THE UNIVERSITY OF WYOMING
MINUTES OF THE TRUSTEES

July 19, 1991

For the confidential information
of the Board of Trustee
# Minutes of the Trustees

July 19, 1991

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROLL CALL</td>
<td>1</td>
</tr>
<tr>
<td>ANNOUNCEMENT</td>
<td>1</td>
</tr>
<tr>
<td>RATIFICATION OF JUNE 11, 1991 EXECUTIVE COMMITTEE ACTION</td>
<td>2</td>
</tr>
<tr>
<td>REPORTS AND RECOMMENDATIONS OF COMMITTEES</td>
<td>2</td>
</tr>
<tr>
<td>ACADEMIC ISSUES COMMITTEE</td>
<td>2</td>
</tr>
<tr>
<td>College of Arts and Sciences Self-Designed Major</td>
<td>2</td>
</tr>
<tr>
<td>BUDGET COMMITTEE</td>
<td>3</td>
</tr>
<tr>
<td>Bond Resolution, Series 1991</td>
<td>4</td>
</tr>
<tr>
<td>1993-1994 Biennium Budget Request</td>
<td>5</td>
</tr>
<tr>
<td>Capital Construction Request for the 1993-1994 Biennium</td>
<td>12</td>
</tr>
<tr>
<td>Amendment to the Rules and Regulations, Program for the Advanced Payment of Higher Education Costs</td>
<td>13</td>
</tr>
<tr>
<td>Approval of Contracts and Grants, Gifts and Scholarships</td>
<td>14</td>
</tr>
<tr>
<td>Internal Audit Activity Conducted in Accordance with the Audit Plan for the Period January 1, 1991 to March 31, 1991</td>
<td>15</td>
</tr>
<tr>
<td>Reallocation Progress Report</td>
<td>15</td>
</tr>
<tr>
<td>PERSONNEL COMMITTEE</td>
<td>15</td>
</tr>
<tr>
<td>Appointments</td>
<td>16</td>
</tr>
<tr>
<td>Adjunct Appointment</td>
<td>19</td>
</tr>
<tr>
<td>Adjunct Reappointments</td>
<td>19</td>
</tr>
</tbody>
</table>
Clinical Faculty Appointment. .......................... 19
Administrative Appointments ............................ 20
Administrative Reappointment ............................ 21
Continuation of Nontenure Appointments .................. 22
Changes in Assignment ................................. 23
Leaves of Absence Without Pay ............................ 24
Changes in Sabbatical Leave ............................. 25
Retirements .............................................. 26
University of Wyoming Employee Suggestion
Award Program ........................................... 27
Part-Time Appointments ................................... 27
Report on Staff Benefits .................................. 27
Tenure Track and Faculty Resignations .................. 28

PHYSICAL PLANT AND EQUIPMENT COMMITTEE .......... 28
Eden Property Sale ....................................... 28
Naming Rooms in College of Engineering ................ 30
Elk Mountain Observatory License Agreement ............ 31
Town of Lyman Proposal .................................. 33
American Heritage Center/Art Museum
Exterior Materials ........................................ 34
Progress Report and Change Orders ....................... 34
Status of AHC/AM Construction Bids ..................... 34

INVESTMENT COMMITTEE ................................. 35
Fiscal Year 1992 Budgets, W.R. Coe Estate, W.R. Coe
School, and Charles Chacek Kuehn Estate Funds .......... 35

COMMUNITY COLLEGE RELATIONS COMMITTEE ......... 36
Progress Report on Articulation Projects ................ 37

ATHLETIC COMMITTEE .................................. 37
Athletic Broadcast Contract ................................ 38
Organizational Changes. ............................. 38
Drug Screening/Education Policy ............................. 38
UNFINISHED BUSINESS. ...................................... 39
Change in Meeting Date. ...................................... 39
Territorial Park Dinner Theatre .............................. 39
Educational Trust Fund. ...................................... 39
KUWR Coverage ............................................ 40
Use of UW Facilities. ...................................... 40
PUBLIC COMMENTS. ........................................... 40
Family Practice Residency Program ......................... 40
Public Meeting. ............................................ 41
ADJOURNMENT AND DATE OF NEXT MEETING ................. 41
THE UNIVERSITY OF WYOMING

Minutes of the Trustees
July 19, 1991

A regular meeting of the Board of Trustees of the University of Wyoming was held on July 19, 1991. President Bryan Sharratt called the meeting to order at 4:05 p.m. Trustees held committee meetings and an executive session to discuss personnel and litigation matters earlier in the day.

ROLL CALL

The following Trustees attended the meeting: Bryan E. Sharratt, John D. (Dave) Bonner, F. Richard Brown, Deborah Hammons, Harry L. Harris, Peter M. Jorgensen, Daniel Kinnaman, Jeri Kirk, Walter G. (Jerry) Saunders, Mike Schutte, and David W. Updike. Ex-officio members Terry P. Roark, Diana Ohman and Travis Gentry were also in attendance. Ex-officio member Mike Sullivan was unable to attend.

ANNOUNCEMENT

President Roark distributed a letter from a student who had recently received her Master's degree from the University of Wyoming. The letter was very complimentary towards the College of Education and the student's graduate committee.
APPROVAL OF MAY 10, 1991
AND JUNE 29, 1991 MINUTES

It was moved by Trustee Bonner and seconded by Trustee Jorgensen that the May 10, 1991 and June 29, 1991 minutes of the Trustees be approved. The motion carried.

RATIFICATION OF JUNE 11, 1991
EXECUTIVE COMMITTEE ACTION

President Sharratt reported on the conference telephone meeting of June 11, 1991. The purpose of the call was to consider the siting of the botany conservatory, the minutes of which are included as Enclosure 1, green. Mr. Bonner moved for ratification of the Executive committee action of June 11, 1991. Mr. Jorgensen seconded the motion and it carried.

REPORTS AND RECOMMENDATIONS OF COMMITTEES

ACADEMIC ISSUES COMMITTEE

President Sharratt called on chairperson Deborah Hammons for a report from the Academic Issues Committee. Committee members Deborah Hammons, Perry Dray, Peter Jorgensen, Diana Ohman, Jerry Saunders, and David W. Updike attended the meeting, along with other Trustees and University personnel. The following report and recommendations were presented to the full Board:

College of Arts and Sciences Self-Designed Major

The Self-Designed Major (SDM) is an option for students who want a program of study which will allow them to develop
intellectual interests not now addressed by traditional majors. The SDM encourages diversity and flexibility while requiring a clear academic focus and a unifying purpose. Most SDMs are interdepartmental and multidisciplinary. Students are admitted to the program between the beginning of sophomore and junior years. They must have a GPA of 2.8 and are expected to fulfill all University and College requirements.

The University's interest in attracting stronger students makes it desirable to offer a kind of degree found at most competitor institutions and one which is especially attractive to intellectually independent and adventurous students. The new degree may allow elimination of underused degree tracks and replacement with a stronger, better supervised program. The Faculty Senate Academic Planning Committee voted unanimously to endorse the program.

Upon a recommendation by the Academic Issues Committee, it was moved by Trustee Hammons and seconded by Trustee Kirk that the self-designed major program in the College of Arts and Sciences as proposed in Enclosure 2, gray, be approved. The motion carried.

**BUDGET COMMITTEE**

President Sharratt called on Chairman Schutte for a report from the Budget Committee meeting held earlier in the day. Committee members Schutte, Bonner, Dray, Hammons, and Harris, and ex officio members Sharratt and Roark attended the committee meeting, along with other Trustees and University staff. Based on
the committee meeting, the following recommendations and reports were presented to the full Board.

**Bond Resolution, Series 1991**

Preparations to issue the Facilities Revenue Bonds, Series 1991 are proceeding on schedule, and the bonds were priced on July 17, with bond closing set for later July or early August. The Trustees' Bond Counsel, Ms. Barbara Bonds of Herschler, Freudenthal, Salzburg, Bonds & Rideout, P.C. attended the meeting to present the Bond Resolution, and the accompanying Bond Purchase Agreement for Trustee review. Messrs. Terry Casey and Don Wheeler, Dain Bosworth Incorporated, and Dan Baxter, Kaiser and Company, underwriters for the Series 1991 bonds, also attended the meeting.

Ms. Bonds reported on the preparation of the various bond documents and provided a copy of the preliminary official statement. Ms. Bonds stated that the issue is fully insured by MBIA, and that approval of the bond resolution will approve all of the other items to be issued.

Ms. Bonds stated that University legal counsel has certified that there is no litigation pending or threatened, which, if decided adversely to the interests of the University or the Board, would have a material adverse effect on the operations or financial condition of the University or the Board. This certification is included as Enclosure 3, blue.
Mr. Casey reported on the sale and pricing of the bonds on July 17, and provided a comparison of final interest rates with other similarly rated issues offered July 17, 1991. The University issue was very comparable and lower in some instances with a net interest rate of 6.95 percent. All bond broker firms in the state that responded to the University's Request for Proposals participated in the sale, with over 50 percent of the bonds sold to individuals.

Based on a recommendation from the Budget Committee, Mr. Schutte moved approval of the Bond Resolution, which by reference is incorporated in these minutes and is located in the office of the Vice President for Finance, University of Wyoming. The motion was seconded by Peter Jorgensen, and it carried.

1993-1994 Biennium Budget Request

The University's Section I and Section II biennium budget recommendations were reviewed by the Budget Committee.

Section I Operating Budget Request

The institution's 1993-1994 biennium budget request consists of three components: (1) the *Standard Budget* request, (2) the *Exception Budget* request, and (3) the *Expanded Budget* request. These three components are defined by Wyoming Statute.

The Standard Budget provides a base funding level for the institution, including salaries for all authorized positions, supportive service funding, and continuation of scholarship and contractual service obligations. By statute, equipment
appropriations and special project funding must be removed from the Standard Budget and included as expanded budget items.

The Exception Budget provides adjustments to the standard budget when changes in the quality and/or quantity of services provided by the institution indicate that additional funding is required to meet the need.

The Expanded Budget includes all requests for new and/or replacement equipment, contractual services, and all new programs and positions requested by the institution.

The estimated 1993-94 biennium standard budget request for the institution is $237,962,711. Work on the 1993-94 standard budget has not been finalized. Translation of the University's accounting system into the program format prescribed by the National Association of College and University Business Officers (NACUBO) and the American Institute of Certified Public Accountants (AICPA), coupled with the data translation from the block grant budget format to program budget format has delayed the development of a final budget. For the purposes of calculating the standard budget, estimates have been developed for the fringe benefit calculations normally provided by the State. These numbers are subject to change when the data are processed on the State's computer.

Funding for the Standard Budget consists of $65.4 million from University funding sources, $1.7 million from Water Development Funds (for support of the Water Research Center), $5.0 million from federal funds supporting Agriculture, and a request for $165.9 million in state general fund appropriation. The general fund
request represents a 5.3 percent increase over the current biennium authorization.

The exception and expanded budget requests have all been labeled "Expanded". The separation of the requests will occur when the final budget materials are submitted to the State. The request for funding salary improvements have been excluded from the expanded budget request.

At the June 29 Budget Committee meeting, President Roark recommended that $13.2 million be allocated for faculty and staff salary improvements. Rather than submit multiple salary adjustment requests for faculty and staff positions, Dr. Roark recommended an overall adjustment of 7.84 percent for each year of the biennium. The allocation of this funding among faculty and staff positions will be based upon the funding appropriated by the legislature and the salary administration plan submitted to the Trustees next spring, with merit and market factors taken into consideration.

In addition, during the June 29 Budget Committee meeting priorities for the expanded operating budget request were considered (Enclosure 4, canary). The budget proposal was split into "essential," "high priority," and "academic and administrative priorities" requests.

In addition to the expanded budget requests recommended by the President, the University will submit a request for $3.2 million reflecting the revenue enhancements that have been adopted by the Trustees as part of the institution's reallocation process. This request represents "own source" revenues that the University has
dedicated to the support of its operations. The program requests for these funds are reflected under the column titled "93-94 REALLOCATION".

Based on a recommendation from the Budget Committee, Mr. Schutte moved approval of a Standard Budget Request of $237,962,711, subject to changes that may be required to match this estimate with the actual figures provided by the Department of Administration and Information; an expanded operating budget request of $9,902,246; $13.2 million for faculty and staff salary improvements; and approval of $3,225,950 for new revenues identified through the reallocation process, as outlined in Enclosure 4. The motion was seconded by Mr. Jorgensen, and it carried.

Section II Budget Request

The University's Section II budget represents the self-sustaining operations and programs of the institution. This budget differs significantly from the Section I budget; Section I is funded primarily by appropriated state general funds, tuition and mineral royalties, as opposed to Section II which is supported by self-generated revenues. Section II revenues are derived from three major, but distinct, sources. The first is sponsored funding which consists of revenues received under contract from federal and state agencies, corporations and foundations for the support of faculty research and educational and service programs. The second source is gifts and contributions received from individuals,
corporations and foundations for support of specific University activities, primarily scholarships and student loans. The third source is Auxiliary Enterprises which represents revenues generated by operations such as dormitories and apartments, food service, bookstore, etc. Other funding categories included in the budget are ASUW, Debt Service and Intercollegiate Athletics.

The Section II budget is prepared separately from Section I as it addresses restricted revenues that cannot be appropriated for the general support of University operations. Section II funds are either restricted contractually, as is the case with sponsored funding, by donor restrictions, as is the case with gifts and contributions, or are used to cover the costs of operations for the units that generated the revenues, which is the case for Auxiliary Enterprises.

Since Section II is driven by self-generated revenues, this budget request is, in effect, a request for authorization to spend the revenues the University anticipates it will receive from the revenue generating activities mentioned above. It is not a request for state general fund appropriations to support University programs.

Consequently, the budget planning and development process used to prepare the Section I budget request has not been applied to Section II. The Section II request is based on projections of the level of activity in each of the major funding areas. Activity levels may trend up or down, depending on such factors as 1) the success of the University's faculty in competing for sponsored
funding to support their research and educational and service programs, 2) the level of donor support received for scholarships and other University activities, 3) endowment income, and 4) student enrollment, which determines the amount of ASUW fees collected and affects the volume of business in many of the auxiliary enterprise operations.

The following statement presents actual Section II expenditures for FY 1991, and a forecast of expenditures for FY 1992, adjusted to reflect anticipated changes.

TABLE I

UNIVERSITY OF WYOMING
SECTION II EXPENDITURES
1991-1992 BIENNIAL

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>FY 1991 Expenditures</th>
<th>FY 1992 Projected Expenditures</th>
<th>Total Biennium Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsored Funding</td>
<td>$27,677,330</td>
<td>$28,566,500</td>
<td>$56,243,830</td>
</tr>
<tr>
<td>Gifts &amp; Contributions</td>
<td>3,482,519</td>
<td>3,481,000</td>
<td>6,963,519</td>
</tr>
<tr>
<td>Auxiliary Enterprises</td>
<td>21,588,170</td>
<td>20,177,000</td>
<td>41,765,170</td>
</tr>
<tr>
<td>ASUW</td>
<td>509,575</td>
<td>704,725</td>
<td>1,214,300</td>
</tr>
<tr>
<td>Debt Service</td>
<td>4,975,058</td>
<td>5,606,043</td>
<td>10,581,101</td>
</tr>
<tr>
<td>Intercollegiate Athletics</td>
<td>3,751,435</td>
<td>2,872,500</td>
<td>6,623,935</td>
</tr>
<tr>
<td></td>
<td>$61,984,087</td>
<td>$61,407,768</td>
<td>$123,391,855</td>
</tr>
</tbody>
</table>
Based on the above estimates for the 1991-1992 biennium, the expanded budget request for the 1993-1994 biennium is as follows:

**TABLE II**

**UNIVERSITY OF WYOMING**

**SECTION II PROJECTED BUDGET REQUIREMENTS FOR 1993-1994 BIENNIAL**

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsored Funding</td>
<td>$57,133,000</td>
<td>$60,500,000</td>
<td>$3,367,000</td>
</tr>
<tr>
<td>Gifts &amp; Contributions</td>
<td>6,962,000</td>
<td>7,695,000</td>
<td>733,000</td>
</tr>
<tr>
<td>Auxiliary Enterprises</td>
<td>40,354,000</td>
<td>48,015,000</td>
<td>7,661,000</td>
</tr>
<tr>
<td>ASUW</td>
<td>1,401,000</td>
<td>1,500,000</td>
<td>99,000</td>
</tr>
<tr>
<td>Debt Service</td>
<td>11,165,100</td>
<td>11,455,160</td>
<td>290,060</td>
</tr>
<tr>
<td>Intercollegiate Athletics</td>
<td>5,745,000</td>
<td>6,032,000</td>
<td>287,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$122,760,100</strong></td>
<td><strong>$135,197,160</strong></td>
<td><strong>$12,437,060</strong></td>
</tr>
</tbody>
</table>

The total expanded budget request of $12,437,060 presented in Table II above reflects the total anticipated change between the budgets for the current biennium and the next. The expanded request provides for anticipated expansion plus the estimated amount ($631,755) the 1991-1992 biennium is short of covering projected expenditures.

Based on a recommendation from the Budget Committee, Mr. Schutte moved adoption of the Section II budget request. The motion was seconded by Mr. Jorgensen, and it carried.
Capital Construction Request for the 1993-1994 Biennium

The University's capital construction request for the 1993-1994 biennium focuses exclusively on the need to maintain and update existing facilities.

The total request is for $9,518,160, of which $4,254,070 would be applied to deferred maintenance needs, and $5,264,090 to capital adaptation and renewal.

