

Planning an efficient future



in education and research





The challenge and the resources to meet it

The future of the human race depends upon the extent to which we can understand the natural world and our role in shaping it. Questions vital to our civilization and our continued existence must receive attention, must receive answers. Those questions concerning the use and management of our natural resources rank foremost in the long lists of information needs.

As basic as our ties to the earth itself, our dependence on its flora and fauna mandates inquiries into their perpetuation and sustained production. Most important among the earth's resources are those we term renewable. Only through the successful stewardship of renewable resources can future civilizations be given anything other than a finite supply of materials needed for the survival and advance of man.

Such is the charge given those who would strive to understand the workings of nature and apply their knowledge for the wise and careful use of our resources. Such is the charge given those who would pass on their understanding to others so knowledge could expand and multiply.



Our demands on non-renewable resources have fostered a growing concern for the time when we can no longer rely on them because of limited or inaccessible supplies. Consequently, increasing emphasis has been placed on renewable resources which we can husband and manage to meet future needs. But before renewable resources can be managed, adequate information must be obtained about them and transmitted to others for present and future use.

The Forest, Wildlife and Range Experiment Station and the College of Forestry, Wildlife and Range Sciences at the University of Idaho were conceived and founded to further the quest for that knowledge and explore its applications. Acting as one entity, they have joined in the pursuit of critical

knowledge and have designed an instructional program to transmit information to students and others.

The Station's and the College's commitment to the quest has resulted in national and international acclaim and increases in both students and staff. The increases have underscored the successes, but they have also led to frustrations. Frustrations rooted close to the heart of success and the desire to excel have led to a proposal for another building in which research and teaching could benefit.

The proposed annex will provide much-needed classroom and office space. By clearing research laboratories now housing research associates and students, the annex will allow efficient use of the existing building's carefully designed facilities. The



key to the project is efficiency. The annex will provide an atmosphere conducive to learning, both for students and for staff, by relieving overcrowded conditions in the main building.

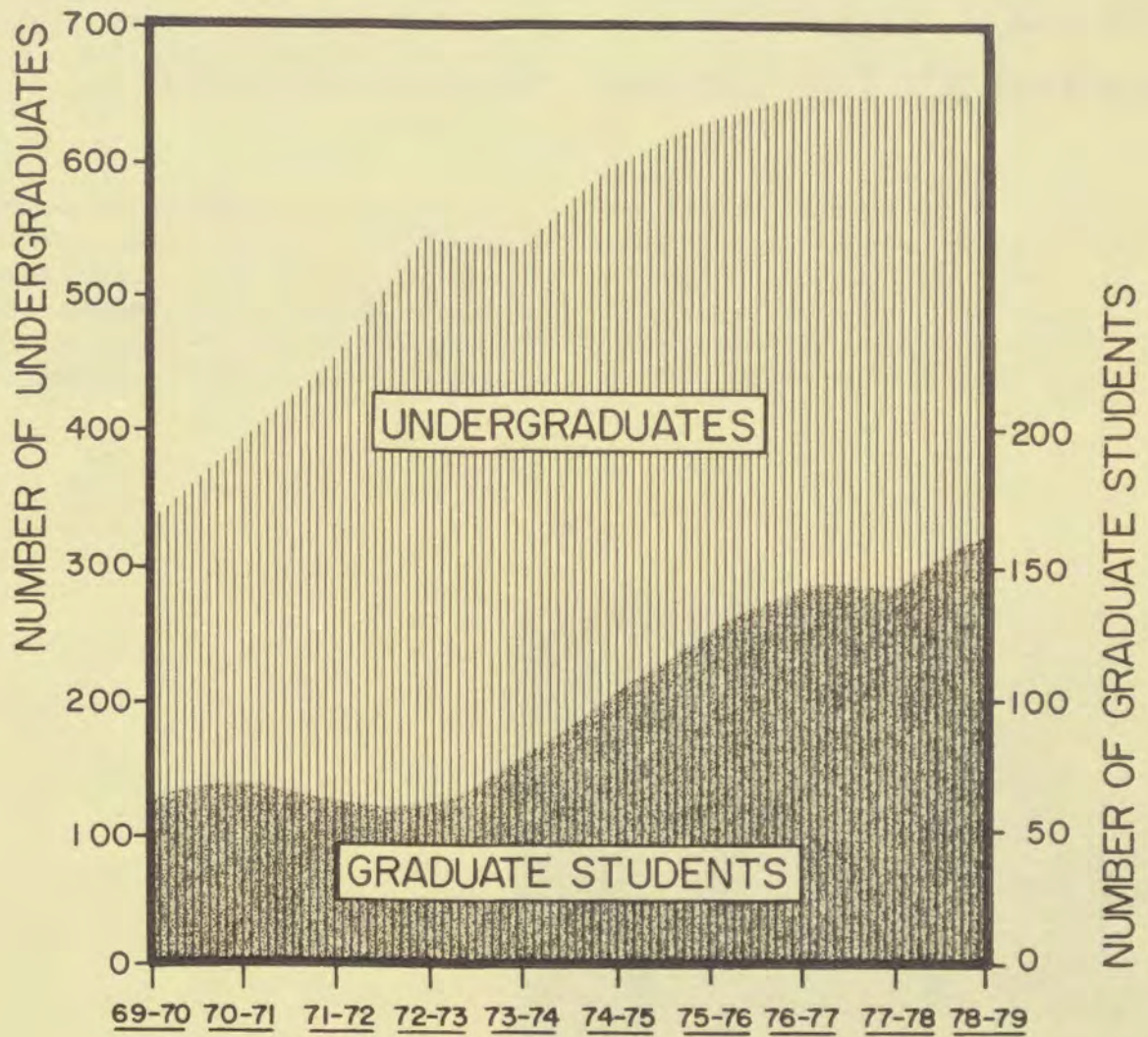
Academics: ensuring personnel for the future

