

OFFICE OF THE VICE PRESIDENT FOR RESEARCH

ANNUAL REPORT

JULY 1, 2008 TO JUNE 30, 2009

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INTRODUCTION

Utah State is a research-intensive land-grant university that supports faculty and student researchers, solves problems, and contributes to the economy. University research is fostered through improving campus research services and support, and through building multidisciplinary research programs and partnerships, thereby enhancing the university's capacity for research excellence.

Research Office Mission Statement

It is the mission of the Research Office at USU to facilitate and stimulate research, scholarship, and creative activities by:

- Providing resources to recruit, retain, and recognize outstanding faculty and student researchers.
- Providing research support services that are highly responsive and efficient.
- Providing leadership to identify and pursue promising research opportunities and to grow external research funding.
- Fostering a culture of academic research integrity and promoting the responsible conduct of research.
- Fostering the creation of intellectual property and supporting appropriate technology commercialization.
- Fostering the expansion of international research projects and programs.
- Communicating the value of USU research throughout the state, nation, and the world.

Core campus constituencies of the Research Office are faculty, research professionals, students, and unit administrators. The VPR chairs the University Research Council, which consists of deans, major center directors, and student and faculty representatives. Because deans, center directors, and department heads are appropriately most concerned with their respective units, the VPR must take a broader, campus-wide perspective.

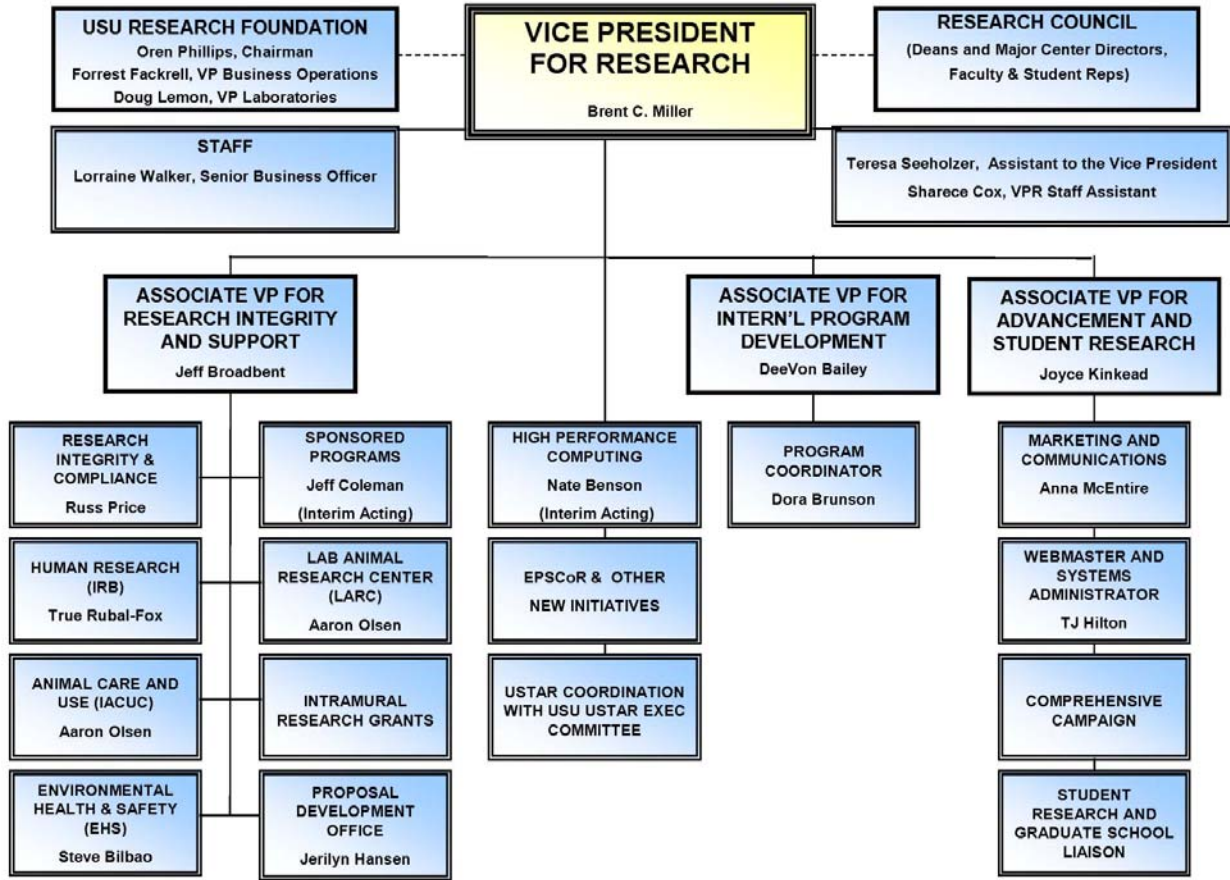
The VPR needs to be actively engaged in professional networks and with societies that have the advancement of research as their mission. The VPR also must be engaged with external constituencies, including local and state elected officials, as well as federal and industry funding sponsors to advance university research.

ANNUAL REPORT

This annual report to the Faculty Senate covers the major activities of the Research Office and the Research Council from July 1, 2008 through June 30, 2009. It is a summary of all units for which the VPR has responsibility. This report is organized in five parts:

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**Utah State University
Vice President for Research Organization**



Updated
1/25/2010

1. OVERVIEW OF VPR AND RELATED SERVICE UNITS

The VPR was responsible for the units shown in the previous diagram during fiscal year 2008-2009. The USU Research Foundation (USURF) is a wholly-owned subsidiary of the university. It is a major organization with large-scale research programs, most notably the Space Dynamics Laboratory (SDL). A cooperative working relationship with the Research Foundation is essential for accomplishing the research mission of the university. The USU Research Council advises the VPR, providing a forum for considering major research issues.

A) Sponsored Programs Office (SPO)

The USU Sponsored Programs Office (SPO) is responsible for supporting and protecting the university and individual researchers as they propose, submit, and administer externally funded sponsored research projects. This role puts SPO in a unique situation to interact with virtually every college, department, research center, and administrative unit at USU. Further, the interdependent nature of contracting requires strong accountability if research endeavors are to be successful. Therefore, SPO makes every effort to provide excellent service, effective resources, timely responsiveness, and accountability necessary to not only promote

a successful research environment, but also to build strong relationships necessary to promote continued research growth.

Some of the specific responsibilities of SPO include providing training and workshops, budgeting and proposal development assistance, assisting in the completion of mandatory internal and external forms, communicating and negotiating with sponsors to develop mutually advantageous agreements that protect the researchers as well as the university, and administering awards. Consequently, SPO has offered and will continue to offer workshops for locating funding opportunities, industry contracting, and electronic research administration. SPO also offers formal and informal training to communicate university, federal and state regulations, policies and procedures to promote compliance and consistency throughout the university.

SPO fosters research at the university by helping researchers to develop and submit proposals that have the highest likelihood for success. To accomplish this, SPO provides the following services: budget development, interpreting contractual terms and conditions, completing required forms, tracking pending proposals, notifying researchers upon award, and negotiating award terms and conditions with sponsors to protect the researcher and university. SPO also works closely with the Controller's Office to ensure that accounts are set up properly and that USU is compliant with federal and state regulations, sponsor-specific terms and conditions, as well as University policies.

A single point of contact approach allows researchers to easily identify their assigned SPO administrator. Further, this approach allows each SPO administrator to become more familiar with sponsor-specific regulations as well as to familiarize themselves with individual researchers and their unique needs. SPO has also developed a strong working relationship with the Controller's Office creating a team approach for pre- and post-award functions that further supports research efforts.

SPO continues to update its website (<http://spo.usu.edu>) to enhance proposal development, provide more user-friendly interfaces, and make information more accessible and easier to locate. SPO policies and procedures are posted on the web and additional policies and procedures continue to be developed and published. Some new features and information available on the website include: guidelines for industry contracting; distinguishing between gifts, grants and contracts; export control; and resources for graduate/undergraduate students. SPO provides monthly reports to the VPR regarding the status of research proposals and awards by college at Utah State University. Appendix A provides a summary of Sponsored Program Awards, FY2005 through FY2009. Appendix B compares awards by month and type of award for FY2008 and FY2009. Appendix C provides a summary of Sponsored Program Awards by Awarding Agency, FY2005 through FY2009; and Appendix D provides a summary of Sponsored Program Awards by Research Center, FY2005 through FY2009.

B) Institutional Review Board (IRB)

The IRB is charged with protecting the rights and welfare of human research participants. All research involving human participants, including unfunded research, must be reviewed in

accordance with the Code of Federal Regulations. USU has a Federal Wide Assurance with the Office of Human Research Protections that commits USU to comply with federal regulations governing human participants in research and which is required for Department of Health and Human Services-funded research. This Assurance is renewed every five years.

In March 2009, the IRB was awarded full accreditation by the Association for the Accreditation of Human Research Protection Programs (AAHRPP). This organization evaluates the institution's Human Research Protect Program (HRPP), and the IRB is one key component. There are 77 required elements to obtain accreditation; 31 center on IRB responsibilities, including evaluation of the IRB membership. Preparation for this application took approximately two years. The accreditation process strengthened the HRPP through effective practices by means of sound policies and procedures, continually raising the ethical standards in research, and documenting practices to assure a commitment to quality improvement and protection for research participants. An extensive evaluation process was performed internally by the IRB Office and the Office of Compliance Assistance. Through these reviews the HRPP and associated IRB processes were assessed, and extensive changes were implemented.

Some of the most significant changes made as a result of the AAHRPP accreditation include:

- Implementation of increased monitoring and measurement of HRPP activities and outcomes to provide for continuous improvement of IRB and other university processes
- Implementation of a more rigorous scientific validity review process in the departments and colleges
- Increased attention to non-compliance and unanticipated problems associated with human research
- Increased emphasis on documentation of the IRB review process, discussions and decisions
- Bifurcation of the Standard Operating Procedures into two publications – one focused on IRB procedures (the SOPs) and the other on information pertinent to investigators (the Investigator Handbook).

The IRB consists of volunteer members with diverse experience to provide an adequate and comprehensive review of USU research activities. Regulations require that an IRB have at least one scientist, one nonscientist, and one member not affiliated with the institution; terms of service are three years and can be renewed.

