

Final Product of the Project:

The fellow will prepare a paper on green remediation technologies and will prepare a presentation for office staff on the findings of the report.

PROJECT NUMBER: 2010-304

Desired Level of Education:
Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Deborah Wales

Project Title:

Evaluation of Ozone Exposure Indices in Relationships with Ecological and Health Effects

Sponsoring Office:

Office of Research and Development, National Center for Environmental Assessment, Research Triangle Park

Office Mission:

National Center for Environmental Assessment (NCEA) provides guidance and risk assessments aimed at protecting human health and the environment. This guidance presents critical analyses and summaries of scientific consensus, vetted through a rigorous peer review process, on the risks of pollutants to human health and the natural environment.

Project Overview:

NCEA/Research Triangle Park (RTP) and other NCEA units have the main responsibility for scientific assessment within the Office of Research and Development (ORD) and EPA in general. These assessments are broad and typically have significant implications for national and international environmental policy development and implementation. NCEA/RTP risk assessment includes preparation of Integrated Science Assessments (ISAs) (previously known as Air Quality Criteria Documents) for particulate matter, ozone, sulfur oxides, nitrogen oxides, carbon monoxide, and lead, as well as other types of assessments of available scientific information (such as Integrated Risk Information System files). The ISAs provide evaluations of health and welfare effects data that are used by EPA's Office of Air and Radiation to develop risk, exposure, and policy assessments and form the scientific basis for the National Ambient Air Quality Standards (NAAQS), as required by the Clean Air Act. The NAAQS have exceedingly high impact in protecting public health and the environment; thus, the scientific soundness of the health and welfare assessment is of crucial importance. Besides serving as the key scientific foundation for U.S. regulations, the ISAs are also used world-wide by other governments and the World Health Organization (WHO) for deriving international guidelines and other aspects of air pollution control strategies and systems for these pollutants. Thus, NCEA/RTP assessments have broad implications, not only nationally for the U.S., but also internationally. A review of the NAAQS for ozone is now under way, and EPA anticipates release of the first draft ISA for ozone in the fall of 2010 for review by the Clean Air Scientific Advisory Committee and the public. The current health-based NAAQS for ozone is set at 0.075 parts per million for an 8-hour average (maximum 8-hour average per day). Health studies have used various indices, including 1-hour daily maximum values or concentrations averaged over a period of days. For ecological effects, cumulative ozone exposures have been more strongly associated with effects than daily exposures; the various exposure windows that have been used generally reflect seasonal average exposures. The fellow working on this project will assist in a number of analyses to evaluate alternative exposure time periods relevant for health and ecological effects of ozone. In addition, the fellow will help in the evaluation of exposure indicators in relationships between ozone and health or ecological effects.

Project Goals:

The fellow can expect to increase his or her knowledge of environmental sciences broadly, particularly in the area of air quality data evaluation, working in multidisciplinary teams including ecologists, epidemiologists, toxicologists, and atmospheric scientists. The fellow will gain an understanding of how scientific information is used to inform risk and exposure assessments and policy decisions.

Final Product of the Project:

The fellow will prepare and present mid-project and final project presentations.

PROJECT NUMBER: 2010-305

Project Title:

Development of a Risk Assessment Training Program

Sponsoring Office:

Office of Research and Development, National Center for Environmental Assessment, Research Triangle Park

Office Mission:

National Center for Environmental Assessment (NCEA) provides guidance and risk assessments aimed at protecting human health and the environment. This guidance presents critical analyses and summaries of scientific consensus, vetted through a rigorous peer review process, on the risks of pollutants to human health and the natural environment.

Desired Level of Education:
Junior to Senior

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Deborah Wales

Project Overview:

NCEA/Research Triangle Park (RTP) and other NCEA units have the main responsibility for scientific assessment within Office of Research and Development (ORD) and EPA in general. These assessments are broad and typically have significant implications for national and international environmental policy development and implementation. NCEA/RTP risk assessments include preparation of Integrated Science Assessments (ISAs) (previously known as Air Quality Criteria Documents) for particulate matter, ozone, sulfur oxides, nitrogen oxides, carbon monoxide, and lead, as well as IRIS (Integrated Risk Information System) assessments of available scientific information for pollutants listed primarily under the Clean Air Act. Additionally, NCEA/RTP provides support in developing and evaluating many of the Agency's risk assessment methodologies and guidance documents. Besides serving as the key scientific foundation for U.S. regulations, ISAs, IRIS assessments, and agency risk assessment methodologies and approaches are also used world-wide by other governments and the World Health Organization (WHO) for deriving international guidelines and other aspects of air pollution control strategies/systems for these pollutants. Thus, NCEA/RTP assessments have very broad implications, not only nationally for the U.S., but also internationally. Another major activity of NCEA/RTP is development of a risk assessment training program in the area of human health risk assessment. This program will be developed to communicate and provide comprehensive training to EPA NCEA and other EPA staff, partners, and stakeholders on current, state-of-the-art risk assessment practices as used and implemented by EPA. The objectives of this training program will be to provide participants with knowledge of scientific fundamentals and conduct of human health risk assessments primarily focusing on hazard identification and dose-response assessment. The fellow working on this project will research quantitative dose-response methods (such as benchmark modeling) in risk assessments. The fellow will also work with staff of NCEA as they prepare materials for the development of this program and the training workshops.

Project Goals:

The fellow can expect to increase his or her knowledge of environmental sciences broadly, particularly in the area of development and application of quantitative dose response methods (such as benchmark modeling) in risk assessments, working in multidisciplinary teams including toxicologists, epidemiologists, and statisticians. The fellow will gain an understanding of how scientific information is used to inform risk assessments and policy decisions.

Final Product of the Project:

The fellow will prepare and present a final project presentation.

PROJECT NUMBER: 2010-306

Desired Level of Education:
Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Deborah Wales

Project Title:

Benchmark Dose Software Development and Maintenance

Sponsoring Office:

Office of Research and Development, National Center for Environmental Assessment, Research Triangle Park

Office Mission:

National Center for Environmental Assessment (NCEA) provides guidance and risk assessments aimed at protecting human health and the environment. This guidance presents critical analyses and summaries of scientific consensus, vetted through a rigorous peer review process, on the risks of pollutants to human health and the natural environment.

Project Overview:

NCEA/Research Triangle Park (RTP) and other NCEA units have the main responsibility for scientific assessment within Office of Research and Development (ORD) and EPA in general. These assessments are broad and typically have significant implications for national and international environmental policy development and implementation. NCEA/RTP risk assessments include preparation of Integrated Science Assessments (ISAs) (previously known as Air Quality Criteria Documents) for particulate matter, ozone, sulfur oxides, nitrogen oxides, carbon monoxide, and lead, as well as IRIS (Integrated Risk Information System) assessments of available scientific information for pollutants listed primarily under the Clean Air Act. Additionally, NCEA/RTP provides support in developing and evaluating many of the Agency s risk assessment methodologies and guidance documents. Besides serving as the key scientific foundation for U.S. regulations, ISAs, IRIS assessments, and agency risk assessment methodologies and approaches are also used world-wide by other governments and the World Health Organization (WHO) for deriving international guidelines and other aspects of air pollution control strategies and systems for these pollutants. Thus, NCEA/RTP assessments have broad implications, not only nationally for the U.S., but also internationally. Another major activity of NCEA/RTP is development of risk assessment models, methods, and guidance to better quantify risks and characterize uncertainty at the low environmental exposure levels most often experienced in real-world scenarios. Specifically, EPA has developed Benchmark Dose Software (BMDS) to facilitate application of the benchmark dose (BMD) methodology in risk assessments. This methodology involves fitting statistical models to the observed data and estimating the BMD, which is the central estimate of the dose or concentration that produces a predetermined change in the response rate of an adverse effect. BMDS undergoes continuous maintenance and further development, including ongoing quality assurance testing, incorporation of new statistical models, and refinements to the graphic user interface. In addition, NCEA/RTP develops training materials for the use of BMDS and conducts training workshops for internal and external stakeholders at venues such as the annual meetings of scientific organizations. The fellow working on this project will work with members of NCEA and conduct research in BMDS, including research on quantitative dose response methods (such as benchmark modeling) in risk assessments.

Project Goals:

The fellow can expect to increase his or her knowledge of environmental sciences broadly, particularly in the area of development and application of quantitative dose response methods (such as benchmark modeling) in risk assessments, working in multidisciplinary teams including toxicologists, epidemiologists, and statisticians. The fellow will gain an understanding of how scientific information is used to inform risk assessments and policy decisions.

Final Product of the Project:

The fellow will prepare and present mid-project and final project presentations.

PROJECT NUMBER: 2010-307

Desired Level of Education:
Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 7/30/2010

Project Officer:
Deborah Wales

Project Title:

Search, Evaluation, and Synopsis of Literature for Development of Inhalation Risk Assessment Guidance Support Documents

Sponsoring Office:

Office of Research and Development, National Center for Environmental Assessment, Research Triangle Park

Office Mission:

National Center for Environmental Assessment (NCEA) provides guidance and risk assessments aimed at protecting human health and the environment. This guidance presents critical analyses and summaries of scientific consensus, vetted through a rigorous peer review process, on the risks of pollutants to human health and the natural environment.

Project Overview:

NCEA/Research Triangle Park (RTP) and other NCEA units have the main responsibility for scientific assessment within Office of Research and Development (ORD) and the Agency in general. These assessments are broad and typically have significant implications for national and international environmental policy development and implementation. NCEA/RTP Risk assessments include preparation of Integrated Science Assessments (ISAs) (previously known as Air Quality Criteria Documents) for particulate matter, ozone, sulfur oxides, nitrogen oxides, carbon monoxide and lead, as well as IRIS (Integrated Risk Information System) assessments of available scientific information for pollutants listed primarily under the Clean Air Act. Additionally, NCEA/RTP provides support in developing and evaluating many of the Agency's risk assessment methodologies and guidance documents. Besides serving as the key scientific foundation for U.S. regulations, ISAs, IRIS assessments, and agency risk assessment methodologies and approaches are also used world-wide by other governments and the World Health Organization (WHO) for deriving international guidelines and other aspects of air pollution control strategies/systems for these pollutants. Thus, NCEA/RTP assessments have broad implications, not only nationally for the U.S., but also internationally. The fellow working on this project will research and evaluate literature related to inhalation risk assessment approaches and methodologies. The fellow will also review, evaluate, and develop a synopsis of key inhalation risk assessment studies.

Project Goals:

The fellow can expect to increase his or her knowledge of environmental sciences broadly, but particularly in the area of inhalation risk assessment and evaluation, working within a group of multidisciplinary scientists. The fellow will gain an understanding of how scientific information is used to support the evaluation of risk assessment approaches and methodologies.

Final Product of the Project:

The fellow will prepare and present mid-project and final project presentations on his or her research related to inhalation risk assessments.

PROJECT NUMBER: 2010-308

Desired Level of Education:
Ph.D. Student

Project Location:
EPA Region 3 - Baltimore, MD

Preferred Project Period:
5/10/2010 to 9/10/2013

Project Officer:
Paul Mayer

Project Title:

Stream Restoration as an Approach for Managing Nitrogen Pollution in Urban Watersheds

Sponsoring Office:

Office of Research and Development, National Risk Management Research Laboratory, Ground Water and Ecosystems Restoration Division

Office Mission:

The Ground Water and Ecosystems Restoration Division conducts research and supplies technical assistance to provide the scientific basis to support development of strategies and technologies used to protect and restore ground water, surface water, and ecosystems affected by man-made and natural processes.

