



## State of Arizona Five-Year Strategic Plan FY 2009-2013

### EXECUTIVE SUMMARY

Founded in 1899, Northern Arizona University is a vibrant community committed to *teaching as learning, research as innovation, and service as shared leadership.*

#### **Mission**

To provide an outstanding undergraduate residential education strengthened by research, graduate and professional programs, and sophisticated methods of distance delivery.

#### **Values**

Excellence in Education	Offer a rigorous, high quality education to all students
Student Success	Place learner needs at the center of our academic and service planning, policies, and programs
Educational Access	Provide all qualified students with access to higher education
Diversity	Achieve multicultural understanding as a priority of educational and civic life
Integrity	Operate with fairness, honesty, and the highest ethical standards to sustain a community of trust
Civility	Support a civil, engaging, and respectful campus climate
Environmental Sustainability	Model environmentally responsible and sustainable operations and education

#### **Strategic Goals**

- Learning-centered university
- Student access, learning, persistence, and affordability
- Sustainability and stewardship of place
- Global engagement
- A culture of inclusion, civility, and respect
- A commitment to Native Americans
- Innovative, effective, and accountable practices

## **Passport to Global Learning, Discovery, and Engagement Near-Term Strategic Issues/FY09 Budget Request Initiatives**

### **Faculty Salaries**

For many years Northern Arizona University's faculty salaries have been last among the three Arizona universities and at the bottom of our peer institutions nationwide. Even with recent salary increases, the distance from the market has improved only marginally and the problem of recruiting and retaining faculty members persists. Providing Arizona with high quality education and issue-focused research is interconnected with the university's ability to attract and retain high quality faculty members with a deep commitment to teaching and active research agenda.

***FY 09-11 Investment: \$7 mil State match***

### **Flagstaff Campus Facilities**

The physical structures on the main campus are the first to be noticed by visiting prospective students and their parents, are an essential component of students' overall college experience, and ultimately, they facilitate learning. Four years ago the university has started addressing its critical capital needs through more significant investments. With three completely new and three renovated facilities, the university is on the right track to revitalize the capital infrastructure. Nonetheless, the classroom facilities used by undergraduate students are still among the most critical structures requiring immediate attention.

***FY 09 Investment: \$7.0 mil debt service***

### **Health Care Education for Arizona**

With Arizona's growing and aging population, expanding health care education is vital to the state's ability meet one of the most essential needs of its citizens. Currently, no university in Arizona offers a broad array of allied health professions. Thanks to the State and Regent appropriated dollars, Northern Arizona University is launching its most significant program initiative in two decades—expanding health professions programs on Flagstaff campus, in Phoenix, and in Yuma. The existing Flagstaff campus facilities cannot provide the spaces needed to accommodate expanded and improved health professions programs, so a new facility that allows for program integration and collaboration is needed. The new Health Professions facility will also address three of the "orange" category buildings on the Red/Orange Building List.

***FY 09 Investment: \$6.0 mil debt service***

### **Serving Rural Arizona**

Access to higher education will continue playing a major role in the state's competitiveness both nationally and globally. The Arizona university system is relatively well designed to address educational needs of its urban population. However, 23% of the state population lives outside

of two most densely populated areas—Maricopa and Pima counties. With 37 local campuses statewide and a promise to offer any program with at least 25 enrollments on site, the university is strongly committed to serve rural Arizona and to expand non-competing, educational opportunities in the metropolitan areas. With the state support the university is prepared to open new branch campuses—similar to recently opened Yuma branch campus—or higher education centers in Prescott, Lake Havasu City, and Tucson.

***FY 09 Investment: \$1.5 mil***

**Economic Development, Workforce Education, and Research**

With changing regional and state public agenda, the institution must adapt its structures and human resources to quickly respond to the needs of its stakeholders. The university with its tremendous intellectual assets and ability to realign its resources and leverage public-private partnerships is a key player in the regional economic development, workforce education, and solution-based research. As the public agenda’s focus on sciences, technology, engineering, and math (STEM) fields increases, the university is uniquely positioned to assist high schools in math and science courses and recruit, retain, and graduate highly qualified math and science teachers, an essential link in expanding the STEM pipeline.

***FY 09 Investment: \$4.2 mil growing to \$7.9 mil in FY13***

**Funding and FTE Budget Summary**

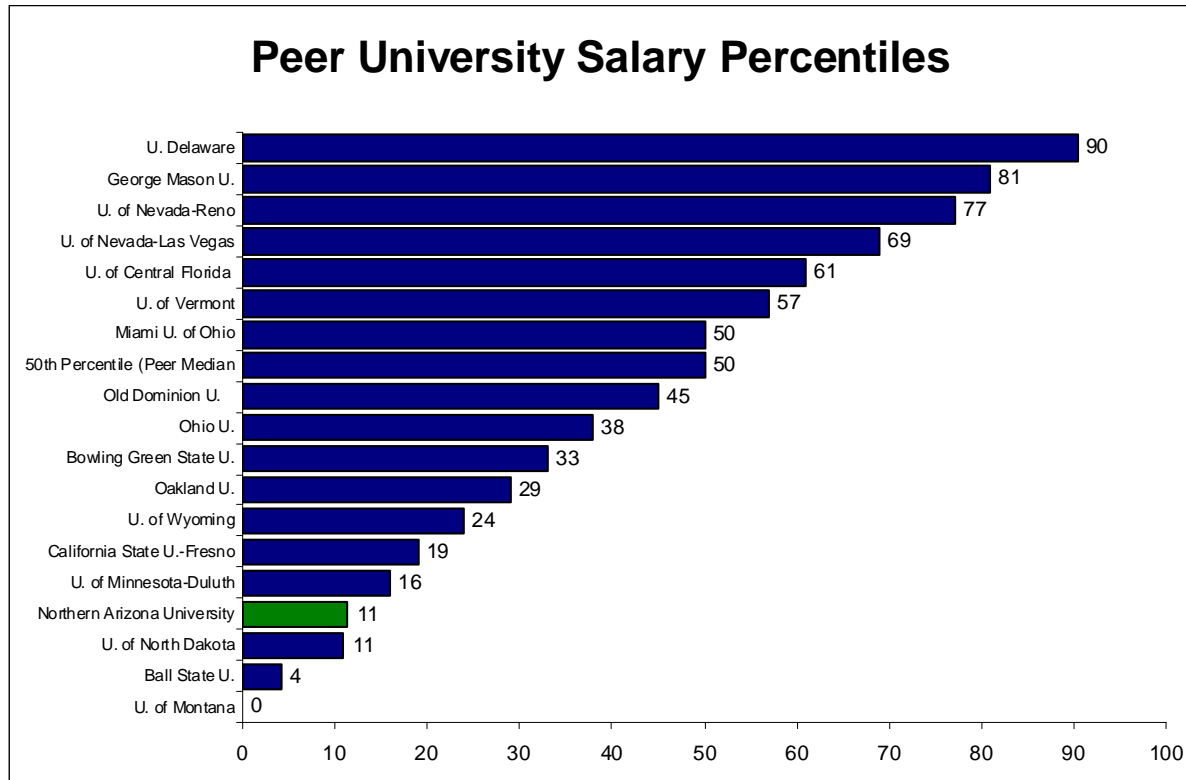
	<b>FY 2008</b>
General Funds	\$189,667,600
Other Appropriated Funds	\$47,788,300
Other Non Appropriated Funds	\$161,107,000
Federal Funds	\$46,939,100
<b>Budget Unit Total</b>	<b>\$445,502,000</b>
<i>FTE Positions</i>	2,174.80