Based on a recommendation from the Budget Committee, Mr. Schutte moved, Mr. Bonner seconded, and it carried to approve the 1993-1994 biennium request for $9,518,160 funding for capital construction requests as follows:

<table>
<thead>
<tr>
<th>Project</th>
<th>Funding Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFERRED MAINTENANCE</td>
<td>$4,254,070</td>
</tr>
<tr>
<td>CAPITAL ADAPTION/RENEWAL</td>
<td></td>
</tr>
<tr>
<td>A&amp;S Building Renovation - Wiring</td>
<td>91,100</td>
</tr>
<tr>
<td>Ag 'C' Partial Renovation</td>
<td>350,000</td>
</tr>
<tr>
<td>Animal Quarters Renovation - Pharmacy</td>
<td>33,130</td>
</tr>
<tr>
<td>Anthropology Building Access</td>
<td>25,000</td>
</tr>
<tr>
<td>Auditorium Access - School of Business, Agriculture and Education Buildings</td>
<td>27,930</td>
</tr>
<tr>
<td>Classroom and Office Updates</td>
<td>120,000</td>
</tr>
<tr>
<td>Education Building Access</td>
<td>66,250</td>
</tr>
<tr>
<td>Extended Studies Access</td>
<td>155,000</td>
</tr>
<tr>
<td>Elevator Access: History</td>
<td>200,000</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>174,615</td>
</tr>
<tr>
<td>Ivinson Remodel</td>
<td>183,205</td>
</tr>
<tr>
<td>Kappa Delta House Renovation - Center for Teaching Excellence</td>
<td>300,000</td>
</tr>
<tr>
<td>Knight Hall Restrooms</td>
<td>33,000</td>
</tr>
<tr>
<td>Pharmacy Renovation</td>
<td>174,000</td>
</tr>
<tr>
<td>Phonetics Laboratory</td>
<td>24,850</td>
</tr>
<tr>
<td>Renovation of Education Annex</td>
<td>450,000</td>
</tr>
<tr>
<td>Renovation - Fine Arts</td>
<td>319,170</td>
</tr>
<tr>
<td>Renovation of 4th Floor Biochemistry - Wyoming Water Research Center</td>
<td>550,000</td>
</tr>
</tbody>
</table>
Renovation of Pharmacy Rooms 106 and 310 17,205
Renovation and Updates to Teaching and Research Laboratories in the Colleges of Agriculture, Arts and Sciences, Education and Health Sciences 1,725,385
Sign Language Laboratory 67,250
Training Room Handicapped Access 15,000
Western Wyoming College - Outreach Facilities 150,000
Wyoming Hall Restrooms 12,000

Total Capital Adaptation/Renewal $5,264,090
Total Capital Construction Request $9,518,160

Amendment to the Rules and Regulations, Program for the Advanced Payment of Higher Education Costs

In 1987 the Wyoming Legislature passed legislation creating the program for the Advanced Payment of Higher Education Costs. The legislation provided that the "Rules and Regulations necessary to administer this (program) shall be promulgated jointly by the program administrator (Deputy Treasurer of the Trustees of the University of Wyoming), the state treasurer and the executive director of the Wyoming community college commission and approved by both a majority vote of the University of Wyoming board of trustees and a majority vote of the Wyoming community college commission." The original rules and regulations, which are still in effect, were approved as required by both the Trustees of the University of Wyoming and the Wyoming Community College Commission in 1987.
The 1991 Legislature amended the 1987 legislation which necessitates a change to the rules and regulations for the program. The original legislation provided that a party could enter into a contract for advanced payment of tuition (including mandatory fees), room and board costs on behalf of a beneficiary for attendance at one or a combination of Wyoming institutions of higher education. By statute, this was the only option that was made available under the program. The 1991 legislature amended this statutory provision by expanding the purchase option to include contracts for the advanced payment of tuition and mandatory fees only.

The rules and regulations have been amended to reflect the statutory change expanding purchase options, plus several editorial changes have been made as well. These changes were reviewed and approved by the Committee responsible for the program at its March 29, 1991 meeting.

Based on a recommendation from the Budget Committee, Mr. Schutte moved approval of the Rules and Regulations for the Advanced Payment of Higher Education Costs as amended. (Enclosure 5, pink). Mr. Jorgensen seconded the motion, and it carried.

Approval of Contracts and Grants, Gifts and Scholarships

Based on a recommendation from the Budget Committee, it was moved by Mr. Schutte, seconded by Mrs. Kirk, and carried, that the Trustees of the University of Wyoming accept contracts and grants in the amount of $8,599,906 for the period April 20, 1991, through

**Internal Audit Activity Conducted in Accordance with the Audit Plan for the Period January 1, 1991 to March 31, 1991**

A report prepared by Mr. Van Jacobson, on the internal audit activity for the period January 1, 1991, through March 31, 1991, conducted in accordance with the audit plan, was presented to the Budget Committee.

**Reallocation Progress Report**

As a matter of information, Provost Karnig presented to the Budget Committee a report on the steps that have been taken to date to accomplish the reallocation approved at the December 1990 Trustee meeting, and the actions to be taken between 1993 and 1996. The report is included as Enclosure 6, salmon.

**PERSONNEL COMMITTEE**

President Sharratt called upon Chairman Updike for a report from the Personnel Committee meeting held on July 19, 1991. Committee members Peter Jorgensen, Jeri Kirk, Jerry Saunders, and Mike Schutte were present at the meeting, along with other Trustees and University personnel. Based on the committee meeting, Mr. Updike moved approval of the following appointments, adjunct appointments, adjunct reappointments, clinical faculty appointment, administrative appointments, administrative reappointment, continuation of probationary appointments, leaves of absence
without pay, changes in sabbatical leave, retirements, and employee suggestion awards program be approved. The motion was seconded by Trustee Jorgensen and carried.

**Appointments**

**COLLEGE OF ARTS AND SCIENCES**

a. **Rodney A. Garnett** as Assistant Professor/Flute, effective August 26, 1991, at an annual (9-month) salary rate of $30,000. This is a tenure track appointment.

b. **Jane V. Nelson** as Assistant Professor of English, effective August 28, 1991, at an annual (9-month) salary rate of $32,508. This is a tenure track appointment.

c. **Lewis Nkosi** as Professor of English, effective August 28, 1991, at an annual (9-month) salary rate of $50,004. This is a tenure track appointment.

**COLLEGE OF BUSINESS**

d. **Martin M. Greller** as Associate Professor of Management and Marketing, effective August 26, 1991, at an annual (9-month) salary rate of $56,004. This is a tenure track appointment.

e. **Lawrence R. Weatherford** as Instructor of Management and Marketing, effective August 26, 1991, at an annual (9-month) salary rate of $45,008. Upon completion of the requirements for the Ph.D. (anticipated August 1991), the rank will be that of Assistant Professor at an annual (9-month) salary rate of $55,008. This is a tenure track appointment.
f. Donna D. Amstutz as Assistant Professor, Division of Lifelong Learning and Instruction, effective August 26, 1991, at an annual (9-month) salary rate of $33,876. This is a tenure track appointment.
g. Cecilia A. Box as Assistant Professor, Division of Leadership, Educational Studies, and Human Development, effective August 26, 1991, at an annual (9-month) salary rate of $31,608. This is a tenure track appointment.
h. Mary Alice Christensen as Assistant Professor, Division of Leadership, Educational Studies, and Human Development, effective August 26, 1991, at an annual (9-month) salary rate of $32,604, contingent upon the successful completion of the doctoral degree prior to the beginning of fall semester, 1991. This is a tenure track appointment.
i. John J. Cochenour as Assistant Professor, Division of Leadership, Educational Studies, and Human Development, effective August 26, 1991, at an annual (9-month) salary rate of $32,592. This is a tenure track appointment.

COLLEGE OF ENGINEERING

j. Robert F. Kubichek as Assistant Professor of Electrical Engineering, effective August 26, 1991, at an annual (9-month) salary rate of $43,020. This is a tenure track appointment.
k. **John E. McInroy** as Assistant Professor of Electrical Engineering, effective August 26, 1991, at an annual (9-month) salary rate of $43,008, contingent upon completion of all requirements for the Ph.D. degree by August 26, 1991. This is a tenure track appointment.

l. **Melissa Anne Robinson** as Assistant Professor of Chemical Engineering, effective August 26, 1991, at an annual (9-month) salary rate of $42,000, contingent upon completion of all the requirements for the Ph.D. by August 26, 1991, otherwise the designation will be as Instructor at an academic year (9-month) salary rate of $38,004. This is a tenure track position.

**COLLEGE OF HEALTH SCIENCES**

m. **Martha Shipe Williams** as Dean of the College of Health Sciences and Professor of Social Work with tenure, effective August 27, 1991, at an annual (12-month) salary rate of $93,000.

**COLLEGE OF LAW**

n. **Robert L. Fischman** as Visiting Assistant Professor of Law, effective August 25, 1991, at an annual (9-month) salary rate of $45,000. This is a non-tenure track appointment.

o. **Carolyn M. DeHoff** as Assistant Women's Basketball Coach and Lecturer in Intercollegiate Athletics, effective July 8, 1991, at an annual (11-month) salary rate of $20,004. This is a non-tenure track appointment.
Adjunct Appointment

COLLEGE OF ARTS AND SCIENCES

a. D. Paul Thomas as Adjunct Professor of Zoology for the period August 1, 1991 through July 31, 1994.

Adjunct Reappointments

COLLEGE OF ARTS AND SCIENCES

a. Richard Howey as Adjunct Professor of Zoology and Physiology for the period January 1, 1991 through December 31, 1993.

b. John G. Wilkinson as Adjunct Professor of Zoology and Physiology for the period August 1, 1991 through July 31, 1994.

Clinical Faculty Appointment

The appointment listed below, in support of student programs, was recommended by the College of Health Sciences and approved by Trustees for the period July 1, 1991 through June 30, 1994.

<table>
<thead>
<tr>
<th>Name</th>
<th>Clinical Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talbot, Craig F.</td>
<td>Clinical Faculty in Family Practice</td>
<td>Kemmerer</td>
</tr>
</tbody>
</table>
Administrative Appointments

COLLEGE OF ARTS AND SCIENCES

a. John H. (Jack) George as Head of the Department of Mathematics, for a three-year term, effective August 28, 1991, with no change in salary.

b. Frederick C. Gersten as Head of the Department of Music, for a three-year term, effective July 16, 1991, with no change in salary.

c. Burke D. Grandjean as Head of the Department of Sociology, for a three-year term, effective June 1, 1991, with no change in salary.

d. Richard L. Howey as Head of the Department of Philosophy, for a three-year term, effective August 15, 1991, with no change in salary.

e. Jane V. Nelson as Director, Writing Center and Assistant Professor of English, effective August 28, 1991, with no change in salary.

f. Richard Reider as Head of the Department of Geography and Recreation, for a three-year term, effective July 1, 1991, with no change in salary.

g. Lee Schick as Head of the Department of Physics and Astronomy, for a three-year term, effective August 1, 1991, with no change in salary.

COLLEGE OF BUSINESS

h. Thomas D. Crocker as Chair of the Department of
Economics and Finance, for a three-year term, effective July 1, 1991, at an annual (9-month) salary rate of $68,796.

**COLLEGE OF EDUCATION**

i. **James R. Collins**, as Professor and Division Chair of Leadership, Educational Studies and Human Development for an 11-month period, effective, August 26, 1991, at an annual (11-month) salary rate of $60,120.

**COLLEGE OF HEALTH SCIENCES**

j. **Ward K. Gates** as Interim Dean, College of Health Sciences and Associate Dean, School of Physical and Health Education, effective July 1, 1991 to August 26, 1991, at a salary supplement of $2,500.

k. **Douglas Bonett** as (Interim) Associate Dean, College of Business, effective June 1, 1991, at an annual (12-month) salary rate of $78,072.

l. **Bruce Forster** as (Interim) Dean, College of Business, effective June 1, 1991, at an annual (12-month) salary rate of $75,648.

**Administrative Reappointment**

**COLLEGE OF ARTS AND SCIENCES**

a. **Mark S. Boyce** as Professor of Zoology and Physiology, and Director of the University of Wyoming-National Park Service for the period July 1, 1991 through June 30, 1992 at an annual (11-month) salary rate of $56,688.
Continuation of Nontenure Appointments

The following members of the faculty in their second, third or fourth year of service were reappointed for the 1991-92 year.

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arnold, Mark G.</td>
<td>Computer Science</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Hanly, Jeri Ryan</td>
<td>Computer Science</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Freeman, Brenda J.</td>
<td>Leadership, Educational Studies, and Human Development</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Hamilton, Jere C.</td>
<td>Civil and Architectural Engineering</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Oolman, Larry D.</td>
<td>Atmospheric Science</td>
<td>Temporary Assistant Professor</td>
</tr>
<tr>
<td>Polson, Donald E.</td>
<td>Civil and Architectural Engineering</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Skaggs, Rodney B.</td>
<td>Civil and Architectural Engineering</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Toth, James J.</td>
<td>Atmospheric Science</td>
<td>Temporary Assistant Professor</td>
</tr>
</tbody>
</table>
**COLLEGE OF HEALTH SCIENCES**

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beeken, Janice E.</td>
<td>Nursing</td>
<td>Temporary Assistant Professor</td>
</tr>
<tr>
<td>Dingmann, Colleen K.</td>
<td>Nursing</td>
<td>Supply Instructor</td>
</tr>
<tr>
<td>Jansa, Nancy</td>
<td>Nursing</td>
<td>Temporary Assistant Professor</td>
</tr>
<tr>
<td>Miller, Holly</td>
<td>Nursing</td>
<td>Supply Instructor</td>
</tr>
<tr>
<td>Wilson, Deborah F.</td>
<td>Nursing</td>
<td>Supply Instructor</td>
</tr>
<tr>
<td>Wolff, Teresa Lynn</td>
<td>Nursing</td>
<td>Temporary Assistant Professor</td>
</tr>
</tbody>
</table>

**Changes in Assignment**

**COLLEGE OF ARTS AND SCIENCES**

a. Richard Machalek, Professor of Sociology and Head of the Department of Sociology, was reassigned as Professor of Sociology, effective June 1, 1991, with no change in salary.

**COLLEGE OF EDUCATION**

b. Donald S. Seckinger, Professor and Division Chair of Leadership, Educational Studies, and Human Development, was reassigned as Professor of Leadership, Educational Studies, and Human Development for a 9-month period, effective, August 26, 1991, at an annual (9-month) salary rate of $39,036.
COLLEGE OF ENGINEERING

c. James L. Smith, Professor of Agricultural Engineering and Head of the Department of Agricultural Engineering, was reassigned as Associate Director of the Office of International Programs, effective July 1, 1991, with no change in salary.

COLLEGE OF HEALTH SCIENCES

d. Marcia L. Dale, Acting Associate Dean for the School of Nursing, was reassigned as Professor of Nursing, effective June 30, 1991, at an annual (9-month) salary rate of $53,484.

INTERCOLLEGIATE ATHLETICS

e. Carolyn Eide was assigned as Interim Head Women's Volleyball Coach and Lecturer in Intercollegiate Athletics for the period August 1, 1991 through July 31, 1992.

Leaves of Absence Without Pay

The following leaves of absence without pay were granted for the period and under the conditions cited.

a. Peter Maxfield, Professor of Law, for the 1992 spring semester, to teach at the University of Utah School of Law.

b. Ralph DeVries, Professor of Physics and Astronomy, for the 1991-1992 academic year, to continue work begun at E.G.&G. in Idaho Falls, Idaho.
c. Michael B. English, Head Women's Volleyball Coach and Lecturer in Intercollegiate Athletics, for the period August 1, 1991 through July 31, 1992 for personal reasons.

**Changes in Sabbatical Leave**

The following changes in sabbatical leave were granted:

a. At the December 8, 1990, meeting of the Trustees, Gary E. Moss, Professor of Animal Science, was granted a sabbatical leave for the period October 1991 through September 30, 1992. Professor Moss requested that this sabbatical leave be changed to the months of October and November, 1991, and the months of February through May, 1992.

**COLLEGE OF ARTS AND SCIENCES**

b. At the December 8, 1990, meeting of the Trustees, William A. Reiners, Professor of Botany, was granted a sabbatical leave for the 1991-1992 academic year. Professor Reiners requested that this sabbatical leave be changed to the 1992 spring semester.

c. At the December 8, 1990, meeting of the Trustees, William K. Smith, Professor of Botany, was granted a sabbatical leave for the 1992 spring semester. Professor Smith requested that this sabbatical leave be changed to the 1993 spring semester.
**Retirements**

The individuals listed below were granted retirement on the dates and under the conditions cited.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Birth Date</th>
<th>Employment Date</th>
<th>Retirement Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalfomo, Philip</td>
<td>Dean, College of Health Sciences</td>
<td>12/27/31</td>
<td>9/1/86</td>
<td>7/1/91</td>
</tr>
<tr>
<td>Hofmann, David J.</td>
<td>Professor of Physics and Astronomy</td>
<td>01/03/37</td>
<td>9/1/66</td>
<td>5/11/91</td>
</tr>
<tr>
<td>Maki, Leroy R.</td>
<td>Professor of Molecular Biology</td>
<td>5/27/27</td>
<td>9/1/55</td>
<td>6/30/91</td>
</tr>
<tr>
<td>McGinley, Patsy R.</td>
<td>Clinical Counselor II</td>
<td>5/16/31</td>
<td>7/15/74</td>
<td>6/30/91</td>
</tr>
<tr>
<td>Pond, David D.</td>
<td>Furniture Repairer/Physical Plant</td>
<td>10/4/28</td>
<td>6/8/74</td>
<td>8/2/91</td>
</tr>
</tbody>
</table>
University of Wyoming Employee Suggestion Award Program

A 1990 amendment to Wyoming Statute 9-2-1034, included as part of Enclosure 7, ivory, establishes an employee (and retiree) suggestion award program for the University of Wyoming. The proposed rules and regulations for the University of Wyoming Employee Suggestion Award Program follow the statute and borrow heavily from the current "Rules and Regulations" of the State of Wyoming Suggestion Award Program which is also authorized by the same statute.

The rules and regulations for the University of Wyoming Employees Suggestion Award Program were adopted as presented in Enclosure 7, ivory.

Part-Time Appointments

Part-time appointments were reported to the Trustees for their information.

Report on Staff Benefits

At the April 1991 meeting several Trustees requested salary information with respect to University staff employees. Reports were prepared by both the administration and by Staff Council and presented to Trustees. Trustees were asked to review the reports and direct any questions or comments to Vice President Dan Baccari.
Tenure Track and Faculty Resignations

Trustees were provided information on tenure track faculty and faculty resignations as a matter of information only.

PHYSICAL PLANT AND EQUIPMENT COMMITTEE

President Sharratt called on Chairman Jorgensen for a report from the Physical Plant and Equipment Committee meeting held earlier in the day. Committee members Jorgensen, Harris, Kinnaman, Kirk and Updike and ex-officio members Sharratt and Roark attended the committee meeting, along with other Trustees and University staff. Mayor Lee Wickel and Mr. Reed Erickson, Administrative Assistant for the Town of Lyman were present for the Physical Plant Committee meeting. Based on the committee meeting, the following recommendations and reports were presented to the full Board.

Eden Property Sale

The Eden Farm, an inactive parcel of University land located in the SW 1/4 of Section 16, Township 24, Range 106, lies immediately north of Eden, Wyoming, contiguous to and east of Highway 187. By Patent No. 2669, State of Wyoming, the State conveyed 159.00 acres, more or less, to the Board of Trustees of the University of Wyoming on January 31, 1958. The University only owns the surface rights as the Trustees conveyed back to the State of Wyoming the right to remove all coal, oil, gas and any minerals from the land along with the right of ingress and egress. A one-acre parcel was excluded
since it belonged, by virtue of Patent No. 1698, State of Wyoming, to the Protestant Episcopal Church in Wyoming.

In March, 1984, the Trustees approved the sale of the Eden property. Robert R. Moulton, appraiser for the Wyoming State Land Board, appraised the property in May of 1984 at $725/acre, plus $3,000 of improvements for a total value of $111,000.

The property was offered for sale in two separate parcels. An 8.4 acre parcel containing all of the improvements (old one-story frame house, bunkhouse, storage shed, loafing shed, main barn and open-face shed) was sold, but no offers were received for the larger parcel of 145.58 acres. Also, on May 21, 1985, the Trustees signed a Quitclaim Deed wherein 5.02 acres of previously leased land was conveyed to Sweetwater County for use as a park. The Sweetwater County land abuts Highway 187 approximately midpoint between the north and south boundaries of this quarter section.

Arrangements were made by the Associate Director of Ag Experiment Stations to lease the 145.58 acres to the party that purchased the 8.4 acre parcel for an annual fee of $1,000. This lease arrangement was in effect until February 1991, when the University attempted to increase the annual fee to something between $2,000 and $3,000 to better reflect the going lease rates in the Eden Valley.

