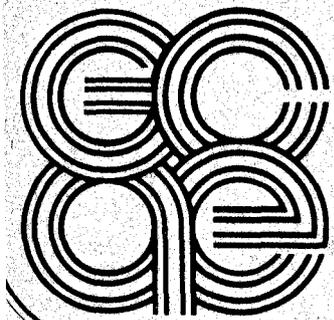


1978 ANNUAL REPORT



GOVERNOR'S COMMISSION ON ARIZONA ENVIRONMENT

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THE COMMISSION

The Governor's Commission on Arizona Environment, established by Executive Order in 1965, is charged to act as a clearinghouse and means of exchange of information relating to environmental problems and their solution. Its volunteer members are appointed by the Governor to represent business and industry, education, government, the professions and various citizen organizations. This broad representation helps provide a cross-section of thought for recommendations to the Governor on particular issues.

The Commission meets approximately every two months in various communities throughout the State of Arizona. All meetings are open to the public.

THE EXECUTIVE BOARD

Roy P. Drachman, Chairman
Jeanette Bideaux, Southern Arizona Vice Chairman
F. J. "Mac" MacDonald, Central Arizona Vice Chairman
William R. Morrall, Northern Arizona Vice Chairman
Robert D. Curtis
Ted A. Edmundson
Dr. Kenneth E. Foster
Stanley E. Hancock
Duncan T. Jennings
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Jeffrey J. Stein

THE 1978 ANNUAL REPORT EDITOR

James L. Olmstead, P.E.

THE STAFF

Janis F. Johns (Mrs. Harvey W., Jr.), Executive Director
Pam Faulconer (Mrs. Dale P.), Assistant

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Commission Chairman Roy P. Drachman (left) and The Hon. Bruce E. Babbitt, Governor of Arizona

Arizona. 1978 ANNUAL REPORT
GOVERNOR'S COMMISSION ON ARIZONA ENVIRONMENT.

Publication Date - November 15, 1978
Due Date to Governor - December 15, 1978

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INTRODUCTION

SYNOPSIS

In 1965 Governor Samuel P. Goddard signed, and Secretary of State Wesley Bolin witnessed, Executive Order 65-4. It established a 27-member Governor's Commission on Arizona Beauty with Roy P. Drachman as its first Chairman. Its objective was "to promote clean, attractive, well designed communities, beautiful highways, parks, shorelines, historic sites and structures through a continuing statewide program of public education and action among citizens, governmental groups and other organizations; and also to protect and encourage awareness and appreciation of Arizona's abundant natural beauty."

Now, thirteen years later, Arizona's abundant natural beauty needs protection more than ever, as does the quality of its environment.

Executive Order 75-2 established the Governor's Commission on Arizona Environment, and ordered it to "act as a clearinghouse and means of exchange of opinion and information relating to the problems of Arizona environment and the solution thereof" and to "endeavor to communicate with all sectors of the Arizona population and economy so that conclusions by the Commission will represent as nearly as possible a cross-section of Arizona thought on the subject of environment." What did the Commission do in 1978?

1978 was an outstanding year. Roy P. Drachman has returned to the Commission as Chairman. Under his direction, GCAE replaced inactive members and added others to bring the work force to 147 persons. While doing this, the balance was improved between representatives from business and industry (now 24%), citizens at large and conservation organizations (27%), educators and professional people (20%) and government representatives (29%). The Commission was further strengthened by the appointment of three regional vice chairmen for northern, central and southern Arizona.

Seven Certificates of Appreciation were awarded to organizations to recognize outstanding efforts in the protection and enhancement of Arizona's environment. Recipients were: Arizona Commission of Agriculture and Horticulture, Sierrita Division of Duval Corporation, Flagstaff Junior High School, Graham County Board of Supervisors, Trail Access Citizen Advisory Committee of Pima County, Tucson Unified School District and Valley Forward Association.

The Commission office in Phoenix received almost 2,000 documents and distributed well over 20,000. It also published and distributed 700 copies of the 1977 Annual Report and 800 copies of the Directory of Arizona Environmental and Conservation Organizations, including requests from other states.

Six meetings were held in 1978 to fulfill the "clearinghouse" responsibility. The meetings were held in Nogales (a joint meeting with counterparts from Sonora), Tucson, Mesa, Prescott, Flagstaff and Wickenburg, with a combined attendance of 853 persons. The Flagstaff Summer Conference alone attracted 294 people, and featured a number of

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experts from Arizona and other states. Organized into public forums, they discussed Indian water rights, environmental education, the federal Clean Air Act, management of natural resources, and interrelationships between flood control and the Rio Salado Project.

As a result of these bi-monthly meetings, 25 resolutions were adopted by the Commission on land (9 resolutions), water (5), air pollution (3), off-road vehicles (3), transportation (3) and environmental education (2). Major problems requiring attention during the year were:

- Land
 - an inventory of state land is needed
 - state lands await development in urban areas
 - combined recreation-flood control areas are needed
 - wilderness and riparian areas need protection
 - development of small parcels needs legislative control
 - Hopi-Navajo land dispute needs an equitable solution
- Water
 - Indian water rights and claims must be settled
 - groundwater consumption exceeds replenishment
 - federal Safe Drinking Water and Water Pollution Control Acts need implementation
- Other
 - auto emissions inspection program must continue
 - off-road vehicle registration must be enforced
 - a coordinated environmental education program is needed at the state level
 - the public is unaware of many environmental problems
 - alternate energy sources, particularly solar energy, need development

These problems will continue to receive Commission attention in 1979 at meetings scheduled for Tucson, Phoenix, Lake Havasu City, Flagstaff, the Globe-Miami area, and at a site yet to be determined. However, the problems cannot be solved without effective action by the Executive, Legislative and Judicial branches of Arizona State Government.

STATEMENT BY COMMISSION CHAIRMAN

The Governor's Commission on Arizona Environment, in 1978, has taken an enthusiastic step forward with the support of Governor Babbitt. His stand for a balance between growth and protecting the environment reflects the stance of the Commission since its inception in 1965. As a result, the membership is attacking issues with renewed vigor and looking at Arizona's environment/growth situation with a keen eye.

The annual Summer Conference in August this year drew the largest number of attendees ever.