## **Strategic Issue #1: Faculty Salaries**

### **Offer competitive faculty salaries by fiscal year 2012.**

#### **Background and Issue Statement:**

Below-the-market faculty salaries accompanied by a high cost of living in Flagstaff continue to pose a significant difficulty to recruit and retain highly qualified faculty.



According to the ACCRA Cost of Living Index for 2007 first quarter, the average home price in Flagstaff was \$473,500, 28% higher than the average home price in Phoenix. Average rent for a two bedroom apartment was \$886, 16% higher than a similar apartment in Phoenix. Composite cost of living was nearly 15% higher in Flagstaff as compared with Phoenix. New faculty being recruited to the university face a sticker-shock that is difficult to overcome. NAU's policy is to hire new assistant professors at market, but the university does not have the resources to compensate for the high cost of living.

#### **Strategy: Bring the faculty salaries to market competitiveness—50<sup>th</sup> percentile (median) of ABOR approved peer institutions—by fiscal year 2012.**

The university encounters a great difficulty hiring assistant professors and retaining faculty at the associate and full professor level. Our salaries are about \$14,000, \$10,000, and \$6,000 below the median salary of comparable institutions at the professor, associate professor, and assistant professor rank, respectively. In this fiscal year we awarded merit-based faculty salary increases up to 7% by combining the state funding specifically designated for salaries with funding received from enrollment

growth. With peer institutions increasing faculty salaries annually by 4% to 5% on average, we are only slowly improving faculty salary competitiveness and continuing to face difficulties to recruit and retain the best faculty. Unless the university's \$23.9 million competitive salary request is fully funded, faculty salaries will remain a critical infrastructure issue for years to come.

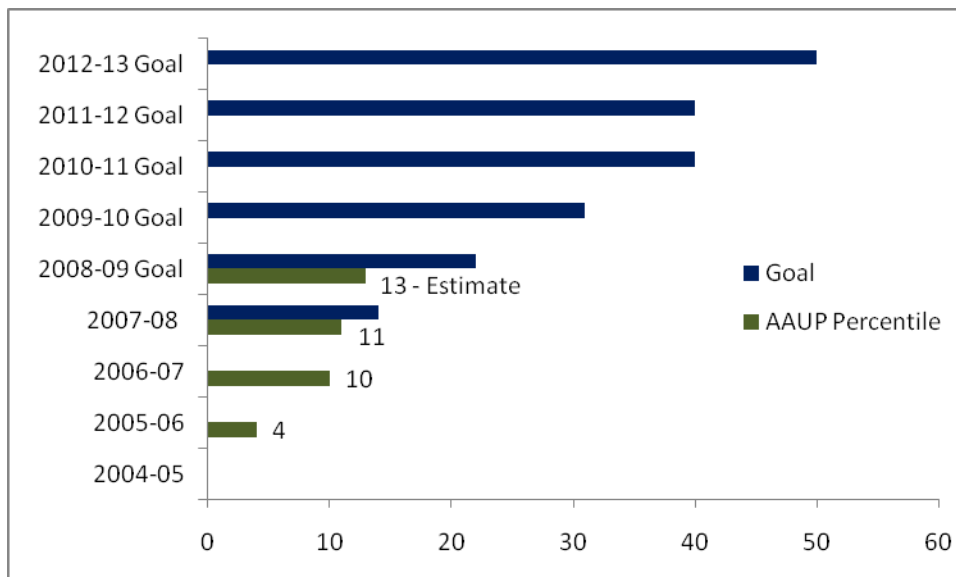
**Strategy Resource Assumptions**

	FY09	FY10	FY11	FY12	FY13
Faculty Salary Competitiveness Match*	\$2,500,000	\$2,500,000	\$2,500,000	*	*

\*In addition, the university will match \$2.5 million from its internal revenue each year. The total state appropriation increase would be \$7.5 million in FY11 and remains in base thereafter.

\*\*To make faculty and staff salaries fully competitive in FY09, \$23,918,200 would have to be appropriated.