The lessee refused to discuss the matter, saying the land would not produce enough to warrant any lease fee in excess of the $1,000 he had paid the previous year. Since the University's annual water assessment is some $1,300, it seemed prudent, therefore, that the
lease fee should reflect this cost of water plus use of the land. The University did not renew the lease, and the land is currently idle.

Water for the property is drawn from the Eden No. One Canal which is under the jurisdiction of the Eden Valley Irrigation District. The water rights to the property were appropriated on November 24, 1903 for one cubic foot of water per second for each 70 acres of land. A representative of the Eden Valley Irrigation District has advised that the appropriation would only be in effect should the irrigation district have a shortage of stored water. Otherwise, the irrigation district can furnish enough water for the irrigation needs in the valley.

The College of Agriculture has been contacted as to whether or not the college has any present or future need for this property. The Associate Director of the Agricultural Experiment Stations has surveyed the faculty in the College of Agriculture, and reports there is no need for the land.

Based on a recommendation from the Physical Plant and Equipment Committee, Mr. Jorgensen moved to authorize the University to either sell the property outright, or on a lease-purchase basis, for no less than a minimum amount to be determined by appraisal. The motion was seconded by Mrs. Kirk, and it carried.

**Naming Rooms in College of Engineering**

Several donors have made contributions to the College of Engineering. The Dean of the College of Engineering wishes to
recognize these donors by naming existing rooms for them. According to current gift policy guidelines, approved by the Trustees March, 1989, facilities may be named for contributions of approximately 25 percent of replacement costs.

The donors' names and the designated room follow:

Gus M. Albert, 3041 - Gus M. Albert Paving Research Laboratory

Paul S. Bechtel, 3065 - Paul S. Bechtel Survey Classroom

John and Emelia Holmes, 3102 - John and Emelia Holmes Civil Engineering Classroom

Harold O. and Bonnie Jane Kester, B125 - Harold O. and Bonnie Jane Kester Structures Research Laboratory

The Paul Stock Foundation, 4035 - Paul Stock Drilling Fluids Research Laboratory

Based on a recommendation from the Physical Plant and Equipment Committee, Mr. Jorgensen moved approval of the room names as listed above. The motion was seconded by Mrs. Hammons, and it carried.

Elk Mountain Observatory License Agreement

The University has had a lease in effect since 1965 with Union Pacific Railroad Company for the construction, maintenance and operation of snow measuring devices and related equipment in the vicinity of Elk Mountain, Carbon County, Wyoming, or more specifically property situated in Section 7, Township 19 North, Range 81 West of the Sixth P.M., Carbon County, Wyoming.

Based on a recommendation from the Physical Plant and Equipment Committee, Mr. Jorgensen moved, Dr. Saunders seconded,
and it carried to approve, as an extension of the lease, a license agreement between Union Pacific Land Resources Corporation and the Trustees of the University of Wyoming beginning July 21, 1991, and such license will automatically renew on each anniversary date unless terminated as provided in the License Agreement, or either party gives the other notice of its intention not to renew the agreement not less than thirty (30) days prior to the anniversary date. In advance of each anniversary date during the term of this agreement, the University shall pay to Union Pacific Land Resources Corporation $2,187.00.

Mr. Jorgensen further moved, Dr. Saunders seconded, and it carried to adopt the following resolution:

WHEREAS, Union Pacific Land Resources Corporation, a corporation of the State of Nebraska, has tendered to The Trustees of the University of Wyoming an agreement covering the continued maintenance, operation and use of a weather station with power and control cables and the non-exclusive use of an existing roadway for access purposes upon certain premises situate in Section 7, Township 19 North, Range 81 West of the Sixth Principal Meridian in the County of Carbon, State of Wyoming, said agreement being identified as Audit No. D00668; and

WHEREAS, the Trustees of the University of Wyoming has said proposed agreement before it and has given it careful review and consideration; and

WHEREAS, it is considered that the best interests of the Trustees of the University of Wyoming will be subserved by the acceptance of said agreement;

THEREFORE, BE IT RESOLVED BY THE TRUSTEES OF THE UNIVERSITY OF WYOMING:

That the terms of the agreement submitted by Union Pacific Land Resources Corporation as aforesaid be, and the same are hereby accepted in behalf of the Trustees of the University of Wyoming;

That the President of the Trustees of the University of
Wyoming is hereby authorized, empowered and directed to execute said agreement on behalf of the Trustees of the University of Wyoming, and that the Secretary of the Trustees of the University of Wyoming is hereby authorized and directed to attest said agreement and to attach to each Duplicate Original of said agreement a certified copy of this Resolution.

Town of Lyman Proposal

Representatives from the Town of Lyman met with the Trustees at their meeting on May 10, 1991, to discuss the town's plans for use of the land owned by the University. They also discussed possible means by which to acquire the land, including a suggestion the University consider a gift of the land to Lyman.

The Trustees rejected the proposal to donate the land. However, the Trustees extended an invitation to the Town of Lyman to submit a proposal to acquire the land to be considered by the Trustees at their July meeting.

The Town of Lyman submitted a lease/purchase proposal for acquisition of land and Mayor Lee Wickel and Administrative Assistant Reed Erickson from Lyman attended the Physical Plant and Equipment Committee meeting to discuss their proposal.

Based on a recommendation from the Physical Plant and Equipment Committee, Mr. Jorgensen moved that since the property is surplus to the University's current or projected needs, that the most recent appraisal of the property be updated by the same appraiser at University expense; that the Town of Lyman be offered the opportunity to purchase the property at the appraised value, with the terms of the sale be: 20 percent down payment, with the
balance over a 10-year period at 10 percent interest, or mutually agreed upon lease/purchase terms; the University retain any mineral rights it may own; the option be available to the Town until the expiration of the present lease on March 31, 1993; and should the Town of Lyman elect not to purchase the property, the University proceed to auction the property through the State Land Office. The motion was seconded by Mr. Bonner, and it carried.

**American Heritage Center/Art Museum Exterior Materials**

Samples of the masonry materials to be used in constructing the exterior walls, and metal materials to be used in constructing the roof, of the American Heritage Center/Art Museum were available at the Physical Plant and Equipment Committee meeting for examination. As requested by the Trustees, the report of the study to assess possible contamination from the use of lead for roofing on the American Heritage Center/Art Museum, provided by TCT-St. Louis at the request of Lead Industries Association, is made a part of these minutes (Enclosure 8, buff).

**Progress Report and Change Orders**

As a matter of information, the progress reports and change orders on current construction projects were provided to the Physical Plant and Equipment Committee.

**Status of AHC/AM Construction Bids**

The deadline for submitting construction bids for the AHC/AM has been extended by two weeks to allow contractors additional time
to respond. The deadline is now July 25. Since bids were not
ready for Trustee approval on July 19, Mr. Jorgensen moved that the
Trustee Executive Committee, along with the Chairman of the
Physical Plant and Equipment Committee, approve the selection of
the contractor for the project as soon as administrative
recommendations are prepared. The motion was seconded by Mr.
Schutte, and it carried. All Trustees were invited to participate
in the conference telephone meeting.

INVESTMENT COMMITTEE

President Sharratt called on
Chairman Brown for a report from
the Investment Committee meeting held earlier in the day.
Committee members Brown, Bonner and Jorgensen and ex-officio
members Sharratt and Roark attended the committee meeting, along
with other Trustees and University staff. Based on the committee
meeting, the following recommendation was presented to the full
Board.

Fiscal Year 1992 Budgets, W. R. Coe Estate, W. R. Coe School, and
Charles Chacee Ruenh Estate Funds

Section 7-2 of Chapter VIII of the Bylaws of the Trustees of
the University of Wyoming provide that "each year the President of
the University shall submit recommendations for allocations to
programs from income produced from the management of endowment
funds to the Committee for approval and submission to the Trustees
for adoption".
Based on a recommendation from the Investment Committee, Mr. Brown moved, Mr. Bonner seconded, and it carried to approve the budget allocations for programs supported by the W.R. Coe Estate, W.R. Coe School and Charles Chacey Kuehn endowments, as follows:

<table>
<thead>
<tr>
<th>Fund</th>
<th>Approved FY 1991</th>
<th>Proposed FY 1992</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>W.R. Coe Estate Funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditures:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Expenses</td>
<td>$19,737</td>
<td>$18,686</td>
</tr>
<tr>
<td>American Studies Program</td>
<td>110,875</td>
<td>113,000</td>
</tr>
<tr>
<td>Coe Chair</td>
<td>24,000</td>
<td>27,468</td>
</tr>
<tr>
<td>Total</td>
<td>$154,612</td>
<td>$159,154</td>
</tr>
<tr>
<td><strong>W.R. Coe School Funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditures:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Expenses</td>
<td>$21,368</td>
<td>$20,218</td>
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<tr>
<td>American Heritage Center</td>
<td>130,897</td>
<td>133,378</td>
</tr>
<tr>
<td>Total</td>
<td>$152,265</td>
<td>$153,596</td>
</tr>
<tr>
<td><strong>Charles Chacey Kuehn Estate</strong></td>
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<td></td>
</tr>
<tr>
<td>Expenditures:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Expenses</td>
<td>$47,275</td>
<td>$48,998</td>
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<tr>
<td>American Studies Program</td>
<td>54,826</td>
<td>56,821</td>
</tr>
<tr>
<td>American Heritage Center</td>
<td>55,048</td>
<td>57,064</td>
</tr>
<tr>
<td>College of Agriculture</td>
<td>56,083</td>
<td>58,125</td>
</tr>
<tr>
<td>Total</td>
<td>$213,232</td>
<td>$221,007</td>
</tr>
<tr>
<td>Total all programs</td>
<td>$520,109</td>
<td>$533,757</td>
</tr>
</tbody>
</table>

These program allocations are based on a distribution of 5.8 percent of the market value of the Coe and Kuehn endowments as of March 31, 1991.
President Sharratt called on Chairperson Saunders for a report from the Community College Relations Committee meeting held on July 19, 1991. Committee members Jerry Saunders, Dave Bonner, F. Richard Brown, Deborah Hammons and Diana Ohman attended the committee meeting, along with other Trustees and University personnel. The following report was presented to the full Board.

**Progress Report on Articulation Projects**

Trustees were provided with a progress report on articulation projects between the University of Wyoming and Wyoming community colleges/high schools. Dr. Judith Powell, Associate Provost, briefed the Trustees on the report and offered to continue reporting if requested by Trustees.

President Sharratt called on Chairperson Bonner for a report from the Athletic Committee meeting held earlier in the day on July 19, 1991. Committee members Dave Bonner, F. Richard Brown, Perry Dray, Harry Harris, Jeri Kirk, Mike Schutte, and David Updike attended the committee meeting, along with other Trustees and University personnel. The following report was presented to the full Board.
Athletic Broadcast Contract

Special Assistant to the President David Baker explained the status of the athletic broadcast contract between the University of Wyoming and Curt Gowdy Sports, Inc. A recommendation for Trustee action related to athletic broadcast rights will be submitted at the September, 1991 meeting of the Board. Trustees were asked for input pertaining to policy questions and asked to direct any comments to Mr. Baker before the September meeting.

Organizational Changes

David Baker, Special Assistant to the President, advised Trustees of a new organizational chart which has been prepared for the Athletic Department to reflect current positions and titles.

Drug Screening/Education Policy

At the present time the University of Wyoming administers a voluntary drug testing program for its athletes which was approved by the Trustees in November, 1986. The Director of Intercollegiate Athletics is undertaking a review of the five-year program with the UW Drug Screening and Education Program. Particular emphasis will be placed on the voluntary nature of the program, its effectiveness and any recommendations for changes to improve the program. David Baker, Special Assistant to the President, will provide results of that study at the September, 1991 Trustees' meeting. At the request of the Trustees, Mr. Baker will also review UW's alcohol policy by the next meeting.
UNFINISHED BUSINESS

Change in Meeting Date

President Roark noted that the December 6-7, 1991 Trustee meeting and a WICHE meeting had been scheduled on the same dates. Since it will be the last meeting at which he would be serving as WICHE chair, Dr. Roark requested that the Trustees consider changing their meeting date to December 13-14, 1991. It was moved by Trustee Dray and seconded by Trustee Bonner that the meeting originally scheduled on December 6-7, 1991 be changed to December 13-14, 1991. The motion carried.

Territorial Park Dinner Theatre

Trustee Brown said that he had attended the dinner theatre at the Territorial Park and was very impressed with the performance of UW students who participated. He encouraged those who hadn't had an opportunity to see the performance to do so.

Educational Trust Fund

Trustee Dave Bonner reported that the review of applications for Wyoming Education Trust Fund monies was now complete. Approval was granted to UW for telecommunications funding in the amount of $500,000 to establish a two-way interactive video system. The monies will be available in 1992.
**KUWR Coverage**

Trustee Jorgensen expressed his disappointment that KUWR intended to drop the program "All Things Considered" as well as making other cutbacks. He said he had written a letter to Dr. Ken Griffin, Associate Provost, asking for an inquiry into the matter. Dr. Griffin will make his report available to all Trustees.

**Use of UW Facilities**

Trustee Harris inquired about UW's policy on the use of its facilities as it related to use by unrelated groups. It was explained by Special Assistant David Baker and President Roark that UW has an open, liberal policy in that regard and that groups may hold meetings on campus with appropriate University sponsorship.

**PUBLIC COMMENTS**

**Family Practice Residency Program**

State Representative Carol Jo Vlastos from Natrona County spoke to Trustees about her concerns relating to the Family Practice Residency Program. Some of those were: vacant faculty positions, reaccreditation concerns, and the lack of a permanent director in Casper. Ms. Vlastos introduced several Family Practice Residency Program students at the meeting. Dr. Chris Moser, a third-year residency student in Casper, also spoke to Trustees about his perceptions and concerns about the program.

President Roark indicated that UW Trustees and administration had continually supported the Family Practice Residency Program,
and that the efforts have been successful, especially in the Legislature. Money will be released if it will promote the program, and a permanent director will be appointed. He said that a practice plan would be developed and submitted to Trustees at the September meeting if feasible. Dr. Roark also introduced Ward Gates, Acting Dean of the College of Health Sciences.

Trustee Dray asked that an interpretation of the reallocation motion of December, 1990 regarding the Family Practice Residency Programs and the effect of those programs be brought to the Trustees at the September meeting.

Public Meeting

Robert Roten, Laramie Daily Boomerang, said that he had attended the meeting referenced earlier by Trustee Harris, and that the coordinator made it clear at that meeting that his views did not necessarily reflect UW's position by virtue of the fact that the meeting was being held on campus.

ADJOURNMENT AND DATE OF NEXT MEETING

The meeting was adjourned at 5:40 p.m. The next meeting of the Board of Trustees of the University of Wyoming will be held September 6-7, 1991 in the Old Main Board Room.

Respectfully submitted,

Donna Mecham
Deputy Secretary
MINUTES
CONFERENCE TELEPHONE MEETING
EXECUTIVE COMMITTEE OF
THE TRUSTEES OF THE UNIVERSITY OF WYOMING

June 11, 1991

A conference telephone meeting of the Executive Committee of the Trustees of the University of Wyoming was held on June 11, 1991, at 9:15 a.m. with Committee members Bryan Sharratt, Dave Bonner, Perry Dray, Mike Schutte, and David W. Updike participating. Trustee Peter Jorgensen, Chairman of the Physical Plant and Equipment Committee, and Vice President for Finance Dan Baccari also took part in the meeting.

The conference meeting was called to consider the siting of the Botany Conservatory. At the May 10 Trustee meeting, a request for authorization to proceed with selection of engineering and architectural services for design and construction of the Botany Conservatory was deferred to the Executive Committee, and the administration was asked to determine the cost of constructing the Conservatory at alternate sites.

Mr. Baccari reported that the cost to build the structure on the roof of the Aven Nelson Building and the roof of the Student Health Services Building was determined and the information provided to Chairman Jorgensen. Both exceeded the budget available for the project. Consideration was given to siting the facility to the south of the Aven Nelson Building between the park boundary and the two large evergreen trees, with a connecting walkway to Aven Nelson. This site is too narrow for the proposed structure and would require a major revision of the configuration of the facility. There was general agreement that this was not a feasible alternative. A site on 30th Street would be too far from other Botany facilities to make it a viable research laboratory.

Mr. Bonner moved that authorization be granted to proceed with selection of engineering and architectural services for design and construction of the Botany Conservatory to be sited on the south side of the Aven Nelson Building. The motion was seconded by Mr. Schutte, and it carried.

It was suggested that the University look into the possibility of making a gift of one of the trees to be used as the White House Christmas Tree, or look into the possibility of contributing one to be put in the State Capitol rotunda.

Mr. Baccari reported that the Internal Auditor has been requested to conduct an audit for the Leadership, Education and Development (LEAD) program for an affiliated agency. It was the consensus of the Committee that an outside firm should be retained if an audit is required, or that perhaps the Accounting
Office could assist with establishing accounting procedures if that is all that is needed.

President Sharratt brought to the Committee's attention a matter that had come to his attention concerning the scholarships awarded by the University. There was some concern that some scholarships might not be funded. Mr. Baccari reported that he had met with the Associate Provost for Student Affairs and the Director of Student Financial Aids, and that the University will honor all commitments for fiscal year 1992. This situation will be included on the agenda for discussion at the Budget Committee meeting on July 29.

There being no further business to come before the Committee, the conference telephone meeting was adjourned at 10:05 a.m.

Respectfully submitted,

Betty Long
PROPOSAL FOR A SELF-DESIGNED MAJOR

Introduction

Individually tailored degrees or Self-Designed Majors (SDMs) are a common option at schools around the country (see appendix). They encourage students to take greater responsibility for their own education, allow universities to meet the needs of students without creating additional programs, feature coherent, often multidisciplinary study, and encourage independent research. Students at other universities have found a wide variety of uses for this sort of program, designing majors in such areas as medical illustration, historic preservation, Black studies, urban problems, technology and human values, peace studies, religious studies, arts management, classical civilizations, international public administration, and three-dimensional design. For some students the SDM is an intellectual adventure; for others it is preparation for a career; still others find that the program provides excellent preparation for graduate or professional school.

There are additional reasons for instituting an SDM program. First, the University's interest in attracting stronger students makes it desirable for us to offer a kind of degree found at most competitor institutions and one which is especially attractive to intellectually independent and adventurous students. Second, the new degree may allow us to eliminate under-used degree tracks (political economy and English/theatre, for instance) and replace them with a stronger, better supervised program.

1. Describe proposed unit - title, department(s) and college(s) involved, and proposed reporting relationship.

The Self-Designed Major would be a Plan I degree program within the College of Arts and Sciences. As with other non-departmental degree programs (Administration of Justice, for instance), a small representative committee of faculty, together with an associate dean as ex officio member, would be responsible for the administration of the program, and the committee would report to the Dean of the College.

2. Summarize the purpose and nature of the unit.

The purpose of the degree program is to provide undergraduate students within the College of Arts and Sciences with the opportunity to construct coherent, usually cross-disciplinary degree programs in areas where no existing program is appropriate.
3. List activities now undertaken that would be included in the new unit.

The SDM is a new program. It would not require shifting of current programs or resources, but it may render unneeded certain little-used undergraduate degrees now in existence (English-Theatre, Political Economy, for instance).

