



## EPA'S NATIONAL NETWORK FOR Environmental Management Studies Fellowship Program

## Catalog for 2009

## **Student Fellowship Program**



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



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### **Table of Contents**

Introduction	1
Background	1
How to Use the NNEMS Catalog for 2009	1
How to Obtain Additional Copies	1
For Additional Information	1
Overview of the NNEMS Program	2
Purpose	2
Fellowships	2
Compensation	4
Role of Program Coordinators	4
Disclaimer	4
How to Apply	5
The Application Process	5
Eligibility Requirements	5
Application Materials	6
Submitting Confidential Information	8
Submitting Multiple Applications	8
Applications by Current NNEMS Fellows	8
Submitting Applications for Consecutive Projects	8
Deadline for Applying	8
Mailing Address for Applications	8
Evaluation and Selection of NNEMS Fellows	9
Evaluation of Applications	9
Selection and Notification of Award Status	9
Student Acceptance of Award	9
Notification of Non-Selection	10
Procedures to Initiate and Complete a Fellowship	11
How to Initiate a Fellowship	
How to Complete a Fellowship	12
Guidelines for NNEMS Fellows	13
Payment of the Grant	13
laxes	13
	13
Iravel and Housing	14
Liabilities	14 14
Confidential Business Information	14
Resolution of Disputes	14
Resolution of Disputes	16
	15
Catalog of 2009 Fellowships	17
2009 Fellowships Matrix	18
2009 Fellowships	19
Appendix A – Application Materials	. A-1
Appendix B – NNEMS Program Coordinators	B-1
Appendix C – IRS Publication 970: Tax Benefits for Education	C-1

### 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 the EPA 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 20 to 30 fellowships in 2009 for an estimated total of \$300,000.

#### How to Use the NNEMS Catalog for 2009

The NNEMS Catalog for 2009 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 2009 Fellowships provides detailed descriptions of each of the fellowships offered in 2009, 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 20 to 30 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 five 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.

#### • Computer Programming and Development

Fellowships in this category may include the development of computer software, the development and querying of databases, and the design of programming functions required in laboratory work.

Detailed descriptions of the fellowships offered this year are provided in the section, *Catalog of 2009 Fellowships*, which begins on page 17 and on the NNEMS Web site at **www.epa.gov/enviroed/NNEMS/2009projects.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 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 13 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 2008 GS pay scale by localities is available online at **www.opm.gov/oca/08tables/indexGS.asp**. Please note that rates for 2009 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 2009, 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/2009pc.html**.

Please note: Any eligible student enrolled for academic credit at an accredited<sup>1</sup> 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 2009.

<sup>1</sup> 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 2009 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/2009projects.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 2, 2009**.



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 11 and 12 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 requirements 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.<sup>2</sup>
- 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.

<sup>2</sup> 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 2009. 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<sup>3</sup>, 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 may be submitted in hard copy or electronically through **www.grants.gov** as explained more fully below (only part of the package can be submitted electronically through **www.grants.gov**). Whether submitting an application via hard-copy or electronically, all students who are interested in applying for a NNEMS fellowship must submit a complete application package 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 three photocopies of the transcript are required for each complete application. If submitting multiple applications, 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.
- 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.

Students have the option of submitting their application package in one of the following two ways:

- 1) hard-copy submission submitted via mail, courier, or express delivery.
- 2) partial electronic submission with hard-copy attachments submitted via mail, courier, or express delivery.

<sup>&</sup>lt;sup>3</sup> 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 2009. Please note that EPA is prohibited from awarding fellowships to applicants who have been accepted, but have not enrolled, in an academic program.

Please carefully read the following submission instructions for each option.

#### **Hard-Copy Submission**

Applicants must submit all application materials listed on page 6. 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 three 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 hard-copy NNEMS applications and hard-copy portions of applications submitted electronically must be postmarked by February 2, 2009 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

#### **Partial Electronic Submission**

As an alternative to full hard-copy submission of their application package, students have the option of submitting the SF 424 electronically through **www.grants.gov**. Students must submit the remaining required parts of their application package including the: 1) NNEMS Application Form, 2) résumé, 3) transcripts, 4) NNEMS Reference Form, 5) NNEMS Disclosure and Waiver Statement, and 6) verification of acceptance and/or enrollment in a graduate or Ph.D. program (if appropriate), in hard-copy form via U.S. mail, courier, or express delivery, and this submittal must be postmarked by the application deadline of February 2, 2009. All portions of the hard-copy submission must include one original and three photocopies. Students wishing to exercise the option of partial electronic submission can access the SF 424 for the 2009 NNEMS Program at **www.grants.gov** (by entering the Funding Opportunity Number [EPA-EED-09-01] or the CFDA number [66.952]). The SF 424 must be submitted to **www.grants.gov** by 11:59 p.m. Eastern Standard Time (EST) on February 2, 2009.

The Web site **www.grants.gov** requires an individual registration to submit an application; however, registration is not required to view the NNEMS application package. Please note that the registration process may take up to one business day to complete. To register, go to **www.grants.gov**, click on "Get Registered" on the left side of the page and click on "Individual Registration."

To begin the application process, go to **www.grants.gov** and click on the "Apply for Grants" tab on the left side of the page. Then click on "Apply Step 1: Download a Grant Application Package" to download the compatible Adobe viewer and obtain the application package. To apply through **www.grants.gov** you must use Adobe Reader applications and download the compatible Adobe Reader version (Adobe Reader applications are available to download for free at **www.grants.gov**. For more information on Adobe Reader, please visit the Help section on **www.grants.gov** at **www.grants.gov/help/help.jsp or www.grants.gov/aboutgrants/program\_status.jsp**). Once you have downloaded the viewer, you may retrieve the application package by entering the Funding Opportunity Number, EPA-EED-09-01, or the CFDA number that applies to the announcement (CFDA 66.952), in the appropriate field. You may also be able to access the application package by clicking on the Application button at the top right of the synopsis page for this announcement on **www.grants.gov** (to find the synopsis page, go to **www.grants.gov** and click on the "Find Grant Opportunities" button on the left side of the page and then go to Search Opportunities and use the Browse by Agency feature to find EPA opportunities). To view the full funding announcement, go to **www.epa.gov/education/grantsols.html** or go to **www.grants.gov** and click on "Find Grant Opportunities".

The SF 424 must be transferred through **www.grants.gov** no later than 11:59 p.m. EST on February 2, 2009. All hard-copy portions of applications including: 1) NNEMS Application Form, 2) résumé, 3) transcripts, 4) NNEMS Reference Form, 5) NNEMS Disclosure and Waiver Statement, and 6) verification of acceptance and/or enrollment in a graduate or Ph.D. program (if appropriate), must be postmarked on or before February 2, 2009.

On the electronic "Grant Application Package" page, students should enter their name, starting with last name, in the "Application Filing Name" field.

#### SF 424 - Application for Federal Assistance

Complete the SF 424 following the instructions included in *Appendix A, Application Materials*. For additional guidance, please review the sample completed SF 424 before completing the form.

Once the application package has been completed, the "Submit" button will become active. Students should save their completed application package with two different file names before submission to avoid having to re-create the package should they experience submission problems. Close all other software before attempting to submit the application package.

If a student experiences submission problems, he or she should reboot his or her computer (turning the power off may be necessary) and re-attempt the submission. If a student continues to experience submission problems, he or she should contact **www.grants.gov** for assistance (phone: 1-800-518-4726; e-mail at **www.grants.gov/help/help.jsp**).

Applications submitted through **www.grants.gov** will be time and date stamped electronically.

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.

#### **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 in writing 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. Separate, complete application packages (one original and three copies) must be submitted for each fellowship project. 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 2009. The existing fellowship, however, must be completed and the fellowship ended (see *Procedures to Initiate and Complete a Fellowship* on pages 11 and 12) 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 electronic or hard-copy submissions of applications for 2009 fellowships is February 2, 2009**. All hard-copy materials must be postmarked on or before February 2, 2009 to be eligible for consideration. Applications postmarked after February 2, 2009 will not be accepted. Students wishing to exercise the option of partial electronic submission must submit the SF 424 to **www.grants.gov** by 11:59 p.m. EST on February 2, 2009.

#### **Mailing Address for Applications**

Hard-copy 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

#### **Confirmation of Application Receipt**

Applications received with a postmark on or before February 2, 2009 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 2009 fellowships is February 2, 2009. All hard-copy materials must be postmarked on or before February 2, 2009 to be eligible for consideration.

### **Evaluation and Selection of NNEMS Fellows**

#### **Evaluation of Applications**

**US EPA ARCHIVE DOCUMENT** 

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 11 and 12.

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 11 and 12 for more details).

Once a student has accepted a fellowship offer, 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 2009 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 2009 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. Information on assistance agreement competition-related dispute procedures will also be included.



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.

#### Step 1: Complete and Submit the Fellowship Application Packet Forms

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

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 Grant Administration Division (GAD) for approval and award of the grant. All the information that the student provided will be verified by GAD 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 GAD. 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

Approximately 6 weeks after the Fellowship Application Packet forms have been submitted to EPA, the student will receive 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 GAD.

• 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 GAD at the address provided on the form within 3 weeks of receipt or within a timeframe approved by GAD. 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 Within 2 weeks

of receipt

Up to 6 weeks following receipt

of the Fellowship

**Application Packet** 

by EPA

Within 3 weeks of receipt

	DEADLINES
<ul> <li>Step 3 Continued</li> <li>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 GAD. Once the signed Fellowship Activation Notice is received, GAD 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 GAD within 90 days of the start of the fellowship, EPA will initiate action to terminate the fellowship agreement.</li> <li>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."</li> </ul>	First day of fellowship Last day of fellowship
<b>Step 4: Begin the Fellowship</b> 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 second strength of an NINIEAAC following the coll NINIEAAC following and accurate at the	
At the completion of a ININEMS fellowship, all ININEMS fellows are required to:	DEADLINES
<b>Step 1: Submit a Final Report of the Project</b> 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
<ul> <li>Step 3: Retain All Records</li> <li>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.</li> <li>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.</li> </ul>	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 2009 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.<sup>3</sup>
- 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://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/05-1371.htm*.

<sup>&</sup>lt;sup>3</sup> 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 2009 and will be taking a year off before attending graduate school in the Fall of 2010. Am I eligible to apply for a fellowship scheduled to take place during the Summer of 2009?
- A No, only students who are currently enrolled in undergraduate or graduate school at the time of fellowship award are eligible.
- **Q** I am interested in the NNEMS Fellowship Program, but no projects are being offered this year in the state in which I live. May I apply for projects outside my home state?
- A Yes, you may apply for fellowships located outside your home state, but EPA will not provide funding to cover transportation or housing costs.
- **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 2009 program is February 2, 2009.
- **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 received 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 three 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** 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 2, 2009 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 student's address provided on the NNEMS Application Form.
- 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 the Grants Administration Division (see *Procedures to Initiate and Complete a Fellowship* on page 11). 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 the Grants Administration Division 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/2009projects.html. A response to your question will be provided by e-mail as soon as possible.

