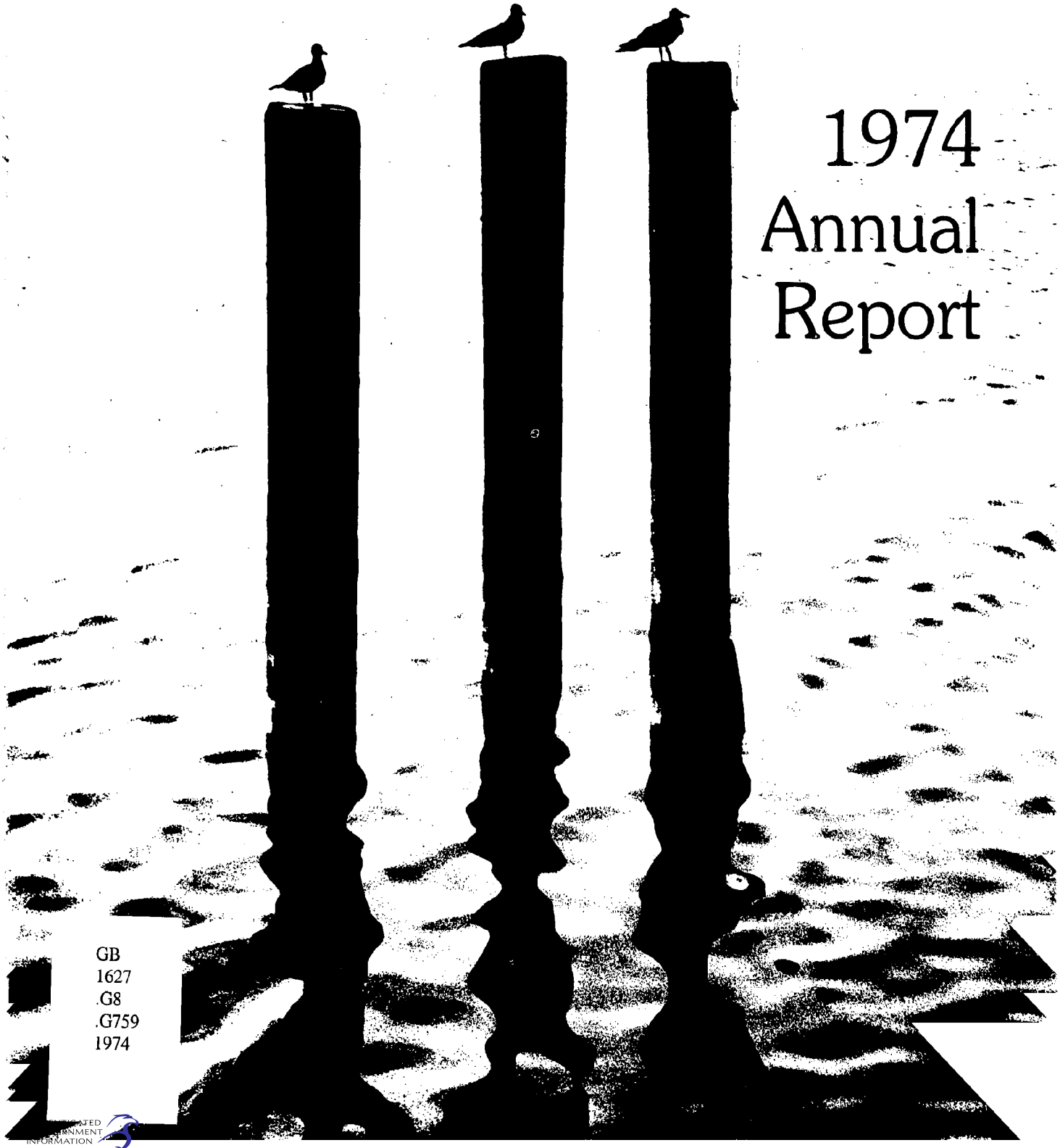
Great Lakes Basin Commission



1974 Annual Report

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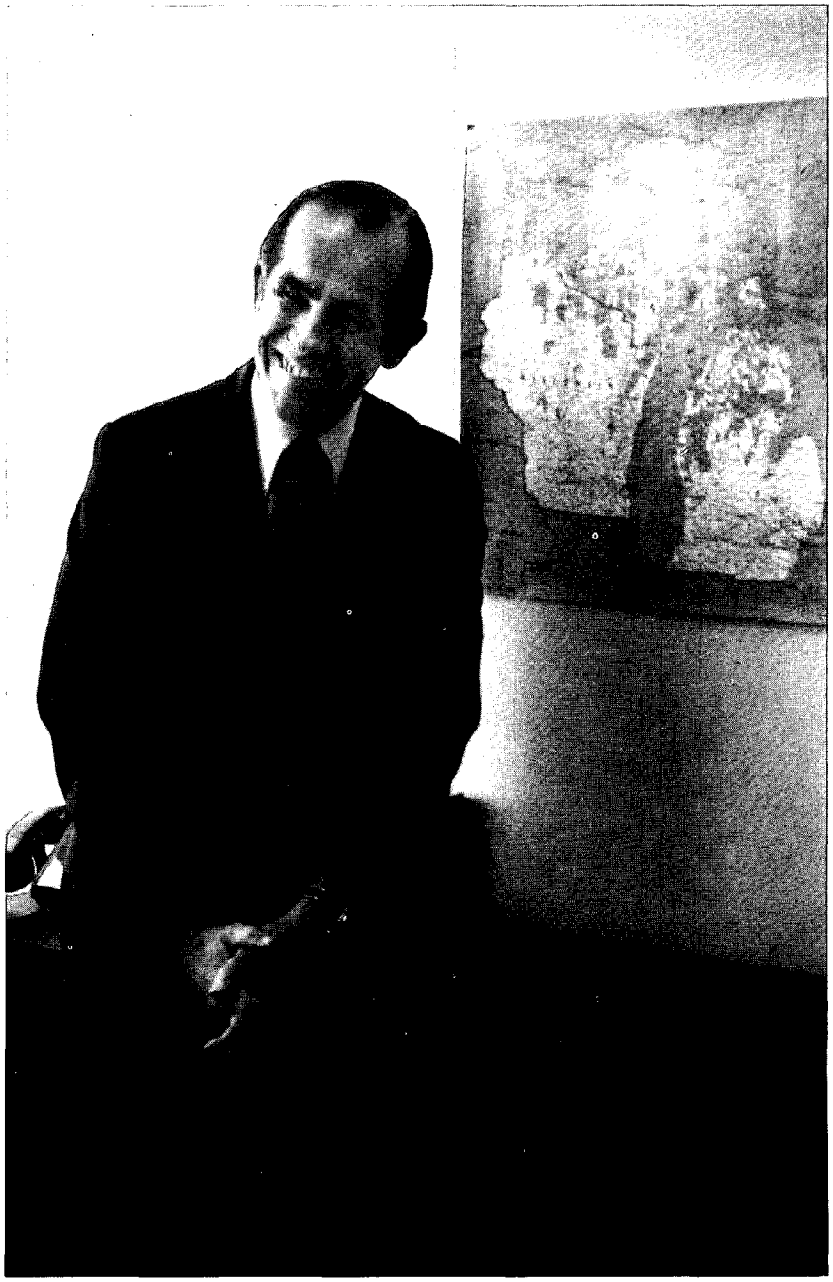

From the Chairman

To their excellencies, the Governors of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin, and to the US Water Resources Council for transmittal to the Congress through the President of the United States:

In the course of Fiscal Year 1974 the Water Resources Council's new Principles and Standards and the "new approach" to Level B planning have radically changed water and related land resource planning. The Great Lakes Basin Commission has kept abreast of these changes, making its seventh full year of operation a productive one.

In keeping with the "new approach" instituted by Warren Fairchild, Director, Water Resources Council, the Basin Commission rescoped its Maumee River Basin Level B Study and its proposal for a Fox-Wolf River Basin Level B Study. The new approach is designed to save taxpayers considerable time and money. The revisions streamlined the study organization while emphasizing public participation and State leadership. As currently structured, the studies will be completed two years after their respective funding dates.