4. List illustrative major new activities that would be undertaken.

The major new activity to be undertaken would be the supervision of a number of undergraduate students who desire to participate in the program. That number may be as large as 20-30 per year (as at the University of Indiana), but it seems more likely that we should anticipate 5-10.

5. Briefly but specifically project teaching, research, service, and other benefits and impacts of the new unit. (The descriptions should be clear enough to be employed as criteria in subsequent reviews of the unit.)

Benefits:

1. **Recruiting.** Prospective students may well consider attractive the option of an SDM. The existence of the SDM can encourage more independent, adventurous students to apply. It also makes us competitive with other schools in the region and nation.

2. **Additional Degree Options for Students.** With an SDM, students may design programs which meet an interest (Renaissance Studies, with courses from History, English, and Modern Languages), a vocational ambition (Medical Illustration, with courses from Zoology, Communication, and Art), or any of a number of other motives.

3. **Psychic Income for Faculty.** The faculty have an opportunity to work with good students in cross-disciplinary projects.

4. **Increased Student Responsibility.** Students must take greater responsibility for the design of their undergraduate course of studies.

5. **Elimination of Little-Used Degree Tracks.**

Impacts:

1. **Teaching.** As students would be enrolling in already existing courses, there would be little impact on teaching, aside from the responsibility of a student's supervising committee to guide the student's independent study and to evaluate the senior paper or project.

2. **Research.** No impact.

3. **Service.** The SDM increases the service load on faculty who are appointed to the SDM Committee and who are on the student’s supervisory committee.
6. List projected costs of the new unit and sources of funds over the next three years.

<table>
<thead>
<tr>
<th></th>
<th>FTE</th>
<th>State Funds</th>
<th>Other Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Unit administration</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The administration of the program will be performed by a faculty committee and facilitated by the staff of the Dean's Office. For the faculty, the work will count as part of their service responsibilities. Typically, such program committees meet once a month.

b. Faculty | 0   |             |             |

Students in the program will take already existing courses plus six hours of independent studies. Students likely to participate in the program may well be taking independent studies in any case.

c. Research or other professional staff | 0   |             |             |

d. Clerical and other staff | 0   |             |             |

The small increase of record keeping for this degree will be matched by a decrease in the programs in which the student might otherwise have majored.

e. Graduate assistants | Not required |             |             |
f. Other personnel | Not required |             |             |
g. Construction/renovation | Not required |             |             |
h. New space - to be built, renovated or reallocated | Not required |             |             |
i. New Equipment | Not required |             |             |
j. Library and/or Computer Services | Adequate |             |             |
k. Supplies | 0 | $100         |             |

A small budget for a brochure describing the program for distribution on campus and in recruiting visits could come out of college and admissions office accounts.

l. Travel | Not Required |             |             |
m. Other | Not Required |             |             |
7. Please provide text explaining any new resources required in #6 above.

Please see comments above.

8. Where in the region is a similar unit now in operation?

Please see the appendix.

9. Briefly describe evidence of local, state, and/or national need.

The University of Wyoming needs to remain competitive with other regional universities which offer degree programs like the one proposed. No organized group, industry, or profession requires graduates with SDM degrees. One can observe that Indiana University has graduated 275 students with a similar degree in the last decade.

10. Please provide a list of and endorsement by relevant faculty.

The proposal was circulated among A&S department heads and program directors on 9 July 1991; they reviewed it and made suggestions.

11. Please provide a recommendation by relevant college(s) committees.

The Central Committee of the College of Arts and Sciences reviewed and approved the proposal on 18 February 1991.

12. Please provide any additional information that should be understood by those reviewing the proposal.

Bulletin Copy

In developing a program description, we attempted to maintain a balance between simplicity and academic integrity. The following draft of a Bulletin description emphasizes the key elements of the program.

The Self-Designed Major (SDM) is an option for students who want a program of study which can allow them to develop intellectual interests not now addressed by traditional majors. The SDM encourages diversity and flexibility while requiring a clear academic focus and a unifying purpose. Most SDMs are interdepartmental and multidisciplinary.

Program requirements. Students are admitted to the program between the beginning of sophomore and junior years. They must have a gpa of 2.8 and are expected to fulfill all University and College requirements.

Application for the Program. Students first see an associate dean of Arts and Sciences (A&S 114) who explains the program and helps with the application process. With the guidance of a faculty member with expertise in the general
area which a student intends to study, students prepare a one- or two-page rationale for the SDM and a specific list of courses, including a minimum of 24 hours of formal course work and six hours of independent study to be used to prepare a senior paper or project. They will also need a letter of support from a primary faculty advisor as well as consent from two or more additional faculty to serve on the student's supervisory committee. Members of the student's supervisory committee will be selected for their expertise in the area or areas in which the student plans to work. Once the SDM Committee has reviewed the application, it interviews the student and then notifies him or her of its decision. Later modifications of the program must be approved by the student's supervisory committee and an associate dean.

Senior Project. Approximately two months before the end of his or her senior year, the student submits a project or paper which sums up or typifies the SDM. The project is then evaluated by the supervisory committee. The supervisory committee makes a recommendation to the SDM Committee which recommends the student for graduation.

Students will receive the appropriate bachelors degree in Special Studies:

(Name of Focus)

Administration

In order to provide appropriate supervision and administration of the program, the Dean will appoint a SDM Committee of at least three interested faculty who broadly represent the various disciplines of the College, with at least one from the Arts and Humanities, one for the Natural Sciences, and one from the Social Sciences. An Associate Dean will be an ex officio member of the SDM Committee and is responsible for preliminary advising of interested students, maintenance of records, and publicity. The student, with the help of the primary faculty advisor and the associate dean, will form the supervisory committee, including at least two faculty who have appropriate interests and training. The goal of this organization is to allow the supervisory committee to concentrate on the education of the student, the SDM Committee to provide oversight, and the associate dean to handle the paper work. At least initially, and then so long as the number of participating students is small, one member of the SDM committee should serve on each supervisory committee.

Review

In order to assure that the SDM program is meeting the goals for which it was created, the program will be formally reviewed by a committee appointed by the Dean three years after it becomes operational.
Appendix I

As part of the planning for the Self-Designed Major, we investigated similar programs as several comparator and other institutions. Attached are xeroxes of the bulletin copy describing these programs.

University of Michigan--Individual Concentration Program
Brown University--Concentration Requirement
University of Indiana--Individualized Major Program
University of Tennessee--Individualized Program
University of Connecticut--Individualized Major
University of Kentucky--Topical Majors
University of Nebraska-Lincoln--University Studies Program
University of Delaware--Bachelor of Arts in Liberal Studies
Oregon State University--Liberal Studies Major
University of Maine--Bachelor of Arts in Special Studies
University of Vermont--Individual Design Major
University of Missouri--Bachelor of General Studies
Washington State University--General Studies Program
University of New Hampshire--Student-Designed Majors
Arkansas State University--General Studies
Illinois State University--General Studies
University of Nebraska-Omaha--Liberal Studies
University of California-Santa Barbara--Individual Major
Arizona State University--Interdisciplinary Studies
TO WHOM IT MAY CONCERN:

As of the above date, the University of Wyoming is named as defendant in the following lawsuits:

Herb Martin and Charles Townsend v. Abdullah Al-Natrafi, University of Wyoming, Saudia Services, and Operating Company, Ltd. and The Kingdom of Saudi Arabia, U.S. District Court, Case No. 90 LV0305-J alleging failure to supervise Saudi Arabia student who became involved in auto accident without auto insurance.
* Insurance Carrier - Cigna Property and Casualty Co.

Shirley Aronson v. Lewis Dabney and University of Wyoming, U.S. District Court, Civil Action No. C89-0253B alleging age discrimination, civil rights violations and breach of contract by an employee
* Insurance Carrier - United Educators and State of Wyoming Self-Insurance Fund

Vince DiVenere and Margo DiVenere v. University of Wyoming, Second Judicial District, Civil Action No. 22286 alleging negligence in slip and fall
* Insurance Carrier - Cigna Property and Casualty Co.

In addition, the University of Wyoming is participating in the defense of two lawsuits pending against its employees as follows:

Dennis J. Miller vs. Memorial Hospital of Sweetwater County, Michael Mains, M.D., Two Emergency Room Nurses, High Desert Emergency Physicians, Dr. James Richard, Third Judicial District, Civil Action No. C-89-556 alleging medical malpractice in the diagnosis of appendicitis in a patient.
* Insurance Carrier - State of Wyoming Self-Insurance Fund

* Insurance Carrier - Cigna Property and Casualty Co.

As indicated, each of the above lawsuits is subject to insurance coverage and none have a clear potential to exceed policy limits.

Very truly yours,

[Signature]
David L. Baker
Special Assistant to the President
June 28, 1991

TO: University of Wyoming Board of Trustees

FROM: Terry P. Roark, President

RE: FY 1993-94 Biennial Budget Recommendations

Budget planning for the 1993-94 biennium and the recommendations I am providing have been based upon the revenue constraints and budget parameters that you approved in February 1991. These were exclusive of the capital construction request and included:

1. The fact that the Consensus Revenue Estimating Group (CREG) projected state general fund income to increase by about 2.3 percent for the next biennium.

2. The University would probably not ask for more than $20 million expanded request.

3. Of the $20 million, $13-14 million would probably be targeted for improvements in faculty/staff salaries and graduate assistant stipends and approximately $6 million would be targeted for all other institutional requests.

This proposed legislative package is built around three budget components. These include a request for an expanded operating budget, salary adjustments, and recommendations for capital construction projects. These budget priorities are summarized as follows:

UNIVERSITY OF WYOMING
1993-1994 BIENNIAL
BUDGET SUMMARY

- Operating Budget $11.9*
  Equipment Replacement $2.5
  Scholarships 2.0
  Administrative Computing 1.4
  "Essential" / "High Priority" 2.0
  Support Services & Misc. (pro-rata) 4.0
- Salary Enhancements 13.2
- Capital Construction 9.5

TOTAL $34.6

* All dollar figures in millions
A. OPERATING BUDGET

The Budget Council reached consensus on $6 million as the level of funding to be targeted for expanded budget priorities developed within the academic and administrative units, exclusive of (1) $2.5 million for replacement equipment (this is stripped from the Standard Budget each biennium and must be brought forward as an expanded budget request) and (2) the approximately $2 million required to fund scholarships. I have concurred with this recommendation.

Additional support for administrative computing was not included among the items that the Council considered to be outside the $6 million expanded budget target. I believe that a request for $1.4 million should be considered. The University is prepared to reallocate approximately $600,000 for administrative computing and an additional $1.4 million would fund the requirements of the five year administrative computing plan and bring the institution into alignment with the recommendations provided by NCHEMS.

It is recommended that the $6 million operating budget proposal be split into two categories: "essential" and "high priority" requests. After a review of specific requests, the following were identified as "essential" based upon the principle that the expansion was necessitated to address program requirements mandated by legislative or administrative actions. These included:

Level A--Essential:

- Math/Statistics for University Studies
  (2 FTE GA's and 2 Acad. Prof.) $ 218,528
- Extended Teacher Education Program
  (2 FTE Faculty) 160,000
- School District Clinical Faculty Support 200,000
- Maintenance and Support for AHC/Museum, Regulated Materials Facility and Botany Conservatory (19 FTE Staff) 634,336

25 FTE POSITIONS TOTAL $1,212,864

Level B--High Priority:

A second group of "essential" proposals were identified as critical to the success of the University's current program activities. Four such specific critical requests identified through this process were:
- Extended College of Education Program Seminars (1.5 FTE GA's) $73,874
- Enhanced Student Recruitment by Academic Units 200,000
- Off-Campus Degree Program Support (1 FTE Staff, 1 Acad. Prof., 4 FTE Faculty) 400,000*
- Development Officer (1 FTE) 87,500

8.5 FTE POSITIONS TOTAL $761,374

* Additional off-campus faculty will generate additional revenue. The amount of the revenue generated by the expanded program could not be determined. To the extent that the expanded programs are capable of being self-supporting, the general fund requirement may be reduced.

Level C—Academic and Administrative Priorities:

It is recommended that a minimum of 80 percent of the monies available after funding "essential" and "high priority" requests ($3.2 million) should be utilized to fund academic and administrative requests which address the following planning priorities:

- promoting accessibility and excellence in undergraduate and graduate programs
- increasing University outreach activities
- upgrading support for facilities, equipment and operations

It is also recommended that up to a maximum of 20 percent ($800,000) of the legislative funding will be utilized for part-time salary enhancements or new positions identified within the individual budget requests prepared by the academic and administrative units.

Individual Council members expressed concern about the number of expanded positions approved within the "essential" program requests and whether it was appropriate to allow the academic/administrative units to apply their 20 percent salary allocation to the creation of additional new positions. I have not proposed a limitation on requests for new positions, but would like to further discuss the issue with you.
Distribution of the $4.2 million to address the academic and administrative budget priorities will initially be based upon the individual unit's total operating budget relative to the total UW budget. Any final allocation of expanded funding provided by the legislature will be determined when the institution's annual operating budget is established. The allocation table for the distribution of these funds is attached as enclosure 1.

B. SALARIES

It is recommended that $13.2 million be allocated for faculty and staff salary improvements.

This figure is based upon the estimated cost of implementing the third year of the five year faculty salary adjustment plan and providing appropriate benchmarks which will be utilized in developing a salary plan for staff and academic professionals, similar to the five-year faculty plan. Included as enclosure 2 you will find an analysis of the faculty comparator data and the projected cost of the salary request.

Two issues which relate to the recommended salary improvement proposal emerged from the Budget Council's discussions.

First, an aberration was introduced into the University's five year faculty salary adjustment plan. As you will recall, we opted to follow the State lead in funding fully the state retirement contribution for all personnel. This benefit adjustment amounted to 3.71 percent of the faculty's 9.77 percent compensation package.

The five year plan originally targeted salary rather than total compensation (salary plus benefits). The Budget Council agreed that the benefit and salary increases granted faculty for FY 92 will be treated as salary adjustments for the purpose of evaluating progress toward the 50th percentile goal which we have established.

Second, preliminary data indicate that classified staff positions are lagging both local and regional markets. Appropriate benchmarks are being developed to determine the funding that will be required to keep our staff salaries competitive.

Rather than submitting multiple salary adjustment requests for faculty and staff positions, I am recommending an overall adjustment of 7.84 percent for each year of the biennium. The allocation of this funding among faculty and staff positions will be based upon the funding appropriated by the legislature and the salary administration plan submitted to the Trustees next spring, with merit and market factors taken into consideration.
C. CAPITAL CONSTRUCTION

My recommendation for capital construction projects includes:

- Deferred Maintenance $4,254,070
- Capital Adaption/Renewal $5,264,090

TOTAL $9,518,160

Included in the Capital Adaption & Renewal request is a proposal to create a Center for Teaching Excellence. It is recommended that the Kappa Delta house be purchased from existing University resources and that a modest request for $300,000 be submitted to the legislature for the purpose of adapting this facility into a Center for Teaching Excellence.

The capital priorities for 1993-94 do not include "new" construction projects. I have asked the Space Allocation Committee to review the new construction project list and establish the institution's priorities for these projects.

A more comprehensive listing of the capital adaption and renewal projects is attached as enclosure 3 for your review.
<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>SALARIES</th>
<th>SUPPORT</th>
<th>TRAVEL</th>
<th>EQUIPMENT</th>
<th>GRANTS/ AID</th>
<th>NON-OP</th>
<th>CONTRACT</th>
<th>TOTAL</th>
<th>%SHARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSTRUCTION</td>
<td>94,740,240</td>
<td>6,343,062</td>
<td>739,672</td>
<td>731,695</td>
<td>0</td>
<td>330,116</td>
<td>739,842</td>
<td>103,624,647</td>
<td>46.88</td>
</tr>
<tr>
<td>RESEARCH</td>
<td>12,020,571</td>
<td>2,065,640</td>
<td>146,886</td>
<td>141,791</td>
<td>754,400</td>
<td>350,000</td>
<td>126,000</td>
<td>15,605,268</td>
<td>7.06</td>
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<tr>
<td>PUBLIC SERVICE</td>
<td>9,432,509</td>
<td>648,882</td>
<td>246,592</td>
<td>6,890</td>
<td>3,500</td>
<td>0</td>
<td>22,398</td>
<td>10,360,871</td>
<td>4.69</td>
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<tr>
<td>ACADEMIC SUPPORT</td>
<td>10,086,185</td>
<td>10,223,696</td>
<td>55,250</td>
<td>396,526</td>
<td>0</td>
<td>0</td>
<td>87,188</td>
<td>20,878,847</td>
<td>9.45</td>
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<tr>
<td>STUDENT SERVICES</td>
<td>6,903,428</td>
<td>855,144</td>
<td>134,050</td>
<td>57,450</td>
<td>5,715,900</td>
<td>44,866</td>
<td>233,734</td>
<td>13,944,382</td>
<td>6.31</td>
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<tr>
<td>INSTITUTIONAL SUPPORT</td>
<td>13,405,512</td>
<td>3,385,954</td>
<td>292,450</td>
<td>41,080</td>
<td>0</td>
<td>329,492</td>
<td>220,460</td>
<td>17,854,948</td>
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<tr>
<td>OPERATION OF PLANT</td>
<td>10,651,196</td>
<td>11,683,036</td>
<td>10,886</td>
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<td>0</td>
<td>160,996</td>
<td>22,661,856</td>
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<tr>
<td>SCHOLARSHIPS/FELLOWSHIPS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5,197,988</td>
<td>18,000</td>
<td>0</td>
<td>6,215,988</td>
<td>2.81</td>
</tr>
<tr>
<td>ATHLETICS</td>
<td>3,443,503</td>
<td>2,197,400</td>
<td>1,531,250</td>
<td>25,837</td>
<td>2,913,362</td>
<td>30,996</td>
<td>241,000</td>
<td>10,383,358</td>
<td>4.70</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>160,683,144</td>
<td>37,382,834</td>
<td>3,186,816</td>
<td>1,557,333</td>
<td>15,565,150</td>
<td>1,103,270</td>
<td>1,831,618</td>
<td>221,330,165</td>
<td>100.14</td>
</tr>
</tbody>
</table>
**BUDGET REQUEST FOR FACULTY TYPE EMPLOYEES FOR FY93**

Annual increases required to raise U.W. faculty salaries and benefit increase to AAUP averages over 1, 2, 3 and 4 years, without and with inflation factors:

<table>
<thead>
<tr>
<th>AAUP 1991-92 DATA:</th>
<th>Number of</th>
<th>Annual increases required without annual inflation over number of years:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Average</td>
<td><strong>Univ.</strong></td>
<td>Section I Teaching Wyoming</td>
</tr>
<tr>
<td>Public of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctorial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wyoming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professors</td>
<td>63,527</td>
<td>54,935 261</td>
</tr>
<tr>
<td>Assoc Prof</td>
<td>46,086</td>
<td>43,333 143</td>
</tr>
<tr>
<td>Asst Prof</td>
<td>38,651</td>
<td>38,822 147</td>
</tr>
<tr>
<td>Weighted Average</td>
<td>551</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.64% 7.54% 4.96% 3.70%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.35% 3.13% 2.07% 1.55%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-0.44% -0.22% -0.15% -0.11%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.94% 4.33% 2.85% 2.13%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>One Year Increase %-age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors 5.09%</td>
</tr>
<tr>
<td>Assoc Prof 4.74%</td>
</tr>
<tr>
<td>Asst Prof 4.52%</td>
</tr>
<tr>
<td>Weighted Average</td>
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<tr>
<td></td>
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</tbody>
</table>

**Average salary including benefit increase was computed by the average of the rank times 3.71 percent plus the average divided by $540.**

**Note:** U.W. Averages were calculated from FY92 section I faculty salaries converted to AAUP salaries. In addition, only those Faculty employees whose IPEDS flag was set to "Y" were reported.
<table>
<thead>
<tr>
<th></th>
<th>FY 93 ADJUSTED BASE</th>
<th>FY 94 ADJUSTED BASE</th>
<th>1993-1994 REQUEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 92 FACULTY SALARY BASE</td>
<td>41,407,873.00</td>
<td>7.84%</td>
<td>7.84%</td>
</tr>
<tr>
<td>FY 92 ADMIN SALARY BASE</td>
<td>1,909,000.00</td>
<td>7.84%</td>
<td>7.84%</td>
</tr>
<tr>
<td>FY 92 STAFF SALARY BASE</td>
<td>18,258,000.00</td>
<td>7.84%</td>
<td>7.84%</td>
</tr>
<tr>
<td>ESTIMATED PT FACULTY/ACAD PROF</td>
<td>1,317,000.00</td>
<td>7.84%</td>
<td>7.84%</td>
</tr>
<tr>
<td>ESTIMATED PT STAFF</td>
<td>2,137,000.00</td>
<td>7.84%</td>
<td>7.84%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>65,028,873.00</td>
<td>70,127,136.54</td>
<td>75,625,104.16</td>
</tr>
</tbody>
</table>

**FUNDING REQUIRED**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>SALARY REQUEST</td>
<td>10,596,231</td>
</tr>
<tr>
<td>EMPLOYER PD BENEFITS @ 25%</td>
<td>2,649,058</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>13,245,289</td>
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FY 1993-1994 SUMMARY OF CAPITAL CONSTRUCTION PRIORITIES

The following capital projects are recommended, in priority order, by the University Budget Council to the President of the University of Wyoming.

