

**Library Note:**

Even though some of the material following the meeting is labelled as exhibits, it appears to be out of order, so it is difficult to tell whether all exhibit material is present and what materials were submitted with which exhibit. Many of the pages appear to have been taken from the same larger document, as page numbering is consistent, but there are other documents that appear to have been submitted separately.

Research Library  
September 2014

MINUTES OF THE  
MEETING OF THE SENATE COMMITTEE  
ON FINANCE

SIXTY-FIRST SESSION  
NEVADA STATE LEGISLATURE  
February 17, 1981

The Senate Committee on Finance was called to order by Vice Chairman James I. Gibson, at 7:00 a.m., Tuesday, February 17, 1981, in Room 231 of the Legislative Building, Carson City, Nevada. Exhibit A is the Meeting Agenda. Exhibit B is the Attendance Roster.

COMMITTEE MEMBERS PRESENT:

Senator Floyd R. Lamb, Chairman  
Senator James I. Gibson, Vice Chairman  
Senator Eugene V. Echols  
Senator Thomas R.C. Wilson  
Senator Lawrence E. Jacobsen  
Senator Clifford E. McCorkle  
Senator Norman D. Glaser

STAFF MEMBERS PRESENT:

Ronald W. Sparks, Chief Fiscal Analyst  
Dan Miles, Deputy Fiscal Analyst  
Candace Chaney, Secretary

OTHERS PRESENT:

Howard Barrett, Budget Division  
Mark Stevens, Budget Division  
Robert Laxalt, University of Nevada Press  
Nicholas Cady, " " "  
Kenneth Robbins, " " "  
John Tom Ross, University of Nevada System, Regent  
Pat Goodall, University of Nevada, Las Vegas  
Dale Nitzschke, " " " "  
Joseph A. Fry, " " " "  
Gary A. Jones, UNS Compensation Commission  
Peter A. Krenkel, Desert Research Institute  
Warren Kocmond, " " "  
Mark Dawson, " " "  
Dale Schulke, " " "  
Clifford J. Murino, " " "  
Chris Stojanoff, " " "  
Joe Fisher, Nevada State Education Association  
John W. Palmer, Chancellor's Office  
Bill Berg, Northern Nevada Community College  
Richard Davies, University of Nevada, Reno  
David Seibert, " " "  
Don Jessup, " " "  
Joe Crowley, " " "  
Richard Dankworth, " " "  
David R. Charles, College of Agriculture, UNR  
Dale Bohmont, " " "  
John R. McBride, University of Nevada Regent  
Kenneth Partridge, University of Nevada System  
Herman Westfall, University of Nevada, Las Vegas

Dr. Donald H. Baepler, Chancellor, University of Nevada System, introduced Mr. Robert Laxalt of the University of Nevada Press to the committee. Mr. Laxalt continued the presentation of the University of Nevada System's budgets by reviewing the budget for the University Press. (See Exhibit C.)

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The University Press (Pg. 208)

Senator Gibson inquired if there were any positions paid for out of other funds. Mr. Laxalt replied a technical editor was needed for the Great Basin Natural History series to be paid for from funds taken from the interest monies off the Fleischmann grant. He said the position would be needed for three years only.

Senator McCorkle asked why the \$60,000 in sales revenue were not reflected in this budget. Dr. Baepler stated these monies were in a sales account budget to pay for the manufacture of books. Mr. Barrett noted that for every University budget being presented there was a corresponding estimative budget on the outside. He said that the estimative budget is not reviewed by the Finance Committee or by the Budget Division. Dr. Baepler added that these budgets were all in the University's work program as an estimated budget, the type where one could not spend the monies until the revenue came in.

Desert Research Institute (Pg. 258.1)

Dr. Clifford Murino, President of the Desert Research Institute, discussed the budget for this program. (See Exhibit D)

Administrative and Clerical support. Dr. Murino stated that these were funds requested from the State in the amount of \$640,000. He asked the committee to compare that figure with 6.4 million dollars that was received from Federal and private sources and to notice that the program had been operating with a multiplier factor of 10 to 1, Federal and private funds to State funds. He noted that some State funds were also used for research support for several projects being undertaken that were particularly timely and urgent to the State.

Dr. Murino noted the shortfall problem in the payment of salaries to the agency's staff. (See Exhibit D.) He said the agency was only able to accept monies from outside sources if they had an amount of administrative and clerical support funds coming from the State to match those monies on a 10 to 1 ratio. Dr. Murino said the agency agreed with the Governor's recommendations.

Weather Modification Project. Dr. Murino indicated this was an on-going program.

The Chairman asked if the agency could prove they had produced 176,000 acre feet of water in the mountain areas. Dr. Murino replied the agency could prove it on a statistical basis within certain probability limits of about 70%.

Senator Echols inquired how widespread cloud seeding was across the nation. The Director of DRI noted cloud seeding was very widespread in the West, especially in the area of snow pack. He added it was also used to a large degree in the Great Plains.

Senator Gibson asked if the Weather Modification Project budget was intermingled with the entire agency budget. Dr. Murino answered that the budget was intermingled and merged into the administrative costs of the office operations.

Truckee River Project. Dr. Murino said the agency agreed with the Governor's recommendations on this budget.

Senator McCorkle asked how the agency saw its role between local government and the Federal government in connection with water quality. Dr. Murino felt the responsibility of this program was to undertake important studies of the crucial problems, collect, analyze and make knowledge available to local and Federal entities, and to provide the data base for everyone to see.

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Senator Wilson asked the Director if the DRI felt that some of the Truckee River water quality standards imposed by the EPA were not cost-effective. Dr. Murino said he felt the criteria imposed by the EPA was sometimes a little too stringent.

Senator Gibson noted in the past, the committee found that the DRI was an antagonist to the State on some matters. Dr. Murino remarked the agency has tried to work hard in improving relations with the various State entities.

Solar Electric Energy Production. Dr. Murino explained that this program involved the use of playas for solar pond applications.

Recharge to Nevada's Groundwater Reservoirs. Dr. Murino said this program was to improve knowledge of groundwater reservoirs in regard to replenishment and perennial yield. He noted that the Governor was recommending this program.

Senator Jacobsen asked if this program would be used for every water basin in the State. Dr. Murino stated a few would be selected to develop the techniques, the techniques would then be applicable to other basins. As yet, the agency has not selected the basins to be used.

Senator Gibson inquired as to the testing site of the solar energy storage program. The Director said the agency was looking at a number of playas throughout the State, but, as yet, no selection had been made until hydrologists could be brought in to help in the selection process.

Dr. Murino stated the agency was also requesting replacement of DRI's ageing equipment. He said a steady program of equipment replacement was needed, one that was plannable over the long term. He also requested funding for some seed monies to start projects for which Federal funding was not available at the present time.

Senator McCorkle asked if the agency could prove they have not lost any money on their contracts. Dr. Murino noted the program had not. He added if they had lost money, the agency would have gone out of business; money was not made or lost on projects. He added that the agency was bound to a great degree by Federal regulations; what could and could not be done was prescribed very carefully by the Federal government. He noted a low rate of depreciation, 6-2/3%, had to be used for the depreciation of equipment. Rigorous Federal regulations had to be followed for pricing.

Senator McCorkle asked if the agency had any involvement with MX contracts. Dr. Murino indicated the agency had several projections based on whether MX was deployed or not. He added that if the agency did work with the MX, they would do so on a prime basis and not work behind a private contractor. The Air Force accepted those terms, he said. He added that the agency's principal interest was the State of Nevada and not the welfare of the Air Force. A potential project with the Air Force now involved researching the possibility of a new underground water supply, depending on if the MX was deployed or not.

Senator Glaser asked if the agency was anticipating any major research projects in the area of bioresource, particularly in the development of ethanol. Dr. Murino remarked that the agency was not proposing any programs funded by the State for those type of projects.

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University of Nevada, Las Vegas (Pg. 220)

Dr. Baepler introduced Dr. Pat Goodall, President of the University of Nevada, Las Vegas, to the committee. Dr. Goodall addressed the UNLV budget to the members. (See Exhibit E.)

Dr. Goodall noted two important items of this budget included tuition increase impact and salary increases. The latter, he said, was the single highest priority system-wide.

The UNLV President indicated that an assumption was built into the budget for a 15% salary increase each of the two years. He said a dollar figure was put in, in hopes of having some kind of principal in the budget that would involve cost of living. He added that exact figures would have to be adjusted when more was known about the rate of inflation.

Dr. Goodall stated the budget request assumed a 13% inflation rate on non-personnel items in the first year of the biennium and a 12% rate in the second year. He noted those were projection estimates on the University's part.

The President indicated that the University could not prove in a quantitative way what would happen to the quality of education if the student/faculty ration was increased. He did note that a characteristic of the best schools in the West was a low student/faculty ratio.

Dr. Goodall said the Audio-Visual Services item was the most single critical area that needed funding; it was not recommended by the Executive budget. He noted, also, the need for a new librarian, not recommended by the Governor. He stated both items were used campus-wide.

Dr. Goodall referred to areas related directly to the public. He indicated the University was aware of the need to raise money in the private sector because there was not enough money in the public sector to do everything that needed to be done.

Senator Wilson: The problem has been brought up concerning the lack of ability of students to read and write. Has your campus experienced the same difficulty that UNR has, particularly regarding entering Freshman?

Dr. Goodall: It is indeed a system-wide problem.

Wilson: Was this problem specifically and explicitly touched in your budget discussion with the Governor's office.

Goodall: Only in the most general way. We had discussed the problem with Dr. Crowley. The problem is not specifically identified in the budget.

Wilson: Do you have a budget supplement of some kind to present to the committee for remedial courses in reading and writing.

Goodall: I did not bring the material with me, but will provide such to the Senator.

Senator Wilson felt it would have been an item that Dr. Goodall and Dr. Crowley would have been prepared to present at the budget hearings for their respective campuses. He assumed that it would have been an item that the Governor would have been prepared to recommend expenditures. If not, he said, he thought they should talk about it and be prepared to make some recommendations to the committee.

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Senator Wilson said this problem was so serious as to go to the success of their very mandate when one-third to one-half of entering Freshmen were functionally illiterate. He stated he did not want this problem finessed or lost between the categories of the budget.

Dr. Goodall concurred with Senator Wilson's feelings and said he would be prepared to deal with the Senator's request. He noted that it was a problem for all the colleges. Dr. Goodall said they would be prepared to address the problem the next morning for discussion.

Senator McCorkle asked if UNLV agreed with the recommendations of the Executive budget; did they have different priorities on how to juggle the monies differently or more effectively to accomplish University needs. Dr. Goodall said the budget itself was so "bone-bare" that he could not make any large recommendations, only those concerning small items.

Senator McCorkle requested another alternative by the University other than increased funding. Dr. Goodall noted that additional monies might come from tuition increases if it were taken in two steps and if it were more limited than the tuition increases being recommended.

Mr. John Ross, Regent of the University of Nevada System, indicated one alternative would be to restrict enrollment to cut down funding.

Senator Gibson noted that the committee did not line-item budget the University. He said the committee discussed the rationale of the sum of money that was presented in the budget but the final decision of where the money went was left to the University.

Senator Glaser referred to a manpower study done at UNLV showing the average workload for a professor was 27 hours per week. He commented that if he were a Regent, he would require more mileage out of the professors than they were getting. Mr. Cashell, Chairman of the Board of Regents, indicated a presentation was to be made before the Board of Regents to enable them to address those findings.

Senator Lamb commented that it was the tenure problem that was severely hurting the University System. Mr. Cashell said this problem was also being looked into.

The Chairman also noted that the committee had heard that UNLV had never graduated a men's basketball athlete. Mr. Cashell stated the Board of Regents was trying to implement policy concerning that problem at the present time. He said it would require the student to go to their counselor for guidance so they would leave the University academically prepared.

Senator Lamb remarked that the State was very low on reserves and the University would have to take cuts as well as every other agency. Dr. Goodall said the University would take what allocations they received and would run the best University they could.

Dr. Goodall commented the largest single area of position loss was in janitorial services. He said the budget request was based on the average square footage cleaned by janitors, and believed the loss of positions would have a negative impact on the campus.

Senator Gibson asked Mr. Barrett if his division had figured in the new building in their computation. Mr. Barrett replied they had figured 16,950 per square foot per janitor at the UNLV campus, and 17,351 square feet for the Reno campus. Mr. Cashell noted that the UNR campus elected to put money in salaries rather than hire staff for janitorial services to make up for compensation.

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He said the Budget Division now saw that UNR was doing with fewer janitors, and thus the budget.

Dr. Goodall stated his concern was that one found the lowest janitorial costs of any campus in the State and everyone was averaged down to that level. He noted the problem went beyond the janitor questions, rather it asked how one was going to build quality into the university system.

Senator Lamb asked Dr. Baepler if he thought the time would come when student enrollment would have to be limited. Dr. Baepler thought it would if additional resources were not made available, whether by eliminating the total number of students or by eliminating certain existing programs.

Dr. Goodall commented that the budget before the committee made the assumption that the University would have a 5% classified salary savings instead of a 2% savings which is the savings the University has experienced in the past on classified personnel.

The UNLV President noted that the need for utility monies would be considerably larger for the second year of the biennium than the amount estimated in the budget.

Dr. Goodall stated the tuition increase was the most difficult area to get a handle on. He said the University had made enrollment projections and assumptions when they originally built their budget and did not build tuition increases into that budget. He indicated the budget before the committee assumed a 25% tuition increase for in-state students and a 33-1/3% increase for out-of-state tuition. He stated the impact of the tuition increase would not be known in entirety until student enrollment figures were known in September.

Senator Gibson asked if all out-of-state travel was under the Vice President of Academic affairs. Dr. Goodall said all of the faculty out-of-state travel would be under that budget. Administrative travel would be under the President's office.

#### Intercollegiate Athletics, UNLV (Pg. 23)

Dr. Goodall said there were no specific requests or adjustments other than what was presently contained in this budget. He noted Title IX, inflation in general, and travel costs in particular, would be problems affecting this program.

#### Statewide Programs, UNLV (Pg. 232)

Dr. Goodall indicated this was not a large budget for the University. He noted there were three areas in this budget; Business and Economic Research Division; Continuing Education Program; and the Museum. He said each of the areas had some funding outside the State budget. He noted the Continuing Education Program operated many of its programs on a self-supporting basis. Dr. Goodall said staffing increases had been requested particularly in the Business and Economic Research Division.

Dr. Goodall remarked the Continuing Education Program was estimating revenues of \$850,000 for their self-sustaining courses this year. He noted the program had to break even. The State's appropriation for this program was \$56,000 for administration.

#### Business Center South (Pg. 234)

Dr. Goodall noted he had no specific comments on this budget.

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Senator Gibson asked Mr. Barrett if he had any response on the turn-over factor figures for classified salaries of 5% versus 2%. Mr. Barrett noted that \$253,000 had been moved from the classified salary budget into other areas of the budget. Mr. Mark Stevens of the Budget Division said there was a 3% hike for everyone else and 5% for the University. This was, in effect, the same thing done for all State agencies.

University of Nevada, Reno (Pg. 189)

Dr. Joseph Crowley, President of the University of Nevada, Reno, presented the UNR budget to the committee noting seven appropriation requests that would be reviewed. (See Exhibit F.)

Senator Wilson asked what was the ratio at the University for administrators to faculty. Dr. Crowley said it was 82.4% for instruction to 17.8% for non-instruction staff.

Senator Wilson inquired if the salaries equated to an hourly ratio. Dr. Crowley thought they did, but said it was difficult to determine how to pay on an hourly schedule.

Senator McCorkle asked what was the ratio for teaching assistants to faculty members. Dr. Crowley noted there was simply a lump sum set aside in the Executive budget; there was no identified number of positions for graduate assistants.

Dr. Crowley indicated in the Business and Engineering Departments there was an overly large ratio of students to faculty with regard to accreditation standards. He noted one alternative would be to limit enrollment. The University was requesting for the Business Department an additional four positions to be added over the biennium, also four positions for the Engineering Department. He added that 5+ positions were being requested for six other departments.

Dr. Crowley stated that there were four programs that were particularly need-based:

1. Orvis School of Nursing
2. Department of Educational Administration
3. Department of Speech Pathology and Audiology
4. Department of Medical Technology

Senator Wilson asked what UNR was going to do regarding the functional illiteracy of a significant portion of entering Freshman. Mr. Cashell said the University System was prepared to take a tough public position on this problem. He stated that the committee should let the secondary education group know that the University is going to have remedial programs for a few years as a "catch-up" program. He remarked that secondary education would have to send students adequately prepared for higher education or the University would turn them away.

Senator Gibson thought education was a local problem which the high schools should be solving. He felt there should not be Federal involvement in this problem. He added this basically was not the responsibility of the University but they would have to deal with it as long as they were sent unqualified students from the high schools.