Basin Commission activities also were affected by the Water Resources Council's new Principles and Standards. These Principles and Standards apply to all Federally funded agencies involved in planning and development of water resources. While defining required steps in the planning process, the new Principles and Standards break with past planning guidelines by stating that two objectives, environmental quality and national economic development, must be satisfied by suggested alternatives.

The Basin Commission realizes that water resources planning cannot be accomplished in a vacuum. As the primary coordinating agency for water resource planning in the Basin, it has used its influence to coordinate land use planning, coastal zone management, regional comprehensive planning, and social and economic planning. The Basin Commission's newly established standing committee on coastal zone management has broken ground in this area. The Basin Commission also sponsored shoreland management and shoreland damage reduction workshops in the second quarter of the fiscal year. It worked in conjunction with the Federal Regional Council, Region V, to draw up a strategy for reducing shoreland damage, a strategy badly needed by coastal areas that were flooded and eroded by last year's record breaking high lake levels.

The Basin Commission continued to prepare its Comprehensive Coordinated Joint Plan (CCJP), putting the final touches on the first stage in this ongoing project, the Great Lakes Basin Framework Study. The Public Information Office of the Great Lakes Basin Commission, which is carrying through the massive task of publishing the 27-volume study, arranged with the Government Printing Office in May to contract with a printer. The Basin Commission also continued to review State and regional studies for incorporation in the CCJP.

Planning staff involvement in special studies this year included preparation for regional participation in the National Water Assessment and preliminary work on the US portion of the International Joint Commission's Study on Great Lakes Pollution from Land Use Activities. Planners also began evaluating the water supply that will be required by the President's Project Independence.

In addition, the Great Lakes Basin Commission staff monitored systems analysis activities under way in the Basin. In light of what they found, the Basin Commission's proposed Great Lakes Environmental Planning Study was redesigned. The revised plan of study, which will be resubmitted to the Water Resources Council early in FY 1974, proposes using systems analysis as a means of finding better solutions to problems in the Great Lakes.

We seek your continuing support of our efforts to encourage effective resource management in the Great Lakes Basin.

Respectfully,

Frederick O. Rouse

Frederick O. Rouse

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An Alternative Course

Centuries of glaciation scoured and carved the Great Lakes Basin into the largest freshwater lake system in the world, leaving the region rich in natural resources. Modern man, who was drawn to the area because of these resources, has used them to build a thriving industrial and agricultural economy. The region supports 15 percent of the nation's population which, in turn, accounts for 18 percent of the nation's personal income. The resources, once seemingly unlimited in supply, are being depleted, if not endangered, by man's demands.

The Great Lakes Basin Commission is dedicated to an alternative course. Wise use, conservation, and development of water and related land resources are its goals. Comprehensive, coordinated water and related land resources planning are its means.

The Basin Commission was established by the President in 1967, at the request of the Governors of five of the Great Lakes Basin States with concurrence from the other three. Its members are representatives from the eight Great Lakes States and 11 Federal agencies concerned with water and related land resources. A representative from the Great Lakes Commission, an interstate agency, is also a member. As of this year official Canadian representatives are encouraged to participate in Basin Commission meetings, although they do not vote. The Basin Commission's effectiveness depends on its members, who have the authority to implement Basin Commission policy in their separate but overlapping spheres of influence. It is coordinated action by all the members of the Basin Commission that will make the difference in the Basin's future.

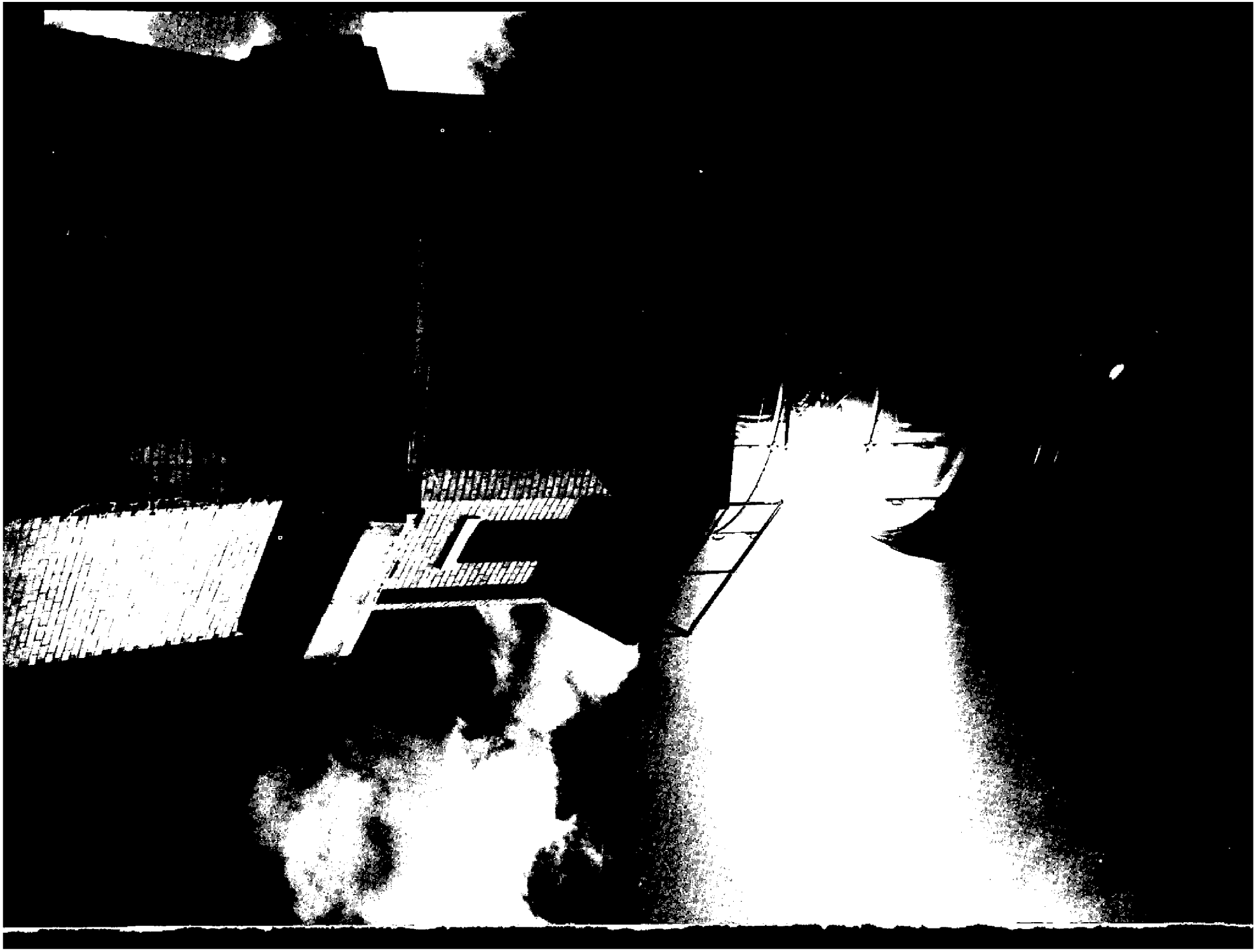
As stipulated in the Water Resources Planning Act, the Basin Commission's responsibilities are fourfold. These responsibilities, while distinct, are interrelated to the extent that none can be fulfilled without the others. The Basin Commission is the primary coordinator of all Federal, State, interstate, local, and nongovernmental plans concerned with water and related land resource development in the Basin. To do this the Basin Commission employs interstate-interagency committees or task forces to attack problems of regional concern. The Basin Commission also reviews plans developed by State and regional planning boards to see that they are in the interest of the Basin as a whole.

The Basin Commission's second duty is to prepare and keep up to date a comprehensive, coordinated joint plan (CCJP) for development of water and related land resources. This plan is to be used by Federal, State, interstate, local, and nongovernmental planning agencies to insure that their separate efforts complement one another.

Level A of the CCJP is the Great Lakes Basin Framework Study, a general survey of all the resources, problems, and future needs in the Basin. The Basin Commission will continually update this baseline as the more specific Level B and Level C studies are conducted in smaller areas of the Basin. The Basin Commission is conducting some Level B studies itself. Others are done under the aegis of Federal, State, and regional planning agencies.

