



## ***Final Report***

Educational Advancement Alliance, Inc.  
4548 Market Street, Suite LL04  
Philadelphia, PA 19139

DOE Award No.: DE-SC0005329

Project Title: STEM Recruitment, Education, Retention, and Graduate Scholarship Program

Program Director: Sheronda R. Ball

Report Prepared by: Karen E. Nicholas

Date of Report: 18 August 2012

Period Covered by Report: 30 September 2010 through 29 September 2011

**The National Minority STEM Fellowship Program (NMSFP)** was a program that provided fellowships operating under an award funded by the US Department of Energy and administered by the Educational Advancement Alliance, Inc. (EAA). We supported students who were beginning or continuing in Master's level programs in **science, technology, engineering, or mathematics (STEM)** at colleges and universities in Delaware, Maryland, New Jersey, Pennsylvania, or the District of Columbia.

The **NMSFP** provided for tuition up to \$20,500 for the year and stipend support in the amount of \$18,000 annually for each student. Awardees were required to be U.S. citizens and from cultural, racial, geographic, and socio-economic backgrounds that are currently underrepresented in graduate education are encouraged to participate in the fellowship program.

From the time that the project was conceived and the development of the proposal, regular meetings were held by the internal steering committee to coordinate the associated activities that fell under the implementation and facilitation processes. It was important to ensure that although the anticipated start date of the grant would fall shortly after the semester began that the EAA would have students to comprise this first cohort under the new grant. The accomplishments were consistent with the goals for funding year and included the following:

1. The internal steering committee, comprised of EAA staff and our partner Sydney Lei & Associates (SLA), most of whom were formally assigned to this project met regularly to identify areas of oversight, market the fellowship opportunity to eligible students and interested faculty and administrators, invite applications and award the fellowship to qualified students.
2. The EAA designed and developed a website and marketing materials including brochures that introduced the STEM fellowship program to prospective applicants, college and university administrators and faculty, graduate school faculty, administrators, and admissions officers, and other program stakeholders, collaborators, and partners. The website address is [www.nmsfp.org](http://www.nmsfp.org).

3. The EAA also designed a PowerPoint presentation that provided an overview of the Educational Advancement Alliance' existing programs and provided pertinent information about the sponsor, the Department of Energy, and specific information about the fellowship's eligibility requirements.
4. The EAA identified faculty and administrators at many institutions on the east coast who were in direct contact with eligible students. They represented the Biology, Chemistry, Physics, Environmental Science, Engineering, Information, Systems, and Mathematics colleges and departments within the universities. Contact lists were created and a database for follow-up and future communications enabled staff to communicate with various constituencies efficiently and effectively.
5. The internal steering committee designed the Fellowship application and the application intake and workflow process to assist with data collection and reporting.
6. The EAA awarded eighty-one (81) fellowships to qualified applicants who matriculated or were matriculated at institutions in the designated area.
7. The EAA held Fellowship orientation for students who were awarded fellowships for the 2010-2011 academic year. The weekend activity was held at the Sheraton Society Hill Hotel. There were speakers and presenters for workshops that covered a myriad of topics including how the graduate experience will differ from the undergraduate experience, research as a critical part of the master's level program, the importance of participating and understanding social networking, and managing personal finances amongst other topics. This orientation was held to acquaint students with the staff of the Educational Advancement Alliance, Inc. (EAA) and our partner, Sydney Lei & Associates, Inc. (SLA) and what was required to access the funding that was awarded. Additionally pertinent information about the transition and EAA support services was shared to assist the students with their transition from undergraduate to graduate school and their relocation.
8. Disbursements for tuition were made to most colleges and universities during the fall and spring semesters. Stipend checks were required to submit a monthly report detailing their experience. The reports were due on the 15<sup>th</sup> of the month and a monthly stipend was issued to the student in the amount of \$1,500. The payments were issued through EAA's payroll system and directly deposited into the student's account. Samples of the monthly reports are attached in the appendices.
9. The EAA and partner Sydney Lei and Associates (SLA) engaged in ongoing outreach efforts to Deans and admissions officers of colleges and universities in an effort to further develop relationships that complemented the coordination of all processes including application, acceptance, transition, and support for students.
10. An extensive database was created. Every aspect of what we did expanded our database. Maintaining records of who we have contacted and developed relationships with was paramount in the successful implementation and delivery of a project of this scope.
11. The EAA facilitated two professional development weekend conferences providing information on internships, resume development, presentation assistance, mentors who have travelled similar paths, tax filing for graduate stipends, employment, and Ph.D programs and processes.

