

The Map Information Office*

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THIS PAPER PRESENTS an over-all view of a little-known service within the federal government—the Map Information Office of the U. S. Geological Survey—a service supplying a wealth of summary information on maps that is in ever-increasing demand in all libraries today.

The enormous number of maps now being published, the multitude of subjects and data portrayed, and the current availability of related data such as aerial photographs and geodetic control surveys—all these indeed challenge the skills and resourcefulness of librarians and their staffs in maintaining up-to-date reference materials.

As a guide in developing your library's map collection, whether your library is a map depository for federal government maps or maintains a reference collection, you have probably obtained the catalogs, indexes, checklists and reports issued by the government and the volumes describing government publications prepared by your association members and others. These publications, you have discovered, serve as your most authoritative bibliographical aids for general reference service in the field of surveying and mapping.

Yet, with the best reference materials at hand, you may frequently ponder many seemingly strange requests. Perhaps, too, you receive such questions as these directed to our office: "Where can I get a map of the uncharted islands in

the Pacific"; "a map showing all the good fishing spots"; "a map showing all the natural resources of the United States"; "a map showing all the unknown deposits of uranium?"

These inquiries may appear on the lighter side of rendering adequate reference assistance to the map-using public; nevertheless they do reflect genuine sincerity of purpose. On the more serious side, our office receives, for the most part, inquiries of a technical nature pertaining to all kinds of maps and related data for the administrative and planning needs of government, for exploration and scientific use, for industrial expansion and development programs, for educational purposes, and for hundreds of other uses. In answering these inquiries, the professional staff of the Map Information Office can advise what maps and data are available and where they may be obtained.

At this point, a brief résumé of the surveying and mapping of the United States, its territories and possessions within the past century may be helpful in explaining how the surveys conducted by the government have been coordinated and how the Map Information Office has been developed to serve federal and state agencies and the public as a central source of survey and map data.

The desirability of coordinating the surveying and mapping activities of the federal government was recognized as early as 1878. At that time, four exploratory geographical and geological surveys were in progress west of the 100th meridian. Bitter rivalry developed during these surveys, which had been started about 1867, and resulted in

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strong competition for support. The surveys overlapped and spheres of activity were undefined. To remedy this situation, the Congress of the United States requested the National Academy of Science to recommend a plan whereby these surveys could be consolidated. As a result of the academy's studies and recommendation, the four exploratory surveys were abolished and the Congress created the Geological Survey on March 3, 1879.

The need for further coordination of federal surveying and mapping was again apparent shortly after World War I, since in the intervening years many overlapping functions had developed. Acting upon the recommendations of the major map-making and map-using agencies, the President of the United States created by Executive Order on December 30, 1919, a Federal Board of Surveys and Maps. Among other stipulations, the Executive Order directed the Board to "establish a central information office in the Geological Survey for the purpose of collecting, classifying, and furnishing to the public information concerning all map and survey data available in the several Government departments and from other sources."

The Federal Board and the Map Information Office (as it later became known) functioned within their correlative and advisory capacities until the board was abolished by Executive Order on March 10, 1942. The functions of the board were then assigned to the Bureau of the Budget, at whose request the Map Information Office continued to be maintained within the Geological Survey, although on a rather small scale because of the wartime restrictions.

During World War II, the production of maps and charts for the United States and all parts of the world was stepped up tremendously. Thus, at the close of the war, the enormous volume of these publications and the unprecedented demand for all types of map and survey

data again pointed up the imperative need for a central and authoritative source of map information. To meet this need, the staff and facilities of the Map Information Office were expanded in the early part of 1946 to undertake this challenging assignment.

In the ensuing years, the demand for survey and map information has continued to increase, engendered in part through the extensive use of maps by soldiers and civilians during the war period and through the peacetime development programs of government and industry in this country and around the world. For the first four months of this year, service requests (including those received by mail and telephone and from visitors) as compared with the same period in 1946, reflected a 30-fold increase.

The Map Information Office today comprises three specialized units: the Topographic Maps Unit, the Aerial Photography Unit, and the Geodetic Control Unit. The activities of these units fall into clearly defined fields of responsibility and service.

The Topographic Maps Unit carries on continuous research for all topographic data pertaining to the United States, its territories and possessions, produced by federal, state, or commercial organizations. The unit makes evaluation studies of these data and publishes the results of this appraisal annually in the form of an index map, titled "Status of Topographic Mapping in the United States." This index shows by color and pattern the status of the topographic maps produced by the Geological Survey and other federal agencies. The map appraisal given in this index differentiates four map-evaluation classes: Class 1, a standard quality map; Class 2, a standard quality map but one in need of revision; Class 3, a useful map but one deficient in accuracy and content; Class 4, a substandard, reconnaissance map or one requiring

resurvey. In addition to portraying the latest summary information on all available topographic maps, the index reveals the areas of the United States not yet mapped and indicates the areas in which new mapping is authorized or in progress. Along with its research and evaluation work, this unit maintains a complete file of all topographic maps produced by the Geological Survey and a complete compilation history of these maps.