USU IRB board members are:

Kim Corbin-Lewis (Chair) – COMDDE
Thorana Nelson (Vice-Chair) - Department of Family, Consumer, and Human Development
True Fox – IRB Administrator
Gretchen Gimpel Peacock - Department of Psychology
Richard Albiston - Prisoner Advocate

John Allen - Department of Sociology, Social Work and Anthropology
Melanie Domenech-Rodriguez - Department of Psychology
Nick Eastmond – Department of Instructional Technology and Learning Sciences
Joanna Endter-Wada - Environment and Society
Chris Fawson (alternate) - Department of Economics
Richard Gordin - Department of Health, Physical Education and Recreation
Stacey Hills - Department of Business Administration
Stuart Howell - Community Representative
Mike Monson (alternate) – Community Representative
Bob Morgan - Department of Special Education and Rehabilitation
Ron Munger - Department of Nutrition, Dietetics, and Food Sciences
Russ Price (ex officio) – Federal Compliance Assistance
Dr. Ed Redd - Deputy Director of the Bear River Health Services
Noreen Schvaneveldt - Department of Nutrition, Dietetics, and Food Sciences
Tim Slocum (alternate) - Department of Special Education and Rehabilitation
Nancy Sassano – IRB Coordinator

The IRB meets monthly to review protocol applications requiring regulatory approval. Certain research protocols do not require full board review and can be classified as “Exempt” or “Expedite.” All reviews follow criteria provided in the federal regulations. All on-going research projects are reviewed yearly; however, if there is more than a minimal risk, the continuation research reviews may be more frequent. Any proposed change or revision to a currently approved study that affects human participants must be reviewed and approved by the IRB prior to implementation of that change. A special amendment/modification document is required from the PI.

The IRB Office documents compliance with federal regulations by maintaining a database of all research protocols submitted and of actions taken by the board. The Vice President for Research Office entered into a service agreement with USU’s software development team to provide a web-based interactive protocol management application that will enhance the IRB’s ability to track protocols and communicate with investigators involved in human research. This software is in development with projected use to begin FY2011.

Written policies and procedures established by the university and congruent with federal guidelines have been instituted to address procedures such as yearly continuing review, reporting of unanticipated problems, changes in research methods and objectives, and researchers’ conflict of interest. A complete copy of our IRB Handbook is posted on the VPR Web site at <http://irb.usu.edu/>.

The IRB Administrator is actively involved in implementing revised federal procedures and updating USU procedures; providing continuing education for faculty, students, and board; and helping to coordinate ethics-in-research training for researchers and IRB members. Appendix E illustrates the number of IRB research applications by types of review categories from 2005 through 2009.

C) Laboratory Animal Research Center (LARC)

The primary mission of the LARC is to support university animal research, testing, and teaching by providing resources for animal procurement, housing, husbandry and care, health care, and disposal. Space is also provided for researchers to conduct short- and long-term research. The LARC staff is also a resource for expert information on the use of live animals in research and teaching. The LARC is accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International, is public Health Service (PHS) assured, and is a United States Department of Agriculture (USDA) registered animal research center.

The permanent LARC staff consists of the following: A director (A. Olsen), a Utah-licensed and USDA-accredited veterinarian and member of the American Society of Laboratory Animal Practitioners and the American Association for Laboratory Animal Science; a full-time supervisor (K. Udy), who is a certified Registered Laboratory Animal Technologist by the American Association of Laboratory Animal Science; a full-time secretary (J. Daniels); one full-time animal caretaker (T. Lauritzen); one part-time animal caretaker (L. Potter), and one part-time cage wash technician (J. Abbot). There are also part-time students employed who work in the washroom and provide basic animal care. In exceptional cases, researchers provide part or all of their own animal care. The Director (Olsen), full-time supervisor (Udy) and secretary (Daniels) have shared assignments with the Institutional Animal Care and Use Committee (IACUC).

Major accomplishments for FY2009:

- The USDA inspector found the LARC to be in full compliance during the annual facility inspection.
- All available animal space is occupied.
- The LARC was awarded a Facilities Improvement grant from the NIH totaling \$454,000 for the purchase of capital equipment, caging and support diagnostic equipment. Funding began in FY2009 and continues into FY2010
- Remodeling was completed to upgrade the facility for additional work in the antiviral program.

Construction of the Life Sciences Research Building (aka USTAR Building #2) is ongoing. The building includes a substantial vivarium and biosafety containment suite. This vivarium will dramatically increase animal holding capacity and research capabilities. The building is currently on schedule for a substantial completion date in November 2010. If this date is achieved we expect to begin using the USTAR vivarium in early 2011.

D) Environmental Health and Safety Office (EH&S)

The EH&S Office provides expertise and guidance for compliance with federal, state, and local safety and health regulations, as well as current professional practices and guidelines. Its goal is to prevent injuries, illnesses, and environmental damage through the recognition, evaluation, and control of potential hazards arising from university activities. This is

accomplished through services that ensure a safe and healthy environment for all students, faculty, and staff at USU and the surrounding community. Services include assisting in compliance with regulations and training university personnel and students in appropriate safety measures. General areas of focus include biological, radiological, occupational, and chemical health and safety.

The EH&S Office interacts with many governmental regulators in the course of normal business, including: Environmental Protection Agency (EPA), State of Utah-Department of Environmental Quality (DEQ), Division of Radiation Control (DRC), Occupational Safety and Health Administration (OSHA), Centers for Disease Control (CDC), and the National Institutes of Health (NIH). Many of these entities perform routine and unannounced inspections and require written programs, documented training, permits, and numerous reports of differing types that the EH&S Office completes on behalf of the university.

Responsibilities of the EH&S program cross many traditional aspects of the campus community. In FY2009, EH&S accomplished the following:

- Transported, managed and disposed of approximately 65,350 lbs. of hazardous waste, 752 lbs. of biological waste, 1,535 lbs. of radiation waste, and recycled 86,415 lbs. of hazardous materials.
- Continued application of the radioactive waste volume reduction plan resulted in cost savings by reducing the amount of waste shipped off-site for disposal by 295 pounds.
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- Provided safety training to approximately 775 faculty, staff, and students in 36 courses.
- Provided Logan City Fire Department with 57 new or updated pre-incident plans for campus buildings. Provided 5 new Emergency Response Map Books and 35 new building evacuation plans. Created 85 specialty maps (i.e. rad decon floor plans, asbestos abatement floor plans, etc.) for in office and campus use. Commenced updating campus emergency utilities maps.

E) Office of Global Engagement (OGE) – International Research)

OGE was actively involved in a variety of faculty-led international projects and activities during the last fiscal year. Among them are:

Active International Research and Technical Assistance Projects:

- Iraq Agricultural Extension Revitalization (IAER) - Texas A&M University is the lead institution on this project. USU's portion is related irrigation and has resulted in a two year extension (~ \$500,000 to USU) with training to take place in Amman, Jordan. Jagath Kaluarachchi (CEE), Wynn Walker (CEE), Mac McKee (UWRL).
- Global Livestock-Climate Change Collaborative Research Support Program (GL-CRSP) - Project centered in Ethiopia and Kenya and is designed to help pastoralist communities to mitigate climate-related risk through income diversification. This is

the last year of funding after eleven years (\$200,000 this year (FY 2008-09) compared to \$600,000 in previous year). Layne Coppock, (ENS). – Approximately \$4 million over 11 years.

- Strengthening Early Childhood Education in Jordan - The objectives of the partnership are to improve the undergraduate degree program to reflect best practices in early childhood education, enhance the theoretical and assessment backgrounds in undergraduate classes, and increase the links between theory and classroom practice to augment the student teaching experience available to students. Vonda Jump, (CPD). - \$450,000 over three years.
- Senegal River OMVS Modeling Project – West Africa - This project represents the culmination of a series of projects that UWRL has conducted for OMVS, dating back to the 1970's. It is designed to update the modeling process measuring costs incurred by the countries drawing water resources from the Senegal River. Mac McKee (UWRL) and John Keith (APEC). - \$600,000
- Litani River Basin Management Support – Lebanon - This proposal was solicited by IRG under the Water IQC. The purpose of this activity is to set the groundwork for improved, more efficient and sustainable basin management at the Litani river Basin (Bekaa Valley) through provision of technical support to the Litani River Authority and implementation of limited small scale infrastructure activities. Bob Hill (CEE), Gary Merkley (CEE), Grant Cardon (PSC). - \$600,000
- Village Wells and Water Supply Program – Armenia - This cooperative agreement with USDA continued a previous agreement that began in 2001. USU provided expert service in helping Armenian farmers improve on-farm water management and helped train Armenians to drill wells and monitor for compliance with environmental standards. Bob Hill, (CEE). - \$200,000
- Irrigation Assessments for Millennium Challenge Corporation – Armenia, Moldova, and Burkina Faso - This project strengthened public and private irrigation organizations to manage irrigation systems and water resources and will help farmers to operate and maintain their systems. Bob Hill (CEE) and Gary Merkley (CEE) partnered with USDA/Foreign Agricultural Services in Moldova (\$287,995) and Burkina Faso (\$299,824).
- Design, Management and Evaluation of Surface Irrigation Systems in Egypt - This project is aimed at the improvement of on-farm technologies that will take advantage of better water delivery and yield higher water use efficiencies. Some of these technologies have been developed elsewhere but none have been adapted and applied to significant areas in Egypt. This proposed project would evaluate new surface irrigation technologies, test their application in Egypt, and develop guidelines for their widespread adoption. Wynn Walker, (CEE). - \$16,800

- Middle East Water and Livelihood Initiative - Initiative led by the International Center for Agricultural Research in Dry Land Areas (ICARDA). Five U. S. universities (Florida, TAMU, Illinois, Cal-Davis, and USU) are involved along with seven countries (Yemen, Palestine, Lebanon, Egypt, Jordan, Iraq, and Syria). Areas of focus include: water, livestock, horticulture, socio-economics, and extension. The first year of funding provided \$500,000 to develop the proposal (\$40 – \$50 million over ten years).
- Business Field Study for Carr Foundation – Mozambique - Marketing study of traveling display used to raise money for Gorongosa Restoration Project. Mark Thomas, (HSB). - \$15,000
- China Initiative - Biotechnology and Extension activities in China Federal funding of \$450,000 with money being divided between USU departments of ADVS (Ken White), PSC (Roger Kjelgren), and Extension (Noelle Cockett).

The OGE Office – International Research is currently asking faculty in colleges of Agriculture, Jon M Huntsman School of Business, Engineering, Emma Eccles Jones College of Humanities and Education and Natural Resources to develop projects in east Africa, Philippines, Ecuador and other worldwide programs.