A detailed project description of each project recommended for funding follows this summary.

<table>
<thead>
<tr>
<th>CAPITAL PROJECT</th>
<th>FUNDING REQUESTED</th>
<th>APPROPRIATION REQUESTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred Maintenance</td>
<td>$20,000,000 +</td>
<td>$4,254,070</td>
</tr>
<tr>
<td>Continuing Projects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Mineral Research/Reclamation</td>
<td>17,905,500</td>
<td>-</td>
</tr>
<tr>
<td>b. Law Library</td>
<td>940,000</td>
<td>-</td>
</tr>
<tr>
<td>c. Animal Science Teaching Arena</td>
<td>3,500,000</td>
<td>-</td>
</tr>
<tr>
<td>Capital Adaption/Renewal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knight Hall Restrooms</td>
<td>33,000</td>
<td>33,000</td>
</tr>
<tr>
<td>Education Building Access</td>
<td>66,250</td>
<td>66,250</td>
</tr>
<tr>
<td>Extended Studies Access</td>
<td>155,000</td>
<td>155,000</td>
</tr>
<tr>
<td>Phonetics Laboratory</td>
<td>24,850</td>
<td>24,850</td>
</tr>
<tr>
<td>Ivinson Remodel</td>
<td>183,205</td>
<td>183,205</td>
</tr>
<tr>
<td>Teaching and Research Laboratory Renovation and Updates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College of Ag</td>
<td>2,100,000</td>
<td></td>
</tr>
<tr>
<td>College of A&amp;S</td>
<td>2,068,100</td>
<td></td>
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<tr>
<td>College of Ed</td>
<td>2,080,070</td>
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<tr>
<td>Health Sciences</td>
<td>282,670</td>
<td>1,725,385</td>
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<tr>
<td>Classroom and Office Updates</td>
<td>2,784,690</td>
<td>120,000</td>
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<tr>
<td>A&amp;S Building Renovation</td>
<td></td>
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<tr>
<td>- Wiring</td>
<td>91,100</td>
<td>91,100</td>
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<tr>
<td>Ag 'C' Partial Renovation</td>
<td>3,256,000</td>
<td>350,000</td>
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<tr>
<td>Model Pharmacy Renovation</td>
<td>174,000</td>
<td>174,000</td>
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<tr>
<td>Renovation Pharmacy Rooms 106 and 310</td>
<td>17,205</td>
<td>17,205</td>
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<tr>
<td>Education Renovation/WWRC -Relocation and Center of Pedagogy</td>
<td>1,033,990</td>
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<tr>
<td>Library Audio/Visual Expansion</td>
<td>242,595</td>
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<tr>
<td>Training Room Handicapped Access</td>
<td>15,000</td>
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<tr>
<td>Animal Quarters Renovation - Pharmacy</td>
<td>33,130</td>
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<tr>
<td>Sign Language Laboratory</td>
<td>67,250</td>
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<tr>
<td>Renovation - Fine Arts</td>
<td>761,980</td>
<td>319,170</td>
</tr>
<tr>
<td>Project Description</td>
<td>Amount</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Indoor Tennis Court - Renovation</td>
<td>111,580</td>
<td></td>
</tr>
<tr>
<td>Elevator Access - A&amp;S, History, &amp; Biochemistry</td>
<td>603,920</td>
<td></td>
</tr>
<tr>
<td>Wyoming Hall Accessible Restrooms</td>
<td>12,000</td>
<td></td>
</tr>
<tr>
<td>Anthropology Building Access</td>
<td>25,000</td>
<td></td>
</tr>
<tr>
<td>Auditorium Accessibility, C&amp;I, Ag and Education Buildings</td>
<td>27,930</td>
<td></td>
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<tr>
<td>Storage Renovation–Library</td>
<td>647,775</td>
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<tr>
<td>Coe Library Renovation</td>
<td>2,830,000</td>
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</tr>
<tr>
<td>Renovation A&amp;S Building &amp; Auditorium</td>
<td>1,747,225</td>
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<tr>
<td>Renovation Science Library</td>
<td>466,370</td>
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<tr>
<td>Center For Teaching Excellence–Kappa Delta House–Renovation</td>
<td>300,000</td>
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<tr>
<td>Western Wyoming College – Outreach Facilities</td>
<td>150,000</td>
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<tr>
<td>Wyoming Water Research Center–Renovate 4th Floor Biochem</td>
<td>550,000</td>
<td></td>
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<tr>
<td>Renovate Education Annex</td>
<td>450,000</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td><strong>23,583,295</strong></td>
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</table>

**New Construction Projects (alphabetical order)**

- Animal Science Phase II: 11,287,930
- Coe Library Addition: 1,465,800
- C & I Classroom East: 12,700,000
- New Education Building: 22,708,050
- Environmental Simulation Lab Matching Funds: 10,000,000
- Family Practice Center - Casper Addition: 118,105
- Fine Arts Addition: 5,130,640
- Half Acre Addition: 782,460
- Plant, Soil, & Insect Science Greenhouse Addition: 345,660
- Powell Research/Extension Center Office: 2,616,800
- Science Library Expansion: 1,520,530
- Student Services Building: 10,929,160
- University Farms – Irrigation: 220,000
- Vet Laboratory Offices: 690,130

**Total Requests** $145,327,265

**Total Recommendations** $9,518,160
STATE OF WYOMING
PROGRAM FOR ADVANCE PAYMENT OF HIGHER EDUCATION COSTS

RULES AND REGULATIONS

Section 1. Introduction. The Forty-Ninth Legislature of the State of Wyoming, 1987 General session, enacted Wyoming Statutes §21-16-501 through §21-16-505 creating an Advance Payment Program, AND THE FIFTY-FIRST LEGISLATURE OF THE STATE OF WYOMING, 1991 GENERAL SESSION, AMENDED §21-16-501 THROUGH §21-16-504, for attendance at any one or a combination of public institutions of higher education in the State of Wyoming. Plans under the program will be available for purchase by both residents of the State of Wyoming and non-residents on an after the statutes' effective date of May 22, 1987. The statutes provide for a Committee, which has, as part of its charge, developed these rules and regulations to govern the administration of the Advance Payment Program.

Section 2. Definitions. For the purposes of the rules and regulations for the Program for the Advance Payment of Higher Education Costs, the following definitions shall apply:

(a) "Advance Payment Contract" shall mean a contract entered into by the Program Administrator and a purchaser to provide for 1. the costs of tuition, fees and room and board, OR 2. THE COSTS OF TUITION of a beneficiary at an Wyoming public institution of higher education;

(b) "Beneficiary" shall mean the individual designated within the advance payment contract to receive 1. tuition, fees and room and board, OR 2. TUITION at an institution of higher education;

(c) "Benefits" shall mean the payment of 1. tuition, fees and room and board, OR 2. TUITION on behalf of a beneficiary for attendance at an institution of higher education;

(d) "Committee" shall mean the Program Administrator, the Treasurer of the State of Wyoming and the Executive Director of the Wyoming Community College Commission;

(e) "Community College" shall mean any institution of higher education in Wyoming established by the Wyoming Community College Code of 1985, Wyoming statutes §12-18-101 (1986);

(f) "Full-time Student" shall mean any student qualifying for full-time status under the respective full-time student definition of the institution of higher education of attendance;

(g) "Institution of Higher Education" shall mean the University of Wyoming or a community college within Wyoming;
(h) "Plan Purchase Price" shall mean the one-time advance payment to be made to the Program Administrator on behalf of a beneficiary;

(i) "Plan Year" shall mean the period from August 1 through July 31 of any year;

(j) "Program" shall mean the Program for the Advance Payment of Higher Education Costs contained in Wyoming Statutes §21-16-501 through §21-16-505 (1986), as may be hereafter amended or revised;

(k) "Program Administrator" shall mean the Deputy Treasurer of the Trustees of the University of Wyoming;

(l) "Purchaser" shall mean an individual or a legal representative of an individual who has made an advance payment of 1. tuition, fees and room and board, or 2. TUITION costs on behalf of a beneficiary pursuant to an advance payment contract;

(m) "Room and Board Costs" shall mean the amount assessed for lodging and regularly scheduled meals, or the equivalent of same, provided to students pursuant to a contract for room and board with an institution of higher education;

(n) "Tuition" shall mean the amount assessed for full-time enrollment at an institution of higher education, including mandatory fees imposed upon all full-time students as a condition of enrollment;

(o) "Undergraduate" shall mean any student who has not earned the bachelor's level degree from any institution of higher education in the State of Wyoming, or outside the State;

(p) "University" shall mean the University of Wyoming established by Wyoming Statutes §21-17-101 (1986);

Section 3. Program Administration.

(a) Program Administrator

   (i) The Program Administrator shall be responsible for administration of the program subject to the provisions of:

      (A) Wyoming Statutes §21-16-501 through §21-16-505;

      (B) The rules and regulations contained herein;

      (C) The University Investment Policy of the Trustees of the University of Wyoming.
(ii) The Program Administrator shall provide for:

(A) An accounting and reporting to purchasers of payments deposited and invested; PROOF OF PAYMENT AND COPY OF COMPLETED CONTRACT TO THE PURCHASER;

(B) A report to the Legislature of the State of Wyoming on the status of the advance payment account and any shortfalls experienced by the advance payment account in the payment of benefits.

(iii) The Program Administrator shall determine and notify each Committee member of the time, date and place of each meeting of the Committee and shall cause to have prepared an agenda for each meeting. The agenda shall be submitted to each member of the Committee seven (7) calendar days in advance of a scheduled meeting.

(iv) The Program Administrator shall be responsible for maintaining accurate records of the meetings of the Committee.

(v) The Program Administrator shall be responsible for the review and approval of any requests FROM BENEFICIARY OR PURCHASER for the modification of existing advance payment contracts.

(b) Committee

(i) The Committee is responsible for:

(A) The promulgation of rules and regulations for the administration of the program. Such rules and regulations shall not be effective until approved, by majority vote, and OF both the Trustees of the University of Wyoming and the Wyoming Community College Commission.

(B) Meeting four times annually in the months of June, September, December and March. The agenda for each of these meetings shall include the following business items:

(I) June:

(1.) Investment review

(2.) Set plan rates and interest accrual/ discount rate for the quarter beginning August 1

(II) September:

(1.) Investment review
(2.) Set plan rates and interest accrual/discount rate for the quarter beginning November 1

(3.) Semi-annual review of program participation

(III) December:

(1.) Investment review

(2.) Set plan rates and interest accrual/discount rate for the quarter beginning February 1

(3.) Overall program and plan review

(4.) Prepare annual report for presentation to State Legislature

(IV) March:

(1.) Investment review

(2.) Set plan rates and interest accrual/discount rate for the quarter beginning May 1

(3.) Semi-annual review of program participation

(4.) Review any legislative action affecting program and implement changes as required

(V) In addition to the above items, the agenda may also include any other pertinent business matter.

(ii) The records of the Committee shall be public and open to inspection.

(iii) The meetings of the Committee shall be open to the public, and provision for public comment shall be made at each Committee meeting.

(c) Plans

(i) The Program Administrator shall enter into contracts with purchasers for the advance payment of 1. tuition, fees and on-campus room and board on behalf of a beneficiary for attendance at or a combination of public institutions of higher education in the State of Wyoming, without further tuition, fees and on-campus room and board costs to the beneficiary; OR, 2. FOR THE ADVANCE PAYMENT OF TUITION ON BEHALF OF A BENEFICIARY FOR ATTENDANCE AT ONE OR A COMBINATION OF PUBLIC INSTITUTIONS OF HIGHER EDUCATION IN THE STATE OF WYOMING, WITHOUT FURTHER TUITION COSTS TO THE
BENEFICIARY, subject to the determination of residency status for tuition payment purposes by the appropriate institution of higher education, and the applicability of the plan purchased to the institution of attendance.

(ii) Plans available under the program are available for purchase by residents of the State of Wyoming and non-residents.

(iii) Plans guaranteeing BENEFICIARY resident rates:

(A) A plan purchased for a beneficiary for attendance at the University, who, at the time of purchase, qualifies for tuition assessment at resident rates under Chapter VIII, Section 3(a)(7) of the Regulations of the Trustees of the University of Wyoming, as revised April 11, 1986, shall be guaranteed tuition assessment at resident rates at the University for the life of the contract. Plans purchased under this condition must include a photocopy of the beneficiary's birth certificate and a completed request for in-state status form. THIS GUARANTEE IS NON-TRANSFERABLE TO SUBSTITUTE BENEFICIARIES.

(B) A plan purchased for a beneficiary for attendance at Northwest Community College, who, at the time of purchase, qualifies for tuition assessment at resident rates under Northwest Community College Board of Trustees Policy on the residency status of sons and daughters of alumni (adopted May 12, 1986), shall be guaranteed tuition assessment at resident rates at Northwest Community College for the life of the contract. THIS GUARANTEE IS NON-TRANSFERABLE TO SUBSTITUTE BENEFICIARIES.

(iv) The plans available under the program shall be:

(A) A maximum of four (4) regular academic terms at any community college in the State of Wyoming;

(B) A maximum of eight (8) regular academic terms at the University;

(C) A maximum of eight (8) regular academic terms of combined community college in the State of Wyoming and the University.

(v) Plans will be based on utilization of benefits starting the fall term ten (10) to seventeen (17) years from the date of purchase.

(vi) The plans will be available for undergraduate study (freshman through senior years) only. Plans for graduate study or combination undergraduate and graduate study are not available for purchase. Plans for summer terms are not available for purchase; but a beneficiary may, under special circumstances, request a contract modification to allow use of benefits during a summer term at summer tuition, fees and room and board costs with no refund of the difference between summer and regular academic term benefits.
(vii) The plan year for all available plans is August 1 through July 31.

(d) Rates

(i) Quarterly, the Committee shall set rates for one regular academic term for:

(A) Resident:

(I) Any community college

(II) The University

(B) Non-resident:

(I) Any community college;

(II) The University; and

(C) The rates set shall apply to the fall regular academic term seventeen (17) years from the date set.

(ii) In establishing the rates for the various plans, the Committee may consider pertinent information, including but not limited to the Consumer Price Index, Wyoming Consumer Price Index, Higher Education Price Index, Treasury Note and Bond Rates and Yields, the Census Bureau Volume of Long Term Economic Growth, the Business Conditions Digest, and plan performance (investment record) to date.

(e) Plan Purchase Price

(i) The plan purchase price shall be determined by utilizing the established rates in the combination needed to complete the plan being purchased.

(ii) A purchaser may purchase a plan at its established purchase price anytime during the first two weeks of the plan year. Purchases after the first two weeks shall be at the plan's established purchase price plus interest accrual at the approved rate.

(iii) A purchaser may purchase a plan for utilization of benefits starting the fall term ten (10) to seventeen (17) years from the date of purchase, at the plan’s established purchase price plus interest compounded annually at the rate of ten percent (10%) for each year less than seventeen (17) years.

(iv) The form of payment by purchaser to the Program Administrator shall be cash, personal check, cashier's check, money order, or registered check only.
(f) Beneficiary

(i) The beneficiary shall be the individual named, in the advance payment contract by the purchaser, to be the recipient of benefits under the program.

(ii) Benefits, as stated herein, shall be paid on behalf of the beneficiary.

(iii) Any time during the life of the contract, the purchaser may substitute another individual for the named beneficiary.

(iv) Payment of benefits or refund will be made directly to the beneficiary where such payment, under specified circumstances, has previously been requested by the purchaser.

(g) Benefits

(i) An amount equal to TUITION on-campus room and board, as a direct payment or equivalent, plus fees and specified tuition; OR TUITION ONLY, shall be paid on behalf of the beneficiary, in accordance with the contract, each regular academic term the plan is in effect. The summer term, for purposes of this program, shall not be considered as a regular academic term.

(ii) The determination of residency status, for tuition payment purposes, of the beneficiary at the time of plan purchase is not guaranteed, other than as stated herein, to IN SECTION 3, PART (c)(iii) AT PAGE 5. THE RESIDENCY OF the beneficiary SHALL BE DETERMINED at the time of proper application to the institution of higher education of desired attendance.

(iii) The residency status, for tuition payment purposes, of beneficiary shall be determined at the time proper application FOR ADMISSION is submitted to the institution of higher education of desired attendance.

(iv) The total amount to be paid, on behalf of a beneficiary, shall be determined by the combination of the benefit plan of the advance payment contract purchased, the institution of higher education of attendance and the residency status; for tuition, fees and room and board payments purposes; of the beneficiary; and

(A) If the benefit purchased is not sufficient to pay the total of tuition, fees and on-campus room and board or its equivalent; CHARGES COVERED BY THE BENEFIT PLAN, either due to a change in:

(I) The specific institution of higher education of attendance; or

(II) The residency status, for tuition payment purposes, of the beneficiary, then the beneficiary shall be responsible for any resulting shortfall; or
(B) If the benefit purchased exceeds the total of tuition, fees and on-campus room and board or its equivalent, CHARGES COVERED BY THE BENEFIT PLAN, either due to a change in:

(I) The specific institution of higher education of attendance; or

(II) The residency status, for tuition payment purposes, of the beneficiary, then the Program Administrator shall pay only the total of tuition, fees and on-campus room and board or its equivalent, CHARGES COVERED BY THE BENEFIT PLAN of the beneficiary.

