Notice of Public Meeting

Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the Navajo County Community College District Governing Board (Board) and to the general public that the Board will hold a regular District Governing Board Meeting open to the public on **March 17, 2015 beginning at 10:00 a.m**. The meeting will be held at the Northland Pioneer College Painted Desert Campus, Tiponi Community Center meeting room, located at 2251 E. Navajo Blvd., Holbrook, Arizona.

One or more Board members and/or staff members may participate in the meeting by telephone if necessary.

The public is invited to check on addenda that may be posted up to 24 hours prior to the meetings. Copies of the meeting agenda may be obtained through the Office of the President, Northland Pioneer College, Painted Desert Campus, 2251 E. Navajo Blvd., Holbrook, AZ, telephone (928) 524-7418 or (800) 266-7845 Ext. 7418, at least 24 hours in advance of the meeting. If any disabled person needs any type of accommodation, please notify Lisa Jayne at the above address or telephone number at least 24 hours prior to the scheduled time.

The Board may vote to hold an executive session for the purpose of obtaining legal advice from the District's attorney on any matter listed on the agenda pursuant to A.R.S. §38-431.03 (A)(3). Should the District's attorney not be present in person, notice is further given that the attorney may appear by speakerphone.

I, Lisa Jayne, certify that this notice of public meeting, prepared pursuant to A.R.S. § 38-431.02, was posted on or before the 16th day of March 2015, at 10:00 a.m.

Lisa Jayne
Recording Secretary to the Board

NOTICE DISTRIBUTION

1. WHITE MOUNTAIN INDEPENDENT NEWSPAPER
2. TRIBUNE-NEWS & SNOWFLAKE HERALD NEWSPAPERS
3. NAVAJO TIMES
4. NAVAJO-HOPI OBSERVER
5. KINO RADIO
6. KNNB RADIO
7. KONOPNICKI COMMUNICATIONS [KQAZ/KTHQ/KNKI RADIO]
8. KWKM RADIO
9. WHITE MOUNTAIN RADIO
10. NPC WEB SITE
11. NPC ADMINISTRATORS AND STAFF
12. NPC FACULTY ASSOCIATION PRESIDENT
13. NPC CLASSIFIED AND ADMINISTRATIVE SUPPORT ORGANIZATION PRESIDENT
14. NPC STUDENT GOVERNMENT ASSOCIATION PRESIDENT

OUR MISSION

Northland Pioneer College
creates, supports
and promotes
lifelong learning.

Northland Pioneer College

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Governing Board Meeting Agenda

Painted Desert Campus, Tiponi Community Center
2251 East Navajo Boulevard, Holbrook, Arizona

Date: March 17, 2015 **Time:** 10:00 a.m. (MST)

Item	Description	Resource
1.	**Call to Order and Pledge of Allegiance**	Chair Handorf
2.	**Adoption of the Agenda** (**Action**)	Chair Handorf
3.	**Call for Public Comment** Individuals may address the Board on any relevant issue for up to 5 minutes. At the close of the call to the public, Board members may not respond to any comments but may respond to criticism, ask staff to review a matter or ask that a matter be placed on a future agenda.	Chair Handorf
4.	**Reports:**	
	A. **Financial Position**	Vice President Hatch
	B. **Human Resources**	Director Hokanson
	C. **CASO**	Margaret White
	D. **NPC Faculty Association**	FA Representative
	E. **NPC Student Government Association**	Joshua Rogers
	F. **NPC Friends and Family**	Betsyann Wilson
5.	**Consent Agenda** (**Action**) A. **February 17, 2015 Regular Board Minutes** B. **Request to Approve Intergovernmental Agreement with Northeast Arizona Technological Institute of Vocational Education (NATIVE)** C. **Request to Approve Modification of the Business AAS, CAS, CP in Accounting, Entrepreneurship, Management and Leadership, Medical Office Technologies, Medical Transcription, Modern Office Technologies and Retail Management** D. **Request to Approve Modification of the Computer Information Systems CP in Network and PC Support** E. **Request to Approve Modification of the Medical Assistant AAS, CAS** F. **Request to Approve Modification of the Nursing Assistant CP** G. **Request to Approve Modification of the Associate of General Studies (AGS)** H. **Request to Approve Modification of the Paramedicine (EMT) AAS, CAS, CP** I. **Request to Approve Modification of the General Education Requirements – AA, AAEE, AAS, ABUS, AGS, and AS** J. **Request to Approve Modification of the Associate of Science** K. **Request to Approve New Program – Associate of Arts in Early Childhood** L. **Request to Approve New Program – Film and Digital Video** M. **Request to Approve 2016-2017 Academic Calendar**	Chair Handorf
6.	**Old Business:** None.	
7.	**New Business:**	
	A. **Preliminary Budget Analysis**	Vice President Hatch
	B. **Request to Approve 2015-16 Tuition and Fees Schedules (Action)**	Vice President Hatch
	C. **Request to Approve 2015-2016 Wage & Salary Schedules (Action)**	Vice President Hatch
	D. **Request to Modify/Accept Policy 1087 (Action)**	President Swarthout
	E. **Request to Approve Purchase of Laptops (Action)**	President Swarthout
	F. **Request to Approve Purchase of PCs (Action)**	President Swarthout
	G. **Board of Nursing Response**	President Swarthout
	H. **ACCT Conference Update**	President Swarthout
	I. **EMSI Report**	Director Wasson
	J. **Review of Northeast Arizona Training Center**	Vice President Hatch
8.	**Standing Business:**	
	A. **Strategic Planning and Accreditation Steering Committee Report**	Vice President Vest
	B. **President's Report**	President Swarthout
	C. **DGB Agenda Items and Informational Needs for Next Meeting**	Chair Handorf
9.	**Board Report/Summary of Current Events**	Board Members
10.	**Announcement of Next Regular Meeting** **April 14, 2015**	Chair Handorf
	Adjournment (**Action**)	Chair Handorf

The District Governing Board may consider any item on this agenda in any order and at any time during the meeting. The District Governing Board may take action to approve, or may take other action, regarding all items of New Business, Old Business, Standing Business, or the President's Report. The Board may vote to hold an executive session for the purpose of obtaining legal advice from the District's attorney on any matter listed on the agenda pursuant to A.R.S. §38-431.03 (A)(3). Should the District's attorney not be present in person, notice is further given that the attorney may appear by speakerphone.

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NAVAJO COUNTY COMMUNITY COLLEGE DISTRICT
Statement of Financial Position
For the period July 1, 2014 to January 31, 2015 Budget Period Expired 58%

Tax Supported Funds

	General Unrestricted			
	Budget	Current Month Actual	Y-T-D Actual	%
REVENUES				
Primary Tax Levy	14,035,753	392,475	8,771,293	62%
State Aid:				
Maintenance and Operations	1,618,200	404,550	1,213,650	75%
Equalization	5,283,300	1,320,825	3,962,475	75%
Tuition and Fees	4,500,000	540,392	3,370,314	75%
Investment earnings	140,000	6,159	76,447	55%
Grants and Contracts	1,800,000	-	927,109	52%
Other Miscellaneous	200,000	14,379	98,451	49%
Transfers:	(2,750,000)	(166,667)	(1,695,559)	62%
TOTAL REVENUES	$24,827,253	$2,512,113	$16,724,180	67%
EXPENDITURES				
Salaries and Wages	17,335,284	1,243,486	8,677,204	50%
Operating Expenditures	8,243,969	820,654	3,838,132	47%
Capital Expenditures	248,000	3,895	132,657	53%
TOTAL EXPENDITURES	$24,375,381	$2,068,035	$12,647,993	52%

	Unrestricted Plant			
	Budget	Current Month Actual	Y-T-D Actual	%
REVENUES				
State Aid:				
Capital	375,400	93,850	281,550	75%
Other Miscellaneous				
Transfers:	2,000,000	166,667	1,166,667	58%
TOTAL REVENUES	$2,375,400	$260,517	$1,448,217	61%
EXPENDITURES				
Salaries and Wages				
Operating Expenditures				
Capital Expenditures	7,775,400	245,994	2,070,769	27%
TOTAL EXPENDITURES	$7,775,400	$245,994	$2,070,769	27%

NAVAJO COUNTY COMMUNITY COLLEGE DISTRICT
Statement of Financial Position
For the period July 1, 2014 to January 31, 2015 Budget Period Expired 58%

Restricted and Auxilary Funds

Restricted

	Budget	Current Month Actual	Y-T-D Actual	%
REVENUES				
Grants and Contracts	6,400,000	1,480,207	3,608,207	56%
Donations				
Transfers:	600,000		459,811	77%
TOTAL REVENUES	$7,000,000	$1,480,207	$4,068,018	58%
EXPENDITURES				
Salaries and Wages	1,234,614	223,799	935,089	76%
Operating Expenditures	5,665,386	184,141	2,891,414	51%
Capital Expenditures	100,000	-	98,495	98%
TOTAL EXPENDITURES	$7,000,000	$407,940	$3,924,998	56%

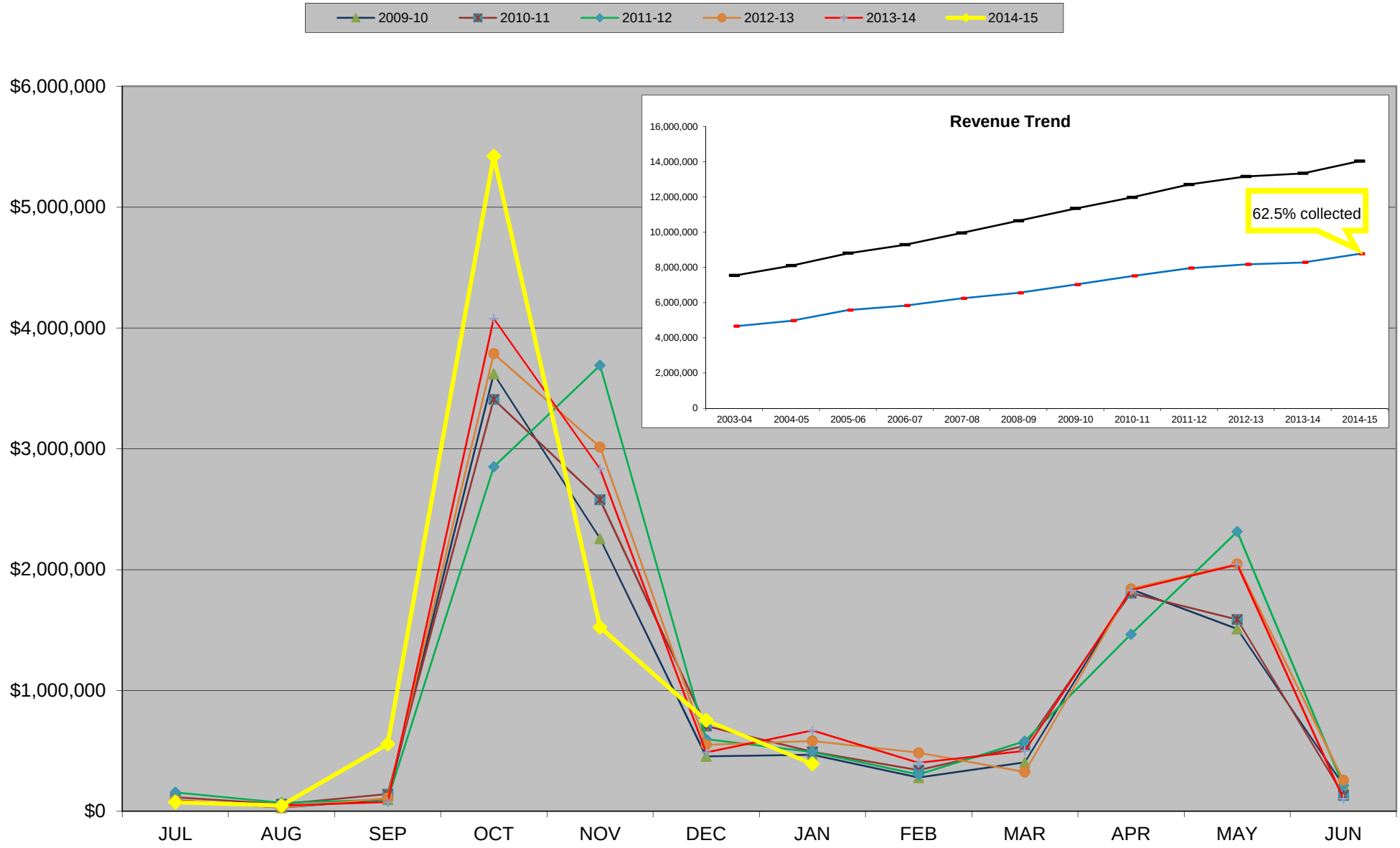
Auxiliary

	Budget	Current Month Actual	Y-T-D Actual	%
REVENUES				
Sales and Services				
Bookstore	100,000	17,081	75,765	76%
Other	400,000	8,227	97,053	24%
Donations				
Transfers:	150,000	-	69,081	46%
TOTAL REVENUES	$650,000	$25,308	$241,899	37%
EXPENDITURES				
Salaries and Wages	424,551	20,357	178,197	42%
Operating Expenditures	225,449	3,443	59,423	26%
Capital Expenditures				
TOTAL EXPENDITURES	$650,000	$23,800	$237,620	37%

Cash Flows

Cash flows from all activities (YTD)	$22,482,314
Cash used for all activities (YTD)	$18,881,380
Net Cash for all activities (YTD)	$3,600,934

Monthly Primary Property Tax Receipts



Human Resources UPDATE
DGB-March 17, 2015

FILLED

1. **Audio/Video Support Technician – Curtis Stevens started on March 2, 2015. Curtis is currently taking classes at Northland Pioneer College. He comes to us from City 4 Television.**
2. **Technical Design/Production Manager – Patrick Day starts June 1, 2015. Patrick received his Bachelor of Arts from the University of California.**
3. **Assistant to the Campus Manager - 20 hr. PDC – Jill Sartain started on February 17, 2015. Jill received her Associate of Arts degree from Northland Pioneer College. Previously she was a temporary Assistant to the Campus Manager.**
4. **Assistant to the Campus Manager - 20 hr. LCC – Kelli Sartain started February 16, 2015. Kelli received her Associate of Arts from Northland Pioneer College. Previously she was a temporary Assistant to the Campus Manager.**
5. **Community and Corporate Learning Specialist – Rebecca Hunt started March 16, 2015. Rebecca received her Associate of Arts from the University of Phoenix. Previously she was the Alumni Relations Assistant at NPC.**
6. **Academic Advisor – PDC – Anthony Hill started March 9, 2015. Anthony received his Bachelor of Science from Arizona State University and his Master of Arts from the University of Phoenix. Anthony previously taught as an adjunct faculty for Northland Pioneer College.**
7. **Secretary to the Dean of Career and Technical Education. Pamela Dominguez started March 2, 2015. Pam has 3 Associate of Applied Science Degrees from Northland Pioneer College. Pam was previously the Interim Assistant to the Campus Manager.**

EXTERNAL OPENINGS

8. **Wireless Network Engineer – Closed September 21, 2014. 16 applicants.**
9. **Coordinator of Administrative Systems Support – Re-advertised. Open until filled. 2 applicants.**
10. **Lead Technician for Technical Services – Re-advertised. Closed February 13, 2015 6 applicants**
11. **Faculty in English – Closed January 15, 2015. 59 applicants.**
12. **Director for Information Services – Open until filled. 10 applicants.**

INTERNAL POSTINGS

13. **Faculty in ECD and Education – 1 yr. appointment. Closed February 22, 2015. 1 applicant.**
14. **Career Coach & WIA Business Services Representative – Closes March 20, 2015. 1 applicant.**

Navajo County Community College District
Governing Board Meeting Minutes

February 17, 2015 – 10:00 a.m.
Painted Desert Campus, Tiponi Community Center
2251 East Navajo Boulevard, Holbrook, Arizona

Governing Board Member Present: Ms. Ginny Handorf, Mr. James Matteson, Mr. Prescott Winslow, Mr. Frank Lucero, Mr. Peaches arrived at approximately 10:20 a.m.

Staff Present: President Jeanne Swarthout; Vice President Blaine Hatch; Vice President Mark Vest; Institutional Effectiveness Director Dr. Leslie Wasson; Recording Secretary to the Board Lisa Jayne.

Others Present: Tracy Mancuso, Rich Chanick, Venessa Beecraft, Jim Austin, Larry Hildebrand, Rico Baca, Peggy Belknap, Eric Bishop, Byron Lewis, Mark Juzwiak, Stuart Bishop, Everett Robinson, Ann Hess, Daphne Brimhall, Margaret white, Beth Johnson, John Spadaccini, Rebecca Hunt, Josh Rogers, Stan Pirog, Kelley Harvey-Brannon, Tom Poscharsky, Jennifer Bishop, Naomi Hatch, Shawntel Skousen, Rickey Jackson, Patti Matyas, Maderia Ellison, Sandy Johnson, Joann Barnes-Slocum, Jessica Kitchens, Ryan Taylor, Linda Kor, Beaulah Bob-Pennypacker, Sharon Hokanson, Cindy Hildebrand, Marcia Bennett, Paul Moffitt, Kerri Larson, Mindy Neff, Mark Ford.

Agenda Item 1: Call to Order and Pledge of Allegiance
Chair Handorf called the meeting to order at 10:00 a.m. Mr. Matteson led the Pledge of Allegiance.

Agenda Item 2: Adoption of Agenda
Mr. Matteson moved to adopt the agenda as presented. Mr. Lucero seconded the motion. ***The vote was unanimous in the affirmative.***

Agenda Item 3: Call for Public Comment
Sandra Johnson addressed the Board regarding the Expenditure Limitation problem, stating that she felt the college should attempt a budget override.

Agenda Item 4: Reports

4.A. Financial Position – Vice President Hatch
Vice President Hatch summarized the Financial Position report to the Board.

Mr. Winslow asked if grant funds are dispersed before they are received from the federal government. Vice President Hatch stated that in most cases the College functions on a reimbursement arrangement with both federal aid for students as well as any grants the College receives from the federal government or the State of Arizona. Mr. Winslow asked if that was common practice. Vice President Hatch stated it was.

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4.B. Human Resources – Director Sharon Hokanson
Director Sharon Hokanson reviewed the Human Resources report with the Board.

President Swarthout asked if the IS Director position had been posted. Director Hokanson stated it has been posted and is being advertised nationally.

4.C. NPC CASO
Margaret White, co-chair of CASO, addressed the Board and stated CASO just issued the February newsletter and handed a copy to the Board members. She stated that thirteen NPC students were awarded the All-Arizona Academic Scholarship. Also, Colleen Readel is organizing graduation this year. Shawntel Skousen will take charge of the Warm and Fuzzy awards.

4.D. Faculty Association
Mark Ford, Faculty in Film and Digital Video, addressed the Board and stated Vice President Vest provided the Faculty Association data about the scheduling issues at SCC. The FA has an ongoing dialogue about the process by which the College handles questions of academic misconduct, plagiarism, and issues of academic standards, as the FA is looking to revise the academic misconduct process. Nominations for Faculty Association officers took place and the FA is finalizing details about handling the commemoration of faculty member Karen Hansen. The Construction Department is building a bench in her honor.

Mark Ford stated he is developing curriculum for Film and Digital Video Program which is presently being reviewed in Instructional Council. As soon as it is approved he will come before the Board to introduce the program.

4.E. NPC Student Government Association
None.

4.F. NPC Friends and Family – Betsyann Wilson
Betsyann Wilson addressed the Board and stated that Tuesday April 7 is Arizona Gives Day which is sponsored by the Alliance of Arizona Non-profits. This is a 24-hour online opportunity for crowd funding. The link for donation is at www.npcfriendsfamily.org, under "events" there's a link for giving a donation on Arizona Gives Day. On that day she will be asking everyone to send out requests to ten people in Facebook, Twitter, or email to request donations on April 7. First prize for non-profit who raises the most is $15,000, second $10,000, and third prize is $8,000. The non-profit with the most donors overall will receive $8,500.

Chair Handorf asked Ms. Wilson what a sustaining member donation requires. Betsyann stated just a quick set up of a monthly charge on debit or credit that can be set up from the website as well at www.npcfriendsfamily.org.

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4.G. SBDC- Tracy Mancuso

Tracy Mancuso addressed the Board and introduced SBDC staff Rich Chanik, Vanessa Beecraft, and Jim Austin. She reviewed a survey of the SBDC program with the Board and stated the SBDC is part of NPC but also part of national program that is accredited. Rich Chanik addressed the Board regarding the Restaurant Association that was recently developed, stating the purpose of the Association is to help new restaurants succeed by providing training and mentoring. Tracy Mancuso stated the SBDC also sponsors a monthly spot in Maverik Magazine for new businesses. For every $1 that NPC invests to fund the SBDC Program there is $3.50 in increased sales revenue generated by businesses in Northeast Arizona, 120 new jobs, and 22 new businesses open.

Chair Handorf asked how often the SBDC grant is renewed. Ms. Mancuso stated it is renewed annually. She also stated that on March 24th a Success Award will be given to Randy Nikolato in Round Valley who has a wood products company. Mr. Matteson asked if the businesses are introduced to Google. Tracy stated information provides covers Google, Facebook, Yellow Pages, Yelp, and Urban Spoon and also covers how to get a message that is consistent and targeted. Ms. Mancuso stated that a Facebook workshop is coming soon.

Agenda Item 5: Consent Agenda

- **A. January 20, 2015 DGB Minutes; January 20, 2015 Study Session Minutes; January 20, 2015 Executive Session Minutes**
- **B. Request to Approve Modification of the Associate of Business (ABus)**
- **C. Request to Approve Modification of the following Early Childhood Studies Degrees: Early Childhood Management AAS, CAS; Family Care AAS, CAS, CP; Infant/Toddler AAS, CAS, CP; Preschool AAS, CAS, CP; School Age AAS, CAS, CP**
- **D. Request to Approve Modification of the Fire Science AAS, CAS, CP**
- **E. Request to Approve Modification of the Human Services AAS, CAS, CP**
- **F. Request to Approve Modification of the Mechatronics AAS**
- **G. Request to Approve Modification of the Industrial Maintenance And Operations AAS, CAS, CP**

Mr. Matteson made a motion to approve the consent agenda. Mr. Lucero seconded. ***The vote was unanimous in the affirmative.***

Agenda Item 6: Old Business

None

Agenda Item 7: New Business

7.A. Request to Approve Administrator Emeritus Award – Eric Bishop

Director Sharon Hokanson addressed the Board regarding Eric Bishop's accomplishments during his time at the College. She stated that Eric Bishop began his employment with Northland Pioneer College as Faculty in Computer Information Systems in August of 2006. Eric earned his Associate of Applied Science in Networking Technology from Gateway Community College and his Bachelor of Science in Technical Management from DeVry University. In January 2009 he was awarded his Master of Science degree in Computer Information Systems from Boston University. In January of 2010 he became the Director for Information Services.

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Eric has served as an Annual Update Reviewer for the Higher Learning Commission. He is a member of the American Association of University Professors, the Institute of Electrical and Electronics Engineers, the Institute of Electrical and Electrical Engineers Computer Society, and the Association for Computing Machinery. He has taught graduate courses as an adjunct faculty member at Boston University.

As the Director of Information Services, Eric has served as a valued member of the Executive Team at NPC. His knowledge, insight, work ethic, and leadership abilities will be greatly missed by his colleagues.

Mr. Matteson made a motion to approve Eric Bishop for Administrator Emeritus Award. Mr. Lucero seconded the motion. ***The vote was unanimous in the affirmative.***

7.B. Request to Approve Purchase of SmartBoards, Projectors, and Document Cameras
President Swarthout stated as part of a replacement cycle staff is recommending approval of the purchase of SmartBoards, Projectors, and Document Cameras.

Mr. *Lucero made a motion to approve the purchase of SmartBoards, Projectors, and Document Cameras from CCS Presentation Systems in the amount of $141,411.60. Mr. Matteson seconded the motion.* ***The vote was unanimous in the affirmative.***

7.C. Request to Approve Silver Creek Reinvention Plan
President Swarthout stated that the Silver Creek Reinvention Plan overview and summary has not changed since initially presented. The new item introduced is a phased approach to the project. The phasing would begin and be driven by course scheduling for the next academic year and provides a timeline for the project all the way through to completion on December 31, 2015.

Mr. Matteson stated the course offerings are largely unchanged from what is offered today. He asked if student services would still be offered. Vice President Vest stated student services would still be provided although under the proposal advising would be more limited. In regards to the question of access, by reducing the number of hours of availability, the College does run the risk of not being available when a student requires services.

Mr. Matteson asked if it would be possible to make appointments for advising. Vice President Vest stated it is currently walk-in at most locations, but if the proposal moved forward, moving advising to an appointment model will be considered. Mr. Matteson asked if with proposed office staffing changes, there would be adequate office staff for the business conducted at the campus. Vice President Vest stated that the office staff actually reports to Vice President Hatch but from the student services side, there are peaks and valleys in the registration cycle and it might be necessary to bring in additional staffing during the peaks in order to meet the needs of students. Mr. Matteson asked if that type of staffing would be adequate. Vice President Vest stated in the affirmative.

Mr. Matteson stated he wanted to make sure under the proposed revisions that the students are still going to be served with the campus restructure. Vice President Vest stated advising services

and front office services will be available but not to the extent they are at present but the educational and instructional services offered at Silver Creek will continue.

Mr. Lucero stated that if administration moved to Silver Creek Campus and then enrollment increased, it would be difficult to undue this change and accommodate new enrollment.

Mr. Matteson stated he felt the recommendation for reinvention of student services would work for accommodating students at the current level. He also felt the recommendation to reduce library operations while retaining some library activities also made sense. But in regards to administrative staff, Mr. Matteson suggested there be a four-campus study prepared in advance of any architectural work that would flesh out the problem of moving administration. Mr. Matteson stated he suggests moving ahead with the alterations to student services, the alterations to the library as recommended, but instead of going ahead immediately to architectural design changes to campuses, the study will delineate the changes at each campus. Also, this space plan could be utilized into the three year capital improvement plan.

Mr. Winslow stated he wanted to look over the recommendations laid out to the Board. The last one that suggests the Board "do nothing" which he felt was just another way of saying the Board would kick the can down the road. Mr. Winslow stated kicking the can down the road is unwise and unfair to do to a future Board, as it would leave a future board to make draconian cuts down the line.

Mr. Winslow stated that what's driving this proposal is the expenditure limitation, which is difficult to talk about because it's a substantial negative influence that could happen but won't definitely happen. He stated he's not willing to cross his fingers and hope that a solution will be coming from the legislature in the near future. The other aspect is a need to reduce expenditures because of reduced enrollment. There is a possibility of a shift at enrollment at SCC, although there is not compelling evidence this will happen. Mr. Winslow stated this Board can justify making these changes due to decreased enrollment as long as there's nothing that goes into place to make it permanent and irreversible.

Mr. Winslow stated he would need to see more compelling evidence of moving administrators in one location, as he feels that having at least one administrator on each campus is important in a multi-campus system. He would support a move to make the changes to student services and the library and transfer of the faculty, but then would recommend leaving the space vacant until some overall space planning study that can be integrated with the capital facility plan.
Vice President Vest stated he wanted to clarify that if the Board moves to not relocate administrators, then there will be nowhere for faculty at SCC to be relocated to. Mr. Winslow stated that was a good point and it would be prudent to not move the faculty until a space planning study was completed to determine if/when faculty should be moved.

Larry Hildebrand, Kerry Ballard, Jason Brubaker, Patti Matyas, Beth Johnson, Tom Poscharsky Byron Lewis spoke in opposition of the SCC reinvention or made a request that the Board give the communities of Taylor/Snowflake some time to turn enrollment around before any

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irreversible changes were made. Margaret White spoke in opposition and gave a petition to Chairman Handorf that "demanded" the SCC reinvention be stopped.

Chair Handorf stated she thought waiting could be helpful, and stated the College has offered four new scholarships to students to help with completion which may help increase enrollment. Chair Handorf also clarified that the Board of Nursing's problem with the nursing program has to do with counseling space, not the program itself.

Mr. Lucero stated it was the same thing. President Swarthout asked if the Board was requesting the Board of Nursing be contacted about moving the nursing program to SCC. Mr. Lucero stated he was requesting that be done. Mr. Lucero also requested College expenditures for NATC.

Mr. Peaches asked what changing student services entailed, if it meant no classroom instruction and teachers at Silver Creek. Vice President Vest stated there is an advisor position at SCC that has been in limbo, the individual who was the academic advisor at SCC is now the Director of Student Services over the advising staff, and one of the questions was whether or not to move forward with filling this position as it was not clear if the Board was going to approve moving this person from SCC or not. It really is just an advising position, whether full-time or part-time.

Mr. Matteson made a motion to approve student services changes as recommended; implement library changes in conjunction with the community over the next year; and staff and faculty will not be moved until a four-campus study of space planning with cost estimates can be brought to the Board sometime in the summer. Mr. Winslow seconded the motion. ***The vote passed with a majority vote.***

7.D. Request to Accept Expenditure Limitation Report

Vice President Hatch stated the Office of the Auditor General did complete the audit of the College's Annual Budget Expenditure Limitation report. Staff recommends acceptance of the report.

Mr. Winslow stated that the report basically says that the College met the requirements of the law and that overages were covered by carry forward.

Vice President Hatch stated that was correct. The letter to the Board indicates the College was able to carry forward about $3.6 million of unexpended tuition, revenues, and in Note 5 it indicates the College did have a need to use $1.1 million of the carry forward to balance.

Mr. Winslow asked for the total available carry forward balance to the nearest million. Vice President Hatch stated the Auditor General is currently reviewing schedules but at this point there is approximately $30 million of carry forward. Mr. Lucero asked if the carry forward was limited to certain areas. Vice President Hatch stated there are certain requirements, some of the carry forward credits are to be used in specific areas such as debt services, capitol fund expenditures, but the bulk is tuition which has no limitation.

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Mr. Matteson moved to approve the Expenditure Limitation Report. Mr. Lucero seconded the motion. ***The vote was unanimous in the affirmative.***

7.E. Request to Approve Adjustment to Fiscal Year 2013-2014 Adopted Budget
Vice President Hatch stated staff recommends approval of the adjustment to Fiscal Year 2013-2014 Adopted Budget which reflects the actual expenditures for the year.

Mr. Winslow moved to approve the adjustment to the Fiscal Year 2013-2014 Adopted Budget. Mr. Matteson seconded the motion. ***The vote was unanimous in the affirmative.***

7.F. Review of Introductory Budget Analysis
Vice President Hatch reviewed the Introductory Budget Analysis with the Board.

Mr. Winslow asked if there were any major grant proposals pending. Vice President Vest stated the College has filed a Student Support Services Trio grant that would be for $220,000 a year for five years; just under $1.2 million. Also, a FIPSE grant, Fund to Improve Post-Secondary Education, proposal in conjunction with the school districts in spring that would be well over $1 million for the College. Mr. Winslow asked if receiving grant awards would affect the College's expenditure limitation. Vice President Hatch stated grant revenues are outside the expenditure limitation.

7.G. First Read: Salary & Wages 2015-2016
Vice President Hatch stated staff is recommending an increase in wages by two percent. The Board approved budget assumptions in regard to Salary and Wages are that the College will incrementally increase rates, that the College will consider the competitive market conditions by maintaining a comparative position to the average increases of other local public entities including community colleges in other similar institutions. The shared governance process resulted in a recommendation of a 2% increase, and staff recommends this recommendation go forward with the exception of administrator level positions in which a 1% increase is being recommended.

The Expenditure Limitation has been discussed with the general college community for several years and this concept of wages has also been discussed, and staff has made recommendations in the past that the College needs to stay competitive to make sure that new employees coming in are not coming in at a point that is higher than employees who have served for a number of years. For that reason staff recommends regular increases in wages and salary.

The Proposed Faculty Schedule is included that shows increase along the base by a half a percent. The employees not eligible would be those who are at the bottom of the schedule but with the schedule base being increased that would equate to a 2% increase for all employees who are eligible for a step. Staff is also recommending a 2% to the overload and adjunct pay rates as listed on the schedules. Also the non-exempt employees will receive a 2% increase based on the proposed schedule.

Initial looks at comparable institutions in regards to wages and salary show one institution will propose a 4% wage increase and two other institutions are not planning wage increases. Two additional institutions are not reporting yet.

Mr. Matteson asked why administrators are only being recommended for a 1% increase. Vice President Hatch stated that the proposal gives recognition to the fact that for the most part administrators are more highly paid and a 2% increase in actual dollars is different at the other levels, and the recognition that wage increases need to continue, and not having wage increases is not supportable. And with expenditure concerns, it is one way to make a reduction in expenditures so that the College can continue to address the current expenditure challenges. Mr. Matteson stated that 1% is not keeping up with inflation and that he personally feels it should be higher.

Vice President Hatch stated the expected impact of salary and wages recommendation is approximately $230,000. The ASRS change reflects a savings of about $10,000. In regards to health insurance, the Navajo County Schools Employee Benefit Trust has successfully managed double digit increases over the last several years and has had much lower increases. It is anticipated that increases will continue and current estimates is a 4% increase in both employee and dependent coverage. Cost of living is forecasted at 1.9% in 2015 and 2.1% in 2016. Over the next ten years forecasters are expecting inflation to average about 2.2%.

7.H. First Read: Tuition & Fees 2015-2016

Vice President Hatch reviewed the proposed 2015-2016 Tuition and Fee Schedule with the Board.

7.I. First Read: Policy 1087; Definition of Decentralization

Vice President Vest stated Policy 1087 has not been revised since March of 1998. It does accurately describe the way the College currently functions and operates. President Swarthout would like the Board to review the policy to address any possible changes.

Mr. Matteson stated there are a number of community colleges that have a decentralized model and this policy seems current and relative. Mr. Winslow suggested a comma be added after "flexible" under section 5.

Agenda Item 8: Standing Business

8.A. *Strategic Planning and Accreditation Steering Committee (SPASC) Report* – Vice President Vest

Vice President Vest stated the College is sending a group of employees to the Higher Learning Commission Persistence and Completion Academy, which is tied directly to the Quality Initiative. The initial meeting for this academy is in St. Charles, Illinois and Vice President Vest, Director Leslie Wasson, and Ann Hilliard, Chair of the QI Team, will report back to SPASC after the visit. The Annual HLC meeting is in March and this year the group attending will be focused on the QI. Also, Rickey Jackson will be presenting research based on work the Developmental Education Division has done over the last two years on student success rates based on offering courses in different timeframes and different modalities. Later in the spring a

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group of five will go to the Persistence and Completion Academy itself and that group will be a mixture of student services and faculty who have been working on the Quality Initiative and the PASS project.

8.B. *President's Report*
Vice President Vest stated that the listening sessions have been constructive and reflects an increasingly engaged community that sincerely wants to try to change the nature of their participation at the campus. Mr. Lucero stated he would like to be notified of upcoming listening sessions.

Mr. Winslow asked if there had been any recent changes at Coconino Community College. Vice President Vest stated he didn't believe there had been any new changes. Over a year ago, due to funding issues they did reduce participation in their nursing program and as a consequence, NPC anticipated seeing, beginning this year, an increased number of applicants to the Winslow program from Coconino County. Mr. Lucero asked if the College is thinking of expanding Winslow for that reason. Vice President Vest stated it will depend on what the pool looks like. Nursing enrollment had shrunk along with enrollment over the last five years. Changes could result in discussions with the Board and the State Board of Nursing.

Mr. Winslow asked if the cap from the State Board of Nursing is above the current enrollment. Vice President Vest stated the current enrollment is capped by the State Board but if the demand in Winslow increased then the State Board could be contacted about a possible increase.
Mr. Lucero asked how long of a process that would be. Vice President Vest stated it is difficult to say.

8.C. Agenda Items/Informational Needs

Agenda Item 9: Board Report/Summary of Current Event
Chair Handorf stated the AADGB is planning to put on a program with the national organization in April. Mr. Lucero stated the Holbrook Library is remodeling the entrance to their building.

Agenda Item 10: Announcement of Next Regular Meeting: March 17, 2015. The spring Board Retreat will be March 12, 2015 at PDC

Agenda Item 11: Adjournment
The meeting was adjourned at 1:10 p.m. upon a motion by Mr. Winslow, a second by Mr. Matteson, and a unanimous affirmative vote.

Respectfully submitted,

Lisa Jayne

Lisa Jayne
Recording Secretary to the Board

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INTERGOVERNMENTAL AGREEMENT
BETWEEN
NAVAJO COUNTY COMMUNITY COLLEGE DISTRICT
AND
NORTHEAST ARIZONA TECHNOLOGICAL INSTITUTE OF VOCATIONAL EDUCATION

This Intergovernmental Agreement ("Agreement") is entered into this 11th day of Feb., 2015 between Navajo County Community College District, ("College"), and Northeast Arizona Technological Institute of Vocational Education ("School District") (collectively "Parties"). Both Parties are public agencies of the State of Arizona as defined in Arizona Revised Statutes ("A.R.S.") § 11-951.

BACKGROUND

College and School District are authorized to enter into this Agreement pursuant to A.R.S. § 15-342(13), § 15-701.01(G), § 15-1444(B)(4), and § 15-1821.01. Grant schools are authorized to participate in this Agreement under the Tribally Controlled Schools Act, 25 U.S.C. § 2501 *et seq*. This Agreement and its use are mandated under A.R.S. § 15-1821.01(1).

College has determined that it is in the best interests of the citizens of the School District to offer college level courses that may be counted toward both high school and college graduation requirements at the high school during the school day.

School District desires that College provide to high school students college level courses that may be counted toward both high school and college graduation.

AGREEMENT

In consideration of the mutual promises contained herein, the Parties agree as follows:

1. PURPOSE

The purpose of this Agreement is to set forth the understanding of the Parties as to their respective responsibilities and rights in providing Dual Enrollment Courses, as defined in Section 2 below, to eligible School District students.

2. DEFINITION

Pursuant to A.R.S. § 15-101(11), a "Dual Enrollment Course" is defined as a college level course that is conducted on the campus of a high school or on the campus of a joint technological education district, and that is:

A. applicable to an established community college academic degree or certificate program, and transferable to a university under the jurisdiction of the Arizona Board of Regents; or

B. applicable to a community college occupational degree or certificate program.

C. Notwithstanding the foregoing, physical education shall not be available as a Dual Enrollment Course.

3. EFFECTIVE DATE AND TERM

This Agreement shall be effective:

A. After the governing boards of School District and College have approved it; and

B. On the date that authorized representatives of both Parties have signed it ("Effective Date").

The term of this Agreement shall be from the Effective Date through June 30, 2015 ("Term").

4. OBLIGATIONS OF COLLEGE

4.1 General Course Requirements

A. College will offer Dual Enrollment Courses to School District juniors and seniors, and freshman and sophomore students subject to Paragraph F in this Section 4.1, who meet College's prerequisites.

B. Pursuant to A.R.S. § 15-1821.01(3), College will ensure that all Dual Enrollment Courses offered to School District students are:

1. of a quality and depth to qualify for college credit as determined by College;

2. evaluated and approved through the College curriculum approval process;

3. at a higher level than taught by the School District high school;

4. transferable to an Arizona public university or applicable to an established community college occupational degree or certificate program; and

5. compliant with all other standards for College courses.

Dual Enrollment Courses offered pursuant to this Agreement are listed in Exhibit B attached to this Agreement.

C. Students enrolled in Dual Enrollment Courses shall be admitted to College for college level credit under current procedures for admission of students to College, and in compliance with A.R.S. § 15-1821.01 and A.R.S. § 15-1805.01. A student who is under eighteen (18) years of age may be

granted admission if the student meets the pre-requisites for the Dual Enrollment Course and the student achieves any one of the following:

1. a composite score of ninety-three (93) or more on the preliminary scholastic aptitude test;

2. a composite score of nine hundred thirty (930) or more on the scholastic aptitude test;

3. a composite score of twenty-two (22) or more on the American college test;

4. a passing score on the relevant portions of the Arizona instrument to measure standards test;

5. the completion of a college placement test designated by College that indicates the student is at the appropriate college level for the course; or

6. is a graduate of a private or public high school or has a high school certificate of equivalency.

Home schooled students are exempt from Sections 1-6 of this Paragraph C. Notwithstanding the above, a student who enrolls in a vocational or occupational education course may be admitted on an individual basis with the approval of College if the student meets the established requirements of the course for which the student enrolls and College determine that the student's admission is in the best interest of the student. College retains the right to refuse admission to and remove a student from Dual Enrollment Courses in accordance with College policy.

D. College has the right to limit the number of semester hours in which a student may enroll in Dual Enrollment Courses to not more than six (6) credit hours per semester.

E. College shall determine residency status of students for tuition purposes in accordance with A.R.S. § 15-1801 *et seq*.

F. Pursuant to A.R.S. § 15-1821.01(2)(b) and subject to Section 5.1(E) below, College may waive the class status requirements for up to twenty-five percent (25%) of the students enrolled for Dual Enrollment Courses by College. College shall have written criteria for waiving the requirement for each Dual Enrollment Course which shall include a demonstration, by an examination of the specific purposes and requirements of the course, that freshman and sophomore students who meet the Dual Enrollment Course prerequisites are prepared to benefit from the college level course. College shall report all exceptions and the justification for each exception.

G. College will provide to School District the instructional information necessary to meet the goals of the courses delivered, including but not limited to College approved textbook titles, syllabi, course outlines and grading standards applicable to the Dual Enrollment Courses.

H. College will ensure that instructors of Dual Enrollment Courses follow the Dual Enrollment Course guidelines, and that the same standards of expectation and assessment that are applied to other College courses are applied to the Dual Enrollment Courses.

I. For each student, College will assign an identification number to the student that shall correspond to or reference the Student Accountability Information System (SAIS) number assigned to the student. School District will provide College with the SAIS number for each student as provided in Section 5.1(G).

J. College will grant College credit for a Dual Enrollment Course when a student satisfactorily completes the course.

4.2. Instructors and Instruction

A. College will ensure that School District instructors teaching Dual Enrollment Courses have valid College teaching qualifications in the field being taught and are selected and evaluated by College using the same procedure and criteria that are used for instructors at College campus.

B. If College is providing the instructor for a Dual Enrollment Course, College will provide at College's expense a substitute instructor, as necessary and as agreed upon by School District, to cover the absence of any College instructor teaching a Dual Enrollment Course.

4.3. Assessment and Monitoring

A. Except for vocational and occupational Dual Enrollment Courses, and if required by College policy, College will assess each student who seeks enrollment in a Dual Enrollment Course through an assessment test prior to, or at the time of, enrollment to determine and assure proper placement in the Dual Enrollment Courses.

B. College will involve full-time College faculty who teach a particular discipline in the selection, orientation, ongoing professional development and evaluation of School District faculty teaching Dual Enrollment Courses.

C. College will designate a liaison officer to assist with dual enrollment activities and to meet with the liaison designated by School District as necessary and, at least once within a two-year period, to review Dual Enrollment Course outlines and School District's high school Scope and Sequence, and to review and amend the course outlines as necessary.

D. College will provide career counseling and advisement for School District students enrolled in Dual Enrollment Courses.

4.4 Policy and Procedure

A. College will comply with all applicable procedures and requirements for the Dual Enrollment Courses set out in state statute and College policy.

B. College will provide School District with College policies and procedures applicable to students enrolling in Dual Enrollment Courses.

C. College will provide School District access to the educational records of students as necessary to carry out the terms of this Agreement, and limit access to such records to employees who have a legitimate interest and a need to know the substance of the particular record, understanding that students enrolled in the Dual Enrollment Courses will be enrolled in both School District and College. Pursuant to Title 34, Part 99, Section 99.31 of the Code of Federal Regulations, the Family Educational Rights and Privacy Act of 1974, as amended ("FERPA"), School District and College may disclose educational records of students to each other as "officials of another school system" where the student is enrolled.

4.5 Students with Disabilities

A. After notification from School District of a student's need, if College is providing the instructor, College will cooperate with School District to ensure the instructor complies with Section 504 of the Rehabilitation Act of 1973, as amended, and the Individuals with Disabilities Education Act. College shall work with School District in determining appropriate accommodations, however, School District shall have the primary financial and administrative responsibility for providing and implementing necessary accommodations.

B. College will provide training and guidance to instructors and other personnel in the area of compliance with the Americans with Disabilities Act (ADA) and Rehabilitation Act of 1973, as amended, as the Acts specifically relate to instructing students in a postsecondary education situation.

4.6. Reporting and Tracking

College will submit a report to the Joint Legislative Budget Committee pursuant to A.R.S. § 15-1821.01(2)(b) when necessary, and School District will provide College with data that is required for inclusion in any such report in a timely fashion, as specified in Section 5.6.

5. OBLIGATIONS OF SCHOOL DISTRICT

5.1 General Course Requirements

A. School District will provide an opportunity for School District students who meet criteria pursuant to Paragraph B of this Section 6.1 to enroll in Dual Enrollment Courses and to receive college credit and credit toward high school graduation.

B. Pursuant to A.R.S. § 15-1821.01(6), School District will ensure that each student who enrolls for a Dual Enrollment Course pursuant to this Agreement is a full-time student, as defined in A.R.S. § 15-901(A)(2)(b), and is currently enrolled in and attending a full-time instructional program, as defined in A.R.S. § 15-901(A)(2)(c), in a school in School District; except that high school seniors who satisfy high school graduation requirements with less than a full-time instructional program shall be exempt from this provision.

C. If School District is providing the instructor for the Dual Enrollment Course, School District will provide instruction in accordance with the polices, regulations and instructional standards of College in courses designated as Dual Enrollment Courses to students of School District at the School District facility during the day.

D. School District will verify that each student enrolled in a Dual Enrollment Course, including those not electing to enroll for College credit, satisfies the prerequisites for the Dual Enrollment Course as published in College's catalog and complies with College policies and this Agreement regarding student placement in courses.

E. The School District Superintendent or designee may allow freshman and sophomore students to enroll in Dual Enrollment Courses subject to Section 4.1(F) above.

F. School District will adopt and utilize College approved textbooks, course outlines, and grading standards applicable to the Dual Enrollment Courses being taught. School District shall provide textbooks for the students. Each student shall be responsible to purchase other supplies, if any, required for the Dual Enrollment Course. Classroom supplies normally supplied by College are included in tuition charges.

G. For each student enrolling in a Dual Enrollment Course, School District will enroll the student using the student's SAIS number and provide that number to College.

5.2 Instructors and Instruction

A. If School District is to provide the instructor, School District will nominate an instructor qualified in the appropriate subject area for each Dual Enrollment Courses and submit each instructor's name and credentials to College for approval.

B. School District will ensure that instructors teaching Dual Enrollment Courses provide instruction in accordance with policies, regulations and instructional standards of College and comply with College assessments.

C. If School District is providing the instructor, School District will provide at School District's expense a substitute instructor, as necessary and as agreed upon by College, to cover the absence of a School District instructor who teaches a Dual Enrollment Course. In the case of substitutions exceeding ten (10) consecutive school days, School District shall notify College in writing of the name and credentials of the substitute instructor.

5.3 Assessment and Monitoring

A. School District will designate a liaison officer to assist with dual enrollment activities and to meet with the College designated liaison as necessary and, at least once within a two-year period, to review Dual Enrollment Course outlines and School District's high school Scope and Sequence to review and amend the course outlines as necessary.

B. School District will provide counseling and advisement for School District students enrolled in Dual Enrollment Courses for the duration of the term of this Agreement.

5.4 Policy and Procedure

A. School District will ensure that each student seeking enrollment in a Dual Enrollment Course:
   1. has completed the necessary registration forms;
   2. has completed College assessment examinations, if required by College;
   3. is aware the student is subject to both School District policies and procedures and College policies and procedures;
   4. is aware the student is participating in a college level course, even though provided at the School District, and should act appropriately; and
   5. is aware of the requirements for determination of resident/nonresident tuition.

B. School District will ensure that each instructor of Dual Enrollment Courses agrees to be subject to School District policies and procedures and College policies and procedures, including the right of College to withdraw authorization of the instructor's participation in the dual enrollment program for failure to follow College requirements.

C. School District will provide College access to the educational records of students as necessary to carry out the terms of this Agreement, and limit access to such records to employees who have a legitimate interest and a need to know the substance of the particular record, understanding that students enrolled in the Dual Enrollment Courses will be enrolled in both School District and College. Pursuant to Title 34, Part 99, Section 99.31 of the Code of Federal Regulations, the Family Educational Rights and Privacy Act of 1974, as amended ("FERPA"), School District and College may disclose educational records of students to each other as "officials of another school system" where the student is enrolled.

5.5 Students with Disabilities

School District will determine the appropriate accommodations for each qualified student with disabilities in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, submit appropriate documentation on students with disabilities to the Disabilities Coordinator at College, and implement accommodations as required by Federal and State law and as negotiated between the College Disability Resource office and School District. School District shall work with College in determining appropriate accommodations. School District shall have the primary financial and administrative responsibility for providing and implementing necessary accommodations.

5.6 Reporting and Tracking

School District will provide to College any data or other information that is required for the submission of the report required by A.R.S. § 15-1821.01(2)(b).

5.7 Facilities and Funding

A. School District will provide classroom/laboratory space in which Dual Enrollment Courses and activities will be conducted. Facilities and ancillary services provided for the delivery of Dual Enrollment Courses shall comply with all applicable provision of the state Fire Marshall Code, A.R.S. § 41-2161 et seq. (access for disabled persons), and all other applicable federal and state laws.

B. Payment, if any, for facilities and ancillary services shall be designated in Exhibit A attached to this Agreement.

6. MUTUAL AGREEMENTS

6.1. Instructor.

A. Throughout the term of this Agreement, an instructor provided by College shall remain an employee of College, and shall be subject to the terms and conditions of the instructor's employment contract and College policy. An instructor provided by School District shall remain

an employee of School District, and shall be subject to the terms and conditions of the instructor's employment contract and School District policy, but shall also be subject to continuing approval by College. Should a School District instructor violate College procedure or policy, College may withdraw authorization for the instructor to participate in the dual enrollment program and School District, upon such withdrawal of authorization, shall substitute another qualified instructor and notify College in writing of such substitution. The instructor must be approved by College pursuant to the terms of this Agreement.

B. Throughout the term of this Agreement, an instructor provided by College shall remain an employee of College, and shall be subject to the terms and conditions of the instructor's employment contract and College policy, but shall also be subject to School District policy. Should an instructor violate School District procedure or policy, School District may ask College to withdraw authorization for the instructor to participate in the dual enrollment program and College, upon such withdrawal of authorization, shall substitute another qualified instructor and notify School District in writing of such substitution.

6.2. Student.

Each student enrolled in a Dual Enrollment Course, even though enrolled as a College student during the term of the Dual Enrollment Course, shall remain a student of School District and shall follow the schedule and calendar of classes as established by School District and approved by College.

6.3. Removal from Course.

School District retains the right to refuse to allow a student to enroll in a Dual Enrollment Course and to discipline and/or remove any student from the Dual Enrollment Course in accordance with School District policies. College shall have the right to request School District to remove a student from a Dual Enrollment Course in accordance with College policy.

6.4. Schedule and Number of Students.

School District and College shall mutually determine the schedule of, and maximum and minimum number of students to enroll in, each Dual Enrollment Course. Such schedule shall not be changed except by written agreement of School District and College. School District and College must mutually agree if any student who is not a student of School District will be enrolled in a Dual Enrollment Course; provided, however, that any such student must comply with the admissions requirements and course prerequisite requirement provisions of this Agreement.

6.5. Availability of Instructors.

Availability of Dual Enrollment Courses offered by College shall be dependent on the availability of appropriately qualified instructors. College may compensate School District for the services of a qualified instructor provided by School District or, alternatively, College may provide a qualified instructor to deliver any Dual Enrollment Course.

6.6. Guidelines.

School District and College shall ensure that each student enrolled in a Dual Enrollment Course, and all personnel of School District and all personnel of College who are involved in the dual enrollment program are provided with dual enrollment guidelines, and that such persons agree to review and comply with the guidelines.

6.7. Rigor of Courses.

College and School District agree that college level courses are rigorous and demanding courses, and the standards and criteria of any Dual Enrollment Course shall meet statutory and College criteria, and such criteria shall not be diminished for the purpose of the dual enrollment program.

7. FINANCIAL PROVISIONS AND FORMAT FOR BILLING: See Exhibit A attached.

7.1 Fees.

Fees and charges for the Dual Enrollment Courses and program are provided on Exhibit A attached to this Agreement.

7.2. Supplies.

School District will provide and pay for basic textbooks, workbooks, supplies and other costs related to the teaching of and the administration of Dual Enrollment Courses within School District.

7.3. Tuition.

A. The student or School District shall be responsible for payment of tuition to College, as specified in Exhibit A.

B. College may provide grants, scholarships or financial aid in accordance with College policies and as set forth in Exhibit A. In addition, College may offset tuition payments owed to College by School District with payments due from College to School District.

B. School District understands and agrees that tuition charges for students enrolled under this program may vary from student to student depending upon the total number of student credit hours for which each student has enrolled each term, and depending upon the residency status of the student. Pursuant to A.R.S. § 15-1802(C), the residency of an unemancipated student under the age of nineteen years will be that of the student's parent or legal guardian, and any student who is not a legal resident of Arizona will be charged out of state tuition rates.

7.4 Billing Format

The format for the billing of all services pursuant to this Agreement is set forth on Exhibit A. The Billing Format shall include all information required by A.R.S. § 15-1821.01(1)(a).

8. CONTINUATION OF AGREEMENT

The continuation of this Agreement beyond the initial fiscal year is dependent on and subject to the appropriation and availability of funding for each Party in each subsequent fiscal year. If sufficient funding is not made available to allow a Party to continue meeting its contractual obligations under this Agreement, that Party shall so notify the other Party and either Party may cancel this Agreement and have no further obligation to the other Party. In the alternative, the Parties may by mutual written agreement, modify this Agreement to reduce the level of compensation, services or other consideration provided.

9. RECORDS

All accounts, reports, files and other records relating to this Agreement shall be kept for a minimum of five (5) years after termination of this Agreement and shall be open to reasonable inspection and audit by the other party during that period. Audits may be conducted, at a time mutually agreed upon by the parties, by any appropriate political subdivision or agency of the State of Arizona or by representatives of the comptroller General of the United States or the Secretary of Education when required by applicable federal regulations.

10. CONFIDENTIALITY

All written student records shall be kept confidential in accordance with the Family Rights and Privacy Act (20 USC 1232(g)) ("FERPA") and regulations adopted pursuant to FERPA, the Individuals with Disabilities Education Act ("IDEA") and regulations adopted thereunder, and applicable state laws and school board policies controlling the disclosure of personally identifiable information from a student's education records.

11. TERMINATION/DISPOSITION OF PROPERTY

11.1. Termination.

Either Party may terminate this Agreement for any reason following written notice to the other Party of intent to terminate delivered not less than ninety (90) days prior to the intended date of termination. Except as provided in this section 12, termination shall only be effective at the end of a semester, and no Dual Enrollment Course shall be terminated prior to such effective date.

11.2. Risk to Health or Safety.

If either Party has reason to suspect that any activities undertaken pursuant to this Agreement present a risk to the health or safety of students or is contrary to the Party's mission or operations, that Party may request that a meeting between the Parties be convened within 48 hours and promptly confirm the meeting in writing. In such circumstances, the Parties to this Agreement will attempt to reconcile differences within five (5) working days of such meeting. If reconciliation is not achieved within the five (5) day period, this Agreement will automatically terminate.

11.3. No Relief from Obligations.

Termination shall not relieve either Party from its obligation to pay for services provided prior to termination and those for any student already admitted and enrolled in a course or courses and obtaining dual credit at the time of termination or notice thereof.

11.4. Disposition of Property.

The Parties do not contemplate joint acquisition of any property pursuant to this Agreement. Upon termination of this Agreement, equipment furnished or purchased by College for the program shall be retained by College, and equipment furnished or purchased by School District for the program shall be retained by School District.

12. RESPONSIBILITY

12.1. Conduct of Operations.

Each Party agrees to be responsible for the conduct of its operations and performance of contract obligations and the actions of its own personnel while performing services under this Agreement, and each party shall be solely responsible for supervision, daily direction, and control of payment of salary (including withholding for payment of taxes and social security), workers' compensation and disability benefits.

12.2 Indemnification.

Each Party, to the greatest extent legally permissible, shall indemnify, defend, and hold harmless the other Party from any liability resulting from the negligence, intentionally tortious, or willful misconduct of the indemnifying Party's employees, officers, students and agents.

13. CANCELLATION FOR CONFLICT OF INTEREST

This Agreement may be canceled pursuant to A.R.S. § 38-511, the pertinent provisions of which are fully incorporated herein by reference.

14. NON-ASSIGNABILITY

Neither Party may assign any right or delegate a duty or responsibility under this Agreement without the prior written consent of the other Party.

15. COMPLIANCE WITH NON-DISCRIMINATION LAWS

To the extent applicable, the Parties shall comply with all College policies and State and Federal laws and regulations which prohibit discrimination against any person based on race, religion, handicap, color, age, sex, sexual orientation, political affiliation or national origin, and the Parties shall prohibit discrimination in the employment or advancement in employment of a qualified person because of physical or mental disability including all applicable provisions of the Americans with Disabilities Act (Public Law 101-336, 42 U.S.C. §§ 12101-12213).

16. RIGHTS/OBLIGATIONS OF PARTIES ONLY

The terms of this Agreement are intended only to define the respective rights and obligations of the Parties. Nothing expressed herein shall create any rights or duties in favor of any potential third Party beneficiary or other person, agency or organization.

17. ENTIRE AGREEMENT

This Agreement, and its attachments as noted herein, constitutes the entire agreement between the Parties, and, except as previously noted, all prior or contemporaneous oral or written agreements are superseded by this Agreement. There are no representations or other provisions other than those contained herein, and any amendment or modification of this Agreement shall be made in writing and signed by the Parties to this Agreement.

18. INVALIDITY OF PART OF THE AGREEMENT

If any part of this Agreement is held to be illegal, invalid or void by a court of competent jurisdiction, the remainder of this Agreement shall remain in full force and effect with those offending portions omitted.

19. GOVERNING LAW

This Agreement shall be construed under the laws of the State of Arizona and shall incorporate by reference all laws governing intergovernmental agreements and mandatory contract provisions of state agencies required by statute or executive order.

All statutes and regulations referenced in this Agreement are incorporated herein as if fully stated in their entirety in the Agreement. Each Party agrees to comply with and be responsible for the provisions, the statutes, and the regulations set out in this Agreement.

20. NOTICE

All notices, requests for payment, or other correspondence between the Parties regarding this Agreement shall be mailed United States postage prepaid or delivered personally to the respective parties at the following addresses:

If to College:

Dr. Jeanne Swarthout, President
Northland Pioneer College
P.O. Box 610
Holbrook, Arizona 86025

If to School District:

Ron Tsosie, Superintendent
NATIVE District
P.O. Box 710
Kayenta, AZ 86033

IN WITNESS WHEREOF, the Parties have executed this Agreement on this 11th day of February 2015.

COLLEGE	SCHOOL DISTRICT
By: Jeanne Swarthout, Ph.D., President	By: Ron Tsosie, Superintendent
Date	Date 7/1/14, ratified on 2/11/15

Attorney Approval: This Amendment has been reviewed pursuant to A.R.S. 11-952 by the undersigned attorney who has determined that it is in proper form and is within the powers and authority granted under the laws of Arizona to the Governing Board of the College.

By:_____
Legal Counsel for College

Attorney Approval: This Amendment has been reviewed pursuant to A.R.S. 11-952 by the undersigned attorney who has determined that it is in proper form and is within the powers and authority granted under the laws of Arizona to the Governing Board of the School District.

By: Killie Peterson
Legal Counsel for School District

EXHIBIT A

FINANCIAL PROVISIONS

1. APPROVED TUITION AND FEES APPLICABLE TO THIS AGREEMENT

Tuition: $66 per credit hour.