Project Overview:

Bioreactive nitrogen is a non-point source pollutant that impairs ecosystem function and threatens human health. Urban streams transport heavy nitrogen loads to estuaries such as the Chesapeake Bay. Stream restoration may be a cost-effective way to reduce nitrogen in urban streams, yet despite the billions of dollars spent annually on restoring streams, little is known about the effectiveness of stream restoration as a best management practice (BMP) for nitrogen. The fellow working on this project will research and quantify the ecological benefits of stream restoration. The fellow will take a field-based research approach to assessing the efficacy of stream restoration as a BMP for nitrogen control in urban watersheds. The fellow will use state-of-the-art ecological methods, including isotope tracer techniques, to quantify biological and hydrological processes in surface water and ground water at streams throughout Baltimore, Maryland, before and after restoration to identify biogeochemical controls of microbial denitrification, a natural process occurring in ground water that removes bioreactive nitrogen by transformation to a biologically inactive gas form. Stream restoration that stabilizes stream banks, reconstructs stream meanders and riffle zones, and re-establishes riparian vegetation may increase nitrogen uptake via denitrification by reconnecting hydrology and increasing carbon availability to microbes. Identifying restoration techniques where high denitrification activity occurs provides insight into important nitrogen management tools. The fellow will also conduct cutting-edge research into the ecology of urban streams and the effects of ecosystem restoration. The end date for this project is flexible.

Project Goals:

The fellow will accomplish the following goals: (1) assess ecosystem service benefits of restoration; (2) identify stream restoration methods that enhance nitrogen control; and (3) develop predictive models of stream hydrology and nutrient mass balance.

Final Product of the Project:

The fellow will author peer-reviewed scientific journal articles that describe the efficacy of various stream restoration methods as a BMP for nitrogen control.

PROJECT NUMBER: 2010-309

Desired Level of Education:
Junior to Senior

Project Location:
EPA Region 3 - Lancaster, PA

Preferred Project Period:
5/10/2010 to 5/10/2012

Project Officer:
Paul Mayer

Project Title:

Effects of Watershed Restoration on Nitrogen and Phosphorous in a Stream Impacted by Legacy Sediments

Sponsoring Office:

Office of Research and Development, National Risk Management Research Laboratory, Ground Water and Ecosystems Restoration Division

Office Mission:

The Ground Water and Ecosystems Restoration Division conducts research and supplies technical assistance to provide the scientific basis to support development of strategies and technologies used to protect and restore ground water, surface water, and ecosystems affected by man-made and natural processes.

Project Overview:

Excess sediments and anthropogenic nutrients, especially nitrogen (N) and phosphorous (P), are leading causes of water quality impairment in streams and wetlands throughout the Mid-Atlantic Region of the United States. Legacy sediments, deposited as a function of historical mill dam construction, may contribute significantly to the sediment and nutrient load of streams and estuaries, including the Chesapeake Bay. Removing legacy sediments may be a cost-effective, sustainable means to reduce sediment and nutrient pollution in watersheds. Therefore, identifying best management practices (BMP) for streams and wetlands to mitigate the impacts of legacy sediments is important. Stream restoration to remove legacy sediment may represent an important nutrient management tool.

The fellow will take a field-based research approach to assessing the efficacy of legacy sediment removal as a BMP for sediment and nitrogen control in a watershed. The fellow will use state-of-the-art geological and ecological methods, including isotope tracer techniques, to quantify the effects of restoration on surface water and ground water quality at a restored and unrestored control watershed in Lancaster County, Pennsylvania. The fellow will conduct cutting-edge research into the ecology of urban streams and the effects of ecosystem restoration by examining watersheds before and after restoration to quantify stream flow, characterize stream geomorphology and sediment movement, monitor surface water and ground water chemistry, and measure ground water level and temperature. All monitoring will be conducted at high-resolution, daily and weekly temporal scales. The end date for this project is flexible.

Project Goals:

The fellow will accomplish the following specific goals: (1) assess ecosystem service benefits of restoration; (2) identify stream restoration methods that enhance nutrient control; and (3) develop predictive models of stream hydrology and nutrient mass balance.

Final Product of the Project:

The fellow will author peer-reviewed scientific journal articles that describe the efficacy of stream restoration as a BMP for phosphorous and nitrogen control.

PROJECT NUMBER: 2010-310

Project Title:

Source Category Attributes Comparative Tool Development

Sponsoring Office:

Office of Air Quality Planning and Standards, Sector Policies & Programs Division, Metals and Minerals Group

Office Mission:

The mission of the Office of Air Quality Planning and Standards (OAQPS) is to preserve and improve the air quality of the United States. OAQPS is responsible for development and implementation of regulation to protect the nation's air quality with respect to stationary sources.

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Susan Fairchild

Project Overview:

The Metals and Minerals Group (MMG) leads development and implementation of effective control strategies and regulations governing primary and secondary metals production and minerals processing operations. The group develops and implements innovative strategies to reduce hazardous and criteria air pollutant emissions, including the use of market-based mechanisms, alternative technologies, processes, and compliance options, as well as regulatory and economic incentives to achieve environmental goals of the air program. Under this project, the fellow will develop a database tool in Microsoft Access that enables comparison of characteristics of selected industries among data elements, including raw materials, size, temperatures, processes, controls, and emissions. The fellow will conduct searches of literature, review state and federal permits, and research the Internet to compile attributes of each industry. The project officer will provide an initial list of source categories for comparison, and additional industries may be added to the list of source categories based on the fellow's interest or as time allows.

Project Goals:

The fellow will gain insight into database tool development to identify commonalities across diverse industry categories and learn key elements of raw material and processes that contribute to emissions of different pollutants.

Final Product of the Project:

The final product will be a Microsoft Access database tool that identifies common traits across different source categories according to varying priorities.

PROJECT NUMBER: 2010-311

Project Title:

Researching Innovative Air Quality Benefits Estimation Methods

Sponsoring Office:

Office of Air and Radiation, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, Air Benefits and Cost Group

Office Mission:

The mission of the Office of Air Quality Planning and Standards (OAQPS) is to lead and manage national air quality programs to protect public health and the environment from air pollution. The Air Benefit and Cost Group within OAQPS is charged with estimating the benefits and costs of achieving air quality management strategies and standards.

Desired Level of Education:
Graduate Student to Ph.D. Student

Desired Level of Education:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Neal Fann

Project Overview:

The process of estimating the human health and ecosystem benefits of improvements in air quality is both controversial and technically complex. The academic literature regularly generates new data and techniques that can be used to estimate air pollution benefits from a reduction in air pollution. During this project, the fellow will explore innovative and novel benefits estimation methods to be used in estimating human health and ecological air quality benefits. This research could focus on developing methods to estimate certain benefits of air quality impacts that have previously not been quantified or valued; new epidemiological studies that have not yet been considered; new health impact functions; new valuation studies and methods that have not yet been considered; new approaches to estimating ecosystem benefits; and new approaches to estimating the baseline incidence of certain adverse health effects.

Project Goals:

When the project is complete, the fellow will have accomplished one or more of the following: (1) researched and identified a new or improved method for quantifying the benefits of improved air quality on a human health or ecological endpoint; and (2) identified new methods for estimating the baseline incidence rate for one or more human health endpoints. The fellow working on this project can expect to increase his or her knowledge of environmental science, microeconomics, air quality modeling, and policy analysis. Research completed under this fellowship could inform a master's thesis or Ph.D. dissertation.

Final Product of the Project:

The fellow will develop a final report and presentation summarizing his or her findings.

PROJECT NUMBER: 2010-312

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Region 3 - Philadelphia, PA

Preferred Project Period:
6/7/2010 to 8/27/2010

Project Officer:
Ralph Spagnolo and Robert Runowski

Project Title:

Evaluating the Effectiveness of Low-Impact Development in Storm Water Management

Sponsoring Office:

Region 3, Office of States and Watersheds Partnerships, Water Protection Division

Office Mission:

The Office of States and Watersheds Partnerships (OSWP) develops and implements partnerships among governmental and non-governmental entities for watershed restoration and to develop strategies for implementation of watershed restoration projects.

Project Overview:

The fellow will review the results of current Low-Impact Development (LID) projects and analyze implementation of new projects to address storm water problems. The fellow will work under the direction of OSWP staff and with other governmental and non-governmental organization partners, and using the watershed approach as the evaluative context. The Mid-Atlantic area of Region 3 has been promoting a "green" perspective to preserve and protect diminishing environmental resources while continuing to support sustainable development. The fellow will work with local governments and other agencies to conduct research on LID projects throughout the United States, primarily projects applicable to environmental situations in Region 3. The fellow will review current stormwater management practices of state and local governments throughout the region and evaluate whether LID applications could improve the effectiveness of stormwater projects. Applicants should have experience in either the environmental sciences or civil engineering and some basic field experience, especially in watersheds. The fellowship may require up to 25 percent field activities.

Project Goals:

The fellow will: (1) develop skills in technical communications with governmental agencies and non-governmental entities; and (2) understand the concept of green infrastructure through its application in LID and stormwater issues.

Final Product of the Project:

The fellow will present a final report addressing how the concept of "green infrastructure" techniques can be used within the watershed approach, and furthermore, how LID and stormwater issues are affected. This report will be presented to Region 3 staff involved with stormwater issues and remedial activities.

PROJECT NUMBER: 2010-313

Project Title:

EPA/Federal Highway Administration, Green Highways Program

Sponsoring Office:

Region 3, Office of States and Watersheds Partnerships, Water Protection Division

Office Mission:

The Office of States and Watersheds Partnerships (OSWP) develops and implements partnerships among governmental and non-governmental entities for watershed restoration and to develop strategies for implementation of watershed restoration projects.

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Region 3 - Philadelphia, PA

Preferred Project Period:
6/7/2010 to 8/27/2010

Project Officer:
Robert Runowski

Project Overview:

The fellow, supported by staff in the Region 3 OSWP and the EPA/Federal Highway Administration (FHWA), will review "green infrastructure" research and concepts. The emphasis of this project will be to assess how the "green infrastructure" philosophy relates to the Green Highways Program (GHP) and, correspondingly, affects watershed restoration. The fellow will identify sites and situations where green infrastructure concepts that have been used to support the GHP have been used in Region 3. OSWP, Region 3, and the Maryland State Department of Health (DOH) have initiated a pilot study in Charles County, Maryland, to assess the relocation of the U.S. 301 corridor. The pilot study is using green infrastructure principles, including innovations such as developing a natural resources registry and integrated decision matrix. The fellow will have the opportunity to participate in researching and evaluating the effects of the pilot study. In addition, the fellow will research the implications of low-impact development (LID) in this county's watershed restoration. The applicant should have a functional understanding of the environmental sciences; computer skills, and data and geographic information systems (GIS) applications would also be helpful. Field experience in stream monitoring and watershed issues would be beneficial, in support of the project's approximately 20 percent field component.

Project Goals:

The fellow will learn about the GHP and its impacts on watersheds restoration. The fellow will gain a thorough understanding of the principles and philosophy of green Infrastructure and LID and its relationship with the GHP and watershed resources protection and preservation. Furthermore, the fellow will also gain an understanding of working with an interagency team to develop and implement a methodology for project mitigation.

