

FY2009

Grants and Contracts Report

November 2, 2009

Annual Report on Externally Sponsored Projects



The University of South Dakota

OFFICE OF RESEARCH &
SPONSORED PROGRAMS

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Executive Summary

In FY09, The University of South Dakota (USD) submitted 354 proposals for a total request of \$181,916,807, approximately three times that proposed by USD in FY08. The proposal increase was due primarily to stimulus funds available in the National Science Foundation and National Institutes of Health. Also in FY09, USD received \$28,451,707 from 190 grants and contracts. When corrected for funding cycle notification anomalies, this represents approximately \$30 million in awards, which maintains USD at a funding level similar to recent years.

The College of Arts & Sciences attracted \$8.4 million in grants and contracts in FY09, a three-fold increase over the last 5 years. This college now accounts for 30% of dollars for sponsored projects across the university, and is home to one of the Governor's new research centers, CUBED, focused on physics experiments for the underground lab at the Homestake mine. Awards for Biomedical Engineering, a doctoral program assigned to the Graduate School and located at the Graduate Education and Applied Research Center in Sioux Falls, doubled from FY08 to FY09, reaching three-quarters of a million dollars. The difficult funding situation at the National Institutes of Health, in addition to restructuring of the partnership embodied by Sanford Research/USD, contributed to reduced funding in the Sanford School of Medicine. Awards in the medical school totaled about \$13.9 million, a decrease of 15% from FY08. New funds infused into federal agencies in spring 2009 provided opportunities for new proposals, but also slowed official notification of awards, thus delaying to FY10 several major grants, such as the renewal of the multi-million dollar SD BRIN grant in the Sanford School of Medicine and award of the new IGERT grant for the College of Arts & Sciences.

Dollars awarded for research outstripped that for public service in FY09, with 67% of awarded dollars received for research activities and 27% for service. Federal funding represented 74% of USD's awards in FY09, and dollars from the Department of Health and Human Services was 67% of the federal funding.

As reported in the most recent version of the *Academic Research and Development Expenditures* (FY2007), published by the National Science Foundation, USD's relative position among peer institutions was not improved. Nonetheless, comparison of the sources from which other institutions garnered research support offers valuable strategies, such as diversifying its sponsor portfolio, for USD to consider. USD has made gains by increasing funding from the U.S. Department of Energy and the National Science Foundation and developing relationships with the Department of Defense.

With a liberal arts foundation, USD historically has not had an applied research focus. However, with the opening of the Graduate Education and Applied Research Center in April 2009, there are opportunities for interactions with small business partners; in FY09, USD licensed technology for anti-microbial materials. Moreover, on the Vermillion campus, funding from the National Science Foundation and the Department of Energy has stimulated renewable energy research that will lead to invention disclosures.

Overall, USD experienced gains in some areas and losses in others in FY09. It is clear that the strategy of focusing faculty talent in niche areas in which USD has strength and aggressively pursuing multiple funding avenues has yielded substantial gains. Application of this approach more broadly across campus is key to USD's success in reaching its sponsored projects goals in future years.

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Abbreviations: BRIN/INBRE, Biomedical Research Infrastructure Network/ IDeA Network of Biomedical Research Excellence; COBRE, Center of Biomedical Research Excellence; EPSCoR, Experimental Program to Stimulate Competitive Research; DHHS, Department of Health & Human Services; DOD, Department of Defense; DOE, Department of Energy; IDeA, Institutional Development Award (at NIH); NIH, National Institutes of Health; NSF, National Science Foundation; USD, The University of South Dakota.

Introduction

The following pages provide a snapshot of sponsored activities at USD¹ in FY09, with comparison to records from previous years and other universities. While the data are telling in many ways – addressing USD’s successes and challenges – there are limitations inherent in the data. Thus, the reader is advised to consider trends and to recognize that the university fiscal year is an arbitrary time period in the world of externally funded projects. Nonetheless, we measure grants and contracts received with an official “signature” between July 1 and June 30 to assess our progress in attracting sponsors for our contributions in research, service, and instruction.