2. IDENTITY OF PERSON OR ENTITY RESPONSIBLE FOR PAYING STUDENT TUITION AND FEES

Students are responsible for payment of tuition and fees. An individual billing account will be established for each participating student.

3. ADDITIONAL CHARGES

Except as provided in this section, no additional fees shall be charged for assessment tests, if any, used for placement purposes. Assessment fees, if any, will be charged subject to and in compliance with College policies and procedures, and relevant state statutes and regulations.

4. FINANCIAL AID POLICIES

Except as indicated in this section, College offers no grant, scholarship or financial aid for the dual enrollment program. The provision, if any, of any grant, scholarship or financial aid shall be subject to and in compliance with College policies and procedures, and relevant state statutes and regulations.

All students enrolled in an authorized dual enrollment course are eligible for tuition and fee scholarships.

5. FORMAT FOR BILLING

Except as provided below, charges will be assessed each semester and invoices shall be sent no later than thirty (30) days after the end of the semester. Payment shall be due within thirty (30) days of receipt of the invoice.

NCCCD shall not reimburse the School District.

6. FULL TIME STUDENT EQUIVALENT

Amount College received in FTSE in prior academic year	1,618.200
Portion of that FTSE distributed to School District	0
Amount School District returned to College	0

EXHIBIT B

TYPE OF INSTRUCTION
DUAL ENROLLMENT COURSES

COURSES AND CREDITS

For complete course descriptions, refer to the current College catalog.
All courses listed with an asterisk are also offered to freshmen and sophomore students.
The number of students admitted for any Dual Enrollment Course shall not be less than **six (6)** students per section and shall not exceed a maximum of **thirty (30)** students per section.

Course	Title	Credits	Semester	Location	Instructor
HES170	Medical Terminology	3	Fall 2014	Chinle HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	Ganado HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	Pinon HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	Red Mesa HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	Monument Valley HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	Window Rock HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	Tuba City HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	Valley HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	Red Valley/Cove HS	Kathy Reynolds
HES170	Medical Terminology	3	Fall 2014	NATIVE Central/MF/P	Kathy Reynolds

~~NAT101~~	~~Nursing Assistant~~	~~3~~	~~Spring 2015~~	~~Chinle HS~~	~~Kathy Reynolds~~
NAT101	Nursing Assistant	3	Spring 2015	Ganado HS	Kathy Reynolds
NAT101	Nursing Assistant	3	Spring 2015	Pinon HS	Kathy Reynolds
NAT101	Nursing Assistant	3	Spring 2015	Red Mesa HS	Kathy Reynolds
NAT101	Nursing Assistant	3	Spring 2015	Monument Valley HS	Kathy Reynolds
NAT101	Nursing Assistant	3	Spring 2015	Window Rock HS	Kathy Reynolds
NAT101	Nursing Assistant	3	Spring 2015	Tuba City HS	Kathy Reynolds
NAT101	Nursing Assistant	3	Spring 2015	Valley HS	Kathy Reynolds

HES199	Direct Care Worker	4	Spring 2015	Chinle HS	Kathy Reynolds/Marge Wartzs

REQUEST TO APPROVE MODIFICATION OF THE BUSINESS AAS, CAS, CP IN ACCOUNTING, ENTREPRENEURSHIP, MANAGEMENT AND LEADERSHIP, MEDICAL OFFICE TECHNOLOGIES, MEDICAL TRANSCRIPTION, MODERN OFFICE TECHNOLOGIES AND RETAIL MANAGEMENT

Recommendation:
The Instructional Council (IC) recommends approval of the modification of the Business (BUS) Associate of Applied Science (AAS), Certificate of Applied Science (CAS) and Certificate of Proficiency in Accounting, Entrepreneurship, Management and Leadership, Medical Office Technologies, Medical Transcription, Modern Office Technologies and Retail Management.

Summary:
These are relatively simple changes to the BUS AAS, CAS and CP Programs, including:

- Brings program into compliance with the new math requirement wording recommended by IC at the 11-14-14 Meeting.
- Brings program into compliance with the new communications requirement wording recommended by IC at the 12-12-14 Meeting.
- Prefixes were changed on Principles of Economics (Macro and Micro) and are reflected in the Accounting, Entrepreneurship, Management and Leadership and Retail Management specializations.
- Accounting, Entrepreneurship, Management and Leadership and Retail Management replaces BUS 115 with BUS 206. These courses are similar, but outcomes were changed to accommodate transferability to all three Arizona state universities.
- Medical Office Technologies deletes BUS 181, as it was an outdated course. (Program modification earlier this year.)

Proposed effective date of these modifications are Fall 2015.

BUS – Accounting Specialization

Bookkeeping, accounting, and auditing clerks produce financial records for organizations. They record financial transactions, update statements, and check financial records for accuracy. Employment in these occupations is projected to grow 11 percent from 2012 to 2022, about as fast as the average for all occupations. The median annual salary in nonmetropolitan north Arizona is $35,170 (2112).

As the number of organizations increases and financial regulations become stricter, there will be greater demand for

these workers to maintain books and provide accounting services.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2014-15 Edition, Bookkeeping, Accounting, and Auditing Clerks

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data online at ***www.npc.edu/business-studies.***

Accounting Fundamentals (CP) • 18 credits

BUS 100 Introduction to Business ..... 3 credits
BUS 103 Success on Your Job..... 2 credits
BUS 117 Principles of Financial Accounting I ..... 3 credits
BUS 122 Computerized Accounting with QuickBooks ..... 3 credits
BUS 125 Payroll Accounting..... 3 credits
BUS 128 Microsoft Excel Applications for Business ..... 3 credits
BUS 202 Professional Customer Service ..... 1 credit

Accounting (CAS) • 30 credits

Complete the Accounting Fundamentals CP..... 18 credits

PLUS

BUS 120 Principles of Financial Accounting II ..... 3 credits
BUS 123 Income Tax Procedures..... 3 credits
ENL 101 College Composition I..... 3 credits

~~***Mathematics..... 3 credits***~~

~~MAT 103 or MAT 152 or any mathematics course for which MAT 152 is a prerequisite~~

Mathematics..... 3 credits

Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101, MAT 109, MAT 112, MAT 125, or MAT 142.

Accounting (AAS) • 64 credits

Complete the Accounting CAS..... 30 credits

PLUS these General Education courses

~~Communications..... 3 credits~~

~~*Select one of the following:*~~

~~ENL 102 College Composition II..... 3 credits~~

~~ENL 109 Technical Writing..... 3 credits~~

Communications..... 3 credits

Select any course under the Communications General Education List (for AAS Degrees) EXCEPT for SPT 110 and SPT 120.

Discipline Studies ..... 7 credits

(Select one course from the **Physical and Biological Sciences** and one course from either the **Arts and Humanities** or **Social and Behavioral Sciences** lists on page 84.)

AND

~~BUS 115 Business Law ..... 3 credits~~

BUS 206 Legal, Ethical, Global, And Regulatory Environment of Business……3 credits

BUS 121 Principles of Accounting – Managerial..... 3 credits

~~BUS 140 Principles of Economics – Macro..... 3 credits~~
ECN 211 Principles of Economics - Macro……3 credits
~~BUS 141 Principles of Economics – Micro..... 3 credits~~
ECN 212 Principles of Economics - Micro……3 credits
BUS 185 Ethics in Management ..... 3 credits
BUS 210 Principles of Management ..... 3 credits

AND

Unrestricted Electives..... 6 credits
(Choose from any unduplicated courses at the 100-level or above.)

BUS – Entrepreneurship Specialization

Entrepreneurship plays a vital role in the growth of the U.S. economy. The number of new business establishments (establishments that are less than 1 year old in any given year) tends to rise and fall with the business cycle of the overall economy. The number of new establishments for the year ending in March 2010 was at the lowest level since data collection began in 1994.

Since most entrepreneurs are self-employed, no median annual salary statistics are available.

If you are considering starting your own business, consider contacting NPC's Small Business Development Center for free consultation and assistance in preparing Small Business Administration loan applications.

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data online at ***www.npc.edu/business-studies.***

Entrepreneurship Fundamentals (CP) • 19 credits

BUS 100 Introduction to Business ..... 3 credits
BUS 105 Techniques of Supervision ..... 3 credits
BUS 110 Small Business Management ..... 3 credits
BUS 112 Fundamentals of Bookkeeping ..... 3 credits
BUS 202 Professional Customer Service ..... 1 credit
BUS 220 Principles of Marketing ..... 3 credits
BUS 240 Entrepreneurship ..... 3 credits

Entrepreneurship (CAS) • 31 credits

Complete the Entrepreneurship Fundamentals CP..... 19 credits

PLUS

BUS 106 Techniques of Personal Finance ..... 3 credits
BUS 210 Principles of Management ..... 3 credits
ENL 101 College Composition I..... 3 credits

~~***Mathematics..... 3 credits***~~
~~MAT 103 or MAT 152 or any mathematics course for which MAT 152 is a prerequisite~~

Mathematics..... 3 credits
Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101, MAT 109, MAT 112, MAT 125, or MAT 142.

Entrepreneurship (AAS) • 64 credits

Complete the Entrepreneurship CAS ..... 31 credits

PLUS these General Education courses

~~Communications..... 3 credits~~
~~*Select one of the following:*~~
~~ENL 102 College Composition II..... 3 credits~~
~~ENL 109 Technical Writing..... 3 credits~~

Communications..... 3 credits
Select any course under the Communications General Education List (for AAS Degrees) EXCEPT for SPT 110 and SPT 120.

Discipline Studies ..... 7 credits
(Select one course from the **Physical and Biological Sciences** and one course from either the **Arts and Humanities** or **Social and Behavioral Sciences** lists on page 84.)

AND

~~BUS 115 Business Law ..... 3 credits~~
BUS 206 Legal, Ethical, Global, And Regulatory Environment of Business……3 credits
BUS 122 Computerized Accounting with QuickBooks ..... 3 credits
BUS 128 Microsoft Excel Applications for Business ..... 3 credits
~~BUS 140 Principles of Economics – Macro..... 3 credits~~
ECN 211 Principles of Economics - Macro……3 credits
~~BUS 141 Principles of Economics – Micro..... 3 credits~~
ECN 212 Principles of Economics - Micro……3 credits

AND

Unrestricted Electives..... 8 credits
(Choose from any unduplicated courses at the 100-level or above)

BUS – Management and Leadership Specialization

The **Management and Leadership** area of specialization prepares graduates for a variety of career options, from administrative services managers, human relations managers, sales managers, marketing specialists, natural science managers, hospitality and food service managers or even school or college administrators.

Career Opportunities

Employment opportunities in the management area are projected to grow 12 percent from 2012 to 2022, about as fast as the average for all occupations. Tasks such as managing facilities and being prepared for emergencies will remain important in a wide range of industries.

The national median annual salaries range from $46,000 to $135,620.

(Figures from US BLS May 2012) (SOC 27.1024).

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data online at ***www.npc.edu/business-studies.***

Management and Leadership Fundamentals

(CP) • 16 credits

BUS 100 Introduction to Business ..... 3 credits
BUS 180 Organizational Behavior ..... 3 credits
BUS 185 Ethics in Management ..... 3 credits
BUS 202 Professional Customer Service ..... 1 credit
BUS 210 Principles of Management ..... 3 credits
BUS 230 Organizational Leadership ..... 3 credits

Management and Leadership (CAS) • 28 credits

Complete the Management and Leadership Fundamentals CP16 credits
BUS 105 Techniques of Supervision
or BUS 225 Human Resource Management ..... 3 credits

AND
~~BUS 140 Principles of Economics – Macro..... 3 credits~~
ECN 211 Principles of Economics - Macro……3 credits
ENL 101 College Composition I ..... 3 credits

~~***Mathematics..... 3 credits***~~
~~MAT 103 or MAT 152 or any mathematics course for which MAT 152 is a prerequisite~~

Mathematics..... 3 credits
Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101, MAT 109, MAT 112, MAT 125, or MAT 142.

Management and Leadership (AAS) • 64 credits

Complete the Management and Leadership CAS..... 28 credits

PLUS these General Education courses

~~Communications..... 3 credits~~
~~*Select one of the following:*~~
~~ENL 102 College Composition II..... 3 credits~~
~~ENL 109 Technical Writing..... 3 credits~~

Communications..... 3 credits
Select any course under the Communications General Education List (for AAS Degrees) EXCEPT for SPT 110 and SPT 120.

Discipline Studies ..... 7 credits
(Select one course from the **Physical and Biological Sciences** and one course from either the **Arts and Humanities** or **Social and Behavioral Sciences** lists on page 84.)

AND
~~BUS 115 Business Law ..... 3 credits~~
BUS 206 Legal, Ethical, Global, And Regulatory Environment of Business……3 credits
BUS 117 Principles of Financial Accounting I ..... 3 credits
~~BUS 141 Principles of Economics – Micro..... 3 credits~~
ECN 212 Principles of Economics - Micro……3 credits
BUS 150 Administrative Policymaking ..... 3 credits
BUS 220 Principles of Marketing ..... 3 credits
CIS 105 Computer Applications and Information Technology..... 3 credits

AND

Unrestricted Electives..... 8 credits

(Choose from any unduplicated courses at the 100-level or above)

BUS – Medical Office Technologies Specialization

Medical records and health information technicians organize and manage health information data. They ensure its quality, accuracy, accessibility, and security in both paper and electronic systems. They use various classification systems to code and categorize patient information for insurance reimbursement purposes, for databases and registries, and to maintain patients' medical histories.

Employment of health information technicians is projected to grow 22 percent from 2012 to 2022, much faster than the average for all occupations. The demand for health services is expected to increase as the population ages.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook,
2014-15 Edition, Medical Records and Health Information Technicians

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data online at ***www.npc.edu/business-studies.***

Need help paying for classes?

Many students can qualify for financial aid if they take the time to submit the Free Application for Federal Student Aid (FAFSA), available online at ***https://fafsa.ed.gov.***

Apply early, as the process can take 4-6 weeks. You should have all of your paperwork submitted to the Financial Aid Office by the **Priority Deadlines**:

April 15 for Fall Semester
October 15 for Spring
March 15 for Summer

(CP) Certificate of Proficiency
(CAS) Certificate of Applied Science
(AAS) Associate of Applied Science Degree

Medical Office Technologies Fundamentals

(CP) • 18 credits

BUS 101 Business Grammar ..... 1 credit
BUS 104 Developing Your Professionalism ..... 1 credit
BUS 108 Basic Keyboarding and Document Processing ..... 3 credits
BUS 118 Computerized Medical Billing ..... 3 credits
BUS 119 Medical Office Administrative Procedures ..... 3 credits
BUS 126 Vocabulary for the Medical Office ..... 3 credits
BUS 183 Electronic Medical Records ..... 3 credits
BUS 202 Professional Customer Service ..... 1 credit

Medical Office Technologies (CAS) • 29 credits

Complete the Medical Office Technologies Fundamentals CP 18 credits
BUS 102 Proofreading Mastery ..... 1 credit
BUS 227 Medical Coding ..... 4 credits
ENL 101 College Composition I ..... 3 credits

~~***Mathematics ..... 3 credits***~~
~~MAT 103 or MAT 152 or any mathematics course~~

~~for which MAT 152 is a prerequisite~~

Mathematics..... 3 credits

Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101, MAT 109, MAT 112, MAT 125, or MAT 142.

Medical Office Technologies (AAS) • 64 credits

Complete the Medical Office Technologies CAS..... 29 credits

PLUS these General Education courses

~~Communications..... 3 credits~~

~~*Select one of the following:*~~

~~ENL 102 College Composition II..... 3 credits~~

~~ENL 109 Technical Writing..... 3 credits~~

Communications..... 3 credits

Select any course under the Communications General Education List (for AAS Degrees) EXCEPT for SPT 110 and SPT 120.

Discipline Studies ..... 7 credits

(Select one course from the **Physical and Biological Sciences** and one course from either the **Arts and Humanities** or **Social and Behavioral Sciences** lists on page 84.)

AND

BUS 100 Introduction to Business ..... 3 credits
BUS 106 Techniques of Personal Finance ..... 3 credits
BUS 111 Ten-Key Skill Mastery..... 1 credit
BUS 112 Fundamentals of Bookkeeping ..... 3 credits
BUS 155 Microsoft Word Level I ..... 3 credits
~~BUS 181 Medical Records Management..... 1 credit~~ (See program modification earlier in year)
BUS 231 Microsoft Office Level I ..... 3 credits
CIS 103 Introduction to Windows..... 1 credit

AND

Unrestricted Electives..... ~~7~~ 8 credits (see program modification earlier in year)

(Choose from any unduplicated courses at the 100-level or above)

BUS – Medical Transcription Specialization

Medical transcriptionists listen to voice recordings that physicians and other healthcare professionals make and convert them into written reports. They may also review and edit medical documents created using speech recognition technology. Transcriptionists interpret medical terminology and abbreviations in preparing patients' medical histories, discharge summaries, and other documents.

Medical transcriptionists typically need postsecondary training. Prospective medical transcriptionists must have an understanding of medical terminology, anatomy and physiology, grammar, and word-processing software.

The median annual wage for medical transcriptionists was $34,020 in May 2012.

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data online at ***www.npc.edu/business-studies.***

Medical Transcription Fundamentals (CP) • 16 credits

BUS 101 Business Grammar ..... 1 credit
BUS 102 Proofreading Mastery ..... 1 credit
BUS 103 Success on Your Job ..... 2 credit
BUS 108 Basic Keyboarding and Document Processing ..... 3 credits
BUS 126 Vocabulary for the Medical Office ..... 3 credits
BUS 131 Medical Transcription Fundamentals ..... 3 credits
BUS 155 Microsoft Word Level I ..... 3 credits

Medical Transcription (CAS) • 30 credits

Complete the Medical Transcription Fundamentals CP..... 16 credits
BUS 109 Advanced Keyboarding & Document Processing ..... 3 credits
BUS 202 Professional Customer Service ..... 1 credit
BUS 236 Advanced Medical Transcription I ..... 4 credits
ENL 101 College Composition I ..... 3 credits

~~***Mathematics..... 3 credits***~~
~~MAT 103 or MAT 152 or any mathematics course for which MAT 152 is a prerequisite~~

Mathematics..... 3 credits
Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101, MAT 109, MAT 112, MAT 125, or MAT 142.

Medical Transcription (AAS) • 64 credits

Complete the Medical Transcriptions CAS ..... 30 credits

PLUS these General Education courses

~~Communications..... 3 credits~~
~~*Select one of the following:*~~
~~ENL 102 College Composition II..... 3 credits~~
~~ENL 109 Technical Writing..... 3 credits~~

Communications..... 3 credits
Select any course under the Communications General Education List (for AAS Degrees) EXCEPT for SPT 110 and SPT 120.

Discipline Studies ..... 7 credits
(Select one course from the **Physical and Biological Sciences** and one course from either the **Arts and Humanities** or **Social and Behavioral Sciences** lists on page 84.)

AND

BUS 100 Introduction to Business ..... 3 credits
BUS 119 Medical Office Administrative Procedures ..... 3 credits
BUS 170 Written Business Communication ..... 3 credits
BUS 237 Advanced Medical Transcription II ..... 4 credits

AND

Unrestricted Electives..... 11 credits
(Choose from any unduplicated courses at the 100-level or above)

BUS – Modern Office Technologies Specialization

Secretaries and administrative assistants perform routine clerical and administrative duties. They organize files, draft messages, schedule appointments, and support other staff.

Graduates with basic office and computer skills usually qualify for entry-level positions. Although most secretaries learn their job in several weeks, many legal and medical secretaries require several months of training to learn industry-specific terminology. Executive secretaries usually need several years of related work experience.

Career Opportunities

Employment of secretaries and administrative assistants is projected to grow 12 percent from 2012 to 2022, about as fast as the average for all occupations. Many job openings will result from the need to replace workers who leave the occupation. Those with a combination of work experience and computer skills should have the best job prospects.

The national median annual wage for secretaries and administrative assistants was $35,330 in May 2012.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2014-15 Edition.

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data online at ***www.npc.edu/business-studies.***

Modern Office Technologies Fundamentals (CP) • 18 credits

BUS 101 Business Grammar ..... 1 credit
BUS 102 Proofreading Mastery ..... 1 credit
BUS 103 Success on Your Job ..... 2 credit
BUS 108 Basic Keyboarding and Document Processing ..... 3 credits
BUS 144 Professional Office Skills ..... 3 credits
BUS 155 Microsoft Word Level I ..... 3 credits
BUS 182 Records Management ..... 3 credits
BUS 202 Professional Customer Service ..... 1 credit
CIS 103 Introduction to Windows ..... 1 credit

Modern Office Technologies (CAS) • 28 credits

Complete the Modern Office Technologies Fundamentals CP 18 credits
BUS 104 Developing Your Professionalism ..... 1 credit
BUS 231 Microsoft Office Level I ..... 3 credits
ENL 101 College Composition I ..... 3 credits

~~***Mathematics..... 3 credits***~~
~~MAT 103 or MAT 152 or any mathematics course for which MAT 152 is a prerequisite~~

Mathematics..... 3 credits
Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101, MAT 109, MAT 112, MAT 125, or MAT 142.

Modern Office Technologies (AAS) • 64 credits

Complete the Modern Office Technologies CAS ..... 28 credits

PLUS these General Education courses

~~Communications..... 3 credits~~

~~*Select one of the following:*~~

~~ENL 102 College Composition II..... 3 credits~~

~~ENL 109 Technical Writing..... 3 credits~~

Communications..... 3 credits

Select any course under the Communications General Education List (for AAS Degrees) EXCEPT for SPT 110 and SPT 120.

Discipline Studies ..... 7 credits

(Select one course from the **Physical and Biological Sciences** and one course from either the **Arts and Humanities** or **Social and Behavioral Sciences** lists on page 84.)

AND

BUS 100 Introduction to Business ..... 3 credits
BUS 106 Techniques of Personal Finance ..... 3 credits
BUS 109 Advanced Keyboarding & Document Processing ..... 3 credits
BUS 111 Ten-Key Skill Mastery..... 1 credit
BUS 112 Fundamentals of Bookkeeping ..... 3 credits
BUS 149 Microsoft Publisher Basics..... 1 credit
BUS 170 Written Business Communication..... 3 credits

AND

Unrestricted Electives..... 9 credits

(Choose from any unduplicated courses at the 100-level or above)

BUS – Retail Management Specialization

The **Retail Management** area of specialization provides fundamentals for small business owners and those working for larger corporations.

Retail managers direct organizations' sales teams. They set sales goals, analyze data, and develop training programs for organizations' sales representatives.

Career Opportunities

Employment of retail managers is projected to grow 8 percent from 2012 to 2022, about as fast as the average for all occupations. Employment growth of these managers will depend primarily on growth or contraction in the industries that employ them.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2014-15 Edition.

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data online at ***www.npc.edu/business-studies.***

Retail Management Fundamentals • (CP) • 16 credits

BUS 100 Introduction to Business ..... 3 credits
BUS 105 Techniques of Supervision ..... 3 credits
BUS 202 Professional Customer Service ..... 1 credit
BUS 215 Principles of Retail Management ..... 3 credits
BUS 216 Merchandising Practices and Policies ..... 3 credits
BUS 220 Principles of Marketing ..... 3 credits

Retail Management (CAS) • 28 credits

Complete the Retail Management Fundamentals CP ..... 16 credits
~~BUS 140 Principles of Economics – Macro ..... 3 credits~~
ECN 211 Principles of Economics - Macro……3 credits
BUS 210 Principles of Management ..... 3 credits
ENL 101 College Composition I ..... 3 credits

~~***Mathematics ..... 3 credits***~~
~~MAT 103 or MAT 152 or any mathematics course for which MAT 152 is a prerequisite~~

Mathematics ..... 3 credits
Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101, MAT 109, MAT 112, MAT 125, or MAT 142.

Retail Management (AAS) • 64 credits

Complete the Retail Management CAS ..... 28 credits

PLUS these General Education courses

~~Communications ..... 3 credits~~
~~*Select one of the following:*~~
~~ENL 102 College Composition II ..... 3 credits~~
~~ENL 109 Technical Writing ..... 3 credits~~

Communications ..... 3 credits
Select any course under the Communications General Education List (for AAS Degrees) EXCEPT for SPT 110 and SPT 120.

Discipline Studies ..... 7 credits
(Select one course from the **Physical and Biological Sciences** and one course from either the **Arts and Humanities** or **Social and Behavioral Sciences** lists on page 84.)

AND

~~BUS 115 Business Law ..... 3 credits~~
BUS 206 Legal, Ethical, Global, And Regulatory Environment of Business……3 credits
BUS 117 Principles of Financial Accounting I ..... 3 credits
~~BUS 141 Principles of Economics – Micro ..... 3 credits~~
ECN 212 Principles of Economics - Micro……3 credits
BUS 180 Organizational Behavior
or BUS 230 Organizational Leadership ..... 3 credits
BUS 185 Ethics in Management ..... 3 credits

AND

Unrestricted Electives ..... 11 credits
(Choose from any unduplicated courses at the 100-level or above)

REQUEST TO APPROVE MODIFICATION OF THE COMUPTER INFORMATION SYSTEMS CP IN NETWORK AND PC SUPPORT

Recommendation:
The Instructional Council (IC) recommends approval of the modification of the Computer Information Systems (CIS) Certificate of Proficiency (CP) in Network and PC Support.

Summary:
These are relatively simple changes to the CIS CP in Network and PC Support Program. The CIS 198 Internship changes from 2 credit hours to 3 credit hours and the CIS 298 Portfolio changes from 2 credit hours to 1 credit hour. It is felt by both faculty and the CIS Advisory Committee that it is in the best interest of the students if they spend more time in the internship. Proposed effective date of this modification is Fall 2015.

Network and PC Support (CP) • 16 credits

CIS 105 Computer Applications and Information Technology.....3 credits
CIS 141 Managing and Maintaining Your PC I (A+) .....3 credits
CIS 142 Managing and Maintaining Your PC II (A+) .....3 credits
CIS 145 Network+ Certification Preparation.....3 credits
~~CIS 198 Internship .....2 credits~~
CIS 198 INTERNSHIP .....3 CREDITS
~~CIS 298 Portfolio.....2 credits~~
CIS 298 PORTFOLIO.....1 CREDITS

REQUEST TO APPROVE MODIFICATION OF THE MEDICAL ASSISTANT AAS, CAS

Recommendation:
The Instructional Council recommends approval of the modification of the Medical Assistant (MDA) Associate of Applied Science (AAS) and Certificate of Applied Science (CAS).

Summary:
This change is to comply with the new math requirement wording recommended by Instructional Council (IC) at the 11-14-15 IC Meeting and the new communications requirement wording recommended by IC at the 12-12-14 IC Meeting. Proposed effective date of this modification is Fall 2015.

Medical Assistant (MDA)

Certificate (CAS) & AAS Degree Options

The Northland Pioneer College **Medical Assistant** program trains students for a career providing patient care and physician assistance in medical offices and clinics. Classes include front- and back-office theory and procedures, preparing students for national certification examination. A 160-hour externship is required.

The NPC program meets or exceeds the Arizona State Board of Medical Examiners training requirements. You can be certain you are gaining the necessary knowledge to succeed in this rapidly growing field.

Note: The MDA degree and certificate program does **NOT** lead into the NPC nursing program.

Career Opportunities

Employment of medical assistants is projected to grow 29 percent from 2012 to 2022, much faster than the average for all occupations. The growth of the aging baby-boom population will continue to spur demand for preventive medical services, which are often provided by physicians. As their practices expand, physicians will hire more assistants to perform routine administrative and clinical duties, allowing the physicians to see more patients.

The median annual salary for North Nonmetropolitian Arizona was $29,840 in May 2012.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2014-15 Edition.

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career &

Technical Education certificate programs.

You can access the current data online at ***www.npc.edu/medical-assistant***.

Medical Assistant (CAS) • 40 credits

Complete these Core courses

BIO 160 Introduction to Human Anatomy and Physiology ..... 4 credits
or BIO 201 AND 202* Human Anatomy and Physiology I & II
BUS 119 Medical Office Administrative Procedures ..... 3 credits
BUS 231 MS Office Level I ..... 3 credits
HES 109 Phlebotomy..... 4 credits
HES 170 Medical Terminology for Clinical Health Professionals .. 3 credits
HES 180 Basic Pharmacology..... 3 credits
MDA 124 Clinical Procedures I ..... 5 credits
MDA 125 Clinical Procedures II ..... 5 credits
MDA 126 Medical Assistant Externship ..... 4 credits
**See an NPC academic adviser if selecting the BIO 201/202 option*

PLUS these General Education courses

ENL 101 College Composition I..... 3 credits

Mathematics..... 3 credits
Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101
~~BUS 133 or any mathematics course..... 3 credits~~

Associate of Applied Science (AAS) • 64 credits

Complete the Medical Assistant ~~Core courses~~ CAS ..... ~~34~~ 40 credits

Required Electives..... 9 credits
Select a minimum of nine credits from the following courses:
BUS 105 Techniques of Supervision ..... 3 credits
BUS 112 Fundamentals of Bookkeeping ..... 3 credits
CIS 105 Computer Applications and Information Technology..... 3 credits
HES 120 Law and Ethics of the Health Care Professional..... 3 credits
HES 145 Nutrition ..... 3 credits

Unrestricted Electives..... 3 credits
Any unduplicated 100 or higher level course ..... 3 credits

PLUS these General Education courses

Communications..... ~~6~~ 3 credits
Select any course under the Communications General Education List (for AAS Degrees) EXCEPT for SPT 110 and SPT 120..... 3 credits

~~ENL 101 College Composition I..... 3 credits~~
~~*Select one of the following:*~~
~~ENL 102 College Composition II..... 3 credits~~
~~ENL 109 Technical Writing..... 3 credits~~

~~Mathematics ..... 3 credits~~
~~BUS 133 or MAT 103 or MAT 105 or MAT 109 any mathematics course for which MAT 109 is a prerequisite~~

Discipline Studies ***(per the list on page 84)***

Arts and Humanities ..... ***3 credits***
Select one course from the **Arts and Humanities** section.
Social and Behavioral Sciences ..... 6 credits
One course from the **Social and Behavioral Sciences** list ..... 3 credits
AND PSY 101 Introduction to Psychology ..... 3 credits

REQUEST TO APPROVE MODIFICATION OF THE NURSING ASSISTANT CP

Recommendation:
The Instructional Council recommends approval of the modification of the Nursing Assistant (NAT) Certificate of Proficiency (CP).

Summary:
This change is to comply with the new math requirement wording recommended by Instructional Council (IC) at the 11-14-15 IC Meeting. Proposed effective date of this modification is Fall 2015.

Nursing Assistant (NAT)

Certificate of Proficiency (CP)

The **Nursing Assistant** Certificate of Proficiency (CP) is designed to provide a curriculum to improve student knowledge about the health care field. Successful completion includes the required course content and hours specified by the Arizona Nurse Practice Act making a student eligible to take the Arizona state test to become a Certified Nursing Assistant (CNA).

This certification not only establishes direct-to-work credentials, it is a creditable foundation for students interested in pursuing other, allied health careers. CNA certification is a mandatory requirement for entering the NPC Nursing Program. Students are required to provide fingerprint identification when applying for the CNA license.

Requirements: To earn the Certificate of Proficiency in Nursing Assistant, a student must complete the program with a grade point average of 'C' or better. Additionally, under the Arizona Nurse Practice Act, an applicant can be denied certification as a nursing assistant if convicted of a felony or addicted to habit-forming drugs or if the applicant in any other way fails to meet qualifications required by law. To enter any clinical coursework, a current TB skin test must be completed.

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data for the Nursing Assistant (CP) Program online at ***www.npc.edu/CNA_nursing-assistant***.

Nursing Assistant (CP only) • 20 credits

ENL 101 or higher, with grade C or better ..... 3 credits
HES 120 Law and Ethics of the Health Care Professional..... 3 credits
HES 145 Nutrition ..... 3 credits
HES 170 Medical Terminology..... 3 credits
~~MAT 103 or MAT 105 or MAT 109 or MAT 112 or any mathematics course for which MAT 112 is a prerequisite, with grade C or better..... 3 credits~~
Select any course under the MAT General Education List (for CAS and AAS Degrees) EXCEPT for MAT 101
NAT 101..... 5 credits

REQUEST TO APPROVE MODIFICATION OF THE ASSOCIATE OF GENERAL STUDIES

Recommendation:
The Instructional Council (IC) recommends approval of the modification of the Associate of General Studies (AGS).

Summary:
The program modification to the AGS is to delete MAT105, because it is being discontinued by the Mathematics Department. Proposed effective date of this modification is Fall 2015.

General Degree

Associate of General Studies (AGS) Degree

The **Associate of General Studies (AGS) Degree is the most flexible of the degrees offered at NPC.** With this degree you learn the basics of mathematics, English, science, history and a wide variety of other subjects, allowing you the chance to explore many different disciplines while enhancing your personal development with the equivalent of two years of post-high school education.

While an AGS degree does not totally fulfill all AGEC transfer requirements *(see page 83)*, many courses transfer directly to the three Arizona public universities. Work with your NPC academic adviser to ensure courses meet your specific goals.

NPC Requirements

The **Associate of General Studies (AGS) degree** requires a minimum of **64 hours of course credits** with a cumulative grade point average of 2.0 on a 4.0 scale.

Students must complete 31 general education credits, listed at right.

Some courses have **placement requirements** or **prerequisites** that may result in coursework beyond the minimum credits. For information about prerequisites, see an NPC academic adviser.

Students with 12 or more credits must meet with an NPC academic adviser to select a program of study to best meet the student's goals.

Students with an associate or higher degree will not be considered for this degree.

In most general education courses, special emphasis is placed on developing written communication skills with intensive writing requirements. Race and ethnic issue awareness is embedded throughout the general education requirements.

Associate of General Studies (AGS) • 64 credits

All AGS degrees require completion of these 31 general education course credits:

General Education courses

Communications ..... 6 credits

ENL 101 College Composition I ..... 3 credits

Plus one of the following:

ENL 102 College Composition II ..... 3 credits

ENL 109 Technical Writing..... 3 credits

Mathematics..... 3 credits

Select one of the following, or a higher mathematics course for which MAT 112 is a prerequisite.

~~MAT 105 Mathematics for General Education ..... 3 credits~~

MAT 112 Algebra II: Intermediate ..... 3 credits

Discipline Studies

Arts and Humanities..... 6 credits

(Select two courses from at least two disciplines from the list on page 84)

Physical and Biological Science..... 4 credits

(Select one course from the list on page 84)

Social and Behavioral Sciences..... 6 credits

(Select two courses from at least two disciplines from the list on page 84)

Additional Discipline Studies ..... 6 credits

Select a minimum of six additional credits from the **Discipline Studies** list on page 84, ***or*** from these courses:

Foreign Language

FRE 101 Elementary French I..... 4 credits

FRE 102 Elementary French II..... 4 credits

GER 101 Elementary German I ..... 4 credits

GER 102 Elementary German II ..... 4 credits

SPA 101 Elementary Spanish I..... 4 credits

SPA 102 Elementary Spanish II..... 4 credits

Computer Science

CIS 105 Computer Applications and Information Technology..... 3 credits

Verbal Communications

SPT 120 Public Speaking ..... 3 credits

AND

Required Electives ..... 33 credits

From any unduplicated courses at 100 or higher level.

~~In addition to the **Associate of General Studies (AGS) degree**, NPC offers three specialized AGS degrees in **Early Childhood Development** *(see pages 110, 115 and 118)* and one in **Special Needs Educational Assistant** *(see page 126)*.~~

REQUEST TO APPROVE MODIFICATION OF THE PARAMEDICINE (EMT) AAS, CAS, CP

Recommendation:
The Instructional Council recommends approval of the modification of the Paramedicine (EMT) Associate of Applied Science (AAS), Certificate of Applied Science (CAS) and Certificate of Proficiency (CP).

Summary:
This change is to comply with the new math requirement wording recommended by Instructional Council (IC) at the 11-14-15 IC Meeting and the new communications requirement wording recommended by IC at the 12-12-14 IC Meeting. Proposed effective date of this modification is Fall 2015.

Paramedicine (EMT)

Certificate (CP & CAS) and AAS Degree

How do I start?

STEP 1: Students must first enroll in *EMT 240 Basic ECG and Pharmacology*, and upon successful completion of the course take an entrance exam and interview for acceptance into the paramedic program.

STEP 2: When accepted in the program you will take the core requirement course *EMT 244 Paramedic Training I*, a 23-credit hour course that meets two full days per week for the fall semester.

STEP 3: The following spring semester you take the final paramedicine core course, the 26-credit hour *EMT 245 Paramedic Training II*.

Note: Successful completion of the NPC program also fulfills the Arizona Department of Health Services mandatory requirement of 500 hours of clinical and vehicular hours.

Prerequisites:

Students interested in earning their EMT-Paramedic must also meet a number of requirements to quality for the NPC program. Applicants must:

Be an Arizona certified EMT-Basic
with a minimum of one-year experience

Meet NPC placement requirements for *ENL 101 (College Composition I)* and *MAT 101 (Basic Technical Mathematics)*

Have successfully completed a hazardous materials first responder course (minimum 24 clock hours)

Have a TB skin test within six months of the start of the program and MMR and Hepatitis B (or waiver) immunizations.

Cost & Time for Completion

The U.S. Department of Education requires NPC to annually publish cost and time for completion data on Career & Technical Education certificate programs.

You can access the current data for the Paramedicine (CP & CAS) Program online at ***www.npc.edu/paramedicine***.

Paramedicine (CP) • 52 credits

EMT 240 Basic ECG and Pharmacology ..... 3 credits
EMT 244 Paramedic Training I ..... 23 credits
EMT 245 Paramedic Training II ..... 26 credits
Plus 500 clinical and vehicular hours are mandatory for completion of any paramedic program per AZDHS.

Paramedicine (CAS) • 58 credits

Complete the Paramedicine CP..... 52 credits

Plus,

ENL 101 English Composition I ..... 3 credits
~~MAT 101 or MAT 103 or MAT 105 or MAY 109 or MAT 112 or any mathematics course for which MAT 112 is a prerequisite ..... 3 credits~~
Select any course under the MAT General Education List (for CAS and AAS degrees) ..... 3 credits

Paramedicine (AAS) • 70 credits

Complete the Paramedicine CAS ..... 58 credits

Plus

These General Education courses

Communications ..... 3 credits

~~Complete one of the following:~~
~~ENL 102 College Composition II ..... 3 credits~~
~~ENL 109 Technical Writing ..... 3 credits~~
~~SPT 120 Public Speaking ..... 3 credits~~
Select any course under the Communications General Education List (for AAS Degrees) ..... 3 credits

Discipline Studies ***(per the list on page 84)*** ..... 9 credits
Arts and Humanities ..... 3 credits
Select one course from the **Arts and Humanities** section.
PHL 105 is recommended, but not required
Social and Behavioral Sciences ..... 6 credits
PSY 101 Introduction to Psychology ..... 3 credits
AND
One additional non-PSY course from the **Social and Behavorial Sciences** list ..... 3 credits

REQUEST TO APPROVE MODIFICATION OF THE GENERAL EDUCATION AA, AAEE, AAS, ABUS, AGS AND AS

Recommendation:
The Instructional Council recommends approval of the modification of the General Education Associate of Arts (AA), Associate of Arts in Elementary Education (AAEE), Associate of Applied Science (AAS), Associate of Business (ABUS), Associate of General Studies (AGS) and Associate of Science (AS) .

Summary:
This program modification:

- Expands the options of general education courses for students, including PHL 103 Introduction to Logic and Critical Thinking, PSY 250 Social Psychology and ANT 104 Biological Anthropology and Human Origins.
- Deletes PSY 200 Psychology of Adjustment, which is not frequently offered and less useful for transfer.
- Prefixes were changed on Principles of Economics (Macro-ECN 211 and Micro-ECN 212).

Proposed effective date of this modification is Fall 2015.

GENERAL EDUCATION

Completion of the required general education course credits fulfills requirements for the Arizona General Education Curriculum (AGEC) for the Associate of Arts (AA), Associate of Arts in Elementary Education (AAEE), Associate of Business (ABus) and Associate of Science (AS) degrees. *(see What is AGEC? – page 83)*

Communications ..... 6 credits
ENL 101 College Composition I .....3 credits
ENL 102 College Composition II .....3 credits
OR from the options listed under a specific degree.

Mathematics ..... 3-4 credits
Mathematics requirements are listed under each degree.

Discipline Studies

Arts and Humanities..... 6-9 credits
Select courses from at least two different disciplines, as listed under a specific degree.

ART 101 Understanding Art.....3 credits
ART 115 Art History I.....3 credits
ART 116 Art History II.....3 credits
ART 215 Native American Art.....3 credits
ENL 220 World Literature I.....3 credits
ENL 221 World Literature II.....3 credits
ENL 224 English Literature I.....3 credits
ENL 225 English Literature II.....3 credits
ENL 230 American Literature I.....3 credits
ENL 231 American Literature II.....3 credits
HUM 150 Humanities in the Western World I ..... 3 credits
HUM 151 Humanities in the Western World II ..... 3 credits
MUS 150 Music Appreciation.....3 credits
MUS 250 World Music .....3 credits
PHL 101 Introduction to Philosophy.....3 credits
PHL 103 INTRODUCTION TO LOGIC AND CRITICAL THINKING … 3 CREDITS
PHL 105 Introduction to Ethics.....3 credits
SPT 130 Introduction to Theatre .....3 credits
SPT 150 Introduction to Film.....3 credits
SPT 155 History of Television.....3 credits

Physical and Biological Science

Select courses, as listed under a specific degree. Students may transfer *either* CHM 130 or CHM 151, **but not both**; therefore, taking CHM 130 and CHM 151 will not satisfy the 8-credit requirement.

ANT 104 BIOLOGICAL ANTHROPOLOGY AND HUMAN ORIGINS … 4 CREDITS
BIO 100 Biology Concepts.....4 credits
BIO 105 Environmental Biology .....4 credits
BIO 160 Introduction to Human Anatomy and Physiology.....4 credits
BIO 181 General Biology I .....4 credits
BIO 182 General Biology II .....4 credits
CHM 130 Fundamental Chemistry.....4 credits
CHM 151 General Chemistry I.....4 credits
CHM 152 General Chemistry II.....4 credits
GEO 111 Physical Geography.....4 credits
GLG 101 Introduction to Geology I - Physical .....4 credits
GLG 102 Introduction to Geology II - Historical.....4 credits
PHY 113 General Physics I.....4 credits
PHY 114 General Physics II.....4 credits

Social and Behavioral Sciences ..... 6-9 credits

Select courses from at least two different disciplines, as listed under a specific degree. Select at least one asterisk (*) course to meet requirements for Contemporary Global, International or Historical Awareness.

*ANT 102 Cultural Anthropology.....3 credits
ANT 120 Buried Cities and Lost Tribes.....3 credits
~~BUS 140 Principles of Economics - Macro ..... 3 credits~~
~~BUS 141 Principles of Economics - Micro..... 3 credits~~
ECN 211 PRINCIPLES OF MACROECONOMICS ……3 CREDITS
ECN 212 PRINCIPLES OF MICROECONOMICS ……..3 CREDITS
*GEO 110 World Regional Geography .....3 credits
GEO 120 Human Geography.....3 credits
*HIS 105 U.S. History to 1877.....3 credits
*HIS 106 U.S. History since 1877 .....3 credits
*HIS 155 Western Civilization to 1700 .....3 credits

*HIS 156 Western Civilization since 1700.....3 credits
POS 110 American Government.....3 credits
PSY 101 Introduction to Psychology.....3 credits
~~PSY 200 Psychology of Adjustment.....3 credits~~
PSY 240 Developmental Psychology.....3 credits
PSY 250 SOCIAL PSYCHOLOGY . . . .3 CREDITS
SOC 120 General Sociology.....3 credits
SOC 121 Social Problems in America .....3 credits
SOC 130 Racial, Ethnic and Gender
Relations in Modern Society.....3 credits
SOC 225 Sociology of the Family .....3 credits

Electives

Choose carefully based on lower division and common course requirements for majors at the college or university to which you plan to transfer. To ensure you are selecting appropriate courses, see your academic adviser. The **electives component** must consist of credits that transfer to all three public Arizona universities as defined in the *Course Equivalency Guide* for the year in which the course is completed. Access to information about degrees and pathways, common courses, *Course Equivalency Guides*, and Arizona college and university catalogs is available through an academic adviser or directly on the Internet at ***www.AZTransfer.com.***

REQUEST TO APPROVE MODIFICATION OF THE ASSOCIATE OF SCIENCE

Recommendation:
The Instructional Council recommends approval of the modification of the Associate of Science (AS) Degree.

Summary:
This program modification allows for additional options for students pursuing the AS Degree (BIO 241 Human Genetics and ANT 104 Biological Anthropology and Human Origins) and deletes MAT 261 Introduction to Differential Equations, that has not been offered recently and never had many enrollees. Proposed effective date of this modification is Fall 2015.

Associate of Science (AS) • 64 credits

Completion of the 36 general education course credits fulfills requirements for the Arizona General Education Curriculum (AGEC-S) for the Associate of Science degree. *(see What is AGEC? – page 83)*

General Education courses

Communications (Per the list on page 84) ***..... 6 credits***

Mathematics..... 4 credits
MAT 221 Calculus I..... 4 credits
Or any mathematics course for which MAT 221 is a prerequisite.

Discipline Studies

Arts and Humanities..... 6 credits
(Select two courses from at least two disciplines from the list on page 84)

Physical and Biological Science..... 8 credits
(Select two courses from the **SAME** discipline)
BIO 181 General Biology I ..... 4 credits
BIO 182 General Biology II ..... 4 credits
CHM 151 General Chemistry I..... 4 credits
CHM 152 General Chemistry II..... 4 credits

Social and Behavioral Sciences..... 6 credits
(Select two courses from two different disciplines, with at least one asterisk (*) course to meet requirements for Contemporary Global, International or Historical Awareness from the list on page 84)

Science/Mathematics Option..... 6 credits
(Select two courses not taken to satisfy **Physical and Biological Sciences** requirements listed above.)
ANT 104 BIOLOGICAL ANTHROPOLOGY AND HUMAN ORIGINS … 4 CREDITS
BIO 105 Environmental Biology ..... 4 credits

BIO 160 Introduction to Human Anatomy and Physiology I ..... 4 credits
BIO 181 General Biology I ..... 4 credits
BIO 182 General Biology II ..... 4 credits
BIO 201 Human Anatomy and Physiology I ..... 4 credits
BIO 202 Human Anatomy and Physiology II ..... 4 credits
BIO 205 Microbiology ..... 4 credits
BIO 241 HUMAN GENETICS……..3 CREDITS
CHM 151 General Chemistry I ..... 4 credits
CHM 152 General Chemistry II ..... 4 credits
GEO 111 Physical Geography ..... 4 credits
GLG 101 Introduction to Geology I - Physical ..... 4 credits
GLG 102 Introduction to Geology II - Historical ..... 4 credits
MAT 231 Calculus II ..... 4 credits
MAT 241 Calculus III ..... 4 credits
~~MAT 261 Introduction to Differential Equations ..... 4 credits~~
PHY 113 General Physics I ..... 4 credits
PHY 114 General Physics II ..... 4 credits

Electives (Per the description on page 84) ***..... 28 credits***

REQUEST TO APPROVE NEW PROGRAM – ASSOCIATE OF ARTS IN EARLY CHILDHOOD

Recommendation:
The Instructional Council recommends approval of the new program – Associate of Arts in Early Childhood (AAEC) .

Summary:
The Associate of Arts in Early Childhood transfer degree offers foundational education that enhances good communication skills and provides wide general knowledge while allowing the early childhood student the opportunity to also complete the core early childhood courses leading to a CDA Credential, the most widely-recognized credential in early childhood education. The AAEC degree is designed for students planning to continue their education by transferring to one of the three Arizona public universities. Proposed effective date of this modification is Fall 2015.

Transfer Degree

Associate of Arts - Early Childhood (AAEC)

Why study Early Childhood?

Love working with young children?

Students Interested in the Early Childhood field have several pathways available to them including two degree options - an Associate of Arts -Early Childhood or an Associate of Applied Science (AAS).

The Associate of Arts-Early Childhood transfer degree offers foundational education that enhances good communication skills and provides wide general knowledge while allowing the early childhood student the opportunity to also complete the core early childhood courses leading to a CDA Credential, the most widely-recognized credential in early childhood education. In Arizona, K-3 teachers are also now required to have birth to 8-year old early educator/caregiver experience. Many early childhood settings also are requiring early educators/providers to obtain bachelor degrees in

early childhood.

The AA-EC degree is designed for students planning to continue their education by transferring to one of the three Arizona public universities. It is specifically designed to fulfill the lower division general education requirements of the Arizona General Education Curriculum (AGEC-A) which when completed, will transfer to any of the three public Arizona state universities as a block meeting all lower division general education requirements.

Additionally, with your AAEC degree in hand, you may meet current early childhood mandates required by several early childhood programs to be a classroom teacher, teacher assistant, provider or home visitor. You will have the credentials to work in your chosen setting while completing your bachelor's degree.

NPC Requirements

- The Associate of Arts in Early Childhood degree requires a minimum of 64 hours of course credits with a "C" or better in all courses and a cumulative grade point average of 2.0 on a 4.0 scale.
- Some courses have **placement requirements** or **prerequisites** that may result in coursework beyond 64 credits. These courses, too, require a grade of "C" or better. For information about prerequisites, see an NPC academic adviser.
- In most general education courses, special emphasis is placed on developing written communication skills with intensive writing requirements. Race and ethnic issue awareness is embedded throughout the general education requirements. Specific courses, as noted, meet the requirement for Contemporary Global/International or Historical Awareness.

Associate of Arts - Early Childhood (AAEC) • 64 credits

Completion of the 35 general education course credits fulfills requirements for the Arizona General Education Curriculum (AGEC-A) for the Associate of Arts Early Childhood degree. *(see What is AGEC? – page 83)*

General Education courses ..... 35 credits

Communications ..... 6 credits
(Select two courses from the list on page 84)

Mathematics ..... 3 credits
Select one of the following, **OR** a mathematics course for which MAT 142 or MAT 152 is a prerequisite.
MAT 142 College Mathematics with Contemporary Applications. **3 credits**
MAT 152 Advanced Algebra ..... **3 credits**

Discipline Studies

Arts and Humanities ..... 6 credits
(Select three courses from at least two disciplines from the list on page 84)

Physical and Biological Science ..... 8 credits
(Select two courses from the list on page 84)

Social and Behavioral Sciences ..... 9 credits
PSY 101 Introduction to Psychology
SOC 225 Sociology of the Family
POS 110 American Government

Computer Science……3 credits
(Select a course from the list on page ___)

Required Electives ..... ~~24~~ 22 credits

Mat 161 (Algebra-based Mathematics for Elementary
Teacher I…… 3 credits
Math 162 (Algebra-based Mathematics for Elementary
Teachers II ..... 3 credits
ECD 100 Providing a Healthy Environment ..... 1 credit
ECD 101 The Child's Total Learning Environment... …… ……1 credit
ECD 102 Ensuring a Safe Environment……1 credit
ECD 103 Planned Arrangement and Schedules……..1 credit
ECD 105 Guidance Principles for Encouraging Self-Discipline……..1 credit
ECD 108 Techniques for Observing Children……1 credit
ECD 110 Building Relationships with Parents Through Communication
OR
ECD112 Enhancing Family Involvement……1 credit
ECD 115 Nutrition in Early Childhood…… 1 credit
ECD 120 Enhancing a Positive Self-Concept……1 credit
ECD 125 Creative Media……1 credit
ECD 200 Introduction to Early Childhood Education…… 3 credits
ECD 250 Child Development 1……3 credits
~~ECD 270 CDA Assessment Prep……2 credits~~

AND

Additional Electives .....~~5 credits~~ 7 credits

Successful completion of ~~five~~ seven credits of unduplicated university transferable electives

REQUEST TO APPROVE NEW PROGRAM – FILM AND DIGITAL VIDEO

Recommendation:
The Instructional Council recommends approval of the new program Film and Digital Video (FDV) Associate of Applied Science (AAS), Certificate of Applied Science (CAS) and Certificate of Proficiency (CP) .

Summary:
See program description below. Many of the communities in the college's service area have expressed great interest in this field, and NPC's new program will address these needs in a program of study. Arrangements with NAVIT and local high schools for dual enrollment credit will strengthen the program's enrollment, as well as offer a pipeline for students who wish to stay in the region and earn a degree in Film and Digital Video. Proposed effective date of this modification is Fall 2015.

Film and Digital Video (FDV)

The Northland Pioneer College Film and Digital Video program trains students for a career in motion pictures. Foundational courses in the history and theory of film, as well as film aesthetics, pave the way for hands-on courses in the art and craft of several fields of video production, including lighting, cinematography, sound, screenwriting, and editing. Students work with the latest digital tools to produce their own video work in the AAS degree, which acts as a resume or "short reel" for entry into the professional world of film/video.

Certificate of Proficiency (CP) • 24 credits

FDV 130 or SPT 230 Video Production ..... 3 credits
FDV 140 or SPT 240 Video Editing ..... 3 credits
FDV 150 or SPT 150 Introduction to Film ..... 3 credits
FDV 160 Digital Audio For Film/TV ..... 3 credits

FDV 210 or ENL 210 Screenplay Writing..... 3 credits
FDV 220 Film Aesthetics..... 3 credits
FDV 222 Digital Video Pre-Production Applications..... 2 credits
FDV 232 Digital Video Production Applications ..... 2 credits
FDV 242 Digital Video Post-Production Applications ..... 2 credits

Certificate of Applied Science (CAS) • 30 credits

Complete the FDV CP

PLUS

ENL101 College Composition I ..... 3 credits

Mathematics ..... 3 credits
Select any course under the MAT General Education List (for CAS and AAS Degrees).

Associate of Applied Science (AAS) • 64 credits

Complete the FDV CAS ..... 30 credits

PLUS these General Education courses

Communications..... 3 credits
Select any course under the Communications General Education List (for AAS Degrees).

Discipline Studies ..... 7 credits
(Select one course from the **Physical and Biological Sciences** and one course from either the **Arts and Humanities** or **Social and Behavioral Sciences** lists on page ___.)

AND

Unrestricted Electives..... 24 credits
(Choose from any unduplicated courses at the 100-level or above

2016-2017 NPC Academic Calender

Recommendation:
Staff and Instructional Council recommend approval of the 2016-2017 academic calendar.

Summary:
Instructional Council, College Council, and the administration have reviewed and recommend approval of the attached 2016-2017 academic calender. The calendar conforms to the basic calender template under which NPC currently operates. NPC develops its calenders two years in advance to help both the district, NAVIT, and local school districts with advance planning.

1st- 10 month faculty return
15th- 9 month faculty return
22nd – first day of class

AUGUST 2016							
W	S	M	T	W	Th	F	S
		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
1	21	22	23	24	25	26	27
2	28	29	30	31			

SEPTEMBER 2016							
W	S	M	T	W	Th	F	S
2					1	2	3
3	4	5	6	7	8	9	10
4	11	12	13	14	15	16	17
5	18	19	20	21	22	23	24
6	25	26	27	28	29	30	

5th- Labor Day

OCTOBER 2016							
W	S	M	T	W	Th	F	S
6							1
7	2	3	4	5	6	7	8
8	9	10	11	12	13	14	15
9	16	17	18	19	20	21	22
10	23	24	25	26	27	28	29
11	30	31					

NOVEMBER 2016							
W	S	M	T	W	Th	F	S
11			1	2	3	4	5
12	6	7	8	9	10	11	12
13	13	14	15	16	17	18	19
14	20	21	22	23	24	25	26
15	27	28	29	30			

11th-Veterans Day
24th-Thanksgiving

DECEMBER 2016							
W	S	M	T	W	Th	F	S
15					1	2	3
16	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31

9th-Last day of fall
14th- Grades due
15th & 16th- no registration
26th – 30th college closed

JANUARY 2017							
W	S	M	T	W	Th	F	S
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
1	15	16	17	18	19	20	21
2	22	23	24	25	26	27	28
3	29	30	31				

2nd- 10 month Faculty return
9th- 9 month Faculty return
16th- MLK Day
17th- First day of spring semester

FEBRUARY 2017							
W	S	M	T	W	Th	F	S
3				1	2	3	4
4	5	6	7	8	9	10	11
5	12	13	14	15	16	17	18
6	19	20	21	22	23	24	25
7	26	27	28				

MARCH 2017							
W	S	M	T	W	Th	F	S
7				1	2	3	4
8	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
9	19	20	21	22	23	24	25
10	26	27	28	29	30	31	

13th-18th- Spring Break

APRIL 2017							
W	S	M	T	W	Th	F	S
10							1
11	2	3	4	5	6	7	8
12	9	10	11	12	13	14	15
13	16	17	18	19	20	21	22
14	23	24	25	26	27	28	29
15	30						

MAY 2017							
W	S	M	T	W	Th	F	S
15		1	2	3	4	5	6
16	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31			

13th Last day of Spring / Commencement
15thLast day of 9month faculty
16th- Grades due
17th & 18th no registration
29th- Memorial Day

JUNE 2017							
W	S	M	T	W	Th	F	S
					1	2	3
1	4	5	6	7	8	9	10
2	11	12	13	14	15	16	17
3	18	19	20	21	22	23	24
4	25	26	27	28	29	30	

2nd- Last day for 10 month Faculty
5th- First day of Summer School

JULY 2017							
W	S	M	T	W	Th	F	S
4							1
5	2	3	4	5	6	7	8
6	9	10	11	12	13	14	15
7	16	17	18	19	20	21	22
8	23	24	25	26	27	28	29
	30	31	1	2	3		

4th- Independence Day
28th- Last day of Summer
2nd- Grades due

Approved by IC 02-27-15

2015-16 PRELIMINARY BUDGET ANALYSIS

Summary:

The 2015-16 budget development process is moving forward. A copy of the approved budget calendar and budget assumptions is included. The proposed preliminary budget will be presented during the regular April District Governing Board meeting on the official forms provided by the Office of the Auditor General. The following analysis is intended to give an overview of the anticipated revenues for the upcoming fiscal year and the expenditure budget requests received. Please note that the budget requests reflect review by the budget managers and include alignment with the 2014-2017 three-year strategic plan.

The preliminary expenditure budget currently reflects recommended increases in wages, anticipated increases in employee related expenses, and all operational budget requests. Recommendations for the general fund contingency line item and general fund transfers to other funds have not been finalized.

The following items summarize the major components of the budget.

1. Strategic plan priorities and linkages
2. General fund revenue estimates

   Overall revenues are expected to increase by $1.1 million compared to current fiscal year.

   Primary property tax is assumed to be levied at the maximum rate, which is 2% higher than current year tax and will require a truth-in-taxation hearing. Property tax valuation is continuing to decline causing a greater than 2% increase in the current tax rate of $1.6610/$100 NAV to a rate of $1.7423, which would total $14,509,355 – an increase of $473,602.

   With the proposed tuition increase of $2 per credit hour, along with proposed course fee changes, the overall tuition and fee revenues are expected increase by $100,000 compared to the 2014-15 budget.

   State operating aid funding will decrease by $36,100 due to enrollment declines. State equalization aid will increase by $566,100 as the gap between local net assessed valuation and the average rural net assessed valuation has increased.

   Investment earnings, grants and contracts, and other miscellaneous revenues are budgeted to remain the same.

   If General Fund transfers to other funds remain the same as budgeted in the current year, available revenues for the General Fund total $ 25,930,855, an increase of 4%.