Senator Wilson felt it was the responsibility of the University System as they set the standards for the academic community. The Senator noted the University may not have a jurisdictional responsibility concerning this problem but it was their duty to set the standards for admission to college level work.

Dr. Baepler indicated the most important standard maintained by the University was their exit requirements. He said when a student graduated, the University stamp of approval was bestowed.



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The Vice Chairman noted that only 50% of those who entered the University graduated. He felt the University might have a greater percentage graduating if the entrance standards were better.

The Chairman felt that the problem lay with the with the secondary education system.

Dr. Crowley noted five areas that wer impacted by the Executive budget:

1. Reductions in existing positions.
2. Library book acquisitions.
3. Utilities.
4. Classified salary reserve.
5. Fees and tuition.

Senator Lamb said he heard that students at UNLV were very much protesting the tuition increase. Dr. Baepler stated that students throughout the University System were opposed to the fee increase proposed by the governor.

Senator McCorkle addressed the tenure area. He said it appeared to him that the Universities had done nothing, to date, to rectify the problem of inadequate teaching. Mr. Cashell said the Board of Regents were prepared to make some difficult decisions in this area. He indicated the Board would give guidance to the chairmen of departments regarding tougher evaluation of tenure. A re-evaluation system would be implemented to insure quality teaching after the professor had attained tenure, the Regent said.

Senator McCorkle presented a proposal regarding the use of renewable contracts for faculty as an alternative to tenure on a three, five, and seven year basis.

Dr. Crowley stated he appreciated the fact that tenure was a controversial issue and invoked opposition from substantial segments of the population. He felt, though, that it was a system not well understood. Dr. Crowley indicated he felt the University already had a very arduous system of tenure. He noted that the University could and should improve the system and would accept the advice of the committee on such matters. He did feel that the tenure system was a workable one and commented that the staff at the University were very hardworking.

Senator Glaser inquired if funding for the faculty senate was warranted. Dr. Crowley felt, in his opinion, the faculty senate performed a very valuable service, and they provided a wealth of expertise to call upon.

Senator McCorkle commented that he had received correspondence concerning the veteranarian school, saying there was a lack of full-time commitment given by the veteranarian professors to their school. Dr. Bohmont, Dean of the College of Agriculture, stated that the school had no authority to prevent veteranarians from doing what they chose on their own time.

Senator McCorkle said he understood that the Department of Communications and Broadcasting could, if run differently, become self-supporting. Dr. Baepler stated that the University radio station could not go commercial due to FCC regulations.

Senator Gibson addressed the fact that the University had requested a 33% increase in General Fund monies from their present work program for the first year of the biennium and another 17% increase for the second year. He noted that in the opening statements made by the University, that they said they recognized the tight economic situation the State was up against. The Vice Chairman commented that the monies requested by the University did not reflect any such recognition. He noted that State revenues did not increase at that rate.

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Dr. Crowley, in response, stated that approximately two million dollars had been trimmed from the University's original budget request which was reflected in the budget before the committee. He noted that the 33% figure increase was, by and large, an inflation related figure.

Senator Gibson commented that inflation had not increased 33% in one year. Dr. Crowley concurred with the Vice Chairman, and said the inflation factor was bukt into the budget. He stated it was debatable as to whether the University had recognized the needs of the State. Dr. Crowley noted, in regard to priorities, salary increases were number one. He said the second major problem to be addressed was fees and tuition. Thirdly, high-growth programs and special need programs had to be dealt with.

Senator Wilson asked what kind of priority the University placed on the acquisition of library books. Dr. Crowley said he would add it to the list of priorities since the area was critical to the functioning of the University.

Senator Gibson asked Mr. Barrett to explain the Budget Division's approach to the utility budgets. Mr. Barrett remarked an increase was put into the budget for the additional square footage. He noted an 80% increase for natural gas and a 35% increase for electricity were added for next year's budget. He said there was no way to tell what would happen to utility costs in the future. Mr. Barrett stated that utilities had been isolated into a separate category so they could be seen more easily. He indicated that Budget Division had suggested to the University that if they did not have sufficient monies and had been economical in their use of said monies, they could approach Interim Finance if needed.

Senator Gibson noted that the University had shown the doubling of electricity costs in their budget over the two year period. He asked if they anticipated the budget being that costly. Mr. Don Jessup, Vice President for Business, said that the \$1,398,000 figure was accurate for this year. He indicated that they had estimated an increase of about 30% for each year of the biennium for electricity costs.

The Vice Chairman asked the University to furnish back-up material to the committee for the utility budgets. Dr. Crowley said he would provide such to the committee.

#### Intercollegiate Athletics (Pg. 200)

Dr. Crowley indicated the major priority in this budget was for increased scholarship support for the women's athletic program. He noted that the need for this support was more intensified as a consequence of Title IX of the Education Amendments of 1972.

Dr. Crowley said there was no commensurate recommendation in the Executive budget for an increase in grants in aid which directly reflects on this program in a negative manner.

Senator Gibson sated that he thought that fund-raising programs supplied a lot of the money for the athletic program. Dr. Crowley concurred but added, one had to take care on how far one wanted to push the private fund-raising. He said he did not want to see the private funding portion grow inordinately.

Senator Wilson inquired as to what the "grants in aid" category included. Dr. Crowley stated it consisted of fees and tuition, not including room and board.

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Senator Wilson asked what percentage of the total fees and tuition grants were funded privately. Dr. Baepler said he would get the figures to the Senator.

Ag Experiment Station (Pg. 202) and Co-op Extension Service (Pg. 204)

Dr. Crowley said these were two related and somewhat complicated budgets. He indicated both programs operated under the College of Agriculture but were separate appropriation areas. He stated the University request was similar in both areas: An overall 19% increase and the addition of a modest number of new positions. Dr. Crowley said 3½ positions were being requested both for the Ag Experiment Station and for the Co-op Extension Service.

Dr. Crowley stated the Executive budget proposed a 10% reduction of positions in both programs, a reduction of 8.75 positions at the Ag Experiment Station and, 9.8 positions reduced at the Co-op Extension Service. Dr. Crowley felt the recommended reductions would adversely affect the activities of both programs.

Senator Lamb asked why such a large amount of monies were budgeted for out-of-state travel under agricultural research. Dean Bohmont noted that the funding contained Federal, as well as, State monies. He said the Federal Authorities required the program to participate in coordination in eleven Western states, called regional research. He indicated these meetings had to be attended to retain Federal support.

Statewide Programs (Pg. 214)

Dr. Crowley noted that no new positions were requested for this program. He said these programs included public service research bureaus of the University and there was an increasing demand for those services. He indicated that the Executive budget did impose a general funding support reduction on this budget.

Senator Lamb asked if the University had compiled a list of priorities of programs that might be done away with due to restricted economic conditions. Dr. Baepler said the University Presidents had given that issue a lot of thought. High-cost programs with relatively low student enrollment would be among the first programs cut. Mr. Cashell noted he would supply the committee with a program of all-back positions taken in case the University System was not able to attain the reinstatements.

Senator Gibson asked Mr. Barrett why two positions were eliminated from the Mining Analytical Lab. Mr. Barrett said one position was for a graduate assistant, and one position did not show in the budget. He said the monies were there for the graduate assistant, \$14,000.

The Vice Chairman, referring to classified positions, asked why 4.1 positions were requested and only 2.15 positions were budgeted for. Dr. Crowley said two positions were moved to the Bureau of Mines and Geology since it was very closely related to the Mining Analytical Lab.

Business Center North (Pg. 218)

Dr. Crowley said the Business Center serviced all of the institutions of public higher education in Nevada in addition to some statewide responsibilities. He noted that the levels of activities had increased substantially for the center and the University requested an additional seven positions for the program. The Executive budget recommends two positions. Dr. Crowley indicated there were no other reductions proposed by the Executive budget.

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Senator Gibson asked Mr. Barrett why the Governor had recommended fewer positions yet the total dollar recommendation was greater than the agency requested. Mr. Barrett remarked that the University did not build in their salary increases into the original budget. He said th 14% classified salary increase was then added by the Budget Division.

Dr. Baepler introduced Dr. Gary Jones, Chairman of the UNS Compensation Committee, to the members to address the committee concerning faculty salary increases proposed by the Compensation Committee.

Dr. Jones stated that in the last decade faculty salaries throughout the country have experienced a dramatic decline, especially acute in the last two years. He said the decline had resulted in a shortfall of 15.1% for faculty employed by the University of Nevada System.

Dr. Jones indicated the faculty in the University System were becoming increasingly demoralized over their financial condition which was resulting in a decrease in their efficiency. He noted that some faculty have looked for part-time work elsewhere just to supplement their incomes.

Dr. Jones stated that the Compensation Committee was recommending budgeted salary increases to be broken down into two areas:

1. Cost-of-living adjustment.
2. Merit and Equity, and Promotion Pool (3½%)

These factors would result in roughly a 15% increase per biennium for the next two years, Dr. Jones indicated. He said the Compensation Committee was recommending, in addition, a 15.1% shortfall adjustment to make up for the loss of purchasing power during the last biennium which was also endorsed by the Board of Regents.

The Vice Chairman asked Dr. Jones of the Compensation Committee was recommending an overall 45% increase in faculty salaries. Dr. Jones said yes.

Senator Gibson inquired if Dr. Jones thought that was a reasonable figure. Dr. Jones replied that it did sound like a lot. Senator Gibson commented that it did sound like a lot, especially when 80% of the University budget was salary.

Senator Gibson requested Dr. Jones to supply the committee with the documentation on his cost-of-living studies, as well as, the source of the other figures presented.

Senator Jacobsen asked if Dr. Jones' committee had any priorities as to where the funds should come from for the proposed 45% salary increase. Dr. Jones replied that the Compensation Committee did not feel it was their responsibility to do so, that responsibility should lay with the legislature.

Senator Glaser inquired as to what the average starting salary was for a beginning faculty member, as well as, what was the top of the range for faculty. Dr. Jones said it varied as to what discipline the faculty member was in. The lowest starting salary would be in the \$13,000 range, he noted, while the top of the range would be in excess of \$20,000.

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SEnator Lamb commended the current Board of Regents on a job well done. The Chairman added that the committee would be more than willing to work with and held the Board.

There being no further business, the meeting adjourned at 10:45 a.m.

Respectfully submitted by:

  
Candace L. Chaney  
Candace L. Chaney, Secretary

APPROVED BY:

  
Senator Floyd R. Lamb, Chairman

DATED: 2/26/81

SENATE AGENDA

COMMITTEE MEETINGS

Committee on FINANCE, Room 231.

Day (See Below), Date (See Below), Time 8:00 a.m.

MONDAY, FEBRUARY 16, 1981

UNIVERSITY OF NEVADA SYSTEM

1. System Administration (Pg. 186 - Dr. Donald Baepler).
2. Computing Center (Pg. 210 - Niels Anderson)
3. University Press (Pg. 208 - Robert Laxalt)
4. Desert Research Institute (Pg. 258.1 - Clifford Moreno)
5. Ag Experiment Station (Pg. 202 - Dr. Joseph Crowley)
6. Co-op Extension (Pg. 204 - Dr. Joseph Crowley)
7. UNR School of Medical Sciences (Pg. 205 - Dr. Robert Daugherty)

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UNIVERSITY OF NEVADA SYSTEM

1. University of Nevada, Las Vegas (Pg. 220 - Dr. Leonard Goodall)
2. Intercollegiate Athletics, UNLV (Pg. 230 - Dr. Leonard Goodall)
3. Statewide Programs, UNLV (Pg. 232 - Dr. Leonard Goodall)
4. Business Center South (Pg. 234 - Dr. Leonard Goodall)
5. University of Nevada, Reno (Pg. 189 - Dr. Joseph Crowley)
6. Intercollegiate Athletics, UNR (Pg. 200 - Dr. Joseph Crowley)
7. Statewide Programs, UNR (Pg. 214 - Dr. Joseph Crowley)
8. Business Center North (Pg. 218 - Dr. Joseph Crowley)

WEDNESDAY, FEBRUARY 18, 1981

UNIVERSITY OF NEVADA SYSTEM

1. Northern Nevada Community College (Pg. 254 - Dr. Bill Berg)
2. Western Nevada Community College (Pg. 243 - Dr. Jack Davis)
3. Truckee Meadows Community College (Pg. 248 - Dr. Jim Eardley)
4. Clark County Community College (Pg. 236 - Dr. Judith Eaton)

THURSDAY, FEBRUARY 19, 1981

1. Civil Defense (Pg. 601-617.....Barney Diehl)

ATTENDANCE ROSTER FORM

COMMITTEE MEETINGS

SENATE COMMITTEE ON FINANCE

DATE: February 17, 1981

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RICHARD T. DANFORTH	UNR		
Dale Schulke	DRI		
Daniel R Charles	College of Agriculture, UNR		
DALE BOHMONT	COL OF AGR. UNR		
Don Jessup	UNR		
Joe Crowley	UNR		





There are other high growth programs which have had to contend with enrollment increases without added staffing help. The most significant examples are listed in Table V:

TABLE V

## Other High Growth Programs

<u>Program</u>	<u>FTE Student Increase Since 1975</u>	<u>FTE Student Increase Since 1978</u>
Mathematics	36.3 %	22.8 %
Educ. Found. & Media	15.8 %	9.0 %
Recreation and P. E.	31.0 %	8.3 %
Political Science	29.4 %	24.7 %
Foreign Languages	11.9 %	26.4 %
English	11.1 %	18.0 %

The full time equivalent instructional staff in these programs totaled 71.11 in 1975. The total staff is 69.77 for the current year.

Need-based Programs. Although the University offers no programs for which a demonstrable need does not exist, there are several departments which are under pressure to satisfy high existing and potential demands in Nevada but currently lack the staff to do so. Two notable examples are the Orvis School of Nursing and the Department of Educational Administration.

Recent projections indicate that, at current rates of production, there will be a considerable shortage of Registered Nurses in Nevada by 1985\*. The deficit in these projections range from 1,200 to 2,000. The Orvis School of Nursing is the largest producer of RN's in the state. Significant increases in the numbers of the students trained in this program, and in the programs of other state educational institutions, will be necessary if this deficit is to be made up. Additionally, there are demands for greater numbers of nurses with Masters degrees and for continuing education courses related to state re-certification requirements. Neither demand can be met without improvements in existing staffing levels.

The Department of Educational Administration is a department offering only graduate degrees. Although, again, the demand is heavy in this area, the department has had to limit enrollments because of staff limitations. Three professionals teach in this program, with student-faculty ratios in recent years

\* The Greater Nevada Health Systems Agency, (Where Have All The Nurses Gone July, 1980, and Nursing Manpower Coalition, Nursing Personnel Projections for 1985.

ranging from 17.3 to 1.7 to 1. These ratios are substantially higher than they should be for a graduate level program.

A third, but somewhat different example of a program responsible for meeting a singular need in the state is the Department of Speech Pathology and Audiology. The bachelor's degree in this department is pre-professional. The master's is the terminal professional degree. UNR provides the only education in this area in the state. Until this year, the master's program was subsidized by federal funds. These funds have run out and, for 1980-81, the University supported the program with contingency funds. That support cannot be continued, however. Unless state funds are forthcoming for the 1.75 faculty positions and associated operating costs needed to sustain the master's program, the program will lose accreditation and will necessarily be terminated. In that event, there will also be no source of continuing education courses to meet certification requirements for practicing Nevada professionals and the state-funded speech and hearing positions in rural schools will be difficult to fill. The vast majority of speech pathologists and audiologists in Nevada are graduates of UNR. There is a clear need for more, but without additional state funding the need cannot be met.

A similar, although somewhat less critical problem, confronts the Department of Medical Technology, which has lost federal funding support for one faculty position out of the five required to operate the program. This program is the only one in Nevada providing clinical technicians for our hospitals and laboratories.

Other Professional Position Needs. In some disciplines, such as Chemistry and the Foods and Nutrition component of Home Economics, we are lacking critical specialties. A few departments -- Music and Chemical and Metallurgical Engineering most notably -- can achieve accreditation only with the addition of a professional position. In the area of instructional support, positions are needed in several divisions to meet expanding internal service requirements. Instructional media design, Student Services and the Library are the leading examples.

Associated Costs. In relation to the programs outlined above, additional classified positions and operating funds are also needed. Another component of our request, with a high priority for the University, is the Library book acquisition fund. This component is described later in the presentation. The specific funding requirements for these programs are described in the Table on page 50 C and in the summary attached to this presentation.