F) The Center for High Performance Computing (HPC@USU)

Former HPC director Thomas Hauser moved to Northwestern University in November 2009. HPC has transitioned to Interim Director Nate Benson, who also serves as HPC@USU Lead System Administrator. Nate joined HPC@USU in October 2008 from private industry. In addition to his *Juris Doctorate* training and degree, Nate brings 20 years of private industry IT, HPC, and management leadership to HPC@USU.

Major accomplishments for FY 2009:

- Nate Benson continues HPC@USU's involvement in the Utah Cyber Infrastructure Committee with partners from UoU, WSU, UVU and SUU. The purpose of the committee is to promote, organize and seek funding to develop cyber infrastructure in support of research and collaboration in Utah and beyond. In 2009, Nate coordinated with University of Utah, UEN, and North Dakota State University to submit two competitive EPSCoR proposals designed to be an investment in the cyberinfrastructure knowledge, educational and computational community in Utah, and within its partnerships.
- HPC@USU collaborated with USU's Center for Atmospheric and Space Sciences to build and manage two clusters that enable physics-based data assimilation models for the upper atmosphere and ionosphere in an effort called the Global Assimilation of Ionospheric Measurements, or GAIM.
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- HPC@USU team of Nate Benson, Thomas Hauser and MAE MS student Kyle Horne were one of four finalists in the prestigious international SC09 Storage Challenge in Portland, Oregon.
- HPC@USU collaborated with UofU CHPC to staff a joint booth and present research at SC09. USU undergrad and graduate students presented research posters, attended workshops and enhanced their expertise in HPC capabilities.
- Through its visualization laboratory, HPC@USU provides the USU community with resources for high-resolution three-dimensional visualization and remote collaboration through the Access Grid. Individual workstations are available for faculty and students for data analysis and pre-/post-processing. This laboratory has been successfully used for distance education classes at USU.
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- With 2008 USDA funds, HPC@USU purchased additional computational and storage capacity. Wasatch cluster increased disk storage capacity from 10TB to 90TB. With this enhancement, together with the existing Uinta cluster, HPC clusters are consistently in use at 85% capacity.

HPC collaborates with USU faculty and researchers to quickly and efficiently offer cost-effective HPC solutions in support of research. Current users include researchers in the colleges of Agriculture, Engineering, Natural Resources, and Science.

G) Advancement & Activities of Student Research

Undergraduate research is one of the few “high impact” educational practices that has documented results in student success and retention. Undergraduate research is one of the primary marketing messages for Utah State University, particularly in recruiting highly talented prospective students. The culture that allows students to “get their hands on research” at an early point in their undergraduate career brings benefits to students and also national recognition to Utah State University. Key to this success are faculty members who have an ethic of working with undergraduates. USU has the second oldest program in the country, established in 1975 with the help of faculty from MIT, which established the first program in 1969. With the establishment of the centralized office in 2000, support of students and faculty has increased significantly.

Support was provided to 57 undergraduates through the Undergraduate Research and Creative Opportunities (URCO) Grant Program in FY2009. The Research Office has doubled its investment in research grants over the last few years. Increasing the maximum award from \$1000 is one of the priorities recommended by the Undergraduate Research Advisory Board (URAB) but is still in the future. URCO alumni provide the basis for enhanced communication and fund-raising to support the undergraduate research program.

The 9th annual Research on Capitol Hill event, designed to illuminate the effect of a research university on undergraduate education, featured 33 Utah State students and a similar number from the University of Utah at the State Capitol. In the third annual Utah Conference on

Undergraduate Research (UCUR), hosted on the Westminster College campus, 43 USU students presented, joining almost 400 students from practically every institution of higher education in the state; 7 USU faculty attended. Sixteen USU students were accepted to present at the National Conference on Undergraduate Research (NCUR) held at University of Wisconsin-La Crosse in April, 2009. One student, Bradley Hintze (and his mentor Dr. Sean Johnson), were invited to the Council on Undergraduate Research (CUR) Posters on the Hill in Washington, DC, in April 2009, an event that features 60 posters.

Student Showcase, which is part of USU's annual Research Week, continued to feature more than 100 posters and presentations. At noon, eight undergraduate researchers, representing each college as well as the regional campuses, were recognized with the David and Terry Peak Undergraduate Researcher of the Year Award. Likewise, outstanding faculty mentors for undergraduate research were recognized. The student award was also featured at Robins Awards Ceremony, where Trenton Olsen, an English major, was designated as the University Undergraduate Researcher of the Year. In addition, Olsen was awarded the inaugural Utah Humanities Council Fellowship for undergraduates. A separate new fellowship for graduate students was also established, also awarded to a USU student.

The Undergraduate Research Advisory Board, (URAB), chaired by Associate Dean of Science Lisa Berreau and including faculty and student membership from each college and the regional campuses continued to identify the successes and opportunities for undergraduate research. The URAB made a report to Research Council outlining the following needs: increased funds for URCO Grants; increased opportunity for students in the humanities, arts, and social sciences; improved communication and contact regarding undergraduate research for each department and college; support for interdisciplinary projects; support for international projects. The Research Office piloted a Humanities Research Assistant initiative, for which faculty apply. Students receive a \$500 stipend for working with a faculty member. Four grants were awarded in Art History, English, and History. Using assessment data from the pilot, the program was revised and institutionalized. The student members of URAB led in securing Tier Two Tuition funds (\$10,000) to be used to establish or enhance department/unit website to improve information about and access to undergraduate research. This initiative was suggested by students as they are sometimes frustrated by not knowing what their programs offer in the way of undergraduate research and scholarship. Two colleges—Business and Engineering—as well as one department—English—led out on establishing new websites for undergraduate research: Huntsman School of Business: <http://huntsman.usu.edu/urp> and <http://www.engineering.usu.edu/htm/information/undergraduateresearch>.

Two points of data for undergraduate research: the National Survey of Student Engagement (NSSE) showed that 26% of graduating seniors reported working with a faculty mentor on an independent research project, a higher figure than USU's peer institutions; the number of applications of the transcript designation of *Undergraduate Research Scholar* continued to increase.

Joyce Kinhead, Associate Vice President, who oversees Undergraduate Research, serves as a councilor on the Undergraduate Research Program Directors Division of the Council on

Undergraduate Research (CUR), a three-year term; Kenneth Bartkus, Director of Undergraduate Research for the Huntsman School of Business is a councilor in the Social Sciences Division. Alexa Sand, Assistant Professor of Art History was elected as a councilor in the Arts and Humanities Division while Christie Fox, Director of Honors, was elected to an At-Large position.

The signature program of undergraduate research, the University Undergraduate Research Fellows, chose its sixth cohort in March at Scholars Day, interviewing 138 students. Research Fellows number over 100 and have led the campus in prestigious awards such as the Goldwater Scholarship. As a result of the Fellows Program, students are presenting earlier at professional conferences and other undergraduate events and being more competitive for external awards.

2. RESEARCH COUNCIL MEMBERSHIP AND MAJOR ACTIVITIES

The Research Council provides advice and recommendations to the Vice President for Research. Additionally, members of the Council provide direct and important channels of communication between researchers and those who make decisions affecting research at USU. Members of the Research Council are college deans or their representatives, and selected center/lab directors as specified by the University code of policies and procedures. Appendix F is a current membership list of the University Research Council. This group meets about once a month to discuss and make recommendations on research issues.

The following is a summary of major issues addressed by USU's Research Council in FY2009:

- Graduate Student Health Insurance - Dean Byron Burnham, School of Graduate Studies, researched options and coordinated a proposed recommendation of graduate student health insurance at USU. Research Council participated in the review process and agreed with the proposed recommendations. Graduate student benefits were finalized and offered in fall semester 2008, with 1,065 graduate students offered coverage (277 opted out due to existing partner coverage).
- Credit for Joint Research Awards & Expenditures - Accuracy in tracking USU awards and expenditures with multiple investigators challenging. To improve the process, procedural steps were written in FY2008 so that departments can set up separate accounts on USU's SPO-1 form to track joint awards. On September 22, 2008, Byard Wood and Brent Miller presented this information to the deans who responded favorably to implementing this enhancement at Utah State. It is important that PIs and Co-PIs agree at the time a proposal is submitted how credit will be allocated. Separate budgets will still be necessary to accurately capture account expenditures, but distribution amounts could be amended if the award amounts are adjusted. With these changes, F&A distribution can be shared amongst the colleges and distributed according to internal policy and agreements within colleges/departments; however, colleges will still have the flexibility to determine how funds are ultimately distributed.

- Time & Effort Reporting - Compliance is an important component of the reporting requirements. Because salary and benefits are approximately two-thirds to three-fourths of award expenditures, this is a critical risk area to research universities like USU. Federal guidelines in this area include: 1) A written policy must be implemented, 2) On-going training must take place, 3) Independent evaluations/audits of all Time and Effort reports, and 4) Reports must be monitored on an on-going basis relative to committed versus actual effort. USU has implemented procedures and steps to cover all requirements. The preparation stage of each proposal is very important; therefore, on-going evaluations compare what the PI committed on the SPO-1 form to the documentation the PI submits. If there is not a match, the PI must clarify if the Time and Effort is a “cost share” and provide support documentation to track the activity. Flexibility is also necessary for those cases when minor adjustments to the original proposal are necessary. The PI has oversight where a graduate student or post-doc has the greater portion of the time and effort on a given award. If the time and effort fluctuation is greater than 2%, further documentation/action is required by the PI to properly identify the adjusted time and effort. This reporting is a “shared” responsibility by the department, PI, and Sponsored Programs Office. Federal OMB Circular A-21 requires that the University document the distribution of direct activity to each individual sponsored project. When Time & Effort are not accurately reported, USU may lose revenue on sponsored projects because effort is inaccurately reported or proper documentation is missing. Non-compliance can also result in lost funding and reduced opportunities to compete for future funding. Guidelines for USU Time & Effort reporting are posted on the Controller’s Office website at <http://www.usu.edu/hr/policies/section500/582.pdf>
- NFS EPSCoR Funding Eligibility - Utah has been identified as an EPSCoR state by the National Science Foundation (NSF). With this designation, new opportunities are available to Utah State relative to research competitiveness for NSF funding, which include Research Infrastructure Improvement (RII) grants. Before applying for this funding, the State of Utah was required to prepare and submit a “Planning Grant.” This included cooperation between Utah State University, University of Utah, Brigham Young University, and the Governor’s Office of Economic Development and the State Science advisor. The Utah team formulated and submitted Utah’s EPSCoR Planning Grant Proposal which was approved in May 2009. 1) Co-funding opportunities (EPSCoR Program Director can share funding if the project receives a favorable review) with other NSF programs, 2) Research Infrastructure Improvement (RII), which includes two funding tracts, and 3) Workshops and “Outreach” funding support. The RII 1 and RII 2 proposals were submitted in October, 2009.
- Graduate Student Travel Support - The purpose of graduate student travel support is to help graduate students travel to workshops and conferences (professional development) to present their work. Students who have been awarded funding in the past received \$300.00 towards their travel expenses. Funding was completely consumed by increased student requests, so there were no “carry over” funds remaining for the fiscal year. Preliminary projections showed a budget shortfall of \$25,000, (or a reduction of 62 graduate students being able to obtain travel funding support) for FY2009. As this funding had not been increased in the past 8 years, the Research Council voted in favor of contributing \$25,000, which would be an increase of \$18,000 per year. Funding to support this increase will come from recovered

overhead money and would enable approximately the same number of students to travel this year as last year. Additional funding support for these students can be obtained through the Academic Opportunity Fund (Tier II funding).