16

**US EPA ARCHIVE DOCUMENT** 

### Catalog of 2009 Fellowships

Described on the following pages are the NNEMS fellowships being offered in 2009. As discussed in detail in the *Overview of the NNEMS Program* section, the fellowships are organized under five 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.

#### • Computer Programming and Development

Fellowships in this category may include the development of computer software, the development and querying of databases, and the design of programming functions required in laboratory work.

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 2009 the project number, category, desired educational level of the student, location, and duration of the project.



	Desired Level of Education						2009 Fellowships Matrix					
	c	ore			e Student	udent						
	ma	om	L	L.	nat	St			Preferre	d Project	Period	
Project	resh	hqo	oiur	enio	rad	Ч. Ч.	Project		2009			
Number	Ē	Ň	-	Ŵ	U	•	Location	June	JUIY	Aug.	Dec.	2010
2009-101					•	•	EPA Headquarters	ianon, and				
2007-101							Research Triangle Park, NC					
2009-102			•	•	•		EPA Headquarters - Arlington, VA					
2009-103					•		EPA Headquarters - Research Triangle Park, NC					
2009-104			•	•	•		EPA Region 3 - Philadelphia, PA					
2009-105			•	•	•		EPA Region 3 - Philadelphia, PA					
2009-106					•	•	EPA Headquarters - Research Triangle Park, NC					
2009-107			•	•	•	•	EPA Headquarters - Research Triangle Park, NC					
2009-108			•	•	•		EPA Headquarters - Washington, DC			12/1/2009		
2009-109			•	•	•	•	EPA Region 5 - Chicago, IL					
						En	vironmental Management o	and Admin	istration			
2009-201	•	•	•	•	•		EPA Region 10 - Seattle, WA					
2009-202			•	•			EPA Region 3 - Philadelphia, PA					
2009-203	•	•	•	•			EPA Region 3 - Philadelphia, PA					
2009-204			•	•	•	•	EPA Region 10 - Seattle, WA				2/28	8/2010
2009-205			•	•			EPA Headquarters - Washington, DC				12/15/2009	
2009-206			•	•	•	•	EPA Region 2 - New York City, NY					
2009-207			•	•	•	•	EPA Region 3 - Philadelphia , PA					
							Environmental S	cience				
2009-301			•	•	•		EPA Region 3 - Philadelphia , PA					
2009-302			•	•	•		EPA Region 3 - Philadelphia , PA					
2009-303			•	•	•		EPA Headquarters - Arlington, VA					
2009-304			•	•	•	•	EPA Headquarters - Arlington, VA					
2009-305			•	•	•	•	EPA Region 5 - Chicago, IL		1			
2009-306			•	•	•	•	EPA Region 5 - Chicago, IL					
2009-30/			•	•	•		Era Kegion I - Narragansett, Kl					
2000 401								innunicatio				
2009-401			•	•			EPA REGION Z - INEW YORK CITY, NY					
2009-402							CFA Headquarters - Arlington, VA					
2009-403							Research Triangle Park, NC					

#### **Project Title:**

Researching Innovative Air Quality Benefits Estimation Methods

#### **Sponsoring Office:**

Health and Environmental Impacts Division, Air Benefit Cost Group

#### **Office Mission:**

The Air Benefit Cost Group (ABCG) is responsible for providing scientifically defensible and transparent economic assessments in a policy relevant timeframe; developing methodologies, models, and applied tools to provide scientifically defensible and transparent economic analysis to EPA and other stakeholders in a policy-relevant time frame; and analyzing costs, benefits,

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

**Project Location:** EPA Headquarters - Research Triangle Park, NC

**Preferred Project Period:** 6/1/2009 to 9/1/2009

**Project Officer:** Ronald Evans

and economic impacts of air quality management strategies, programs, and regulations developed throughout EPA. Additional responsibilities include participating in Agency-wide assessments of the costs, benefits, and economic impacts of environmental programs and development of policies, methodologies, and models for this purpose; performing and documenting a wide range of economic analyses to address social cost and benefits, economic impacts, regulatory flexibility (such as impacts on small entities and Tribes), information collection requests, and environmental justice; and collaborating with researchers throughout the Agency as well as in academic, research institutes and other government organizations to improve the science of applied environmental economics. Finally, ABCG is assigned to provide technical support and expertise on benefit, cost, and economic impact models to regional, state, and local agencies, international agencies, Tribal agencies, and the public on the benefits and costs of improving air quality.

#### **Project Overview:**

The process of estimating the human health and environmental 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 benefits from a reduction in air pollution. The NNEMS fellow will explore innovative and novel benefits of 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; and new approaches to estimating the baseline incidence of certain adverse health effects.

#### **Project Goals:**

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

#### Final Product of the Project:

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

#### **Project Title:**

Schools Chemical Cleanout Campaign (SC3) Education Sustainability Project

#### **Sponsoring Office:**

Office of Solid Waste

#### **Office Mission:**

Nearly everything we do leaves behind some kind of waste. Households create ordinary garbage, and industrial and manufacturing processes create

**Desired Level of Education:** Junior to Graduate Student

**Project Location:** EPA Headquarters - Arlington, VA

**Preferred Project Period:** 6/1/2009 to 8/31/2009

**Project Officer:** Rhonda Minnick

create ordinary garbage, and industrial and manufacturing processes create solid and hazardous waste. The Office of Solid Waste's mission is to protect human health and the environment by ensuring responsible national management of hazardous and nonhazardous waste. Our goals are to: (1) conserve resources by reducing waste; (2) prevent future waste disposal problems by writing result-oriented regulations; and (3) clean up areas where waste may have spilled, leaked, or been improperly disposed of.

This project has

been canceled.

Do not apply

#### **Project Overview:**

The Office of Solid Waste began work to encourage responsible chemical management in K-12 schools in 2004, when it created the SC3. The goals of SC3 are: (1) raising awareness of the problem of chemical mismanagement in schools; (2) encouraging cleanouts of unnecessary and dangerous chemicals; and (3) instituting sustainable responsible chemical management practices in every K-12 school in the United States.

Teachers are critical in creating and maintaining responsible chemical management in schools. Reaching university students that are planning to teach in K-12 schools (pre-service teachers) would better prepare them to responsibly use, store, and dispose of chemicals used in classrooms. These practices will eventually change behaviors in the school and contribute to a sustainable responsible chemical management program. Very little pre-service teacher training is available on responsible chemical management. When this training is available, it is usually presented in the context of general science laboratory safety. To fill this gap, the SC3 program is developing strategies and materials to encourage pre-service teacher training for science, art, vocational, and other teachers. In 2009, SC3 will focus on pre-service teacher education, with the aim of finding answers to the following questions: (1) Are current responsible chemical management curricula adequate for training pre-service teachers? (2) What elements of responsible chemical management are or should be included in the curricula? (3) Should the SC3 program create and promote a model curriculum; modify and promote existing curricula; or merely promote existing curricula? (4) What outreach and networking mechanisms will best promote adoption of pre-service teacher curricula in colleges and universities?

The fellow will be involved in the following tasks: (1) meet with EPA's SC3 champions, educational experts, teachers and students, and other federal agencies to discuss the necessary components of responsible chemical management curricula and review information gathered through interviews, focus groups, and other research; (2) collaborate with related membership organizations, such as the Association of Science Teacher Education, the National Science Teachers Association, the National Education Association, and the National Art Education Association, to assess the need for pre-service teacher training in responsible chemical management; (3) research materials aimed at preservice teachers that promote responsible chemical management training in the form of outlets such as educational newsletters, SC3 and other Web sites, iPod downloads, blogs, and other media outlets; and (4) research the availability of internship programs in other federal agencies that emphasize responsible chemical management. The fellow may also be involved in other SC3 projects.

#### **Project Goals:**

The fellow will acquire and enhance his or her knowledge about problems caused by outdated, unknown, or excessive amounts of dangerous chemicals when they are found in the sensitive population of students in K-12 schools. The fellow will also gain valuable insight into the creation of policies and practices that prevent future accumulations of chemicals and encourage responsible management of necessary chemicals. In addition, the fellow will obtain valuable insight into the role of various stakeholders in the process of evaluating, modifying, or creating environmental teaching curricula.

#### **Final Product of the Project:**

The fellow will develop case studies and a final presentation to compare existing chemical management curricula with the curricular components identified through interviews, focus groups, and other research.



**Project Title:** 

Ecosystem Toxic Multimedia Endpoints

#### **Sponsoring Office:**

Office of Air Quality Planning and Standards

#### **Office Mission:**

The Office of Air Quality Planning and Standards' (OAQPS) primary mission 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 **Desired Level of Education:** Graduate Student

**Project Location:** EPA Headquarters - Research Triangle Park, NC

**Preferred Project Period:** 6/1/2009 to 8/21/2009

**Project Officer:** Randall Waite

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 the status of air pollution and the progress made in reducing it.

#### **Project Overview:**

Air toxics, once they have been deposited on the landscape, can affect many different wildlife species living in or on various media. The fellow selected will design and implement a literature review research project to identify toxic multimedia endpoints for ecosystem pollutants of concern for various classes of wildlife. The fellow will meet with experts across EPA and government, including in the Office of Air and Radiation and the Office of Research and Development, as well as experts in academia, to gather relevant peer-reviewed data and literature.

#### **Project Goals:**

The fellow will gain critical insight into the state of the science and potential policy applications of the science and be exposed to a range of federal research and policy perspectives.

#### **Final Product of the Project:**

The fellow will develop a final report and presentation to summarize the state of the science on ecosystem toxic multimedia endpoints.

#### 2009-104 **PROJECT NUMBER:**

#### **Project Title:**

Clean Water Act (CWA) Section 404 Regulatory Process in Region 3 and Significant Nexus Determinations

#### **Sponsoring Office:**

Office of Environmental Programs

#### **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

**Desired Level of Education:** Junior to Graduate Student

**Project Location:** EPA Region 3 - Philadelphia, PA

**Preferred Project Period:** 6/1/2009 to 8/28/2009

**Project Officer:** Jessica Martinsen

integrates regulatory responsibilities and activities in innovative ways to maximize environmental benefits.

