STATE UNIVERSITY SYSTEM of FLORIDA
Board of Governors

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April 19, 2013

Representative Lake Ray and Senator Joseph Abruzzo
Alternating Chairs
Joint Legislative Auditing Committee
111 West Madison Street, Room 876
Claude Pepper Building
Tallahassee, FL 32399-1400

Re: Six-Month Follow-up Responses to Auditor General Report 2013-024

Dear Representative Ray and Senator Abruzzo:

Pursuant to Section 20.055, Florida Statutes, attached is the State University System of Florida Board of Governors Office of Inspector General's written response to the Board Chair and the Chancellor regarding the status of corrective actions taken by senior staff in response to Auditor General Report No. 2013-024.

Please contact me immediately if you have any questions regarding this matter.

Sincerely,

Derry Harper
Office of the Inspector General and
Director of Compliance

DH/lc

C: Kathryn H. DuBose , Coordinator, JLAC
Dean Colson, Chair, Board of Governors
Frank Brogan, Chancellor, Board of Governors
Randy Goin, Chief of Staff, Board of Governors
Alan Levine, Chair, Board of Governors, Audit & Compliance Committee
David Martin, Auditor General

Attachments:

Six-Month Follow-up Report
The "SUS Council of Student Affairs Campus Environment Matrix: Hazing Prevention Best Practices" matrix
"Behaviors Addressed by University Student Codes of Conduct and Policies" chart
Board of Governors Regulation 18.001, Purchasing
The "State University System Capital Improvement Fee Annual Remittance Review Procedures"
The "21st Century World Class Scholars Expenditure Analysis" report
The "Florida Board of Governors 2010 New Florida Initiative Accountability Summary" report

State University System of Florida
Board of Governors
Six-Month Follow-up Report to
Operational Audit for Fiscal Year Ended June 30, 2012
Report No 2013-024, October 2012

Finding No. 1 REGULATIONS AND OVERSIGHT FUNCTION:
The Board of Governors needs to enhance regulations and provide detailed guidelines to the State University System (SUS) to establish uniform standards and, as applicable, conform to statutory requirements.

Recommendation: *The Board should review, and revise as appropriate, its current regulations provided to universities to address the above-cited issues.*

Corrective Action Status:
With regard to sponsored research, Board staff discussed this with the Council for Administrative & Financial Affairs (CAFA) on February 19. CAFA indicated that they have numerous rules, procedures, and guidelines regarding sponsored research. Board staff is reviewing university websites and is considering the development of a guidance memorandum.

With regard to anti-hazing activities, Board staff has been working with the SUS Council for Student Affairs to implement stronger anti-hazing programs and practices throughout the SUS. A statewide anti-hazing summit was held during Fall 2012 which provided a forum for sharing best practices and for university staff to receive additional training from national experts. In addition, guidance was recently issued to the SUS Council for Student Affairs recommending the implementation, at a minimum, of 24/7 reporting system, an anti-hazing website, programming and training activities for faculty, staff, students and student organizations; and broad dissemination of hazing policies to all students, faculty and staff on a semester basis. NOTE: the matrix relied upon by the Auditor General for this audit had been superseded by a subsequent matrix dated May 1, 2012, which was not considered as a part of this audit. A copy of that matrix is attached (refer to Attachment 1, SUS Council of Student Affairs Campus Environment Matrix: Hazing Prevention Best Practices).

The Board's General Counsel reviewed the student conduct code regulations and/or policies at each of the universities to determine if additional guidance was needed as to the types of behaviors that could subject a student to discipline. Based upon that review, it was determined that each university has a robust conduct code that addresses a wide range of behaviors that can result in disciplinary action. A chart depicting the types of behaviors covered by the various university regulations is attached (refer to Attachment 2, Behaviors Addressed by University Student Codes of Conduct and Policies).

The Board amended the purchasing regulation in March 2013 and a copy of the final regulation is attached (refer to Attachment 3, Board of Governors Regulation 18.001, Purchasing).

Finding No. 2 MONITORING ACTIVITIES:

The Board does not perform a comparison of estimated revenues expected to be received from the universities to actual amounts that should be received from the universities based on the actual enrollments and fee amounts in order to determine whether the universities have transferred all amounts required by law for the bond issues.

Recommendation: *The Board should develop procedures to review the actual remittances of revenues and fees by the universities for the payment of revenue bonds with the amounts required by statute for the bond issues.*

Corrective Action Status:

Procedures have been developed to review remittances as recommended. These will be implemented effective June 2013, to coincide with fiscal year end. (Refer to Attachment 4, State University System Capital Improvement Fee Annual Remittance Review Procedures)

Finding No. 3 MONITORING ACTIVITIES:

The Board needs to improve procedures related to monitoring of grant expenditures by universities.

Recommendation: *The Board should establish policies to obtain and review sufficient documentation from the universities to ensure awarded funds are spent for authorized Program purposes. In addition, the Board should take action to resolve UCF's inappropriate transfer of the $2 million of Program funds to UCF's Foundation.*

Corrective Action Status:

With regard to the first part of this recommendation—obtaining and reviewing sufficient documentation from the universities to ensure awarded funds are spent for authorized Program purposes - expenditure reports have been submitted by the universities demonstrating that 99% of the funding has been expended (to include the placement of funds in endowments exclusively for the purposes of supporting the Scholars). In addition, please see the appended report "21st Century World Class Scholars Expenditure Analysis" (Refer to Attachment 5, 21st Century World Class Scholars Expenditure Report). This is an analysis, by percentages of the whole, of originally proposed against actual expenditures according to individual expenditure

categories for each award, with rationales provided by the universities for variances of 20%between proposed and actual expenditures per expenditure category. Institutional rationales were reviewed by the Board of Governors offices of Budget and Academic and Student Affairs.

The Board's General Counsel requested an opinion from the Attorney General's office concerning the placement of the funds into the UCF Foundation. The Attorney General's office, however, declined to issue an opinion.

Finding No. 4 MONITORING ACTIVITIES:
The Board did not maintain proposal selection or monitoring documentation for the SUS's New Florida Initiative awards.

Recommendation: *The Board should strengthen its procedures for retaining documentation of the selection, awarding, and monitoring to ensure that amounts awarded are fairly selected and that expenditures are accurately reported in accordance with New Florida Initiative program plans.*

Corrective Action Status:
With regard to the first part of this recommendation—strengthening procedures for retaining documentation of the selection and awarding of New Florida Initiative awards—the Board Office has developed a checklist of procedures from the point of calls for proposals to award approvals by the Board of Governors that will ensure the retention of documentation. The checklist will include the electronic scanning of all hard-copy documentation so that no hard-copy historical files will be necessary. The checklist includes:

- Development of proposal submission instructions.
- Development of score sheets and scoring system.
- Calibration of staff proposal scorers.
- Transmission of submission instructions and templates to universities.
- Receipt of proposals from universities.
- Electronic filing system created for receipt of proposals from universities.
- Assignment of code numbers to individual submissions.
- Creation of master table to include all submissions and deletion of potential duplicate submissions.
- Electronic filing of all submissions.
- Proposal scoring by staff scorers.
- Electronic scanning of all score sheets.
- Electronic compilation and filing of proposal scores by staff scorers.
- Development and electronic filing of master table of proposals rank-ordered by composite score.

- Rank-ordered master table submitted to Chancellor for final consideration and recommendations.
- Final consideration and recommendations shared with universities for any potential concerns.
- Recommendations provided to Board of Governors for approval.

With regard to the second part of this recommendation—monitoring and ensuring that expenditures are accurately reported in accordance with New Florida Initiative program plans—please see the appended 2013 "2010 New Florida Accountability Report" (Refer to Attachment 6, Florida Board of Governors 2010 New Florida Initiative Accountability Summary Report). This 85 page document is in two parts. Part One contains two years (2010-11, 2011-12) of narrative reporting on the successes of the various projects and awards associated with the New Florida Initiative. Part Two is an analysis, by percentages of the whole, of originally proposed against actual expenditures according to individual expenditure categories, with rationales provided by the universities for variances of 20% between proposed and actual expenditures per expenditure category. Institutional rationales were reviewed by the Board of Governors Offices of Budget and Academic and Student Affairs.

SUS Council of Student Affairs **05/01/12 Final**

Campus Environment Matrix: Hazing Prevention Best Practices

SUS INSTITUTIONS	FAMU	FAU	FGCU	FIU	FSU	NCF	UCF	UF	UNF	USF	UWF
Create an environment of personal and mutual respect for all students											
Values Education, University Creed and Civility programs	Y	Y		Y	Y		Y	Y	Y	Y	Y*
Leadership Development programs	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ethics Training and Curricula	Y			Y	Y		Y	Y	Y**		Y
Hazing Reporting Mechanisms											
24/7 reporting systems	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
University Police	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Regular university-wide communications to faculty, staff, and students about hazing and how to report incidents	Y	Y		Y	Y	Y	Y	Y	Y**	Y	
Incident reporting system (online-physical locations)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hazing Prevention Strategies											
Dedicated anti-hazing website	Y*	Y**		Y**	Y		Y*	Y**	Y**	Y	
Broad dissemination of hazing policies/statutes, trainings and workshops to all students, faculty and staff on a semester basis (regardless of affiliation to athletics, Greek life, student organizations, etc.)	Y	Y		Y	Y	Y	Y	Y	Y**	Y	Y
Swift response/disciplinary action through student conduct offices	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Individual anti-hazing pledge forms/anti-hazing compliance systems	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y*
Student leader training, development and discussions	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y
Professional staff development/training	Y	Y**			Y			Y	Y**		Y*
National Hazing prevention week	Y*	Y		Y	Y		Y	Y	Y	Y	
University Hazing prevention teams or task forces	Y	Y		Y	Y		Y	Y	Y	Y	
Expectation for student organizations to provide anti-hazing educational programs (regardless of affiliation to athletics, Greek life, student organizations, etc.)	Y	Y	Y	Y			Y	Y	Y	Y	Y*

**Proposed for Fall 2012* ***Proposed or in progress for future implementation*

SUS Council of Student Affairs **05/01/12 Final**

Campus Environment Matrix: Hazing Prevention Best Practices

Hazing defined: 'Hazing' means any action or situation that recklessly or intentionally endangers the mental or physical health or safety of a student including, but not limited to, initiation with an organization operating under the sanction of a postsecondary institution (FL Statute 1006.63.1).

Background: The National Study of Student Hazing (http://www.hazingstudy.org/publications/hazing_in_view_web.pdf, 2008) is one of the more comprehensive studies in hazing and hazing prevention. With 11,000 responses and over 300 interviews from 53 college campuses nationwide, the study illustrates the problems and challenges related to student hazing. Its findings include:

- 47% of students come to college having experienced hazing
- 55% of college students involved in clubs, teams, and organizations experience hazing
- Nine out of ten students who have experienced hazing behavior in college do not consider themselves to have been hazed
- In 95% of the cases where students identified their experience as hazing, they did not report the events to campus officials
- There are public aspects to student hazing including: Students talk with peers (48% to a friend; 41% to another group member) or family (26%) about their hazing experiences

Recommendation

All SUS institutions should establish and maintain the following minimum standards to affirm anti-hazing policies and to reduce hazing occurrences:

a. An anti-hazing website
b. A 24/7 reporting system (online and/or physical locations)
c. Programming and training activities for faculty, staff members, students and organizations (to include athletics, Greek organizations, parents, alums, community organizations, etc.)
d. Broad dissemination of hazing policies/statutes, trainings and workshops to all students, faculty and staff on a semester basis (to include athletics, Greek organizations, parents, alums, community organizations, etc.)

Next Steps

1. The SUS Council for Student Affairs (CSA) will serve as the primary group to identify, sustain, and promote an anti-hazing platform for the State University System. The CSA will encourage and support participation by the Florida Student Association and all state university student governments in these efforts.
2. The SUS Council for Student Affairs will serve as a front-line resource team for the State University System to aid in the response of complex or crisis situations that occur at any of the SUS campuses.
3. A statewide conference will be held in 2012 for students, faculty, and administrators to share anti-hazing best practices and receive training from experts in the field. The University of Florida and University of South Florida will coordinate this effort, with assistance from the SUS Council for Student Affairs and the Office of the Board of Governors.

BEHAVIORS ADDRESSED BY UNIVERSITY STUDENT CODES OF CONDUCT AND POLICIES

	FAMU	FAU	FGCU	FIU	FSU	NC	UCF	UF	UNF	USF	UWF
Fighting	x	x	x	x	x	x	x	x	x	x	x
Assault/Battery	X	x	x	x	X	x	x	x	x	x	x
Defiance/Disobey	X	x	x	x	x	x	x	x	x	x	x
Unauthorized entry	X		x	x	x	x	x	x	x	x	x
Deception	x	x	x	x	x	x	x	x	x	x	x
Hazing	x	x	x	x	x	x	x	x	x	x	x
Gambling	X			x	x	x	x		x	x	
Alcohol Misuse	X	x	x	x	x	x	x	x	x	x	x
Lewdness	X	x	x	x	x	x	x	x	x	x	x
Weapons/ explosives	X	x	x	x	x	x	x	x	x	x	x
Off campus conduct	X	x	x	x	x	x	x	x	x	x	x
Conspiracy	X	x	x	x	x	x	x	x	x	x	x
Fail to comply w/ Directives	X	x	x	x	x	x	x	x	x	x	x
Illegal alteration or use of ID, etc.	X		x	x	x	x	x	x	x	x	x
Stalking	X	x	x	x	x	x		x	x	x	x
Sexual Misconduct	X	x	x	x	x	x	x	x	x	x	x
Academic Dishonesty	X	x	x	x	x	x	x	x	x	x	x
Computer Misuse	x	x	x	x	x	x	x	x	x	x	x
Theft	X	x	x	x	x	x	x	x	x	x	x
Abuse of Judicial System	X	x	x	x	x	x	x	x	x	x	x
Disruptive Conduct	X	x	x	x	x	x	x	x	x	x	x
Illegal Drugs	X	x	x	x	x	x	x	x	x	x	x
Harassment	X	x	x	x	x	x	x	x	x	x	x
Forgery	X	x	x	x	x	x	x	x	x	x	x
Property offenses	x	x	x	x	x	x	x	x	x	x	x
Misuse of university key or access card	x	x	x	x	x	x	x	x	x	x	x
Interference with rights of others	x	x	x	x	x	x	x	x	x	x	x
Unauthorized commercial solicitation		x	x	x	x			x	x		x
Arson/Fires		x	x	x	x		x	x	x	x	x
Misconduct at Sponsored Events	x	x	x	x	x	x	x	x		x	

18.001 Purchasing Regulation

(1) **Authority of the Institutions.** Each university Board of Trustees shall adopt regulations establishing basic criteria related to procurement, including procedures and practices to be used in acquiring commodities and contractual services, as follows:

(a) Removing any contractor from the University's competitive vendor list that fails to fulfill any of its duties specified in a contract with the University(s) and to reinstate any such contractor when satisfied that further instances of default will not occur.

(b) Planning and coordinating purchases in volume and negotiating and executing agreements and contracts for commodities and contractual services under which the University may make purchases.

(c) Evaluating, approving, and utilizing contracts let by any State of Florida agency or department, the Federal Government, other states, political subdivisions, not-for-profit cooperatives or consortia, or any independent college or university for the procurement of commodities and contractual services, when it is determined to be cost-effective and in the best interest of the University, to make purchases under contracts let by such other entities. Universities shall review existing consortia and cooperative contracts to identify potential savings and, if there is the potential for savings, enter into new consortia and cooperative contracts to achieve the savings, with the goal of achieving a five-percent savings on existing contract prices. (d) Awarding contracts for commodities and contractual services to multiple suppliers, if it is determined to be in the best interest of the University. Such awards may be on a university, regional or State University System-wide basis and the contracts may be for multiple years.

(e) Rejecting or canceling any or all competitive solicitations when determined to be in the best interest of the University.

(f) Barring any vendor from doing business with the University for demonstrated cause, including previous unsatisfactory performance.

(g) Prohibiting University employees and University direct support organization employees participating on a procurement selection committee for commodities or services from soliciting donations from responding vendors during the selection process, except for donations or other benefits expressly stated in the procurement document.

(2) **Competitive Solicitation Threshold.** Each university Board of Trustees shall establish a competitive solicitation threshold not greater than $75,000 (the "Competitive Solicitation Threshold") for the purchase of commodities or contractual services.

(a) When only one response is received to the competitive solicitation for commodities or contractual services that exceed the Competitive Solicitation Threshold, the University may review the solicitation responses to determine if a second call for a competitive solicitation is in the best interest of the University. If it is determined that a second call would not serve a useful purpose, the University may proceed with the acquisition.

(b) The purchase of commodities and contractual services shall not be divided to avoid the requirement of competitive solicitation.

(3) **Preferences for Florida-Based Vendors**.

(a) Preferences for Personal Property. When a University awards a contract to purchase personal property, other than printing, by competitive solicitation pursuant to paragraph (2) of this regulation, a preference shall be provided to vendors with a principal place of business in Florida (such vendors hereinafter referred to as "Resident Vendors") as follows:

1. If the responsible and responsive vendor that submits the lowest bid, the most advantageous proposal, or the best value reply is one whose principal place of business is outside of Florida and is in a state or political subdivision thereof that grants a preference for the same purchase to a vendor in such state or political subdivision, as applicable, then the University shall grant the same preference to the responsible and responsive Resident Vendor with the lowest bid received pursuant to an Invitation to Bid, the most advantageous proposal received pursuant to a Request for Proposals, or the best value reply received pursuant to an Invitation to Negotiate.
2. With respect to Invitations to Bid, if the lowest responsible and responsive bid is from a vendor whose principal place of business is in a state that does not grant a preference for the purchase to a vendor in such state, then the University shall grant a preference in the amount of five percent (5%) to the lowest responsible and responsive Resident Vendor.
3. For vendors whose principal place of business is outside of Florida, such vendors must, at the time of submitting its bid, proposal or reply, provide a written opinion from a licensed attorney in its state specifying: (a) the preferences(s) granted by the state or political subdivision, as applicable, under the laws of that state to vendors whose principal place of business is in that state or political subdivision; and (b) how the preference is calculated. The failure to submit the written opinion may be waived as non-material if all vendors responding to the solicitation have principal places of business outside of Florida.
4. The vendor's principal place of business, as represented by the vendor in its bid or reply, may be relied upon by the University without further inquiry. If the University determines that a vendor has misrepresented its principal place of business, the vendor's bid, proposal or reply shall be rejected.
5. For the purpose of paragraph (3)(a), "personal property" shall be defined as goods and commodities, but not real estate, intellectual property or services.

(b) Preferences for Printing. When a University purchases printed materials by competitive solicitation pursuant to paragraph (2) of this regulation, a preference shall be provided Resident Vendors as follows:

1. If the lowest responsible and responsive bid received pursuant to an Invitation to Bid is from a vendor whose principal place of business is outside of Florida, then the University shall grant a preference to the lowest responsible and responsive Resident Vendor in the amount of five percent (5%) if the University has determined that the printing can be performed by the Resident Vendors at a level of quality comparable to that obtainable from the vendor submitting the lowest bid whose principal place of business is outside of Florida.

2. For purposes of subparagraph 3(b)(1), the level of quality shall be determined by whether a vendor satisfies the minimum specification requirements as set forth in the Invitation to Bid .

(c) Method of Calculating Five Percent Preference.

1. If the competitive solicitation is an Invitation to Bid, then an amount equal to five percent (5%) of the total base bid and any alternates shall be deducted from the base bid and alternates, as applicable, of the lowest responsible and responsive Resident Vendor's bid.

(d) Determining a Vendor's Principal Place of Business. A vendor's "principal place of business" is determined as follows:

1. If the vendor is an individual or a sole proprietorship, then its "principal place of business" is in the state where the vendor's primary residence is located.
2. If the vendor is a business organization, then its "principal place of business" is in the state where the majority of the vendor's executive officers direct the management of the vendor's business affairs.

(e) Federally Funded Projects. Purchases made to perform specific obligations under federally funded projects shall not be subject to this preference requirement to the extent the application of a preference is not allowed under applicable federal law or regulation.

(4) **Exceptional Purchases**. Each university is authorized to make exceptional purchases of commodities or contractual services as follows:

(a) Purchase of Products with Recycled Content. Each University may establish a program to encourage the purchase and use of products and materials with recycled content and postconsumer recovered material.

(b) Purchase of Private Attorney Services. Written approval from the Attorney General is not required for private attorney services acquired by the University.

(c) Purchase of Insurance. Each University shall have the authority to purchase insurance as deemed necessary and appropriate for the operation and educational mission of the University.

(d) Purchase of Printing. However, if a University determines that it is in the best interests of the University to purchase printed materials through a competitive solicitation process, the preference provision in paragraph (3)(b) shall apply.

(5) **Purchases from Contractors Convicted of Public Entity Crimes.** A University shall not accept a competitive solicitation from or purchase commodities or contractual services from a person or affiliate who has been convicted of a public entity crime and has been placed on the State of Florida's convicted vendor list for a period of 36 months from the date of being added to the convicted vendor list.

(6) **Competitive Solicitation Exceptions.** The following types of purchasing actions, and commodities and contractual services purchases are not subject to the competitive solicitation process:

(a) Emergency Purchases. When a university president or his/her designee determines, in writing, that the delay due to the competitive solicitation process is an immediate danger to the public health or safety or the welfare of the University, including

University tangible and/or intangible assets; or would otherwise cause significant injury or harm not in the best interest of the University, the University may proceed with the procurement of commodities or contractual services without a competitive solicitation.

(b) Sole Source Purchases. Commodities or contractual services available from a single source may be exempted from the competitive solicitation process.

(c) Purchases from Contracts and Negotiated Annual Price Agreements established by the State of Florida, other governmental entities, other Universities in the State University System, or other independent colleges and universities are not subject to further competitive solicitation.

(d) The following listed commodities and services are not subject to competitive solicitation:

1. Artistic services;
2. Academic reviews;
3. Lectures;
4. Auditing services;
5. Legal services, including attorney, paralegal, expert witness, appraisal, arbitrator or mediator services;
6. Health services involving examination, diagnosis, treatment, prevention, medical consultation or administration. Prescriptive assistive devices for medical, developmental or vocational rehabilitation including, but not limited to prosthetics, orthotics, wheelchairs and other related equipment and supplies, provided they are purchased on the basis of an established fee schedule or by a method that ensures the best price, taking into consideration the needs of the client;
7. Services provided to persons with mental or physical disabilities by not-for-profit corporations organized under the provisions of s. 501(c)(3) of the Internal Revenue Code or services governed by the provisions of the Office of Management and Budget Circular A-122;
8. Medicaid services delivered to an eligible Medicaid recipient by a health care provider who has not previously applied for and received a Medicaid provider number from the Department of Children and Family Services. This exception will be valid for a period not to exceed 90 days after the date of delivery to the Medicaid recipient and shall not be renewed;
9. Family placement services;
10. Training and education services;
11. Advertising;
12. Services or commodities provided by governmental agencies, another University in the State University System, direct support organizations of the university, political subdivisions or other independent colleges and universities;
13. Programs, conferences, workshops, continuing education events or other university programs that are offered to the general public for which fees are collected to pay all expenses associated with the event or program;
14. Purchases from firms or individuals that are prescribed by state or federal law, or specified by a granting agency;
15. Regulated utilities and government franchised services;

16. Regulated public communications, except long distance telecommunication services or facilities;
17. Extension of an existing contract;
18. Renewal of an existing contract if the terms of the contract specify renewal option(s);
19. Purchases from an Annual Certification List developed by each University;
20. Purchases for resale;
21. Accounting Services;
22. Contracts or services provided by not-for-profit support and affiliate organizations of the University, direct support organizations, health support organizations and faculty practice plans;
23. Implementation/programming/training services available from owner of copyrighted software or its contracted vendor; or
24. Purchases of materials, supplies, equipment, or services for instructional or sponsored research purposes when a director of sponsored research or designee certifies that, in a particular instance, it is necessary for the efficient or expeditious prosecution of a research project in accordance with sponsored research procedures or to attain the instructional objective.

(7) **Vendors Excluded from Competition**. In order to ensure objective contractor performance and eliminate unfair competitive advantage, contractors that develop or draft specifications, requirements, statements of work, Invitations to Bid, Request for Proposals and/or Invitations to Negotiate shall be excluded from competing for such procurements.

(8) **Standard of Conduct.** It shall be a breach of ethical standards for any employee of a University to accept, solicit, or agree to accept a gratuity of any kind, form or type in connection with any contract for commodities or services. It shall also be a breach of ethical standards for any potential contractor to offer an employee of a University a gratuity of any kind, form or type to influence the development of a contract or potential contract for commodities or services.

Authority: Section 7(d) Art. IX, Fla. Const.; History—New 3-27-08; amended 3-28-13

State University System
Capital Improvement Fee
Annual Remittance Review Procedures

1. **In mid-June, the Director, Finance and Facilities will request the DOE Comptroller's Office to provide data showing all remittances to the CIF Trust Fund.**
2. **This data will be compared to the following metrics, and any variances greater than 5% will be further examined following fiscal year end:**
    a. **Prior year remittances.**
    b. **Preliminary FTE X CITF Fee**
3. **The Director will request the DOE Comptroller's Office to provide data showing all remittances following year-end close.**
4. **Any changes will be used to update the variance review information produced by step 2.**
5. **For variances greater than 5%, the respective university will be requested to provide an explanation as to the variance, and to provide reasonable assurance that the university is collecting and remitting all CITF fees in accordance with BOG regulations.**
6. **Once all variances are explained and all issues resolved, the Director will provide a memo to the CFO, indicating completion of the annual remittance review process, and making recommendations if needed.**

21ST Century World Class Scholars Expenditure Analysis

This report, an analysis of 21st Century World Class Scholars Program ("the Program") expenditures, is for the purpose of ensuring that the award dollars have been used for the intended purposes of attracting World Class Scholars and enhancing the teaching, research, and service missions associated with those Scholars.

The Program is a portion of the 21st Century Enhancement Act. The Act was created in 2003, amended in 2006 to include the Program, and repealed in 2012. Funds for the Program were appropriated only in 2006, and the entirety of this $20M appropriation was non-recurring. Given that the Act has been repealed, the Program is, for all intents and purposes, a one-time, one-appropriation experience. The $20M appropriation resulted in sixteen awards at five State University System institutions as follows:

University	Number of Awards	Total Dollar Value
University of Florida	6	$8,000,000
University of South Florida	4	$4,000,000
Florida State University	3	$5,000,000
Florida International University	1	$1,000,000
University of Central Florida	2	$2,000,000

Reporting on World Class Scholars has been undertaken for several years, initially as a discrete report and, later, as a part of the State University System (SUS) Annual Accountability Report. The yearly reporting on World Class Scholars in the SUS Annual Accountability Report has demonstrated the strong return on the State's original investment through their

teaching, research, service, and commercialization activities. Initially, reports were submitted that identified the extent to which award dollars in the aggregate had been expended. In subsequent reporting, more detailed reports have provided expenditure information for each award.