It is difficult to predict the future, but based upon the year's statistics, and the enthusiasm of the members, it can be forecast that 1979 will be an outstanding year for the Commission.

THE COMMISSION

INTRODUCTION

Operating under the Governor's Executive Order 75-2 (Appendix A), the Governor's Commission on Arizona Environment has two basic duties: First, to serve as a clearinghouse and means of exchange of opinion and information relating to problems of Arizona environment and the solution thereof. Second, to communicate with all sectors of the Arizona population and economy so that conclusions by the Commission will represent as nearly as possible a cross-section of Arizona thought.

Two specific outputs are required of the Commission. Conclusions and data shall from time to time be transmitted to the Governor. In addition, an Annual Report is to be submitted to the Governor on or before December 15th of each year.

MEMBERSHIP

A cross-section of Arizona thought is achieved by appointing a large number of people to the Commission, and by selecting members who represent one or more organizations of other Arizona people. Moreover, the Commission seeks representation from diverse organizations throughout Arizona. Finally, there is a deliberate effort to balance the various segments of Arizona's economy. For example, in November, 1978, Commission membership was distributed between segments as follows:

<u>Category</u>	<u>Examples</u>	<u>Members</u>	<u>%</u>
Business and Industry	Utilities, advertising, mining, agriculture, public relations, transportation, petroleum	35	24
Citizens and Conservation Organizations	Citizen at large, Sierra Club, Four Wheel Drive Club, League of Women Voters	39	27
Education	College professor, classroom teacher, university environmental activities	18	12
Government	Corps of Engineers, Soil Conservation Service, Game and Fish, Public Health, legislators	43	29
Professional	Physician, nurse, engineer, architect	12	8
TOTAL		<u>147</u>	<u>100%</u>

THE COMMISSION

Members of the Commission are appointed by the Governor from among persons with a competency and true interest in the various areas of Arizona environment, both natural and man-made. Each member is assigned to the committee of his choice and serves without compensation. Members are listed in Appendix B. Several non-member resource persons (see Appendix C.) have been designated by the Commission to assist on various ad hoc committees.

Geographic distribution of members is shown in Figure I. The fact that most federal and state organizations, as well as many businesses and industries, are situated in the State Capital accounts for the large representation from Maricopa County. Most other counties have several representatives.

ORGANIZATION

The Governor's Commission on Arizona Environment is chaired by Roy P. Drachman, assisted by Vice Chairmen Jeanette Bideaux (Southern Arizona), F. J. "Mac" MacDonald, (Central Arizona), and William R. Morrall (Northern Arizona).



Commission Vice Chairmen (left to right) -- F. J. "Mac" MacDonald, Jeanette Bideaux, and William R. Morrall

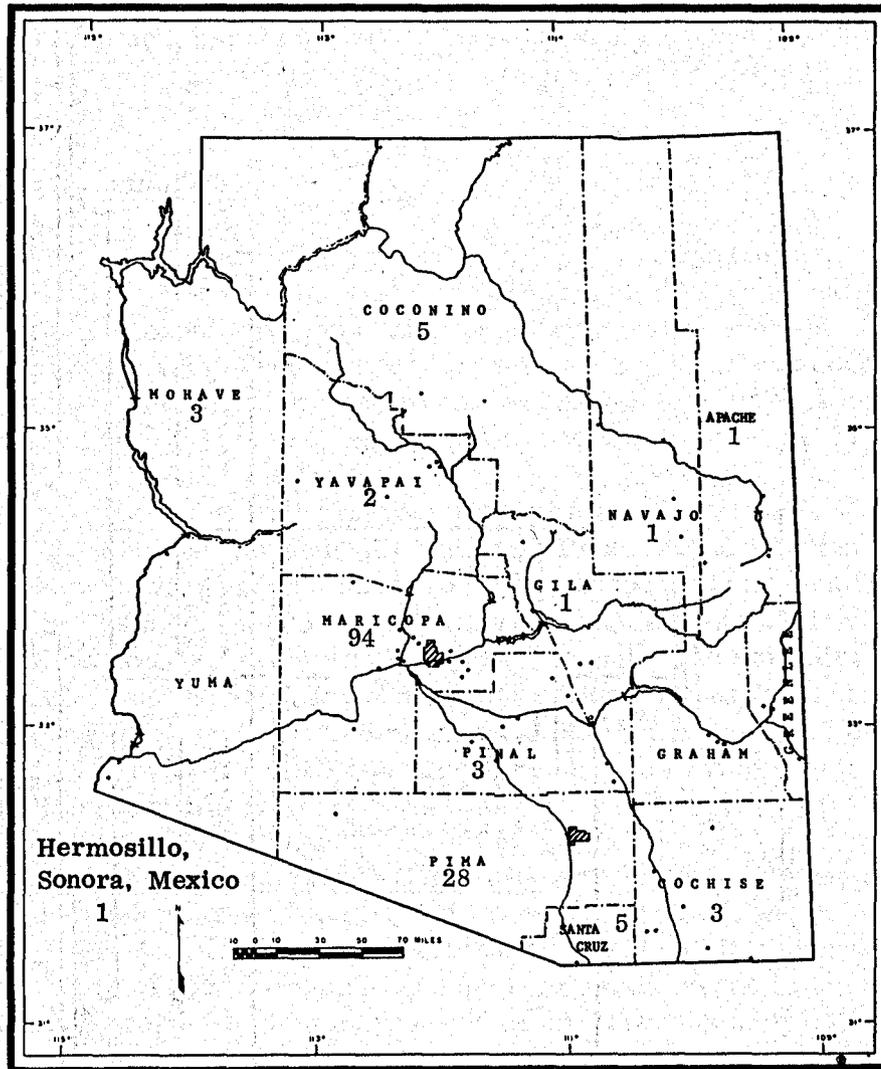
Objectives and policies are established by the 13-member Executive Board. It is composed of the Commission Chairman, the Commission Vice Chairmen, and the standing committee chairmen.

The mainstream of Commission activities is conducted by standing committees, ad hoc committees and special assignments.

The Governor's Commission on Arizona Environment is organized for 1979 as shown in Figure II.