#### **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 CWA establishes a program to regulate the placement of dredge or fill material into waters of the United States. The regulatory program is jointly administered by the EPA and the U.S. Army Corps of Engineers (USACE). 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 NNEMS fellow will conduct research related to guidance issued by USACE and EPA Headquarters as a result of the 2006 Rapanos Decision from the Supreme Court. The fellow will work with members of the Aquatic Resource Team (ART) and conduct research to assess the significant nexus of smaller streams and wetlands to traditionally navigable waters. In addition, the fellow will conduct research on case-specific project impacts and develop criteria to evaluate the environmental effects of these impacts.

#### **Project Goals:**

The fellow will acquire and enhance their knowledge in wetland science and what the federal and state governments do to regulate those wetlands and oceans. The fellow will also obtain valuable insight into the role of various stakeholders in the process. The experience will enhance the fellow's understanding of environmental laws, regulations, and policies.

#### **Final Product of the Project:**

As a result of the on-hands training the fellow receives, he or she will develop a compendium of permit review and enforcement resources and information in support of significant nexus determinations.

#### **Project Title:**

The National Environmental Policy Act (NEPA) Process and the Use of Green Infrastructure Assessment Approach

#### **Sponsoring Office:**

Office of Environmental Programs

#### **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:**

**Desired Level of Education:** Junior to Graduate Student

**Project Location:** EPA Region 3 - Philadelphia, PA

**Preferred Project Period:** 6/1/2009 to 8/28/2009

**Project Officer:** Jessica Martinsen

NEPA requires that any project involving a federal action (such as a federal transportation project) use a systematic, interdisciplinary approach to evaluate the action and alternatives to the action. This evaluation takes into consideration environmental, social, and economic issues and is usually summarized in a document called an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). EPA is required under Section 309 of the Clean Air Act to review and rate all EIS documents.

The fellow will interact with the NEPA Team as it develops a Strategic Conservation Transportation Plan. The fellow will research Green Infrastructure assessment approaches that integrate priorities for transportation and conservation planning. The Green Infrastructure assessment uses strategically planned and managed networks of natural lands, working landscapes, and other open spaces that conserve ecosystem values and functions and provides associated benefits to human populations. In addition, the fellow will conduct research related to specific EISs issued by project proponents, such as energy-related projects (nuclear power plan installations, liquid natural gas, wind, and electric transmission line proposals). The fellow will evaluate significant environmental impacts, including the cumulative affects of these projects in EPA Region 3.

#### **Project Goals:**

The fellow will acquire and enhance his or her knowledge of environmental science, including Green Infrastructure ecology, wetland science, hydrology, air conformity, and particulate impact analysis and stormwater modeling. The fellow will obtain valuable insight into the role of various stakeholders in the process and the impacts of these projects on communities. Finally, the experience will enhance the fellow's understanding of environmental laws, regulations, and policies.

#### Final Product of the Project:

The fellow will conduct research on the Strategic Conservation Transportation Plan and develop a cumulative effects study of the significant environmental impacts of major projects, ranging from energy to transportation.

#### **Project Title:**

Climate-Air Quality Linkages

#### **Sponsoring Office:**

Office of Air and Radiation (OAR), Office of Air Quality Planning and Standards

#### **Office Mission:**

The primary mission of the 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 **Desired Level of Education:** Graduate Student to Ph.D. Student

**Project Location:** EPA Headquarters - Research Triangle Park, NC

**Preferred Project Period:** 6/1/2009 to 8/31/2009

**Project Officer:** Lourdes Morales

with monitoring and controlling air pollution; makes information about air pollution available to the public; and reports to Congress the status of air pollution and the progress made in reducing it.

#### **Project Overview:**

As we move forward with states, local agencies, and tribes to develop and implement programs to improve air quality, and as EPA and the U.S. proceed to address climate change, it is important to have a good understanding of the interactions among global climate, air quality, and regional climate. This knowledge of linkages between climate and air quality will help EPA and its partner agencies to develop effective programs to further improve air quality while reducing pollution that contributes to climate change.

The fellow selected will design and implement a research project involving linkages between climate and air quality and related policy issues. Relevant policy questions that require further investigation include: (1) How might air quality management strategies need to be adapted in a changing climate? (2) What quantifiable effects will U.S. air quality programs have on climate, and in turn, on air quality? (3) What opportunities are there to devise and implement strategies that reduce climate gases and air pollutants simultaneously? (4) How can we improve capacity for integrated climate and air quality assessments (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? The fellow will meet with experts across EPA (including those 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 with its corresponding research, and potential policy implications.

#### **Final Product of the Project:**

The fellow will be expected to develop a final report and to make presentations summarizing the research and results of this effort to EPA staff and management, as well as others, as appropriate.

#### **Project Title:**

International Air Quality Analysis and Strategy Development

#### **Sponsoring Office:**

Office of Air Quality Planning and Standards

#### **Office Mission:**

As a national EPA headquarters office located in Research Triangle Park, North Carolina, 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, **Desired Level of Education:** Junior to Ph.D. Student

**Project Location:** EPA Headquarters - Research Triangle Park, NC

**Preferred Project Period:** 6/1/2009 to 8/28/2009

**Project Officer:** Richard Crume

and reports to Congress 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. Many countries depend on the U.S. Environmental Protection Agency for guidance in assessing air pollution problems and developing air quality management programs. Additionally, EPA participates in treaty negotiations, workshops, and conferences concerned with global air pollution. The Office of Air Quality Planning and Standards (OAQPS) supports EPA's international mission in a number of areas, including participating in negotiations under the Long Range Transboundary Air Pollution Convention; air quality management capacity building in China, Mexico, and other developing countries; preparing air quality training materials and programs for international audiences; and conducting modeling, monitoring, and data analysis to address transboundary transport concerns. Guided by the selected fellow's interests and background, the fellow will work with OAQPS staff to: (1) analyze international air quality information and forecasting system. This work will include reviewing relevant reports and technical papers and participating in meetings with technical and policy staff inside and outside EPA.

#### **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.

#### Final Product of the Project

The fellow will prepare a final report or briefing addressing international air pollution issues, including action items and recommendations for further development.

#### **Project Title:**

Brownfields and Land Revitalization Program Development

#### **Sponsoring Office:**

Office of Solid Waste and Emergency Response/Office of Brownfields and Land Revitalization

#### **Office Mission:**

The mission of the Brownfields and Land Revitalization Program is to restore land and other natural resources into sustainable community assets that

maximize economic, ecological, and social reuses and ensure protection of human health and the environment.

#### **Project Overview:**

The mission of the Brownfields and Land Revitalization Program is to restore land and other natural resources into sustainable community assets that maximize economic, ecological, and social reuses and ensure protection of human health and the environment. The priorities of this project are to research sustainable redevelopment solutions and environmentally protective cleanup technologies. The project will include consideration of energy-efficient, and carbon-reducing, alternatives to ensure minimum impacts to environmental resources and minimum contributions to global climate change. The fellow will participate in demonstration projects and research outreach and education materials, including Web-based tools.

#### **Project Goals:**

The fellow will learn about sustainable redevelopment solutions and environmentally protective cleanup technologies and develop a comprehensive understanding of EPA's cross-program sustainable redevelopment efforts.

#### **Final Product of the Project:**

The fellow will develop a report on his or her research related to sustainable redevelopment solutions and environmentally protective cleanup technologies.



**Project Location:** EPA Headquarters - Washington, DC

**Preferred Project Period:** 6/1/2009 to 12/1/2009

**Project Officer:** Sven-Erik Kaiser

#### **Project Title:**

**Disproportionality Analysis** 

#### **Sponsoring Office:**

Office of Enforcement and Compliance Assurance, Region 5

#### **Office Mission:**

Region 5's Office of Enforcement and Compliance Assurance (OECA) coordinates enforcement and compliance assurance policy and guidance, regional and state enforcement planning, regional multi-media enforcement

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

**Project Location:** EPA Region 5 - Chicago, IL

**Preferred Project Period:** 6/1/2009 to 8/31/2009

**Project Officer:** Alan Walts

**Project Overview:** Executive Order 12898 requires EPA and other federal agencies to identify and address "disproportionately high and adverse human health or environmental effects" as part of their mission. EPA has built a strong consensus on how to evaluate and characterize the "adversity" of risk (for example, cancer risk as a probability; hazard indices for noncancer risk). This consensus is the basis for a wide range of risk management decisions made by EPA and is an important source of information to support community-based efforts to prioritize and reduce risk. However, there is no comparable consensus, within or outside the EPA, on: (1) how and when to measure the disproportionality of risk; or (2) how to consider this disproportionality when characterizing risk and making risk management decisions – that is, what is "significant" disproportionality. The NNEMS fellow will review academic and federal agency approaches to assessing and considering disproportionately. Based on literature review and discussion with academics and practitioners, the fellow will evaluate current approaches for consistently measuring and characterizing disproportionality in the context of risk-based decision-making.

National Environmental Policy Act (NEPA) programs.

#### **Project Goals:**

The fellow will learn about risk assessment, risk management, and environmental justice. The fellow will also gain experience in balancing theoretical and practical research concerns, by considering an issue with both scientific and sociopolitical implications, and one that raises questions of both analysis and judgment.

actions, and data management and reporting. OECA also implements the Environmental Justice, Innovation, and

#### **Final Product of the Project:**

The fellow will develop a report and a final presentation that: (1) discusses one or more approaches to disproportionality assessment, including examples of application in one or more representative scenarios; (2) evaluates the approaches, with particular attention to how they balance factors related to practicability (such as ease of use, cost, level and type of expertise required, and responsiveness to community needs) and defensibility (for example, analytical rigor or scientific peer acceptance); and (3) proposes future directions and needs for further development of disproportionality analysis.

#### **Project Title:**

Risk Management Program Compliance Assistance

#### **Sponsoring Office:**

EPA 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.

#### **Project Overview:**

The fellow will have an opportunity to participate in many aspects of the Clean Air Act Risk Management Program (RMP) program. As part of this program, the fellow will research current outreach and compliance assistance information and evaluate what additional information would benefit prevention of hazardous chemical releases. The project may also involve researching human health and environmental impacts from accidental releases. The fellow will interact with other federal, state, and local government agencies and have an opportunity for limited travel. In addition, the fellow will be exposed to the broader mission of the Emergency Response Unit, including the Emergency Planning and Community Right-to-Know Act (EPCRA), the Oil Pollution Act (OPA), removal cleanups, and first-response activities.

#### **Project Goals:**

The fellow will gain knowledge of EPA's RMP, EPCRA, OPA, and other emergency response programs. The fellow will enhance his or her skills in writing, communication, and presentation and participate in briefings and meetings. The fellow will understand the challenges posed to EPA and the regulated community as they relate to enforcing and complying with the RMP and prioritizing methods for enhanced compliance assistance.

#### **Final Product of the Project:**

The fellow will develop a report containing visuals that summarizes his or her research.