(v) The advance payment contract shall carry a maturity date equal to the first year benefits are available plus six years. If all benefits have not been utilized by the maturity date, the Program Administrator shall terminate the contract and refund to the purchaser a pro-rata share of the advance payment plus interest compounded annually at four percent (4%) adjusted for benefits utilized.

(vi) At any time during the contract period, the purchaser may substitute another individual for the originally named beneficiary, but the advance payment contract shall not be sold or otherwise transferred by the purchaser or beneficiary.

(vii) Upon written request to the Program Administrator, the purchaser may terminate the contract at any point during the contract’s life;

(A) If termination is prior to any utilization of benefits by the beneficiary, the purchaser shall receive, within sixty (60) days, a refund equal to the advance payment together with interest compounded annually at the rate of four percent (4%), or,

(B) If termination if after partial utilization of benefits by the beneficiary, the purchaser shall receive, within sixty (60) days, a refund equal to the advance payment together with interest compounded annually at the rate of four percent (4%) adjusted for benefits utilized.

(viii) Upon written notice to the purchaser, the Program Administrator shall terminate the contract and refund, within sixty (60) days, to the purchaser, to any person designated by the purchaser by contract or to the legal representative of the purchaser, the advance payment together with interest compounded annually at the rate of four percent (4%) if termination is prior to any utilization of benefits by the beneficiary; or, the advance payment together with interest compounded annually at the rate of four percent (4%) adjusted for benefits utilized if termination occurs after partial utilization of benefits by the beneficiary when:

(A) The beneficiary dies and the purchaser does not substitute another individual for the originally named beneficiary;
(B) The beneficiary is not admitted to a public institution of higher education upon proper application;

(C) The beneficiary elects not to attend a public institution of higher education in the State of Wyoming;

(D) The beneficiary elects not to exercise his/her rights under the contract and the purchaser does not name another beneficiary.

(h) Guarantees

(i) The purchaser is guaranteed that EITHER 1. payment equal to TUITION, on-campus room and board, fees and specified tuition (resident/non-resident), OR 2. PAYMENT EQUAL TO TUITION will be made on behalf of the beneficiary to the specified institution of higher education in the State of Wyoming in accordance with the terms of the contract. Such payment shall be made for each regular academic term purchased by the purchaser.

(ii) The purchaser is not guaranteed the beneficiary will:

(A) Be admitted to a public institution of higher education in the State of Wyoming;

(B) If admitted, be determined a resident for tuition purposes by the admitting public institution of higher education in the State of Wyoming;

(C) Be allowed to continue attendance at a public institution of higher education in the State of Wyoming; or,

(D) Graduate from a public institution of higher education in the State of Wyoming.

(i) Receipt, Deposit and Accounting for the One-Time Advance Payment

(i) The Advance Payment Program requires a one-time single sum payment to be made by the purchaser. The one-time payment shall be receipted by the University of Wyoming and deposited into an account(s) established specifically for the Advance Payment Program within the University of Wyoming permanent Endowment Fund. An individual record for each one-time advance payment shall be maintained by the University of Wyoming.

(j) Investments

(i) All funds received in payment under the Advance Payment Program plus earned income will be invested in accordance with University of Wyoming Investment Policy.
(ii) The University of Wyoming shall periodically review the investment history and perform tests and evaluations on benefit coverage. Such reviews and evaluations shall be provided to the Committee for review and recommendation.

(iii) The administrative costs associated with the administration of the program, to include investment counsel, investment management and other administrative costs shall be paid by the program, not to exceed two percent (2%) of investment earnings accruing to the program.

(k) Fund Ownership

(i) The purchaser shall retain ownership of the one-time advance payment up to utilization of benefits by the beneficiary; or, in the case of partial utilization of benefits, the one-time advance payment adjusted for benefits utilized by the beneficiary through the benefit period.

(ii) If the advance payment contract is terminated prior to utilization of benefits by the beneficiary, the purchaser shall retain ownership of the one-time advance payment plus interest compounded annually at the rate of four percent (4%); or, if termination is after partial utilization of benefits by the beneficiary, the one-time advance payment plus interest compounded annually at the rate of four percent (4%) adjusted for benefits utilized.

(iii) The beneficiary shall obtain ownership of the benefit amount (benefit paid per regular academic term) at the time each benefit is paid.

(iv) Any amounts contained within the Advance Payment Program not listed above shall be owned by the program.

(l) Other Provisions

(i) During any given benefit year, if the funds available for benefit payments exceed the funds required to meet such payments, then the Program Administrator shall maintain the resulting excess in the investment pool to be available for addressing possible shortages in future years.

(A) During any given benefit year, if the funds available for benefit payments are not sufficient to meet such required payments, then the Program Administrator may include any excess funds retained from previous years in a pro-rata distribution of available funds to the specified institution(s). If a shortage still exists after the pro-rata distribution or if a shortage is not addressed by supplemental State appropriations, each respective institution shall be required to absorb any remaining shortfall. The purchaser and/or beneficiary will not be required to make up any such identified shortfall.
(ii) Refunds shall be made, within sixty (60) days, directly to the purchaser or legal representative unless directed by the purchaser IN WRITING to refund to the beneficiary or other individual.

(iii) Benefit payments shall be made, on behalf of the beneficiary, directly to the appropriate institution of higher education one week prior to the first day of the regular academic year.

(A) Benefit payments shall be made directly to the beneficiary, by the attending institution, in those instances where the beneficiary receives other financial assistance for the payment of tuition, fees and room and board and where such payment has previously been requested by the purchaser.

(iv) The Financial Aids Office of the attending institution shall be notified of the beneficiary’s benefit during the month of March prior to each eligible benefit year.

(v) The payment of benefits or refunds under the Advance Payment Program may be subject to taxation under the Internal Revenue Code. The extent to which benefits and refunds may be taxed, and under what circumstances, cannot be determined with certainty as of the issue date of these rules and regulations, and the purchaser/beneficiary assumes full responsibility for any subsequent tax liability. However, it is the intent of the Program Administrator and Committee to administer this program in a manner that will minimize or eliminate exposure to taxation, particularly for benefit payments, to the fullest extent possible.

These rules and regulations for the administration of the Advance Payment of Higher Education Costs Program shall not be effective until approved, by majority vote, by both the Trustees of the University of Wyoming and the Wyoming Community College Commission, and promulgated pursuant to the Wyoming Administrative Procedure Act.

APPROVED:

______________________________  ________________________________
University of Wyoming           Wyoming Community College Commission

______________________________  ________________________________
Date                          Date

11
ON-GOING UNIVERSITY REALLOCATION PROCESS
July 18, 1991

Introduction

University of Wyoming Trustee President, Bryan Sharatt, opened the December 8, 1990 committee meeting with the observation that University reallocation "...is a continuing process."

The reallocation process was driven by the reality that the University had lost nearly 20 percent of its purchasing power against the Higher Education Price Index, while experiencing a 10 percent increase in students during the period 1984-1990. This combined impact resulted in a roughly 30 percent decline in the University's budgetary resources.

The National Center for Higher Education Management Systems (NCHEMS) confirmed the budgetary problems facing the University. In December 1989, NCHEMS recommended three initiatives to address existing budgetary problems:

- Internal reallocations and reductions
- Charging higher tuition and gathering more funds from development activity; and
- Receiving greater legislative support.

The first step of the University internal reallocation process is being implemented effective FY 92. This step involves internal reallocations, program reductions, tuition increases, heightened development activity and expanded requests for legislative support. Three other steps which define the University's ongoing internal reallocation process are also underway.

The purpose of this narrative is to summarize these four reallocation steps within the context of the University of Wyoming's biennial budget process for FY 93-94.

Step 1: FY 92 Reallocations

The University Trustees have approved revenue enhancement proposals through increased funding and program reductions or eliminations. In addition, they have identified other programs which will be enhanced by the reallocation of these funds.

For FY 92, internal reallocation and revenue enhancements will result in a shift of approximately $3 million to the institution's highest needs. During this year, 17.5 faculty positions have been targeted as part of the reallocation process.
Step 2: Reallocation Schedule for FY 93 through FY 96

The University's reallocation process also identified a series of internal reallocations which will be carried out annually from FY 93 through FY 96.

This step in the institution's reallocation process is premised upon completing the process initiated in 1990. It is anticipated that these changes will result in the reallocation of an additional $3 million as well as 7.93 faculty and 2.5 staff lines.

Step 3: ARC Recommended Program and Curricular Reviews

The University administration is pursuing recommendations approved by the Trustees which address program and curricular issues. For example, these reviews include:

- expand course offerings, particularly in the life sciences, in support of the University Studies Program;

- review scheduling practices of under-enrolled classes to better utilize faculty resources;

- evaluate graduate programs which have low enrollments to ascertain whether such options could be consolidated or replaced by interdisciplinary degree programs;

- complete the reorganization of the College of Business by a through review of its functions and development of a mission statement;

- develop a marketing plan to raise the number of majors in College of Engineering to 1,300;

- decide whether to eliminate the physical education activity requirement;

- examine the status of the undergraduate social work degree program (this issue was delayed pending the appointment of a new Health Sciences dean);

- analyze the ARC, Deans' Council and Extension Administrators' recommendations to consolidate the extension organizations administratively under the Provost;

- request that task force members develop and recommend guidelines for academic job descriptions, teaching responsibilities, evaluation of teaching activities and a reward structure for instructional excellence.
In addition to the above Trustee approved recommendations which are under review, the following reallocation decisions have been implemented:

- Implemented new Summer Session organizational structure and budgeting structure;
- Deans' Council has outlined criteria for addressing closed classes through shifting faculty resources based upon the pre-registration process as well as spreading classes throughout the day;
- Multi-college Task Force has addressed the question of teaching improvement through the proposed Center For Teaching Excellence, which will be funded with Wyoming Educational Trust Fund and reallocation monies;
- Registration Committee has developed a plan to improve the University's registration process (first steps implemented Summer 1991 and subsequent steps during 1991-92 academic year);

Step 4: On-Going Reallocation Process

The University is committed to an on-going reallocation effort which will be embodied in a regular program review and strategic planning process.

The purpose of the future effort will be to identify high-priority needs in teaching, research and service which can be met with enhancements from new funding sources or reallocation from lower-priority activities. Included in this process will be the reallocation of human and financial resources to provide a cost share for the Wyoming Educational Trust Fund monies which will be available to the University in the future.

The on-going process will be integrated primarily into the University's biennial budget process. In alternate years, Deans and Vice-Presidential level administrators will systematically identify high needs and areas from which resources may be reallocated based upon changing circumstances.

The University is presently engaged in an evaluation of its biennial budget planning process. This evaluation, which involves the University Budget Council representing faculty, staff and the administration, will develop the guidelines for the on-going program review and the integration of these procedures into the biennial budget planning process.

The goal will be to ensure that individual programs within each University department or unit are reviewed on a regular basis without the onerous effort required by the process involving the ARC and NARC reallocation endeavor.
UNIVERSITY OF WYOMING
EMPLOYEE SUGGESTION AWARD PROGRAM
RULES AND REGULATIONS

CHAPTER I
GENERAL PROVISIONS

Section 1. Purpose. The Suggestion Award Program is established to recognize employees with monetary or other types of awards who contribute suggestions that reduce expenditures, increase revenues or productivity, eliminate safety hazards, improve efficiency in University operations and services or result in other benefits to the University.

Section 2. Authority. The Suggestion Award Program is authorized by W.S. 9-2-1034. This law (attached) establishes a Suggestion Award Board (hereafter referred to as "Board") composed of the University Board of Trustees.

Section 3. Responsibilities.

(a) Suggestion Award Board. The Board shall be responsible for the following:

(i) Adoption of rules and regulations, including criteria for making awards.

(ii) Administration of the program to ensure uniformity and consistency throughout the University.

(iii) Making final decision as to eligibility of employees or suggestions for awards.
(iv) Making final decision as to whether an award shall be made and the type and amount of the award.

(v) Appointment of a Suggestion Award Coordinator.

(b) Suggestion Award Coordinator. The Suggestion Award Coordinator shall be responsible for:

(i) Acting as liaison with the Board.

(ii) Receiving and processing suggestions, including screening for duplication of suggestions.

(iii) Conducting initial eligibility determination of employees or suggestions for an award.

(iv) Forwarding suggestions to appropriate Department Heads for evaluation.

(v) Receiving evaluation results and reporting all problems, issues, disputes and status of suggestions to the Board.

(vi) Monitoring evaluation status of suggestions and keeping suggestors informed.

(vii) Developing and maintaining a recordkeeping system and monitoring results of the program.

(viii) Notifying the Board of the Department's intent to adopt/reject a suggestion and the Department's recommendation.

(c) Department Head. The Department Head shall be responsible for the following:
(i) Notifying the Suggestion Award Coordinator of the Department's intent to adopt/reject a suggestion and recommending type and amount of award for the adopted suggestion with sufficient documentation to support recommendation.

(ii) Ensuring that suggestions are fairly evaluated and implemented within a reasonable timeframe.

(iii) Encouraging employees to participate in the Suggestion Award Program.

(d) The Department Head may appoint a Department Coordinator to act as the liaison between the department and the Suggestion Award Coordinator and coordinate the program within the department.

(e) The Department Head may appoint an Evaluation Committee to assist in the investigation and evaluation of suggestions and recommendations for type and amount of award. The size and membership of such a committee shall be determined by the Department Head.

(f) **Administrative Functions.** The Board may authorize the Suggestion Award Coordinator to make the day-to-day decisions involving the administration of the program. This may include, but not be limited to, eligibility of suggestions and suggestors, referral of suggestions to appropriate departments, and responding to questions or problems.

(g) All final decisions shall be made by the Board and are not subject to appeal through grievance or other employee dispute resolution procedures.
CHAPTER II
ELIGIBILITY REQUIREMENTS

Section 1. Eligibility Requirements for Suggestors.

(a) All active and retired employees of the University are eligible to participate in the Suggestion Award Program, except as excluded in (b).

(b) Employees excluded by W.S. 9-2-1034 from receiving monetary awards are: University of Wyoming deans, directors, department heads, vice presidents and the president.

(c) Employee eligibility for awards shall be measured in terms of assigned or expected job duties or responsibilities. An employee shall not be eligible for an award for a suggestion under the following conditions:

(i) Suggestions arising from employees who have been assigned research, planning, investigation, management analysis or problem resolution as a normal part of their job duties, unless the suggestion is outside the scope of the suggestor's assigned or normal duties and responsibilities.

(ii) Suggestions from supervisory personnel pertaining to the employee's work unit unless the suggestion requires approval of a higher authority to implement or if the suggestion applies to work units beyond the suggestor's area of responsibility.

(d) The Board shall have the final authority to determine if a suggestor is eligible to receive a monetary or other type of award. Eligibility information may be solicited from the Suggestion Award Coordinator.

Section 2. Eligibility Requirements for Suggestions.
(a) Suggestions shall be submitted on the prescribed form and shall identify a problem or area in which cost savings, productivity or efficiency can be improved, recommend a specific action to resolve the problem or improve the situation and describe the expected savings or benefits to the University.

(b) Suggestions of the following types shall not be eligible for award consideration:

(i) Correction of a condition that exists only because established procedures or policies are not being followed.

(ii) An award has been granted for the suggestion previously.

(iii) The suggestion is too vague or ambiguous to be properly evaluated or implemented as written, or no method or procedure to implement the suggestion has been proposed.

(iv) The suggestion where the concern can be reduced by routine maintenance, repair or housekeeping of buildings, equipment or grounds which may be reported through normal channels.

(v) Personal complaints, grievances, opinions or issues.

(vi) Suggestions requiring legislative action. If legislation is passed implementing the idea, the suggestor may be considered for an award by the Board.

(vii) Ideas under active consideration by management, i.e., management is actively considering the idea prior to the suggestion being made. Documentation of prior consideration must be made available by management upon request of the Board.

(viii) The employee has obtained a patent on the idea or has claimed copyright thereon.
(ix) Suggestions which are a result of assigned or contracted audits, studies, surveys, reviews or research.

(x) Suggestions concerning employee classification and compensation other than those involving procedure or administration.

(xi) Suggestions to eliminate, lower or raise fees or taxes levied by the State.

(xii) Suggestions dealing with new procedures or programs which have been in effect for less than six (6) months.

(xiii) Criticism of other employees or their work performance.

(xiv) Recommend a "study or survey or review" with the course of action to be taken in accordance with the findings.

(c) Eligibility information on suggestions may be solicited from the Department Head.
CHAPTER III
AWARDS

Section 1. Award Types.

(a) Awards may be given to employees for suggestions that result in either measurable savings or other benefits to the University. Awards may be either monetary or nonmonetary. Monetary awards shall be for savings that can be calculated using a cost/benefit analysis within limits prescribed by W.S. 9-2-1034 and these rules. Nonmonetary awards shall be for intangible benefits for which a cash savings cannot be calculated.

(b) Awards shall be based on savings or benefits realized by the University in the first twelve (12) months following the date the suggestion is implemented.

(c) Awards shall be given to eligible employees whose suggestions are adopted and successfully implemented by a University department or departments.

Section 2. Monetary Awards.

(a) Monetary awards shall be limited to ten percent (10%) of the first year's estimated annual net savings, or one thousand dollars ($1,000.00), whichever is less. The minimum monetary award shall be twenty five dollars ($25.00). A certificate of recognition shall be given with all monetary awards.

(b) Suggestions that result in estimated net annual savings of two hundred fifty dollars ($250.00) or less shall be eligible for a monetary award of $25.00 if approved.

(c) Net annual savings shall be certified by the evaluating department and Suggestion Award Coordinator and verified by the Board. Net annual savings shall be determined by subtracting the cost to implement a suggestion
from the estimated gross savings for the first year after the suggestion has been adopted.

(d) Monetary awards shall be paid by the principal benefiting department or departments from the amount of funds or appropriated money saved or increased by implementing the suggestion.

(e) The Board shall identify the department or departments who shall be the principal beneficiary of the suggestion. If other departments are able to benefit from the suggestion, the Board shall determine if the monetary award shall be prorated among the benefiting departments. Suggestions become the property of the University and can be used in State agencies with no additional monetary award.

(i) The total amount of a monetary award for a single suggestion paid by one or more departments shall not exceed one thousand dollars ($1,000.00).

(f) Monetary awards shall be considered as taxable income and all appropriate federal income and FICA taxes shall be withheld.

(g) Monetary awards shall normally be paid upon initiation of a suggestion based on estimated net savings for one year following implementation. If a monetary award amount cannot be reasonably and accurately calculated, the department with the Board's permission, may elect to pay in the following manner.

(i) A partial payment may be granted the suggestor, upon initiation of the suggestion. The remainder of the monetary award shall be paid in a lump sum when total savings are documented. No interest shall be paid on that portion which is yet to be awarded.

(h) Employees not eligible for a monetary award shall be eligible for a certificate of recognition or other type of award (Reference Chapter III,
Section 3) at the discretion of the Board.

Section 3. Awards for Intangible Benefits.