- Overview of Association for the Accreditation of Human Research Protection Programs (AAHRPP) Site Visit, October 22-23, 2008 - For the past three years, USU has been working to achieve AAHRPP accreditation. This accreditation is recognized as the “standard” in the area of human research protection and certifies that accredited institutions ensure the protection of human participants in research. The two-day site visit included three AAHRPP site representatives who interviewed President Albrecht, IRB administrators and leadership, IRB PIs, and staff involved with human researchers projects. The site visit went well and AAHRPP advised USU representatives that USU accreditation looks favorable and should result at AAHRPP’s next council review in March of 2009. USU received two commendations during this visit: 1) USU’s Standard Operating Procedures (SOPs) were well prepared and meet the established regulatory requirements, and 2) True Fox was recognized for her experience, skills, breadth of knowledge, and professionalism in carrying out IRB responsibilities at USU. AAHRPP reviewers commented that USU’s IRB program is very strong and continues to mature. The integration of individuals and collaboration of skills across campus is excellent and USU was complimented in the manner which individuals with disciplinary differences work together in innovative and productive team environments. Additionally, the site reviewers commented that they were especially impressed with the educational research taking place in the Emma Eccles Jones College of Education and Human Services.
- Implementation of USU Proposal Writing Institute - Jerilyn Hansen was selected as Manager of the Office of Proposal Development. Prior to joining the VPR Office, Jerilyn worked for USU as a Sponsored Programs Administrator. Her role will include establishing USU’s Grant Writer Institute, along with providing support with VPR seed funding grants (RC, SPARC, & GEM). Research Council was alerted that the VPR Office offers a first year salary match of 50% to those colleges and centers who employ a grant writer to team with the VPR Office in preparing proposals. The goal is to encourage involvement in the proposal development process as well as improve the quality and number of proposal submissions at USU. Annually USU will offer a Proposal Writing Institute that will assist (new or established faculty) researchers in a “hands on” environment with developing high-quality proposals. Because training will be geared to provide intensive individual assistance, only twelve (12) participants will be selected to participate in the first year. Each academic college will be assured 1 spot in the institute, with the remaining 5 slots to be awarded competitively. Jerilyn and Jeff Broadbent met with the college deans and center directors to explain the institute and process for selecting participants for the first session in May 2009.
- Undergraduate Research Advisory Board Presentation - This Board includes faculty representation from each college who has actively participated as a research mentor in the previous year. Additional USU representation consists of the regional campuses, library, honors, Sigma Xi (Scientific Research Group), Vice President for Research Office, and current students who are chosen as “Undergraduate Research Students of the Year” for their college. The objective of this board is to identify the strengths of USU’s undergraduate

research program along with focusing on areas of improvement. Lisa Berreau, College of Science, continues her responsibilities as Chair of this Board. Existing strengths such as URCO grants (began in 1975) and the Undergraduate Research Fellows program was implemented in 2003. As a result of these programs, USU students have become much more competitive nationally. Positive outcomes have resulted in both the increased numbers of USU Goldwater Scholars, as well as recognition in prestigious fellowships across various fields of study. Undergraduate Research has also enhanced the research culture on campus as an increased number of students are choosing to participate in the National Conference on Undergraduate Research (NCUR), Utah Conference on Undergraduate Research (UCUR), and Research on Capitol Hill. Other positives include: 1) Undergraduate research is now a USU marketing message for both student recruitment and retention, 2) USU offers an Undergraduate Research Scholar transcript designation for those who meet the requirements, and 3) a significant proportion of graduating seniors participate in undergraduate research while attending USU.

- \$ 200 Million Research Goal - USU continues to look for opportunities to grow sponsored research. New ideas have been implemented such as the RC/GEM/SPARC seed grants, the office of Proposal Development including a Grant Writer as a dedicated resource to support faculty and research units across campus. The VPR Office provided deans with a detailed breakdown of historical awards within each of the colleges and the deans were asked to provide their best estimate of where they envision their research funding to be in three years. From this information, “bottlenecks” and barriers were identified, as well as what opportunities are available to expand research to meet the goals.
- FY2009 RC, SPARC & GEM Awards - The first (7/1/08) and second (1/1/09) rounds of seed funding opportunities for FY2009 were completed. Representatives from each of the academic colleges participated in the proposal review committee. In total, seventy-two (72) proposals were submitted for consideration: 61 Research Catalysts (RC), 6 Grant-writing Experience through Mentorship (GEM), and 5 Seed Program to Advance Research Collaborations (SPARC). The overall quality of proposals improved in the second round from those submitted in the first round. One requirement is that all proposals should identify an external sponsor to be targeted. The most competitive proposals in the second round were those that addressed this requirement and detailed in the application how the seed funding was going to position the project to be successful in obtaining funding from the external sponsor.
- TCO Discussion: University I.P. Assignments - Several incidents resulted in the past year where USU IP Policy (Number 327) was not adhered to by USU employees. When this occurs, various legalities can result that impact USU business relationships and potential future funding. Examples were shared of past problems where violations resulted with 3rd party associations both on and off campus. Federal and Utah law (34-39-1) highlight key areas relative to employment inventions and non-compliance to USU’s policy occur with both inexperienced and experienced USU personnel. USU employees who consult need to be especially careful that they follow USU’s policy about consulting guidelines. TCO sent out a FAQ booklet to all faculty that will assist them in addressing IP questions along with working with Sponsored Programs Office (SPO) on all contracts. USU’s TCO is available to

examine issues and offer expertise in advance of USU personnel entering into agreements and commitments where potential problems might occur.

- USU Mandatory Furlough Discussion - For some research programs, USU's March 2009 (3/9/09 thru 3/13/09) furlough resulted in challenges/burdens. Those discussed in Research Council included the following:
 - 1) Contracts are especially problematic; researchers can't take a furlough and deliver on the terms of some agreements.
 - 2) Short term projects don't allow time for completion if an employee furlough is required.
 - 3) Future competitiveness is undermined by not performing per expectations or agreement.
 - 4) Longer term projects with near end dates don't allow for furlough time to be rolled into next year.
 - 5) Some budgets are only salary; funds cannot be moved to operating expenses.
 - 6) Funding is lost if budget (which is mostly salary) cannot be expended by end date.
 - 7) Reduced research expenditures translate to reduced recovery of overhead dollars.

It was noted that in specific cases, there is no flexibility to adjust/swap furlough days and still achieve grant requirements, and deans had the authority to make exceptions to the mandatory furlough within their college. To preserve extramural revenue funding and address concerns should future furloughs be considered, Research Council will continue to provide input, recommendations, and examples to the president, provost, and USU's Financial Office for consideration.

- Equipment Transfers for Departing Faculty - Research Council received training on five basic steps that should be addressed with disposition and ownership of research equipment prior to faculty/colleagues departing from Utah State University:
 - 1) Determine who owns the equipment. It either belongs to USU or a Sponsoring Agency. Even when startup funds are used for new faculty, USU owns the equipment.
 - 2) What to do if the Sponsoring Agency retains title or has control over the equipment
 - 3) What to do if the title resides with the University
 - 4) Determine current and future needs of the equipment. If no future need is determined, the Department Head should declare the equipment "excess" and proceed with steps to send the equipment to Surplus Sales, or negotiate with departing faculty if appropriate.
 - 5) Disposal /Transfer Steps (Completion of Equipment Transfer Form – See Operating Policies & Procedures, Section 500/503)
- USTAR & Stimulus Funding (Competitive Opportunities) - On February 20, 2009, a news release was generated that outlined research funding opportunities available to universities. Some monies were available by way of formula funding through the governor's office and state agencies, while other selected federal agencies received a substantial increase of

funding. Research Council received handouts that referenced specific funding amounts targeted for scientific research priorities within NIH & NSF. NIH's budget was increased by \$8.2 billion and specified ways to distribute the funds as follows:

- 1) All previous RO1 submissions that were highly rated during the peer review process, but were rejected after 10/1/08 due to lack of funding were eligible to receive funding because of the stimulus allocation. Proposals rejected prior to this date needed to be resubmitted for consideration.
- 2) New solicitation opportunities were introduced.
- 3) Currently awarded projects also had the potential to receive supplemental funding.
- 4) New types (e.g., NIH Challenge Grant Program) of funding opportunities were considered.

The focus with the stimulus funding was to assure monies were prioritized to projects that were capable of making significant advances within the next two years. NSF's budget was increased by \$3 billion, of which, \$2 billion were targeted to grant applications that were previously denied due to lack of funding, as well as the following:

- 1) Requests with Major Research Instrumentation (MRIs) requirements
- 2) Academic Research Infrastructure (ARI) needs
- 3) Programs that have fundamental facility construction requirements

NASA was targeted to receive \$1 billion, of which they indicated that ~ \$400 million would support research. DoE was allocated to receive ~ \$1.6 billion. A key component of the stimulus funding included extensive reporting requirements with mandates such as; quarterly reports, completion/status progress reports, evaluations of the number of jobs created and retained, and detailed information on sub-contractors associated with an award.

- Research Week Recap - Approximately 600 students participated in Research Week 2009 with over 90 award recognitions. Seven college Researchers of the Year, along with the D. Wynne Thorne Career award were highlighted. Workshops held during the week were very successful and well attended. During Student Showcase, 107 undergraduates presented posters and oral presentations. Undergraduate researchers of the year, mentor awards, and poster awards were also recognized. For the Graduate Student Symposium, participation was double from the previous year with 123 posters and oral presentations. The week's events concluded with the TCO Innovation and Invention Reception where an additional 21 recipients received awards.