**Strategy Performance Measure: AAUP Percentile Rank**



## **Strategic Issue #2: Flagstaff Campus Facilities**

**Revitalize Flagstaff campus infrastructure through maintenance, replacement, and renovation.**

### **Background and Issue Statement**

In the last four years, the university was able to remodel the College of Engineering and School of Communication buildings, replace the facility used by the W. A. Franke College of Business, and add a new laboratory facility and a building for Applied Research and Development. Currently, the classrooms on the third floor of the Liberal Arts building are being remodeled. While this represents a huge progress in improving campus infrastructure, key instructional and heavily used student services buildings require replacement or extensive. The positive trend of Flagstaff campus growth is making it difficult to replace or remodel facilities as quickly as needed.

### **Strategy #1: Remodel key instructional and heavily used student service buildings that are on the Red/Orange Building List<sup>1</sup>.**

The university is making progress addressing capital needs, but the task is overwhelming and many of the buildings suffering most are classroom facilities used by our undergraduate students, which is a rapidly growing population on the Flagstaff campus. The growth is good news for both the university and the state in addressing the need for baccalaureate education, but it means that the university has not been able to demolish red and orange buildings as new buildings are built. Key instructional buildings and heavily used student service buildings that are on the Red/Orange Building List and therefore need extensive renovation are: Anthropology Lab, Adel Math, Biological Science, Chemistry, Eastburn Education, Geology Building, Liberal Arts, the Learning Resource Center, the Eugene Hughes Hotel and Restaurant Management building, North Union, and Gammage.

### **Strategy #1 Resource Assumptions**

	FY09	FY10	FY11	FY12	FY13
Debt Service Coverage for Key Renovations	\$7,000,000	*	*	*	*

\*Added to FY09 base; remains in base thereafter.

<sup>1</sup> The Red/Orange Building List has its basis in a facilities condition index (FCI) which indicates the condition of each building. A desirable FCI is 0.02. An FCI of 0.5 - 0.10 is an indication that facilities are in fair condition. An FCI of 0.10 - 0.15 is an indication that facilities are in poor condition. An FCI greater than 0.15 is an indication that facilities are at risk for failure or non-functionality if significant renovation or replacement does not occur soon. The Red/Orange Building List refers to buildings with FCI>0.15—buildings that require replacement or extensive renovations.

**Strategy #2: Fully Fund Building Renewal Formula**

According to the building renewal allocation forecast, the university needs \$10,449,500 for FY09.

**Strategy #2 Resource Assumptions**

	FY09	FY10	FY11	FY12	FY13
Building Renewal Formula	\$10,449,500*				

\*Capital one-time funds not included in general appropriations

**Strategy 3: Provide maintenance and operational support for the expansion to the University Union.**

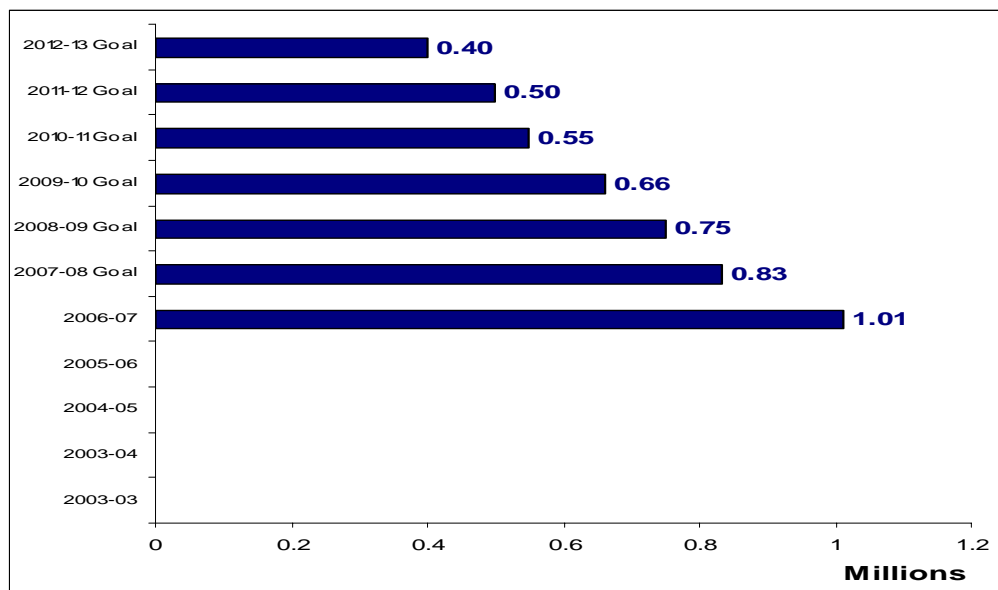
The 27,000 square foot expansion/renovation to the University Union includes dining capacity to meet student demand and student gathering/social space. The additional space, while enhancing student access and convenience, will allow for increased seating capacity and additional retail food concepts to support the increased volume experienced by dining services.

**Strategy #3 Resource Assumptions**

	FY09	FY10	FY11	FY12	FY13
Operations & Maintenance of New Facilities	\$221,100	*	*	*	*

\*Added to FY09 base; remains in base thereafter.