Intercollegiate Athletics. The principal priority in this area is for additional grants-in-aid. The most fundamental need here is for increased scholarship support for the women's athletic program. While we have been able to increase funding for this program over the last several years, additional support is needed to help meet the mandates of Title IX of the Education Amendments of 1972. The final Policy Interpretation of the Title IX regulations was published last year and federal compliance review activities are underway. Further, a problem of serious magnitude for the athletic program is inherent in the Executive Budget approach to grants-in-aid. That is, although that budget suggests major increases in fees and tuition, it proposes no increase in grants-in-aid funding. This presents a problem for the University in general, but

the problem would be particularly critical for Intercollegiate Athletics, which is recommended in the Executive Budget for only 11 percent and 10 percent budget increases for the next two years. It would mean, in effect, a large scale reduction in funding for that department because the numerous in-state and out-of-state grants-in-aid awarded by the department would need to be paid at the increased fee and tuition levels. Thus, any increase in fees and tuition should carry with it the same percentage increase in grants-in-aid funding.

Agricultural Experiment Station. The University request for this appropriation area is for an overall 19 percent increase for 1981-82 and 15 percent for 1982-83. This is essentially an inflation-based budget, with a small number of additional positions to provide needed research in such fields as meat production and energy systems. We have requested 3.5 new professional positions for the biennium, to add to the existing complement of 45 positions.

Cooperative Extension Service. The CES request is similar to that of the Experiment Station, with 19 and 15 percent increases, respectively, for 1981-82 and 1982-83. The basic need is for positions in Extension Service offices around the state, including a youth agent for Carson City and Lyon County (.50 of this position to be paid from county funds), an urban horticulturalist for Clark County, an Extension Home Economist for Lincoln County and a Superintendent for the large Gund Ranch property in Central Nevada. This would add a total of three FTE professional positions to the 73 currently employed by CES.

Statewide Programs. The entire request in this area is to offset the cost of inflation. No new positions of any type are proposed, despite the growing demand for services furnished by the research and public service units encompassed by the Statewide Programs appropriation.

Business Center North. This Center services all of the activities of the University System in northern Nevada and some activities (Cooperative Extension, DRI and the Computing Center, for example) which are statewide in scope. Approximately 70% of the System's business needs are processed through the Center. Major increases in enrollment and a considerably augmented volume of other Center activities have markedly expanded the demand for service. Seven additional classified positions (a 12 percent increase) are sought to meet this demand.

### EXECUTIVE BUDGET IMPACTS

Although, as noted, the Executive Budget reflects a small increase in funding for UNR for the 1981-83 biennium, that budget actually imposes a series of reductions for the University. In total, these reductions add up to a substantial retreat from existing levels of support. This retreat occurs in the context of double digit enrollment growth and of demands for programs and services that have already exceeded our resources. The reductions are recommended, or implied, in a variety of areas and in a variety of ways. The following material summarizes the most critical Executive Budget recommendations and shortfalls.

Reductions In Existing Positions. By changing the student-faculty ratio from the 20-1 formula that has been employed for the past decade to the 22-1 formula described by the Chancellor, the basic UNR budget is cut back by 9.65 instructional faculty positions. There is a related reduction of 3.6 classified positions in instruction. (See page 190) This is a general position reduction, with no specific indication as to where the cuts might be made. However, the Executive Budget does propose specific cuts in certain areas. Alumni Relations, School Relations and the Office of Information are proposed to lose 4.75 professional and classified positions. (See page 195) In fact the recommendation for the latter two offices is for zero funding for the biennium. School Relations was established four years ago in response to voluminous and long standing criticisms from public school educators and counselors, parents and prospective students, that the University was not disseminating adequate information, providing necessary contacts and explaining programs and options to Nevada high school students and their families. The office has done an outstanding job, turned a bad situation into a good one and is now proposed in the Executive Budget for elimination.

The Office of Information is imperative to the functioning of the University in media and community relations. No institution of the size, scope and complexity of UNR can ignore its obligation in this area. The office has been state funded for 27 years and its functions were first undertaken as a separate and identifiable responsibility as far back as the 1920's. It too has performed smoothly and efficiently and with strong community support in recent years. It too is recommended for elimination.

Two other critical programs proposed for position reduction are the Agricultural Experiment Station and the Cooperative Extension Service. In the former case, 8.75 professional and classified positions are cut. (See page 202) In the Extension Service, the figure is 9.3 (See page 204) To accomplish this reduction, positions will be terminated in at least nine counties, programs will be reduced in 4-H, irrigation and renewable resources and the operations of four Field Laboratories (Newlands, Pahrump, Southern Nevada and Main Station) will be diminished.

Library Book Acquisitions. The Executive Budget recommends that the Book Acquisition Fund remain next year at exactly the same level as for 1980-81 and then be increased by 10 percent for 1982-83. (See page 191) In reality, this recommendation imposes a 32 percent decrease in the Fund for the biennium. The inflation rate for books and periodicals has consistently been much greater than the ordinary rate. For several years it has been running at 20 percent or above. The library is at the heart of all the University's missions -- teaching, research and public service. It is an indispensable recourse that must at least be maintained at current levels. Merely catching up with the reduction suggested in the Executive Budget is a process that could take a decade or more.

Utilities. The difference between our own projection of utilities funding needs and that of the Executive Budget amounts to \$2.5 million for the biennium. (See pages 197-98) We must be able to plan as carefully as possible in allocating funds to this major component of our budget. Given the significant difference in the two projections, we cannot plan appropriately unless there is

either a restoration of a large portion of our utilities or a mechanism established whereby we can secure needed funding from the state should we experience the shortfall we believe will occur if the Executive Budget figures are accepted.

It should be noted that we are not profligate in our utilities expenditures. We have in fact given conservation a very high priority over the last seven years. That effort has been quite successful. Since 1973, our consumption has increased only two percent for electrical energy and four percent for natural gas, with a corresponding increase in the campus utility service area of approximately 29 percent. We estimate that, because of this program, which has achieved widespread recognition, we are saving \$650,000 during the current year.

Classified Salary Reserve. The Executive Budget allocation of nine percent to meet a 14 percent proposed salary increase does not square with our experience with classified salary savings. The UNR vacancy rate averages about two percent (not five percent) annually. For the biennium, the recommendation leaves us with a shortfall in excess of \$200,000 in classified salaries, or, in other terms, an additional reduction of 15 classified positions.

Fees and Tuition. Here, I need to emphasize what has been previously observed by others. The Executive Budget proposal for a 25 percent increase in the per credit fee and a 33 percent increase in non-resident tuition may well be the single most critical problem we have with that budget. It suggests that the cost of our program for resident students, already among the highest in the Western states, be made higher still. It suggests that students, who already furnish a greater percentage of our revenue in relation to the general fund appropriation than is the case in most Western states, increase that percentage even more. It proposes in the context of the remainder of the Executive Budget, that students pay a significantly higher price for a program of significantly less quality. However, our most serious difficulty with the fee and tuition increases, is that they present us with severe planning and management uncertainties. It is difficult for us to project, as does the Executive Budget, that these major increases will have no effect on enrollment. We believe it possible, even likely, that the recommended increases, will produce a serious revenue shortfall. Certainly, that has been our experience in the past. That possibility, or likelihood, is something we cannot contend with in September. We would need to plan for it in advance. To put it another way, the proposed fee and tuition increases are very likely in reality a hidden additional reduction of substantial magnitude.

I commented earlier on the related problem in grants-in-aid funding. To provide a manageable approach to budgeting, in my view, any fee and tuition increases must be considerably lower and fairer, and they must be matched by a parallel augmentation of grants-in-aid funding.

SUMMARY

Perhaps the best way of summarizing this presentation is to note that none of the major priorities -- none of the obligations we have in high growth programs, need-based and other programs -- can be satisfied if the Executive Budget prevails. Far from meeting these obligations, we will be faced with the necessity of enrollment limitations in areas such as Business, Engineering and

elsewhere; with the possibility of terminating certain programs; with the further possibility of serious accreditation difficulties in major program areas; and with the necessity of examining the deleterious and demoralizing alternative of terminating younger faculty.

We believe we have prepared a responsible and responsive budget request. We believe we have considered the economic uncertainties facing Nevada. We believe that the Executive Budget recommendations will produce decidedly adverse results well beyond the range of the biennium. We need your assistance. The following summary Table describes the kind of assistance we need.

**TABLE VI \***  
**SUMMARY OF ADDITIONAL UNR FUNDING NEEDS**  
**FOR**  
**1981-83 BIENNIUM**

	1981-82			1982-83		
	<u>Prof. Pos.</u>	<u>Class. Pos.</u>	<u>Total \$</u>	<u>Prof. Pos.</u>	<u>Class. Pos.</u>	<u>Total \$</u>
<b>I UNR Budget Request</b>						
<b>A. High Growth Programs</b>						
College of Engineering	3.00		78,670.00	1.00		28,585.00
College of Business Adm.	2.00		52,445.00	2.00		57,170.00
Other Listed Programs	4.25		111,445.00	1.00		28,585.00
<b>B. Need-Based Programs</b>						
Nursing	1.50		39,335.00			
Education Administration	1.00		26,220.00	.75		21,435.00
Speech Pathology	1.00		26,220.00			
<b>C. Other Program Needs</b>	7.00		183,561.00	2.50		71,460.00
<b>D. Associated Needs</b>						
High Growth		1.68	27,435.00		.73	12,995.00
Needs-Based		.82	15,390.00**		.14	4,642.00**
Other		1.27	20,740.00		.45	8,010.00
<b>Subtotal</b>	<b>20.75</b>	<b>3.77</b>	<b>581,461.00</b>	<b>7.25</b>	<b>1.32</b>	<b>232,882.00</b>
<b>Previous Years Increase ***</b>				<b>20.75</b>	<b>3.77</b>	<b>633,792.00</b>
<b>Total</b>	<b>20.75</b>	<b>3.77</b>	<b>581,461.00</b>	<b>28.00</b>	<b>5.09</b>	<b>866,674.00</b>

**II Executive Budget Shortfall**

<b>A. Position Reductions</b>						
General Reductions	9.65	3.60	334,613.00	--	--	--
Specific Reductions	2.50	2.25	102,300.00	--	--	--
Assoc. Cost Reductions			33,549.00	--	--	--
<b>B. Library Book Acquisition</b>			172,863.00			120,693.00
<b>C. Classified Salaries</b>			177,605.00			88,021.00
<b>Subtotal</b>	<b>12.15</b>	<b>5.85</b>	<b>820,930.00</b>			<b>208,714.00</b>
<b>Previous Years Increase***</b>				<b>12.15</b>	<b>5.85</b>	<b>894,814.00</b>
<b>Total Executive Budget Shortfall</b>	<b>12.15</b>	<b>5.85</b>	<b>820,930.00</b>	<b>12.15</b>	<b>5.85</b>	<b>1,103,528.00</b>
<b>Cumulative Total I &amp; II</b>	<b>32.90</b>	<b>9.62</b>	<b>1,402,351.00</b>	<b>40.15</b>	<b>10.94</b>	<b>1,970,202.00</b>
<b>III Utilities Shortfall</b>						
<b>Total Utilities Shortfall</b>			<b>1,157,267.00</b>			<b>1,429,982.00</b>
<b>Cumulative Total I, II &amp; III</b>	<b>32.90</b>	<b>9.6</b>	<b>2,559,658.00</b>	<b>40.15</b>	<b>10.94</b>	<b>3,400,184.00</b>

\* This table does not include funding reductions and needs generated by the Executive Budget recommendations for fee and tuition increases, nor for the funding requirements of any alternative set of increases. It also does not include reductions and needs in grants-in-aid funds related to fee and tuition increases.

\*\* Includes operating funds for Speech Pathology

\*\*\* Increased by 9% salary increase for 1982-83



TABLE VII

SUMMARY OF 1981-83 BIENNIAL NEEDS IN OTHER APPROPRIATION AREAS

	1981-82			1982-83		
	<u>Prof. Pos.</u>	<u>Class. Pos.</u>	<u>Total \$</u>	<u>Prof. Pos.</u>	<u>Class. Pos.</u>	<u>Total \$</u>
<b>I Intercollegiate Athletics</b>						
A. Executive Budget Shortfall			68,000.00			68,000.00
<b>II Agriculture Exp. Station</b>						
A. Budget Request	2.50	1.00	94,350.00	1.00		33,941.00
B. Executive Budget Shortfall	4.50	4.25	210,267.00			
Subtotal	7.00	5.25	304,617.00	1.00		33,941.00
Previous Years Total				7.00	5.25	332,032.00
Total Agric. Exp. Sta.	7.00	5.25	304,617.00	8.00	5.25	365,973.00
<b>III Cooperative Ext. Service</b>						
A. Budget Request	2.00	1.00	67,814.00	1.00		29,693.00
B. Executive Budget Shortfall	7.30	2.00	225,523.00			
Subtotal	9.30	3.00	293,337.00	1.00		29,693.00
Previous Years Total				9.30	3.00	319,737.00
Total Coop. Ext. Serv.	9.30	3.00	293,337.00	10.30	3.00	349,430.00
<b>IV Statewide Programs</b>						
A. Executive Budget Shortfall	1.62	1.50	76,624.00			
Previous Years Total				1.62	1.50	83,520.00
Total Statewide	1.62	1.50	76,624.00	1.62	1.50	83,520.00
<b>V Business Center North</b>						
A. Budget Request		5.00	85,375.00			
Previous Years Total					5.00	93,059.00
Total B.C.N.		5.00	85,375.00		5.00	93,059.00
<b>Grand Total</b>	<b>17.92</b>	<b>14.75</b>	<b>827,953.00</b>	<b>19.92</b>	<b>14.75</b>	<b>959,982.00</b>

578

STATEMENT BY JOE CROWLEY, PRESIDENT OF UNR  
SENATE FINANCE COMMITTEE  
FEBRUARY 16, 1981

I come before you at this Session in a rather different position than was the case in 1979. Two years ago, UNR had gone through a period of moderately declining enrollments, expecting that trend to turn around but hard put to defend our projection of three percent enrollment increases for each year of the biennium. We faced an Executive Budget that recommended a substantial reduction. Despite our difficult situation, the Legislature was very helpful in restoring some of the proposed reduction and in providing a mechanism for additional restoration should the enrollment picture improve. The picture did improve and the additional restoration was granted. This year, we are in the midst of an enrollment boom that has doubled our projected increase for the current biennium. We have been heartened by that growth and encouraged by the burgeoning interest in the University expressed by students of all ages and by the community in general. We have been very pleased with the results of the changes that have been instituted to make UNR a more efficient, visible and outreaching institution. However, there is one similarity between our current situation and that of 1979. We again come before you facing an Executive Budget that, despite all our progress, recommends a substantial reduction in funding. So, again, we need your help.

I understand that the state is now in a period of economic uncertainty and that there is difficulty in stretching resources to meet needs. The University's responsibility is to build that understanding into its budget request, to make that request responsible, cost-effective and answerable to the demonstrable higher educational needs of Nevada. That is the kind of budget request we have assembled. It is a request that was reasonable in the initial funding it proposed, but one that, in light of economic circumstance, we reduced several times.

What we present then, is a budget request based primarily on three considerations:

1. A faculty salary increase as our highest priority.
2. An increase in positions tied to the 20-1 student-faculty ratio and to a projected three percent per year growth in full time equivalent enrollments.
3. Adjustments in operating funds to permit us to keep pace with inflation.

My purposes this morning are to discuss with you some of the details of our request, in particular, highlighting our major priorities, and then to comment on certain aspects and impacts of the Executive Budget recommendations. It might be helpful, first, to provide some brief background information.

The 1970's and 1980's at UNR

It is instructive to consider the University's request for the 1981-83 biennium against a background of our budgetary history over the course of the 1970's. The following tables summarize that history.

**TABLE I**

**UNR -- A 12 Year Profile  
FTE Positions and Work Program Expenditures\***

	<u>1969-70</u>		<u>1980-81-</u>	
	FTE	\$	FTE	\$
<u>Instruction</u>				
Professional	334.47	4,878,152	338.29	10,080,236
Classified	68.86	585,257	61.60	999,881
Teaching Assistants	44.50	333,750	31.50	411,842
Wages		76,553		91,111
Operating		355,602		465,190
Out-of-State Travel		26,344		16,194
Total	<u>447.83</u>	<u>6,255,658</u>	<u>431.39</u>	<u>12,065,174</u>
<u>All Other</u>				
Professional	57.09	923,624	73.18	2,400,225
Classified	242.21	1,697,201	281.00	4,585,226
Teaching Assistants	1.85	13,900	1.66	21,791
Wages		90,209		196,134
Operating		1,315,831		4,610,872
Out-of-State Travel		7,329		5,072
Total	<u>301.15</u>	<u>4,048,094</u>	<u>355.84</u>	<u>11,819,320</u>
<u>Totals</u>				
Professional	391.56	5,801,776	411.47	12,480,461
Classified	311.97	2,282,458	342.60	5,585,107
Teaching Assistants	46.35	347,650	33.16	433,633
Wages		166,762		287,245
Operating		1,671,433		5,076,062
Out-of-State Travel		33,673		21,986
Total	<u>748.98</u>	<u>10,303,752</u>	<u>787.23</u>	<u>23,884,494</u>

\*The Table includes for 1969-70 only those programs which are a part of the UNR appropriation area for 1980-81. For example, Intercollegiate Athletics was a part of the UNR budget in 1969-70 while it is now a separate appropriation area. It is not included, nor are any other such programs in the Table figures for 1969-70.