4. USE OF FACILITIES AND ADMINISTRATION FUNDS AT USU, FY2008-2009

Facilities and Administrative (F&A) costs are the shared indirect or overhead costs of doing research. The federal government audits actual F&A costs and establishes a rate that the university seeks to recover from sponsors. Recovered F&A funds are used to pay actual indirect costs of research and to stimulate and expand research opportunities.

Appendix G is a report compiled by the Controller's Office that summarizes the amount of F&A generated in FY2007-08 by department; 30% returned to the cost center; and allocations of the 70% held centrally in the VPR Office. The graph in Appendix H illustrates USU's scientific and engineering expenditures by non-federal and federal funding.

5. SELECTED RESEARCH INITIATIVES

In 2007, Vice President Miller introduced a goal to Research Council to increase the volume and competitiveness of USU research by 25% over the next 3 years. A committee, called the Research Focus Group and chaired by Associate V.P. for Research Jeff Broadbent, was formed in March 2007 to recommend initiatives that the Research Office could implement to achieve this goal. The Committee, which included representatives from all colleges, SDL/USURF, and major research centers, issued a strategic plan that recommended implementation of two major initiatives: 1) Restructure VPR seed grants toward more targeted programs with specific missions/goals and expected outcomes; and 2) Establish a network of proposal development specialists to pursue strategic grant opportunities and improve the grant-writing skills and awards won by researchers. Both recommendations were implemented in FY 2008.

A) Implementation of Restructured VPR Seed Grants.

The VPR developed three targeted seed grant programs that have specific missions/goals and expected outcomes as summarized below:

- Grant-Writing Experience through Mentorship (GEM) - GEM provides funding of up to \$5,000 to enhance the professional development of junior faculty through one-on-one research and grant-writing interaction with successful senior faculty mentors. The purpose of this program is to build the University's research capability and increase extramural funding for scholarly activities by enhancing the proposal development skills of junior faculty. To facilitate this goal, it is expected that each funded GEM project will result in the development and submission of at least one proposal to an external funding agency. Eligible junior faculty members include all USU tenure-eligible assistant professors and non-tenure track research assistant professors or research professionals with no more than four (4) years in rank who have not previously received a New Faculty Research Grant.
- Research Catalyst (RC) - The RC program provides 1-year seed funding of up to \$20,000 to help applicants develop new initiatives or directions in their discipline that

will lead to new externally funded grants. The purpose of this program is to build the University's research capability and increase extramural funding for scholarly activities from government agencies and private sources. Thus, it is required that funded RC projects will directly lead to the submission of at least one proposal to an external funding agency. All tenured or tenure-eligible faculty, research faculty, or other USU research professionals are eligible to apply.

- Seed Program to Advance Research Collaboration (SPARC) - The SPARC program provides 1-year seed funding of up to \$35,000 to catalyze development of large interdisciplinary research teams and projects that involve scholarly research in more than one department, research center, college or institution. It is anticipated that new projects catalyzed by SPARC will extend the University's research capability and increase extramural funding for scholarly activities from government agencies and private sources. Thus, SPARC proposals require mutual effort by faculty and researchers from multiple disciplines, and directly lead to the submission of a new, large-scale (solicit at least \$1 million in new research funding), interdisciplinary proposal to an external funding agency. All tenured or tenure-eligible faculty, research faculty, or other USU research professionals are eligible to apply.

GEM, RC, and SPARC awardees are required to develop and submit at least one proposal to an external funding agency within three months of project completion. Because proposal submission deadlines vary widely among different agencies, funding for VPR seed grant programs is offered twice yearly, with start dates of January 1 or July 1. For FY 2009, which was the first year these programs were offered, the VPR received 6 GEM, 61 RC, and 5 SPARC proposals. An internal review committee comprised of representatives from each of the academic colleges plus the Associate VPR determined that one GEM, ten RC and two SPARC applications should be disqualified from consideration because they did not meet core requirements for the respective program. Twenty nine proposals, including three GEM, two SPARC, and twenty four RC projects, were selected for funding. External grant submissions from the 13 awardees in our first cohort (funding awarded July 1, 2008) were due on or before October 1, 2009. (See Appendix I for complete description of new programs)

B) Creation of the Office for Proposal Development (OPD).

In October of 2008, the VPR created the USU Office for Proposal Development and hired Jerilyn Hansen to serve as a central proposal development specialist and OPD manager. The OPD mission is to expand external research funding at USU through: training researchers on proposal development; providing services to enhance success in obtaining funding; managing proposal development for strategically important submissions; and fostering interdisciplinary collaborations. Key initiatives are listed below:

- Strategic Proposal Development - The full services of the OPD are provided, as available, to any academic or research unit that seeks to prepare a large,

institutionally strategic proposal. These services can run from the beginning to end of the proposal development process or can be utilized at any point in the process. Although the office is still very young, OPD staff assisted in 36 submitted external proposals valued at more than \$33 million dollars and are currently involved in numerous additional proposals. The OPD project portfolio includes several especially strategic proposals for the University, including an NIH NIAID proposal that could elevate one of USU's most successful research centers (Institute for Antiviral Research), NIH facilities proposals to enhance USU research infrastructure, and a \$12 million STEM-related grant that would bridge the colleges of Education and Science. To date, one NIH facilities proposal to enhance the LARC and the NIH NIAID proposal have been awarded, three NIH facilities proposals have been declined, and many other applications are still pending.

- Establish a Campus - Wide Network of Proposal Development Specialists - USU's OPD is comprised of a network of proposal development staff located in the units across campus. These individuals provide a variety of services to their college researchers in addition to pooling their efforts on large, institutionally strategic proposals. To promote unit participation in the OPD network, the VP for Research Office provides 50% of a salary for the first year, and 10% each year thereafter, to academic or research units who employ a proposal development specialist. The OPD manager works with these units to identify and recruit specialists who can provide proposal development services to that unit's researchers. Services provided by a proposal developer to his/her unit are under the direction of the dean/department head/center director. Unit proposal developers are expected to contribute effort, as needed, toward large institutionally strategic proposals as directed by the Manager of Proposal Development. All proposal developers are expected to assist with the annual Proposal Writing Institute. In FY 2009, Elaine Thatcher (Humanities, Arts, and Social Sciences) and Nancy Sassano (Emma Eccles Jones College of Education and Human Services) joined the OPD under this framework, and additional hires are in process.
- Proposal Development Institute - The PDI is an intensive training experience in proposal development that culminates with submission of a major external grant. Small group size allows for individualized attention and positive interactions among participants and staff. Participation in the PDI is based on a competitive application process that requires nomination by a researcher's department head and dean or center director. USU's first Proposal Development Institute was delivered by OPD personnel in May, 2009. Academic college Deans nominated up to three persons for participation in the Institute. One faculty from each academic college (except Business, which did not submit a nominee), were automatically included, then another six faculty were selected OPD staff through a competitive review of nomination packets. Participants and OPD personnel met for six full days, collectively and in small groups, while each participant prepared an original external proposal. Participants were instructed to solicit a written peer review of their external proposal before November 20, 2009.

The following faculty participated in the first Proposal Development Institute:

Kory Hintz, (NFS)
Kerry Jordan, (Psych)
Soonjo Kwon, (BIE)
Damon Cann, (PolySci)
Jiming Jin, (WATs)
John Stevens, (Math & Stats)
Brett Shelton, (ITLS)
Jong Su Eun, (ADVS)
Karin Kettenring, (WATs)
Ann Laudati, (E&S)
Sean Johnson, (Chem & BioChem)
Shane Larson, (Phys)

APPENDIX A

SPONSORED PROGRAM CONTRACT/GRANT AWARDS
BY COLLEGE¹

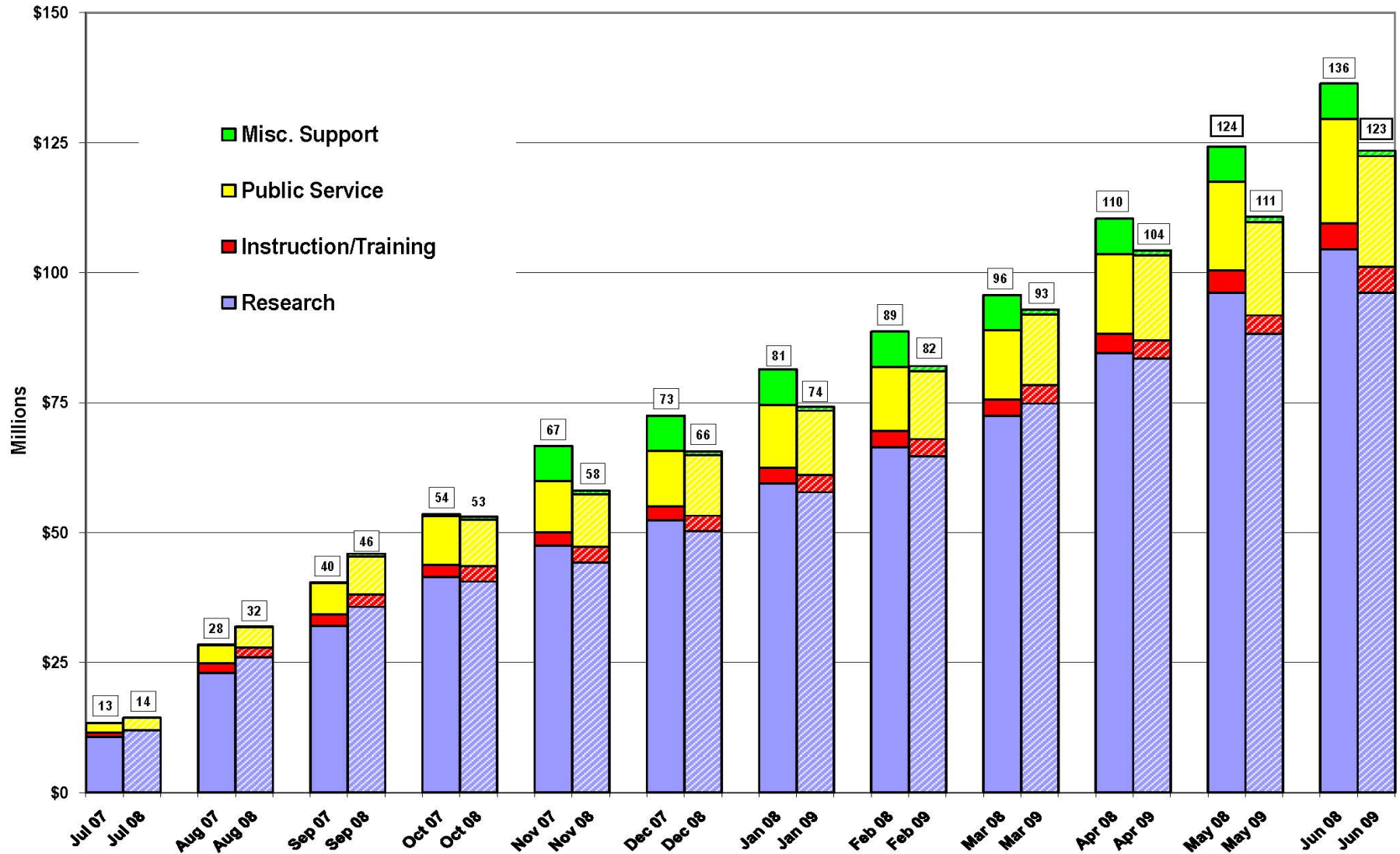
	<u>2004-2005</u>	<u>2005-2006</u>	<u>2006-2007</u>	<u>2007-2008</u>	<u>2008-2009</u>
Agriculture	13,650,668	16,979,327	12,022,213	15,309,673	16,257,864
Business	1,985,155	2,373,466	1,334,038	960,504	1,353,087
Education	25,789,744	20,722,283	22,730,535	18,256,237	20,228,926
Engineering	9,911,299	10,223,439	13,258,408	15,179,544	12,294,578
HASS	925,631	1,456,615	1,088,437	1,199,615	2,939,781
Natural Res.	9,786,361	9,684,998	10,482,217	8,200,490	5,478,575
Science	10,038,023	8,123,447	7,890,437	8,598,964	7,320,622
USURF	43,566,429	49,353,930	54,000,033	57,557,872	51,652,892
Other	7,222,649	5,525,978	10,279,740	11,698,365	6,271,093
Jointly Admin. Programs ²	<u>-660,217</u>	<u>-1,391,647</u>	<u>-395,158</u>	<u>-601,324</u>	<u>-339,087</u>
TOTAL	<u>\$122,215,742</u>	<u>\$123,051,836</u>	<u>\$132,690,900</u>	<u>\$136,359,943</u>	<u>\$123,458,332</u>
Financial Aid-Pell Grants, etc.	22,402,674	24,374,592	19,474,007	19,902,221	21,083,543
Adjusted Total	<u>\$144,618,416</u>	<u>\$147,426,428</u>	<u>\$152,164,907</u>	<u>\$156,262,164</u>	<u>\$144,541,876</u>