None of this reporting, however, focused on the extent to which award dollars were expended as originally proposed. This report focuses on the variance between expenditures as originally proposed and actual expenditures as reported. The Board of Governors Office has asked that the universities provide explanation and rationale for major shifts of expenditures by category from those that were initially proposed to those that were actually made.

That said, the ultimate outcome is undeniable: 16 World Class Scholar awards were made, and 16 World Class Scholars were hired who, without the Program, would have been less likely, or even unlikely, to have come to the State University System. Their many-fold return on Florida's initial investment is documented and demonstrable.

Methodology

Because initial expenditure plans were predicated on requests for more dollars than those actually received, the Board of Governors examined dollars in expenditure categories as percentages of the whole, comparing those percentages in initial proposals against the percentages reported as actual expenditures. Board staff reviewed the extent to which shifts occurred and the magnitude of such shifts. Board staff determined that any shift of 20%—either above or below—in any given expenditure category would result in a request that the university provide a rationale for such a shift. For example, if an initial proposal indicated that 30% of the award would be spent on salaries and benefits, and expenditure reporting indicated that 51% had actually been expended, the Board Office requested an explanation for the shift.

Analysis

There were two reasons for seeing major shifts between proposed and reported expenditure categories. First, some expenditures were initially reported in the wrong categories. (One benefit of this expenditure analysis is that it resulted in a close scrutiny of reported expenditures on the part of the universities.) Secondly, proposed expenditures were predicated on requests for more dollars than those actually received. Therefore, universities made expenditure adjustments based on the actual dollars received. The rationales for such adjustments are contained in this report.

Such adjustments were often not, nor could they be, simple "across-the-board" adjustments downward; that is, they could not be reduced across all expenditure categories equally. A few theoretical examples may be illustrative.

Theoretical Example One A university intends to use 60% of its award on faculty salaries. However, the reduction of the actual award makes it impossible to make such hires. Therefore, dollars are expended in other categories.

Theoretical Example Two In the course of laboratory set-up, a university's newly hired World Class Scholar finds that unforeseen changes to configuration will be necessary. Therefore, dollars are shifted to expenses and capital outlay.

In the course of its analysis, while Board staff found a number of cases where plus/minus shifts of twenty percent had occurred, *it is the professional judgment of Board staff that the rationales provided for such shifts were reasonable, expected, and in some cases even innovative, often utilizing counterbalancing with other external funding sources.*

Comments on Specific Expenditure Reports

University of Florida: Linda Bartoshuk A substantial shift (from 80% to 31.9%) was made in the Salaries and Benefits category. This shift was due to Dr. Bartoshuk's having had, over the past six years, grant or other revenue sources to fund 43% of her salary and benefits. This freed Salaries and Benefits dollars to be expended as principal to fund an endowment (from 0% to 66.7% in a "Revenue Source—Endowment Principal" category shifting from 0% to 66.7%) creating an ongoing revenue source for Dr. Bartoshuk's research efforts.

University of Florida: Kirk Conrad Expenditures previously shown as shifted by category were initially misreported; Operating Capital Outlay was reported within the Expense category which now includes the total of all laboratory and equipment costs.

University of Florida: Grant McFadden The original expenditure plan for this award was contained within a proposal requesting $4M, $2.7M of which was designated for Operating Capital Outlay. The actual award was for only $1M. Accordingly, expenditures required revision, including in Operating Capital Outlay (from 64% to 0%). Laboratory and equipment were reported in Expenses category, and remaining funds were used for salaries (a shift from 32% to 68%).

University of Florida: Scott Perry Shifts in the Expense category (from 29% to 1%) and the Operating Capital Outlay category (from 63% to 89%) were primarily associated with the purchase of a major piece of equipment (Asylum MFP-3D Atomic Force Microscope), reported in the latter category.

University of Florida: Johannes Vieweg The original expenditure plan for this award was contained within a proposal requesting $4.2M, $1.7M of which was designated for Operating Capital Outlay. The actual award was for only $1M. Accordingly, expenditures required revision, including in Operating Capital Outlay (from 42% to 0%). Laboratory and equipment were reported in Expenses category, and remaining funds were used for salaries (a shift from 53% to 78%).

University of South Florida: John Adams Shifts in Operating Capital Outlay expenditures (from 21% to 0%) were associated with the manner in which the University funded laboratory facilities for Dr. Adams. Ultimately, the project was coordinated and overseen by the University of South Florida (USF) Research Foundation. To pay for the costs of the construction, the College of Public Health agreed on specific scopes of work with the Research Foundation and paid for the projects via purchase orders between the USF College of Public Health and the USF Research Foundation. The expenses associated with these purchase orders posted in the financial system as an expense item, rather than a capital outlay, causing an increase in the Expense category and a decrease in the Operating Capital Outlay category. Furthermore, World Class Scholar award dollars were used to support the start-up costs associated with transitioning Dr. Adams' research program to USF. These included funds for salary and benefits for his laboratory staff (although this represented only a 12% shift in the Salary and Benefits category).

University of South Florida: Thomas Unnasch The original budget proposal allocated the majority of the budget to operating and fixed capital outlay. While 51% of the award was used for this purpose, a shift in this expenditure category (from 88% to 51%) was due to the research team's ability to secure other resources, including extramural awards, to obtain equipment that had been part of its anticipated needs. Furthermore, laboratory construction and renovations took longer than expected, resulting in a need to support the salary and benefits of critical research staff, resulting in a shift in the Salaries and Benefits category (from 0% to 26%). In addition, moving and relocation costs for Dr. Unnasch's lab and team were higher than originally budgeted, and additional resources were needed to purchase laboratory supplies required to support operations (although this represented only a 17% shift).

University of South Florida: James Mihelcic Dr. Mihelcic's award was designed to build local and international partnerships and to build the Civil and Environmental graduate program. As a result, his funding went towards instructors' salaries and graduate student support (a shift in the Salaries and Benefits category from 14% to 46%, and a shift in the Other Personnel Services category from 11% to 25%). The shift in Operating Capital Outlay (from 56% to 0%) is a result of funds being reported in other categories that were more appropriately reported in the Expenses and the Salaries and Benefits categories.

University of South Florida: Richard Gitlin The University determined that a greater investment was necessary in the form of tenured faculty and research associates. Accordingly, a shift was made (from 14% to 79%) in the Salaries and Benefits category. The associated reduction in the Operating Capital Outlay category (from 56% to 4%) was compensated for by internal construction and outfitting of the necessary laboratory facilities.

Florida State University: David Gilbert Dr. Gilbert's original request was for $1,257,678 and $1M was funded. This reduced award, coupled with receiving external funding, required the adjustment of expenditures. Operating Capital Outlay was reduced (a shift from 80% to 21%) due to the availability of external funding for operating capital outlay costs. Dr. Gilbert then determined to hire an additional Post Doc with Other Personnel Services dollars, and added graduate students, creating shifts in the Salaries and Benefits and the Other Personnel Services categories. By using external funds for the Operating Capital Outlay purchases, more funds were available for the Expense category (a shift from 13% to 43%).

Florida State University: David Larbalestier The original proposal requested $4.25M which included $2M for renovations. Dr. Larbalestier received $3M of State 21st Century World Class Scholar funds; therefore, a budget adjustment was necessary. The funding served to facilitate the development of the Applied Superconductivity Center at FSU. A high priority need was to have the Shaw Building renovated in order to turn the building from office space to one with advanced laboratory capability. Therefore, the entire $3M of State funds was used toward renovations and facilities upgrading. Other funds from external sources as well as non-state institutional funds were used to cover personnel costs and other expenses, accounting for the shifts in both the Salaries and Benefits category and the Other Personnel Services category to 0%. The $3M of State funds expended was originally reported to the Board of Governors as Fixed Capital Outlay rather than as Operating Capital Outlay.

Florida State University: Eric Hellstrom The rationale for expenditure shifts associated with this award mirror the rationale associated with the previous award. This award was also used to facilitate the development of the Applied Superconductivity Center, and dollars for this award were also instrumental in renovating and upgrading facilities associated with the Shaw Building.

University of Florida: Linda Bartoshuk ($3,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Award Expenditures by Expenditure Category
$3,000,000	$3,000,000				
			Revenue Source - Endowment Principal	0%	66.7%
			Direct Expenditures		
			Salaries and Benefits	80%	31.9%
			Other Personnel Services	4%	0%
			Expenses	7%	.6%
			Operating Capital Outlay	9%	.8%
			Electronic Data Processing	0%	0%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended by the endowment principal and direct expenditures.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

Endowment Principal – Original Proposal 0%, Actual Expenditures 67%: $2,000,000 was used as principal to fund an Endowment. The endowment revenue is used as an ongoing revenue source for Dr. Bartoshuk's expenditures. Salaries and Benefits – Original Proposal 80%, Actual Expenditures 32%: Over the past six years Dr. Bartoshuk has had grant or other revenue sources to fund $730,446 of her salary/benefits (43% of total).

University of Florida: Kirk Conrad ($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Award Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	53%	44%
			Other Personnel Services	14%	3%
			Expenses	5%	53%
			Operating Capital Outlay	28%	0%
			Electronic Data Processing	0%	0%
			Special Category	0%	0%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

Operating Capital Outlay was reported within the expense category which shows the total of all Laboratory and Equipment costs.

University of Florida: Martin Glicksman ($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	71%	84%
			Other Personnel Services	14%	7%
			Expenses	14%	8%
			Operating Capital Outlay	1%	1%
			Electronic Data Processing	0%	0%
			Special Category	0%	0%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

This report indicates that no such shifts were made.

University of Florida: Grant McFadden ($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	32%	68%
			Other Personnel Services	0%	9%
			Expenses	4%	23%
			Operating Capital Outlay	64%	0%
			Electronic Data Processing	0%	0%
			Special Category	0%	0%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

Dr. McFadden's original revenue/expenditure plan was for 4.2M which included 2.7M for Operating Capital Outlay. Since the award was for 1M a change in the revenue/expenditure categories required revision. Laboratory and equipment were reported in the Expenses category and the remaining funds were used for salaries.

University of Florida: Scott Perry ($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	3%	3%
			Other Personnel Services	5%	7%
			Expenses	29%	1%
			Operating Capital Outlay	63%	89%
			Electronic Data Processing	0%	0%
			Special Category	0%	0%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

An Asylum MFP-3D Atomic Force Microscope was purchased that utilized the expense money and the capital outlay. The benefit to purchasing the microscope is it allowed for research collaboration with the other departments and colleges.

University of Florida: Johannes Vieweg ($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	53%	78%
			Other Personnel Services	0%	3%
			Expenses	5%	19%
			Operating Capital Outlay	42%	0%
			Electronic Data Processing	0%	0%
			Special Category	0%	0%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward—of 20% or more, provide an explanation and rationale for such shifts.

Dr. Vieweg's original revenue/expenditure plan was for 4.2M which included 1.7M for Operating Capital Outlay. Since the award was for 1M a change in the revenue/expenditure categories required revision. Laboratory and equipment were reported in the Expenses category and the remaining funds were used for salaries.

University of South Florida: John Adams ($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	0%	12%
			Other Personnel Services	4%	0%
			Expenses	75%	88%
			Operating Capital Outlay	21%	0%
			Electronic Data Processing	0%	0%
			Special Category	0%	0%
			Total, All Categories	100%	100%

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

There are two reasons for the shift in expenditures away from the Operating Capital Outlay category. The primary reason is the original award budget anticipated part of the funds being used for equipment related to the construction of the laboratory facilities for Dr. Adams. As the College moved forward with plans for the labs, it was determined that this project would be coordinated and overseen by the USF Research Foundation. To pay for the costs of the construction, the College of Public Health entered in agreements on specific scopes of work with the Research Foundation, and paid for the projects via purchase orders between the USF College of Public Health and the USF Research Foundation. The expenses associated with these purchase orders posted in the financial system as an expense item, rather than a capital outlay, causing an increase in the expense budget and a decrease in operating capital outlay.

The second reason is that these funds were used to support the start-up costs associated with transitioning Dr. Adams' research program to USF. For a variety of reasons, including longer construction periods than originally anticipated, Dr. Adams determined that he needed to use a portion of these funds for salary and benefits for his laboratory staff, and reallocated funds available to his program for that purpose, until he was able to transition them onto his active extramural awards. All expenditures supported the transition of Dr. Adams and his research program to USF and have resulted in the development of a truly world-class research program.

University of South Florida: Thomas Unnasch –($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	0%	26%
			Other Personnel Services	6%	0%
			Expenses	6%	23%
			Operating and Fixed Capital Outlay	88%	51%
			Electronic Data Processing	0%	0%
			Special Category	0%	0%
			Total, All Categories	100%	100%

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

There were two expenditure category shifts within this proposal. This proposal was developed to support the recruitment of Dr. Unnasch and other researchers into the Department of Global Health. The original budget proposal allocated the majority of the budget to operating and fixed capital outlay. While 51% of the award was used for expenditures in that area, the faculty asked to re-budget resources for several reasons. First, the team was able to leverage other resources, including extramural awards, to obtain equipment that had been part of the anticipated needs for the team. New laboratory construction and renovations to the existing labs needed to support the research protocol of the faculty took longer than expected, resulting in a need to support the salary and benefits of critical research staff until the charges could be allocated to extramural funds. In addition, moving and relocation costs for Dr. Unnasch's lab and team were higher than originally budgeted, and additional resources were needed to purchase laboratory supplies required to support operations than originally anticipated. All expenditures have resulted in the development of a truly world-class research program.

University of South Florida: James Mihelcic ($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	14%	46%
			Other Personnel Services	11%	25%
			Expenses	8%	23%
			Operating Capital Outlay	56%	6%
			Electronic Data Processing	11%	0%
			Special Category	0%	0%
			Total, All Categories	100%	100%

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

Dr. Mihelcic established a world class research program with an emphasis on interdisciplinary research supporting USF's efforts to attract NSR/EPA/DOD/DOE research funding. His program was designed to build local and international partnerships and to build the Civil and Environmental graduate program. As a result, his funding went towards instructors' salaries and for graduate students. The capital outlay that he envisioned for the program was used to purchase materials and to pay his graduate students as they interacted with water utilities and local organizations. As a result, the items would have shown under expenses and salaries rather than the capital outlay category. Upon receiving these funds, they were used with a discretionary methodology in order to create successful programs.

University of South Florida: Richard Gitlin ($1,000,000 Award)					
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	14%	79%
			Other Personnel Services	11%	8%
			Expenses	8%	9%
			Operating Capital Outlay	56%	4%
			Electronic Data Processing	11%	0%
			Special Category	0%	0%
			Total, All Categories	100%	100%

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

$13K remained from the $1M originally provided. The university will be advised to expend the remaining portion of the funds prior to the submission of the yearly Accountability Report.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

The iWINLAB group focuses on studying novel in vivo channel models and signal processing that will facilitate the creation of new communications protocols accommodating the limitations of implanted devices from a communication and computing standpoint. This knowledge is useful to improve the design and implementation of the wirelessly controlled & communicating Miniature Anchored Robotic Videoscope camera and other embedded devices that are expected to create a paradigm shift in minimally invasive surgery.

To realize this vision, the focus was on (1) architecting, realizing, and networking a family of wirelessly controlled and communicating in vivo devices that will facilitate a new paradigm for Minimally Invasive Surgery and (2) creating

novel in vivo wireless communications and networking technology to support these devices and advance the performance of such wireless body area networks. In order to create this technology tenure track faculty as well as research associates were found to be necessary in creation, proposal discussion & submittal. The Engineering Shop helped to build equipment and outfit the lab. Upon receiving these funds, categorically, we used them with a discretionary methodology in order to create successful programs. Dr. Gitlin had a distinguished career in the wireless communications area, but upon coming to USF he has initiated a new area of research in the biomedical area. As a result, the instrumentation requirement was less than originally anticipated. Furthermore, much of the equipment necessary for wireless communications research was leveraged from existing facilities in the Center for Wireless and Microwave Information Systems. This has resulted in a highly productive research activity.

Florida State University: David Gilbert -- $1,000,000 Award					
Column 1	Column 2		Column 3	Column 4	Column 5
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	6%	16%
			Other Personnel Services	1%	20%
			Expenses	13%	43%
			Operating Capital Outlay	80%	21%
			Electronic Data Processing	0%	
			Special Category	0%	
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

Dr. Gilbert's original request submitted was for $1,257,678, and $1,000,000 was funded. This reduced budget and receiving external funding necessitated the rebudgeting of the 21st Scholar funds. His first adjustment was to reduce Capital Outlay from 80% to 21%. He then opted to hire an additional Post Doc on OPS and added graduate students. Using external funds for the OCO purchase require a greater amount being used on expense. These changes enabled him to maximize the productivity of his research and obtain substantial funding from NIH.

Florida State University: David Larbalestier ($3,000,000 Award)					
Column 1	Column 2		Column 3	Column 4	Column 5
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$3,000,000	$3,000,000		Salaries and Benefits	34%	0%
			Other Personnel Services	27%	0%
			Expenses	11%	0%
			Operating Capital Outlay	5%	0%
			Electronic Data Processing	0%	0%
			Special Category	23%	100%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

The original proposal requested $4.25M which included $2M for renovations and Dr. Larbalestier received $3M of State 21st Century World Class Scholar funds. A high priority need was to have the Shaw Building renovated in order to turn the building from office space to one with advanced laboratory capability. Therefore, the entire $3M of State funds was used toward the renovations, and other funds from external sources as well as non-state institutional funds were used to cover personnel costs and other expenses. The $3M of State funds expended was originally reported to the BOG as Fixed Capital Outlay not as Operating Capital Outlay as the table above reflects. Therefore the percentages in Column 5 should be amended as noted above. The funding served to facilitate the development of the Applied Superconductivity Center at FSU.

Florida State University: Eric Hellstrom ($1,000,000 Award)					
Column 1	Column 2		Column 3	Column 4	Column 5
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	32%	0%
			Other Personnel Services	10%	0%
			Expenses	8%	0%
			Operating Capital Outlay	2%	0%
			Electronic Data Processing	0%	0%
			Special Category	48%	100%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

All funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

The original proposal requested $2.1M which included $2M for renovations, and Dr. Hellstrom received $1M of State 21st Century World Class Scholar funds. A high priority need was to have the Shaw Building renovated in order to turn the building from office space to one with advanced laboratory capability. Therefore, the entire $1M of State funds was used toward the renovations and other funds from external sources as well as non-state institutional funds were used to cover personnel costs and other expenses. The $1M of State funds expended was originally reported to the BOG incorrectly as Expenses and should have been reported as Fixed Capital Outlay. Therefore the percentages in Column 5 should be amended as noted above. The funding served to facilitate the development of the Applied Superconductivity Center at FSU.

Florida International University: Joe Leigh Simpson ($1,000,000)					
Column 1	Column 2		Column 3	Column 4	Column 5
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$756,898		Salaries and Benefits	37%	25%
			Other Personnel Services	13%	0%
			Expenses	9%	21%
			Operating Capital Outlay	41%	54%
			Electronic Data Processing	0%	0%
			Special Category	0%	0%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

Dr. Joe Leigh Simpson has been on partial professional leave during 11/12 and will continue during 12/13. Also, he and his research team have been very successful in obtaining sponsored research and proportional effort has been charged to grants. All remaining funds will be expended by the end of the 12/13 fiscal year.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

Salaries are less than originally projected due to sponsored research effort; expenses are higher due to using professional services rather than OPS and OCO due to higher specialized equipment costs than originally projected.

University of Central Florida: Marwan Simaan ($1,000,000 Award)					
Column 1	Column 2		Column 3	Column 4	Column 5
Total State Award	Total State Award Expended		Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000		Salaries and Benefits	0%	0%
			Other Personnel Services	0%	0%
			Expenses	0%	0%
			Operating Capital Outlay	0%	0%
			Electronic Data Processing	0%	0%
			Special Category (UCF Foundation)	100%	100%
			Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

Not applicable; all state funds have been expended through purchase of the Foundation endowment.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

Not applicable; funds were expended with no shift in category.

Notwithstanding the placement of the award into its Foundation, provide an explanation of how UCF has supported or will continue to support the Scholar associated with this award.

The university provided $1,000,000 (July 2008) in contract and grant project funds to support Dr. Marwan Simaan ($625,000) and additional junior faculty ($325,000) for the 21st Century World Class Scholar grant. Dr. Simaan's cumulative expenditures through December 2012 equal $151,887, which include salary charges for his summer employment, graduate student salary support and travel. The university determined faculty and graduate student salary expenditures in the amount of $221,051 were improperly assigned to the project accounts and are being transferred off as required. The current funds available to support Dr. Simaan's future research and scholarly activities under the 21 Century World Scholar program equal $473,113.

The 2012 annual financial report in question included, in part, funding support values that were made available to the Program but were not expended. The financial values listed in the report followed the 21 Century World Class Scholar reporting instructions by explaining how "…UCF has supported or will continue to support the Scholar associated with the award.

University of Central Florida: (Biophotonics Vodopyanov) ($1,000,000 Award)				
Column 1	Column 2	Column 3	Column 4	Column 5
Total State Award	Total State Award Expended	Expenditure Categories	% of Award Expenditures Originally Proposed by Expenditure Category	% Actual Expenditures by Expenditure Category
$1,000,000	$1,000,000	Salaries and Benefits	0%	0%
		Other Personnel Services (including "students" and "postdocs")	0%	0%
		Expenses	0%	0%
		Operating Capital Outlay (including start-up funds)	0%	0%
		Electronic Data Processing	0%	0%
		Special Category (UCF Foundation)	100%	100%
		Total, All Categories	**100%**	**100%**

If all state award dollars have not yet been expended, please provide a narrative rationale for their non-expenditure, and indicate a timeline for the expenditure of all funds. If all funds have been expended, please verify by entering "All funds have been expended."

Not applicable; all state funds have been expended.

If funds shown as expended in any given expenditure category indicate shifts—either upward or downward--of 20% or more, provide an explanation and rationale for such shifts.

Not applicable; funds were expended with no shift in category.

Notwithstanding the placement of the award into its Foundation, provide an explanation of how UCF has supported or will continue to support the Scholar associated with this award.

Dr. Konstantin Vodopyanov will leave Stanford University in January 2013 to assume the position of 21st Century World Class Scholar in Optics at UCF. Dr. Vodopyanov is a world renowned scientist whose research focuses on biophotonics, lasers, and their biomedical applications. The state award was expended in its entirety by purchasing a UCF Foundation endowment account designed to provide growth income to support the Scholar's research on an annual basis. The state's support of the Scholar is matched generously by UCF as follows: Dr. Vodopyanov's 9-month-base salary of $150,000 and benefits will be paid by CREOL, The College of Optics and Photonics, with a portion during the first three years being provided through a Provost Research Enhancement Position (PREP). Dr. Vodopyanov will be provided with $800,000 of start-up funds for building a world-class research facility in biophotonics and lasers. This startup package was developed with $600,000 provided by CREOL, $100,000 provided by the Office of Research, and $100,000 provided by the Provost. In addition, Dr. Vodopyanov will be excused from teaching one formal course in each of the first two years, giving him additional time for building his research program at UCF. Efforts are also underway to obtain an affiliate appointment in the Department of Physics for the Scholar.

Florida Board of Governors

2010 New Florida Initiative

Accountability Summary

March 2013

Contents

Introduction
In 2010 the Florida Legislature appropriated $10M to the State University System (SUS) in order to advance its research and economic development capacity. These dollars came without restrictions as to how they might be allocated or used, nor were there any requirements as to accountability reporting.

The Board of Governors used these dollars to create **2010 New Florida**: a two-pronged initiative. "Scholar Boost" awards were provided to recruit or retain high quality STEM faculty in the State University System. "Clustering" awards were provided to create or enhance collaborative, cross-institutional STEM research efforts in critical areas across the SUS.

The 2010 New Florida Initiative was intended to produce meaningful outcomes within a relatively short timeframe and to demonstrate the power of the System when it collaborates in areas critical to Floridians. This report constitutes the final accountability report for the 2010 New Florida Initiative.

Institutional Reporting
Narrative reports were submitted in 2011, and from these a narrative synopsis of the 45 awards was created. In 2012 further narrative reports and expenditure reports were submitted. This report contains synopses from both reporting periods.

Although the $10M appropriation did not begin to cover the number of dollars requested (notwithstanding a $400K cap on any given request), the Florida Board of Governors is confident that the 2010 New Florida Initiative produced a great many positive outcomes. In total, 45 discrete dollar awards were made through the Initiative.

Awards were formally approved by the Board of Governors in November 2010, and award allocation followed thereafter through standard allocation procedures. This timeline resulted in projects having not expended all of their dollars by the end of the first reporting period. It was apparent, therefore, that a second round of accountability reporting would be necessary beyond the initial accountability reporting that was conducted in fall 2011, and that this second reporting would focus on both progress and expenditures.

This constitutes the second and final phase of accountability reporting, and includes information on award expenditures as well as narrative on the activities associated with awards. As of January 2013 $9,992,086.55, or 99% of the $10,000,000 was reported as having been expended.

Narrative reporting for each award is in two parts in this document. The first part provides a synopsis of the 2011 accountability reporting, and the second is an updated

2012 accountability report submitted for each of the awards and projects covering the time period between the end of the initial accountability reporting and fall 2012.

Expenditure Analysis

Because invariably proposal requests were for dollar figures greater than actual awards made, it was presumed that institutions would need to make adjustments to their expenditures. If, as an example, a request was made for $400,000 but funded at $100,000 it was expected that adjustments, sometimes even substantial adjustments, would need to be made to original spending plans. It was the intention of the Board that a final expenditure reporting and justification would be conducted at such time as all, or very nearly all, expenditures would had been made, and this is reflected in the expenditure reporting that begins on page 54 of this document.

Staff conducted an analysis of expenditures proposed in the original proposals against actual expenditures as reported. Reports were provided in standard SUS expenditure categories. If a reported expenditure had shifted by 20%—either above or below—the estimate of the expenditure in the original proposal, universities were required to further submit a rationale for such a shift. Awards where this occurs are identified by the shading associated with the proposed/actual expenditure comparison table, as well as by the inclusion of the rationale at the bottom of any such table where this occurs.