(a) Nonmonetary awards shall be given to employees for implemented suggestions that result in improved operations, safety, employee morale, service, public relations or other intangible benefits to the University which cannot be measured by monetary savings or generated revenue.

(b) Awards for an intangible suggestion shall be either a certificate of recognition and/or annual leave not to exceed three (3) days.

(c) Annual leave awarded for adopted suggestions shall be in addition to regular leave earnings. Annual leave not taken within twelve (12) months of the date of award shall be canceled. No portion of this leave shall be included in any separation leave payments.
CHAPTER IV
CONDITIONS IN THE PROCESSING OF SUGGESTIONS

Section 1. Joint Submission of Suggestions.

(a) A suggestion submitted by a group of employees shall be treated as if the suggestion has been submitted by one employee and any award will be divided equally among the eligible employees. A suggestion form submitted by a group of employees must bear the names and signatures of all individuals involved.

Section 2. Duplicate Suggestions. If duplicate or substantially similar suggestions are submitted, the suggestion with the earliest date of receipt by the Suggestion Award Coordinator shall be eligible for consideration.

(a) If duplicate or substantially similar suggestions are received on the same date, these suggestions shall be considered eligible for consideration and any award shall be shared equally by the eligible suggestors.

(b) The Board shall have final authority in determining the duplication or similarity of suggestions.

Section 3. Modification of Suggestions. If a department modifies an employee's suggestion and initiates the suggestion in a different form, the employee shall be eligible for an award if the employee's suggestion was directly responsible for the action taken by the department's management. The award shall be made on the basis of the suggestion's contribution or impact on the implemented process or procedure.

Section 4. Active Life of Suggestions. The active life of an eligible suggestion shall be one (1) year from receipt by the Suggestion Award Coordinator or until final disposition of the suggestion if longer than one
(1) year. To retain eligibility of a nonadopted suggestion for an additional year, the employee shall resubmit the suggestion prior to the expiration of the one (1) year eligibility period. A pending suggestion shall remain eligible for award consideration if adopted during the active time period.

Section 5. Confidentiality. A suggestor may request the confidential treatment of the suggestor's name during the evaluation process. The suggestor's name shall be revealed when intent to adopt the suggestion has been made as the suggestor's eligibility must be assessed in relation to the suggestion when an award is indicated. Anonymity cannot be guaranteed.
CHAPTER V
PROTECTION CRITERIA

Section 1. Rights to Use of a Suggestion.

(a) The use by the University of an employee's suggestion shall not form the basis of a further claim of any nature upon the University by the suggestor, the suggestor's heirs or assigns.

(b) When an award is granted, the suggestion shall be considered the property of the University. The University shall have the right to make full use of the suggestion in any form or within any agency, modified or otherwise, as it sees fit without further claim by the suggestor. The right of the University to use a suggestion shall not in any way be abridged or limited by copyrights or patents.

Section 2. Former or Deceased Employees.

(a) Former employees shall remain eligible for a monetary award if the University adopts the suggestion within one (1) year from the date of receipt of the suggestion by the Board or until the date of final disposition if longer than one (1) year.

(b) In the case of a deceased employee, any monetary award shall be paid to the employee's heirs or estate.
University of Wyoming Employee Suggestion Award Program

A 1990 amendment to Wyoming Statute 9-2-1034 establishes an employee (and retiree) suggestion award program for the University of Wyoming. The program was established for State agencies in 1988. The statute is fairly specific concerning the administration of the awards program. The attached proposed provisions follow the statute and borrow heavily from the current "Rules and Regulations" of the State of Wyoming Suggestion Award Program which is also authorized by the same statute.

The statute is clear on the process of administering the U.W. suggestion award program: "The following boards are created to administer the employee incentive award program: ... The University of Wyoming employee suggestion award board consisting of the university board of trustees; ..." The Board's responsibilities are outlined on page 1, Section 3 (a.).

Representatives of the Faculty Senate, Staff Council, ASUW, UW Retirees, Personnel Services and Legal Office met several times over a period of six months to draft the attached proposal.
14 May 1991

TO: President Terry Roark

FROM: Sonja G. Ringen, Chemical Safety Officer, Safety Officer

SUBJECT: Lead Roofing for American Heritage Center

In my memo of March 7, 1991, I expressed concerns about environmental contamination from the lead roof being proposed for the American Heritage Center. At that time, I was waiting for information from the manufacturer on their studies of lead run-off, and so could give you no specific recommendations.

At the end of April, Roger Baalman, Jack Doerges and I met with Ken Mardick, Vice President of Mayfield Manufacturing Company (a lead roofing manufacturer), Robert Putnam, Environmental Health Consultant and Max Gricevich, Engineer with TCT to discuss information they had on the environmental health considerations of the lead roof.

TCT, an environmental consulting and testing firm, has been doing modeling studies of lead roofing for the Lead Industries Association. Their data shows less than half the lead concentration in environmental run-off than I calculated using figures from an ASTM study. A later ASTM study using lead sheets confirms TCT's data.

Mayfield Manufacturing Co. uses a polymer coating on lead roofing to protect the lead from leaching into environmental moisture while a natural patina forms underneath the coating. Mayfield Manufacturing says that as the polymer wears off over a period of about 7 years, the patina builds up and it minimizes the lead leaching. Studies show undetectable amounts of lead leaching from roofs protected with the polymer. The polymer can be reapplied in the future if deemed necessary.

Robert Putnam told us that some lead will leach off the roof, and although no one can guarantee how much, the impact can be minimized by design of the drainage system. A drainage system for the entire area has already been addressed through formation of two retention ponds for storm water run-off. After overflowing the retention ponds, the run-off joins water in the rest of the area and is highly diluted before reaching Spring Creek and the Laramie River.

Mr. Putnam also addressed the area of risk assessment for this particular roof. Because lead causes health effects in children and primarily through ingestion, in this case, the
assessment would deal with the chance that a child would ingest enough lead-contaminated soil to cause harmful effects. Since it appears that the level of lead in the soil would be much lower than originally calculated, the rate of children playing in the area and the chance of repeatedly ingesting the soil are very low, the risk would be minimal.

From the information that these three gave us, I would agree that a lead roof on the American Heritage Center would cause no serious environmental health effects if the following items are addressed.

The roof should be coated with a protective polymer to minimize the amount of lead that will leach. But because there will still be some lead that leaches off the roof, the drainage system from the building and the area needs to be designed to minimize the impact. This includes design of the retention ponds.

It is known that lead readily absorbs to soil. Analysis of the soils in the area indicate no natural lead occurrences. In order to determine the impact of the run-off, soil samples from the area contacted by the run-off and samples of the run-off itself should be taken and analyzed yearly.

There is still concern about accessibility of the roof to the public. The possibility of someone defacing the roof and depositing lead into the nearby soil, ingesting it or harming the environment somewhere else can be controlled by architecturally limiting the access.

EPA has recently (February 1991) proposed a strategy for reducing lead exposures. One of the major objectives is to significantly reduce unacceptable lead exposures to children, the general public or the environment, and it specifically includes lead-contaminated soil. EPA does take into consideration associated costs and benefits.

If the afore-mentioned items are addressed, the university will minimize the environmental health effects of the lead roof.

cc: Dan Baccari
    Roger Baalman
May 9, 1991
3499-14000

Dr. Robert D. Putnam, CIH
2525 Meridian Parkway
Post Office
Box 12763
Research Triangle Park, North Carolina 27709-2763

Dear Bob:

Attached is a letter report which addresses lead-in-runoff for the proposed museum in Laramie. It includes both “worst case” and more realistic situations.

Under any of the scenarios considered, no problems accruing to lead runoff should occur.

Please pass on copies of this report to Ken Mardick and Jerry Smith. If you have any questions or need additional information, give me a call at (314) 426-0880.

Sincerely,

Max Gricevich
Project Manager

MAG/jam/MG102/4
Attachment
1.0 INTRODUCTION

The University of Wyoming is planning the construction of an American Heritage Cultural Center. Among the alternatives being considered for the Center’s roof is lead sheeting, which is desirable for its durability and adaptability to the architectural application.

The University has expressed some concern regarding the environmental health considerations of using lead roofing. Sonja Ringen, Chemical Safety Officer from the University of Wyoming Safety Office, performed preliminary studies which highlight issues of concern. Her studies are soundly based on ASTM experiments and USEPA health effects guidance. They do, however, focus on hypothetical "worst-case" situations which do not take into consideration site-specific watershed characteristics, treatment of the lead sheeting, or other studies which indicate much lower lead corrosion rates than the ASTM study used.

The purpose of this report is to examine scenarios for projected runoff at the Center which represent more site-specific studies of the situation than Ms. Ringen’s and which take into account a greater number of factors which affect lead concentrations in the runoff.

2.0 STANDARDS AND CRITERIA FOR LEAD IN WATERS

Water quality standards and criteria applicable to lead are listed in Table 1. They range from a low of .034 mg/l for protection of aquatic life to .10 mg/l for general use of surface waters. The state standards for Illinois and Minnesota are included because they are "typical" of most states which regulate lead runoff by state standards. The standards which are currently enforceable are the Federal primary Maximum Contaminant Level (MCL) of .05 mg/l and the standards of the various states, none of which are lower than the Federal MCL. The proposed (or "recommended") MCL is .02 mg/l.

3.0 DESCRIPTION OF STUDY AREA

The proposed American Heritage center would be located in the east-central section of the University of Wyoming campus in Laramie, Wyoming. This section is east of the central core of academic facilities, near the athletic fields and a new arena.

A recent geotechnical investigation [1] performed in this area of the campus indicates that soils are sands, sandy clays, and gravels, all very permeable. Water levels in the area are first encountered at about 30 feet. The East Campus Drainage Study [2], currently being used in studies of potential development in Laramie, identifies the drainage area of which
# TABLE 1

**WATER-QUALITY STANDARDS AND CRITERIA APPLICABLE TO LEAD**

<table>
<thead>
<tr>
<th>Standard or Criterion</th>
<th>Limit or Recommended Not-to-Exceed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Federal</td>
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<tr>
<td>Primary Maximum Contaminant Level (MCL)</td>
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</tr>
<tr>
<td>RCRA Groundwater Protection Goal</td>
<td>.05 mg/l</td>
</tr>
<tr>
<td>Recommended Maximum Contaminant Level</td>
<td>.02 mg/l</td>
</tr>
<tr>
<td>Ambient water Quality Criterion for Protection of Human Health - Toxicity Protection, Ingesting Water and Organisms</td>
<td>.05 mg/l</td>
</tr>
<tr>
<td>Ambient Water Quality Criterion for Protection of Aquatic Life - Freshwater, acute</td>
<td>.034 mg/l</td>
</tr>
<tr>
<td>2. World Health Organization Guideline</td>
<td>.05 mg/l</td>
</tr>
<tr>
<td>3. State of Minnesota Class A Waters</td>
<td>.05 mg/l</td>
</tr>
<tr>
<td><strong>Illinois Water Quality Standards:</strong></td>
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</tr>
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<td>.05 mg/l</td>
</tr>
<tr>
<td>Aquatic Life</td>
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</tr>
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</table>
the study area is a part as Drainage Area Z-9A. Figures 1 and 2 show the general location of the study area and Drainage Area Z-9A, respectively. Drainage Area Z-9A is 31.96 acres in extent and is currently unpaved parking lots and undeveloped area. Plans call for paving of the lots and building construction in the undeveloped area. The hydrologic analyses performed as part of the above-cited drainage study assumed complete pavement of the lots and development of the buildings. Peak flows from the basin were calculated as 10.6 cFs for the 2-year flood and 54.5 cFs for a 100-year flood event.

The basin is tributary to the Willett Drive sewer to the south of the site. The Willett Drive main is not sized to convey the flood-event flows predicted from the basins which are tributary to it in a paved condition. Maximum discharge limitation of 10 cFs has been placed on Area Z-9A as a result. To attain this flow, a retention basin with a capacity of 184,732 ft$^3$ to retain 2-year flood-flows from Drainage Areas Z-9A and Z-9B is planned. From Willett Drive, which will receive the overflow from the retention basin, drainage is conveyed southward along 15th Street to Spring Creek and then to the Laramie River.

### 4.0 DESCRIPTION OF POTENTIAL LEAD SOURCE

The source of lead being considered in this study is a lead roof for the proposed American Heritage Center. The roof, as proposed, would be conical in configuration and have an area of approximately 40,000 square feet.

#### 4.1 Effects of Patenization

The roof would be coated with a polymeric "patinizing agent". As lead corrodes in the presence of air, a coating of lead carbonates, lead sulfides, lead hydroxides, and lead oxides forms. This coating is termed a "patina". "Patinizing agents" encourage the formation of the patina. A "patinizing agent" seals the roof plating from direct exposure to precipitation while allowing gaseous transfer. Thus, it allows corrosion to occur while it minimizes or virtually eliminates "washing off" of the corrosion layer.

The patina is a hard layer of virtually insoluble lead salts forms. The molecules comprising this layer are chemically bound to each other and to the lead layer and are not readily removed by precipitation. Studies [3, 4] performed by the American Society for Testing Materials (ASTM) indicate that this corrosion layer, once formed, protects the lead against further corrosion or mechanical deterioration and that it is fully-formed within a period of 5 to 10 years.

*The effect of a patinizing agent on lead sheeting is, thus, as follows: during the period in which the patinizing coat remains intact, virtually no lead runoff occurs, but corrosion and accompanying formation of an insoluble coating of lead salts occurs. Once this coating is formed, it protects the lead sheeting and largely prevents lead release from it.*
4.2 Corrosion of the Lead Roof

Several studies [3, 4, 5] of lead corrosion rates were consulted for this report. The results of the studies varied widely. Their application to studies of lead contribution to the environment requires caution for a number of reasons. Among these were use of lead rods rather than sheeting in the studies and use of weight and/or thickness of the lead as indices of corrosion. The use of lead rods overestimates corrosion (when results are extrapolated to sheeting), since the surface-to-volume ratio is over three times (i.e., ) greater for rods than sheeting. The use of data which relates lead thickness to corrosion rate as a basis for lead runoff calculations overestimates runoff because of the assumption that the loss in thickness equates to the amount of lead made available for runoff, when, in reality, the corrosion layer formed protects the sheeting from release of lead to runoff. All of the studies do indicate, however, that once a corrosion patina has formed, lead corrosion is quite slow.

The highest corrosion rate among the studies was $4 \times 10^{-6}$ inches/year for raw, uncoated lead. In order to construct a "worst-case" scenario, this rate will be used in the runoff calculations in this study.

5.0 CALCULATION OF POTENTIAL LEAD LEVELS IN RUNOFF

Using the above-cited corrosion rate of $4 \times 10^{-6}$ inches/year as a basis of calculation, approximately 3.75 kg/year from the 40,000 square foot roof would be "corroded". "Corrosion" in this case refers to loss of raw lead through two mechanisms - conversion of lead to insoluble lead salts and physical removal of lead and lead salts through the abrasive or dissolving action of precipitation. The ASTM studies cited indicate that virtually all of the corroded material (the "patina") stays on the panel when exposed to atmospheric conditions. It will be assumed, however, for increased conservatism, that 10% of the corroded material is transported by runoff. Thus, .375 kg/year of lead could be transferred to runoff from the proposed lead roof.

The watershed of which the lead-roofed building is a part is 31.96 acres in extent. Assuming approximately 10 inches of annual rainfall in the watershed, 32,855,399 liters of water should be deposited in the watershed during a 1-year period. Since the watershed in its developed form is to be almost entirely paved, it is reasonable to assume that 90% of this water, or 29,569,859 liters, would run off (i.e., flow through) the watershed. The lead roof, under the extremely conservative scenario constructed, could contribute .375 kg of lead during that period, resulting in an average lead concentration of .013 mg/l in the runoff from the Drainage Area Z-9A watershed. This is less than one fourth of the federal drinking water standard. Since the drainage flow from Area Z-9A will combine with that from several other drainage areas prior to release to the Laramie River, the lead contribution from the proposed roof to the river would be almost undetectable.

It should be noted once again that this scenario is based on an uncoated lead roof. If a roof coated with a patinizing agent is assumed, lead runoff would be far less.
6.0 CONCLUSIONS

Lead runoff from the proposed lead roof is not of concern from an environmental standpoint. No existing or proposed standards would be exceeded and no levels approaching those used in health-effects studies would occur accruing to the roof. Drainage from the roof should, however, be collected and channeled to the drain system rather than being allowed to flow to the ground in an uncontrolled manner to preclude any possibility of lead buildup around the building's periphery.

The highest collection rate seems the smallest, 1% x 104 inches/year for the recycled lead.

In order to conduct a "worst-case" scenario, this rate will be used in the linear calculation of potential.

CONVERSION OF POTENTIAL LEAD LEVELS TO REAL

Using the source conversion rate of 1 x 104 inches/year for the 5,000 square foot roof, would result in a "worst-case" scenario of potential lead concentrations. The VERT model indicates that the potential lead concentrations at 50 years lead into the calculation lead to physical removal of lead and lead-acetate. The resulting lead to the environment will be retained or incorporated. Therefore, the use of lead concentration in the VERT model is not realistic.

To evaluate the potential lead level,
REFERENCES


3. The Use of Lead and Tin Outdoors, G.O. Hiers, ASTM, 1946.


April 16, 1991

Mr. Max Gricevich
Senior Environmental Scientist
TCT - St. Louis
1908 Innerbelt Business Center
St. Louis, Missouri 63114-5700

Dear Max:

Enclosed are copies of corrosion articles, two of which are from ASTM, and probably one of those is the one used by the chemist from the University of Wyoming.

Also enclosed are some items taken from our files dealing with lead carbonate compounds.

I hope this material is not too late for you to use in preparing our response for the University.

Cordially,

Jerome F. Smith
Executive Director

JFS:iwb
Enclosures
PAGE 1 OF 34
THE USE OF LEAD AND TIN OUTDOORS

BY GEORGE O. HEERS AND ELMER J. MENARCK

The present paper is a partial summary of the 20-yr atmospheric tests conducted by Subcommittee VI on Atmospheric Corrosion of ASTM Committee B-3 on Corrosion of Non-Ferrous Metals and Alloys.

The metals with which this section is concerned are: chemical lead (U), 1 per cent antimonial lead (CC) and commercial tin (EE).

The significance of use of these kinds of metals outdoors in the United States is outlined below:

Chemical Lead (U).—This is a high-grade soft lead the specification requirements being set forth in ASTM Specification B29. In the authors' opinion, it can be considered as representative of the other ASTM commercial leads in its excellent resistance to atmospheric corrosion. In the extruded tubular form it is used as power and communication cable sheathing and as pipes. In the rolled sheet form, it has various architectural uses on the outside of buildings. Its softness or pliability markedly facilitates its application.

Antimonial Lead (CC).—This alloy is frequently made by adding 1 per cent by weight antimony to chemical lead. Within the scope of the authors' knowledge, the alloy is not used for roofing or architectural purposes. An 0.8 per cent antimony, balance lead alloy has been widely used as extruded sheath on communications cables in both aerial and underground locations. In such use it has been considered practically equal to soft lead in resistance to corrosion.

Commercial Tin (EE).—The quality of this tin may be taken as representative of tin used as a thin coating on sheet iron. The test data, up to and including 20 years' exposure, may be of value only to those who make and use tinned iron.