Final Product of the Project:

At the end of the project, the fellow will present his or her research and conclusions on the relationship of "green infrastructure," GHP, and watershed restoration, specifically related to the Maryland/U.S. 301 corridor.

PROJECT NUMBER: 2010-401

Desired Level of Education:
Graduate Student

Project Location:
EPA Headquarters - Arlington, VA

Preferred Project Period:
6/1/2010 to 8/31/2010

Project Officer:
Suzanne Wells

Project Title:

Community Involvement and Program Initiatives

Sponsoring Office:

Office of Superfund Remediation and Technology Innovation, Community Involvement and Program Initiatives Branch

Office Mission:

The mission of the Superfund program is to reduce risks to people and the environment by cleaning up the nation's worst hazardous waste problems. The mission of the Superfund Community Involvement Program is to advocate and strengthen early and meaningful community participation during Superfund cleanups.

Project Overview:

The Community Involvement Program seeks to build capacity in communities so that citizens may effectively participate in the Superfund process. Building capacity in communities may focus on providing technical assistance or offering communities the opportunity to form advisory groups to discuss site activities and resolve issues. In addition, the Community Involvement and Program Initiatives Branch works to establish dialogue with the public on critical issues facing communities near Superfund sites. This project with the Community Involvement and Programs Initiative Branch will allow the fellow to become familiar with the Superfund process and how public participation is implemented during cleanups. The specific project will focus on the emerging issues. Students applying for this fellowship must have good writing skills and be able to perform basic research, critical analysis, and synthesize information from multiple sources. In addition, applicants should have knowledge of community involvement and conflict resolution.

Project Goals:

The fellow will learn about critical issues facing a government agency as it seeks to involve the public in decision making. The fellow will also learn to analyze emerging issues or topics, and work with EPA staff as they develop strategies for managing the issues and topics.

Final Product of the Project:

The fellow will develop a lessons-learned summary and a report on his or her research.

PROJECT NUMBER: 2010-402

Desired Level of Education:
Junior to Graduate Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Project Officer:
Donna Rogers

Project Title:

Investigating Web Analytical Tools for EnviroFlash

Sponsoring Office:

Office of Air Quality Planning and Standards, Outreach & Information Division, Innovative Programs Outreach Group

Office Mission:

The mission of Office of Air Quality Planning and Standards (OAQPS) is to preserve and improve the air quality of the United States. OAQPS is responsible for the development and implementation of regulation to protect the nation's air quality with respect to stationary sources.

Project Overview:

This project will involve analytical investigations of the AIRNow Web tools, which provide the public with easy access to national air quality information. In addition, the fellow will research the marketing efforts of the AIRNow program, EnviroFlash, which is a system that sends e-mails about daily air quality forecasts to subscribers. The fellow will explore state-of-the-art Web analytical tools, such as Google Analytics and CrazyEgg, to gather Web usage data from the AIRNow Web site (www.airnow.gov). The data will be used to analyze user behavioral patterns, create usage reports, and glean other relevant information. The fellow will identify performance metrics for Web sites, evaluate the results of the Web analytical tools, and apply the tool that gives the best results to other Web sites.

In addition, the fellow will participate with OAQPS staff in the EnviroFlash Challenge, which is an effort to increase the number of subscribers to EnviroFlash and runs approximately May 1 to May 31. The fellow will work with participating partner agencies as they evaluate the results and track their success. The fellow will also work with OAQPS to research and evaluate the effectiveness of promoting EnviroFlash through various mechanisms.

Project Goals:

The fellow will gain insight into Web analytical tools and the marketing efforts used to promote the air quality notification system, EnviroFlash.

Final Product of the Project:

The fellow will be expected to develop a final report and presentation summarizing the results of these efforts to EPA staff and management, as well as others, as appropriate.

PROJECT NUMBER: 2010-403

Desired Level of Education:
Graduate Student to Ph.D. Student

Project Location:
EPA Headquarters - Research Triangle Park, NC

Preferred Project Period:
5/10/2010 to 8/20/2010

Preferred Project Period:
Jenny Noonan

Project Title:

Strategies to Address Air Quality Communications Challenges

Sponsoring Office:

Office of Air Quality Planning and Standards, Office of the Director, Policy Analysis and Communications Staff

Office Mission:

The Office of Air Quality Planning and Standards (OAQPS) compiles and reviews air pollution data, develops regulations to limit and reduce air pollution, assists states and local agencies with monitoring and controlling air pollution, makes information about air pollution available to the public, and reports to Congress on the status of air pollution and the progress made in reducing it.

Project Overview:

One of the most important and often overlooked aspects of environmental management is the ability to communicate complex information in a clear, concise, and unambiguous way to a variety of stakeholders. Relevant communication challenges may include agriculture and air quality; climate and air quality; communicating air quality information effectively through new media; communicating air quality information effectively to emerging stakeholders; evaluating existing materials for relevance in today's media environment; using new media to communicate about air quality; cost-benefit analysis and air quality; health and risk communication and air quality; or ways to engage varied stakeholders in air quality topics. The fellow will research and evaluate strategies for addressing the challenges specific to the topic or topics of his or her interest. The project could address traditional or new communication methods, or both (anything from written materials to new Web 2.0 media materials). The fellow will have an opportunity to engage with key decision-makers and stakeholders, including scientists, engineers, and policy experts at EPA, other federal agencies, and stakeholder groups; congressional staff; the media; and the public.

Project Goals:

The fellow will gain critical insight into the process of developing and communicating federal air quality policy at a variety of levels, and the policy implications associated with that communication.

Final Product of the Project:

The fellow will create and share an integrated media presentation describing his or her research about the communication challenge identified and the strategies identified to address it.

Appendix A – Application Materials

A complete set of application materials is included in this appendix. Electronic versions of the forms can be downloaded from EPA's Web site at ***www.epa.gov/education/students.html***. The forms are available in an interactive portable document format (pdf) and can be completed online, then printed and mailed to EPA as described in the *How to Apply* section on page 5.

NNEMS Application A-3

Sample NNEMS Application A-5

Standard Form 424 – Application for Federal Assistance A-7

Sample Standard Form 424 – Application for Federal Assistance A-13

NNEMS Reference Form A-17

NNEMS Disclosure and Waiver Statement A-19

Helpful Tips:

- **Read the section, *How to Apply*, on page 5 for detailed instructions on applying for a NNEMS fellowship;**
- **Confirm that you meet all of the eligibility requirements described on pages 5 and 6;**
- **Include a transcript for each school attended;**
- **Indicate on the application whether the Reference Form(s) will be sent under separate cover;**
- **Type or complete online the application. If handwritten, write as neatly as possible;**
- **Review the application to check for typographical or grammatical errors;**
- **Mail the application so that it is postmarked on or before February 5, 2010.**

EPA's National Network for Environmental Management Studies Fellowship Program

NNEMS APPLICATION

Program Announcement Identifier: EPA-EED-10-01

An interactive PDF version of this form is available online at ***www.epa.gov/education/NNEMS/2010apply.html***

Project Information

Project Number: 2010-_____

Project category: _____

- ❑ Environmental Policy, Regulation, and Law
- ❑ Environmental Management and Administration
- ❑ Environmental Science
- ❑ Public Relations and Communications

If you are applying for more than one NNEMS project, please indicate:

_____ Total number of NNEMS projects for which you are applying

_____ Order of preference for this project (1 = most preferred)

You must complete a separate application for each project for which you are applying.

Applicant Information

Name: _____

Please check the address to which you would like materials sent.

❑ Current Mailing Address

_____

_____

_____ _____ _____

City State Zip

At Current Address Through _____ (month/year)

Current Phone: (_____) _____ - _____

Current E-mail: _____

❑ Permanent Mailing Address

_____

_____

_____ _____ _____

City State Zip

At Current Address Through _____ (month/year)

Permanent Phone: (_____) _____ - _____

Permanent E-mail: _____

Current School/University: _____

Current Student Level:

Undergraduate	Advanced
❑ Associate	❑ Graduate
❑ Freshman	❑ Ph.D.
❑ Sophomore	
❑ Junior	
❑ Senior	

Current Major/Minor: _____

Expected Graduation Date: _____

Please list any additional universities attended:

School/University	Dates Attended	Transcript Enclosed
		❑ Yes ❑ No
		❑ Yes ❑ No
		❑ Yes ❑ No

Names of Individual(s) Providing Reference: _____

_____

_____

_____

Eligibility

A NNEMS fellowship is available to any associate, undergraduate, or advanced student who is:

- A citizen of the U.S., its territories or possessions, or lawfully admitted to the U.S. for permanent residency
- Enrolled for academic credit at an accredited educational institution[1]
- Pursuing an educational program directly related to pollution control or environmental protection for the duration of the fellowship

Please note: The following types of students are not eligible for a NNEMS fellowship:

- *Federal employees, including those who are on "leave without pay" status*
- *Undergraduate and graduate students who will graduate before the NNEMS fellowship is completed (Students who complete their undergraduate studies before the end of a fellowship may apply if currently accepted or enrolled to a graduate program.)*
- *High school students*

Additional requirements for associate,undergraduate, and advanced students include the following:

Associate and Undergraduate Students

- 3.0 cumulative grade point average (GPA) based on a scale of 4.0 at the time that the application is due (a GPA of 2.999, for example, is not sufficient)
- Completion of at least four courses related to the field of environmental studies

Advanced Students

- Currently enrolled in a graduate or Ph.D. program or can provide proof of acceptance and enrollment to a graduate or Ph.D. program at the time of fellowship award. Students who are awaiting notification of acceptance must submit verification of acceptance and enrollment at the time of fellowship award.
- Completion of one semester of graduate or Ph.D. work, or at least four undergraduate courses related to the field of environmental studies

[1] The 2- or 4-year college, university, or distance-learning institution must be accredited by a regional or national accrediting organization recognized by the U.S. Department of Education or the Council for Higher Education Accreditation (***www.chea.org***).

Project Number: 2010-_____

NNEMS APPLICATION

Proposal

You may attach one additional page as necessary.

Proposed Research Plan: Describe how you would conduct your research on this project.

Relevant Information: Describe your academic, professional, or relevant experience that you believe qualifies you to conduct this research. For example, identify academic courses or research that enhances your qualifications.

Academic Goals: State how you expect this project to support your academic and professional goals.

Application Package Checklist

	Yes	No
Are you a citizen of the U.S., its territories or possessions, or lawfully admitted to the U.S. for permanent residency (a lawful permanent resident must provide his or her green card number on his or her application)?	❑	❑
Are you enrolled at an accredited school?	❑	❑
Are you a federal employee? Federal employees, including those who are on "leave without pay" status, are not eligable for a NNEMS Fellowship.	❑	❑
Do you have a minimum 3.0 GPA?	❑	❑

Confidential Information

	Yes	No
Does your application package contain information that you consider to be confidential?	❑	❑

Be sure to clearly mark confidential information

Students must submit **three** complete application packages for each project (one original and two copies). Please note that only one official transcript is required, which may be opened and copied, even if a student is applying for multiple projects. Please verify that you have included:

	Original	2 Copies	Mailed Separately
A completed Application Form	❑	❑	❑
A completed Standard Form 424 (SF 424)	❑	❑	❑
A résumé	❑	❑	❑
An official college transcript from each school attended	❑	❑	❑
A Reference Form from a professor or advisor	❑	❑	❑
A completed NNEMS Disclosure and Waiver Statement	❑	❑	❑
Verification of acceptance and/or enrollment in a graduate or Ph.D. program if applicant is a graduating senior	❑	❑	❑

Complete application packages must be submitted for each NNEMS project.