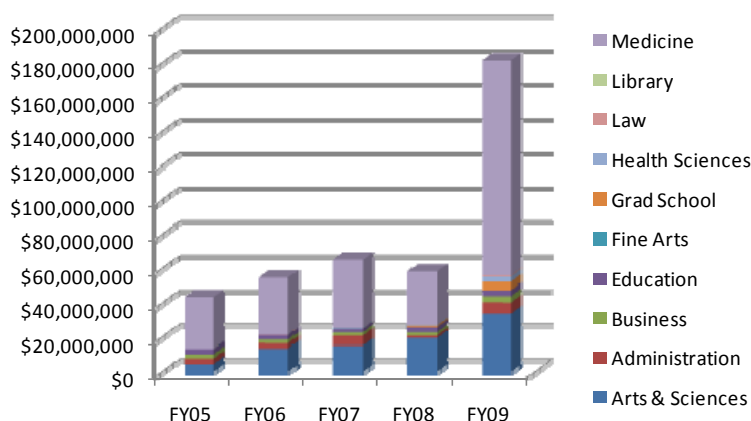
Proposals Submitted

FY09 brought a 15% increase in the number of proposals submitted, compared to FY08, and a three-fold increase in the dollar amount requested. The record amount of dollars proposed (~\$182M) was due, in large measure, to the availability of stimulus dollars at the National Science Foundation (NSF) and National Institutes of Health (NIH). Each academic and administrative unit showed increased proposal activity during this past fiscal year (Table 1 and Figure 1). Proposal activity in the Graduate School emanated from the Biomedical Engineering program.

Table 1: Proposals Submitted in FY09, by College/School

College/School	Number	Amount
Arts & Sciences	125	\$34,225,440
Administration	20	\$6,585,995
Business	16	\$3,727,684
Education	26	\$3,402,282
Fine Arts	2	\$18,300
Grad School	10	\$4,690,796
Health Sciences	13	\$2,979,175
Law	2	\$661,648
Medicine	140	\$125,625,487
TOTAL	354	\$181,916,807

Figure 1: Five-year Trend in Dollar Amounts Proposed, by College/School



¹ Abbreviations are found on page 2.

Awards Received

Between July 1, 2008, and June 30, 2009, USD received 190 “signed” grants and contracts totaling approximately \$28.5M (Table 2). There were, in addition, several awards for which USD received unofficial notices prior to June 30, with the official documents arriving after July 1; these awards are not counted here. Also, sponsors occasionally award multiple years of funding in one fiscal year, or send award notices for two budget years within the same fiscal year, *i.e.*, July 1 and the following June 30. Only Figure 3, which shows long-term funding trends, is corrected for these funding anomalies and only for major awards; all other tables and figures show awards strictly by date official notification was received. The uncorrected FY09 awards total (\$28,451,707) is a 5% increase over FY08 (\$27,104,110).

As shown in Table 2, the College of Arts & Sciences and the School of Medicine account for 30% and 49%, respectively, of all awarded dollars. This is a significant upsurge for Arts & Sciences, which increased its awards from \$4.9M in FY08 to \$8.4M in FY09; and a decrease for Medicine from \$16.2M in FY08 to \$13.9M in FY09. All other units combined accounted for 21-22% of awarded dollars, comparable to the previous fiscal year.

Table 2: FY09 Awards to Colleges and Schools, by Source of Funds

College/School	All Sources	Federal	State	Private	Other Nonprofit
Arts & Sciences	\$8,432,939	\$4,038,786	\$4,196,131	\$64,297	\$133,724
Administration	\$1,574,765	\$1,420,526	\$47,239	\$3,000	\$104,000
Business	\$1,432,062	\$799,841	\$507,221	\$50,000	\$75,000
Education	\$1,974,798	\$1,667,595	\$130,603		\$176,600
Fine Arts	\$500	\$500			
Grad School	\$763,013	\$753,013		\$10,000	
Health Sciences	\$314,841	\$269,023	\$20,000		\$25,818
Law	\$48,025	\$48,025			
Medicine	\$13,910,765	\$11,912,385	\$1,670,893	\$150,000	\$177,487
Total	\$28,451,707	\$20,909,694	\$6,572,087	\$277,297	\$692,629

In the College of Arts & Sciences, growth in awards occurred in several departments, most notably Physics, Psychology, and the Government Research Bureau (Table 3). Physics dollars include the multi-year award for a new Governor’s research center (CUBED) and NSF funding. Two new grants from NIH for Psychology faculty support research focused on alcohol and stress. The Departments of Chemistry and Computer Science also increased their funding in FY09, whereas Biology registered a small decrease in awards due primarily to the timing of award notices for multi-year grants – these funds will appear in FY10 totals.