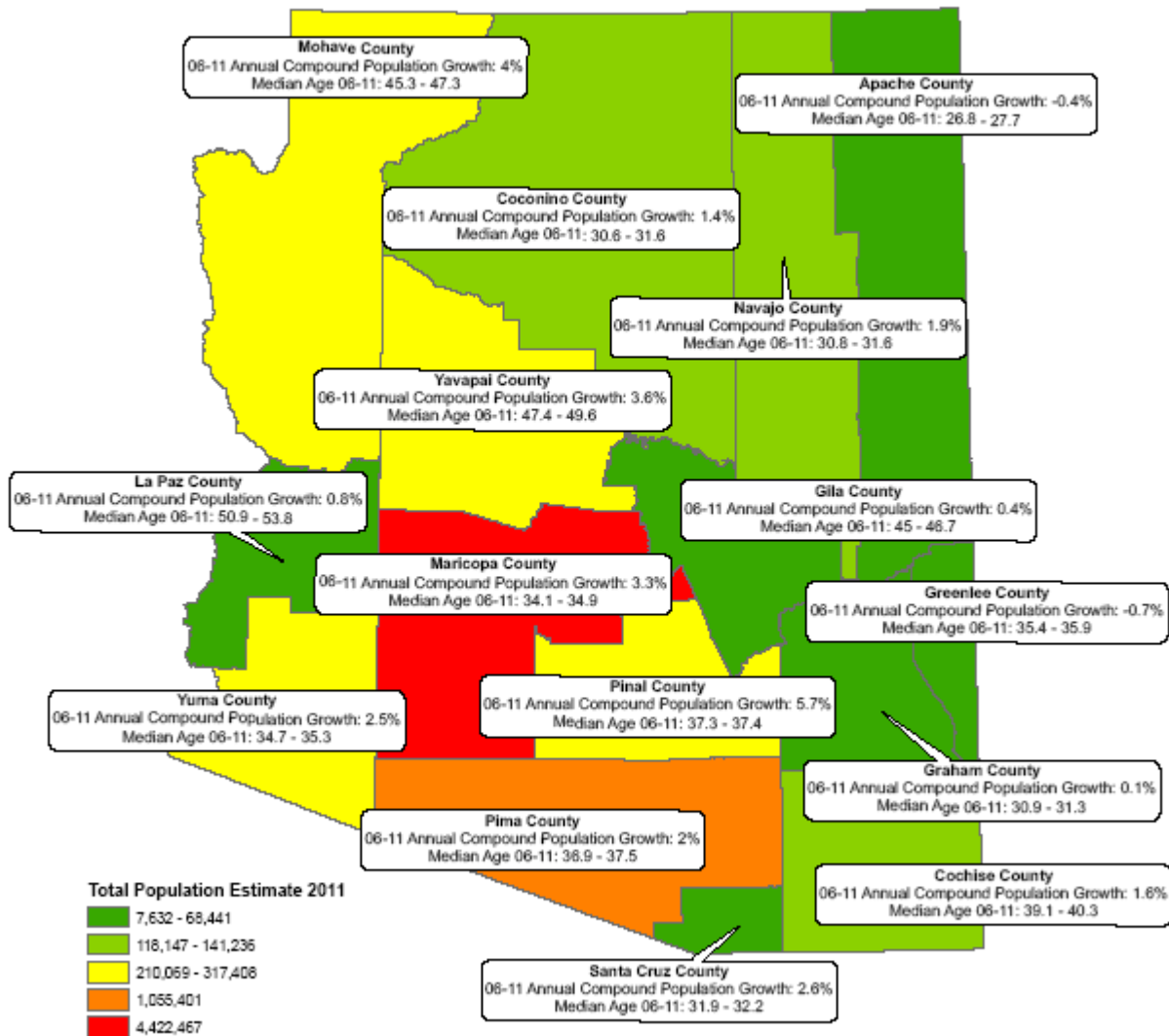
**Strategy #1, 2, and 3 Performance Measure: Square Footage of Facilities coded as “Red” or “Orange.”**



### **Strategic Issue # 3: Health Care Education for Arizona.** **Expand health professions programs on and off the main campus.**

**Background and Issue Statement**

In 2011, Arizona population is projected to reach 7,123,261, a 16% increase from 2006. The population in the age group 65+ will grow in the same timeframe by 24%, reaching 1,032,105. The state’s shortage of qualified health professionals in non-physician positions in addition to growing and aging population present a serious concern. The university with its newly formed College of Health and Human Services has already committed to expand health professions programs on the Flagstaff campus, in Phoenix and through other campuses statewide.



However, the facilities currently used to prepare future health care professionals on the Flagstaff campus are inadequate.

**Strategy #1: Build a new Flagstaff health professions facility**

Northern Arizona University requests a \$6 million annual appropriation to cover debt service associated with a \$75-\$85 million debt issuance to construct a new Health Professions complex on the Flagstaff campus. The 150,000-200,000 square foot complex will also use \$1.5 million in debt service from the university’s Technology and Research Innovation Fund (TRIF) capital to fund an additional \$20 million for the complex.

This new complex would alleviate the problems associated with separate facilities and inadequate infrastructure, and will allow the university to meet the need for new space configurations. The current spaces used by the College of Health and Human Services are heavily used, and the quality of the learning spaces (classrooms and labs) is poor. A new complex will facilitate the health disciplines’ emphasis on collaboration and shared resources and strengthen our recent restructuring of health programs into a distinct college.

A new complex would also facilitate our continued progress on addressing critical building issues. Although our existing health and nursing buildings are not “red” buildings, they are “orange” buildings. The new Health Professions facility could address three of the orange buildings on the Red/Orange Building List.

The new facility will include the following programs with their approximate net square footage requirements: nursing (11,000 NASF), physical therapy and athletic training, communication sciences and disorders (12,500), occupational therapy (12,000), health sciences (4,700), dental hygiene (3,100), nutritional sciences (500), dean/advising (1,300), combined clinics (14,100), and common areas (17,000 NSF) which include computer labs, classrooms, and conference areas.

**Strategy #1 Resource Assumptions**

	FY09	FY10	FY111	FY12	FY13
Capital Debt Service	6,000,000	*	*	*	*

\*Added to FY09 base; remains in base thereafter.

