Report of AY22-23 Market Analysis of Las Cruces Campus Faculty Base Salary Compensation

Prepared by members of the Faculty Compensation Advisory Committee

August 31, 2023

Table of Contents

Executive Summary

As part of achieving NMSU's LEADS 2025 strategic plan, three studies of base salary compensation rates of full-time, Las Cruces campus faculty began in Fall 2019, co-led by the Office of the Provost and NMSU (New Mexico State University) Human Resources. Faculty input and expertise were contributed by a Faculty Compensation Advisory Committee, a group of 17 Las Cruces campus faculty assembled specifically for this task (see Addendum A – Faculty Advisory Committee Members).

Study One was an external market analysis comparing NMSU's Fiscal Year (FY) 20-21 compensation rates with those of other public research universities. Study Two was an internal analysis of NMSU's FY21-22 compensation rates to ascertain whether NMSU faculty salaries show evidence of inequitable pay gaps based on gender or race-ethnicity. Study Three was a follow-up external market analysis comparing NMSU's compensation rates as of May 1, 2023 with those of other public research universities. The comparisons were made both **before and after** inclusion of the 6% raise approved by the NM State Legislature effective FY23-24.

In addition to identifying potential inequities, these three studies were intended to help establish a rigorous, regular, replicable, and transparent process for continual review of compensation packages for NMSU's faculty. All three studies examined base salaries of Las Cruces campus full-time faculty with continuing appointments (i.e., tenured, tenure-track, and non-tenure-track appointments).

This report details the analytical methodology and results of Study Three.

Study Three showed:

- Although faculty salaries remain below market, NMSU's competitiveness has improved.

- When the Advisory Committee started reviewing NMSU faculty salaries in FY20-21, most NMSU faculty salaries (70%) were at or below the 40th percentile compared to other R2 institutions in lower cost-of-living areas. Now, the majority of NMSU faculty salaries (83%) are above the 40th percentile compared to the analogous group of institutions.

- Comparisons of NMSU faculty salaries against R1 institutions indicate that NMSU faculty salaries remain a barrier to attaining R1 status.

Background

Consistent with LEADS 2025 Goal 4 Building a Robust University System as well as the goal of obtaining R1 status, the Provost's Office, Human Resource Services, and an advisory committee of 17 faculty members cooperated to evaluate whether NMSU-Las Cruces faculty salaries are competitive and equitable. External market analyses address competitiveness and internal equity analyses address equity. As these analyses have different purposes, they use different methodologies.

External market analyses compare an institution's salaries against some measure of the external market, often controlling for job type and education level. The goal is to determine whether an institution's salaries are competitive against other similar institutions. As such, demographic variables such as gender and race-ethnicity are not considered in external market analyses.

Internal equity analyses determine whether salaries are equitable. In higher education, faculty salaries should vary by characteristics such as rank, highest degree, and discipline. Salaries should not vary by factors such as faculty member's gender or race-ethnicity. Thus, internal equity analyses use a different methodology than external market analyses. Internal equity analyses focus only on salaries within the institution (without any market comparison) and pay particular attention to the role of gender and race-ethnicity in predicting salaries.

The Faculty Advisory Committee completed the first external market analysis in FY20-21 and the first internal equity analysis in FY21-22. In consultation with Provost Shoho, we decided to continue this two-year cycle in FY22-23 with the second external market analysis (i.e., Study Three) reported here.

Several methodological characteristics remain consistent across all three analyses:

1. The population studied was regular, full-time faculty members on the Las Cruces campus, including tenured, tenure-track, and non-tenure track faculty members and ranks of Assistant, Associate, and Professor.

2. The key measure was base salaries, scaled to a 9-month appointment and 1.0 FTE.

3. We controlled for faculty discipline using the U.S. Department of Education Classification of Instructional Programs (CIP) codes.[1] All faculty members included in the study have been assigned a specific CIP code by NMSU Human Resource Services. Market data obtained from the College and University Professionals Association Human Resources (CUPA-HR) annual survey of faculty salaries is also organized by CIP code, allowing us to compare NMSU faculty salaries to those of their disciplinary peers at other institutions.