The Basin Commission is also responsible for recommending long-range schedules of priorities for collection and analysis of basic data. This schedule is to include priorities for investigation, planning, and construction of projects.

Finally, because sound management decisions cannot be made without ample information, the Basin Commission is authorized to undertake special studies that are related to its other tasks. It may undertake any studies of water and related land resources problems in the Basin that facilitate preparation of the CCJP.



Coordination

The Great Lakes Basin Commission's responsibility to promote cooperation among its members is a continuous task. Four times a year members reinforce agreements and resolve their differences face-to-face at Basin Commission meetings. Policy is determined by consensus. Coordination of land and water resource planning in the Basin also takes place through committees and task forces established to address specific problems. Other committees are formed to review documents that are of interest to the Basin Commission. A summary of the Basin Commission's coordinating activities follows.

COASTAL ZONE MANAGEMENT

With passage of the Coastal Zone Management Act in 1972, the Great Lakes States were encouraged to take action against the high lake levels that were pummeling their shores. At the February quarterly meeting, the States asked the Basin Commission to assume interstate coordination of management programs and planning efforts for coastal zone management. With the endorsement of the Commissioners, the Standing Committee on Great Lakes Coastal Zone Management was formed. William D. Marks of the Michigan Department of Natural Resources was appointed chairman, and committee members were named by the Basin Commission's member States and agencies.

The standing committee helped the States apply for Federal grants to develop management organizations and tools for their coastal areas under the 1972 Coastal Zone Management Act. The Committee also reviewed proposals to reduce shoreland damage, and it recommended that the Basin Commission accept in concept such a strategy prepared by a joint task force of the Great Lakes Basin Commission and the Federal Regional Council, Region V. The committee's ongoing task is to coordinate measures used along the shorelines of the eight Great Lakes States to reduce shoreland damage. As part of this effort, the committee is trying to locate old maps of shoreline areas for use in estimating erosion rates. Necessary mapping of new shorelines will be carried out with support from the National Oceanic and Atmospheric Administration.

SHORELAND DAMAGE REDUCTION

High lake levels that have caused extensive erosion and property damage during the last two years have hammered home the need for an overall strategy to reduce shoreline damages in the Great Lakes Basin. The Great Lakes Basin Commission joined with the Federal Regional Council to develop such a strategy. The GLBC/FRC joint task force was also to undertake studies and introduce measures that will help implement the overall strategy. The joint task force report was published in March, and Commissioners accepted it in concept, urging that the strategy be improved and implemented at the earliest possible date.

SURVEY OF PLANNING PROGRAMS

One way to minimize duplication and conflict in planning is to publicize all that is being done. With this in mind, the Commissioners instructed the Basin Commission staff to compile a list of projects that will be conducted in the Basin during FY 1975. Commission members and selected organizations were being surveyed at the end of the fiscal year. This survey will yield information about ongoing and anticipated programs including data collection and research efforts. In addition the survey will cover projects that may continue or be initiated in the next five fiscal years.

The information, which will be available in October 1974, is being compiled in a tabular format on a State-by-State basis. Cost estimates and brief descriptions of the overall objectives or contents of each program element are included.

INTERNATIONAL COORDINATION AND RESEARCH

The Great Lakes Basin Commission's jurisdiction extends only to the US-Canadian border, but its concerns reach beyond. The Basin's problems know no political bounds. Consequently, the Commission requested its Chairman to improve coordination with Canada, particularly through the exchange of factual information regarding planning and data activities. In response to this request, the Chairman has sought

closer relationships with the International Joint Commission and Federal and Provincial Canadian governments. Through the efforts of the US State Department, official representatives from Canadian planning agencies now regularly attend Great Lakes Basin Commission meetings. They are encouraged to participate in the discussions, although they cannot vote.

The Basin Commission staff, long interested in research as a foundation for better planning, has been associated with the Research Advisory Board, a subsidiary of the International Joint Commission. Staff members are conducting a literature search for the Research Advisory Board in the fields of social science, economics, and law. Having reviewed the research activity in these areas, the staff will prepare a report on what specific topics require more research.

Cooperation between the International Joint Commission (IJC) and the Great Lakes Basin Commission has included review of the IJC report on Regulation of Great Lakes Water Levels. The report, which was prepared by the IJC's International Great Lakes Levels Board, suggests that high lake levels in Lakes Michigan and Huron could be reduced by storing water in Lake Superior during critical periods. The States surrounding Lake Superior are concerned that the plan does not indemnify their residents against the kind of losses residents in the lower lakes have suffered as a result of high lake levels. It is difficult to predict what damage might occur from rises in the level of Lake Superior.

A special Great Lakes Basin Commission committee will review the levels report and its appendices to ascertain whether Basin Commission action is appropriate. It is possible that States that would be affected by a change in the level of Lake Superior may decide on joint action.

1975 ASSESSMENT OF WATER AND RELATED LAND RESOURCES

The Great Lakes Basin Commission is one of 21 regional participants in the 1975 Assessment of Water and Related Land Resources. The project represents the Water Resources Council's effort to maintain an up-to-date assessment of the nation's severe water problems. Regional and public participation will be emphasized in identifying severe water problems. The study will also establish priorities and emphasize the need to resolve problems from national and regional/State viewpoints.

The Great Lakes Basin Commission staff reviewed drafts of the plan of study. The final draft is being prepared for publication early in FY 1975. The Basin Commission staff also reviewed the agency work plans that will be used by Federal agencies to carry out the first step of the study. This first step involves a nationwide analysis of all current water supplies and supplies expected in 1985 and 2000.

The Basin Commission's primary task is to identify problems and select areas for further evaluation in the Great Lakes Basin. Using national and regional projections of demands, Basin Commission staff members will evaluate problem areas and establish priorities. Finally, they will draw up conclusions about regional and State areas and offer recommendations. Work on these tasks will begin as soon as the Great Lakes Basin Commission and the Water Resources Council have developed a regional work agreement. It is in this agreement that the Basin Commission can express its ideas about conducting the specific problem analyses, step two of the study.

PUBLIC PARTICIPATION

In its capacity as the primary coordinator of water and related land resources in the Basin, the Great Lakes Basin Commission has a responsibility to keep the public informed about its activities. It also has an obligation to listen to the public and consider what it hears. Its Level A and Level B studies include methods of learning what kinds of use and development the public desires.

The Basin Commission's meetings are open to the public. Representatives from the press, Sierra Club, Lake Michigan Federation, League of Women Voters, and the American Association of University Women (AAUW) attend regularly. The AAUW has established a task force to monitor Basin Commission activities. This group has evaluated the Basin Commission's influence on legislators

and commented on its public information publications. A delegation from the Michigan Division of AAUW toured the Basin Commission offices last fall to become better acquainted with its operation.

The Basin Commission's major ongoing public relations effort is its monthly newsletter. The *Communicator,* which goes to more than 11,000 subscribers, contains articles on the Basin Commission and its member States and agencies. It focuses on topics of current and lasting interest to water and land resources planners, legislators, and Great Lakes Basin residents on both sides of the international boundary. This year the Public Information Office responded to 11,000 inquiries for Great Lakes information

LAKE ERIE WASTEWATER MANAGEMENT DEMONSTRATION PROJECT

The Great Lakes Basin Commission is participating in a Lake Erie Wastewater Management Demonstration Project as a member of the Interagency Technical Advisory Group. The study is being conducted by the US Army Corps of Engineers in an attempt to demonstrate ways of improving and restoring Lake Erie.

The plan of study is almost complete. It will outline ways of analyzing how Lake Erie will respond to various methods of reducing pollution, and it may also propose several pilot projects to demonstrate the effectiveness of various pollution reduction methods.

Comprehensive

The Basin Commission is required by law to prepare a comprehensive, coordinated joint plan for development of water and related land resources. The CCJP, which is expected to be used as a guideline by all planning agencies in the Basin, must include an inventory of the Basin's resources. It must evaluate how much those resources are being used and how much they could be used in the future. It must also include reasoned predictions about future demands on those resources, and suggest feasible ways of developing and conserving the Basin's resources in order to meet those demands. The plan is to be kept up to date by continual addition of current and more detailed data. Preparation of the CCJP is a continuous process.