Table 3: FY09 Awards to Departments in the College of Arts & Sciences, by Source of Funds

Arts & Sciences Departments	All Sources	Federal	State	Private	Other Nonprofit
Biology	\$823,973	\$753,942	\$70,031		
Chemistry	\$2,314,670	\$1,590,929	\$723,741		
Computer Science	\$608,114	\$608,114			
Communication Disorders	\$2,560			\$2,560	
English	\$52,500	\$46,000	\$6,500		
Earth Science & Physics	\$3,547,186	\$187,088	\$3,360,098		
Government Research Bureau	\$253,566	\$116,020	\$17,228	\$44,130	\$76,187
Math	\$13,500	\$7,500			\$6,000
Political Science	\$15,207			\$15,207	
Psychology	\$801,663	\$729,193	\$18,533	\$2,400	\$51,537
Total	\$8,432,939	\$4,038,786	\$4,196,131	\$64,297	\$133,724

Table 4 provides data on awards received by departments and divisions in the School of Health Sciences and the Sanford School of Medicine. The School of Health Sciences saw an increase of almost \$200,000, with most of its funding from federal sources. In the Sanford School of Medicine, 94% of the school's grants and contracts were for activities in Basic Biomedical Sciences, Center for Disabilities, and Sanford Research/USD. The Center for Disabilities awards increased about \$1.1M over FY08, with 82% of the Center's awards for public service and 17% for instruction. Restructuring of Sanford Research/USD led to the move of some faculty out of the university's employ, followed by grants relinquished or subawarded to Sanford Research/USD. This, in part, accounts for a decrease of ~\$3.8M in the Basic Biomedical Sciences. Note that faculty may have more than one departmental affiliation, and the grants and contracts generated by these faculty are only shown for the unit in which they *self identify*.

Table 4: FY09 Awards to the Schools of Health Sciences and Medicine, by Source of Funds

Department	All Sources	Federal	State	Private	Other Nonprofit
Health Sciences	\$314,841	\$269,023	\$20,000	\$0	\$25,818
Alcohol & Drug Abuse	\$200,958	\$180,958	\$20,000		
Dental Hygiene	\$25,818				\$25,818
Nursing	\$88,065	\$88,065			
Medicine	\$13,910,765	\$11,912,385	\$1,670,893	\$150,000	\$177,487
Basic Biomedical Sciences	\$4,903,549	\$4,428,003	\$457,546		\$18,000
Center for Disabilities	\$2,932,983	\$2,558,749	\$291,234		\$83,000
Family Medicine	\$32,010				\$32,010
Internal Medicine	\$44,477				\$44,477
Lab Medicine	\$394,000	\$394,000			
Ob/Gyn	\$30,000	\$30,000			
Sanford Research/USD	\$5,247,883	\$4,347,883	\$900,000		
Surgery	\$325,863	\$153,750	\$22,113	\$150,000	
Total	\$14,225,606	\$12,181,408	\$1,690,893	\$150,000	\$203,305

Historical Trends in Awards

Table 5 and Figure 2 display historical trends in the number and dollar amount of awards – although these are not corrected for multiple budget year funding in a fiscal year. The number of awards received on behalf of several units increased in FY09, and the most dramatic increase in dollars awarded was seen in the College of Arts & Sciences.