¹ College awards include centers most closely aligned with that college (See Appendix D for Center totals).

² Awards for jointly administered programs are reflected in the total of both colleges involved with these programs. The amount in the jointly administered programs category is an accounting function designed to eliminate double counting of awards.

Appendix B

Utah State University Sponsored Program Awards FY 2008, FY 2009



APPENDIX C
RESEARCH AWARDS
BY FEDERAL SPONSORING AGENCY (IN DOLLARS)

	FY04-05	FY05-06	FY06-07	FY07-08	FY08-09
Department of Agriculture	14,844,728	12,933,403	11,291,025	11,313,340	12,752,755
Department of Defense	6,229,055	20,718,470	23,854,478	35,294,360	32,715,392
Department of Education	17,795,729	16,683,226	14,080,060	14,180,883	13,778,457
Department of Health and Human Services	9,568,985	10,997,713	10,488,329	11,709,196	8,197,206
Department of the Interior	3,754,104	5,096,481	3,596,782	2,309,079	3,094,563
Department of State		-	188,281	195,135	30,000
Environmental Protection Agency	643,766	911,386	116,509	0	50,500
National Aeronautics & Space Administration	24,977,824	23,596,496	21,987,757	13,864,987	10,647,596
National Science Foundation	8,761,253	9,331,392	6,099,684	9,525,689	3,777,608
State Agencies & Others ¹	58,042,973	47,157,861	60,461,975	57,869,495	59,497,798
TOTAL	<u>\$144,618,417</u>	<u>\$147,426,428</u>	<u>\$152,164,907</u>	<u>\$156,262,164</u>	<u>\$144,541,875</u>

¹This number is a composite of international banks, state agencies, other federal agencies, local agencies, private industry, and others.

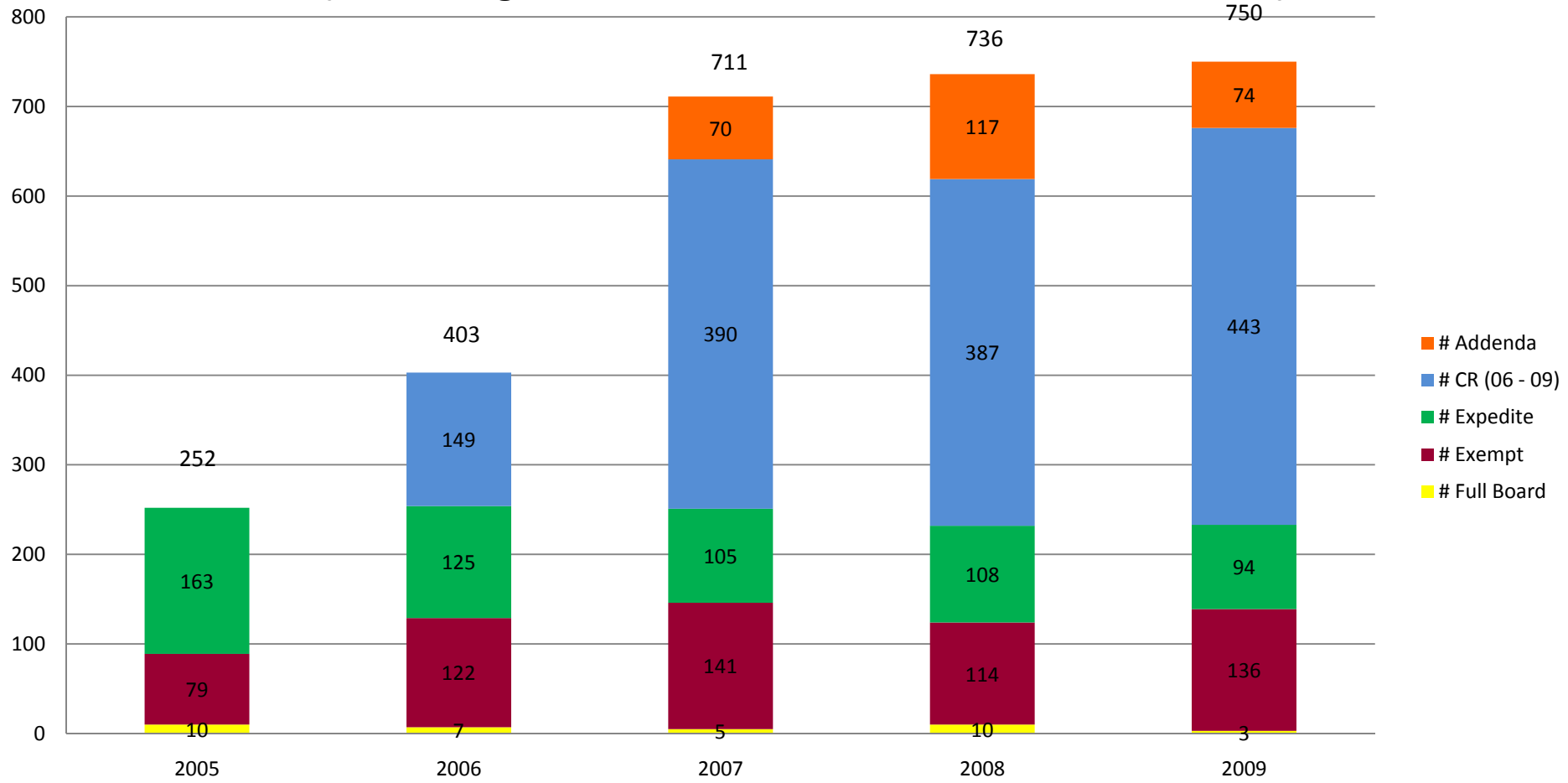
APPENDIX D

**SPONSORED PROGRAMS CONTRACT/GRANT AWARDS
BY RESEARCH CENTER**

RESEARCH CENTER	FY04-05	FY05-06	FY06-07	FY07-08	FY08-09
Ag. Experiment Station	11,605,967	13,881,355	12,933,734	15,064,305	16,364,154
Center for Integrated BioSystems	0	0	0	90,000	265,626
CASS	1,647,479	537,175	1,226,610	1,134,720	1,150,161
CPD	11,873,218	6,071,622	7,275,949	9,796,797	10,161,700
Center for Space Eng. (Beginning FY2002, USURF reassigned reporting centers)	0	0	0	0	0
Cooperative Extension	4,339,414	3,242,340	1,761,756	3,355,502	5,173,285
Ecology	2,424,505	3,250,987	2,755,350	2,722,347	1,092,954
Eng. Experiment Station	274,991	558,532	776,561	306,613	47,894
Financial Aid-Pell Grants, etc.	22,402,675	24,374,592	19,474,007	19,902,221	21,083,543
High Performance Computing	0	0	523,700	33,713	0
International Programs	0	0	0	0	0
School of the Future	0	0	0	0	0
Provost	24,699	0	0	0	0
Univ. Research & Training	44,267,770	44,506,542	45,486,402	41,463,628	30,174,211
USTAR	0	0	177,292	250,942	1,135,384
USURF/SDL	43,566,429	49,353,930	54,000,033	57,557,873	51,633,892
Remote Sensing	0	0	0	65,372	135,661
UT Transportation Center	0	0	1,801,834	460,261	1,550,240
Utah Water Research Lab.	<u>2,191,270</u>	<u>1,649,352</u>	<u>3,971,679</u>	<u>4,057,870</u>	<u>4,573,171</u>
Total USU	<u>\$144,618,417</u>	<u>\$147,426,427</u>	<u>\$152,164,907</u>	<u>\$156,262,164</u>	<u>\$144,541,876</u>

APPENDIX E

**Institutional Review Board (IRB)
New Approved Research Projects by Category and Total
2005- 2009
(Continuing Review and Addenda for FY 2007, 2008, 2009)**



APPENDIX F

UNIVERSITY RESEARCH COUNCIL Membership (2009-2010)