THE COMMISSION

FIGURE I - GEOGRAPHIC DISTRIBUTION OF MEMBERS BY COUNTY AND CITY

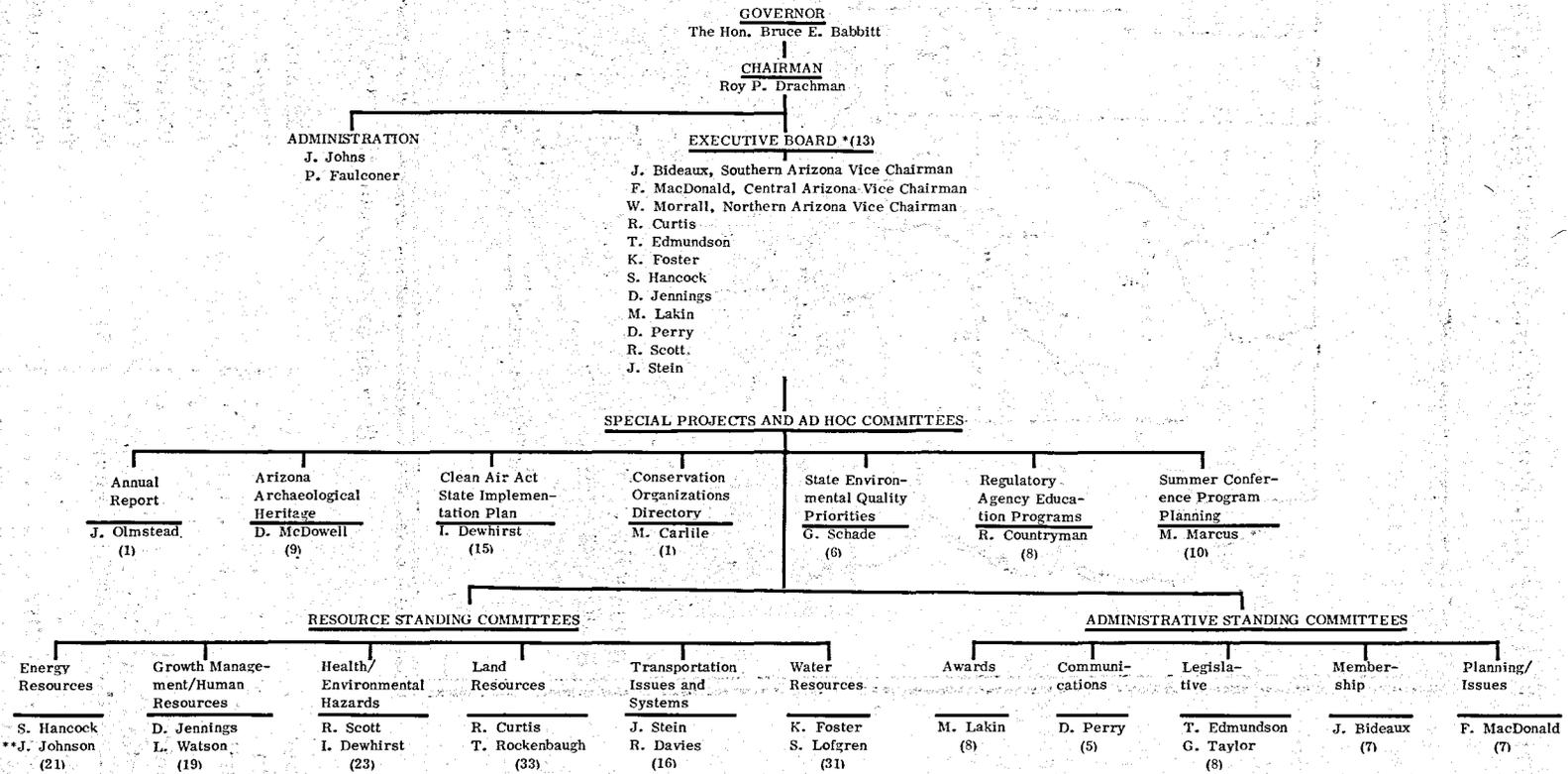


Data as of November 15, 1978

Bisbee	2	Payson	1
Elgin	2	Phoenix	71
Flagstaff	5	Prescott	1
Florence	1	San Manuel	1
Fountain Hills	1	Scottsdale	5
Ganado	1	Superior	1
Hermosillo, Sonora, Mexico . .	1	Tempe	10
Kingman	1	Tucson	28
Lake Havasu City	1	Tumacacori	1
McNeal	1	Wickenburg	1
Mesa	5	Williams Air Force Base	1
Mohave Valley	1	Winslow	1
Nogales	2	Yarnell	1
		TOTAL	147

THE COMMISSION

FIGURE II - ORGANIZATION OF THE COMMISSION FOR 1979



*Number of persons on committee, including chairman, as of November 15, 1978

**Vice chairman listed below chairman

THE COMMISSION

COMMITTEE/SPECIAL PROJECT ACTIVITIES IN 1978

During 1978, the Commission was organized into six resource standing committees, five administrative standing committees, three ad hoc committees and four special projects. Each group's purpose and chairman, and examples of its 1978 activities, are described in the following sections.

Standing Resource Committees

The Energy Resources Committee was chaired by John S. Rountree. Studies conducted during the year included (1)*transmission line siting; and (2)*a proposal of the Citizens for Environmental Responsibility mandating greater focus on renewable energy resources and alternate energy developments, especially solar energy. It was concluded that the development of solar energy is impeded by public suspicion of installation contractors, public ignorance of true economics, and visual impacts on residential areas.

The Growth Management/Human Resources Committee had Duncan T. Jennings as its chairman in 1978. Studies included: (1) the Farm Protection Bill which, if passed into law, would protect farm and ranch lands from being forced into premature sale by impractical tax appraisals; (2) improving the utilization of state-owned lands close to growing cities through accurate evaluation and subsequent trade or sale; (3) registration of off-road vehicles and the establishment of recreational areas for their use; (4) Santa Cruz and Rio Salado park projects as important tools of environmental protection; (5) working with the Arizona Office of Economic Planning and Development; and (6) long-range planning for Arizona's future.