GREAT LAKES BASIN FRAMEWORK STUDY

The Great Lakes Basin Framework Study represents the first step in compiling the CCJP. The Basin Commission's editing staff spent FY 1974 editing 23 of the study's 27 volumes and incorporating last minute data changes in preparation for publication. In May, the Basin Commission Chairman, Frederick O. Rouse, authorized the Government Printing Office to begin securing a printing contract. The first volume is expected to come off the presses in November 1974.

Appendix 1, which contains descriptions of ways to meet future resource needs, is now taking form. Comments on the preliminary draft of the appendix, entitled *Alternative Frameworks,* were incorporated into a first draft early in the fiscal year. Comments and revised data were then incorporated into a second draft, which was to be distributed for review early in FY 1975.

The appendix discusses two planning frameworks. The "normal" framework is based on projections of population and economic activity that reflect historic rates of growth. The "proposed" framework is the Basin Commission's idea of how best to conserve and manage the Basin's water and related land resources. This framework was designed to reflect as much as possible the divergent desires of Basin residents. In order to compile the proposed framework, planners projected both the high and low limits of economic growth in the Basin. They also projected the resource requirements that would correspond to accelerated or limited growth. Using these extreme projections to place their work in context, planners modified the normal framework to develop the proposed framework.

The Great Lakes Basin Framework Study Report, which will be based on the Study's 25 appendices, was begun this year and is expected to be finished in FY 1975.

The Basin Commission committee assigned to compile an environmental impact statement has evaluated the effects the alternative frameworks would have on the environment. The first draft of the statement was distributed for review by the Commissioners in April 1974. The Commissioners will transmit a draft of the environmental impact statement to the

Coordinated Joint Plan

Council on Environmental Quality and to interested Federal, State, and local agencies at the same time as the Framework Study Report is referred for comments. The final draft of the environmental impact statement will be completed before the report is submitted to the Water Resources Council.

LEVEL B STUDIES

If the Great Lakes Basin Framework Study is the blueprint of the CCJP, Level B studies conducted by State or regional planning agencies are the bricks and mortar that give it shape. They are comprehensive studies of hydrological or metropolitan areas — areas small enough to be examined in detail. The portions of these studies that the Commissioners endorse are incorporated into the CCJP.

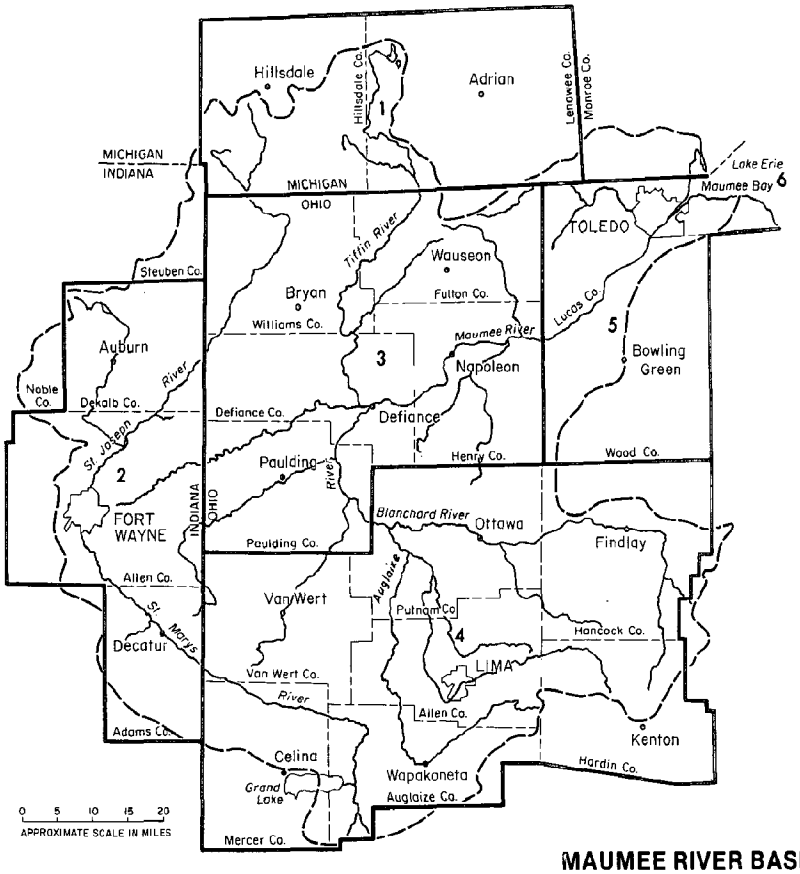
The mechanics of incorporating Level B studies and the even more detailed Level C studies into the CCJP has been a topic of discussion this year. States who are members of other river basin commissions in addition to the Great Lakes Basin Commission have asked for review of the Great Lakes Basin Commission's definition of the CCJP. They are seeking a reasonable consistency in approach.

In addition, New York, which last year asked the Basin Commission to review its Erie-Niagara Basin Report for possible incorporation into the CCJP, has requested a change in the review procedure. It invited the Commission to participate with the State as it reviews its several regional plans in the Great Lakes Basin. Heretofore, the Basin Commission had been asked to review only those plans already having State approval.

New York argues that simultaneous review would allow State plans to reflect national and regional concerns, as well as State concerns. The Basin Commission agreed to the accelerated procedure with the understanding that if changes are made on the State level, the plan would be resubmitted to the Basin Commission for another 90-day review before final approval is given.

MAUMEE RIVER BASIN LEVEL B STUDY

Maumee River Basin Level B Study, conducted by the Great Lakes Basin Commission, is the first in the nation to reflect the "new approach" to Level B planning. Initiated in October 1973, it was revised in March 1974 to accommodate the Water Resources Council's new emphasis on integrated planning. Its timetable was shortened to two years. The budget was cut. The three States that have land in the drainage basin, Indiana,



MAUMEE RIVER BASIN

Michigan, and Ohio, were given leadership roles. The public was encouraged to participate in every stage of the planning. Citizens were given a hand in the conduct of the study through establishment of the Citizens' Advisory Committee. The study organization places new emphasis on the judgmental role of a small group of local, State, and Federal planners, thus avoiding time-consuming and often unproductive layers of review. The study manager, a member of the Great Lakes Basin Commission staff, carries out day-to-day duties.

The purpose of the study is to propose an integrated approach to the Maumee basin's water and related land resource problems. The approach is in line with the new Principles and Standards, which demand solutions that foster environmental quality as well as national economic development.

Early in the study, the Great Lakes Basin Commission established a Citizens' Advisory Committee (CAC). Its 30 members were appointed by the Indiana, Michigan, and Ohio Commissioners to represent various organizations and a large segment of the public. As its first task, the CAC drafted a preliminary report on goals. This working paper, which contains the CAC assessment of what planning should accomplish in the basin, was used by study planners as they worked on "first-cut" alternatives.

At the close of the fiscal year, the Maumee Study Planning Board representing local, State, and regional agencies, was completing the first phase of the study. This phase includes a preliminary assessment of the basin's resources and problems and a description of "first-cut" solutions. One set of solutions emphasizes the objective of national economic development; another fosters environmental quality. A third, the "suggested alternative," is a mix of measures the planners believe will improve the quality of life. These measures consider the national economic development and environment quality objectives as well. The sketch alternatives will appear in the interim report, which will be published early in FY 1975.

FOX-WOLF RIVER BASIN LEVEL B STUDY

The proposal for a Level B study of the Fox-Wolf River Basin in Wisconsin was also revised this year. Originally approved by the Basin Commission in May 1973, the study was not funded. This winter the Basin Commission staff rescoped the proposal to study, modeling it after the "new approach" to Level B planning. The new proposal includes such elements of the "new approach" as:

- immediate and repeated plan formulation with continual opportunities for public reaction
- increased emphasis on State participation and leadership
- maximum use of existing information; no new data collection
- reduced expenditure of time and money

The Commissioners approved the general concept of the new management organization of the study at the February quarterly meeting. They directed the staff to submit the revised proposal of study to the Water Resources Council for funding as an initial start in FY 1976. As proposed, the study will be prepared by the Great Lakes Basin Commission under the direction of a study manager from Wisconsin.

REGIONAL STUDIES

The Great Lakes Basin Commission is often asked to review regional studies conducted in the Basin. The review process facilitates two Basin Commission tasks: coordination of water and land resource planning in the Basin and creation of the Comprehensive Coordinated Joint Plan. The status of the various regional studies is summarized below.

