Agriculture (Section O)

The program for Section O, arranged by chairman Wynne Thorne, consisted of a symposium on land and water use, with special reference to the plains and mountain regions. This symposium involved four half-day sessions, for which Section O had prime responsibility. In addition, Section O cosponsored, with the AAAS, a half-day interdisciplinary program on water and climate and two half-day sessions on water improvement, in conjunction with the Committee on Desert and Arid Zones Research of the AAAS Southwestern and Rocky Mountain Division.

The first session (27 December) of the Section O program dealt with the subject of land and water resources (of the plains and mountain regions). Thorne substituted for Roland Renne (president of Montana State College) as presiding officer. There were four papers: “Population demands for land and water resources of the western hinterland,” presented by S. C. Smith (University of California); “Land resources and potential use,” by R. D. Hockensmith (U.S. Soil Conservation Service); “Water resources, development, and uses,” by W. I. Palmer (U.S. Bureau of Reclamation); and “Public grazing lands in the economy of the West,” by M. L. Upchurch (U.S. Department of Agriculture).

The second session dealt with optimum uses for resources, with E. L. Frolik (University of Nebraska) presiding. E. N. Castle (Oregon State College) discussed criteria and planning for optimum use; Nathaniel Wollman (University of New Mexico) presented a paper on economic priorities on water use in arid regions; B. D. Gardner (Brigham Young University) reviewed agriculture as a competitive segment of multiple use; and Marion Clawson (Resources for the Future) discussed recreation as a competitive segment of multiple use.

The third session (29 December) followed the AAAS half-day session on water and climate, held on 28 December, continuing the general consideration of the use of land and water resources. This third session dealt with...
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the impact of public policy on land and water use. W. E. Morgan (Colorado State University) presided. The first paper, on the government's responsibility for land and water, by L. B. Leopold and R. L. Nace of the U.S. Geological Survey, was presented by the associate author. The second paper, by C. R. Gutermuth (Wildlife Management Institute), presented problems associated with wilderness and other reserves of public lands. M. M. Kelso (University of Arizona) discussed problems growing out of the spaciousness of the West. The final paper, by W. E. Foltz (University of Idaho), dealt with public and private investment in resource development.

The fourth session of the symposium (29 December) centered on the theme "Projecting management programs," with R. E. Hodgson (U.S. Department of Agriculture) presiding. There were four papers. Of these, the first, "Providing for multiple use in managing land and water," was presented by J. A. Hopkin. The second, "Modifying management and vegetation of watershed areas for improved water yields," was presented by F. H. Kennedy (U.S. Forest Service). The third, "Management associated with complex use for wildlife, livestock, and recreation," was presented by A. L. McComb (University of Arizona). N. K. Roberts (Utah State University) discussed management of private lands in relation to changing uses of public lands, completing the program.

On the following day the special programs on water improvement provided an important treatment of that subject, enlarging upon the themes developed in the Section O symposium. The entire series of programs, from 27 through 30 December, provided a comprehensive and well-balanced treatment of the problems associated with land and water resources and their use in the 17 western states. The information presented, and the analyses of potential programs and decisions, should be very useful to those seeking solutions to the critical problems facing these western regions.

The attendance totaled about 550 for the four half-day sessions of Section O and more than 400 for the three related half-day sessions. The audience included agricultural leaders from the federal and state agencies concerned with land and water use in the West and many leaders from private enterprises. The interdisciplinary nature of these programs was an excellent illustration of the role of science in solving basic problems.
problems of current and long-range significance.

The following actions were taken, or announced, relative to Section O. Thorne, chairman of the section for 1961, was appointed committeeman-at-large for a 4-year term, beginning 1 January 1962. He succeeds L. P. Reitz, who has completed a 4-year term as committeeman-at-large. H. B. Sprague was reappointed secretary of Section O for a 4-year term. The symposium program of Section O for the 1962 meeting of the AAAS in Philadelphia will have as its theme, "Food quality, as influenced by production and processing." George R. Irving, Jr. (deputy administrator, Agricultural Research Service, U.S. Department of Agriculture), was elected chairman of Section O for 1962 and a vice president of the AAAS for that period.

Howard B. Sprague, Secretary

Land and Water Use

Twenty papers were presented during the 3-day symposium on land and water use, one session being a general society symposium jointly sponsored and arranged with the Southwestern Division's Committee on Desert and Arid Lands Research.

Population increases of 1.6 percent per year, rising living standards, and changing interests and leisure-time activities are increasing the pressures on the nation's land and water resources (Stephen C. Smith, University of California). Higher-than-average population increases in the West, the nearly 400 million acres of public lands, and acute water limitations combine to make this an area of conflicting ideas about the use of resources.

With production on the nation's farms increasing about 2.6 percent per year, the approximately 640 million acres of land suitable for cultivation, plus anticipated developments in science and technology, will provide food and fiber needs for the foreseeable future (R. D. Hockensmith, Soil Conservation Service).

W. I. Palmer (Bureau of Reclamation) pointed out that water needs for the West could only be satisfied through a large public investment for storage, distribution, pollution control, and better measures for reducing losses. F. H. Kennedy (U.S. Forest Service) reported preliminary results of some long-term experiments which indicate that thinning or removing trees and replacing them with grass on many western watersheds could result in larger yields of water. Similar increased water supplies were foreseen from capture and use of underground and surface water (J. Harshbarger, University of Arizona) and from better knowledge of climatic events (P. R. Julian, University of Colorado).

The role of government as a guardian and developer of resources has been accepted, according to L. B. Leopold and R. Nace (U.S. Geological Survey), but they foresaw need for action to guard public interest against government encroachment. Research to determine the consequences of long-term programs is needed, with more consideration of esthetic and social values. M. K. Udall (U.S. congressman, Arizona) concluded that legislative attempts to consolidate agencies concerned with national resources had failed; legislation is being sought to establish uniform criteria among agencies for developing and managing land and water.

Several papers evaluated competitive uses of resources. N. Wollman (University of New Mexico), in an economic appraisal of alternative uses of water...