Applications must be postmarked on or before **February 5, 2010**.

Mail or courier completed application package to:
NNEMS Fellowship Program
Tetra Tech EM Inc.
1881 Campus Commons Drive, Suite 200, Reston, VA 20191

EPA's National Network for Environmental Management Studies Fellowship Program

SAMPLE APPLICATION

An interactive PDF version of this form is available online at
www.epa.gov/education/NNEMS/2010apply.html

Project Information

Project Number: 2010-XXX

Project category:

- [X] Environmental Policy, Regulation, and Law
- [ ] Environmental Management and Administration
- [ ] Environmental Science
- [ ] Public Relations and Communications

If you are applying for more than one NNEMS project, please indicate:

3 Total number of NNEMS projects for which you are applying

1 Order of preference for this project (1 = most preferred)

You must complete a separate application for each project for which you are applying.

Applicant Information

Name: John Doe

Please check the address to which you would like materials sent.

[X] Current Mailing Address

123 Hill Street

Anytown | VA | 22205
City | State | Zip

At Current Address Through May 2009 (month/year)

Current Phone: (123) 456-7891

Current E-mail: johndoe@e-mail.com

[ ] Permanent Mailing Address

City | State | Zip

At Current Address Through _____ (month/year)

Permanent Phone: (_____) _____ - _____

Permanent E-mail: _____

Current School/University: State University

Current Student Level:

Undergraduate
- [ ] Associate
- [ ] Freshman
- [ ] Sophomore
- [X] Junior
- [ ] Senior

Advanced
- [ ] Graduate
- [ ] Ph.D.

Current Major/Minor: Environmental Policy

Expected Graduation Date: June 2011

Please list any additional universities attended:

School/University	Dates Attended	Transcript Enclosed
		[ ] Yes [ ] No
		[ ] Yes [ ] No
		[ ] Yes [ ] No

Names of Individual(s) Providing Reference: Dr. Jane Doe

Eligibility

A NNEMS fellowship is available to any associate, undergraduate, or advanced student who is:

- A citizen of the U.S., its territories or possessions, or lawfully admitted to the U.S. for permanent residency
- Enrolled for academic credit at an accredited educational institution[1]
- Pursuing an educational program directly related to pollution control or environmental protection for the duration of the fellowship

Please note: The following types of students are not eligible for a NNEMS fellowship:

- *Federal employees, including those who are on "leave without pay" status*
- *Undergraduate and graduate students who will graduate before the NNEMS fellowship is completed (Students who complete their undergraduate studies before the end of a fellowship may apply if currently accepted or enrolled to a graduate program.)*
- *High school students*

Additional requirements for associate,undergraduate, and advanced students include the following:

Associate and Undergraduate Students

- 3.0 cumulative grade point average (GPA) based on a scale of 4.0 at the time that the application is due (a GPA of 2.999, for example, is not sufficient)
- Completion of at least four courses related to the field of environmental studies

Advanced Students

- Currently enrolled in a graduate or Ph.D. program or can provide proof of acceptance and enrollment to a graduate or Ph.D. program at the time of fellowship award. Students who are awaiting notification of acceptance must submit verification of acceptance and enrollment at the time of fellowship award.
- Completion of one semester of graduate or Ph.D. work, or at least four undergraduate courses related to the field of environmental studies

[1] The 2- or 4-year college, university, or distance-learning institution must be accredited by a regional or national accrediting organization recognized by the U.S. Department of Education or the Council for Higher Education Accreditation (***www.chea.org***).

SAMPLE

Project Number: 2010-XXX

SAMPLE APPLICATION

Proposal

You may attach one additional page as necessary.

Proposed Research Plan: Describe how you would conduct your research on this project.

Some well-placed phone calls can save a lot of time in the library, so my investigation would begin with a week or two of phone interviews with a range of people already familiar with (1) wetland protection issues, and (2) the impact of USAID, World Bank and IUCN policies on environmental media. I would include USAID and World Bank program officers, UNEP officers, UNEP officials, public interest organizations with international environmental programs, and academic specialists, as well as people within EPA.

(continued on attached sheet)

Relevant Information: Describe your academic, professional, or relevant experience that you believe qualifies you to conduct this research. For example, identify academic courses or research that enhances your qualifications.

Though I do not have a background in wetlands or water issues in general, I have been working for the past five years on international pesticide issues. I am already familiar with some of the mechanisms currently in place at the World Bank and USAID to regulate how their funds are used for pesticides. Last year, I wrote Problem Pesticides, Pesticide Programs and Analysis of the International Code of Conduct on the Distribution and Use of Pesticides approved in November 1986 by the FAO, as well as a guide on how to monitor for compliance with the code.

Academic Goals: State how you expect this project to support your academic and professional goals.

I would expect my end project to be a report summarizing the impacts these agencies are having on wetlands, along with a substantive analysis of the legal and political factors driving these impacts. The report would also include specific recommendations for policy changes. This project would allow me to gain hands-on experience in international policy as it relates to environmental issues, which dovetails with the Environmental Management program I am pursuing. This real world experience would reinforce the topics I have studied in school, allow me to explore wetlands issues in more depth, and give me crucial background experience to help me find a job in the environmental public policy field upon graduation.

Application Package Checklist

	Yes	No
Are you a citizen of the U.S., its territories or possessions, or lawfully admitted to the U.S. for permanent residency (a lawful permanent resident must provide his or her green card number on his or her application)?	☒	☐
Are you enrolled at an accredited school?	☒	☐
Are you a federal employee? Federal employees, including those who are on "leave without pay" status, are not eligable for a NNEMS Fellowship.	☐	☒
Do you have a minimum 3.0 GPA?	☒	☐

Confidential Information

	Yes	No
Does your application package contain information that you consider to be confidential?	☐	☒

Be sure to clearly mark confidential information

Students must submit **three** complete application packages for each project (one original and two copies). Please note that only one official transcript is required, which may be opened and copied, even if a student is applying for multiple projects. Please verify that you have included:

	Original	2 Copies	Mailed Separately
A completed Application Form	☒	☒	☐
A completed Standard Form 424 (SF 424)	☒	☒	☐
A résumé	☒	☒	☐
An official college transcript from each school attended	☒	☒	☐
A Reference Form from a professor or advisor	☐	☐	☒
A completed NNEMS Disclosure and Waiver Statement	☒	☒	☐
Verification of acceptance and/or enrollment in a graduate or Ph.D. program if applicant is a graduating senior	☐	☐	☐

Complete application packages must be submitted for each NNEMS project.

Applications must be postmarked on or before **February 5, 2010**.

Mail or courier completed application package to:
NNEMS Fellowship Program
Tetra Tech EM Inc.
1881 Campus Commons Drive, Suite 200, Reston, VA 20191

SAMPLE

STANDARD FORM 424 – APPLICATION FOR FEDERAL ASSISTANCE

Instructions for Completing the Standard Form 424 – Application for Federal Assistance (an interactive PDF version of this form is available online at *www.epa.gov/education/NNEMS/2010apply.html* or *www.grants.gov*):

1. Enter "Preapplication."
2. Enter "New."
3. Leave blank.
4. Leave blank.
5. Federal Entity Identifier: Leave blank.
   Federal Award Identifier: Leave blank.
6. Leave blank.
7. Leave blank.
8. Legal Name: Enter your legal name in this order: last name, first name, middle initial/name.
   Employer/Taxpayer Identification Number (EIN/TIN): Enter "123456789."
   Organizational DUNS: Leave blank.
   Address: Enter the address (including street, city, state, and zip code) you are currently using to receive United States Postal Service mail.
   Organizational Unit: Leave blank.
   Name and contact information of person to be contacted on matters involving this application: Enter your name, telephone number, and e-mail address. Your middle name, suffix, and fax number are optional.
9. Enter "P. Individual."
10. Enter "Environmental Protection Agency."
11. Enter "66.952."
12. Enter "EPA-EED-10-01."
13. Leave blank.
14. Leave blank.
15. Enter the project title of the fellowship for which you are applying.
16. List your Congressional District under "Applicant." Under "Program/Project," list the Congressional District for the fellowship project location. To identify the appropriate Congressional District, go to ***www.house.gov*** and enter your nine digit zip code to identify your representative and district.
17. Enter the project start and end dates for the fellowship for which you are applying.
18. Leave blank.
19. Enter "c. Program is not covered by E.O. 12372."
20. Self-explanatory.
21. Enter your name, title, telephone number and e-mail address. "Student" or "Graduate Student" is an appropriate title. Print a hard-copy of the SF 424 and sign the pre-application.

OMB Number: 4040-0004
Expiration Date: 01/31/2012

Application for Federal Assistance SF-424

Version 02

*1. Type of Submission	*2. Type of Application	*If Revision, select appropriate letter(s):
☑ Preapplication	☑ New	
☐ Application	☐ Continuation	* Other (Specify)
☐ Changed/Corrected Application	☐ Revision	

*3. Date Received:

4. Application Identifier:

5a. Federal Entity Identifier:

*5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

* b. Employer/Taxpayer Identification Number (EIN/TIN):
123456789

*c. Organizational DUNS:

d. Address:

*Street1:
Street 2:
*City:
County:
*State:
Province:
Country:
*Zip/ Postal Code:

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:
First Name:
Middle Name:
*Last Name:
Suffix:

Title:

Organizational Affiliation:

*Telephone Number:
Fax Number:

*Email:

Application for Federal Assistance SF-424

Version 02

9. Type of Applicant 1: Select Applicant Type:
P. Individual

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

*Other (specify):

*10. Name of Federal Agency:
Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:
66.952

CFDA Title:

*12. Funding Opportunity Number: EPA-EED-10-01

*Title:
NNEMS Fellowship Program

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

*15. Descriptive Title of Applicant's Project:

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

*a. Applicant *b. Program/Project:

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:

*a. Start Date: *b. End Date:

18. Estimated Funding ($):

*a. Federal
*b. Applicant
*c. State
*d. Local
*e. Other
*f. Program Income
*g. TOTAL

***19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on
☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
☑ c. Program is not covered by E.O. 12372

*20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)
☐ Yes ☐ No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

☐ **I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: *First Name:

Middle Name:

*Last Name:

Suffix:

*Title:

*Telephone Number: Fax Number:

*Email:

*Signature of Authorized Representative: Date Signed:

Application for Federal Assistance SF-424

Version 02

*Applicant Federal Debt Delinquency Explanation

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

SAMPLE

OMB Number: 4040-0004
Expiration Date: 01/31/2012

Application for Federal Assistance SF-424

Version 02

*1. Type of Submission	*2. Type of Application	*If Revision, select appropriate letter(s):
☑ Preapplication	☑ New	
☐ Application	☐ Continuation	* Other (Specify)
☐ Changed/Corrected Application	☐ Revision	

*3. Date Received:

4. Application Identifier:

5a. Federal Entity Identifier:

*5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Doe, John H.