**Desired Level of Education:** Freshman to Graduate Student

**Project Location:** EPA Region 10 - Seattle, WA

**Preferred Project Period:** 6/1/2009 to 8/21/2009

**Project Officer:** Sally Hanft

#### **Project Title:**

Local Government Initiating Conservation for Sustainability (LOGICS) Expansion

#### **Sponsoring Office:**

Office of Environmental Innovation

#### **Office Mission:**

The Office of Environmental Innovation (OEI) is the tool testing and experimentation works of Region 3. The overall OEI approach is to identify

**Desired Level of Education:** Junior to Senior

**Project Location:** EPA Region 3 - Philadelphia, PA

**Preferred Project Period:** 6/1/2009 to 8/14/2009

**Project Officer:** Lorna Rosenberg

new tools and procedures, prototype their use within Region 3, evaluate their effectiveness, and develop a long-term program implementation and transfer plan. In other words, once a tool or program is up, working, and found to be effective, it should be handed off to program offices, and new tools should be explored. OEI uses science, program feedback, benchmarks of other organizations, and environmental information to direct its development of new tools and processes that improve our outcomes, efficiency, and address emerging issues. OEI is expected to be creative and a think tank. Program offices and personnel surely have experience and are themselves innovative; but OEI is expected to have a region-wide, priority-based innovative approach to using new tools to achieve outcomes.

#### **Project Overview:**

In 2007, Region 3 launched the LOGICS initiative to work with local governments encouraging energy efficiency, green purchasing, and green buildings. It began with a pilot test in South East Pennsylvania where a group of non-profit and government partners provided educational programs and technical resources to local governments to address the three target issues. Numerous PowerPoint presentations and workshops were delivered and follow-up with interested local governments has been ongoing. A grant was awarded to the Pennsylvania Technical Assistance Program (PennTAP), which is providing free energy audits to various local communities. Significant progress has been achieved in Southeast Pennsylvania, and LOGICS is looking to replicate the success in the Pittsburgh area, Lehigh Valley, West Virginia, and Central Pennsylvania. Under this project, the fellow will work with LOGICS teams consisting of EPA and local partners in the Pittsburgh area, Lehigh Valley, West Virginia, and Central Pennsylvania on the needs of geographic area and measurements of success will be established. The fellow will research technical resources from the federal government, state government, and other sources to learn about energy efficiency, green purchasing, and green buildings. The fellow will also analyze environmental measurement goals, such as expected greenhouse gases reduced, electricity saved, and gallons of water diverted.

#### **Project Goals:**

The fellow will: (1) develop self-starting skills that will be used to research energy efficiency, green purchasing, and green buildings; (2) have opportunities to create PowerPoint presentations based on research; (3) have opportunities to participate in LOGICS team meetings; (4) learn about programs and efforts to assist local governments in reducing their environmental footprint to become more sustainable; and (5) meet individuals and learn about programs from government agencies, environmental non-profits, and state and local governments who will support LOGICS.

#### Final Product of the Project:

The fellow will prepare a binder containing all research information and conduct a presentation to the Regional Senior Managers on the research.

#### **Project Title:**

Leadership in Energy and Environmental Design (LEED) Existing Building Submittal for Fort Meade, Maryland, Environmental Science Center

#### **Sponsoring Office:**

Office of Environmental Innovation

#### **Office Mission:**

The Office of Environmental Innovation (OEI) is the tool testing and experimentation works of Region 3. The overall OEI approach is to identify

**Desired Level of Education:** Freshman to Senior

**Project Location:** EPA Region 3 - Philadelphia, PA

**Preferred Project Period:** 6/1/2009 to 8/15/2009

**Project Officer:** Lorna Rosenberg

new tools and procedures, prototype their use within Region 3, evaluate their effectiveness, and develop a long-term program implementation and transfer plan. In other words, once a tool or program is up, working, and found to be effective, it should be handed off to program offices, and new tools should be explored. OEI uses science, program feedback, benchmarks of other organizations, and environmental information to direct its development of new tools and processes that improve our outcomes, efficiency, and address emerging issues. OEI is expected to be creative and a think tank. Program offices and personnel surely have experience and are themselves innovative; but OEI is expected to have a region-wide, priority-based innovative approach to using new tools to achieve outcomes.

#### **Project Overview**

EPA's Environmental Science Center, located at Fort Meade, Maryland, is working to register its Laboratory and Administrative Office building with the LEED Existing Building certification. Based in the Region 3 office, work is being performed with the Director of Facilities and "Green Team" in Fort Meade to: (1) gather and analyze energy data; (2) create policies for recycling and materials management, water efficiency, renewable energy, indoor air quality, and environmental innovation; and (3) compile and complete the submittal to the U.S. Green Building Council for LEED certification. Under this project, the fellow will conduct research on the LEED Existing Building program and recycling and materials management, water efficiency, renewable energy, indoor air quality, and environmental innovation. Occasionally, travel will be required to Fort Meade to conduct research, but most work will occur in the Philadelphia Regional Office.

#### **Project Goals:**

The fellow will develop self-starting skills while working with the facilities director, regional supervisor, and Green Team to conduct research on the LEED Existing Building program and recycling and materials management, water efficiency, renewable energy, indoor air quality, and environmental innovation.

#### Final Product of the Project:

The fellow will prepare on report on his or her research and make a presentation to senior management.
# **Project Title:**

Sustainable Materials Management in the Pacific Northwest

# **Sponsoring Office:**

Office of Air, Waste and Toxics, Region 10

# **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:**

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

**Project Location:** EPA Region 10 - Seattle, WA

**Preferred Project Period:** 6/1/2009 to 2/28/2010

**Project Officer:** Lisa McArthur

The NNEMS fellow will support the Waste Reduction, Resource Conservation, and Stewardship team in its mission to support more sustainable material use and waste management in the Pacific Northwest and Alaska. The fellow will work with the team and develop case studies of effective sustainability, recycling, and green building practices. The fellow will also participate in a Web-based educational series on effective sustainability, recycling, and green building practices and programs. In addition, the fellow will 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 fellow will gain understanding in a new and exciting area of work - sustainable materials management. The fellow will understand the impact that materials management can have on our climate footprint and will be able to translate that 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 Title:**

**Research Regulatory Fellow** 

# **Sponsoring Office:**

Office of Water, Office of Ground Water and Drinking Water, Resource Management and Evaluation Staff

## **Office Mission:**

The Office of Ground Water and Drinking Water (OGWDW), together with states, tribes, and our many partners, will protect public health by ensuring

**Desired Level of Education:** Junior to Senior

**Project Location:** EPA Headquarters - Washington, DC

**Preferred Project Period:** 6/15/2009 to 12/15/2009

**Project Officer:** Tracey Ward

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safe drinking water and protecting ground water. We will accomplish this mission using the following principles: prevention as an effective approach; risk-based priority setting for new and existing regulations, based on sound science, quality data in reliable databases, and quality methods and standards; partnership and involvement of public and private organizations, citizens, and communities; flexibility and effectiveness in implementation while maintaining a national public health baseline; accountability of all parties through public participation and accessible information; and results that are documented and presented clearly.

# **Project Overview:**

Evidence suggests that the nation's drinking water supply is shrinking. Drinking water is what systems pump and treat from aquifers, natural reservoirs below the earth's surface. Although water is used on a daily basis for many activities, the amount generally has not been quantified. The availability of water is an issue that has many socioeconomic consequences, such as health, economic, and environmental considerations. Water availability is a topic of national interest because of its importance at both the state and federal levels of authority. Since the total quantity of water is unknown, it is important to manage this resource wisely not only through conservation practices, but also through policy and regulation. The Prevention Branch is seeking a fellow to research the question of "How much water is there?" and "How are states ensuring that drinking water supplies will be available for future generations?" Understanding the state water management practices in the use of water at the state and local municipality levels will provide a better understanding of how the resource is managed. To evaluate water management, the NNEMS fellow will use Internet resources and contacts to construct state profiles.

# **Project Goals:**

The fellow will use research to understand state regulatory information on management of ground water. The fellow will gain knowledge of how state and local municipalities regulate natural resources, and how the Office of Water conducts research through implementation of the Safe Drinking Water Act.

#### **Final Product of the Project:**

The fellow will develop state profiles and a final presentation that will group states depending on governing practices for how water in each state is allocated (drinking water, agriculture, energy, industrial, and other uses).

# **Project Title:**

Voluntary Clean Diesel Program

# **Sponsoring Office:**

Division of Environmental Planning and Protection, Air Progams 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:**

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

**Project Location:** EPA Region 2 - New York City, NY

**Preferred Project Period:** 6/1/2009 to 8/31/2009

**Project Officer:** Marlon Gonzales

Under this project, the fellow will have the opportunity to research: (1) the types and magnitude of air pollution that results 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 being implemented to reduce air pollution from mobile sources. Program 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 NNEMS fellow will review existing data sources managed by EPA, our states, and other public and private entities. The NNEMS fellow will develop mediation skills and an understanding of the potential positive 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 opportunities for additional 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 NNEMS 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 fellow will develop a report to summarize the information gathered during his or her research.

# **Project Title:**

Technology and Environmental Measurement

# **Sponsoring Office:**

Region 3

# **Office Mission:**

Office of Policy and Management (OPM) 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

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

**Project Location:** EPA Region 3 - Philadelphia, PA

**Preferred Project Period:** 6/1/2009 to 8/28/2009

**Project Officer:** Michael D'Andrea

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planning, policy and regulatory development, contracting and procurement, information systems, facilities, telecommunications, and grants and audit management.

# **Project Overview:**

Currently, EPA relies on data management systems to set targets for environmental improvements and to record environmental results. 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 participate in informational interviews with external organizations and with Region 3 programmatic staff to discuss partnership parameters. The fellow will research financial, logistical, and organizational frameworks. The fellow will also research EPA's current tracking efforts, such as the EPA Annual Commitment System, to compare real-time measurement systems.

# **Project Goals:**

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. The fellow will also deliver a presentation to senior regional leadership.



#### **Project Title:**

Evaluating the Effectiveness of Low-Impact development (LID) in Storm Water Management

# **Sponsoring Office:**

Office of States and Watersheds Partnerships (OSWP), WPD, Region 3

# **Office Mission:**

The mission of the Office of States and Watersheds Partnerships (OSWP) is to develop and implement partnerships among governmental and nongovernmental entities for watershed restoration.