Primary property tax (max levy):	$14,509,355	+ $473,602
Tuition:	$4,600,000	+ $100,000
State Aid:	$7,431,500	+ $530,000
Investment earnings:	$140,000	No change
Grants and Contracts:	$1,800,000	No change
Other:	$200,000	No change
Transfers out:	- $2,750,000	No change
TOTAL	**$25,930,855**	**+$1,103,602**

3. General fund expenditures

Requested wages and ERE:	$ 17,092,316	- $320,489
Operating Expenditures:	$ 7,221,484	+ $133,524
TOTAL	**$24,313,800**	- $186,965

- The shared governance process recommendation of two percent increase in wages is included in request summary, along with the recommendation to hold administrator wages to a one percent increase. The additional expense associated with the full recommendation is approximately $230,000.
- Benefit cost increases include employee base health insurance increase of three percent totaling about $45,000 in additional cost. Changes in the base plan benefits, including increases in out-of-pocket maximums have been introduced. The high deductible health insurance plan is available to all employees as a lower cost option.
- Arizona State Retirement System cost reductions account for a savings of approximately $10,000 as the employer match will decrease from 11.6% to 11.47%
- Adjustments to adjunct, faculty overload, lab aid and temporary help expenditures expenditures total an additional $133,000. However, reductions in other employee lines brings the total request down by $320,489 (-1.8%)
- Budget managers have submitted a $133,524 (1.9%) increase for non-employee related costs.

4. Unrestricted plant fund (capital) for 2014-15

   a. Revenue includes
      i. State STEM Aid $ 345,500 - $ 32,000
      ii. Preliminary General fund transfer: $ 2,000,000 No change
      iii. Fund balance: As required

   b. Expenditure requests (pending budget hearing): $ 7,775,400

5. Restricted fund (grants and student federal financial aid)
    a. General fund transfer remains same
    b. Anticipate increases in revenue and expenditure categories
        i. Seek additional grant opportunities
        ii. Stable federal financial aid awards
    c. Building Workforce Development (Proposition 301) construction fund
    d. Initial accounting for STEM State Aid with transfer to the capital fund when expenditures occur.

6. Auxiliary fund
    a. General fund transfer remains the same
    b. Corporate Training is expected to continue to grow
    c. Non-credit courses will continue to be offered
    d. Bookstore revenues are continuing to decline
    e. Other auxiliary activities remaining stable

7. Expenditure limitation
    Staff anticipates the expenditure limit will be breached in FYE 2015; however, carry-forward will be used as a short-term solution as legislative options are identified.

STRATEGIC PLANNING
AND BUDGET DEVELOPMENT CALENDAR
FISCAL YEAR 2015 – 2016
APPROVED

ACTIVITY	RESOURCE	DUE BY
1. Receive and approve budget calendar	DGB	✓18 November
2. ERC receives wage/salary recommendations	FA-CASO	✓15 December
3. Review current three-year strategic plan	DGB	✓16 December
4. Receive and approve budget assumptions & overview	DGB	✓16 December
5. Review current strategic plan and current budget	Budget Managers	✓19 December
6. Distribute materials for departmental operational & capital	Director Fin Svcs	✓5 January
7. College Council receives wage & salary recommendation	ERC	✓5 January
8. Receive departmental operational & capital requests	Executive Team	✓2 February
9. President receives wage & salary recommendation	College Council/SPASC	✓2 February
10. Executive review of operational & capital budget	Executive Team	✓9 February
11. Receive introductory budget analysis	DGB	✓17 February
12. Receive wage and salary recommendation	DGB	✓17 February
13. Receive tuition and fee schedules	DGB	✓17 February
14. Budget hearings	SPASC co-chairs Director Fin Svcs Budget Managers	*2 March
15. Receive preliminary budget analysis	DGB	17 March
16. Approve tuition and fee schedules	DGB	17 March
17. Approve salary schedules	DGB	17 March
18. Receive complete budget analysis	DGB	21 April
19. Approve budget publication	DGB	21 April
20. Adopt tentative current budget & three-year capital budget	DGB	21 April
21. Publish notice of budget public hearing/TNT hearing	VP Adm Svcs	1 May
22. Notice of TNT hearing second publication	VP Adm Svcs	8 May
23. Publish notice of budget public hearing/TNT hearing	VP Adm Svcs	13 May
24. Public hearing conducted for taxpayers	DGB	19 May
25. Final current budget and three-year capital budget adopted	DGB	19 May
26. Notify PTOC of primary property tax levy	VP Adm Svcs	20 May
27. Submit Tax levy to Navajo County	VP Adm Svcs	20 May

✓**Completed** * *Partial completion*

Northland Pioneer College
Approved Budget Development Assumptions
FY 2015-16

GENERAL ASSUMPTIONS

- Budget Development Calendar will be followed
- Introductory budget analysis for DGB in February will be prior to budget hearings and will be limited to an overview of expenditure and revenue trends.
- Preliminary budget analysis for DGB in March will include a detailed examination of budget planning similar to prior year preliminary budget analyses
- Statutory Expenditure Limit will be breached.
- Carry-forward is available to address short-term issues and expenditures will not be restricted by statutory expenditure limitations, however, identification and recommendation for cost savings actions will be identified

REVENUE ASSUMPTIONS

- Overall revenues are expected to increase compared to current fiscal year by a total of about $1 million or three percent of the general fund
- Equalization State funding expected to increase in FY15-16 by approximately $551,000 and Operational State Aid is expected to decline by $36,000 for a net increase of $515,000
- Each $1 increase in tuition is estimated to generate $50,000 in additional revenue - tuition and general fees will be set at a rate that
  - (A) Gives consideration to the impact on students, student enrollment, and student retention rates
  - (B) Increases incrementally
  - (C) Is competitive in our market by maintaining a comparative position to the average overall tuition and general fees at other Arizona community colleges
- Course fees will be set at a rate calculated to offset expendable supplies and equipment
- Primary property tax will be levied at the maximum rate, which is two percent higher than current year tax plus new construction and will require a truth-in-taxation hearing. Property tax valuation is expected to continue to decline causing a greater than two percent increase in the current tax rate of $1.6610/$100 Net Assessed Valuation. The growth in property tax levy associated with new construction is estimated to be approximately $150,000 and the maximum two percent increase will generate about $285,000 for a total revenue increase of $435,000
- Other revenues will be estimated based on historical information and emerging trends

EXPENDITURE ASSUMPTIONS

- Overall general fund expenditures are expected to be flat or decrease compared to current fiscal year
- Items in budget requests will be linked to the current **NPC Strategic Plan** through operational plans developed at the division or departmental level. Any budget amounts that are higher than current budget **or** actual historical spending will require j**ustification and will be reviewed during the budget hearing process**.
- Budget requests for operational and capital expenditures will be completed by **Monday, February 2, 2015.**

- SALARY SCHEDULES will be developed with
  - (A) Incrementally increasing rates
  - (B) Consideration to competitive market conditions with the goal to maintain a comparative position to the average increases/rates at other local public entities, other Arizona community colleges, and other similar institutions.
  - (C) Consideration to salary recommendations received through the shared governance process
- BENEFITS will be developed with
  - (A) No major changes expected in plan benefit structure or options
  - (B) Consideration on impacts from third-party partnerships
    - (1) Navajo County Schools Employee Benefit Trust for medical and dental insurance
    - (2) Arizona State Retirement System for retirement contributions
- Education partner relationships will be maintained
  - (A) Apache County
  - (B) NAVIT
  - (C) Dual enrollment
  - (D) Other
- CAPITAL budget requests will be developed for a three-year period (2015 – 2018). The State STEM aid formula calls for a $30,000 reduction in funding in the fiscal year ending June 30, 2016, however equipment purchases identified for the fiscal year will be tied to the actual state appropriation
- GRANT funding will continue to be identified and pursued
- AUXILIARY fund activities will be maintained

Northland Pioneer College
Budget Development Assumptions
FY 2015-16

Budget Categories & Targets:

Revenues	• Budget will be prepared by Administrative Services
Salaries/Wages & Benefits	• Budget will be prepared by Administrative Services **except** for the following wages that budget managers will **include in budget requests:** ○ Adjunct faculty ○ Faculty overload ○ Temporary employee ○ Lab aid ○ Substitute faculty
Operating Expenditures	• Funding expected to remain level in FY 14-15. • Budget requests should reflect only those items identified in division or departmental operational plans. • Any new programs/services must demonstrate linkage to the adopted strategic plan.
Capital Expenditures	• All requests for funding will be linked to revenues from the operational budget, grant funds, or reserved funds. • Minimal state funding for STEM is expected to continue.

Sec. 23. ARIZONA COMMUNITY COLLEGES

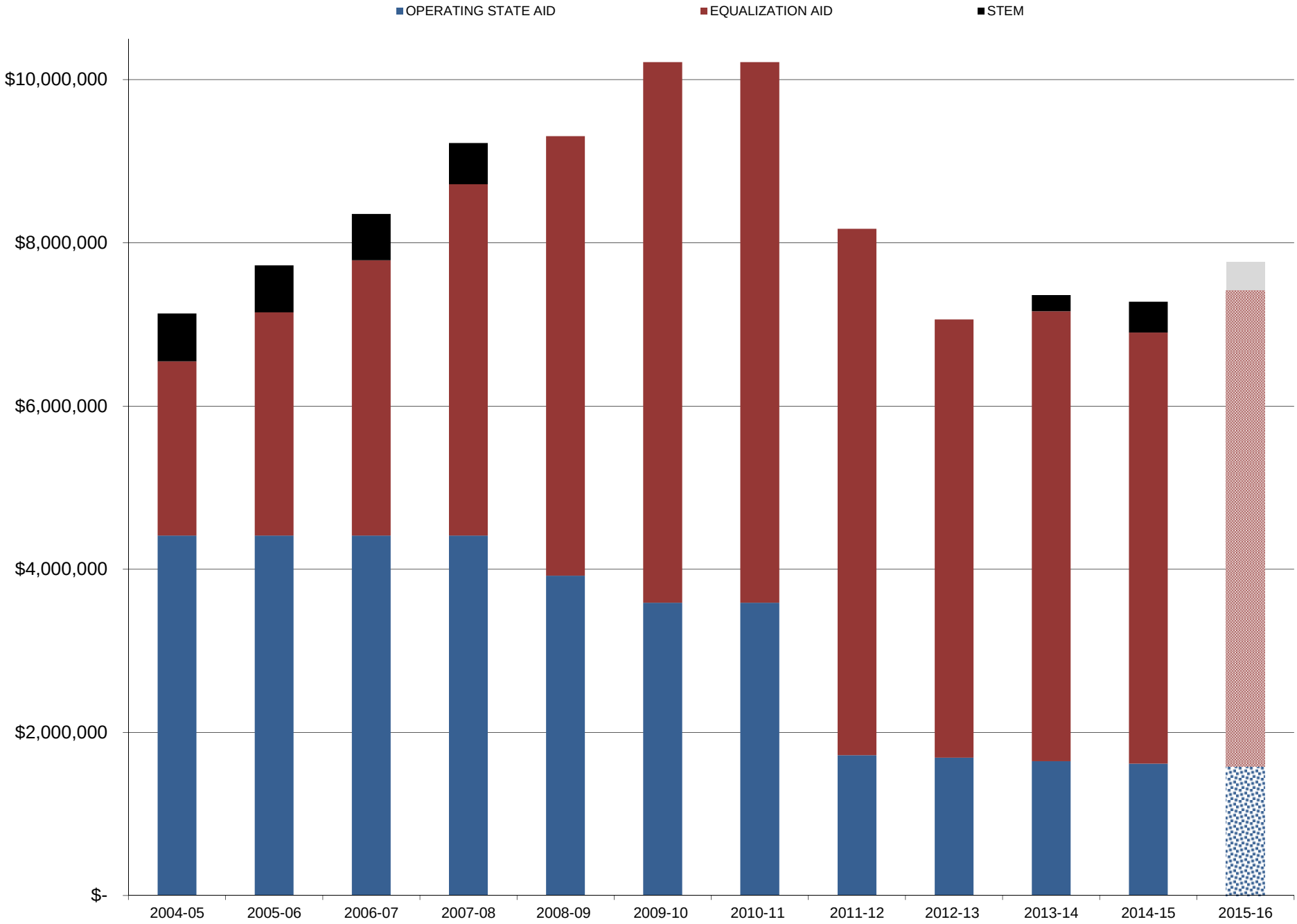
	2015-16
Equalization aid	
Cochise	$ 4,332,800
Graham	14,538,800
Navajo	5,849,400
Total - equalization aid	$ 24,721,000
Operating state aid	
Cochise	$ 5,206,000
Coconino	1,771,200
Gila	368,100
Graham	2,175,600
Mohave	1,524,000
Navajo	1,582,100
Pinal	1,903,500
Santa Cruz	57,300
Yavapai	890,300
Yuma/La Paz	2,702,500
Total - operating state aid	$ 18,180,600
STEM and workforce programs state aid	
Cochise	$ 1,150,000
Coconino	423,200
Gila	160,900
Graham	569,500
Mohave	577,700
Navajo	345,500
Pinal	96,500
Santa Cruz	53,100
Yavapai	805,700
Yuma/La Paz	867,300
Total - STEM and workforce programs state aid	$ 5,049,400
Rural county reimbursement subsidy	$ 1,273,800
Total appropriation - Arizona community colleges	$ 49,224,800
Fund sources:	
State general fund	$ 49,224,800

Of the $1,273,800 appropriated to the rural county reimbursement subsidy line item, Apache county receives $699,300 and Greenlee county receives $574,500.

Sec. 24. REGISTRAR OF CONTRACTORS

	2015-16
FTE positions	105.6
Operating lump sum appropriation	$ 11,179,100

NPC State Aid Revenues



2015 LEVY LIMIT WORKSHEET

Date: 2/10/2015

NAVAJO COUNTY - NORTHLAND PIONEER COLLEGE

MAXIMUM LEVY	**2014**
A.1. Maximum Allowable Primary Tax Levy	$14,035,753
A.2. A.1 multiplied by 1.02	$14,316,468

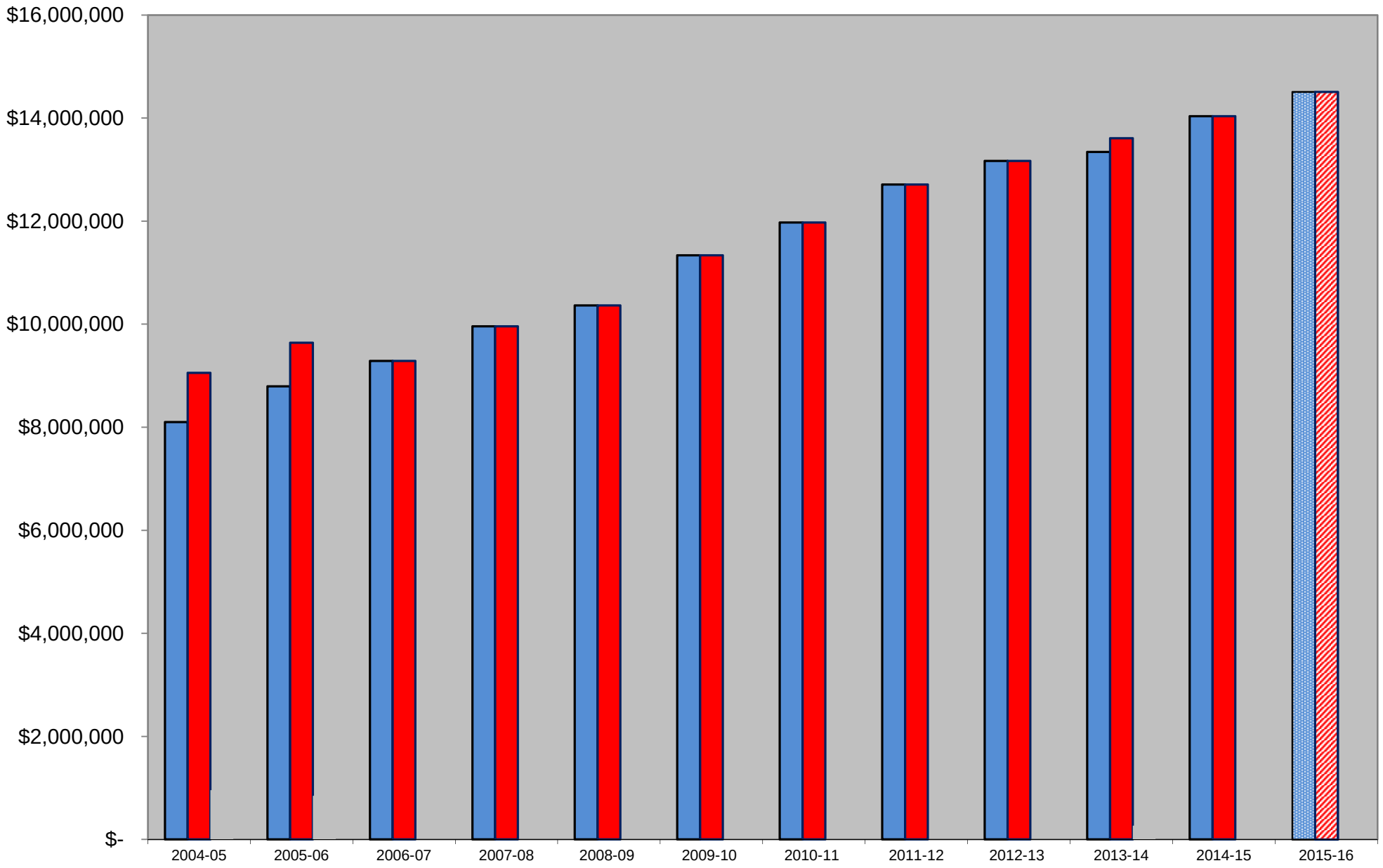
CURRENT YEAR NET ASSESSED VALUE SUBJECT TO TAXATION IN PRIOR YEAR	**2015**
B.1. Centrally Assessed	$257,137,386
B.2. Locally Assessed Real Property	$549,905,532
B.3. Locally Assessed Personal Property	$14,662,934
B.4. Total Assessed Value (B.1 through B.3)	$821,705,852
B.5. B.4. divided by 100	$8,217,059

CURRENT YEAR NET ASSESSED VALUES	**2015**
C.1. Centrally Assessed	$261,979,130
C.2. Locally Assessed Real Property	$556,128,109
C.3. Locally Assessed Personal Property	$14,662,934
C.4. Total Assessed Value (C.1 through C.3)	**$832,770,173**
C.5. C.4. divided by 100	$8,327,702

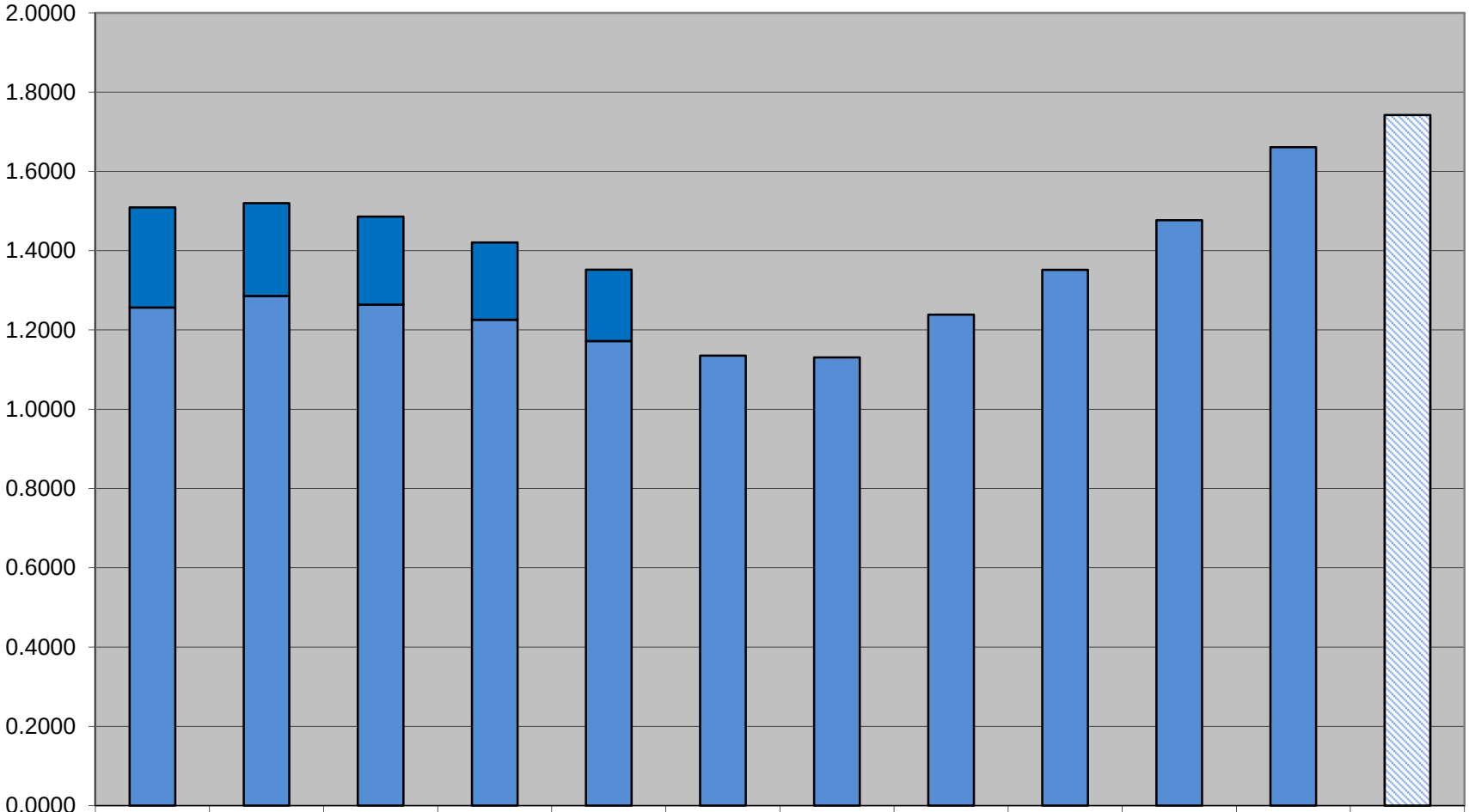
LEVY LIMIT CALCULATION	**2015**
D.1. LINE A.2	$14,316,468
D.2. LINE B.5	$8,217,059
D.3. D.1/D.2 (MAXIMUM ALLOWABLE TAX RATE)	**1.7423**
D.4. LINE C.5	$8,327,702
D.5. D.3 multiplied by D.4 = MAXIMUM ALLOWABLE LEVY LIMIT	**$14,509,355**
D.6. Excess Collections/Excess Levy	
D.7. Amount in Excess of Expenditure Limit	
D.8. ALLOWABLE LEVY LIMIT (D.5 - D.6 - D.7)	**$14,509,355**

2015 New Construction	$11,064,321

NPC Primary Maximum Property Tax Levy compared to Actual Levy



NPC Historical Property Tax Rates



	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Secondary	0.2526	0.2343	0.2219	0.1949	0.1800	0	0	0	0	0	0	0
Primary	1.2566	1.2857	1.2639	1.2257	1.172	1.1352	1.1308	1.2387	1.3515	1.4769	1.6610	1.7423

IDENTIFICATION OF TAXING ENTITIES								
				2013			2014	
Auth #	CODE	TAXING ENTITY	Primary	Secondary	Total	Primary	Secondary	Total
02000	COUNTY	NAVAJO COUNTY	0.6995	0.0000	0.6995	0.8185	0.0000	0.8185
15728	NCFCD	NAVAJO COUNTY FLOOD CONTROL DIST	0.0000	0.3000	0.3000	0.0000	0.3000	0.3000
08150	NPC	NORTHLAND JR COLLEGE	1.4769	0.0000	1.4769	1.6610	0.0000	1.6610
14900	NCLD	NAVAJO COUNTY LIBRARY DISTRICT	0.0000	0.0704	0.0704	0.0000	0.1000	0.1000
11900	FDAF	FIRE DISTRICT ASSISTANCE FUND	0.0000	0.1000	0.1000	0.0000	0.1000	0.1000
29999	NCPHSD	NAVAJO COUNTY PUBLIC HEALTH SVCS DIST	0.0000	0.2151	0.2151	0.0000	0.2430	0.2430
02001	SE	SCHOOL EQUALIZATION	0.5123	0.0000	0.5123	0.5089	0.0000	0.5089
TOTAL	TOT	TOTAL OF ABOVE	2.6887	0.6855	3.3742	2.9884	0.7430	3.7314
		SCHOOLS						
07001	SD1	#1 WINSLOW UNIFIED	2.2361	3.0821	5.3182	2.0967	3.2215	5.3182
07002	SD2	#2 JOSEPH CITY UNIFIED	2.2267	0.6055	2.8322	2.0873	0.5789	2.6662
07003	SD3	#3 HOLBROOK UNIFIED	4.0987	3.2025	7.3012	3.7778	3.5234	7.3012
07004	SD4	#4 PINON UNIFIED	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
07005	SD5	#5 SNOWFLAKE UNIFIED	4.8242	0.9565	5.7807	4.3242	1.1052	5.4294
07006	SD6	#6 HEBER-OVERGAARD UNIFIED	3.5046	1.0016	4.5062	3.6370	1.0729	4.7099
07010	SD10	#10 SHOW LOW UNIFIED	4.6373	0.8555	5.4928	3.7136	0.8189	4.5325
07020	SD20	#20 WHITERIVER UNIFIED	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
07025	SD25	#25 CEDAR UNIFIED SD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
07027	SD27	#27 KAYENTA UNIFIED	0.0000	8.0000	8.0000	0.0000	8.0000	8.0000
07032	SD32	#32 BLUE RIDGE UNIFIED	3.5860	1.4028	4.9888	3.9107	1.3462	5.2569
07990	MST	MINIMUM SCHOOL TAX SD2	0.4312	0.0000	0.4312	0.6338	0.0000	0.6338
07999	CED	COUNTY EDUCATION DISTRICT	2.1265	0.0000	2.1265	2.1123	0.0000	2.1123
		INCORPORATED MUNICIPALITIES						
04151	HOL	CITY OF HOLBROOK	0.2789	0.0000	0.2789	0.0000	0.0000	0.0000
04152	SHO	CITY OF SHOW LOW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
04153	SNO	TOWN OF SNOWFLAKE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
04154	TAY	TOWN OF TAYLOR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
04155	WIN	CITY OF WINSLOW	1.1934	0.0000	1.1934	1.2831	0.0000	1.2831
04156	PLI	TOWN OF PINETOP-LAKESIDE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10350	NHD	NAVAPACHE HOSPITAL DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		FIRE DISTRICTS						
11201	JCFD	JOSEPH CITY FIRE DISTRICT	0.0000	2.0990	2.0990	0.0000	2.8013	2.8013
11202	LFD	LAKESIDE FIRE DISTRICT	0.0000	2.6978	2.6978	0.0000	2.9821	2.9821
11203	PFD	PINETOP FIRE DISTRICT	0.0000	2.5246	2.5246	0.0000	2.7557	2.7557
11204	SFD	SHOW LOW FIRE DISTRICT	0.0000	2.9071	2.9071	0.0000	2.9473	2.9473
11205	HOFD	HEBER-OVERGAARD FIRE DISTRICT	0.0000	1.5994	1.5994	0.0000	1.8061	1.8061
11206	WMLFD	WHITE MTN LAKES FIRE DISTRICT	0.0000	3.1156	3.1156	0.0000	3.1156	3.1156
11207	CSPFD	CLAYSPRINGS-PINEDALE FIRE DISTRICT	0.0000	1.6681	1.6681	0.0000	1.8556	1.8556
11208	WFD	WOODRUFF FIRE DISTRICT	0.0000	1.8060	1.8060	0.0000	2.5048	2.5048
11209	LDFD	LINDEN FIRE DISTRICT	0.0000	3.2441	3.2441	0.0000	3.2500	3.2500
11210	SVFD	SUN VALLEY FIRE DISTRICT	0.0000	3.2500	3.2500	0.0000	3.2500	3.2500
11211	MRFD	MCLAWS ROAD FIRE DISTRICT	0.0000	0.5181	0.5181	0.0000	0.6639	0.6639

		SPECIAL DISTRICTS						
13001	JCSLID	JOSEPH CITY SLID #13-98	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13002	SLSLID	CITY OF SHOW LOW STREET LIGHT DIST	0.0000	0.1131	0.1131	0.0000	0.1291	0.1291
15726	SCFC	SILVER CREEK FLD CONTROL PROTECTION DIST	0.0000	0.1451	0.1451	0.0000	0.1607	0.1607
15727	LCFC	LITTLE COLORADO FLD CONTROL ZONE	0.0000	0.2000	0.2000	0.0000	0.2000	0.2000
16826	WID	WOODRUFF IRRIGATION DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		SANITARY DISTRICTS						
21251	P-LSD	PINETOP-LAKESIDE SANITARY DISTRICT	0.0000	0.2890	0.2890	0.0000	0.2890	0.2890
21253	JCSD	JOSEPH CITY SANITARY DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21254	WMLSD	WHITE MTN LAKES SANITARY DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21255	H-OSD	HEBER-OVERGAARD SANITARY DISTRICT	0.0000	0.2920	0.2920	0.0000	0.3175	0.3175
20001	TASPRD#1	TIMBERLAND ACRES SPEC RD DIST #1	0.0000	1.7211	1.7211	0.0000	1.8059	1.8059
20002	CCDCID	COUNTRY CLUB DRIVE CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20003	PME#2CID	PORTER MTN ESTATES #2 CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20004	ADCID	ALCHESAY DRIVE CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20005	WSID	WINSLOW STREET IMP DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20006	DFDCRID	DEEP FOREST DR #2 CRID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20007	ELCRID	EAST LANE CRID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20008	TPDCID	TALL PINE DR CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20009	NHBPCRID	NIGHT HAWK/BLACK PANTHER CRID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20010	SCCRID	SILVER CREEK CRID	0.0000	0.8619	0.8619	0.0000	0.9386	0.9386
20011	OLRID	OSPREY LANE RD IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20012	CTCRID	CHRISTMAS TREE CIRCLE RD IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20013	ACRID	AIRPINE COUNTY RID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20014	MH2CID	MOUNTAIN HOMES #2 CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20015	HWRDCID	HIDDEN WAY RD ACCES CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20016	SVCWCRID	SWEEPING VISTA/CHARRO WAY CRID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20018	PDCRID	PALOMINO DR CRID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20019	SECRID	SOARING EAGLE CRID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20020	HCRID	HOMESTEAD CO ROAD IMPR DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20021	MCCID	MOON CREEK CIRCLE IMPR DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20022	WHRID1	WILD HORSE ROAD IMPR DIST 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20027	CDID	CHAPARRAL DRIVE IMPROVEMENT DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20028	PMCCID	PINE MEADOWS COUNTRY CLUB IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20029	HTID	HIAWTHA TRAIL IMPROVEMENT DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20030	DSLID	DRIFTING SNOW LOOP IMPR DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20031	WWID	WILDCAT WAY IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20032	BDCID	BEAVER DAM CIRCLE IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20033	SDID	SUTTER DRIVE IMPROVEMENT DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20035	SPNID	SCOTT'S PINE NORTH IMP DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20036	MLID	MADISON LAND IMPROVEMENT DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20037	SRID	SHUMWAY ROAD IMPROVEMENT DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20038	VHRMD	VICTORY HEIGHTS ROAD MD	0.0000	1.7214	1.7214	0.0000	1.7605	1.7605
20039	BUID	BUCKING HORSE IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20040	NWSLID	NORTH WHISTLE STOP LOOP IMPROVEMENT DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

20041	HDID	HILLTOP DRIVE IMPROVEMENT DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20042	MVID	MOUNTAIN VIEW IMPROVEMENT DISTRICT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23950	NIRD#1	NAVAJO INDIAN RES DISTRICT #1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23951	HIRD#1	HOPI INDIAN RES DISTRICT #1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23952	NIRD#2	NAVAJO INDIAN RES DISTRICT #2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23953	NIRD#3	NAVAJO INDIAN RES DISTRICT #3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23954	HIRD#3	HOPI INDIAN RES DISTRICT #3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23955	NIRD#5	NAVAJO INDIAN RES DISTRICT #5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23956	HIRD#5	HOPI INDIAN RES DISTRICT #5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23957	FAIRD#20	FORT APACHE INDIAN RES DISTRICT #20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23958	HIRD#25	HOPI INDIAN RES DISTRICT #25	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23959	NIRD#25	NAVAJO INDIAN RES DISTRICT #25	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23960	NIRD#27	NAVAJO INDIAN RES DISTRICT #27	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23961	HIRD#27	HOPI INDIAN RES DISTRICT #27	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23962	NIRD#4	NAVAJO INDIAN RES DISTRICT #4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23963	HIRD#4	HOPI INDIAN RES DISTRICT #4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28301	PLCID	PINETOP LAKES CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28303	SPMCID	SCOTTS PINE MEADOWS CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28304	TPCID	TIMBERLAKE PINES CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28307	WMSHDWCID	WHITE MTN SUMMER HOME DOM WATER CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28308	SPM#2CID	SCOTTS PINE MEADOWS #2 CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28309	WMLR#2CRID	WHITE MTN LKE #2 SPC CRID	0.0000	1.6096	1.6096	0.0000	2.0170	2.0170
28310	WDWCID	WOODRUFF DOMESTIC WATER CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28311	PMDWCID	PORTER MTN DOMESTIC WATER CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28313	PVCID	PARK VALLEY CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28314	SLCCCID	SHOW LOW COUNTRY CLUB CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28315	WMLCID	WHITE MTN LAKES CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28320	DFDCID	DEEP FOREST DRIVE CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28323	MMDWCID	MISTY MOUNTAIN DOMESTIC WATER CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28324	MMCID	MISTY MOUNTAIN CID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28326	TOTDWID	THREE-O-THREE DOMESTIC WATER IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28327	PDWID	PINEDALE DOMESTIC WATER IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28329	CSDWID	CLAYSPRINGS DOMESTIC WATER IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28330	SHDWID	SKY-HI DOMESTIC WATER IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28332	WMLDWID	WHITE MTN LAKES DOMESTIC WATER IMP	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28333	WMLCRID	WHITE MTN LAKES CRID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28335	JCDWID	JOSEPH CITY DOMESTIC WATER IMP DIST	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28974	MDWWID	MOGOLLON DOMESTIC WWID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28975	FBDWID	FAWNBROOK DWID	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28976	OTDWW	OVERGAARD TOWNSITE DOM WASTE WATER	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28977	FHSID99A	FLAG HOLLOW SEWER IMPR DIST 99-A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28978	WOTSID	WILD OAK TRAIL SID 97-D2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28979	APIISID	AH-HO PINES II SID 97-A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28983	WWWSID93B	WEST WAGON-WHEEL SID 93-B	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

28984	FVPSSID93A	FOREST VIEW PINEY SLOPE SID 93-A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28988	LLWSID	LARSON/LAKE OF TH WDS SID 88-B	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28989	NPSID	NORTH PINETOP SID 88-A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28990	MSID	MOUNTAIN SID 86-C	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28991	RLPACSID	RAINBOW LK PNS-APCH CV SID 86-A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30000	NAVIT	NORTHERN ARIZONA VIT	0.0000	0.0500	0.0500	0.0000	0.0500	0.0500
30001	NATIVE	NE AZ TECHNOLOGICAL INST OF VOC ED	0.0000	0.0500	0.0500	0.0000	0.0500	0.0500
32001	SLBCFD	SHOW LOW BLUFF CFD	0.0000	3.5500	3.5500	0.0000	3.5500	3.5500

	TAX RATES							
AREA			2013				2014	
CODE		Primary	Secondary	Total		Primary	Secondary	Total
0100	TOT,SD#1,NAVIT	4.9248	3.8176	8.7424		5.0851	4.0145	9.0996
0100P	TOT-NCFCD,SD#1,NAVIT	4.9248	3.5176	8.4424		5.0851	3.7145	8.7996
0101	TOT,SD#1,NAVIT	4.9248	3.8176	8.7424		5.0851	4.0145	9.0996
0101P	TOT-NCFCD,SD#1,NAVIT	4.9248	3.5176	8.4424		5.0851	3.7145	8.7996
0102	TOT,SD#1,NAVIT	4.9248	3.8176	8.7424		5.0851	4.0145	9.0996
0102P	TOT-NCFCD,SD#1,NAVIT	4.9248	3.5176	8.4424		5.0851	3.7145	8.7996
0103	TOT,SD#1,NAVIT	4.9248	3.8176	8.7424		5.0851	4.0145	9.0996
0103P	TOT-NCFCD,SD#1,NAVIT	4.9248	3.5176	8.4424		5.0851	3.7145	8.7996
0105	TOT,SD#1,LCFC,NAVIT	4.9248	4.0176	8.9424		5.0851	4.2145	9.2996
0105P	TOT-NCFCD,SD#1,NAVIT	4.9248	3.5176	8.4424		5.0851	3.7145	8.7996
0130	TOT,SD#1,WIN,LCFC,NAVIT	6.1182	4.0176	10.1358		6.3682	4.2145	10.5827
0130P	TOT-NCFCD,SD#1,WIN,NAVIT	6.1182	3.5176	9.6358		6.3682	3.7145	10.0827
0131	TOT,SD#1,WIN,NAVIT	6.1182	3.8176	9.9358		6.3682	4.0145	10.3827
0131P	TOT-NCFCD,SD#1,WIN,NAVIT	6.1182	3.5176	9.6358		6.3682	3.7145	10.0827
0132	TOT,SD#1,WIN,LCFC,WSID,NAVIT	6.1182	4.0176	10.1358		6.3682	4.2145	10.5827
0132P	TOT-NCFCD,SD#1,WIN,WSID,NAVIT	6.1182	3.5176	9.6358		6.3682	3.7145	10.0827
0200	TOT,SD#2,NAVIT	5.3466	1.3410	6.6876		5.7095	1.3719	7.0814
0200P	TOT-NCFCD,SD#2,NAVIT	5.3466	1.0410	6.3876		5.7095	1.0719	6.7814
0201	TOT,SD#2,JCFD,LCFC,JCSD,JCSLID,JCDWID,NAVIT	5.3466	3.6400	8.9866		5.7095	4.3732	10.0827
0201P	TOT-NCFCD,SD#2,JCFD,NAVIT	5.3466	3.1400	8.4866		5.7095	3.8732	9.5827
0202	TOT,SD#2,NAVIT	5.3466	1.3410	6.6876		5.7095	1.3719	7.0814
0202P	TOT-NCFCD,SD#2,NAVIT	5.3466	1.0410	6.3876		5.7095	1.0719	6.7814
0203	TOT,SD#2,JCFD,LCFC,NAVIT	5.3466	3.6400	8.9866		5.7095	4.3732	10.0827
0203P	TOT-NCFCD,SD#2,JCFD,NAVIT	5.3466	3.1400	8.4866		5.7095	3.8732	9.5827
0204	TOT,SD#2,JCFD,JCSLID,JCDWID,NAVIT	5.3466	3.4400	8.7866		5.7095	4.1732	9.8827
0204P	TOT-NCFCD,SD#2,JCFD,NAVIT	5.3466	3.1400	8.4866		5.7095	3.8732	9.5827
0205	TOT,SD#2,LCFC,NAVIT	5.3466	1.5410	6.8876		5.7095	1.5719	7.2814
0205P	TOT-NCFCD,SD#2,NAVIT	5.3466	1.0410	6.3876		5.7095	1.0719	6.7814
0206	TOT,SD#2,LCFC,JCSD,JCSLID,JCDWID,NAVIT	5.3466	1.5410	6.8876		5.7095	1.5719	7.2814
0206P	TOT-NCFCD,SD#2,NAVIT	5.3466	1.0410	6.3876		5.7095	1.0719	6.7814
0207	TOT,SD#2,MRFD,NAVIT	5.3466	1.8591	7.2057		5.7095	2.0358	7.7453
0207P	TOT-NCFCD.SD#2,MRFD,NAVIT	5.3466	1.5591	6.9057		5.7095	1.7358	7.4453
0210	TOT,SD#2,JCFD,JCSD,JCSLID,JCDWID,NAVIT	5.3466	3.4400	8.7866		5.7095	4.1732	9.8827
0210P	TOT-NCFCD,SD#2,JCFD,NAVIT	5.3466	3.1400	8.4866		5.7095	3.8732	9.5827
0211	TOT,SD#2,HOL,LCFC,NAVIT	5.6255	1.5410	7.1665		5.7095	1.5719	7.2814
0211P	TOT-NCFCD,SD#2,HOL,NAVIT	5.6255	1.0410	6.6665		5.7095	1.0719	6.7814
0212	TOT,SD#2,JCFD,LCFC,JCSLID,JCDWID,NAVIT	5.3466	3.6400	8.9866		5.7095	4.3732	10.0827
0212P	TOT-NCFCD, SD#2, JCFD,NAVIT	5.3466	3.1400	8.4866		5.7095	3.8732	9.5827
0300	TOT,SD#3,NAVIT	6.7874	3.9380	10.7254		6.7662	4.3164	11.0826
0300P	TOT-NCFCD,SD#3,NAVIT	6.7874	3.6380	10.4254		6.7662	4.0164	10.7826
0301	TOT,SD#3,WFD,LCFC,WID,WDWCID,NAVIT	6.7874	5.9440	12.7314		6.7662	7.0212	13.7874
0301P	TOT-NCFCD,SD#3,WFD,WID,WDW,NAVIT	6.7874	5.4440	12.2314		6.7662	6.5212	13.2874
0302	TOT,SD#3,NAVIT	6.7874	3.9380	10.7254		6.7662	4.3164	11.0826
0302P	TOT-NCFCD,SD#3,NAVIT	6.7874	3.6380	10.4254		6.7662	4.0164	10.7826
0303	TOT,SD#3,NAVIT	6.7874	3.9380	10.7254		6.7662	4.3164	11.0826
0303P	TOT-NCFCD,SD#3,NAVIT	6.7874	3.6380	10.4254		6.7662	4.0164	10.7826
0304	TOT,SD#3,NAVIT	6.7874	3.9380	10.7254		6.7662	4.3164	11.0826
0304P	TOT-NCFCD,SD#3,NAVIT	6.7874	3.6380	10.4254		6.7662	4.0164	10.7826
0305	TOT,SD#3,LCFC,NAVIT	6.7874	4.1380	10.9254		6.7662	4.5164	11.2826
0305P	TOT-NCFCD,SD#3,NAVIT	6.7874	3.6380	10.4254		6.7662	4.0164	10.7826
0306	TOT,SD#3,WFD,LCFC,WID,NAVIT	6.7874	5.9440	12.7314		6.7662	7.0212	13.7874
0306P	TOT-NCFCD,SD#3,WFD,WID,NAVIT	6.7874	5.4440	12.2314		6.7662	6.5212	13.2874

	TAX RATES						
AREA			2013			2014	
CODE		Primary	Secondary	Total	Primary	Secondary	Total
0307	TOT,SD#3,SVFD,NAVIT	6.7874	7.1880	13.9754	6.7662	7.5664	14.3326
0307P	TOT-NCFCD,SD#3,SVFD,NAVIT	6.7874	6.8880	13.6754	6.7662	7.2664	14.0326
0308	TOT,SD#3,TOTDWID,NAVIT	6.7874	3.9380	10.7254	6.7662	4.3164	11.0826
0308P	TOT-NCFCD,SD#3,TOT-NCFCDDWID,NAVIT	6.7874	3.6380	10.4254	6.7662	4.0164	10.7826
0309	TOT,SD#3,MRFD,NAVIT	6.7874	4.4561	11.2435	6.7662	4.9803	11.7465
0309P	TOT-NCFCD,SD#3,MRFD,NAVIT	6.7874	4.1561	10.9435	6.7662	4.6803	11.4465
0310	TOT,SD#3,MRFD,LCFC,NAVIT	6.7874	4.6561	11.4435	6.7662	5.1803	11.9465
0310P	TOT-NCFCD,SD#3,MRFD,NAVIT	6.7874	4.1561	10.9435	6.7662	4.6803	11.4465
0350	TOT,SD#3,HOL,LCFC,NAVIT	7.0663	4.1380	11.2043	6.7662	4.5164	11.2826
0350P	TOT-NCFCD,SD#3,HOL,NAVIT	7.0663	3.6380	10.7043	6.7662	4.0164	10.7826
0355	TOT,SD#3,HOL,NAVIT	7.0663	3.9380	11.0043	6.7662	4.3164	11.0826
0355P	TOT-NCFCD,SD#3,HOL,NAVIT	7.0663	3.6380	10.7043	6.7662	4.0164	10.7826
0356	TOT,SD#3,HOL,MRFD,LCFC,NAVIT	7.0663	4.6561	11.7224	6.7662	5.1803	11.9465
0356P	TOT-NCFCD,SD#3,HOL,MRFD,NAVIT	7.0663	4.1561	11.2224	6.7662	4.6803	11.4465
0400	TOT,SD#4,NATIVE	2.6887	0.7355	3.4242	2.9884	0.7930	3.7814
0400P	TOT-NCFCD,SD#4,NATIVE	2.6887	0.4355	3.1242	2.9884	0.4930	3.4814
0401	TOT,SD#4,NATIVE	2.6887	0.7355	3.4242	2.9884	0.7930	3.7814
0401P	TOT-NCFCD,SD#4,NATIVE	2.6887	0.4355	3.1242	2.9884	0.4930	3.4814
0500	TOT,SD#5,NAVIT	7.5129	1.6920	9.2049	7.3126	1.8982	9.2108
0500P	TOT-NCFCD,SD#5,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0501	TOT,SD#5,NHD,SCFC,NAVIT	7.5129	1.8371	9.3500	7.3126	2.0589	9.3715
0501P	TOT-NCFCD,SD#5,NHD,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0502	TOT,SD#5,NHD,SCFC,SWRID, NAVIT	7.5129	1.8371	9.3500	7.3126	2.0589	9.3715
0502P	TOT-NCFCD,SD#5,NHD,SWRID,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0503	TOT,SD#5,NHD,SWRID,NAVIT	7.5129	1.6920	9.2049	7.3126	1.8982	9.2108
0503P	TOT-NCFCD,SD#5,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0508	TOT,SD#5,SNO,NHD,NAVIT	7.5129	1.6920	9.2049	7.3126	1.8982	9.2108
0508P	TOT-NCFCD,SD#5,SNO,NHD,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0540	TOT,SD#5,NHD,NAVIT	7.5129	1.6920	9.2049	7.3126	1.8982	9.2108
0540P	TOT-NCFCD,SD#5,NHD,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0545	TOT,SD#5,NHD,WMLFD,NAVIT	7.5129	4.8076	12.3205	7.3126	5.0138	12.3264
0545P	TOT-NCFCD,SD#5,NHD,WMLFD,NAVIT	7.5129	4.5076	12.0205	7.3126	4.7138	12.0264
0546	TOT,SD#5,NHD,WMLFD,SCFCD,SRID,NAVIT	7.5129	4.9527	12.4656	7.3126	5.1745	12.4871
0546P	TOT-NCFCD,SD#5,NHD,WMLFD,NAVIT	7.5129	4.5076	12.0205	7.3126	4.7138	12.0264
0561	TOT,SD#5,SNO,NHD,SCFC,NAVIT	7.5129	1.8371	9.3500	7.3126	2.0589	9.3715
0561P	TOT-NCFCD,SD#5,SNO,NHD,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0570	TOT,SD#5,TAY,NHD,NAVIT	7.5129	1.6920	9.2049	7.3126	1.8982	9.2108
0570P	TOT-NCFCD,SD#5,TAY,NHD,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0571	TOT,SD#5,TAY,NHD,SCFC,NAVIT	7.5129	1.8371	9.3500	7.3126	2.0589	9.3715
0571P	TOT-NCFCD,SD#5,TAY,NHD,NAVIT	7.5129	1.3920	8.9049	7.3126	1.5982	8.9108
0600	TOT,SD#6,NAVIT	6.1933	1.7371	7.9304	6.6254	1.8659	8.4913
0600P	TOT-NCFCD,SD#6,NAVIT	6.1933	1.4371	7.6304	6.6254	1.5659	8.1913
0601	TOT,SD#6,ACRID,NAVIT	6.1933	1.7371	7.9304	6.6254	1.8659	8.4913
0601P	TOT-NCFCD,SD#6,ACRID,NAVIT	6.1933	1.4371	7.6304	6.6254	1.5659	8.1913
0607	TOT,SD#6,HOFD,HOSD,NAVIT	6.1933	3.6285	9.8218	6.6254	3.9895	10.6149
0607P	TOT-NCFCD,SD#6,HOFD,HOSD,NAVIT	6.1933	3.3285	9.5218	6.6254	3.6895	10.3149
0614	TOT,SD#6,HOFD,HOSD,OTDWW,NAVIT	6.1933	3.6285	9.8218	6.6254	3.9895	10.6149
0614P	TOT-NCFCD,SD#6,HOFD,HOSD,NAVIT	6.1933	3.3285	9.5218	6.6254	3.6895	10.3149
0639	TOT,SD#6,HOFD,HOSD,PMCCID,NAVIT	6.1933	3.6285	9.8218	6.6254	3.9895	10.6149
0639P	TOT-NCFCD,SD#6,HOFD,HOSD,NAVIT	6.1933	3.3285	9.5218	6.6254	3.6895	10.3149

	TAX RATES							
AREA			2013				2014	
CODE		Primary	Secondary	Total		Primary	Secondary	Total
0640	TOT,SD#6,NHD,NAVIT	6.1933	1.7371	7.9304		6.6254	1.8659	8.4913
0640P	TOT-NCFCD,SD#6,NHD,NAVIT	6.1933	1.4371	7.6304		6.6254	1.5659	8.1913
0641	TOT,SD#6,HOFD,HOSD,MDWWID,NAVIT	6.1933	3.6285	9.8218		6.6254	3.9895	10.6149
0641P	TOT-NCFCD,SD#6,HOFD,HOSD,MDWWID,NAVIT	6.1933	3.3285	9.5218		6.6254	3.6895	10.3149
1000	TOT,SD#10,NHD,LDFD,NAVIT	7.3260	4.8351	12.1611		6.7020	4.8619	11.5639
1000P	TOT-NCFCD,SD#10,NHD,LDFD,NAVIT	7.3260	4.5351	11.8611		6.7020	4.5619	11.2639
1001	TOT,SD#10,NHD,CSPFD,NAVIT	7.3260	3.2591	10.5851		6.7020	3.4675	10.1695
1001P	TOT-NCFCD,SD#10,NHD,CSPFD,NAVIT	7.3260	2.9591	10.2851		6.7020	3.1675	9.8695
1002	TOT,SD#10,NHD,LDFD,TASPRD#1,NAVIT	7.3260	6.5562	13.8822		6.7020	6.6678	13.3698
1002P	TOT-NCFCD,SD#10,NHD,LDFD,TASPRD#1,NAVIT	7.3260	6.2562	13.5822		6.7020	6.3678	13.0698
1003	TOT,SD#10,NHD,WMLFD,SCFC,NAVIT	7.3260	4.8517	12.1777		6.7020	4.8882	11.5902
1003P	TOT-NCFCD,SD#10,NHD,WMLFD,NAVIT	7.3260	4.4066	11.7326		6.7020	4.4275	11.1295
1004	TOT,SD#10,SHO,NHD,SLSLID,NAVIT	7.3260	1.7041	9.0301		6.7020	1.7410	8.4430
1004P	TOT-NCFCD,SD#10,SHO,NHD,SLSLID,NAVIT	7.3260	1.4041	8.7301		6.7020	1.4410	8.1430
1005	TOT,SD#10,NHD,WMLFD,NAVIT	7.3260	4.7066	12.0326		6.7020	4.7275	11.4295
1005P	TOT-NCFCD,SD#10,NHD,WMLFD,NAVIT	7.3260	4.4066	11.7326		6.7020	4.4275	11.1295
1007	TOT,SD#10,NHD,WMLFD,WMLR#2CRID,WMLDWID,WMLCRID,NAVIT	7.3260	6.3162	13.6422		6.7020	6.7445	13.4465
1007P	TOT-NCFCD,SD#10,NHD,WMLFD,WMLR2,NAVIT	7.3260	6.0162	13.3422		6.7020	6.4445	13.1465
1008	TOT,SD#10,NHD,NAVIT	7.3260	1.5910	8.9170		6.7020	1.6119	8.3139
1008P	TOT-NCFCD,SD#10,NHD,NAVIT	7.3260	1.2910	8.6170		6.7020	1.3119	8.0139
1009	TOT,SD#10,NHD,WMLFD,WMLCID,WMLDWID,WMLCRID,NAVIT	7.3260	4.7066	12.0326		6.7020	4.7275	11.4295
1009P	TOT-NCFCD,SD#10,NHD,WMLFD,WMLCID,NAVIT	7.3260	4.4066	11.7326		6.7020	4.4275	11.1295
1010	TOT,SD#10,NHD,WMLFD,WMLSD,WMLR#2CRID,WMLDWID,WMLCRID,NAVIT	7.3260	6.3162	13.6422		6.7020	6.7445	13.4465
1010P	TOT-NCFCD,SD#10,NHD,WMLFD,WMLSD,WMLRD2,NAVIT	7.3260	6.0162	13.3422		6.7020	6.4445	13.1465
1011	TOT,SD#10,NHD,WMLFD,WMLSD,WMLDWID,WMLCRID,NAVIT	7.3260	4.7066	12.0326		6.7020	4.7275	11.4295
1011P	TOT-NCFCD,SD#10,NHD,WMLFD,WMLDWID,NAVIT	7.3260	4.4066	11.7326		6.7020	4.4275	11.1295
1012	TOT,SD#10,NHD,WMLFD,SCCRID,WMLDWID,WMLCRID,NAVIT	7.3260	5.5685	12.8945		6.7020	5.6661	12.3681
1012P	TOT-NCFCD,SD#10,NHD,WMLFD,SCCID,NAVIT	7.3260	5.2685	12.5945		6.7020	5.3661	12.0681
1013	TOT,SC#10,NHD,WMLFD,SCCRID,WMLCID,WMLDWID,WMLCRID,NAVIT	7.3260	5.5685	12.8945		6.7020	5.6661	12.3681
1013P	TOT-NCFCD,SD#10,NHD,WMLFD,SCCID,WMLCID,NAVIT	7.3260	5.2685	12.5945		6.7020	5.3661	12.0681
1014	TOT,SD#10,NHD,CSPFD,PDWID,NAVIT	7.3260	3.2591	10.5851		6.7020	3.4675	10.1695
1014P	TOT-NCFCD,SD#10,NHD,CSPFD,PDWID,NAVIT	7.3260	2.9591	10.2851		6.7020	3.1675	9.8695
1015	TOT,SD#10,NHD,CSPFD,CSDWID,NAVIT	7.3260	3.2591	10.5851		6.7020	3.4675	10.1695
1015P	TOT-NCFCD,SD#10,NHD,CSPFD,CSDWID,NAVIT	7.3260	2.9591	10.2851		6.7020	3.1675	9.8695
1016	TOT,SD#10,SHO,NHD,LDFD,SLSLID,NAVIT	7.3260	4.9482	12.2742		6.7020	4.9910	11.6930
1016P	TOT-NCFCD,SD#10,SHO,NHD,LDFD,SLSLID,NAVIT	7.3260	4.6482	11.9742		6.7020	4.6910	11.3930
1017	TOT,SD#10,NHD,WMLFD,WMLDWID,WMLCRID,NAVIT	7.3260	4.7066	12.0326		6.7020	4.7275	11.4295
1017P	TOT-NCFCD,SD#10,NHD,WMLFD,WMLDWID,NAVIT	7.3260	4.4066	11.7326		6.7020	4.4275	11.1295
1018	TOT,SD#10,NHD,WMLFD,WMLCRID,NAVIT	7.3260	4.7066	12.0326		6.7020	4.7275	11.4295
1018P	TOT-NCFCD,SD#10,NHD,WMLFD,WMLCRID,NAVIT	7.3260	4.4066	11.7326		6.7020	4.4275	11.1295
1019	TOT,SD#10,NHD,CSPFD,VHRMD,NAVIT	7.3260	4.9805	12.3065		6.7020	5.2280	11.9300
1019P	TOT-NCFCD,SD#10,CSPFD,NAVIT	7.3260	4.6805	12.0065		6.7020	4.9280	11.6300
1020	TOT,SD#10,SHO,NHD,SFD,SLSLID,NAVIT	7.3260	4.6112	11.9372		6.7020	4.6883	11.3903
1020P	TOT-NCFCD,SD#10,SHO,NHD,SFD,SLSLID,NAVIT	7.3260	4.3112	11.6372		6.7020	4.3883	11.0903
1021	TOT,SD#10,SHO,NHD,SFD,SLSLID,PVCID,NAVIT	7.3260	4.6112	11.9372		6.7020	4.6883	11.3903
1021P	TOT-NCFCD,SD#10,SHO,NHD,SFD,SLSLID,PVCID,NAVIT	7.3260	4.3112	11.6372		6.7020	4.3883	11.0903
1022	TOT,SD#10,SHO,NHD,SFD,SLSLID,SLCCCID,NAVIT	7.3260	4.6112	11.9372		6.7020	4.6883	11.3903
1022P	TOT-NCFCD,SD#10,SHO,NHD,SFD,SLSLID,SLCCCID,NAVIT	7.3260	4.3112	11.6372		6.7020	4.3883	11.0903
1023	TOT,SD#10,NHD,WMLFD,WMLSD,WMLDWID,NAVIT	7.3260	4.7066	12.0326		6.7020	4.7275	11.4295
1023P	TOT-NCFCD,SD#10,WMLFD,NAVIT	7.3260	4.4066	11.7326		6.7020	4.4275	11.1295

