



U.S. Department of Education
Grant Performance Report Cover Sheet (ED 524B)

OMB No. 1894-0003
Exp. 04/30/2014

Check only one box per Program Office instructions.
[] Annual Performance Report [] Final Performance Report

General Information

- 1. PR/Award #: P031C110087
2. Grantee NCES ID#: 187994
3 Project Title: Strengthening Science, Engineering, and Energy Career Options (SECO)
4. Grantee Name (Block 1 of the Grant Award Notification.): New Mexico State University - Alamogordo
5. Grantee Address (See instructions.): 2400 N. Scenic Drive, Alamogordo, NM 88310-3722
6. Project Director (See instructions.) Name: Stan R. Carlson Title: Associate Professor
Ph #: (575) 439-3771 Ext: (n/a) Fax #: (575) 439-3759
Email Address: stacarl@s@nmsu.edu

Reporting Period Information (See instructions.)

- 7. Reporting Period: From: 10/01/2011 To: 03/31/2012 (mm/dd/yyyy)

Budget Expenditures (To be completed by your Business Office. See instructions. Also see Section B.)

8. Budget Expenditures

Table with 3 columns: Budget Category, Federal Grant Funds, Non-Federal Funds (Match/Cost Share). Rows include Previous Budget Period, Current Budget Period (\$247,176.03), and Entire Project Period.

Indirect Cost Information (To be completed by your Business Office. See instructions.)

9. Indirect Costs

- a. Are you claiming indirect costs under this grant? Yes No (X)
b. If yes, do you have an Indirect Cost Rate Agreement approved by the Federal Government? Yes No
c. If yes, provide the following information:
Period Covered by the Indirect Cost Rate Agreement: From: / / To: / / (mm/dd/yyyy)
Approving Federal agency: ED Other (Please specify):
Type of Rate (For Final Performance Reports Only): Provisional Final Other (Please specify):
d. For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:
Is included in your approved Indirect Cost Rate Agreement?
Complies with 34 CFR 76.564(c)(2)?

Human Subjects (Annual Institutional Review Board (IRB) Certification) (See instructions.)

- 10. Is the annual certification of Institutional Review Board (IRB) approval attached? Yes No (X) N/A

Performance Measures Status and Certification (See instructions.)

11. Performance Measures Status

- a. Are complete data on performance measures for the current budget period included in the Project Status Chart? Yes (X) No
b. If no, when will the data be available and submitted to the Department? 12/31/2012 (mm/dd/yyyy)

12. To the best of my knowledge and belief, all data in this performance report are true and correct and the report fully discloses all known weaknesses concerning the accuracy, reliability, and completeness of the data.

Name of Authorized Representative: Cheri Jimeno Title: President
Signature: Cheri Jimeno Date: 4/12/2012



U.S. Department of Education
Grant Performance Report (ED 524B)
Executive Summary

OMB No. 1894-0003
Exp. 04/30/2014

PR/Award # (11 characters): P031C110087

Substantial progress in support of year-1 objectives has been made during the first 6 months of the SECO Project—particularly in the areas of hiring, budget management, reporting processes, purchasing, inventory, construction planning, and curriculum development. A project manual, which includes an evaluation plan, has been completed and an internal evaluation team has been formed.