12. Coordinated and facilitated the National Conference on Higher Education for 850 undergraduate students interested in attending graduate school. Students attended from 22 states and the U. S. Virgin Islands and 69 colleges and universities. Students represented all majors however 65% of all attendees were majoring in STEM disciplines. Eighty-five graduate school participated in the graduate school fair. The weekend conference serves to create an environment whereby underrepresented undergraduate students convene annually to receive critical and pertinent information about educational opportunities in graduate and professional schools and be inspired to reach beyond college and take the next step in completing the educational circle

### Budget-To-Actuals Report

Object Class Categories	Budget	Cumulative Actuals
Personnel	381,620	379,208.78
Fringe Benefits	91,900	90,730.65
Travel	53,700	38,425.88
Equipment	7,600	0
Supplies	46,025	36,201.26
Contractual	446,975	441,310.00
Construction		
Other (Participation Costs)	3,264,000	3,305,990.02
Total Direct Charges	4,291,820	4,291,866.59
Indirect Charges	82,180	82,180.00
Totals	4,374,000	4,374,046.59

# APPENDIX



## National Minority STEM Fellowship Program

### STATUS REPORT

This form, completed in its entirety must be e-mailed to ALL of the following addresses:

[sball@eaalliance.org](mailto:sball@eaalliance.org)  
[sdiggs@eaalliance.org](mailto:sdiggs@eaalliance.org)  
[knicholas@eaalliance.org](mailto:knicholas@eaalliance.org)

It must be received no later than the noon on the 15<sup>th</sup> of each month. Failure to e-mail your monthly status report by the appointed time and date may delay your stipend by two weeks or more. If you have any questions, comments, or concerns at any time in regards to the Status Report, please e-mail [sball@eaalliance.org](mailto:sball@eaalliance.org).

Date Submitted: Wednesday 2nd

For Month: March, 2011

Name of Fellow: V. L.

University: West Chester University of Pennsylvania

Major: Geography and Planning Advisor: N/A

#### STATUS REPORT,

Describe in detail your experience/s for the month, including but not limited transition, relationship development with cohort and advisor, campus acclimation, coursework, etc.

I am proud to announce my recent achievement. As of mid-February, I have been a member of the Gamma Theta Upsilon International Honor Society for Geography. My Mother was very proud of this milestone. The 25<sup>th</sup> Annual National Conference on Higher Education was beyond words. I enjoyed everything that weekend from the speakers to the workshops and even the talent show.

Since the last journal entry, the Population Processes course has covered issues such as policy making in regards to fertility, poverty levels and health in developing nations. The findings concluded that in East Asian Countries, public health increased over the past century before the overall wealth did. The United States had the exact opposite effect where the Country's wealth had experienced an increase before health levels. I have written papers on migrant worker

policies both in the United States and abroad. So far, I have received perfect scores on all assignments in this course.

The Geographic Information Systems Applications course is picking up some momentum. My idea for a new application for the i-phone resulted in a perfect score. Since this assignment, we have been working with solar data. I have to admit that this part of the field is fairly new to me, but I am open to the challenges as always. We are currently working with mostly raster data. There are two different kinds of data in Geographic Information Systems. One is called vector data and the other is raster. City planners, demographers and business analyst will typically use vector data because vector data doesn't really change much. Vector data is constant and will never be used by environmentalist, ecologist or oceanographers. The reason why raster is best for the more technical fields is because scientists usually work with data that is always changing. Engineers will use raster to measure slopes, radiation levels, flooding zones or soil erosion. Raster data is also used to track weather patterns and even volcanic activity.