**Strategy #2: NAU Share of UA College of Medicine-Phoenix MEB and ABCII Debt Service**

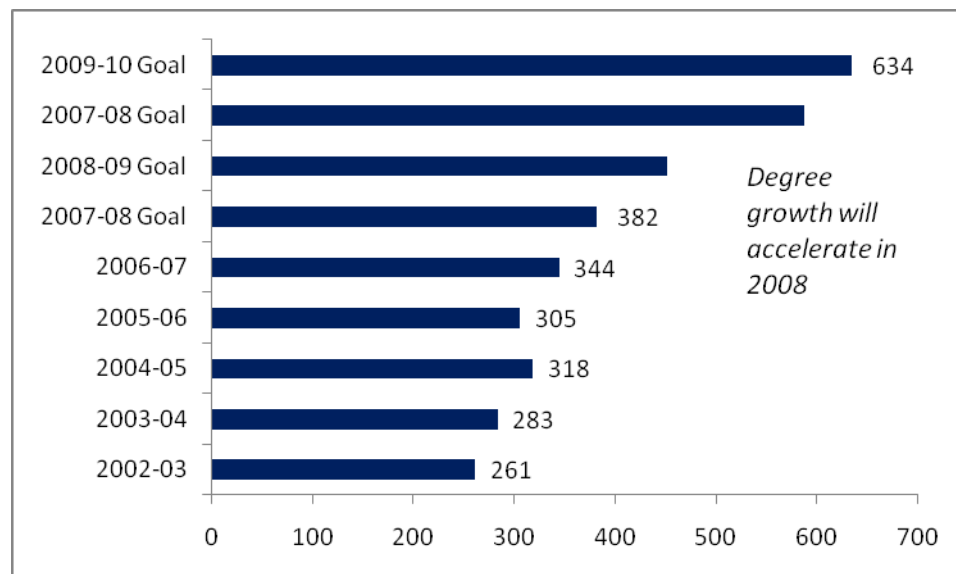
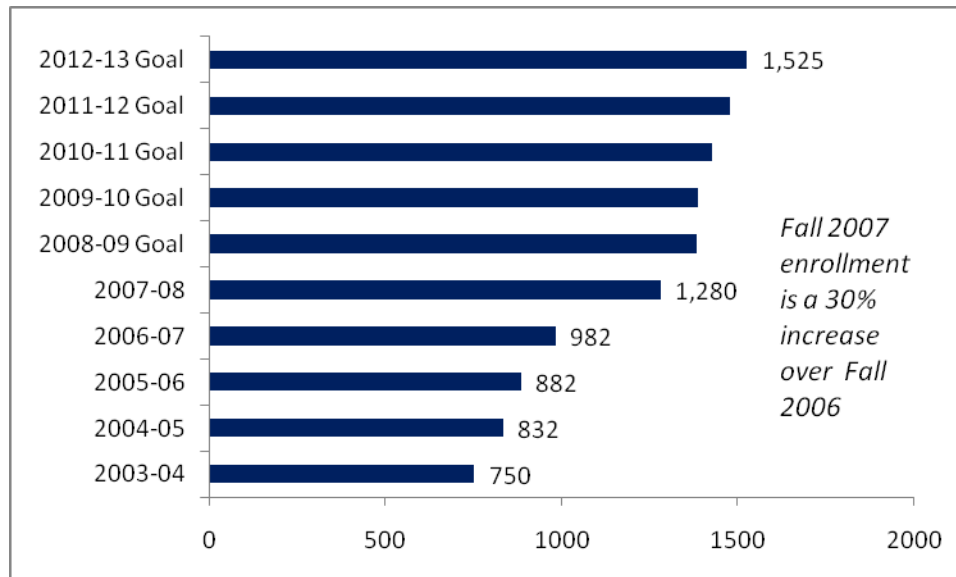
Physical therapy, nursing, dental hygiene, as well as new programs in occupational therapy and physicians assistant will be offered in Phoenix in association with the new medical school.

**Strategy #2 Resource Assumptions**

	FY09	FY10	FY111	FY12	FY13
NAU's Debt Service Share	1,400,000				

\*Added to FY09 base; remains in base thereafter.

**Strategy #1 and 2: Enrollment and Degree Growth in Health Professions Programs (Clinical)**



## Strategic Issue # 4: Serving Rural Arizona

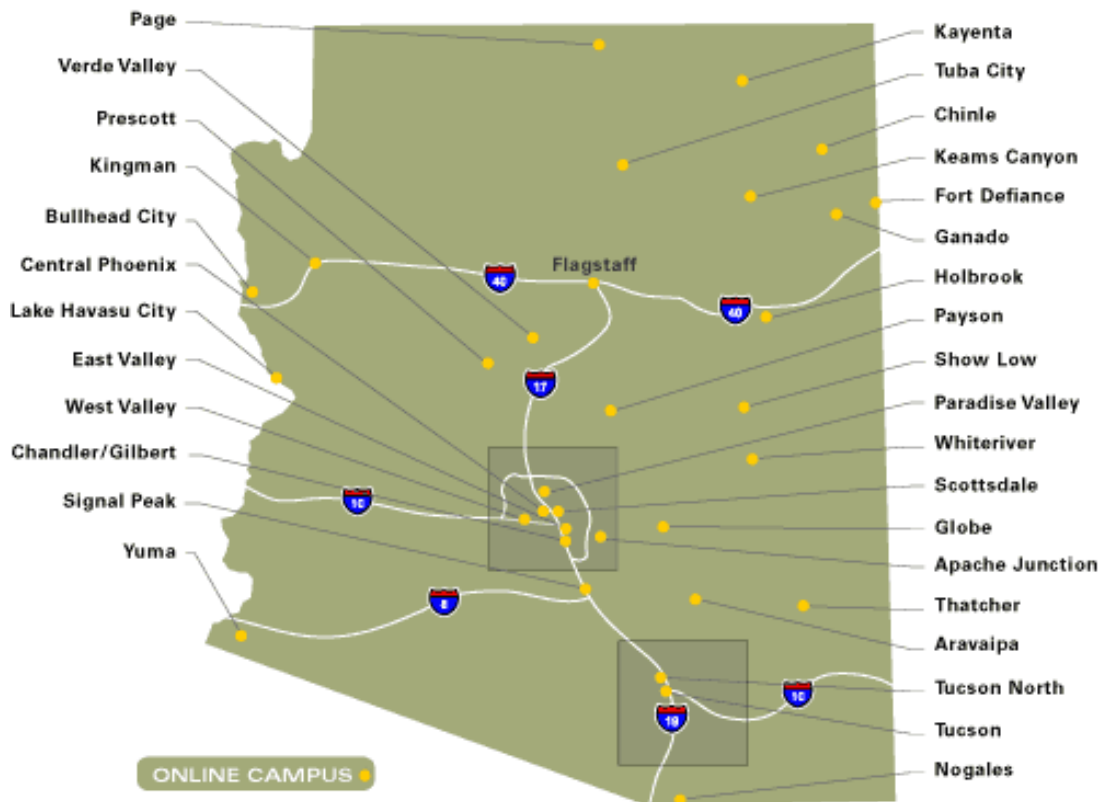
Provide underserved communities with baccalaureate degree opportunities

### Background and Issue Statement

Recent studies have indicated that Arizona is underserved at the baccalaureate level. While each of the state universities have additional capacity on their campuses to serve students, the need for baccalaureate education in rural and other underserved areas remains acute.