TABLE II

FTE Fall Gross Enrollments  
and Student-Faculty Ratios

	<u>1969-70</u>	<u>1980-81</u>
Undergraduate	5,413	6,299
Graduate	721	843
Total	<u>6,134</u>	<u>7,142</u>
Student-Faculty Ratio	18.3-1	21.1-1

Of course, there have been ups and downs during the years since 1969-70, but the recent pattern is one of considerable growth. There has been minimal growth in instructional positions, although to maintain the student-faculty ratio that obtained in 1969-70 would require 52 more professional positions than we have this year. There has been significant growth in support positions, largely staff in vital support areas such as the Library, Student Services and Buildings and Grounds. There has been a substantial decline in the purchasing power of instructional operating dollars. This year's figure is worth 45% of the figure for 1969-70. To put it another way, it would require \$318,165 more than is allocated for instructional operating this year to equal the purchasing power of the 1969-70 expenditure.

With all of the above, we have held our own in terms of the cost per FTE student, as Table III makes clear:

TABLE III

Cost Per FTE Student  
1969-70 and 1980-81

	<u>1969-70</u>	<u>1980-81</u>	<u>1980-81</u> <u>Adjusted for inflation</u>
Instruction	\$1,020	\$1,689	\$ 767
Other	660	1,655	751
Total	<u>\$1,680</u>	<u>\$3,344</u>	<u>\$1,518</u>

When adjusted for the Consumer Price Index inflation increase for the period involved, the per student cost for the current year is 162 dollars less than the figure for 1969-70. The actual instructional cost per FTE student, when adjusted for inflation, is 24.8 percent less (i.e., \$767 for 1980-81 compared with \$1,020 for 1969-70). A large part of the growth in "other" costs results from an extraordinary increase, approximating 333 percent, in utilities expenditures since 1969-70. We estimate our utilities expense at slightly in excess of \$600,000 for that year. In the current year, we have allocated \$2.6 million for utilities.

In general, the profile of UNR during the past 12 years -- a period of growth in enrollments, decline in instructional resources and substantial inflation in instructional support costs --- is in keeping with national trends for public universities. We began the decade in a weaker position than most such universities. We ended the decade in approximately the same relative position. For the decade ahead, however, Nevada has an unusual opportunity to move against prevailing national trends, to develop among the states a position of leadership in higher education. This opportunity is provided by Nevada's favorable demography for the 1980's.

Numerous projections suggest that for most of the nation, the 1980's will be a period of significantly declining enrollments in, and therefore declining state expenditures, for public colleges and universities. The basic reason for this projected decline is the substantial reduction in the birthrate which began in the 1960's and continued into the 1970's. That reduction, it is anticipated, will lead to a 25 percent drop off nationally in numbers of high school graduates and a parallel decrease in numbers of entering college students. This trend is already in evidence. In many states, there is also anticipated a significant outmigration of population, leading to a further decline in college enrollments.

Nevada, however, is one of the few states (seven or eight, mainly in the West) where the national trend is not expected to develop. Projections vary -- and there are many available -- but the pattern that typically emerges from them for Nevada is one of growth rather than decline. We have authorized two independent studies on UNR enrollment in the 1980's. Both suggest an increase in full time equivalent students in the neighborhood of 20 percent over the course of the decade.

If the state is willing to match that growth with commensurate increases in funding support, Nevada can dramatically alter its standing in those many measures of support for higher education that consistently place us in an inferior position. The enrollment growth we have experienced during the past two years is, we believe, a portent of what lies ahead. The 1981-83 biennial budget becomes, in that context, a critical step into the future. That future can be a bright one for both the University and the state, if we take advantage of the opportunity we have. The benefits of a strong higher education system for attracting appropriate types of industry, for providing a desirable environment for the economic diversification we need, have been mentioned. The biennium ahead will be critical in determining whether those benefits and that strength will be available.

#### The UNR Request

The UNR budget is comprised of seven separate appropriation areas including Business Center North. Page numbers for these areas in the University Budget request and in the Executive Budget are as follows:

Executive Budget

University Budget

University of Nevada, Reno	189	43
Intercollegiate Athletics	200	139
Agricultural Experiment Station	202	179
Cooperative Extension Service	204	169
School of Medicine	205	117
Statewide Programs	214	151
Business Center North	218	369

Dean Robert Daugherty will be presenting the budget for the School of Medicine. My remarks will be confined largely to the UNR appropriation area, though I will allude to certain needs in the other areas as well.

The basic UNR budget looks toward a total revenue increase of 24 percent for the first year of the biennium and 15 percent for 1982-83. The Executive Budget, by way of comparison, suggests annual increases of nine percent and 10 percent, respectively. However, most of the total revenue growth in the Executive Budget is to be accomplished by large-scale increases in fees and tuition, a subject about which I will have more to say later.

The highest priority in our budget request, as noted earlier, is for faculty salaries. Beyond that, our most critical need is for a moderate number of instructional positions. The fundamental justification for these needed positions is enrollment growth. Such growth, over the past two years, has been experienced in most departments of the University. In some areas, however, it has substantially outstripped our ability to provide faculty positions to deal with it.

High Growth Programs. The two colleges most affected, and most in need of additional positions, are Engineering and Business Administration. In Engineering, the full time equivalent student population has grown by 80.9 percent since 1975, 28.4 percent since 1978 and this year by 9.6 percent. In Business Administration, there has been a 27.4 percent increase since 1975, 15.9 percent since 1978 and 6.0 percent during the current year. Full-time equivalent faculty positions have increased since 1975 by 6.1 percent in Engineering and 16.8 percent in Business Administration. Table IV summarizes what has occurred in these two colleges.

TABLE IV

Enrollment and Faculty Positions in Two Colleges  
1975 - 1980\*

	<u>1975 Enrollment</u>	<u>Faculty Positions</u>	<u>1978 Enrollment</u>	<u>Faculty Positions</u>	<u>1980 Enrollment</u>	<u>Faculty Positions</u>
Engineering	240.4	25.76	338.6	26.09	434.8	27.32
Business Adm.	742.7	30.74	816.6	34.39	946.3	35.89

\* In terms of full time equivalents



University of Nevada System

405 Marsh Avenue  
Reno, Nevada 89509  
702/784-4901

DONALD H. BAEPLER, CHANCELLOR

February 4, 1981

MEMORANDUM

To: Members of the Nevada State Legislature

Summary of minimal needs for system administration in order to retain the present level of support:

1. Board of Regents. Restoration of 0.5 classified position: 1981-82 -- \$6,284; 1982-83 -- \$6,545.
2. Chancellor's Office. Restoration of two professional positions: 1981-82 -- \$81,189; 1982-83 -- \$81,189.
3. Chancellor's Office. Restoration of 1.5 classified positions: 1981-82 -- \$27,244; 1982-83 -- \$27,343.
4. Reserves for classified and professional positions: 1981-81 -- \$16,272; 1982-83 -- \$26,142.

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Donald H. Baepler  
Chancellor

b1

- I. The University of Nevada System Computing Center (UNSCC) serves three basic areas:
- A. Education
  - B. Research
  - C. Administrative
- II. To achieve these goals the resources provided the UNSCC by the State are organized into:
- A. Hardware/software network consisting of:
 

<u>Size Computer</u>	<u>Location</u>
Medium	UNLV Campus
Medium	UNR Campus
Small	North Cheyenne CCC
Small	Energy System Center, Boulder City

These computers provide services to users through local or remote terminals and are linked via communication lines to optimize their use.
  - B. People are grouped into five organizational units:
 

<u>Unit</u>	<u>Number</u>
System Operations	30
System Software & Network Development	6
Teaching/Research Support	5
Administrative Design & Programming	8
Director's Office	3
Total	<u>52</u>
- III. Demand for Computing Resources
- A. It became increasingly evident in 1979 that demand for computer services was exceeding available supply by the flattening of growth trends and the advent of many user reports of inaccessibility to computers and poor response time.
  - B. An independent consulting firm was requested to examine the UNSCC operation and recommend measures which would correct problem areas.
  - C. Computer Shortages:
    1. The independent consultant firm found lack of resources to meet expected demand in three areas:
      - a. Hardware
      - b. Software
      - c. People
    2. The UNSCC's budget request for FYS 82-83 included funds to correct known deficiencies in resources at a minimal level.
- IV. Executive Budget Recommendations
- A. The Executive Budget increased the number of professionals by 2 thereby filling 25% of the 8 requested. There is no increase in the number of classified. The "one-shot" request, which I urge you to approve, will be of significant help in providing increased hardware resources.
  - B. An area of deep concern is the new concept of charging students who use computers a fee to raise \$100,000 per year for the Center. Enforcement of this concept, while possible, will add to administrative costs and place yet another financial burden on students for learning a skill which in this day and age is akin to learning to read and write. I urge that the Center's revenues be increased by \$100,000 each year from the general funds and that the plan to collect a computer fee from students be eliminated.



# Exhibit F

## SUMMARY - UNR

The attached statement outlines the principal aspects of the UNR budget request and the Executive Budget recommendations for the 1981-83 biennium. The University request, which covers the basic UNR budget and six additional appropriation areas, is based on the need to keep up with inflation and to increase positions in relation to enrollment growth to levels determined by the 20-1 student faculty ratio. Major priorities include funding for high growth programs, such as Engineering, Business Administration and Mathematics; programs meeting particular needs in the state, such as Nursing, Education Administration and Speech Pathology and Audiology; and programs such as Chemical and Metallurgical Engineering and Foods and Nutrition, where accreditation or other special needs exist. The Executive Budget recommendations would make it impossible to accomplish any of these priorities. It proposes substantial reductions in existing positions and contains significant shortfalls in such areas as library book acquisitions, classified salaries, utilities and grants-in-aid. In addition, the Executive Budget poses a severe problem with its recommendation for major increases in fees and tuition. These increases engender very difficult planning and management problems and imply a further funding reduction of uncertain but potentially serious magnitude. Finally, the Executive Budget suggests cutbacks in other appropriation areas, most notably in the Agricultural Experiment Station and the Cooperative Extension Service, which would require the University to deal with growing demands with substantially reduced resources.

The following table summarizes UNR's budget priorities, in terms of number of needed dollars. The table covers both the University's request and the funding shortfalls proposed in the Executive Budget.

SUMMARY OF ADDITIONAL UNR FUNDING NEEDS  
FOR 1981-83 BIENNIUM\*

	1981-82	1982-83
<b>I. <u>UNR Budget Request</u></b>		
A. High Growth Programs	\$ 242,560	\$ 114,340
B. Need Based Programs	91,775	21,435
C. Other Program Needs	183,561	71,460
D. Associated Needs	63,565**	25,647**
Sub-Total	\$ 581,461	\$ 232,882
Previous Years Increase***		633,792
Total UNR Budget Request	\$ 581,461	\$ 866,674
<b>II. <u>Executive Budget Shortfall</u></b>		
A. Position Reductions	\$ 470,462	\$ -
B. Library Book Acquisition	172,863	120,693
C. Classified Salary Reserve	177,605	88,021
Sub-Total	\$ 820,930	\$ 208,714
Previous Years Increase***		894,814
Total Executive Budget Shortfall	\$ 820,930	\$1,103,528
<b>III. <u>Utilities Shortfall</u></b>		
Total Utilities Shortfall	\$1,157,267	\$1,429,982
<hr style="border: 0.5px solid black;"/>		
TOTAL UNR	\$2,559,658	\$3,400,184
<b>IV. <u>Other Appropriation Areas</u></b>		
A. Intercollegiate Athletics	\$ 68,000	\$ 68,000
B. Agriculture Experiment Station	304,617	365,973
C. Cooperative Extension Service	293,337	349,430
D. Statewide Programs	76,624	83,520
E. Business Center North	85,375	93,059
<hr style="border: 0.5px solid black;"/>		
TOTAL OTHER APPROPRIATION AREAS	\$ 827,953	\$ 959,982
<hr style="border: 0.5px solid black;"/>		
GRAND TOTAL	\$3,387,611	\$4,360,166

**Statement on Biennium Budget Request of**

**The University of Nevada, Reno**

**1981-1983**

**Prepared by**

**Joseph N. Crowley**

**President**

**February, 1981**

## Tuition Figures for Western States

In-State Tuition 1980-81

UNR	\$ 720
UNLV	720
Northern Arizona	600
Arizona State	600
University of Arizona	600
University of Utah	651
Utah State	651
Weber State	633
Montana State	572
University of Montana	626
University of Idaho	474
Boise State	475
Idaho State	460
University of California - 9 campuses	776
California State - 19 campuses	219
University of Colorado	894
Colorado State	850
University of Wyoming	592
University of New Mexico	664
New Mexico State University	704

University of Nevada, Las Vegas

Summary Statement on Biennium Budget, 1981-83

The biennium budget request for UNLV for 1981-83 is for \$53.6 million (\$24.8 million in 1981-82 and \$28.9 million for 1982-83). The executive budget recommends \$46.8 million. Included in the recommendations is an assumption of a 25% fee increase for in-state students and 33% for out-of-state students. The major impacts of the executive budget, and the funds needed to meet the most severe of the problems are outlined below.

Additional Funds Needed Above Executive Recommendations

I. Student/faculty ratio. The single most significant decision in the executive budget is the recommendation to raise the student/faculty ratio from 20:1 to 22:1. This would have a major negative impact on the quality of higher education in Nevada. Although we had hoped to actually improve the student/faculty ratio during the coming biennium, UNLV and UNR are both prepared now to accept a budget which would maintain the current 20:1. The funds required for that at UNLV in addition to the executive budget would be:

1981-82	\$385,536
1982-83	415,346

Legislative staff inquired as to our high growth areas, those with accreditation problems, and those with waiting lists for entrance. If we were to meet only the new faculty needs in those areas, the costs would be less than those stated above, but would still require the following for new faculty in business, hotel administration, nursing and geoscience:

1981-82	\$ 232,000
1982-83	172,000

II. Restoration of existing positions. The executive budget eliminates a number of positions now in the budget and essential to the current level of campus operations. The major example is the elimination of 20 janitorial positions during a biennium when at least two and perhaps three new buildings will become available for use. The amounts needed to restore existing positions which would be eliminated are as follows:

Office of academic affairs		
.5 administrative assistant	1981-82	\$ 16,124
	1982-83	16,124
Instructional positions		
1.6 classified	1981-82	\$ 19,650
	(restored in 1982-83)	

<b>Deans' Offices</b>		
.33 assistant deans	1981-82	\$ 24,938
1.0 secretary	1982-83	24,938
<b>Audio-Visual Services</b>		
2.0 Technicians	1981-82	\$ 22,503
	1982-83	22,503
<b>Library</b>		
1.0 Professional librarian	1981-82	\$ 22,460
	1982-83	22,460
<b>Vice President for Administration</b>		
1.0 secretary	1981-82	\$ 17,535
	1982-83	17,535
<b>Concert Hall</b>		
1.0 Director	1981-82	\$19,631
	1982-83	19,631
<b>Alumni Relations Office</b>		
.5 Director	1981-82	\$ 20,785
.5 secretary	1982-83	20,785
<b>Janitorial Services</b>		
20 positions in 1981-82	1981-82	\$ 241,767
15 positions in 1982-83	1982-83	163,370
<b>Maintenance Supervision</b>		
	1981-82	\$ 13,100
	1982-83	13,100

III. High priority new items. In addition to the above two categories, which simply maintain our existing level of services, the following high priority items are of critical importance to UNLV. The library item, in particular, should be noted because inflationary pressures make the increase necessary to maintain even minimal adequacy in that area.

To restore library acquisitions budget to original request	1981-82	\$ 241,458
	1982-83	271,153
To make Development Office full-time instead of half-time	1981-82	\$ 30,902
	1982-83	30,902
To provide grants-in-aid if fees are raised as recommended	1981-82	\$ 224,343
	1982-83	238,024

IV. Tuition and fees. The executive budget recommends a 25% fee increase for in-state students and 33% for out-of-state. In addition to the equity of the matter when students are already paying one of the highest rates in the West,

there is the problem of not knowing the impact of the increase on the enrollment level itself. The following amounts would be needed to keep fees at their present level.