#### **Project Overview:**

**Desired Level of Education:** Junior to Graduate Student

**Project Location:** EPA Region 3 - Philadelphia, PA

**Preferred Project Period:** 6/1/2009 to 8/29/2009

**Project Officer:** Robert Runowski

The fellow, under the direction of OSWP staff and with other governmental and non-governmental organizations partners, and using the watershed approach as the evaluative context, will review the results of current LID projects and analyze implementation of new projects to address storm water problems. 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 U.S., 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 to evaluate whether LID applications could improve the effectiveness of storm water 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 Title:**

EPA/Federal Highway Administration (FHWA), Green Highways Program

# **Sponsoring Office:**

Office of States and Watersheds Partnerships (OSWP), WPD, Region 3

#### **Office Mission:**

The mission of the Office of States and Watersheds Partnerships (OSWP) is to develop and implement partnerships among governmental and nongovernmental entities for watershed restoration.

#### **Project Overview:**

The fellow, supported by staff in the Region 3 OSWP and the 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 Highway 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 US301 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. 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 their research and conclusions on the relationship of "green infrastructure," GHP, and watershed restoration, specifically related to the Maryland/US301 corridor.

**Desired Level of Education:** Junior to Graduate Student

**Project Location:** EPA Region 3 - Philadelphia, PA

**Preferred Project Period:** 6/1/2009 to 8/29/2009

**Project Officer:** Robert Runowski

#### **Project Title:**

Environmental Applications and Implications of Nanotechnology

# **Sponsoring Office:**

Office of Superfund Remediation and Technology Innovation, Technology Innovation Program

# **Office Mission:**

EPA's Technology Innovation Program (TIP) advocates development and application of new treatment and characterization technologies by government and industry to contaminated waste sites.

# **Project Overview:**

The mission of this project is for the fellow to gain knowledge about environmental applications and implications of nanotechnology in the Superfund program. Nanotechnology holds promise in remediating hazardous waste sites costs effectively and in addressing challenging site conditions, such as the presence of dense nonaqueous phase liquids (DNAPL) in ground water. For example, nanoscale iron is in use in full-scale projects, with an encouraging measure of success. A great deal of research also is under way to investigate particles such as self-assembled monolayers on mesoporous supports (SAMMSTM), dendrimers, carbon nanotubes, and metalloporphyrinogens at the bench and pilot scales to evaluate how to apply their unique chemical and physical properties to full-scale remediation. There are many unanswered questions on nanotechnology, including a lack of information about the fate and transport of free nanoparticles in the environment, whether they are persistent, and whether they may have toxicological effects on various biological systems. Our office has collected information on sites where nanoscale iron has been tested for remediation. The fellow will conduct research (searching the Internet, contacting site managers and vendors, and similar methods) on site-specific information, including cost and performance data. The fellow will also collect and summarize information on research that has been done on: (1) potential health effects of nanomaterials that are used for site remediation; (2) measurement technology applications (sensors and other measuring devices); and (3) advances with treating specific contaminants, such as metals and chlorinated hydrocarbons.

Activities of the fellow include: (1) collecting information on the state of the art of environmental applications of nanotechnology for site remediation; (2) collecting information for sites where nanoscale zero-valent iron has been tested (including cost and performance data); (3) collecting information on advances in developing state-of-the-art sensors and other measuring devices that use nanotechnology or nanomaterials; and (4) searching Web sites, as well as contacting individuals (industry and EPA), about vendors of nanomaterials for site remediation and other environmental applications.

# **Project Goals:**

Through this project, the fellow will gain a greater knowledge of environmental applications and implications of nanotechnology. The fellow will also benefit from exposure to the organization, operations, and mission of EPA.

# Final Product of the Project:

The fellow will prepare a report based on knowledge of environmental applications and implications of nanotechnology.

# **Desired Level of Education:**

Junior to Graduate Student

**Project Location:** EPA Headquarters - Arlington, VA

**Preferred Project Period:** 6/1/2009 to 8/28/2009

**Project Officer:** Cheryl Johnson

#### **Project Title:**

Green Remediation

#### **Sponsoring Office:**

Office of Superfund Remediation and Technology Innovation, Technology Innovation Program

#### **Office Mission:**

EPA's Technology Innovation Program (TIP) advocates development and application of new treatment and characterization technologies by government and industry to contaminated waste sites.

#### **Project Overview:**

Under this project, the fellow will identify and write case studies on "green" remediation technologies. Green remediation can include green remediation technologies and remediation projects that have used traditional remediation technologies with alternative energy or alternative fuels. Alternative energy consists of solar power, wind power, and geothermal; alternative fuels can consist of ethanols, natural gas, propane, hydrogen, biodiesel, electricity, methanol, and p-series. Some of the green remediation technologies consist of soil amendments, bioremediation, and phytoremediation.

#### **Project Goals:**

The goal of this project is to educate the fellow on green remediation practices and their cost-effective and environmental benefits.

#### **Final Product of the Project:**

The fellow will produce a table or matrix showcasing greener, cost-effective ways of cleaning up Superfund sites based on the green remediation case studies. The final product will include benefits of the technologies and an analysis of the researched information for comparisons and trends.



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

**Project Location:** EPA Headquarters - Arlington, VA

**Preferred Project Period:** 6/1/2009 to 8/26/2009

**Project Officer:** Cheryl Johnson

#### **Project Title:**

Research on Waste-to-Energy (WtE) Technologies and their use in the Midwest

#### **Sponsoring Office:**

Resources Management Division, Chicago Regional Laboratory, Region 5

#### **Office Mission:**

To effectively manage EPA's resources to achieve desired environmental goals of protecting public health and the environment.

#### **Project Overview**

As part of the U.S. mission to lower our dependence on fossil fuels and reduce our carbon emissions, EPA supports research into green energy, which includes using waste products to create energy. Many waste streams are available as energy sources via combustion or fermentation to produce methane or biogas. Some of these sources include agricultural wastes (such as manure and crop residuals), biosolids from wastewater plants, municipal solid waste, and landfill gas. The conversion of wastes-to-energy (WtE) has many environmental benefits, such as reducing emissions of methane, reducing nutrient runoff to waters from land-applied manure, and reducing the amount of land needed to dispose of municipal wastes.

The fellow will investigate projects funded through the Small Business Innovation Research Program (SBIR). This program provides federal grants to target the entrepreneurial sector because that is where most innovation and innovators thrive. SBIR funds the critical startup and development stages and encourages commercialization of useful technologies, products, and services. The fellow will conduct research relevant to WtE in the Midwest, compile an inventory of existing WtE projects in Region 5, and investigate the opportunities for expanding the use of WtE. The fellow selected for this opportunity must have demonstrated excellent research skills and good written communication skills.

#### **Project Goals:**

The fellow will learn about cutting-edge research taking place in the area of WtE and the extent to which WtE technologies are currently being used in this region.

#### Final Product of the Project:

The fellow will develop a report or presentation on WtE technologies and their use through the SBIR. The report or presentation will be complete with data and charts of available information on existing projects and SBIR-relevant research.

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

**Project Location:** EPA Region 5 - Chicago, IL

**Preferred Project Period:** 6/1/2009 to 8/28/2009

**Project Officer:** Michele Palmer

#### **Project Title:**

Research on the Monitoring of Emerging and Difficult-to-Measure Contaminants

#### **Sponsoring Office:**

Resources Management Division, Chicago Regional Laboratory, Region 5

#### **Office Mission:**

To effectively manage EPA's resources to achieve desired environmental goals of protecting public health and the environment.

#### **Project Overview:**

There is a continuous need to improve the ability to detect and measure pollutants that are difficult to measure or that are new and emerging chemicals of concern to protect public health and the environment. Measurement is a necessary component of any environmental program. This project is an opportunity for a fellow interested in learning about the latest developments in new and improved monitoring instruments and tools to detect and measure chemicals that pose health risks to humans and ecosystems. Below are some of the challenges currently faced in monitoring to protect public health: (1) Air - effective monitors to track emissions and exposures to hazardous air pollutants; hydrogen sulfide at low, ambient levels emitted from landfills and animal feeding operations; formaldehyde in urban air; trichloroethylene and perchloroethylene vapor intrusion into basements; digital opacity instruments to detect particulate matter emissions quickly. (2) Great Lakes Waters - real-time sampling and analysis techniques for microcystis toxin produced from algal blooms; predictors of Botulism toxin in lake water that threatens loon populations. (3) Water - sampling methods for emerging contaminants, perflorinated chemicals, pharmaceuticals, and personal use products in drinking water and waste water. (4) Land - methods for determining arsenic speciation and treatment at extremely high concentrations.

The fellow will investigate projects funded through the Small Business Innovation Research Program (SBIR) to learn about cutting-edge research taking place in the area of monitoring emerging and difficult-to-measure chemical contaminants. This program provides federal grants to target the entrepreneurial sector because that is where most innovation and innovators thrive. SBIR funds the critical startup and development stages and encourages commercialization of useful technologies, products, and services. The fellow selected for this opportunity must have demonstrated research skills, good communication skills, and a basic understanding of chemistry and chemical monitoring equipment.

# **Project Goals:**

The fellow will learn about cutting-edge research taking place in the area of monitoring of emerging and difficultto-measure chemical contaminants.

# Final Product of the Project:

The fellow will develop a report or presentation summarizing the results of his or her research on detecting and measuring pollutants that are difficult to measure.

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

**Project Location:** EPA Region 5 - Chicago, IL

**Preferred Project Period:** 6/1/2009 to 8/28/2009

**Project Officer:** Michele Palmer

#### **Project Title:**

Aquatic Population Responses to Stress

#### **Sponsoring Office:**

National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division (AED)

#### **Office Mission:**

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.

#### **Project Overview:**

AED conducts research to evaluate how species biology, genetics, and ecology influence effects of stressors on aquatic population persistence. AED's research encompasses three areas: (1) population genetic effects on population stress responses; (2) genetic correlates of stress responses in naturally varying wild populations; and (3) mechanisms of toxicity for environmental pollutants, alone, and in combination with other environmental factors. The fellow will participate in experimental research, which includes using marine laboratory systems to breed and maintain fish and invertebrate species and expose sensitive life stages (such as embryonic development and larval metamorphosis) to environmental stressors, including chemical pollutants. The fellow will assess stressor effects with traditional and novel genomic, biochemical, and physiological endpoints measured using molecular and imaging techniques.

#### **Project Goals:**

The fellow will gain knowledge in the application of experimental methods to address scientific hypotheses, and, more specifically, in development and application of ecotoxicological methods to address environmental issues. The fellow will gain direct experience in a range of experimental methods that contribute to understanding how environmental stressors affect cells, organisms, and populations.

#### **Final Product of the Project:**

The fellow will develop a written report and final oral presentation describing the experimental methods and results and discussing the implications of these findings to environmental protection.