The goals of the College are to maintain excellence and leadership in education, research and service. The multidisciplinary nature of the College, incorporating forest, wildlife, range, fisheries and recreation programs within one administrative unit, promotes the cooperation and coordination of its natural resources education and research efforts.

Undergraduate students in all disciplines offered receive instruction in their chosen field plus supporting courses in four main areas: ecology, mathematics and quantitative sciences, related natural resource disciplines and field exercises. Graduate students focus their studies on their chosen career, but continue to benefit from the integrated approach of the College and their proximity to other students and professionals in related disciplines.

Undergraduate enrollment has doubled since the present building was designed. Graduate student enrollment has tripled. Those increases, coupled with increases of teaching, research and support staff and the expansion of course offerings, have begun to limit the efficiency of the present building.





Student enrollment

The faculty

Regular, affiliate and research faculty have quadrupled since 1971. In sheer numbers and variety of expertise, the faculty have increased the demand for space both within the classrooms and the laboratories as the instructional offerings expanded to reflect their diversity.

The faculty have been extensively active in scientific and professional organizations. Since 1972, College personnel have served in leadership roles in international organizations 19 times. Their roles have included: International Society for Range Management director, Entomological Society of Canada fellow, AID Advisory Committee member, and World Forestry Congress U.S. delegate for education.

On the national level, College faculty members served in 58 leadership posts including: Society for Wood Science and Technology chairman, National Aquaculture Conference panel leader, The Wildlife Society Professionalism Committee chairman, *Journal of Forestry* associate editor, Society of American Foresters Range Division chairman, The Nature Conservancy trustee and Forest Products Research Society chairman.

On the regional level, they have served as Inland Empire Reforestation Council secretary, Northwest Scientific Association president, Northern Forest Action Pest Council director, and Forest Products Research Society trustee. Together they have served as leaders in 45 regional organizations.

Members of the College faculty have served in 71 leadership roles at the state and local level. Their duties included: Idaho Research Foundation president, Idaho Trails Council president, Idaho Natural Areas Council president, American Fisheries Society Idaho Chapter president, Society for Range Management Palouse Chapter president, Society of American Foresters Palouse Chapter chairman, American Society of Photogrammetry local chapter president, and Sigma Xi Board of Advisors member.

Faculty have received 21 special awards and commendations for excellence during the same time period including: USDA Superior Service Award for

Exceptional and Original Research, USDA Forest Service Certificate of Recognition, Bureau of Commercial Fisheries Meritorious Award, National Association of Agriculture Experiment Station Editors Blue Ribbon Award, and the Government of Iran Special Science Award.

As a result of the quality of the faculty and the academic curricula, the College last year attracted new transfer students from 224 different colleges and universities. Students from three foreign countries also enrolled in the College. About two-thirds of the new students came from other states, about half transferred from other institutions. The College conducts no undergraduate recruiting program.