It is apparent from this report that a number of such shifts were deemed at the institutional level to be necessary. An analysis of these shifts, in combination with the narratives that demonstrate the effectiveness of the awards, leads the Board Office to conclude that these shifts were necessary, not unexpected, and justifiable.

Clustering Grant: Community Health Workers Research and Training Institute

Awards Provided:
FAMU: $300,000 (award #01)
UF: $300,000 (award #24)
Awards Expended:
FAMU: $300,000
UF: $299,970.39

Activities in 2010-11: This community-based initiative focused on a variety of healthcare issues including preventative medicine, especially in challenged rural and urban environments. Economic analysis to document the return on the investment is ongoing. Currently, a return on investment for UF has been in the form of contracts from the Department of Health (total of $52,285). In addition, the project led to one new hire at UF (Ms. Tamira Carter). At FAMU, the project led to one new staff person (Dr. Charles Weaver, II) and two graduate assistants. Partnerships and linkages were strengthened in Gadsden County with the Gadsden County Health Department, Workforce *Plus*, and the Gadsden Community Health Council. Through coordination with *Workforce Plus,* FAMU was able to effectively recruit and retain a significant number of trainees. In addition, FAMU presented the UF-FAMU Cluster Grant to the Gadsden Community Health Council.

Activities in 2011-12: The UF-FAMU Community Health Workers Research and Training Institute was implemented. A training program was implemented that is comprised of a core curriculum and a specialized curriculum. The core curriculum is comprised of three modules: Health Disparities, Cultural Competency, and The Community Health Worker Profession. The specialized curriculum (which is designed to train Community Health Worker trainees as Health Empowerment Coaches to implement the Health-Smart Behavior Program to Modify and Prevent Obesity and Related Diseases) was developed and is comprised of the roles and responsibilities of each Health Empowerment Coach during each Health-Smart Behavior Program component. Subsequent to the specialized training, Community Health Worker Health Empowerment Coach Trainees implement the Health-Smart Behavior Program (with recruited community members serving as program participants) as a practicum training experience.

The original goal of 480 trained Community Health Worker Health Empowerment Coaches was adjusted to 360 due to a 25% reduction in the requested amount of funding. As of June 30, 2012, in Alachua County, 103 people completed the core curriculum, 81 people completed the specialized curriculum, and 45 people have completed the practicum training experience. In Gadsden County, 124 people were recruited to participate in two separate cohorts (Cohorts I and II) due to the capacity size of the training venue. Cohort I consisted of 54 people completing the core curriculum, and 54 people completed the specialized curriculum and practicum. For Cohort II, 50 people completed the core curriculum and 44 people completed both the specialized curriculum and the practicum. In Volusia County, 124 people have

completed the core curriculum, 124 people have completed the specialized curriculum, and 89 people have completed practicum training experience. In Gadsden County, pre-assessment and post-assessment were conducted to determine baseline knowledge and any knowledge gained following the administration of the curriculum.

The original goal of 4,800 mostly-minority children and adults who have learned health-smart behaviors to modify and prevent obesity with regard to themselves and their families was adjusted to 3,600 due to a 25% reduction in the requested amount of funding. In Alachua County, 149 community members have participated in the Health-Smart Behavior Program, in Gadsden County, 105 community members participated and in Volusia County, 361 community members have participated in the Health-Smart Behavior Program.

A return on investment for UF has been in the form of contracts from the Department of Health. In addition, partnerships and linkages were strengthened in Gadsden County with the Gadsden County Health Department, Workforce Plus, and the Gadsden Community Health Council. Through coordination with Workforce Plus, FAMU was able to effectively recruit and retain a significant number of trainees. A poster of Institute activities was presented at the Florida Community Health Worker Program in June of 2012. From January 2012-June 30, 2012, one of the newly trained Gadsden Community Health Workers partnered with the Gadsden County Health Department in the development and submission of a grant entitled "Using a Network of Community Health Advisors to Address Health Disparities in the Black Community" to the Florida Department of Health Closing the Gap Program. The funding outcome was successful and Mother Care Network employed 72 of the trained community health workers from the Institute to conduct door-to-door contacts with over 10,000 residents in Gadsden County. In order to improve the health of the residents who suffer from the chronic disease of diabetes, cardiovascular disease and HIV/AIDS, healthy living strategies were promoted and residents were referred to participating healthcare professionals who agreed to provide access to affordable and quality healthcare for the rural residents of Gadsden County.

Scholars Boost Grant: Associated with Retaining a Professor of Physics

Award Provided:
FAMU: $150,000 (award #02)
Award Expended:
FAMU: $150,000

Activities in 2010-11: Dr. Carol Scarlett, a current Assistant Professor of Physics at FAMU, received the award. Dr. Scarlett began to expend the funds in fall 2011. The funds are being utilized for Dr. Scarlett's research on steering/focusing of particle beams and hiring students to work in her laboratory.

Activities in 2011-12: To date, Dr. Scarlett has worked with two graduate students to further their understanding of basic charged particle beam dynamics, identified as a key undertaking towards developing experts in medical physics for which there is growing demand. These students presented their research at the National Science Foundation's Emerging Researchers' Conference in Atlanta. Dr. Scarlett also employed two undergraduate students to develop suitable targets to be used at the Jupiter laser facility and completed a section of Florida A&M University's Center for Research Excellence in Science and Technology (CREST) based on these findings.

Dr. Scarlett and her collaborators at Lawrence Livermore National Laboratory (LLNL) have completed important background studies that will allow for the design of a more advanced experiment to begin in 2013. These efforts have lead to an estimate for the protons produced during illumination of a gold target with an ultra-intense laser beam. Their work has resulted in a pre-publication ("Proton Spectrum at the Jupiter Facility of LLNL," C. Scarlett et. al.) that is being reviewed for a refereed journal. Dr. Scarlett also employed a Research Assistant, Mikhail Khankhasayev, to further the research program looking at the effects of an electric dipole moment on fundamental interactions.

Scholars Boost Grant: Associated with Recruiting a Professor and Chair of Ocean and Mechanical Engineering in the College of Engineering and Computer Sciences

Award Provided:
FAU: $250,000 (award #03)
Award Expended:
FAU: $250,000

Activities in 2010-11: This award was extremely helpful as part of the start-up package for Dr. Javad Hashemi. The University reports that, without it, recruiting Dr. Hashemi may not have been successful. He is exceptionally qualified to lead the FAU Department of Ocean and Mechanical Engineering and to strengthen FAU's research programs in that department.

Activities in 2011-12: Dr. Hashemi is developing a new area of research that relates to materials, biomechanics and biomaterials. He is currently guiding the efforts of one PhD student to develop hybrid robotic devices that would simulate physical activities. Dr. Hashemi has purchased the equipment and software needed for his research including a motion capture system, a materials testing system for biological materials (static and fatigue), a pressure sensing system for joint pressure measurement, a nano-indenter to be used for both soft and conventional materials analysis at the nano-scale, a system to gather neurological brain signals during various human activities, and software to generate 3-D models of biological tissue. The ultimate plan is to establish a center for injury biomechanics and rehabilitation robotics as related to assistive technologies that deals with soft tissue mechanics (materials analysis) and in-vitro

simulation. During the first year of his employment, Dr. Hashemi has dedicated most of his research time to purchasing the needed equipment and planning the infrastructure of the laboratory. He has also generated and analyzed previously gathered data to serve as foundation to three new proposals to be submitted to NSF and NIH during the next academic year.

Clustering Grant: Neuroscience Cluster (with Max Planck, FAU MacArthur Campus)

Award Provided:
FAU: $300,000 (award #04)
Award Expended:
FAU: $300,000

2010-11 Activities: FAU identified and prepared space on the MacArthur campus where a physiology laboratory will be established. On August 6, 2011 FAU moved a large amount of electrophysiology equipment to that space. Offices for Boca Raton faculty who will be involved with the neuroscience course have been established immediately adjacent to the lab in the same building. FAU is in the process of inventorying the equipment provided by the Provost and has obtained quotes on the equipment needed to complement the Provost's loan. FAU has delayed ordering equipment to ensure that new equipment complements, rather than duplicates, the loaned equipment. FAU purchased the new equipment over the next three months with the intention of offering a course in the spring semester of 2012. FAU recruited one faculty member who is primarily responsible for buying the equipment, setting up the lab course and running the teaching laboratory. Other faculty will also present a year-long lecture course that complements the proposed laboratory. One graduate student was enrolled to take a similar course run jointly by the Max Planck Institute and the Georg August University in Goettingen, Germany. The student will help buy the equipment that matches equipment he used in Germany, and he will serve as teaching assistant for the new course at FAU. His stipend is being paid by the New Florida award. New Ph.D. students have been recruited to FAU's Integrative Biology and Neuroscience program. The new students will be the first to take the course along with present FAU graduate students and a few students from the Honors College at the MacArthur campus. The New Florida grant assisted in organizing a symposium to be run jointly by Max Planck, FAU and the International Brain Research Organization March 4, 2012. This symposium will bring scientific leaders from Europe and South America to highlight the new joint program in South Florida, serving as a recruiting forum where FAU informs the scientists of the research opportunities for post-doctoral and pre-doctoral scholars. FAU will be especially focused on South America as it develops its international recruiting base for young scholars. At this stage of the project, the main return on investment is FAU's continuing interaction with the Max Planck Florida Institute. Establishing this new

course on the FAU MacArthur honors campus demonstrates FAU's commitment to the Jupiter initiative and gives the FAU portion of the program a physical presence in Jupiter.

2011-12 Activities: The major objective in 2012 was to establish an advanced electrophysiology laboratory course on the MacArthur campus of FAU. Faculty moved into space on the Honors campus (Bldg MC17) and established the laboratory for student training. Most of the equipment was purchased (or loaned by the Provost) in the fall of 2011 and the course ran for the first time in spring 2012 with 8 FAU graduate students. Faculty from FAU and MPFI ran sections of the course and one experienced FAU graduate student served as Teaching Assistant.

A secondary goal was to recruit graduate students to a joint program called Integrative Biology and Neuroscience. FAU has recruited its second cohort of 4 graduate students for fall 2012 matriculation, and all of the students will be trained in the newly established teaching lab. The quality of these new students is noticeably above the past recruits, indicating the strength of the collaboration. Two of the new students are already assigned to MPFI labs enhancing the collaborative nature of the clustering proposal. Institutional complementary funds are also being used to encourage research collaborations between the FAU and MPFI by funding graduate students to work on joint projects between the two institutions.

Clustering Grant: SUS Climate Change Task Force

Awards Provided:
FAU: $175,000 (award #05)
FSU: $100,000 (award #11)
UF: $125,000 (award #25)
Awards Expended:
FAU: $174,999
FSU: $99,990.25
UF: $124,967.30

2010-11 Activities: The work to date has engaged faculty members from most state universities and has led to many interactions among SUS faculty and external public and private organizations. Among universities, it has led to increased awareness of expertise across disciplines, a potential for reducing duplicative efforts, and discussions of future collaborative grant opportunities. These partnerships have already led to the development of proposals for grant solicitations, including an existing USF project to attract additional NSF funding to FAU and USF on development of a climate change education network in Florida and Puerto Rico. This project has created a greater awareness of the many initiatives on climate change issues, inside and outside universities. Research into climate education has yielded a list of courses available throughout the SUS. Awareness and access to these courses will lead to more educational opportunities for students in universities, industry

professionals, and agency leaders. The Task Force is seeing increased interest by various agencies in Florida for having a coalition of universities that can better respond to their needs for scientific information through research and training programs on climate change and societal responses.

2011-12 Activities: After the first workshop at FAU, thirty-nine representatives from FAU, FSU, UF, FAMU, FIU, UCF, USF and UM contributed to the project. Working teams produced 4 white papers and presentations for November 14-15 workshop at UF. Goals of this workshop were to foster communication and cooperation among university scientists and the public and private sectors in Florida regarding climate change and sea level rise science and societal responses. The program, which attracted speakers from public and private entities, included presentations of the four White Papers developed in this project, three keynote speakers, and two panel discussions: 1) Environment and Natural Resources, and 2) Economics and Policy. The program and summary report are at: http://floridaclimate.org/nov15_2011_home.php and presentation videos are at http://floridaclimate.org/presentations.

A web site, http://floridaclimate.org, was developed with input from all three campuses to facilitate interactions among the three university partners and to create a climate change information system portal to connect Florida universities with state agencies, private industries, and other interested parties. A goal is to expand the collaboration and continue to maintain the web site. The Four White Papers are available at http://floridaclimate.org/whitepapers/.

Clustering Grant: Southwest Florida Coastal Watersheds—A Collaborative Integration of Research, Education, and Policy Outreach

Awards Provided:
FGCU: $200,000 (award #06)
NCF: $300,000 (award #18)
Awards Expended:
FGCU: $199,074.12
NCF: $300,000

2010-11 Activities: Three symposia addressing coastal watersheds were planned. Working with partners in Sarasota and Manatee County governments, the City of Sarasota government, the Sarasota Bay Estuary Program, the Charlotte Harbor National Estuary Program, the Tampa Bay Estuary Program, the Science and Environment Council of Sarasota County, the Florida Fish and Wildlife Conservation Commission, Florida Sea Grant, the South West Florida Water Management District, Mote Marine Laboratory, Audubon of Florida, the University of South Florida, and the school boards of several counties, collaborators began the work of better integrating science, policy and education in the management of coastal watersheds of Southwest Florida. The symposium was designed to prioritize Southwest Florida coastal watershed research gaps and develop a collaborative research agenda for the

region, determine key points at which regional policies are disconnected from current empirical data, and develop strategies to remedy identified disconnects.

Two scientific symposia were planned at FGCU in connection to the grant. The first is the Cela Tega meeting on the economic value of conservation land in the Estero Bay watershed, bringing together land managers, conservationists, economists, industrial and real estate developers, journalists and members from the scientific community. The second is the Caloosahatchee River Symposium scheduled for Spring 2012, intended to bring together local, regional and national researchers to discuss their research in an effort to define the current state of knowledge of the ecology of the Caloosahatchee River and estuary, identify gaps in this knowledge, and focus future research activities.

At NCF, a Southwest Florida coastal Wiki is under development for regional researchers to share data and insights with a virtual community of coastal watershed managers and educators. FGCU is developing GIS-based teaching modules that integrate existing research in a manner accessible to formal and informal education applications available to the general public. The project will facilitate new and existing public service projects, service learning programs, and formal and informal environmental education at all levels ranging from K-12 to senior policy makers and enhance undergraduate education in marine/human sustainability. NCF faculty have developed field explorations for K-12 students on the topics of local coastal wetlands and local 19th century coastal communities. Two new classes were planned for fall 2011. Current FGCU GIS-based modules are being utilized in two general education classes at FGCU. FGCU is working with K-12 district Science Coordinators to schedule workshops with teachers so that they can be integrated into the middle and high school curricula.

Two NCF student researchers were trained in GIS techniques. Their work has produced valuable results that are already proving useful to Sarasota County environmental workers. One researcher produced new GIS data on seagrass prop scar locations and conditions. The other produced new GIS data to enhance a watershed pollutant loading model. Three new undergraduate courses were developed that involve students in solutions to local watershed problems. A new partnership was forged between New College and Sarasota Bay Estuary Program to bridge science, policy, and education for better coastal watershed management. A new Partnership between NCF and the Florida Center for Community Design was established, and a new partnership was initiated with USF to enhance the Water Atlas project to allow map-based searches of the data library and improved community involvement. The completion of the educational GIS-based modules has been the most distinct return on investment for the FGCU efforts to date. This grant made it possible to focus and continue support for this effort.

Activities in 2011-12: The Sarasota Bay Watershed Symposium (Feb. 15-17, 2012) brought together 252 participants, including scientists, educators, policy makers, business leaders, students, and the interested public to address coastal issues in

Sarasota Bay and her watersheds. Access to research has been improved through a geo-referenced and searchable resource bibliography for the Sarasota Bay Watershed on the Sarasota Water Atlas. A new Bay Conditions Index was created displaying current and historical trends in water quality data for each bay managed by the Sarasota Bay Estuary Program. Students and faculty generated new research on local seagrass conditions, local neighborhood stormwater runoff, cycles of local harmful algal blooms, and cognitive and sensory systems in local captive marine mammals. Faculty also created two new coastal learning explorations for K-12 public school classes, designed to connect classroom teachers with community resources to deepen learning around Sunshine State Standards. Undergraduate education at New College was enhanced through the development of three courses offered in 2012-13. Finally, the feasibility for New College third and fourth year students to participate in an accelerated Masters of Public Administration program at Florida Gulf Coast University was investigated. Also investigated were the feasibility of an accelerated Masters of Engineering at UF, an accelerated D.O. at LECOM, and the creation of a certificate program in Marine Mammal Science based at New College.

The Sarasota Bay Watershed Symposium reenergized community conversations about low impact development/redevelopment. The Symposium promoted public understanding of the connectedness between yards and neighborhoods and the water quality and living resources of coastal waters. New College and the State University System were recognized as the conveners and leaders of these important conversations. The project added value to the existing Sarasota Water Atlas by displaying data in user friendly maps and graphs, searchable by individual bays and inlets. Relationships were strengthened between New College of Florida and the Sarasota Bay Estuary Program, the Sarasota County School District, Sarasota news outlets, and the many private sponsors of the Sarasota Bay Watershed Symposium. These relationships will support future community collaborations. New relationships flourished between New College of Florida and Florida Gulf Coast University, particularly with the College of Arts and Sciences and the Graduate Studies Office. New courses and internships connected undergraduates more deeply to the real-world issues of local coastal watersheds.

Two scientific symposia were held at FGCU in connection to the grant. FGCU has developed a number of educational offerings as a result of the cluster grant. The first is a series of GIS-based teaching modules that integrate existing research in a manner accessible to formal and informal education applications through web pages that will be available to the general public. These modules are currently being utilized in two general education classes at FGCU. FGCU is communicating with Science Coordinators of Lee and Collier counties to schedule workshops with teachers so that they can be integrated into the middle and high school curricula. The Cluster Award also supported middle school science education and the training of middle school teachers through the development and implementation of 2 Summer Research Opportunity (SRO) programs. SRO is similar in design to the National Science Foundation's Research Experience for Undergraduates (NSF-REU), but involves

middle school (6-8th grade) students. One program included Collier County students and was hosted by the Naples Botanical Garden, and the second engaged students from Lee and Charlotte Counties and was hosted by FGCU. Sixty students in all participated. Additionally 6 public school educators were involved as student mentors, and were provided with training in the practice of science. Cluster monies permitted significant expansion, doubling the number of participating students and involving their teachers for the first time. Finally, the relationships formed between New College and FGCU through Cluster grant activities have supported the development of joint degree opportunities for New College students. The pilot program will provide an opportunity for New College students to start their FGCU MPA while still enrolled at New College. The MPA program was chosen as a pilot program because of its online accessibility and potential appeal to a cross-section of New College students who have strong public sector interests.

Scholar Boost Grant: Associated with Recruiting the Holder of the Backe Eminent Scholar in Renewable Energy

Award Provided:
FGCU: $200,000 (award #07)
Award Expended:
FGCU: $196,111.89

2010-11 Activities: FGCU has dramatically increased its research portfolio in renewable energy and currently has one of the largest solar panel fields operating in the world. Dr. Joseph Simmons was offered and accepted the position of Backe Chair in Renewable Energy in June 2011, with expectations to formally begin as a faculty member at FGCU in fall, 2011. The Scholar Boost funding provided to for this strategic hire is expected to lead to a significant return on investment. For example, it is anticipated that new external grants and contracts will be received at FGCU as a result of the hire. In addition, Dr. Simmons will be establishing relationships with industry to advance the commercialization of technologies, attract new industry to Southwest Florida, and to contribute toward the general economic diversification of Southwest Florida. Being able to offer the funds in support of the hire was extremely helpful in attracting this eminent scholar to FGCU.

2011-12 Activities: The Scholar Boost award assisted in hiring Dr. Joseph H. Simmons, an eminent scholar in Optical Physics and Solar Energy. Professor Simmons is past Head of the Materials Science and Engineering Department at the University of Arizona and is the Founding Director of the Arizona Research Institute for Solar Energy (AzRISE). Professor Simmons is an expert in solar energy. His participation and contributions are critical to the development of a Renewable Energy Engineering degree program, and the development of the University's presence at the Innovation Hub. In addition, Professor Simmons is working with the local industry and regional

municipalities in advising on renewable energy developments. He has taken charge of the FGCU 2 MW solar power plant and is expanding research to measure photovoltaic performance in the Southwest Florida climate.

Professor Simmons has formed the FGCU Renewable Energy Institute and has developed a plan to build a Solar Research Park at the Innovation Hub. Through his contacts with the solar community, Professor Simmons has brought to the Solar park, the partnership of many leading solar energy and energy storage businesses, including: Nanotune (energy storage), IBM (solar forecasting), Sunpower (photovoltaic modules), Redflow (energy storage), Sanyo (photovoltaic modules), Hanwa Solar (photovoltaic modules and energy storage) and AzRISE (energy storage). In terms of in-kind value the donated technologies add up to well over half a million dollars.

In education, Professor Simmons has developed and is teaching an advanced undergraduate course in ***Solar Energy Science and Technology*** and has initiated a STEM project for high schools in the Lee and 3 neighboring counties that consists of building and racing a Solar Go-Kart, planned to start this school year with a race in spring 2013. He also supervises 2 graduate students and 2 undergraduate students.

Scholar Boost Grant: Associated with a Director for the Center for Nano Medicine, College of Engineering and Computing

Award Provided:
FIU: $300,000 (award #08)
Award Expended:
FIU: $302,030.88 [$2,030.88 is non-state complementary funding]

2010-11 Activities: The position was filled in January 2011 by Sakhrat Khizroev, a faculty member in the department of Electrical and Computer Engineering. Dr. Khizroev has initiated the founding of the *Center for Nanomedicine*, of which he will be the Director. This interdisciplinary Center has initiated several collaborative projects. These projects include

- "Nanosized nicotine particles for finely controlled topical drug delivery" [Nair (COM) and Khizroev (CEC)]
- "Mass produced nanosized anti-nerve gas nanoparticles" [Petroianu (COM) and Khizroev (CEC)]
- "Magnetic Nanocarrier Drug Delivery to Treat NeuroAIDS and Opiate Addiction" [Nair (COM) and Khizroev (CEC)]
- "Nanotransducers for biological neural networks" [Jung (Biomedical Engineering) and Khizroev (ECE), both at CEC]
- "Nanolasers for non-invasive diagnostics" [Derici (CAS) and Khizroev (CEC)]
- "Nanomagnetic Information Processing at Extreme Conditions" [many faculty members from CEC and CAS]

All these projects have resulted in research proposals to various funding agencies including National Science Foundation (NSF), National Institute of Health, Department of Defense, and others. In addition, a strong partnership has been established with Western Digital Corporation, which committed to provide additional $200,000 support within the next five years. The Silicon Valley giant is interested in the project related to the development of nanolasers. These devices could impact not only the field of medicine but also change the technology roadmap of the consumer electronics industries.

A large cross-disciplinary NSF ERC proposal, expected to be submitted in early Fall 2011, will bring together a team of renowned national and international researchers on nanomagnetic information processing. Collaborating universities include UC Berkeley, University of Minnesota, University of Notre Dame, National University of Singapore, and Technical University of Munich. This proposal will create a Nanotechnology partnership of community colleges in the states of Florida, California, Indiana, and Minnesota for disseminating the knowledge in the emerging high-impact field of nanotechnology and promoting a new culture of cross-disciplinary education and research to a wider audience. As a result, students at select community colleges will get exposed to nanotechnology. The short courses will be taught by distinguished experts from the participating institutions during summer and/or winter semesters as well as through the on-line format.

2011-12 Activities: In 2011, Professor Khizroev won a prestigious three-year National Science Foundation research grant to develop an advanced multilevel signal processing technology that could greatly improve understanding of the control of nanodevices for non-invasive brain stimulation. In addition, he received a commitment for a research grant from Western Digital Corporation in the amount of $200,000 for two years to develop nanolasers that could be suitable for high-precision diagnostics. Dr. Khizroev's presence at FIU has had a major impact in fostering interdisciplinary collaboration between the colleges of Engineering and Medicine at FIU. Specifically, Dr. Khizroev's research has been integrated with the College of Medicine's Institute of Neuro-Immune Pharmacology, Directed by Professor Madhavan Nair of the Department of Immunology. Examples of successful cross-disciplinary research projects started through this collaboration are (1) Nano-magneto-electric particles for non-invasive brain stimulation to fight neural system related diseases such as Parkinson's Disease and others, (2) Nanoparticles to Control Topical Drug Injection in Nicotine Patches (goes along with Florida's anti-smoking initiative), and others. This collaboration has assisted the Institute of Neuro-Immune Pharmacology in obtaining a $2M R01 grant from NIH, and has produced publications in top-tiered scientific journals, such a Nature. Additionally, Dr. Khizroev assisted the College of Medicine in obtaining a $2M NIH grant, for which Dr. Madhavan Nair is the Principal Investigator.

Scholar Boost Grant: Associated with a Biomedical Engineering Professor to Lead a Department and a Center for Adaptive Neural Systems, FIU College of Medicine
Award Provided:
FIU: $300,000 (award #09)
Award Expended:
FIU: $299,198.26

2010-11 Activities: Dr. Jung is currently Principal Investigator on a major National Institutes of Health (NIH) Bioengineering Research Partnership funded project that is developing a unique advanced neural prosthesis system to provide sensation back to upper-limb amputees. Through a wireless communication system, amputees will be able to feel the grip force of their prosthetic hand and know the extent to which it is open or closed without looking at it. The project is an academic-clinical-industrial partnership. Since her arrival, Dr. Jung has established new connections with a Miami based hand surgeon, a prosthetics practice, and a local R&D company. They, in conjunction with an existing partnership with Cochlear Ltd, an international leading medical device company, are working on the project. A senior research engineer and several undergraduate students in biomedical engineering are already working on the project. Several postdoctoral fellows (national and international) have been interviewed and two or three are expected to start work on the project in Fall 2011. The parent grant, for more than $1M is in the process of being transferred from Arizona State University to FIU. The previously established partnership with Arizona State will continue. In conjunction with this existing grant, she has also submitted to NIH a proposal for considering the "Ethical and Social Challenges of Integrated Neurotechnologies." Dr. Jung has also recently submitted a grant proposal to the Defense Advanced Research Projects Agency (DARPA) for development of a system to capture motor intent from upper limb amputees. This work is aimed at providing novel neurotechnology to record neural activity from nerves in the residual limb of upper limb amputees to help them control prosthetic arms to do various tasks of daily living. Since her arrival she has also led the department of Biomedical Engineering at FIU to establish new academic partnerships with other private and public universities. The Department has submitted two pre-proposals for consideration by the National Science Foundation for large Science and Technology Centers. One of these is in partnership with the University of Miami and the other with the University of Illinois-Urbana Champaign. In Fall 2011, Dr. Jung will lead an FIU-wide effort to compete for a "Research Center for Minority Institutes" Center grant with an application to the National Institutes of Health. This effort will bridge disciplines in engineering, medicine and social sciences, as well as link with industry and foundations. To enhance cutting-edge research training and communication skills of our graduating workforce, Dr. Jung guided the department in establishing an undergraduate Research Day. Undergraduate students presented their research projects at poster sessions to faculty, researchers and industrial partners of the department and the posters were evaluated and judged for both content and presentation. A graduate research day is planned for Fall 2011. All of this effort directly supports the creation

of new job and workforce training and development which serve as the enhancers of a knowledge-based economy in the State of Florida.