**To maintain tuition and fees at present level**

All tuition and fees	1981-82	\$ 1,619,093
	1982-83	1,667,464

To maintain in-state fees	1981-82	\$ 1,179,093
	1982-83	1,214,464

**Conclusion.** The items identified above represent only a small portion of the total budget request submitted by UNLV. These are those high priority items which we believe to be essential to maintaining the present level of quality at UNLV. Support for these items will be crucial for UNLV and will be a good investment for the state.

### Scholarships and Fellowships

The budget request increase for this is small, amounting to only \$5,698 the first year of the biennium and \$8,006 the second year of the biennium. The increase is based on student FTE and past experience for the other areas.

### Reserves

All professional compensation in the 1981-83 biennium budget for existing as well as new positions is budgeted at the 1980-81 salary scale. The 15% increase in professional compensation for each year of the biennium is budgeted in the Reserve accounts. The first year this amounts to \$1,671,748, and amounts to 6.7% of the entire budget. The 1982-83 budget request figure of \$3,678,611 amounts to 12.7% of the budget.

## INTERCOLLEGIATE ATHLETICS

University Request. The Intercollegiate Athletics biennium budget request shows an increase in 1981-82 of \$234,976 over the 1980-81 budget. This is 35.1% increase over the 1980-81 budget. The request for 1982-83 is for an additional \$135,781, which is a 15.0% increase.

The Director of Athletics has taken a different approach to budgeting athletics in that his primary objective is to have all of the full-time permanent positions paid from state-appropriated funds. His objective in this budget request is to move 6.32 professional positions and two classified positions the first year of the biennium and another professional position the second year from estimated budgets to the state-supported budgets. This still leaves 12.5 full-time current professional positions to be paid from soft-money accounts as well as part-time appointments for minor sports.

Another major change is that, other than grants-in-aid, no operating or travel is requested in this budget.

Executive Budget Recommendations. Without providing any breakdown by categories, the recommendation appears to apply a straight percentage increase to this category, recommending \$742,524 in 1981-82 and \$816,776 in 1982-83.

## STATEWIDE SERVICES

The biennium budget request for Statewide Services shows the largest percentage of increase than any of the other appropriations. However, it must be kept in mind that the base is small. The increase, including projected professional salaries increases is \$270,464, an increase of 101.9% for 1981-82 over 1980-81. The second year the total request is for \$109,804, a 20.5% increase over 1981-82. Statewide Services budget is broken into three areas which include Center for Business & Economic Research, Continuing Education, and UNLV Museum.



### Center for Business and Economic Research

The Center for Business and Economic Research has requested an increase of \$63,265 in 1981-82 over 1980-81, a 57.4% increase. For the second year, the request is for \$39,131, an increase of 22.6% over 1981-82. Both of these increases are exclusive of professional compensation increases requested. The request includes one new professional position for each year of the biennium, and for the first year only the request includes .67 FTE new graduate assistants and one new classified position. The requested increase for operating and wages is \$6,307 and \$5,363 respectively the first year, an increase of 51.9% and 62.8%. The second year of the biennium has an operating increase of \$1,810, or 9.8%, and wages of \$6,828, an increase of 50.1%.

### Continuing Education

The Continuing Education biennium budget request asks for an increase of \$48,631 for 1981-82 over that of 1980-81, an increase of 87.1%. The second year of the biennium the request is for an increase of \$1,271 over 1981-82, an increase of 39.5%. These increases are also exclusive of the professional salaries increase. The request includes one new professional position and one new classified position for each year of the biennium. Requests for operating funds increased by \$10,239 the first year of the biennium and \$1,740 the second year.

### UNLV Museum

The budget request for 1981-82 for the UNLV Museum is \$118,565 over 1980-81, an increase of 119.2%. The second year budget request shows a decrease of \$33,937 from the 1981-82 request. Again, these requests are exclusive of professional compensation increases. The decrease in the 1982-83 budget is because the first year of the biennium request for operating included a large amount of funds for equipment that would not be needed the second year of the biennium. The UNLV Museum budget shows an increase in the first year of the biennium of .75 professional positions and 2.5 new classified positions. There are no new requests in the second year of the biennium.

### Executive Budget Recommendations

The budget recommendations include no increases at all in staff for any of the units in Statewide Services.

### REVENUE ESTIMATES

We are concerned about the potential validity of the revenue estimates if the in-state and out-of-state fee increases recommended in the executive budget are implemented. In particular, it is likely that the out-of-state tuition increase will have a negative impact on revenue by drastically decreasing the number of out-of-state students coming to UNLV. In addition, this will have the obvious negative impact on quality by reducing the desirable mix of in-state and out-of-state students which enhances the quality of the educational experience on campus.

The impact on in-state students will be two-fold. First, a 25% fee increase will undoubtedly have a negative impact on the numbers of students who decide to attend UNLV. Second, since many of our students take less than a full load because of work and other obligations, they are likely to react to the fee increase by reducing course loads. The student who has been taking nine hours will now enroll for three or six. The result will be fewer than projected FTE and less than projected fee revenues.

### CONCLUSION

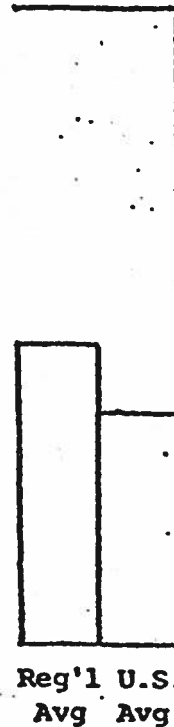
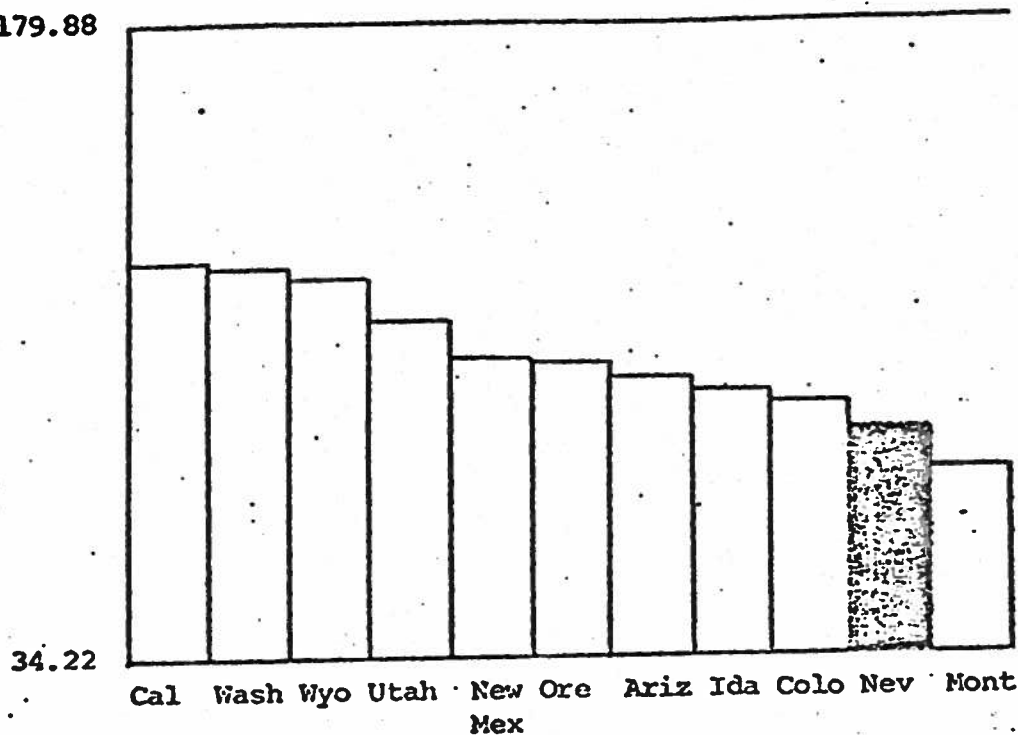
University officials fully recognize the severe financial constraints facing the state in the coming biennium. With that in mind, this presentation has reflected our priorities. We have not discussed here the very legitimate needs for new programs such as water resources or architecture, although those are needed now and the need will become more acute in the future.

Our budget reflects the very real needs of UNLV to continue to provide service at the present level of quality. Support for this budget will represent a good investment for the people of the state.

APPROPRIATIONS FOR HIGHER EDUCATION  
IN ELEVEN WESTERN STATES

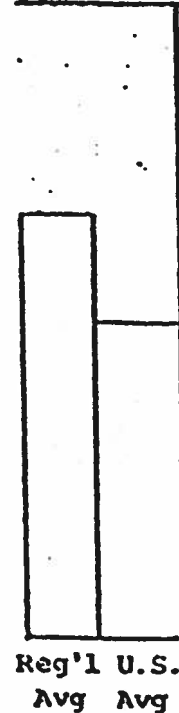
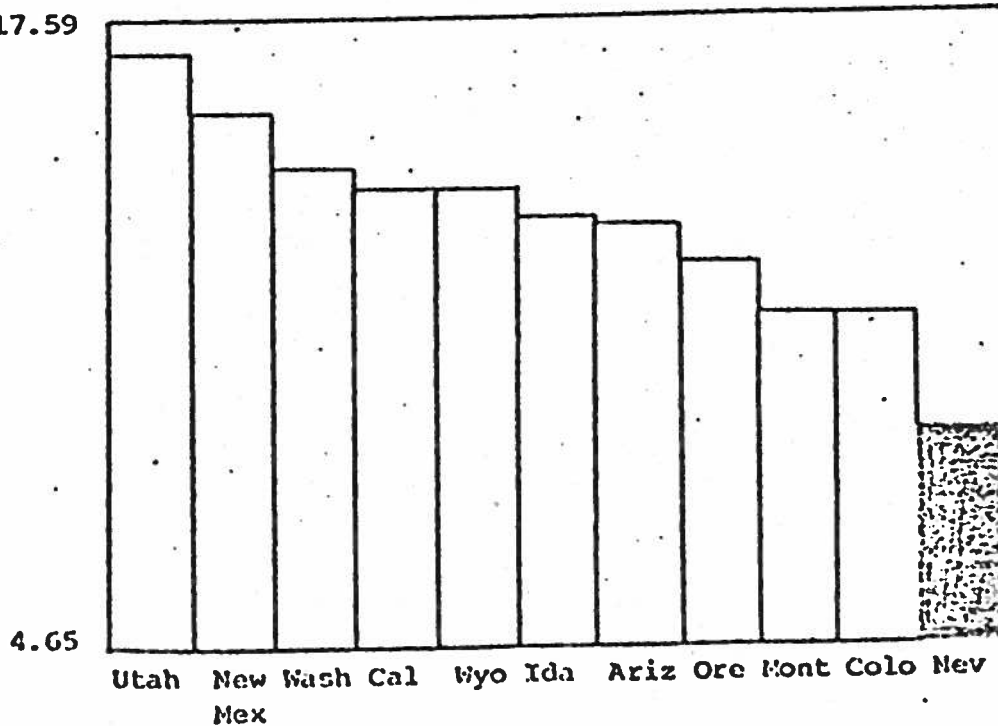
1979-80 Appropriations Per Capita

\$179.88



1979-80 Appropriations Per \$1000  
Personal Income

\$17.59



# Exhibit E

**Statement on Biennium Budget Request of**

**The University of Nevada, Las Vegas**

**1981 - 1983**

**Prepared by**

**Leonard E. Goodall**

**President**

**February, 1981**

**Statement on Biennium Budget Request of****The University of Nevada, Las Vegas****1981 - 1983**

The University of Nevada, Las Vegas is completing a decade of very rapid growth with every indication that the growth pattern will continue. From 1970 to 1980, headcount enrollment grew by 75 percent, from 5,679 to 9,939. The full-time equivalent student growth during the decade was 56 percent, from 4,137 to 6,444. This was roughly parallel to the population growth of southern Nevada, and we assume that our growth in the future will continue to be closely tied to the growth and development of the area. Within these general figures, certain programs can be identified which have experienced especially rapid growth. In just the last year (1979-80 to 1980-81), for example, enrollment in the College of Business and Economics has grown by 14.3 percent, Hotel Administration by 14.6 percent, and Nursing by 17.2 percent.

The real value of the University is seen equally well in qualitative as well as quantitative measures. Every major metropolitan area in the southwest that has experienced significant growth in recent years has seen the development of a university as an integral part of its overall population growth and economic expansion. This would be true of the University of Houston, San Diego State, Arizona State, and in the Las Vegas area, of UNLV. The universities have provided a cultural focus for areas and have been important to business decisions to locate in a certain area, in addition to providing undergraduate, graduate and continuing education opportunities.

The unfortunate fact for Nevada is that our support of higher education in recent years has not kept up with either national or regional trends. Exhibit I and Exhibit II illustrate this fact. The first shows that our state support for the University System is one of the lowest in the West, and the second indicates that we have compensated for this by asking the students to bear an unusually large portion of the total costs of their education. The budget recommended for your consideration would shift even more of the costs to the student, raising not only a basic question of equity but also presenting very serious problems in terms of estimating the impact of the increase on enrollment. This latter point will be discussed later in this presentation.

The following comments outline UNLV's budget request for the coming biennium and discuss the impact of the reductions recommended in the executive budget. Information is provided on three budget areas: UNLV's general budget, inter-collegiate athletics, and statewide services.

UNLV GENERAL BUDGET

The total biennium budget request for 1981-83 is \$53,643,317 (24.8 million in 1981-82 and \$28.9 million in 1982-83, which is an increase of \$15,382,597 over the 1979-81 Work Programs exclusive of classified salary adjustments for the 1981-83 budget request. The \$24.8 million request for 1981-82 represents an increase of 23.9% over 1980-81. The \$28.9 million requested for 1982-83 would be 16.6% more than the amount requested for 1981-82. The classified salary adjustment for 1981-83 is not included. The following paragraphs attempt to show where the increases occurred in the major functions as they appear in the budget.

Instruction

University Request. To arrive at the estimated annualized FTE for the years 1981-82 and 1982-83, we had to begin with the base of the year 1979-80. We made the assumption that the increase in FTE for 1980-81 would be 2% and that there will be a 3% increase for each year of the new biennium. We arrived at an annualized FTE of 6,468 for the year 1981-82 and 6,662 for the year 1982-83. Our larger-than-expected enrollment increase in 1980-81 means that these budget projections are already too low. Nevertheless, these conservative projections are the basis for the established budget requests. This provides for a total of 324.08 professional positions in Instruction for 1981-82 and 334.08 for 1982-83, an increase of 20.9 the first year and an additional 10 positions for the second year of the biennium. These numbers include 1981-82 requests for an additional 6 FTE in Business, 1.5 in Hotel Administration, 1.0 in Nursing, and 1.0 in Geoscience, all high demand and high priority items for us. For 1982-83, additional faculty are requested in these fields as follows: Business, 5.0; Hotel Administration, 1.0; Nursing 1.0. The parameters also provide for 33.33 FTE positions for graduate assistants for 1981-82 and 34.32 FTE graduate assistants for 1982-83. This is an increase of 5.33 FTE positions for the first year of the biennium and 1 FTE additional position the second year of the biennium. In addition, the graduate assistant salaries will be increased to \$5,000 the first year of the biennium and \$5,750 the second year of the biennium. Applying the parameters results in an increase of 6.50 new classified positions for 1981-82 and an additional 2 positions for 1982-83. Student wages in the Instruction area were increased over the 1980-81 budget by 18.37% the first year and 13.48% the second year of the biennium. There is no way to determine the amount of students that will be employed.

Determination of operating budgets was based on need. In addition, we made the assumption of an inflation factor of 13% for 1980-81 over that of 1979-80 and an additional 12% for each year of the new biennium. Obviously, this is a guess on our part and it may not be adequate. When the inflation rate is compounded, it results in an almost 42% inflation factor for the second year of the biennium over that of the year 1979-80. The increase in operating for the Instruction area for 1981-82 over that of 1980-81 is \$361,759, an increase of 71.3%. The second year

of the biennium shows an increase of \$166,566 over the first year or 19.12%. A large part of the increase is that of the Marching Band which has a budget request in operating of \$100,000 the first year of the biennium and \$112,000 the second year of the biennium.

Executive Budget Recommendations. The single most significant policy decision which the executive office appears to have built into its budget recommendations is the recommendation that we increase our student/faculty ratio from 1:20 to 1:22. This has a very serious impact on our funding of faculty positions. Where we have requested 324.08 FTE for the first year of the biennium, the budget recommendation is for 304.68. Our current figure is 303, and this means that we will have to absorb all of the larger-than-expected enrollment increase of this year plus next year's enrollment increase with virtually no increase in faculty positions. In the second year of the biennium, our request is for 334.08 FTE positions, but the recommendation is for 313.81.

Other segments of the budget which are based on the formula for instructional positions have received similar cuts. This would apply to classified and graduate assistant positions as well as operating funds.