Northern Arizona University has pioneered an “Expand on Demand” approach where areas of the state with small populations and student demand are served from leased facilities. As the population and therefore student demand grows the university seeks funding for permanent facilities on community college campuses or in the greater community.

The university can continue to incrementally expand program and course access through the “Expand on Demand” process. However, to satisfy the demand in the fastest growing areas with larger populations the university is unable to fund two different types of needs—the need for full-time anchor faculty based in the rural areas, and the construction of instructional/student services facilities in communities.



**Strategy: Expand the university’s presence through Arizona baccalaureate education centers**

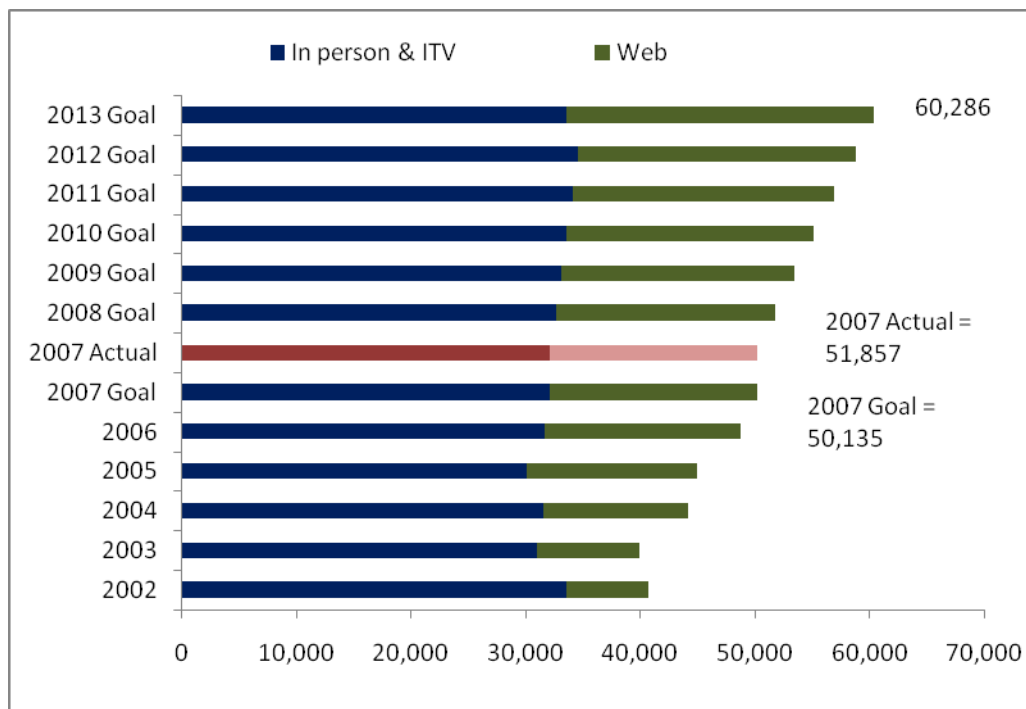
While the University has expanded the number of degrees available off-campus from about 20 ten years ago to more than 120 today much of this expansion has been via web-delivered programs. Almost all the growth in student enrolment off-campus over the past four years has been in web programs, even as the university has added traditional classroom programs. The economics of web and ITV delivery have allowed NAU to expand the number of degree programs offered to students no matter where they live in the state. However, some students prefer the traditional classroom to a web course, and as rural areas grow into small and medium-sized cities, the demand for full time faculty in these regions increases. The university request \$1.5 million for instruction, academic support, and student services to address the needs of underserved, mostly rural areas.

**Strategy Resource Assumptions**

	FY09	FY10	FY11	FY12	FY13
Instruction, Academic Support, Student Services	\$1,500,000	*	*	*	*

\*Added to FY09 base; remains in base thereafter.

**Strategy Performance Measure – Student Credit Hours generated off the Flagstaff Campus**



## **Strategic Issue # 5: Economic Development, Workforce Education, and Research**

Improve Arizona's global competitiveness by increasing number of graduates in science, technology, engineering, and math.

### **Background and Issue Statement**

With estimated 6.8% GDP growth, Arizona has the third fastest economy in the nation (after Idaho and Utah)<sup>1</sup>. The fastest growing industry sectors that contributed to Arizona's recent economic growth include real estate, durable goods manufacturing, retail, and construction. Nationwide, the sectors that typically contribute to the economic growth most include professional and business services as well as durable goods, trade, and financial activities. We are 36<sup>th</sup> and 39<sup>th</sup> in the nation when it comes to per capita real GDP and per capita personal income, respectively. To ensure the long-term prosperity of the state and its citizens, the state's economy has to focus less on volatile sectors such as real estate and construction and more on sectors with a high commercial potential, leading to manufacturing of high value added products and services. Such industry sectors require workforce educated in science, technology, engineering, and math fields. Currently, the state faces significant shortages in highly qualified K-12 math and science teachers, low retention and graduation rates of students in the STEM programs, and generally low interest to enter these fields of study. The university proposes three initiatives focused on improving the STEM pipeline and an initiative focused on society, energy, and environment—factors that will have a significant effect on state's economic outlook and wellbeing of its citizens.