Students awarded bachelor of science degrees from the College increased from 60 in 1970 to 132 in 1979. The College also performs a valuable service to students enrolled in other disciplines at the University of Idaho. Undergraduate students representing 53 different majors and graduate students representing 22 fields outside the scope of the College enrolled in courses within the College.

Students receive strong encouragement to participate in organizations of their choice. Student chapters of the American Fisheries Society, American Society for Range Management, Idaho Recreation and Parks Society, Society of Wood Science and Technology and the Wildlife Society are active. Students may also participate in the government of the College through the Student Affairs Council and other administrative bodies. Those interested in expanding their knowledge of publications can work on the production of an in-house newsletter, "The Snag," and an annual magazine, *Idaho Forester*.

The effectiveness of the academic program shows in employment success survey results tabulated over the last several years. Eighty-three percent of those who graduated from the College in 1975 within 6 months after graduation found jobs, with 88 percent of their jobs directly related to their chosen profession. Eighty-nine percent of 1978 forest resources graduates contacted have found career-related employment. One-half of the 1975 graduates found jobs in industry.

College graduates have done well for themselves and for the reputation of the College. Throughout the years, the College has produced 41 professors, 8 regional foresters or district managers, 12 corporate executives and three state foresters. One graduate presently serves as a U.S. Assistant Secretary of State.

The College research organization operates nearly parallel to the academic programs assuring a balance of practical and theoretical activities available to staff and students. The budget for teaching and research draws funding from 62 sources. Through continual contact with industry and a USDA Forest Service employee on the research committee, the thrust of research follows the needs and demands of those most concerned with renewable natural resources management and application problems.

Research: answers for today and tomorrow

In addition to faculty, the College and its research arm, the Forest, Wildlife and Range Experiment Station, employ 37 personnel charged specifically with developing, performing and administering research programs. The Station was created by the Idaho Legislature in 1939 to investigate the entire spectrum of renewable natural resources problems within the state.

The legislative charter established the Station to investigate and promote "the production, protection and management of the forest resources, . . . the conversion and utilization of timber products, . . . the propagation, protection and management of wildlife and game, . . . the production, protection, utilization and management of the forest and range resources, . . . the varied recreational resources of wild forest land possessing a special value for watershed. . . ."

The enactment of the charter into law began to institutionalize the conduct of research as a basic responsibility of the College. At first the teaching budget supported the research activities. With the

establishment of the Idaho Cooperative Wildlife Unit in 1947 and the Idaho Cooperative Fishery Unit in 1963, however, research funding received significant boosts. Both research units are directed by personnel from the U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game and the College. Now research funding has outstripped teaching allocations nearly sevenfold.

Since the Station's charter mandates that it fulfill the research needs of the state to maintain a healthy economy in areas dependent upon renewable