There are no funds at all recommended for the marching band. This means that we will either have to secure private funding for the band, implement the alternative discussed last year of increasing ticket prices to support the band, or consider suspension of the band activities.

### Research

University Request. The biennium budget request has a request of \$100,000 for each year of the biennium. However, during the current biennium, there have been no research funds available from state appropriations.

Executive Budget Recommendations. The budget recommendation for the next biennium includes a figure of \$17,500 for research. While this is far from adequate, it is commendable that the principle of funding of research is to be established.

### Academic Support

University Request. The Academic Support area shows an increase of 3 professional positions the first year of the biennium with no additional positions the second year and an increase of 9.5 classified positions the first year and an additional 3 classified positions the second year of the biennium. These increases are almost exclusively that of the Library and Audio-Visual. The Library's new positions are necessary because of the opening of the Library addition which almost doubles the existing space. The dollar increase requested for this area of the budget is 52.0% the first year and 6.6% the second year. The same assumptions were made for inflation as in the Instruction area, and both the Library and Audio-Visual are planning the buying of supplies and equipment for

the opening of the Library addition. Audio-Visual needs additional equipment as well as replacement for obsolete equipment. The Library is requesting an increase in the first year of the biennium of \$304,287 in book acquisitions over that of 1980-81 which amounts to 59.1% increase. The second year of the biennium the request is \$87,478, which amounts to 9.7%. The acquisitions problem has reached a critical point at UNLV. In 1970, 52% of the library budget was going for acquisitions, and 48% for salaries and operations. Inflationary pressures on operating and personnel costs have been so severe that by 1980, 40% of the budget went to acquisitions and 60% to salaries and operations.

Executive Budget Recommendations. Our major concerns in academic support are that the recommended level of professional positions for the library is actually one less than we currently have. Also, the book acquisition budget has been seriously reduced, in spite of the continuing inflationary trends that libraries face in this area.

We also appear to have lost the two classified positions in Audio-Visual Services that we had recovered only during the second year of the current biennium. That office had been funded at 8 professional positions in earlier years and was cut to 6 in 1979-80, a cut that had a very negative impact on the office's ability to serve the academic units of the campus. It was restored to 8 in 1980-81, but the executive budget calls for it to be reduced to 6 again in the next biennium. This will inevitably have a serious impact on the campus.

### Student Services

University Request. The requested budget increases for Student Services are fairly moderate. Requests include 1 new professional position for the first year of the biennium and 4 classified positions for the first year of the biennium with no additional requests for the second year. These positions are scattered throughout the budget function with the major increase being in Financial Aid and the separately budgeted unit, English As A Second Language. Operating increase requested is a moderate one barely covering inflation.

Executive Budget Recommendations. No funding at all has been recommended for English As A Second Language.

### Institutional Support

University Request. The requests in this area are for 2 additional professional positions for the first year of the biennium and 1 additional professional position for the second year. The position for the second year is the Director of the Special Events Center that is scheduled to open in November, 1982. The requested increase in classified positions includes 3 new positions the first year of the biennium and an additional 3 classified positions the second year.

The positions for the first year will be assigned as follows: 1 in Central Services, 1 in Campus Security, and 1 in Alumni Relations. The positions for the second



year will be assigned as follows: 2 in Campus Security and 1 in the Special Events Center. The requested increase for wages and operating is moderate, and again, is a little higher than our projected inflation rate.

Executive Budget Recommendations. A number of very serious budget reductions have occurred in this area. The Alumni Office has been reduced by 50%, the position of Manager of the Concert Hall has been eliminated, the classified position in the Vice President for Administration office has been eliminated, and the request for a Director for the Special Events Center (Thomas Mack Arena) has been eliminated. Loss of the Concert Hall position will make it virtually impossible to continue the level of programming that currently exists in that facility. If construction on the new arena goes forward on schedule, it will be absolutely essential to have a position budgeted to begin coordination of operations of that building during the second year of the biennium.

### Operation and Maintenance

University Request. The biennium budget request of operation and maintenance of Physical Plant shows a significant increase. However, it must be kept in mind that there will be two new buildings to maintain, heat and cool, as well as the anticipation of continued high increases in energy costs. Operation and Maintenance is requesting an \$832,711 increase in 1981-82 over the amount budgeted in 1980-81, an increase of 19.9%. In 1982-83 they are requesting a budget increase over 1981-82 of \$1,201,883, an increase of 23.9%.

As you know, the Library addition will be completed during the 1980-81 fiscal year, but we received no funds for its maintenance for 1980-81. The Library addition increases the square footage maintained by Operation & Maintenance under this budget by 10%. We are also expecting the Fine Arts Building to be completed not later than mid-year of 1981-82 fiscal year. The maintenance of both of these buildings is included in the Operation & Maintenance budget request for 1981-82. In 1982-83 we are expecting the completion of the Special Events Center, and we have budgeted the utilities for this facility for one-half of the year. We have used an approximate 13% per year inflation factor for utilities.

The budget request includes an increase of 19.60 classified positions for 1981-82 and an additional 8.0 classified positions for 1982-83 to maintain these buildings and care for the surrounding grounds. The requested increase is substantial, but we feel it is justified.

Executive Budget Recommendations. Next to the change in the student/faculty ratio, the most significant policy change impacting upon this budget is in the area of maintenance services. Although we are opening at least one and perhaps two new buildings during the coming biennium, the number of janitorial staff recommended in the budget has been reduced by 20, from 56 to 36. We believe this would mean that the amount of area to be cleaned by each of our janitors would be one of the highest for any state facility in Nevada.

equation. This method has been extremely useful in developing first approximations for a given groundwater basin's recharge. However, the method does have some serious inherent uncertainties that make its use somewhat tenuous in circumstances where restriction of groundwater development is contemplated. Because of these uncertainties, and ramifications of over-estimates of groundwater recharge, the State has justifiably pursued a conservative approach in selecting recharge estimates.

Actual groundwater recharge is not an easy quantity to determine; however, in areas where groundwater pumpage is to be restricted, better methods than the one currently used for determining natural replenishment are needed. These new methods might yield estimates different from those obtained with the current method, but their accuracy could provide a stronger basis for water and land management decisions.

This project will initiate a study of the processes of replenishment, or recharge, to Nevada's groundwater reservoirs in order to improve our ability to estimate this important quantity. Groundwater recharge estimates are assuming greater importance because of the number of basins that are being "designated" under provisions of the State water law. Once a basin is "designated," further development is essentially precluded.

During the 1981-83 biennium, this study will focus upon the development of needed methodologies. The specific objectives during this period will be as follows:

- a) to identify those areas within a basin where recharge is actually occurring;

b) to determine the most important controls (e.g., precipitation characteristics, channel networks, depths to water table, lithology, elevation, topography, vegetation, etc.) on replenishment to groundwater reservoirs; and

c) to attempt to develop procedures for estimation of the replenishment to and perennial yields of groundwater reservoirs in one, or possibly two, selected groundwater basins.

This study not only is directed at improving our knowledge of the selected groundwater reservoir in regard to replenishment and perennial yield, but will also serve as a benchmark for similar studies in other Nevada groundwater basins. The ultimate effect of studies such as the one proposed herein will be a firmer scientific basis for the application of provisions of Nevada water law as it pertains to groundwater recharge and mining.

SUMMARYDESERT RESEARCH INSTITUTE 1981-83 BIENNIAL BUDGET REQUEST

The DRI 1981-83 Biennial Budget Request consists of three elements: 1) Continued salary support for a limited few administrative staff members; 2) Support for selected research programs; 3) Research-program enrichment: equipment replacement and advanced research project initiation.

The DRI budget showing the Governor's recommendation is formatted according to the above functional elements in Table I (attached) and according to the Executive Budget in Table II (attached).

### 1. Administrative Staff Salary Support

The DRI requests, and the Governor recommends, continued salary support for 19.25 administrative and clerical positions in the offices of the President, Vice President and the Executive Directors of the five research centers. These positions provide for an Institute management structure which gives both overall scientific program direction and the needed financial planning, management and control. These costs are not allowable as a direct charge to grants and contracts.

A recent detailed financial analysis of the Institute (see Appendix) has proven that, because of federal regulations governing sponsored research at academic institutions, the State's contribution to DRI administrative expenses (plus certain System-contributed services) is the sole source of DRI's fiscal stability. Any reduction in the State's contribution to administration would result in an immediate equal reduction in overhead recovery on grants and contracts and this would have serious consequences for DRI's fiscal stability.

### 2. Research Program Support

The DRI requests, and the Governor recommends, support for the following research programs of particular importance and timeliness to the State:

#### a) Weather Modification Program

Nevada's water supply comes principally from the winter snowpack which accumulates in the mountainous regions of the State. The DRI has been conducting a weather modification program aimed at augmenting this naturally-occurring snowfall. Data collected for the last two completed operational years, 1978-79 and 1979-80, for the current Tahoe-Truckee, Carson-Walker and Spring Mountain project areas provide estimates that we have produced 176,000 acre feet of additional water at a cost of less than \$4.00 per acre-foot (or 1/8 cent per 1000 gals)-- a cost well below typical water costs. In 1981-83 the DRI has proposed to expand the program to include a fourth area near Elko; the Governor recommends continuing the program at current levels. (see Appendix).

**b) Truckee River Project**

The Truckee River Project has as its overall objective to provide an improved understanding of the river system to make more accurate predictions of its water quantity and quality under various management strategies. Given the controversial nature of the Truckee River: interstate in character, terminus on an Indian reservation, involvement of federal agencies, there have been many other studies in bits and pieces over the years. In 1981-83, our objective will be to summarize existing knowledge of the Truckee River system, to collect and analyze needed new data, to conduct field and laboratory investigations and to assemble all of this information into a comprehensive data base for use in the development of water policy and management decisions by various levels of government. The DRI has requested that the program be augmented; the Governor recommends continuing the program at current levels. (see Appendix)

**c) Solar-Electric Energy Production**

The characteristics of Nevada's playas (areas that are periodically flooded and have a compact underlying surface composed of fine-grained material) make them ideally suited for solar-pond application. The heat absorbed and collected in the bottom layer of a solar pond is extracted and utilized for generating electrical power. The DRI plans to assess the capacity of Nevada's playas for electrical power generation, to conduct hydrological investigation and to assess ecological impacts. A major portion of the research and development effort will be concentrated on the design and construction of a prototype playa solar-pond model consisting of a 1000-square meter area and a 5-kilowatt turbogenerator. Since this technique could prove to be an important source of energy for Nevada, both the Governor and DRI recommend funding this program in this coming biennium. (see Appendix)

**d) Recharge to Nevada's Groundwater Reservoirs**

In many of Nevada's desert basins, economic activities rely solely on groundwater for water supply. In these areas, the amount of replenishment (recharge) received by groundwater reservoirs is of vital concern. The amount of water which safely can be withdrawn from a groundwater reservoir without depleting it is limited to the amount of average annual replenishment. Over-estimates of replenishment could result in continued declines in water levels, inevitable restrictions on water withdrawal, and attendant disruption of activity with economic consequences. Under-estimates could result in needless limitations on a basin's economic development. The accuracy of the estimate of average annual replenishment thus takes on crucial economic importance. Unfortunately, the current method for estimating recharge has serious inherent uncertainties that make its use somewhat tenuous in circumstances where restriction of groundwater development is contemplated. An increasing number of Nevada's basins are being "designated" under provisions of State water law which preclude further development of these basins. This project will initiate a study of the processes of recharge to Nevada's groundwater reservoirs to improve our ability to estimate this important quantity. Both the DRI and the Governor recommend funding this program in the coming biennium. (see Appendix)

### 3. Research-Program Enrichment

Funding for two enrichments to the DRI research program have been requested:

- a) Equipment Replacement - to enable DRI to remain in a position of strength for securing grants and contracts by implementing a systematic and orderly program of replacement of obsolete equipment.
- b) Advanced Research Project Initiation - to establish DRI's competence in new research areas and thus to be eligible for major new funding when such becomes available from the sponsoring agencies. (see Appendix)

The Governor does not recommend funding these enrichments in the coming biennium.

**TABLE I**  
**DESERT RESEARCH INSTITUTE**  
**1981-83 BUDGET REQUEST WITH GOVERNOR'S RECOMMENDATION**

FORMAT: By Function

	1980-81 WORK PROGRAM		1981-82				1982-83			
			REQUEST		GOVERNOR RECOMMENDS		REQUEST		GOVERNOR RECOMMENDS	
	FTE	\$	FTE	\$	FTE	\$	FTE	\$	FTE	\$
<b>ADMINISTRATIVE SALARY SUPPORT</b>										
President's Office	4.00	161,535	4.00	161,535	4.00	147,691	4.00	161,535	4.00	148,027
Vice President for Administration	4.25	115,443	4.25	115,689	4.25	107,046	4.25	115,843	4.25	107,541
Atmospheric Sciences Center	2.00	78,442	2.00	78,442	2.00	72,182	2.00	78,442	2.00	72,383
Bioresources Center	2.00	57,020	2.00	57,623	2.00	53,211	2.00	58,256	2.00	53,943
Energy Systems Center	3.00	98,457	3.00	98,457	3.00	90,535	3.00	98,457	3.00	90,737
Social Sciences Center	2.00	58,247	2.00	58,817	2.00	54,275	2.00	59,411	2.00	54,973
Water Resources Center	2.00	71,409	2.00	71,999	2.00	64,963	2.00	72,619	2.00	65,649
Salary Reserve				69,585		76,935		136,703		143,501
<b>Sub Total</b>	<b>19.25</b>	<b>640,553</b>	<b>19.25</b>	<b>712,147</b>	<b>19.25</b>	<b>666,838</b>	<b>19.25</b>	<b>781,266</b>	<b>19.25</b>	<b>736,754</b>
<b>RESEARCH PROJECTS</b>										
Weather Modification	3.35	330,000	6.00	558,250	3.35	350,115	6.00	576,054	3.35	376,513
Truckee River Project	2.01	62,220	4.12	121,984	0.85*	62,881	4.16	131,844	0.85*	66,546
Wind Energy		35,000								
Solar-Electrical Energy						185,000				204,300
Groundwater Reservoir						185,794				204,373
<b>Sub Total</b>	<b>5.36</b>	<b>427,220</b>	<b>10.12</b>	<b>680,234</b>	<b>4.20</b>	<b>783,790</b>	<b>10.16</b>	<b>707,898</b>	<b>4.20</b>	<b>851,732</b>
<b>RESEARCH PROGRAM ENRICHMENT</b>										
Research Equipment				250,000		-0-		250,000		-0-
Special Projects				250,000		-0-		250,000		-0-
<b>Sub Total</b>				<b>500,000</b>		<b>-0-</b>		<b>500,000</b>		<b>-0-</b>
<b>OTHER</b>										
Contingency Reserve		91,266								
<b>TOTAL</b>	<b>24.61</b>	<b>\$1,159,039</b>	<b>29.37</b>	<b>\$1,892,381</b>	<b>23.45*</b>	<b>\$1,450,628</b>	<b>29.41</b>	<b>\$1,989,164</b>	<b>23.45*</b>	<b>\$1,588,486</b>

\*The Governor's recommendation includes funding for Graduate Research Fellows. It does not, however, include the FTE for these positions. With these included, the FTE will be increased by 0.66 each year in the Governor Recommends column.

TRUCKEE RIVER PROJECT - BUDGET  
"GOVERNOR'S RECOMMENDATION"

<u>PERSONNEL</u>	<u>FTE</u>	<u>FY 82</u>	<u>FY 83</u>
Professional	0.85	\$ 24,388	\$ 24,388
Graduate Assistants		16,560	18,302
Fringe Benefits		<u>3,933</u>	<u>4,056</u>
Total Salaries and Benefits		<u>\$ 44,881</u>	<u>\$ 46,746</u>
<u>OPERATING</u>			
Chemical Analysis		\$ 16,000	\$ 17,600
In-State Travel		1,000	1,100
Miscellaneous		<u>1,000</u>	<u>1,100</u>
Total Operating		<u>\$ 18,000</u>	<u>\$ 19,800</u>
TOTAL COST		<u><u>\$ 62,881</u></u>	<u><u>\$ 66,546</u></u>



## SOLAR - ELECTRIC ENERGY PRODUCTION ON THE PLAYAS IN NEVADA

Playas are characteristic geologic landform features of the Basin and Range Province. The playas (often termed marshes, flats, dry lakes, etc.) are flat and generally barren lower portions of an arid basin of internal drainage that periodically floods and accumulates sediment. The playa surface is usually compact and the surficial materials are normally fine-grained sediments and/or evaporite minerals of various compositions.