Stan R. Carlson was appointed by College President Cheri Jimeno and began working as Interim Director on January 1; he was approved by the Program Officer and named Project Director on February 1. In January and early February job descriptions, required approvals, NMSU job titles, and hiring search committees were established for the six remaining year-1 positions: (1) Outreach-Transfer Coordinator (1.0 FTE); (2) Renewable Energy Instructional Coordinator (9-month, 1.0 FTE); (3) Technology Specialist (1.0 FTE); (4) Biology Lab Instructional Specialist (1.0 FTE); (5) Physical Sciences Lab Instructional Specialist (9-month or 0.75 FTE); and (6) Administrative Assistant (1.0 FTE). All searches are proceeding within normal timelines for NMSU hiring processes. The five staff positions are in the final stages of completion and should be filled before the end of April. Part of the Technology Specialist position, 0.25 FTE, was filled with a qualified existing employee, Systems Analyst Fernando Terrazos; the remaining 0.75 FTE will be filled by a new hire. Completing the Renewable Energy Instructional Coordinator search will likely occur in May or June, to begin August 2012 (again, a typical hiring timeline for this type of 9-month position). Hiring this position near the end of year-1 may slightly delay progress on the renewable energy aspects of the project. Finally, we have begun the process of hiring the year-2 Engineering Instructional Coordinator (9-month, 1.0 FTE) and are expecting to fill this position on schedule for Fall 2012.

All budget management systems have been established for the SECO Project. Within the first 3 months and following NMSU Policy, budget indexes were established for (1) the Salary and Non-salary categories and (2) Construction. Budget ledgers for the non-salary categories (equipment, supplies, etc.) have been established. Personnel costs and fringe benefits are being verified monthly. A Shadow Budget system (which independently tracks project expenditures) has been established and is being used to reconcile and verify NMSU budget reports on a monthly basis. The Shadow Budget is also used to “translate” the NMSU accounting system into the 8 federal budget categories: personnel, fringe benefits, travel, equipment (\geq \$5k), supplies, contractual, construction, and other. An area for budget transfers has recently been added to the system. As of March 31, \$247,176.03 has been spent or encumbered, which represents 28.4% of the FY-12 budget. This exceeded our target of 25% year-1 spending by March 31, even though we have experienced some cost savings on equipment and supply items; in particular, MacPro (iMac) computers were budgeted at \$9200 each, but cost only \$5633 per unit. Plans are underway to appropriately spend any surplus funds on value-added items (e.g., additional needed lab supplies and equipment). Finally the SECO Project has a 43% personnel budget (including fringe benefits). Therefore, when the hiring processes conclude the rate of spending will increase substantially.

Employee reporting processes have been established and are being used monthly for (1) time & effort; (2) progress; (3) travel requests; and (4) travel reports. These reports are being filed in binders and stored in the Project’s main office. All reports have been submitted through March 2012.

An inventory system has been developed and is being used to log, locate, and track all equipment and the larger supply items (such as computers valued at less than \$1000, but not including small office supplies such as binders). A tagging system (to read HSI STEM <tag#>) has also been developed. The SECO Project adheres to NMSU policy regarding institutional tagging of items \geq \$1000.

The grant proposal originally had instructional lab renovation projects funded over the 5 years of the grant period. After discussions with NMSU-A Administration and the STEM Steering Committee, we proposed a more efficient way to complete the renovation work over the first two years of the SECO Project. The plan was submitted to the Program Officer on February 6 and approved on February 15. All planning and design work (now underway) will be completed in April 2012. Lab renovations will be started in Summer 2012 (year-1) and completed in Summer 2013 (year-2). Essentially we will complete all Chemistry lab renovations in year-1 and remaining renovation work (Physics/Engineering lab, Geology/Geography lab, and Biology lab) in year-2. Completing the renovation work early will accelerate the goal of improving learning environments in our Science and Engineering labs, and thus clearly benefit our STEM students. However, the accelerated schedule will not require changing the sequencing of our 5-year project objectives. To obtain short-term funding, we will use the college’s capital reserves in FY-12 and FY-13; the reserves will be paid back as grant funds become available each fiscal year. This plan is analogous to an interest-free short-term loan and similar to the “reimbursement” method that the college uses to draw down grant funds. Because of our strong enrollment trends, the college’s capital reserves are projected to be strong for at least the next few years. The total budget for lab renovations is \$369K with requested temporary financing from college capital reserves of \$227K.