### **Strategy #1: Deliver secondary mathematics and science courses to students in Arizona high schools**

Northern Arizona University in collaboration with highly qualified secondary STEM teachers and teacher-aides will create and deliver secondary mathematics and science courses. The increased graduation requirements in math and science under today's discussion will require additional math and science teachers. However, the significant shortage of math and science teachers, despite the university system and the State's efforts to improve the situation, cannot be easily addressed in the near future. As an immediate solution, the university with its long-lasting tradition of producing a high percentage of Arizona's K-12 teachers is uniquely positioned to assist schools by providing quality courses to high school students in math and science.

The university plans to develop and deliver five new courses per year for a total of 15 courses being offered after three years. The structure for this program assumes the appropriation will support all course development costs for the initial five courses.

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<sup>1</sup> Bureau of Economic Analysis: [http://www.bea.gov/scb/pdf/2007/07%20July/0707\\_gdp\\_state.pdf](http://www.bea.gov/scb/pdf/2007/07%20July/0707_gdp_state.pdf)

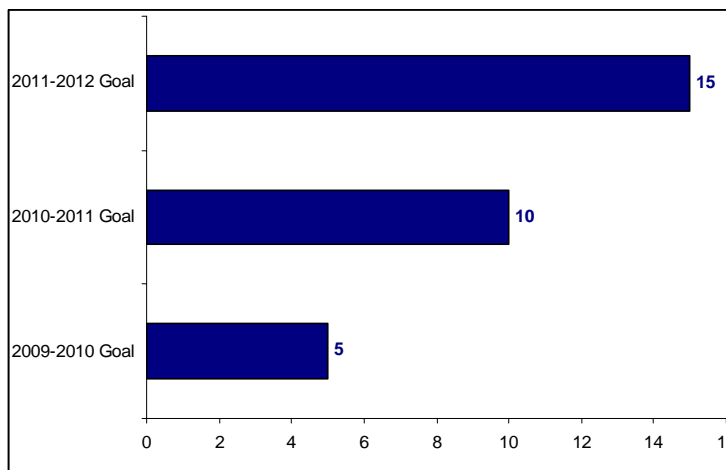
**Strategy #1 Resource Assumptions**

	FY09	FY10	FY11	FY12	FY13
Develop and deliver secondary math and science courses	\$1,000,000	\$600,000	\$600,000	*	*

\*The base allocation would grow from \$1 million in FY09 to \$1.6 million in FY10 to a total of \$2.2 million in FY11 and remain in base in the following years unless other arrangements are made through the public schools.

Continuing costs could be offset in several ways: the state continues to pay the full costs through a base budget legislative allocation; the state provides Northern Arizona University a per-student amount as part of the state subsidy to all public schools; and/or the schools pay Northern Arizona University for some or all of the ongoing costs. A combination of the direct state legislative allocation and per student state subsidy to Northern Arizona University would most likely make the program sustainable in the long-term. Base fixed costs would be covered by the ongoing legislative allocation, and the per-student state subsidy would ensure that increased revenues are available to cover costs generated by more students.

**Strategy #1 Performance Measure: Number of developed and delivered high school courses in math and science**



**Strategy #2: Expand STEM pipeline**

The challenge of increasing the number of graduates in STEM fields and the number of qualified teachers of science and mathematics is often viewed as a pipeline issue. The interest in science and math declines for many students during their middle school years but outreach programs for pre-college students have been demonstrated to enhance the chances that students, especially those from first-generation or under-represented populations, will enter STEM fields in college.

To address Arizona’s need for an educated workforce and highly qualified teachers in the science, technology, engineering, and math disciplines the university will focus on recruitment, increasing capacity of the STEM programs, and student retention. The key initiatives increasing number of students entering the STEM programs will include:

- a. STEM Recruitment Coordinator to scale up outreach activities
- b. Community college articulation support to build partnerships between College of Engineering and Natural Sciences and potential community college partners
- c. Recruiting Corps to offer the math and science education students attractive campus employment program that offsets the lack of internships and scholarships so often available to the STEM majors but not to the math and science education students

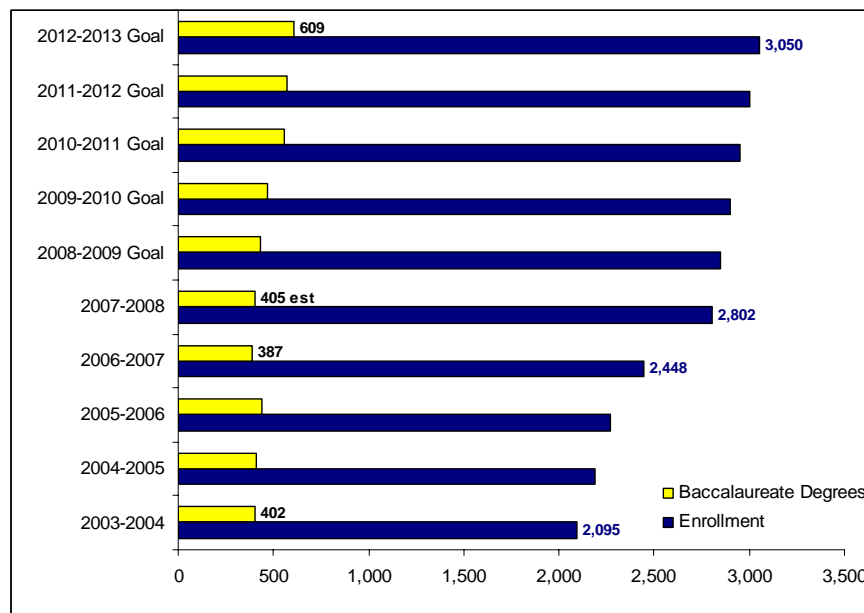
To increase the capacity of the STEM programs and to address retention issues so typical in these fields, the university has to add new faculty lines especially in the Mathematics and Statistics Department and to bring a faculty leader with expertise in college-level math pedagogy to head a student-learning improvement program.