2011-12 Activities: Dr. Ranu Jung has brought to FIU her leadership in research, administration, and outreach. Since arriving at FIU, she has initiated major research projects and secured federal funding, built new partnerships, and recruited additional talent to FIU and Florida. Dr. Jung received a $499,233, contract from the Defense Advanced Research Projects Agency (DARPA) for development of a system to capture motor intent from upper limb amputees. She also transferred $1,798,530 from her previous institution (Arizona State University) to FIU for a major National Institutes of Health (NIH) Bioengineering Research Partnership funded project on which she is the Principal Investigator. This project is developing a unique advanced neural prosthesis system to provide sensation back to upper-limb amputees. Additionally, there have been new patent applications related to Dr. Jung's research.

Scholar Boost Grant: Associated with a Professor to Lead a Marine Fisheries and Ecosystems Dynamics and Policy Center

Award Provided:
FIU: $300,000 (award #10)
Award Expended:
FIU: $308,933.41 [$8,933.41 is non-state complementary funding]

2010-11 Activities: Dr. Kevin Boswell has been hired. There is no current return on investment since, at the time of 2010-11 reporting, Dr. Boswell had not yet begun at FIU. However, he will be transferring several research grants immediately upon starting at FIU.

2011-12 Activities: Dr. Boswell has received several awards since he arrived at FIU, in addition to transferring awards from his previous institution. He has recently been awarded, as PI, a highly competitive grant with colleagues in Alaska from the North Pacific Research Board, totaling ~$300k with $134,310 coming to FIU. Additionally, he has recently co-authored a high-profile manuscript in the journal Current Biology. Dr. Boswell has also submitted proposals valued at $1,002,563, which at the time of this report are pending.

Scholar Boost Grant: Associated with Recruiting a Professor of Biomedical Science, FSU College of Medicine

Award Provided:
FSU: $250,000 (award #12)
Award Expended:
FSU: $250,000

2010-11 Activities: For this reporting period, the only funding that was provided was for travel for the candidate to Tallahassee for recruiting purposes. The COM and the

Department of Biomedical Sciences expects to make a significant investment in the coming year. The expenditures include a commitment for his salary and fringe benefits, the standard FSU moving expenses and $1M ($500K/year for two years) for equipment, other set-up costs associated with moving his laboratory, and suitable laboratory space. At this time, at least $600,000 of these funds are expected to be used for large items of equipment for Dr. Bhide's lab or for upgrades that he has requested for the Departmental Core Facilities. The remainder will be used by Dr. Bhide for smaller equipment items, supplies, and personnel (i.e., one postdoc and one lab technician) over a two year period after his arrival. Additionally, Dr. Bhide has been selected as the Jim and Betty Ann Rodgers Eminent Scholar Chair in Neuroscience at the COM. The endowment for this Chair produces ~$80,000/year.

2011-12 Activities: The position holder Dr. Pradeep Bhide was recruited with an NIH research funding portfolio that exceeded $1 million. Additionally, Dr. Jinmin Zhu was also recruited as part of Dr. Bhide's research group. Dr. Zhu holds an NIH award with Dr. Bhide as a co-investigator. Upon his arrival at FSU, Dr. Bhide has a) recruited four individuals to work in full-time positions in his research group; b) sought new grant funding from federal and non-federal sources to expand his research portfolio, c) attracted philanthropic funding amounting to $1,000,000, and d) filed a new Invention Disclosure entitled, "Novel Class of Non-Stimulant Treatment for ADHD and Related Disorders" with the FSU Office of Intellectual Property. Thus, the return on investment for FSU and the State has been significant.

Additionally, Dr. Bhide has been selected as the Jim and Betty Ann Rodgers Eminent Scholar Chair in Neuroscience at the COM. The endowment for this Chair produces ~$80,000/year. Dr. Bhide's research grant portfolio from all sources amounts to over $1 million.

The award was utilized to purchase laboratory equipment necessary for setting up and operating Dr. Bhide's research laboratory. The equipment includes microscope and associated imaging equipment, centrifuges, and PCR machine. The equipment has been received, and it is in place and operational in Dr. Bhide's laboratory.

Clustering Grant: A Unified Approach for Enhancing Aerospace Research, Education, and Workforce Training

Awards Provided:
FSU: $150,000 (award #13)
UCF: $225,000 (award #19)
Awards Expended:
FSU: $149,655.56
UCF: $225,000

2010-11 Activities: With regard to a professional certificate program, based on the input from Siemens Energy and FTT, two new courses were developed, and both

courses are scheduled to be offered as Special Topic courses in Spring 2012 for the first time. Per the suggestion from the local industrial stakeholders, the TPP program will include two existing courses in addition to the new courses. The certificate program will be limited to 10 students in its first year. Siemens and FTT have agreed to provide ten 2-semester-long internships (a mandatory part of the program), if necessary. Brevard Workforce Development, Space Florida, and other local agencies were contacted for financial help with the tuition payment for the 10 participants, who will be selected from the recently displaced engineers on NASA KSC area. BWD has tentatively agreed to provide the tuition for all 10 program participants of the inaugural batch. In 5 years, it is expected that 30 new students will enroll in the TPP certificate program. It is also expected that all 30 graduates will be absorbed by the local turbine industry. The TPP program will allow graduates to start at even higher positions with higher responsibilities. This will positively impact local economy as well as UCF's pool of influential alumni. The TPP program is expected to arrest, and even reverse, recent flight of turbine jobs to neighboring states as these companies are expanding their manufacturing, e.g. Siemens to Charlotte, Mitsubishi to Savannah, and Alstom to Chattanooga.

The Florida Center for Advanced Aero-Propulsion (FCAAP) at the Florida State University is developing a polysonic wind tunnel to generate high-fidelity aerodynamic data and develop flow diagnostics for complex flowfield. The preliminary design of the polysonic wind tunnel is completed and FSU has selected a contractor for the fabrication of wind tunnel components with systems installed to measure aerodynamic characteristics at realistic test conditions. The polysonic wind tunnel facility is large enough to be very useful to industry, ensuring its long-term use and sustainability, yet small enough to be safely operated by university personnel. The tunnel will be used to develop innovative, practical active flow and noise control techniques and advanced diagnostics to study the design of, and fundamental problems in, high-speed flight vehicles. It will incorporate unique design features that will facilitate low test-section noise and extensive optical access for flow diagnostics.

2011-12 Activities: The majority of the FSU funds were spent on designing and acquiring advanced diagnostics and instrumentation hardware for further enhancing the capabilities of the *Next Generation PolySonic Wind Tunnel (PSWT)* that is being built though the competitively won $3.3 million NSF grant through NSF's Major Research and Instrumentation program. Funds were used to support staff at FCAAP: engineers and scientists, who are working on the Polysonic Tunnel project. In order to develop additional advanced diagnostics for this facility FSU also competed for and *won a $400,000 grant for the Air Force Office of Scientific Research (AFOSR)*. The capabilities of the Polysonic facility combined with the advanced diagnostic and test capabilities added through the Cluster program and other sources will result in a truly unique, shared facility that will serve and help grow the research and academic community as well as the aerospace industry in Florida.

At UCF, the certificate program was originally designed to involve three courses with two new courses, and the other one based on thorough modification of an existing course. The first one was taught in its enhanced version in Fall 2011. The two new courses were developed and taught for the first time in Spring 2012. As the purpose of these new courses and the subsequent certificate is workforce development for the local turbomachinery related industry, it was imperative to have one or more co-instructor(s) from the industry for each of the courses. Accordingly, *TurbinesSP* had one co-instructor from Florida Turbine Technology; *DfM TurboM* had three co-instructors from Siemens Energy; and *IntegrityTM* had two industrial co-instructors: one from Florida Turbine Technology and one from Siemens Energy. Both of the new courses have been offered as Special Topics (ST) courses. As they have been already offered once, requests are being prepared to convert them to regular courses. Once that approval is granted, the formal request for the TPP certificate will be submitted in Fall 2012. Industry partners have suggested inclusion of an enhanced version of EML 5142: Turbomachinery, which will be done when the request for TPP certificate is submitted in Fall 2012.

Clustering Grant: Tackling Florida's Growing Geophysical Threats through Collaborative Coupled Modeling

Awards Provided:
FSU: $200,000 (award #14)
USF: $100,000 (award #36)
Awards Expended:
FSU: $206,456.83 [$6,456.83 is non-state complementary funding]
USF: $103,889.42 [$3,889.42 is non-state complementary funding]

2010-11 Activities: The USF and FSU investigators each had several meetings and conference calls related to this project. Thus far, a high-resolution dataset for Hurricane Ike (2008) which consolidated all available observations in the model initialization was produced as a case study by USF. Further, through this collaboration, the FSU colleagues worked on setting up an ocean model in pseudo-real time for the Gulf of Mexico, Florida, and the western Atlantic. FSU is using New Florida funds to set up a real-time atmospheric simulation that will soon feed the atmospheric forcing to the ocean model. To provide a climatological perspective on this modeled hurricane risk to Florida, FSU colleagues have progressed on work to quantify the landfall risk to Florida and the surrounding region. The location-based regional landfall threats have been expanded to include additional years in the climatology, short-term tendency in landfall threat, most imminent threatened landmass, as well as time of year dependency. Finally, through this collaborative modeling experience, USF has prepared training materials as well as materials on visualization of the model output using state of the art software. Through this experience, the first of three workshops will be presented in spring 2012, training

students on the use of the latest visualization software to analyze and interpret historical and real-time hurricane model output.

This project advances modeling research and improves the influence of USF and FSU on this frontier research area. Through the collaborators, it incorporates collaboration with external organizations (UM, NOAA, NWS, U. Nanjing). The investment is leading to the design of a real-time coupled ocean-atmosphere modeling system with output to the web (upcoming) that will provide high-resolution forecasts for threats to Florida and the surrounding region, such as hurricanes, fires, and oil spills. Results from this research have been communicated to local, state, and national press through interviews (phone and print) as well as conferences nationally and internationally, and will continue to do so. The project has been and will continue to support numerous research assistants, including graduate students. Additionally, the collaboration between USF and FSU has grown substantially due to this funding, and will continue to do so as the real-time modeling, dissemination, and planned workshops progress through further collaboration.

2011-12 Activities: USF has set up an experimental real-time 40km uncoupled atmospheric model which runs four times daily over a North Atlantic Ocean domain for the 2012 hurricane season. Website graphics through 120hr from these model runs depict: 1) sea level pressure and precipitable water, 2) steering flow, 3) wind shear, and 4) a three dimensional depiction of atmospheric specific humidity and temperature. A second North Atlantic Ocean domain in use during active periods has a higher resolution nest with 15 km grid spacing over the Gulf of Mexico and Caribbean Sea. Work completed on the multi-scale geophysical dynamics that generated tropical storm Arlene (2005) in the Atlantic Ocean is in process of being submitted to *Weather and Forecasting*. Further work will be completed for other case studies. There have been substantial data exchanges between the two groups (and to other universities) to facilitate the education of students and colleagues on using numerous software packages (to be discussed in detail later).

Using the $70,000 High Performance Computing purchase at FSU, a two-way coupled ensemble ocean-atmosphere system was implemented. It should be noted that the $90,000 investment is enormous leverage for the university as it contributes to a shared resource that is made available to all groups at FSU when those CPUS are idle. The exchange of fields between the two models in this coupling include: sea-surface temperature, wind stresses, heat fluxes, and precipitation. In Year 3, waves will be introduced into the calculations as well. All of these combinations are quickly leading toward the stated goal of an ensemble ocean- atmosphere coupled system by the end of Year 3.

PIs from both sides of the team utilized funds to present the work at the 3rd Summit on Hurricanes and Climate Change in 2011. After continued development and positive colleague feedback, further presentations were presented at the 2011 AGU Meeting, and 2012 Annual AMS and AAG meetings, culminating in the 30th AMS Conference on Hurricanes and Tropical Meteorology. During late spring 2011, PI Hart arranged to have the Spring UCAR PACUR meeting at FSU, during which

several presentations on oil spill impacts, modeling, and tracing, by graduate students were given to representatives from approximately a dozen peer universities. Finally, as proposed in the grant, USF and FSU have jointly pursued an aggressive effort at incorporating new software packages and the datasets related to this project, within the classroom. Demonstrations of the incorporation of the scientific results in the classroom at USF were given by example at the July 2012 UCAR Unidata Conference where both PIs Collins and Hart were invited speakers. Prior to the conference, Collins received an Equipment Award from UCAR Unidata to enhance USF's Weather Lab. She included two graduate students in the grant application to UCAR to mentor them on grant writing. USF and FSU have benefitted significantly from the funding provided: several graduate students received support for their degrees, both USF and FSU and BOG received significant exposure on the research through the numerous presentations, interviews with the media regarding the forecast threat to Florida further provided exposure, web-site development communicated the research to a broad audience, and the research will lead to improved understanding of the geophysical threats to Florida.

Clustering Grant: Sunshine Grid—Florida's Research and Education Cyber-infrastructure

Awards Provided:
FSU: $150,000 (award #15)
UF: $200,000 (award #26)
USF: $100,000 (award #37)
Awards Expended:
FSU: $150,000
UF: $200,000
USF: $100,000

2010-11 Activities: The three STEM projects supported are the Cryo-Electron Microscope (FSU+UF), the High Energy Physics Compact Muon Solenoid experiment (UF+FSU), and the weather-ocean coupling model (USF+FSU). In all three projects Sunshine Grid staff has engaged with the respective researchers. An advisory panel has been constituted. A website has been created and has information on the two summits that were held in March at UF and in June at USF. It also has the database to collect the information about research resources available to researchers in Florida. The database is being filled with information during the second half year of the project. The infrastructure for the shared storage system has been designed, the concept tested, and the equipment purchased. It will be deployed during the second half of the project. This will allow data sharing between the institutions. Cycle sharing will be supported by deploying repurposed hardware at the three institutions in the same time frame as the storage deployment. A storage specialist was hired at FSU, a storage specialist and an application specialist at UF, and a web developer at USF. The concept for a Major Research Instrumentation proposal to NSF has been

developed and was discussed at the HPC Summit in June. A Research Computing Day is being planned at UF to convene researchers to showcase the infrastructure and solicit further participation. No student assistants were hired, nor were the shared data storage resources at FSU or USF purchased, because funds requested in the original proposal to support these efforts were not received. One additional science project has been identified for support from the Sunshine Grid infrastructure. This project involves collaboration in veterinary science research between UF and neuroscience modelers at USF and needs to share measured data from neuron signals recorded at UF for modeling at USF.

The Board of Governor's investment in the Sunshine Grid has not only accelerated progress on the three areas of leading-edge research identified in the proposal, but has made possible the data sharing components of these projects and therefore has significantly broadening their impact. The creation of the Sunshine Grid website required that a simple module be developed to provide authentication for users from three institutions using credentials provided by these institutions in completely different protocols. The needs of this project make it clear that the universities in the state of Florida can and must take a leadership role in the adoption of such infrastructure. This capability will benefit numerous research projects across the State University System beyond the three projects that are explicit at this time. In short, many technical hurdles have been overcome because of New Florida funding and, perhaps most importantly, solid lines of communication have been established among three of Florida's leading SUS institutions to facility future state, federal, or private funded collaborations.

2011-12 Activities: The three STEM projects supported are the Cryo-Electron Microscope (FSU+UF), the High Energy Physics Compact Muon Solenoid experiment (UF+FSU), and the weather-ocean coupling model (USF+FSU). In all three projects Sunshine Grid staff has engaged with the respective researchers. Jobs have been shown to be submitted at FSU to run at UF HPC resources using Condor flocking software, as well as the reverse and the same thing has been accomplished between FSU and USF. File systems have been cross mounted from UF at FSU and USF, as well as at collaborating institutions like FIU. The target for offering the job submission and file sharing capability as a cloud-like production service is September 2012.

The collaboration between the three institutions was significantly expanded to 9 institutions in the state of Florida who form SSERCA (Sunshine State Education & Research Computing Alliance): Florida State University, University of Central Florida, University of Florida, University of South Florida, and University of Miami are the founding members. In the last four months Florida A&M University, Florida International University, Florida Institute of Technology, and Florida Atlantic University joined as affiliates. The alliance has held quarterly meetings hosted in turn by one of the member institutions in March 2011 (UF), June 2011 (USF), September 2011 (UM), December 2011 (UCF), March 2012 (FSU), June 2012 (USF). The next meeting will be in September 2012 at UF.

In November 2012, SSERCA organized a booth at the Supercomputing conference in Seattle, which attracted support from vendors and funding agencies alike. A booth for Supercomputing 2012 in Salt Lake City is being planned. The above mentioned cloud service will be offered under the umbrella of SSERCA. The architecture has been developed and will use Condor as the common submission interface and Shibboleth as the common authentication mechanism.

The Sunshine Grid website has been expanded, upgraded and improved to become the SSERCA website at http://sserca.org, offering listing of resources, news items about computational researchers in the state, minutes about the meetings, information about SSERCA and its mission and bylaws, and procedures for applying for computing and storage resources. The website was upgraded to use a new content management system in May 2012. The website database on researchers and resources has been populated for researchers at USF and the process will be extended to the other SSERCA member institutions as the alliance moves forward.

In March 2012 a workshop was held immediately following the SSERCA meeting in Tallahassee for researchers interested in advances and challenges in parallel programming to reach the Exascale. The workshop was held at FSU with speakers from Intel about MIC and NVIDIA about GPUs. Details, including slides from the presentations are available on the SSERCA web site.

Several proposals have been submitted by faculty at participating institutions that leverage the capabilities developed under this project and now offered under the umbrella of SSERCA. One particularly interesting example is the proposal submitted to NSF in April 2012 for crop modeling. The project will start from a 1,200 year climate simulation to be carried out on national resources, in particular the NSF funded XSEDE (eXtreme Science and Engineering Discovery Environment) resources at TACC (Texas Advanced Computing Center). The approximately 100 TB of climate simulation data will be transferred to FSU with a replica maintained at UM. The climate researchers at FSU and UM will then continue to process this data modifying about 10 TB of data on a continuous basis and sharing the changes between the two institutions. A fraction of about 10 TB of the 100 TB of data will be further replicated at UF for the third PI at UF, who is the crop modeler, to use as the environmental data to model and predict the crop yields.

The existence of SSERCA building on the work done and experience gained with this New Florida 2010 Cluster project makes this replication of data possible. A second proposal that was greatly enhanced by the existence of SSERCA, and therefore by this project, was the proposal submitted in February 2012 to NIH for a Regional Comprehensive Metabolomics Research Core. The fact that procedures and mechanisms for sharing data between institutions have been worked out and are ready to be deployed made it much easier to argue that the proposed work can be carried out in a timely manner.

Through the SSERCA organization computational resources were extended to Professor Mark Jack, a researcher at FAMU in the Department of Physics. These resources allowed Dr. Jack to compete and succeed in acquiring an XSEDE time

allotment to forward his research. In addition, SSERCA members were able to help this researcher acquire computer systems for his students to participate in a national student HPC competition.

Clustering Grant: Highly individualized, High-performance Prostheses with Multifunctional Materials

Awards Provided:
FSU: $150,000 (award #16)
UNF: $125,000 (award #34)
Awards Expended:
FSU: $150,000
UNF: $124,999,24

2010-11 Activities: The main achievement of this project to date is the development and demonstration of the new real-time prosthetic socket pressure measurement method/ system which has great potential for orthotics & prosthetics clinicians to produce comfortable sockets for patients with reduced lead time. The effectiveness of pressure measurement will be improved with the new polymer foam-based biocompatible pressure sensors being developed by the research team. The research team has filed a provisional patent for the new pressure sensor technology and its application to prosthetic socket design. There are potentials for technology transfer and commercialization of this technology. The preliminary results from this project have also served as a foundation for submission of a major proposal to Veteran Affairs Innovation Initiative Program in June 2011 by the research team. In addition, through the project, FSU and UNF will have a set of socket design/analysis software (UNF) and functional analysis system and state-of-the-art equipment to evaluate performance, effectiveness, and comfort for amputees (FSU). These capabilities will help both universities move into the emerging field of O&P in both education and research. At UNF, this project has so far involved two undergraduate students, one professor, and one post-doctoral person. Additional students are planned to be hired in August. The research team adopted new modeling and analysis tools and techniques. The University has acquired new technology that can be used to enhance teaching and research. The research team has already identified parts of the project that can be published, increasing UNF's visibility in the research community. The new O&P graduate program being developed will be the first one in Florida, and it will significantly enhance the capacity of FSU and Florida to train a highly-skilled, high-wage workforce in the important and growing field.

This interdisciplinary multi-university project has brought up collaborative opportunities between two disciplines (engineering and human sciences) that do not normally interact. A relationship has also been developed between the universities and the clinic (Williams Orthotics and Prosthetics), allowing for expert opinions and suggestions for development of performance methodology by those who work with amputees every day. Relationships like this will allow for amputees to become easily

involved in university research with real-life beneficial outcomes. For this project, the interactions with the practitioners/clinicians have been smoother and more effective than originally expected. Originally, the main purpose of the pressure monitoring system proposed is to provide practitioners data-driven evidence to help patient rehabilitation. Via interaction with Williams O&P, researchers have realized that the pressure sensing system being developed has applications beyond the initial vision. The system will greatly help the practitioner to better design sockets during the initial fitting period. This will greatly reduce the discomfort patents experience during this period. Moreover, fewer check sockets may be needed in this transition period, greatly reducing the total health care cost. For the UNF part, in the original proposal a larger budget was requested such that a post-doctoral fellow and several graduate students could be hired on the project. Since the budget was significantly reduced, it was decided that a post-doctoral student would not be hired as this wouldn't leave enough finances to fully engage students in the project. With that decision, the emphasis of the project has increased the focus on the students. It has been amazing to see how well students can perform when they have an opportunity to be involved with a meaningful project. Hence, the students' performance and commitment to the project are greater than expected.

2011-12 Activities: At UNF, in an effort to design and analyze a prosthetic device, surface scans were generated of the geometry of a transfemoral (above-knee) physical amputee model. Using a state-of-the-art modeling tool, a solid model was developed of the stump geometry. This geometry was the starting point in designing the customized prosthesis.

FSU established a real-time measurement system to measure pressures real-time a different locations of the prosthetic socket during normal and irregular gaits. Tests were conducted on a human subject. The team fabricated COC nanofoam piezoelectric sensors with good pressure measurement capabilities. The team used this technology to manufacture liners with different surface curvatures to study the correlation of pressure locations. A systematic evaluation methodology for prosthesis was developed by the Department of Nutrition, Food and Exercise Sciences (NFES) at FSU to evaluate the effectiveness/performance of the newly developed prosthesis and multifunctional materials. Using the established methodology, physiological testing was conducted on one Iraq war veteran with an above-knee amputation while wearing pressure sensors in a socket in order to understand the prosthesis alignment to pressure point relationships and the impact on certain physiological outcomes.

At UNF, the project has so far involved a total of six undergraduate students, one graduate student, and one professor. UNF has acquired new technologies that can be used to enhance teaching and research. A journal paper will soon be submitted. This should increase UNF's visibility in the research community. The project has provided potential opportunities for collaboration with the local industry. Funding opportunities are being investigated to learn how this project can be expanded. Through the project, FSU is now equipped with a fully functional analysis system and state-of-the-art equipment to evaluate performance, effectiveness and

comfort for amputees. This capability will continue to move FSU in the direction of establishing a graduate degree program in Industrial Engineering with a specialization in Materials Engineering and Management of Orthotics and Prosthetics. The findings of this interdisciplinary work will serve as a foundation for submission of expanded proposals to various agencies.

This project has brought up collaborative opportunities between two disciplines that do not normally interact. A relationship has also been further developed between FSU and Williams Orthotics and Prosthetics of Tallahassee. The relationship has allowed for expert opinions and suggestions for development of performance methodology by those who daily work with amputees. The involvement of the certified prosthetist in the measurement also ensured that data are clinically relevant. In addition, relationships like this will allow for amputees to become easily involved in university research with actual beneficial outcomes.

The New Florida 2010 Clustering Award Program has provided additional and expanded research opportunities for the University of North Florida, its students, and the community. It is helping UNF establish itself as a place for biomechanical orthopedic research. The New Florida Clustering Awards program has also helped put UNF on the National map for biomechanical research. The Clustering Award Program has further provided opportunities for UNF and the PI to strengthen and build new relationships with the local industry. For example, as a direct result of the prosthetics project, the PI has come in contact with Bremer Brace, a local prosthetics company. Discussions are under way on how the current project can be expanded into collaborative research endeavors.

Clustering Grant: Community Research Collaborative Program in Pediatrics, Internal Medicine, Family Medicine

Awards Provided
FSU: $300,000 (award #17)
UF: $300,000 (award #27)
Awards Expended:
FSU: $300,000
UF: $300,000

2010-11 Activities: For this reporting period, 68 physicians representing 25 practices in Orlando and Tallahassee were recruited. Participants include rural family medicine practitioners, rural school-based clinics, pediatricians, public hospitals, a children's hospital and a family medicine residency program. An additional 18 pediatricians and family practitioners in Gainesville and Jacksonville were recruited. In July the project launched the public portion of the Collaborative's website and is nearing completion of the web-based data reporting and training components for the practices participating in the pilot studies. The project hired two Clinical Research Coordinators for Tallahassee and Orlando with backgrounds in nursing and clinical research as well as a Community Research Associate in Orlando to serve as a liaison between community groups and the UF-FSU Community Research Collaborative

Program. The project is developing a database for the Health Risk Assessment study that is modular so that additional study protocols can be easily added as they are developed. In addition, the Health Risk Assessment study database will contain health links as resource guides for physicians for referrals and patient education. This database and the associated health links will serve as a prototype for other projects. The project secured approval for the concussion study, and FSU is nearing final approval for Phase 1 of the Health Risk Assessment study. The project launched an online human subjects course for participating FSU community faculty. The project has increased communication and multidisciplinary collaboration between the universities and community faculty and clinicians across Florida. Simultaneously, the project is expanding professional development in clinical research as well as techniques for identifying and managing sports-related concussions in young athletes and assessing risky health behaviors among adolescents. Additional funding for the project was obtained from the National Institutes of Health which allowed for the inclusion of more physician practices in the project than would otherwise have been possible. The NIH award has demonstrated the ability to bring in additional funding because of the partnership.