Progress has also been made in STEM curriculum development. A revision of the Associate of Science (AS) degree has been drafted and will soon be ready for review by the college Curriculum Committee. The General Engineering AS degree has been finalized and will become an official NMSU program in Fall 2012. Progress has been made in the initial stages of developing the Renewable Energy AAS curriculum (including requests for new courses), but we will need input from the Renewable Energy Instructional Coordinator to finalize the degree plan. Work on developing and revising the Computer Graphics AAS has also begun. Additional curriculum work using faculty teams, with input from advisory boards, will be conducted in Summer 2012.

Several year-1 items have been purchased, including basic staff office supplies, staff computers and printers, iMac computers for the Computer Graphics lab, PCs for the Math lab, and computer projection systems for the Science labs. Most remaining year-1 equipment and supplies will be purchased in April and May—ready for installation in Summer 2012.

Finally, the Project Director has begun professional development and initial outreach activities, including participation in a workshop on minority males in STEM programs and a presentation to Leadership Otero, a group of local civic leaders sponsored by the Alamogordo Chamber of Commerce. Once hired, the Outreach-Transfer Coordinator will place an emphasis on attracting and supporting our Hispanic and low-income students.



**U.S. Department of Education
Grant Performance Report (ED 524B)
Project Status Chart**

OMB No. 1894-0003
Exp. 04/30/2014

PR/Award # (11 characters): P03IC110087

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

1. Project Objective Check if this is a status update for the previous budget period.

By Fall 2013, at least 80% of participants (at least 40% Hispanic/ low-income) each in Associate of Science (AS), Renewable Energy (RE) AAS, and Computer Graphics (CG) AAS first-year STEM course pilots will re-enroll for the second year.

1.a. Performance Measure	Measure Type	Quantitative Data					
		Target		Actual Performance Data			
		Raw Number	Ratio	Raw Number	%	Ratio	%
By Fall 2012, at least 40 AS majors (at least 16 Hispanic/low-income) will enroll in first-year STEM course pilots with at least 90% re-enrolling for the Spring 2013 semester.	Project	40	36/40	0	90%	/	0%

1.b. Performance Measure	Measure Type	Quantitative Data					
		Target		Actual Performance Data			
		Raw Number	Ratio	Raw Number	%	Ratio	%
By Fall 2012, at least 40 each RE AAS majors (at least 16 Hispanic/low-income) will enroll in first-year STEM course pilots with at least 90% re-enrolling for the Spring 2013 semester.	Project	40	36/40	0	90%	/	0%

1.c. Performance Measure	Measure Type	Quantitative Data					
		Target		Actual Performance Data			
		Raw Number	Ratio	Raw Number	%	Ratio	%
By Fall 2012, at least 40 CG AAS majors (at least 16 Hispanic/low-income) will enroll in first-year STEM course pilots with at least 90% re-enrolling for the Spring 2013 semester.	Project	40	36/40	0	90%	/	0%

Explanation of Progress (Include Qualitative Data and Data Collection Information):

Based on project implementation strategies supporting this objective, we have conducted or initiated various activities key to accomplishing our enrollment and retention goals, including: (1) hiring project staff; (2) preparing for year-1 construction projects; (3) purchasing year-1 equipment and supplies; (4) developing and revising curricula; and (5) planning outreach and other student support activities.

1.a. Initial discussions have taken place with the Student Services Office about coordinating outreach and enrollment activities for the AS program. A draft revision of the AS degree, prepared by a faculty team, is nearing completion. Several science courses are now being delivered online, including general biology (BIOL 111G), most physics courses (PHYS 110G, 211G, and 212G; 215G is in development), intro geology (GEOL 111G), intro astronomy (ASTR 105G, 110G), and calculus for life sciences (MATH 142G); one geography course is now offered online (GEOG 112G) and another is under development (111G). Construction plans for the Chemistry lab renovation (a summer 2012 project) are underway and nearing completion. Also being developed are plans for integrating service learning into selected courses in Fall 2012. Based on progress to date, we are confident that this performance measure will be achieved.