ERIE-NIAGARA BASIN

The New York State plan for use of water and related land resources in the Erie-Niagara area was adopted by New York in 1972. The plan is being reviewed by the Great Lakes Basin Commission/New York CCJP Committee for incorporation into the CCJP for this portion of the Great Lakes Basin.

ST. LAWRENCE-FRANKLIN RIVER BASIN

The Great Lakes Basin/New York CCJP Committee is coordinating its review of the St. Lawrence-Franklin River Regional Resources Planning Board Report so that the Basin Commission's review of the regional plan will coincide with the State of New York's official review.

GREATER FINGER LAKES—OSWEGO RIVER BASIN

The Regional Water Resources Planning Boards of the Cayuga Lake, Wa-Ont-Ya, and Eastern Oswego areas have drawn up their plans and an interboard plan for the Greater Finger Lakes-Oswego River Basin. New York State received the planning boards' report, and held public hearings. It has initiated the review process and will render a decision in July 1974. At the State's request, members of the Great Lakes Basin/New York CCJP Committee began reviewing the plan at the same time.

GRAND RIVER BASIN—MICHIGAN

The Grand River Basin Study is one of the 15 Type 2 comprehensive river basin planning studies initiated in 1963 as Federal-State programs. Eighteen appendices have been prepared as a basis for the conclusions and recommendations that will appear in the study's main report. As soon as alternative plans and the main report are bound, they will be released for a 180-day public review period. They will then be submitted to the Great Lakes Basin Commission.

KALAMAZOO-BLACK-MACATAWA-PAW PAW RIVERS BASIN

This ongoing program in southwestern Michigan is primarily concerned with major changes in land utilization and the resulting erosion and sedimentation in streams and lakes, improper uses of land, deterioration of fish and wildlife habitats, and imminent overall reduction of environmental quality. Mapping, inventorying, and initial plan formulation are well along under the leadership of the State of Michigan with support from the Department of Agriculture.

SOUTHEAST MICHIGAN

This comprehensive basin planning activity, officially referred to as a study of the "Great Lakes, particularly Lake Ontario and Lake Erie — Southeast Michigan," was initiated in 1966. The coordinating committee responsible for the project under the leadership of the US Army Corps of Engineers is made up of several State and Federal agencies, including the Great Lakes Basin Commission. Progress on the study has been slowed because of the Corps' commitments to higher priority items. The Department of Agriculture's Type IV study in the same area is near completion.

ELKHART RIVER BASIN

The State of Indiana, assisted by the US Department of Agriculture, is conducting a Type IV study to determine the future needs and opportunities for land and water development in the Elkhart River Basin. Plan formulation has been substantially completed. Further analysis of institutional arrangements and water quality aspects is under way.

SOUTHEAST WISCONSIN

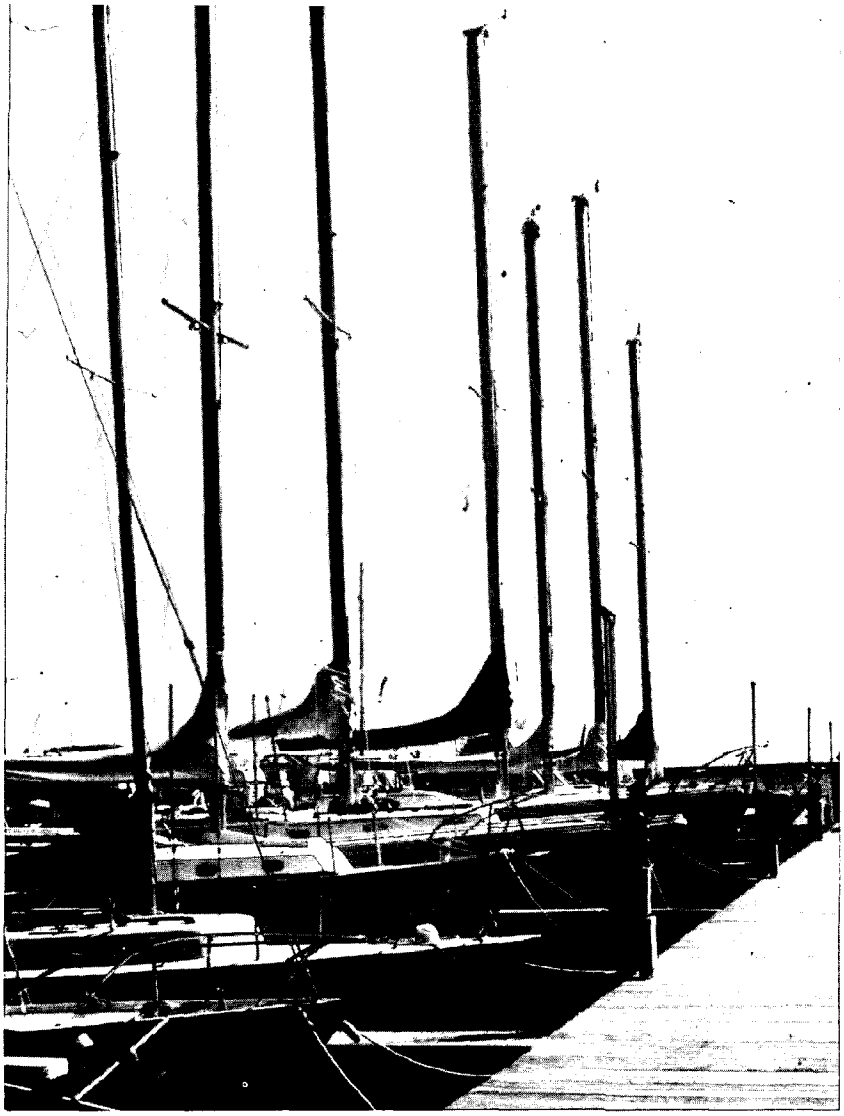
The State of Wisconsin has nearly completed its Type IV study of southeast Wisconsin. The State received technical assistance primarily from the US Department of Agriculture.

ERIE COUNTY, PENNSYLVANIA

The water supply and wastewater management study being conducted in Erie County, Pennsylvania, is nearing completion. The Federal government helped fund the study, which was jointly conducted under contract by State and local governments. A summary version of the study's interim report will be released soon.

WATER NAVIGATION

The Great Lakes-St. Lawrence Seaway Winter Navigation Board has been conducting a demonstration project and survey study to determine the merits of extending the navigation season in the Great Lakes. The demonstration project has been successful in extending the season through the month of January for the last three winters. The Board, which is composed of representatives from the US Army Corps of Engineers, US Maritime Administration, US Department of the Interior, National Oceanic and Atmospheric Administration, Great Lakes Commission, and the Great Lakes Basin Commission, among others, is currently outlining plans for studies in the Lake Ontario-St. Lawrence River areas next year. The US Department of Transportation and the St. Lawrence Seaway Development Corporation have encouraged efforts to extend the navigation season on the Great Lakes.



Long-Range Priorities

Development of long-range priorities is an implicit part of all Great Lakes Basin Commission activities. Wise use, development, and conservation of water and related land resources are possible only if guidelines, criteria, and schedules for effective management decisions are provided. A preliminary schedule of priorities was last published by the Basin Commission in 1971. The Great Lakes Basin Framework Study outlines general priorities through the year 2020. The Basin Commission requested that further work on priorities be deferred until work on the CCJP provided improved perception of needs.

The Basin Commission's current survey of projects planned in the Basin in the next five years will be used by the Commission staff as it compiles an up-to-date schedule of priorities.

Special

INTERNATIONAL JOINT COMMISSION'S STUDY ON GREAT LAKES POLLUTION FROM LAND USE ACTIVITIES

The US Environmental Protection Agency has contracted with the Great Lakes Basin Commission to study the effects of land drainage on the quality of boundary waters in the Great Lakes. Basin Commission staff members have been assigned much of the US portions of Task A and B of the study, which is being conducted by an International Joint Commission reference group under supervision of the Great Lakes Water Quality Board.

Task A involves an assessment of what is known about how land use activities affect water quality. It involves a survey of problems, management programs, and research related to land use/water quality relationships in 17 categories. This survey includes an analysis of what is known about controlling pollution from nonpoint sources.