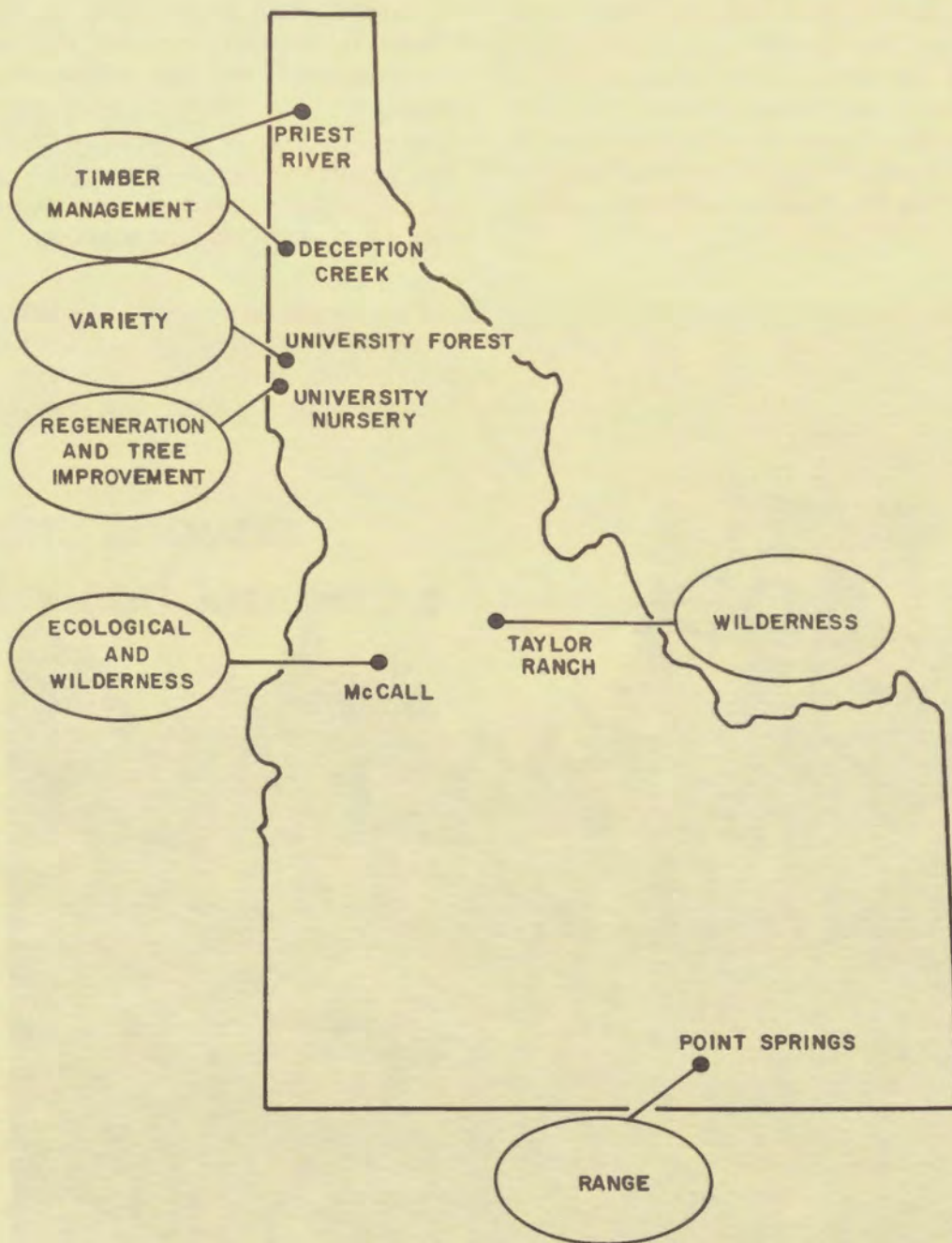


natural resources and to maintain a healthy environment, Idaho has become an outdoor laboratory for Station researchers. With a rapidly increasing population, Idaho industry and government must seek answers to potential problems threatening the environment before problems become irreversible catastrophes. Not only will Idaho's natural resources have to support this state's burgeoning numbers, but other more highly developed states will continue to rely on Idaho for their renewable natural resource materials. It is a sure bet that the demands will increase, rather than decrease.

The need for renewable natural resources research has been a long-recognized need within the College and the Station and at the University of Idaho before either of the other entities existed. Courses in forestry began before 1900. In 1909, Professor Charles H. Shattuck imported 300 species of trees and established the first arboretum west of the Mississippi River. Professor Shattuck sought to discover which trees might be suited for Idaho domestic and commercial applications. Now many of the species Professor Shattuck imported have received wide use in windbreaks and woodlots.



The Shattuck Arboretum: the first arboretum west of the Mississippi.



Outlying experiment stations



In the 1940's wood science, range management and wildlife research consumed most of the research effort. Fisheries research began in the 1950's. Outdoor recreation research began in the next decade. The addition of research programs within the Station and academic disciplines within the College have reflected areas of growing public concern and need through the years.

To facilitate research and provide areas where long-term research could be conducted, the College sought and obtained tracts of land to establish experiment stations. In 1911, the Priest River Experimental Forest was established by the USDA Forest Service. The Forest Service made the forest available to College and Station researchers for their research; often cooperative projects were conducted.