2011-12 Activities: UF and FSU successfully formed a collaboration to conduct the Concussion and Health Risk Assessment (HRA) Studies. As part of this collaboration, electronic concussion and HRA assessment and follow-up tools were developed and implemented. Both studies involved the use of iPads to: a) gather information about concussion risks (children) and overall health risks (adolescents); and b) provide the information to physicians and other health care providers immediately via a secure connection and database to facilitate treatment and referrals for further care if necessary. For the HRA study, the adolescents' reported health risks are linked to possible health care resources that are geocoded to the adolescents' addresses. The provider can use this information to recommend follow-up care for identified risks that are closest to where the adolescent lives.

Both studies were implemented and conducted over an 8 month period in 38 different practices in Gainesville, Jacksonville, Orlando, and Tallahassee. The practices were diverse and included private single and multi-specialty groups, health departments, and Federally Qualified Health Centers in both rural and urban areas. For the Concussion Study, 215 children were screened and 26 providers who had not previously done so were trained in office-based concussion assessment. On average, training increased their knowledge of concussion by over 15% on an objective knowledge-based test. As adolescents and their pediatricians prepare for the 2012 athletic season, over 500 additional screenings are likely to take place by August 15, 2012.

For the HRA study, 256 adolescents were screened and participated and another 300 adolescents are expected to be screened by September 30, 2012. Ten practices enrolled the targeted number of adolescents for their practices and completed the HRA Study. These practices requested to continue using the HRA

software and assessment tool because these tools facilitated identification of health risks and subsequent referrals among the adolescents served. The remaining practices are continuing to collect data until September 30, 2012.

A key goal of the project was to use the Concussion and HRA Studies to develop a research infrastructure for the UF-FSU collaboration, named health IMPACTS (Integrating Medical Practice and Community-based Translational Science). This goal was accomplished by a) successfully implementing the two protocols; b) developing a webportal to facilitate ongoing communication between community providers and scientists at UF and FSU about potential community-based studies designed to promote evidenced-based health care and to improve the health of Floridians; c) providing online training and maintenance of certification options for physicians through the health IMPACTS webportal; and d) creating software tools for concussion and HRAs that are adaptable for other studies.

The return on investment (ROI) has been significant. First, 24% of the adolescents screened were referred for follow-up and needed care as a direct result of the screening activities. These referrals include: follow-up for depression/suicide prevention, substance use, and counseling. The current study was not designed and has not been conducted for a long enough time period to examine adolescent health outcomes as a result of these referrals. Better understanding the effects of screening and subsequent referrals on adolescent health outcomes and costs of health care is important and is a focus area for future grant development.

Second, the project has directly resulted in two additional funded projects to UF in the last year. One project is funded through the Centers for Medicare and Medicaid Innovations (CMMI) and is $1.9M per year for 4 years. This project, one of only 10 in the US, is using an adaptation of the HRA software to assess health risks in low-income, adults enrolled in Medicaid or dually enrolled in Medicare and Medicaid with comorbid physical and mental health conditions. Based on the health risk assessments, the individuals are then referred to needed health and wellness resources with the goal of enhancing health promotion activities, reducing morbidity, and controlling health care costs. As part of this longitudinal project, estimated health care cost savings resulting from early risk identification and referrals will be calculated. CMMI intends to use projects with the most promising results to serve as models for Medicare and Medicaid Programs nationally. The second project is funded by the Society for Adolescent Health and Medicine and is one of only 6 in the US. This project is designed to use the HRA software to enhance pediatrician follow-up on immunizations for adolescents, specifically for the Human Papillomavirus (HPV) vaccine. HPV is a common virus that can cause cervical cancer in women and can also cause other kinds of cancer in both men and women. The HPV vaccine is very effective against diseases caused by HPV types 16 and 18; which cause most cervical cancers, as well as other HPV associated cancers. Yet only about 40% of low-income girls receive the HPV vaccine. This study has the potential to improve health

and reduce health care costs through prevention of cervical cancer. Third, as previously noted, the infrastructure for future community-based trials and implementation science studies has been formed. This foundation will make UF and FSU more competitive in obtaining extramural funding for projects focused on physician practice-based research. Currently, two additional protocols are being discussed to submit for extramural funding focused on reducing cardiovascular disease among rural populations and promoting minority male health.

Finally, the projects successfully have incorporated medical students, including MD/PhD students into them. The student involvement increases their awareness of and knowledge about the research process.

Clustering Grant: Florida Biomedical Engineering Partnership

Awards Provided
UCF: $325,000 (award #20)
UF: $300,000 (award #28)
USF: $200,000 (award #38)
Awards Expended:
UCF: $325,000
UF: $300,000
USF: $200,000

2010-11 Activities: At UCF, a special topics course, Introduction to Medical Robotics and Tele-Operation, was offered in Fall 2010. A Raven III dual-arm robot ($250,000) was ordered on May 31, 2011, and its delivery is expected at the end of 2011. It will be the centerpiece of the 800 sq. ft Medical Robotic Lab facility. One Post-Doctoral Associate and two graduate students are currently developing laboratory modules for the course on medical robotics and tele-operation. Most hardware and software have been purchased, and laboratory modules are near completion in the 900 sq. ft. Applied and Computational Biofluids Laboratory. Graduate and undergraduate students have been hired and actively participated in laboratory and course module development. The partner universities have held teleconferences, and a Wiki has been launched to upload and share coursework and lab development. Funding from New Florida Clustering Program enables UCF researchers to broaden educational activities in biomedical engineering. UCF has provided resources to hire 3 faculty members in biomedical engineering during AY2011-2012. Existing collaboration among UCF, Florida Hospital, Orlando Regional Health Services and L-3 Communications have expanded. A proposal entitled "Multi-scale Modeling of the Neonate Circulation After Hybrid Norwood Palliation " has been funded in July 2011 by the American Heart Association for 2 years for 165K, as well as a proposal involving computational modeling by Orlando Regional Health Services and FHTC for $67K. A proposal has been submitted to the National Science Foundation. Undergraduate and graduate students engaged in the current New Florida project (including 2 females and 5 Hispanics) also actively participate in these research

projects and are pursuing bioengineering related honors in the major and MS theses and dissertations.

At USF, renovation of a 3,500 square foot space for the new Interdisciplinary Learning Laboratory began in June 2011. The construction phase of the project is expected to be complete in September 2011. Instrumentation for the Bio-Mechanics, Bio-Imaging, and Bio-Instrumentation Pods has been identified and is on-order. Instrumentation for the Bio-Materials Pod, and the new Bio-Sensors Pod is currently being specified with the expectation that orders for this equipment will be placed by early September 2011.

At UF, laboratory exercises for the Biomedical Instrumentation lab and the Cellular Engineering lab have been designed. This lab will be taught in the Fall 2011 semester to a small group of students as a pilot. 2,000 sq ft of space has been remodeled and furniture installed. Equipment has been ordered and is being installed. The Cellular Engineering lab needs more design and is scheduled to be taught in the Spring 2012 semester as a pilot.

2011-12 Activities: At UCF, a Raven III dual-arm robot ($250,000) will be the centerpiece of the 800 sq. ft *Medical Robotic Lab* facility. The Medical Robotics Laboratory was established in the Fall of 2011. The Raven robot was originally ordered on May 31, 2011, but negotiation between University of Washington (vendor) and UCF took many rounds, and the purchase agreement was finally signed on August 1, 2012. Delivery of the robot is expected within the next nine months. During Fall 2011 and Spring 2012, one Post-Doctoral Associate and three graduate students were hired to develop laboratory modules. A total of seven modules have been successfully developed for the course on medical robotics and tele-operation. The final design of the course Applied and Computational Biofluids was completed and the course was taught in Spring 2012 as a special topics course EML 5937. It has since been approved at the university level by the College of Graduate Studies as a regular course and a formal course number has been requested from the State. The lab modules both experimental and computational have been designed, realized, and successfully completed by the first group of students who took the course. The grant has permitted the addition of two courses and accompanying laboratories that support and enrich the bioengineering program at the College of Engineering and Computer Science.

At USF, renovation of a 3,500 square foot space for the new Interdisciplinary Learning Laboratory (IDLL) began in June 2011 and was completed in October 2011. Instrumentation for the Bio-Mechanics, Bio-Imaging, Bio-Instrumentation and Bio-Materials Pods was purchased and acquired, and will be in use beginning in fall 2012. All furniture for the lab (test benches and lecture area) and audio-visual equipment has been purchased and is currently being installed. The IDLL has already served as a prime location for hosting multiple educational events including: a Summer Biomedical Engineering program in June 2012 as part of a USF College of Engineering STEM outreach activity; the 2012 USF Programming Challenge hosted by IEEE, IEEE-

CS, and ACM Student Chapters at USF on March 31, 2012 (50 students); the 2012 College of Engineering Eminent Scholars Lecture Series (120 students); the Spring 2012 Foundations of Engineering Design Project Expo on Friday April 27, 2012 (100 students); design project demonstrations on April 27, 2012 (90 students and visitors); the College of Engineering poster presentations on May 3, 2012(100 students); and, the Logikslab hardware competition on June 2, 2012 and June 3, 2012 (40 students). The laboratory also serves as a key component of a multi-institution National Science Foundation curriculum development grant which entails the creation of biomedical hands-on-learning experiments for undergraduate engineering students; the grant involves collaborators from the University of Hawaii, University of Vermont, University of Minnesota and Northern Arizona University. We anticipate further similar grant opportunities that will utilize the new, interdisciplinary laboratory.

At UF, two undergraduate laboratories have been designed and taught in a pilot of a small group of students: *Biomedical Instrumentation laboratory*. Renovation and installation of equipment is finished. A permanent instructor for the lab has been hired. All the laboratory exercises have been designed, and equipment and supplies to support the lab have been purchased. Six students took courses in Spring 2012, and 20 juniors will take it in Spring 2013. Interest in BME has increased at UF. Currently 70 freshmen for Fall 2012 have declared BME as their major. The grant has allowed us to create two laboratories that are now sustainable for the future.

Scholar Boost Grant: Associated with Retaining a Professor of Nanoscience and Chemistry

Award Provided
UCF: $225,000 (award #21)
Award Expended
UCF: $225,000

2010-11 Activities: Dr. Huo's research on cancer detection and diagnosis using nanotechnology has been progressing very well. She has published two papers related to this project, two patent applications were filed, and a pre-application proposal was invited by the DOD Prostate Cancer Research Program for full proposal submission. Dr. Huo has also initiated collaboration with Florida Hospital Cancer Institute to conduct clinical studies on prostate cancer detection and diagnosis. Dr. Huo has recently discovered and developed a new test that will allow doctors to be able to distinguish aggressive prostate cancer from indolent tumor more accurately. This test will significantly reduce the unnecessary radical prostatectomy surgery on patients with slow growing tumors and save the lives of patients with aggressive prostate cancer.

2011-12 Activities: Dr. Huo published two papers, received three patent approvals, and filed one new patent application in year 2011-2012. Dr. Huo joined 40 or so other world-leading experts on noble metal nanoparticles to give an invited lecture in the

2012 Gordon Research Conference on Noble Metal Nanoparticles at Mount Holyoke College, South Hadley, MA. A total of more than three hundred attendees from around the world attended this high profile conference. Dr. Huo's presentation in this conference has brought significant international and national recognition to the nanoscience and nanotechnology research at UCF. In addition, Dr. Huo published a review article in a high impact journal, Chemical Society Review. The impact factor of Chemical Society Review is 26.583, one of the highest impact journals in chemistry field, and Dr. Huo is one of the highest cited faculty at UCF.

Dr. Huo published a paper in a medical journal: Journal of Translational Medicine on prostate cancer detection. In this work, Dr. Huo and her collaborators developed a nanoparticle test to predict the aggressiveness of prostate cancer. This work has received a wide media attention from the scientific community. Dr. Huo's research group is now working with Florida Hospital Cancer Institute to conduct a clinical testing and validation study on the new test. If successfully validated, this new test could bring a major advancement in prostate cancer diagnosis and care by solving the overdiagnosis and overtreatment problem.

In early 2008, Dr. Huo and her research group first invented and reported a new analytical technology named NanoDLSay™ (Nanoparticle-enabled dynamic light scattering assay) for chemical and biological sensing and detection. NanoDLSay™ technology is licensed to Nano Discovery Inc. The company hired three engineers and two local engineer firms to develop the product in 2011-2012. The company has received safety clearance in North America and European market. It has launched its first product to the market in July 2012. It has signed a distribution agreement with a biotechnology firm in China. The company is aiming to reach a sales revenue of more than $10 million in five years, and to create 10-20 technical and management positions in the company. Nano Discovery Inc. is headquartered at the UCF Technology Incubator. Nano Discovery Inc. manufactures and distributes its product locally from Orlando, Florida.

On April 23, 2012, Qun Huo was named one of the four finalists for the 2012 Cade Museum Prize. The four finalists were chosen from more than 120 entries. Open to all Florida residents, the Cade Museum Prize is designed to encourage innovation and invention by providing an incentive for early-stage companies to move ideas and products closer to marketplace viability. Huo's entry is titled "Nanoparticle-Enabled Bioanalytical Technology", a technology that was invented in Dr. Huo's laboratory.

Clustering Grant: Microgravity Research and Education (with Kennedy Space Center & Space Florida)
Award Provided
UCF: $375,000 (award #22)
Award Expended
UCF: $375,000

2010-11 Activities: UCF has worked together with Space Florida toward the creation of the Center for Microgravity Research and Education. Space Florida has received approval from their Board and has initiated the contract process to provide funds for the Center. Initial seed funds have been received from Space Florida. UCF is awaiting the full contract from Space Florida. Two new 600-square-foot laboratories in the UCF Physical Sciences Building have been designated for the Center. The funds from this award are being used to outfit these laboratories and to create payloads for commercial suborbital spaceflight. Two post-graduate engineers, two graduate students, and seven undergraduate students are working in the labs on an experiment that will fly as part of the Microgravity Experiment on Dust Environments in Astrophysics on the New Shepard commercial suborbital launch vehicle as part of the Pathfinder Project of the Blue Origin company. These students are also conducting related ground-based experiments and preparing an experiment for flight on parabolic airplane flights in the Fall of 2011. In addition they have constructed a drop tower infrastructure that will allow microgravity experiments up to 0.75 seconds in duration to be performed in the lab. These experiments will be a proving ground for flight experiments on rockets and airplanes. The lab now has 4 high-speed digital video camera systems, some of which can record at up to 500 frames per second with more than a million pixels per frame. Three one-day professional development workshops were given to middle school and high school science teachers from the Central Florida districts of Volusia, Orange, and Seminole counties, reaching 98 teachers. These workshops included new lessons, new classroom demonstration equipment, and access to a suite of web-based interactive teaching tools provided by Pearson Education, publishers of science textbooks and on-line interactive materials. These workshops were great successes and will serve as a baseline for ongoing teacher development and training.

A proposal has been submitted to UCF for creation of an educational facility on the scale and origin of the solar system on the UCF campus that would be a magnet for central Florida K-12 field trips as well as a component of general science courses for UCF undergraduates. A web site for the Center, including an educators' research page has been designed and is currently in a soft launch. A dedicated server has been procured and the site is being migrated to that with a new dedicated site name. The project has helped secure new NASA funding. In addition, the project is laying the infrastructure foundation to enable new proposals for federal funding to take advantage of the state investment. This will give these proposals a significant competitive advantage. Reviews from the first funded proposal specifically identified the institutional and state funding for laboratory equipment as a significant advantage.

The project has supported the hosting of an international conference at the University of Central Florida main campus (the 2011 Next-Generation Suborbital Researchers Conference) attended by more than 300 people from 11 countries, including the presidents and CEOs of four commercial suborbital launch vehicle providers and representatives from a fifth. This three-day meeting helped establish UCF, Space Florida, and KSC as a focal point for future suborbital research activity.

The conference received prominent coverage in the New York Times. The teacher training workshops will improve the quality of science education for our K-12 students, helping to produce a better-trained workforce. UCF students are getting hands-on experience building spaceflight hardware.

2011-12 Activities: Initial funding for the Center for Microgravity Research and Education (CMRE) has been received from Space Florida. The CMRE has been developing payloads for parabolic airplane and suborbital rocket flights in two state-of-the-art laboratories on the UCF campus. A test flight of one payload was made from Titusville Florida on the Zero-G corporation's parabolic airplane flight in November 2011. This led to the successful proposal for NASA-funded flights of the same payload.

Two post-graduate engineers, one post-doctoral research associate, one research scientist, two graduate students, and 10 undergraduate students are working in the labs on the Collisions Into Dust Experiment-3 (COLLIDE-3) that will fly as part of the Microgravity Experiment on Dust Environments in Astrophysics (MEDEA) on the New Shepard commercial suborbital launch. They have constructed a drop tower infrastructure that allows microgravity experiments up to 0.75 seconds in duration to be performed in the lab. These experiments will be a proving ground for flight experiments on rockets and airplanes. The lab has 4 high-speed digital video camera systems, some of which can record at up to 500 frames per second with more than a million pixels per frame, several vacuum systems, electronic infrastructure, computers for three-dimensional computer-aided design work, and extensive diagnostic equipment. A web site for the Center, including an educators' research page has been launched at microgravity.physics.ucf.edu.

The project has helped secure new NASA funding. In Summer 2011 a $68,000 seed grant was awarded by NASA's Planetary Geology and Geophysics Program. In Spring 2012 a $300,000 grant was awarded by NASA's Outer Planets Research Program. Both grants leverage the seed funding provided by the CMRE and the New Florida Initiative. The project also participated in a multi-million dollar proposal led by the University of Florida to NASA's Astrobiology Institute program. That proposal, which leveraged this project's infrastructure, is still pending. This project led to three proposals to NASA's Flight Opportunities Program: one for a parabolic airplane flight campaign and two for suborbital payloads. All three were selected by NASA.

The project has supported the hosting of an international conference at the University of Central Florida main campus (the 2011 Next-Generation Suborbital Researchers Conference) attended by more than 300 people from 11 countries, including the presidents and CEOs of four commercial suborbital launch vehicle providers and representatives from a fifth. This three-day meeting helped establish UCF, Space Florida, and KSC as a focal point for future suborbital research activity. The conference received prominent coverage in the New York Times. The project supported a strong Florida participation in, and sponsorship of, the 2012 Next-Generation Suborbital Researchers Conference in San Jose, CA, attended by 400

individuals. UCF students are getting hands-on experience building spaceflight hardware, preparing them for STEM careers. One of our recent graduates is now an engineer at Lockheed-Martin.

Clustering Grant: SUS Professional Science Master's Statewide Initiative
Award Provided
UCF: $125,000 (award #23)
Award Expended
UCF: $125,000

2010-11 Activities: As of the initial reporting period, the PSM Initiative had created 27 PSM programs in Florida with 272 students enrolled in Fall 2010 (more expected in Fall 2011) and 70 graduates so far. These graduates are highly educated with master's degrees and are trained to be immediately employable in industry sectors important to our state's economy. The industry sectors were chosen by workforce and high tech agencies as important to the State of Florida and its economic development. The return on investment is very high, considering that only $125,000 will be expended on this effort. The universities are providing considerable match grants to offer these programs. The Sloan Foundation provided $146,050 to provide modest resources to the new programs for advisory boards, meetings and marketing and recruiting. In addition, one of the programs received National Science Foundation funding to become a PSM program (UF, Translational Biotechnology). Therefore, state dollars have truly been leveraged to produce more STEM workers in Florida in industry sectors important to Florida's future.

2011-12 Activities:
Funds have been used for the salary of a statewide PSM Coordinator to assist in managing the details of this initiative. The PSM Coordinator has been responsible for the program budgeting of the remaining Sloan Foundation funds, marketing, communication and advocacy for the PSM initiative, as well as reporting to funding foundations and to the state. She assists program directors with curriculum design, internship opportunities for students and national certification guidelines for PSM programs while also researching other statewide initiatives and keeping up to date with the certification guidelines. In this role, she also plans and coordinates semi-annual meetings with the Statewide Advisory Board and the PSM Program Directors. She has presented and attended various conferences and national science and technology meetings to provide outreach to the statewide PSM programs. She has created and implemented a communication plan for the statewide PSM programs including print, web and social media marketing. The salary of the statewide PSM Coordinator will be continued until December 31, 2012 with the remaining New Florida funds so that she can continue to support the initiative with the upcoming fall activities. She will continue to facilitate the communication between the program directors, maintain the statewide initiative website, and make arrangements for the

joint statewide advisory board and program directors' meeting that is scheduled to take place on October 26, 2012. The statewide meetings are most important in allowing the program directors a chance to collaborate and share best practices as well as share their ideas with the Statewide Advisory Board. The coordinator will conduct the annual fall program surveys in November 2012 and analyze these data. The coordinator will also oversee the final budgeting of the Sloan Foundation Phase II Grant and assist in the writing of the final reports since the Sloan Phase II grant will end in February 2013. Unfortunately, unless the PSM statewide initiative receives sustainable funding, it will end December 2012.

Clustering Grant: Advanced Smart Sensor Technologies (Materials Engineering and Physics)

Awards Provided
UF: $300,000 (award #29)
USF: $250,000 (award #39)
Awards Expended:
UF: $300,000
USF: $249,719.79

2010-11 Activities: FCASST (Florida Cluster for Advanced Smart Sensor Technologies), a collaborative inter-institutional cluster between scientists and engineers from the Department of Physics at USF and the Department of Materials Science and Engineering (MSE) at UF, directed at the discovery, development and optimization of smart sensors based on advances in materials science and technology has been established and is now functional. Specific actions and outcomes include an inaugural FCASST Meeting on Thursday, December 9th 2010 at USF to initiate the Cluster. Subsequently, three UF-USF technical projects have been funded after review and research on these projects is currently ongoing. They include Multiferroics for Multifunctional Sensors: Interfaces, Nanostructures, and Composites, $120K awarded; Materials for High Temperature Sensing Applications, $80K awarded; and Visible and Infrared Optical Sensors based on Hybrid Electronic Materials, $100K awarded. A national search was initiated in January 2011 for three research faculty positions at USF for FCASST, resulting in 77 applications. Two recruitments have already been made. The third position is expected to be filled shortly. These three research faculty members and the affiliated faculty members at USF Physics and UF MSE will be instrumental in achieving future goals for the Cluster during the upcoming fiscal year.

2011-12 Activities FCASST (Florida Cluster for Advanced Smart Sensor Technologies) has been established and is now functional. Three UF-USF technical projects have been funded after review and research on these projects is currently ongoing. They include: Multiferroics for Multifunctional Sensors--Interfaces,

Nanostructures, and Composites; Materials for High Temperature Sensing Applications; and Visible and Infrared Optical Sensors based on Hybrid Electronic Materials. A national search was initiated in January 2011 for three Research Faculty positions at USF for FCASST, resulting in 77 applications. Three appointments were made. In addition to the three UF-USF technical projects listed above, the three research faculty members in FCASST at USF have initiated 14 projects. In concert, these projects have not only established FCASST as a demonstrably fruitful USF-UF partnership, but also leveraged the expertise of a wider network of national and international researchers, resulting in productivity in research publications, training of postdoctoral scientists in sensor and materials research, and the enhancement of graduate student doctoral degree objectives in STEM areas.

Clustering Grant: Optimizing Detection, Prevention, and Treatment of Vector Borne Diseases (Translational Medicine and Pharmaceutical Innovation)

Awards Provided
UF: $275,000 (award #30)
USF: $200,000 (award #40)
Awards Expended
UF: $275,000
USF: $199,345.54

2010-11 Activities: Proposed and actual timelines differed in part because of delayed availability of financial resources. Overall, however, significant progress has been made, ensuring that the vast majority of the proposed goals will be completed during the next fiscal year. Partners within the cluster grant (UF and USF) have taken significant actions and achieved outcomes towards the proposed goals outlined in the project summary, while the vast fraction of the budget has been saved for continuation of the project during fiscal year 2012. Activities started with detailed discussions within the leading organizations (USF's Center for Drug Discovery and Innovation, College of Pharmacy and the College of Public Health Global Health Infectious Disease Research Program as well as UF's Emerging Pathogens Institute, UF's College of Pharmacy including members of the new Center of Pharmacometrics and System Pharmacology at Lake Nona) in order to fine-tune translational strategies for product innovation for the treatment and prevention of vector borne diseases, such as dengue. Resulting from these meetings for the period reported here, activities concentrated on statewide outreach to interesting potential academic and industrial cluster members; and start of the scientific activities for generating preliminary results for competitive grant submissions. As success for the proposed initiative depends on identifying additional suitable cluster members, necessary for a streamlined drug development, activities within the beginning of the funding period concentrated on identifying these cluster base units. A significant effort was invested in organizing a state-wide conference entitled "Optimizing Detection, Prevention and Treatment of Vector borne diseases: Application of the Critical Path Initiative Development Kit, Orlando, FL, Jan, 2011. This was multidisciplinary one-day conference held at the

Sanford-Burnham Institute with more than 120 registrants from research organizations (Burnham, Scripps), universities (USF, UCF, UF, Florida Gulf Coast University) Florida Department of Health and Biotech (United Therapeutics, Mycosynthetix, Nanotherapeutics). The goal of the meeting was to start discussions across Florida's stakeholders in dengue research was successful as possible collaborators throughout Florida were identified who could supply the data allowing to establish a data bank for Florida based entities interested in vector-borne diseases. A second statewide meeting will be held in the Fall of 2011. The leadership of the cluster initiative met in July 2011 with representatives of the Florida Health Sciences Gateway Initiative that is under the umbrella of *Florida CURED* (Center for Universal Research to Eradicate Disease- a Statewide Center hosted by the Florida State University College of Medicine. The conclusion of this one day meeting was to combine forces of the cluster and Gateway initiative in expanding collaborative partnerships, establish research and development within Florida that can also serve as a portal between the Americas and the Caribbean with the final goal of developing new therapeutics and thereby strengthening the State's economy. It is especially the connection of CURED to business and economic constituencies that will facilitate interaction with industry and funding opportunities. Combining forces of the USF/UF cluster initiate with the FSU Gateway initiative in therapy and control of dengue fever will increase success of the overall initiatives by benefitting from the CURED's expertise in identifying funding for drug development related projects. Two members of the Cluster grant were key in establishing and linking the Cluster Initiative with the new Center of Pharmacometrics and Systems Pharmacology to be developed as a think tank for regulatory sciences and drug development at UF's Research and Academic Center at Lake Nona. This Center will further strengthen the translational and regulatory expertise within the cluster for streamlined drug development. A project manager was recently hired to facilitate interaction of cluster members, manage research activities, establish a data bank for academic, industrial and regulatory units interested in dengue research, education, and drug development as well as serve as liaison for community outreach and engagement.