	TAX RATES						
AREA			2013			2014	
CODE		Primary	Secondary	Total	Primary	Secondary	Total
1024	TOT,SD#10,NHD,WMLFD,WMLDWID,NAVIT	7.3260	4.7066	12.0326	6.7020	4.7275	11.4295
1024P	TOT-NCFCD,SD#10,NHD,WMLFD,NAVIT	7.3260	4.4066	11.7326	6.7020	4.4275	11.1295
1025	TOT,SD#10,NHD,LDFD,CDID,NAVIT	7.3260	4.8351	12.1611	6.7020	4.8619	11.5639
1025P	TOT-NCFCD,SD#10,NHD,NAVIT	7.3260	4.5351	11.8611	6.7020	4.5619	11.2639
1026	TOT,SD#10,SHO,NHD,LDFD,NAVIT,SLSLID	7.3260	4.8351	12.1611	6.7020	4.8619	11.5639
1026P	TOT-NCFCD,SD#10,SHO,NHD,LDFD,NAVIT,SLSLID	7.3260	4.5351	11.8611	6.7020	4.5619	11.2639
1028	TOT,SD#10,SHO,NHD,SFD,SLSLID,SLBCFD,NAVIT	7.3260	8.1612	15.4872	6.7020	8.2383	14.9403
1028P	TOT-NCFCD,SD#10,SHO,NHD,SFD,NAVIT	7.3260	7.8612	15.1872	6.7020	7.9383	14.6403
1029	TOT-SD#10,TAY,NHD,WMLFD,SCFC,NAVIT	7.3260	4.8517	12.1777	6.7020	4.8882	11.5902
1029P	TOT-NCFCD,SD#10,TAY,NHD,WMLFD,NAVIT	7.3260	4.4066	11.7326	6.7020	4.4275	11.1295
1030	TOT-SD#10,TAY,NHD,WMLFD,NAVIT	7.3260	4.7066	12.0326	6.7020	4.7275	11.4295
1030P	TOT-NCFCD,SD#10,TAY,NHD,WMLFD,NAVIT	7.3260	4.4066	11.7326	6.7020	4.4275	11.1295
1070	TOT,SD#10,NHD,SFD,NAVIT	7.3260	4.4981	11.8241	6.7020	4.5592	11.2612
1070P	TOT-NCFCD,SD#10,NHD,SFD,NAVIT	7.3260	4.1981	11.5241	6.7020	4.2592	10.9612
2000	TOT,SD#20,NHD,NAVIT	2.6887	0.7355	3.4242	2.9884	0.7930	3.7814
2000P	TOT-NCFCD,SD#20,NHD,NAVIT	2.6887	0.4355	3.1242	2.9884	0.4930	3.4814
2500	TOT,SD#25	2.6887	0.6855	3.3742	2.9884	0.7430	3.7314
2500P	TOT-NCFCD,SD#25	2.6887	0.3855	3.0742	2.9884	0.4430	3.4314
2501	TOT,SD#25	2.6887	0.6855	3.3742	2.9884	0.7430	3.7314
2501P	TOT-NCFCD,SD#25	2.6887	0.3855	3.0742	2.9884	0.4430	3.4314
2502	TOT,SD#25	2.6887	0.6855	3.3742	2.9884	0.7430	3.7314
2502P	TOT-NCFCD,SD#25	2.6887	0.3855	3.0742	2.9884	0.4430	3.4314
2700	TOT,SD#27,NATIVE	2.6887	8.7355	11.4242	2.9884	8.7930	11.7814
2700P	TOT-NCFCD,SD#27,NATIVE	2.6887	8.4355	11.1242	2.9884	8.4930	11.4814
2701	TOT,SD#27,NATIVE	2.6887	8.7355	11.4242	2.9884	8.7930	11.7814
2701P	TOT-NCFCD,SD#27,NATIVE	2.6887	8.4355	11.1242	2.9884	8.4930	11.4814
2702	TOT,SD#27,NATIVE	2.6887	8.7355	11.4242	2.9884	8.7930	11.7814
2702P	TOT-NCFCD,SD#27,NATIVE	2.6887	8.4355	11.1242	2.9884	8.4930	11.4814
3200	TOT,SD#32,NHD,NAVIT	6.2747	2.1383	8.4130	6.8991	2.1392	9.0383
3200P	TOT-NCFCD,SD#32,NHD,NAVIT	6.2747	1.8383	8.1130	6.8991	1.8392	8.7383
3201	TOT,SD#32,NHD,LFD,MMDWCID,MMCID,NAVIT	6.2747	4.8361	11.1108	6.8991	5.1213	12.0204
3201P	TOT-NCFCD,SD#32,NHD,MMDWCID,MMCID,NAVIT	6.2747	4.5361	10.8108	6.8991	4.8213	11.7204
3202	TOT,SD#32,NHD,LFD,P-LSD,BRSID,NAVIT	6.2747	5.1251	11.3998	6.8991	5.4103	12.3094
3202P	TOT-NCFCD,SD#32,NHD,P-LSD,NAVIT	6.2747	4.8251	11.0998	6.8991	5.1103	12.0094
3203	TOT,SD#32,PLI,NHD,P-LSD,NAVIT	6.2747	2.4273	8.7020	6.8991	2.4282	9.3273
3203P	TOT-NCFCD,SD#32,PLI,NHD,P-LSD,NAVIT	6.2747	2.1273	8.4020	6.8991	2.1282	9.0273
3204	TOT,SD#32,NHD,PFD,SHDWID,NAVIT	6.2747	4.6629	10.9376	6.8991	4.8949	11.7940
3204P	TOT-NCFCD,SD#32,NHD,PFD,SHDWID,NAVIT	6.2747	4.3629	10.6376	6.8991	4.5949	11.4940
3205	TOT,SD#32,NHD,PMDWCID,LFD,NAVIT	6.2747	4.8361	11.1108	6.8991	5.1213	12.0204
3205P	TOT-NCFCD,SD#32,NHD,PMDW,NAVIT	6.2747	4.5361	10.8108	6.8991	4.8213	11.7204
3206	TOT,SD#32,NHD,LFD,PME#2CID,PMDWCID,NAVIT	6.2747	4.8361	11.1108	6.8991	5.1213	12.0204
3206P	TOT-NCFCD,SD#32,NHD,LFD,PME#2,PMDW,NAVIT	6.2747	4.5361	10.8108	6.8991	4.8213	11.7204
3210	TOT,SD#32,PLI,NHD,PFD,P-LSD,PWCFDI,WOTSID,NAVIT	6.2747	4.9519	11.2266	6.8991	5.1839	12.0830
3210P	TOT-NCFCD,SD#32,PLI,NHD,PFD,P-LSD,PWCFDI,WOSID,NAVIT	6.2747	4.6519	10.9266	6.8991	4.8839	11.7830
3211	TOT,SD#32,PLI,NHD,LFD,P-LSD,WOTSID,NAVIT	6.2747	5.1251	11.3998	6.8991	5.4103	12.3094
3211P	TOT-NCFCD,SD#32,PLI,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998	6.8991	5.1103	12.0094
3213	TOT,SD#32,NHD,LFD,P-LSD,APIISID,NAVIT	6.2747	5.1251	11.3998	6.8991	5.4103	12.3094
3213P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998	6.8991	5.1103	12.0094
3214	TOT,SD#32,NHD,PFD,P-LSD,WMSHDWCID,NAVIT	6.2747	4.9519	11.2266	6.8991	5.1839	12.0830
3214P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266	6.8991	4.8839	11.7830

	TAX RATES							
AREA			2013				2014	
CODE		Primary	Secondary	Total		Primary	Secondary	Total
3217	TOT,SD#32,NHD,LFD,SPNID,P-LSD,SPM#2CID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3217P	TOT-NCFCD,SD#32,NHD,LFD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3218	TOT,SD#32,NHD,LFD,SPNID,SPM#2CID,NAVIT	6.2747	4.8361	11.1108		6.8991	5.1213	12.0204
3218P	TOT-NCFCD,SD#32,NHD,LFD,NAVIT	6.2747	4.5361	10.8108		6.8991	4.8213	11.7204
3219	TOT,SD#32,NHD,LFD,SPNID,P-LSID,SPM#2CID,SPMSID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3219P	TOT-NCFCD,SD#32,NHD,LFD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3220	TOT,SD#32,NHD,PFD,DFDCRID,MLCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3220P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3221	TOT,SD#32,SHO,NHD,SLSLID NAVIT	6.2747	2.2514	8.5261		6.8991	2.2683	9.1674
3221P	TOT-NCFCD,SD#32,SHO,NHD,SLSLID,NAVIT	6.2747	1.9514	8.2261		6.8991	1.9683	8.8674
3222	TOT,SD#32,NHD,PFD,BHID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3222P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3223	TOT,SD#32,NHD,PFD,P-LSD,BHID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3223P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3224	TOT,SD#32,NHD,SFD,FBDWID,NAVIT,SHO,SLSLID	6.2747	5.1585	11.4332		6.8991	5.2156	12.1147
3224P	TOT-NCFCD,SD#32,NHD,SFD,NAVIT, SHO,SLSLID	6.2747	4.8585	11.1332		6.8991	4.9156	11.8147
3225	TOT,SD#32,NHD,PFD,NWSLID,P-LSD,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3225P	TOT-NCFCD,SD#32,NHD,PFD,NWSLID,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3226	TOT,SD#32,NHD,PFD,P-LSD,PDWCID,NAVIT,BDCID	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3226P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVID	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3227	TOT,SD#32,SHO,NHD,SFD,SLSLID,NAVIT	6.2747	5.1585	11.4332		6.8991	5.2156	12.1147
3227P	TOT-NCFCD,SD#32,SHO,NHD,SFD,P-LSD,SLSLID,NAVIT	6.2747	4.8585	11.1332		6.8991	4.9156	11.8147
3228	TOT,SD#32,NHD,PFD,P-LSD,PDWCID,WWID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3228P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3229	TOT,SD#32,NHD,LFD,P-LSD,FHSID99A,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3229P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3231	TOT,SD#32,NHD,PFD,DSLID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3231P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3232	TOT,SD#32,PLI,NHD,PFD,P-LSD,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3232P	TOT-NCFCD,SD#32,PLI,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3233	TOT,SD#32,NHD,PFD,PDWCID,HTID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3233P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3237	TOT,SD#32,NHD,PFD,BLCID,PDWCID,P-LSD,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3237P	TOT-NCFCD,SD#32,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3239	TOT,SD#32,NHD,PFD,WHRID1,PDWCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3239P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3240	TOT,SD#32,NHD,PFD,P-LSD,MCCID,PDWCID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3240P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3242	TOT,SD#32,NHD,LFD,P-LSD,WWWSID93-B,HCRID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3242P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3243	TOT,SD#32,NHD,LFD,P-LSD,WWWSID93-B,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3243P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3244	TOT,SD#32,NHD,LFD,P-LSD,FVPLSID93-A,BRSID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3244P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,FVPSSID,BRSID,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3245	TOT,SD#32,SHO,NHD,LFD,SLSLID,NAVIT	6.2747	4.9492	11.2239		6.8991	5.2504	12.1495
3245P	TOT-NCFCD,SD#32,SHO,NHD,LFD,SLSLID,NAVIT	6.2747	4.6492	10.9239		6.8991	4.9504	11.8495
3247	TOT,SD#32,NHD,PFD,PWCFD1,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3247P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3249	TOT,SD#32,PLI,NHD,PFD,P-LSD,PWCFD1,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3249P	TOT-NCFCD,SD#32,PLI,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3250	TOT,SD#32,NHD,PFD,NHBPCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3250P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3251	TOT,SD#32,NHD,PFD,P-LSD,NHBPCRID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3251P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3252	TOT,SD#32,NHD,PFD,P-LSD,TPDCID,PDWCID,PCCESID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3252P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830

	TAX RATES							
AREA			2013				2014	
CODE		Primary	Secondary	Total		Primary	Secondary	Total
3253	TOT,SD#32,NHD,PFD,SECRID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3253P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3254	TOT,SD#32,NHD,PFD,P-LSD,PDCRID,PDWCID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3254P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,PDCRID,PDWID,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3255	TOT,SD#32,NHD,LFD,P-LSD,LLWSID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3255P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3256	TOT,SD#32,PLI,NHD,PFD,P-LSD,NPSID,PWCFDI,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3256P	TOT-NCFCD,SD#32,PLI,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3257	TOT,SD#32,NHD,LFD,P-LSD,MSID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3257P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,MSID,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3258	TOT,SD#32,NHD,LFD,P-LSD,RLPACSID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3258P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3259	TOT,SD#32,PLI,NHD,PFD,P-LSD,WMCESID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3259P	TOT-NCFCD,SD#32,PLI,NHD,PFD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3260	TOT,SD#32,PLI,NHD,LFD,NAVIT	6.2747	4.8361	11.1108		6.8991	5.1213	12.0204
3260P	TOT-NCFCD,SD#32,PLI,NHD,LFD,NAVIT	6.2747	4.5361	10.8108		6.8991	4.8213	11.7204
3262	TOT,SD#32,PLI,NHD,LFD,P-LSD,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3262P	TOT-NCFCD,SD#32,PLI,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3263	TOT,SD#32,PLI,NHD,PFD,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3263P	TOT-NCFCD,SD#32,PLI,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3264	TOT,SD#32,PLI,NHD,PFD,WMSHDWCID,PWCFDI,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3264P	TOT-NCFCD,SD#32,PLI,NHD,PFD,WMSHW,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3265	TOT,SD#32,PLI,NHD,NAVIT	6.2747	2.1383	8.4130		6.8991	2.1392	9.0383
3265P	TOT-NCFCD,SD#32,PLI,NHD,NAVIT	6.2747	1.8383	8.1130		6.8991	1.8392	8.7383
3267	TOT,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3267P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3268	TOT,SD#32,NHD,PFD,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3268P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3270	TOT,SD#32,NHD,SFD,NAVIT	6.2747	5.0454	11.3201		6.8991	5.0865	11.9856
3270P	TOT-NCFCD,SD#32,NHD,SFD,NAVIT	6.2747	4.7454	11.0201		6.8991	4.7865	11.6856
3271	TOT,SD#32,SHO,NHD,SFD,SLSLID,NAVIT	6.2747	5.1585	11.4332		6.8991	5.2156	12.1147
3271P	TOT-NCFCD,SD#32,SHO,NHD,SFD,SLSLID,NAVIT	6.2747	4.8585	11.1332		6.8991	4.9156	11.8147
3272	TOT,SD#32,NHD,PFD,DFDCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3272P	TOT-NCFCD,SD#32,NHD,PFD,DFDCID,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3273	TOT,SD#32,NHD,PFD,P-LSD,DFDCID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3273P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,DFDCID,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3274	TOT,SD#32,NHD,SFD,HWRDCID,NAVIT	6.2747	5.0454	11.3201		6.8991	5.0865	11.9856
3274P	TOT-NCFCD,SD#32,NHD,SFD,HWRDCID,NAVIT	6.2747	4.7454	11.0201		6.8991	4.7865	11.6856
3275	TOT,SD#32,NHD,PFD,SVCWCRID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3275P	TOT-NCFCD,SD#32,NHD,PFD,SVCWCRID,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3276	TOT,SD#32,NHD,LFD,P-LSD,SPMSID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3276P	TOT-NCFCD,SD#32,NHD,LFD,P-LSD,SPMSID,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3277	TOT,SD#32,NHD,PFD,ELCRID,PDWCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3277P	TOT-NCFCD,SD#32,NHD,PFD,ELCID,PDWID,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3278	TOT,SD#32,PLI,NHD,PFD,P-LSD,WADWCID,BRSID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3278P	TOT-NCFCD,SD#32,PLI,NHD,PFD,P-LSD,WADW,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3279	TOT,SD#32,NHD,PFD,ADCID,PDWCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3279P	TOT-NCFCD,SD#32,NHD,PFD,ADCID,PDWID,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3280	TOT,SD#32,NHD,PFD,PDWCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3280P	TOT-NCFCD,SD#32,NHD,PFD,PDWID,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3282	TOT,SD#32,NHD,PFD,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3282P	TOT-NCFCD,SD#32,NHD,PFD,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3283	TOT,SD#32,NHD,PFD,P-LSD,PDWCID,PCCESID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3283P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,PDWID,PCCESID,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3284	TOT,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3284P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830

	TAX RATES							
AREA			2013				2014	
CODE		Primary	Secondary	Total		Primary	Secondary	Total
3285	TOT,SD#32,NHD,PFD,MH2CID,P-LSD,PDWCID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3285P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,MH2CID,PDWID,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3287	TOT,SD#32,PLI,NHD,PFD,P-LSD,OLRID,PWCFD1,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3287P	TOT-NCFCD,SD#32,PLI,NHD,PFD,P-LSD,OLRID,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3288	TOT,SD#32,NHD,PFD,WMSHDWCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3288P	TOT-NCFCD,SD#32,NHD,PFD,WMSHW,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3289	TOT,SD#32,NHD,PFD,CCDCID,PDWCID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3289P	TOT-NCFCD,SD#32,NHD,PFD,CCD,PDWID,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3290	TOT,SD#32,NHD,LFD,NAVIT	6.2747	4.8361	11.1108		6.8991	5.1213	12.0204
3290P	TOT-NCFCD,SD#32,NHD,LFD,NAVIT	6.2747	4.5361	10.8108		6.8991	4.8213	11.7204
3293	TOT,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3293P	TOT-NCFCD,SD#32,NHD,LFD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3294	TOT,SD#32,NHD,LFD,SPM2CID,NAVIT	6.2747	4.8361	11.1108		6.8991	5.1213	12.0204
3294P	TOT-NCFCD,SD#32,NHD,LFD,SPM2CID,NAVIT	6.2747	4.5361	10.8108		6.8991	4.8213	11.7204
3295	TOT,SD#32,PLI,NHD,PFD,DFDCRID,P-LSD,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3295P	TOT-NCFCD,SD#32,PLI,NHD,PFD,P-LSD,DFDCID,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3296	TOT,SD#32,NHD,PFD,DFDCRID,NAVIT	6.2747	4.6629	10.9376		6.8991	4.8949	11.7940
3296P	TOT-NCFCD,SD#32,NHD,PFD,DFDCID,NAVIT	6.2747	4.3629	10.6376		6.8991	4.5949	11.4940
3297	TOT,SD#32,NHD,PFD,P-LSD,PDWCID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3297P	TOT-NCFCD,SD#32,NHD,PFD,P-LSD,PDWCID,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3298	TOT,SD#32,NHD,PFD,CTCRID,P-LSD,PDWCID,NAVIT	6.2747	4.9519	11.2266		6.8991	5.1839	12.0830
3298P	TOT-NCFCD,SD#32,NHD,PFD,CTCRID,P-LSD,DWID,NAVIT	6.2747	4.6519	10.9266		6.8991	4.8839	11.7830
3299	TOT,SD#32,NHD,LFD,SDID, NAVIT	6.2747	4.8361	11.1108		6.8991	5.1213	12.0204
3299P	TOT-NCFCD,SD#32,NHD,LFD,NAVIT	6.2747	4.5361	10.8108		6.8991	4.8213	11.7204
3301	TOT,SD#32,NHD,LFD,HDID,P-LSD,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3301P	TOT-NCFCD-NCFCD,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3302	TOT,SD#32,NHD,LFD,HDID,P-LSD,APIISID,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3302P	TOT-NCFCD-NCFCD,SD#32,NHD,LFD,P-LSD,APIISID,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
3303	TOT,SD#32,NHD,LFD,MVID,P-LSD,NAVIT	6.2747	5.1251	11.3998		6.8991	5.4103	12.3094
3303P	TOT-NCFCD-NCFCD,SD#32,NHD,LFD,P-LSD,NAVIT	6.2747	4.8251	11.0998		6.8991	5.1103	12.0094
4500	TOT,CED	4.8152	0.6855	5.5007		5.1007	0.7430	5.8437
4500P	TOT-NCFCD,CED	4.8152	0.3855	5.2007		5.1007	0.4430	5.5437

REQUEST TO APPROVE 2015-16 TUITION AND FEES

Recommendation:
Staff recommends approval of the 2015-16 Tuition and Fee schedules as presented.

Summary:

Staff has developed the tuition and fee schedules based on the approved Budget Development calendar and assumptions, along with the discussion at the March 2015 regular board meeting. The budget development assumptions for tuition and fees include: Tuition and general fees will be set at a rate that: A.) gives consideration to the impact on students, student enrollment, and student retention rates; B.) increases incrementally; and C.) is competitive in our market by maintaining a comparative position to the average tuition at other Arizona community colleges. Course fees will be set at a rate calculated to offset expendable supplies and equipment.

Historical tuition rates are included along with comparative information to projected tuition rates at other community colleges in Arizona.

2015-16 revenues compared to the current budget a expected to increase approximately $100,000 if the proposed $2 per credit hour increase is approved. A similar percentage increase to the proposed in-state tution is also proposed for out-of-state tuition.

Tuition Scholarships

Finish Line*: Last twelve (12) credits of degree*
A reduction in total tuition costs allow for scholarships to benefit individuals who are close to completion. Applicants will be required to demonstrate that a Pell grant application has also been completed. An annual budget of $100,000 has been included in the operational budget of the General Fund. Participation in the program is expected to grow as the option becomes more recognized and students begin planning to maximize the benefit.

College Bound: *Seven general education (AGEC) credits each semester for high school students*
Qualified high school students with a 3.0 GPA can apply to participate in the free seven-credit AGEC program. An annual budget of $100,000 has been included in the FY 2015-16 preliminary budget. Interest and potential participation is expected to grow as the benefits of the program become more.

Reduced Tuition

Summer session courses reduced by 50% Net tuition revenues are expected to remain stable or increase as the reduced summer tuition rate is implemented in 2015.

TLC (The Learning Cornerstone) courses reduced by 50% Net tuition revenues are expected to remain the same in FY 2015-16 as FY 2014-15.

Western Undergraduate Exchange Participation Tuition

Northland Pioneer College participates in WICHE's Western Undergraduate Exchange (WUE). WUE is a regional tuition-reciprocity agreement that enables students from WICHE states to enroll in more than 150 participating two and four-year college public institutions at 150% of the enrolling institution's resident tuition. WUE is the largest program of its kind in the nation, and has been in operation since 1987. WUE is not a short term exchange, it is meant to be used for a full degree.

Course Fees

Instructional staff conducted a comprehensive review of all course fees to assure fees are based on cost of consumable supplies and other course specific expenses. Over 1,200 courses are listed in the current catalog, with less than one-third of the courses requiring a course fee. Proposed course fee changes are expected to cover new courses and the increased cost of course supplies, equipment maintenance, and course-specific operational expenses.

Additions are proposed in the Arts and Sciences division for new courses associated with Film and Digital Video curriculum.

In the Career and Technical Education division, all ATO course fees were increase from $55 to $75 due to the increased cost of automotive consumables for lab instruction. All IMO courses except the ones listed separately were increased from $145 to $160 due to the increased cost of the eLearning system. The students curriculum is all on-line and there is no additional cost to students for book. The listed courses are not on the eLearning system and students pay for books with course fee needed to cover the cost of consumables. The MET fee is being increased to offset the online eLearning cost; the students have no book costs. The WLD fee is being increased to account of the increasing cost of consumables, particularly metals.

The Nursing and Allied Health division is the decreasing the cost NUR 121, 122, 221, and 222 from $500 to $400 as students will begin purchasing Elsevier online access directly.

NAVAJO COUNTY COMMUNITY COLLEGE DISTRICT
NORTHLAND PIONEER COLLEGE
2015-16
PROPOSED

TUITION	Approved 2014-15	Proposed 2015-16
IN-STATE	**$66 per credit hour**	**$68 per credit hour**
APACHE COUNTY	**$66 per credit hour**	**$68 per credit hour**
OUT-OF-STATE	**$315 per credit hour**	**$315 per credit hour**
SENIOR CITIZENS 60 years or older	*50% of the applicable rate: In-District, Apache County, or Out-of-State. (Does not apply to non-credit courses)	*50% of the applicable rate: In-District, Apache County, or Out-of-State. (Does not apply to non-credit courses)
SUMMER SESSION COURSES	*50% of the applicable rate: In-District, Apache County, or Out-of-State. (Does not apply to non-credit courses)	*50% of the applicable rate: In-District, Apache County, or Out-of-State. (Does not apply to non-credit courses)
TLC COURSES	*50% of the applicable rate: In-District, Apache County, or Out-of-State. (Does not apply to non-credit courses)	*50% of the applicable rate: In-District, Apache County, or Out-of-State. (Does not apply to non-credit courses)
WICHE WUE	150% of the In-State rate	150% of the In-State rate
REFUNDS FOR TUITION	100% before 1st day of semester and if NPC cancels the class. 50% during 1st and 2nd weeks of the semester. No refund after the end of the second week of the semester	100% before 1st day of semester and if NPC cancels the class. 50% during 1st and 2nd weeks of the semester. No refund after the end of the second week of the semester
SUMMER SESSION REFUNDS	100% prior to 1st day of session. 50% through 1st two days of the term	100% prior to 1st day of session. 50% through 1st two days of the term
SHORT-TERM COURSE REFUNDS	100% prior to 1st day of session. 50% through 1st two days of the term	100% prior to 1st day of session. 50% through 1st two days of the term

*50% discounts are not to be combined

NAVAJO COUNTY COMMUNITY COLLEGE DISTRICT
NORTHLAND PIONEER COLLEGE
2015-2016
PROPOSED

FEES	Approved 2014-15	Proposed 2015-16
GENERAL		
Media Fee①	**$40/semester**	**$40/semester**
SPECIAL		
Transcript (each)	$10	$10
Transcript (each) On demand	$15	$15
Transcript (each) Next day delivery	$20	$20
Diploma/Certificate Replacement	$15	$15
NSF Check Collection	$25	$25
"Money Card" Replacement		
ACTIVE card	$21	$21
INACTIVE card	$10	$10
COMPASS/ASSET Testing②	$10	$10
Late Registration	$25	$25
Credit by Exam	50% of in-state tuition rate	50% of in-state tuition rate
Credit by Evaluation③	50% of in-state tuition rate	50% of in-state tuition rate
Credit by Evaluation Fee (non-refundable)	$15	$15
Delinquent Account Charge	$10/month	$10/month
HESI Testing	$44	$44

①Assessed to all students enrolling in three (3) or more credit hours.
② Includes up to three (3) tests.
③ Evaluation of Learning Certificates from business, industry, government, military, and non-regionally accredited institutions without waiver agreement

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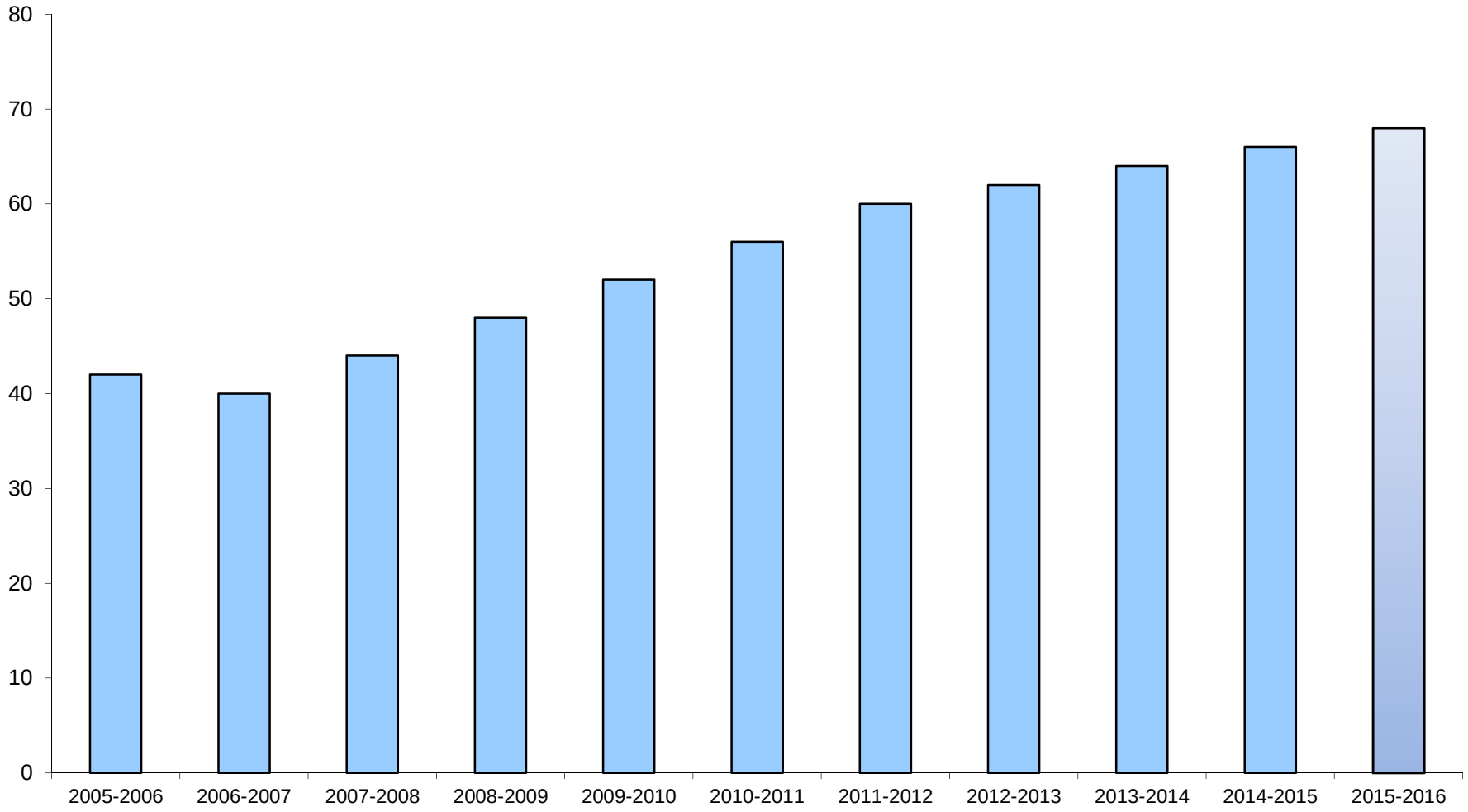
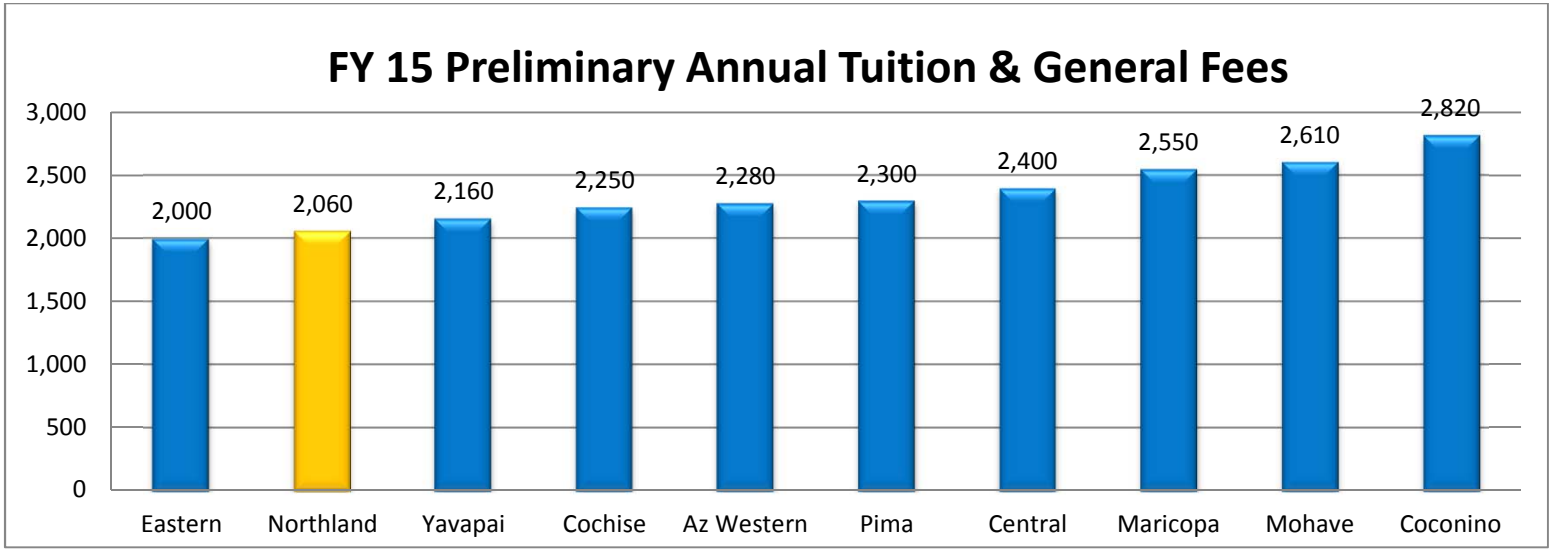
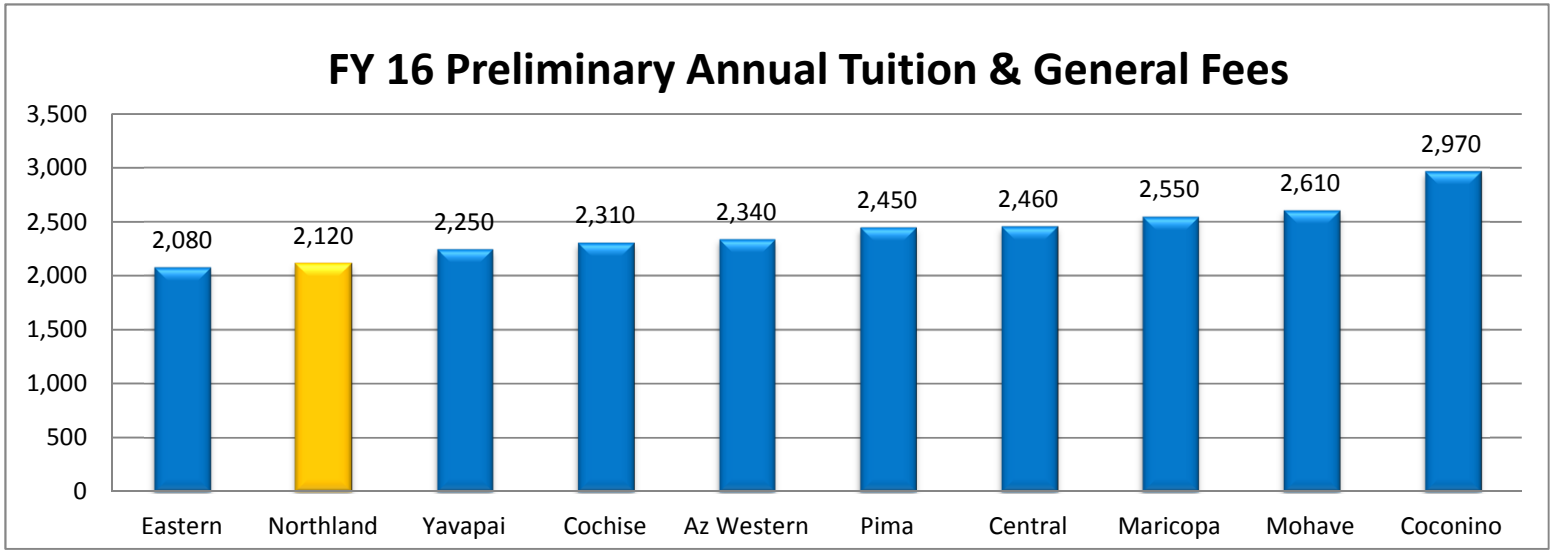
NPC Tuition History
per Credit Hour




FY 15 Preliminary Annual Tuition & General Fees
3,000
2,500
2,000
1,500
1,000
500
0
2,000
2,060
2,160
2,250
2,280
2,300
2,400
2,550
2,610
2,820
Eastern
Northland
Yavapai
Cochise
Az Western
Pima
Central
Maricopa
Mohave
Coconino


FY 16 Preliminary Annual Tuition & General Fees
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2,080
2,120
2,250
2,310
2,340
2,450
2,460
2,550
2,610
2,970
Eastern
Northland
Yavapai
Cochise
Az Western
Pima
Central
Maricopa
Mohave
Coconino

Arizona Community Colleges
Comparative In-State Tuition and Fees

(Note - Fees include mandatory technology, registration and activity fees - course fees not included)

DISTRICT	2014- 2015 Semester Tuition & Fees (15 cr hrs)	2014- 2015 Annual Tuition & Fees (30 cr hrs)	2014- 2015 Annual Fees (mandatory)	2014- 2015 Tuition Rate (per cr hr)	2015- 2016 preliminary Semester Tuition & Fees (15 cr hrs)	2015- 2016 preliminary Annual Tuition & Fees (30 cr hrs)	2015- 2016 preliminary Annual Fees (mandatory)	2015- 2016 preliminary Tuition Rate (per cr hr)	Preliminary FY 16 Tuition Increase per credit hr	Preliminary % Inc FY 16 Annual Tuition & Fees
Cochise	$ 1,125	$ 2,250	$ -	$ 75	$ 1,155	$ 2,310	$ -	$ 77.0	$ 2.00	2.67%
Coconino	$ 1,410	$ 2,820	$ 150 [1]	$ 89	$ 1,485	$ 2,970	$ 210 [1]	$ 92.0	$ 3.00	3.37%
Eastern	$ 1,000	$ 2,000 [2]	$ -	$ 67	$ 1,040	$ 2,080 [3]	$ -	$ 69.3	$ 2.33	3.48%
Maricopa	$ 1,275	$ 2,550	$ 30 [4]	$ 84	$ 1,275	$ 2,550	$ 30 [4]	$ 84.0	$ -	0.00%
Mohave	$ 1,305	$ 2,610	$ 210 [5]	$ 80	$ 1,305	$ 2,610	$ 210 [5]	$ 80.0	$ -	0.00%
Northland	$ 1,030	$ 2,060	$ 80 [6]	$ 66	$ 1,060	$ 2,120	$ 80 [6]	$ 68.0	$ 2.00	3.03%
Pima	$ 1,150	$ 2,300	$ 185 [7]	$ 70.5	$ 1,225	$ 2,450	$ 185 [7]	$ 75.5	$ 5.00	7.09%
Central	$ 1,200	$ 2,400	$ -	$ 80	$ 1,230	$ 2,460	$ -	$ 82.0	$ 2.00	2.50%
Yavapai	$ 1,080	$ 2,160	$ -	$ 72	$ 1,125	$ 2,250	$ -	$ 75.0	$ 3.00	4.17%
Az Western	$ 1,140	$ 2,280	$ 10 [8]	$ 76	$ 1,170	$ 2,340	$ 10 [8]	$ 78.0	$ 2.00	2.63%
Average	$ 1,172	$ 2,343	$ 67	$ 76	$ 1,207	$ 2,414	$ 73	$ 78	$2.13	2.81%
Median	$ 1,145	$ 2,290	$ 20	$ 76	$ 1,198	$ 2,395	$ 20	$ 78	$ 2.00	2.85%
				Increase	3.0%	3.0%	9%	2.8%		

Notes :

(1) $5 per credit hour Technology Fee (Coconino), anticipating increase to $7 per credit hour in 2015-16.
(3) $90 per credit hour, then plateau from 2-6 credit hours, then increase by $140 per credit hour up to 12 credit hours per semester (Eastern)
(3) $90 per credit hour, then plateau from 2-6 credit hours, then increase by $145 per credit hour up to 12 credit hours per semester (Eastern)
(4) $15 registration fee per semester (Maricopa)
(5) $6 Tech fee + $1 Act fee per credit hour (Mohave)
(6) $35 media fee per semester for students taking 3 credit hours or more per semester (NPC)
(7) $3 per cr hr activity fee, 2.50 per cr hr technology fee, plus $10 processing fee per semester (Pima)
(8) $5 per semester transportation (bus pass) fee

RESIDENT IN-DISTRICT/COUNTY & NON-RESIDENT TUITION AND FEES AT PUBLIC TWO-YEAR INSTITUTIONS IN THE WICHE REGION: STATE AVERAGES, 2014-15, 2013-14, 2009-10 AND 2004-05

Institution	2014-15	2013-14	2009-10	2004-05	2013-14 to 2014-15	2009-10 to 2014-15	2004-05 to 2014-15
ALASKA	--	$4,690	$3,970	$2,658	--	--	--
ARIZONA	2,437	2,355	1,945	1,413	3.5%	25.2%	72.4%
CALIFORNIA	1,380	1,380	780	780	0.0%	76.9%	76.9%
COLORADO	3,848	3,699	2,802	1,835	4.0%	37.3%	109.7%
COMM. NO. MARIANAS	3,350	3,350	3,350	2,450	0.0%	0.0%	36.7%
HAWAII	3,499	3,259	2,441	1,458	7.4%	43.4%	140.1%
IDAHO	3,009	2,902	2,362	1,732	3.7%	27.4%	73.7%
MONTANA	3,434	3,384	3,233	2,701	1.5%	6.2%	27.1%
NEVADA	2,700	2,700	2,010	1,590	0.0%	34.3%	69.8%
NEW MEXICO	1,603	1,572	1,201	1,065	2.0%	33.5%	50.6%
NORTH DAKOTA	4,210	4,086	3,808	2,969	3.0%	10.6%	41.8%
OREGON	4,638	4,535	3,567	2,834	2.3%	30.0%	63.6%
SOUTH DAKOTA	6,020	5,937	4,394	2,468	1.4%	37.0%	143.9%
UTAH	3,410	3,261	2,601	1,943	4.6%	31.1%	75.5%
WASHINGTON	4,294	4,274	3,116	2,457	0.5%	37.8%	74.7%
WYOMING	2,602	2,539	2,118	1,724	2.5%	22.8%	50.9%
AVERAGE	$2,585	$2,550	$1,870	$1,498	1.4%	38.2%	72.5%
AVERAGE WITHOUT CALIFORNIA	$3,492	$3,425	$2,684	$2,030	2.0%	30.1%	72.0%

NAVAJO COUNTY COMMUNITY COLLEGE DISTRICT
NORTHLAND PIONEER COLLEGE
2015-2016
Proposed Course Fees

ARTS & SCIENCES			Approved 2014-15	Proposed 2015-16
ART	103	Basic Design	$15	$15
ART	105	Beginning Drawing I	$15	$15
ART	110	Figure Drawing I	$15	$15
ART	140	Lettering	$15	$15
ART	150	Advertising Design	$15	$15
ART	155	Printmaking	$15	$15
ART	170	Sculpture I	$15	$15
ART	175	Painting	$15	$15
ART	180	Watercolor	$15	$15
ART	185	Handbuilding Pottery	$20	$20
ART	186	Clay Sculpture	$20	$20
ART	187	Raku Pottery	$20	$20
ART	190	Ceramics	$20	$20
ART	205	Drawing II	$15	$15
ART	206	Figure Drawing II	$15	$15
ART	220	Painting II	$15	$15
ART	225	Watercolor II	$15	$15
ART	245	Ceramics II	$20	$20
ART	246	Ceramics III	$20	$20
ART	247	Ceramics IV	$20	$20
ART	280	Art Studio – 2 Dimensional	$15	$15
ART	281	Art Studio – 3 Dimensional	$20	$20
BIO	100	Biological Concepts	$35	$35
BIO	160	Intro. to Human Anatomy & Physiology	$35	$35
BIO	181	General Biology I	$35	$35
BIO	182	General Biology II	$35	$35
BIO	201	Human Anatomy & Physiology I	$35	$35
BIO	202	Human Anatomy & Physiology II	$35	$35
BIO	205	Microbiology	$35	$35
CHM	ALL	All Courses	$35	$35

199-299 and non-credit/special interest courses have variable fees determined by the length and type of each.

ARTS & SCIENCES (cont'd)			Approved 2013-14	Proposed 2014-15
ECD	ALL	ECD Permanent Number/1 cr.	$17	$17
ECD	143	Inclusion of Children w/ Special Needs	$17	$17
ECD	233	Developing Policies & Procedures for Early Childhood Programs	$35	$35
EDU	281	Introduction to Structured English Immersion	$55	$55
FDV	**130**	**Video Production**	**New Course**	**$20**
FDV	**140**	**Video Editing**	**New Course**	**$20**
FDV	**160**	**Digital Audio For Film/TV**	**New Course**	**$20**
FDV	**222**	**Digital Video Pre-Production Applications**	**New Course**	**$20**
FDV	**232**	**Digital Video Production Applications**	**New Course**	**$20**
FDV	**242**	**Digital Video Post-Production Applications**	**New Course**	**$20**
GEO	111	Physical Geography	$25	$25
GLG	ALL	All Geology Courses	$ 25	$ 25
MUS	155	Music Applied (all)	$120	$120
PHO	100	Beginning Photography	$20	$20
PHO	101	Digital Photography	$20	$20
PHO	115	Pictorial Journalism	$20	$20
PHO	150	Investigative Photo I	$20	$20
PHO	151	Investigative Photo II	$20	$20
PHO	200	Intermediate Photography	$20	$20
PHO	201	Intermediate Digital Photography	$20	$20
PHO	212	Color Photography I	$20	$20
PHO	213	Color Photography II	$20	$20
PHO	220	Advanced Photography	$20	$20
PHO	230	View Camera Photo	$20	$20
PHO	240	Photography Portfolio	$20	$20
PHO	270	Free Lance/Stock Photo	$20	$20
PHO	280	Photography Practicum	$20	$20
POS	221	Arizona Constitution and Government	$55	$55
POS	222	U.S. Constitution	$55	$55
PHY	ALL	All Physics Courses	$25	$25
SPT	178	Stage Makeup	$50	$50
SPT	**230**	**Video Production**	**New Course**	**$20**
SPT	**240**	**Video Editing**	**New Course**	**$20**

199-299 and non-credit/special interest courses have variable fees determined by the length and type of each.

NAVAJO COUNTY COMMUNITY COLLEGE DISTRICT
NORTHLAND PIONEER COLLEGE
2015-2016
Proposed Course Fees

CAREER & TECHNICAL EDUCATION			Approved 2014-15	Proposed 2015-16
AJS	102	Intensive Police Academy	$200	$200
ATO	**ALL***	**All Automotive Courses**	**$55**	**$75**
BUS	ALL*	All Business Courses except BUS 133	$15	$15
CIS	ALL*	All 1, 2 & 3 credit CIS courses except 141,142,145	$15	$15
CIS	141	Managing and Maintaining Your PC I	$200	$200
CIS	142	Managing and Maintaining Your PC II	$200	$200
CIS	145	Network + Certification Preparation	$275	$275
CON	100	Construction Math and Safety	$45	$45
CON	105	Engineering Principles/Construction Methods	$45	$45
CON	110	Plan Reading-Site Layout-Communication-Employment	$45	$45
CON	121	Cabinet Making I	$45	$45
CON	124	Masonry Systems	$45	$45
CON	125	Concrete Systems	$45	$45
CON	126	Framing Systems	$45	$45
CON	140	Computer Applications in Construction	$45	$45
CON	145	Roofing, Thermal & Moisture Protection Systems	$45	$45
CON	180	Construction Service Learning	$45	$45
CON	198	Construction Internship	$45	$45
CON	200	Integrated Construction Management/Design Laboratory	$45	$45
CON	221	Cabinet Making II	$45	$45
CON	223	Heavy Highway Construction	$45	$45
CON	227	Electrical, Mechanical, and Plumbing Systems	$45	$45
CON	230	Sustainable Construction	$45	$45
CON	241	Electrical Level 1	$45	$45
CON	242	Electrical Level 2	$45	$45
CON	263	Estimating, Scheduling, and Planning	$45	$45
COS	ALL*	All Cosmetology Courses	$25	$25
DRF	ALL*	All Drafting Courses	$30	$30

199-299 and non-credit/special interest courses have variable fees determined by the length and type of each.

CAREER & TECHNICAL EDUCATION (cont'd)			Approved 2014-15	Proposed 2015-16
FRS	101	Principles of Fire and Emergency Service Administration	$10	$10
FRS	104	Firefighter I & II	$225	$225
FRS	110	HazMat First Responder	$25	$25
FRS	126	Rope Rescue I	$30	$30
FRS	127	Rope Rescue II	$30	$30
FRS	128	Rope Rescue III	$30	$30
FRS	130	Incident Command System	$10	$10
FRS	132	Fire Investigation I	$10	$10
FRS	135	Fire Protection Hydraulics & Water Supply	$10	$10
FRS	137	Strategies and Tactics	$10	$10
FRS	138	Legal Aspects of Emergency Services	$10	$10
FRS	139	Confined Space Operations	$10	$10
FRS	141	Fire Service Communication	$10	$10
FRS	150	Wild Land Firefighter	$25	$25
FRS	200	Fire Behavior and Combustion	$10	$10
FRS	201	Fire Protection Systems	$10	$10
FRS	202	Principles of Emergency Services	$10	$10
FRS	203	Fire Prevention	$10	$10
FRS	207	Building Construction for Fire Prevention	$10	$10
FRS	208	Principles of Fire & Emergency Services Safety & Survival	$10	$10
HQO	109	Basic Operations Techniques/Tractors	$200	$200
HQO	119	Introduction to Earthmoving and Trucks	$200	$200
HQO	121	Rollers and Scrapers	$200	$200
HQO	122	Loaders and Forklifts	$200	$200
HQO	211	Backhoes and Dozers	$200	$200
HQO	212	Introduction to Crew Leader & Excavators	$200	$200
HQO	230	Motor Graders	$200	$200
HQO	232	Finishing/Grading & Soils	$200	$200
HQO	233	Cranes and Rigging	$200	$200
HQO	240	Advanced Loader Operation	$200	$200
HQO	241	Advanced Dump Truck Operation	$200	$200
HQO	242	Advanced Scraper Operation	$200	$200
HQO	243	Advanced Backhoe Operation	$200	$200
HQO	244	Advanced Excavator Operation	$200	$200
HQO	245	Advanced Forklift Operation	$200	$200
HQO	246	Advanced Dozer Operation	$200	$200
HQO	247	Advanced Motor Grader Operation	$200	$200
INA	ALL*	All Industrial Arts Courses	$45	$45

199-299 and non-credit/special interest courses have variable fees determined by the length and type of each.

CAREER & TECHNICAL EDUCATION (cont'd)			Approved 2014-15	Proposed 2015-16
IMO	**ALL***	**All Industrial Maintenance Courses except as listed below**	**$145**	**$160**
IMO	151	Electrical Level I	$90	$90
IMO	152	Electrical Level II	$90	$90
IMO	153	Electrical Level III	$90	$90
IMO	154	Electrical Level IV	$90	$90
IMO	155	Instrumentation Level I	$90	$90
IMO	156	Instrumentation Level II	$90	$90
IMO	157	Instrumentation Level III	$90	$90
IMO	158	Instrumentation Level IV	$90	$90
IMO	160	Robotics	$10	$10
IMO	161	Intro to Computer-Aided Mfg.	$10	$10
IMO	200	Systems Critical Thinking & Control	$10	$10
IMO	201	Introduction to Industrial Maintenance	$75	$75
IMO	214	Advanced Power Plant Specific Training	$75	$75
IMO	**230**	**Mechanical Maintenance I**	**$145**	**$75**
IMO	**231**	**Mechanical Maintenance II**	**$145**	**$75**
IMO	**232**	**Mechanical Maintenance III**	**$145**	**$75**
IMO	**233**	**Mechanical Maintenance IV**	**$145**	**$75**
IMO	**234**	**Power Generation Maintenance Mechanic**	**New Course**	**$75**
IMO	270	DC Analysis and Lab	$50	$50
IMO	271	AC Analysis and Lab	$50	$50
MET	**ALL***	**All Mechatronics Courses**	**$50**	**$100**
WLD	**130**	**Metal Art**	**$55**	**$75**
WLD	**131**	**Int. Metal Art**	**$55**	**$75**
WLD	**151**	**Cutting Process & Welding**	**$55**	**$75**
WLD	**152**	**SMAW Plate I**	**$55**	**$75**
WLD	**153**	**SMAW Plate II**	**$55**	**$75**
WLD	**154**	**GMAW Plate**	**$55**	**$75**
WLD	**155**	**GTAW Plate**	**$55**	**$75**
WLD	**157**	**AWS Level I Certification**	**$55**	**$75**
WLD	**240**	**Intro to Plastics**	**$55**	**$75**
WLD	**241**	**Plastic Welding**	**$55**	**$75**
WLD	**242**	**Fabrication of Plastics**	**$55**	**$75**
WLD	**243**	**Pipe Fitting for Plastic**	**$55**	**$75**
WLD	**260**	**Fit Up/Inspect/Metallurgy**	**$55**	**$75**
WLD	**261**	**SMAW Open V Butt I**	**$55**	**$75**
WLD	**262**	**SMAW Open V Butt II**	**$55**	**$75**
WLD	**263**	**SMAW Open Root Pipe I**	**$75**	**$95**

199-299 and non-credit/special interest courses have variable fees determined by the length and type of each.

CAREER & TECHNICAL EDUCATION (cont'd)			Approved 2014-15	Proposed 2015-16
WLD	264	SMAW Open Root Pipe II	$75	$95
WLD	265	GMAW Pipe	$75	$95
WLD	266	FCAW Pipe	$75	$95
WLD	267	GTAW Pipe I	$75	$95
WLD	268	GTAW Pipe II	$75	$95
WLD	290	Welding Fabrication	$55	$75

199-299 and non-credit/special interest courses have variable fees determined by the length and type of each.

NAVAJO COUNTY COMMUNITY COLLEGE DISTRICT
NORTHLAND PIONEER COLLEGE
2015-2016
Proposed Course Fees

NURSING AND ALLIED HEALTH			Approved 2014-15	Proposed 2015-16
HES	109	Phlebotomy	$200	$200
HES	180	Basic Pharmacology	$10	$10
EMT	090	Heart Saver CPR	$10	$10
EMT	095	Healthcare Provider CPR	$25	$25
EMT	104	Healthcare Provider CPR & First Aid	$35	$35
EMT	120	Emergency Medical Responder	$10	$10
EMT	121	EMR Refresher	$10	$10
EMT	130	EMT Preparation Course	$10	$10
EMT	132	Emergency Medical Training	$150	$150
EMT	133	Refresher Course - EMT Recertification	$40	$40
EMT	134	EMT IVC	$50	$50
EMT	236	Advanced Cardiac Life Support	$80	$80
EMT	237	Pediatric Advanced Life Support	$80	$80
EMT	238	ACLS Renewal	$50	$50
EMT	239	PALS Renewal	$50	$50
EMT	240	Basic ECG & Pharmacy	$30	$30
EMT	241	ALS Refresher	$150	$150
EMT	244	Paramedic Training I	$700	$700
EMT	245	Paramedic Training II	$700	$700
EMT	250	Instructor Strategy	$20	$20
EMT	251	Instructor Renewal	$10	$10
MDA	124	Clinical Procedures I	$90	$90
MDA	125	Clinical Procedures II	$130	$130
NAT	101	Nursing Assistant	$40	$40
NUR	116	LPN to RN Transition	$400	$400
NUR	117	Pharmacology I	$10	$10
NUR	118	Pharmacology II	$10	$10
NUR	**121**	**Nursing I**	**$500**	**$400**
NUR	**122**	**Nursing II**	**$500**	**$400**
NUR	123	Paramedic to Nurse Bridge	$200	$200
NUR	**221**	**Nursing III**	**$500**	**$400**
NUR	**222**	**Nursing IV**	**$500**	**$400**
NUR	290	RN Refresher Course	$400	$400
PHT	101	Pharmacy Technician	$20	$20

199-299 and non-credit/special interest courses have variable fees determined by the length and type of each.

RECOMMENDATION TO APPROVE 2015-16 WAGE AND SALARY INCREASES

Recommendation:

Staff recommends increasing wages by two percent for the 2015-16 fiscal year for all employee groups except Administrators; staff recommends a one-percent increase for Administrators.

The recommendation includes adjusting the faculty base schedule by one-half percent and providing a step to all employees on the faculty schedule, which equals a two percent increase for all employees eligible for a step increase; increasing the overload/adjunct pay rates by two percent; providing a step to all employees on the non-exempt schedule and adjusting the base in the non-exempt schedule to assure that each employee in this class receive an increase of at least two percent as long as the employee is eligible for a step increase; providing a two percent increase to all non-Administrator non-exempt employees and a one percent increase for Administrators (groups D and E) with a one-half percent increase in the minimum and the maximum for each employee group band on the non-exempt schedule.

All recommended salary schedules are included.

Summary:

Board approved budget assumptions for salary include the following criteria: a) incrementally increasing rates; b) consideration to competitive market conditions by maintaining a comparative position to the average increases/rates at other local public entities, other Arizona community colleges, and other similar institutions; c) consideration to salary recommendations received through the shared governance process.

All current salary schedules are included along with the recommended schedules.

Also included is a graph detailing actual wage adjustments for a ten-year period and a chart showing the 2014-15 salary changes along with the expected changes for 2015-16 at other Arizona community colleges.

The expected budget impact of this recommendation has been factored in to the budget analysis and represents an annual increase of approximately $230,000.

EMPLOYEE RELATED EXPENSES

ASRS Employee and employer ASRS contributions will decrease from 11.6 percent to 11.47 percent. The institutional impact is expected to be a decrease in expenditures of approximately

$10,000. The Alternate Contribution Rate (ACR) will be applied to all ASRS retirees who are functioning as employees through ASRS Return to Work (RTW) provisions. The ACR will continue to be split evenly with RTW employees. The institutional impact is expected to remain unchanged. A graph is included with information on ASRS contribution rates since 2004-05.

Health Insurance The Navajo County School Employee Trust continued to operate well in 2014, successfully managing double-digit increases in healthcare cost. Employer cost is expected to increase three percent and dependent coverage will continue to be offered as an option with the employee bearing the entire cost. Employees with basic coverage will likely see some changes to the plan benefits. Open enrollment for employees will occur in April.

COST OF LIVING

Effective with the release of the January 2015 CPI on February 26, 2015, the Bureau of Labor Statistics began using a new estimation system for the Consumer Price Index. The new estimation system, the first major improvement in over 25 years, is a redesigned, state-of-the-art system with improved flexibility and review capabilities.

The CPI-U declined 0.7 percent in January on a seasonally adjusted basis. Over the last 12 months, the all items index decreased 0.1 percent before seasonal adjustment.

The energy index fell 9.7 percent as the gasoline index fell 18.7 percent in January, the sharpest in a series of seven consecutive declines. The gasoline decrease was overwhelmingly the cause of the decline in the all items index, which would have risen 0.1 percent had the gasoline index been unchanged. The fuel oil index also fell sharply, and the index for natural gas turned down, although the electricity index rose. The food index was unchanged in January, with the food at home index falling for the first time since May 2013.

The index for all items less food and energy rose 0.2 percent in January.

The all items index declined 0.1 percent over the last 12 months, the first negative 12-month change since the period ending October 2009. The energy index fell 19.6 percent over the span, with the gasoline index down 35.4 percent. The food index rose 3.2 percent, and the index for all items less food and energy increased 1.6 percent.

The Survey of Professional Forecasters, which consolidates multiple well-regarded national macroeconomic forecasts, is the oldest quarterly survey of its kind in the United States. The most recent report was released The forecasters see lower headline and core measures of CPI and Personal Consumer Expenditures (PCE) inflation in 2015. Measured on a fourth-quarter over fourth-quarter basis, both headline CPI and PCE inflation is expected to average 1.1 percent in 2015.

Over the next 10 years, 2015 to 2024, the forecasters expect inflation to average 2 percent at an annual rate.