Two categories, sediments and forestry, were funded and prepared by the US Department of Agriculture in coordination with the Basin Commission office. Fourteen categories were subcontracted to universities and a private firm. Category A-17, Management and Control of Land Use/Water Quality Relationships, was prepared by Basin Commission staff.

Studies

All 17 papers are now being completed. They will be available to study participants in September 1974.

Task B is an inventory of land use and land use practices. A report on current land use is due to be completed by the end of calendar year 1974, and a report on trends in land use is scheduled for completion in 1975.

As part of Task B, the Laboratory for Applications of Remote Sensing at Purdue University will define how land is being used in the 191 counties in the Great Lakes Basin. Four other subtasks related to this project will be handled by the Basin Commission staff or by private contractors. The results, which will be arranged by Lake basin, are scheduled to be available early in calendar year 1975.

GREAT LAKES ENVIRONMENTAL PLANNING STUDY

The Great Lakes Basin Commission has revised its proposal for an environmental planning study in the Great Lakes in light of a review of system analysis programs already under way in the Basin.

Originally proposed for fiscal year 1973, the Great Lakes Environmental Planning Study (GLEPS) was designed to use systems analysis to evaluate environmental problems in the Lakes and propose solutions. The study was not funded. In the meantime, parts of the proposed project were undertaken by other agencies.

Initially considered as a planning study combined with a special study to develop planning tools, GLEPS was revised this year according to the "new approach" to Level B planning. The planning aspect of the study was reduced in scope to reflect ongoing work in systems analysis and shortened in time of performance. The Basin Commission will submit the new proposal to study to the Water Resources Council in July 1974. It is expected to cost $2.1 million.

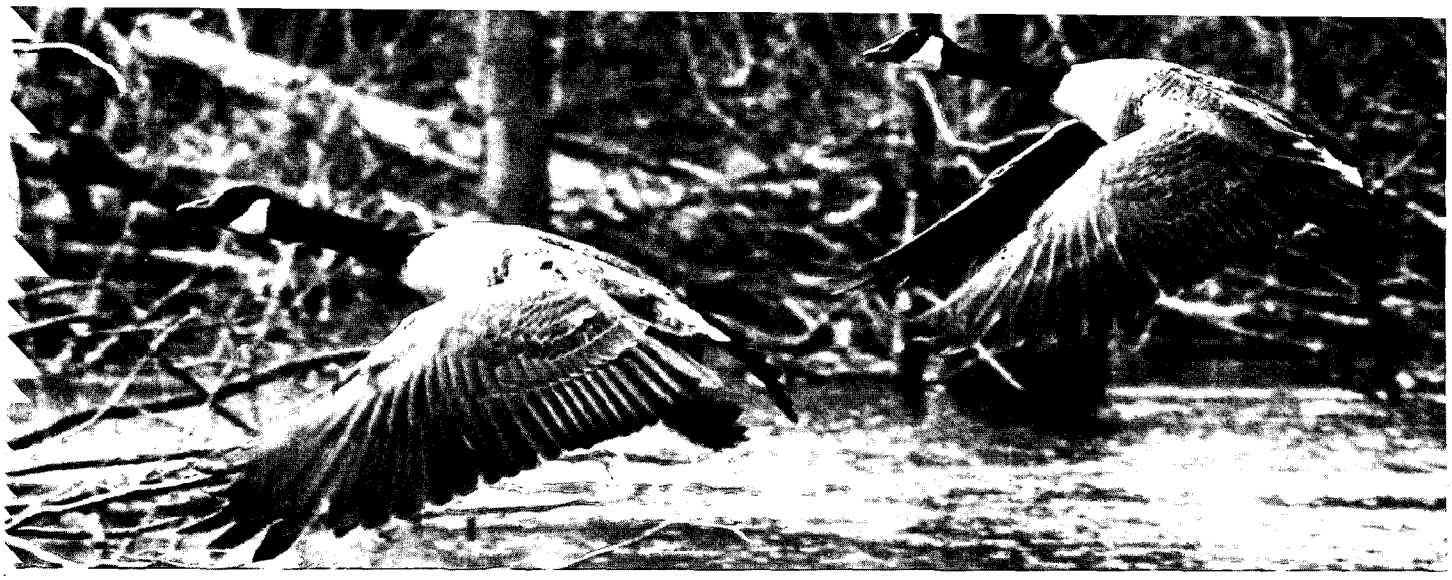
Funding assistance from the WRC permitted the Basin Commission to secure consulting assistance in restructuring its proposal to study and to coordinate with the interested Federal agency participants. The study concept is strongly supported by GLBC Commissioners.

During the year, Basin Commission staff members met with consultants and university and Canadian planners to review activities being conducted in the Basin in systems analysis. Progress is being made on several fronts. The contractor for the Great Lakes Limnological Systems Analysis Feasibility Study, Hydroscience of Westwood, New Jersey, is assisting the National Oceanic and Atmospheric Administration in its analysis of data collection in connection with International Field Year on the Great Lakes (IFYGL). It is also undertaking research modeling efforts for the Environmental Protection Agency's Grosse Ile Laboratory. The modeling efforts concern eutrophication of Lakes Huron, Erie, and Ontario. The Canada Centre for Inland Waters has research investigations under way in several selected areas of limnological systems analysis. Case Western Reserve University and Battelle Memorial Institute are also involved in similar studies. The potential of systems analysis may be explored as part of the Lake Erie Wastewater Management Demonstration Project.

WATER FOR ENERGY SELF-SUFFICIENCY

As part of the President's Project Independence, the Water Resources Council asked the Basin Commission to analyze projected water requirements for energy in the Basin. Basin Commission staff members are preparing a response that will identify all projected water requirements. It will also define potential problem areas with respect to environmental constraints and institutional limitations. The report will suggest several programs to facilitate future energy production while protecting the environment.

The report is expected to conclude that there is an adequate supply of water in the Great Lakes Basin, but that water quality and other considerations limit its use. Nevertheless, foresighted planning and management can insure that energy needs are met in the future. The report will suggest steps to be taken now while the greatest number of possible alternatives are available.



State Activities

State participation is an essential element in comprehensive water and related land resources planning. In recognition of this, the Water Resources Planning Act authorizes the Water Resources Council to assist States in the development of comprehensive plans. The act stipulates that $5 million be appropriated to the Water Resources Council to this end each fiscal year through 1976.

The following are the State's activities in water and related land resources planning during FY 1974.

ILLINOIS

The State of Illinois assigned first priority to flood plain and coastal zone management programs during FY 1974. For its newly initiated flood plain management program the State is devising a series of permits to regulate development along flood plains. The program is being conducted by the State Division of Waterways.

The State Department of Conservation and the Division of Waterways are responsible for the Illinois Coastal Zone Management Program, which will be funded with assistance from the Federal government under the Coastal Zone Management Act. The State has applied for a grant from the National Oceanic and Atmospheric Administration to finance collection of existing data on coastal zone uses and problems.

A third State project that will affect water and related land resource planning in the Illinois portion of the Basin is the State's $70 million bond issue for energy development. The State Department of Business and Economic Development is using the bond issue to finance research on coal gasification. The State hopes to discover ways of developing Illinois coal as a more efficient source of energy.

INDIANA

Recreational opportunities were improved in two State parks in Indiana's portion of the Basin during 1974, and the refrigerated toboggan slide at Pokagon State Park opened for its first season. The State Department of Natural Resources also established a reservation system and added permanent naturalists to its State park system. Construction has begun on a new coldwater fish hatchery in northern Indiana, which will benefit fishermen throughout the Basin. The hatchery's production capacity of 500,000 trout and salmon will be used to stock Lake Michigan. A new 3,800-acre State recreation area being purchased and developed in northern Indiana will also provide recreational opportunities to nearby Great Lakes Basin residents.

The State's activity in flood plain management has greatly increased during the year. The Indiana Natural Resources Commission promulgated Rule FPM-1 as required by the State's 1973 Flood Plain Management Act. FPM-1 establishes the 100-year flood as the criterion for delineating flood plains. It divides flood plains into floodways and floodway fringe districts. The fringe boundary lies two feet above the 100-year flood line. The rule also addresses the problem of nonconforming uses in a flood plain. The Natural Resources Commission also adopted "Guidelines for Delineation of Floodways and Flood Hazard Areas," a document describing how delineation is to be accomplished.