Table 5: Historical Trend in Number of Awards Received, by College/School

College/School	FY05	FY06	FY07	FY08	FY09
Arts & Sciences	54	47	38	50	58
Administration	13	12	12	15	15
Business	17	20	17	14	16
Education	18	19	16	12	21
Fine Arts	3	1		1	1
Graduate School				5	7
Health Sciences				1	8
Law	1		1	1	1
Library	2				
Medicine	82	87	71	73	63
Total	190	186	155	172	190

Figure 2: Total Grant and Contract Dollars for Five Units, FY05 to FY09
(not adjusted for multi-year funding in individual fiscal years)

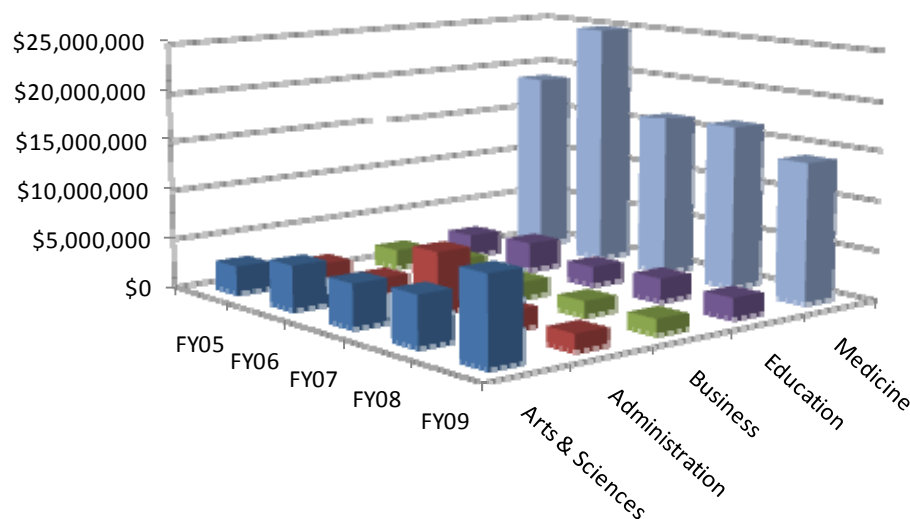
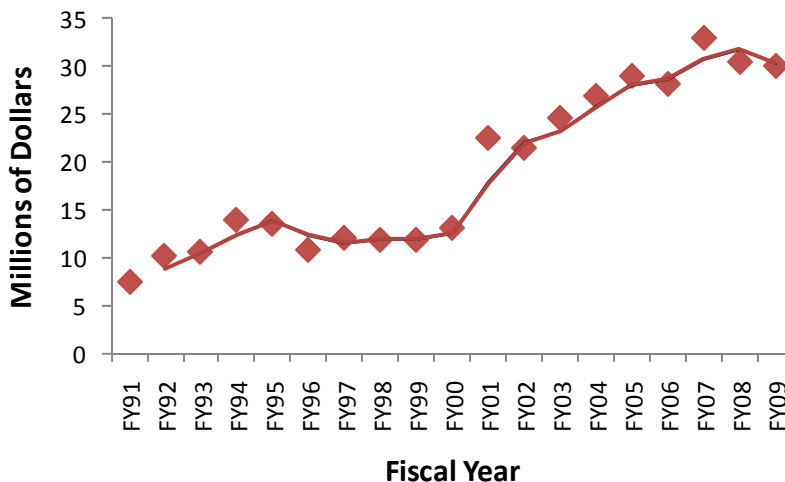


Figure 3, which is corrected to show only one grant budget year per award per fiscal year, illustrates the growth of awards between FY00 and FY06 in response to the doubling of the NIH budget between 1998 and 2003. Thereafter, USD’s total awards plateau at ~\$30M. While USD has successfully increased its funding from federal agencies including NSF, Department of Education, Department of Energy (DOE) and Department of Defense (DOD) – a combined 1.7-fold increase from FY05 to FY09 – funding from the Department of Health and Human Services (DHHS) dropped from a high of \$22.3M in FY06 to \$13.8M in

FY09. The most notable drop has been in NIH funding, which was ~\$10.4M lower in FY09 than FY06. Some reduction can be accounted for simply by shifts of the NIH funding year cycle for major awards, however, relinquishing the cardiovascular Center of Biomedical Research Excellence (COBRE) to Sanford Research/USD and the reduced number of NIH RO1 awards in FY09 compared to FY06 affect USD's funding totals. That is, increases in federal funding outside of DHHS and awards from state sources were not sufficient to offset the continued decline in DHHS funds.

