EIA Program Report for Fiscal Year 2011-12

Coversheet

EIA-Funded Program Name: **ScienceSouth**

Current Fiscal Year: **2011-12**

Current EIA Appropriation: **$500,000**

Name of Person Completing Survey and to whom EOC members may request additional information: Stephen M. Welch

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Question 1: History of the program: Please mark the appropriate response (choose one):

This program:

___was an original initiative of the Education Improvement Act of 1984

___was created or implemented as part of the Education Accountability Act of 1998

___ has been operational for less than five years

__X_was funded last fiscal year by general or other funds

___ is a new program implemented for the first time in the current fiscal year

___Other

Question 2: What SC laws, including provisos in the current year's general appropriation act, govern the implementation of this program? Please complete citations from the SC Code of Laws including, Title, Chapter, and Section numbers.

Code of Laws:

H.3700

2011-12 General Appropriation Act

Section XI. Education Improvement Act, F. Partnerships.

Proviso(s): (If applicable. Please make references to the 2011-12 General Appropriation Act as ratified)

Regulation(s): None

Do guidelines that have been approved by the State Board of Education, the Commission on Higher Education or other governor board exist that govern the implementation of this program?

___Yes

___X_No

Question 3: What are the primary objective(s) or goals of this program? Please distinguish between the long-term mission of the program and the current annual objectives of the program. (The goals or objectives should be in terms that can be quantified, evaluated, and assessed.)

ScienceSouth's mission statement is to advance scientific understanding and increase the competitiveness of future generations in all areas of science.

Annual objectives are:

To improve science knowledge for grades K-12 addressed in the South Carolina Department of Education Science Standards reflected by an improvement in the PASS and EOC test scores for students who have participated in ScienceSouth programs. This will be accomplished by offering programs to schools through ScienceSouth's "Science on Wheels" and on site programs such as field trips and homeschool program. Each school district will be provided with a disclosed amount of funding, they will then select the programming they wish to have implemented and the time with in the school year for their particular school district.

To improve teacher quality by offering summer camp programs to teachers (K-12) to present science content as well as teaching and demonstrating "hands-on" laboratory activities to enhance science content presented to students. This would be reflected in an improvement in PASS and EOC scores for students of teachers involved in programming.

Increase students' knowledge and use of technologies by purchasing and using state of the art science education equipment for programming offered by ScienceSouth. This would be accomplished by programs presented through "Science on Wheels" and on site at the ScienceSouth Pavilion.

Implement programming, which focus on STEM (Science, Technology, Engineering, and Mathematics) topics on site and in communities throughout the state. ScienceSouth would accomplish this through: programming in schools, weekend programs, adult programs, and festival appearances by ScienceSouth. These programs include: ScienceSaturdays, STEM Saturday (Program is paid for in part by a grant received from Time Warner Cable's Connect-A-Million Minds initiative), Science After Dark for adults and Mommy and Me (preschool) programs.

Question 4: What are the outcomes or results of this program?

Outcome can be both quantitative and qualitative and should address the program's objectives. Please use the most recent data available:

Examples of outcomes would be: results of surveys, student achievement results, increases in participation, reduction in achievement gaps, loans awarded, textbooks purchased, etc.

Science PASS Scores Analysis: From a grant received from the AT&T Foundation in 2010 in the amount of $25,000.00 ScienceSouth was able to offer science programming to all Florence County, Williamsburg's and Dillon 1 (Lake View) school districts for the 2010-2011 school year. A total of 20 schools were visited and programs were presented which were selected by the school districts. When comparing PASS passing scores in science from 2010 to 2011, 60% of the schools where ScienceSouth's programming was presented showed an improvement in at least one grade level in the school that were directly involved with the program presented (Briggs Elementary, Greenwood Elementary, Moore Intermediate, Royall Elementary, Savannah Grove Elementary, Cades-Hebron Elementary, Kingstree Elementary, Hannah-Pamplico Elementary, Lake View Elementary, RE McNair Middle School, JP Truluck Elementary, and Johnsonville Middle School). In addition 20% of the schools visited showed an overall improvement in all grade levels where ScienceSouth's programming was presented (Kingstree Elementary, Cades-Hebron Elementary, JP Truluck Elementary, and Johnsonville Middle School). Factors, which may have influenced data: Not all 5th grade students involved in programming took the Science PASS tests. Higher scores could also be attributed to improvement in instruction by teachers.