4. We also controlled for rank, type of appointment (tenure/tenure-track vs non-tenure-track), and terminal degree.

Study One Summary

Study One was an external market analysis comparing NMSU's FY20-21 compensation rates against those of a custom comparison group of 44 R1 public institutions and 55 R2 public institutions, excluding institutions in California and the Northeast. Institutions in California and the Northeast were excluded from the comparison group due to the difference in cost-of-living between Las Cruces and these locations. Data from the CUPA-HR annual survey of faculty salaries were used to estimate market rates. Approximately 20% of NMSU-Las Cruces

---

[1]CIP codes are reported at varying levels of specificity (i.e., 6-digits, 4-digits, and 2-digits). To provide the best possible match for faculty discipline while ensuring sufficient data for valid comparisons, faculty salaries were analyzed using 6-digit CIP codes, controlling for rank and highest degree. In cases where the 6-digit CIP did not yield a sufficient comparison sample, we used the faculty member's 4-digit CIP, then 2-digit CIP as necessary.

faculty were paid below the 10th percentile for their discipline at R2 institutions. The Provost's Office allocated $606K to bring these faculty members' salaries up to at least the 10th percentile for the studied R2 universities in FY21-22.

Study Two Summary

Study Two was an internal analysis of NMSU's FY21-22 compensation rates to ascertain whether NMSU faculty salaries show evidence of inequitable pay gaps based on gender or race-ethnicity. Results indicated a controlled gender pay gap of at least 1%, favoring men faculty members. Women faculty members received salary adjustments of 1% effective March 1, 2023 to address this inequity. Results also indicated that African-American and Native American faculty members were underpaid but there were too few of these faculty members in the sample to estimate of the magnitude of this inequity.

Study Three Overview

Study Three estimated market salaries using data from the [2023 CUPA-HR annual surveys of faculty salaries](#) and followed largely the same methodology as the FY20-21 external market analysis, except as noted below.

Population Studied

The population studied contained all full-time tenured, tenure-track, and non-tenure-track faculty with active appointments on NMSU's Las Cruces campus and ranks of Assistant, Associate, or Professor as of April 24, 2023, including Library faculty (N=575).[2]

Analysis Procedure

NMSU base faculty salaries as of May 1, 2023 were converted to 9-month, 1.0 FTE as necessary. CUPA-HR collected faculty salary data from participating institutions November 1, 2022 through January 13, 2023. We aged these data using the CUPA-HR aging function to reflect probable changes in the market between January and May 1.

We constructed four comparison groups from institutions who participated in the 2023 CUPA-HR faculty salary survey: 1) all R1 public institutions (N=106); 2) all R2 public institutions (N=86); 3) a geographically-restricted group of R1 public institutions that excluded institutions in California and the Northeast (N=83); and 4) an analogously restricted group of R2 public universities (N=65). (See Addendum B – Universities Included in the R2 and R1 Market Comparisons). The geographically-restricted comparison groups were used to account for cost-of-living in the Las Cruces-El Paso area. Full market comparisons groups were included because feedback from the first external market study indicated some faculty members thought it was inappropriate to exclude the most competitive U.S. markets from the analysis.

Salary data were downloaded from NMSU Human Resource Services for all combinations of discipline, highest degree (doctoral or non-doctoral), tenure status (tenured/tenure track or non-tenure track), and rank (Assistant

---

[2] Current faculty executives (e.g., Department Heads and Associate Department Heads, Deans, Assistant Deans, and Associate Deans) were excluded from the study population. The base salary of a small number of faculty serving as interim faculty executives were included under the presumption that they would return to their primary faculty roles soon. Faculty members at the Alamogordo, Grants, and Doña Ana campus were also excluded, as were visiting faculty, instructors, research faculty, and instructors. Faculty working as Cooperative Extension Services Agents or Agricultural Extension Services collected their own external market data from peer institutions as CIP codes and CUPA-HR data do not adequately capture their positions or relevant market. These data consisted of average salaries and did not allow analysis by percentiles. Extrapolating as best we could from these data, it appeared that none of the CES/AES faculty salaries fell below the 10th percentile. Also, the 6% raise allocated by the NM Legislature is I&G funds; CES/AES faculty salaries are funded by sources other than I&G funds.

Professor, Associate Professor, or Professor). Again, we used CIP codes to control for discipline when comparing NMSU salaries to market salaries.[3]

Importantly, we analyzed NMSU faculty salaries **before and after** including the 6% raise allocated by the New Mexico State Legislature in early 2023 to the faculty salaries pulled from Banner as of May 1, 2023.