Scientific activities focused on projects with the highest priority for obtaining future funding. Researchers evaluated the epidemiology of the emergence of dengue in Key West and related it to tourist travel activities from the Caribbean. This established model will be very helpful in evaluating emerging dengue outbreaks and in combination with pharmacodynamic models the effects of protective treatment on dengue. It is hoped that further work in this area might be funded by the tourism industry in Florida. Graduate students started to combine epidemiological models with pharmacometric models to achieve this goal. A newly hired post-doctoral researcher is in the process of establishing a high through-put screening method to identify anti-viral candidates for dengue. A collaboration with Sanford-Burnham has been established that will allow researchers to screen the NIH compound library (after NIH approval) and others, such as herbal libraries, to identify antiviral compounds against dengue. A post-doctoral fellow at USF performs research on clinical isolate

strains of dengue cases and facilitating the communication between UF and USF participants.

The cluster so far, has achieved a significant number of proposed goalposts while having spent only a fraction of the allocated budget (<20%). This will ensure that milestones still to be achieved are likely to be reached within the current fiscal year without budget restraints. Researchers were successful in attracting a large base of academic, governmental and industrial entities interested in the cluster. Working relationships to additional Florida-based core organizations (Burnham, FSU), industrial entities, and the start of laboratory activities towards establishing high-throughput screens for dengue has shifted the cluster activities to a second level. In summary, $70,000 spent so far, has brought the dengue research community of Florida together, identified new core cluster members, hired workforce to ensure communication across the Florida based dengue community, reached out to the community, and initiated research projects that will ensure further funding from alternative sources.

2011-12 Activities: The goal of the proposed project was to establish a cluster of public and industrial entities interested in Dengue drug translation research and development and to facilitate public awareness about Dengue in Florida. Over the period of the grant, strategies were developed and implemented to achieve this goal. Activities started with detailed discussions within the leading organizations. Resulting from these meetings for the period reported here, activities concentrated on statewide outreach to interested potential public and industrial cluster members through statewide meetings (a total of two meetings averaging 100 participants each), white papers for Dengue research and the development of an internet site (www.flvalliance.org) that also facilitates community outreach and public awareness for Dengue. The second goal of the project focused on initiating scientific activities for generating preliminary results for competitive grant submissions. The Florida Health Sciences Gateway Initiative that is under the umbrella of Florida CURED (Center for Universal Research to Eradicate Disease- a Statewide Center hosted by the Florida State University College of Medicine) and industrial organizations such as United Therapeutics combined forces with the Dengue Cluster and a statewide network was initiated (see: www.flvalliance.org for more information). Scientific activities focused on projects with the highest priority for obtaining future funding. The epidemiology of the emergence of dengue in Key West was evaluated and related to tourist travel activities from the Caribbean. Knowledge of such relationships will allow decisions as to when and at what doses antiviral drugs should be given in a specific geographic region as prophylaxis. High throughput screening methods to identify anti-viral candidates for dengue were designed by UF and USF. Similarly, a collaboration between USF and United Therapies allowed for screening United's antiviral compound libraries. A gene therapy based vaccine that has significant advantages over traditional vaccines and on new approaches for the diagnosis of Dengue has been designed and preliminary testing is under way. Grants written or received and linked to the cluster support are listed below. Due to the provided support, the

initiated cluster is in a position to continue its mission to combat Dengue in Florida as the established structure and preliminary results should be sufficient to attract future support from other sources.

The cluster so far has achieved a significant number of proposed goalposts. It was successful in attracting a large base of academic, governmental and industrial entities interested in the cluster. Working relationships to additional Florida-based core organizations (Burnham, FSU), industrial entities (United Therapeutics- a company with a promising lead compounds against dengue and Nanotherapeutics - a company involved in development of pharmaceutical bioterrorism solutions), and the start of laboratory activities towards establishing high-throughput screens for dengue has shifted the cluster activities to a second level. In summary, the activities have brought the dengue research community of Florida together, identified new core cluster members (including FSU) as a new university institutions, the research organizations Sanford-Burnham) and industrial partners (Nanotherapeutics, United Therapeutics, Claro Scientific, and Oxitec), hired workforce to ensure communication across the Florida based dengue community, reached out to the community and initiated research projects that will ensure further funding from alternative sources (Florida CURED, NIH, biotech, Florida Department of Health).

Scholar Boost Grant: Associated with a Faculty Hire in Biomedical Engineering

Award Provided
UF: $250,000 (award #31)
Award Expended
UF: $250,000

2010-11 Activities: The University has hired Dr. Jon Dobson who will begin his work at the University of Florida in August 2011.

2011-12 Activities: This funding has enabled Dr. Dobson to collaborate with other faculty on campus and prepare significant interdisciplinary grant proposals totaling in excess of $6,629,462 in less than one year. To date, 2 of 7 proposals that Dr. Dobson is lead PI on have been funded.

Scholar Boost Grant: Associated with a Professor of Diagnostic Medicine and Pathobiology in Veterinary Medicine

Award Provided
UF: $200,000 (award #32)
Award Expended
UF: $199,999.98

2010-11 Activities: Dr. Paul Cooke was hired as Chair and Professor of the Department of Physiological Sciences. His research interests include stem cell

spermatogonia, specifically the role of the transcription factor ERM (ETV5) in maintenance of spermatogonial stem cells and ability of spermatogonial stem cells to transdifferentiate into other tissues for therapeutic purposes; Sertoli cell development and function; phytoestrogen effects on adipose and reproductive tissue; regulation of uterine development, especially related to development of canine contraceptive methodologies.

2011-12 Activities: Dr. Cooke is currently the principal investigator on a $500,000 grant from NIH and a $10,000 grant from Morris Animal Foundation, as well as the principal investigator on a sub-contract that is part of a $1,250,000 NIH grant. Both the direct and indirect costs generated by these grants represent a return on the state investment for the BOOST award. Dr. Cooke has served on numerous NIH study sections and panels since coming to UF, which increases visibility of the university. Dr. Cooke has also continued to publish following his move to UF, and serves as the Associate Editor of the top-ranked journal in the field of reproduction. These activities and their association with the University of Florida increase the visibility and impact of the university and represent a return on investment that is not monetary but is nonetheless important for the overall mission of the university.

The BOOST funding allowed Dr. Cooke's laboratory to hire and pay both the salary and benefits for Terry Medrano for a year. Ms. Terry has a Master's degree from UF, and hiring her soon after the receipt of the BOOST award allowed the laboratory to get up and running much more quickly than would have otherwise been possible. The BOOST funding has also paid for one part-time OPS employee. The BOOST funds have also allowed allowed for the purchase of a number of critical pieces of equipment that are necessary for the normal research in the lab, such as an inverted microscope that is used to examine cells in culture and a machine that delivers isofluorane gas anesthesia, among many others. Dr. Cooke has been able to travel to one conference using BOOST funds. Finally, the lab has been able to buy the expensive and extensive supplies and reagents needed for research with the resources provided by the BOOST award. The BOOST award has also paid for a significant portion of our animal care bills over the past year; this is critical because the work of the lab is dependent on the use of various transgenic mice.

Scholar Boost Grant: Associated with a Professor of Health and Science
Award Provided
UF: $200,000 (award #33)
Award Expended
UF: $200,000

2010-11 Activities: Dr. Sylvian Dore has been hired as Professor of Health and Science. At this time neither the University or State has fully realized the ROI from this Boost Award. The University of Florida anticipates a great deal of federal funding to emerge for the fundamental work being done.

2011-12 Activities:
Describe the return on investment for the university and the state that the award has achieved. To date, the scholar recruited and appointed with this BOG Boost Award, has been awarded over 1.2M in research grants and contracts to the University and the State of Florida. These research projects have created over 9 new jobs in our community and state. The New Florida funds served as an essential support mechanism so this new investigator could reestablish his research after joining the faculty at the University of Florida. During the latter part of this award this investigator submitted 21 research proposals himself and another eight with other faculty members of the Department of Anesthesiology. We are already receiving new awards directly associated with the research efforts supported by these funds and expect to continue to see the return on this investment.

Scholar Boost Grant: Associated with a Professor to Lead the Bruce Taylor Engineering Research Institute

Award Provided
UNF: $250,000 (award #35)
Award Expended
UNF: $250,000

2010-11 Activities: Bruce Taylor, an engineer who has been instrumental in creating UNF's programmatic offerings in engineering, provides the name for this research institute which is expected to ramp up the research portfolio for UNF in various fields of engineering. Dr. Donald Resio was hired 7/14/11. The University has already been contacted about partnering on a major Federal grant initiative. In addition, the initiative has provided an important platform that is leveraging ongoing projects to increase their impact and potential for additional funding. Because Dr. Resio has just begun in his position, there has not been sufficient time to garner the full return on investment that this award will achieve. Discussions are in progress to finalize the quotes for a High Performance Computing Cluster to be purchased prior to the end of the 2011 calendar year. This HPCC will be used for research, as stated in the initial request for funds.

2011-12 Activities: Dr. Resio has already secured three contracts, one from the Nuclear Regulatory Commission for $11,088, one from the Office of Naval Research for $218,676, and one from the Strategic Alliance for Risk Reduction for $25,000. All of the projects have follow-on potentials which exceed these initial contract amounts. Dr. Resio is the PI on a number of additional proposals that have been submitted with a total dollar sum of about $1.8M. On the academic recruiting side, UNF already has 4 graduate students committed to entering the new coastal engineering program in Fall 2012, along with one additional student who is almost certain to attend and a number of others who are considering this career path. Dr. Resio has also published 1 paper in

the Journal of Geophysical Research and two accepted papers (one in the American Society of Civil Engineers Journal of Port Coastal and Ocean Engineering and one in the Journal of Natural Hazards) – as a professor at UNF since last July when he arrived. It is expected that the coastal engineering program will continue to grow and will become widely recognized as a leader in this area.

UNF provided $145,300 in complementary funding for this project. This funding has been placed into a carryforward account, allowing the Taylor Engineering Research Institute to carefully choose the necessary expenditures and continue spending after June 30, 2012. The E&G funding for the Taylor Engineering Research Institute is $60,000 for annual operating expenses. In addition, $270,400 is budgeted for salary and benefits for the Director of the Taylor Engineering Research Institute and the Program Assistant.

Scholar Boost Grant: Associated with a Professor of Health Outcomes and Health Services Research

Award Provided
USF: $175,000 (award #41)
Award Expended
USF: $175,000

2010-11 Activities: As a result of Dr. Williams hiring at COPH and USF two fully externally funded Post-Doctoral Fellows are in the Department. These are the first Fellows that this Department has had in its history. Two fully-funded Ph.D. students have been recruited, one an MPH graduate from Yale University. Dr. Williams has produced more than 10 refereed research publications in higher impact journals with credits listing him as a faculty member at COPH and USF. The Department is in the process of interviewing candidates for two positions as Assistant and Associate Professors. A large number of applicants applied for these positions due to Dr. Williams' experience and reputation as Chair, Health Care Policy and Management at Mayo Clinic, Rochester, MN, and his well-established research and publication record. A thorough search is in progress for top talent that will promote community economic development as well as academic excellence at USF Health, the College of Public Health, and the Department of Health Policy and Management. Activities being expanded include research engagement with Hallmark Cards but additionally include activities related to studies of immunization that may introduce cost savings to local health care providers and substantial benefits to parents and children; potential cost savings and reimbursement expansion to provider institutions through expanded services and potential cost savings to elderly adults; and studies of improvements in documentation, identification, and management of cancer treatment symptoms that also are likely to reduce service costs to patients and providers while increasing reimbursements per unit of service.

A multi-site cancer treatment study is being planned with the VA. A study is being initiated with additional financial support to assess how patients resident in the Tampa Bay area and in their home countries (Puerto Rico and Panama) engage in self-care behaviors. It is anticipated that PAHO, NIH, or other funders, based upon the results of this study, will provide support to Dr. Williams and colleagues well beyond the ROI planned for the New Florida Award. Additionally, Dr. Williams is seeking to establish longer term arrangements with PAHO that will stimulate additional funding and, perhaps, will enhance economic activities for the University, non-profits, and businesses in Tampa Bay within the Caribbean and Latin America organizations. Dr. Williams has met with organizations in Tampa, Sarasota, and St. Petersburg about cooperative use of his department and personnel to expand services to children and the elderly in Tampa Bay. A major activity mentioned under this Award is the Talking Card study with Hallmark Cards and Children's Mercy Hospitals and Clinics in Kansas City, Missouri. This is proceeding slowly in Missouri and Kansas. While the required number of subjects has been enrolled, subjects have completed only 2 of the 3 clinic visits needed to determine the efficacy of card use and treatment for asthma. Dr. Williams has included the USF Pediatric Department in this study and approached St. Joseph's and All Children's about participation. Interest in participation in this study is still under review at the latter two institutions. Dr. Williams has talked with administrators at Hallmark Cards about initiating or expanding business activities in the Tampa Bay area. It is quite important that this study be completed successfully.

2011-12 Activities: The presence of Dr. Williams at COPH and USF has had the following results on staffing. A fully externally funded Post-Doctoral Fellow is in the Department. This is the first Fellow that this Department has had in its history. Two fully- funded Ph.D. students have been recruited, one from Wake Forest University. Dr. Williams has produced more than 20 refereed research publications in higher impact journals with credits listing him as a faculty member at COPH and USF under this award.

Four faculty were hired. Activities are being expanded within the Department to include those mentioned in the Award. These include research engagement with Hallmark Cards but additionally include activities related to studies of immunization that may introduce cost savings to local health care providers and substantial benefits to parents and children; potential cost savings and reimbursement expansion to provider institutions; and studies of improvements in documentation, identification, and management of cancer treatment symptoms that also are likely to reduce service costs to patients and providers while increasing net reimbursements per unit of service.

A major activity mentioned under this Award is the Talking Card study, a randomized clinical trial using an innovative card that talks to pediatric patients, that is being done with Hallmark Cards and Children's Mercy Hospitals and Clinics in Kansas City, Missouri.

A multisite randomized clinical trial cancer treatment study using the Therapy-Related Symptom Checklist (TRSC) has been submitted to the VA System. This proposal was submitted through Haley VA in June 2012, and a funding decision is expected through the VA System this October 2012. The proposal involves collaboration with Kansas University Medical Center, Haley VA, and five additional VA study sites, including Bay Pines VA. The funding request is for $1.2M over four years.

A study was initiated with financial support in addition to this Florida Award to assess how patients (Caucasians, Blacks, Puerto Ricans, and Panamanians) resident in the Tampa Bay area and in their home countries (Puerto Rico and Panama) engage in self-care behaviors and identify cancer symptoms. In the Florida Award preliminary report, mention was made of immunization studies underway in which Dr. Williams was collaborating with faculty at Children's Mercy Hospitals and Clinics and Quest Diagnostics. The data collection for these studies is now complete. One study involved the use of guidelines and audits to encourage physicians to better utilize antibotics in the treatment of children with community-acquired pneumonia. This is now published in *Pediatrics*.

Dr. Williams has met with organizations in Tampa, Sarasota, and St. Petersburg about cooperative use of the Department and its personnel to expand services to children and the elderly in Tampa Bay. Due to much reduced prospects for NIH funding of studies in the current economic and political environment, Dr. Williams has encouraged his staff to seek external funding through the VA System. This effort also will help "economic "development in the Tampa Bay area, since Haley VA and Bay Pines VA have a strong presence and many veterans reside in Tampa Bay and Florida more generally.

To date this effort has meet with some success in that cooperative relationships with the VA seem to be producing about $100,000 to $200,000 in research and faculty support. This will offset the cost of the Florida Award, and the other activities mentioned herein appear to be moving toward a 12% ROI consistent with our preliminary report.

Scholar Boost Grant: Associated with a Professor of Engineering
Award Provided
USF: $175,000 (award #42)
Award Expended
USF: $175,000

2010-11 Activities: With the award, the Patel School of Global Sustainability (PSGS) appointed two research staff who have supported PSGS with several important and successful initiatives. With the support of the award, PSGS successfully graduated 14 students in July 2011 with an MA in Global Sustainability. In addition, PSGS developed two new concentrations to the existing MA course in Global Sustainability. In addition, PSGS developed a class-based version of the online courses, so that the MA in Global Sustainability can now be studied both online and in the classroom. For the August 2011, PSGS is enrolling over 30 students. PSGS intends to add further concentrations in Global Security and Energy, and these two new concentrations should be available in Fall 2012.

With the support of the award PSGS developed two interdisciplinary research grant proposals. A pre-proposal for a NSF Science and Technology Center with the title 'Center for Integrated Science of Resilient Urban System' was submitted in June 2011 (the proposal involved 22 internal and external partners). In addition, a proposal for 'Water Footprint and the Value of Water' was submitted in July 2011 to the Water Research Foundation. Currently PSGS is developing another application for the NSF grant 'Water Sustainability Climate' and this will be submitted by October 2011.

With support of the award PSGS worked on the Resilient Tampa Bay initiative. The initiative included a major conference (in February, 2011) that involved local stakeholders and international experts. As result, several follow-up projects were developed to improve the resiliency of Tampa Bay. These include the development of a training package "Resilient Coastal Cities"; the development of a "Resiliency Atlas for Tampa Bay"; and preparation of a track in the upcoming Coastal City Summit 2012 in St. Petersburg.

With support of the award PSGS developed very good international links with UN agencies and other intergovernmental bodies that stress global perspectives. PSGS was invited to participate in UNEP's International Resource Panel and received an award of $44,000 to write a report titled: 'Decoupling, Water Efficiency, Water Productivity'. PSGS also received an award of $20,000 from the World Bank to develop a strategic paper titled: 'Cities of the Future in Africa.' In addition, PSGS is coordinating a major theme of UNESCO's intergovernmental water program and successfully achieved UN-HABITAT 'Preferred University Status'. All these activities have enhanced USF's visibility in the international arena.

2011-12 Activities: The Florida Boost Award was awarded to the Executive Director of the newly founded Patel School of Global Sustainability (PSGS). PSGS provides integrated and interdisciplinary research, scholarship and teaching in the area of urban resource management. The school has a focus on providing policy advice on urban governance issues for resilient and adaptive cities, particularly in developing countries.

Prior to the award, an MA in 'Global Sustainability' was only available online. Through the support of the award PSGS developed classroom-based versions of the online courses, allowing the program to be offered as an online, classroom-based, and a hybrid program beginning in August 2011. PSGS developed additional concentrations—water, and entrepreneurship. An additional concentration--sustainable tourism--will begin in August 2012, and another concentration on renewable energy is being developed and will be offered August 2013. An aggressive marketing campaign was implemented to recruit students into the program. As a result, all concentrations have recruited strong numbers. Since the launch of the program there have been 78 successful enrollments, of which 53 are Florida residents.

PSGS developed a formalized partnership with Hillsborough County Public Schools to assist in the development of the environmental science curriculum and education at the Dowdell Middle School, Young Middle School and Lockhart Elementary School in Tampa. PSGS commissioned the development of a textbook on environmental rhetoric. Oxford University Press will publish the book in early 2013.

In respect to research, with the support of the Boost award, PSGS developed 14 interdisciplinary research grant proposals between Jan 2011 – July 2012. With the support of the Boost award PSGS was able to secure:

- A grant of $40,071 from UNEP's International Resource Panel
- A grant of $20,107 to write a strategic paper for the 'City of the Future in Africa' program for the World Bank.
- A grant of $249,600 grant from the World Bank to provide a case study analysis on 'Integrated Urban Water Management for Africa'
- A grant of $28,900 from the World Bank to write a publication titled "Future of Water in African Cities: Why Waste Water?"
- A grant of $180,000 from UN-Habitat to lead the preparation of their flagship report - UN-Habitat Global Report "State of Water & Sanitation in the Worlds Cities 2012 – Looking ahead to 2050."

In addition to the above, the Boost award was used to establish the initiative 'Resilient Tampa Bay'. The initiative included a major conference with both local stakeholders and international experts. Local follow-up projects to improve the resiliency of Tampa Bay include the development of a 'Resiliency Atlas Tampa Bay' and the development of partnerships amongst key stakeholders within Tampa Bay. As part of the 'Resilient Tampa Bay' initiative a session was organized during the Coastal City Summit 2012, held in St Petersburg, FL in May 2012. In addition, with the support of

the award PSGS secured a $20,000 grant for the 'Tampa Bay Clean City Coalition, an initiative to reduce the Tampa Bay region's dependence on petroleum.

With the support of the Boost award PSGS developed strong international links with various intergovernmental bodies, highlighting the global reputation of the school. As a result, PSGS is regularly being requested to participate in high-level international meetings where the global agenda is being set in the area of sustainability.

Scholar Boost Grant: Associated with a Dean of the College of Marine Science

Award Provided
USF: $150,000 (award #43)
Award Expended
USF: $149,059.71

2010-11 Activities: Dr. Jaqueline Dixon has been appointed and is currently working at USF as Dean of the College of Marine Science. Money is being encumbered for small grants to act as seed money for external grant proposals. Through the State Boost award program, the College of Marine Science was given a one-time only award of $150,000 for Interdisciplinary Research Grants to support proof of concept interdisciplinary research between CMS and the other USF colleges and partners. A call for proposals was distributed in March with an April 30th deadline. A total of eleven proposals were submitted. The quality and breadth of proposed collaborations was impressive. Proposals were ranked by a faculty committee and awards were announced on May 24th. Four proposals were fully or partially funded. Funds will be provided for seed research between CMS faculty and the USGS, Mote, and the College of Medicine. Various subaccounts for the award have been established and distribution of funds is in progress.

2011-12 Activities: The Scholar Boost Award provided funding for 3 research projects for the purpose of establishing new collaborations. Each project was funded at $50,000, and resulted in the following outcomes. First, a collaboration between The Marine Genomics Lab at the College of Marine Science, the Molecular Genetics Lab at the College of Medicine, USF Health, and All Children's Hospital. This collaboration allowed for the integration of techniques utilized in each lab separately, and potentially will result in a licensable product that will be widely used by veterinarians and the research community. Secondly, a collaboration between USF's College of Marine Science and the USGS St. Petersburg Coastal and Marine Science Center. The research utilized geochemical tracers to investigate aspects of ocean acidification in the Gulf of Mexico. This work should result in preliminary data to allow development of a full research proposal to the National Science Foundation or similar funding agency for a larger study. Thirdly, a collaboration between USF's College of Marine Science and Mote Marine Laboratory. The College of Marine Science and Mote Marine Laboratory operate glider programs on the West Florida Shelf. This collaboration

provided increased geographic coverage and augmented the College of Marine Science's ocean modeling capabilities and observation technologies.

Scholar Boost Grant: Associated with Recruiting a Professor of Geology and Geophysics

Award Provided
USF: $125,000 (award #44)
Award Expended
USF: $125,000

2010-11 Activities: Dr. Timothy Dixon has been appointed and is currently working at USF in the Department of Geology. Plans are being made to purchase new scientific equipment (ground-based radar) which will be deployed this summer in Greenland to measure outlet glacier velocity in support of a sea level experiment.

2011-12 Activities: This award was used to provide startup funds for T. H. Dixon, including the purchase, upgrade, and initial field deployment tests of a new type of radar interferometer. This instrument is being used in Iceland and Greenland to study the velocity structure and variations of fast moving outlet glaciers. These glaciers are critical in determining the health of large ice sheets. The ability to predict the behavior of these ice sheets, and their future influence on global sea level rise, rests on understanding the dynamic of outlet glaciers, and the velocity measurements are a key part of this research. Sea level rise will directly impact the safety and long term economics of Florida's coastal zone, hence this research is directly relevant to the state.

Clustering Grant: Inter-disciplinary Principles and Inter-professional Strategies for Successful Aging in Northwest Florida (UWF Campus-wide)

Award Provided
UWF: $350,000 (award #45)
Award Expended
UWF: $349,995.62

2010-11 Activities: The University of West Florida (UWF) Center on Aging (COA) officially launched its clustering program in January 2011, with the backing of the State University System Board of Governor's Clustering Award. The timeline for the proposed activities in the original proposal was adjusted to reflect the receipt and amount of funds. Additionally, some activities were postponed until after the start date of the new COA Director in August, 2011. Dr. Doug Friedrich was initially named co-interim director along with Dr. Laura Koppes Bryan, Director of the School of Psychological and Behavioral Sciences (SPBS). Because of Dr. Friedrich's retirement, Dr. Koppes Bryan served as temporary interim director until Dr. Glenn Rohrer, who has

gerontology expertise and is Director of the School of Justice Studies and Social Work, was named the interim director. An associate director (i.e., program manager), program specialist, and a student intern were employed, and offices, equipment and supplies were furnished by the SPBS. The COA inter-disciplinary Interim Executive Committee, comprised of UWF core faculty specializing in aging studies, administrators and an FSU medical school faculty member, has met three times to review strategies and COA progress, as well as to begin to research funding sources. The committee was instrumental in the creation of media materials, including a website and brochures that supported pro-active COA marketing strategies, and the inclusion of the UWF External Relations office, which has regularly promoted surveys and COA updates to 150 news sites in the four county areas. Potential members for the COA community advisory board are now being identified to assist the executive committee as long term initiatives are developed. Faced with the prospect that almost one in three citizens in northwest Florida will be 60 years of age or older by the year 2030, a demographic analysis and profile of the aging population was immediately initiated and research continues on a daily basis. A senior needs assessment was developed that considered physical ability, access to professional services, technology, and educational/life-long learning opportunities. Over 125 visits to senior centers, housing facilities, congregate meal sites, faith based centers, military retiree programs, and state/local agencies have resulted in 965 online and print responses, that will be analyzed and interpreted for area service providers. An on-line workforce assessment was electronically administered in late July to 300 service providers, including housing, home health care, hospitals, state/local agencies, and financial and legal professionals, asking questions regarding current and future employment needs, employee skill and educational levels, and expectations of the University to improve their effectiveness. An institutional academic committee was formed to assess UWF curricula that involve aging studies. Preliminary discussions revealed limited course offerings, so the committee will re-convene in September to study information derived from the workforce assessment and submit recommendations that will be program-specific and interdisciplinary. A major emphasis has been placed on making the COA an active partner with established city/county/state agencies and local organizations providing services to seniors in the four counties. Personal visits and participation in regional events have enhanced relationships and garnered support for UWF to become an active and central figure in northwest Florida aging strategies, and will culminate with the COA Fall Summit, to be held October 18 and 19 on the UWF Campus. A planning committee was formed to organize the summit, which will include a recap of the assessment work of the COA, presentations of various senior perspectives, including a workshop hosted by the UWF Center for Applied Psychology and the Pensacola Naval Hospital on aging veterans, and discussions to identify strategic directions (goals and actions) for the UWF COA. Summit participants were identified. The following specific actions listed in the deliverables section of the proposal will occur under the guidance of Dr. Guttmann:

- Establish permanent Executive Committee;
- Convene COA Community Advisory Board;

- Complete successful Fall Summit and workshop on aging veterans;
- Develop COA strategic goals and action plans resulting from Fall Summit;
- Develop priority listing of funding resources and grants;
- Complete and submit grant proposals;
- Identify and develop outreach services and programs based on needs and resources assessments;
- Establish a grant and incentive program to be approved by the COA Executive Committee and Community Advisory Board;
- Facilitate and develop University academic curriculum programs responsive to workforce needs;
- Solidify aging network of community partners;
- Explore formalized collaborations with the Florida State University College of Medicine and State University System centers on aging; and
- Complete final report.