1.b. Initial discussions have taken place with the Student Services Office about coordinating outreach and enrollment activities for the RE AAS program. The RE AAS and two certificates have undergone preliminary development, including requests for new courses and draft degree/certificate plans; completion of the RE AAS hinges on hiring the RE Instructional Coordinator. With continued curriculum development and outreach activities we believe that this performance measure will be attained.

1.c. Initial discussions have taken place with the Student Services Office about coordinating outreach and enrollment activities for the CG AAS program. Some preliminary work has been done on the CG AAS, but it will require additional work by a faculty team in Summer 2012. The CG AAS is essentially a consolidation of components of two related AAS degrees: Computing and Information Technology. With continued curriculum development and outreach activities we believe that this performance measure will be attained.



**U.S. Department of Education
Grant Performance Report (ED 524B)
Project Status Chart**

OMB No. 1894-0003
Exp. 04/30/2014

PR/Award # (11 characters): P031C110087

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

2. Project Objective Check if this is a status update for the previous budget period.

By Fall 2013, at least 80% of participants (at least 40% Hispanic/ low-income) each will earn grades of C/+ in Associate of Science (AS), Renewable Energy (RE) AAS, and Computer Graphics (CG) AAS first-year STEM course pilots; at least 75% of participants will express satisfaction with courses and services.

2.a. Performance Measure	Measure Type	Quantitative Data				
		Target		Actual Performance Data		
By Fall 2012, at least 95% of project staff will be released/ hired and oriented, first-year construction/ renovation will be complete, supplies and equipment will be acquired and installed, and STEM academic and Outreach-Transfer support programs will be developed.	Project	Raw Number	Ratio	Raw Number	Ratio	
				/		/
				95%		10%

2.b. Performance Measure	Measure Type	Quantitative Data				
		Target		Actual Performance Data		
By Fall 2012, at least 95% of first-year STEM curricula will be revised/ developed/ converted.	Project	Raw Number	Ratio	Raw Number	Ratio	
				/		/
				95%		20%

Explanation of Progress (Include Qualitative Data and Data Collection Information):

Based on project implementation strategies supporting this objective, we have conducted or initiated various activities key to accomplishing our student success and staff performance goals, including: (1) hiring project staff; (2) preparing for year-1 construction projects; (3) purchasing year-1 equipment and supplies; (4) developing and revising curricula; and (5) planning outreach and other student support activities.

2.a.

The Project Director (Stan Carlson) was placed as interim Director on January 1 and approved by the Program Officer on February 1. (A search is currently underway for the position previously held by the Director—Division Head for Math, Engineering, Science and Health.) The All regular project staff will be hired by the start of the Fall 2012 semester, with most personnel expected to be on duty by May 1, 2012. Near completion are searches for (1) Administrative Assistant (expected start date April 9); (2) Outreach-Transfer Coordinator (expected start date May 1); (3) Biology and Physical Sciences Lab Specialists (expected start date May 1); and Systems Analyst (expected start date May 1). Employee orientations will occur within one week of hire. Search processes for the Renewable Energy Instructional Coordinator (9-month

position) should be completed by June 1, with a start date of mid-August (Fall semester). Hiring processes for the Engineering Instructional Coordinator have been initiated and should conclude by July 1, with an expected start date of mid-August (Fall semester).

Planned year-1 construction includes (1) renovating the chemistry lab, and (2) erecting a renewable energy training lab. Planning and design work for the chemistry lab is nearing completion and the renovation work will take place during Summer 2012. Initial plans for the renewable energy structure are underway, but input from the Renewable Energy Instructional Coordinator will be required, which could delay construction to August or September.

Based on amount budgeted, 50.7% (\$55,309/\$109,000) of supplies have been purchased to date. Most of the remaining supplies will be purchased no later than June 1, ready for use or installation in Summer 2012. As for equipment, 50.3% (\$112,660/\$224,100) has been purchased to date. Remaining equipment purchases will occur no later than June 1 for Summer 2012 installation.