We made two methodological refinements in this iteration of the external market analysis. First, we modified how we estimated the market for non-tenure-track faculty. In the FY20-21 analysis, we used market salary data from tenured faculty with doctoral degrees as the baseline, and then estimated market salaries of faculty on the college track and/or with a non-doctoral degree from the baseline data. This time, we used CUPA-HR data for all faculty including non -tenure-track and those with non-doctoral degrees. This provided a better estimate of the market for these faculty members. It also allowed us to use the same comparison strategy for tenure-track/tenured faculty members and non-tenure-track faculty.

Second, we included twelve Library faculty members in this iteration of the analysis using the [CUPA-HR annual survey of professionals in higher education salary](#) database.[4] CUPA-HR includes data regarding librarians' salaries (with and without faculty status) in their professional database rather than in the faculty salary database.[5] Also, the professionals database reports 12-month salaries. Thus, NMSU librarians' salaries were all converted to a 12-month basis for the purposes of the market comparison.

Results

NMSU faculty salaries remain significantly lower than market, regardless of appointment type or comparison group. However, the 6% raise effective FY23-24 notably reduced the number of faculty members whose salary was at or below the 10th percentile compared to their peers (see Table 1). We also estimated the total cost to bring all faculty salaries to various percentile ranges compared to the geographically-restricted R2 comparison group, **before and after** the 6% raise effective FY23-24 (See Figure 1). Results for the other three comparison groups (i.e., a full market R2 comparison group, an analogously geographically-restricted R1 comparison group, and a full R1 comparison group) **after** including the 6% raise are in Addendum C – Cost to Bring NMSU Faculty Salaries to Given Percentile after 6% Raise Compared to Full R2 Market, Geographically-Restricted R1 Market, and Full R1 Market.

---

[3] Six-digit CIP was used for approximately 54% of the faculty, 4-digit CIP for approximately 21%, and 2-digit CIP for approximately 20%. When the sample of R2 or R1 institutions did not yield a sufficient sample size at the 2-digit CIP, we used a national sample (i.e., not limited to R2 or R1 institutions) to estimate market. We started again with 6-digit CIP, moving to 4-digit and 2-digit CIPs when necessary to obtain a sufficient sample size, controlling for rank and highest degree throughout. National salary data was used to estimate market salary for approximately 4% of the faculty in the study.

[4] One librarian was excluded because CUPA did not have enough data to publish numbers for that person's code.

[5] Although other sources of salary data are available for librarians (i.e., from the Association of Research Libraries), those data have several limitations. First, only average salaries are reported, making it impossible to calculate more nuanced percentiles. Second, other data sources do not include information specific to geographical location or R1/R2 status. Benchmarks from the CUPA-HR professional survey were generated by HRS for geographically-restricted R1 and R2 institutions; results based on unrestricted (nationwide) comparison groups were not calculated by HRS. None of the librarians' salaries fell below the 15th percentile compared to either the geographically-restricted R1 or R2 market comparisons.

Table 1 Cost to Bring All Faculty Salaries to Given Percentile for R2 Geographically-Restricted Market

	10th	15th	20th	25th	30th	33rd	40th	50th
Before 6% raise	$214,554 N=65 11%	$359,130 N=98 17%	$497,899 N=131 23%	$679,914 N=173 30%	$886,370, N=199 35%	$1,032,102 N=215 37%	$1,376,621 N=262 46%	$2,105,836 N=344 60%
After 6% raise	$ 47,762 N=11 2%	$ 94,695 N=20 3%	$144,257 N=31 5%	$196,376 N=42 7%	$261,370 N=69 12%	$330,540 N=77 13%	$ 502,561 N=98 17%	$ 891,932 N=152 26%