2011-12 Activities:

During the summer of 2011, the senior and workforce assessment data collection was completed and the analysis began. The final evaluation was presented at the Center on Aging (COA) Fall Summit on October 18, 2011, which was attended by over 140 community leaders, service providers and educators from throughout the four county area. Center on Aging presentations at the "Summit on Aging" were accompanied by group breakout sessions, dedicated to the identification and discussion of key concerns related to aging in the region. Age-related needs included: aging veterans, disaster preparedness, economic impact of aging, health and nutrition healthcare services, issues of caregiving, older adults with disabilities, poverty and aging, technology and aging, and transportation. On day two of the summit, the Center co-hosted a workshop with the UWF Center for Applied Psychology and the Pensacola Naval Hospital for aging veterans and issues of latent PTSD.

Dr. Rodney Guttmann was hired as a tenured, Full-Professor with direct responsibility for completing the aims of this initiative. He is a molecular neurobiologist with expertise in biomedical research related to aging and Alzheimer's disease along with leadership experience in the field of gerontology. An interim executive committee formed at the initiation of the proposal was refined and made permanent upon the hiring of Dr. Guttmann as Center Director. Members are from across all three colleges and external including a member from FSU College of Medicine.

Several Grant applications for long-term funding and sustainability are complete, or in process. Additional applications are under development with external partners in areas such as decreasing caregiver stress through technology, and improving patient outcomes in rural communities with chronic disease through improved patient education strategies.

As an outcome of the "Summit on Aging,"a series of three COA sponsored workshops to engage community participation were held at the University of West Florida in 2012. During this period, the COA enhanced its partnership with Covenant Hospice in co-hosting an aging information seminar to 100 caregivers at the UWF conference center. The COA was invited to be a member of the Escambia County Emergency Management Committee in consideration of Functional Needs Support Services during disaster scenarios. The COA partnered with UWF Center for Applied Psychology in providing assessment and evaluation services for Northwest Florida Catholic Charities and the Spirit of the Gulf Fund, designed to support job training, emergency assistance and mental health counseling for area residents. The COA has created a strong association with senior programs at the three major health enterprises in region including: Baptist Health Care, Sacred Heart Hospital and West Florida Hospital (HCA member). Dr. Guttmann is presently working through the Pensacola Branch of the FSU College of Medicine to formalize collaborative efforts focused on education of the older adults population located in the Florida Panhandle and related research activities.
UWF COA is now the recognized leader in aging research in Northwest Florida. The COA provides expertise in age-related areas of need to the community including Alzheimer's disease, chronic pain, and memory. The COA also provides resources and experts in needs assessment, survey-based research, statistical analysis and senior program development. Through the activities of the COA, efforts continue to facilitate collaborative partnerships among area agencies. Local and state organizations that serve older adults, along with private stakeholders now have a unique forum, provided by the COA, to accelerate the creation of education, outreach and research opportunities to improve outcomes for our population. Collaborations with the COA have also yielded financial benefits to the University through sponsorship of COA educational and outreach activities. Because of the funding of the New Florida grant proposal, the UWF COA has reached a level of expertise and respect in this region that is unprecedented in its history.

EXPENDITURE ANALYSIS

01 FAMU Clustering Grant: Community Health Workers Research and Training Institute		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	30%	48%
Other Personnel Services	23%	21%
Expenses	27%	25%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	3%
Travel	0%	3%
Special Category	20%	0%
Total All Categories	**100%**	**100%**
As indicated in the original proposal, this category was to support a subcontract to Bethune Cookman Univ. ($55,000). However, FAMU did not dispatch this funding until 9/30/11 and it was also not delineated in the final encumbrance report. Thus, 18% should replace 0% in the % in Accountability Report column of the *Special Category* expenditure category. The remaining 2% was utilized to support travel costs back and forth to Gadsden County to conduct training.		

02 FAMU Scholars Boost Grant: Associated with Recruiting a Professor of Physics		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	60%
Other Personnel Services	0%	0%
Expenses (including travel and equipment)	8%	7%
Operating Capital Outlay	49%	33%
Fixed Capital Outlay	43%	0%

Special Category	0%	0%
Total All Categories	**100%**	**100%**

The change in salaries and benefits was due to the need of hiring a theorist who could calculate the cross sections for the interaction that was the basis of the proposal. Two manuscripts have been developed for peer review. One has been submitted to the Journal of Nuclear Instruments and Methods. The second will be submitted to a refereed journal. Two students have attended a conference to present collected data. The Operating Capital and Fixed Capital outlays were shifted to salary to cover the cost of the theoretical position.

03 FAU Scholars Boost Grant: Associated with Recruiting a Professor and Chair of Ocean and Mechanical Engineering in the College of Engineering and Computer Sciences

Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	0%
Other Personnel Services	32%	0%
Expenses	3%	0%
Operating Capital Outlay (including Equipment)	65%	100%
Fixed Capital Outlay	0%	0%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

The original proposal budget plan of $380k allocated 32% of funds in OPS for the hiring of graduate students and 65% towards equipment purchases. The award received was reduced to $250k. In order to still attract the candidate to accept the position as Chair of Ocean & Mechanical Engineering the University contributed an additional $100,000 as a start-up package to Dr. Hashemi for the OPS student support. Dr. Hashemi spent the $250,000 BOOST award to purchase equipment necessary to develop an Assisted Technologies Laboratory. The addition of this lab now serves as a foundation allowing FAU to seek additional funding in the areas of materials, biomechanics and biomaterials. The OPS student support originally budgeted as part of the Boost funding, is being funded from Dr. Hashemi's start-up package.

04 FAU Neuroscience Cluster

Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	7%	17%
Other Personnel Services	23%	15%
Expenses	20%	20%

Operating Capital Outlay	0%	0%
Fixed Capital Outlay and Equipment	50%	46%
Travel	0%	2%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

05 FAU Clustering Grant: SUS Climate Change Task Force		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	50%	35%
Other Personnel Services	27%	56%
Expenses	7%	2%
Operating Capital Outlay	3%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	5%
Special Category	14%	2%
Total All Categories	**100%**	**100%**
FAU faculty budgeted to be paid in line positions were paid from OPS funds instead, at the request of the faculty hired. Additional research time was needed in order to complete the project, because more mapping data needed to be collected and incorporated into the report, funds to cover these costs were moved from other categories (expense and special). These categories came in under budget as the estimates in the proposal (e.g. travel) were slightly over actual cost.		

06 FGCU Clustering Grant: Southwest Florida Coastal Watersheds—A Collaborative Integration of Research, Education, and Policy Outreach		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	60%	41%
Other Personnel Services	10%	6%
Expenses	10%	23%
Operating Capital Outlay	20%	30%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

07 FGCU Scholar Boost Grant: Associated with Recruiting the Holder of the Backe

Eminent Scholar in Renewable Energy		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	4%
Other Personnel Services	0%	32%
Expenses	0%	28%
Operating Capital Outlay	0%	5%
Fixed Capital Outlay	0%	0%
Equipment	0%	27%
Travel	0%	4%
Special Category	100%	0%
Total All Categories	**100%**	**100%**

Special Category – This category was initially selected for the funds in order to maximize flexibility in the scholarly research by allowing the Backe Chair to reassign monies as needed in the different categories. The Project consisted of starting a research and outreach program in Renewable Energy at Florida Gulf Coast University. With the help of the funds provided for OPS and equipment the scholar has been able to start two research projects, write three funding applications and build a solar and battery research facility.

OPS – Funds were used to employ 2 recently graduated FGCU students from the Department of Environmental Engineering to conduct new studies in the use of energy storage to mitigate intermittency in solar power generation caused by clouds. They built the laboratory infrastructure and conducted research efforts on solar power available in Fort Myers and the use of flow batteries for firming up solar power delivery.

Expenses – Funds were used to purchase laboratory equipment and tools to enable scholarly research by the Backe Chair.

Equipment – Funds were used to purchase power meters and dataloggers for recording the solar power produced, a flow battery for performance testing and irradiance measuring instruments to compare solar power produced with solar irradiance.

08 FIU <u>Scholar Boost Grant:</u> Associated with a Director for the Center for Nano Medicine, College of Engineering and Computing		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	25%	38%
Other Personnel Services	0%	0%
Expenses (including capital outlay, equipment, and travel)	75%	62%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

09 FIU Scholar Boost Grant: Associated with a Biomedical Engineering Professor to Lead a Department and a Center for Adaptive Neural Systems, FIU College of Medicine		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	31%
Other Personnel Services	0%	8%
Expenses	0%	7%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay/Equipment	100%	52%
Travel	0%	2%
Special Category	0%	2%
Total All Categories	**100%**	**100%**
At the end of the first year of the grant, we re-budgeted the funds to meet the needs of starting new laboratories and projects. The BOG funds were used for partial salary support for two research professors, three postdoctoral scientists, one research engineer and hourly stipends for three students to setup the laboratory and conduct pilot research projects. The pilot work, primarily conducted in spring and summer of 2012, resulted in an additional contract of $206,191 from DARPA in September 2012 and submission of a grant to the National Science Foundation for $569,612 in November.		

10 FIU Scholar Boost Grant: Associated with a Professor to Lead a Marine Fisheries and Ecosystems Dynamics and Policy Center		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	29%	41%
Other Personnel Services	0%	0%
Expenses	57%	18%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	14%	0%
Equipment	0%	41%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**
To be competitive as soon as possible for programmatic grants from NOAA and other agencies, renovations to Dr. Boswell's laboratory space were required. Originally, these purchases were budgeted under expenses or fixed capital outlay, but in actuality, they should have been budgeted under "equipment." Certain key pieces of equipment were necessary, mainly: 1) Myriax Echosounder (120khz), 2) YSI Data Sonde, 3) Didson Sonar, 4) Kongsberg Echosounder (38khz) and transducers, 5) Kongsberg Multibeam Sonar, and 6) SeaRobotics Unmanned Surface Platform Kit. Although these		

expenditures were anticipated, they were not budgeted under "equipment."

11 FSU Clustering Grant: SUS Climate Change Task Force		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	97%	32%
Other Personnel Services	0%	65%
Expenses (including travel)	3%	3%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**
The funds that were originally budgeted for TBD salaried scientists were switched over to OPS employees. This allowed us to perform the proposed work using a diverse pool of qualified personnel including five OPS researchers and two graduate students. The names of these OPS researchers and graduate students can be provided if needed.		

12 FSU Scholar Boost Grant: Associated with Recruiting a Professor of Biomedical Science, FSU College of Medicine		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	0%
Other Personnel Services	0%	0%
Expenses	0%	0%
Capital Outlay (including equipment)	100%	100%
Fixed Capital Outlay	0%	0%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

13 FSU Clustering Grant: A Unified Approach for Enhancing Aerospace Research, Education, and Workforce Training		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**

Salaries and Benefits	28%	44%
Other Personnel Services	11%	7%
Expenses	25%	15%
Operating Capital Outlay	32%	34%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	0%
Special Category	4%	0%
Total All Categories	**100%**	**100%**

14 FSU Clustering Grant: Tackling Florida's Growing Geophysical Threats through Collaborative Coupled Modeling

Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	58%	29%
Other Personnel Services	0%	27%
Expenses	2%	1%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	38%	0%
Equipment	0%	33%
Travel	0%	10%
Special Category	2%	0%
Total All Categories	**100%**	**100%**

Fixed Capital Overlay (38% to 0%) vs. Equipment (0% to 33%)

As stated in the original proposal, it was intended from the start to purchase a significant investment in the FSU High Performance Computing (HPC) to perform the modeling and analysis stated in the proposal. After communication with Jim Wilgenbusch in May 2011, this purchase was indeed made on July 2011 with availability of the nodes on September 2011, with emails available to document this purchase as planned. The purchase was for $70,000 with FSU HPC providing matching on top of this purchase of $19,297.50. The difference in the two budgets (Fixed Capital Overlay vs. Equipment) is that the declared category at the proposal submission was simply incorrect. At the time of submission, the PI regrettably and incorrectly assumed that an HPC investment was "Fixed Capital Outlay" rather than "Equipment". Regardless, the small difference in investment amount (38% vs. 35%) is simply a result of the fact that equipment costs (# of cores) decreased slightly between proposal and purchase time due to the HPC equipment description shift. The residual 5% was used for travel to an unexpected but very important AGU Session on coupled modeling and tropical cyclones, as discussed later.

Salaries and Benefits (58% to 29%) vs. Other Personnel Services (0% to 27%)

Also as stated in the original proposal, it was intended from the start to fund faculty, graduate students, and research assistants to perform the research stated in the proposal. This funding included two faculty (PI Hart and co-I Bourassa) and several graduate students and research associates between FSU Meteorology and COAPS. While it was originally intended to fund a postdoctoral associate to aid in the research, such a hire was not possible in the short solicitation time despite soliciting at national and international meetings. Consequently, faculty, graduate students and COAPS research associates were utilized to complete the required research tasks, which was very successful. As can be seen the total expenditures between these two categories was (intentionally) very similar (58% vs. 56%). This difference did not impact the completion of research tasks proposed.

Travel (0% to 10%)

Unexpected special sessions on coupled atmosphere-ocean modeling and tropical cyclone risk was announced at the Fall 2011 AGU meeting six months after the proposal was submitted. Given the foci of these sessions, it was deemed essential to attend the AGU meetings and have faculty, associated COAPS research staff, and graduate students involved on this grant present the associated research on coupled modeling and tropical cyclones. With the 5% saved on HPC purchase, and several percent saved on salaries due to the shifting of postdoc responsibilities to a combination of faculty, research staff, and graduate students, the resources were available to attend this critical conference, and approved within EOAS. At that conference, several oral presentations and several posters were presented with substantial feedback provided by the community. Since that time, publication of the work has been confirmed for several presentations, most with graduate student coauthors.

15 FSU Clustering Grant: Sunshine Grid—Florida's Research and Education Cyber-infrastructure

Expenditure Categories	% in Proposal	% in Accountability Report
Salaries and Benefits	70%	99%
Other Personnel Services	0%	0%
Expenses	0%	0%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	30%	0%
Equipment	0%	0%
Travel	0%	1%
Special Category	0%	0%

Total All Categories	**100%**	**100%**

The original Sunshine Grid budget for each participating university was $400,000. FSU was awarded 38% of its initial budget request. FSU worked with the Sunshine Grid team leaders to reallocate funds to those elements of its proposal that were required to ensure the success of this award. FSU's original budget included funds for a limited amount of data storage and computing infrastructure. The data storage and computing hardware represented the Fixed Capital Outlay in FSU's original budget. FSU eliminated capital items in its revised budget and only hired a single IT professional to stay within the reduced budget allotment. The reallocation strategy proved successful, as the project exceeded the major goals of the original proposal. For example, the IT professional hired by FSU helped to established multiple science workflows at FSU and among our partner institutions. The IT professional describes one these workflows and acknowledges the BOG support in the Journal of Structural Biology. The Sunshine Grid has also grown well beyond expectations. This state-wide organization now includes eight additional full members and affiliates and changed its name to the Sunshine State Education and Research Computing Alliance (SSERCA) to reflect its broad mission. This organization meets quarterly and its members can now point to several successful grant proposal that would not have been possible if it were not for this cluster award.

16 FSU Clustering Grant: Highly individualized, High-performance Prostheses with Multifunctional Materials

Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	20%	27%
Other Personnel Services	35%	32%
Expenses	8%	9%
Operating Capital Outlay	31%	13%
Fixed Capital Outlay	0%	
Equipment	0%	16%
Travel	0%	3%
Special Category	6%	
Total All Categories	**100%**	**100%**

When submitting the report, we had considered the terms "equipment" and "operating capital outlay" interchangeably. Considering the proposal called for 0% for equipment and 31% in OCO, in hindsight, we should have reported the "equipment" amount in the line for OCO, which would then total to 29%.

17 FSU Clustering Grant: Community Health Collaborative Program in Pediatrics, Internal Medicine, and Family Medicine

Expenditure Categories	% in Proposal	% in Accountability Report
Salaries and Benefits	79%	67%
Other Personnel Services	0%	32%
Expenses (including equipment and travel)	21%	1%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

It should be noted that the original BOG request was based on a $399,820 budget, which was nearly $100,000 higher than the $300,000 award received. In its original budget request, the FSU College of Medicine anticipated spending most of the BOG award and College match (complementary dollars) on Salaries and Benefits (76% of the BOG request, and 91% of the College's proposed match). However, due to the need to quickly hire and deploy personnel for the research project, it was determined that OPS staffing resources were more suitable than FTE. Consequently, only 67% of the BOG award and 69% of the College's matching dollars were spent on Salaries and Benefits, while 32% of the BOG award and 13% of the College's matching dollars were spent on OPS staffing. The original BOG budget request did include one OPS position and should have been reflected in the OPS spending category as $11,000 or 3% of the total original BOG budget request rather than 0%.

Although the original budget request contemplated spending 21% of the requested BOG budget and 9% of the College's proposed matching dollars on Expenses, almost all expenses were paid from the University's matching funds (18%) rather than BOG funds (1%). Most of the expenses incurred ($43,260) were for iPads used to collect data for the research studies. The College's matching funds were used to cover most of the expenses incurred because, as previously noted, fewer matching dollars were needed for Salaries and Benefits since OPS staffing became the more realistic personnel solution to quickly deploy and manage the research studies. It should also be noted that overall expenses incurred were lower than originally anticipated because travel needs were less than expected and the majority of information processing (informatics) for the research studies was conducted by University of Florida technology resources.

18 NCF Clustering Grant: Southwest Florida Coastal Watersheds—A Collaborative Integration of Research, Education, and Policy Outreach

Expenditure Categories	% in Proposal	% in Accountability Report
Salaries and Benefits	61%	16%
Other Personnel Services	3%	38%
Expenses	26%	43%
Operating Capital Outlay	10%	0%

Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

The award reduced the proposal amount by 25% and the project was reduced in scale and reconfigured. This resulted in shifts between expenditure categories.

Salaries and Benefits Percentage Decreased by 45%:

- The *proposal* included a full-time employee to coordinate the project and develop the resource atlas. In the *project* a current administrative staff person was assigned to manage the project working closely with two part-time OPS project coordinators. This resulted in reduced salary and benefit expenditures and increased OPS expenditures.

☐ The *proposal* included two full-time post-doctoral fellows: one to coordinate coastal watershed science education outreach to K-12; the second to assess coastal watershed policy. The *project* instead used part-time OPS employees (including faculty working in the summer) to develop coastal watershed content for K-12 educational programs, assess coastal watershed policies and develop additional content for the Sarasota County Water Atlas. This resulted in reduced salary and benefit expenditures and increased OPS expenditures.

Other Personnel Services Percentage Increased by 35%:

☐ The *proposal* included OPS funds for NCF faculty to develop new courses related to coastal watersheds. The *project* provided funds for faculty to develop new courses and conduct coastal watershed research during two summers. Faculty interest was higher than anticipated which led to an increase in OPS funding for this purpose.

☐ The tasks *proposed* for the two full-time post-doctoral fellows in the areas of K-12 coastal watershed education and outreach and coastal policy assessment were performed in the *project* by part-time OPS employees, summer faculty, and student assistants.

☐ The *proposal* called for a significant portion of a new full-time employee's time to coordinate the project. In the *project,* an existing administrative staff member worked closely with part-time OPS employees to coordinate the project. This reduced the salary and benefits expenditures and increased the OPS expenditures.

☐ The *proposal* called for a portion of a full-time position to develop a GIS enabled resource atlas. The *project* used part-time OPS employees to develop content to add value and accessibility to the existing Sarasota County Water Atlas. This shifted salary and benefits expenditures to OPS expenditures.

19 UCF Clustering Grant: A Unified Approach for Enhancing Aerospace Research, Education, and Workforce Training		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	12%	5%
Other Personnel Services	10%	12%
Expenses	26%	17%
Operating Capital Outlay	25%	35%
Fixed Capital Outlay	0%	0%
Equipment	0%	31%
Travel	0%	0%
Special Category	27%	0%
Total All Categories	**100%**	**100%**
The cluster involves FSU (lead), UCF and UF. What was originally listed as "Special Category" (27%) as shown in the Proposal column is the "Equipment for Polysonic Tunnel." This is one and the same as what is listed as "Equipment" (31%) under the Accountability column. Originally, the item was listed as "Special Category" as this was to be sent to FSU to be in the shared facility called "Polysonic Tunnel," and not stay in UCF as regular "Equipment." Therefore, the discrepancy is only 4% between what was proposed and what is in the Accountability Report.		

20 UCF Clustering Grant: Florida Biomedical Engineering Partnership		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	0%
Other Personnel Services	10%	9%
Expenses	10%	6%
Operating Capital Outlay (and Equipment and space renovation)	80%	85%
Fixed Capital Outlay	0%	0%
Travel	0%	0%
Total All Categories	**100%**	**100%**

21 UCF Scholar Boost Grant: Associated with Retaining a Professor of Nanoscience and Chemistry		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	18%	12%
Other Personnel Services	21%	16%
Expenses	15%	35%
Operating Capital Outlay	2%	0%

Fixed Capital Outlay/Equipment	32%	34%
Travel	0%	3%
Special Category	12%	0%
Total All Categories	**100%**	**100%**
The "Salaries and benefits" and "Special Category" budgets (which included estimated tuition and travel expenses in the original budget) where significantly reduced or eliminated because the project had two graduate students that were supported under a university fellowship. The savings in these categories resulted in additional expenses for biological specimens, which enabled the project to extend the pilot study to more substantial validation study. By spending more expense dollars, the project has published two papers with one additional manuscript.		

22 UCF Clustering Grant: Microgravity Research and Education (with Kennedy Space Center & Space Florida)		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	47%	9%
Other Personnel Services	0%	46%
Expenses	21%	26%
Operating Capital Outlay	32%	15%
Fixed Capital Outlay	0%	0%
Equipment	0%	1%
Travel	0%	1%
Special Category	0%	2%
Total All Categories	**100%**	**100%**
Funds were transferred from "Salary" to "OPS" because we could not get the necessary personnel into regular salary job classifications in time for this project due to delays with the funding from Space Florida and the short timeframe for completion of the project. Consequently we did the work with OPS employees who could be hired more rapidly for a short-term project. As a result, the project's goals were met.		

23 UCF Clustering Grant: SUS Professional Science Master's Statewide Initiative		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	70%	89%
Other Personnel Services	0%	0%
Expenses	26%	11%
Operating Capital Outlay	4%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%

Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

24 UF Clustering Grant: Community Health Workers Research and Training Institute ($300,000)		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	56%	35%
Other Personnel Services	1%	34%
Expenses	42%	12%
Operating Capital Outlay	1%	0%
Equipment	0%	0%
Travel	0%	1%
Special Category	0%	18%
Total All Categories	**100%**	**100%**

1. The Salaries and Benefits category of the proposed budget for this project inadvertently included salaries and benefits for several staff that should have instead been in the Other Personnel Services (OPS) category. The staff whose salaries and benefits should have instead been placed in the OPS category include (a) the Health Empowerment Coach Training Program Manager and Co-Lead Trainer, (b) two Program Coordinators, (c) the Data Manager and Administrative Assistant, (d) three graduate students, and (e) two Community Member Liaisons. Indeed, State of Florida regulations stipulate that salaries and benefits of such employees must be paid from the OPS category (i.e., only personnel in permanent faculty positions can have their salaries and benefits paid from the Salaries and Benefits category). Thus, 21% of the overall budget allocation was moved from the Salaries and Benefits category to the OPS category to pay the aforementioned staff.

2. Furthermore, given the wide range of baseline knowledge and skills of the community members trained as Health Empowerment Coaches in the intervention component of the Institute, and the logistical challenges regarding their training participation, all of the aforementioned staff needed to commit more than the initially allocated effort to the supervision of this training and to the research to evaluate the effectiveness of this training. Thus 12% of the overall budget allocation in the Expenses category was moved to the OPS category to cover the cost of the additional staff time for this training and research.

   Additionally, due to the much greater level of supervision needed to effectively train the Health Empowerment Coaches and the logistical challenges that came with implementing this training, it was necessary to limit the number of community

members who could be trained as coaches. Thus, because there were fewer trainees to which to pay training incentives, we had available incentives money in the Expenses category to move to the OPS category where it was needed.

3. The Budget Justification in the original grant proposal earmarked 18% of the overall budget allocation in the Expenses category as a sub-contract to be paid to Bethune-Cookman University "to support the training activities in Volusia County." However, this sub-contract could not be paid from the Expenses category, and thus the sub-contract amount was moved from the Expenses category to a Special Category.

Note: Although a rationale for this specific (18%) expenditure shift was not requested (because it is not greater than 20%), this expenditure shift helps explain why there was an expenditure reduction of 30% in the Expenses category. Specifically, 12% of the overall budget allocation in the Expenses category was moved to the OPS category as earlier mentioned, and 18% of the overall budget allocation in the Expenses category was moved to the Special Category to pay for the sub-contract to Bethune-Cookman University.