The unit also assembles and makes available for sale preliminary copy of new mapping. This advance copy is obtainable, at the cost of reproduction, for a period of about two years prior to final publication of the quadrangle map. Such copy is most useful to engineers, surveyors, and other technical map users in government and industry.

The Aerial Photography Unit is primarily responsible for the assembly of information on the aerial photography of the United States, its territories and possessions, taken by federal and state agencies and by commercial organizations. This unit has the most complete record of aerial photography in existence for the United States, its territories and possessions, showing the film-holding agency for all photography, the date of the photography, the flight altitude, the scale, and the focal length of the aerial camera lens. The cumulative records of this unit account for about nine million square miles of photography; that is, photography for about three times the area of the United States.

The unit publishes the results of its research in an index map, "Aerial Photography of the United States," which shows by line pattern and color the areas photographed and the film-holding agency. Several federal agencies—the Geological Survey, the Coast and Geodetic Survey, and the Department of Agriculture—are authorized to sell reproductions from the film negatives in their files of the photography shown on

this index. Reproductions from photography held by the Department of the Army and the Department of the Navy are available only if the area has not been photographed by a civilian agency.

The Geodetic Control Unit is responsible for maintaining records of all horizontal and vertical control data produced by the Geological Survey and other federal agencies. Control surveys are required by the Geological Survey and other map-making agencies as the framework for the preparation of topographic maps. In former years, the survey data were considered more or less a by-product of the topographic map, but today in some areas these data are assuming almost as much importance as the map itself, especially where scientific investigations and certain land surveys require more accurate geographic positions and elevations above sea level than can be shown on the map.

The unit maintains records of the latitude, longitude, and elevation above sea level of about five million bench marks scattered throughout the country. Records are maintained in 15-minute quadrangle units conforming to the sheet layout of a topographic quadrangle map.

About every three years the unit publishes index maps of the United States showing all horizontal and vertical control established and reported by federal agencies. It also makes available, at the cost of reproduction, photostatic copies of a series of state maps showing the location of these control surveys in more detail.

Many depository libraries endeavor to maintain complete collections of topographic and geologic quadrangle maps and other important map series. During the war, many of the depository libraries did not receive the Geological Survey's topographic maps regularly and, therefore, some quadrangle maps may be missing from these collections. These

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ates will eventually be moved, after weeding, to the new building. It is likely that, apart from the engineering collection, the content of the undergraduate library will total between 100,000 and 150,000 volumes.

The plans do not include a separate reserve book room despite the fact that all required reading material for courses which include undergraduates will be kept in this library. Provision is being made for a limited, controlled collection of reserve books against the possibility that some required reading may simply not be available in an adequate number of copies. For the most part, however, required or collateral reading which must be provided in multiple copies will be kept in its proper place on the open shelves, the spines of the books marked to indicate that they may be charged out only overnight.

Final arrangement of the books has not yet been settled. The site for the building and the space requirements have governed its shape and the number of stories, but it is completely flexible and it should lend itself to arrangement of the books in a divisional pattern.

We have not planned for a separate browsing collection. In a broad sense, the entire collection will be a browsing collection for the whole campus. The library will contain not only the best books of the past but those of the present, since it is our firm belief that the students' education not only should give them a sense of history but should make them aware of the best current thinking on the issues and life of our times.

It is not intended that the undergraduates be restricted to this building. On the contrary, it is hoped that their experience in the undergraduate library will stimulate them to make advantageous use of the research collections. They will be welcomed at all branches of the library system when they have a serious purpose in using them.

The solution that we have adopted may not be viable on many other campuses. I am certain, however, that it will help the library share in importance and effectiveness with the inspiration of good teaching in educating the undergraduate students at the University of Michigan.

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can be obtained on specific request if copies are still available. Also, as you have probably observed, new editions of the state indexes are being issued much more frequently than in previous years. It is suggested that a careful check of your collections be made to assure that they are up to date, especially in regard to maps of your local area.

Whatever your most perplexing map problems are, whether they concern map acquisition, the maintenance of your collections, or the supplying of specific map data for professional and technical requirements, our office is always glad to be of assistance. Although we do not attempt to maintain file copies of all

maps and related publications issued by government and private groups, we can generally advise what coverage is available for a specific area and where it can be obtained. Often, too, we can supply, or direct you to the source of the information required to answer, many of the seemingly intricate requests for map data. This service is available to all who wish to take advantage of it.

The Map Information Office is always eager to learn about appropriate material that may have been overlooked, and we welcome any suggestions that you wish to make as to how we can improve our service to you and to the users of libraries.