Flood plain information reports have been completed on 17 streams in Lake and Allen Counties, and similar studies are now under way in Elkhart County. Ten cities and five counties within the Indiana portion of

the Great Lakes Basin are cooperating in the National Flood Insurance Program.

Water quality management studies of the Indiana portion of the Lake Michigan basin and Maumee River basins are under way. First drafts of the basin plans have been completed.

During the year Indiana initiated an accelerated program in order to complete a survey of the State's soils within 10 years. State and county financing has put State personnel in the field to help get the job done. Such surveys, which provide an inventory of the State's soils and soil capabilities, are a valuable tool in land use planning.

MICHIGAN

The State of Michigan continued its efforts to mitigate the hardships experienced by shoreland property owners because of high lake levels. The State is attempting to avert similar problems in the future by discouraging unwise shoreland development. As part of its varied shoreland protection and management program, the State continued to construct and evaluate 18 full-scale demonstration projects to study the effectiveness of shore protection devices of low-to-moderate cost.

The State also designated erosion-prone shore areas subject to use regulation under the Shore Protection and Management Act of 1970 and held public meetings and discussions to answer questions about the new designation. The legislature broadened the applicability of use regulation requirements to include flood-prone shorelands. Previously only high-risk erosion areas and biologically valuable environmental areas were covered by use regulations. The deadline for implementing these more exacting land use regulations has been postponed a year, to July 1, 1975.

Aided by a substantial coastal zone management grant from the Federal government, the State is building on its previously adopted shorelands plan. To help staff members in this effort, Michigan has formed a Shorelands Advisory Council, composed of concerned citizens.

In its effort to adequately identify and control all significant waste discharges to the State's lakes and streams, Michigan became the first inland State qualifying to administer its own discharge permit system under the National Pollutant Discharge Elimination System. Michigan's NPDES Program, which was established by P.L. 92-500, the Federal Water Pollution Control Act Amendment of 1972, is expected to be fully operative by the end of calendar year 1974.

Michigan continued to provide construction grants to help local units of government finance municipal waste treatment facilities. Seventeen waste treatment projects were placed under construction during the year, and planning grants for future facilities were awarded to 23 additional communities. Michigan's system for assigning grant priorities is currently being revised.

The State is also developing a soil erosion and sedimentation control program. General rules were adopted that make county and local enforcement agencies responsible for seeing that significant earth-disturbing activities within their jurisdictions are planned and performed in such a way as to minimize erosion. The program, except for provisions concerning agricultural practices, is due to be in effect by January 1, 1975.

During FY 1974 the State of Michigan encouraged the public to participate in natural resources programs by establishing the Environmental Review Board (now consisting of 10 members from the general public and 7 from State agencies), a Shorelands Advisory Council, and a 24-hour "hotline" for reporting environmental concerns. The Michigan Natural Resources Commission also fostered public participation by holding a series of public information meetings in addition to its regular monthly meetings.

MINNESOTA

FY 1974 saw establishment of a Coastal Zone Management Work Group in Minnesota to develop a State coastal zone management program. In its first year of operation the work group intends to establish procedures for information exchange, consultation, and coordination among all government entities active in the coastal zone. It will also call upon interested public and private groups and individuals to articulate management goals and objectives in an attempt to define and quantify problems and needs in the coastal zone area.

The Department of Natural Resources is responsible for shoreland management in the State. The 1973 Minnesota Legislature authorized the State DNR to adopt shoreland management standards for incorporated areas. Previously, only unincorporated areas were included in Minnesota's Shoreland Management Program.

The Minnesota DNR is also charged with preparing studies and reports on local flood plain areas. The State agency often participates with local, State, and Federal agencies in this effort.

Minnesota is currently conducting a study of the economic and environmental impacts of copper and nickel mining in the State. The study will analyze specific sites for water supply and quality, air quality, transportation

needs, employment, and other factors that will affect decisions on copper and nickel mining in the State.

NEW YORK

The State of New York has applied to the National Oceanic and Atmospheric Administration for $550,000 to subsidize the first year of its three-year coastal zone management program. The money will be divided equally between local and State agencies participating in the program. The State Office of Planning Services is the lead agency in the application, with the Department of Environmental Conservation expected to carry out all program elements at the State agency level. The first year of the program will involve collection of existing data and identification of additional information needed for the program. Key issues and critical priorities will also be identified and analyzed.

Under New York State chairmanship, the Erie-Niagara Comprehensive, Coordinated Joint Plan Review Committee was expanded to include all of New York State within the Great Lakes Basin, and, upon the State's request, CCJP review procedures were modified. The accelerated procedure calls for simultaneous review by the Great Lakes Basin Commission and the State.

The accelerated review of New York's Basin Board plans means that the Basin Commission will review the three Oswego River Basin Board plans during the State's official review. This allows for inclusion of Federal, local, and State perspectives before the plans are finalized. The same will hold true for New York's St. Lawrence-Franklin Planning Study and the Black River Basin Planning Study. Draft reports on these areas have been completed for public presentation.

OHIO

During FY 1974 the Ohio Department of Natural Resources continued its land capability study. The study, which is being conducted on a county basis, is attempting to determine the suitability of land for various uses. Several pilot studies were conducted during the year, and a study of the soil capability in Lake County has begun. Four more counties will be examined in 1975.

The Ohio DNR also continued work on its State Comprehensive Outdoor Recreation Plan, which defines official State policy concerning outdoor recreation. The plan, which will meet criteria for Federal Land and Water Conservation funds, contains 17 work elements including a user survey, a trail plan, an inventory of the resources, and an evaluation of the effect of the energy crisis.

Through the efforts of the DNR, portions of the Grand and Cuyahoga Rivers were designated under the State's Wild and Scenic Rivers program during FY 1974. Portions of the Maumee River are being considered for similar designation.

Under the direction of the Ohio Environmental Protection Agency, secondary treatment facilities were installed at the Lake Erie shore communities of Willoughby-Eastlake, Lake County's Madison and Mentor Sewer Districts, at Geneva-on-the-Lake, and at Conneaut. Phosphorus removal facilities were installed at 38 of the State's 60 wastewater treatment plants requiring the added apparatus. Nine of the other plants are in the process of installing phosphorous removal facilities. Ohio EPA is also conducting a surveillance program in an effort to find the best available treatment, including chlorination, for protection of beaches.

PENNSYLVANIA

Beach erosion control at Presque Isle State Park continued to concern Pennsylvania. Its erosion control program consists of structural measures and maintenance programs for repair and preservation of beaches and other recreational facilities that are subject to wave damages. Previous structural measures are unable to prevent damages during high lake levels. A new effort is now under way involving both Federal and State commitments.

The State Department of Environmental Resources is conducting a Water Quality Management Study aimed at maintaining or enhancing the water quality of the Lake Erie region so that the water is suitable for all desired uses. The plan will recommend implementation programs that are sensitive to the changing social, political, economic, and technical climates affected by water quality management. The plan will suggest surveillance and monitoring programs to keep the management plan up-to-date.

The State's program to restore and enhance sport fisheries includes research activities on the feasibility of introducing new species like coho salmon into the Lake. The program is also examining the feasibility of stocking Lake Erie tributaries with lake trout and other game species. The attempts to acquire access sites for boating and fishing have been retarded by lack of funds.

Pennsylvania is also involved in developing a comprehensive State water plan. The statewide program is designed to determine the needs, demands, and capacities for the uses of water and related lands. Water supply, water quality, recreation, and flood damage abatement activities are being scrutinized in particular. The

Lake Erie region will occupy a unique place in the plan because of its abundant water and recreational opportunities. The State will continuously update its plan so that decisions regarding implementation of water resource projects may be based on current information.

In June 1974 the State began developing a coastal zone management program. The three-year activity will control water and land use activities that directly affect coastal waters. The activity will include delineation of control zones, including areas that are critical or sensitive environmentally. An organizational structure for implementing the program will be established.