**Project Location:** EPA Region 1 - Narragansett, RI

**Preferred Project Period:** 6/1/2009 to 9/1/2009

**Project Officer:** Diane Nacci

#### **Project Title:**

Public Affairs Fellow

# **Sponsoring Office:**

**Public Affairs Division** 

# **Office Mission:**

The Public Affairs Division serves as EPA's focal point for relations with the media; Congress, state, and local elected officials; public interest groups; and concerned community members, and works to ensure that the public is informed about EPA policies and programs.

#### **Project Overview:**

The fellow will have the opportunity to participate in a broad range of public affairs activities, including researching and analyzing environmental information of interest to the public, and other projects related to public outreach, to gain a broad knowledge of the division's mission and purpose. The fellow will conduct Web research by reviewing a representative sample of government and non-government Web sites for design, content, functionality, and interactivity. The fellow will participate with the Region 2 Web Team and the Multi-Media Web Team to gain an understanding of overall Web content and design knowledge and decision-making; review pages on the Region 2 Web site; research news releases; attend public press events; and accompany the Superfund community involvement coordinators as they conduct site visits and public meetings.

# **Project Goals:**

The fellow will gain broad-based knowledge and experience of EPA's public affairs activities and have the opportunity to conduct research and analysis of the content and design of the regional Web site and other communications tools.

# **Final Product of the Project**

The fellow will present an analysis of his or her Web research incorporating as many multi-media tools as necessary to convey the results of the study.



**Desired Level of Education:** Junior to Graduate Student

**Project Location:** EPA Region 2 - New York, NY

**Preferred Project Period:** 6/2/2009 to 9/4/2009

**Project Officer:** Natalie Loney

#### **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 on 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 the critical issues that face communities near Superfund sites. This project with the Community Involvement and Programs Initiative Branch requires that the fellow become familiar with the Superfund process and how public participation is implemented during cleanups. The specific project will focus on 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, the students 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 will work with EPA staff in developing 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 Location:** EPA Headquarters - Arlington, VA

**Preferred Project Period:** 6/1/2009 to 8/31/2009

**Project Officer:** Suzanne Wells

#### **Project Title:**

Communication Tools for EPA's ToxCast Program

# **Sponsoring Office:**

Office of Research and Development, National Center for Computational Toxicology (NCCT)

# **Office Mission:**

The National Center for Computational Toxicology (NCCT) is a part of EPA's Office of Research and Development (ORD). Located in Research Triangle Park, North Carolina, NCCT coordinates and implements EPA's research in the field of computational toxicology. NCCT scientists serve as scientific

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

**Project Location:** EPA Headquarters - Research Triangle Park, NC

**Preferred Project Period:** 6/1/2009 to 8/28/2009

**Project Officer:** Karen Dean

reviewers and advisors by providing technical assistance to other laboratories and centers within ORD, to EPA program offices and regions, and to the states. Additionally, NCCT serves as a source of training in computational toxicology by offering seminars, mini-courses, symposia, and staff details.

# **Project Overview:**

In 2007, EPA's NCCT launched ToxCast to develop a cost-effective approach for prioritizing the toxicity testing of large numbers of chemicals in a short period of time. Using data from state-of-the-art high-throughput screening (HTS) bioassays developed in the pharmaceutical industry, ToxCast is building computational models to forecast the potential human toxicity of chemicals. These hazard predictions will provide EPA regulatory programs with science-based information helpful in prioritizing chemicals for more detailed toxicological evaluations and lead to more efficient use of animal testing. A number of products in the form of scientific publications, databases, and computational models are now beginning to emerge from the effort, and they are attracting consideration attention by the scientific community, public stakeholders, and media. Success of the research program will transform the manner in which toxicology is evaluated in the future. NCCT has developed numerous partnerships with a rapidly expanding body of national and international collaborators. The fellow will liaise with representatives from these partnerships to learn effective means of communicating these efforts. The fellow also will interact with key staff in NCCT as they develop public relations and communication efforts related to EPA's ToxCast program.

# **Project Goals:**

The goal of the project is for the fellow to gain broad-based knowledge of the issues associated with toxicity testing of chemicals, models that forecast the potential human toxicity of chemicals, and EPA's ToxCast program.

# Final Product of the Project:

The fellow will present an analysis and options regarding effective communication of the ToxCast program.

# **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. In addition, students have the option of submitting the SF 424 electronically by accessing **www.grants.gov**. If you choose this option, please read the detailed instructions as described in the *How to Apply* section on page 5.

NNEMS Application	A-3
Standard Form 424 – Application for Federal Assistance	A-7
NNEMS Reference Form	A-17
NNEMS Disclosure and Waiver Statement	۸.10

**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 2, 2009;
- All hard-copy NNEMS applications and hard-copy portions of applications submitted electronically must be postmarked by February 2, 2009 (electronic submissions must be posted to *www.grants.gov* by 11:59 p.m. EST on February 2, 2009).



# APPLICATION

Program Announcement Identifier: El

# **Project Information**

#### Project Number: 2009-

Project category:

- Environmental Policy, Regulation, and Law
- Environmental Management and Administration
- □ Environmental Science
- Public Relations and Communications
- Computer Programming and Development

# An interactive PDF version of this form is available online at www.epa.gov/education/NNEMS/2009apply.html or www.grants.gov

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	School/University		
Please check the address to which you would like materials sent.  Current Mailing Address	Current Student Level: Undergraduate Advanced Associate Graduate Freshman Ph.D.		
City State Zip At Current Address Through (month/year) Current Phone: ()	Graduation Date:		
Current E-mail:			
Permanent Mailing Address	Please list any additional universities attended: Transcript Enclosed		
	School/University Dates Attended		
	School/University Dates Attended Ves No		
City State Zip			
Permanent Phone: ()	School/University Dates Attended Yes No		
Permanent E-mail:			
Eligibility	Names of Individuals Providing Reference		
A NNEMS fellowship is available to any associate, undergraduate, or advanced student who is:	Additional requirements for associate, undergraduate, and advanced students include the following:		
<ul> <li>A citizen of the U.S., its territories or possessions, or lawfully admitted to the U.S. for permanent residency</li> <li>Enrolled for academic credit at an accredited educational institution*</li> <li>Pursuing an educational program directly related to pollution control or environmental protection for the duration of the fellowship</li> </ul>	<ul> <li>Associate and Undergraduate Students</li> <li>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)</li> <li>Completion of at least four courses related to the field of</li> </ul>		
<ul> <li>Please note: The following types of students are not eligible for a NNEMS fellowship:</li> <li>Federal employees, including those who are on "leave without pay" status</li> <li>Undergraduate and graduate students who will graduate before the NNEMS fellowship is completed (Students who complete their undergraduate studies before the and of a fellowship is completed to the students who complete their undergraduate studies before the and of a fellowship is completed for the students.</li> </ul>	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

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).

# **Proposal**

# **APPLICATION**

#### 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 reside	□ nt		Students must (one original of is required, wh for multiple pro-	submit <b>four</b> complete applicat and three copies). Please note nich may be opened and copie piects. Please verify that you h	ion packag that only c ed, even if ave includ	ges for eac one official a student i ed:	h project transcript s applying
must provide his or her green card number on his or her application)?			b.e b.		Original	<u>3 Copies</u>	<u>Mailed</u> Separately
Are you enrolled at an accredited			A completed A	Application Form			
school?		_	A completed S	Standard Form 424 (SF 424)			
Are vou a federal employee?			A résumé				
Federal employees, including those who are on "leave without pay" state	us,		An official coll school attende	ege transcript from each d			
are not eligable for a NNEMS Fellowship.			A Reference For advisor	orm from a professor			
Do you have a minimum 3.0 GPA?	□ Yes	□ No	A completed N Waiver Statem	NNEMS Disclosure and nent			
Confidential Information Does your application package contain information that you consider to be confidential? Be sure to clearly mark confidential information	1		Verification of in a graduate is a graduating	acceptance and/or enrollmen or Ph.D. program if applicant g senior			
Separate, complete application package each NNEMS project. Applications must be postmarked on c <b>February 2, 2009</b> .	ges m r befc	ust be su vre	bmitted for	Mail or courier completed ap NNEMS Fellowship Program Tetra Tech EM Inc. 1881 Campus Commons Drive	plication p , Suite 200	oackage to ), Reston, V	A 20191

**US EPA ARCHIVE DOCUMENT** 



# **Project Information**

#### Project Number: 2009-XXX

Applicant Information

Project category:

- Environmental Policy, Regulation, and Law
- Environmental Management and Administration
- Environmental Science
- Public Relations and Communications
- Computer Programming and Development

# SAMPLE APPLICATION Program Announcement Identifier: EPA-EED-09-01

An interactive PDF version of this form is available online at www.epa.gov/education/NNEMS/2009apply.html or www.grants.gov

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.

John Doe	State University
Name	School/University
Please check the address to which you would like materials se	nt. Current Student Level:
Current Mailing Address	Undergraduate Advanced
123 Hill Street	Associate Graduate
	Freshman Ph.D.
	Sophomore XI lunior
Anytown VA 22205	
City State Zip	
At Current Address Through <u>May 2009</u> (month/ye	ar) Current Major/Minor: Environmental Policy
Current Phone: ( <u>123</u> ) <u>456</u> - 7891	Expected Graduation Date: June 2010
Current E-mail: johndoe@e-mail.com	
	Please list any additional universities attended:
Permanent Mailing Address	Enclosed
	School/University Dates Attended IYes No
	School/University Dates Attended Ves No
City State Zip	_ `
Permanent Phone: ()	School/University Dates Attended 🛛 Yes 🗆 No
Permanent E-mail:	Dr. Jane Doe
Elizibility	Names of Individuals Providing Reference
Eligibility	
A NNEMS tellowship is available to any associate,	Additional requirements for associate, undergraduate, and advanced students include the following:
A citizen of the U.S., its territories or possessions, or lawfully admitted	Associate and Undergraduate Students
to the U.S. for permanent residency	3.0 cumulative grade point average (GPA) based on a scale of
<ul> <li>Enrolled for academic credit at an accredited educational institution?</li> <li>Pursuing an educational program directly related to pollution control</li> </ul>	4.0 at the time that the application is due (a GPA of 2.999, for
or environmental protection for the duration of the fellowship	example, is not sufficient) <ul> <li>Completion of at least four courses related to the field of</li> </ul>
Please note: The following types of students are not	environmental studies
eligible for a NNEMS fellowship:	Advanced Students
<ul> <li>Federal employees, including those who are on "leave without pay" status</li> </ul>	Currently enrolled in a graduate or Ph.D. program or can provide
<ul> <li>Undergraduate and graduate students who will graduate</li> </ul>	proot ot acceptance and enrollment to a graduate or Ph.D.
before the NNEMS fellowship is completed	awaiting notification of acceptance must submit verification of
before the end of a fellowship may apply if currently	acceptance and enrollment at the time of fellowship award.
accepted or enrolled to a graduate program.)	<ul> <li>Completion of one semester of graduate or Ph.D. work, or at least four undergraduate courses related to the field of</li> </ul>
<ul> <li>High school students</li> </ul>	environmental studies

\* 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**).