Figure 3: Historical Trends in Grants and Contracts

(for major multi-year grants, recent year totals are adjusted to show only one budget year per fiscal year)



Awards by Project Type

In FY09, the *number* of awards for research and public service were comparable, 77 and 82 respectively (Table 6), and constituted 84% of all awards received. In contrast, most of the awarded *dollars* were for research (Figure 4), which represents a shift in the balance between research and public service awards seen in previous years. While research dollars comprised about two-thirds of the awarded dollars in FY09, they were almost 90% of the proposed dollars (Figure 5), demonstrating, most likely, the greater competition for research grants compared to other sponsored projects.

Table 6: FY09 Awards to Colleges and Schools, by Project Type

College/School	Total	Instruction	Research	Public Service	Academic Support	Student Services	Scholarship
Arts & Sciences	58	7	33	18			
Administration	15	2		7	1	5	
Business	16		2	14			
Education	21	1	1	15	2		2
Fine Arts	1		1				
Grad School	7		7				
Health Sciences	8	4		3			1
Law	1			1			
Medicine	63	4	33	24	1	1	
Total	190	18	77	82	4	6	3

Figure 4: Distribution of Award Dollars among Project Types

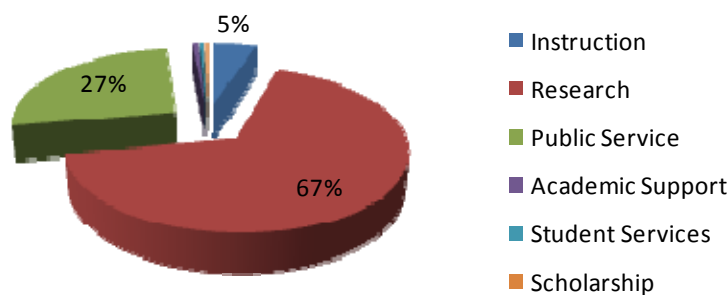
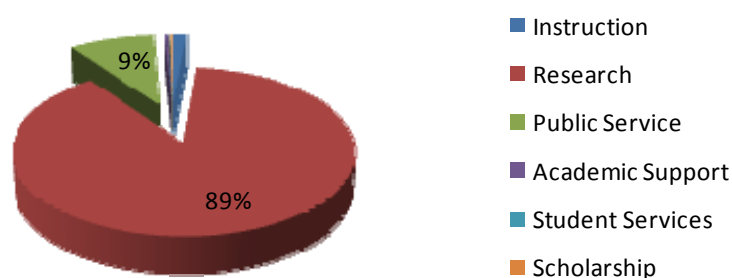


Figure 5: Distribution of Proposal Dollars among Project Types



Awards by Funding Source

Federal agencies continued to be USD’s major sponsors, although the proportion of awarded dollars from federal sponsors dropped about 10% in FY09 to approximately three-quarters of all awarded funds (Figure 6). The Governor’s research center grant and Board of Regents’ incentive grant increased the state proportion of total awards to 23%, the highest in several years. Industry and non-profit sponsors contributed minimally to USD’s overall funding portfolio. As noted earlier, DHHS is the primary federal sponsor of USD projects, although the dollar amount and proportion of DHHS funding decreased in FY09 (Figure 7).