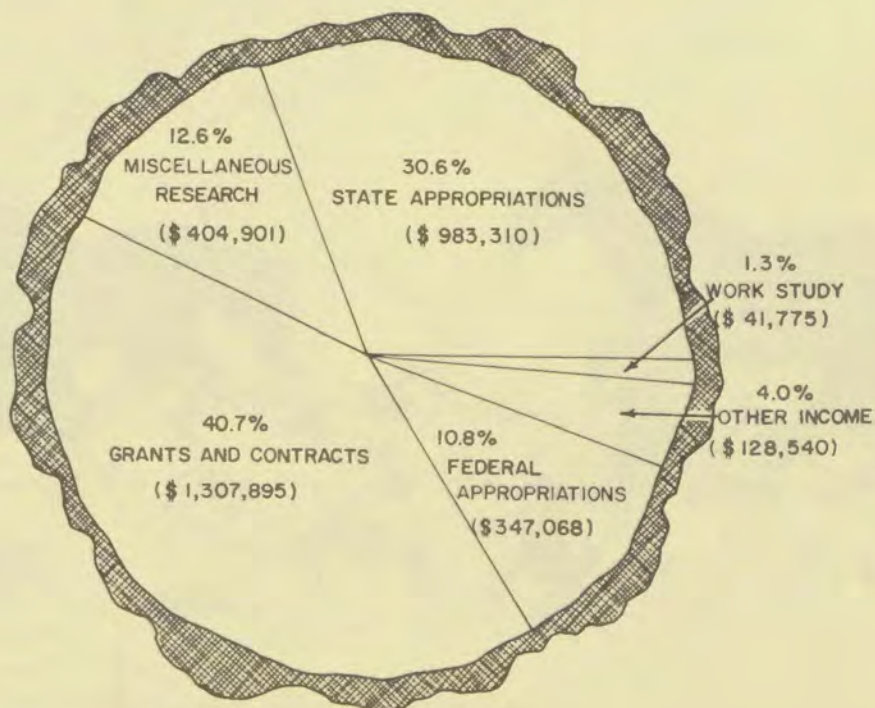
A closer experimental forest was also obtained in just over a decade during the 1930's and 40's through donations from the Potlatch Corporation (then the Forest Development Company), Northern

Pacific Railroad and several individuals. The University of Idaho College Forest now contains 7,158 acres and research conducted on its grounds includes wildlife, recreation, timber management and logging techniques projects. The forest includes tracts of land from Moscow Mountain, north of Moscow, east to the outskirts of Troy.

The field station at McCall, acquired in 1938, occupies a unique area surrounded by a variety of ecosystems. It is used extensively in the College's summer session to provide students with the opportunity to study nature's diversity. It is also used as a base for numerous research projects.

The Taylor Ranch, a 65-acre tract located in the heart of the Idaho Primitive Area, offers College and Station personnel a valuable staging area for wilderness-related research. Point Springs Experimental Area in southeastern Idaho serves as a focal point for the Station's range research activities. The Bureau of Land Management and the Station cooperate on a number of research projects there.

Financial Picture for Fiscal Year 1977-78



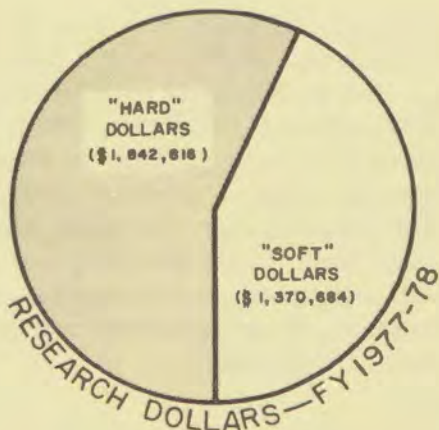
The Deception Creek field station provides another area in northern Idaho where a variety of timber management studies can operate. Because of the diversity of ecosystems occurring with research areas of the College and Station, studies benefitting state agencies and industries throughout the state have been and continue to be conducted.

The College Nursery, with holdings in town and just outside Moscow, also serves as an important research area. The Nursery provides seedlings for private landowners and serves as a research facility for projects investigating problems associated with forest regeneration. Three greenhouses have recently

been constructed on Nursery grounds for growing containerized seedlings which offer a major advantage to foresters working to regenerate timber on difficult sites.