#### 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.

Then I would select three or four organizations to represent the range of agencies active internationally (Bilateral, Multilateral, Quasigovernmental). I would look at specific programs or projects currently under way at these agencies to assess wetland impact. I would also analyze the organizational structures and political context in which these agencies operate to gain a grasp of how these factors influence their projects on wetlands, as well as the legal authorities of these agencies. (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 resider	X		Students must submit <b>four</b> complete applica (one original and three copies). Please note is required, which may be opened and cop for multiple projects. Please verify that you	tion package that only c ed, even if have includ	ges for eac one official a student i ed:	ch project transcript s applying
	must provide his or her green card number on his or her application)?				Original	<u>3 Copies</u>	<u>Mailed</u> Separately
	Are you enrolled at an accredited	X		A completed Application Form	Х	X	
	school?	_	_	A completed Standard Form 424 (SF 424)	X	X	
	Are vou a federal employee?		X	A résumé	X	X	
	Federal employees, including those who are on "leave without pay" statu		_	An official college transcript from each school attended	X	X	
	are not eligable for a NNEMS Fellowship.			A Reference Form from a professor or advisor	X	X	
	Do you have a minimum 3.0 GPA?	X Yes	□ No	A completed NNEMS Disclosure and Waiver Statement	X	X	
	<b>Confidential Information</b> Does your application package contain information that you consider to be confidential?		X	Verification of acceptance and/or enrollmer in a graduate or Ph.D. program if applicant is a graduating senior	nt 🛄		
	Be sure to clearly mark confidential information						
Se ea Ar	parate, complete application packag ch NNEMS project. plications must be postmarked on or	es m befc	ust be su vre	bmitted for Mail or courier completed a NNEMS Fellowship Program Tetra Tech EM Inc.	oplication p	oackage to	:

ead Ap February 2, 2009

# 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/2009apply.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.
- 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-09-01."
- 13. Leave blank.
- 14. Leave blank.
- 15. Enter the project title of the fellowship for which you are applying.
- 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.
- 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. If you are submitting a hard-copy version, print a hard-copy of the SF 424 and sign the pre-application.

Application for Federa	Application for Federal Assistance SF-424 Version 02					
<ul> <li>* 1. Type of Submission:</li> <li>Preapplication</li> <li>Application</li> <li>Changed/Corrected Applica</li> <li>* 3. Date Received:</li> </ul>	* 2. Type of Application:	* If Revision, select appropriate letter(s):  * Other (Specify)				
5a. Federal Entity Identifier:     * 5b. Federal Award Identifier:						
State Use Only:						
6. Date Received by State:	7. State Application	n Identifier:				
8. APPLICANT INFORMATIO	N:					
* a. Legal Name:						
* b. Employer/Taxpayer Identifi 1 2 3 4 5 6 7 8 9	cation Number (EIN/TIN):	* c. Organizational DUNS:				
d. Address:		•				
* Street1:						
e. Organizational Unit:						
Department Name:		Division Name:				
f. Name and contact informa	ation of person to be contacted on	matters involving this application:				
Prefix: Middle Name: * Last Name: Suffix:	* First Nam	ne:				
Title:						
Organizational Affiliation:						
* Telephone Number:	* Telephone Number: Fax Number:					
* Email:						

$\mathbf{F}$		
	9. Type of Applicant 1: Select Applicant Type:	
I	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	
I	11. Catalog of Federal Domestic Assistance Number:	
	66.952	
	CFDA Title:	
ľ	* 12. Funding Opportunity Number:	
	EPA-EED-09-01	
	* Title:	
	NNEMS Fellowship Program	
ŀ	13. Competition Identification Number:	
	Title:	
l		
ŀ	14. Areas Affected by Project (Cities, Counties, States, etc.):	
ĺ	· · · · · · · · · · · · · · · · · · ·	
1		
ł	* 15. Descriptive Title of Applicant's Project:	
)		
	Attach supporting documents as specified in agency instructions.	
1	Add Attachments Delete Attachments View Attachments	

Application for Federal Assistance SF-424 Version	n 02				
16. Congressional Districts Of:					
* a. Applicant * b. Program/Project					
Attach an additional list of Program/Project Congressional Districts if needed.					
Add Attachment Delete Attachment View Attachment					
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					
<ul> <li>b. Program is subject to E.O. 12372 but has not been selected by the State for review.</li> <li>c. Program is not covered by E.O. 12372.</li> <li>* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)</li> <li>Yes No Explanation</li> <li>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)</li> <li>** I AGREE</li> <li>** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency acceleration.</li> </ul>					
Authorized Representative:					
Prefix: * First Name:					
Middle Name:					
* Last Name:					
Suffix:					
* Title:					
* Telephone Number: Fax Number:					
* Email:					
* Signature of Authorized Representative: * Date Signed:					

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Version 02

#### **Application for Federal Assistance SF-424**

# \* 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.

Application for	Application for Federal Assistance SF-424 Version 02							
* 1. Type of Submiss	* 1. Type of Submission: * 2. Type of Application: * If Revision, select appropriate letter(s):							
Preapplication Vew		☑ New						
Application		Continuation	* Other (Specify)					
Changed/Correcte	ed Application	Revision						
* 3. Date Received:		4. Applicant Identifier:						
5a. Federal Entity Ide	entifier:		* 5b. Federal Award Identifier:					
State Use Only:								
6. Date Received by	State:	7. State Application	n Identifier:					
8. APPLICANT INFO	RMATION:							
* a. Legal Name:	Doe, John H.							
* b. Employer/Taxpay	er Identification N	umber (EIN/TIN):	* c. Organizational DUNS:					
123456789								
d. Address:								
* Street1:	123 Hill Street							
Street2:								
* City:	Anytown	nwo						
County:								
* State:	VA							
Province:	-							
* Country:	USA	L	USA: UNITED STATES					
* Zip / Postal Code:	22205							
e. Organizational U	Init:							
Department Name:			Division Name:					
f. Name and contac	t information of	person to be contacted on r	matters involving this application:					
Prefix:		* First Nam	le: John					
Middle Name:								
* Last Name: Doe	Doe							
Suffix:	Suffix:							
Title:								
Organizational Affiliat	tion:							
* Telephone Number:	: (123) 456-78	91	Fax Number:					
* Email: johndoe@email.com								

Application for reactal Assistance of 424	vers
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-09-01	
* 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:	
Effectiveness of Tools for Drinking Water Protection	
Attach supporting documents as specified in agency instructions.	

SAMPLE

OMB Number: 4040-0004 Expiration Date: 01/31/2009

Application	for Federal Assistar	nce SF-424					Version 02
16. Congressio	nal Districts Of:						
* a. Applicant	Virginia 8th			* b. Progra	am/Project	Pennsylvania 2nd	
Attach an addition	onal list of Program/Projec	t Congressional Districts if n	eeded.				
		Add Attachment Dele	ete Attachmen	View Attac	hment		
17. Proposed P	roject:						
* a. Start Date:	5/31/2009			* b	. End Date	: 8/30/2009	
18. Estimated F	unding (\$):						
* a. Federal							
* b. Applicant							
* c. State							
* d. Local							
* e. Other							
* f. Program Inc	ome						
* g. TOTAL							
<ul> <li>a. This application was made available to the State under the Executive Order 12372 Process /</li> <li>a. This application was made available to the State under the Executive Order 12372 Process for review on </li> <li>b. Program is subject to E.O. 12372 but has not been selected by the State for review.</li> <li>c. Program is not covered by E.O. 12372.</li> <li>* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)</li> <li>Yes No Explanation</li> <li>21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements</li> </ul>							
comply with an may subject m	y resulting terms if I acc to criminal, civil, or ac	cept an award. I am aware Iministrative penalties. (U	that any fals	e, fictitious, e 218. Secti	or fraudul on 1001)	ent statements or claims	
** I AGREE				,			
** The list of cer specific instructi	tifications and assurances, ons.	, or an internet site where yo	ou may obtain f	his list, is cor	ntained in tl	he announcement or agency	
Authorized Rep	presentative:						
Prefix:		* First Name:	John				6
Middle Name:							
* Last Name:	Doe						
Suffix:							
* Title: Student							
* Telephone Nur	* Telephone Number: (123) 456-7891 Fax Number:						
* Email: john	.doe@email.com						
* Signature of Au	uthorized Representative:	John Doe		* Date Signed	J: January	y 26, 2009	

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#### Application for Federal Assistance SF-424

#### \* 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.

Version 02





# 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 2, 2009**:

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

# To be Completed by Applicant

Project Number: 2009 Applicant's Name:		Current Phone: ()		
Current Mailing Address		School/University:		
		Current Major/Minor:		
City State	Zip	Expected Graduation Date:		
To be Completed by the Refer	ence			
		Current E-mail:		
Name of Individual Providing Reference		Position or Title:		
Current Mailing Address		Department:		
		Institution:		
City State	Zip			
Current Phone: ()		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 FORM**

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: 2009
Home Phone Number:	
Signature:	Date:

# Appendix B – NNEMS Program Coordinators

Listed on the following pages are the NNEMS Program Coordinators at almost 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 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 North Second 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

#### Brigham Young University

Vince Fordiani, Director, Career Management George W. Romney Institute of Public Management 442 TNRB Provo, UT 84602

#### Bryn Mawr College

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

#### **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 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, Western Pennsylvania Brownfields Center Porter Hall 111 Pittsburgh, PA 15213

Deborah Lange, Executive Director Steinbrenner Institute, Western Pennsylvania Brownfields Center Porter Hall 111 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 29528-6054

#### **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

#### **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

Yin Lu, Career Advisor for Environment Students Career Center Box 90950 Durham, NC 27708-0950

#### **Duquesne University**

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

#### **Elizabeth City State University**

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

#### 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

#### 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

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

#### 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 West 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**

Brandi Ferrara, Associate Director Career Services 300 Pulteney Street 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

#### Humboldt State University

Barbara Peters, Career Counselor Career Center Humboldt State University 1 Harpst Street Arcata, CA 95521-8299

#### Idaho State University

Troy Kase, Director Career Center 921 S. 8th 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 - SPEA

Amanda Shettlesworth, Assistant Director, Employer Development Office of Career Services 1315 E. 10th Street SPEA 200 Bloomington, IN 47405-1701

#### 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

#### 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

#### Loyola University New Orleans

Eileen Doll, Fellowships Coordinator University Honors Program 6363 Saint 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, Associate Professor Earth and Environmental Studies 1 Normal Avenue Montclair, NJ 07043