* b. Employer/Taxpayer Identification Number (EIN/TIN): 123456789

*c. Organizational DUNS:

d. Address:

*Street1: 123 Hill Street
Street 2:
*City: Anytown
County:
*State: VA
Province:
Country: USA: United States
*Zip/ Postal Code: 22205

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:
First Name: John
Middle Name:
*Last Name: Doe
Suffix:

Title: Student

Organizational Affiliation:

*Telephone Number: (123) 456-7891

Fax Number:

*Email: johndoe@e-mail.com

SAMPLE

OMB Number: 4040-0004
Expiration Date: 01/31/2012

Application for Federal Assistance SF-424

Version 02

9. Type of Applicant 1: Select Applicant Type:
P. Individual

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

*Other (specify):

*10. Name of Federal Agency:
Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:
66.952

CFDA Title:

*12. Funding Opportunity Number: EPA-EED-10-01

*Title:
NNEMS Fellowship Program

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

*15. Descriptive Title of Applicant's Project:
Development of a Risk Management Training Program

SAMPLE

OMB Number: 4040-0004
Expiration Date: 01/31/2012

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

*a. Applicant Virginia 8th

*b. Program/Project: North Carolina 4th

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:

*a. Start Date: 5/10/2010

*b. End Date: 7/30/2010

18. Estimated Funding ($):

*a. Federal
*b. Applicant
*c. State
*d. Local
*e. Other
*f. Program Income
*g. TOTAL

***19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on
☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
☑ c. Program is not covered by E.O. 12372

*20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)
☐ Yes ☑ No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

☑ **I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

*First Name: John

Middle Name:

*Last Name: Doe

Suffix:

*Title: Student

*Telephone Number: 123-456-7891

Fax Number:

*Email: Johndoe@e-mail.com

*Signature of Authorized Representative: *John Doe*

Date Signed: January 26, 2010

Application for Federal Assistance SF-424

SAMPLE

Version 02

*Applicant Federal Debt Delinquency Explanation

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

EPA's National Network for Environmental Management Studies Fellowship Program

Reference Form

Instructions for the Reference

Thank you for providing a reference for a NNEMS fellowship applicant. Before you begin, please note that this reference is not intended to be confidential. Please submit the completed form to the applicant identified below, to be included in the application package. You may submit the reference under separate cover at the address provided below, but it must be postmarked on or before **February 5, 2010**:

NNEMS Fellowship Program

Tetra Tech EM Inc.

1881 Campus Commons Drive, Suite 200

Reston, VA 20191

To be Completed by Applicant

Project Number: 2010- _____

Applicant's Name: _____

Current Mailing Address:

_____

_____

_____ _____ _____

City State Zip

Current Phone: (_____) _____ - _____

Current E-mail: _____

School/University: _____

Current Major/Minor: _____

Expected Graduation Date: _____

To be Completed by the Reference

Name of Individual Providing Reference: _____

Current Mailing Address:

_____

_____

_____ _____ _____

City State Zip

Current Phone: (_____) _____ - _____

Current E-mail: _____

Position or Title: _____

Department: _____

Institution: _____

Signature _____ Date _____

Reference

The applicant named above is applying for a NNEMS fellowship. What are your personal impressions of the candidate's ability to perform the proposed fellowship? Include how the fellowship relates to and will further the student's academic goals. Please comment on the quality of his or her work, and promise of productive scholarship. Please explain in what capacity you have known the applicant and for what time period. (Continue on next page, if necessary.)

Reference: (continued from previous page)

Rating:

Please rate this student in overall promise in comparison with other individuals with whom you have known at similar stages in their academic studies by checking the appropriate boxes.

	Outstanding	Excellent	Good	Fair	Poor	Not Applicable
Academic Performance						
Motivation for Proposed NNEMS Research Plan						
Research and Writing Ability						
Leadership Skills and Written Communication Skills						

NNEMS DISCLOSURE AND WAIVER STATEMENT

Please complete and submit with NNEMS application package. This form may be photocopied.

I understand that the National Network for Environmental Management Studies (NNEMS) Program fellows are not employees of the U.S. Environmental Protection Agency (EPA) or the U.S. government. Thus, if selected to be a NNEMS fellow, I will not receive typical federal employee benefits including, but not limited to, health insurance, life insurance, annual leave, and sick leave.

In addition, I understand that in the event of an accident causing injury to myself while either performing my assigned functions or traveling, the U.S. government is not liable for any injury or harm I may incur. Further, I understand that the U.S. government is not liable for any injury or harm I may cause another person or persons while performing my assigned functions or traveling for EPA. As such, I understand that I am responsible for any injury or harm I cause to myself or others as a result of my actions.

By signing this form, I acknowledge that I fully understand the provisions contained in this statement regarding my status as a NNEMS fellow and the consequences of my actions while working as a NNEMS fellow. As a result, I have considered the possibility of obtaining personal insurance during my NNEMS fellowship.

Name: _____ School: _____

Home Address: _____ Project # Applied For: 2010 - _____

_____ Project Category: _____

_____

_____

Home Phone Number: _____

Signature: _____ Date: _____

Appendix B – NNEMS Program Coordinators

Listed on the following pages are the NNEMS Program Coordinators at approximately 200 colleges, universities, and distance-learning organizations throughout the U.S. Program Coordinators act as representatives of the NNEMS program by promoting the program on campus and assisting students in the preparation of their applications.

The Program Coordinators are sorted in alphabetical order by name of organization.

The points of contact are current, according to information available at the time of publication.

Please note: Any eligible student enrolled for academic credit at an accredited 2- or 4-year college, university, or distance-learning institution may apply for a NNEMS fellowship, regardless of whether or not there is a NNEMS Program Coordinator at their university.

American University

Susan Gordon, Career Advisor,
College of Arts and Science
Career Center
4400 Massachusetts Avenue NW
Washington, DC 20016

Kiho Kim
Department of Environmental Science
4400 Massachusetts Avenue NW
Hurst Hall 101
Washington, DC 20016-8007

Appalachian State University

Carol Babyak, Assistant Professor
Chemistry
525 Rivers Street
Boone, NC 28608

Bard College

Jennifer Phillips, Professor
Center for Environmental Policy
P.O. Box 5000
Annandale-on-Hudson, NY 12504

Bellevue University

Che Thompson
Liberal Arts Professional Application
4269 Wirt Street
Omaha, NE 68111

Benedictine College

Becky Gilmore, Director
Career Development
1020 N. 2nd Street
Atchison, KS 66002

Janet Wilcox, Assistant Academic Dean
Student Success Center
1020 N. 2nd Street
Atchison, KS 66002

Black Hills State University

Christien McCart, Outdoor Education Program
Coordinator Outdoor Education Program
1200 University Street #9401
Spearfish, SD 57799-9401

Bryn Mawr College

Don Barber, Associate Professor &
Director of Environmental Studies
Geology
101 N. Merion Avenue
Park Science Bldg
Bryn Mawr, PA 19010

**Bunker Hill Community College/
Suffolk University Joint Program**

Emyq McSweeney
Biology/Marine Science
3 Forbes Street
Jamaica Plain, MA 02130

Cabrini College

Nancy Hutchison, Director
Cooperative Education and Career Services
610 King of Prussia Road
Radnor, PA 19087-3698

California Institute of Technology

Linda Scott, Option Secretary
Environmental Science & Engineering (138-78)
1200 East California Boulevard
Pasadena, CA 91125

California State University, Chico

William Lerch, Director
Office of Experiential Education
400 West 1st Street
Chico, CA 95929-0818

California State University, Northridge

Janice Potzmann, Assistant Director,
Transfer & Experiential Learning Programs
Career Center
18111 Nordhoff Street
University Hall Suite 105
Northridge, CA 91330-8241

California State University, Sacramento

Cici Mattiuzzi, Director, Career Services
College of Engineering and Computer Science
6000 J Street
Sacramento, CA 95819-6023

California State University, San Francisco

Joy Viveros, Fellowship Advisor
Advising Center
1600 Holloway Avenue, Admin. 211
San Francisco, CA 94132

California University of Pennsylvania

Meaghan Clister, Coordinator of Cooperative Education
Career Services
250 University Avenue
California, PA 15419

Carnegie Mellon University

David Dzombak, Faculty Director
Steinbrenner Institute for Environmental Education and Research
5000 Forbes Avenue
Porter Hall 119
Pittsburgh, PA 15213-3890

Deborah Lange, Executive Director
Steinbrenner Institute, Western Pennsylvania Brownfields Center
Hamburg Hall 1209
5000 Forbes Avenue
Pittsburgh, PA 15213

Catholic University of America

Kristen McManus, Director
Columbus School of Law
Office of Legal Career Services
Room 163
Washington, DC 20064-8020

Centre College

Melinda Wilson, Internship and Outreach Coordinator
Career Services
600 W. Walnut Street
Danville, KY 40422

Chestnut Hill College

Robert Meyer, Professor of Biology
Biology
9601 Germantown Avenue
Philadelphia, PA 19118-2693

Clark Atlanta University

Donnita Raglin, Director
Leadership and Professional Development and Cooperative Education
223 James P. Brawley Drive, S.W.
Atlanta, GA 30314

Clark University

Brian Cook, Professor and MPA Director
Department of Government
950 Main Street
Worcester, MA 01610-1477

Clemson University

Alan Elzerman, Director
School of the Environment
342 Computer Court
Anderson, SC 29625

Cindy Lee, Professor
Environmental Engineering & Earth Sciences
342 Computer Court
Anderson, SC 29625

Coastal Carolina University

Ned Cohen, Director
Wall Center for Excellence Wall College of Business Administration
P.O. Box 261954
Conway, SC 29528-605

College of New Jersey

Deb Kelly
Office of Career Services
1938 Pennington Road
Ewing, NJ 08628

College of Staten Island

Geoff Hempill
Career and Scholarship Center (1A-105)
2800 Victory Boulevard
Building 1A-105
Staten Island, NY 10314

College of William and Mary

Lisa Grimes, Director of Fellowships and Undergraduate Research
Charles Center
P.O. Box 8795
Williamsburg, VA 23187-8795

Colorado State University

Erin Reichert, Undergraduate Coordinator
Environmental and Radiological Health Sciences
105 Environmental Health
1681 Campus Delivery
Fort Collins, CO 80526-1681

Connecticut College

Jack Tinker, Director of Recruiting
Career Office
270 Mohegan Avenue
New London, CT 06320

Coppin State University

Seana Coulter, Cooperative
Education/Internship Coordinator
Career Development & Co-op Center
2500 West North Avenue
Baltimore, MD 21216

Cornell University

Bill Alberta, Associate Director
Career Services
103 Barnes Hall
Ithaca, NY 14853

Cuyahoga Community College, Eastern Campus

Herbert Mausser, Program Manager
Environmental Health and Safety Technology
4250 Richmond Road
Highland Hills, OH 44122-6195

Dartmouth College

Kathryn Doughty, Associate Director
Career Services
63 South Main Street
Suite 200
Hanover, NH 03755-3586

Davidson College

Brenda Harvey, Recruiting Coordinator
Career Services
Box 7180
Davidson, NC 28035

Delaware Valley College

Bryan Barts, Assistant Director - Employer
Relations and Recruiting
Career and Life Education
700 E. Butler Avenue
Doylestown, PA 18901

Tracy DePedro, Director
Office of Career & Life Education
700 E. Butler Avenue
Doylestown, PA 18901

Denison University

Pamela Allen, Director & Pre-Professional Advisor
Career Services
306 Burton Morgan Center, 150 Ridge Road
Granville, OH 43023