Northland Pioneer College
2015 - 2016 Faculty Salary Schedule PROPOSED

	Grade										
	1	2	3	4	5	6	7	8	9	10	11
1	$41,276	$42,019	$42,776	$43,546	$44,329	$45,127	$45,940	$46,767	$47,608	$48,465	$49,338
2	$41,896	$42,650	$43,417	$44,199	$44,994	$45,804	$46,629	$47,468	$48,323	$49,192	$50,078
3	$42,524	$43,289	$44,069	$44,862	$45,669	$46,491	$47,328	$48,180	$49,047	$49,930	$50,829
4	$43,162	$43,939	$44,730	$45,535	$46,354	$47,189	$48,038	$48,903	$49,783	$50,679	$51,591
5	$43,809	$44,598	$45,401	$46,218	$47,050	$47,897	$48,759	$49,636	$50,530	$51,439	$52,365
6	$44,466	$45,267	$46,082	$46,911	$47,755	$48,615	$49,490	$50,381	$51,288	$52,211	$53,151
7	$45,133	$45,946	$46,773	$47,615	$48,472	$49,344	$50,232	$51,137	$52,057	$52,994	$53,948
8	$45,810	$46,635	$47,474	$48,329	$49,199	$50,084	$50,986	$51,904	$52,838	$53,789	$54,757
9	$46,498	$47,334	$48,186	$49,054	$49,937	$50,836	$51,751	$52,682	$53,631	$54,596	$55,579
10	$47,195	$48,044	$48,909	$49,790	$50,686	$51,598	$52,527	$53,472	$54,435	$55,415	$56,412
11	$47,903	$48,765	$49,643	$50,536	$51,446	$52,372	$53,315	$54,275	$55,251	$56,246	$57,258
12	$48,621	$49,497	$50,388	$51,295	$52,218	$53,158	$54,115	$55,089	$56,080	$57,090	$58,117
13	$49,351	$50,239	$51,143	$52,064	$53,001	$53,955	$54,926	$55,915	$56,921	$57,946	$58,989
14	$50,091	$50,993	$51,911	$52,845	$53,796	$54,764	$55,750	$56,754	$57,775	$58,815	$59,874
15	$50,842	$51,758	$52,689	$53,638	$54,603	$55,586	$56,586	$57,605	$58,642	$59,697	$60,772
16	$51,605	$52,534	$53,480	$54,442	$55,422	$56,420	$57,435	$58,469	$59,522	$60,593	$61,684
17	$52,379	$53,322	$54,282	$55,259	$56,253	$57,266	$58,297	$59,346	$60,414	$61,502	$62,609
18	$53,165	$54,122	$55,096	$56,088	$57,097	$58,125	$59,171	$60,236	$61,321	$62,424	$63,548
19	$53,962	$54,934	$55,922	$56,929	$57,954	$58,997	$60,059	$61,140	$62,240	$63,361	$64,501
20	$54,772	$55,758	$56,761	$57,783	$58,823	$59,882	$60,960	$62,057	$63,174	$64,311	$65,469
21	$55,593	$56,594	$57,613	$58,650	$59,705	$60,780	$61,874	$62,988	$64,122	$65,276	$66,451
22	$56,427	$57,443	$58,477	$59,529	$60,601	$61,692	$62,802	$63,933	$65,083	$66,255	$67,448
23	$57,274	$58,304	$59,354	$60,422	$61,510	$62,617	$63,744	$64,892	$66,060	$67,249	$68,459
24	$58,133	$59,179	$60,244	$61,329	$62,433	$63,556	$64,700	$65,865	$67,051	$68,257	$69,486
25	$59,005	$60,067	$61,148	$62,249	$63,369	$64,510	$65,671	$66,853	$68,056	$69,281	$70,528
26	$59,890	$60,968	$62,065	$63,182	$64,320	$65,477	$66,656	$67,856	$69,077	$70,321	$71,586
27	$60,788	$61,882	$62,996	$64,130	$65,284	$66,460	$67,656	$68,874	$70,113	$71,375	$72,660
28	$61,700	$62,811	$63,941	$65,092	$66,264	$67,456	$68,671	$69,907	$71,165	$72,446	$73,750
29	$62,625	$63,753	$64,900	$66,068	$67,258	$68,468	$69,701	$70,955	$72,233	$73,533	$74,856
30	$63,565	$64,709	$65,874	$67,059	$68,267	$69,495	$70,746	$72,020	$73,316	$74,636	$75,979
31	$64,518	$65,680	$66,862	$68,065	$69,291	$70,538	$71,807	$73,100	$74,416	$75,755	$77,119
32	$65,486	$66,665	$67,865	$69,086	$70,330	$71,596	$72,885	$74,196	$75,532	$76,892	$78,276
33	$66,468	$67,665	$68,883	$70,123	$71,385	$72,670	$73,978	$75,309	$76,665	$78,045	$79,450

Adjunct Faculty Rate/Load Unit

Level 1	$700
Level 2	$720
Level 3	$740

Substitute Rate

$20.00/hr

Step			Grade										
2014	2015T*	2015	1	2	3	4	5	6	7	8	9	10	11
1													
2													
3													
4													
5													
6													
7	7A	1	$41,071	$41,810	$42,562	$43,329	$44,108	$44,902	$45,711	$46,533	$47,371	$48,224	$49,092
	7B	2	$41,687	$42,437	$43,201	$43,979	$44,770	$45,576	$46,396	$47,231	$48,082	$48,947	$49,828
8	8A	3	$42,312	$43,074	$43,849	$44,638	$45,442	$46,260	$47,092	$47,940	$48,803	$49,681	$50,576
	8B	4	$42,947	$43,720	$44,507	$45,308	$46,123	$46,954	$47,799	$48,659	$49,535	$50,427	$51,334
9	9A	5	$43,591	$44,375	$45,174	$45,987	$46,815	$47,658	$48,516	$49,389	$50,278	$51,183	$52,104
	9B	6	$44,245	$45,041	$45,852	$46,677	$47,517	$48,373	$49,243	$50,130	$51,032	$51,951	$52,886
10	10A	7	$44,908	$45,717	$46,540	$47,377	$48,230	$49,098	$49,982	$50,882	$51,798	$52,730	$53,679
	10B	8	$45,582	$46,402	$47,238	$48,088	$48,954	$49,835	$50,732	$51,645	$52,575	$53,521	$54,484
11	11A	9	$46,266	$47,099	$47,946	$48,809	$49,688	$50,582	$51,493	$52,420	$53,363	$54,324	$55,302
	11B	10	$46,960	$47,805	$48,665	$49,541	$50,433	$51,341	$52,265	$53,206	$54,164	$55,139	$56,131
12	12A	11	$47,664	$48,522	$49,395	$50,285	$51,190	$52,111	$53,049	$54,004	$54,976	$55,966	$56,973
	12B	12	$48,379	$49,250	$50,136	$51,039	$51,958	$52,893	$53,845	$54,814	$55,801	$56,805	$57,828
13	13A	13	$49,105	$49,989	$50,888	$51,804	$52,737	$53,686	$54,653	$55,636	$56,638	$57,657	$58,695
	13B	14	$49,841	$50,738	$51,652	$52,582	$53,528	$54,491	$55,472	$56,471	$57,487	$58,522	$59,575
14	14A	15	$50,589	$51,500	$52,427	$53,370	$54,331	$55,309	$56,304	$57,318	$58,350	$59,400	$60,469
	14B	16	$51,348	$52,272	$53,213	$54,171	$55,146	$56,138	$57,149	$58,178	$59,225	$60,291	$61,376
15	15A	17	$52,118	$53,056	$54,011	$54,983	$55,973	$56,981	$58,006	$59,050	$60,113	$61,195	$62,297
	15B	18	$52,900	$53,852	$54,821	$55,808	$56,813	$57,835	$58,876	$59,936	$61,015	$62,113	$63,231
16	16A	19	$53,693	$54,660	$55,644	$56,645	$57,665	$58,703	$59,759	$60,835	$61,930	$63,045	$64,180
	16B	20	$54,499	$55,480	$56,478	$57,495	$58,530	$59,583	$60,656	$61,748	$62,859	$63,991	$65,142
17	17A	21	$55,316	$56,312	$57,325	$58,357	$59,408	$60,477	$61,566	$62,674	$63,802	$64,950	$66,120
	17B	22	$56,146	$57,157	$58,185	$59,233	$60,299	$61,384	$62,489	$63,614	$64,759	$65,925	$67,111
18	18A	23	$56,988	$58,014	$59,058	$60,121	$61,203	$62,305	$63,427	$64,568	$65,730	$66,914	$68,118
	18B	24	$57,843	$58,884	$59,944	$61,023	$62,121	$63,240	$64,378	$65,537	$66,716	$67,917	$69,140
19	19A	25	$58,711	$59,767	$60,843	$61,938	$63,053	$64,188	$65,344	$66,520	$67,717	$68,936	$70,177
	19B	26	$59,591	$60,664	$61,756	$62,867	$63,999	$65,151	$66,324	$67,518	$68,733	$69,970	$71,230
20	20A	27	$60,485	$61,574	$62,682	$63,810	$64,959	$66,128	$67,319	$68,530	$69,764	$71,020	$72,298
	20B	28	$61,392	$62,497	$63,622	$64,768	$65,933	$67,120	$68,328	$69,558	$70,810	$72,085	$73,382
21	21A	29	$62,313	$63,435	$64,577	$65,739	$66,922	$68,127	$69,353	$70,602	$71,872	$73,166	$74,483
	21B	30	$63,248	$64,386	$65,545	$66,725	$67,926	$69,149	$70,394	$71,661	$72,951	$74,264	$75,600
22	22A	31	$64,197	$65,352	$66,529	$67,726	$68,945	$70,186	$71,449	$72,736	$74,045	$75,378	$76,734
	22B	32	$65,160	$66,332	$67,526	$68,742	$69,979	$71,239	$72,521	$73,827	$75,155	$76,508	$77,885
23	23	33	$66,137	$67,327	$68,539	$69,773	$71,029	$72,308	$73,609	$74,934	$76,283	$77,656	$79,054

2014T* This step designation is in place to facilitate the transistion from the FYE 2014 step designation to the FYE 2015 step designation

Adjunct Faculty Rate/Load Unit		Substitute Rate
Level 1	$685	$20.00/hr
Level 2	$705	
Level 3	$725	

Northland Pioneer College

Hourly Rate - Nonexempt Staff 2015-2016 Schedule PROPOSED

Step	Grade > 1	2	3	4	5	6	7	8	9	10	11
1	$ 12.48	$ 12.84	$ 13.20	$ 13.56	$ 13.92	$ 14.28	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08
2	$ 12.84	$ 13.20	$ 13.56	$ 13.92	$ 14.28	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44
3	$ 13.20	$ 13.56	$ 13.92	$ 14.28	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80
4	$ 13.56	$ 13.92	$ 14.28	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16
5	$ 13.92	$ 14.28	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52
6	$ 14.28	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88
7	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24
8	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60
9	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96
10	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32
11	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68
12	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04
13	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40
14	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76
15	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12
16	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12	$ 21.48

Level 1

Level 2

Level 3

Hourly Rate - Technical and Skilled Craft 2015-2016 Schedule

Step	Grade > 1	2	3	4	5	6	7	8	9	10	11	12
1	$ 14.28	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24
2	$ 14.64	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60
3	$ 15.00	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96
4	$ 15.36	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32
5	$ 15.72	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68
6	$ 16.08	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04
7	$ 16.44	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40
8	$ 16.80	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76
9	$ 17.16	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12
10	$ 17.52	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12	$ 21.48
11	$ 17.88	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12	$ 21.48	$ 21.84
12	$ 18.24	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12	$ 21.48	$ 21.84	$ 22.20
13	$ 18.60	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12	$ 21.48	$ 21.84	$ 22.20	$ 22.56
14	$ 18.96	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12	$ 21.48	$ 21.84	$ 22.20	$ 22.56	$ 22.92
15	$ 19.32	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12	$ 21.48	$ 21.84	$ 22.20	$ 22.56	$ 22.92	$ 23.28
16	$ 19.68	$ 20.04	$ 20.40	$ 20.76	$ 21.12	$ 21.48	$ 21.84	$ 22.20	$ 22.56	$ 22.92	$ 23.28	$ 23.64

Level T1

Level T2

Level T3

Northland Pioneer College

Hourly Rate - Nonexempt Staff 2014-2015 Schedule

Step	1	2	3	4	5	6	7	8	9	10	11
1	$ 12.38	$ 12.74	$ 13.10	$ 13.46	$ 13.82	$ 14.18	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98
2	$ 12.74	$ 13.10	$ 13.46	$ 13.82	$ 14.18	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34
3	$ 13.10	$ 13.46	$ 13.82	$ 14.18	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70
4	$ 13.46	$ 13.82	$ 14.18	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06
5	$ 13.82	$ 14.18	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42
6	$ 14.18	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78
7	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14
8	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50
9	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86
10	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22
11	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58
12	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94
13	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30
14	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66
15	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02
16	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02	$ 21.38
	Level 1		Level 2			Level 3					

Hourly Rate - Technical and Skilled Craft 2014-2015 Schedule

Step	1	2	3	4	5	6	7	8	9	10	11	12
1	$ 14.18	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14
2	$ 14.54	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50
3	$ 14.90	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86
4	$ 15.26	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22
5	$ 15.62	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58
6	$ 15.98	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94
7	$ 16.34	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30
8	$ 16.70	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66
9	$ 17.06	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02
10	$ 17.42	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02	$ 21.38
11	$ 17.78	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02	$ 21.38	$ 21.74
12	$ 18.14	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02	$ 21.38	$ 21.74	$ 22.10
13	$ 18.50	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02	$ 21.38	$ 21.74	$ 22.10	$ 22.46
14	$ 18.86	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02	$ 21.38	$ 21.74	$ 22.10	$ 22.46	$ 22.82
15	$ 19.22	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02	$ 21.38	$ 21.74	$ 22.10	$ 22.46	$ 22.82	$ 23.18
16	$ 19.58	$ 19.94	$ 20.30	$ 20.66	$ 21.02	$ 21.38	$ 21.74	$ 22.10	$ 22.46	$ 22.82	$ 23.18	$ 23.54
	Level T1			Level T2			Level T3					

Northland Pioneer College

Exempt Salary Range Chart 2015-2016 PROPOSED

12 Month Staff		
Group	Base	Max
B2	$34,946	$48,924
B1	$37,926	$53,147
C3	$38,896	$54,453
C2	$42,591	$59,627
C1	$45,330	$63,462
D3	$50,576	$70,806
D2	$63,315	$88,642
D1	$82,423	$111,272
E	$104,106	$140,544

11 Month Staff		
B2	$31,586	$44,222
B1	$34,281	$47,993
C3	$35,156	$49,218
C2	$38,497	$53,894
C1	$40,973	$57,361

10 Month Staff		
B2	$28,898	$40,456
B1	$31,361	$43,906
C3	$32,163	$45,028
C2	$35,218	$49,306
C1	$37,484	$55,493

Exempt Positions by Salary Group	
B2	Center Manager
B2	Data Analyst
B2	Financial Aid Advisor/Technician
B2	Information Services Manager
B2	Lab Technician
B2	Lead Technician for Technical Services
B2	Network Support Technician
B2	SBDC Business Trainer
B2	Technical Designer/Production Manager
B1	Associate Librarian
B1	Bookstore Manager
B1	Campus Manager
B1	Payroll Manager
B1	Small Business Analyst
C3	Academic Advisor
C3	Carl Perkins Grant Manager
C3	Career Coach
C3	Maintenance Supervisor
C3	Recruitment Advisor
C2	Assistant to the President
C2	ASC-GIEC Grant Project Coordinator
C2	Biology Lab Manager
C2	Coordinator of High School Programs
C2	General Ledger Accountant
C2	Grant Accountant
C2	Head Librarian
C2	Media Relations Coordinator
C2	Student Account Coordinator
C1	ABE Special Sites Coordinator
C1	ADOC Program Coordinator
C1	Community and Corporate Learning Coordinator
C1	Coordinator of Administrative Systems Support
C1	Database Administrator
C1	Disabilities Resource & Access Coordinator
C1	Institutional Research Analyst
C1	Network & Systems Administrator
C1	System Analyst
D3	Apache County Coordinator
D3	Director of Financial Aid
D3	Director of Small Business Development Center
D2	Controller
D2	Director of Developmental Services
D2	Director of Enrollment Services
D2	Director of Facilities & Vehicles
D2	Director of Human Resources
D2	Director of Institutional Effectiveness
D2	Director of Marketing & Public Relations
D2	Director of Public Safety Education
D2	Director of Student Services
D1	Dean of Arts and Sciences
D1	Dean of Career and Technical Education
D1	Dean of Nursing & Allied Health
D1	Director of Financial Services
D1	Director of Information Services
D1	Director of NPC Friends & Family
E	Vice President for Administrative Services
E	Vice President for Learning & Student Services

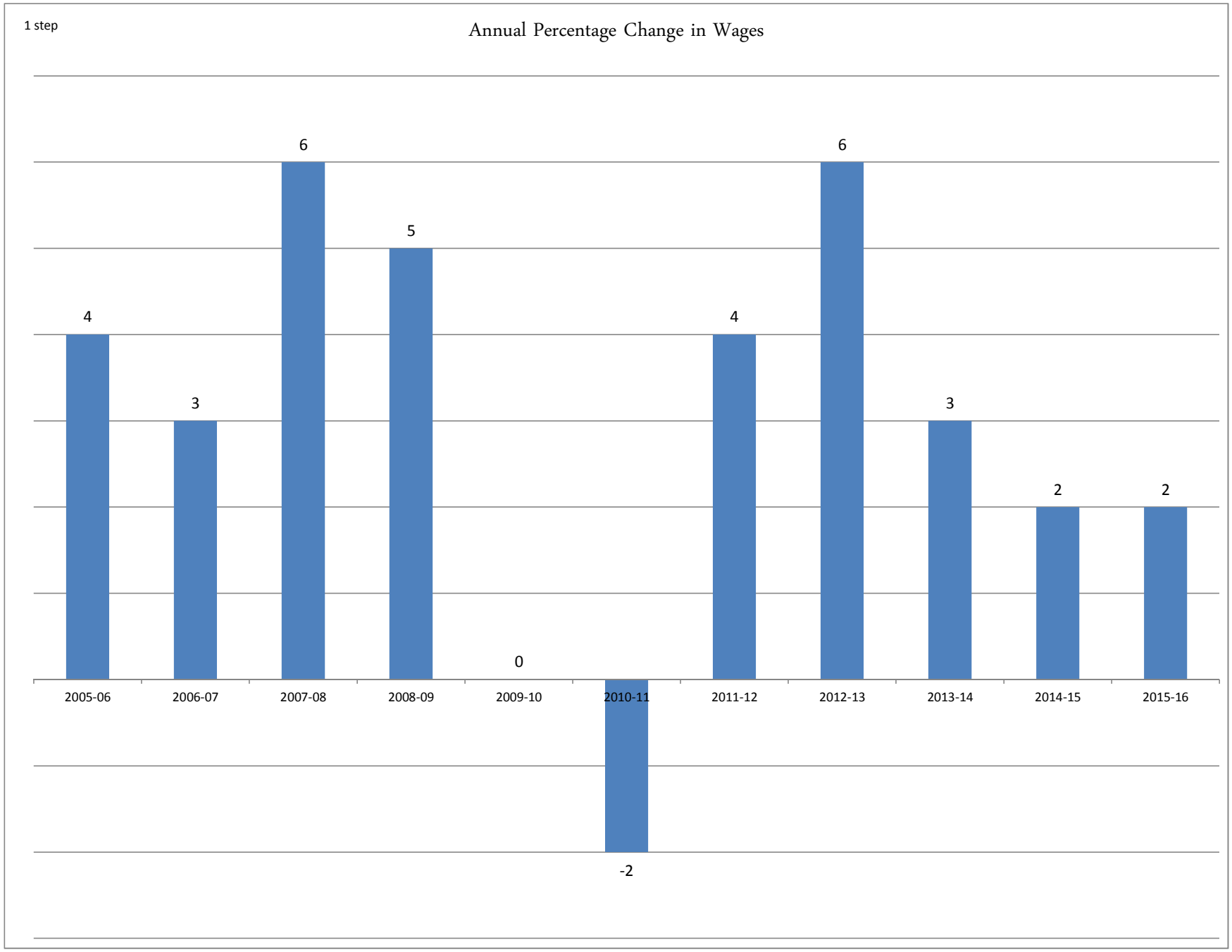
Northland Pioneer College
Exempt Salary Range Chart 2014-2015

12 Month Staff		
Group	Base	Max
B2	$34,772	$48,681
B1	$37,737	$52,833
C3	$38,702	$54,182
C2	$42,379	$59,330
C1	$45,104	$63,146
D3	$50,324	$70,454
D2	$63,000	$88,201
D1	$82,013	$110,718
E	$103,588	$139,845

11 Month Staff		
B2	$31,429	$44,002
B1	$34,110	$47,754
C3	$34,981	$48,973
C2	$38,305	$53,626
C1	$40,769	$57,076

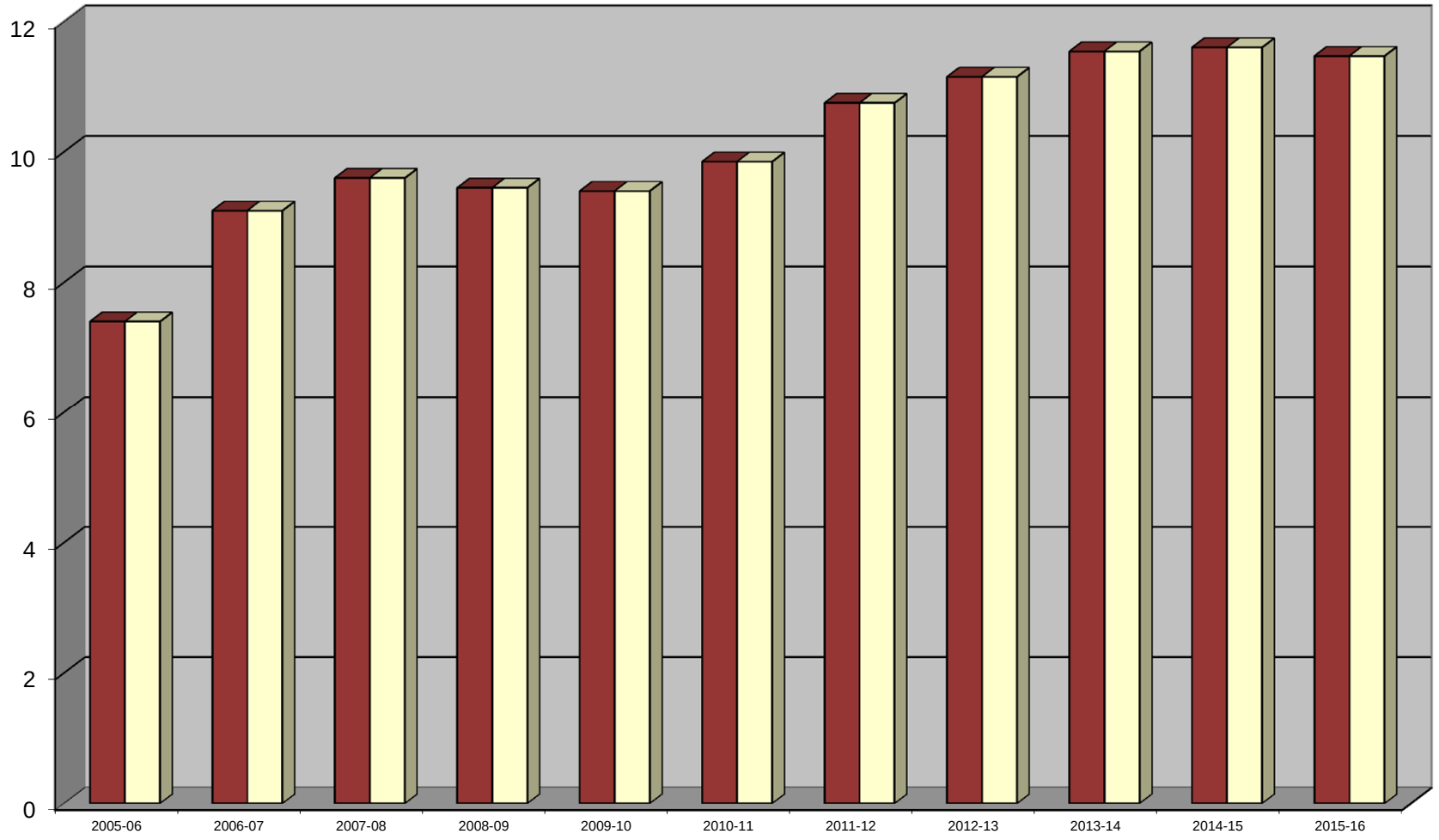
10 Month Staff		
B2	$28,754	$40,255
B1	$31,205	$43,688
C3	$32,003	$44,804
C2	$35,043	$49,061
C1	$37,298	$52,217

Exempt Positions by Salary Group	
B2	Center Manager
B2	Community and Corporate Learning Specialist
B2	Data Analyst
B2	Financial Aid Advisor/Technician
B2	Information Services Manager
B2	Lab Technician
B2	Lead Technician for Technical Services
B2	Network Support Technician
B2	SBDC Business Trainer
B2	Technical Designer/Production Manager
B1	Associate Librarian
B1	Bookstore Manager
B1	Campus Manager
B1	Small Business Analyst
C3	Academic Advisor
C3	Carl Perkins Grant Manager
C3	Career Coach
B1	Maintenance Supervisor
C3	Recruitment Advisor
C2	Apache Families First Coordinator
C2	Assistant to the President
C2	ASC-GIEC Grant Project Coordinator
C2	Biology Lab Manager
C2	Coordinator of High School Programs
C2	General Ledger Accountant
C2	Head Librarian
C2	Media Relations Coordinator
C2	Payroll Supervisor
C2	Student Account Coordinator
C1	ABE Special Sites Coordinator
C1	ADOC Program Coordinator
C1	Community and Corporate Learning Coordinator
C1	Coordinator of Student Services Info Systems
C1	Disabilities Resource & Access Coordinator
C1	Institutional Research Analyst
C1	System Analyst
D3	Apache County Coordinator
D3	Database Administrator
D3	Director of Administrative Systems Support
D3	Director of Financial Aid
D3	Director of Small Business Development Center
D2	Controller
D2	Director of Developmental Services
D2	Director of Facilities & Vehicles
D2	Director of Human Resources
D2	Director of Institutional Effectiveness
D2	Director of Marketing & Public Relations
D2	Director of Public Safety Education
D2	Network & Systems Administrator
D1	Dean of Arts and Sciences
D1	Dean of Career and Technical Education
D1	Dean of Nursing & Allied Health
D1	Director of Financial Services
D1	Dean of Students
D1	Director of Information Services
D1	Director NPC Friends & Family
E	Vice President for Administrative Services
E	Vice President for Learning & Student Services


1 step
Annual Percentage Change in Wages
4
3
6
5
0
-2
4
6
3
2
2
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

ASRS Contribution Rates

Percentage of Payroll



CC Wage Update

2014-2015	Faculty	Classified Staff	Admin Staff
Average	***2.5%***	***2.2%***	***2.2%***
Median	***2.3%***	***2.0%***	***2.0%***
Arizona Western	5.0%	2.0%	2.0%
Central	1.0%	1.0%	1.0%
Cochise	2.5%	2.5%	2.5%
Coconino	2.0%	2.0%	2.0%
Eastern	3.0%	3.0%	3.0%
Maricopa	1.0%	1.0%	1.0%
Mohave	1.0%	1.0%	1.0%
Northland	2.0%	2.0%	2.0%
Pima	3.0%	3.0%	3.0%
Yavapai	4.1%	4.1%	4.1%

2015-2016	Faculty	Classified Staff	Admin Staff
Average	***2.1%***	***2.1%***	***2.0%***
Median	***2.0%***	***2.0%***	***2.0%***
A	*0.0%*	*0.0%*	*0.0%*
B	*0.0%*	*0.0%*	*0.0%*
NPC	*2.0%*	*2.0%*	*2.0%*
C	*2.0%*	*2.0%*	*1.0%*
D	*2.0%*	*2.0%*	*2.0%*
E	*2.0%*	*2.0%*	*2.0%*
F	*3.0%*	*3.0%*	*3.0%*
G	*3.0%*	*3.0%*	*3.0%*
H	*3.0%*	*3.0%*	*3.0%*
I	*4.0%*	*4.0%*	*4.0%*

Preliminary Planning Only

NORTHLAND PIONEER COLLEGE

Insurance Costs for Employees

Effective July 1, 2014

Navajo County Schools Employee Benefits Trust Cost of Medical Insurance

2014-2015 Contribution Rates

PPO Plan*

Covered Group	Medical	Dental	TOTAL Monthly Cost to Employee
Employee Only	$520	$41	$0
Employee & Spouse	$1,040	$88	$567
Employee & Child (ren)	$1,040	$95	$574
Employee & Family	$1,153	$129	$721

High Deductible Health Plan**

Covered Group	Medical	Dental	TOTAL Monthly Cost to Employee
Employee Only	$520	$41	$0
Employee & Spouse	$953	$88	$480
Employee & Child (ren)	$953	$95	$487
Employee & Family	$1,048	$129	$616

**The cost of the Basic Plan for employee medical & dental insurance is an employee benefit and is deducted from the total monthly cost.*

***The annual cost difference of the High Deductible Health Plan will be contributed to the employee Health Savings Account in July, 2014.*

VOLUNTARY DEDUCTION

Cost of Avesis Insurance Group ID 1056 Carrier #10790

Covered Group	Vision Cost
Employee Only	$8.05
Employee & Spouse	$15.13
Employee & Child (ren)	$16.58
Employee & Family	$20.93

For benefit questions call 1-800-828-9341

Locate an AVESIS Provider at www.avesis.com

NORTHLAND PIONEER COLLEGE
2014-15 Plan Options

PPO Plan:

Out of Pocket Maximum	
Individual	$ 4,000
Family	$12,000
Office visit co-pay	$ 35
Specialty office visit co-pay	$ 50
Deductible	
Individual	$ 500
Family	$ 1,500

High Deductible Health Plan:

Deductible	
Individual	$ 2,500
Family	$ 5,000

REQUEST TO APPROVE/MODIFY DISTRICT GOVERNING BOARD POLICY 1087 DEFINITION OF DECENTRALIZATION

Recommendation:
Staff recommends approval of review of District Governing Board Policy 1087, Definition of Decentralization

Summary:
In 1975, the founding District Governing Board approved Policy 1087. The policy was reviewed and revised on March 10, 1998. The staff recommends a review of DGB Policy 1087; this review may lead to revisions to the policy.

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Policy 1087 Definition of Decentralization

The Board is committed to providing the college programs, activities, and services throughout the service area via decentralization. Components of decentralization will include the following:

1. Designating campuses where enrollment, programming and related services are sufficient to fulfill all objectives of the college's mission.

2. Designating centers and course sites where enrollment, programming and related services are insufficient to fulfill all objectives of the college's mission.

3. Allowing campuses and centers to grow according to the unique changes and needs identified within their respective communities.

4. Since high cost programs and services may not be possible for all college locations, these programs may be limited to single sites. These would become magnet programs attracting students to them from throughout the service area.

5. The delivery of instructional and student services via alternative, flexible multiple modalities.

6. Some administrative services must be centralized to be cost effective. (Rev 3/10/98)

REQUEST TO APPROVE PURCHASE OF BUDGETED LAPTOPS

Recommendation:
Staff recommends approval to purchase laptops and PCs as requested in the 2014/2015 Capital Budget for new deployments and lifecycle replacements in the amounts of:
Laptops $72,413.25

Summary:
As part of Northland Pioneer College's three-year capital plan and our 2014-2016 Strategic Plan, staff recommends approval to purchase laptops and PCs for district wide usage. Purchases would be made by the following vendors:

Laptops CDWG

This project will allow for lifecycle replacement of aging equipment and several projects which will add equipment. These purchases are made through State Contracts.

These proposed purchases supports goals 3.1.1 of Northland Pioneer College's 2014-2016 Strategic Plan.

REQUEST TO APPROVE PURCHASE OF BUDGETED PCs

Recommendation:
Staff recommends approval to purchase PCs as requested in the 2014/2015 Capital Budget for new deployments and lifecycle replacements in the amounts of:

PCs $ 68,970.00

Summary:
As part of Northland Pioneer College's three-year capital plan and our 2014-2016 Strategic Plan, staff recommends approval to purchase laptops and PCs for district wide usage. Purchases would be made by the following vendors:

PCs WWT

This project will allow for lifecycle replacement of aging equipment and several projects which will add equipment. These purchases are made through State Contracts.

These proposed purchases supports goals 3.1.1 of Northland Pioneer College's 2014-2016 Strategic Plan**.**

CONTACT WITH ARIZONA BOARD OF NURSING

Summary:
As requested at the February, 2015, District Governing Board meeting, the president has made contact with the Arizona State Board of Nursing regarding moving the Nursing Program from White Mountain Campus to Silver Creek Campus. Representatives of the Board of Nursing raised several concerns including:

- The move would require a program change with the BON and would be unlikely to get approval. Approval must also be obtained from our accreditors ACEN and HLC.
- The costs of build out and renovation would be significant (simulation labs, classrooms, HESI testing dedicated space, etc.) and could far outweigh any benefits.
- The weakening of clinical relationships with Summit.
- NPC has worked hard to achieve a quality program with strong relationships in the communities of Show Low and south; concerned that we would lose community support as well as quality of program.

GOVERNANCE INSTITUTE FOR STUDENT SUCCESS

Summary:
As a reminder to the District Governing Board, the Association of Community Colleges and the Student Success Initiatives are partnering with the Arizona Association of District Governing Boards to bring the Governance Institute for Student Success to Phoenix on April 1-11th. The reserved room block is sold out but, if you intend to attend and haven't reserved a room we can assist with nearby accommodation possibilities.

Demonstrating the Value of Northland Pioneer College

Analysis of the Economic Impact and Return on Investment of Education

February 2015

Economic Modeling Specialists Intl.

409 S. Jackson St.

Moscow, ID 83843

208-883-3500

www.economicmodeling.com

Table of Contents

Acknowledgments

Economic Modeling Specialists International (EMSI) gratefully acknowledges the excellent support of the staff at Northland Pioneer College in making this study possible. Special thanks go to Dr. Jeanne Swarthout, who approved the study; and to Dr. Leslie Wasson, Director of Institutional Effectiveness, who collected and organized much of the data and information requested. Any errors in the report are the responsibility of EMSI and not of any of the above-mentioned institutions or individuals.

Preface

Since 2002, Economic Modeling Specialists International (EMSI) has helped address a widespread need in the U.S., Canada, the U.K., and Australia to demonstrate the impact of education. To date we have conducted more than 1,200 economic impact studies for educational institutions in the U.S. and internationally. Along the way we have worked to continuously update and improve the model to ensure that it conforms to best practices and stays relevant in today's economy.

The present study reflects the latest version of our model, representing the most up-to-date theory and practices for conducting human capital economic impact analysis. Among the most vital departures from EMSI's previous economic model is the conversion from traditional Leontief input-output multipliers to those generated by EMSI's multi-regional Social Accounting Matrix (SAM). Though Leontief multipliers are based on sound theory, they are less comprehensive and adaptable than SAM multipliers. Moving to the more robust SAM framework allows us to increase the level of sectoral detail in the model and remove any aggregation error that may have occurred under the previous framework. This change in methodology primarily affects the regional economic impact analysis provided in Chapter 2; however, the multi-regional capacity of the SAM also increases the accuracy with which we calculate the statewide labor and non-labor multipliers used in the investment analysis in Chapter 3.

Another major change in the model is the replacement of John Parr's development index with a proprietary mapping of instructional programs to regional industries. The Parr index was a significant move forward when we first applied it in 2000 to approximate the industries where students were most likely to find employment after leaving college. Now, by mapping the institution's program completers to detailed regional industries, we can move from an approach based on assumptions to one based on the actual occupations for which students are trained.

The new model also reflects significant changes to the calculation of the alternative education variable. This variable addresses the counterfactual scenario of what would have occurred if the publicly-funded institutions in the state did not exist, leaving the students to obtain an education elsewhere. The previous model used a small-sample regression analysis to estimate the variable. The current model goes further and measures the distance between institutions and the associated differences in tuition prices to determine the change in the students' demand for education. This methodology is a more robust approach than the regression analysis and significantly improves our estimate of alternative education opportunities.

These and other changes mark a considerable upgrade to the EMSI college impact model. With the SAM we have a more detailed view of the economy, enabling us to more accurately determine regional economic impacts. Many of our former assumptions have been replaced with observed data, as exemplified by the program-to-industry mapping and the revision to the alternative education variable. Further, we have researched the latest sources in order to update the background

data with the most up-to-date data and information. Finally, we have revised and re-worked the documentation of our findings and methodology. Our hope is that these improvements will provide a better product to our clients – reports that are more transparent and streamlined, methodology that is more comprehensive and robust, and findings that are more relevant and meaningful to today's audiences. We encourage our readers to approach us directly with any questions or comments they may have about the study so that we can continue to improve our model and keep the public dialogue open about the positive impacts of education.

Introduction

Northland Pioneer College (NPC) creates value in many ways. The college is committed to putting students on the path to success and plays a key role in helping them increase their employability and achieve their individual potential. With a wide range of program offerings, NPC enables students to earn credentials and develop the skills they need in order to have a fulfilling and prosperous career. The college also provides an excellent environment for students to meet new people and make friends, while participation in college courses improves the students' self-confidence and promotes their mental health. These social and employment-related benefits have a positive influence on the health and well-being of individuals.

However, the contribution of NPC consists of more than solely influencing the lives of students. The college's program offerings support a range of industry sectors in Navajo County and supply employers with the skilled workers they need to make their businesses more productive. The expenditures of NPC, along with the spending of its employees and its students, further support the local economy through the output and employment generated by local businesses. Lastly, and just as importantly, the economic impact of NPC extends as far as the state treasury in terms of increased tax receipts and decreased public sector costs.

Objective of the report

In this report we aim to assess the economic impact of NPC on the local business community and the return on investment generated by the college for its key stakeholder groups: students, society, and taxpayers. Our approach is twofold. We begin with an economic impact analysis of NPC on the local business community in Navajo County. To derive results, we rely on a specialized Social Accounting Matrix (SAM) model to calculate the additional income created in the Navajo County economy as a result of college-linked input purchases, consumer spending, and the added skills of NPC students. Results of the regional economic impact analysis are broken out according to the following three impacts: 1) impact of college operations, 2) impact of student spending, and 3) impact of the skills acquired by former students that are still active in the Navajo County workforce.

The second component of the study is a standard investment analysis to determine how money spent on NPC performs as an investment over time. The investors in this case are students, society, and taxpayers, all of whom pay a certain amount in costs to support the educational activities at NPC. The students' investment consists of their out-of-pocket expenses and the opportunity cost of attending college as opposed to working. Society invests in education by forgoing the services that it would have received had it not funded NPC and the business output that it would have enjoyed had students been employed instead of studying. Taxpayers contribute their investment through government funding.

In return for these investments, students receive a lifetime of higher incomes, society benefits from an enlarged economy and a reduced demand for social services, and taxpayers benefit from an expanded tax base and a collection of public sector savings. To determine the feasibility of the investment, the model projects benefits into the future, discounts them back to their present value, and compares them to their present value costs. Results of the investment analysis for students, society, and taxpayers are displayed in the following four ways: 1) net present value of benefits, 2) rate of return, 3) benefit-cost ratio, and 4) payback period.

A wide array of data and assumptions are used in the study based on several sources, including the 2013-14 academic and financial reports from the college, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of EMSI's SAM model, and a variety of published materials relating education to social behavior. The study aims to apply a conservative methodology and follows standard practice using only the most recognized indicators of investment effectiveness and economic impact.

Notes of importance

There are two notes of importance that readers should bear in mind when reviewing the findings presented in this report. First, this report is not intended to be a vehicle for comparing NPC with other publicly-funded institutions in the state or elsewhere. Other studies comparing the gains in income and social benefits of one institution relative to another address such questions more directly and in greater detail. Our intent is simply to provide the NPC management team and stakeholders with pertinent information should questions arise about the extent to which NPC impacts the local economy and generates a return on investment. Differences between NPC's results and those of other institutions, however, do not necessarily indicate that one institution is doing a better job than another. Results are a reflection of location, student body profile, and other factors that have little or nothing to do with the relative efficiency of the institutions. For this reason, comparing results between institutions or using the data to rank institutions is strongly discouraged.

Second, this report is useful in establishing a benchmark for future analysis, but it is limited in its ability to put forward recommendations on what NPC can do next. The implied assumption is that the college can effectively improve its results if it increases the number of students it serves, helps students to achieve their educational goals, and remains responsive to employer needs in order to ensure that students find meaningful jobs after exiting. Establishing a strategic plan for achieving these goals, however, is not the purpose of this report.

Key findings

The results of this study show that NPC has a significant positive impact on the local business community and generates a return on investment for its main stakeholder groups: students, society, and taxpayers. Using a two-pronged approach that involves a regional economic impact analysis and an investment analysis, we calculate the benefits to each of these groups. Key findings of the study are as follows:

Economic impact on local business community

- NPC employed **201** full-time and **352** part-time employees in 2013-14. Payroll amounted to **$17.2 million**, much of which was spent in Navajo County to purchase groceries, clothing, and other household goods and services. NPC is itself a buyer of goods and services and spent **$11 million** to support its operations in 2013-14. The net impact of NPC payroll and expenses in Navajo County was approximately **$17.6 million** in added income in FY 2013-14.
- A total of **19** students relocated to Navajo County from outside of the area and spent money at local businesses to buy books and supplies, purchase groceries, rent accommodation, pay for transport, attend sporting events, and so on. These expenditures added approximately **$75,368** in income to the Navajo County economy in FY 2013-14.
- Approximately **80%** of NPC's students stay in Navajo County after exiting college. Their enhanced skills and abilities bolster the output of local employers, leading to higher regional income and a more robust economy. The accumulated contribution of former NPC students who were employed in the regional workforce in FY 2013-14 amounted to **$204.7 million** in added income in the Navajo County economy.
- The total impact of NPC on the local business community in Navajo County in FY 2013-14 was **$222.4 million**, approximately equal to **9.6**% of Navajo County's total Gross Regional Product.

Return on investment to students, society, and taxpayers

- Students paid a total of **$2.5 million** to cover the cost of tuition, fees, books, and supplies at NPC in 2013-14. They also forwent **$28.4 million** in earnings that they would have generated had they been working instead of learning.
- In return for the monies invested in NPC, students receive a present value of **$216.7 million** in increased earnings over their working lives. This translates to a return of **$6.50** in higher future income for every $1 that students pay for their education at NPC. The corresponding annual return on investment is **27.2%**.
- Society as a whole in the state of Arizona will receive a present value of **$567.2 million** in added state income over the course of the students' working lives. Society will also benefit from **$11.4 million** in present value social savings related to reduced crime, lower welfare and unemployment, and increased health and well-being across the state.
- For every dollar that society spent on NPC in FY 2013-14, society as a whole will receive a cumulative value of **$9.80** in benefits, for as long as NPC's 2013-14 students remain active in the state workforce.
- State and local taxpayers in Arizona paid **$23.9 million** to support the operations of NPC in 2013-14. The present value of the added tax revenue stemming from the students' higher lifetime incomes and the increased output of businesses amounts to **$41.4 million** in benefits to taxpayers. Savings to the public sector add another **$4.4 million** in benefits due to a reduced demand for government-funded social services in Arizona.
- Dividing the benefits to state and local taxpayers by the amount that they paid to support NPC yields a **1.9** benefit-cost ratio, *i.e.*, every $1 in costs returns **$1.90** in benefits. Taxpayers also see an average annual return of **5.5%** on their investment in NPC.

Chapter 1: Profile of NPC and the Regional Economy

Estimating the benefits and costs of NPC requires three types of information: 1) employee and finance data, 2) student demographic and achievement data, and 3) the economic profile of the county and the state. For the purpose of this study, information on the college and its students was obtained from NPC, and data on the regional and state economy were drawn from EMSI's proprietary data modeling tools.

1.1 Employee and finance data

1.1.1 Employee data

Data provided by NPC include information on college faculty and staff by place of work and by place of residence. These data appear in Table 1.1. As shown, NPC employed 201 full-time and 352 part-time faculty and staff in FY 2013-14. Of these, 95% worked in Navajo County and 95% lived in the region. These data are used to isolate the portion of the employees' payroll and household expenses that remains in the regional economy.

Table 1.1: Employee data, FY 2013-14

Full-time faculty and staff (headcount)	201
Part-time faculty and staff (headcount)	352
Total faculty and staff	**553**
% of employees that work in county	95%
% of employees that live in county	95%

Source: Data supplied by NPC.

1.1.2 Revenues

Table 1.2 shows NPC's annual revenues by funding source – a total of $31.7 million in FY 2013-14. As indicated, tuition and fees comprised 7% of total revenue, local government revenue another 42%, revenue from state government 34%, federal government revenue 15%, and all other revenue (*i.e.*, auxiliary revenue, sales and services, interest, and donations) the remaining 2%. These data are critical in identifying the annual costs of educating the student body from the perspectives of students and taxpayers.

Table 1.2: NPC revenue by source, FY 2013-14

Funding source	Total	% of total
Tuition and fees	$2,295,137	7%
Local government revenue	$13,153,327	42%
State government revenue	$10,752,928	34%
Federal government revenue	$4,740,596	15%
All other revenue	$748,662	2%
Total revenues	**$31,690,650**	**100%**

Source: Data supplied by NPC.

1.1.3 Expenditures

NPC's combined payroll amounted to $17.2 million, equal to 61% of the college's total expenses for FY 2013-14. Other expenditures, including capital and purchases of supplies and services, made up $11 million. These budget data appear in Table 1.3.

Table 1.3: NPC expenses by function, FY 2013-14

Expense item	Total	%
Employee payroll	$17,200,506	61%
Capital depreciation	$1,853,898	7%
All other expenditures	$9,171,644	32%
Total expenses	**$28,226,048**	**100%**

Source: Data supplied by NPC.

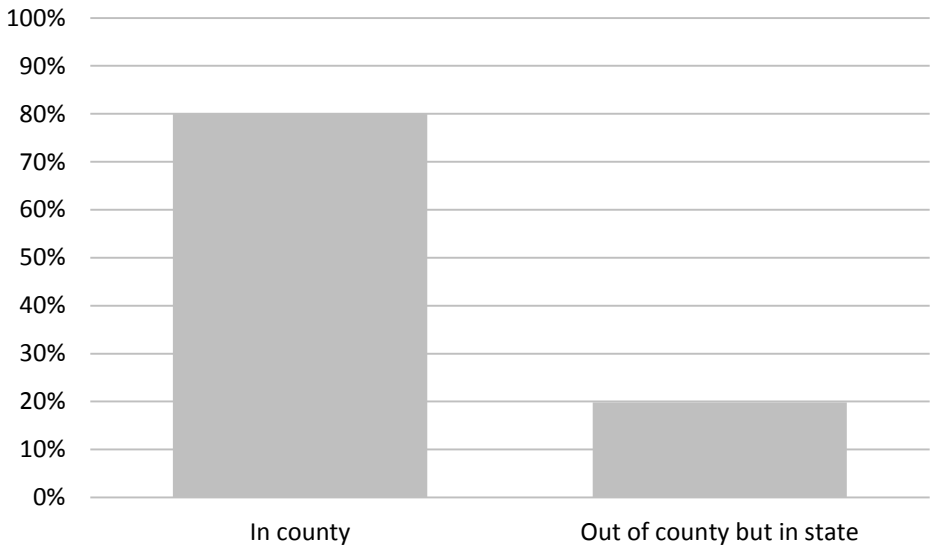
1.2. Student profile data

1.2.1 Demographics

NPC served 6,975 credit students and 2,381 non-credit students in the 2013-14 reporting year (unduplicated). The breakdown of the student body by gender was 40% male and 60% female, and the breakdown by ethnicity was 47% whites and 53% minorities. The students' overall average age was 32.

Figure 1.1 presents the settlement patterns of NPC students after exiting college. As indicated, 80% of students remain in Navajo County. The remaining 20% of students settle outside the county but in the state.

Figure 1.1: Student settlement patterns



1.2.2 Achievements

Table 1.4 summarizes the breakdown of the student population and their corresponding achievements by education level. Achievements are measured in terms of credit hour equivalents (CHEs), which are equal in value to one credit (or 15 contact hours) of classroom instruction. The educational level and CHE production of NPC's students are key to determining how far students advance in their education during the course of the reporting year and the associated value of that achievement.

As indicated, NPC 178 associate's degree graduates, and 404 certificate graduates in the 2013-14 reporting year. A total of 3,097 credit-bearing students pursued but did not complete a credential during the reporting year. NPC also served 1,410 dual credit students, 824 basic education students, and 2,381 personal enrichment students. Workforce and all other students comprised the remaining 1,062 students.

Table 1.4: Breakdown of student headcount and CHE production by education level, 2013-14

Category	Headcount	Total CHEs	Average CHEs
Associate's degree graduates	178	3,373	18.9
Certificate graduates	404	7,446	18.4
Continuing students	3,097	15,792	5.1
Dual credit students	1,410	11,613	8.2
Basic education students	824	5,814	7.1
Personal enrichment students	2,381	5,536	2.3
Workforce and all other students	1,062	13,231	12.5
Total, all students	**9,356**	**62,805**	**6.7**
Total, less personal enrichment students	**6,975**	**57,269**	**8.2**

Source: Data supplied by NPC.

Altogether, NPC students completed 62,805 credit hour equivalents (or CHEs) during the 2013-14 reporting year. In the analysis, we exclude the CHE production of personal enrichment students under the assumption that they do not attain workforce skills that will increase their earnings. The average number of CHEs per student (excluding personal enrichment students) was 8.2.

1.3 Regional profile data

1.3.1 Gross Regional Product

NPC serves Navajo County in Arizona. Since the college was first established in 1974, it has been serving Navajo County by enhancing the workforce, providing local residents with easy access to higher education opportunities, and preparing students for highly-skilled, technical professions. Table 1.5 summarizes the breakdown of the Navajo County economy by major industrial sector, with details on labor and non-labor income. Labor income refers to wages, salaries, and proprietors' income; while non-labor income refers to profits, rents, and other forms of investment income. Together, labor and non-labor income comprise the county's total Gross Regional Product, or GRP.

As shown in Table 1.5, Navajo County's GRP is approximately $2.3 billion, equal to the sum of labor income ($1.5 billion) and non-labor income ($847.7 million). In Chapter 2, we use the GRP of Navajo County as the backdrop against which we measure the relative impacts of the college on the regional economy.

Table 1.5: Labor and non-labor income by major industry sector in Navajo County, 2012

Industry sector	Labor income (millions)	Non-labor income (millions)	Total income (millions)	% of Total
Agriculture, Forestry, Fishing and Hunting	$90	$75	$165	7.1%
Mining	$60	$102	$162	7.0%
Utilities	$7	$18	$25	1.1%
Construction	$56	$4	$60	2.6%
Manufacturing	$39	$36	$74	3.2%
Wholesale Trade	$18	$13	$32	1.4%
Retail Trade	$112	$65	$177	7.7%
Transportation and Warehousing	$64	$43	$107	4.6%
Information	$74	$39	$114	4.9%
Finance and Insurance	$21	$21	$42	1.8%
Real Estate and Rental and Leasing	$29	$86	$115	5.0%
Professional and Technical Services	$25	$8	$33	1.4%
Management of Companies and Enterprises	$14	$3	$17	0.7%
Administrative and Waste Services	$24	$6	$30	1.3%
Educational Services	$24	$2	$26	1.1%
Health Care and Social Assistance	$180	$17	$197	8.5%
Arts, Entertainment, and Recreation	$12	$7	$18	0.8%
Accommodation and Food Services	$55	$31	$86	3.7%
Other Services (except Public Administration)	$27	$4	$31	1.4%
Public Administration	$531	$65	$596	25.8%
Other Non-industries	$0	$202	$202	8.7%
Total	**$1,462**	**$848**	**$2,310**	**100.0%**

* Data reflect the most recent year for which data are available. EMSI data are updated quarterly.

† Numbers may not add due to rounding.

Source: EMSI.

1.3.2 Jobs by industry

Table 1.6 provides the breakdown of jobs by industry in Navajo County. Among the county's non-government industry sectors, the "Retail Trade" sector is the largest employer, supporting 4,385 jobs or 11.1% of total employment in the county. The second largest employer is the "Health Care and Social Assistance" sector, supporting 3,747 jobs or 9.5% of the county's total employment. Altogether, the county supports 39,559 jobs.[1]

[1] Job numbers reflect EMSI's complete employment data, which includes the following four job classes: 1) employees that are counted in the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW), 2) employees that are not covered by the federal or state unemployment insurance (UI) system and are thus excluded from QCEW, 3) self-employed workers, and 4) extended proprietors.

Table 1.6: Jobs by major industry sector in Navajo County, 2013

Industry sector	Total jobs	% of Total
Agriculture, Forestry, Fishing and Hunting	3,540	8.9%
Mining	688	1.7%
Utilities	93	0.2%
Construction	1,884	4.8%
Manufacturing	699	1.8%
Wholesale Trade	558	1.4%
Retail Trade	4,385	11.1%
Transportation and Warehousing	1,064	2.7%
Information	1,272	3.2%
Finance and Insurance	936	2.4%
Real Estate and Rental and Leasing	1,914	4.8%
Professional and Technical Services	903	2.3%
Management of Companies and Enterprises	210	0.5%
Administrative and Waste Services	1,088	2.8%
Educational Services	776	2.0%
Health Care and Social Assistance	3,747	9.5%
Arts, Entertainment, and Recreation	710	1.8%
Accommodation and Food Services	3,433	8.7%
Other Services (except Public Administration)	1,552	3.9%
Public Administration	10,107	25.5%
Total	**39,559**	**100.0%**

* Data reflect the most recent year for which data are available. EMSI data are updated quarterly.

† Numbers may not add due to rounding.

Source: EMSI complete employment data.

1.3.3 Earnings by education level

Table 1.7 and Figure 1.2 present the mean income levels by education level in Navajo County at the midpoint of the average-aged worker's career. These numbers are derived from EMSI's complete employment data on average income per worker in the county.[2] As shown, students who achieve an associate's degree can expect $33,700 in income per year, approximately $7,800 more than someone with a high school diploma. The difference between a high school diploma and the attainment of a bachelor's degree is even greater – up to $19,400 in higher income.

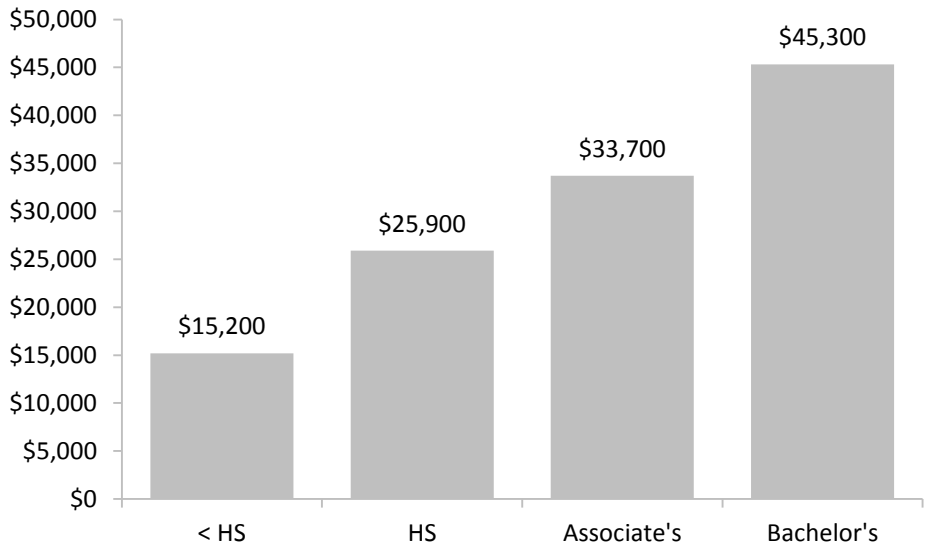
[2] Wage rates in the EMSI SAM model combine state and federal sources to provide earnings that reflect complete employment in the county, including proprietors, self-employed workers, and others not typically included in state data, as well as benefits and all forms of employer contributions. As such, EMSI industry earnings-per-worker numbers are generally higher than those reported by other sources.

Table 1.7: Expected income in Navajo County at the midpoint of individual's working career by education level

Education level	Income	Difference
Less than high school	$15,200	n/a
High school or equivalent	$25,900	$10,700
Associate's degree	$33,700	$7,800
Bachelor's degree	$45,300	$11,600

Source: EMSI complete employment data.

Figure 1.2: Expected income by education level at career midpoint



1.4 Conclusion

This chapter presents the broader elements of the database used to determine the results of the study. Additional detail on data sources, assumptions, and general methods underlying the analyses are conveyed in the remaining chapters and appendices. The core of the findings is presented in the next two chapters – Chapter 2 considers NPC's impact on the regional economy, and Chapter 3 looks at NPC as an investment. The appendices detail a collection of miscellaneous theory and data issues.

Chapter 2: Economic Impact Analysis

NPC impacts Navajo County in a variety of ways. The college is an employer and a buyer of goods and services. It attracts monies to the county that would not have otherwise entered the local economy through its own revenue stream and through the expenditures of non-local students. Further, as a primary source of education to area residents, NPC supplies trained workers to local industry and contributes to associated increases in regional output.

In this chapter we track NPC's regional economic impact under three headings: 1) the college operations impact, stemming from NPC's payroll and purchases; 2) the student spending impact, due to the spending of non-local students for room and board and other personal expenses, and 3) the student productivity impact, comprising the added income created in the county as former NPC students expand the economy's stock of human capital.

2.1 College operations impact

Nearly all NPC employees live in Navajo County (see Table 1.1). Faculty and staff payroll counts as part of the county's overall income, and their spending for groceries, apparel, and other household expenditures helps support local businesses. NPC is itself a purchaser of supplies and services, and many of NPC's vendors are located in Navajo County. These expenditures create a ripple effect that generates still more jobs and income throughout the economy.

Table 2.1 presents the economic impact of NPC's operations. The top row shows the overall labor and non-labor income in the county, which we use as the backdrop for gauging the relative role of NPC in the Navajo County economy. These data match the total labor and non-labor income figures provided in Table 1.5 of Chapter 1.

Table 2.1: Impact of college operations

	Labor income (thousands)	Non-labor income (thousands)	Total income (thousands)	% of total income in county
Total income in county	$1,462,068	$847,657	$2,309,725	100.0%
Initial effect	**$16,340**	**$0**	**$16,340**	**0.7%**
Multiplier effect				
Direct effect	$462	$406	$868	<0.1%
Indirect effect	$20	$14	$34	<0.1%
Induced effect	$1,259	$1,604	$2,863	0.1%
Total multiplier effect	**$1,740**	**$2,024**	**$3,764**	**0.2%**
Gross effect (initial + multiplier)	**$18,081**	**$2,024**	**$20,105**	**0.9%**
Less alternative uses of funds	-$1,087	-$1,374	-$2,461	<0.1%
Net impact	**$16,994**	**$650**	**$17,644**	**0.8%**

Source: EMSI IO model.

As for the impacts themselves, we follow best practice and draw the distinction between initial effects and multiplier effects. The initial effect of NPC operations is simple – it amounts to the $16.3 million in college payroll (including employee benefits, less monies paid to employees who work at locations outside the county). Total college payroll appeared in the list of college expenditures reported in Table 1.3. Note that, as a public entity, NPC does not generate property income in the traditional sense, so non-labor income is not associated with college operations under the initial effect.

Multiplier effects refer to the additional income created in the economy as NPC and its employees spend money in the county. They are categorized according to the following three effects: the direct effect, the indirect effect, and the induced effect. Direct effects refer to the income created by the industries initially affected by the spending of NPC and its employees. Indirect effects occur as the supply chain of the initial industries creates even more income in the county. Finally, induced effects refer to the income created by the increased spending of the household sector as a result of the direct and indirect effects.

Calculating multiplier effects requires a specialized Social Accounting Matrix (SAM) model that captures the interconnection of industries, government, and households in the county. The EMSI SAM model contains approximately 1,100 industry sectors at the highest level of detail available in the North American Industry Classification System (NAICS), and it supplies the industry-specific multipliers required to determine the impacts associated with economic activity within the county. For more information on the EMSI SAM model and its data sources, see Appendix 3.

Table 1.3 in Chapter 1 breaks NPC's expenditures into the following three categories: payroll, capital depreciation, and all other expenditures (including purchases for supplies and services). The first step in estimating the multiplier effect of these expenditures is to map them individually to the approximately 1,100 industry sectors of the EMSI SAM model. Assuming that the spending patterns of college personnel approximately match those of the average consumer, we map college payroll to spending on industry outputs using national household expenditure coefficients supplied by EMSI's national SAM. For the other two expenditure categories (*i.e.*, capital depreciation and all other expenditures), we again assume that the college's spending patterns approximately match national averages and apply the national spending coefficients for NAICS 611210 (Junior Colleges).[3] Capital depreciation is mapped to the construction sectors of NAICS 611210 and the college's remaining expenditures to the non-construction sectors of NAICS 611210.

We now have three vectors detailing the spending of NPC: one for college payroll, another for capital items, and a third for NPC's purchases of supplies and services. Before entering these items into the SAM model, we factor out the portion of them that occurs locally. Each of the approximately 1,100 sectors in the SAM model is represented by a regional purchase coefficient (RPC), a measure of the overall demand for the commodities produced by each sector that is

[3] NAICS 611210 comprises junior colleges, community colleges, and junior college academies and schools.

satisfied by local suppliers. For example, if 40% of the demand for NAICS 541211 (Offices of Certified Public Accountants) is satisfied by local suppliers, the RPC for that sector is 40%. The remaining 60% of the demand for NAICS 541211 is provided by suppliers located outside the county. The three college spending vectors are thus multiplied sector-by-sector by the corresponding RPC for each sector to arrive at the strictly local spending associated with the college.

Local spending is entered into the SAM model's multiplier matrix, which in turn provides an estimate of the associated multiplier effects on regional sales. We convert the sales figures to income using income-to-sales ratios, also provided by the SAM model. Final results appear in the section labeled "Multiplier effect" in Table 2.1. Altogether, NPC's spending creates $1.7 million in labor income and another $2 million in non-labor income through multiplier effects – a total of $3.8 million. This together with the $16.3 million in initial effects generates a gross total of $20.1 million in impacts associated with the spending of NPC and its employees in the county.