		Phone	
		Ext.	UMC
Brent C. Miller	Vice President for Research, Chair	1180	1450
Chris Fawson	College of Business Representative	2320	3530
Jeff Broadbent	Associate Vice President for Research	1199	1450
Byron Burnham	Dean, School of Graduate Studies	1191	0900
Noelle Cockett	Dean, College of Agriculture	2201	4900
Ray Coward	Executive Vice President and Provost	1167	1435
Jim Dorward	College of Education & Human Services, Associate Dean	1469	2800
James MacMahon	Dean, College of Science & Director of Ecology Center	3515	0305
Todd Crowl	College of Natural Resources Representative	7541	5200
Douglas Lemon	Executive Vice President of Laboratories/SDL	4501	9700
Jagath Kaluarachchi	College of Engineering, Associate Dean	2776	4100
M. K. Jeppesen	Vice President/CIO-Information Technology	2630	1495
John Allen	College of Humanities, Arts, & Social Sciences, Assoc. Dean	0310	0700
Joyce Kinkead	Associate Vice President for Undergraduate Research	1706	1450
Mac McKee	Utah Water Research Laboratory, Director	3188	8200
Vincent Wickwar	Faculty Senate President	3641	4405
Bryce Fifield	Center for Persons with Disabilities, Director	2816	1987
Richard Clement	Dean of Libraries	2631	3000
 <u>Students</u>			
Ben Croshaw	Academic Senate President	1726	0105
Todd Redmon	Science Senator	7441	0105
Aaron Davis	ASUSU Graduate Student Representative	1736	TSC 326

APPENDIX G

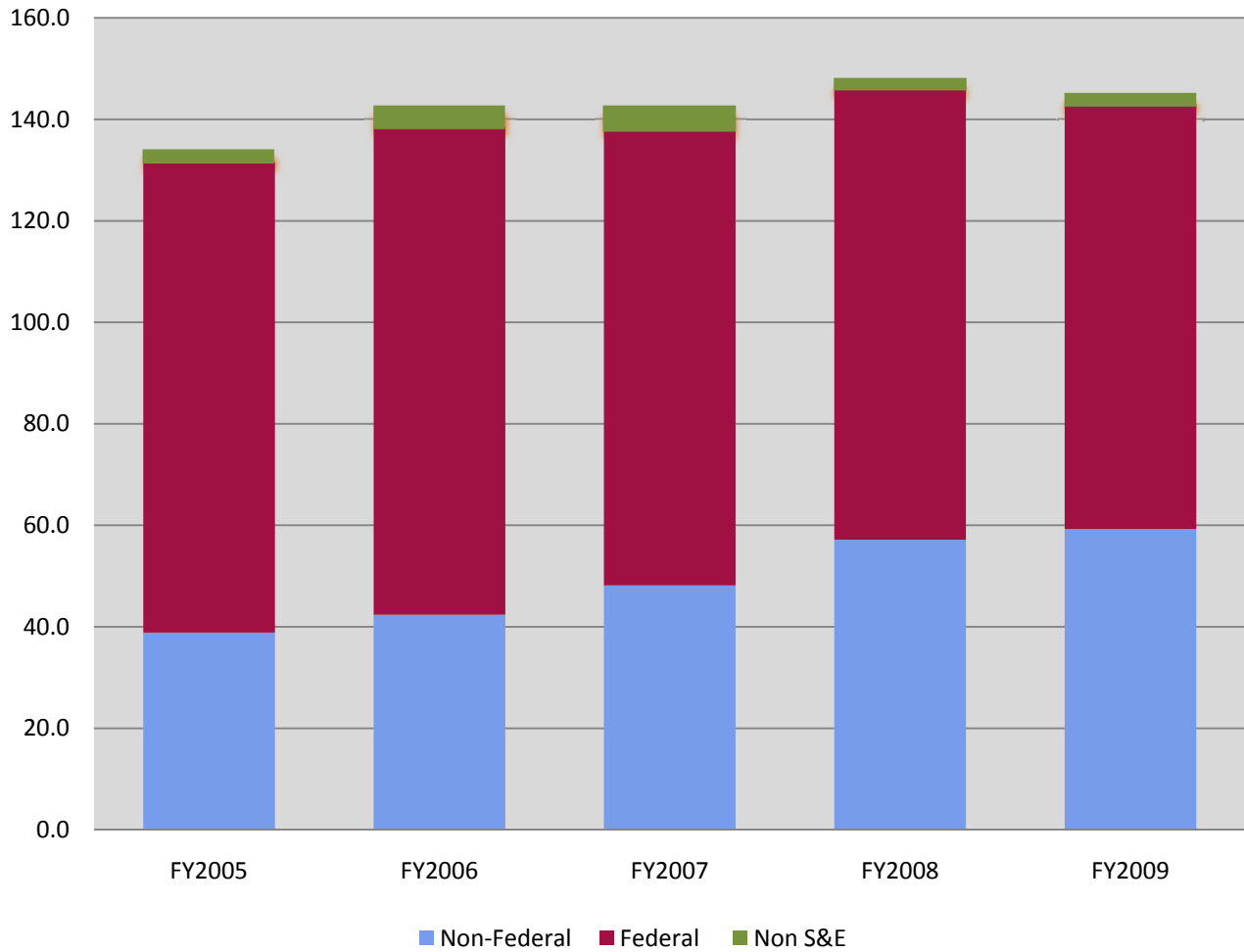
Utah State University
Analysis of Facilities and Administrative Costs Generated and Allocated
July 1, 2008 through June 30, 2009

College or Other Unit	Generated	Budget Allocations From 30% Return	Allocations From 70% Centrally Held	Total Budget Allocations	Budget as a % of Generated
College of Agriculture					
Dean's Office - Agriculture			67,146.00	\$67,146.00	N/A
Agriculture - Economics	\$32,141.37	\$9,642.41		9,642.41	30.00%
Agricultural Experiment Station	27,097.23	8,129.17		8,129.17	30.00%
Animal, Dairy and Veterinary Sciences	1,236,833.79	371,050.14	74,982.00	446,032.14	36.06%
Agricultural Systems Technology and Education	(19.42)	(5.83)		(5.83)	30.00%
Center of Epidemiologic Studies	141,376.86	42,413.06		42,413.06	30.00%
Nutrition and Food Science	54,508.01	16,352.40	81,066.00	97,418.40	178.72%
Plants, Soils and Biometeorology	71,895.23	21,568.57		21,568.57	30.00%
Total College of Agriculture	1,563,833.07	469,149.92	223,194.00	692,343.92	44.27%
College of Business					
Dean's Office - Business	2,335.77	700.73	43,665.00	44,365.73	1899.40%
Business Administration	84,233.92	25,270.18		25,270.18	30.00%
Economics	3,306.00	991.80		991.80	30.00%
Total College of Business	89,875.69	26,962.71	43,665.00	70,627.71	78.58%
College of Education and Human Services					
Dean's Office - Education and Human Services			176,167.00	176,167.00	N/A
Center for Persons with Disabilities	947,135.05	284,140.52	65,538.00	349,678.52	36.92%
Communicative Disorders	85,028.34	25,508.50	43,421.00	68,929.50	81.07%
Family Consumer and Human Development	100,456.65	30,137.00	5,003.00	35,140.00	34.98%
Health, Physical Education and Recreation					
Department	1,969.23	590.77	116,238.00	116,828.77	5932.71%
Instructional Technology	46,261.63	13,878.49	50,285.00	64,163.49	138.70%
Psychology	407,380.48	122,214.14	87,121.00	209,335.14	51.39%
School of the Future	1,523.96	457.19		457.19	30.00%
School of Teacher Education and Leadership	24,565.21	7,369.56	54,305.00	61,674.56	251.06%
Special Education and Rehabilitation	54,922.50	16,476.75		16,476.75	30.00%
Total College of Education and Human Services	1,669,243.05	500,772.92	598,078.00	1,098,850.92	65.83%
College of Engineering					
Dean's Office - Engineering	180,772.81	54,231.84	76,189.00	130,420.84	72.15%
Biological and Irrigation Engineering	200,607.10	60,182.13	262,464.00	322,646.13	160.83%
Civil and Environmental Engineering	352,421.98	105,726.59	102,880.00	208,606.59	59.19%
Electrical and Computer Engineering	128,429.99	38,529.00	146,998.00	185,527.00	144.46%
Engineering and Technology Education	107,295.23	32,188.57	42,015.00	74,203.57	69.16%
Mechanical and Aerospace Engineering	287,114.47	86,134.34	244,293.00	330,427.34	115.09%
Utah Water Research Laboratory	998,821.43	299,646.43	140,034.00	439,680.43	44.02%
Total College of Engineering	2,255,463.01	676,638.90	1,014,873.00	1,691,511.90	75.00%
College of Humanities, Arts and Social Sciences					
Dean's Office - Humanities, Arts and Social Sciences	122,962.41	36,888.72	40,008.00	76,896.72	62.54%
Art			7,000.00	7,000.00	N/A
English	540.33	162.10		162.10	N/A
History			2,800.00	2,800.00	N/A
Intensive English				-	N/A
Interior Design			13,058.00	13,058.00	N/A
Journalism and Communication	294.02	88.21		88.21	30.00%
Landscape Architecture and Environmental Planning	18,834.16	5,650.25	31,731.00	37,381.25	198.48%