The Health and Environmental Hazards Committee was led by R. Bruce Scott in 1978. Among the many problem areas investigated were: (1)*handling and disposal of hazardous wastes; (2) the Federal Clean Air Act as amended in 1977 and its impact on the State; (3) designation of air quality attainment and non-attainment areas in the State; (4) recycling, resource recovery and solid waste disposal; (5) community clean-up programs; and (6) the Safe Drinking Water Act and its implementation in Arizona.

The Land Resources Committee, chaired by Robert D. Curtis, explored six problem areas during the year: (1)*water rights problems between the United States, Arizona, and Indians; (2)*federal wilderness proposals and unique ecosystems; (3)*public apathy toward environmental problems; (4)*Navajo land selection environmental impact statement; (5)*the Governor's State Urban Lands Task Force (on which committee chairman Curtis served); and (6)*Section 208 of the Federal Water Pollution Control Act of 1972.

The Transportation Issues and Systems Committee was chaired first by Ernie Oliphant. Following her appointment to the National Safety Council, the Commission Chairman

*Further discussed in Appendix E.

THE COMMISSION



John S. Rountree (center) conducting a session of the Energy Resources Committee



Duncan T. Jennings (second from left) conducts a session of the Growth Management/Human Resources Committee

selected as her replacement Jeffrey J. Stein in May, 1978. The year saw two general areas studied: transportation energy and transportation planning. In committee discussions of transportation energy with John A. Bivens, Jr. and Roger Herzog of the Transportation Planning Division of the Arizona Department of Transportation, it was revealed that the availability of petroleum and price and tax structures will exert the major influence in the choice of energy sources and usage, and that ADOT has achieved an energy reduction of over 17% with a goal of 25%. Discussions with Louis A. Schmitt, also of the Arizona Department of Transportation, regarding transportation planning surfaced its multi-modal character, i. e., air, vehicular, rail, bikeways and pipelines (which account for 30% of the tonnage of goods transported in Arizona).

The Water Resources Committee had as its chairman Major Henry W. "Will" Worthington. Key issues addressed in 1978 were: (1)*Indian water rights; (2)*the international salinity control project on the Colorado River; (3)*groundwater problems; and (4)* water quality.

Standing Administrative Committees

The Awards Committee was chaired by Jeanette Bideaux in 1978. The group solicits nominations for the Commission's Certificates of Appreciation, evaluates the nominees

*Further discussed in Appendix E.

THE COMMISSION



Chairman R. Bruce Scott and vice chairman Iris Dewhirst (seated at table) conduct a meeting of the Health/Environmental Hazards Committee.



Chairman Robert D. Curtis (seated left center) and Land Resources Committee listen as Christopher P. Williams makes a presentation to the group.



Committee member Paul C. Smith conducts a session of the Transportation Issues and Systems Committee.

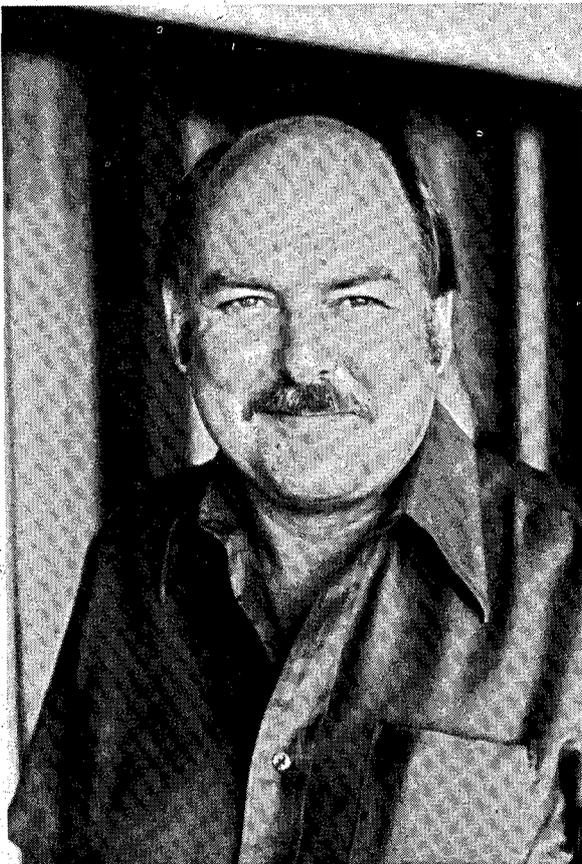


Chairman Henry W. "Will" Worthington (center) and Water Resources Committee listen to a presentation.

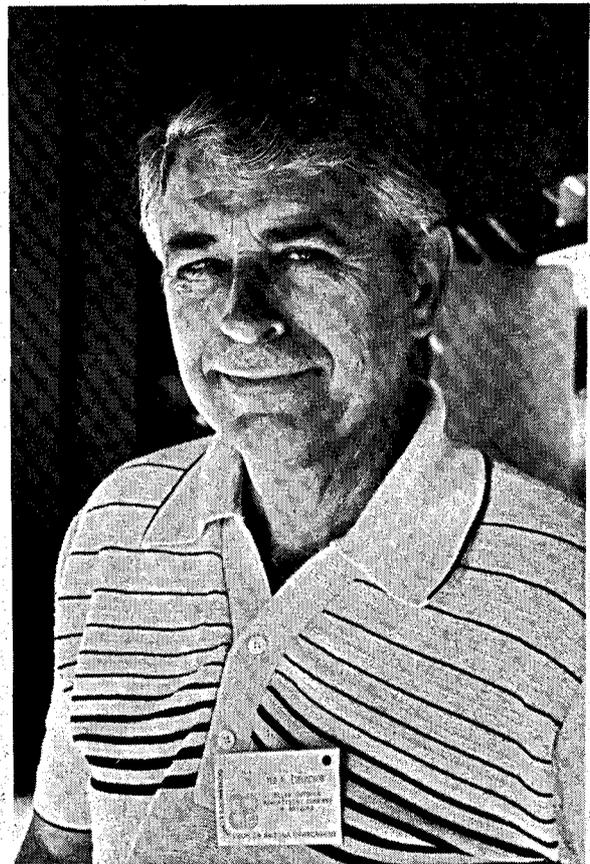
THE COMMISSION

and prepares Letters of Commendation. Seven Certificates of Appreciation were presented in 1978.