Note: All amounts rounded to the nearest dollar, N = Number of faculty represented in each cell; percentage of faculty represented also included
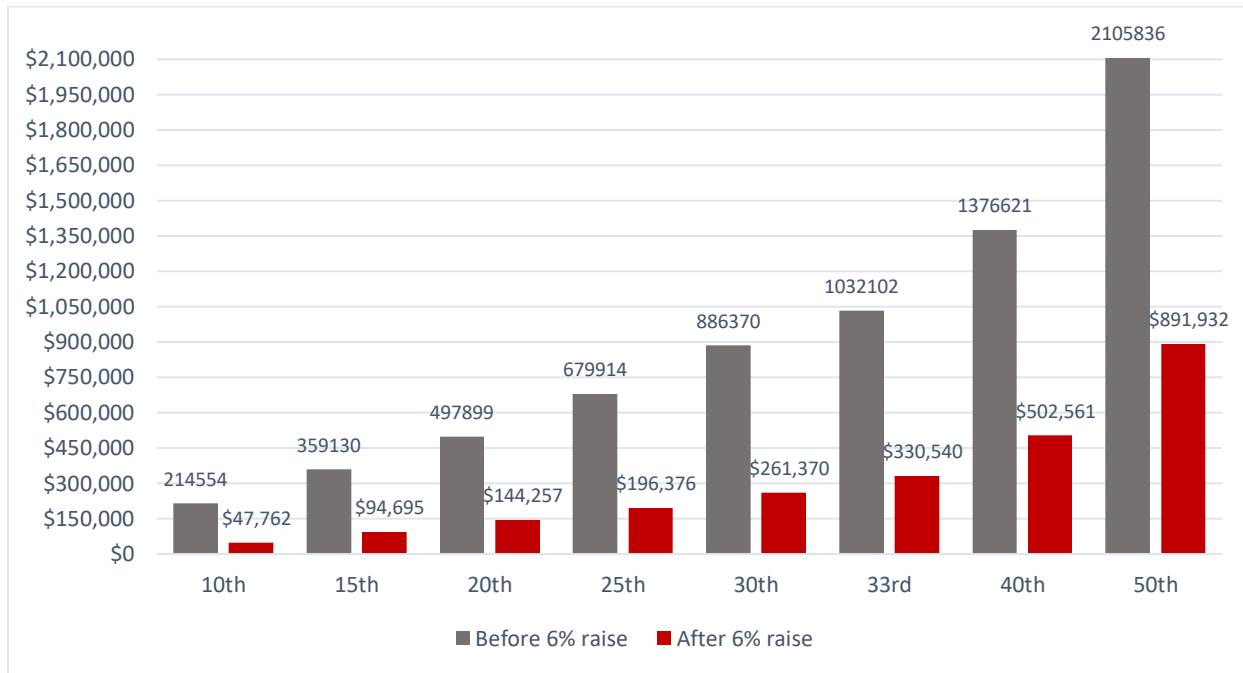

Figure 1 Cost to Bring All Faculty Salaries to Given Percentile for R2 Geographically-Restricted Market Before and After 6% Raise

Conclusions

Although faculty salaries remain below market, NMSU's competitiveness has improved due to:
- the 6% raise effective FY23-24
- salary increases after the first external market analysis and the
- equity adjustment effective March 1, 2023

Competitive faculty salaries is an achievable goal for NMSU (See Table 2).

Table 2 Improvements Over Time Compared to Geographically-Restricted R2 Market

	Cost to bring faculty salaries to 40th percentile[6]	Percentage of faculty salaries below the 40th percentile
FY20-21 salaries	$2,895,000	70%
FY22-23 salaries prior to 6% raise	$1,376,621	46%
FY22-23 salaries after raise effective FY23-24	$ 502,561	17%

As an example, in the first market analysis using FY20-21 salaries, the cost to bring all faculty salaries to the 40th percentile for the restricted R2 comparison group was $2.3 million; prior to the 6% raise using 2023 salaries, the cost to achieve the same benchmark is $1.4 million; after the 6% raise, the cost to achieve the same benchmark is $0.5 million. Looked at another way, when the Advisory Committee started reviewing NMSU faculty salaries, most NMSU faculty salaries (70%) were at or below the 40th percentile compared to other R2 institutions in lower cost-of-living areas. Now, the majority of NMSU faculty salaries (83%) are above the 40th percentile compared to the analogous group of institutions.

On the other hand, comparisons of NMSU faculty salaries against R1 institutions indicate that NMSU faculty salaries remain a barrier to attaining R1 status. About 1/3 of NMSU faculty members are paid significantly below the 10th percentile for R1 institutions in locations with a comparable cost-of-living; it would require an additional $1.5 million in recurring funds to meet this modest benchmark for salaries, not including the cost of fringe benefits. Greater strategic thinking will be necessary to provide NMSU faculty with the compensation and critical research-related resources (e.g., grant support, compliance support staff) required to attain R1 status.