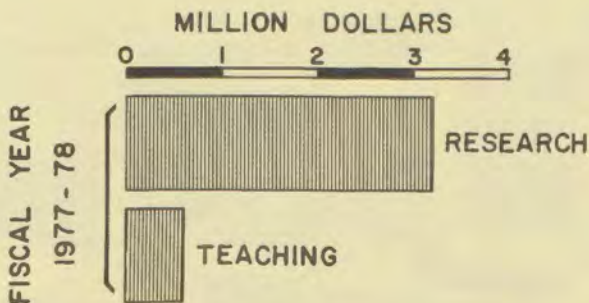
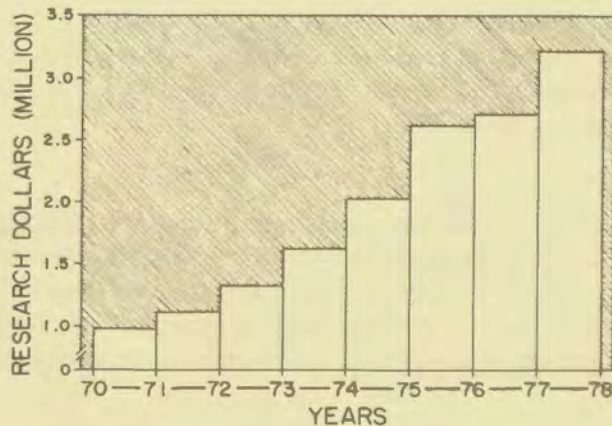
The present building also houses the University of Idaho Wilderness Research Center, which was created in 1969 to promote interdisciplinary research concerning the nation's wilderness resources. The Center is a university-wide entity which investigates the ecology, sociology and education-related aspects of wilderness to promote an understanding of wilderness and its functions in today's society. The McCall field station and the Taylor Ranch regularly serve as bases for Center-sponsored research.

Research funding accounted for 87 percent of the FY 77-78 budget within the College and Station. Of that amount, 57 percent was characterized as "hard" dollars, federal and state funds appropriated from the Station budget, McIntire-Stennis program, Forest Utilization Research program, wilderness research programs and the U.S. Fish and Wildlife Service. These funds provide an essential base for maintenance of research personnel salaries and operational costs. FY 77-78 "hard" dollars amounted to over \$1.8 million.



agencies and private organizations. "Soft" dollars provided the main funding for research activities not related to salaries or personnel maintenance.

Research support funds also provide a source of student support and cannot be discounted as a vital part of maintaining the excellence of the academic program. Students gain invaluable experience and contribute greatly to research efforts under the successful partnership between instruction and research activities.



Since FY 70-71, the numbers of undergraduate and graduate students participating in research projects and the levels of support per student have increased. In FY 70-71, 34 undergraduate students participated in research projects and received \$1,165 in support on the average. In FY 77-78, 360 undergraduates participated and received an average of \$1,213 in support.

In FY 70-71, 44 graduate students, either as graduate assistants or hourly workers, derived an average of \$3,280 in support through research projects. In FY 77-78, 105 graduate students received an average of \$4,983 through research participation.

The "soft" dollars, which amounted to \$1.3 million in FY 77-78, came from 62 sources through an active grant-seeking process pursued by researchers responding to the research needs of federal and state

Research funding is expected to increase in the College and the Station as greater demands are placed on our renewable natural resources to replace or supplement non-renewable resources. As our technical

knowledge increases regarding renewable natural resources, other applications are also expected to arise and expand the demand for raw materials.

The College and the Station have increased their capacity to transmit and disseminate information to technical and non-technical audiences. Editorial personnel and word processing equipment and personnel enable both entities to prepare manuscripts for submission to scientific journals or publish materials through contracted printing facilities. A strong commitment has also been made to disseminating information to the general public through radio, television and newspaper outlets so the knowledge gained through research may be presented to the general public which ultimately foots the bill for its development.

The continuing education program sponsored by the College updates industry and governmental personnel expertise through updates on research progress. Short courses and workshops are held throughout the state to attain maximum exposure

and encourage participation. Minimal fees are charged participants and the response to date has been favorable.

The future for the College and the Station may witness the initiation of centers of excellence or emphasis in several areas including remote sensing, regeneration and genetics, forest nutrition, integrated pest management, resource modeling, renewable resources policy and aquaculture. These centers are envisaged as gatherings of individuals of similar interest who pursue objectives and opportunities in each area of expertise.

Unfortunately, however, the present problem facing the College and the Station is a lack of space: a bottleneck. The present space problems have led to placing two or three staff members in offices designed for one, locating graduate students in several other campus buildings, placing graduate assistants and technicians in laboratory or classrooms and limiting the amount of space for support personnel. In some cases, as with desks placed in laboratories, uncontrollable interruptions hinder efficiency and placement may also cause safety lapses.



The bulk of the College's graduate students use these carrels to study and organize their research projects.