The Communications Committee, led by Pam K. Hait, is a small group of media professionals who distribute information about the Commission to the public. Principal outputs in 1978 were news releases regarding Commission meetings, and an information brochure to be generally disseminated whenever information is requested about the GCAE. The committee also launched a speakers bureau geared to serve the state, offering at no charge speakers who are members of the GCAE and who are prepared to discuss specialized environmental topics.



Public Relations Advisor David N. Perry



Legislative Chairman Ted A. Edmundson

The Legislative Committee had as its chairman Ted A. Edmundson. Main thrusts of the committee were: protection of waterways and riparian environments; development of an acceptable land use planning bill; adequate funding for the enforcement of off-road recreational vehicle regulations; utilization of state trust lands adjoining cities; resolution of problems resulting from unregulated development of small parcels of land (the "40-acre problem"); and legislative support for a state resource inventory. The present status of legislation of interest to GCAE is described in Appendix F.

THE COMMISSION

The Membership Committee, under Marybeth Carlile, concentrated on upgrading attendance at meetings and improving the balance of Commission membership. Members who were unable to attend meetings were encouraged to rearrange their priorities or to resign. Replacements for them and for normal attrition were chosen to achieve a better balance between the categories of representation (e. g., business, government, etc.), background and affiliation, geographical distribution and expertise.

The Planning and Issues Committee was chaired by F. J. "Mac" MacDonald. It is used by members and visitors as a sounding board to present issues for consideration by the Commission. The committee evaluates such suggestions and recommends to the Commission appropriate problem areas as well as means of studying them. Recommendations in 1978 included: study of the wilderness situation; formation of ad hoc committees to determine Arizona's environmental priorities and to promote public environmental education to eliminate the need for enforcement; and reactivation of a state environmental coordinating committee, including the Information Resources Division.

Ad Hoc Committees

The County "40-Acre Problem" Ad Hoc Committee, led by Laura M. Watson, conducted in-depth studies of access, drainage, flood control and other problems that can arise when the division of minor land parcels is not suitably regulated. Advocate and adversary viewpoints of such regulation were included. After the Commission adopted in August, 1978 the committee's proposed resolution regarding this problem, the committee became inactive until such time as legislation develops.

The Summer Conference Program Planning Ad Hoc Committee, with Stanley E. Hancock as its chairman, developed the theme for the Flagstaff Summer Conference: "Emphasis on Understanding". It then proceeded to organize and staff four public forum workshops on Indian water rights, environmental education, the Clean Air Act, and natural resource management. A special program regarding interrelationships between flood control and the Rio Salado Project was also developed. A new feature in the 1978 Summer Conference was a meet-the-press session concluding each workshop.

The Water Salinity Ad Hoc Committee was chaired by Lloyd J. Perper. It focussed attention on the Colorado River Salinity Control Project, a major construction program requiring substantial amounts of energy and having far-reaching economic and environmental consequences in Arizona as well as adjacent states. It was concluded that no GCAE action was needed at this time and the committee was accordingly disbanded following acceptance of its final report by the Executive Board.

Special Projects

The Annual Report Editor, James L. Olmstead, prepared the Commission's yearly report to the Governor. Year-end reports were painfully extracted from the committee

THE COMMISSION

chairmen without the benefit of anesthesia, and were compiled into a summary report. Copies of the report were sent to over 600 Commission members, environmental and conservation organizations, legislators, the Arizona Congressional Delegation, and officials and administrators at the local, state and federal levels.



Lloyd J. Perper (center) conducts a meeting of the Water Salinity Ad Hoc Committee.



1978 Annual Report Editor James L. Olmstead

THE COMMISSION

The Directory of Arizona Environmental and Conservation Organizations is compiled by Marybeth Carlile. There is a continual demand for this important output of the Commission from organizations throughout the nation.



Marybeth Carlile, Editor of the Directory of Arizona Environmental and Conservation Organizations and 1978 Membership Chairman.

The State Rural Development Committee had F. J. "Mac" MacDonald as its GCAE representative. The Committee is available on demand to rural towns and communities needing help in obtaining technical or financial assistance. The Committee is composed of members of various state and federal agencies. The Commission's input is confined to environmental problems arising in conjunction with the projects developed.

The State Water Planning Advisory Group had Edmund C. Garthe as its representative from the Commission. The Group was inactive in 1978, and any further representation will be provided by the GCAE Water Resources Committee.

OPERATIONS

1978 MEETINGS

Six meetings were held during the period covered by this report, and are summarized in Table 1. A joint meeting with citizens from the State of Sonora was held in Nogales in December, 1977, too late to be covered in the 1977 Annual Report. Four workshops were conducted around the state at Tucson, Mesa, Prescott, and Wickenburg. The annual public forum conference was again held in Flagstaff. The final meeting in 1978, a joint meeting with Mexican counterparts in Agua Prieta, Sonora in December, will be covered in the 1979 Annual Report.

Other activities of interest included forwarding 25 recommendations to the Governor for consideration, presenting seven Certificates of Appreciation (the Commission's highest award), providing clearinghouse operations, and conducting numerous environmental studies (summarized in Appendix E).

Joint Meeting with Mexico

This meeting was conducted in the Instituto Tecnológico Regional de Nogales in Nogales, Sonora, Mexico. The theme was "Environmental Dilemmas of the Border." Conference chairman was Carlos Nagel, a member of the Governor's Commission on Arizona Environment and then Coordinator of the Mexico Unit at the Arizona-Sonora Desert Museum.

The Governor's Commission on Arizona Environment has had an ongoing interest in fostering a cooperative approach to the discussion of our shared environmental problems. The purpose of this conference was to make our members more aware of what the issues are and what goals the Mexicans have set for themselves in such areas as resource management, pollution control and environmental education. A further purpose was to bring persons from both sides of the border together so that professional contacts and friendships would be formed and the groundwork laid for bi-national cooperation in the future.