Teacher Surveys for Summer Camp:

ScienceSouth held two teachers camp this summer; a biology camp for middle school and high school teachers in conjunction with Francis Marion University funded in part by a grant from The SC Science and Mathematics Partnership and a Teacher's Space camp as part of a requirement from a NASA grant received for 2010-2011. Teachers were asked to rank the effects of the camp on their teaching as 0 not applicable, 1 as low, 2 moderate, and 3 high success. Teachers completed surveys at the end of the camp and results are as follows. Of teachers completing the survey:

1. Improved their knowledge and skills.

N/A = 0%, Low=0%, Moderate = 25%, High Success= 75%

2. Created a more positive attitude toward science and technology

N/A = 0%, Low=0%, Moderate = 8%, High Success= 92%

3. Improved their ability to deliver curriculum content

N/A = 0%, Low=0%, Moderate = 17%, High Success= 83%

4. Enabled them to develop new approaches for teaching inquiry learning

N/A = 0%, Low=0%, Moderate = 0%, High Success= 100%

5. Provided them with new skills to teach problem solving, self-directed learning, and building character skills

N/A = 0%, Low=0%, Moderate = 17%, High Success= 83%

6. Supported their professional development and built their confidence in teaching

N/A = 0%, Low=0%, Moderate = 17%, High Success= 83%

7. Helped developed a understanding or "real world" science

N/A = 0%, Low=0%, Moderate = 17%, High Success= 83%

8. Helped develop scientific or technological skills

N/A = 0%, Low=0%, Moderate = 25%, High Success= 75%

9. Improved their ability to promote careers in science and technology to young people

N/A = 0%, Low=0%, Moderate = 17%, High Success= 83%

100% of participants surveyed agreed they would participate in these programs again.

No PASS or EOC 2012 score data is available for these teachers at this point for analysis.

Equipment Purchased and programs implemented 2009-2011:

Gel Electrophoresis Equipment: DNA Technologies Program and Forensic Science Summer Camp to teach the concepts of DNA fingerprinting and molecular genetics.

Lego Mindstorm Robotics: Engineering Summer Camp and after school programs for school year to teach the mechanics of building a robots and the process of programming the robots to carry out specific tasks.

Analog and Digital Starlabs: A mobile planetarium (analog Starlab) for teacher training and rental to school districts for district teachers to present lessons relating to SC Science Standards about Earth science and space. ScienceSouth purchased a mobile planetarium (digital Starlab) to offer programs at schools, on site, and public events to teach topics covered by SC Science Standards, general astronomy, and Earth Science. The programs using the digital StarLab are presented exclusively by ScienceSouth staff.

PASCO Probeware: **PASCO equipment is used to record data from various types of probe attachments (temperature, motion detector, sound detector, etc.) then manipulate this data to present it in graphical form for mathematic analysis. Program implementing the use of this equipment include ScienceSouth Science Saturday Programs and current programs in development for physics and chemistry to be implemented in 2011-2012.**

The number of participants involved in programming at ScienceSouth for the fiscal year 2010 -2011 are as follows:

Festival Events/ Public Outreach: 1,332

Home School Program: 287

Girl Scouts Programs: 137

Boy Scouts Program: 12

ScienceSaturday Programs: 206

STEM Saturdays: 192

Student Summer Camps: 191

Teacher Summer Camps: 16

Science on Wheels School Programs: 4,862

School Field Trips to Pavilion 1,064

All participants attending were exposed to STEM content and conducted a "hands on" activities.

The adult Science After Dark and Mommy and Me for preschoolers are to officially begin October 2011.

Question 5: Program Evaluations

What was the date of the last external or internal evaluation of this program?

Annual external financial audit – Burch, Oxner, Seale Co, CPA's, PA Florence, SC

Internal Analysis of Programming Effects on PASS Test Score Improvements

Has an evaluation ever been conducted?

__X__Yes

___No

If an evaluation was conducted, what were the results and primary recommendations of the most recent evaluation?

Internal Analysis of Programming Effects on Science PASS Test Score Improvements

From a grant received from the AT&T Foundation in 2010 in the amount of $25,000.00 ScienceSouth was able to offer science programming to all Florence County, Williamsburg's and Dillon 1 (Lake View) school districts for the 2010-2011 school year. A total of 20 schools were visited and programs were presented which were selected by the school districts. When comparing PASS passing scores in science from 2010 to 2011, 60% of the schools where ScienceSouth's programming was presented showed an improvement in at least one grade level in the school that were directly involved with the program presented (Briggs Elementary, Greenwood Elementary, Moore Intermediate, Royall Elementary, Savannah Grove Elementary, Cades-Hebron Elementary, Kingstree Elementary, Hannah-Pamplico Elementary, Lake View Elementary, RE McNair Middle School, JP Truluck Elementary, and Johnsonville Middle School). In addition 20% of the schools visited showed an overall improvement in all grade levels where ScienceSouth's programming was presented (Kingstree Elementary, Cades-Hebron Elementary, JP Truluck Elementary, and Johnsonville Middle School). Factors, which may have influenced data: Not all 5th grade students involved in programming took the Science PASS tests. Higher scores could also be attributed to improvement in instruction by teachers.

It is recommended that students who have been involved with ScienceSouth programming for consecutive years basis be tracked to evaluate the effectiveness of the program as it relates to the success rate of students in science courses in schools and their pursuit of college degrees and jobs in the scientific field. It is recommended that students who are tracked be identified as students at risk by the school districts.

Can you provide a URL link, electronic version, or hard copy of this evaluation to the EOC? A hard copy of 2009-2010 audit and PASS Test scores data is available upon request.