Development of the year-1 STEM outreach-transfer programs hinges on hiring the Outreach-Transfer Coordinator. This employee should be in place by May 1 and this task will be a top priority.

2.b.

A draft revision of the AS degree, prepared by a science faculty team, is nearing completion; when ready it will be submitted to the campus Curriculum Committee for review. The RE AAS and two certificates have undergone preliminary development, including requests for new courses and draft degree/certificate plans; completion of the RE AAS hinges on hiring the RE Instructional Coordinator. Some preliminary work has been done on the CG AAS, but it will require additional work by a faculty team in Summer 2012. The CG AAS is essentially a consolidation of two related AAS degrees: Computing and Information Technology. Development or revision of service learning and internship curricula hinges on hiring the Outreach-Transfer Coordinator and will take place in May and June. With continued development and progress we believe that this performance measure will be attained.



Grant Performance Report (ED 524B) Project Status Chart

PR/Award # (11 characters): P031C110087

SECTION B - Budget Information (See Instructions. Use as many pages as necessary.)

As of March 31, 2012 \$247, 176 of Federal Grant funds, to the nearest dollar, has been spent (or encumbered) on the SECO Project. This represents 28.4% of the total FY-12 (year-1) budget of \$869,092. Spending to date and planned spending for each budget category are given below.

Personnel (33% of budget): \$286,600 was budgeted and \$31,928 spent as of 3/31 (11.1%). Based on current NMSU pay scales and ongoing hiring processes, projected personnel spending for the remainder of FY-12 (4/1–9/30) will be \$144,139. Thus, total spending will be \$176,067, leaving a surplus of \$110,533. Because the pay scale for some positions is higher than originally proposed in the grant budget (see below), we propose to carry-over \$25,372 to FY-13 and spend the remaining amount—\$85,161—on value-added supplies and equipment. Staff Salary estimates are:

- *Project Director* (Associate Professor), began 1/1: \$76, 292 in FY-12 and \$78,440 in FY-13 (with promotion to Professor); \$58,000 and \$59,740 budgeted, respectively.
- *Outreach-Transfer Coordinator*, to begin 5/1: \$48,000 in FY-12 and FY-13 (midrange grade 8); \$42,000 and \$43,260 budgeted, respectively.
- *Renewable Energy Instructional Coordinator*, to begin 8/15: \$47,600 first year, FY-12/13 (College Instructor); \$49,028 budgeted.
- *Engineering Instructional Coordinator*, to begin 8/15: \$47,600 first year, FY-12/13 (College Instructor); same as budgeted.
- *Technology Specialist*, 0.25 FTE began 1/16, 0.75 FTE to begin 5/1: \$36,000 in FY-12 and \$37,080 in FY-13; same as budgeted.
- *Biology Lab Specialist*, to begin 5/1: \$39,000 in FY-12 and FY-13 (midrange grade 7); \$36,000 and \$37,080 budgeted, respectively.
- *Physical Sciences Lab Specialist* (0.75 FTE), to begin 5/1: \$29,250 in FY-12 and FY-13 (midrange grade 7); \$27,000 and \$27,810 budgeted, respectively.
- *Administrative Assistant*, to begin 4/9: \$27,000 in FY-12 and 27,810 in FY-13; same as budgeted.
- *Faculty release*: \$10,000 in FY-12 and \$15,000 in FY-13; same as budgeted.
- *Tutors*: \$3000 in FY-12 and FY-13; same as budgeted.