These characteristics make the playas ideally suited for solar-pond applications. A solar pond is a body of saline water which absorbs solar radiation, converts it into heat and stores it for a prolonged period of time. The solar pond serves both as a solar energy collector and as an energy reservoir. The heat absorbed and collected in the bottom layer of the pond is extracted and utilized for generating electrical power by means of a low temperature turbogenerator.

The compact clay or silt surface of the playa is ideally suited for the construction of large-scale unlined ponds, since there is no water leakage through the bottom of the pond. Unlined ponds are cheaper to construct and operate than lined ponds. Israeli data for Solar Pond Peaking Plants at the Dead Sea show equipment costs of \$700 to \$900 per kilowatt, and \$20 per kilowatt annual operating and maintenance cost. The actual system performance of the 150-kilowatt Israeli pilot plant at Ein Bokek permits capacity projection of 5-megawatt per square kilometer of pond area for base loading application and 20-megawatt peaking power unit. The peaking load mode of operation of a solar-pond power plant is one of the essential

features of this type power plant, since the energy is already stored and available for immediate use when peak load demand occurs.

The subject matter of this proposal is to assess the capacity of the playas in Nevada for electrical power generation, to conduct hydrological investigation, and to study the ecological impact on playas suitable for power generation.

A major portion of the research and development efforts will be concentrated on the design and construction of a prototype module consisting of a 1000-square meter solar pond and a 5-kilowatt turbogenerator. The experience collected from the prototype experiment will be used to define the optimum modular unit (20 to 50 megawatt) for power generation on the playas.

In the future, a series of such modular units and accompanying solar ponds, could be constructed in a manner to best suit Nevada's electricity network needs for peaking, intermediate and base-loading applications.

As the system expands, solar ponds totaling about 500 square kilometers, with clusters of power plants of 50 to 100-megawatt modules could be put into operation, reaching a total generating capacity of 2500 megawatts. This is a conservative estimate, since 500 square kilometers represent only 10% of the playas in Nevada.

SOLAR - ELECTRIC ENERGY PRODUCTION ON THE PLANTAS IN NEVADA BUDGET

70.

<u>PERSONNEL</u>	<u>FTE</u>	<u>FY 82</u>	<u>FY 83</u>
Professionals	3 / 2	\$ 90,000	\$ 70,000
Technical Support	1	20,000	22,890
Fringe Benefits		<u>26,500</u>	<u>22,300</u>
Total Salaries and Benefits		\$136,400	\$115,190
 <u>EQUIPMENT</u>			
Instrumentation, heat transfer systems, pumps, etc.		25,000	
Construction of 1000-square meter pond with 5-kilowatt turbogenerator			<u>60,000</u>
Total equipment		\$ 25,000	\$ 60,000
 <u>OPERATING COSTS</u>			
Construction of several test sites drilling, etc. (including \$3,600 in-State travel.		23,600	
Computer usage Monitoring Instruments Chemical Analysis, Salts, etc. (including \$3,400 in-State travel)			<u>29,110</u>
Total Operating Costs		<u>\$ 23,600</u>	<u>\$ 29,110</u>
TOTAL COST		<u><u>\$185,000</u></u>	<u><u>\$204,300</u></u>

## RECHARGE TO NEVADA'S GROUNDWATER RESERVOIRS

In many of Nevada's desert basins, economic activities rely solely or heavily on groundwater for water supply. In these areas, the amount of replenishment, or groundwater recharge, received by these underground reservoirs is of vital concern. Nevada water law provides that the State engineer may restrict withdrawal of water from wells in any basin or portion thereof in which it appears that the average annual replenishment to the groundwater supply may not be adequate for the needs of all permittees. Further, the State engineer may restrict drilling of new wells in any basin or portion thereof if he determines that additional wells would cause an undue interference with existing wells. To date the State engineer has designated some seventy hydrographic areas and sub-areas in Nevada where further drilling of wells is restricted.

In essence, the amount of water which safely can be withdrawn from a groundwater reservoir is limited to the amount of average annual replenishment. Further withdrawal would cause the groundwater stored in the reservoir to be depleted or "mined." Therefore, the accuracy of the estimate of average annual replenishment takes on crucial economic importance. Over-estimates of replenishment could result in continued declines in water levels, inevitable restrictions on water withdrawal, and attendant disruption of activity with economic consequence. Conversely, under-estimates could result in needless limitations on a basin's economic development.

In Nevada, the current method for estimating recharge is a simple and straightforward application of the water-budget

In 1979, the Nevada State Legislature provided funds (\$322,000 for 1979-80 and \$330,000 for 1980-81) to continue the program in the original three areas of the State (Tahoe-Truckee, Carson-Walker and Spring Mountains) and this very productive program is currently in progress.

Airborne and ground-based seeding techniques will be used in a program proposed for the coming biennium. This program has as its goal to supply additional water to these three regions of Nevada, plus a fourth region; the Ruby and Jarbidge mountains in Elko County.

Research flights with instrumented aircraft will be used to obtain information on the appropriate conditions for optimum seeding which will allow us to assess: the impact of our own seeding of the clouds; the influence of cloud seeding on the California slopes of the Sierra; and the effect on the precipitation falling on the Nevada side of the Sierra crestline.

**WEATHER MODIFICATION - BUDGET  
"GOVERNOR'S RECOMMENDATION"**

<u>PERSONNEL</u>	<u>FTE</u>	<u>FY 82</u>	<u>FY 83</u>
Professional	3.10	\$ 74,200	\$ 74,200
Technical	0.25	5,278	5,278
Fringe Benefits		<u>9,637</u>	<u>9,935</u>
Total Salaries and Benefits		<u>\$ 89,115</u>	<u>\$ 89,413</u>
<u>OPERATING</u>			
Cloud Seeding Activities		\$170,000	\$187,000
Ground Base Precipitation		40,000	44,000
Chemical Analyses		20,000	22,000
Miscellaneous		11,000	12,100
Forecasting		12,000	13,200
In-State Travel		<u>8,000</u>	<u>8,800</u>
Total Operating		<u>\$261,000</u>	<u>\$287,100</u>
TOTAL COST		<u><u>\$350,115</u></u>	<u><u>\$376,513</u></u>

The Truckee River Project has as its overall objective to provide an improved understanding of the river system with a view toward making accurate predictions concerning its water quantity and quality under various management strategies. During the past few bienniums a water quality monitoring program has been conducted which provides the background information which can be utilized to determine how the river water quality regime reacts to varying influences and what potential impacts of future change might be. In addition, other limited studies have been conducted on such aspects as urban runoff, feasibility and cost of flow augmentation as a means of meeting water quality standards, natural and man-induced quality changes in the reach below the Truckee Meadows and biological influences on water quality with respect to nutrients.

Because of the controversial nature of the Truckee River--given its Interstate character, terminus in the Pyramid Lake Indian Reservation, and the extensive involvement of federal agencies--there have been many other studies of bits and pieces of the hydrology and water quality of the Truckee River over the years. The only thread of continuity through any of these studies has been the Truckee River Project monitoring program and studies which have crossed state boundaries. During the coming biennium one of the principal objectives (beyond continuing the monitoring program) will be to pull together results of all past studies into a compendium volume that summarizes the knowledge and understanding of the Truckee River System. The data to be gathered, compiled and analyzed consists of:

- a) Water Chemistry - Results derived from monitoring nutrient, Ph, cation, etc., and their association with varying streamflow levels.

b) Biological - Effects on aquatic communities, emphasizing suppression of algal growth stimulation to enhance river water quality for downstream users.

c) Climatic Variations - Prehistoric and historic data and paleoenvironmental data will be utilized to examine climatic variations and the range of attendant river flow fluctuations.

The results of these studies will bring together pertinent available data which will be supplemented by necessary field and laboratory investigations to fill in gaps in our knowledge of water quality and quantity in one of Nevada's most important river systems. This data base will constitute a major tool for use in the development of water policy and management decisions by various levels of government and, in particular, will define whether further studies or monitoring are warranted.



THE SOURCE OF DRI'S FISCAL STABILITY

Since there is a shortfall in the amount of direct income on grants and contracts, and indirect costs are intended to cover indirect expenses, how does the DRI maintain its fiscal stability and keep from going bankrupt? To begin to answer this we look at the uses to which DRI puts its recovered overhead dollars. First, it is used to cover institutional expenses, such as plant maintenance and utilities, that are incurred as a necessary part of doing research. Second, it is used to cover the real-world shortfall and emergencies that are the inevitable consequence of inherent imperfections in the fiscal enterprise. Without this coverage, the DRI could not survive. Beginning immediately, one-by-one, people would have to be terminated until the research could not proceed, and DRI would collapse.

One may ask: since overhead dollar recovery is justified entirely on the basis of overhead expenses, how is it possible to have any funds left over to meet this second, crucial purpose? The answer to this key question is at the heart of the uniqueness of DRI. Simply put, the fact is that the State of Nevada fully funds a limited few administrative and clerical salaries including salaries in the President's office, the Vice President's office, and the Center Directors' offices. These salary costs qualify for inclusion in the overhead rate and are fully recovered as overhead dollars on grants and contracts. (A similar situation occurs on the University of Nevada campuses.) Since the salaries already have been covered by State funds, there is no need to pay them from overhead recovery. These overhead dollars are available to meet

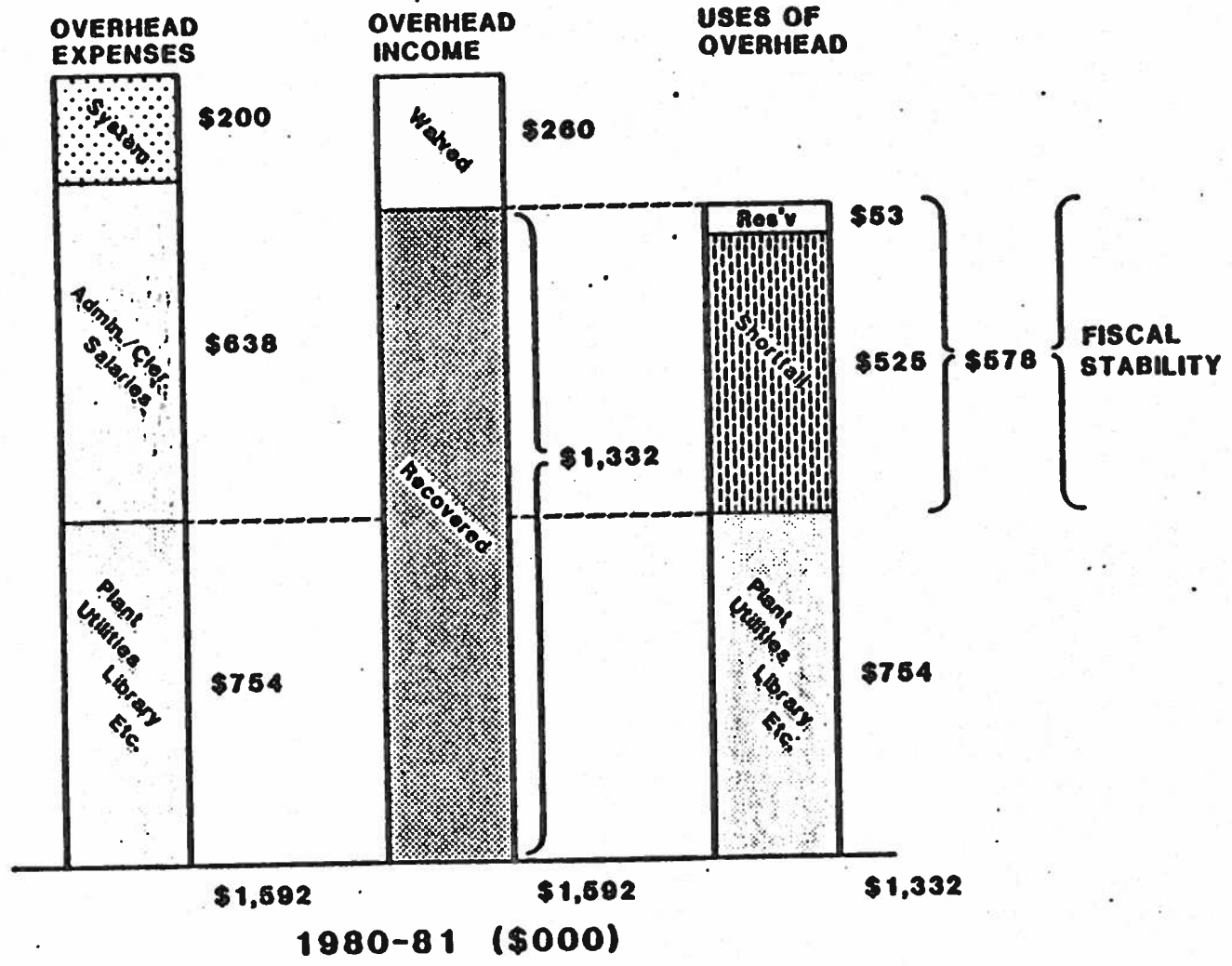
the serious shortfall problem. Together with the dollar-equivalence of certain System-contributed services also included in the overhead rate, these funds constitute the sole source of DRI's fiscal stability. They are also the ceiling on DRI fiscal stability because the dollars actually available will be less by an amount equal to the waived overhead recovery. Moreover, until such time as DRI can develop a base of private philanthropic income, this will always be DRI's sole source of fiscal stability. It is in this special--and not generally recognized--sense that the State funding is absolutely indispensable to DRI's viability. Since the shortfall problem increases as DRI grows, we see as the importance of State support not that it will be there if all else fails; rather, that it becomes increasingly crucial as all else succeeds.

We should stress that the above are available dollars only in the sense that they have not been previously committed to other purposes; not in the sense that they are surplus, available for any purpose. DRI's survival depends on their being used to meet the shortfall problem. That is why they are equated to fiscal stability.

#### AN ILLUSTRATION OF THESE FISCAL PRINCIPLES

To quantify all of this--to put it in concrete terms--we need only to look at the current fiscal year. In 1980-81, DRI's total income of \$7.5 million will equal the total expenditures; a balanced condition. If we examine the overhead portion of this, as displayed in Figure 2, we note that total overhead expenses

Figure - 2



including \$638,000 in State-paid administrative and clerical salaries, <sup>4/</sup> and about \$200,000 in System-contributed services. We expect overhead dollars recovered to be \$1,332,000, some \$260,000 less than overhead expenses, the amount of overhead recovery DRI can not avoid waiving. An amount \$754,000 of the overhead recovery will be used to cover the institutional expenses for which it was obtained. This leaves \$578,000 as the total amount available to meet shortfall and emergencies. Of this, \$525,000 must be committed to the shortfall problem allowing a reserve of only \$53,000 to meet emergencies.

The above amounts of dollars available from overhead recovery would remain constant as DRI received more grants and contracts, while the size of shortfall would increase. To maintain a proper balance between DRI growth and fiscal stability, it is necessary to maintain a corresponding balance between State support and support from other sources.

#### A Good Investment for Nevada

Viewed from the perspective of the State, this is an attractive and highly leveraged investment opportunity. Every administrative dollar that the State invests in DRI is immediately matched by two federal (or private) overhead dollars. There are no ifs or maybes, it is a matter of regulation. Nevada is guaranteed to triple its money. Added to this are the eight additional federal (and private) dollars for direct research expenses - primarily salaries - that provide the State both an economic benefit and the benefit of research for the State.

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<sup>4/</sup> Nevada is also providing \$392,000 to support research projects of special interest to the State: the State of Nevada Weather Modification Project and the Truckee River Studies. This funding is fully expended for the research itself. Its contribution toward DRI's fiscal stability is small and only insofar as it completes salaries not otherwise coverable.

2. RESEARCH PROGRAMS  
STATE WEATHER MODIFICATION PROGRAM

Cost-Effectiveness Analysis  
1978-79 and 1979-80 Seasons

1. We seed 3 areas in the State:
  - a) Truckee-Tahoe Catchment = 673,000 acres  
= 1050 sq. mi.
  - b) Walker-Carson Catchments = 5064 sq. mi.
  - c) Spring Mountains = 600 sq. mi.
2. The mean annual precipitation in the 3 areas are:
  - a) Truckee-Tahoe =  $1.4 \times 10^6$  Acft
  - b) Walker-Carson =  $1.5 \times 10^6$  Acft
  - c) Spring Mountains =  $0.2 \times 10^6$  Acft.
3. The estimated increases in precipitation resulting from the Weather Modification Program for the combined 1978-79 and 1979-80 seasons are:
  - a) Truckee-Tahoe, Walker-Carson = 157,000 Acft
  - b) Spring Mountains = 19,000 Acft
  - Total = 176,000 Acft
4. Cost of 2 year program = \$640,000
5. Estimated cost of water production = approx \$4/Acft  
= 1/8¢ per 1000 gals

Comparative Water Costs by other Systems

1. Southern Nevada Water Project  
Delivers 100,000 Acft/year from Lake Mead to Las Vegas Valley  
Cost - \$12-15/Acft
2. Southern California Canal System  
Cost \$30-40/Acft
3. Desalination at least \$1/1000 gals or at least \$326/Acft

State of Nevada Weather Modification Project 1981-83

With the steady growth in water usage due to increases in gaming, recreation and warehousing industries in western Nevada, it is clear that the region is becoming less able to handle large variations in the annual water supply for farming, domestic and sewage purposes. Our water supplies come principally from the winter snowpack which accumulates in the mountainous regions of the State.