Recommendations

1. Identify $502,561 in recurring funds to bring all faculty salaries up to at least the 40th percentile for the restricted R2 comparison group.
2. Investigate best practices for addressing salary compression in preparation for the next iteration of market analysis (planned for FY24-25).
3. Work closely with Faculty Senate to make faculty evaluation more consistent and more transparent across departments and colleges, especially with respect to merit. Presently, the degree of inconsistencies and poorly-articulated evaluative criteria involved in the faculty evaluation process makes reliable and valid assessments of faculty merit extremely challenging. However, excellent faculty members will continue to leave NMSU if they perceive that their talent and hard work are not valued.
4. Given the Advisory Committee's original charge to develop processes and methods such that market and equity salary analyses are conducted regularly, rigorously, and transparently, we recommend that the Provost's Office work closely with Faculty Senate to institutionalize salary reviews with the support of multiple NMSU administrative offices including the Provost, Human Resource Services, Labor Relations, the Vice President of Equity, Inclusion, and Diversity, and academic Deans.

---

[6] The first external market analysis (in AY20-21) identified 40th percentile of the restricted R2 market as the benchmark.

Addendum A – Faculty Advisory Committee Members

Name	Department	College
Justin MacDonald (co-chair)	Psychology	A&S
Laura Madson (co-chair)	Psychology	A&S
Ivan De La Rosa	Social Work	HEST
Gaylene Fasenko	Animal & Range Sciences	ACES
Charlotte Gard	Economics, Applied Statistics, and International Business Department	Business
Manal Hamzeh	Borderlands and Ethnic Studies	HEST
Jeanette Haynes Writer	School of Teacher Preparation, Administration and Leadership	HEST
Michael Kalkbrenner	Counseling & Educational Psychology	HEST
Martha Mitchell	Chemical Engineering	Engineering
Marshall Taylor	Sociology	HEST
Joe Tomaka	Public Health	HEST
Tonghui Wang	Math	A&S

Addendum B – Universities Included in the R2 and R1 Market Comparisons

R2 institutions (with * indicating they were in the full market only)

Air Force Institute of Technology--Graduate School of Engineering & Management

*Montclair State University

Arkansas State University-Jonesboro

*Morgan State University

Augusta University

New Mexico State University Main Campus

Ball State University

North Carolina Agricultural and Technical State University

Boise State University

Northern Arizona University

Bowling Green State University

Northern Illinois University

*California State University-Fresno

Oakland University

*California State University-Fullerton

Portland State University

*California State University-Long Beach

Prairie View A&M University

*California State University-San Bernardino

*Rowan University

*California State University, East Bay

Sam Houston State University

Central Michigan University

*San Diego State University

*City University of New York The City College

*San Francisco State University

Cleveland State University

South Dakota State University

College of William & Mary

Southern Illinois University Carbondale

East Carolina University

Southern University - Baton Rouge

East Tennessee State University

*State University of New York College of Environmental Science and Forestry

Eastern Michigan University

Tarleton State University

Florida Agricultural and Mechanical University

Tennessee State University

Florida Atlantic University

Tennessee Technological University

Georgia Southern University

Texas A&M University - Corpus Christi

Idaho State University

Texas A&M University - Kingsville

Illinois State University

Texas Southern University

Indiana University of Pennsylvania

Texas State University

Indiana University-Purdue University Indianapolis

The University of Akron, Main Campus

Jackson State University

The University of South Dakota

James Madison University

The University of Texas Rio Grande Valley

Kennesaw State University

University of Alaska Fairbanks

Louisiana Tech University

University of Arkansas at Little Rock

Marshall University

*University of California-Merced

Miami University

University of Colorado Colorado Springs

Michigan Technological University

University of Idaho

Middle Tennessee State University

*University of Maryland Eastern Shore

Missouri University of Science & Technology

*University of Massachusetts Boston

*University of Massachusetts Dartmouth

University of South Alabama

*University of Massachusetts Lowell

University of Texas at Tyler

University of North Carolina at Charlotte

University of North Carolina at Greensboro

University of North Carolina Wilmington

University of North Dakota

University of North Florida

*University of Puerto Rico-Rio Piedras Campus

*University of Rhode Island

University of Toledo

*University of Vermont

University of Wyoming

*West Chester University of Pennsylvania

Western Michigan University

Wichita State University

Wright State University Main Campus

R1 institutions (with * indicating they were in the full market only)