Duke University

Elise Goldwasser, Undergraduate Internship Coordinator
Sanford Institute of Public Policy
Box 90247
Durham, NC 27708

Karen Kirchof, Assistant Dean for Career Services
Nicholas School of Environment and Earth Sciences
Box 90331
Durham, NC 27708-0331

Duquesne University

Robert Volkmar, Interim Director
Center for Environmental Research and Education
332 Fisher Hall
Pittsburgh, PA 15282-0100

Eastern Kentucky University

Billy Bennett, Director, Center for Environmental Education
Division of Natural Areas
EKU Case Annex #105
521 Lancaster Ave
Richmond, KY 40391

Elizabeth City State University

Sandra Gibson, Assistant Director, Career Services
Office of Career Services
Campus Box 804
Elizabeth City, NC 27909

Elmira College

William Couchon
Office of Counseling and Career Services
One Park Place
Elmira, NY 14901

Embry-Riddle Aeronautical University, Prescott Campus

Judy Segner, Director, Career Services
College of Arts & Sciences Career Services
3200 Willow Creek Road
Prescott, AZ 86301-3720

Emory University

Claudia Ellett, Director
Rollins School of Public Health, Career Services
1518 Clifton Road, NE
Suite 168
Atlanta, GA 30322

Endicott College

Devin Rozansky, Internship Coordinator
Internship Office
376 Hale Street
Beverly, MA 01915

Florida State University

Jamie Purcell, Director
Office of National Fellowships
A3550 University Center
Tallahassee, FL 32306-2449

Fordham University

Laura Ebert, Grants and Contracts Administrator
Office of Sponsored Programs
441 East Fordham Road
Bronx, NY 10458

Franklin & Marshall College

Sarah Dawson, Acting Director
Wohlsen Center for the Sustainable Environment
P.O. Box 3003
Lancaster, PA 17602-3003

GateWay Community College

Mario Castaneda, Full Time Faculty
Water Resources Technology Program
108 N. 40th Street
Phoenix, AZ 85034

George Mason University

E. Christien Parsons, Coordinator: Environmental Science/
Management Program
Environmental Science and Policy
4400 University Drive, MSN 5F2
Fairfax, VA 22030-4444

George Mason University

Gemma Scallon, Career Counselor
University Career Services
Mail Stop 3B6
Fairfax, VA 22030-4444

George Washington University

Paul Binkley, Director, Career Development Services
Trachtenberg School of Public Policy and
Public Administration
805 21st Street, NW, Suite 601
Washington, DC 20052

George Washington University

Marlene McGuirl, Adjunct Professor
Environmental Resource Policy
3416 P Street NW
Washington, DC 20007-2705

Georgia College & State University

Caralyn Zehnder, Assistant Professor &
Environmental Sciences Program Coordinator
Biological and Environmental Sciences
Campus Box 81
Milledgeville, GA 31061

Gordon College

Rita Dove, Assistant Director
Office of Cooperative Education
255 Grapevine Road
Wenham, MA 01984

Grand Valley State University

Erik Nordman, Assistant Professor/
Program Coordinator
Biology/Natural Resources Management Program
212 Henry Hall
1 Campus Drive
Allendale, MI 49401

Gustavus Adolphus College

Jeff Jeremiason, Director of Environmental Studies
Environmental Studies
800 W College Avenue
St Peter, MN 56082

Hamilton College

David Bell, Senior Associate Director
The Maurice Horowith Career Center
198 College Hill Road
Clinton, NY 13323

Hampden-Sydney College

Laura Neidert, Assistant Director of Career Development
& Internship Coordinator
Career Development Office
P.O. Box 607
Hampden-Sydney, VA 23943

Harvard University, School of Public Health

Peter Crudele, Director, Career Services
Career Services Office
677 Huntington Avenue
Kresge, G18
Boston, MA 02115

Hiram College

Kathryn Craig, Director
Career Center
Hinsdale Hall, Room 101
Hiram, OH 44234

Hobart and William Smith Colleges

Lana Cao, Assistant Director
Career Services
300 Pulteney Street
Geneva, NY 14456

Michele Maliwauki, Assistant Director
Salisbury Center for Career Services
Trinity Hall
Geneva, NY 14456

Hofstra University

Suzanne Dagger, Director of Career Services
Career Center
140 Hofstra University
M. Robert Lowe Hall
Hempstead, NY 11758

Houston Community College, Northwest

Sam Dibrell, Counselor
Student Services
1550 Fox Lake Drive
Katy Campus/Student Services
Houston, TX 77084

Supriya Sihi, Professor of Chemistry
Physical Sciences
1010 West Sam Houston Parkway North
Town & Country Square Center
Houston, TX 77043

Idaho State University

Troy Kase, Director
Career Center
921 S. 8th Avenue
Stop 8108
Pocatello, ID 83209

Illinois Wesleyan University

Laurie Diekhoff, Assistant Director/Internship Coordinator
Career Center
1211 Park Street
P.O. Box 2900
Bloomington, IL 61702-2900

Indiana University

Ray Clere, Director, Office of Career Services
School of Public and Environmental Affairs
1315 E. 10th Street, SPEA 200
Bloomington, IN 47405

Sarah Dodd, Assistant Director, Office of Career Services
School of Public and Environmental Affairs
1315 E. 10th Street, SPEA 200
Bloomington, IN 47405

Inter American University of Puerto Rico

Angel Rios, Environmental Science Program Coordinator
Science and Technology
Parque Industrial Turpó, Rd # 1
Mercedita, PR 00715

Iowa State University

Say Kee Ong, Professor
Department of Civil, Construction, and
Environmental Engineering
486 Town Engineering Building
Ames, IA 50011

Ithaca College

Susan Allen-Gil, Associate Professor
Environmental Studies/Biology
953 Danby Road
Ithaca, NY 14850

Kristin LiBritz, Employer Relations Coordinator
Office of Career Services
1101 Gannett Center
953 Danby Road
Ithaca, NY 14850

Kansas State University

Beverly Page, Information Specialist
Research & Sponsored Programs
102 Fairchild Hall
Manhattan, KS 66506-1103

Lake City Community College

Merni Stringfellow, Instructor
Allied Health
166 SW Karen Ct
Lake City, FL 32025

Lawrence University

Kristi Hill, Coordinator of Internships and
Volunteer Programs
Career Center
P.O. Box 599
Appleton, WI 54912-0599

Lehigh University

Dork Sahagian, Director
Environmental Initiative
31 Williams Drive
Office 105
Bethlehem, PA 18015

Long Island University, Brooklyn Campus

Amy Rothenberg, Associate Director
Career Services
1 University Plaza
Brooklyn, NY 11201

Amy Rothenberg, Associate Director
Career Services
1 University Plaza
Brooklyn, NY 11201

Loyola University, Maryland

Arthur Sutherland, Director,
National Fellowships Office
4501 N. Charles Street
Baltimore, MD 21210

Loyola University, New Orleans

Eileen Doll, Fellowships Coordinator
University Honors Program
6363 St. Charles Avenue
Box 75
New Orleans, LA 70118

Luther College

James Arthur, Assistant Director of Experiential Education
The Career Center
700 College Drive
Decorah, IA 52101

Madonna University

Ingrid Kroeger, Assistant Director
Career Services
36600 Schoolcraft Road
Livonia, MI 48154-1926

McNeese State University

Frank Phillips, Assistant Professor/Graduate Faculty
Biological & Environmental Sciences
4205 Ryan Street
Lake Charles, LA 70605

Miami University (Ohio)

Catherine Almquist, Assistant Professor
Paper and Chemical Engineering
246 Gaskill Hall
Oxford, OH 45056

Montclair State University

Huan Feng, Professor
Earth and Environmental Studies
1 Normal Avenue
Montclair, NJ 07043

Mount Holyoke College

Joanna Miles, Senior Associate Director
Career Development Center
50 College Street
South Hadley, MA 01075

Muhlenberg College

Patricia Bradt, Associate Professor Emeriti
Environmental Sciences Program
2400 Chew Street, Department of Biology
Allentown, PA 18104-5586

New College of Florida

Jeanne Ware, Director
Office of Research Programs and Services
5800 Bay Shore Road
COH 212
Sarasota, FL 34243-2109

New Jersey City University

Jennifer Jones, Director
Academic Career Planning and Placement
2039 Kennedy Boulevard
Jersey City, NJ 07305

New Jersey Institute of Technology

Taha Marhaba, Professor and Chairman
Civil & Environmental Engineering
323 MLK Boulevard
Newark, NJ 07102

New York University

Mary Leou, Director, Environmental Conservation Education Program
Teaching and Learning
34 Stuyvesant Street, 5th Floor
New York, NY 10003

North Carolina Central University

Donna Hembrick, Interim Director
Career Services
1801 Fayetteville Street
P.O. Box 19585
Durham,, NC 27703

Northeastern University

Diane Ciarletta, Associate Director
Career Services
360 Huntington Avenue
P.O. Box 895
Boston, MA 02117

Northwestern University

Dianne Siekmann, Associate Director
University Career Services
620 Lincoln Street
Evanston, IL 60208

Ohio University

Michele Morrone, Associate Professor
Environmental Health Sciences
School of Health Sciences
E342 Grover Center
Athens, OH 45701

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Appendix C – IRS Publication 970: Tax Benefits for Education

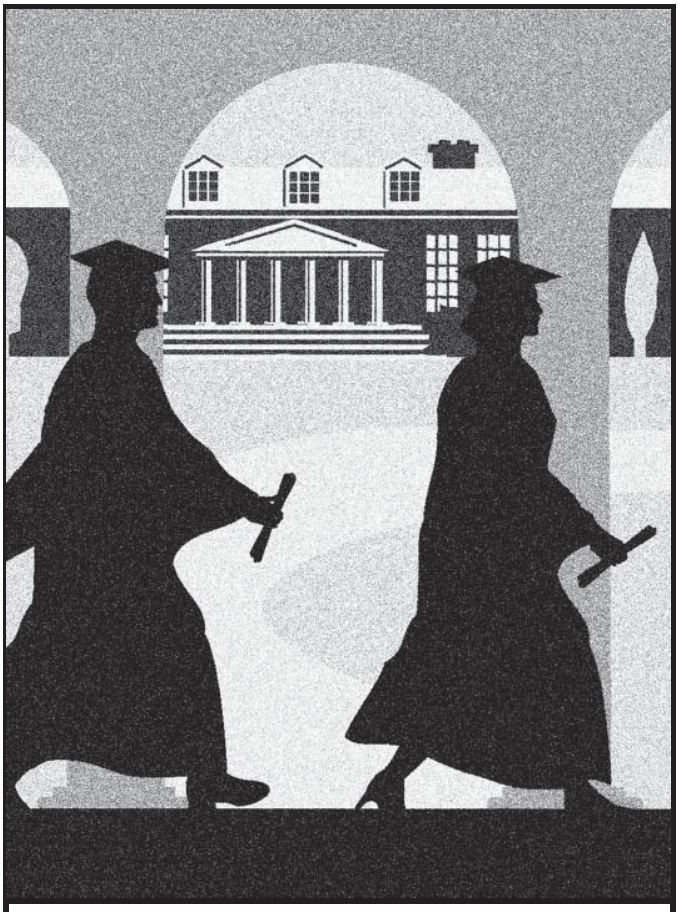
This Appendix includes detailed information and instructions for filing taxes on a fellowship award. This information may be obtained directly on the Internet at ***www.irs.gov***.