Here we make a significant qualification. NPC received an estimated 54.8% of its funding from sources in Navajo County. These monies came from students living in the county, from private sources located within the county, and from state and local taxes.[4] Had other industries received these monies rather than NPC, income effects would have still been created in the economy. This scenario is commonly known as a counterfactual outcome, *i.e.*, what has not happened but what would have happened if a given event – in this case, the expenditure of local funds on NPC – had not occurred. In economic analysis, impacts that occur under counterfactual conditions are used to offset the impacts that actually occur in order to derive the true impact of the event under analysis.

For NPC, we calculate counterfactual outcomes by modeling the local monies spent on the college as regular spending on consumer goods and savings. Our assumption is that, had students not spent money on the college, they would have used that money instead to buy consumer goods. Similarly, had the monies that taxpayers spent on NPC been returned to them in the form of a tax decrease, we assume that they too would have spent that money on consumer goods. Our approach, therefore, is to establish the total amount spent by local students and taxpayers on NPC, map this to the detailed sectors of the SAM model using national household expenditure coefficients, and scale the spending vector to reflect the change in local spending only. Finally, we run the local spending through the SAM model's regional multiplier matrix to derive initial and multiplier effects, and then we convert the sales figures to income. The income effects of this new consumer spending are shown as negative values in the row labeled "Less alternative uses of fund" in Table 2.1.

The net total income impact of NPC spending can now be computed. As shown in the last row of Table 2.1, the net impact is approximately $17 million in labor income and $649,937 in non-labor

[4] Local taxpayers pay state taxes, and it is thereby fair to assume that a portion of the state funds received by NPC comes from local sources. The portion of state revenue paid by local taxpayers is estimated by applying the ratio of regional earnings to total earnings in the state.

income. The overall total is $17.6 million, representing the added income created in the regional economy as a result of NPC operations.

2.2 Student spending impact

Approximately 19 NPC students relocated to Navajo County to attend college in FY 2013-14. These students spent money at local businesses to purchase groceries, rent accommodation, pay for transportation, and so on. The expenditures of NPC's non-local students supported local jobs and created new income in the regional economy.[5]

The average living expenses of students who relocated to Navajo County appears in the first section of Table 2.2, equal to $13,576 per student. Note that this figure excludes expenses for books and supplies, since many of these monies are already reflected in the operations impact discussed in the previous section. Multiplying the $13,576 in annual costs by the number of students who relocated to the county (19 students) generates gross sales of $254,034.

Table 2.2: Average student cost of attendance and total sales generated by NPC's non-local students in Navajo County, 2013-14

Room and board	$8,076
Personal expenses	$5,500
Total expenses per student (A)	**$13,576**
Number of NPC students who relocated to county (B)	19
Gross sales generated by students who relocated (A * B)	$254,034

Source: Data on the cost of attendance and the number of students who relocated supplied by NPC.

Estimating the impacts generated by the $254,034 in student spending follows a procedure similar to that of the operations impact described above. We begin by mapping the $254,034 in sales to the industry sectors in the IO model, apply RPCs to reflect local spending only, and run the net sales figures through the SAM model to derive multiplier effects. Finally, we convert the results to income through the application of income-to-sales ratios.

Table 2.3 presents the results. Unlike the previous subsections, the initial effect is purely sales-oriented and there is no change in labor or non-labor income. The impact of out-of-region student spending thus falls entirely under the multiplier effect. The total impact of out-of-region student spending is $75,368 in added regional income. This value represents the direct added income created at the businesses patronized by the students, the indirect added income created by the supply chain of those businesses, and the increased spending of the household sector throughout the regional economy as a result of the direct and indirect effects.

[5] Online students and students who commuted to Navajo County are not considered in this calculation because their living expenses predominantly occurred in the region where they resided.

Table 2.3: NPC student spending impact, 2013-14

	Labor income (thousands)	Non-labor income (thousands)	Total income (thousands)	% of total income in county
Total income in county	$1,462,068	$847,657	$2,309,725	100.0%
Initial effect	**$0**	**$0**	**$0**	**<0.1%**
Multiplier effect				
Direct effect	$38	$24	$61	<0.1%
Indirect effect	$2	$1	$3	<0.1%
Induced effect	$6	$5	$11	<0.1%
Total multiplier effect	**$46**	**$30**	**$75**	**<0.1%**
Total impact (initial + multiplier)	**$46**	**$30**	**$75**	**<0.1%**

Source: EMSI IO model.

2.3 Student productivity impact

NPC's greatest economic impact stems from the education, skills training, and career enhancement that it provides. Since it was established, the college has supplied skills training to students who have subsequently entered or re-entered the regional workforce. As these skills accumulated, Navajo County's stock of human capital expanded, boosting the competiveness of existing industries, attracting new industries, and generally enlarging overall output. The sum of all these several and varied impacts, measured in terms of added regional income, constitutes the total impact of current and past NPC student productivity on the Navajo County economy.

The student productivity impact differs from the college operations impact and the student spending impact in one fundamental way. Whereas the impacts of college operations and student spending depend on an annually-renewed injection of new sales in the local economy, the student productivity impact is the result of years of past instruction and the associated workforce accumulation of NPC skills. Should NPC cease to exist, the college operations impact and the student spending impact would also immediately cease to exist; however, the impact of the college's former students would continue, as long as those students remained active in the workforce. Over time, though, students would leave the workforce, and the expanded economic output that they provided through their increased productivity would leave with them.

The initial effect of student productivity comprises two main components. The first and largest of these is the added labor income (*i.e.*, higher wages) of former NPC students. Higher wages occur as the increased productivity of workers leads to greater business output. The reward to increased productivity does not stop there, however. Skilled workers make capital goods (*e.g.*, buildings, production facilities, equipment, *etc.*) more productive too, thereby increasing the return on capital in the form of higher profits. The second component of the initial effect thus comprises the added non-labor income (*i.e.*, higher profits) of the businesses that employ former NPC students.

The first step in estimating the initial effect of student productivity is to determine the added labor income stemming from the students' higher wages. We begin by assembling the record of NPC's

historical student headcount (both credit and non-credit) over the past 30 years,[6] from 1984-85 to 2013-14. From this vector of historical enrollments we remove the number of students who are not currently active in the regional workforce, whether because they're still enrolled in education, or because they're unemployed, employed but working in a different region, or out of the workforce completely due to retirement or death. We estimate the historical employment patterns of students in the county using the following sets of data or assumptions: 1) a set of settling-in factors to determine how long it takes the average student to settle into a career;[7] 2) death, retirement, and unemployment rates from the National Center for Health Statistics, the Social Security Administration, and the Bureau of Labor Statistics; and 3) regional migration data from the U.S. Census Bureau. The end result of these several computations is an estimate of the portion of students who were still actively employed in the county as of FY 2013-14.

The next step is to transition from the number of students who were still employed in the county to the number of skills they acquired from NPC. The students' production of credit hour equivalents (CHEs) serves as a reasonable proxy for accumulated skills. Table 1.4 in Chapter 1 provides the average number of CHEs completed per student in 2013-14, equal to 8.2 CHEs. Using this figure as proxy for previous years, we multiply the 8.2 average CHEs per student by the number of students still active in the workforce to derive an estimate of the number of NPC CHEs that were present in the workforce during the analysis year.[8] The result – 1.4 million CHEs – appears in the top row of Table 2.4.

Table 2.4: Number of NPC CHEs in workforce and initial labor income created in county

Number of CHEs in workforce	1,352,560
Average value per CHE	$226
Initial labor income, gross	**$305,645,837**
Percent reduction for alternative education opportunities	20%
Percent reduction for adjustment for substitution effects	50%
Initial labor income, net	**$122,213,028**

Source: EMSI college impact model.

The next row in Table 2.4 shows the average value per CHE, equal to $226. This value represents the average increase in wages that former NPC students received during the analysis year for every

[6] We apply a 30-year time horizon because the data on students who attended NPC prior to 1984-85 is less reliable, and because most of the students whom NPC served more than 30 years ago had left the regional workforce by 2013-14.

[7] Settling-in factors are used to delay the onset of the benefits to students in order to allow time for them to find employment and settle into their careers. In the absence of hard data, we assume a range between one and three years for students who graduate with a certificate or a degree, and between one and five years for returning students and transfer track students. Workforce and professional development students are usually already employed while attending college, so they experience no delay in the onset of their benefits.

[8] Students who enroll at NPC more than one year were counted at least twice – if not more – in the historical enrollment data. However, CHEs remain distinct regardless of when and by whom they were earned, so there is no duplication in the CHE counts.

CHE they completed at the college. The value per CHE varies depending on the students' age, with the highest value applied to the CHE production of students who had been employed the longest by FY 2013-14, and the lowest value per CHE applied to students who were just entering the workforce. More information on the theory and calculations behind the value per CHE appears in Appendix 4. In determining the amount of added labor income attributable to former students, we multiply the CHE production of NPC's former students in each year of the historical time horizon times the corresponding average value per CHE for that year, then sum the products together. This calculation yields approximately $305.6 million in gross labor income in increased wages received by former students in FY 2013-14 (as shown in Table 2.4).

The next two rows in the table show two adjustments that we make to account for counterfactual outcomes. As discussed above, counterfactual outcomes in economic analysis represent what would have happened if a given event had not occurred. The event in this case is the training provided by NPC and subsequent influx of skilled labor into the local economy. The first counterfactual scenario that we address is the adjustment for alternative education opportunities. Our assumption is that, if a portion of the students could have received training even if NPC did not exist, the higher wages that accrue to those students cannot be counted as added labor income in the county. The adjustment for alternative education opportunities amounts to an 20% reduction of the $305.6 million in added labor income, meaning that 20% of the added labor income would have been generated in the county anyway, even if NPC did not exist. For more information on the calculation of the alternative education variable, see Appendix 5.

The other adjustment in Table 2.4 accounts for the substitution of workers. Suppose NPC did not exist and in consequence there were fewer skilled workers in the county. Businesses could still satisfy some of their need for skilled labor by recruiting from outside Navajo County. We refer to this phenomenon as the out-of-region worker substitution effect. Lacking exact information on its possible magnitude, we set the value of out-of-region worker substitution at 50%. In other words, of the jobs that students fill at local businesses, we assume 50% of them could have been filled by workers recruited from outside the county if NPC did not exist.[9] With the 50% adjustment, the net labor income added to the economy comes to $122.2 million, as shown in Table 2.4.

The $122.2 million in added labor income appears under the initial effect in the "Labor income" column of Table 2.5. To this we add an estimate for initial non-labor income. As discussed earlier in this section, businesses that employ former NPC students see higher profits as a result of the increased productivity of their capital assets. To estimate this additional income, we allocate the initial increase in labor income ($122.2 million) to the specific NAICS six-digit industry sectors where former NPC students are employed. This allocation entails a process that maps NPC's

[9] For a sensitivity analysis of the substitution variable, see Chapter 4.

completers[10] to the detailed occupations for which those completers have been trained, and then maps the detailed occupations to the six-digit industry sectors in the regional SAM model. Completer data comes from the Integrated Postsecondary Education Data System (IPEDS), which organizes NPC program completions according to the Classification of Instructional Programs (CIP) developed by the National Center for Education Statistics (NCES). Using a crosswalk created by NCES and the Bureau of Labor Statistics (BLS), we map the breakdown of NPC completers by CIP code to the approximately 700 detailed occupations in the Standard Occupational Classification (SOC) system used by the BLS. We then allocate the $122.2 million in initial labor income effects proportionately to the SOC framework based on the occupational distribution of the completions. Finally, we apply a matrix of wages by industry and by occupation from the regional SAM model to map the detailed occupational distribution of the $122.2 million to the NAICS six-digit industry sectors of the model.[11]

Once these allocations are complete, we apply the ratio of non-labor to labor income provided by the SAM model for each sector to our estimate of initial labor income. This computation yields an estimated $43.3 million in non-labor income attributable to the former NPC students. Summing initial labor and non-labor income together provides the total initial effect of student productivity in the Navajo County economy, equal to approximately $165.5 million.

Table 2.5: Student productivity impact

	Labor income (thousands)	Non-labor income (thousands)	Total income (thousands)	% of total income in county
Total income in county	$1,462,068	$847,657	$2,309,725	100.0%
Initial effect	**$122,213**	**$43,289**	**$165,502**	**7.2%**
Multiplier effect				
Direct effect	$4,531	$2,275	$6,806	0.3%
Indirect effect	$239	$138	$376	<0.1%
Induced effect	$23,383	$8,632	$32,015	1.4%
Total multiplier effect	**$28,153**	**$11,044**	**$39,198**	**1.7%**
Total impact (initial + multiplier)	**$150,366**	**$54,334**	**$204,700**	**8.9%**

Source: EMSI IO model.

The next few rows of Table 2.5 show the multiplier effects of student productivity. Multiplier effects occur as students generate an increased demand for consumer goods and services through the expenditure of their higher wages. Further, as the industries where NPC students are employed increase their output, there is a corresponding increase in the demand for input from the industries

[10] The Integrated Postsecondary Education Data System (IPEDS) defines a completer as the following: "A student who receives a degree, diploma, certificate, or other formal award. In order to be considered a completer, the degree/award must actually be conferred." IPEDS Glossary, accessed July 2013, http://nces.ed.gov/ipeds/glossary/?text=1.

[11] For example, if the regional SAM model indicates that 20% of wages paid to workers in SOC 51-4121 (Welders) occur in NAICS 332313 (Plate Work Manufacturing), then we allocate 20% of the initial labor income effect under SOC 51-4121 to NAICS 332313.

in the employers' supply chain. Together, the incomes generated by the expansions in business input purchases and household spending constitute the multiplier effect of the increased productivity of former NPC students.

To estimate multiplier effects, we convert the industry-specific income figures generated through the initial effect to regional sales using sales-to-income ratios from the SAM model. We then run the values through the SAM's multiplier matrix to determine the corresponding increases in industry output that occur in the county. Finally, we convert all increases in regional sales back to income using the income-to-sales ratios supplied by the SAM model. The final results are $28.2 million in labor income and $11 million in non-labor income, for an overall total of $39.2 million in multiplier effects. The grand total impact of student productivity thus comes to $204.7 million, the sum of all initial and multiplier labor and non-labor income effects. The total figures appear in the last row of Table 2.5.

2.4 Summary of income impacts

Table 2.6 displays the grand total of NPC's impact on Navajo County in 2013-14, including the college operations impact, the student spending impact, and the student productivity impact.

Table 2.6: NPC total impact, 2013-14

	Total (thousands)	% of Total
Total income in county	$2,309,725	100.0%
College operations impact	$17,644	0.8%
Student spending impact	$75	<0.1%
Student productivity impact	$204,700	8.9%
Total	**$222,419**	**9.6%**

Source: EMSI college impact model.

These results demonstrate several important points. First, NPC creates regional economic impacts through its own operations spending, the spending of its non-local students, and through the increase in productivity as former NPC students remain active in the regional workforce. Second, the student productivity impact is by far the largest and most important impact of NPC, stemming from higher incomes of students and their employers. And third, regional income in Navajo County would be substantially lower without the educational activities of NPC.

Calculating Job Equivalents Based on Income

In this study the impacts of NPC on the regional economy are expressed in terms of income, specifically, the added income that would not have occurred in the county if the college did not exist. Added income means that there is more money to spend, and increased spending means an increased demand for goods and services. Businesses hire more people to meet this demand, and thus jobs are created.

Not every job is the same, however. Some jobs pay more, others less. Some are full-time, others are part-time. Some jobs are year-round, others are temporary. Deciding what constitutes an actual job, therefore, is difficult to do. To address this problem, this study counts all jobs equally and reports them in terms of job equivalents, i.e., the number of average-wage jobs in the county that a given amount of income could potentially support. Job equivalents are calculated by dividing the added income created by the college and its students by the average income per worker in the county.

Based on the added income figures from Table 2.6, the job equivalents supported by the activities of NPC and its students are as follows:

- *College operations impact = **472** job equivalents*
- *Student spending impact = **2** job equivalents*
- *Student productivity impact = **5,481** job equivalents*

*Overall, the income created by NPC during the analysis year supported **5,955** average-wage jobs in the county.*

Chapter 3: Investment Analysis

Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile. If costs outweigh benefits, then the investment will lose money and is thus considered infeasible. In this chapter, we consider NPC as an investment from the perspectives of students, society, and taxpayers. The backdrop for the investment analysis for society and taxpayers is the entire state of Arizona.

3.1 Student perspective

Analyzing the benefits and costs of education from the perspective of students is the most obvious – they give up time and money to go to college in return for a lifetime of higher income. The cost component of the analysis thus comprises the monies students pay (in the form of tuition and fees and forgone time and money), and the benefit component focuses on the extent to which the students' incomes increase as a result of their education.

3.1.1 Calculating student costs

Student costs consist of two main items: direct outlays and opportunity costs. Direct outlays include tuition and fees, equal to $2.3 million from Table 1.2. Direct outlays also include the cost of books and supplies. On average, full-time students spent $1,400 each on books and supplies during the reporting year.[12] Multiplying this figure times the number of full-time equivalents (FTEs) produced by NPC in 2013-14[13] generates a total cost of $2.7 million for books and supplies.

Opportunity cost is the most difficult component of student costs to estimate. It measures the value of time and earnings forgone by students who go to college rather than work. To calculate it, we need to know the difference between the students' full earning potential and what they actually earn while attending college.

We derive the students' full earning potential by weighting the average annual income levels in Table 1.7 according to the education level breakdown of the student population when they first enrolled.[14] However, the income levels in Table 1.7 reflect what average workers earn at the midpoint of their careers, not while attending college. Because of this, we adjust the income levels to the average age

[12] Based on the data supplied by NPC.

[13] A single FTE is equal to 30 CHEs, so there were 1,909 FTEs produced by NPC students in 2013-14, equal to 57,269 CHEs divided by 30 (excluding the CHE production of personal enrichment students).

[14] Based on the number of students who reported their entry level of education to NPC.

of the student population (32) to better reflect their wages at their current age.[15] This calculation yields an average full earning potential of $23,001 per student.

In determining what students earn while attending college, an important factor to consider is the time that they actually spend at college, since this is the only time that they are required to give up a portion of their earnings. We use the students' CHE production as a proxy for time, under the assumption that the more CHEs students earn, the less time they have to work, and, consequently, the greater their forgone earnings. Overall, NPC students earned an average of 8.2 CHEs per student (excluding personal enrichment students), which is approximately equal to 27% of a full academic year.[16] We thus include no more than $6,295 (or 27%) of the students' full earning potential in the opportunity cost calculations.

Another factor to consider is the students' employment status while attending college. NPC estimates that 75% of its students are employed. For the 25% that are not working, we assume that they are either seeking work or planning to seek work once they complete their educational goals (with the exception of personal enrichment students, who are not included in this calculation). By choosing to go to college, therefore, non-working students give up everything that they can potentially earn during the academic year (*i.e.*, the $6,295). The total value of their forgone income thus comes to $11 million.

Working students are able to maintain all or part of their income while enrolled. However, many of them hold jobs that pay less than statistical averages, usually because those are the only jobs they can find that accommodate their course schedule. These jobs tend to be at entry level, such as restaurant servers or cashiers. To account for this, we assume that working students hold jobs that pay 58% of what they would have earned had they chosen to work full-time rather than go to college.[17] The remaining 42% comprises the percent of their full earning potential that they forgo. Obviously this assumption varies by person – some students forego more and others less. Without knowing the actual jobs that students hold while attending, however, the 42% in forgone earnings serves as a reasonable average.

Working students also give up a portion of their leisure time in order to go to school, and mainstream theory places a value on this.[18] According to the Bureau of Labor Statistics American

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[15] We use the lifecycle earnings function identified by Jacob Mincer to scale the income levels to the students' current age. See Jacob Mincer, "Investment in Human Capital and Personal Income Distribution," *Journal of Political Economy,* vol. 66 issue 4, August 1958: 281-302. Further discussion on the Mincer function and its role in calculating the students' return on investment appears later in this chapter and in Appendix 4.

[16] Equal to 8.2 CHEs divided by 30, the assumed number of CHEs in a full-time academic year.

[17] The 58% assumption is based on the average hourly wage of the jobs most commonly held by working students divided by the national average hourly wage. Occupational wage estimates are published by the Bureau of Labor Statistics (see http://www.bls.gov/oes/current/oes_nat.htm).

[18] See James M. Henderson and Richard E. Quandt, *Microeconomic Theory: A Mathematical Approach* (New York: McGraw-Hill Book Company, 1971).

Time Use Survey, students forgo up to 1.4 hours of leisure time per day.[19] Assuming that an hour of leisure is equal in value to an hour of work, we derive the total cost of leisure by multiplying the number of leisure hours foregone during the academic year by the average hourly pay of the students' full earning potential. For working students, therefore, their total opportunity cost comes to $19.6 million, equal to the sum of their foregone income ($14 million) and forgone leisure time ($5.7 million).

The steps leading up to the calculation of student costs appear in Table 3.1. Direct outlays amount to $2.5 million, the sum of tuition and fees ($2.3 million) and books and supplies ($2.7 million), less $202,300 in direct outlays for personal enrichment students (these students are excluded from the cost calculations). Opportunity costs for working and non-working students amount to $28.4 million, excluding $2.2 million in offsetting residual aid that is paid directly to students. Summing all values together yields a total of $33.1 million in student costs.

Table 3.1: NPC student costs, 2013-14 (thousands)

Direct outlays	
Tuition and fees	$2,295
Books and supplies	$2,673
Less direct outlays of personal enrichment students	-$202
Total direct outlays	**$4,765**
Opportunity costs	
Earnings forgone by non-working students	$10,977
Earnings forgone by working students	$13,963
Value of leisure time forgone by working students	$5,660
Less residual aid	-$2,241
Total opportunity costs	**$28,359**
Total student costs	**$33,125**

Source: Based on data supplied by NPC and outputs of the EMSI college impact model.

3.1.2 Linking education to earnings

Having estimated the costs of education to students, we weigh these costs against the benefits that students receive in return. The relationship between education and earnings is well documented and forms the basis for determining student benefits. As shown in Table 1.7, mean income levels at the midpoint of the average-aged worker's career increase as people achieve higher levels of education. The differences between income levels define the upper bound benefits of moving from one education level to the next.[20]

[19] "Charts by Topic: Leisure and sports activities," Bureau of Labor Statistics American Time Use Survey, last modified November 2012, accessed July 2013, http://www.bls.gov/TUS/CHARTS/LEISURE.HTM.

[20] As discussed in Appendix 4, the upper bound benefits of education must be controlled for participant characteristics that also correlate with future wage increases, including inherent ability, socioeconomic status, and family background.

A key component in determining the students' return on investment is the value of their future benefits stream, *i.e.*, what they can expect to earn in return for the investment they make in education. We calculate the future benefits stream to NPC's 2013-14 students first by determining their average annual increase in income, equal to $15 million. This value represents the higher income that accrues to students at the midpoint of their careers and is calculated based on the marginal wage increases of the CHEs that students complete while attending college. For a full description of the methodology used to derive the $15 million, see Appendix 4.

The second step is to project the $15 million annual increase in income into the future, for as long as students remain in the workforce. We do this by applying a set of scalars derived from the slope of the earnings function developed by Jacob Mincer to predict the change in earnings at each age in an individual's working career.[21] Appendix 4 provides more information on the Mincer function and how it is used to predict future earnings growth. With the $15 million representing the students' higher earnings at the midpoint of their careers, we apply scalars from the Mincer function to yield a stream of projected future benefits that gradually increase from the time students enter the workforce, come to a peak shortly after the career midpoint, and then dampen slightly as students approach retirement at age 67. This earnings stream appears in Column 2 of Table 3.2.

Table 3.2: Projected benefits and costs, student perspective

1	2	3	4	5	6
Year	Gross added income to students (millions)	Less adjustments (millions)*	Net added income to students (millions)	Student costs (millions)	Net cash flow (millions)
0	$12.9	15%	$2.0	$33.1	-$31.1
1	$13.3	24%	$3.1	$0.0	$3.1
2	$13.7	33%	$4.5	$0.0	$4.5
3	$14.0	45%	$6.2	$0.0	$6.2
4	$14.3	57%	$8.2	$0.0	$8.2
5	$14.7	90%	$13.3	$0.0	$13.3
6	$15.0	91%	$13.6	$0.0	$13.6
7	$15.3	91%	$13.9	$0.0	$13.9
8	$15.6	91%	$14.1	$0.0	$14.1
9	$15.8	91%	$14.4	$0.0	$14.4
10	$16.1	91%	$14.6	$0.0	$14.6
11	$16.3	91%	$14.8	$0.0	$14.8
12	$16.5	91%	$15.0	$0.0	$15.0
13	$16.7	91%	$15.2	$0.0	$15.2
14	$16.9	91%	$15.3	$0.0	$15.3
15	$17.0	91%	$15.4	$0.0	$15.4
16	$17.1	90%	$15.5	$0.0	$15.5

[21] See Mincer, 1958.

Table 3.2: Projected benefits and costs, student perspective

1	2	3	4	5	6
Year	Gross added income to students (millions)	Less adjustments (millions)*	Net added income to students (millions)	Student costs (millions)	Net cash flow (millions)
17	$17.2	90%	$15.5	$0.0	$15.5
18	$17.3	90%	$15.6	$0.0	$15.6
19	$17.4	90%	$15.6	$0.0	$15.6
20	$17.4	89%	$15.5	$0.0	$15.5
21	$17.4	89%	$15.5	$0.0	$15.5
22	$17.4	89%	$15.4	$0.0	$15.4
23	$17.3	88%	$15.3	$0.0	$15.3
24	$17.2	88%	$15.1	$0.0	$15.1
25	$17.2	87%	$14.9	$0.0	$14.9
26	$17.0	87%	$14.7	$0.0	$14.7
27	$16.9	86%	$14.5	$0.0	$14.5
28	$16.7	85%	$14.3	$0.0	$14.3
29	$16.5	84%	$14.0	$0.0	$14.0
30	$16.3	84%	$13.7	$0.0	$13.7
31	$16.1	83%	$13.3	$0.0	$13.3
32	$15.9	82%	$13.0	$0.0	$13.0
33	$15.3	25%	$3.9	$0.0	$3.9
34	$15.0	7%	$1.0	$0.0	$1.0
Present value			**$216.7**	**$33.1**	**$183.6**
Internal rate of return					**27.2%**
Benefit-cost ratio					**6.5**
Payback period (no. of years)					**5.7**

* Includes the "settling-in" factors and attrition.

Source: EMSI college impact model.

As shown in Table 3.2, the $15 million in gross added income occurs at Year 6, which is the approximate midpoint of the students' future working careers, given the average age of the student population and an assumed retirement age of 67. In accordance with Mincer function, the gross added income that accrues to students in the years leading up to the midpoint is less than $15 million, and the gross added income in the years after the midpoint is greater than $15 million.

The final step in calculating the students' future benefits stream is to net out the potential benefits generated by students who are either not yet active in the workforce or who leave the workforce over time. This adjustment appears in Column 3 of Table 3.2 and represents the percentage of the total 2013-14 student population that will be employed in the workforce in a given year. Note that the percentages in the first five years of the time horizon are relatively lower than those in subsequent years. This is because many students delay their entry into the workforce, either because they are still enrolled at the college or because they are unable to find a job immediately upon graduation. Accordingly, we apply a set of "settling-in" factors to account for the time needed by

students to find employment and settle into their careers. As discussed in Chapter 2, settling-in factors delay the onset of the benefits by one to three years for students who graduate with a certificate or a degree, and by one to five years for returning students and transfer track students. We apply no settling-in factors to the benefits for workforce and professional development students because the majority of them are employed while attending.

Beyond the first five years of the time horizon, students will leave the workforce over time for any number of reasons, whether because of death, retirement, or unemployment. We estimate the rate of attrition using the same data and assumptions applied in the calculation of the attrition rate in the economic impact analysis of Chapter 2.[22] The likelihood that students leave the workforce increases as they age, so the attrition rate is more aggressive near the end of the time horizon than in the beginning. Column 4 of Table 3.2 shows the net added income to students after accounting for both the settling-in patterns and attrition.

3.1.3 Return on investment to students

Having estimated the students' costs and their future benefits stream, the next step is to discount the results to the present to reflect the time value of money. For the student perspective we assume a discount rate of 4.5% (see the "Discount Rate" box).[23] The present value of the benefits is then compared to student costs to derive the investment analysis results, expressed in terms of a benefit-cost ratio, rate of return, and payback period. The investment is feasible if returns match or exceed the minimum threshold values, *i.e.*, a benefit-cost ratio greater than 1, a rate of return that exceeds the discount rate, and a reasonably short payback period.

[22] See the discussion of the student productivity effect in Chapter 2. The main sources for deriving the attrition rate are the National Center for Health Statistics, the Social Security Administration, and the Bureau of Labor Statistics. Note that we do not account for migration patterns in the student investment analysis because the higher earnings that students receive as a result of their education will accrue to them regardless of where they find employment.

[23] The student discount rate is derived from the baseline forecasts for the ten-year zero coupon bond discount rate published by the Congressional Budget Office. See the Congressional Budget Office, Student Loan and Pell Grant Programs - March 2012 Baseline, Congressional Budget Office Publications, last modified March 13, 2012, accessed July 2013, http://www.cbo.gov/sites/default/files/cbofiles/attachments/43054_StudentLoanPellGrantPrograms.pdf.

Discount Rate

The discount rate is a rate of interest that converts future costs and benefits to present values. For example, $1,000 in higher earnings realized 30 years in the future is worth much less than $1,000 in the present. All future values must therefore be expressed in present value terms in order to compare them with investments (i.e., costs) made today. The selection of an appropriate discount rate, however, can become an arbitrary and controversial undertaking. As suggested in economic theory, the discount rate should reflect the investor's opportunity cost of capital, i.e., the rate of return one could reasonably expect to obtain from alternative investment schemes. In this study we assume a 4.5% discount rate from the student perspective and a 1.1% discount rate from the taxpayer perspective. The discount rate for taxpayers is lower than it is for students because governments are large and can therefore spread their risks over a larger and more diverse investment portfolio than the private sector can.

In Table 3.2, the net added income of NPC students yields a cumulative discounted sum of approximately $216.7 million, the present value of all of the future income increments (see the bottom section of Column 4). This may also be interpreted as the gross capital asset value of the students' higher income stream. In effect, the aggregate 2013-14 student body is rewarded for their investment in NPC with a capital asset valued at $216.7 million.

The students' cost of attending NPC is shown in Column 5 of Table 3.2, equal to a present value of $33.1 million. Note that costs only occur in the single analysis year and are thus already in current year dollars. Comparing the cost with the present value of benefits yields a student benefit-cost ratio of 6.5 (equal to $216.7 million in benefits divided by $33.1 million in costs).

Another way to compare the same benefits stream and associated cost is to compute the rate of return. The rate of return indicates the interest rate that a bank would have to pay a depositor to yield an equally attractive stream of future payments.[24] Table 3.2 shows NPC students earning average returns of 27.2% on their investment of time and money. This is a favorable return compared, for example, to approximately 1% on a standard bank savings account, or 7% on stocks and bonds (thirty-year average return).

Note that returns reported in this study are real returns, not nominal. When a bank promises to pay a certain rate of interest on a savings account, it employs an implicitly nominal rate. Bonds operate in a similar manner. If it turns out that the inflation rate is higher than the stated rate of return, then money is lost in real terms. In contrast, a real rate of return is on top of inflation. For example, if inflation is running at 3% and a nominal percentage of 5% is paid, then the real rate of return on the investment is only 2%. In Table 3.2, the 27.2% student rate of return is a real rate. With an inflation

[24] Rates of return are computed using the familiar "internal rate of return" calculation. Note that, with a bank deposit or stock market investment, the depositor puts up a principal, receives in return a stream of periodic payments, and then recovers the principal at the end. Someone who invests in education, on the other hand, receives a stream of periodic payments that include the recovery of the principal as part of the periodic payments, but there is no principal recovery at the end. These differences notwithstanding, comparable cash flows for both bank and education investors yield the same internal rate of return.

rate of 2.5% (the average rate reported over the past 20 years as per the U.S. Department of Commerce, Consumer Price Index), the corresponding nominal rate of return is 29.7%, substantially higher than what is reported in Table 3.2.

The payback period is defined as the length of time it takes to entirely recoup the initial investment.[25] Beyond that point, returns are what economists would call "pure costless rent." As indicated in Table 3.2, students at NPC see, on average, a payback period of 5.7 years on their forgone earnings and out-of-pocket costs.

3.2 Social perspective

Society as a whole in Arizona benefits from the education that NPC provides through the income that students create in the state and through the savings that they generate through their improved lifestyles. To receive these benefits, however, members of society must pay money and forgo services that they would have otherwise enjoyed if NPC did not exist. Society's investment in NPC stretches across a number of investor groups, from students to employers to taxpayers. We weigh the benefits generated by NPC to society against the total societal costs of generating those benefits. The total societal costs include all NPC expenditures, all student expenditures, and all student opportunity costs, totaling $59.1 million (= $28.2 million in NPC expenditures + $2.5 million in student expenditures + $28.4 million in student opportunity costs).

On the benefits side, any benefits that accrue to society as a whole – including students, employers, taxpayers, and anyone else who stands to benefit from the activities of NPC – are counted as benefits under the social perspective. We group these benefits under the following broad headings: 1) increased income in the state, and 2) social externalities stemming from improved health, reduced crime, and reduced unemployment in the state (see the "Beekeeper Analogy" box for a discussion of externalities). Both of these benefits components are described more fully in the following sections.

[25] Payback analysis is generally used by the business community to rank alternative investments when safety of investments is an issue. Its greatest drawback is that it takes no account of the time value of money. The payback period is calculated by dividing the cost of the investment by the net return per period. In this study, the cost of the investment includes tuition and fees plus the opportunity cost of time – it does not take into account student living expenses or interest on loans.

Beekeeper Analogy

Beekeepers provide a classic example of positive externalities (sometimes called "neighborhood effects"). The beekeeper's intention is to make money selling honey. Like any other business, receipts must at least cover operating costs. If they don't, the business shuts down.

But from society's standpoint there is more. Flowers provide the nectar that bees need for honey production, and smart beekeepers locate near flowering sources such as orchards. Nearby orchard owners, in turn, benefit as the bees spread the pollen necessary for orchard growth and fruit production. This is an uncompensated external benefit of beekeeping, and economists have long recognized that society might actually do well to subsidize positive externalities such as beekeeping.

Educational institutions are like beekeepers. While their principal aim is to provide education and raise people's incomes, in the process an array of external benefits are created. Students' health and lifestyles are improved, and society indirectly benefits just as orchard owners indirectly benefit from beekeepers. Aiming at a more complete accounting of the benefits of taxpayer expenditures on education, the college impact model tracks and accounts for many of these external social benefits.

3.2.1 Income growth in the state

In the process of absorbing the newly-acquired skills of NPC students, not only does the productivity of Arizona's workforce increase, but so does the productivity of its physical capital and assorted infrastructure. Students earn more because of the skills they learned while attending college, and businesses earn more because student skills make capital more productive (*i.e.*, buildings, machinery, and everything else). This in turn raises profits and other business property income. Together, increases in labor and non-labor (*i.e.*, capital) income are considered the effect of a skilled workforce.

Estimating the impact of NPC on income growth in the state begins with the present value of the students' future income stream, which is displayed in Column 4 of Table 3.2. To this we apply a multiplier derived from EMSI's SAM model to estimate the added labor income created in the state as students and businesses spend their higher incomes.[26] As labor income increases, so does non-labor income, which consists of monies gained through investments. To calculate the growth in non-labor income, we multiply the increase in labor income by a ratio of Arizona's Gross State Product to total labor income in the state.

The sum of the students' higher incomes, multiplier effect, and increases in non-labor income comprises the gross added income that accrues to society as a whole in the state of Arizona. Not all of this income may be counted as benefits to the state, however. Some students leave the state during the course of their careers, and the higher income they receive as a result of their education leaves the state with them. To account for this dynamic, we combine student settlement data from

[26] For a full description of the EMSI SAM model, see Appendix 3.

NPC with data on migration patterns from the U.S. Census Bureau to estimate the number of students who will leave the state workforce over time.

We apply another reduction factor to account for the students' alternative education opportunities. This is the same adjustment that we use in the calculation of the student productivity impact in Chapter 2 and is designed to account for the counterfactual scenario where NPC does not exist. The assumption in this case is that any benefits generated by students who could have received an education even without NPC cannot be counted as new benefits to society.[27] For this analysis, we assume an alternative education variable of 20%, meaning that 20% of the student population at NPC would have generated benefits anyway even without the college. For more information on the calculation of the alternative education variable, please see Appendix 5.

Another adjustment – the "shutdown point" – nets out benefits that are not directly linked to the state and local government costs of supporting the college. As with the alternative education variable, the purpose of this adjustment is to account for counterfactual scenarios, in this case, the situation where state and local government funding for NPC did not exist. To estimate the shutdown point, we apply a sub-model that simulates the students' demand curve for education by reducing state and local support to zero and progressively increasing student tuition and fees. As student tuition and fees increase, enrollment declines. For NPC, the shutdown point adjustment is 0%, meaning that the college could not operate without taxpayer support. As such, no reduction applies. For more information on the theory and methodology behind the estimation of the shutdown point, see Appendix 7.

After adjusting for attrition, alternative education opportunities, and the shutdown point, we calculate the present value of the future added income that occurs in the state, equal to $567.2 million (this value appears again later in this chapter in Table 3.3). Recall from the discussion of the student return on investment that the present value represents the sum of the future benefits that accrue each year over the course of the time horizon, discounted to current year dollars to account for the time value of money. The discount rate in this case is 1.1%, the real treasury interest rate recommended by the Office for Management and Budget (OMB) for 30-year investments.[28]

3.2.2 Social savings

In addition to the creation of higher income in the state, education is statistically associated with a variety of lifestyle changes that generate social savings, also known as external or incidental benefits of education. These represent the avoided costs that would have otherwise been drawn from private and public resources absent the education provided by NPC. Social benefits appear in Table 3.3 and

[27] A situation in which there were no public institutions in the state is virtually impossible. The adjustment is entirely hypothetical and is used merely to examine NPC in standard investment analysis terms by accounting for benefits that would have occurred anyway, even if the college did not exist.

[28] See the Office of Management and Budget, Real Treasury Interest Rates in "Table of Past Years Discount Rates" from Appendix C of OMB Circular No. A-94 (revised December 2012).

break down into three main categories: 1) health savings, 2) crime savings, and 3) welfare and unemployment savings. Health savings include avoided medical costs, lost productivity, and other effects associated with smoking, alcoholism, obesity, mental illness, and drug abuse. Crime savings consist of avoided costs to the justice system (*i.e.*, police protection, judicial and legal, and corrections), avoided victim costs, and benefits stemming from the added productivity of individuals who would have otherwise been incarcerated. Welfare and unemployment benefits comprise avoided costs due to the reduced number of social assistance and unemployment insurance claims.

The model quantifies social savings by calculating the probability at each education level that individuals will have poor health, commit crimes, or claim welfare and unemployment benefits. Deriving the probabilities involves assembling data from a variety of studies and surveys analyzing the correlation between education and health, crime, welfare, and unemployment at the national and state level. We spread the probabilities across the education ladder and multiply the marginal differences by the number of students who achieved CHEs at each step. The sum of these marginal differences counts as the upper bound measure of the number of students who, due to the education they received at NPC, will not have poor health, commit crimes, or claim welfare and unemployment benefits. We dampen these results by the "ability bias" adjustment discussed earlier in this chapter and in Appendix 4 to account for other factors besides education that influence individual behavior. We then multiply the marginal effects of education times the associated costs of health, crime, welfare, and unemployment.[29] Finally, we apply the same adjustments for attrition, alternative education, and the shutdown point to derive the net savings to society.

[29] For a full list of the data sources used to calculate the social externalities, see Appendix 1. See also Appendix 8 for a more in-depth description of the methodology.

Table 3.3: Present value of the future added income and social savings in the state (thousands)

Added Income	**$567,165**
Social Savings	
Health	
Smoking	$4,390
Alcoholism	$339
Obesity	$2,007
Mental illness	$474
Drug abuse	$372
Total health savings	**$7,582**
Crime	
Criminal Justice System savings	$2,899
Crime victim savings	$255
Added productivity	$601
Total crime savings	**$3,755**
Welfare/unemployment	
Welfare savings	$60
Unemployment savings	$14
Total welfare/unemployment savings	**$73**
Total social savings	**$11,410**
Total, added income + social savings	**$578,575**

Source: EMSI college impact model.

Table 3.3 above displays the results of the analysis. The first row shows the added income created in the state, equal to $567.2 million. Social savings appear next, beginning with a breakdown of savings related to health. These savings amount to a present value of $7.6 million, including savings due to a reduced demand for medical treatment and social services, improved worker productivity and reduced absenteeism, and a reduced number of vehicle crashes and fires induced by alcohol or smoking-related incidents. Crime savings sum to $3.8 million, including savings associated with a reduced number of crime victims, added worker productivity, and reduced expenditures for police and law enforcement, courts and administration of justice, and corrective services. Finally, the present value of the savings related to welfare and unemployment amount to $73,482, stemming from a reduced number of persons in need of income assistance. All told, social savings amounted to $11.4 million in benefits to society as a whole in Arizona.

The sum of the social savings and the added income in the state is $578.6 million, as shown in the bottom row of Table 3.3. These savings accrue for years out into the future, for as long as NPC's 2013-14 students remain in the workforce.

3.2.3 Return on investment to society

Table 3.4 presents the stream of benefits accruing to society and the total societal costs of generating those benefits. The stream of benefits to society and total societal costs produce an internal rate of return of 25.8%. Comparing the present value of the benefits to society and the societal costs, we have a benefit-to-cost ratio of 9.8. This means that for every dollar society invests in a NPC education, whether it is the money spent on day-to-day operations of the college or money spent by students on tuition and fees, an average of $9.80 in benefits will accrue to society.

Table 3.4: Projected benefits and costs, social perspective

1	2	3	4
Year	Benefits to society (millions)	Societal costs (millions)	Net cash flow (millions)
0	$3.4	$101.4	-$55.6
1	$5.3	$0.0	$5.3
2	$7.7	$0.0	$7.7
3	$10.6	$0.0	$10.6
4	$13.9	$0.0	$13.9
5	$22.3	$0.0	$22.3
6	$22.6	$0.0	$22.6
7	$22.9	$0.0	$22.9
8	$23.2	$0.0	$23.2
9	$23.4	$0.0	$23.4
10	$23.7	$0.0	$23.7
11	$23.9	$0.0	$23.9
12	$24.0	$0.0	$24.0
13	$24.2	$0.0	$24.2
14	$24.3	$0.0	$24.3
15	$24.3	$0.0	$24.3
16	$24.4	$0.0	$24.4
17	$24.4	$0.0	$24.4
18	$24.3	$0.0	$24.3
19	$24.3	$0.0	$24.3
20	$24.2	$0.0	$24.2
21	$24.0	$0.0	$24.0
22	$23.9	$0.0	$23.9
23	$23.6	$0.0	$23.6
24	$23.4	$0.0	$23.4
25	$23.1	$0.0	$23.1
26	$22.8	$0.0	$22.8
27	$22.5	$0.0	$22.5
28	$22.1	$0.0	$22.1
29	$21.6	$0.0	$21.6
30	$21.2	$0.0	$21.2
31	$20.7	$0.0	$20.7

Table 3.4: Projected benefits and costs, social perspective

1	2	3	4
Year	Benefits to society (millions)	Societal costs (millions)	Net cash flow (millions)
32	$20.1	$0.0	$20.1
33	$6.0	$0.0	$6.0
34	$1.6	$0.0	$1.6
Present value	**$578.6**	**$59.1$59,056**	**$519.5**
Internal rate of return			**25.8%**
Benefit-cost ratio			**9.8**
Payback period (no. of years)			**5.8**

Source: EMSI college impact model.

3.3 Taxpayer perspective

From the taxpayer perspective, the pivotal step here is to limit the overall public benefits shown in Tables 3.3 and 3.4 to those that specifically accrue to state and local government. For example, benefits resulting from income growth are limited to increased state and local tax payments. Similarly, savings related to improved health, reduced crime, and fewer welfare and unemployment claims are limited to those received strictly by state and local government. In all instances, benefits to private residents, local businesses, or the federal government are excluded.

3.3.1 Benefits to taxpayers

Table 3.5 presents the present value of the benefits to taxpayers. Added tax revenue appears in the first row. These figures are derived by multiplying the income growth figures from Table 3.3 by the prevailing state and local government tax rates in the state. For the social externalities, we claim only the benefits that reduce the demand for government-supported social services, or the benefits resulting from improved productivity among government employees. The present value of future tax revenues and government savings thus comes to approximately $45.8 million.

Table 3.5: Present value of added tax revenue and government savings (thousands)

Added tax revenue	**$41,435**
Government savings	
Health-related savings	$1,304
Crime-related savings	$2,973
Welfare/unemployment-related savings	$73
Total government savings	$4,350
Total taxpayer benefits	**$45,785**

Source: EMSI college impact model.

3.3.2 Return on investment to taxpayers

Taxpayer costs are reported in Table 3.6 and come to $23.9 million, equal to the contribution of state and local government to NPC. In return for their public support, therefore, taxpayers are rewarded with an investment benefit-cost ratio of 1.9 (= $45.8 million ÷ $23.9 million), indicating a profitable investment.

Table 3.6: Projected benefits and costs, taxpayer perspective

1	2	3	4
Year	Benefits to taxpayers (millions)	State and local gov't costs (millions)	Net cash flow (millions)
0	$0.3	$23.9	-$23.6
1	$0.4	$0.0	$0.4
2	$0.6	$0.0	$0.6
3	$0.8	$0.0	$0.8
4	$1.1	$0.0	$1.1
5	$1.8	$0.0	$1.8
6	$1.8	$0.0	$1.8
7	$1.8	$0.0	$1.8
8	$1.8	$0.0	$1.8
9	$1.9	$0.0	$1.9
10	$1.9	$0.0	$1.9
11	$1.9	$0.0	$1.9
12	$1.9	$0.0	$1.9
13	$1.9	$0.0	$1.9
14	$1.9	$0.0	$1.9
15	$1.9	$0.0	$1.9
16	$1.9	$0.0	$1.9
17	$1.9	$0.0	$1.9
18	$1.9	$0.0	$1.9
19	$1.9	$0.0	$1.9
20	$1.9	$0.0	$1.9
21	$1.9	$0.0	$1.9
22	$1.9	$0.0	$1.9
23	$1.9	$0.0	$1.9
24	$1.8	$0.0	$1.8
25	$1.8	$0.0	$1.8
26	$1.8	$0.0	$1.8
27	$1.8	$0.0	$1.8
28	$1.7	$0.0	$1.7
29	$1.7	$0.0	$1.7
30	$1.7	$0.0	$1.7
31	$1.6	$0.0	$1.6
32	$1.6	$0.0	$1.6
33	$0.5	$0.0	$0.5

Table 3.6: Projected benefits and costs, taxpayer perspective

1 Year	2 Benefits to taxpayers (millions)	3 State and local gov't costs (millions)	4 Net cash flow (millions)
34	$0.1	$0.0	$0.1
Present value	**$45.8**	**$23.9**	**$21.9**
Internal rate of return			**5.5%**
Benefit-cost ratio			**1.9**
Payback period (no. of years)			**16.1**

Source: EMSI college impact model.

At 5.5%, the rate of return to state and local taxpayers is also favorable. As above, we assume a 1.1% discount rate when dealing with government investments and public finance issues. This is the return governments are assumed to be able to earn on generally safe investments of unused funds, or alternatively, the interest rate for which governments, as relatively safe borrowers, can obtain funds. A rate of return of 1.1% would mean that the college just pays its own way. In principle, governments could borrow monies used to support NPC and repay the loans out of the resulting added taxes and reduced government expenditures. A rate of return of 5.5%, on the other hand, means that NPC not only pays its own way, but it also generates a surplus that state and local government can use to fund other programs. It is unlikely that other government programs could make such a claim.

3.3.3 With and without social savings

Earlier in this chapter, social benefits attributable to education (reduced crime, lower welfare, lower unemployment, and improved health) were defined as externalities that are incidental to the operations of NPC. Some would question the legitimacy of including these benefits in the calculation of rates of return to education, arguing that only the tangible benefits, *i.e.*, higher income, should be counted. Tables 3.4 and 3.6 are inclusive of social benefits reported as attributable to NPC. Recognizing the other point of view, Table 3.7 shows rates of return for both the social and taxpayer perspectives exclusive of social benefits. As indicated, returns are still above threshold values (a benefit-cost ratio greater than 1.0 and a rate of return greater than 1.1%), confirming that taxpayers receive value from investing in NPC.

Table 3.7: Social and taxpayer perspectives with and without social savings

	Including social savings	Excluding social savings
Social perspective		
Net present value	$519,520	$508,109
Benefit-cost ratio	9.8	9.6
Taxpayer perspective		
Net present value	$21,878	$17,528
Benefit-cost ratio	1.9	1.7
Internal rate of return	5.5%	4.8%
Payback period (no. of years)	16.1	17.4

Source: EMSI college impact model.

3.4 Conclusion

This chapter has shown that NPC is an attractive investment to its major stakeholders – students, society, and taxpayers. Rates of return to students invariably exceed alternative investment opportunities. At the same time, state and local government can take comfort in knowing that its expenditure of taxpayer funds creates a wide range of positive social benefits and, perhaps more importantly, actually returns more to government budgets than it costs. Without these increased tax receipts and public sector savings provided by the educational activities of NPC and its students, state and local government would have to raise taxes to make up for lost revenues and added costs.

Chapter 4: Sensitivity Analysis

Sensitivity analysis is the process by which researchers determine how sensitive the outputs of the model are to variations in the background data and assumptions, especially if there is any uncertainty in the variables. Sensitivity analysis is also useful for identifying a plausible range wherein the results will fall should any of the variables deviate from expectations. In this chapter we test the sensitivity of the model to the following input factors: 1) the alternative education variable, 2) the substitution effect variable, 3) the student employment variables, and 4) the discount rate.

4.1 Alternative education variable

The alternative education variable (20%) accounts for the counterfactual scenario where students would have to seek a similar education elsewhere absent the publicly-funded institutions in the state. Given the difficulty in accurately specifying the alternative education variable, we test the sensitivity of the taxpayer and social investment analysis results to its magnitude. Variations in the alternative education assumption are calculated around base case results listed in the middle column of Table 4.1. Next, the model brackets the base case assumption on either side with a plus or minus 10%, 25%, and 50% variation in assumptions. Analyses are then redone introducing one change at a time, holding all other variables constant. For example, an increase of 10% in the alternative education assumption (from 20% to 22%) reduces the taxpayer perspective rate of return from 5.5% to 5.3%. Likewise, a decrease of 10% (from 20% to 18%) in the assumption increases the rate of return from 5.5% to 5.7%.

Table 4.1: Sensitivity analysis of alternative education variable, taxpayer and social perspective

% variation in assumption	-50%	-25%	-10%	Base Case	10%	25%	50%
Alternative education variable	10%	15%	18%	20%	22%	25%	30%
Taxpayer perspective							
Net present value (millions)	$28	$25	$23	$22	$21	$19	$16
Rate of return	6.5%	6.0%	5.7%	5.5%	5.3%	5.0%	4.5%
Benefit-cost ratio	2.2	2.0	2.0	1.9	1.9	1.8	1.7

Based on this sensitivity analysis, the conclusion can be drawn that NPC investment analysis results from the taxpayer and social perspectives are not very sensitive to relatively large variations in the alternative education variable. As indicated, results are still above their threshold levels (net present value greater than 0, benefit-cost ratio greater than 1, and rate of return greater than the discount rate of 1.1%), even when the alternative education assumption is increased by as much as 50% (from 20% to 30%). The conclusion is that although the assumption is difficult to specify, its impact on overall investment analysis results for the taxpayer and social perspective is not very sensitive.

4.2 Substitution effect variable

The substitution effect variable only affects the student productivity calculation in Table 2.5. In the model we assume a substitution effect variable of 50%, which means that we claim only 50% of the initial labor income generated by increased student productivity. The other 50% we assume would have been created in the county anyway – even without NPC – since the businesses that hired NPC students could have substituted some of these workers with equally-qualified people from outside the county had there been no NPC students to hire.

Table 4.2 presents the results of the sensitivity analysis for the substitution effect variable. As above, the assumption increases and decreases relative to the base case of 50% by the increments indicated in the table. Student productivity impacts attributable to NPC, for example, range from a low of $102.3 million at a -50% variation to a high of $307 million at a +50% variation from the base case assumption. This means that if the substitution variable increases, the impact that we claim as attributable to student productivity increases as well. Nonetheless, the impact of student productivity still remains a sizeable factor in the Navajo County economy, even under the most conservative assumptions.

Table 4.2: Sensitivity analysis of substitution effect variable

% variation in assumption	-50%	-25%	-10%	Base Case	10%	25%	50%
Substitution effect variable	25%	38%	45%	50%	55%	63%	75%
Student productivity impact (millions)	$102	$154	$184	$205	$225	$256	$307

4.3 Student employment variables

Student employment variables are difficult to estimate because many students do not report their employment status or because colleges generally do not collect this kind of information. Employment variables include the following: 1) the percentage of students that are employed while attending college, and 2) the percentage of earnings that working students receive relative to the income they would have received had they not chosen to attend college. Both employment variables affect the investment analysis results from the student perspective.

Students incur substantial expense by attending NPC because of the time they spend not gainfully employed. Some of that cost is recaptured if students remain partially (or fully) employed while attending. It is estimated that 75% of students who reported their employment status are employed, based on data provided by NPC. This variable is tested in the sensitivity analysis by changing it first to 100% and then to 0%.

The second student employment variable is more difficult to estimate. In this study we estimate that students that are working while attending college earn only 58%, on average, of the income that they would have statistically received if not attending NPC. This suggests that many students hold part-time jobs that accommodate their NPC attendance, though it is at an additional cost in terms of receiving a wage that is less than what they might otherwise make. The 58% variable is an estimation

based on the average hourly wages of the most common jobs held by students while attending college relative to the average hourly wages of all occupations in the U.S. The model captures this difference in wages and counts it as part of the opportunity cost of time. As above, the 58% estimate is tested in the sensitivity analysis by changing it to 100% and then to 0%.

The changes generate results summarized in Table 4.3, with "A" defined as the percent of students employed and "B" defined as the percent that students earn relative to their full earning potential. Base case results appear in the shaded row – here the assumptions remain unchanged, with A equal to 75% and B equal to 58%. Sensitivity analysis results are shown in non-shaded rows. Scenario 1 increases A to 100% while holding B constant, Scenario 2 increases B to 100% while holding A constant, Scenario 3 increases both A and B to 100%, and Scenario 4 decreases both A and B to 0%.

Table 4.3: Sensitivity analysis of student employment variables

Variations in assumptions	Net present value (millions)	Internal rate of return	Benefit-cost ratio
Base case: A = 75%, B = 58%	$184	27.2%	6.5
Scenario 1: A = 100%, B = 58%	$188	30.4%	7.6
Scenario 2: A = 75%, B = 100%	$198	41.3%	11.3
Scenario 3: A = 100%, B = 100%	$207	69.4%	21.5
Scenario 4: A = 0%, B = 0%	$170	21.0%	4.7

Note: A = percent of students employed; B = percent earned relative to statistical averages

1. Scenario 1: Increasing the percent of students employed (A) from 75% to 100%, the net present value, internal rate of return, and benefit-cost ratio improve to $188 million, 30.4%, and 7.6, respectively, relative to base case results. Improved results are attributable to a lower opportunity cost of time – all students are employed in this case.
2. Scenario 2: Increasing earnings relative to statistical averages (B) from 58% to 100%, the net present value, internal rate of return, and benefit-cost ratio results improve to $197.5 million, 41.3%, and 11.3, respectively, relative to base case results – a strong improvement, again attributable to a lower opportunity cost of time.
3. Scenario 3: Increasing both assumptions A and B to 100% simultaneously, the net present value, internal rate of return, and benefit-cost ratio improve yet further to $206.6 million, 69.4%, and 21.5, respectively, relative to base case results. This scenario assumes that all students are fully employed and earning full salaries (equal to statistical averages) while attending classes.
4. Scenario 4: Finally, decreasing both A and B to 0% reduces the net present value, internal rate of return, and benefit-cost ratio to $170.2 million, 21.0%, and 4.7, respectively, relative

to base case results. These results are reflective of an increased opportunity cost – none of the students are employed in this case.[30]

It is strongly emphasized in this section that base case results are very attractive in that results are all above their threshold levels. As is clearly demonstrated here, results of the first three alternative scenarios appear much more attractive, although they overstate benefits. Results presented in Chapter 3 are realistic, indicating that investments in NPC generate excellent returns, well above the long-term average percent rates of return in stock and bond markets.

4.4 Discount rate

The discount rate is a rate of interest that converts future monies to their present value. In investment analysis, the discount rate accounts for two fundamental principles: 1) the time value of money, and 2) the level of risk that an investor is willing to accept. Time value of money refers to the value of money after interest or inflation has accrued over a given length of time. An investor must be willing to forgo the use of his money in the present if he wishes to receive compensation for it in the future. The discount rate also addresses the investors' risk preferences by serving as a proxy for the minimum rate of return that the proposed risky asset must be expected to yield before the investors will be persuaded to invest in it. Typically this minimum rate of return is determined by the known returns of less risky assets where the investors might alternatively consider placing their money.

In this study, we assume a 4.5% discount rate for students and a 1.1% discount rate for society and taxpayers.[31] Similar to the sensitivity analysis of the alternative education variable, we vary the base case discount rates for students, society, and taxpayers on either side by increasing the discount rate by 10%, 25%, and 50%, and then reducing it by 10%, 25%, and 50%. Note that, because the rate of return and the payback period are both based on the undiscounted cash flows, they are unaffected by changes in the discount rate. As such, only variations in the net present value and the benefit-cost ratio are shown for students, society, and taxpayers in Table 4.4.

[30] Note that reducing the percent of students employed to 0% automatically negates the percent they earn relative to full earning potential, since none of the students receive any earnings in this case.

[31] These values are based on the baseline forecasts for the ten-year zero coupon bond discount rate published by the Congressional Budget Office, and the real treasury interest rates recommended by the Office for Management and Budget (OMB) for 30-year investments. See the Congressional Budget Office, Student Loan and Pell Grant Programs - March 2012 Baseline, and the Office of Management and Budget, Circular A-94 Appendix C, last modified December 2012.

Table 4.4: Sensitivity analysis of discount rate

% variation in assumption	-50%	-25%	-10%	Base Case	10%	25%	50%
Student perspective							
Discount rate	2.2%	3.4%	4.0%	4.5%	4.9%	5.6%	6.7%
Net present value (millions)	$269	$221	$198	$184	$171	$153	$128
Benefit-cost ratio	9.1	7.7	7.0	6.5	6.1	5.6	4.9
Social perspective							
Discount rate	0.6%	0.8%	1.0%	1.1%	1.2%	1.4%	1.7%
Net present value (millions)	$575	$547	$530	$520	$509	$494	$470
Benefit-cost ratio	10.7	10.3	10.0	9.8	9.6	9.4	9.0
Taxpayer perspective							
Discount rate	0.6%	0.8%	1.0%	1.1%	1.2%	1.4%	1.7%
Net present value (millions)	$26	$24	$23	$22	$21	$20	$18
Benefit-cost ratio	2.1	2.0	2.0	1.9	1.9	1.8	1.8

As demonstrated in the table, an increase in the discount rate leads to a corresponding decrease in the expected returns, and vice versa. For example, increasing the student discount rate by 50% (from 4.5% to 6.7%) reduces the students' benefit-cost ratio from 6.5 to 4.9. Conversely, reducing the discount rate for students by 50% (from 4.5% to 2.2%) increases the benefit-cost ratio from 6.5 to 9.1. The sensitivity analysis results for society and taxpayers show the same inverse relationship between the discount rate and the benefit-cost ratio, with the variance in results being the greatest under the social perspective (from a 10.7 benefit-cost ratio at a -50% variation from the base case to a 9.0 benefit-cost ratio at a 50% variation from the base case).