The main theme that became increasingly apparent during the proceedings was that we have finite resources which must be shared and that actions on each side of the border have an effect on the other. Cooperation and shared knowledge are essential. A few comments on some of the discussions will illustrate the point:

- Water: Drainage basins are in no way drawn along political boundaries. Rivers such as the Santa Cruz flow in and out of Mexico. The shared waters of the Colorado will continue to be an issue. Underground water supplies underlie the boundary and both countries can pump out from under the other's territory. All projections show that the Mexican border area will have the highest percentage of population growth and economic development in that country in the future. The impact on water resources will be great and there is a need to address the issue and to develop international water law before a crisis situation develops. (Speaker: Dr. Michael Bradley, Professor of Hydrology and Water Resources, The University of Arizona, Tucson.)

OPERATIONS

TABLE 1 - 1978 COMMISSION MEETING SUMMARY

<u>Location and Type of Meeting; Date</u>	<u>Attendance</u>	<u>Coordinator</u>	<u>Speaker(s)</u>	<u>Award(s) Presented</u>	<u>Field Trips</u>
Joint Workshop with Mexico December 1 - 3, 1977	98	C. Nagel	<ol style="list-style-type: none"> 1. Antonio Certosimo, Arizona-Mexico Commission 2. Hon. C. Hector Monroy Rivera, Mayor, Ciudad de Nogales, Sonora 3. Ing. Raphael Navarro Escobar, Instituto Tecnologico Regional de Nogales 4. Prof. Albert Utton, University of New Mexico 	None	None
Tucson Workshop January 19 - 20, 1978	148	L. Perper	<ol style="list-style-type: none"> 1. Andrew L. Bettwy, Arizona State Land Commissioner 2. John A. Bivens, Jr., Arizona Department of Transportation 3. Clyde W. Doran, Pima County Parks Department 	<ol style="list-style-type: none"> 1. Duval Corporation 2. Tucson Unified School District 	<ol style="list-style-type: none"> 1. U. S. Soil Conservation Service Plant Materials Center 2. Flandreau Planetarium
Mesa Workshop March 31 - April 1, 1978	112	J. Flashberg	<ol style="list-style-type: none"> 1. Dr. Kenneth E. Foster, The University of Arizona 2. Joseph F. Friedkin, International Boundary and Water Commission 3. Manuel Lopez, Jr., U. S. Bureau of Reclamation 4. Lloyd J. Perper, Professional Engineer 	<ol style="list-style-type: none"> 1. Arizona Commission of Agriculture and Horticulture 2. Graham County Board of Supervisors 3. Valley Forward Association 	<ol style="list-style-type: none"> 1. Arizona Resources Information System (ARIS) 2. Central Arizona Project

OPERATIONS

TABLE 1 - 1978 COMMISSION MEETING SUMMARY (CONTINUED)

<u>Location and Type of Meeting; Date</u>	<u>Attendance</u>	<u>Coordinator</u>	<u>Speaker(s)</u>	<u>Award(s) Presented</u>	<u>Field Trips</u>
Mesa Workshop (continued)			<ol style="list-style-type: none"> 5. Hon. Wayne C. Pomeroy, Mayor, City of Mesa 6. Col. David B. Stone, U. S. Army (Ret.) 7. Dr. Jan van Schilfgaarde, U. S. Salinity Laboratory 		
Prescott Workshop May 18 - 19, 1978	107	T. Edmundson	<ol style="list-style-type: none"> 1. Daniel T. Brownell, Valley Forward Association 2. Hon. Lawrence A. Caldwell, Mayor, City of Prescott 3. Elizabeth F. Ruffner, Yavapai Heritage Foundation 	None	<ol style="list-style-type: none"> 1. Prescott historical sites
Flagstaff Summer Conference August 8 - 11, 1978	294	S. Hancock K. Ingols	<ol style="list-style-type: none"> 1. Hon. Bruce E. Babbitt, Governor, State of Arizona 2. Hon. Robert L. Moody, Mayor, City of Flagstaff 3. J. Edward Roush, U. S. Environmental Protection Agency 	<ol style="list-style-type: none"> 1. Flagstaff Public Schools 2. Trail Access Citizen Advisory Committee 	<ol style="list-style-type: none"> 1. Arizona Snow Bowl 2. Camp Colton
Wickenburg Workshop October 5 - 6, 1978	94	R. Coxwell	<ol style="list-style-type: none"> 1. Bruce B. Hronek, U. S. Department of Agriculture 2. Hon. Art Woelffer, Vice Mayor, Town of Wickenburg 	None	<ol style="list-style-type: none"> 1. Desert Caballeros Western Museum

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Dr. Miguel Inguanzu Varela addressing participants of the joint meeting with Mexican counterparts entitled "Environmental Dilemmas of the Border".

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- Land Management: Overgrazing has been a very serious problem in many areas of Sonora. Traditional practice and the newly-implemented land reforms have made this a most difficult situation to reverse, although government is working toward this goal with educational measures, incentives, etc. There is a desire to compare technologies and programs which should be follow up. (Speaker: Donald Johnson, Department of Agriculture, Universidad de Sonora, Hermosillo.)
- Growth and Human Settlements: Unemployment is very high in Mexico and migration to the border areas continues to increase. The Federal Government has put a priority on home building and public service development along the border. The economic stability and quality of life of the entire border area is dependent upon a keen awareness of the problems associated with this migration and its drain on all resources. (Speaker: Lic. Oscar Pinto Lujan, Represente, Secretaria de Asentamientos Humanos y Obras Publicas, Hermosillo.)
- Solid Waste: Population increases and greater consumption have led to many disposal problems. The efforts of the government are to move away from open pits to land fill operations. The two Nogaleses have cooperated in the planning, building and operation of a shared land fill. Further cooperative efforts in border areas would benefit all, especially in the area of public health. (Speaker: Ing. Jose Ma del Castillo Alarcon, Universidad de Sonora, Hermosillo.)
- Education: The Mexican Government has mandated environmental education as a part of its elementary school curriculum. A comprehensive program has been developed. The Sonorans made note of the large role of our Arizona-Sonora Desert Museum's Mexico Unit in the process. The Sonorans hope with a background education in the benefits of resource management and with an understanding of the interdependency of our natural systems, a political confrontation between economic development and environmental integrity may be avoided. (Speaker: Rene Arvizu Durazo, Direccion General Educacion Publica del Estado de Sonora, Hermosillo.)
- Drug Abuse: An awareness of Mexican attitude and laws on drugs is crucial as it is a volatile issue and one that, when confrontation does take place, may hinder other attempts at cooperation. Mexican law totally opposes drug use, marijuana included. When arrested in Mexico, a person is guilty until proven innocent, which is difficult for Americans to understand when personal situations arise. Cooperation on this is essential for the good relations of our countries. (Speaker: Dr. Miguel Inguanzu Varela, Servicios Coordinados de Salud Publica, Secretaria de Salubridad y Asistencia, Hermosillo.)
- "Maquiladoras": Under the Twin Cities concept, American manufacturers use Mexican labor for assembling products. American components are used and