WISCONSIN

A pioneering effort to protect and restore Wisconsin's 9,000 lakes became State law during FY 1974. Assembly Bill 766, Chapter 33, "Public Inland Lake Protection and Rehabilitation," appropriates $1.3 million to establish a partnership among the Department of Natural Resources, a new State Inland Lake Protection and Rehabilitation Council, the University of Wisconsin Extension, and locally created lake districts. The local districts, governed by five-member boards, are responsible for planning and implementing projects, securing permits, and administering grant funds. The State grants can be used for such lake preservation activities as treatment of over-fertilization, dredging, and weed harvesting.

The first phase of Wisconsin's Comprehensive State Water Resources Plan was formally transmitted to the Governor November 1, 1973. Entitled "Visions of Tomorrow — Overview," it sets forth the major concepts and procedures that will be followed as the plan progresses. The second phase will outline a range of alternative futures for water resources in Wisconsin. It will assess the pros and cons of each alternative and describe the management policies required to implement them.

Wisconsin has devised its own Pollutant Discharge Elimination System to regulate the discharge of wastes into surface or ground waters of the State. On February 4, 1974, the Administrator of the Environmental Protection Agency suspended the issuance of National Pollutant Discharge Elimination System permits and approved the State system for issuing permits.

The Wisconsin Department of Natural Resources is developing an Information System for Environmental Protection (INSEP). Focusing on air and water quality programs, the system will contain information on the status of environmental protection programs and the condition of the resources. The US Environmental Protection Agency's STORET system is the major support system for DNR's water quality data.

Several special projects for waste load allocations have been placed under contract by the Department of Natural Resources during FY 1974. These studies will define how much waste load can be assimilated into the waters of Mill Creek below Marshfield, Badfish Creek below the Madison Sewage Treatment Plant, and the Fox River-Illinois below Brookfield and Waukesha. This capacity will be the determining factor in writing permits for allowable waste loads.

Financial Report

BALANCE SHEET — GENERAL FUND
June 30, 1974

ASSETS

Cash on deposit in United States Treasury:		
Restricted:		
Printing of Framework Study	$144,216	
Maumee River Basin Study	61,387	
Other (included in deferred revenue)	10,000	
	215,603	
Unrestricted	135,172	$350,775
Petty cash		50
Accounts receivable:		
Grant receivable - State of Wisconsin	22,000	
Federal government agencies	47,628	69,628
Advances and deposits		4,106
		$424,559

LIABILITIES AND FUND BALANCE

Liabilities:		
Accounts payable	$ 22,006	
Retirement plan payments withheld and accrued	1,670	
Accrued annual leave	39,700	
Accrued sick leave	2,600	
Accrued unemployment	2,300	$ 68,276
Deferred revenue - grants for 1974-75 received in advance		40,000
Fund balance:		
Major restricted funds:		
Printing of Framework Study	144,216	
Maumee River Basin Study	61,387	
	205,603	
Balance for operations:		
Appropriated - Printing of Framework Study	67,000	
Reserve for future operations	43,680	
	110,680	316,283
		$424,559

BALANCE SHEET — PLANT AND EQUIPMENT FUND
June 30, 1974

Assets

Furniture, equipment and library books - Note A	
Furniture and equipment	$ 38,072
Library books	15,305
	$ 53,377

Source of Funds

Appropriations from unrestricted General Fund revenues	$ 53,377

See notes to financial statements.

STATEMENT OF REVENUE AND EXPENDITURES AND CHANGES IN FUND BALANCE — GENERAL FUND

Year ended June 30, 1974

		MAJOR RESTRICTED FUNDS		
	Total	Publishing Framework Study	Maumee River Basin Study	Balance For Operations
Revenue:				
Federal government agencies:				
Operating	$204,500			$204,500
Other	166,038	$ 11,799	$ 99,000	55,239
State governments	208,000			208,000
TOTAL REVENUES	578,538	11,799	99,000	467,739
Expenditures:				
Salaries and fringe benefits:				
Salaries and wages	313,397			
Payroll taxes	15,081			
Retirement	13,220			
Health and life insurance	12,537			
	354,235	32,437	28,848	292,950
Other expenses:				
Travel	19,908			
Subcontracted services	15,289			
Rent	37,880			
Communications	8,748			
Postage	2,351			
Meetings and conferences	1,114			
Insurance	1,300			
Repairs and maintenance	49			
Printing and reproduction	29,982			
Annual report	1,273			
Professional services	2,500			
Other services	3,523			
Supplies	6,011			
Subscriptions	232			
Furniture and equipment	2,134			
Miscellaneous	10			
	132,304	1,168	8,765	122,371
TOTAL EXPENDITURES	486,539	33,605	37,613	415,321
EXCESS OF REVENUES OVER EXPENDITURES (EXCESS OF EXPENDITURES)	91,999	(21,806)	61,387	52,418
Fund balance July 1, 1973	224,284	166,022	-0-	58,262
FUND BALANCE AT JUNE 30, 1974	$316,283	$144,216	$ 61,387	$110,680

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

Year ended June 30, 1974

Note A - Accounting policies

The accounting records of the Commission are maintained on the accrual basis of accounting.

Furniture, equipment and library books have been recorded in the Plant and Equipment Fund at cost. No provision for depreciation has been provided.

The Commission is exempt from Federal income tax under Section 501(c)(3) of the Internal Revenue Code and is treated as an organization which is not a private foundation.

The salary and related fringe benefits of the Commission chairman is provided by the Water Resources Council and these costs are not included in the financial statement.

Note B - Lease agreement

The Commission has entered into a lease agreement for the rental of office facilities extending to October 31, 1975, which requires an annual payment of $43,014 in fiscal 1975. Rental payments aggregated $37,880 in fiscal 1974.

Note C - Pension plan

The Commission has a pension plan for most of its employees. Contributions for fiscal 1974 amounted to $13,220.

Great Lakes Basin Commission
3475 Plymouth Road
P. O. Box 999
Ann Arbor, Michigan 48106

We have examined the balance sheet of the General Fund and the Plant and Equipment Fund of the Great Lakes Basin Commission as of June 30, 1974, and the related statement of revenue and expenditures and changes in fund balance for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying financial statements identified above present fairly the financial position of the General Fund and the Plant and Equipment Fund of the Great Lakes Basin Commission at June 30, 1974, and the results of its operations for the year then ended in conformity with generally accepted accounting principles applied on a basis consistent with the preceding year.

Linscheid, Austin & Frohm
Certified Public Accountants

August 29, 1974

The Staff

(June 30, 1974)

Frederick O. Rouse, *Chairman*

Leonard T. Crook, *Executive Director and Director of Planning*

Ruth E. (Beth) Click, *Executive Secretary*

Eugene A. Jarecki, *Assistant to the Director of Planning and Comprehensive Basin Planner*

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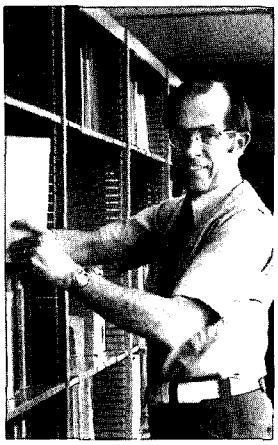
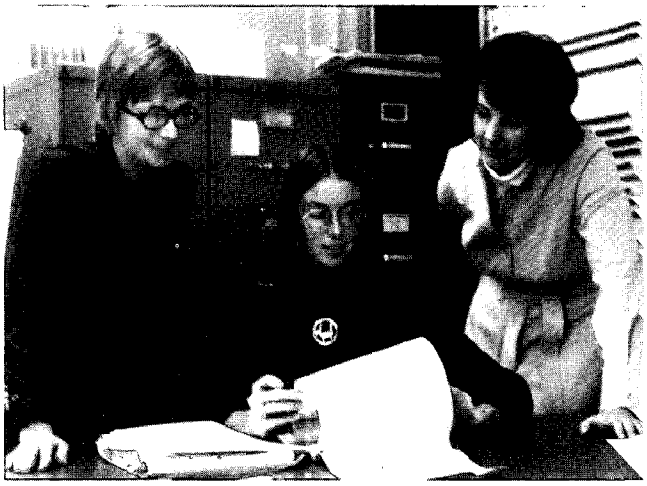
Elizabeth Walker, *Publication Typist*

Barbara B. Kohler, *Librarian*





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