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Appendix 2: Glossary of Terms

Alternative education	A "with" and "without" measure of the percent of students who would still be able to avail themselves of education absent the publicly-funded educational institutions in the state. An estimate of 10%, for example, means that 10% of students do not depend directly on the existence of the institution in order to obtain their education.
Alternative use of funds	A measure of how monies that are currently used to fund the institution might have otherwise been used if the institution did not exist.
Asset value	Capitalized value of a stream of future returns. Asset value measures what someone would have to pay today for an instrument that provides the same stream of future revenues.
Attrition rate	Rate at which students leave the workforce due to out-migration, unemployment, retirement, or death.
Benefit-cost ratio	Present value of benefits divided by present value of costs. If the benefit-cost ratio is greater than 1, then benefits exceed costs, and the investment is feasible.
Credit hour equivalent	Credit hour equivalent, or CHE, is defined as 15 contact hours of education if on a semester system, and 10 contact hours if on a quarter system. In general, it requires 450 contact hours to complete one full-time equivalent, or FTE.
Demand	Relationship between the market price of education and the volume of education demanded (expressed in terms of enrollment). The law of the downward-sloping demand curve is related to the fact that enrollment increases only if the price (tuition and fees) is lowered, or conversely, enrollment decreases if price increases.
Discounting	Expressing future revenues and costs in present value terms.
Economics	Study of the allocation of scarce resources among alternative and competing ends. Economics is not normative (what ought to be done), but positive (describes what is, or how people are likely to behave in response to economic changes).
Elasticity of demand	Degree of responsiveness of the quantity of education demanded (enrollment) to changes in market prices (tuition and fees). If a

	decrease in fees increases total revenues, demand is elastic. If it decreases total revenues, demand is inelastic. If total revenues remain the same, elasticity of demand is unitary.
Externalities	Impacts (positive and negative) for which there is no compensation. Positive externalities of education include improved social behaviors such as lower crime, reduced welfare and unemployment, and improved health. Educational institutions do not receive compensation for these benefits, but benefits still occur because education is statistically proven to lead to improved social behaviors.
Gross regional product	Measure of the final value of all goods and services produced in a region after netting out the cost of goods used in production. Alternatively, gross regional product (GRP) equals the combined incomes of all factors of production, *i.e.*, labor, land and capital. These include wages, salaries, proprietors' incomes, profits, rents, and other. Gross regional product is also sometimes called "value added."
Initial effect	Income generated by the initial injection of monies into the economy through the payroll of the institution and the higher earnings of its students.
Input-output analysis	Relationship between a given set of demands for final goods and services and the implied amounts of manufactured inputs, raw materials, and labor that this requires. In an educational setting, when institutions pay wages and salaries and spend money for supplies in the region, they also generate earnings in all sectors of the economy, thereby increasing the demand for goods and services and jobs. Moreover, as students enter or rejoin the workforce with higher skills, they earn higher salaries and wages. In turn, this generates more consumption and spending in other sectors of the economy.
Internal rate of return	Rate of interest which, when used to discount cash flows associated with investing in education, reduces its net present value to zero (*i.e.*, where the present value of revenues accruing from the investment are just equal to the present value of costs incurred). This, in effect, is the breakeven rate of return on investment since it shows the highest rate of interest at which the investment makes neither a profit nor a loss.
Labor income	Income which is received as a result of labor, *i.e.*, wages.
Multiplier effect	Additional income created in the economy as the institution and its students spend money in the region. It consists of the income created by the supply chain of the industries initially affected by the spending

	of the institution and its students (*i.e.*, the direct effect), income created by the supply chain of the initial supply chain (*i.e.*, the indirect effect), and the income created by the increased spending of the household sector (*i.e.*, the induced effect).
Net cash flow	Benefits minus costs, *i.e.*, the sum of revenues accruing from an investment minus costs incurred.
Net present value	Net cash flow discounted to the present. All future cash flows are collapsed into one number, which, if positive, indicates feasibility. The result is expressed as a monetary measure.
Non-labor income	Income received from investments, such as rent, interest, and dividends.
Opportunity cost	Benefits forgone from alternative B once a decision is made to allocate resources to alternative A. Or, if individuals choose to attend college, they forgo earnings that they would have received had they chosen instead to work full-time. Forgone earnings, therefore, are the "price tag" of choosing to attend college.
Payback period	Length of time required to recover an investment. The shorter the period, the more attractive the investment. The formula for computing payback period is: Payback period = cost of investment/net return per period

Appendix 3: EMSI MR-SAM

EMSI's Multi-Regional Social Accounting Matrix (MR-SAM) represents the flow of all economic transactions in a given region. It replaces EMSI's previous input-output (IO) model, which operated with some 1,100 industries, four layers of government, a single household consumption sector, and an investment sector. The old IO model was used to simulate the ripple effects (*i.e.*, multipliers) in the regional economy as a result of industries entering or exiting the region. The SAM model performs the same tasks as the old IO model, but it also does much more. Along with the same 1,100 industries, government, household and investment sectors embedded in the old IO tool, the SAM exhibits much more functionality, a greater amount of data, and a higher level of detail on the demographic and occupational components of jobs (16 demographic cohorts and about 750 occupations are characterized).

This appendix presents a high-level overview of the MR-SAM. Additional detail on the technical aspects of the model is available upon request; however, we are unable to provide information that discloses confidential or proprietary methodology.

A3.1 Data sources for the model

The EMSI MR-SAM model relies on a number of internal and external data sources, mostly compiled by the federal government. What follows is a listing and short explanation of our sources. The use of these data will be covered in more detail later in this appendix.

EMSI Data are produced from many data sources to produce detailed industry, occupation, and demographic jobs and earnings data at the local level. This information (especially sales-to-jobs ratios derived from jobs and earnings-to-sales ratios) is used to help regionalize the national matrices as well as to disaggregate them into more detailed industries than are normally available.

BEA Make and Use Tables (MUT) are the basis for input-output models in the U.S. The *make* table is a matrix that describes the amount of each commodity made by each industry in a given year. Industries are placed in the rows and commodities in the columns. The *use* table is a matrix that describes the amount of each commodity used by each industry in a given year. In the use table, commodities are placed in the rows and industries in the columns. The BEA produces two different sets of MUTs, the benchmark and the summary. The benchmark set contains about 500 sectors and is released every five years, with a five-year lag time (*e.g.*, 2002 benchmark MUTs were released in 2007). The summary set contains about 80 sectors and is released every year, with a two-year lag (*e.g.*, 2010 summary MUTs were released in late 2011/early 2012). The MUTs are used in the EMSI SAM model to produce an industry-by-industry matrix describing all industry purchases from all industries.

BEA Gross Domestic Product by State (GSP) describes gross domestic product from the value added perspective. Value added is equal to employee compensation, gross operating surplus, and

taxes on production and imports, less subsidies. Each of these components is reported for each state and an aggregate group of industries. This dataset is updated once per year, with a one-year lag. The EMSI SAM model makes use of this data as a control and pegs certain pieces of the model to values from this dataset.

BEA National Income and Product Accounts (NIPA) cover a wide variety of economic measures for the nation, including gross domestic product (GDP), sources of output, and distribution of income. This dataset is updated periodically throughout the year and can be between a month and several years old depending on the specific account. NIPA data are used in many of the EMSI MR-SAM processes as both controls and seeds.

BEA Local Area Income (LPI) encapsulates multiple tables with geographies down to the county level. The following two tables are specifically used: CA05 (Personal income and earnings by industry) and CA91 (Gross flow of earnings). CA91 is used when creating the commuting submodel and CA05 is used in several processes to help with place-of-work and place-of-residence differences, as well as to calculate personal income, transfers, dividends, interest, and rent.

BLS Consumer Expenditure Survey (CEX) reports on the buying habits of consumers along with some information as to their income, consumer unit, and demographics. EMSI utilizes this data heavily in the creation of the national demographic by income type consumption on industries.

Census of Government's (CoG) state and local government finance dataset is used specifically to aid breaking out state and local data that is reported in the MUTs. This allows EMSI to have unique production functions for each of its state and local government sectors.

Census' OnTheMap (OTM) is a collection of three datasets for the census block level for multiple years. **Origin-Destination** (OD) offers job totals associated with both home census blocks and a work census block. **Residence Area Characteristics** (RAC) offers jobs totaled by home census block. **Workplace Area Characteristics** (WAC) offers jobs totaled by work census block. All three of these are used in the commuting submodel to gain better estimates of earnings by industry that may be counted as commuting. This dataset has holes for specific years and regions. These holes are filled with Census' Journey-to-Work described later.

Census' Current Population Survey (CPS) is used as the basis for the demographic breakout data of the MR-SAM model. This set is used to estimate the ratios of demographic cohorts and their income for the three different income categories (*i.e.*, wages, property income, and transfers).

Census' Journey-to-Work (JtW) is part of the 2000 Census and describes the amount of commuting jobs between counties. This set is used to fill in the areas where OTM does not have data.

Census' American Community Survey (ACS) **Public Use Microdata Sample** (PUMS) is the replacement for Census' long form and is used by EMSI to fill the holes in the CPS data.

Oak Ridge National Lab (ORNL) County-to-County Distance Matrix (Skim Tree) contains a matrix of distances and network impedances between each county via various modes of transportation such as highway, railroad, water, and combined highway-rail. Also included in this set are minimum impedances utilizing the best combination of paths. The ORNL distance matrix is used in EMSI's gravitational flows model that estimates the amount of trade between counties in the country.

A3.2 Overview of the MR-SAM model

EMSI's multi-regional social accounting matrix (MR-SAM) modeling system is a "comparative static" type model in the same general class as RIMS II (Bureau of Economic Analysis) and IMPLAN (Minnesota Implan Group). The MR-SAM model is thus not an "econometric" type model, the primary example of which is PolicyInsight by REMI. It relies on a matrix representation of industry-to-industry purchasing patterns originally based on national data which are regionalized with the use of local data and mathematical manipulation (*i.e.*, non-survey methods). Models of this type estimate the ripple effects of changes in jobs, earnings, or sales in one or more industries upon other industries in a region.

The EMSI SAM model shows final equilibrium impacts – that is, the user enters a change that perturbs the economy and the model shows the changes required to establish a new equilibrium. As such, it is not a "dynamic" type model that shows year-by-year changes over time (as REMI's does).

A3.2.1 National SAM

Following standard practice, the SAM model appears as a square matrix, with each row sum exactly equaling the corresponding column sum. Reflecting its kinship with the standard Leontief input-output framework, individual SAM elements show accounting flows between row and column sectors during a chosen base year. Read across rows, SAM entries show the flow of funds into column accounts (a.k.a., "receipts" or "the appropriation of funds" by those column accounts). Read down columns, SAM entries show the flow of funds into row accounts (a.k.a., "expenditures" or "the dispersal of funds" to those row accounts).

The SAM may be broken into three different aggregation layers: broad accounts, sub-accounts, and detailed accounts. The broad layer is the most aggregate and will be covered first. Broad accounts cover between one and four sub-accounts, which in turn cover many detailed accounts. This appendix will not discuss detailed accounts directly because of their number. For example, in the industry broad account, there are two sub-accounts and over 1,100 detailed accounts.

A3.2.2 Multi-regional aspect of the SAM

Multi-regional (MR) describes a non-survey model that has the ability to analyze the transactions and ripple effects (*i.e.*, multipliers) of not just a single region, but multiple regions interacting with each other. Regions in this case are made up of a collection of counties.

EMSI's multi-regional model is built off of gravitational flows, assuming that the larger a county's economy, the more influence it will have on the surrounding counties' purchases and sales. The equation behind this model is essentially the same that Isaac Newton used to calculate the gravitational pull between planets and stars. In Newton's equation, the masses of both objects are multiplied, then divided by the distance separating them and multiplied by a constant. In EMSI's model, the masses are replaced with the supply of a sector for one county and the demand for that same sector from another county. The distance is replaced with an impedance value that takes into account the distance, type of roads, rail lines, and other modes of transportation. Once this is calculated for every county-to-county pair, a set of mathematical operations is performed to make sure all counties absorb the correct amount of supply from every county and the correct amount of demand from every county. These operations produce more than 200 million data points.

With the flows finalized, EMSI is able to use industry standard equations to adjust the national SAM and bring it into focus for the given region or regions. If the model being created is multi-regional, the amount and kind of transactions that occur between those regions is also calculated.

A3.3 Components of the EMSI SAM model

The EMSI MR-SAM is built from a number of different components that are gathered together to display information whenever a user selects a region. What follows is a description of each of these components and how each is created. EMSI's internally created data are used to a great extent throughout the processes described below, but its creation is not described in this appendix.

A3.3.1 County earnings distribution matrix

The county earnings distribution matrices describe the earnings spent by every industry on every occupation for a year – *i.e.*, earnings by occupation. The matrices are built utilizing EMSI's industry earnings, occupational average earnings, and staffing patterns.

Each matrix starts with a region's staffing pattern matrix which is multiplied by the industry jobs vector. This produces the number of occupational jobs in each industry for the region. Next, the occupational average hourly earnings per job is multiplied by 2,080 hours, which converts the average hourly earnings into a yearly estimate. Then the matrix of occupational jobs is multiplied by the occupational annual earnings per job, converting it into earnings values. Last, all earnings are adjusted to match the known industry totals. This is a fairly simple process, but one that is very important. These matrices describe the place-of-work earnings used by the MR-SAM.

A3.3.2 Commuting model

The commuting sub-model is an integral part of EMSI's MR-SAM model. It allows the regional and multi-regional models to know what amount of the earnings can be attributed to place-of-residence vs. place-of-work. The commuting data describe the flow of earnings from any county to any other county (including within the counties themselves). For this situation, the commuted earnings are not

just a single value describing total earnings flows over a complete year, but are broken out by occupation and demographic. Breaking out the earnings allows for analysis of place-of-residence (PoR) and place-of-work (PoW) earnings. These data are created using BLS's OnTheMap dataset, Census' Journey-to-Work, BEA's LPI CA91 and CA05 tables, and some of EMSI's data. The process incorporates the cleanup and disaggregation of the OnTheMap data, the estimation of a closed system of county inflows and outflows of earnings, and the creation of finalized commuting data.

A3.3.3 National SAM

The national SAM as described above is made up of several different components. Many of the elements already discussed are filled in with values from the national Z or transactions matrix. This matrix is built from BEA data that describe which industries make and use what commodities at the national level. These data are manipulated with some industry standard equations to produce the national Z matrix. The data in the Z matrix act as the basis for the majority of the data in the national SAM. The rest of the values are filled in with data from the county earnings distribution matrices, the commuting data, and the BEA's National Income and Product Accounts (NIPA).

One of the major issues that affect any SAM project is the combination of data from multiple sources that may not be consistent with one another. Matrix balancing is the broad name for the techniques used to correct this problem. EMSI uses a modification of the "diagonal similarity scaling" algorithm to balance the national SAM.

A3.3.4 Gravitational flows model

The most important piece of the EMSI MR-SAM model is the gravitational flows model that produces county sales, county subsidies, and county-by-county regional purchasing coefficients (RPCs). County sales are the vector of total output for every sector in the SAM applied to a given county. County subsidies are an estimation of the governmental subsidies given to specific industries in a given county. RPCs estimate how much an industry purchases from other industries inside and outside of the defined region. This information is critical for calculating regional economic SAM and IO models. As discussed earlier, the national SAM incorporates data from the national Z matrix, so from this point on, the national SAM will be referred to as the national Z SAM.

Before we explain how EMSI creates RPCs, one more concept must be introduced, namely the A matrix. An A matrix is mathematically derived from a Z matrix and shows the production function for each sector (*i.e.*, what a sector requires from all other sectors in order to maintain its output). The matrix is calculated by normalizing the columns of a Z matrix with respect to the sales for that column. In other words, each column is scaled so that it sums to 1.

Table A3.1 shows a sample A matrix. Each cell value represents the percentage of a column industry's output that goes toward purchasing inputs from each row industry. So the cell containing 5% shows that Industry 2 spends 5% of its total output to obtain inputs from Industry 1.

Table A3.1: Sample "A" Matrix

	Industry 1	Industry 2	…	Industry n
Industry 1	1%	5%	…	3%
Industry 2	20%	0%	…	12%
…	…	…	…	…
Industry n	3%	9%	…	2%

When calculating RPCs, EMSI uses two methods:

Supply/demand pool method: This method uses regional industry presence and the national A matrix to estimate the regional industry demand that remains unmet by regional industry supply. The difference is assumed to be imported or exported, which defines the basis for all RPC calculation methods.

Gravitational flows method: This is a far more complex method for estimating RPCs, but it yields multi-regional data. Gravity modeling starts with the creation of an impedance matrix that values the difficulty of moving a product from county to county. Next, the impedance matrix is converted into a base matrix that contains seeds of multi-regional flows between counties in a given sector. This base matrix is then fed to a bi-proportional with supply and demand as the row and column constraints, respectively. The result is an estimate of multi-regional flows from every county to every county. These flows are divided by each respective county's demand to produce multi-regional RPCs.

A3.4 Model usages

The previous sections described the components of the EMSI SAM model and the data used to create regional and multi-regional models. This section describes how we use the data to create the models, beginning with a discussion of regional models and moving on to a less comprehensive overview of multi-regional models (multi-regional models are essentially the same as regional models but with additional information).

A3.4.1 Regional models

Regional models are simply county or ZIP code models that we aggregate together. Because the aggregated data would fill approximately 3,000 terabytes, we keep the models to a manageable size by constructing them using only the national SAM, county-by-county RPCs, county sales, county subsidies, county earnings distribution matrices, and the commuting data. For ZIP code models, we use county models as a basis and then scale them to the correct size.

A3.4.2 Multi-regional models

A multi-regional model is able to look at trade between several different county regions. It works by creating a very large matrix with each region's model in the diagonal and inter-region trade matrices in the off-diagonals. These off-diagonal matrices are created in a similar way to the regional county

matrices. The major differences are the number of zeros in the matrix and which RPCs are used. Flows between regions are only accounted for within industries (calculated with RPCs) and residence adjustment earnings (from the commuting model).

A3.4.3 Using the model

There are a large number of uses for regional and multi-regional SAM models. Some examples of model usages are the following:

1. Multiplier effects: Estimate the jobs/earnings effects on industries and demographics due to an initial set of changes in one or more industries.
2. Regional requirements: Estimate the amount of industry requirements (goods/services purchased by the industry) that are obtained within a region versus those imported.
3. Regional exports: Estimate the amount that each industry exports from a region (exporting industries drive regional economic growth).
4. Gross Regional Product: GRP, similar to a nation's GDP, can be estimated for any region from the MR-SAM model.

Appendix 4: Value per Credit Hour Equivalent and the Mincer Function

Two key components in determining the economic impact and return on investment of education are 1) the value of the students' educational achievements, and 2) the change in that value over the students' working careers. Both of these components are described in detail in this appendix.

A4.1 Value per CHE

Typically the educational achievements of students are marked by the credentials they earn. However, not all students who attended NPC in the 2013-14 analysis year obtained a degree or certificate. Some returned the following year to complete their education goals, while others took a few courses and entered the workforce without graduating. As such, the only way to measure the value of the students' achievement is through their credit hour equivalents, or CHEs. This approach allows us to see the benefits to all students who attended NPC, not just those who earned a credential.

To calculate the value per CHE, we first determine how many CHEs are required to complete each education level. For example, assuming that there are 30 CHEs in an academic year, a student generally completes 60 CHEs in order to move from a high school diploma to an associate's degree, another 60 CHEs to move from an associate's degree to a bachelor's degree, and so on. This progression of CHEs generates an education ladder beginning at the less than high school level and ending with the completion of a doctoral degree, with each level education representing a separate stage in the progression.

The second step is to assign a unique value to the CHEs in the education ladder based on the wage differentials presented in Table 1.7. For example, the difference in earnings between a high school diploma and an associate's degree is $7,800. We spread this $7,800 wage differential across the 60 CHEs that occur between the high school diploma and the associate's degree, applying a ceremonial "boost" to the last CHE in the stage to mark the achievement of the degree.[32] We repeat this process for each education level in the ladder.

Of course, several other factors such as ability, socioeconomic status, and family background also positively correlate with higher earnings. Failure to account for these factors results in what is known as an "ability bias." Research by Card (1999) indicates that the upper limit benefits defined

[32] Economic theory holds that workers that acquire education credentials send a signal to employers about their ability level. This phenomenon is commonly known as the "sheepskin" or "signaling" effect. The ceremonial boosts applied to the achievement of degrees in the EMSI college impact model are derived from David Jaeger and Marianne Page, "Degrees Matter: New Evidence on Sheepskin Effects in the Returns to Education," *Review of Economics and Statistics* 78, no. 4 (November 1996): 733-740.

by correlation should be discounted by 10%.[33] As such, we reduce the marginal differences between education levels by 10%.

Next we map the CHE production of NPC's 2013-14 student population to the education ladder. Table 1.4 provides information on the CHE production of NPC's students broken out by educational achievement. In total, students completed 57,269 CHEs during the analysis year, excluding the CHE production of personal enrichment students. We map each of these CHEs to the education ladder depending on the students' education level and the average number of CHEs they completed during the year. For example, associate's degree graduates are allocated to the stage between the high school diploma and the associate's degree, and the average number of CHEs they completed informs the shape of the distribution curve used to spread out their total CHE production within that stage of the progression.

The sum product of the CHEs earned at each step within the education ladder and their corresponding value yields the students' aggregate increase in income (ΔE) at the midpoint of their careers, as shown in the following equation:

$$\Delta E = \sum_{i=1}^{n} e_i h_i \quad \text{where } i \in 1, 2, \ldots n$$

and n is the number of steps in the education ladder, e_i is the marginal earnings gain at step i, and h_i is the number of CHEs completed at step i.

Table A4.1 displays the result for the students' aggregate increase in income (ΔE), a total of $15 million. By dividing this value by the students' total production of 57,269 CHEs during the analysis year, we derive an overall value of $262 per CHE.

Table A4.1: Aggregate increase in income of NPC students and value per CHE at career midpoint

Aggregate increase in income at career midpoint	$14,988,224
Total credit hour equivalents (CHEs) in FY 2013-14*	57,269
Value per CHE	$262

* Excludes the CHE production of personal enrichment students.

Source: EMSI college impact model.

A4.2 Mincer Function

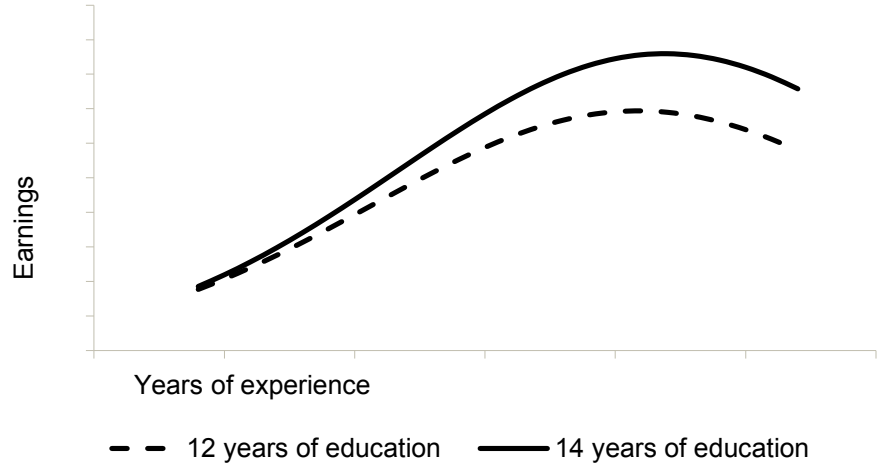
The $262 value per CHE in Table A4.1 only tells part of the story, however. Human capital theory holds that earnings levels do not remain constant; rather, they start relatively low and gradually increase as the worker gains more experience. Research also shows that the earnings increment

[33] David Card, "The causal effect of education on earnings," *Handbook of Labor Economics* 3 (1999): 1801-1863. Card acknowledges that ability is unobservable and the instrumental variable techniques for measuring the ability bias are different. He concludes that the "best available" evidence suggests a "small upward bias (on the order of 10%)."

between educated and non-educated workers grows through time. These basic patterns in earnings over time were originally identified by Jacob Mincer, who viewed the lifecycle earnings distribution as a function with the key elements being earnings, years of education, and work experience, with age serving as a proxy for experience.[34] Mincer's earnings function is still upheld in recent data and has served as the foundation for a variety of research pertaining to labor economics.

Figure A4.1 illustrates several important points about the Mincer function. First, as demonstrated by the shape of the curves, an individual's earnings initially increase at an increasing rate, then increase at a decreasing rate, reach a maximum somewhere well after the midpoint of the working career, and then decline in later years. Second, individuals with higher levels of education reach their maximum earnings at an older age compared to individuals with lower levels of education (recall that age serves as a proxy for years of experience). And third, the benefits of education, as measured by the difference in earnings between education levels, increase with age.

Figure A4.1: Lifecycle change in earnings, 12 years versus 14 years of education



In calculating the student productivity impact in Chapter 2, we use the slope of the curve in Mincer's earnings function to condition the $262 value per CHE to the students' age and work experience.[35] To the students just starting their career during the analysis year, we apply a lower value per CHE; to

[34] See Mincer, 1958 and Jacob Mincer, "Schooling, Experience and Earnings" (New York: National Bureau of Economic Research, 1974). See also Gary S. Becker, *Human Capital: a Theoretical Analysis with Specific Reference to Education* (New York: Columbia College Press for NBER, 1964).

[35] The Mincer equation is computed based on estimated coefficients presented in Robert J. Willis, "Wage Determinants: A Survey and Reinterpretation of Human Capital Earnings Function" in *Handbook of Labor Economics*, Vol. 1 (Amsterdam: Elsevier Science Publishers, 1986): 525–602. These are adjusted to current year dollars in the usual fashion by applying the GDP implicit price deflator. The function does not factor in temporary economic volatility, such as high growth periods or recessions. In the long run, however, the Mincer function is a reasonable predictor.

the students in the latter half or approaching the end of their careers we apply a higher value per CHE. The original $262 value per CHE applies only to the CHE production of students precisely at the midpoint of their careers during the analysis year.

In Chapter 3 we again apply the Mincer function, this time to project the benefits stream of NPC's 2013-14 student population into the future. Here too the value per CHE is lower for students at the start of their career and higher near the end of it, in accordance with the scalars derived from the slope of the Mincer curve illustrated in Figure A4.1.

A4.3 Conclusion

This appendix demonstrates the significance of the value per CHE and the Mincer function in determining the initial effect of student productivity on the regional economy in Chapter 2 and the students' return on their educational investment in Chapter 3. Both chapters provide further discussion on the role that the students' CHE production and corresponding increase in earnings play in calculating the study outcomes.

Appendix 5: Alternative Education Variable

In a scenario where NPC did not exist, some of its students would still be able to avail themselves of an alternative comparable education. These students create benefits in the state even in the absence of the institutions. The alternative education variable accounts for these students and is used to discount the benefits we attribute to NPC.

Recall this analysis considers only relevent economic information regarding Northland Pioneer College. Considering the existence of various other academic institutions surrounding NPC, we have to assume that a portion of students would find alternative educations and either remain in or return to Arizona. For example, some students may participate in online programs hosted at non-NPC institutions while remaining in Arizona. Others may attend an out-of-state institution and return to Arizona upon completing their studies. For these students – who would have found an alternative education and produced benefits in Arizona regardless of the presence of NPC – we discount the benefits attributed to NPC. An important distinction must be made here: the benefits from students who would find alternative educations outside the county and not return to Arizona are *not* discounted. Because these benefits would not occur in Arizona without the presence of NPC, they must be included.

In the absence of NPC, we assume 20% of NPC students would find alternative education opportunities and remain in or return to Arizona. We account for this by discounting the alumni impact, the benefits to taxpayers, and the benefits to society as a whole in sections 3 and 4 by 20%. In other words, we assume 20% of the benefits created by NPC students would have occurred anyways in the counterfactual scenario where NPC did not exist. A sensitivity analysis of this adjustment is presented in section 5.

Appendix 6: Overview of Investment Analysis Measures

The purpose of this appendix is to provide context to the investment analysis results using the simple hypothetical example summarized in Table A6.1 below. The table shows the projected benefits and costs for a single student over time and associated investment analysis results.[36]

Table A6.1: Example of the benefits and costs of education for a single student

Year	Tuition	Opportunity cost	Total cost	Higher earnings	Net cash flow
1	2	3	4	5	6
1	$1,500	$20,000	$21,500	$0	-$21,500
2	$0	$0	$0	$5,000	$5,000
3	$0	$0	$0	$5,000	$5,000
4	$0	$0	$0	$5,000	$5,000
5	$0	$0	$0	$5,000	$5,000
6	$0	$0	$0	$5,000	$5,000
7	$0	$0	$0	$5,000	$5,000
8	$0	$0	$0	$5,000	$5,000
9	$0	$0	$0	$5,000	$5,000
10	$0	$0	$0	$5,000	$5,000
Net present value			**$21,500**	**$35,753**	**$14,253**
Internal rate of return					**18.0%**
Benefit-cost ratio					**1.7**
Payback period					**4.2 years**

Assumptions are as follows:

1. Benefits and costs are projected out ten years into the future (Column 1).
2. The student attends college for one year, and the cost of tuition is $1,500 (Column 2).
3. Earnings forgone while attending college for one year (opportunity cost) come to $20,000 (Column 3).
4. Together, tuition and earnings forgone cost sum to $21,500. This represents the out-of-pocket investment made by the student (Column 4).
5. In return, the student earns $5,000 more per year than he would have otherwise earned without the education (Column 5).
6. The net cash flow (NCF) in Column 6 shows higher earnings (Column 5) less the total cost (Column 4).

[36] Note that this is a hypothetical example. The numbers used are not based on data collected from an existing college.

7. The assumed "going rate" of interest is 4%, the rate of return from alternative investment schemes for the use of the $21,500.

Results are expressed in standard investment analysis terms, which are as follows: the net present value, the internal rate of return, the benefit-cost ratio, and the payback period. Each of these is briefly explained below in the context of the cash flow numbers presented in Table A6.1.

A6.1 Net present value

The student in Table A6.1 can choose either to attend college or to forgo post-secondary education and maintain his present employment. If he decides to enroll, certain economic implications unfold. Tuition and fees must be paid, and earnings will cease for one year. In exchange, the student calculates that with post-secondary education, his income will increase by at least the $5,000 per year, as indicated in the table.

The question is simple – will the prospective student be economically better off by choosing to enroll? If he adds up higher earnings of $5,000 per year for the remaining nine years in Table 1, the total will be $45,000. Compared to a total investment of $21,500, this appears to be a very solid investment. The reality, however, is different. Benefits are far lower than $45,000 because future money is worth less than present money. Costs (tuition plus earnings forgone) are felt immediately because they are incurred today, in the present. Benefits, on the other hand, occur in the future. They are not yet available. All future benefits must be discounted by the going rate of interest (referred to as the discount rate) to be able to express them in present value terms.[37]

Let us take a brief example. At 4%, the present value of $5,000 to be received one year from today is $4,807. If the $5,000 were to be received in year ten, the present value would reduce to $3,377. Put another way, $4,807 deposited in the bank today earning 4% interest will grow to $5,000 in one year; and $3,377 deposited today would grow to $5,000 in ten years. An "economically rational" person would, therefore, be equally satisfied receiving $3,377 today or $5,000 ten years from today given the going rate of interest of 4%. The process of discounting – finding the present value of future higher earnings – allows the model to express values on an equal basis in future or present value terms.

The goal is to express all future higher earnings in present value terms so that they can be compared to investments incurred today (in this example, tuition plus earnings forgone). As indicated in Table A6.1, the cumulative present value of $5,000 worth of higher earnings between years 2 and 10 is $35,753 given the 4% interest rate, far lower than the undiscounted $45,000 discussed above.

The net present value of the investment is $14,253. This is simply the present value of the benefits less the present value of the costs, or $35,753 - $21,500 = $14,253. In other words, the present value

[37] Technically, the interest rate is applied to compounding – the process of looking at deposits today and determining how much they will be worth in the future. The same interest rate is called a discount rate when the process is reversed – determining the present value of future earnings.

of benefits exceeds the present value of costs by as much as $14,253. The criterion for an economically worthwhile investment is that the net present value is equal to or greater than zero. Given this result, it can be concluded that, in this case, and given these assumptions, this particular investment in education is very strong.

A6.2 Internal rate of return

The internal rate of return is another way of measuring the worth of investing in education using the same cash flows shown in Table A6.1. In technical terms, the internal rate of return is a measure of the average earning power of money used over the life of the investment. It is simply the interest rate that makes the net present value equal to zero. In the discussion of the net present value above, the model applies the "going rate" of interest of 4% and computes a positive net present value of $14,253. The question now is what the interest rate would have to be in order to reduce the net present value to zero. Obviously it would have to be higher – 18.0% in fact, as indicated in Table A6.1. Or, if a discount rate of 18.0% were applied to the net present value calculations instead of the 4%, then the net present value would reduce to zero.

What does this mean? The internal rate of return of 18.0% defines a breakeven solution – the point where the present value of benefits just equals the present value of costs, or where the net present value equals zero. Or, at 18.0%, higher incomes of $5,000 per year for the next nine years will earn back all investments of $21,500 made plus pay 18.0% for the use of that money ($21,500) in the meantime. Is this a good return? Indeed it is. If it is compared to the 4% "going rate" of interest applied to the net present value calculations, 18.0% is far higher than 4%. It may be concluded, therefore, that the investment in this case is solid. Alternatively, comparing the 18.0% rate of return to the long-term 7% rate or so obtained from investments in stocks and bonds also indicates that the investment in education is strong relative to the stock market returns (on average).

A word of caution – the approach for calculating the internal rate of return can sometimes generate wild or unbelievable results that defy the imagination. Technically, the approach requires at least one negative cash flow to offset all subsequent positive flows. For example, if the student works full-time while attending college, the opportunity cost of time would be much lower. The only out-of-pocket cost would be the $1,500 paid for tuition. In this case, it would still be possible to compute the internal rate of return, but it would be a staggering 333% because only a negative $1,500 cash flow would be offsetting nine subsequent years of $5,000 worth of higher earnings. Although the 333% return would technically be correct, it would not be consistent with the conventional understanding of returns expressed as percentages.

A6.3 Benefit-cost ratio

The benefit-cost ratio is simply the present value of benefits divided by present value of costs, or $35,753 ÷ $21,500 = 1.7 (based on the 4% discount rate). Of course, any change in the discount rate would also change the benefit-cost ratio. Applying the 18.0% internal rate of return discussed above

would reduce the benefit-cost ratio to 1.0, the breakeven solution where benefits just equal costs. Applying a discount rate higher than the 18.0% would reduce the ratio to lower than 1.0, and the investment would not be feasible. The 1.7 ratio means that a dollar invested today will return a cumulative $1.70 over the ten-year time period.

A6.4 Payback period

This is the length of time from the beginning of the investment (consisting of tuition and earnings forgone) until higher future earnings give a return on the investment made. For the student in Table A6.1, it will take roughly 4.2 years of $5,000 worth of higher earnings to recapture his investment of $1,500 in tuition and the $20,000 in earnings forgone while attending college. Higher earnings that occur beyond 4.2 years are the returns that make the investment in education in this example economically worthwhile. The payback period is a fairly rough, albeit common, means of choosing between investments. The shorter the payback period, the stronger the investment.

Appendix 7: Shutdown Point

The investment analysis in Chapter 3 weighs the benefits generated by the college against the state and local taxpayer funding that the college receives to support its operations. An important part of this analysis is factoring out the benefits that the college would have been able to generate anyway, even without state and local taxpayer support. This adjustment is used to establish a direct link between what taxpayers pay and what they receive in return. If the college is able to generate benefits without taxpayer support, then it would not be a true investment.[38]

The overall approach includes a sub-model that simulates the effect on student enrollment if the college loses its state and local funding and has to raise student tuition and fees in order to stay open. If the college can still operate without state and local support, then any benefits it generates at that level are discounted from total benefit estimates. If the simulation indicates that the college cannot stay open, however, then benefits are directly linked to costs, and no discounting applies. This appendix documents the underlying theory behind these adjustments.

A7.1 State and local government support versus student demand for education

Figure A7.1 presents a simple model of student demand and state and local government support. The right side of the graph is a standard demand curve (*D*) showing student enrollment as a function of student tuition and fees. Enrollment is measured in terms of total credit hour equivalents (CHEs) and expressed as a percentage of the college's current CHE production. Current student tuition and fees are represented by *p'*, and state and local government support covers *C%* of all costs. At this point in the analysis, it is assumed that the college has only two sources of revenues: 1) student tuition and fees and 2) state and local government support.

[38] Of course, as a public training provider, NPC would not be permitted to continue without public funding, so the situation in which it would lose all state support is entirely hypothetical. The purpose of the adjustment factor is to examine NPC in standard investment analysis terms by netting out any benefits it may be able to generate that are not directly linked to the costs of supporting it.

Figure A7.1

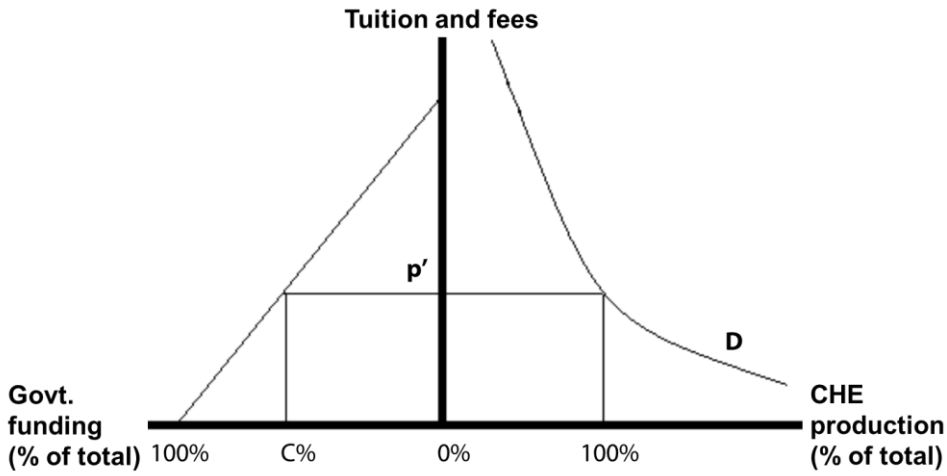
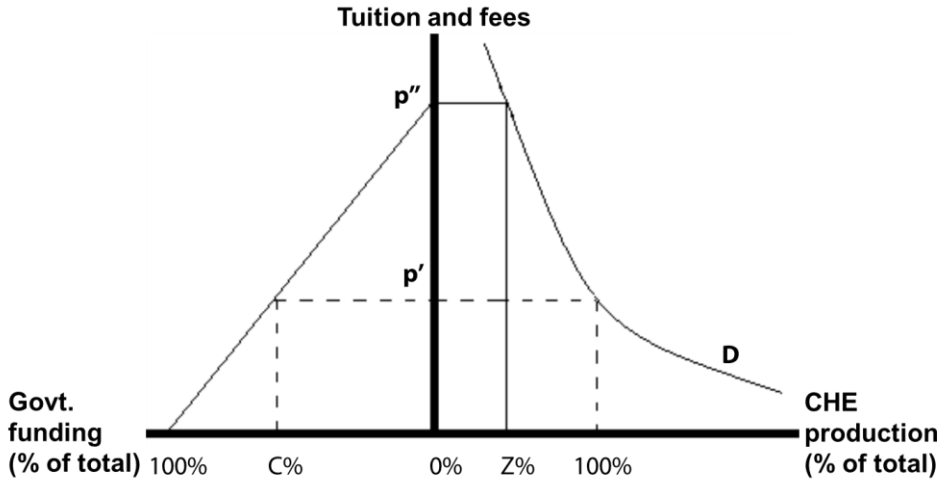


Figure A7.2 shows another important reference point in the model – where state and local government support is 0%, student tuition and fees are increased to *p″*, and CHE production is at *Z%* (less than 100%). The reduction in CHEs reflects the price elasticity of the students' demand for education, *i.e.*, the extent to which the students' decision to attend college is affected by the change in tuition and fees. Ignoring for the moment those issues concerning the college's minimum operating scale (considered below in the section called "Shutdown Point"), the implication for the investment analysis is that benefits to state and local government must be adjusted to net out the benefits that the college can provide absent state and local government support, represented as *Z%* of the college's current CHE production in Figure A7.2.

Figure A7.2



To clarify the argument, it is useful to consider the role of enrollment in the larger benefit-cost model. Let B equal the benefits attributable to state and local government support. The analysis derives all benefits as a function of student enrollment, measured in terms of CHEs produced. For consistency with the graphs in this appendix, B is expressed as a function of the percent of the college's current CHE production. Equation 1 is thus as follows:

1) $B = B\ (100\%)$

This reflects the total benefits generated by enrollments at their current levels.

Consider benefits now with reference to Figure A4.2. The point at which state and local government support is zero nonetheless provides for $Z\%$ (less than 100%) of the current enrollment, and benefits are symbolically indicated by the following equation:

2) $B = B\ (Z\%)$

Inasmuch as the benefits in equation 2 occur with or without state and local government support, the benefits appropriately attributed to state and local government support are given by equation 3 as follows:

3) $B = B\ (100\%) - B\ (Z\%)$

A7.2 Calculating benefits at the shutdown point

Colleges cease to operate when the revenue they receive from the quantity of education demanded is insufficient to justify their continued operations. This is commonly known in economics as the shutdown point.[39] The shutdown point is introduced graphically in Figure A7.3 as $S\%$. The location of point $S\%$ indicates that the college can operate at an even lower enrollment level than $Z\%$ (the point at which the college receives zero state and local government funding). State and local government support at point $S\%$ is still zero, and student tuition and fees have been raised to p'''. State and local government support is thus credited with the benefits given by equation 3, or $B = B\ (100\%) - B\ (Z\%)$. With student tuition and fees still higher than p''', the college would no longer be able to attract enough students to keep the doors open, and it would shut down.

[39] In the traditional sense, the shutdown point applies to firms seeking to maximize profits and minimize losses. Although profit maximization is not the primary aim of colleges, the principle remains the same, *i.e.*, that there is a minimum scale of operation required in order for colleges to stay open.

Figure A7.3

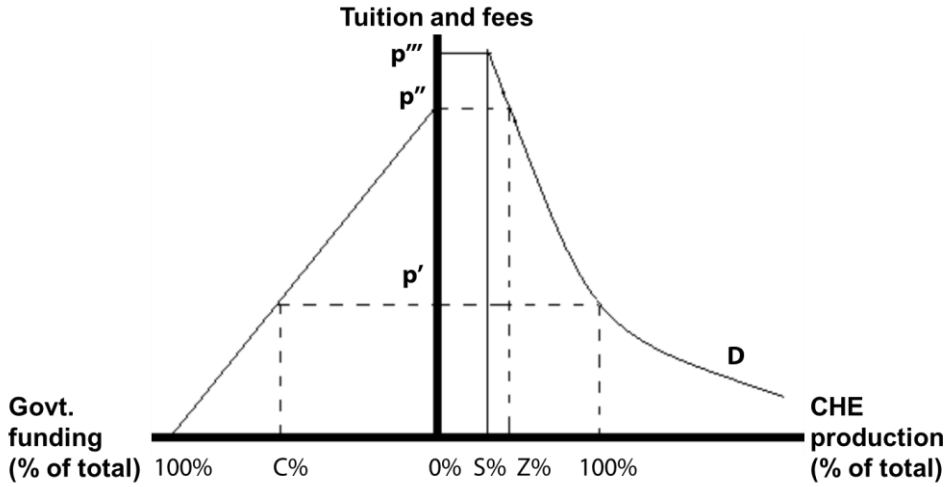
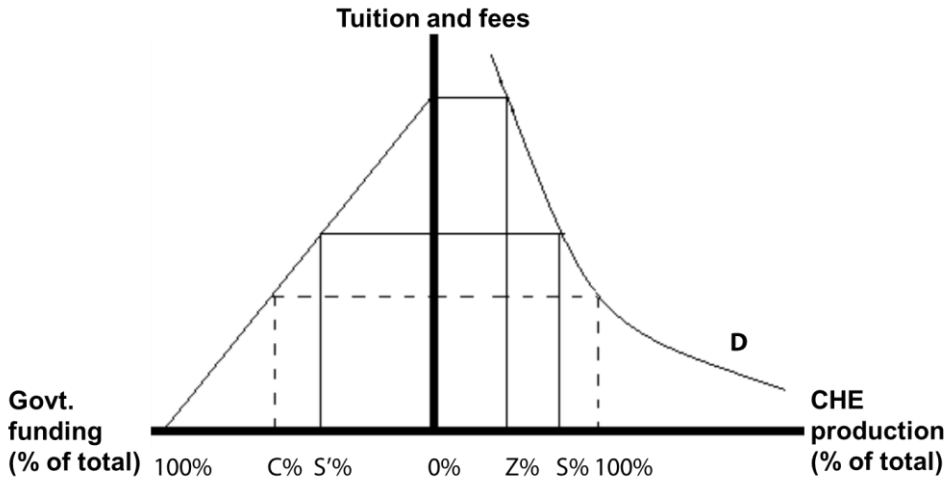


Figure A7.4 illustrates yet another scenario. Here the shutdown point occurs at a level of CHE production greater than *Z%* (the level of zero state and local government support), meaning some minimum level of state and local government support is needed for the college to operate at all. This minimum portion of overall funding is indicated by *S'%* on the left side of the chart, and as before, the shutdown point is indicated by *S%* on the right side of chart. In this case, state and local government support is appropriately credited with all the benefits generated by the college's CHE production, or *B = B (100%)*.

Figure A7.4



Appendix 8: Social Externalities

Education has a predictable and positive effect on a diverse array of social benefits. These, when quantified in dollar terms, represent significant social savings that directly benefit society as a whole, including taxpayers. In this appendix we discuss the following three main benefit categories: 1) improved health, 2) reductions in crime, and 3) reductions in welfare and unemployment.

It is important to note that the data and estimates presented here should not be viewed as exact, but rather as indicative of the positive impacts of education on an individual's quality of life. The process of quantifying these impacts requires a number of assumptions to be made, creating a level of uncertainty that should be borne in mind when reviewing the results.

A8.1 Health

Statistics clearly show the correlation between increases in education and improved health. The manifestations of this are found in five health-related variables: smoking, alcoholism, obesity, mental illness, and drug abuse. There are other health-related areas that link to educational attainment, but these are omitted from the analysis until we can invoke adequate (and mutually exclusive) databases and are able to fully develop the functional relationships between them.

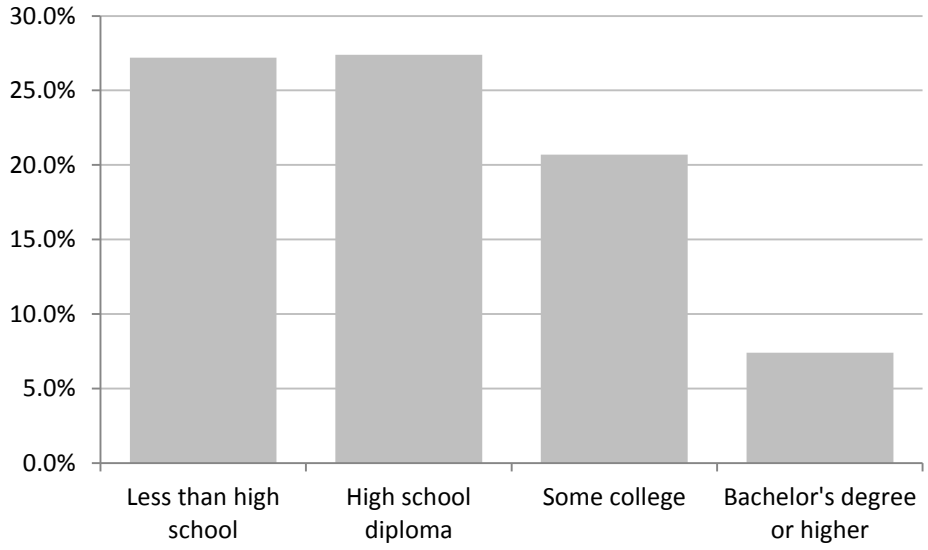
A8.1.1 Smoking

Despite a marked decline over the last several decades in the percentage of U.S. residents that smoke, a sizeable percentage of the U.S. population still uses tobacco. The negative health effects of smoking are well documented in the literature, which identifies smoking as one of the most serious health issues in the U.S.

Figure A8.1 shows the prevalence of cigarette smoking among adults aged 25 years and over, based on data provided by the National Health Interview Survey.[40] As indicated, the percent of persons who smoke begins to decline beyond the level of high school education.

[40] Centers for Disease Control and Prevention, "Table 61. Age-adjusted prevalence of current cigarette smoking among adults aged 25 and over, by sex, race, and education level: United States, selected years 1974-2011," National Health Interview Survey, 2011.

Figure A8.1: Prevalence of smoking among U.S. adults by education level



The Centers for Disease Control and Prevention (CDC) reports the percentage of adults who are current smokers by state.[41] We use this information to create an index value by which we adjust the national prevalence data on smoking to each state. For example, 19.3% of Arizona's adults were smokers in 2011, relative to 21.2% for the nation. We thus apply a scalar of 0.9 to the national probabilities of smoking in order to adjust them to the state of Arizona.

A8.1.2 Alcohol abuse

Alcoholism is difficult to measure and define. There are many patterns of drinking, ranging from abstinence to heavy drinking. Alcohol abuse is riddled with social costs, including healthcare expenditures for treatment, prevention, and support; workplace losses due to reduced worker productivity; and other impacts.

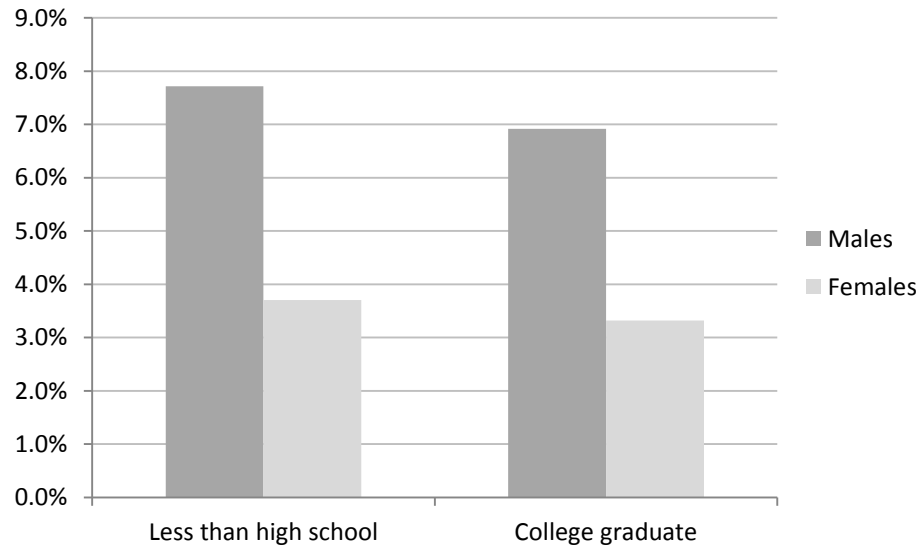
Figure A8.2 compares the percent of males and females aged 26 and older that abuse or depend on alcohol at the less than high school level to the prevalence rate of alcoholism among college graduates, based on data supplied by the Substance Abuse and Mental Health Services Administration (SAMHSA).[42] These statistics give an indication of the correlation between education and the reduced probability of alcoholism. As indicated, alcohol dependence or abuse falls from a 7.7% prevalence rate among males with less than a high school diploma to a 6.9% prevalence rate

[41] Centers for Disease Control and Prevention, "Adults who are current smokers" in "Tobacco Use – 2011," Behavioral Risk Factor Surveillance System Prevalence and Trends Data, accessed August 2013, http://apps.nccd.cdc.gov/brfss/list.asp?cat=TU&yr=2011&qkey=8161&state=All.

[42] Substance Abuse and Mental Health Services Administration, "Table 5.7B - Substance Dependence or Abuse in the Past Year among Persons Aged 26 or Older, by Demographic Characteristics: Percentages, 2010 and 2011," Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2010 and 2011.

among males with a college degree. Similarly, alcohol dependence or abuse among females ranges from a 3.7% prevalence rate at the less than high school level to a 3.3% prevalence rate at the college graduate level.

Figure A8.2: Prevalence of alcohol dependence or abuse by sex and education level



A8.1.3 Obesity

The rise in obesity and diet-related chronic diseases has led to increased attention on how expenditures relating to obesity have increased in recent years. The average cost of obesity-related medical conditions is calculated using information from the *Journal of Occupational and Environmental Medicine*, which reports incremental medical expenditures and productivity losses due to excess weight.[43] The CDC also reports the prevalence of obesity among adults by state.[44]

Data for Figure A8.3 was provided by the National Center for Health Statistics which shows the prevalence of obesity among adults aged 20 years and over by education and sex.[45] As indicated, college graduates are less likely to be obese than individuals with a high school diploma. However, the prevalence of obesity among males with some college is actually greater than males with no more

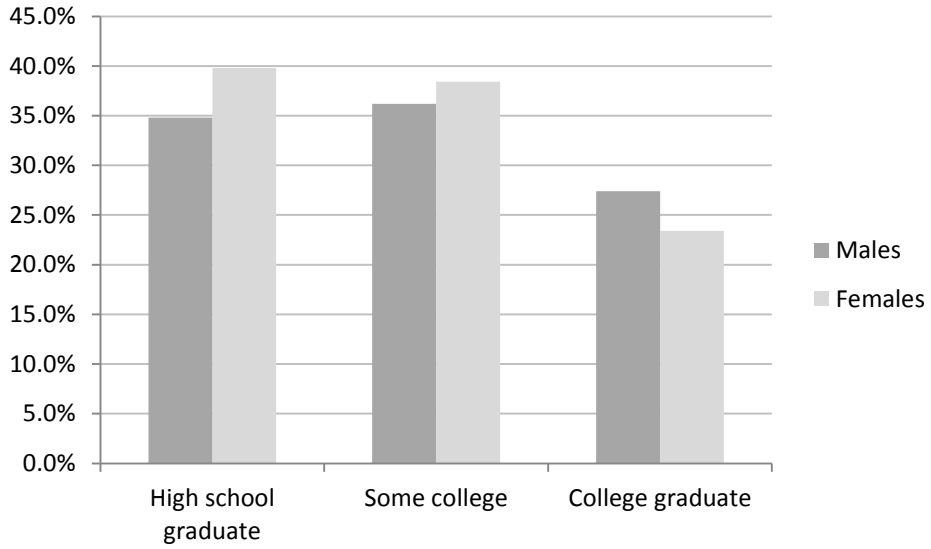
[43] Eric A. Finkelstein, Marco da Costa DiBonaventura, Somali M. Burgess, and Brent C. Hale, "The Costs of Obesity in the Workplace," *Journal of Occupational and Environmental Medicine* 52, no. 10 (October 2010): 971-976.

[44] Centers for Disease Control and Prevention, "Adult Obesity Facts," Overweight and Obesity, accessed August 2013, http://www.cdc.gov/obesity/data/adult.html#Prevalence.

[45] Cynthia L. Ogden, Molly M. Lamb, Margaret D. Carroll, and Katherine M. Flegal, "Figure 3. Prevalence of obesity among adults aged 20 years and over, by education, sex, and race and ethnicity: United States 2005-2008" in "Obesity and Socioeconomic Status in Adults: United States 2005-2008," NCHS data brief no. 50, Hyattsville, MD: National Center for Health Statistics, 2010.

than a high school diploma. In general, though, obesity tends to decline with increasing levels of education.

Figure A8.3: Prevalence of obesity by education level

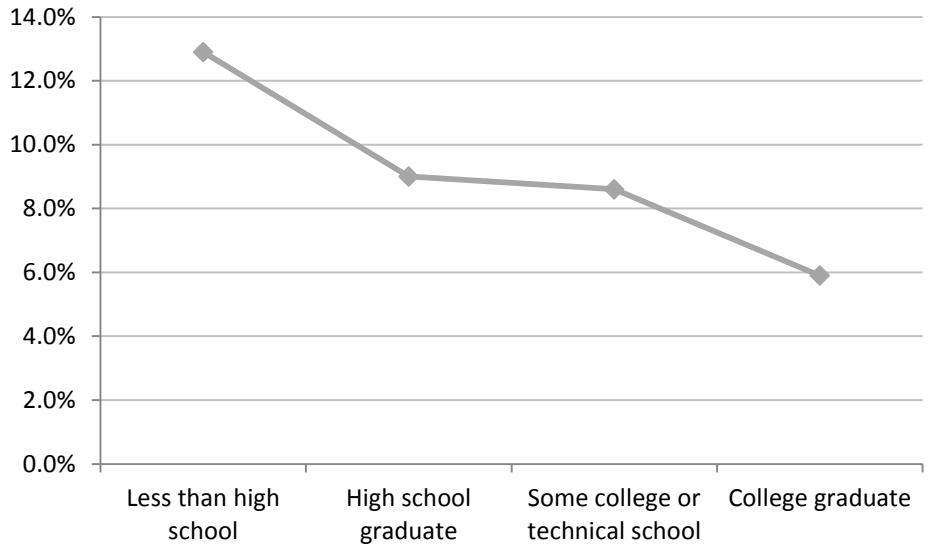


A8.1.4 Mental illness

Capturing the full economic cost of mental disorders is problematic because many of the costs are hidden or difficult to detach from others externalities, such as drug abuse or alcoholism. For this reason, this study only examines the costs of absenteeism caused by depression in the workplace. Figure A8.4 summarizes the prevalence of self-reported frequent mental distress among adults by education level, based on data supplied by the CDC.[46] As shown, people with higher levels of education are less likely to suffer from mental illness, with the prevalence of mental illness being the highest among people with less than a high school diploma.

[46] Centers for Disease Control and Prevention, "Table 1. Number of respondents to a question about mental health and percentage who self-reported frequent mental distress (FMD), by demographic characteristics -- United States, Behavioral Risk Factor Surveillance System, 1993-1996" in "Self-Reported Frequent Mental Distress Among Adults -- United States, 1993-1996." *Morbidity and Mortality Weekly Report* 47, no. 16 (May 1998): 325-331.

Figure A8.4: Prevalence of frequent mental distress by education level



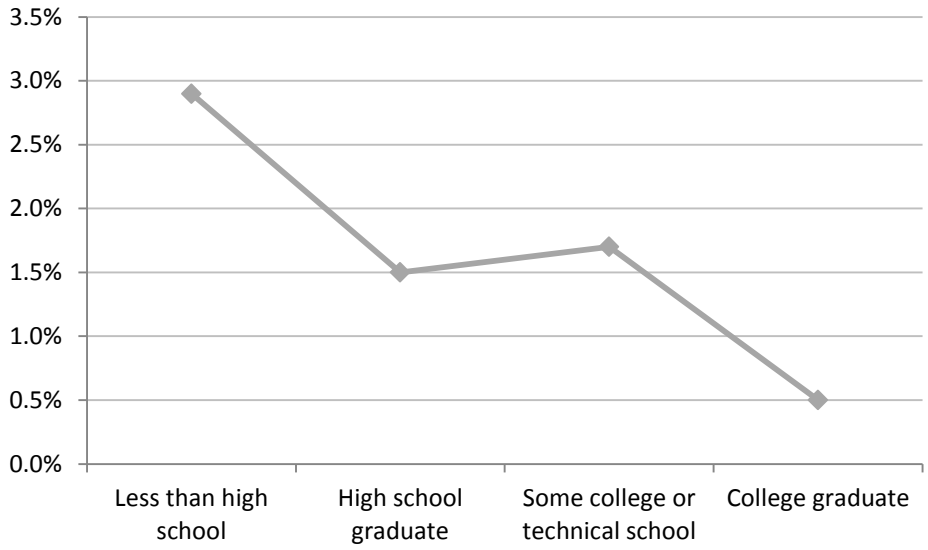
A8.1.5 Drug abuse

The burden and cost of illicit drug abuse is enormous in our society, but little is known about potential costs and effects at a population level. What is known is that the rate of people abusing drugs is inversely proportional to their education level. The higher the education level, the less likely a person is to abuse or depend on illicit drugs. The probability that a person with less than a high school diploma will abuse drugs is 2.9%, nearly six times greater than the probability of drug abuse for college graduates (0.5%). This relationship is presented in Figure A8.5 based on data supplied by SAMHSA.[47] Health costs associated with illegal drug use are also available from SAMSHA, with costs to state and local government representing 48% of the total cost related to illegal drug use.[48]

[47] Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, 2010 and 2011.