The Transportation Planning course is preparing us for the mass transit field. We have been working on proposals for bicycle lanes throughout Chester County. We have also worked with proposals on how to improve bus routes. In addition to that, we have looked at other proposals such as high speed rails. I have been working on the final project proposal. In the proposal I use the train routes in Spain as an example to show the benefits of having rail lines covering a large area. The benefits are not just environmental, but can lead to economic growth even in the jobs sector. The fact that someone can go from Philadelphia to New York City in less than forty minutes is an amazing progress. Our current tracks are outdated and are not designed for such high speeds. This upgrade will enable the United States to compete in the global world from an infrastructural perspective.

Signature of Fellow: *Virgilio Lawson* Date: 3/2/2011

**(for use by Educational Advancement Alliance, Inc.)**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Stipend Amount \_\_\_\_\_ Check No. \_\_\_\_\_



## National Minority STEM Fellowship Program

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Date Submitted: 5/16/11 For Month: May, 2011

Name of Fellow: T, S.

University: Temple University

Major: Env. Eng. Advisor: Dr. Michel Boufadel

### STATUS REPORT

Describe in detail your experience/s for the month, including but not limited transition, relationship development with cohort and advisor, campus acclimation, coursework, etc.

The end of this semester was a little stressful, trying to finish final papers, project presentations and study for finals. But it all paid off in the end. My teachers just posted 2 of my 3 final grades. I received an A- in my Contaminant Dynamics class. I was a little surprised by how well I did in this class since I was expected around a B. My midterm in this class was a 77 out of 100, so I pushed myself to pick up the slack with class participation. The final for this class was a paper that had to answer 3 questions extensively. My paper grade was a 97 so I was very happy about that. In my Groundwater Modeling class I received a B and was very grateful because this

is the class that I had the most trouble in. My teacher understood that I was working very hard and trying to understand the concepts. I was in her office every other day asking for help and assistance, spent many late hours in the computer lab working on my project, and genuinely tried my hardest to bring my grade up in that class. My last course, Biological Principles, I have not received my grade yet. So this will be holding me up on when I can send in my transcripts. The efforts I made in class and my grades reflect that I should be getting around an A- or B+, but this really depends on how I did on my final test. The test was really difficult, and despite studying for 2 weeks prior to the test, I still did not feel that I understood the material completely. So hopefully I passed.

Besides finishing classes, I am very excited for my move to California and the work that I will be doing at the Livermore National Laboratory. I have my housing all figured out and have sent off the paperwork for my clearances. My host is currently working on my placement and assignments. Mrs. Nicholas has been very helpful in keeping me updated and calling people when I am unable to reach people in California.

I am currently working on getting my classes situated for next semester. One of the classes that I need to complete my additional certificate in Stormwater Management is not being opened for graduate students since I am the only one who is interested in taking the course, I am trying to convince my teacher to extend the class to graduate students, because without this course I will not be able to get my certificate. I am only 6 credits away from graduating, but I have taken everything that is being offered next fall. So if this class does not open for me I will have to fill my schedule with classes that have nothing to do with my major in order to be a full time student and that would be a waste of money. My options are to take this next semester to do research and finish my degree in the spring. Another option would be to (if this class opens up) take this course along with a geology course to be considered full time for the fall semester. Either way I look at it, my graduation time will be pushed back from January of 2012 to May of 2012 because of the unavailability of classes and because I have taken everything that is being offered for the fall semester. I believe that I am still eligible to be apart of the NMSFP because I would still be in the 2 years designated by them. The 2 year mark for me would be at the end of the 2012 semester since I started the program fall of 2011. I would like to get input from someone at the Fellowship to help me on how I should go about scheduling my classes for the next semester and possibly the next school year.