The scientific evidence from several cloud seeding projects in the Sierra Nevada shows that increases in snowfall can be anticipated when suitable winter storms in the mountainous regions of the State are seeded. Results from the Pyramid Pilot Cloud Seeding Project conducted by DRI from 1970 to 1975 suggested that 16 to 25 percent increases had been produced by seeding suitable storms in the Lake Tahoe Basin.

In January 1977, it became apparent that Nevada was going to experience its second consecutive winter with below average snowfall, and at that time the State Legislature authorized the Desert Research Institute (DRI) to conduct the cloud seeding program for augmenting the supply of water in several regions of the State.

This weather modification program is currently seeding three areas of the State which will benefit from increased water supplies. These are the Tahoe-Truckee basin, the Carson and Walker Rivers watersheds and the Spring Mountains north of Las Vegas. During the 1977-78 winter season the program was extended to cover the Ruby Mountains at Elko and the mountain ranges east and west of the town of Ely. These two additional areas were seeded by aircraft techniques with funds provided by the Federal Government under its drought relief program (a one-year program only).

## APPENDIX: DESERT RESEARCH INSTITUTE

## 1. ADMINISTRATIVE SALARY SUPPORT

## FINANCIAL CONSIDERATIONS

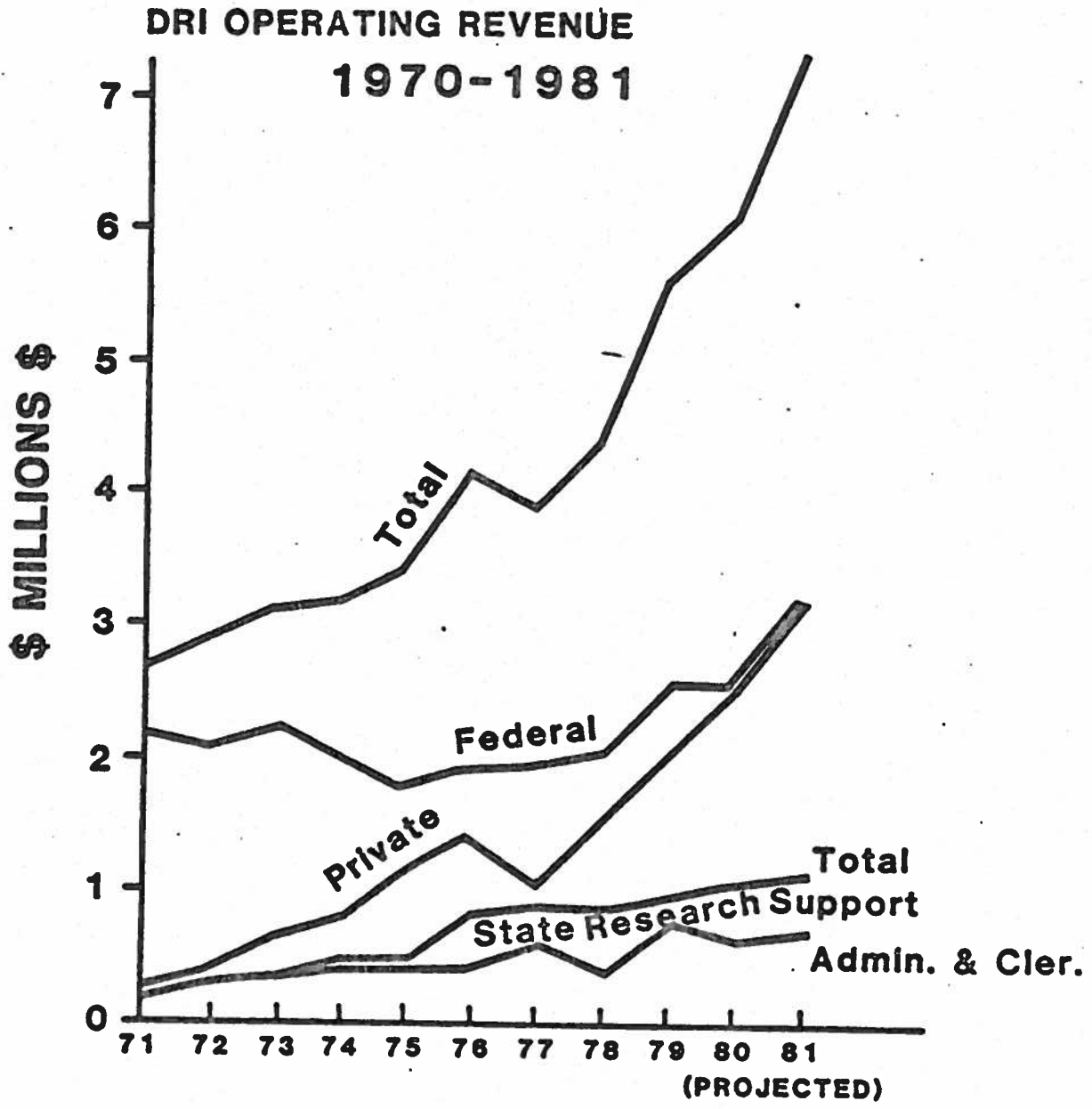
The Essence of the DRI Fiscal Condition

## DRI's SOURCES OF FUNDING

The total funding for the DRI is received in three distinct streams: 1) funding from the State of Nevada; 2) funding from the federal government and 3) funding from private industry. The Institute's operating revenues from these sources for the 11-year period 1970-71 to 1980-81 are displayed in Figure 1. One can see that achieving growth has not been one of DRI's problems. Over this period, revenues will have nearly tripled; the growth rate has exceeded inflation by a comfortable margin.

Funding from federal and private sponsors represents by far the major fraction of the total DRI support. Out of a total \$7.5 million we expect to receive in 1980-81, an estimated \$6.4 million will be related to research programs supported by the federal government and by private industry. The funding received from the State, while small in comparison to the other two sources, for the subtle reasons discussed below is nonetheless the most important funding the DRI receives in that it makes the other two possible. The State funding is limited to certain administrative and clerical salaries and benefits, and to several research projects of special interest and timeliness to the State. No State funding is provided for on-going institutional support such as plant maintenance costs, utilities, and the DRI libraries. These latter costs are entirely covered out of grant and contract funds.

Figure - 1





## FEDERAL SPONSORSHIP OF ACADEMIC RESEARCH <sup>1/</sup>

The single largest provider of funds to DRI has been the federal government. In fiscal year 1980-81, some \$3.2 million will come from this source. Since the DRI is an academic institution, a part of the University of Nevada System, this funding is governed by the provisions of Circular A-21 of the Federal Office of Management and Budget. This Circular articulates regulations which apply to federally-sponsored research in academic institutions as distinguished from federally-sponsored research undertaken by private industry and by non-academic not-for-profit corporations. Sponsored research in these latter institutions falls under an entirely different set of federal regulations which, in key respects, such as the ability to charge a fee and to depreciate equipment over relatively short time intervals, are more liberal than Circular A-21. The distinction has major significance for DRI.

In a typical federal research grant <sup>2/</sup> to an academic institution, the funding has two components: 1) funds to cover the direct costs of doing research, for example, the costs of salaries of the researchers, materials and supplies, travel, project instrumentation, computer use, and so on; and, 2) funds to cover the indirect costs of doing research, for example, general administrative costs, institutional costs such as: plant maintenance and utilities.

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<sup>1/</sup> With the exception of references to federal regulation, virtually all of what is said in this Chapter about federally-sponsored research applies equally to research sponsored by private industry.

<sup>2/</sup> In this Chapter, often we will use the term grant to include the term contract, as in this instance.

THE SHORTFALL PROBLEM

Much of DRI's support comes in the form of research contracts that are competitively awarded. In such competitions, costs must be kept realistic and must be fully justified. Many research projects can justify only fractional amounts of the services of the team members, not only for support people such as secretaries and technicians, but also for the researchers. Were we to attempt to charge 100% of their salaries we would price ourselves out of the market, and the contract would be awarded to a competitor. Even in the case of research grants, a sponsor will balk at unjustified costs and will refuse to make the award.

Many of the research problems DRI addresses are intrinsically interdisciplinary in nature. For example, to study the water quantity and quality of a river system or reservoir system, in-depth competence is required in say: hydrology, water chemistry, engineering, aquatic biology, etc. The required skills seldom will reside in one individual who can work full-time on the problem. More often, it will require four or more people, each working part-time, and each bringing his or her own special skills to the task. In this way, DRI can prove it has the capability to carry out research at a high quality, and at a cost that is competitive and acceptable to research sponsors. Thus, normally, only parts of many people are funded under any one grant or contract. The salary of a given researcher, technician, or secretary is made up from a patchwork of contributions from a number of different grants and contracts--all with different starting and ending dates. Sometimes the grant is renewed, sometimes not. Sometimes there is no interruption of cash flow between renewals or replacement, sometimes

there is. Sometimes a staff member's full salary is covered by the grant mix, sometimes there is a gap. In special circumstances, to be eligible for a grant the DRI is required to assume a share of the direct costs of the research.

Since the DRI is prohibited by federal regulation from charging more than the full salaries of some individuals in order to make up for the shortfall of others, the DRI fiscal machine in the real world inevitably must run significantly short of the ideal. On average, the percentage of all salaries covered should lie somewhere between 0% and 100%; statistical chance would say 50%. Fortunately it turns out that the number at DRI is about 85%, and this is very good. Perhaps this can be improved in the future, but it will always be impossible to achieve the ideal 100%. There must always be a shortfall problem. <sup>3/</sup>

Increasing the base of research support that DRI receives from federal and private sponsors will not necessarily help with this problem. It will help in those circumstances where the additional income is used to complete the partially-covered salaries of people already on board. It will compound the problem in those circumstances where it adds new people who are only partially supported. Since the nature of the research dictates the kind and quality of competence of the research team required for its execution, it frequently is not possible to focus growth only on those areas that result in completing salaries of those already on board.

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<sup>3/</sup> Industrial, and non-academic not-for-profit firms operating under the more liberal federal regulations are able to offset this shortfall problem because they are allowed to include a fee (including profit) which they then can accumulate as a cushion against shortfall.

Exhibit C

THE UNIVERSITY OF NEVADA PRESS

Objectives

Ever since the University of Nevada Press was created by the Board of Regents in 1961, its prime objectives have been: to record the many neglected corners in Nevada's history; to stimulate scholarly research and writing by faculty members and other authors in their specialized fields; to enhance the academic reputation of the University of Nevada System.

Evidence that the Press has accomplished its objectives can be seen in the following: it has published a broad range of books dealing with previously unrecorded areas of Nevada's history; it has published biographies of various Nevadans, ranging from early settlers to minority group members to state governors; it has stimulated research on Nevada history, Basque studies, political processes, and natural history; its 67 publications have received many hundreds of laudatory critical reviews, not only from Nevada media, but from major newspapers and scholarly journals throughout the United States and foreign countries.

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Budget

For the forthcoming biennium, the Board of Regents; budget request for the University of Nevada Press was:

Fiscal year 1981-82 -- \$192,938  
Fiscal year 1982-83 -- \$215,861

The Governor's budget recommendation is:

Fiscal year 1981-82 -- \$196,118  
Fiscal year 1982-83 -- \$213,515

This represents a 20.1 percent increase over the current biennial budget of \$340,976.

The Governor's recommendation calls for cost-of-living increases in salaries for three professional positions and two classified positions, plus an increase in fringe benefits. The University Press has requested no new positions from appropriated funds.

The Governor's recommendation calls for slight cutbacks from the Board of Regents' request in the areas of wages for one part-time student, and out-of-state travel.

The operating appropriation provides less than 5 percent of moneys needed to meet the cost of manufacturing books. Slightly more than 95 percent of book manufacturing funds comes from sales of University Press books. Sales of our books continue to grow steadily. We are now taking in an average of about \$60,000 per year in book sales. These earnings cover nearly the entire cost of book manufacture -- including typesetting, printing, paper, and binding of books. Advertising and sales promotion of our books come largely out of operating.

Therefore, the University Press is satisfied with the Governor's recommended budget for the next biennium.

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Books published per year

(See addendum for list of books published in calendar years 1979 and 1980, and books scheduled to be published in 1981 and 1982.)

The number of books published per year by the University Press is also climbing. The average production schedule for a press of our limited staffing and funding is five books per year.

We published three books in 1979. In 1980, this figure jumped to a total of nine books. It must be explained that the disparity between the two years is not unusual. Academic books -- as contrasted

to fiction -- come to fruition at varying speeds, depending upon their length, the amount of research required, the inevitable revisions that are called for by critical readers, and book manufacturing problems. At any rate, the average for the two years was six books per year, which is above average for a university press of our size.

In calendar year 1981, we will publish seven books. In 1982, we are projecting an additional seven books.

Next year, in 1982, we expect to see the first two books in our Fleischmann Series on Great Basin Natural History. One will be on birds and the other will be on trees and shrubs of the Great Basin -- the land area which takes in nearly the entire state of Nevada and parts of neighboring states. Other books in this series will deal with such topics as flowering plants, mammals, fish, insects, anthropology, and climatology.

The Great Basin Series has been made possible by a \$550,000 grant to the University of Nevada Press from the Max C. Fleischmann Foundation. The grant is specifically earmarked to meet research and manufacturing costs of a book series on natural history of the Great Basin. From what we understand, it is the largest such grant ever made to a university press anywhere for a series of this nature. We intend to make the Fleischmann Series a really outstanding one that will bring national prestige to the University System and to the State of Nevada.

THE UNIVERSITY OF NEVADA PRESS

Addendum -- Books published and projected for four-year period:

1979

SIERRA SUMMER, by Mel Marshall  
HIS OWN COUNSEL: THE LIFE AND TIMES OF LYMAN TRUMBULL, by Ralph Roske  
BELTRAN: BASQUE SHEEPMAN OF THE AMERICAN WEST, by William Douglass

1980

THE STORY OF THE MINE, by Charles H. Shinn  
WILL JAMES: THE LAST COWBOY LEGEND, by Anthony Amaral  
THE NEVADA CONSTITUTION (5th ed.), by Eleanore Bushnell with Don Driggs  
THE BASQUES: THE FRANCO YEARS AND BEYOND, by Robert Clark  
EARLY NEVADA: THE PERIOD OF EXPLORATION, by F.N. Fletcher  
THE WITCHES' ADVOCATE: BASQUE WITCHCRAFT AND THE SPANISH INQUISITION,  
by Gustav Henningsen  
TWENTY MILES FROM A MATCH (second printing), by Sarah Olds  
A BOOK OF THE BASQUES (reprint), by Rodney Gallop  
CRAIG SHEPPARD: WESTERN DRAWINGS IN BRUSH AND INK (portfolio)

1981

NEVADA PRINTING HISTORY, by Robert Armstrong  
THE UNSPIKED RAIL: MEMOIR OF A NEVADA REBEL, by Sally Springmeyer  
Zanjani  
THE PINON PINE: A NATURAL AND CULTURAL HISTORY, by Ronald Lanner  
NEVADA'S TURBULENT 50s, by Mary Ellen Glass  
IN A HUNDRED GRAVES: A BASQUE PORTRAIT (reprint), by Robert Laxalt  
UNDER THE MOUNTAIN, by Molly Knudtsen  
THE NEVADA ADVENTURE: A HISTORY, 5th edition revised, by James Hulse

1982

THE NEWSPAPERS OF NEVADA: A HISTORY AND BIBLIOGRAPHY -- 1854-1979,  
by Richard Lingenfelter and Karen Gash  
PAT McCARRAN: POLITICAL BOSS OF NEVADA, by Jerome Edwards  
WALTER VAN TILBURG CLARK: THE MAN AND HIS WORKS, ed. by Charlton Laird  
HISTORY OF NEVADA, by Hubert Howe Bancroft (Vintage Nevada)  
FIRST YEAR BASQUE GRAMMAR, by Juan Onatibia and William Jacobsen  
BIRDS OF THE GREAT BASIN, by Fred Ryser  
TREES AND SHRUBS OF THE GREAT BASIN, by Hugh Mozingo

Exhibit D

Statement on Biennium Budget Request of

The Desert Research Institute

1981-1983

Prepared by

Clifford J. Murino

President

February, 1981