"Hard" Lead.—While there is a tendency to refer to hard lead as an alloy containing from 4 to 20 per cent antimony, a 6 per cent alloy (balance lead) is used in large quantities in cast, extruded, and sheet forms. In this paper, by hard lead is meant the 6 per cent antimony-94 per cent lead alloy. This metal is considerably more rigid and stronger than soft lead. Hard lead resists buckling far better than soft lead. Consequently, it is recommended and used more often (tons consumption) than soft lead for roofing purposes. While the 6 per cent antimony-94 per cent lead alloy was not included in the ASTM tests, actual experience from more than 50 yr usage, indicates its resistance to atmospheric corrosion similar to chemical lead and 1 per cent antimonial lead.

During the 20-yr period, 9 in. by 12 in. sheets were exposed and periodically brought in to determine weight changes, from which data the inches of corrosion penetration per year could be calculated. Precut tension specimens were also brought in periodically, tested and compared to indoor storage samples to determine the loss in strength due to corrosion. In order to determine the effect of edge corrosion, tension specimens were cut from the exposed 9 in. by 12 in. sheets and the strength determined. Where weakening by edge effects occurs, the precut exposed specimens would be
TABLE I.—YEARS TO CAUSE CORROSION PENETrATION TO THE DEPTH OF 0.001 IN. (1 MIL).

<table>
<thead>
<tr>
<th>Environment</th>
<th>Location</th>
<th>Lead (G)</th>
<th>Antimonial (G)</th>
<th>Tin (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>Altoona, Pa.</td>
<td>46</td>
<td>0.025</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>New York, N. Y.</td>
<td>66</td>
<td>0.151</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Sandy Hook, N. J.</td>
<td>47</td>
<td>0.021</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>Key West, Fla.</td>
<td>46</td>
<td>0.021</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>La Jolla, Calif.</td>
<td>46</td>
<td>0.020</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>State College, Pa.</td>
<td>50</td>
<td>0.0125</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>Phoenix, Ariz.</td>
<td>53</td>
<td>0.0125</td>
<td>0.1</td>
</tr>
</tbody>
</table>

*Ten-year basis.

TABLE II.—CORROSION PENETrATION IN MILES PER YR.

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Chemical Lead (G)</th>
<th>Antimonial Lead (G)</th>
<th>Tin (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altoona, Pa.</td>
<td>0.025</td>
<td>0.025</td>
<td>0.3</td>
</tr>
<tr>
<td>New York, N. Y.</td>
<td>0.151</td>
<td>0.151</td>
<td>0.4</td>
</tr>
<tr>
<td>Sandy Hook, N. J.</td>
<td>0.021</td>
<td>0.021</td>
<td>0.3</td>
</tr>
<tr>
<td>Key West, Fla.</td>
<td>0.020</td>
<td>0.020</td>
<td>0.3</td>
</tr>
<tr>
<td>La Jolla, Calif.</td>
<td>0.0125</td>
<td>0.0125</td>
<td>0.1</td>
</tr>
<tr>
<td>State College, Pa.</td>
<td>0.0125</td>
<td>0.0125</td>
<td>0.1</td>
</tr>
<tr>
<td>Phoenix, Ariz.</td>
<td>0.0125</td>
<td>0.0125</td>
<td>0.1</td>
</tr>
</tbody>
</table>

*Ten-year rate used, because 20-yr panels were missing.

results and drawing also on the 10-yr results the approximations in Table I are indicated.

Where chemical lead penetration were available for both the 10 and 20 periods it was observed that the was less than the 10-yr rate of corrosion with the exception of La Jolla. The formation of a tightly adherent and protective film is definitely indicated in all seacoast exposures.

Confirming general knowledge that variances of lead shown to be very durable at all test sites in industrial and

expected to be weaker than the corresponding post-cut specimens. This will be discussed later.

The tests as originally conceived were to compare impartially the behavior of all metals. A study of the accumulated data indicates that certain of the metals, which are not as rigid as others, were subject to considerable distortion. Attempts at straightening and remounting the specimens introduced variables that are difficult to evaluate.

The corrosion and tension test data for all the periods have been previously reported with the exception of the 20-yr results.

The most valuable results are probably the corrosion penetration data based on weight loss. Based on the 20-yr test exposures, tin is distinctly less resistant.

Tension tests were made of samples cut prior to exposure or cut from the exposed weight-

It was originally thought that the edge corrosion as part of the loss of strength could be determined. The loss of the 9 in. by 12 in. chemical lead, antimonial lead at various test sites limited the number of specimens cut after exposition of the available data at the edge effect was not significant metals covered in this report.

The most nearly complete set of data is available on the previously tension specimens.

Table III shows the relation between the tensile strength of the storage a
The determined strengths of the storage specimens during 20 years showed that the lead alloys lost approximately 13 per cent of the original strength while the tin lost approximately 18 per cent. The lowering of strength of all samples was apparently due to the normal aging effects.

The sea coast exposures at Sandy Hook and Key West showed the only appreciable corrosion loss. As yet, it has not been ascertained whether the corrosion products contain chlorides and sulfates.

### TABLE III.—COMPARISON OF EXPOSED SPECIMENS WITH STORAGE SET.

<table>
<thead>
<tr>
<th>Alloy</th>
<th>Original</th>
<th>10 yr</th>
<th>20 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tensile Strength, psi</td>
<td>Elongation, per cent</td>
<td>Tensile Strength, psi</td>
</tr>
<tr>
<td>Chemical lead (U)</td>
<td>2880</td>
<td>42.8</td>
<td>2250</td>
</tr>
<tr>
<td>One per cent Antimonial lead (CC)</td>
<td>2460</td>
<td>45.3</td>
<td>2280</td>
</tr>
<tr>
<td>Commercial tin (EE)</td>
<td>3760</td>
<td>60.3</td>
<td>2230</td>
</tr>
</tbody>
</table>

### TABLE IV.—CHANGE IN TENSILE STRENGTH OF CHEMICAL LEAD (U) EXPOSED AS MACHINED SPECIMENS.

<table>
<thead>
<tr>
<th>Exposure Site</th>
<th>Storage (Original) Tensile Strength, psi</th>
<th>10 yr</th>
<th>20 yr</th>
<th>10 yr</th>
<th>20 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tensile Strength, psi</td>
<td>Change from Storage, per cent</td>
<td>Tensile Strength, psi</td>
<td>Change from Storage, per cent</td>
<td></td>
</tr>
<tr>
<td>Altoona</td>
<td>2280</td>
<td>2370</td>
<td>+0.9</td>
<td>2180</td>
<td>-9.2</td>
</tr>
<tr>
<td>New York</td>
<td>2280</td>
<td>2370</td>
<td>+0.9</td>
<td>2290</td>
<td>+2.7</td>
</tr>
<tr>
<td>Sandy Hook</td>
<td>2280</td>
<td>2310</td>
<td>-1.7</td>
<td>2110</td>
<td>-6.4</td>
</tr>
<tr>
<td>Key West</td>
<td>2280</td>
<td>2350</td>
<td>0</td>
<td>2100</td>
<td>-5.8</td>
</tr>
<tr>
<td>Las Vegas</td>
<td>2280</td>
<td>2390</td>
<td>+1.7</td>
<td>2290</td>
<td>+2.7</td>
</tr>
<tr>
<td>State College</td>
<td>2280</td>
<td>2380</td>
<td>+1.3</td>
<td>2260</td>
<td>+1.3</td>
</tr>
<tr>
<td>Phoenix</td>
<td>2280</td>
<td>2410</td>
<td>+2.6</td>
<td>2310</td>
<td>+8.6</td>
</tr>
<tr>
<td></td>
<td>Ten-year storage 2230</td>
<td>Twenty-year storage 2280</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(self annealing) which take place at ordinary temperatures with these metals.

Table IV shows the values obtained for the exposed chemical lead (U) specimens. A number of gains in strength are shown, which apparently are in error but may be due to the working incidental to the handling of the specimens both in the field and in the laboratory, preparatory to testing the specimens.

For the industrial atmospheres of Altoona and New York, the determined chemical lead corrosion losses were apparently within an experimental error of ±2.7 per cent.

The rural exposures at State College and Phoenix both showed gains, the maximum being +3.6 per cent, which may be the total experimental error.

Using these data, it is not possible to derive the rate of atmospheric corrosion for chemical lead.

Table V shows the values obtained for 1 per cent antimonial lead (CC). The data for this alloy are not as erratic as for chemical lead, and all exposed specimens showed tensile strength losses when compared to the storage sets of the same period.
SYMPOSIUM ON ATMOSPHERIC CORROSION OF NON-FERROUS METALS

The per cent loss of strength was greater for the 20-yr period than for the 10-yr period for all exposures except New York and Lajolla. The average for the three types of test specimen exposures is close enough to warrant averaging all exposures at 5.7 per cent loss. The

TABLE V.—CHANGE IN TENSILE STRENGTH OF 1 PER CENT ANTIMONY LEAD (CC) EXPOSED AS MACHINED SPECIMENS.

<table>
<thead>
<tr>
<th>Exposure Site</th>
<th>Storage (Original)</th>
<th>Tensile Strength, psi</th>
<th>Change from Storage, per cent</th>
<th>Tensile Strength, psi</th>
<th>Change Storage, psi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altoona</td>
<td>8450</td>
<td>2050</td>
<td>-6.2</td>
<td>2010</td>
<td>-4</td>
</tr>
<tr>
<td>New York</td>
<td>8450</td>
<td>2180</td>
<td>-6.2</td>
<td>2030</td>
<td>-6</td>
</tr>
<tr>
<td>Sandy Hook</td>
<td>8450</td>
<td>2130</td>
<td>-6.6</td>
<td>2070</td>
<td>-6</td>
</tr>
<tr>
<td>Key West</td>
<td>8450</td>
<td>2050</td>
<td>-6.2</td>
<td>2030</td>
<td>-6</td>
</tr>
<tr>
<td>Lajolla</td>
<td>8450</td>
<td>2050</td>
<td>-6.2</td>
<td>2030</td>
<td>-6</td>
</tr>
<tr>
<td>State College</td>
<td>8450</td>
<td>2150</td>
<td>-6.2</td>
<td>2070</td>
<td>-6</td>
</tr>
<tr>
<td>Phoenix</td>
<td>8450</td>
<td>2040</td>
<td>-6.2</td>
<td>2020</td>
<td>-6</td>
</tr>
</tbody>
</table>

Ten-year storage 8220  Twenty-year storage 8

TABLE VI.—CHANGE IN TENSILE STRENGTH OF COMMERCIAL TIN (EZ) EXPOSED AS MACHINED SPECIMENS.

<table>
<thead>
<tr>
<th>Exposure Site</th>
<th>Storage (Original)</th>
<th>Tensile Strength, psi</th>
<th>Change from Storage, per cent</th>
<th>Tensile Strength, psi</th>
<th>Change Storage, psi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altoona</td>
<td>8760</td>
<td>2620</td>
<td>-15.0</td>
<td>2500</td>
<td>-15</td>
</tr>
<tr>
<td>New York</td>
<td>8760</td>
<td>2300</td>
<td>-12.0</td>
<td>2300</td>
<td>-15</td>
</tr>
<tr>
<td>Sandy Hook</td>
<td>8760</td>
<td>2710</td>
<td>-15.7</td>
<td>2080</td>
<td>-16</td>
</tr>
<tr>
<td>Key West</td>
<td>8760</td>
<td>2780</td>
<td>-15.6</td>
<td>2080</td>
<td>-16</td>
</tr>
<tr>
<td>Lajolla</td>
<td>8760</td>
<td>2410</td>
<td>-15.2</td>
<td>2010</td>
<td>-16</td>
</tr>
<tr>
<td>State College</td>
<td>8760</td>
<td>2040</td>
<td>-15.0</td>
<td>2020</td>
<td>-16</td>
</tr>
<tr>
<td>Phoenix</td>
<td>8760</td>
<td>2020</td>
<td>-15.0</td>
<td>2020</td>
<td>-16</td>
</tr>
</tbody>
</table>

Ten-year storage 3220  Twenty-year storage 16

* Badly bent, not pulled.

The 138 strength loss of 4.75 per cent, which neglecting experimental errors indicates a corrosion penetration of 0.042 mils per yr or 24 yr for 1 mil penetration. The seacoast atmosphere specimens show an average loss of strength of 5.9 per cent, which indicates 0.064 mils per yr penetration or 18 yr for 1 mil penetration. The rural atmosphere specimens show an average strength loss of 5.9 per cent, with corrosion penetration would that 0.050 mils per yr or 20 yr for 1 mil penetration. The magnitude of the loss about six times greater than that estimated by the weight-loss determinations. The authors believe that the weight data are more useful.

The tensile strength data for exposed precut commercial tin (EZ) specimens are shown in Table VI.
### TABLE VII.—TENSILE STRENGTH DATA FROM 20-YEAR TESTS OF CHEMICAL LEAD (U) BASED ON PRECUT SPECIMENS.

<table>
<thead>
<tr>
<th>Location</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20-yr Corrosion Penetration from 9 by 12 in. Plates, m</td>
<td>Tensile Strength Changes from Storage Set, per cent</td>
<td>Estimated Change in Tensile Strength Based on Corrosion Penetration, per cent</td>
</tr>
<tr>
<td>Altoona</td>
<td>0.578</td>
<td>-2.2</td>
<td>-1.7</td>
<td>0.5</td>
</tr>
<tr>
<td>New York</td>
<td>0.529</td>
<td>+2.7</td>
<td>+1.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Sandy Hook</td>
<td>0.548</td>
<td>-2.4</td>
<td>-1.8</td>
<td>4.8</td>
</tr>
<tr>
<td>Key West</td>
<td>0.454</td>
<td>-3.5</td>
<td>-1.6</td>
<td>4.3</td>
</tr>
<tr>
<td>Lafolla</td>
<td>0.414</td>
<td>+2.7</td>
<td>+2.5</td>
<td>...</td>
</tr>
<tr>
<td>State College</td>
<td>0.420</td>
<td>-1.3</td>
<td>-1.4</td>
<td>...</td>
</tr>
<tr>
<td>Phoenix</td>
<td>0.549</td>
<td>+0.6</td>
<td>+0.6</td>
<td>...</td>
</tr>
</tbody>
</table>

* See Table II from 1955 Report. 
† Corrosion Penetration x 100. This is to give a hypothetical value allowing for corrosion penetration on both sides of sheet.
* Estimated from 10-yr data.

### TABLE VIII.—TENSILE STRENGTH DATA FROM 20-YEAR TESTS OF 1 PER CENT ANTIMONIAL LEAD (CC) BASED ON PRECUT SPECIMENS.

<table>
<thead>
<tr>
<th>Location</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20-yr Corrosion Penetration from 9 by 12 in. Plates, m</td>
<td>Tensile Strength Changes from Storage Set, per cent</td>
<td>Estimated Change in Tensile Strength Based on Corrosion Penetration, per cent</td>
</tr>
<tr>
<td>Altoona</td>
<td>0.562</td>
<td>-7.9</td>
<td>-2.6</td>
<td>6.3</td>
</tr>
<tr>
<td>New York</td>
<td>0.463</td>
<td>-1.5</td>
<td>-1.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Sandy Hook</td>
<td>0.423</td>
<td>-5.2</td>
<td>-2.3</td>
<td>2.0</td>
</tr>
<tr>
<td>Key West</td>
<td>0.420</td>
<td>-7.0</td>
<td>-2.6</td>
<td>5.0</td>
</tr>
<tr>
<td>Lafolla</td>
<td>0.438</td>
<td>-2.6</td>
<td>-2.6</td>
<td>2.0</td>
</tr>
<tr>
<td>State College</td>
<td>0.422</td>
<td>-3.6</td>
<td>-1.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Phoenix</td>
<td>0.424</td>
<td>-8.2</td>
<td>-1.4</td>
<td>6.8</td>
</tr>
</tbody>
</table>

* See Table II from 1955 Report.
† Corrosion Penetration x 100. This is to give a hypothetical value allowing for corrosion penetration on both sides of sheet.
* Estimated from 10-yr data.

### TABLE IX.—TENSILE STRENGTH DATA FROM 20-YR TESTS OF COMMERCIAL TIN (EE) BASED ON PRECUT SPECIMENS.

<table>
<thead>
<tr>
<th>Location</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20-yr Corrosion Penetration from 9 by 12 in. Plates, m</td>
<td>Tensile Strength Changes from Storage Set, per cent</td>
<td>Estimated Change in Tensile Strength Based on Corrosion Penetration, per cent</td>
</tr>
<tr>
<td>Altoona</td>
<td>1.32</td>
<td>-25.3</td>
<td>-7.3</td>
<td>18.0</td>
</tr>
<tr>
<td>New York</td>
<td>1.03</td>
<td>-15.9</td>
<td>-5.7</td>
<td>11.2</td>
</tr>
<tr>
<td>Sandy Hook</td>
<td>1.48</td>
<td>-22.1</td>
<td>-8.6</td>
<td>22.6</td>
</tr>
<tr>
<td>Key West</td>
<td>1.03</td>
<td>-22.1</td>
<td>-10.1</td>
<td>22.6</td>
</tr>
<tr>
<td>Lafolla</td>
<td>2.94</td>
<td>...</td>
<td>-12.7</td>
<td>...</td>
</tr>
<tr>
<td>State College</td>
<td>3.75</td>
<td>-18.0</td>
<td>-21.6</td>
<td>...</td>
</tr>
<tr>
<td>Phoenix</td>
<td>3.46</td>
<td>-19.8</td>
<td>-21.5</td>
<td>...</td>
</tr>
</tbody>
</table>

* See Table II from 1955 Report.
† Corrosion Penetration x 100. This is to give a hypothetical value allowing for simple corrosion penetration on both sides of sheet.
* Estimated from 10-year data.
The tensile strength shows an average loss for all exposures of 23.2 per cent, indicating corrosion penetration of 0.202 mils per yr or 5 yr for 1 mil penetration. The average indicated loss of strength based on weight loss data only would be 12.5 per cent, showing a better correlation between the tensile and weight loss data than for the more corrosion-resistant lead alloys.

In our Tables VII, VIII and IX we have attempted to analyze the data relating to tensile strength losses appearing, originally, in Tables XVI, XXI and XXV of the Task Committees' current report. We head our column "D" as "Loss attributable to causes other than simple corrosion." These other causes are probably confined to: age softening of metals (self annealing), alterations in samples resulting from inadequate support or from handling, and possible edge effects.

CONCLUSIONS

The corrosion penetration data based on weight losses appear valuable and show chemical lead and antimonial lead are remarkably durable in all of the test site exposures.

Losses in strength of some of the specimens due to inadequate support in the test racks, emphasizes a recognized need for knowledge and skill in the application of hard lead and soft lead for architectural use. Lead continues to be used on buildings designed for long life.


When the test racks were examined after 6 yr exposure of the specimens, the committee made the following comment. The 9 in. by 12 in. sheets, at all outdoor sites showed:

(C) "Pitting or roughness insignificant in all cases. In all cases sheets buckled due to inadequate support."

(CC) "General mechanical damage in all cases due to inadequate support. Pitting or roughness insignificant in all cases."

(SE) "Specimens in fair condition, but some warping."

3 Report of Subcommittee VI on Atmospheric Corrosion, see p. 3 of this Symposium.