Signature of Fellow: \_\_\_\_\_ Tiffini Smith \_\_\_\_\_ Date: \_\_5/16/11\_\_\_\_

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Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Stipend Amount \_\_\_\_\_ Check No. \_\_\_\_\_

Rev 10/09



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Date Submitted: 08/15/11 For Month: August

Name of Fellow: T. S.

University: Temple University

Major: Env. Eng. Advisor: Dr. Michel Boufadel

### STATUS REPORT

Describe in detail your experience/s for the month, including but not limited transition, relationship development with cohort and advisor, campus acclimation, coursework, etc.

This past month was spent finishing up my projects at Lawrence Livermore National Laboratory. I have been working on the bioremediation project that will be implemented at a small portion of the lab in order to test how the technology will effect that area. Subsurface contamination has been an issue at LLNL that dates back to WWII. ISB01 (my treatability area) is a groundwater treatment facility at The TFD Helipad Source Area that will use in-situ bioremediation as a means to breakdown and eventually eliminate Trichloroethene (TCE) and other contamination that is present. In-situ bioremediation uses microorganisms and optimum nutrient levels to aide in the degradation of contamination. The purpose of my project is to understand the unique properties of the subsurface at ISB01 using data from the Flourescein dye tracer experiments that were done a few months earlier. Included in these properties are hydraulic conductivity, groundwater velocities, travel times, storativity, as well as the radius of

remediation influence. Modeling exercises were performed to simulate transport and flow in order to assist and enhance the design and operation of this facility. After completing my project, all of the students had to enter the student poster symposium and present their projects. I also had to present all of my work to the entire department. My supervisor was really impressed with the amount of work that I accomplished. On my last day of work he offered me a chance to come back next summer. This wouldn't be a permanent job, but the same as an internship. I would either have to enter into a PhD program after I graduate or they would have to pay me as a summer employee. I would just have to keep in contact with the lab and hopefully this will all work out in the end. Classes start on the 29<sup>th</sup> of August. My school report is indicating that I now need 35 credits in order to graduate so I will be graduating in May instead of December. Also, one of my classes that is required to fulfill my certificate and major is not offered until the spring semester. With classes being limited, I will only be taking 2 classes next semester and my final 2 the following spring. I can get a letter from my advisor authorizing that 2 classes is acceptable for full time. I look forward to starting the new school year and I look forward to finishing out my degree.

Signature of Fellow: \_\_\_\_\_ Tiffini Smith \_\_\_\_\_ Date: 8/15/11 \_\_\_\_\_

**(for use by Educational Advancement Alliance, Inc.)**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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Rev 10/09



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Date Submitted: 02/14/2011 For Month: February, 2011

Name of Fellow: N. P.

University: Rutgers, The State University of New Jersey

Major: Nutritional Science Advisor: Dr. Hoffman

### STATUS REPORT

This past month has been quite a handful with the starting of the semester on January 18<sup>th</sup>. I am taking two graduate courses, two undergraduate courses, thesis research, teaching two different courses, and also being a graduate mentor. It is quite the handful, but I'm still hanging on.

I successfully completed fifteen pages for the introduction to my thesis, and will now get started on the data analysis. Unfortunately, I have been hitting a wall since my advisor refuses to help me, so I am trying to seek the aid of the statistics department in order to assist me in my data analysis. I am extremely frustrated with the situation at the moment, and trying to manage it the best I can. I am working hard to not breakdown and instead tackle the challenges.

My undergraduate courses are fairly manageable and not too much work so that gives me time to focus on my graduate seminar, research, and teaching. I am handling mastery of the material needed to teach biology lab, as well as being organized to teach a new course to females in

STEM majors called Introduction to Scientific Research (ISR). I am learning things about the research process as I go through teaching the course to undergraduates. Teaching this course allows me more flexibility in grading compared to right and wrong answers in biology. This allows me to grow as a teacher/mentor because I am able to give encouraging scores even though work may be criticized and needs improvement. I can push students without penalizing them. I am also building stronger relationships with the girls in my dorm, being available for any questions they may have and helping direct them on more resolution-oriented paths to their concerns and challenges.