Department of the Treasury
Internal Revenue Service

Publication 970
Cat. No. 25221V

Tax Benefits for Education

For use in preparing
2008 Returns



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What's New

Hope and lifetime learning credits. For 2008, the amount of your Hope or lifetime learning credit is gradually reduced (phased out) if your modified adjusted gross income (MAGI) is between $48,000 and $58,000 ($96,000 and $116,000 if you file a joint return). You cannot claim a credit if your MAGI is $58,000 or more ($116,000 or more if you file a joint return). This is an increase from the 2007 limits of $47,000 and $57,000 ($94,000 and $114,000 if filing a joint return). For more information, see chapters 2 and 3.

For 2008, the maximum amount of the Hope credit has increased to $1,800 ($3,600 for a student in a Midwestern disaster area). This is an increase from the 2007 maximum amount of $1,650. For more information, see chapter 2.

Students in Midwestern disaster areas. The following rules apply only to students attending an eligible educational institution in the Midwestern disaster areas in the states of Arkansas, Illinois, Indiana, Iowa, Missouri, Nebraska, and Wisconsin. See Table 3-2 near the end of chapter 3 for a list of counties.

- **Hope credit increased.** The Hope credit for students in Midwestern disaster areas is 100% of the first $2,400 of qualified education expenses and 50% of the next $2,400 of qualified education expenses for a maximum credit of $3,600 per student. See chapter 2 for more information.
- **Lifetime learning credit increased.** The lifetime learning credit rate for students in Midwestern disaster areas is 40% of qualified expenses paid, with a maximum credit of $4,000 allowed on your return. See chapter 3 for more information.
- **Definition of qualified expenses expanded.** The definition of qualified education expenses for the education credits and the tuition and fees deduction is expanded for students in Midwestern disaster areas. See chapters 2, 3, and 6 for more information.

Student loan interest deduction. If you are married and file a joint return, for 2008 the amount of your student loan interest deduction is gradually reduced (phased out) if your modified adjusted gross income (MAGI) is between $115,000 and $145,000. You cannot take a deduction if your MAGI is $145,000 or more. This is an increase from the 2007 limits of $110,000 and $140,000. For more information, see chapter 4.

Contribution of military death gratuity to Coverdell ESA. Families of soldiers killed in the line of duty may contribute, subject to certain limitations, up to 100 percent of survivor benefits to education savings accounts. Under certain conditions this applies retroactively to deaths from injuries occurring on or after October 7, 2001. For more information, see chapter 7.

Education savings bond program. For 2008, the amount of your interest exclusion will be phased out (gradually reduced) if your filing status is married filing jointly or qualifying widow(er) and your modified adjusted gross income (MAGI) is between $100,650 and $130,650. You cannot take the deduction if your MAGI is $130,650 or more. For 2007, the limits that applied to you were $98,400 and $128,400.

For all other filing statuses, your interest exclusion for 2008 is phased out if your MAGI is between $67,100 and $82,100. You cannot take the deduction if your MAGI is $82,100 or more. For 2007, the limits that applied to you were $65,600 and $80,600. For more information, see chapter 10.

Business deduction for work-related education. For 2008:

- If you drive your car to and from school and qualify to deduct transportation expenses, the amount you can deduct for miles driven from January 1, 2008, through June 30, 2008, is 50½ cents per mile. The amount you can deduct for miles driven from July 1, 2008, through December 31, 2008, is 58½ cents per mile. This is up from 48½ cents per mile in 2007. See chapter 12 for more information.
- If your adjusted gross income for 2008 is more than $159,950 ($79,975 if you are married filing separately), your itemized deductions may be limited. See chapter 12 and the instructions for line 29 of Schedule A (Form 1040).

Reminders

Estimated tax. If you have taxable income from any of your education benefits and the payer does not withhold enough income tax, you may need to make estimated tax payments. For more information, see Publication 505, Tax Withholding and Estimated Tax.

Photographs of missing children. The Internal Revenue Service is a proud partner with the National Center for Missing and Exploited Children. Photographs of missing children selected by the Center may appear in this publication on pages that would otherwise be blank. You can help bring these children home by looking at the photographs and calling 1-800-THE-LOST (1-800-843-5678) if you recognize a child.

Introduction

This publication explains tax benefits that may be available to you if you are saving for or paying education costs for yourself or, in many cases, another student who is a member of your immediate family. Most benefits apply only to higher education.

What is in this publication. Chapter 1 explains the tax treatment of various types of educational assistance, including scholarships, fellowships, and tuition reductions.

Two tax credits for which you may be eligible are explained in chapters 2 and 3. These benefits, which reduce the amount of your income tax, are:

- The Hope credit, and
- The lifetime learning credit.

Ten other types of benefits are explained in chapters 4 through 12. With these benefits, you may be able to:

- Deduct student loan interest;
- Receive tax-free treatment of a canceled student loan;
- Receive tax-free student loan repayment assistance;
- Deduct tuition and fees for education;
- Establish and contribute to a Coverdell education savings account (ESA), which features tax-free earnings;
- Participate in a qualified tuition program (QTP), which features tax-free earnings;
- Take early distributions from any type of individual retirement arrangement (IRA) for education costs without paying the 10% additional tax on early distributions;
- Cash in savings bonds for education costs without having to pay tax on the interest;
- Receive tax-free educational benefits from your employer; and
- Take a business deduction for work-related education.

Note. You generally cannot claim more than one of the benefits described in the lists above for the same qualifying education expense.

Comparison table. Some of the features of most of these benefits are highlighted in *Appendix B*, beginning on page 77 of this publication. This general comparison table may guide you in determining which benefits you may be eligible for and which chapters you may want to read.

TIP *When you figure your taxes, you may want to compare these tax benefits so you can choose the method(s) that give you the lowest tax liability. If you qualify, you may find that a combination of credit(s) and deduction(s) gives you the lowest tax.*

Analyzing your tax withholding. After you estimate your education tax benefits for the year, you may be able to reduce the amount of your federal income tax withholding. Also, you may want to recheck your withholding during the year if your personal or financial situation changes. See Publication 919, How Do I Adjust My Tax Withholding, for more information.

Glossary. In this publication, wherever appropriate, we have tried to use the same or similar terminology when referring to the basic components of each education benefit. Some of the terms used are:

- Qualified education expenses,
- Eligible educational institution, and
- Modified adjusted gross income.

Even though the same term, such as qualified education expenses, is used to label a basic component of many of the education benefits, the same expenses are not necessarily allowed for each benefit. For example, the cost of room and board is a qualified education expense for the qualified tuition program, but not for the education savings bond program.

Many of the terms used in the publication are defined in the glossary near the end of the publication. The glossary is not intended to be a substitute for reading the chapter on a particular education benefit, but it will give you an overview of how certain terms are used in discussing the different benefits.

Comments and suggestions. We welcome your comments about this publication and your suggestions for future editions.

You can write to us at the following address:

Internal Revenue Service
Individual Forms and Publications Branch
SE:W:CAR:MP:T:I
1111 Constitution Ave. NW, IR-6526
Washington, DC 20224

We respond to many letters by telephone. Therefore, it would be helpful if you would include your daytime phone number, including the area code, in your correspondence.

You can email us at **taxforms@irs.gov*. (The asterisk must be included in the address.) Please put "Publications Comment" on the subject line. Although we cannot respond individually to each email, we do appreciate your feedback and will consider your comments as we revise our tax products.

Ordering forms and publications. Visit *www.irs.gov/formspubs* to download forms and publications, call 1-800-829-3676, or write to the address below and receive a response within 10 days after your request is received.

Internal Revenue Service
1201 N. Mitsubishi Motorway
Bloomington, IL 61705-6613

Tax questions. If you have a tax question, check the information available on *www.irs.gov* or call 1-800-829-1040. We cannot answer tax questions sent to either of the above addresses.

Useful Items

You may want to see:

Publication

- ❑ **463** Travel, Entertainment, Gift, and Car Expenses
- ❑ **525** Taxable and Nontaxable Income
- ❑ **550** Investment Income and Expenses
- ❑ **553** Highlights of 2008 Tax Changes
- ❑ **590** Individual Retirement Arrangements (IRAs)
- ❑ **4492-B** Information for Affected Taxpayers in the Midwestern Disaster Areas

Form (and Instructions)

- ❑ **1040** U.S. Individual Income Tax Return
- ❑ **1040A** U.S. Individual Income Tax Return
- ❑ **1040EZ** Income Tax Return for Single and Joint Filers With No Dependents
- ❑ **1040NR** U.S. Nonresident Alien Income Tax Return
- ❑ **1040NR-EZ** U.S. Income Tax Return for Certain Nonresident Aliens With No Dependents
- ❑ **2106** Employee Business Expenses
- ❑ **2106-EZ** Unreimbursed Employee Business Expenses
- ❑ **5329** Additional Taxes on Qualified Plans (Including IRAs) and Other Tax-Favored Accounts
- ❑ **8815** Exclusion of Interest From Series EE and I U.S. Savings Bonds Issued After 1989
- ❑ **8863** Education Credits (Hope and Lifetime Learning Credits)
- ❑ **8917** Tuition and Fees Deduction
- ❑ **Schedule A (Form 1040)** Itemized Deductions

See chapter 13, *How To Get Tax Help*, for information about getting these publications and forms.

1.

Scholarships, Fellowships, Grants, and Tuition Reductions

Reminder

Individual retirement arrangements (IRAs). You can set up and make contributions to an IRA if you receive taxable compensation. Under this rule, a taxable scholarship or fellowship is compensation only if it is shown in box 1 of your Form W-2, Wage and Tax Statement. For more information about IRAs, see Publication 590.

Introduction

This chapter discusses the tax treatment of various types of educational assistance you may receive if you are studying, teaching, or researching in the United States. The educational assistance can be for a primary or secondary school, a college or university, or a vocational school. Included are discussions of:

- Scholarships,
- Fellowships,
- Need-based education grants, such as a Pell Grant, and
- Qualified tuition reductions.

Many types of educational assistance are tax free if they meet the requirements discussed here.

Special rules apply to U.S. citizens and resident aliens who have received scholarships or fellowships for studying, teaching, or researching abroad. For information about these rules, see Publication 54, Tax Guide for U.S. Citizens and Resident Aliens Abroad.

Scholarships and Fellowships

A scholarship is generally an amount paid or allowed to, or for the benefit of, a student at an educational institution to aid in the pursuit of studies. The student may be either an undergraduate or a graduate.

A fellowship is generally an amount paid for the benefit of an individual to aid in the pursuit of study or research.

Table 1-1 provides an overview of the tax treatment of amounts received as a scholarship or fellowship (other than amounts received as payment for services). Generally, whether the amount is tax free or taxable depends on the expense paid with the amount and whether you are a degree candidate.

Table 1-1. **Tax Treatment of Scholarship and Fellowship Payments[1]**

Do not rely on this table alone. Refer to the text for complete details.

IF you use the payment for...	AND you are...		THEN your payment is...	
	A degree candidate	Not a degree candidate	Tax free[2]	Taxable
Tuition	X		X	
		X		X
Fees	X		X[3]	
		X		X
Books	X		X[3]	
		X		X
Supplies	X		X[3]	
		X		X
Equipment	X		X[3]	
		X		X
Room	X			X
		X		X
Board	X			X
		X		X
Travel	X			X
		X		X

[1] Does not include payments received for past, present, or future services.
[2] Payments used for any expenses indicated in this column are tax free only if the terms of the scholarship or fellowship do not prohibit the expense.
[3] If required of all students in the course.