**Strategy #2 Resource Assumptions**

	FY09	FY10	FY11	FY12	FY13
Expanding the STEM pipeline	\$1,000,000	\$500,000	\$500,000	\$500,000	\$500,000

\* Base appropriation would grow by \$500,000 a year for four years. Total appropriation amounts by year: FY10 \$1.5 million; FY11 \$2 million; FY12 2.5 million; FY13 \$3 million. Ongoing support would remain in base thereafter.

**Strategy #2 Performance Measure: College of Engineering and Natural Sciences enrollment and baccalaureate degrees awarded**



**Strategy #3: Implement NAU Teach program**

Arizona, like many states in the nation, is in critical need of science and mathematics teachers. Many students in science and mathematics are discouraged from teaching due to low salaries and even when science and mathematics majors certify to teach, about one-third quits during their first three years and almost half leaves within five years. This turnover is highest in poor, predominantly minority schools. If the increased graduation requirements in mathematics and science under discussion are approved, the retention will become even more important.

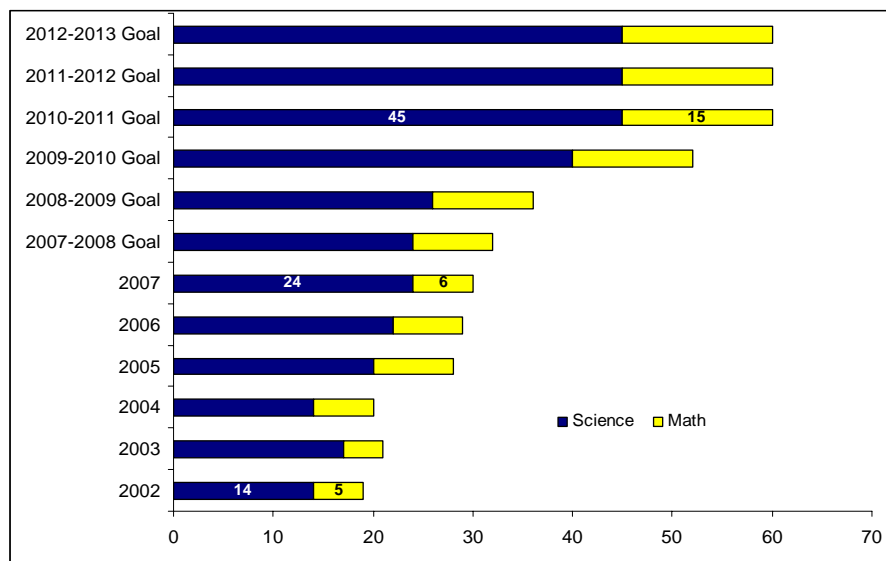
Based on informal data collected at a meeting of the Arizona Initiative in Math & Science Education, Arizona’s state universities collectively certify fewer than 50 secondary science teachers each year and fewer than 30 secondary mathematics teachers. Recognizing the national nature of this problem, the National Math and Science Initiative agreed to fund 10 universities across the country to transition their mathematics and science teacher certification programs to a model developed at the University of Texas at Austin. This model, called UTeach, is based on research and has been shown to increase student recruitment into mathematics and science teaching while increasing the retention rate of their graduates to 84% after 4 years. NAU is currently a finalist for consideration for this funding and is proposing to adopt the UTeach model. Adopting this model will mean an increase in the number of science and mathematics teachers certifying at NAU from a current level of about 25 per year to 60 per year.

**Strategy #3: Resource Assumptions**

	FY09	FY10	FY11	FY12	FY13
NAU Teach	\$833,700	*	*	\$500,000	*

\*Base funding in FY09 growing by \$500,000 for a total of \$1,333,700 by FY12 and in base thereafter.

**Strategy #3 Performance Measures: Certified math and science teachers**



#### **Strategy #4: Initiative for Society, Energy and the Environment (ISEE)**

Northern Arizona University has a strong presence in areas related to energy, the environment, and climate change. Sustainability is a significant theme in our educational and scholarly activities. We propose to grow our program in these areas, achieving a critical mass. We will intensify our efforts to establish and promote cross-disciplinary integration of information needed to address energy and sustainability issues with a focus on Arizona and its rural areas. We consider rural Arizona to be all regions outside of the two major metropolitan areas, including the many tribal lands within the state.

To accomplish this initiative, we request a series of faculty lines that, combined with existing expertise, will enhance and solidify NAU's world class presence in climate change and energy teaching and research. All lines are envisioned as joint appointments in two or more departments: (a) fire ecology, (b) environmental economics, (c) ecological modeling, (d) environmental policy, and (e) climatology.

Funds are requested to support both graduate students and undergraduate students. A hallmark of our learner-centered process incorporates students of all levels into the research functions. The students supported by this new initiative will further benefit from a cross-disciplinary approach and synergistic interactions.

#### **Strategy #4 Resource Assumptions**

	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>
Initiative for Society, Energy, and the Environment	\$1,356,000	*	*	*	*

#### **Strategy #4 Performance Measures will include**

- Acreage of restored and remediated lands--riparian, range, and forest habitats
- Students trained with information on their career trajectories
- Outreach program development on society, energy, and climate change for implementation and distribution in rural Arizona
- Assessing the positive economic impact of remediation and restoration of different locales and habitats, development of new curriculum--classes and seminars that are cross-disciplinary for both undergraduates and graduate students
- Projects in water management, renewable energy, and environmental change impacts
- Possible intellectual property
- Scholarly productivity measured in terms of external funding, peer-reviewed publications and public presentations of research findings

**Sum of Incremental Costs to Support These Initiatives**

	<b>FY2009</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>	<b>FY2013</b>
General Funds	\$22,810,800	\$3,600,000	\$3,600,000	\$1,000,000	\$500,000
Other Appropriated Funds					
Other Non Appropriated Funds	\$1,000,000				
Federal Funds					
Budget Unit Total	\$23,810,800	\$3,600,000	\$3,600,000	\$1,000,000	\$500,000
FTE Positions	101.25	5	5	3	3