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FISCAL IMPACT REPORT

SPONSOR Nava **DATE TYPED** 02-18-05 **HB** _____

SHORT TITLE Pre-College Math & Science Skill Improvement **SB** 615

ANALYST Woods

APPROPRIATION

Appropriation Contained		Estimated Additional Impact		Recurring or Non-Rec	Fund Affected
FY05	FY06	FY05	FY06		
	\$200.0			Recurring	General Fund

(Parenthesis () Indicate Expenditure Decreases)

Relates to the appropriation for New Mexico State University in the General Appropriations Act.

Relates to HB316, SB97, SB487 and SB568

SOURCES OF INFORMATION

LFC Files

Responses Received From

New Mexico State University (NMSU)
New Mexico Public Education Department (PED)

No Response Received From

New Mexico Commission on Higher Education (CHE)

SUMMARY

Synopsis of Bill

Senate Bill 615 – Making an Appropriation to Improve Math and Science Skills of Disadvantaged Pre-College Students for Entry into Science and Engineering Majors at New Mexico State University – appropriates \$200,000 from the general fund to the Board of Regents of New Mexico State University for expenditure in FY06 to improve math and science skills of economically

disadvantaged pre-college students for entry into science and engineering majors. Any unexpended or unencumbered balance remaining at the end of FY06 shall revert to the general fund.

Significant Issues

NMSU indicates that this legislation provides support to the NMSU Pre-Freshman Engineering Program (PREP). PREP recruits high potential pre-college students for a seven-week, academically intense, summer program with the goal of preparing them for careers in the science, engineering, and mathematics fields. PREP offers its participants special courses in logic, algebraic structures, physics, and technical writing. Problem solving seminars equip them with the necessary tools and desire to complete pre-calculus and calculus in high school. Participants may begin the program as early as sixth grade, and attend for three years prior to college entrance. PREP's focus is on female and minority populations, which are traditionally underrepresented in the science, engineering, and mathematics fields.

PED suggests that many students in New Mexico are not adequately prepared for college-level work. The New Mexico Association of Community Colleges reports that approximately 68 percent of high school graduates entering community colleges in 2004 require remediation.¹ The need for remediation negatively affects retention rates.

Both high school and college graduation rates in New Mexico are lower than national averages, and across the nation, more than half – some 53 percent – of all college students take at least one remedial math or English course during their college experience.² Moreover, data reflect that students who take remedial courses are less likely to earn college degrees:

- just 45 percent of students who take one remedial course finish college, while
- only 18 percent of those taking three or more remedial courses complete their degrees.

PED adds that these success rates are significantly lower for minority students.³

This project is not included in CHE's *2005-2006 Higher Education Funding Recommendation*.

FISCAL IMPLICATIONS

The appropriation of \$200,000 contained in this bill is a recurring expense to the general fund. Any unexpended or unencumbered balance remaining at the end of FY06 shall revert to the general fund.

ADMINISTRATIVE IMPLICATIONS

New Mexico State University will retain oversight of this appropriation.

¹ NMACC Report, *Meeting our Mission*, 2004 – 2005

² *New Mexico Report Card*, New Mexico Business Roundtable for Educational Excellence, 2003.

³ American Diploma Project, *Executive Summary: Ready or Not – Creating a High School Diploma that Counts*, 2004).

CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP

Relates to the appropriation for New Mexico State University in the General Appropriations Act.

Relates to HB316 in that HB316 seeks to appropriate \$100,000 from the general fund to the Board of Regents of the University of New Mexico for expenditure in FY06 to enhance pre-college science and mathematics skills and conduct a summer mathematics and science camp for minority students.

Relates to SB97 in that SB97 seeks to appropriate \$175,000 from the general fund to the Board of Regents of New Mexico State University for expenditure in FY06 to continue the Science, Engineering, Mathematics and Aerospace Academy at New Mexico State University.

Relates to SB487 in that SB487 seeks to appropriate \$250,000 to the Commission on Higher Education for expenditure in FY06 to provide programs at various New Mexico colleges and universities for high school students to develop expertise in the fields of mathematics, science and engineering.

Relates to SB568 in that SB568 seeks to appropriate \$25,000 from the general fund to the Board of Regents of New Mexico Highlands University for expenditure in FY06 to support the MESA program.

OTHER SUBSTANTIVE ISSUES

NMSU observes that – during the past eight summers – NMSU PREP has had 439 students complete PREP 1; 264 students complete PREP 2; and 175 students complete PREP 3. Annual summer retention remains high at 92 percent, and approximately two-thirds of former participants who completed PREP 1 return to complete PREP 2; while the retention rate from PREP 2 to PREP 3 is approximately 75 percent.

NMSU additionally observes that each year the PREP office conducts a follow-up survey of former participants. In 2004, 84 of the 118 former participants that are now college age responded, and the following data were compiled:

- 79 are currently in college, three are college graduates and two are in the military;
- all are high school graduates;
- more than half of those attending college are majoring in science, engineering or mathematics;
- 77 percent are members of underrepresented minority groups, and 55 percent are female;
- 90 percent are enrolled at New Mexico State University and 96 percent are attending universities in New Mexico.

PED notes that a survey of outreach programs published by The College Board in 2001 lists 19 programs in New Mexico.⁴ Eighteen of these deal with pre-college youths; 13 include math or science instruction or enrichment and eight are managed through institutions of higher education. Examples of these programs include:

- the Junior University, an academic recruitment and support program at the University of New Mexico College of Education that targets Native American students;
- Upward Bound programs at New Mexico Junior College, NMSU and Eastern New Mexico University; and
- the New Mexico Alliance for Minority Participation (NM-AMP) at NMSU, an academic support program for college students that targets groups underrepresented in science and engineering.

NM-AMP reports that the number of science, technology engineering and mathematics (STEM) degrees awarded per year has doubled since the program began in 1993. Further, in 2003-04, 44 percent of STEM degrees were awarded to under-represented students, up from 24 percent in 1993.⁵

Another program is the New Mexico MESA (Mathematics Engineering Science Achievement) program at the New Mexico Institute of Mining and Technology. NM-MESA is a support and enrichment program for pre-college students. A preliminary survey of 2003 MESA graduates enrolling in New Mexico colleges and re-enrolling in 2004 shows a retention rate of 89 percent.⁶

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL?

NMSU indicates that PREP was founded in 1997 as part of a NASA initiative, called Proyecto Access. The purpose of this initiative was to populate the successful Texas PREP program nationally. For the past eight years, NASA has supported the national PREP initiative in the amount of one million dollars annually. NMSU PREP is one of ten sites partially funded by this national grant.

In 1997, NMSU advises, it was able to support only 50 students and its entire budget came from the NASA Proyecto Access grant. Although the NASA funding to NMSU PREP has remained at the same level, NMSU has solicited enough funding from other sources to triple the number of students served. Due to budget constraints at the federal level, NASA has decided to eliminate the Proyecto Access funding. This will have a severe impact on the highly successful NMSU PREP program and on the youth of southern New Mexico.

Although NMSU suggests that its fundraising has allowed it to triple the number of students served, public interest in NMSU PREP has correspondingly risen to the level that, presently, it can only accommodate some 50 percent of new applicants.

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⁴ The College Board, *Outreach Program Handbook*, 2001

⁵ www.nmsu.edu/~nmamp

⁶ www.nmmesa.org