Figure 6: Distribution of FY09 Award Dollars by Funding Source

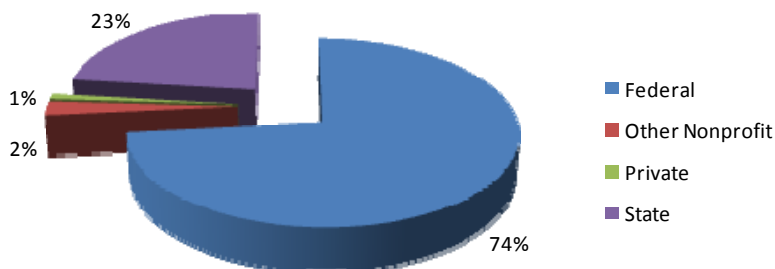
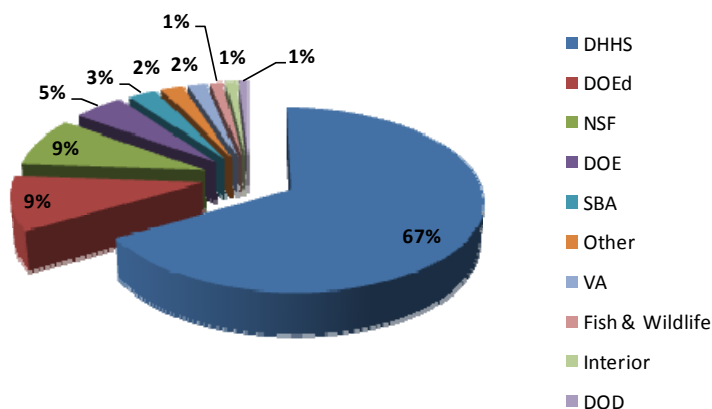


Figure 7: FY09 Award Dollars by Federal Agency

Research Expenditures: Comparison to Other Institutions

The “Survey of Research and Development Expenditures at Universities and Colleges” is an annual questionnaire from NSF in which academic institutions self-report their research expenditures from various sources. These expenditures do not include funds for public service, instruction, or other activities outside of research, although expenditures may be from sources external or internal to the college or university. Each year the NSF publishes the *Academic Research and Development Expenditures* document, which tracks research dollars among all private and public institutions reporting their expenditures. In the tables that follow, *research* expenditures for USD and several comparable and aspirational peer institutions are shown – over time, from various sources, and from federal agencies. Note that the most recent data available are FY08 (for USD) and FY07 for all other institutions.

Expenditures for research at USD were over \$22.7M in FY08, an increase following a drop in FY07 (Table 7). Unlike awards received (discussed in the previous sections), expenditures better represent ongoing activities and are unaffected by funding cycles or multiple year awards. Like awards received, USD research expenditures reached a plateau at ~\$22M over the last 3 years. Industry funding in particular is absent from USD’s expenditure history.

Table 7: USD Research Expenditures Reported to the NSF Survey
(in thousands of dollars)

Fiscal Year	Total	Federal	State/Local	Industry	Institution	All Other
FY08	\$22,742	\$17,569	\$2,411	\$0	\$1,304	\$1,458
FY07	\$21,473	\$16,683	\$2,183	\$0	\$1,180	\$1,427
FY06	\$22,892	\$17,502	\$2,486	\$0	\$1,213	\$1,696
FY05	\$18,681	\$15,448	\$1,160	\$0	\$758	\$1,315
FY04	\$15,523	\$12,849	\$126	\$0	\$1,422	\$1,126
FY03	\$11,148	\$8,308	\$226	\$0	\$877	\$1,737
FY02	\$8,368	\$5,830	\$174	\$0	\$681	\$1,683

*FY08 data are the most recent data available. FY09 data will be available in early 2010.

A set of institutions with comparable research funding was developed, based on FY06 research expenditures. Among these institutions (Table 8), three reported expenditure increases of \$5M or more in FY07 compared to FY06, and three reported increases of \$2M to \$4M. With decreased expenditures in FY07 relative to FY06, USD was not able to improve its standing among these peer institutions.

Table 8: Institutions with Comparable Research Expenditures, by Source of Funds
(research expenditures in millions of dollars for FY2007, as reported to the NSF Survey)

Institution	Total	Federal	State/Local	Industry	Institutional	All Other
University of Texas - Dallas	\$46.5	\$17.8	\$15.3	\$4.1	\$2.3	\$6.9
South Dakota State University	\$39.0	\$16.7	\$10.6	\$1.8	\$2.3	\$7.6
University of Massachusetts - Lowell	\$34.8	\$20.0	\$1.0	\$5.2	\$8.6	\$0.0
University of Missouri - Kansas City	\$26.9	\$16.5	\$0.0	\$0.4	\$8.9	\$1.0
University of South Alabama - Mobile	\$25.9	\$16.4	\$0.2	\$3.0	\$6.2	\$0.0
Marshall University	\$22.5	\$18.4	\$1.7	\$0.2	\$1.9	\$0.3
University of South Dakota	\$21.5	\$16.7	\$2.2	\$0.0	\$1.2	\$1.4
Idaho State University	\$19.9	\$11.9	\$0.2	\$3.1	\$4.0	\$0.7
University of Massachusetts - Dartmouth	\$19.5	\$11.5	\$2.2	\$0.8	\$4.9	\$0.3