Arizona State University	The University of Texas at Arlington
Auburn University	The University of Texas at Dallas
*City University of New York Graduate Center	The University of Utah
Clemson University	*University At Buffalo, State University of New York
Colorado School of Mines	University of Alabama at Birmingham
Colorado State University	University of Alabama in Huntsville
Florida International University	University of Arkansas Main Campus
Florida State University	*University of California-Berkeley
George Mason University	*University of California-Davis
Georgia Institute of Technology	*University of California-Irvine
Georgia State University	*University of California-Los Angeles
Indiana University	*University of California-Riverside
Iowa State University	*University of California-San Diego
Kansas State University	*University of California-Santa Barbara
Kent State University Main Campus	*University of California-Santa Cruz
Louisiana State University and Agricultural and Mechanical College - Baton Rouge	University of Central Florida
Michigan State University	University of Cincinnati Main Campus
Mississippi State University	University of Colorado Boulder
Montana State University	University of Colorado Denver
*New Jersey Institute of Technology	University of Connecticut
North Carolina State University	*University of Delaware
North Dakota State University Main Campus	University of Florida
Ohio University	University of Georgia
Oklahoma State University	University of Hawaii at Manoa
Old Dominion University	University of Houston
Oregon State University	University of Illinois at Chicago
*Pennsylvania State University	University of Illinois at Urbana-Champaign
Purdue University Main Campus	University of Iowa
*State University of New York At Albany	University of Kansas Main Campus
*State University of New York at Binghamton	University of Kentucky
*Stony Brook University	University of Louisiana at Lafayette
*Temple University	University of Louisville
Texas A&M University	*University of Maine
Texas Tech University	*University of Maryland Baltimore County
The Ohio State University	*University of Maryland College Park
The University of Alabama	*University of Massachusetts
The University of Arizona	University of Michigan-Ann Arbor
The University of Memphis	University of Minnesota-Twin Cities
University of Mississippi	University of Southern Mississippi

University of Missouri - Columbia

University of Montana - Missoula

University of Nebraska - Lincoln

University of Nevada, Las Vegas

University of Nevada, Reno

*University of New Hampshire

University of New Mexico Main Campus

University of North Carolina at Chapel Hill

University of North Texas Denton Campus

University of Oklahoma Norman Campus

University of Oregon

*University of Pittsburgh

University of South Carolina Columbia

University of South Florida

University of Tennessee, Knoxville

University of Texas at Austin

University of Texas at El Paso

University of Texas at San Antonio

University of Virginia

University of Washington

University of Wisconsin-Madison

University of Wisconsin-Milwaukee

Utah State University

Virginia Commonwealth University

Virginia Tech

Washington State University

Wayne State University

West Virginia University

Addendum C – Cost to Bring NMSU Faculty Salaries to Given Percentile after 6% Raise Compared to Full R2 Market, Geographically-Restricted R1 Market, and Full R1 Market[7]

Table 2 Cost for R2 Full Market

	10th	15th	20th	25th	30th	33rd	40th	50th
After 6% raise	$ 89,238 N=16 3%	$137,789 N=23 4%	$192,504 N=37 6%	$262,274 N=54 9%	$ 359,100 N=78 14%	$ 441,192 N=93 16%	$ 656,897 N=118 21%	$1,099,989 N=174 30%

Table 3 Cost for R1 Geographically-Restricted Market

	10th	15th	20th	25th	30th	33rd	40th	50th
After 6% raise	$1,493,560 N=183 32%	$2,168,036 N=266 46%	$2,992,174 N=327 57%	$3,881,678 N=388 67%	$4,784,076 N=429 75%	$5,375,326 N=447 78%	$6,838,598 N=473 82%	$9,035,093 N=498 87%

Table 4 Cost for R1 Full Market

	10th	15th	20th	25th	30th	33rd	40th	50th
After 6% raise	$1,607,861 N=197 34%	$2,443,370 N=285 50%	$3,342,653 N=350 61%	$4,317,094 N=401 70%	$5,234,285 N=438 76%	$5,833,726 N=458 80%	$7,340,990 N=484 84%	$9,783,954 N=518 90%

---

[7] All amounts rounded to the nearest dollar, N = Number of faculty represented in each cell; percentage of faculty represented also included. Calculations **before** the 6% raise are not shown as they are less relevant.