Structural modifications made in the present facility 1974 to 1978

| SPACE | | FUNCTION | |
|---------------------------------------|-------------|----------------------------------------------------|----------------------------------------------------------------------------|
| Room number | Square feet | Original | Present |
| rooms 18 and 19A north part, 19B | 1,536 | 35 graduate cubicle spaces | five recreation faculty offices, secretarial area and research layout room |
| room 19C | 312 | graduate locker and research area | three faculty and staff offices |
| room 19D | 225 | faculty locker and research area | office space for one faculty and one staff member |
| room 20 | 595 | controlled temperature and greenhouse | fish and wildlife research area |
| room 23 | 390 | storage and soil preparation room | diet laboratory |
| room 24 | 192 | growth chamber work area | seven graduate cubicles |
| room 27 | 460 | research planning and design room | calculator room |
| room 28 | 192 | student organization offices | office space for two retired professors |
| rooms 11A and 11B | 385 | seminar room | computer room |
| rooms 17, 17A, 17B, 17C, 17D, and 17E | 860 | retired professor and visiting lecturers' rooms | five faculty offices and one secretarial area |
| room 13A | 135 | audio-visual simulation room | office space for staff |
| room 15 | 360 | computer laboratory | remote sensing laboratory |
| room 114B | 190 | fish specimen storage | office space for staff |
| room 116B | 220 | lumber conditioning research laboratory | part of the laboratory converted to three offices for staff |
| room 119A | 294 | biometric watershed research wet laboratory | eight graduate cubicles |
| room 104 | 345 | secretarial office | office space for two staff members and economical laboratory |
| room 107 | 208 | game research laboratory | eight graduate cubicles |
| room 108A | 180 | game laboratory preparation area | office space for staff |
| room 216 | 100 | laboratory technician work area | faculty office space |
| room 216B | 200 | laboratory receiving and storage | two office spaces (faculty and staff) |
| room 202 | 600 | bulletin storage (extension and college) | four offices for administration personnel |
| room 207 | 90 | range research laboratory | forestry faculty office |
| room 201A | 160 | office supplies and equipment area | publication work space |
| rooms 216 and 218 | 100 | technician and work space in analytical laboratory | faculty office |

The Annex: our only way to meet increasing demands

The Proposed Annex to the present College of Forestry, Wildlife and Range Sciences and Forest, Wildlife and Range Experiment Station facility contains 29,400 square feet of usable space. The major function of the annex will be to relieve the present building of the pressures of increased undergraduate and graduate student enrollments and increased research, instructional and support staffs. The Annex will provide present and future staff members and graduate students with sufficient office space and classroom space for a number of College courses that do not require elaborate laboratory equipment.

The present Annex proposal includes a provision for connecting the two buildings by tunnel to facilitate the access for staff and students and the movement of equipment and materials. The Annex will utilize heavy timber construction with natural finish materials complimented by brick to match the main building. The interior will be divided with open office partitions to maintain maximum flexibility at minimum cost. Each floor will contain 9,800 square feet of usable space.

As of January 1979, when the original plans were formulated and cost estimates prepared, the architects Hummel, Jones, Shawyer & Miller, P.A. of Boise projected a total construction cost of \$2,115,000. That total is subject to a .75-1.0 percent monthly inflation factor after the original projected costs, which would mean total budget increases of \$15,000 to \$20,000 per month delay.