It is noteworthy that several universities have significant expenditures from state (University of Texas – Dallas, South Dakota State University), institutional (University of Massachusetts – Lowell, University of Missouri – Kansas City) or industrial sources (University of Texas – Dallas, University of Massachusetts – Lowell). When expenditures from federal sources are considered instead, USD is at the median of expenditures (\$16.7M) and has the highest expenditures from DHHS sources (Table 9).

Table 9: Institutions with Comparable Research Expenditures, by Federal Agency
(research expenditures in millions of dollars for FY2007, as reported to the NSF Survey)

Institution	All Federal	DOD	DOE	HHS	NASA	NSF	USDA	Other
University of Massachusetts - Lowell	\$20.0	\$8.5	\$0.7	\$5.0	\$0.5	\$3.2	\$0.0	\$2.1
Marshall University	\$18.4	\$2.9	\$0.0	\$6.5	\$2.2	\$1.0	\$0.5	\$5.3
University of Texas - Dallas	\$17.8	\$5.9	\$0.5	\$5.9	\$0.5	\$4.4	\$0.0	\$0.6
South Dakota State University	\$16.7	\$0.4	\$0.4	\$1.5	\$1.5	\$2.9	\$6.5	\$3.6
University of South Dakota	\$16.7	\$0.3	\$0.0	\$14.1	\$0.0	\$1.7	\$0.5	\$0.1
University of Missouri - Kansas City	\$16.5	\$0.5	\$0.3	\$13.6	\$0.0	\$1.3	\$0.0	\$0.8
University of South Alabama - Mobile	\$16.4	\$0.0	\$0.0	\$10.4	\$0.0	\$1.4	\$0.0	\$4.5
Idaho State University	\$11.9	\$1.8	\$3.5	\$2.3	\$0.8	\$2.6	\$0.0	\$1.0
University of Massachusetts - Dartmouth	\$11.5	\$1.3	\$0.0	\$0.2	\$0.1	\$2.2	\$0.7	\$6.9

A set of “aspirational” peers was developed, based on approximate size of institution, rural location, or science focus. As shown in Table 10, USD has one-half to one-quarter of the research expenditures of

these institutions. In some cases, the research portfolios are skewed by institutional funds (*e.g.*, \$42.8M at the University of Wyoming; \$15.6M at the University of Montana) and state funds (*e.g.*, \$25M at the University of Idaho). Focusing exclusively on federal sources of research expenditures (Table 11), it is clear that these institutions have successfully implemented strategies to attract a median of \$2M to \$6M from each of the major federal sponsors. This suggests an important tactic for USD, that is, diversifying the sponsors, including federal sponsors, from which it seeks research funding. An interesting exception to the diversified portfolio characteristic is the University of Maryland – Baltimore County, which has leveraged its coastal location to garner funds from NASA, leading to more than \$23M in research expenditures in environmental sciences.

Table 10: Aspirational Peer Institutions, Research Expenditures by Source of Funds
(research expenditures in millions of dollars for FY2007, as reported to the NSF Survey)

Institution	Total	Federal	State/Local	Industry	Institutional	All Other
University of Idaho	\$83.4	\$46.1	\$25.0	\$0.9	\$9.7	\$1.7
University of Wyoming	\$79.7	\$25.5	\$6.1	\$2.3	\$42.8	\$2.9
University of Maryland - Baltimore County	\$67.0	\$49.5	\$2.2	\$0.8	\$12.5	\$2.1
University of North Dakota	\$63.0	\$44.6	\$2.6	\$7.5	\$7.1	\$1.2
University of Montana - Missoula	\$55.8	\$33.9	\$2.8	\$1.1	\$15.6	\$2.4
University of South Dakota	\$21.5	\$16.7	\$2.2	\$0.0	\$1.2	\$1.4