Languages and Philosophy			5,000.00	5,000.00	N/A
Music			16,302.00	16,302.00	N/A
Political Science	(68.19)	(20.46)	11,470.00	11,449.54	N/A
Sociology, Social Work and Anthropology	97,807.03	29,342.11	32,500.00	61,842.11	63.23%
Total College of Humanities, Arts and Social Sciences	240,369.76	72,110.93	159,869.00	231,979.93	96.51%
College of Natural Resources					
Dean's Office - Natural Resources	-\$29.63	-\$8.89	\$43,311.00	\$43,302.11	N/A
Aquatic, Watershed and Earth Resources	328,354.50	98,506.35	94,498.00	193,004.35	58.78%
Ecology Center	50,313.06	15,093.92	13,014.00	28,107.92	55.87%
Environment and Society	122,394.35	36,718.31	42,833.00	79,551.31	65.00%
Forest, Range and Wildlife Sciences	340,627.68	102,188.30	70,500.00	172,688.30	50.70%
Total College of Natural Resources	841,659.96	252,497.99	264,156.00	516,653.99	61.39%
College of Science					
Dean's Office - Science			70,224.00	70,224.00	N/A
Biology	334,981.75	100,494.53	44,945.00	145,439.53	43.42%
Center for Atmospheric and Space Sciences	409,453.77	122,836.13		122,836.13	17.08%
Chemistry and Biochemistry	166,455.05	49,936.52	20,000.00	69,936.52	42.02%
Computer Science	226,904.00	68,071.20	53,400.00	121,471.20	53.53%
Geology	124,572.31	37,371.69	20,000.00	57,371.69	46.05%
Mathematics and Statistics	53,588.54	16,076.56	61,383.00	77,459.56	144.55%
Physics	129,475.25	38,842.58	46,930.00	85,772.58	66.25%
Total College of Science	1,445,430.67	433,629.21	316,882.00	750,511.21	51.92%
Vice President - University Extension					
Cooperative Extension				-	N/A
Extension Agriculture and Natural Resources	110,065.20	33,019.56		33,019.56	30.00%
Extension Field Staff	61,425.04	18,427.51		18,427.51	30.00%
Extension Youth Programs	19,248.80	5,774.64		5,774.64	30.00%
Uintah Basin Center	18,334.70	5,500.41		5,500.41	30.00%
Total Vice President - University Extension	209,073.74	62,722.12	-	62,722.12	30.00%
International Programs	-	-	179,259.00	179,259.00	N/A
Total International Programs	-	-	179,259.00	179,259.00	N/A
Vice President - Student Administration and Services					
Campus Recreation	69,784.39	20,935.32		20,935.32	30.00%
Student Support Services	19,942.88	5,982.86		5,982.86	30.00%
Student Wellness	107.70	32.31		32.31	30.00%
Vice President for Student Services	10,221.49	3,066.45		3,066.45	30.00%
Undergraduate Scholarships and Recruitment			77,000.00	77,000.00	N/A
Total Vice President - Student Administration and Services	100,056.46	30,016.94	77,000.00	107,016.94	106.96%
Vice President - Information Technology					
Information Technology	20.20	6.06	-	6.06	30.00%
Total Vice President - Information Technology	20.20	6.06	-	6.06	30.00%
Utah State University Research Foundation					
Space Dynamics Laboratory	12,481,232.00	12,481,232.00		12,481,232.00	100.00%
Total Utah State University Research Foundation	12,481,232.00	12,481,232.00	-	12,481,232.00	100.00%
School of Graduate Studies	9,535.09	2,860.53	300,263.00	303,123.53	3179.03%
Total School of Graduate Studies	9,535.09	2,860.53	300,263.00	303,123.53	3179.03%
Total Colleges and Non-Academic Units	20,905,792.70	15,008,600.23	3,177,239.00	18,185,839.23	86.99%
Support of Infrastructure					
Vice President - Research					
Center for Advanced Nutrition	\$109,601.01	\$32,880.30		\$32,880.30	30.00%
Center for High Performance Computing	1,625.20	487.56	\$207,761.00	208,248.56	N/A

Center for Biofuels	47,369.15	14,210.75		14,210.75	30.00%
Disallowance Account			50,000.00	50,000.00	N/A
Grant Writer/Faculty Grantwriting Workshop			168,573.00	168,573.00	N/A
Internet II			100,600.00	100,600.00	N/A
Faculty Activity Database			35,000.00	35,000.00	N/A
Technology Commercialization Office			500,000.00	500,000.00	N/A
Women and Gender Research Institute			34,000.00	34,000.00	N/A
URCO			13,000.00	13,000.00	N/A
Undergraduate Research			39,000.00	39,000.00	N/A
Washington Based Support			191,400.00	191,400.00	N/A
Total Vice President - Research	158,595.36	47,578.61	1,339,334.00	1,386,912.61	N/A
Vice President - Business and Finance					
Accounting and Financial Reporting			168,152.00	168,152.00	N/A
Controller's Office			115,669.00	115,669.00	N/A
Facilities and Administrative Cost Study			272,232.00	272,232.00	N/A
Federal Single Audit			27,920.00	27,920.00	N/A
Purchasing			25,869.00	25,869.00	N/A
Total Vice President - Business and Finance	-	-	609,842.00	609,842.00	N/A
Total Support of Infrastructure (% is computed on total Facilities and Administrative costs generated from all units)	158,595.36	47,578.61	1,949,176.00	1,996,754.61	N/A
Vice President - Research					
Biotechnology Bond			792,318.00	792,318.00	N/A
Building 620 Bond Payment			579,839.00	579,839.00	N/A
Total Vice President - Research			1,372,157.00	1,372,157.00	N/A
Total	\$21,064,388.06	\$15,056,178.84	\$6,498,572.00	\$21,554,750.84	102.33%

USU Scientific and Engineering Expenditures



Millions of Dollars

	FY2005	FY2006	FY2007	FY2008	FY2009
Non-Federal	38.9	42.4	48.2	57.2	59.3
Federal	92.7	96.2	89.9	88.9	83.7
Total S&E	131.6	138.6	138.1	146.1	143
Non S&E	2.6	4.3	4.7	2.1	2.2
Total Research Exp.	134.2	142.9	142.8	148.2	145.2

APPENDIX I

VPR SEED FUNDING PROGRAMS

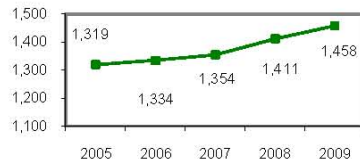
PROGRAM	ELIGIBILITY	FUNDING	NOTES	REQ. OUTCOME
<u>Grant-Writing Experience Through Mentorship (GEM)</u>	Tenure-eligible asst. profs, research asst. profs., or research professionals with ≤ 4 yrs in rank	1-yr, \$5,000 max (semiannual)	Requires active collaboration between the junior faculty member and a successful senior colleague. Funds cannot be used for salary support of junior faculty member, but mentors can receive \$1,000.	Develop and submit an external grant proposal within 3 mo of project completion Serve on review panel for 2 yrs afterward.
<u>Research Catalvst (RC)</u>	All tenured or tenure-eligible faculty, research faculty, or other USU research professionals	1-yr, \$20,000 max (semiannual)	Funds can be used for 1 mo faculty salary support, student RA, travel required to do research, supplies and equipment needed to complete the project.	Develop and submit an external grant proposal within 3 mo of RC award end date.
<u>Seed Program To Advance Research Collaboration (SPARC)</u>	Same as RC, but must also engage faculty from more than 1 dept, research center, college or institution	1-yr, \$35,000 max (semiannual)	Funds use is same as above plus travel to meet with collaborators or representatives of funding agencies. To obtain full award level, PIs must utilize a professional proposal development service.	Develop and submit an interdisciplinary external grant proposal seeking $\geq \$1M$ within 3 mo of SPARC award end date.

APPENDIX J

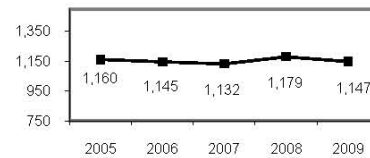
USU RESEARCH PERFORMANCE DASHBOARD – FY 2009

Sponsored Programs

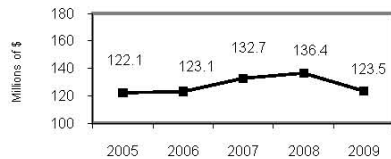
Number of Proposals Submitted³ ▲



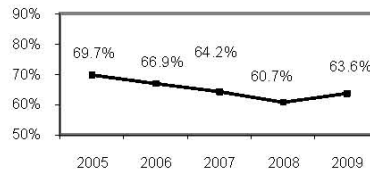
Number of Grants Awarded³ ●



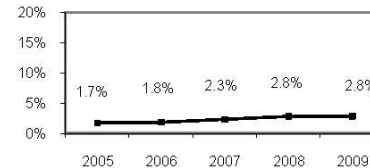
Total Amount of Contracts/Grants Awarded ●



Federal Funding as a Percent of Total Funding ●

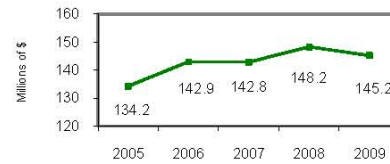


Industry Funding as a Percent of Total Funding ●

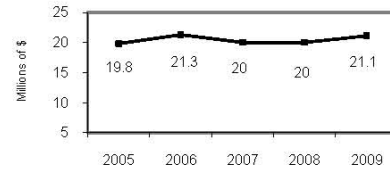


Research Funding

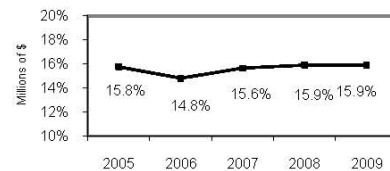
Total Research Expenditures¹ ▲



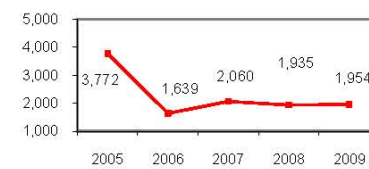
F&A (Indirect Costs) Recovered ●



Effective F&A Rate² ●

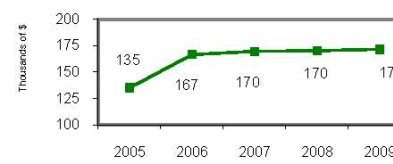


USU Non-Student Research-Related Jobs ▼

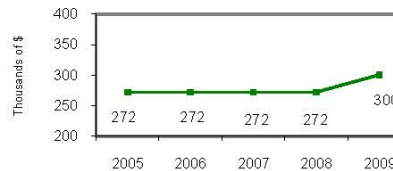


Student Research

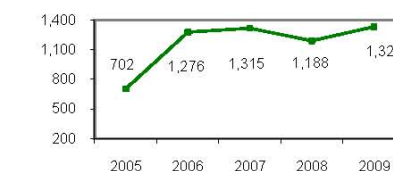
Funding for Undergraduate Research ▲



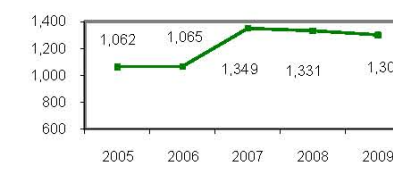
Funding for Graduate Research⁴ ▲



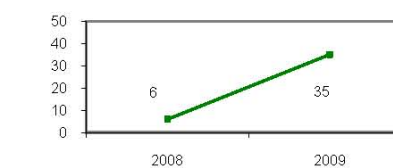
Undergraduate Research Employees Headcount ▲



Graduate Research Employees Headcount ▲



Undergraduate Research Transcript Scholars⁵ ▲



TREND KEY:

▲ higher

▼ lower

● no change

green = better

red = worse

black = neutral

FOOTNOTES:

¹ According to NSF Report

² Some funding agencies by policy limit the recovery of F&A costs to less than the negotiated rate. Effective F&A is the ratio between modified total direct costs and actual F&A collected.

³ One proposal can be awarded in multiple years.

⁴ Graduate research funding includes: fellowships, travel, and graduate student recruitment.

⁵ 2008 number includes students who graduated in December 2007 and May 2008.