[48] Substance Abuse and Mental Health Services Administration. "Table A.2. Spending by Payer: Levels and Percent Distribution for Mental Health and Substance Abuse (MHSA), Mental Health (MH), Substance Abuse (SA), Alcohol Abuse (AA), Drug Abuse (DA), and All-Health, 2005" in *National Expenditures for Mental Health Services & Substance Abuse Treatment, 1986 – 2005*. DHHS Publication No. (SMA) 10-4612. Rockville, MD: Center for Mental Health Services and Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration, 2010.

Figure A8.5: Prevalence of illicit drug dependence or abuse by education level



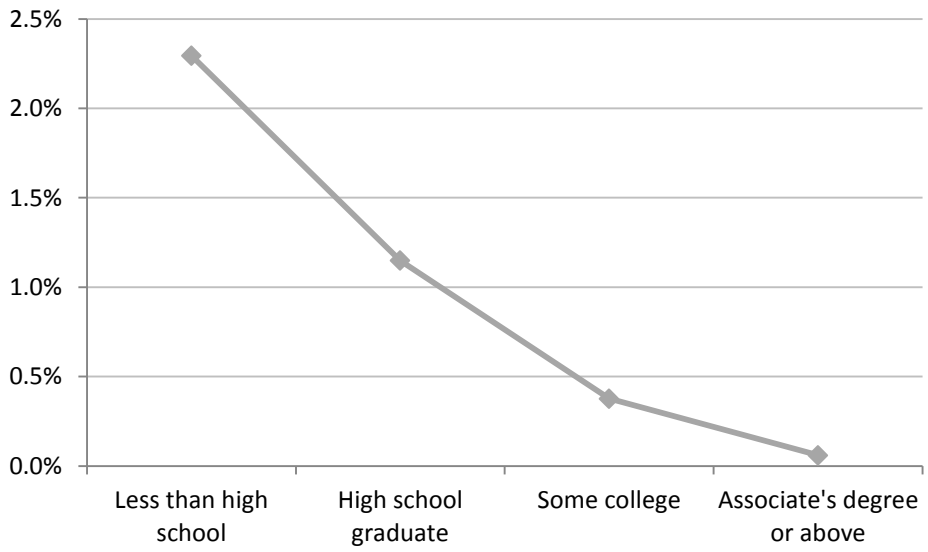
A8.2 Crime

As people achieve higher education levels, they are statistically less likely to commit crimes. The analysis identifies the following three types of crime-related expenses: 1) criminal justice expenditures, including police protection, judicial and legal, and corrections, 2) victim costs, and 3) productivity lost as a result of time spent in jail or prison rather than working.

Figure A8.6 displays the probability that an individual will be incarcerated by education level. Data are derived from the breakdown of the inmate population by education level in federal, state, and local prisons as provided by the Bureau of Justice Statistics,[49] divided by the total adult population. As indicated, incarceration drops on a sliding scale as education levels rise.

[49] Caroline Wolf Harlow. "Table 1. Educational attainment for State and Federal prison inmates, 1997 and 1991, local jail inmates, 1996 and 1989, probationers, 1995, and the general population, 1997" in "Education and Correctional Populations." Bureau of Justice Statistics Special Report, January 2003, NCJ 195670. Accessed August 2013. http://bjs.ojp.usdoj.gov/index.cfm?ty=pbdetail&iid=814.

Figure A8.6: Incarceration rates by education level



Victim costs comprise material, medical, physical, and emotional losses suffered by crime victims. Some of these costs are hidden, while others are available in various databases. Estimates of victim costs vary widely, attributable to differences in how the costs are measured. The lower end of the scale includes only tangible out-of-pocket costs, while the higher end includes intangible costs related to pain and suffering.[50]

Yet another measurable benefit is the added economic productivity of people who are gainfully employed, all else being equal, and not incarcerated. The measurable productivity benefit is simply the number of additional people employed multiplied by the average income of their corresponding education levels.

A8.3 Welfare and unemployment

Statistics show that as education levels increase, the number of welfare and unemployment applicants declines. Welfare and unemployment claimants can receive assistance from a variety of different sources, including Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), Medicaid, Supplemental Security Income (SSI), and unemployment insurance.[51]

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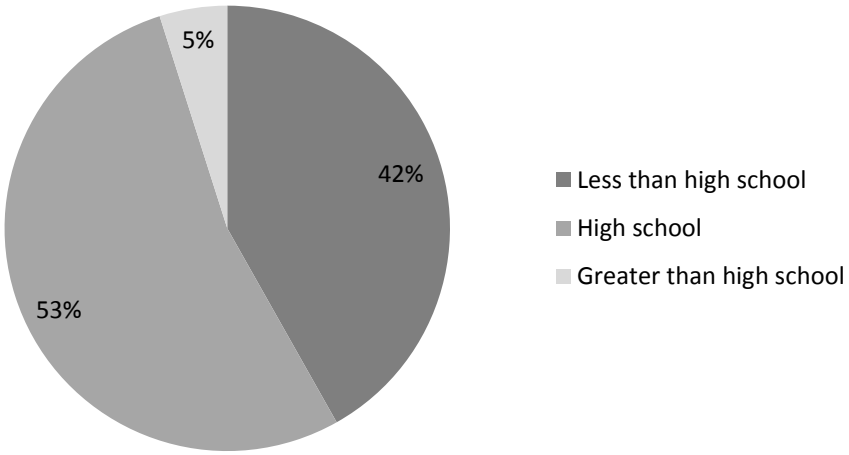
[50] Kathryn E. McCollister, Michael T. French, and Hai Fang, "The Cost of Crime to Society: New Crime-Specific Estimates for Policy and Program Evaluation." *Drug and Alcohol Dependence* 108, no. 1-2 (April 1, 2010): 98-109.

[51] Medicaid is not considered in the analysis for welfare because it overlaps with the medical expenses in the analyses for smoking, alcoholism, obesity, mental illness, and drug abuse. We also exclude any welfare benefits associated with disability and age.

Figure A8.7 relates the breakdown of TANF recipients by education level, derived from data supplied by the U.S. Department of Health and Human Services.[52] As shown, the demographic characteristics of TANF recipients are weighted heavily towards the less than high school and high school categories, with a much smaller representation of individuals with greater than a high school education.

Figure A8.7: Breakdown of TANF recipients by education level

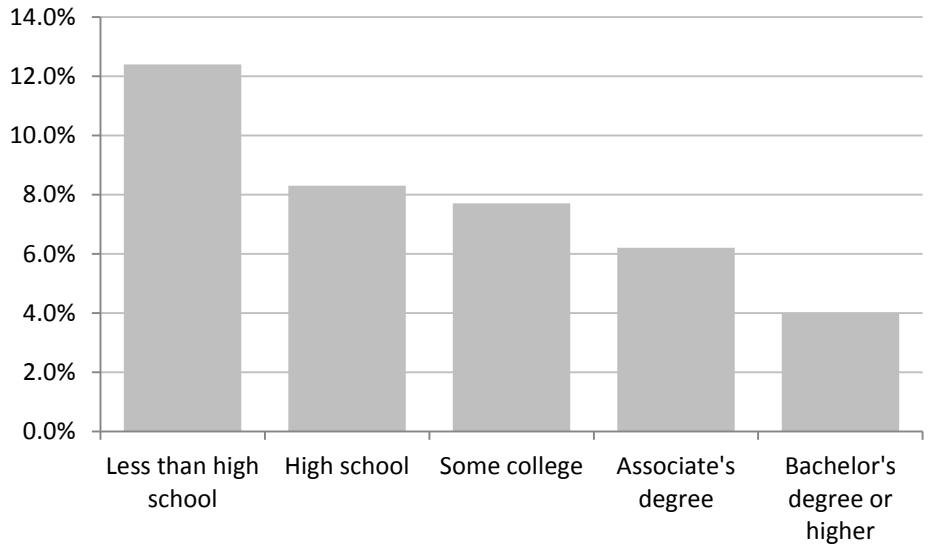


Unemployment rates also decline with increasing levels of education, as illustrated in Figure A8.8. These data are supplied by the Bureau of Labor Statistics.[53] As shown, unemployment rates range from 12.4% for those with less than a high school diploma to 4.0% for those at the bachelor's degree level or higher.

[52] U.S. Department of Health and Human Services, Office of Family Assistance, "Table 10:26 - Temporary Assistance for Needy Families - Active Cases: Percent Distribution of TANF Adult Recipients by Educational Level, FY 2009" in Temporary Assistance for Needy Families Program Ninth Report to Congress, 2012.

[53] Bureau of Labor Statistics, "Table 7. Employment status of the civilian noninstitutional population 25 years and over by educational attainment, sex, race, and Hispanic or Latino ethnicity." Current Population Survey, Labor Force Statistics. Accessed August 2013. http://www.bls.gov/cps/cpsaat07.pdf.

Figure A8.8: Unemployment by education level



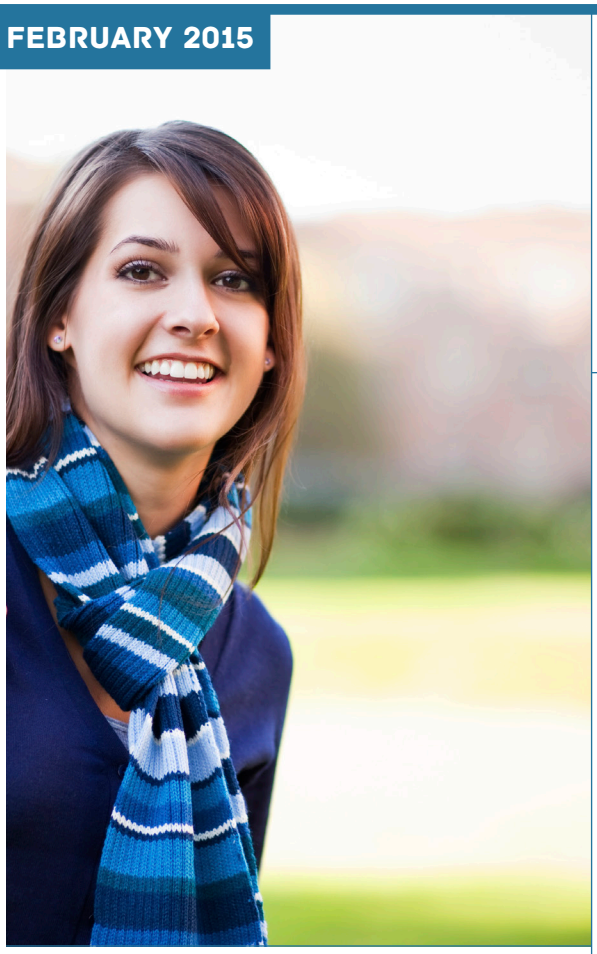
A8.4 Conclusion

The statistical databases bear out the simple correlation between education and improved health, lower incarceration rates, and reduced welfare and unemployment. These by no means comprise the full range of benefits one possibly can link to education. Other social benefits certainly may be identified in the future as reliable statistical sources are published and data are incorporated into the analytical framework. However, the fact that these incidental benefits occur and can be measured is a bonus that enhances the economic attractiveness of education.

IMPACT ON LOCAL BUSINESS COMMUNITY

Demonstrating the Economic Value of Northland Pioneer College

FEBRUARY 2015



In FY 2013-14, NPC's total impact on the Navajo County economy was $222.4 million in added income, equal to 9.6% of the region's Gross Regional Product.

NPC PAYROLL & EXPENSES SUPPORT LOCAL BUSINESSES

- In FY 2013-14, NPC employed **553** full-time and part-time faculty and staff, with an annual payroll of **$17.2 MILLION**. Much of this was spent in Navajo County to purchase groceries, clothing, and other household goods and services.
- The college is itself a buyer of goods and services and spent another **$11 MILLION** to support its operations during the analysis year.
- The net impact of college payroll and expenses in Navajo County was **$17.6 MILLION** in added regional income.

JOB EQUIVALENTS BASED ON INCOME

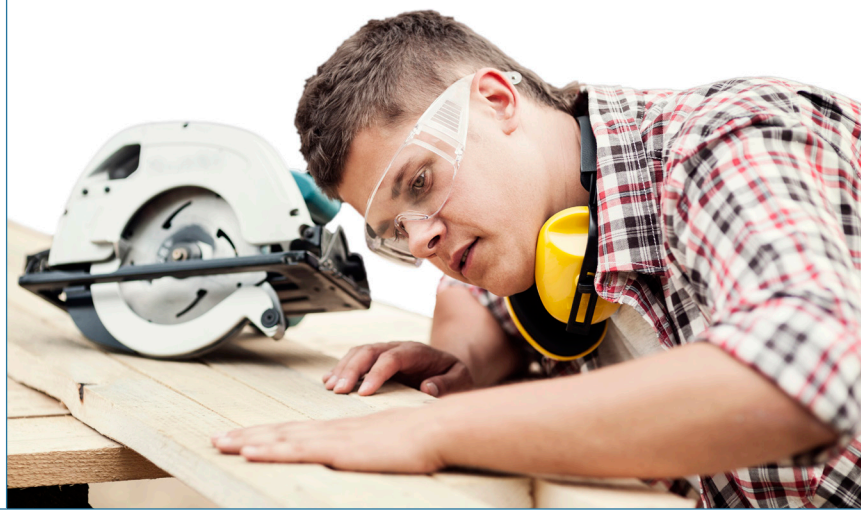
Job equivalents are a measure of the average-wage jobs that a given amount of income can potentially support. They are calculated by dividing income by the average income per worker in the region. Based on the added income created by NPC, the job equivalents are as follows:

Operations spending impact = **472** job equivalents

Impact of student spending = **2** job equivalents

Alumni impact = **5,481** job equivalents

Overall, the added income created by NPC and its students supported **5,955** job equivalents.



INCOME CREATED BY NPC IN FY 2013-14 (ADDED INCOME)

$17.6 MILLION Operations spending impact
$75.3 THOUSAND Impact of student spending
$204.7 MILLION Alumni impact
$222.4 MILLION Total impact

NPC STUDENTS BOOST LOCAL SPENDING

- Around 20% of students attending NPC originated from outside the county. Some of these students relocated to Navajo County and spent money on groceries, transportation, rent, and so on at county businesses. These expenditures helped support local businesses.
- The expenditures of the college's out-of-region students added approximately **$75,368** in income to the region during the analysis year.

NPC TRAINING SUSTAINS A SKILLED WORKFORCE

- Over the years, students have studied at NPC and entered or re-entered the workforce with newly-acquired skills. Today, thousands of former students are employed in Navajo County.
- As students apply the skills they acquired at the college, they are rewarded with higher incomes. They also raise business profits through their increased productivity. These higher incomes and increased profits create even more income as they are spent in the region.
- In FY 2013-14, the effect of former NPC students on the regional economy amounted to **$204.7 MILLION**, in added income.

EXECUTIVE SUMMARY

Demonstrating the Economic Value of Northland Pioneer College

FEBRUARY 2015 | ANALYSIS OF THE **ECONOMIC IMPACT & RETURN ON INVESTMENT** OF EDUCATION

Northland Pioneer College (NPC) creates value in many ways. The college plays a key role in helping students increase their employability and achieve their individual potential. It provides students with the skills they need to have a fulfilling and prosperous career. Further, it supplies an environment for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

The contribution of NPC influences both the lives of students and also the regional economy. The college serves a range of industries in Navajo County and supports local businesses, and society as a whole in Arizona benefits from an expanded economy and improved quality of life. The benefits created by NPC even extend to the state and local government through increased tax revenues and public sector savings.

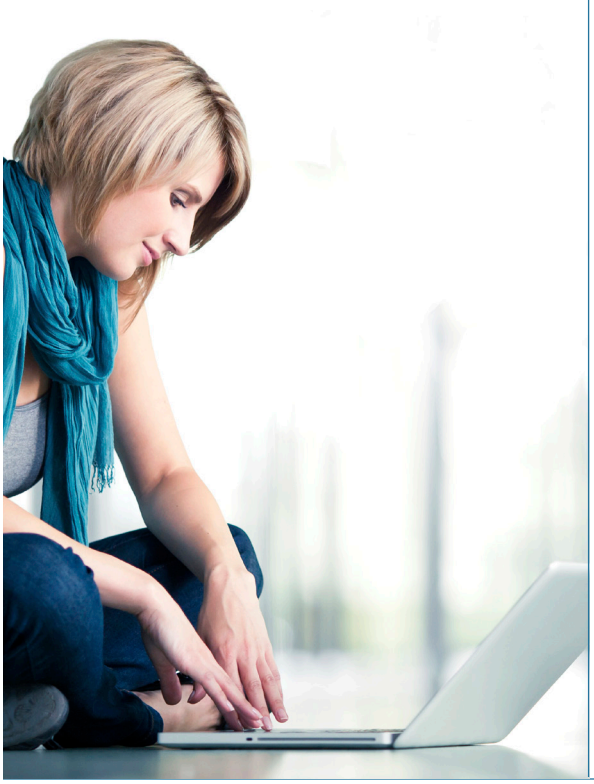
The purpose of this study is to investigate the economic impacts created by NPC on the business community and the benefits that the college generates in return for the investments made by its key stakeholder groups—students, society, and taxpayers. The following two analyses are presented:

- **REGIONAL ECONOMIC IMPACT ANALYSIS**
- **INVESTMENT ANALYSIS**

All results reflect student and financial data for Fiscal Year (FY) 2013-14. Impacts on the business community are reported under the economic impact analysis, and the return on investment to students, society, and taxpayers are reported under the investment analysis. Both analyses are described more fully in the following sections.

ECONOMIC IMPACT ANALYSIS

NPC promotes economic growth in Navajo County in a variety of ways. The college is an employer and buyer of goods and services, and the living expenses of students from outside of Navajo County benefit local businesses. In addition, NPC is a primary source of education to Navajo County residents and a supplier of trained workers to Navajo County industry.



The regional economic impact analysis examines the impact of NPC on the local business community through increased consumer spending and enhanced business productivity. Results are measured in terms of added income and are organized according to the following three impacts:

1. Impact of college operations;
2. Impact of the spending of students who relocated to the region, and;
3. Impact of the increased productivity of alumni that were employed in the regional workforce during the analysis year.

OPERATIONS SPENDING IMPACT

NPC is an important employer in Navajo County. In FY 2013-14, the college employed 553 full-time and part-time faculty and staff. Of these, 95% lived in Navajo County. Total payroll at NPC was $17.2 million, much of which was spent in the region for groceries, rent, eating out, clothing, and other household expenses.

NPC is itself a large-scale buyer of goods and services. In FY 2013-14 the college spent $11 million to cover its expenses for facilities, professional services, and supplies.

The total income that NPC created during the analysis year as a result of its day-to-day operations was $17.6 million. This figure represents the college's payroll, the multiplier effects generated by the spending of the college and its employees, and a downward adjustment to account for funding that the college received from local sources.

JOB EQUIVALENTS BASED ON INCOME

Job equivalents are a measure of the average-wage jobs that a given amount of income can potentially support. They are calculated by dividing income by the average income per worker in the county. Based on the added income created by NPC, the job equivalents are as follows:

Operations spending impact = **472** job equivalents

Impact of student spending = **2** job equivalents

Alumni impact = **5,481** job equivalents

Overall, the added income created by NPC and its students supported **5,955** job equivalents.

INCOME CREATED BY NPC IN FY 2013-14 (ADDED INCOME)

$17.6 MILLION Operations spending impact
$75.4 THOUSAND Impact of student spending
$204.7 MILLION Alumni impact
$222.4 MILLION Total impact

IMPACT OF STUDENT SPENDING

Around 20% of students attending NPC originated from outside the county in FY 2013-14. Some of these students relocated to Navajo County. These students likely would not have come to the region if the college did not exist. While attending, out-of-region students spent $254,034 to purchase groceries, rent accommodation, pay for transportation, and so on. A significant portion of these expenditures occurred in the region, generating $75.4 thousand in new income in the economy during the analysis year.

ALUMNI IMPACT

NPC's biggest impact results from the education and training it provides for local residents. Since the college was established, students have studied at NPC and entered the workforce with new skills. Today, thousands of former students are employed in Navajo County.

During the analysis year, former students of NPC generated $204.7 million in added income in the region. This figure represents the higher wages that students earned during the year, the increased output of the businesses that employed the students, and the multiplier effects that occurred as students and their employers spent money at other businesses.

TOTAL IMPACT

The overall impact of NPC on the local business community during the analysis year amounted to $222.4 million, equal to the sum of the operations spending impact, the student spending impact, and the alumni impact. This added income was equal to approximately 9.6% of the region's Gross Regional Product.

INVESTMENT ANALYSIS

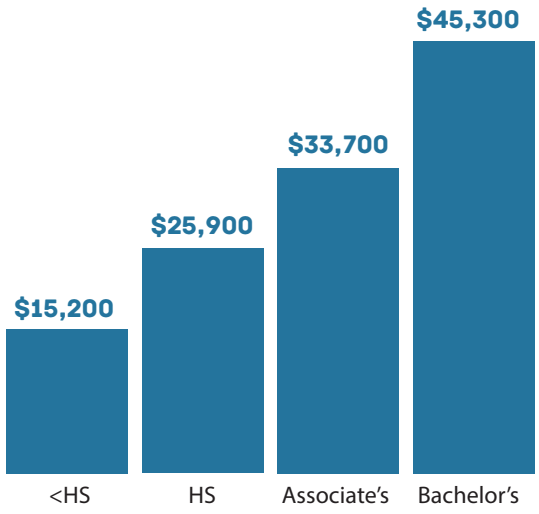
Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile. If costs outweigh benefits, then the investment will lose money and is considered unprofitable. This study considers NPC as an investment from the perspectives of students, society, and taxpayers. The backdrop for the analysis is the entire Arizona economy.

STUDENT PERSPECTIVE

In 2013-14, NPC served 6,975 credit students and 2,381 non-credit students. In order to attend college, students paid for tuition, fees, books, and supplies. They also gave up money that they would have otherwise earned had they been working instead of attending college. The total investment made by NPC's students in FY 2013-14 amounted to $33.1 million, equal to $2.5 million in out-of-pocket expenses plus $28.4 million in forgone time and money.

In return for their investment, NPC's students will receive a stream of higher future wages that will continue to grow through their working lives. As shown in Figure 1, mean income levels at the midpoint of the average-aged worker's career increase as people achieve higher levels of education. For example, the average associate's degree completer from NPC will see an increase in earnings of $7,800 each year compared to someone with a high school diploma or equivalent. Over a working lifetime, this increase in earnings amounts to an undiscounted value of approximately $273,000 in higher income.

FIGURE 1. ANNUAL INCOME BY EDUCATION LEVEL AT CAREER MIDPOINT IN NAVAJO COUNTY



Source: EMSI complete employment data.

The present value of the higher future wages that NPC's students will receive over their working careers is $216.7 million. Dividing this value by the $33.1 million in student costs yields a benefit-cost ratio of 6.5. In other words, for every $1 students invest in NPC in the form of out-of-pocket expenses and forgone time and money, they receive a cumulative of $6.50 in higher future wages. The average annual rate of return for students is 27.2%. This is an impressive return compared, for example, to the less than 1% return per annum that is generally expected from saving money in today's standard bank savings accounts.

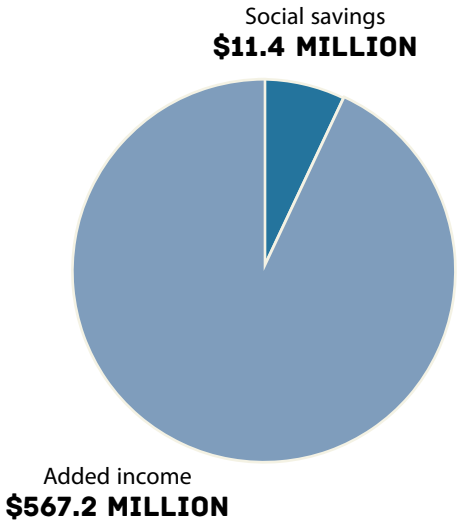
SOCIAL PERSPECTIVE

Society as a whole within Arizona benefits from the presence of NPC in two major ways. The first and largest benefit that society receives is the added income created in the state. As discussed in the previous section, students earn more because of the skills they acquire while attending NPC. Businesses also earn more because the enhanced skills of students make them more productive. Together, higher student wages and increased business output stimulate increases in income across the state, thereby raising prosperity in Arizona and expanding the economic base for society as a whole.

Benefits to society also consist of the savings generated by the improved lifestyles of students. Education is statistically correlated with a variety of lifestyle changes that generate social savings across three main categories: 1) health, 2) crime, and 3) unemployment. Health savings include avoided medical costs associated with smoking, alcoholism, obesity, drug abuse, and mental disorders. Crime savings include reduced security expenditure and insurance administration, lower victim costs, and reduced criminal justice system expenditures. Unemployment savings include the reduced demand for income assistance and welfare benefits. For a list of study references to these statistical benefits, please contact the college for a copy of the main report.

Figure 2 shows the present value of the added income and social savings that will occur in Arizona over the working lifetime of the 2013-14 student population at NPC. Added income amounts to a present value of $567.2 million due to the increased lifetime incomes of students and associated increases in business output. Social savings amount to $11.4 million, the sum of health, crime, and unemployment savings in Arizona. Altogether, total benefits to society equal $578.6 million (in present value terms).

FIGURE 2. PRESENT VALUE OF ADDED INCOME AND SOCIAL SAVINGS IN ARIZONA



Society invested $59.1 million in NPC educations during the analysis year. This includes all expenditures by NPC, all student expenditures, and all student opportunity costs. For every dollar of this investment, society as a whole in Arizona will receive a cumulative value of $9.80 in benefits, equal to the $578.6 million in benefits divided by the $59.1 million in costs. These benefits will occur for as long as NPC's 2013-14 students remain employed in the state workforce.

TAXPAYER PERSPECTIVE

From the taxpayer perspective, benefits consist primarily of the taxes that state and local government will collect from the added income created in the state. As NPC students earn more, they will make higher tax payments. Employers will also make higher tax payments as they increase their output and purchase more supplies and services. By the end of the students' working careers, state and local government will have collected a present value of $41.4 million in added taxes.

A portion of the savings enjoyed by society also accrues to state and local taxpayers. Students are more employable, so the demand for welfare and unemployment benefits reduces. Improved health habits lower the students' demand for national health care services. Students are also less likely to commit crimes, so the demand for law enforcement services reduces (study references are available in the main report). All of these benefits will generate a present value of $4.4 million in savings to state and local taxpayers.

Total benefits to taxpayers equal $45.8 million, equal to the sum of the added taxes and public sector savings. Comparing this to the taxpayer costs of $23.9 million—equal to the funding that NPC received from state and local government during the analysis year—yields a benefit-cost ratio of 1.9. This means that for every $1 of public money invested in NPC, taxpayers receive a cumulative value of $1.90 over the course of the students' working lives. The average annual rate of return is 5.5%, a solid investment that compares favorably with other long-term investments in both the private and public sectors.

TABLE 2. SUMMARY OF INVESTMENT ANALYSIS RESULTS

STUDENT PERSPECTIVE	
$216,677	Benefits (thousands)
$33,125	Costs (thousands)
$183,552	Net present value (thousands)
6.5	Benefit-cost ratio
27.2%	Rate of return

SOCIAL PERSPECTIVE	
$578,575	Benefits (thousands)
$59,056	Costs (thousands)
$519,520	Net present value (thousands)
9.8	Benefit-cost ratio
NA	Rate of return*

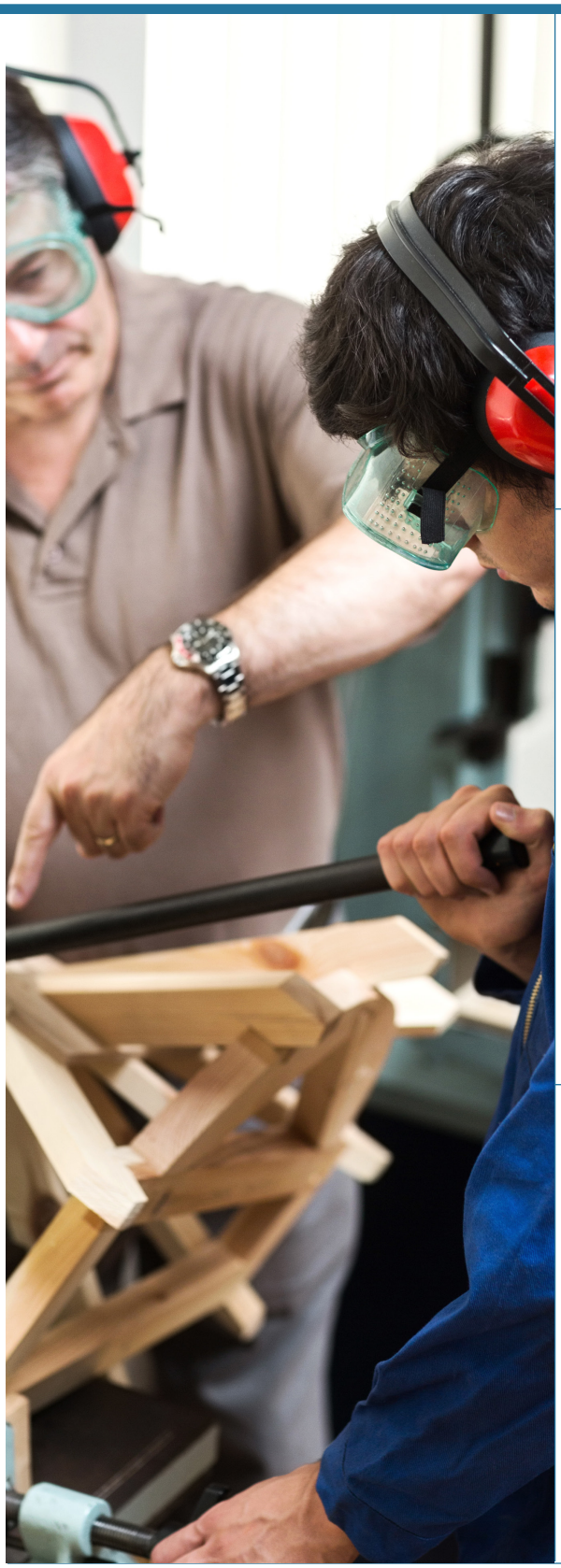
TAXPAYER PERSPECTIVE	
$45,785	Benefits (thousands)
$23,906	Costs (thousands)
$21,878	Net present value (thousands)
1.9	Benefit-cost ratio
5.5%	Rate of return

* The rate of return is not reported for the social perspective because the beneficiaries of the investment are not necessarily the same as the original investors.

SUMMARY OF INVESTMENT ANALYSIS RESULTS

Table 2 presents the results of the investment analysis for all three of NPC's major stakeholder groups—students, society, and taxpayers. As shown, students receive great value for their educational investment. At the same time, the investment made by state and local taxpayers in the college creates a wide range of benefits to society and returns more to government budgets than it costs.

CONCLUSION



The results of this study demonstrate that NPC creates value from multiple perspectives. The college benefits local businesses by increasing consumer spending in the region and supplying a steady flow of qualified, trained workers into the workforce. It enriches the lives of students by raising their lifetime incomes and helping them achieve their individual potential. It benefits society as a whole in Arizona by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of students. Finally, it benefits state and local taxpayers through increased tax receipts across the state and a reduced demand for government-supported social services.

ABOUT THE STUDY

Data and assumptions used in the study are based on several sources, including the 2013-14 academic and financial reports from the college, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of EMSI's Social Accounting Matrix (SAM) model, and a variety of studies and surveys relating education to social behavior. The study applies a conservative methodology and follows standard practice using only the most recognized indicators of investment effectiveness and economic impact. For a full description of the data and approach used in the study, please contact the college for a copy of the technical report.

ABOUT EMSI

Economic Modeling Specialists International, a CareerBuilder company, is a leading provider of economic impact studies and labor market data to educational institutions, workforce planners, and regional developers in the U.S. and internationally. Since 2000, EMSI has completed over 1,200 economic impact studies for educational institutions in four countries. Visit www.economicmodeling.com for more information about EMSI's products and services.

FACT SHEET

Demonstrating the Economic Value of Northland Pioneer College

FEBRUARY 2015

Northland Pioneer College (NPC) creates a significant positive impact on the business community and generates a return on investment to its major stakeholder groups—students, society, and taxpayers. Using a two-pronged approach that involves an economic impact analysis and an investment analysis, the study calculates the benefits to each of these groups. Results of the analysis reflect Fiscal Year (FY) 2013-14.

INCOME CREATED BY NPC IN FY 2013-14 (ADDED INCOME)

$17.6 MILLION	Operations spending impact
$75.4 THOUSAND	Impact of student spending
$204.7 MILLION	Alumni impact
$222.4 MILLION	Total impact

IMPACT ON BUSINESS COMMUNITY

During the analysis year, NPC and its students added **$222.4 MILLION** in income to the Navajo County economy, approximately equal to **9.6%** of the Gross Regional Product. The economic impacts of NPC break down as follows:

Operations spending impact

- NPC employed 553 full-time and part-time employees in FY 2013-14. Payroll amounted to **$17.2 MILLION**, much of which was spent in Navajo County to purchase groceries, clothing, and other household goods and services. The college spent another **$11 MILLION** to support its day-to-day operations.
- The net impact of college payroll and expenses in Navajo County during the analysis year was approximately **$17.6 MILLION** in added income.

Impact of student spending

- Around 20% of students attending NPC originated from outside the county. Some of these students relocated to Navajo County and spent money on groceries, transportation, rent, and so on at county businesses.
- The expenditures of students who relocated to the region during the analysis year added approximately **$75.4 THOUSAND** in income to the economy.

Alumni impact

- Over the years, students have studied at NPC and entered or re-entered the workforce with newly-acquired skills. Today, thousands of these former students are employed in Navajo County.
- The accumulated contribution of former students currently employed in the regional workforce amounted to **$204.7 MILLION** in added income during the analysis year.

JOB EQUIVALENTS BASED ON INCOME

Job equivalents are a measure of the average-wage jobs that a given amount of income can potentially support. They are calculated by dividing income by the average income per worker in the region. Based on the added income created by NPC, the job equivalents are as follows:

Operations spending impact = **472** job equivalents

Impact of student spending = **2** job equivalents

Alumni impact = **5,481** job equivalents

Overall, the added income created by NPC and its students supported **5,955** job equivalents.

FOR EVERY $1 SPENT BY...

STUDENTS	**$6.50** Gained in lifetime income for STUDENTS
SOCIETY	**$9.80** Gained in added state income and social savings for SOCIETY
TAXPAYERS	**$1.90** Gained in added taxes and public sector savings for TAXPAYERS

RETURN ON INVESTMENT TO STUDENTS, SOCIETY, AND TAXPAYERS

Student perspective

- NPC's 2013-14 students paid a total of **$2.5 MILLION** to cover the cost of tuition, fees, books, and supplies. They also forwent **$28.4 MILLION** in money that they would have earned had they been working instead of learning.
- In return for the monies invested in the college, students will receive a present value of **$216.7 MILLION** in increased earnings over their working lives. This translates to a return of **$6.50** in higher future income for every $1 that students invest in their education. The average annual return for students is **27.2%**.

Social perspective

- Society as a whole in Arizona will receive a present value of **$567.2 MILLION** in added state income over the course of the students' working lives. Society will also benefit from **$11.4 MILLION** in present value social savings related to reduced crime, lower unemployment, and increased health and well-being across the state.
- For every dollar that society spent on NPC educations during the analysis year, society will receive a cumulative value of **$9.80** in benefits, for as long as the 2013-14 student population at NPC remains active in the state workforce.

Taxpayer perspective

- In FY 2013-14, state and local taxpayers in Arizona paid **$23.9 MILLION** to support the operations of NPC. The net present value of the added tax revenue stemming from the students' higher lifetime incomes and the increased output of businesses amounts to **$41.4 MILLION** in benefits to taxpayers. Savings to the public sector add another **$4.4 MILLION** in benefits due to a reduced demand for government-funded services in Arizona.
- Dividing benefits to taxpayers by the associated costs yields a **1.9** benefit-cost ratio, i.e., every $1 in costs returns $1.90 in benefits. The average annual return on investment for taxpayers is **5.5%**.

RETURN ON INVESTMENT TO SOCIETY

Demonstrating the Economic Value of Northland Pioneer College

FEBRUARY 2015

Benefits created by NPC extend to far more people than just its students. As students and employers enjoy higher income and increased output, society as a whole benefits from an expanded economy and a range of savings associated with the students' improved quality of life.

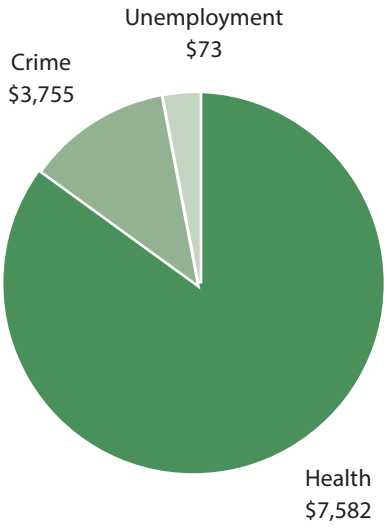
NPC RAISES PROSPERITY IN THE STATE

- Students earn more because of the skills and qualifications they acquire at NPC. Further, employers earn more because the added skills of the students they hire make their businesses more productive.
- Together, increases in earnings and business output stimulate corresponding increases in income and employment throughout the state. Over their working lives, NPC's 2013-14 student population will generate a present value of **$567.2 MILLION** in added income in the state of Arizona.

NPC IMPROVES QUALITY OF LIFE

- As NPC students achieve higher levels of education, they are statistically more likely to develop good health habits. This leads to a present value of **$7.6 MILLION** in savings to students and to society as a whole for medical treatment related to smoking, alcoholism, obesity, drug abuse, and mental disorders.

PRESENT VALUE OF SOCIAL SAVINGS (THOUSANDS)



- Students enjoy better employment opportunities as a result of their education at NPC. This makes them less likely to require income assistance and less likely to commit crimes. These effects translate to a present value of **$73,482** in unemployment-related savings and **$3.8 MILLION** in law enforcement savings to society as a whole.
- Altogether, savings to society amount to a present value of $11.4 million, equal to the sum of avoided costs related to health, crime, and unemployment.

BENEFITS TO SOCIETY OUTWEIGH SOCIAL COSTS

- In FY 2013-14, society invested **$59.1 MILLION** in NPC educations. This includes all NPC expenditures, all student expenditures, and all student opportunity costs. In return for this investment, society as a whole will receive a present value of **$578.6 MILLION** in benefits, the sum of the added income and social savings that NPC's 2013-14 student population will generate in the state.
- For every dollar spent on NPC educations, society as a whole in Arizona will receive a cumulative value of **$9.80** in benefits, for as long as NPC's 2013-14 students remain active in the state workforce.

RETURN ON INVESTMENT TO STUDENTS

Demonstrating the Economic Value of Northland Pioneer College

FEBRUARY 2015

Education has the power to raise students' earning potential and increase their employability. In return for their investment in education, NPC's 2013-14 students will receive higher wages that will continue to grow throughout their working lives.

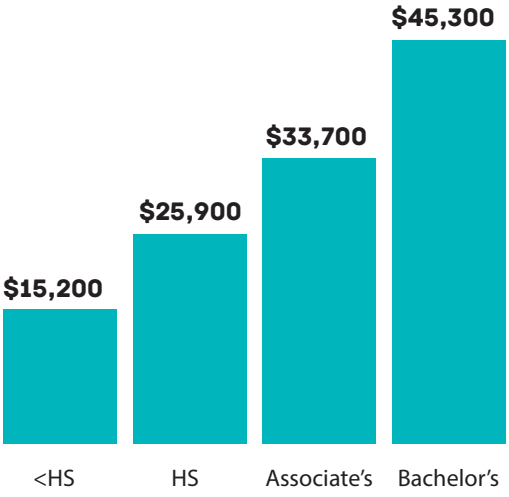
EDUCATION MAKES A DIFFERENCE IN PEOPLE'S LIVES

- NPC provides an environment for students to learn the skills they need to gain and maintain productive employment.
- The training and credentials that students acquire at the college increases their earning potential and help put them on the path to fulfilling and prosperous careers.

EDUCATION RETURNS VALUE FOR MONEY SPENT

- To meet the costs of going to college, students rely on their own earnings or on the earnings of their families. At NPC, students paid a total of **$2.5 MILLION** in FY 2013-14 to cover the cost of tuition, fees, books, and supplies.
- While at college, students spend time focusing on their studies, time they would have otherwise spent in employment or with their families and friends. For NPC students, the value of time and earnings forgone was estimated to be **$28.4 MILLION** (less offsetting monies received from residual aid).

ANNUAL INCOME BY EDUCATION LEVEL AT CAREER MIDPOINT IN NAVAJO COUNTY



- In return for the costs of going to college, students will receive a stream of higher lifetime income. These income gains will fully recover the money that students invested and will continue to grow throughout the students' working lives.

EDUCATION INCREASES PEOPLE'S EARNING POTENTIAL

- Average annual incomes increase as students attain higher levels of education. On average, associate's degree completers in Navajo County will earn $33,700 at the midpoint of their careers, **$7,800** more than someone with a high school diploma.
- Associate's degree completers will earn **$1,179,500** (undiscounted) over their working lifetime, an increase of $273,000 compared to someone with a high school diploma.

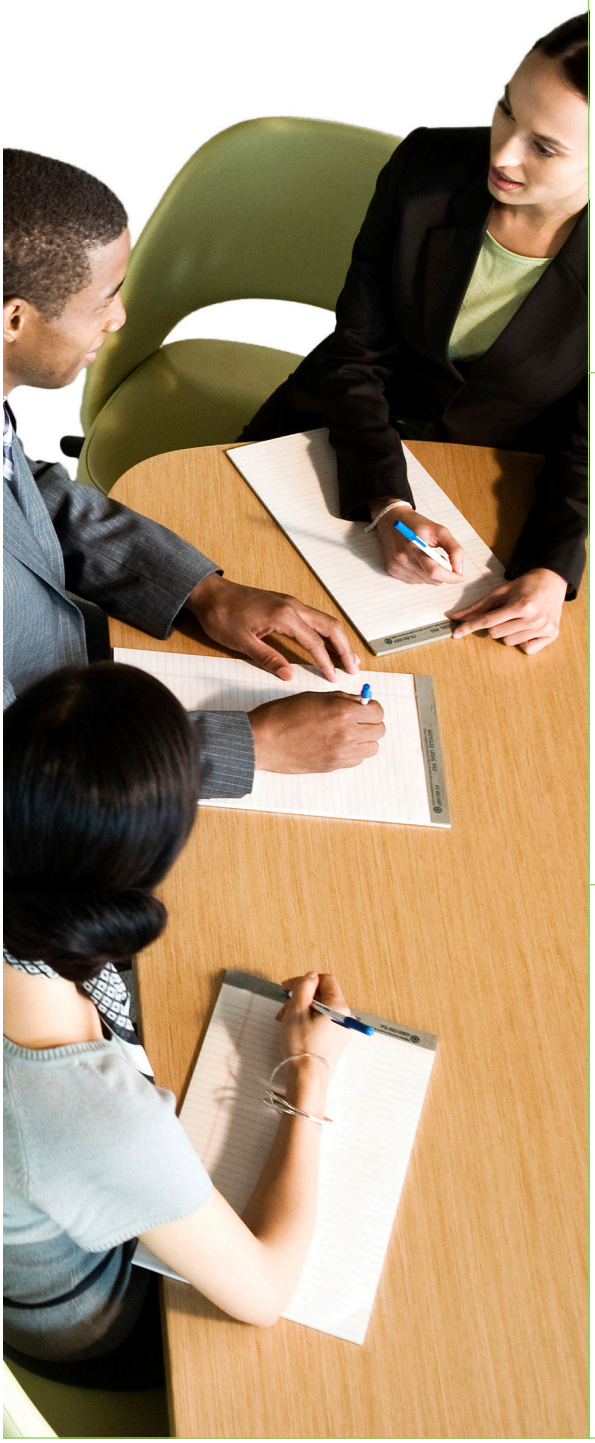
EDUCATION IS ONE OF THE BEST INVESTMENTS STUDENTS AND THEIR FAMILIES CAN MAKE

- NPC's 2013-14 students will receive an average annual rate of return of **27.2%** on their investment in the college. This rate of return continues throughout their working lives.
- Had students and their families taken the money they spent on education and invested it instead in a standard bank savings account, they would have received a rate of return of less than 1%.
- On average, NPC's 2013-14 students will receive a cumulative **$6.50** in higher future income for every $1 they invested in their education.

RETURN ON INVESTMENT TO TAXPAYERS

Demonstrating the Economic Value of Northland Pioneer College

FEBRUARY 2015



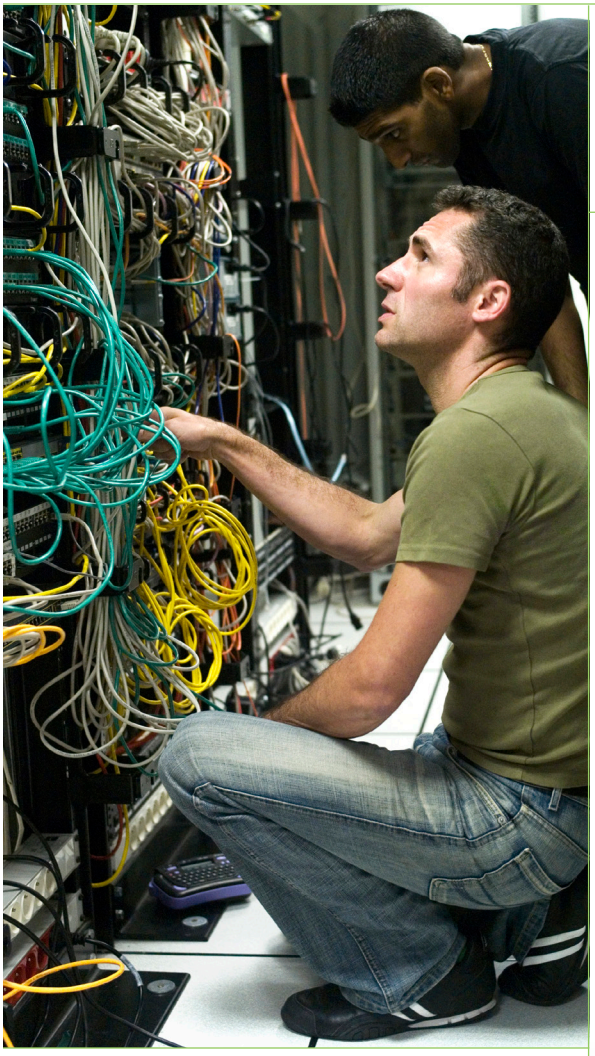
Students and society as a whole enjoy a range of benefits due to their educational investment in NPC. A portion of these benefits accrues to state and local taxpayers in the form of higher tax receipts and a reduced demand for government-supported social services.

NPC INCREASES TAX REVENUE

- Approximately **100%** of NPC's students remain in Arizona upon completing their educational goals. As students earn more, they pay higher taxes. Employers also pay higher taxes through their increased output and spending.
- Over the students' working lives, state and local government in Arizona will collect a present value of **$41.4 MILLION** in the form of higher tax receipts.

NPC REDUCES GOVERNMENT COSTS

- NPC students who achieve higher levels of education are statistically less likely to have poor health habits, commit crimes, or claim welfare or unemployment benefits.
- The improved lifestyles of students result in a reduced demand for government-supported services. Better health leads to reduced health care costs. Reduced crime leads to a reduced burden on the criminal justice system. Further, increased employability leads to fewer claims for welfare and unemployment benefits.

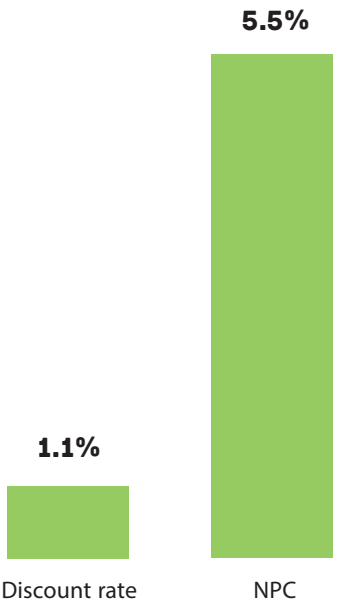


- As a result, taxpayers in the state of Arizona will see a present value of **$4.4 MILLION** in savings to government over the students' working careers.

NPC IS A SOLID INVESTMENT FOR STATE AND LOCAL TAXPAYERS

- In FY 2013-14, state and local taxpayers in Arizona paid **$23.9 MILLION** to support the operations of NPC.
- For every $1 of public money spent on NPC, taxpayers receive a cumulative return of **$1.90** over the course of students' working lives in the form of higher tax receipts and public sector savings.
- Taxpayers see an annual return of **5.5%** on their investment in NPC. This return compares favorably with the 1.1% discount rate used by the federal government to appraise long-term investments.

COMPARING TAXPAYER RATE OF RETURN TO DISCOUNT RATE



REVIEW OF NORTHEAST ARIZONA TRAINING CENTER (NATC)

Summary:
A brief timeline highlighting key events involving NATC and Northland Pioneer College (NPC) is presented below.

2001 - Northeast Arizona Fire Chief's Association (NAFCA) and Abitibi Consolidated joined in a partnership to build a regional fire training facility.

2003 - The concept expanded to a regional training facility for emergency management professionals. The partnership included NPC along with NAFCA and their associate members, law enforcement agencies of Apache and Navajo Counties, Arizona Department of Public Safety, Abitibi Consolidated, Town of Taylor, Arizona Public Service and the US Forest Service.

2004 – Northeast Arizona Training Center formally organized as an Arizona Non-Profit, Tax-Exempt Corporation with interim by-laws and construction of the facility begins.

August 2004 – NPC by DGB action enters into an MOU to become a member of NATC.

September 2004 – NPC by DGB board action enters into an MOU with NATC to provide $300,000 for the construction of a burn tower at the proposed training facility. NPC made a commitment to be the educational provider for the facility.

2005 – The Arizona Peace Officer Standards and Training Board (AZPOST) provides funding for the driving track, NAVIT makes a cash contribution, and the Town of Taylor secures a $500,000 GADA loan with proceeds used to construct the NATC training facility.

2006 – By-laws formalized with NPC as the education provider.

2007 – The Arizona State Legislature appropriates $1 million to NPC to be used for construction of a public safety and emergency services training facility. All expenditures of the appropriation are approved by the DGB.

2008 – The Arizona State Legislature appropriates $500,000 to NPC to be used for construction of a public safety and emergency services training facility. All expenditures of the appropriation are approved by the DGB.

2011 – The financial audit for the fiscal year ending June 30, 2011 includes a finding that NPC is not in compliance with state laws as NATC is not operated and controlled by NPC.

September 2012 - NATC alters the Bylaws of the organization in order to reach compliance with Arizona State General Session Law after committing to full financial responsibility for repayment of principle and interest of the Town of Taylor GADA loan. The NATC Board consists of three voting members, all appointed by the NPC DGB. Navajo County, Town of Taylor, NAFCA, and the Northeast Arizona Police Association (NAPA) roles shift to a non-voting advisory council. The financial audit finding no longer appears in the financial audit beginning with the audit of the fiscal year ending June 30, 2012.

November 2014 – All members of the NATC advisory council submit a letter to the DGB requestion that the "ownership and the autonomous operations of the facility be transferred permanently to Northland Pioneer College." The Town of Taylor requests that the GADA loan be paid in full by Northland Pioneer College.

NATC Balance Sheet
The audited financial statements of NATC for the period ending June 30, 2014 include assets of $1,930,922. The cash assets were $66,719 and property and equipment assets are $1,860,461. Cash balances as of the end of February were $63,034. The liabilities of the corporation were identified as $345,000 at June 30, 2014.

GADA Loan Pay-off Option
An option to participate in an upcoming refunding of the GADA loan is available. The notice of commitment to participate is due prior to May 15, 2015 and payment would be required in June 2015. The current payoff amount is $302,150, which results in an estimated present value savings of $22,647 based on the current market.

NPC's NATC Operational Cost
NPC currently provides an Executive Director and support staff to NATC. We estimate that Stuart Bishop, the Executive Director, spends less than six percent of his total time on NATC activities. Danneel Elkins, support staff, is estimated to spend less than two percent of her total time on NATC activities. The total contribution from NPC for these services equals no more than $8,000 annually.

NPC currently pays $24,000 annually for rent and the rental agreement indicates that we provide custodial services, which are currently budgeted at $3,000 annually.

The total annual cost to NPC for operating the NATC facility outside of the normal program related costs is $35,000.

NAVAJO COUNTY

Board of Supervisors

Jonathan M. Nez • Jesse Thompson • Jason Whiting • David Tenney • Dawnafe Whitesinger

"Enhance the quality of life in Navajo County by delivering excellence in service and leadership"

November 10, 2014

Northland Pioneer College
P O Box 610
Holbrook Arizona

Northland Pioneer District Governing Board:

The Navajo County Board of Supervisor's along with its partners, the Town of Taylor, Northeast Arizona Fire Chiefs Association and Northern Arizona Police Chief's Association have discussed in depth the question of ownership and operation of the Northeast Arizona Training Center (NATC). It is the consensus of these partners that the ownership and the autonomous operations of the facility be transferred permanently to Northland Pioneer College.

The burn tower is permanently affixed to the property and was financed by the Town of Taylor with Greater Arizona Development Authority (GADA) loan funds. The GADA loan is callable on July 1, 2015 with a required forty-five day advance notice in the amount of $335,350 which will save over $75,000 in interest over the next 10 years. It is the desire of the Town of Taylor that in consideration for the transfer of the facility the loan be paid in full by Northland Pioneer College.

The vision for the NATC facility was to be a place of first responder training, education and exercise. It is the belief of all of the partners that Northland Pioneer College is the most capable partner to continue this mission. We respectfully ask the Northland Pioneer District Governing Board to consider and authorize this action.

Jesse Thompson, Chairman
Navajo County Board of Supervisors

Fay Hatch, Mayor
Town of Taylor

Rich Upham, President
NAFCA

Mark Jackson, President
NAPA

AMORTIZATION SCHEDULE

FILL ON THIS COLORED CELLS

GADA 2008A TOWN OF TAYLOR DS FD

RESERVE REQUIREMENT
N/A

INT ACCRUES FROM:	2/23/2005	ORIGINAL O/S:	$500,000	AVG ANNL DEBT S	$46,978.67
FIRST PAYMENT DATE:	2/1/2006	MULTIPLES OF:		WGHTD AVG MAT.	
FINAL MATURITY:	8/1/2024	DAYS IN YEAR	360	WGHTD AVE CPN:	
MAX ANNUAL D SERV:	$43,350.00	TOTAL YEARS TO CALC AVG ANNL:	38	10% OF PROCEED	$50,000.00

DATE:	COUPON:	PRINCIPAL DUE	INTEREST DUE:	DEBT SERVICE	YEARLY DEBT SERVICE	YEARLY DEBT SERVICE	PRINCIPAL OUTSTANDING
2/1/2006		$0.00	$21,218.89	$21,218.89	$21,218.89		$500,000.00
8/1/2006	5.000%	$10,000.00	$11,300.00	$21,300.00		$42,518.89	$490,000.00
2/1/2007		$0.00	$11,050.00	$11,050.00	$32,350.00		$490,000.00
8/1/2007	2.375%	$20,000.00	$11,050.00	$31,050.00		$42,100.00	$470,000.00
2/1/2008		$0.00	$10,812.50	$10,812.50	$41,862.50		$470,000.00
8/1/2008	2.750%	$20,000.00	$10,812.50	$30,812.50		$41,625.00	$450,000.00
2/1/2009		$0.00	$10,537.50	$10,537.50	$41,350.00		$450,000.00
8/1/2009	3.125%	$20,000.00	$10,537.50	$30,537.50		$41,075.00	$430,000.00
2/1/2010		$0.00	$10,225.00	$10,225.00	$40,762.50		$430,000.00
8/1/2010	3.000%	$20,000.00	$10,225.00	$30,225.00		$40,450.00	$410,000.00
2/1/2011		$0.00	$9,925.00	$9,925.00	$40,150.00		$410,000.00
8/1/2011	5.000%	$20,000.00	$9,925.00	$29,925.00		$39,850.00	$390,000.00
2/1/2012		$0.00	$9,425.00	$9,425.00	$39,350.00		$390,000.00
8/1/2012	5.000%	$20,000.00	$9,425.00	$29,425.00		$38,850.00	$370,000.00
2/1/2013		$0.00	$8,925.00	$8,925.00	$38,350.00		$370,000.00
8/1/2013	5.000%	$25,000.00	$8,925.00	$33,925.00		$42,850.00	$345,000.00
2/1/2014		$0.00	$8,300.00	$8,300.00	$42,225.00		$345,000.00
8/1/2014	5.000%	$25,000.00	$8,300.00	$33,300.00		$41,600.00	$320,000.00
2/1/2015		$0.00	$7,675.00	$7,675.00	$40,975.00		$320,000.00
8/1/2015	5.000%	$25,000.00	$7,675.00	$32,675.00		$40,350.00	$295,000.00
2/1/2016		$0.00	$7,050.00	$7,050.00	$39,725.00		$295,000.00
8/1/2016	5.000%	$25,000.00	$7,050.00	$32,050.00		$39,100.00	$270,000.00
2/1/2017		$0.00	$6,425.00	$6,425.00	$38,475.00		$270,000.00
8/1/2017	5.000%	$30,000.00	$6,425.00	$36,425.00		$42,850.00	$240,000.00
2/1/2018		$0.00	$5,675.00	$5,675.00	$42,100.00		$240,000.00
8/1/2018	5.000%	$30,000.00	$5,675.00	$35,675.00		$41,350.00	$210,000.00
2/1/2019		$0.00	$4,925.00	$4,925.00	$40,600.00		$210,000.00
8/1/2019	5.000%	$30,000.00	$4,925.00	$34,925.00		$39,850.00	$180,000.00
2/1/2020		$0.00	$4,175.00	$4,175.00	$39,100.00		$180,000.00
8/1/2020	4.000%	$35,000.00	$4,175.00	$39,175.00		$43,350.00	$145,000.00
2/1/2021		$0.00	$3,475.00	$3,475.00	$42,650.00		$145,000.00
8/1/2021	5.000%	$35,000.00	$3,475.00	$38,475.00		$41,950.00	$110,000.00
2/1/2022		$0.00	$2,600.00	$2,600.00	$41,075.00		$110,000.00
8/1/2022	5.000%	$35,000.00	$2,600.00	$37,600.00		$40,200.00	$75,000.00
2/1/2023		$0.00	$1,725.00	$1,725.00	$39,325.00		$75,000.00
8/1/2023	5.000%	$35,000.00	$1,725.00	$36,725.00		$38,450.00	$40,000.00
2/1/2024		$0.00	$850.00	$850.00	$37,575.00		$40,000.00
8/1/2024	4.250%	$40,000.00	$850.00	$40,850.00		$41,700.00	$0.00
TOTALS		$500,000.00	$268,850.00	$780,068.89	$739,218.89	$780,068.89	