Tax-Free Scholarships and Fellowships

A scholarship or fellowship is tax free only if:

- You are a candidate for a degree at an eligible educational institution, and
- You use the scholarship or fellowship to pay qualified education expenses.

Candidate for a degree. You are a candidate for a degree if you:

1. Attend a primary or secondary school or are pursuing a degree at a college or university, or
2. Attend an accredited educational institution that is authorized to provide:
   a. A program that is acceptable for full credit toward a bachelor's or higher degree, or
   b. A program of training to prepare students for gainful employment in a recognized occupation.

Eligible educational institution. An eligible educational institution is one that maintains a regular faculty and curriculum and normally has a regularly enrolled body of students in attendance at the place where it carries on its educational activities.

Qualified education expenses. For purposes of tax-free scholarships and fellowships, these are expenses for:

- Tuition and fees required to enroll at or attend an eligible educational institution, and
- Course-related expenses, such as fees, books, supplies, and equipment that are required for the courses at the eligible educational institution. These items must be required of all students in your course of instruction.

However, in order for these to be qualified education expenses, the terms of the scholarship or fellowship cannot require that it be used for other purposes, such as room and board, or specify that it cannot be used for tuition or course-related expenses.

Expenses that do not qualify. Qualified education expenses do not include the cost of:

- Room and board,
- Travel,
- Research,
- Clerical help, or
- Equipment and other expenses that are not required for enrollment in or attendance at an eligible educational institution.

This is true even if the fee must be paid to the institution as a condition of enrollment or attendance. Scholarship or fellowship amounts used to pay these costs are taxable.

Worksheet 1-1. You can use Worksheet 1-1 to figure the tax-free and taxable parts of your scholarship or fellowship.

Athletic Scholarships

An athletic scholarship is tax free if it meets the requirements discussed above.

Taxable Scholarships and Fellowships

If your scholarship or fellowship does not meet the requirements described earlier, it is taxable. The following amounts received may be taxable.

- Amounts used to pay expenses that do not qualify.
- Payments for services.
- Scholarship prizes.

Each type is discussed below.

Amounts used to pay expenses that do not qualify. A scholarship amount you use to pay any expense that does not qualify is taxable, even if the expense is a fee that you must pay to the institution as a condition of enrollment or attendance.

Payment for services. Generally, you must include in income the part of any scholarship, fellowship, or tuition reduction that represents payment for past, present, or future teaching, research, or other services. This applies even if all candidates for a degree must perform the services to receive the degree.

Exceptions. You do not have to include in income the part of any scholarship or fellowship that represents payment for teaching, research, or other services if you receive the amount under:

Worksheet 1-1. **Taxable Scholarship and Fellowship Income**

Keep for Your Records

1.	Enter your scholarship or fellowship income for 2008 • If you are a degree candidate at an eligible educational institution, go to line 2. • If you are **not** a degree candidate at an eligible educational institution, **stop here**. The entire amount is **taxable**. For information on how to report this amount on your tax return, see *Reporting Scholarships and Fellowships*.	**1.** _____
2.	Enter the amount from line 1 that was for teaching, research, or any other services. (Do not include amounts received for these items under the National Health Service Corps Scholarship Program or the Armed Forces Health Professions Scholarship and Financial Assistance Program.)	**2.** _____
3.	Subtract line 2 from line 1	**3.** _____
4.	Enter the amount from line 3 that your scholarship or fellowship **required** you to use for other than qualified education expenses	**4.** _____
5.	Subtract line 4 from line 3	**5.** _____
6.	Enter the amount from line 5 that was used for qualified education expenses required for study at an eligible educational institution. This amount is the **tax-free part** of your scholarship or fellowship income*	**6.** _____
7.	Subtract line 6 from line 5	**7.** _____
8.	**Taxable part.** Add lines 2, 4, and 7. See *Reporting Scholarships and Fellowships* for how to report this amount on your tax return	**8.** _____

* If you qualify for other education benefits (see chapters 2 through 12), you may have to reduce the amount of education expenses qualifying for a specific benefit by the tax-free amount on this line.

- The National Health Service Corps Scholarship Program, or
- The Armed Forces Health Professions Scholarship and Financial Assistance Program,

and you:

- Are a candidate for a degree at an eligible educational institution, and
- Use that part of the scholarship or fellowship to pay qualified education expenses.

Example 1. You received a scholarship of $2,500. The scholarship was not received under either of the exceptions mentioned above. As a condition for receiving the scholarship, you must serve as a part-time teaching assistant. Of the $2,500 scholarship, $1,000 represents payment for teaching. The provider of your scholarship gives you a Form W-2 showing $1,000 as income. You used all the money for qualified education expenses. Assuming that all other conditions are met, $1,500 of your scholarship is tax free. The $1,000 you received for teaching is taxable.

Example 2. You are a candidate for a degree at a medical school. You receive a scholarship (not under either of the exceptions mentioned above) for your medical education and training. The terms of your scholarship require you to perform future services. A substantial penalty applies if you do not comply. The entire amount of your grant is taxable as payment for services in the year it is received.

Scholarship prizes. If you win a scholarship as a prize in a contest, the scholarship is fully taxable unless you meet the requirements discussed earlier under *Tax-Free Scholarships and Fellowships*.

Reporting Scholarships and Fellowships

Whether you must report your scholarship or fellowship depends on whether you must file a return and whether any part of your scholarship or fellowship is taxable.

If your only income is a completely tax-free scholarship or fellowship, you do not have to file a tax return and no reporting is necessary. If all or part of your scholarship or fellowship is taxable and you are required to file a tax return, report the taxable amount as explained below. You must report the taxable amount whether or not you received a Form W-2. If you receive an incorrect Form W-2, ask the payer for a corrected one.

For information on whether you must file a return, see Publication 501, Exemptions, Standard Deduction, and Filing Information, or your income tax form instructions.

How To Report

How you report any taxable scholarship or fellowship income depends on which return you file.

Form 1040EZ. If you file Form 1040EZ, report the taxable amount on line 1. If the taxable amount was not reported on Form W-2, enter "SCH" and the taxable amount in the space to the left of line 1.

Form 1040A. If you file Form 1040A, report the taxable amount on line 7. If the taxable amount was not reported on Form W-2, enter "SCH" and the taxable amount in the space to the left of line 7.

Form 1040. If you file Form 1040, report the taxable amount on line 7. If the taxable amount was not reported on Form W-2, enter "SCH" and the taxable amount on the dotted line next to line 7.

Schedule SE (Form 1040). Include amounts you receive under a scholarship as pay for your services as an independent contractor in determining your net earnings from self-employment. If your net earnings are $400 or more, you will have to pay self-employment tax. Use Schedule SE, Self-Employment Tax, to figure this tax.

For more information on determining whether you are an independent contractor or an employee, get Publication 15-A, Employer's Supplemental Tax Guide.

Form 1040NR. If you file Form 1040NR, report the taxable amount on line 12. You must generally report the amount shown in Form(s) 1042-S, box 2. See the Instructions for Form 1040NR for more information on reporting fellowship and scholarship income on Form 1040NR.

Form 1040NR-EZ. If you file Form 1040NR-EZ, report the taxable amount on line 5. You must generally report the amount shown in Form(s) 1042-S, box 2. See the Instructions for Form 1040NR-EZ for more information on reporting fellowship and scholarship income on Form 1040NR-EZ.

Other Types of Educational Assistance

The following discussions deal with common types of educational assistance other than scholarships and fellowships.

Fulbright Grants

A Fulbright grant is generally treated as a scholarship or fellowship in figuring how much of the grant is tax free. Report only the taxable amount on your tax return. See *Reporting Scholarships and Fellowships* on this page.

Pell Grants and Other Title IV Need-Based Education Grants

These need-based grants are treated as scholarships for purposes of determining their tax treatment. They are tax free to the extent used for qualified education expenses during the period for which a grant is awarded. Report only the taxable amount on your tax return. See *Reporting Scholarships and Fellowships* on this page.

Payment to Service Academy Cadets

An appointment to a United States military academy is not a scholarship or fellowship. Payment you receive as a cadet or midshipman at an armed services academy is pay for personal services and will be reported to you in box 1 of Form W-2. Include this pay in your income in the year you receive it unless one of the exceptions, discussed earlier under *Payment for services*, applies.

Veterans' Benefits

Payments you receive for education, training, or subsistence under any law administered by the Department of Veterans Affairs (VA) are tax free. Do not include these payments as income on your federal tax return.

If you qualify for one or more of the education benefits discussed in chapters 2 through 12, you may have to reduce the amount of education expenses qualifying for a specific benefit by part or all of your VA payments. This applies only to the part of your VA payments that is required to be used for education expenses.

Qualified Tuition Reduction

If you are allowed to study tuition free or for a reduced rate of tuition, you may not have to pay tax on this benefit. This is called a "tuition reduction." You do not have to include a qualified tuition reduction in your income.

A tuition reduction is qualified only if you receive it from, and use it at, an eligible educational institution. You do not have to use the tuition reduction at the eligible educational institution from which you received it. In other words, if you work for an eligible educational institution and the institution arranges for you to take courses at another eligible educational institution without paying any tuition, you may not have to include the value of the free courses in your income.

The rules for determining if a tuition reduction is qualified, and therefore tax free, are different if the education provided is below the graduate level or is graduate education.

You must include in your income any tuition reduction you receive that is payment for your services.

Eligible educational institution. An eligible educational institution is one that maintains a regular faculty and curriculum and normally has a regularly enrolled body of students in attendance at the place where it carries on its educational activities.

Officers, owners, and highly compensated employees. Qualified tuition reductions apply to officers, owners, or highly compensated employees only if benefits are available to employees on a nondiscriminatory basis. This means that the tuition reduction benefits must be available on substantially the same basis to each member of a group of employees. The group must be defined under a reasonable classification set up by the employer. The classification must not discriminate in favor of owners, officers, or highly compensated employees.

Education Below the Graduate Level

If you receive a tuition reduction for education below the graduate level (including primary, secondary, or high school), it is a qualified tuition reduction, and therefore tax free, only if your relationship to the educational institution providing the benefit is described below.

1. You are an employee of the eligible educational institution.
2. You were an employee of the eligible educational institution, but you retired or left on disability.
3. You are a widow or widower of an individual who died while an employee of the eligible educational institution or who retired or left on disability.
4. You are the dependent child or spouse of an individual described in (1) through (3), above.

Child of deceased parents. For purposes of the qualified tuition reduction, a child is a dependent child if the child is under age 25 and both parents have died.

Child of divorced parents. For purposes of the qualified tuition reduction, a dependent child of divorced parents is treated as the dependent of both parents.

Graduate Education

A tuition reduction you receive for graduate education is qualified, and therefore tax free, if both of the following requirements are met.

- It is provided by an eligible educational institution.
- You are a graduate student who performs teaching or research activities for the educational institution.

You must include in income any other tuition reductions for graduate education that you receive.

How To Report

Any tuition reduction that is taxable should be included as wages in box 1 of your Form W-2. Report the amount from Form W-2, box 1, on line 7 (Form 1040 or Form 1040A) or line 1 (Form 1040EZ).

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