25 UF Clustering Grant: SUS Climate Change Task Force		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	73%	33%
Other Personnel Services	0%	50%
Expenses	4%	7%
Operating Capital Outlay	2%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	10%
Special Category	21%	0%
Total All Categories	**100%**	**100%**

The reason for the discrepancy between salary and OPS is threefold. First, in the proposal, the salary for one post-doctoral associate was written into the budget as salary. UF categorizes post-doctoral associates as salary plan OPS, thus resulting in an initial divergence between proposed and actual expenditures. Secondly, the original proposal budget did not break apart the special category, a workshop, into its component budget categories. These consisted of personnel, detailed below, as well as travel, printing, and material and supplies (classified as Travel and Expenses in Actuals). Finally, UF was originally responsible for leading one of the white papers; however, UF assumed the lead on 2 of the 4 papers instead. This change in circumstance necessitated the use of two additional post-doctoral associates. Furthermore, the process of planning and executing the workshop required the help of

an Adjunct Assistant faculty member (also classified as OPS) in addition to the proposed staff as UF produced additional products for the project. UF enlisted staff to assist in the website development, video recording, and the design of programs and reports that remain a resource and product of the project.

26 UF Clustering Grant: Sunshine Grid—Florida's Research and Education Cyber-infrastructure		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	70%	50%
Other Personnel Services	0%	19%
Expenses	0%	0%
Capital Outlay (Fixed and Capital)	30%	31%
Equipment	0%	0%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

The proposed project included hiring a senior IT professional with a salary cost of $100,000, with another senior IT professional to be provided by the University at a similar salary. The time constraints on the project and the lead time to post the position, interview candidates, and hire the chosen applicant made impossible to pay a full year's salary to the IT professional who has been hired (Ying Zhang). However, other qualified individuals were available who were working with UF Research Computing staff on the project. One of them, Yu Fu, has now been permanently added to the staff as stated in the proposal. This process took even longer, and has been completed only recently on Jan 18, 2013. As a result, UF needed to pay the individuals who carried out the work during the time period of the project as OPS funds rather than as salary funds.

27 UF Clustering Grant: Community Health Collaborative Program in Pediatrics, Internal Medicine, and Family Medicine		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	80%	64%
Other Personnel Services	0%	1%
Expenses (including travel and Special Category Expenses @ less than 1%)	20%	22%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	13%
Total All Categories	**100%**	**100%**

28 UF Clustering Grant: Florida Biomedical Engineering Partnership		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	4%
Other Personnel Services	0%	0%
Expenses	6%	63%
Operating Capital Outlay (including space renovation)	94%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	33%
Travel	0%	0%
Total All Categories	**100%**	**100%**
The reason for the shift of percentages from Operating Capital Outlay to Equipment and Expenses is because the College of Engineering agreed to pay for the space renovation using ARRA (stimulus) funds, which freed up resources initially budgeted for in the Operating Capital Outlay area to allow for the purchase of needed lab equipment and materials. Dollars being provided by ARRA funding through the College of Engineering increased the impact of the CLUSTER funds, as they could be used to purchase these needed items sooner rather than later.		

29 UF Clustering Grant: Advanced Smart Sensor Technologies (Materials Engineering and Physics)		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	85%	0%
Other Personnel Services	0%	50%
Expenses	13%	21%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	6%
Travel	0%	3%
Special Category	2%	14%
Total All Categories	**100%**	**100%**
The deviation above is the result of the following: 1) Budget was reduced from $400,000 to $300,000 upon award. 2) Funds for both salary and OPS positions were included in the salary category in the original proposal. 3) A research scientist was not utilized; therefore, there were no expenses in the Salary category. 4) One of the participating faculty members altered his scope of work following the kickoff meeting.		

The project originally budgeted for a research scientist to focus on sensor work. However, after the kickoff meeting with USF, UF found that it had a few more expedited lines of collaboration in the field of nanofiber based sensors and thermoelectric based materials for which graduate students already had the expertise and were carrying out related efforts. With the reduction in personnel cost, and broader scope redefined after the kickoff meeting, UF was able to utilize the additional funds to enhance its capabilities to demonstrate advanced nanofibers production and thermoelectric synthesis.

30 UF Clustering Grant: Optimizing Detection, Prevention, and Treatment of Vector Borne Diseases (Translational Medicine and Pharmaceutical Innovation)

Expenditure Categories	% in Proposal	% in Accountability Report
Salaries and Benefits	70%	42%
Other Personnel Services	0%	25%
Expenses	30%	6%
Operating Capital Outlay	0%	23%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

Salary, OPS, and Expense: After the project was awarded, it quickly became apparent to the investigators that a project coordinator, post-doctoral associate, and OPS/student assistants would be needed to carry out the study aims given the timeline provided. Funds were rebudgeted from the salaries and expense categories to OPS accordingly to hire Quarrie, Jadhav, Lu, Hernandez, and Messenger.

Operating Capital Outlay: During the second half of the project, the investigative team realized it needed a specific type of equipment to carry on its work in dengue, a liquid chromatography tandem mass spectrometry machine for developing diagnostics and preclinical evaluation of potential anti dengue drugs which is what the cluster was used for and also to be used with the ongoing dengue research project.

31 UF Scholar Boost Grant: Associated with a Faculty Hire in Biomedical Engineering		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	94%	0%
Other Personnel Services	0%	30%
Expenses	6%	17%
Operating Capital Outlay	0%	47%
Fixed Capital Outlay	0%	0%
Equipment	0%	1%
Travel	0%	5%
Special Category	0%	0%
Total All Categories	**100%**	**100%**
The funds that were requested in the proposal as salaries were charged as Other Personnel Services because a Post-Doctoral Associate and two Graduate Assistants were hired to begin working with the faculty member in Biomedical Engineering. The reason why Equipment/Operating Capital Outlay was purchased but not requested in the proposal is that personnel were not hired immediately upon receipt of the funds, so funding was used for needed laboratory equipment that the faculty required as part of his start-up for his lab at UF, some of these items being an iCyte Flow Cytometer, a MICA magnetic force bioreactor system, incubators, microscopes, and probes.		

32 UF Scholar Boost Grant: Associated with a Professor of Diagnostic Medicine and Pathobiology in Veterinary Medicine		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	39%
Other Personnel Services	0%	1%
Expenses	0%	0%
Operating Capital Outlay	100%	39%
Fixed Capital Outlay	0%	0%
Equipment	0%	20%
Travel	0%	1%
Special Category	0%	0%
Total All Categories	**100%**	**100%**
The proposal for the Boost funds was written prior to Dr. Cooke's arrival at UF. The original proposal requested funds exclusively for capital outlay, which would have funded only major pieces of equipment (>$5,000). When he moved from the University of Illinois to the University of Florida in February, 2011, Dr. Cooke was able to bring a very significant amount of equipment from the University of Illinois that represented items which Dr. Cooke had purchased with through his NIH grants over the years.		

These items included, but were not limited to, a CFX96 Real-time PCR system, a BH-2 Olympus microscope with Plan Apo lenses and a dual-head attachment that allows simultaneous viewing by two observers, and a SZH Olympus dissecting microscope with both transmitted and incident light capabilities. Bringing these pieces of equipment, which became the property of the University of Florida following Dr. Cooke's move, allowed Dr. Cooke to use some of the funds originally designated for capital outlay for some smaller pieces of equipment that were necessary for the establishment of the lab but did not meet the UF threshold of $5,000 that allows something to be classified as capital outlay rather than equipment. Thus, 20% of the appropriation was used for smaller pieces of equipment that were not classified as capital outlays, but these were items that were essential for Dr. Cooke's work, and they will last and be used for the rest of his career. Finally, since Dr. Cooke brought significant portions of the equipment he needed to UF, some of the remaining funds allocated to complete the set-up of his lab was used for the salary of Ms. Terry Medrano, who was hired into a Bioscientist position. Ms. Medrano oversaw the installation and use of the existing equipment brought from the University of Illinois and played a key role in researching, purchasing, setting up, calibrating and ultimately using the equipment that was purchased with the Boost funding.

33 UF Scholar Boost Grant: Associated with a Professor of Health and Science		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	75%	19%
Other Personnel Services	0%	1%
Expenses	0%	78%
Operating Capital Outlay	12%	0%
Fixed Capital Outlay	13%	0%
Equipment	0%	2%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

The UF Boost Award funds served as an essential support mechanism so this new investigator could reestablish his research efforts after joining the faculty at the University of Florida. After submission of the UF Scholar Boost proposal, Dr. Dore was awarded additional grant funding. Dr. Dore submitted 21 research proposals himself and another eight with other faculty members of the Department of Anesthesiology. We are already receiving new awards directly associated with the research efforts supported by these funds and expect to continue to see the return on this investment. Due to Dr. Dore's success in generating research funding, it was not necessary to use the UF Boost award to cover his salary. Also, the UF Boost Award was only funded at 50% of the proposal. Therefore, the college requested and received campus level approval to adjust the budget and use the UF Boost Award to cover expenses required to operate the lab, including laboratory supplies, operations, subcontracts, and equipment service contracts. These expense items were included in the proposal narrative, but included as operating and fixed capital outlay in the expenditure categories budget.

In summary, the variance of Salaries and Benefits and Expenses categories (% in Proposal to % in Accountability Report) is due to receiving an award less than proposed and being able to pay salary expense from new research support instead of the UF Boost as anticipated.

34 UNF Clustering Grant: Highly individualized, High-performance Prostheses with Multifunctional Materials

Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	40%	34%
Other Personnel Services	14%	30%
Expenses	10%	13%
Operating Capital Outlay	21%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	22%
Travel	0%	1%
Special Category	15%	0%
Total All Categories	**100%**	**100%**

The OCO/Equipment amounts were recorded incorrectly in the accountability report when submitted. The $26,837.08 should have been recorded under Operating Capital Outlay. (By definition OCO is the expenditure category which includes equipment, fixtures and other tangible personal property of a non-consumable nonexpendable

nature, the value or cost of which is $1,000 or more.) When the $26,837.08 is shifted from Equipment to OCO, the two percentages highlighted will be within 20% of the original budget. All spending followed the proposal, allowing for successful research.

35 UNF Scholar Boost Grant: Associated with a Professor to Lead the Bruce Taylor Engineering Research Institute

Expenditure Categories	% in Proposal	% in Accountability Report
Salaries and Benefits	0%	0%
Other Personnel Services	0%	0%
Expenses	0%	19%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	25%	0%
Equipment	0%	0%
Travel	0%	0%
Special Category: Costs (Expenses, Equipment, Service Agreement) associated with computing	75%	81%
Total All Categories	**100%**	**100%**

The original proposal included 25% for Fixed Capital Outlay. When first written, space for this project was not identified. (By definition, Fixed Capital Outlay (FCO) is real property (land, buildings including appurtenances, fixtures and fixed equipment, structures, etc….) Space was identified for this project, eliminating the need for FCO. Funds were redirected to Expenses and the Special Category as shown above. The expenditures from this grant allowed for successful and ongoing research for the Taylor Engineering Research Institute.

36 USF Clustering Grant: Tackling Florida's Growing Geophysical Threats through Collaborative Coupled Modeling

Expenditure Categories	% in Proposal	% in Accountability Report
Salaries and Benefits	27%	67%
Other Personnel Services	0%	0%
Expenses	0%	18%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	68%	0%
Equipment	0%	0%
Travel	0%	15%
Special Category	5%	0%
Total All Categories	**100%**	**100%**

Salaries and Benefits: The initial proposal stated 27% of the budget was to be used for salaries and benefits. The project was funded at 25% of the proposed budget. At that point, USF needed to modify the budgeted amounts in order to accomplish the intended goals of this project. USF did reduce the proposed amount of salary/benefits that would be directly charged to the funding, but needed to keep 65% of the budgeted amount in salary in order to fulfill the cost of the effort of the research team. The structure of the team needed to be enhanced due to the expertise that this project warranted to accomplish the goals explained in USF's final report. Dr. Jennifer Collins, the USF PI, was paid for during summer 2011 and 2012. She became the sole USF PI working on this project and 2 post docs were funded, Dr. Kekuan Chu of the College of Marine Science and Dr. Jinwoong Yoo of the College of Arts and Sciences. These were essential personnel to ensure the success of the project. The additional salary expended was for the training and experience of two graduate students in the Department of Geography.

Fixed Capital Outlay: The initial proposal had been budgeted to enhance the existing centers at USF and FSU for atmosphere and ocean modeling. The budgeted fund in the Fixed Capital Outlay category was reduced in the direct costs of the budget; however, the computer equipment and supplies necessary to build the weather center's atmospheric model was achieved. The equipment supplies purchased as a direct cost are reported under supplies. The major cost of the computers purchased was provided through the College of Arts and Sciences and the College of Marine Sciences complimentary funds on this project.

37 USF Clustering Grant: Sunshine Grid—Florida's Research and Education Cyber-infrastructure

Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	70%	90%
Other Personnel Services	0%	0%
Expenses	0%	0%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	30%	0%
Equipment	0%	10%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

Salaries and Benefits: The percentages in the original proposal represented the estimated costs of hiring a cluster infrastructure professional. Although the original amount of the proposal was reduced the funds required to hire a competent professional did not decrease. The amount paid represents slightly less than one year of estimated salary for this position.

Fixed Capital Outlay: There were two factors that resulted in the decrease in percentage funds spent in this category. First, as described under the Salaries and Benefits bullet, because of the reduction from requested funding a larger percentage of the initiative funding had to be diverted to salary. The second factor is that the fixed capital outlay was requested for computer equipment, and was spent on such, but was reported as equipment.

In addition to the information above, the matching funds for this project were spent entirely on Equipment which is as explained above the same as Fixed Capital Outlay for this project. Existing storage was also used to ensure the success of this project.

Despite the reduction in funds from the original request, the benefits of this project for Florida went far beyond the initial scope as laid out the proposal. The original three science projects were well supported as proposed. The website as describe has been completed and is being maintained without further state funding.

As a result of this project a new collaborative group, or "coalition of the willing", the Sunshine State Education and Research Computing Alliance (SSERCA), was formed to continue the science collaborations, web presence, and infrastructure support between the three universities. This group was immediately joined by two other research universities in Florida and has recently grown to include nine institutions. The group has received significant national attention and has led to the submission of competitive grants for national funding. In addition grant proposals from some of the universities have used the existence of this group to improve their competitive advantage. This group has also supported researchers from non-member state universities by allowing them to use the high performance computing resources at the member institutions.

38 USF Clustering Grant: Florida Biomedical Engineering Partnership		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	0%
Other Personnel Services	8%	0%
Expenses	5%	20%
Operating Capital Outlay	87%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	81%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**
Expenses: At USF these funds allowed for the renovation of a 3,500 square foot space for the new Interdisciplinary Learning Laboratory (IDLL) that began in June 2011 and		

was completed in October 2011. Instrumentation for the Bio-Mechanics, Bio-Imaging, Bio-Instrumentation and Bio-Materials Pods was purchased and acquired, and were in use beginning in fall 2012. All furniture for the lab (test benches and lecture area) and audio-visual equipment has been purchased and is installed.

Operating Capital Outlay: Variances exist because USF & USF system does not differentiate between OCO and Equipment.

Equipment: Variances exist because USF & USF system does not differentiate between OCO and Equipment.

The primary return on investment is the establishment of a new interdisciplinary teaching laboratory (IDLL) that will serve not only the needs of the Florida Biomedical Engineering Partnership, but several existing undergraduate and graduate courses across all six engineering departments at USF. The laboratory also serves as a key component of a multi-institution National Science Foundation curriculum development grant which entails the creation of biomedical hands-on-learning experiments for undergraduate engineering students; the grant involves collaborators from the University of Hawaii, University of Vermont, University of Minnesota and Northern Arizona University. USF anticipates further similar grant opportunities that will utilize the new, interdisciplinary laboratory.

The IDLL has already served as a prime location for hosting multiple educational events including:

1. A Summer Biomedical Engineering program in June 2012 as part of a USF College of Engineering STEM outreach activity.
2. The 2012 USF Programming Challenge hosted by IEEE, IEEE-CS, and ACM Student Chapters at USF on March 31, 2012 (50 students).
3. The 2012 College of Engineering Eminent Scholars Lecture Series (120 students).
4. The Spring 2012 Foundations of Engineering Design Project Expo on Friday April 27, 2012 (100 students).
5. Design project demonstrations on April 27, 2012 (90 students and visitors).
6. The College of Engineering poster presentations on May 3, 2012(100 students).
7. The Logikslab hardware competition on June 2, 2012 and June 3, 2012 (40 students).

39 USF Clustering Grant: Advanced Smart Sensor Technologies (Materials Engineering and Physics)		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	77%	87%
Other Personnel Services	12%	12%
Expenses	8%	1%

Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	0%
Special Category	3%	0%
Total All Categories	**100%**	**100%**

40 USF Clustering Grant: Optimizing Detection, Prevention, and Treatment of Vector Borne Diseases (Translational Medicine and Pharmaceutical Innovation)		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	49%	67%
Other Personnel Services	20%	0%
Expenses	6%	29%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	0%
Special Category	25%	4%
Total All Categories	**100%**	**100%**

Salaries and Benefits / Other Personnel Services: In the proposal salaries and benefits were separated from other personnel services but in reporting they were combined. Under the university's reporting system, salaries for faculty members and wages for graduate assistants/ post docs are all reported under the category of wages and fringe.

Expenses: In the proposal, expenses were supposed to be 26% of the total budget. Expenses were to include both supplies and travel related expenses. Final analysis of expenditures incurred shows that travel was 2% of the expenses incurred and supplies were 27%.

Special category: In the special category column were funds that were supposed to be used for tuition payment for some of the graduate students that were expected to work on the project. The number of students that needed help was far less than expected since a number of them were already receiving tuition aid from other sources.

41 USF Scholar Boost Grant: Associated with a Professor of Health Outcomes and Health Services Research		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	63%	22%
Other Personnel Services	11%	31%
Expenses	22%	21%

Operating Capital Outlay	4%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	20%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

Salaries and Benefits: Variance reflects the actual distribution of salaries of recruited faculty members. Faculty recruitments were finalized in Spring 2012. The search process took significantly longer than anticipated though it resulted in not only the two ranked faculty positions identified in the Scholar Boost Grant but a third ranked faculty member that started in July 2012 and a new adjunct faculty member. Expenses for the adjunct faculty member are reflected in the variance in the Other Personnel Services category.

Other Personnel Services: Variances reflect the recruitment of a .20 FTE of an OPS faculty member specializing in health services research that assisted in the implementation of the research projects and contributed to the teaching mission of the department, adding expertise not previously available within the existing faculty. The Scholar Boost Grant also supported a significant growth in graduate research assistant positions in the department, providing expanded opportunities for student research and training in health outcomes/health services research.

Equipment: Variance reflects the purchase of customized software in the amount of $35,000 for an interactive voice response and web-based symptom collection (with text analysis) in both English and Spanish for use on the pilot research projects.

Purpose of Grant: Through the recruitment of faculty and the expansion of relationships with other faculty at USF as well as the health services community in Tampa and across the State of Florida, the Scholar Boost Award funding provided funding to attract and retain quality ranked faculty in the areas of health outcomes and health services research. The Scholar Boost grant provided $175,000 to assist with this endeavor.

The Scholar Boost Award provided funding to enhance and expand the Department of Health Policy Management in the College of Public Health. The funds were utilized to recruit a new assistant professor and a new professor who have immediately contributed to the development of new collaborations and the enhancement of the existing academic program. The funds also supported the recruitment of an adjunct professor and an associate professor who started in July 2012.

- The project was done in cooperation with Hallmark Cards Inc., new product development. Hallmark professionally designed and reproduced cards used in

the study.

- The data collection from the research has resulted in an invitation to give a podium presentation at the Pediatric Academic Association in May 2013. The results will also lead to several publications.
- Since the awarding of the New Scholar Boost award, research funding in the department has increased significantly. The faculty members recruited through this award - Drs. Williams, Petrila, Wiltshire, and Eisert - have brought $566,331 in extramural research to the department since the receipt of this award. Funding agencies included US Army Medical Research & Material Command, US Department of Veterans Affairs, Robert Woods Johnson Foundation, Miami-Dade County, and Palm Beach County.
- One of the awards received allowed the Department of Health Policy & Management to support its first post-doctoral fellow, funded by a Health Disparity Training Award from the US Army Medical Research & Material Command's Prostate Cancer Research Program.

42 USF Scholar Boost Grant: Associated with a Professor of Engineering		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	100%	100%
Other Personnel Services	0%	0%
Expenses	0%	0%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	0%
Special Category	0%	0%
Total All Categories	**100%**	**100%**

43 USF Scholar Boost Grant: Associated with a Dean of the College of Marine Science		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	9%
Other Personnel Services	0%	16%
Expenses	0%	73%
Operating Capital Outlay	0%	0%
Fixed Capital Outlay	0%	0%
Equipment	0%	0%
Travel	0%	2%
Special Category	100%	0%

Total All Categories	**100%**	**100%**

Variance from 100% Special Category to 9% Salaries and Benefits, 16% Other Personnel Services, 73% Expenses, and 2% Travel: Variances are due to grant proposal submission prior to the subsequent hire date, and start-up requirements identified by the new Dean. Actual amounts result from the distribution from the Special Category to the appropriate expense category as needed based on approved interdisciplinary research grants.

Purpose of Grant: The Scholar Boost Award funding provided an additionally inducement to attract and retain the highest quality Dean for the College of Marine Science. Dean Dixon provides the College with the necessary knowledge and leadership skills to enhance the College's national recognition, and has demonstrated a commitment to student success, interdisciplinary collaboration, and global engagement. The Scholar Boost Grant provided $150,000 for Interdisciplinary Research Grants to support proof of concept interdisciplinary research between CMS and the other USF colleges and partners (FWRI, USGS, NOAA, SRI, Mote). Funds were provided for seed research between CMS faculty and the USGS (Flower & Moyer), Mote (Weisberg & Kirkpatrick; Paul & Ritchie), the College of Medicine (Breitbart & Dishaw).

Return on Investment: The Scholar Boost Award provided funding for 3 research projects for the purpose of establishing new collaborations. Each project was funded at $50,000, and resulted in the following outcomes:

- Collaboration between The Marine Genomics Lab at the College of Marine Science, the Molecular Genetics Lab at the College of Medicine, USF Health, and All Children's Hospital. This collaboration allowed for the integration of techniques utilized in each lab separately (marine science, immunology, virology). The two labs worked on developing an immunological assay to detect a newly discovered sea lion virus. The work supported a graduate student, and will result in a tool that can be used by veterinarians and the research community. In addition, this award created a new collaboration studying the gut bacterial communities of a Ciona, a marine invertebrate that can be used as a model system to study the human microbiome. This project has supported an additional PhD student, who was recently granted a study-abroad award from the ASSEMBLE (Association of European Marine Biological Laboratories) program. In addition, the PIs (Dishaw and Breitbart) submitted a joint NSF proposal on this topic in January 2013 and plan to apply for more external funding in the future. This interdisciplinary collaboration, enabled by the Scholar Boost Award, established two new research projects, the support and co-advising of two graduate students, and the application for competitive external funding.

- Collaboration between USF's College of Marine Science and the USGS St.

Petersburg Coastal and Marine Science Center. The research utilized geochemical tracers to investigate aspects of ocean acidification in the Gulf of Mexico. This work should result in preliminary data to allow development of a full research proposal to the National Science Foundation or similar funding agency for a larger study.

- Collaboration between USF's College of Marine Science and Mote Marine Laboratory. The College of Marine Science and Mote Marine Laboratory operate glider programs on the West Florida Shelf. This collaboration provided increased geographic coverage and augmented the College of Marine Science's ocean modeling capabilities, and observation technologies including autonomous underwater gliders capable of operating for weeks to months at sea, traversing hundreds of kilometers while collecting vital information about the ocean. This funding allowed the two groups to create mechanisms for the transfer of data between researchers at each institution. The resulting datasets provided valuable information regarding red tide evolution and transport and northeastern Gulf of Mexico water column variables. Seed funding was also secured from the Gulf of Mexico Coastal Ocean Observing System partially due to the data collected during the fall deployment.

44 USF Scholar Boost Grant: Associated with Recruiting a Professor of Geology and Geophysics		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	0%	0%
Other Personnel Services	0%	0%
Expenses (including Equipment, Operating Capital Outlay, and computational resources)	100%	100%
Fixed Capital Outlay	0%	0%
Travel	0%	0%
Total All Categories	**100%**	**100%**

45 UWF Clustering Grant: Inter-disciplinary Principles and Inter-professional Strategies for Successful Aging in Northwest Florida (UWF Campus-wide)		
Expenditure Categories	**% in Proposal**	**% in Accountability Report**
Salaries and Benefits	13%	64%
Other Personnel Services	46%	19%
Expenses (including summit expenses)	6%	7%
Operating Capital Outlay	2%	0%

Fixed Capital Outlay	0%	0%
Equipment	0%	2%
Travel	0%	4%
Special Category (consulting services, grant programs, matriculation waivers)	33%	4%
Total All Categories	**100%**	**100%**

Due to time constraints imposed by the actual awarding of the grant funds and a reduction in the amount received, the principal investigator, Dr. Laura Koppes determined that it was necessary to readjust the original budget in order to successfully complete the project and ensure its sustainability once the funds from the Clustering Grant were exhausted. The following descriptions explain the most significant budget adjustments that were made to each shaded category.

Salaries and Benefits

The special category amount that was originally budgeted for $120,000 to provide grant programs was reduced by $58,930 and reallocated to the salary category in order to hire full-time faculty to complete a plethora of tasks in the short amount of time required by the grant to fulfill the intentions of the proposal including the needs & resource assessment analysis, relevant human factors project proposal, curriculum review, demographic analysis and profile, research project implementation, conference planning/participation/facilitation, and projects in collaboration with the Center for Applied Psychology.

Other Personnel Services

The OPS funds that were originally budgeted to hire an OPS program manager were reallocated to the salary category in the amount of $97,767 to hire a full-time salaried Associate Director to administer and coordinate the day-to-day operations of the project and provide assistance and transition upon the arrival of the incoming Director of the Center on Aging (CoA).

Special Category

The special category amount that was originally budgeted for $120,000 to provide grant programs was reduced by the amount that the actual award was reduced of $48,735 ($398,734 less $350,000). As explained in the Salaries and Benefits section of this response, the budget was further reduced by $58,930 and reallocated to the salary category in order to complete the project tasks and objectives and to ensure sustainability of the newly formed Center on Aging beyond the grant. http://uwf.edu/coa/

The remaining budget for the grant proposals of $12,335 was used to fund internal

grants.