I have successfully finished the application process for my dietetics internship! I am extremely relieved that this is over, but I have to await the results which will be disclosed in early April. I am planning to continue into another graduate program as a backup if I don't attain an internship. I have also considered applying to employment as well, but that is a fresh idea which I will need to explore more in the next few months. The second graduate program deadline will be March 1<sup>st</sup>, so that will be a focus for the remainder of February. If I do not get into the internship this matching period, I will not quit, but rather meet clinical volunteering hours to enhance my candidacy and reapply the following year!

This point in my life is very stressful as I am trying to figure out the next steps, however it will be sorted out in time. I need to re-focus on eating well and exercising in order to maintain my internal balance and survive this semester with grace.

On a side note, I had a great time and learning experience at the professional workshop held by EAA in January! I related very well to the circle of relationship levels and time management.

Signature of Fellow: Nipa Patel Date: 02/14/2011

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Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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Date Submitted: 9/15/2011 For Month: September, 2011

Name of Fellow: M. S. K.

University: Rutgers University

Major: Nutritional Sciences Advisor: Dr. Hallman

#### STATUS REPORT, Page 2

Describe in detail your experience/s for the month, including but not limited transition, relationship development with cohort and advisor, campus acclimation, coursework, etc.

I cannot believe that the Fall semester has already started again. I feel that time is flying by, and there are so many things that I want to do and accomplish. As of right now, my main focus is my RD Exam. This exam will determine my status as a nutrition professional. While the content is information I know well, I am very anxious about taking the exam. I have always had anxiety when it comes to tests, especially standardized exams. The time is quickly approaching and I feel myself becoming more anxious, but I'm sure once I take the exam I will feel much better.

As the classes begin again, I am once again the Graduate mentor for the class 'Careers in Nutrition.' I truly enjoyed working with Dr. Sherman and seeing all that goes into developing and running a classroom. I also enjoy serving as a mentor to the undergraduate students and sharing my own experience with them, since I was in their situations just a few years ago. This course introduces the students to different career paths in nutrition, but also is

a class of self-reflection. Since this is a non-traditional course, many of the assignment topics are very personal. As I was making my comments on the first assignments, I was completely shocked and humbled by the information they were sharing with me. Some of the students were pouring out their personal lives and most sincere thoughts. Several of the students came from extremely difficult home situations. It once again put my life into perspective, and I feel humbled and so grateful for everything I have. While this position is not paid, I feel that I am learning a great deal about running and managing a classroom. I have developed lesson plans before, but this is a different setting, one that I've never experienced before as an instructor. I hope this experience will help me grow as a professional and a potentially a future educator.

Having submitted my application for the Fulbright Program, I am excited to hear of the results. I am so excited for an opportunity that would allow me to travel and really learn about my cultural heritage. I will learn of the outcome in January, but it is difficult not to this about it.

Perhaps the most novel event that happened this month is that I was hired as a part-time Sports Dietitian for the RU Athletics Department. While this is a challenge, I have always been interested in sports nutrition, and see this as an opportunity to learn more. I am also excited that I will be able to utilize my nutrition counseling skills so I do not become 'rusty' as I finish my graduate work. This position is ideal for me since it has very limited hours, due to budget reasons, and is very flexible. I enjoy working with the college population and look forward to this experience.

With all of the exciting opportunities that are available it is easy to lose focus on what first needs to be accomplished. I do recognize that I have a great deal I must complete first before pursuing other endeavors, but it is always refreshing to see all of the options ahead of you.

Signature of Fellow: Melanie S. Kim Date: 9/15/2011

**(for use by Educational Advancement Alliance, Inc.)**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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