Fringe Benefits (10.3% of budget): \$89,892 was budgeted and \$10,217 spent as of 3/31 (9.4%). Based on current NMSU pay scales and ongoing hiring processes, projected fringe benefit spending for the remainder of FY-12 (4/1–9/30) will be \$44,304. Thus, total spending will be \$54,521, leaving a surplus of \$35,371. Because the pay scale (thus fringe rate) for some positions is higher than given in the grant proposal (see above), we propose to carry-over \$8,119 to FY-13 and spend the remaining amount—\$27,252—on value-added supplies and equipment. Fringe rates are based on salaries given above: 32% for regular positions and 18% for temporary positions.

The total year-1 surplus funds in Personnel and Fringe that we will propose to transfer to Equipment and Supplies is \$112,413. A formal request to transfer these funds, including a detailed spending plan, will be made to the Program Officer by May 31.

Travel (0.6% of budget): \$5000 was budgeted and \$1062 spent as of 3/31 (21.2%). Travel so far has included professional development training for the Project Director with RMA consulting (\$987) and participation in a workshop focused on minority males in STEM programs, held at NMSU Las Cruces (\$75). The remaining \$3938 will be spent on trips to NMSU Las Cruces to discuss and negotiate program articulation (\$1224), attending one conference or workshop on best practices (\$938), and travel to best practice institutions in New Mexico (\$1776).

Equipment (25.8% of budget): \$224,100 was budgeted and \$112,660 spent as of 3/31 (50.3%). So far we have purchased 20 iMac computers for the Computer Graphics lab, at \$5633 per unit (\$112,660 total); the grant proposal listed 18 computers at \$9200 each (\$165,600). We will continue to follow the purchasing plan described in the grant proposal to spend the remaining funds (\$111,440). If we experience further cost savings, additional equipment purchases will be carefully determined, using rec-

ommendations from faculty and (as appropriate) program advisory boards. We will use the same process to select value-added equipment if the plan to transfer surplus funds from Personnel and Fringe is approved.

Supplies (12.5% of budget): \$109,000 was budgeted and \$55,235 spent as of 3/31 (50.3%). So far we have purchased 29 PCs for the Math lab, at \$2750. Other items include 9 staff PCs (\$8518) and 2 staff iMacs (\$4158); 4 laptops (\$4581), 4 LCD projectors (\$2956), and related parts (\$1628); advertising and related hiring costs (\$1395); AppleCare (\$2380) and iMac cables (\$980); and staff office supplies (\$109). We will continue to follow the purchasing plan described in the grant proposal to spend the remaining funds (\$53,691). If we experience cost savings, additional supply purchases will be carefully determined, with input from faculty and (as appropriate) program advisory boards. We will use the same process if the plan to transfer surplus funds from Personnel and Fringe is approved.

Contractual (0.5% of budget): \$4,000 was budgeted and \$0 spent as of 3/31 (0%). This budget will be spent in Summer 2012 for Red Rocks Community College (a model institution) instructional experts to assist with the Renewable Energy Program development and review.

Construction (16.3% of budget): \$142,000 was budgeted and \$36,000 encumbered as of 3/31 (25.4%). Year-1 construction work will include renovation of the Chemistry lab (\$82,000) and the erection of a Renewable Energy training lab (\$60,000). With project lab renovation work approved by the Project Officer for completion over the first two years of the project, year-1 work will also include renovation of the Chemistry storage/prep room (\$45,000, borrowed from the college's capital funds). Lab renovation work will be completed in Summer 2012 and architectural renderings are near completion. The \$36,000 spent so far is for architectural fees for the entire two-year lab renovation project. The Renewable Energy training lab will likely be completed in August or September, after the Renewable Energy Instructional Coordinator has been hired and provided design input.

Other (1.0% of budget): \$8500 was budgeted and \$0 spent as of 3/31 (0%). This budget will be spent in August or September for an external evaluation of year-1 project progress and performance. The evaluator fee will be \$1500 per day for 5½ days. The Project Director is currently screening several highly qualified evaluators for recommendation to the Internal Evaluation Team.

SECTION C - Additional Information (See Instructions. Use as many pages as necessary.)