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the products are returned to the U. S. for distribution. \$588,000,000 is provided to the economy of Mexico under this program. This exceeds the inflow from tourism by \$100,000,000. This program has been a particular boon to the border area. Nogales, Sonora has 43 such operations at present. The concept is presently being challenged in Congress by the labor unions on the contention that jobs are lost in the U. S. However, the economic benefits from the program can be shown to be an economic boon to our country as well and to actually increase job opportunities on this side of the border. Arizonans and Mexicans both favor the program. The economic vitality of Mexico is in the long-run interest of our country. However, the cultural sensitivities of this kind of program and the examination of the socio-economic impacts (inflation, housing and school demands, etc.) should not be overlooked. (Speakers: Robert Carrier, General Manager, Arizona-Mexico Operations, Molex Inc., Nogales, and Lic. Humberto Garcia Gallegos, Presidente Bioconservacion, A. C., Nogales.)

The conference did most effectively what was intended. Participants came away with a much better perspective on the issues, with great respect and admiration for the Mexican people's dedication to addressing their problems, and with many new friendships made among cross-cultural colleagues. Our Commission will assess what direction we wish to follow in the future. We are most heartened that the Arizona-Mexico Commission is proposing an environmental subcommittee and will be ready to assist in any way. Carlos Nagel serves as liaison between the groups. The Governor's Commission on Arizona Environment recognizes more than ever the need to have an ongoing dialogue and will continue its involvement.

Flagstaff Public Forum Conference

Held in August, the public forum conference was the largest meeting of the year. Key speakers included: Governor Bruce E. Babbitt of Arizona; J. Edward Roush, Director of the Office of Regional and Intergovernmental Operations in the U. S. Environmental Protection Agency; and Robert L. Moody, Mayor of the City of Flagstaff. Two public forum workshops were held on Wednesday, August 9th, and another two on Thursday, August 10th. A special program was also held on Wednesday. Administrative and ad hoc committees met on Thursday, and resource committees and the Commission in toto met on Friday, August 11th. Recommendations developed at the conference were referred to appropriate Commission committees for further consideration and action.

An exhibition center was operated in conjunction with the meetings and offered exhibits pertaining to Arizona's resources and environment. Coordinated by Christopher P. Williams of the U. S. Soil Conservation Service, the exhibitors were:

- Arizona Association of Conservation Districts
- Arizona Department of Health Services

OPERATIONS

- Arizona Mining Association
- Arizona Public Service Company
- Arizona State Land Department
- Hamilton Test Systems
- Maricopa Association of Governments
- Peabody Coal Company
- Salt River Project
- The Cosanti Foundation
- U. S. Army Corps of Engineers
- U. S. Fish and Wildlife Service
- Valley Forward Association

Topics discussed in the Wednesday, August 9th workshops were "Indian Water Rights and Claims" (Session I) and "Environmental Education" (Session II). They were supplemented with a special presentation, "Interrelationships Between Flood Control and the Rio Salado Project."



Governor Bruce E. Babbitt addressing 1978 Summer Conference participants during luncheon ceremonies on August 9th.

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Priscilla Kuhn (standing) moderated the Environmental Education panel of David L. Byrn, Walter E. Jeske, and Dr. Thomas R. Reno.

Summer Conference participants used breaks to discuss important issues raised during the public forum workshop sessions.

Thursday, August 10th, saw two more topics discussed in workshops: "The Clean Air Act Amendments of 1977" (Session III) and "Natural Resource Management" (Session IV).

Indian Water Rights and Claims was moderated by Wesley E. Steiner, Executive Director of the Arizona Water Commission. Panelists were: Donald R. Antone, Sr., Lieutenant Governor, Gila River Community, Sacaton; James W. Johnson, Attorney at Law, Fennemore, Craig, Von Ammon and Udall, Phoenix; David Harrison, Acting Trust Protection Officer, Bureau of Indian Affairs, U. S. Department of the Interior, Washington; and A. J. Pfister, General Manager, Salt River Project, Phoenix.

The workshop was designed to answer such questions as: How much water is used by Indians? By non-Indians? How much water are Indians claiming rights to? What are the legal bases for the Indian claims, and how valid are they? What legislation is now pending regarding Indian water rights in Arizona? Is additional legislation likely to be introduced? Are compromises outside litigation and legislative actions being considered? Do various Indian tribes have comprehensive development plans to help them determine water needs? What moral obligation does the non-Indian population have to the Indians regarding water?

The question of Indian water rights and claims is one that should be of great concern to all Arizonans, both Indian and non-Indian. There are 16 Indian tribes in Arizona located

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on 21 reservations. Indian population at the end of 1977 totaled more than 135,000... 5.6% of the state's overall population; Indian reservations account for 26.6% of all the land in Arizona; and much of the state's natural resources are on reservations.

The Indian tribes, without question, need more water for the economic development of their land and the well-being of their people. But water is a precious and scarce commodity in Arizona, and the state continues to experience a growth rate significantly higher than that of almost any other state in the nation. Additional water to provide for the needs of the state's Indian tribes, growing municipalities, agricultural community and mining industry is difficult, if not impossible, to find.

To set the stage for the panel discussion, the moderator provided an overview of Arizona's water supply picture. David Harrison discussed the Carter Administration's position for assessing and quantifying western water use on Indian reservations. He informed the group that a plan for assessment and quantification is due by June, 1979. The Bureau of Indian Affairs has been charged to establish a set of technical criteria for water development. The Administration is also advocating discussion and negotiation between Indian and non-Indian water users.