#### **Muhlenberg College**

Patricia Bradt, Associate Professor Emerita 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

Michele Collins, Coordinator Chemistry and Environmental Science 151 Tiernan Hall University Heights Newark, NJ 07102

Taha Marhaba, Associate Professor Civil & Environmental Engineering 323 Martin Luther King Boulevard Newark, NJ 07102

#### **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

#### **Oregon State University**

Wanda Crannell, Key Advisor/Instructor Bioresource Research Interdisciplinary Sciences Program and OSU-MANRRS Advisor Agriculture & Life Science Building #4017 Corvallis, OR 97331-7304

Tom Savage, Professor and Head Advisor Department of Animal Sciences 114 Withycombe Hall Corvallis, OR 97331-6702

#### **Pace University**

Richard Schlesinger, Associate Dean for Academic Affairs Program in Environmental Science One Pace Plaza New York, NY 10038

#### Penn State University, Altoona

Thomas Shaffer Academic Internships 3000 Ivyside Park Altoona, PA 16601-3760

#### Penn State University, University Park

Keith Fledderman, Program Coordinator Penn State Washington Program P.O. Box 9291 Arlington, VA 22219

Susan Knell, Director, Science Cooperative Education Program and Science International Programs Eberly College of Science 108 Whitmore Laboratory University Park, PA 16802

Cindye Rudy, Assistant Director Eberly College of Science Office of Cooperative Education 108 Whitmore Laboratory University Park, PA 16802

Robert Shannon, Program Coordinator Environmental Resource Management 119 Agricultural Administration Building University Park, PA 16802

#### Pomona College

Richard Hazlett, Professor Geology/Environmental Analysis 85 East Sixth Street Claremont, CA 91711

#### **Princeton University**

Ann Corwin, Director of Graduate Career Services & Relations Woodrow Wilson School 203 Robertson Hall Princeton, NJ 08544-1013

#### **Principia College**

James Brandt, Career Coordinator Academic and Career Advising 1 Maybeck Place Elsah, IL 62028

#### **Providence College**

Patrick Ewanchuk Biology 549 River Ave. Providence, RI 02918

#### **Queens College**

Ross Wheeler, Director of Honors Office of Honors and Scholarships Honors Hall, Room 19 65-30 Kissena Boulevard Flushing, NY 11367

#### **Radford University**

Kathryn Jordan, Director Experiential Learning & Career Services P.O. Box 6901 Radford University Radford, VA 24142

#### **Rider University**

Jonathan Husch, Professor and Chair Geological, Environmental, and Marine Sciences (GEMS) 2083 Lawrenceville Road Lawrenceville, NJ 08648

#### **Rochester Institute of Technology**

Maria Richart, Assistant Director Office of Cooperative Education and Placement Bausch & Lomb Center 57 Lomb Memorial Drive Rochester, NY 14623-5603

#### **Roosevelt University**

Terri Berryman, Director Office of Career Services 430 S Michigan Ave Chicago, IL 60605

#### **Rutgers University**

Teresa Delcorso, Assistant Dean for Graduate Student External Support Graduate School New Brunswick 25 Bishop Place New Brunswick, NJ 08901

Mary Feldenkreiss, Information Specialist Office of Research & Sponsored Programs 3 Rutgers Plaza ASB III-3rd Floor New Brunswick, NJ 08901-8559

William Hallman, Professor Department of Human Ecology School of Environmental and Biological Sciences 55 Dudley Road New Brunswick, NJ 08901-8520

Carol Rutgers, Director Cooperative Education School of Environmental and Biological Sciences 88 Lipman Drive New Brunswick, NJ 08901-8525

#### **Sacred Heart University**

Elizabeth Lowery, Assistant Director of Career Placement Career Development 5151 Park Avenue, Curtis 211 Fairfield, CT 06825

#### Saint Louis University

Catherine Nolan, MPH Practice Experience Coordinator School of Public Health 3545 Lafayette Ave. Room 472 St. Louis, MO 63104-1314

#### **Salisbury University**

Becky Emery, Director Career Services 1101 Camden Avenue Salisbury, MD 21801

Elichia Venso, Professor and Program Director Environmental Health Science 1101 Camden Avenue Henson Hall 230 E Salisbury, MD 21801

#### Samford University

Alice Martin, Director Career Development Center 800 Lakeshore Drive Birmingham, AL 35229-2276

#### **Scripps College**

Julie Elliott Career Planning & Resources 1030 Columbia Avenue Claremont, CA 91711

#### **Seattle Pacific University**

Timothy Nelson, Director, Blakely Island Field Station and Professor of Biology Biology Suite 205 Seattle Pacific University Seattle, WA 98119-1950

#### Sewanee: The University of the South

Kay Mackenzie Office of the Dean of the College Sewanee: The University of the South Sewanee, TN 37383-1000

#### Shepherd University

Betsy Sheets, Director of Career Services Career Development Center P.O. Box 3210 Gardiner Hall, G-24 Shepherdstown, WV 25443

#### Soka University of America

Jennifer Cunningham, Manager of Career Services Career Services 1 University Drive Aliso Viejo, CA 92656-4105

#### South Dakota State University

Roger Sandness, Professor and Head College of Arts & Sciences Scobey Hall 232 Box 504 Brookings, SD 57007-0648

#### Southeast Missouri State University

Stephen Overmann, Director of Environmental Science Environmental Science Mail Stop 6250 One University Plaza Cape Girardeau, MO 63701

#### Southern Illinois University Carbondale

John Nicklow, Professor and Associate Dean Engineering Mailcode 6603 Carbondale, IL 62901

#### Southern University and A&M College

Beverly Wade, Dean Honors College Southern University and A&M College Honors College Baton Rouge, LA 70813

#### St. Mary's College of Maryland

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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 **2007** Returns



Get forms and other information faster and easier by:

Internet • www.irs.gov

### Contents

What's New	2
Reminders	2
Introduction	2
1. Scholarships, Fellowships, Grants, and Tuition Reductions Scholarships and Fellowships Other Types of Educational Assistance	4 4 6
2. Hope Credit Can You Claim the Credit What Expenses Qualify Who Is an Eligible Student Who Can Claim a Dependent's Expenses Figuring the Credit Claiming the Credit When Must the Credit Be Repaid (Recaptured) Illustrated Example	8 9 12 13 14 15 15
3. Lifetime Learning Credit Can You Claim the Credit What Expenses Qualify Who Is an Eligible Student Who Can Claim a Dependent's Expenses Figuring the Credit Claiming the Credit When Must the Credit Be Repaid (Recaptured) Illustrated Example	18 19 22 22 23 23 23 23
4. Student Loan Interest Deduction	25 25 28 29 30
5. Student Loan Cancellations and Repayment Assistance Student Loan Cancellation Student Loan Repayment Assistance	31 31 31
6. Tuition and Fees Deduction	32 33 34 35 35 36 36 37
7. Coverdell Education Savings Account (ESA)	39 39 40 43 43
8. Qualified Tuition Program (QTP) What Is a Qualified Tuition Program How Much Can You Contribute Are Distributions Taxable Rollovers and Other Transfers	49 49 49 49 51

9. Education Exception to Additional Tax on Early IRA Distributions Who Is Eligible	53 53
Tax	53 54
<b>10. Education Savings Bond Program</b> Who Can Cash In Bonds Tax Free         Figuring the Tax-Free Amount         Claiming the Exclusion         Illustrated Example	55 55 56 56 56
11. Employer-Provided Educational Assistance	58
12. Business Deduction for Work-Related Education Qualifying Work-Related Education What Expenses Can Be Deducted How To Treat Reimbursements Deducting Business Expenses Recordkeeping Illustrated Example	59 59 62 64 65 66
13. How To Get Tax Help	68
Appendices Appendix A—Illustrated Example Appendix B—Highlights of Tax Benefits	70 70 72
Glossary	74
Index	76

## What's New

Hope and lifetime learning credits. Beginning in 2007, the amount of your Hope or lifetime learning credit is gradually reduced (phased out) if your modified adjusted gross income (MAGI) is between \$47,000 and \$57,000 (\$94,000 and \$114,000 if you file a joint return). You cannot claim a credit if your MAGI is \$57,000 or more (\$114,000 or more if you file a joint return). This is an increase from the 2006 limits of \$45,000 and \$55,000 (\$90,000 and \$110,000 if filing a joint return). For more information, see chapters 2 and 3.

**Education savings bond program.** Beginning in 2007, 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 \$98,400 and \$128,400. You cannot take the deduction if your MAGI is \$128,400 or more. For 2006, the limits that applied to you were \$94,700 and \$124,700.

For all other filing statuses, your interest exclusion for 2007 is phased out if your MAGI is between \$65,600 and \$80,600. You cannot take the deduction if your MAGI is \$80,600 or more. For 2006, the limits that applied to you were \$63,100 and \$78,100. For more information, see chapter 10.

#### Business deduction for work-related education. Beginning in 2007:

 If you drive your car to and from school and qualify to deduct transportation expenses, the amount you can deduct for miles driven during 2007 is 48<sup>1</sup>/<sub>2</sub> cents per mile. This is up from 441/2 cents per mile in 2006. See chapter 12 for more information.

 If your adjusted gross income for 2007 is more than \$156,400 (\$78,200 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 72 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.

**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 under *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.

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**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 2007 Tax Changes
- **590** Individual Retirement Arrangements (IRAs)

#### 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
- □ 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
- B863 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<sup>1</sup>

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

	AND you are		THEN your payment is	
IF you use the payment for	A degree candidate	Not a degree candidate	Tax free <sup>2</sup>	Taxable
Tuition	X		Х	
		X		X
Fees	X		X3	
		X		x
Books	X		<b>X</b> <sup>3</sup>	
		X		X
Supplies	X		<b>X</b> <sup>3</sup>	
		X		X
Equipment	X		X <sup>3</sup>	
		X		X
Room	X			X
		X		X
Board	X			X
		X		X
Travel	X			X
		X		X

<sup>1</sup> Does not include payments received for past, present, or future services.

<sup>2</sup> 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.

<sup>3</sup> 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:

 The National Health Service Corps Scholarship Program, or

Keep for Your Records

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

1.	<ul> <li>Enter your scholarship or fellowship income for 2007</li></ul>	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 <b>required</b> 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 <b>tax-free part</b> of your scholarship or fellowship	c
	income	0
7.	Subtract line 6 from line 5	7
8.	<b>Taxable part.</b> Add lines 2, 4, and 7. See <i>Reporting Scholarships and Fellowships</i> for how to reportthis 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 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* earlier in this chapter.

#### 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* earlier in this chapter.

#### 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).

# **US EPA ARCHIVE DOCUMENT**

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



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