__X__Yes

_ _ _No

If yes, please provide URL link here.

If no, why not?

Question 6:

While EIA revenues increased in 2010-11 over the prior fiscal year and no mid-year cuts were made to any EIA programs, programs and agencies continue to implement conservative budget practices.

Please describe how the program and/or organization would absorb or offset potential EIA reductions totaling 5%, and 10% in the current fiscal year, Fiscal Year 2011-12?

No new equipment purchases.

A reduction in travel for programming and availability of programming to school districts.

Question 7:

If no additional EIA revenues were appropriated to this program in Fiscal Year 2012-13 above the current year's appropriation level, how would the objectives, activities and priorities of this program change?

ScienceSouth's outreach to students in schools would be dramatically impacted by a reduction in financial support. ScienceSouth would be able to present programs to schools only which could afford to pay for contracted services. These services include Science on Wheels and teacher camps. In the 2010-2011 fiscal year there was only one school district in the state, which contracted for services in the amount of $4,850.00. At this point in the 2011-2012 school year, there has been only one school district to contact ScienceSouth with an interest in contracting services for their school district this year; while in the school year 2008-2009 eight school districts contracted ScienceSouth for it's services in the amount of $209,115.00.

If ScienceSouth receives the same appropriation for the 2012-2013 fiscal year it would be limited to the amount of additional outreach services it could provide to students and teachers in the school districts of the state of South Carolina.

Please be specific to address the impact to students, teachers or schools. Are there regulatory or statutory changes that you would recommend to the legislature that would assist this program/organization in meeting its objectives?

ScienceSouth exists as a non-profit organization and relies heavily upon grants and corporate sponsorship for operating costs and programming available to schools. In the current economic climate this type of funding has become more and more difficult to obtain due to increased competition for these funds, which at the same time are being reduced in the awarded amounts. ScienceSouth is the only science education and outreach center located in the Pee Dee Region of South Carolina. Many children in the Pee Dee Region are identified as at risk and live at or below the poverty level. The districts in this region have a high percentage of minority students as well.

Because of uncertainty in funding ScienceSouth cannot consistently guarantee programming services to school districts every year. If ScienceSouth had consistent funding as provided by a Proviso such as the Roper Mountain Facility in the upstate, it could provide consistent programming to school districts in the Pee Dee and surrounding areas as well as possibly expanding to include more areas for outreach programming. Thus with consistent funding it would allow ScienceSouth to establish a method to track identified at risk and minority students progress annually who have been directly involved in ScienceSouth programming from grades K-12.

If you want to provide supporting documents or evaluation reports, either reference a website below or email the report directly to mbarton@eoc.sc.gov.

Question 8: Fiscal Year 2012-13

The total amount of EIA funds requested for this program for the next fiscal year will be:

__X__The same as appropriated in the current fiscal year's appropriation

____An increase over the current fiscal year's appropriation

____A decrease over the current fiscal year's appropriation

If you indicated an increase or decrease in funding for the next fiscal year, what is the total amount requested for this program for the next fiscal year?

If you indicated an increase or decrease, please describe the reasons for the increase or decrease. How will the increase or decrease impact the objective of the program?

Question 9: Current Fiscal Year 2011-12

Please fill in the attached charts to reflect the budget for this program in the prior fiscal year (2010-11) and the budget for this program in the current fiscal year (2011-12).

If the program was not funded by the State of South Carolina in the prior fiscal year, please fill out information for the current fiscal year only.

Funding Source	Prior FY Actual	Current FY Estimated
EIA	0	500,000.00
General Fund	0	0
Lottery	0	0
Fees	94,000.00	63,500.00
Other Sources	0	0
Grant	37,500.00	30,000.00
Contributions, Foundation	3,500.00	2,500.00
Other (Specify)	500,000.00	0
Carry Forward from Prior Yr	500,000.00	500,000.00
TOTAL	1,135,000.00	1,096,000.00

Other: Please specify here.

NASA Earmark/ Education ($500,000, October 1, 2010-September 30, 2011)

Expenditures	Prior FY Actual	Current FY Estimated
Personal Service	341,418.00	321,226.00
Contractual Services	16,800.00	16,800.00
Supplies and Materials	15,098.00	30,000.00
Fixed Charges	0	0
Travel	4,718.00	8,500.00
Equipment	44,853.00	10,000.00
Employer Contributions	0	0
Allocations to Districts/Schools/Agencies/Entities	25,500.00	40,000.00
Other: Please explain	46,313.00	58,000.00
Balance Remaining	0	15,000.00
TOTAL	494,700.00	499,526.00
#FTES	6	5

Other: Please explain here.

Repair and Maintenance of Vehicles (Vans and Mobile Science Labs)

Bank Charges

Interest Charges

Insurance

Internet and Phone

Taxes

Dues to Associations/ Professional Organizations (SCANPO, NSTA, ASTC)

Marketing and Public Relations

Security

Utilities

Building Maintenance

Miscellaneous