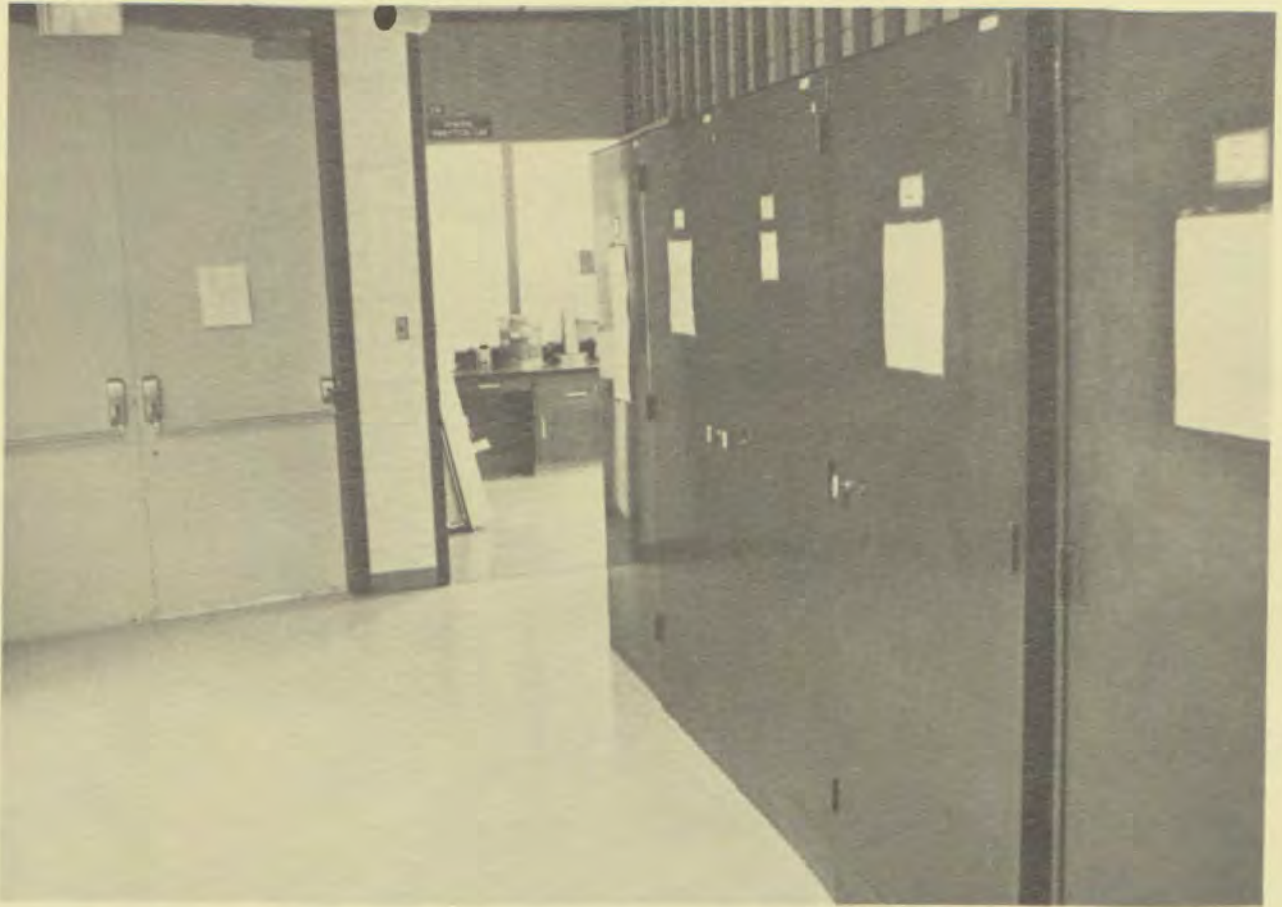
The Annex design incorporates a maximum of efficiency and economy factors. All plumbing would be contained within the building's central core. The ceilings in the annex will contain less space than the present building due to less extensive plumbing to be installed in areas outside the central core area. If the present building were to be constructed under

prevailing economic conditions, its cost would be three times the \$3,024,780 originally spent on construction.

The stripped-down annex will prove entirely suitable to a wide range of College and Station activities. By concentrating research projects which require the elaborate laboratory facilities within the present building, classes which require no wet lab facilities would receive more functional facilities within the Annex. Dendrology, wildland recreation



DM



These botanical storage cabinets have been moved into the hallway to make room for researchers.

management courses and others throughout the College which require simple inspection or theoretical exercises could use the Annex dry labs as effectively as present facilities, thereby freeing wet labs for courses and research which require more complex equipment.

The increase in student enrollment has also increased the need for more sections in many courses to maintain effective student-teacher ratios. Given future research demand projections, the Annex will further contribute to the College's and Station's efforts to meet those demands by allowing strengthened staffs in areas of greatest need. In essence, the Annex will provide the present facility with a buffer

and further enable research and instructional programs to keep abreast with the present and the future.

Industry, government and the public will benefit with the addition of an Annex to the present College and Station building through increased efficiency. With increased efficiency in research and instructional programs, students will graduate better prepared to manage and perpetuate our renewable natural resources. Present and future staff members will benefit from the increased facilities through more efficient office and laboratory space allocation and an atmosphere more conducive to their duties as crucial links in maintaining and improving renewable natural resources supplies and applications.



For more information on the Annex please contact

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