Table 11: Aspirational Peer Institutions, Research Expenditures by Federal Agency
(research expenditures in millions of dollars for FY2007, as reported to the NSF Survey)

Institution	All Federal	DOD	DOE	HHS	NASA	NSF	USDA	Other
University of Maryland - Baltimore County	\$49.5	\$2.9	\$0.1	\$2.6	\$23.2	\$0.1	\$0.0	\$20.5
University of Idaho	\$46.1	\$4.8	\$1.9	\$10.0	\$4.2	\$6.4	\$11.4	\$7.4
University of North Dakota	\$44.6	\$4.5	\$13.8	\$10.2	\$7.4	\$2.3	\$3.5	\$2.8
University of Montana - Missoula	\$33.9	\$1.9	\$0.4	\$10.0	\$1.3	\$7.6	\$5.1	\$7.5
University of Wyoming	\$25.5	\$2.0	\$1.5	\$6.1	\$0.7	\$8.5	\$5.3	\$1.4
University of South Dakota	\$16.7	\$0.3	\$0.0	\$14.1	\$0.0	\$1.7	\$0.5	\$0.1

Prospectus

As predicted, FY09 grants and contracts were comparable to FY08. Improved budgets at NIH and NSF, including strong funding in the EPSCoR/IDeA programs at these agencies, are an encouraging sign for future funding at USD and other universities as well. Proposals submitted in FY09 have already yielded awards to investigators who were unfunded for a year or more, and so it is likely that FY10 will show substantial growth beyond the 5% increase from FY08 to FY09. Several large scale pending proposals – such as the protein quality control and degradation COBRE proposal, DOE EPSCoR proposal for underground physics, and NSF proposal to build a lab for dark matter detection in the Homestake mine – hold promise for major boosts in award dollars in FY10 and beyond ... with the following caveat.

Some multi-year projects – specifically the neuroscience COBRE and Project EXPORT – will end or potentially enter a different phase of funding in FY10, and the Sanford School of Medicine in particular will need a solidified plan for its future external funding. Current discussions over development of an interdisciplinary neuroscience and behavioral science institute are timely, given the growth of research on brain injury, stress, and drug and alcohol use, funded by NIH and DOD and conducted by several faculty in the medical school and the Department of Psychology. These translational studies complement basic neuroscience research funded by the COBRE program.

Renewal of the NSF EPSCoR Research Infrastructure Improvement grant for 5 years, combined with 3 years of appropriated dollars for the South Dakota Catalysis Group, provides funding to fully establish solar energy research primarily in the Department of Chemistry. Seeking long-term support for a research center is a significant expectation for these researchers. Additionally, the scientific expertise in renewable energy may be partnered with research, education and outreach efforts in energy policy, law, business, and environment, thereby creating at USD an interdisciplinary faculty responsive to funding opportunities in energy, climate and environment.

Three strategies outlined previously continue to make sense for USD:

- 1) *Encourage faculty participation in multi-disciplinary or interdisciplinary “centers”.* Centers will be positioned to be nationally competitive by taking advantage of resources distinctive to USD, the state, and the region. To create the necessary critical mass in the centers, newly hired faculty will be encouraged to be active center researchers and recruited accordingly. Additionally, centers will engage highly motivated existing faculty who, although not currently active in sponsored research, have expertise that contributes unique capacity to the centers. The centers will be expected to submit high quality, multi-investigator grant proposals. Policies will tangibly reward participation in and success of centers.
- 2) *Develop strong relationships with sponsors.* Key sponsors – whether federal, non-profit, or private – will be identified, and development of strong relationships between the program officers and investigators will be promoted. Proposed projects will thus be well aligned with sponsor objectives, and opportunities will be created to inform the sponsors of potential future directions in which USD may be major players.
- 3) *Enhance proposal quality.* Resources will be redirected to assist in proposal preparation while the university concurrently increases its expectations for the quality of the proposals. Productive visits with program officers will be both expected and supported. Substantial internal review of proposals will be strongly encouraged, and external pre-review of proposals will become the standard for all major proposals. These tactics are anticipated to increase sustained funding, and will be particularly important in light of NIH’s new policy limiting resubmission of revised proposals.