A. J. Pfister discussed current plans for negotiations with the Salt River, Camp Verde, Ft. McDowell, White Mountain Apache, San Carlos Apache and Gila River Tribes. Two phases are planned. Phase I is to determine the water needed for tribal self-sufficiency by a review of each tribe's development plans. The development plans will be "tested" for economic and physical feasibility. Phase II will involve the negotiations for water and possible sources. Mr. Pfister also pointed out that to date the federal role has been one of facilitator.

Donald R. Antone briefly discussed his tribe's efforts to attain self-sufficiency through agricultural development. The biggest problem is lack of actual delivery of the 210,000 acre-feet recognized under the Gila River Decree. Instead, only 70,000 acre-feet on the average is delivered annually.

James W. Johnson discussed potential areas for compromise based upon his experience of industry negotiations with tribal government. He listed and discussed the common elements in negotiations, the impediments to negotiations and those points that needed to be resolved. He stated that in the case of Ak-Chin and Papago negotiations, an additional supply is available.

Public discussion and panel input led to the following seven general conclusions:

- A water shortage exists.
- Negotiation is preferable to litigation.
- Everyone recognizes the Winters Doctrine as a basis for Indian rights.
- Potential regional solutions exist where unused resources can be allocated, i. e., wastewater or water on other federal land(s).

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- Two sets of governing laws exist: state and federal.
- Regional negotiations appear more reasonable than statewide or national solutions.
- The central Arizona tribes do not share a unified position on the negotiating process.

The following unofficial recommendations were developed at the Flagstaff meeting:

- That the Governor's Commission on Arizona Environment endorse the concept of negotiation between Indian and non-Indian entities in all environmental matters.
- That in the current water-related negotiations, the Governor's Commission on Arizona Environment urge all parties to adopt a mutual basis for discussion which takes into account a wide range of social and economic values.
- That the Governor's Commission on Arizona Environment urge the Federal Government to provide the Indian tribes with necessary technical assistance to facilitate their planning process.
- That the Governor's Commission on Arizona Environment actively seek greater tribal participation in future Commission activities so that their views on environmental issues can be considered and better understood.

The above recommendations were approved by the full Commission on October 6, 1978 at the Wickenburg meeting.

Environmental Education was moderated by Priscilla Kuhn, Southern Arizona Field Representative for U. S. Senator Dennis DeConcini, Tucson. Panelists were: David L. Byrn, Assistant Superintendent, Educational Services, Washington Elementary School District #6, Phoenix; Walter E. Jeske, Chief of the Education and Publications Branch, Soil Conservation Service, U. S. Department of Agriculture, Washington; Dr. Thomas R. Reno, Associate Superintendent, Arizona Department of Education, Phoenix.

David L. Byrn described current activities of Washington Elementary School District outdoor education programs of ocean research, wildlife, camping and food production. Panelists then discussed the concept that the need for doing something for the environment and for ourselves equals environmental education. Historically, environmental action was begun by small groups having no need for integrated efforts in all programs. Current needs are:

- emphasis on the quality of life, not just environment
- realization that the environment is changing, not static
- central coordination to meet needs and avoid duplication
- identification of goals

"Toward an Action Plan: A Report on the Tbilisi Conference on Environmental Education", March, 1978, was reviewed. A copy of this 34-page report with specific national and international points and a recommendation is available from the GCAE office.

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The need for the Arizona Department of Education to provide personnel in the area of environmental education is clear to some but lacks widespread political support.

The following conclusions were reached:

- There is change occurring in environmental education but it is slow and needs to be increased.
- There is a need for integration of environmental education into all activities and programs.
- There is a need for education of the voting public on the need for environmental education and its priority.
- There is need for state level coordination of existing efforts in environmental education and for reporting on successful programs.
- There needs to be a stress on the interdependency of human/nature components in environmental education.
- The need for environmental education materials by teachers is not being met by the existing system, even though materials exist.
- There is a need for increased involvement (financial and otherwise) of the private sector in environmental education.
- Public perception of "environment" is negative and there is a need to accent the positive.
- A number of international and national environmental education concepts are established and could be adapted for use in Arizona.

The Environmental Education workshop then made the following recommendations to the Commission for study prior to discussion and vote at the Wickenburg meeting in October, 1978:

- *That the Governor's Commission on Arizona Environment provide support for a full time coordinator of environmental education in the Arizona Department of Education.
- *That the Governor's Commission on Arizona Environment support the establishment of an interagency coordinating committee for environmental education.
- That the Governor's Commission on Arizona Environment support the establishment of a "committee" of non-governmental representation to review, recommend, and implement environmental education needs in Arizona.
- That the Governor's Commission on Arizona Environment support the concept of holding a statewide conference on environmental education for an education/business audience with prime sponsorship by the Arizona Department of Education.
- That the Governor's Commission on Arizona Environment identify what programs in environmental education currently exist in Arizona.
- That the Governor's Commission on Arizona Environment identify state environmental education goals and competencies using international/national/state models.

*These recommendations were adopted as Commission resolutions at the Wickenburg meeting.

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- That the Governor's Commission on Arizona Environment pursue finding mechanisms of environmental education by private industry.
- That the Governor's Commission on Arizona Environment endeavor to meet the need for education of the voting public on positive aspects of environmental education.

Interrelationships Between Flood Control and the Rio Salado Project was moderated by Roland H. Sharer, State Liaison Officer, Arizona Outdoor Recreation Coordinating Commission, Phoenix. Panelists were: Joseph Dixon, Water Conservation Project Manager, Corps of Engineers, U. S. Department of the Army, Phoenix; Herbert P. Donald, P. E., Chief Engineer and General Manager, Maricopa County Flood Control District, Phoenix; James W. Elmore, FAIA, Central Arizona Chapter, American Institute of Architects, Phoenix; William R. Schulz, Rio Salado Steering Committee, Valley Forward Association, Phoenix; and Robert A. Witzeman, M. D., President, Maricopa Audubon Society, Phoenix.

The Rio Salado Project and flood control are both potentially compatible and complementary. There is a need for both projects. Development of the Salt River floodplain into a recreational area offers economic as well as aesthetic benefits. By controlling flood potential, additional water storage and groundwater recharge is possible.

Both projects can be developed on their own; however, if both are destined for completion, an integrated approach appears to be most efficient. Additional study and decisions must precede either project's development. Complete data is not yet available and the social, economic and environmental trade-offs have not been decided.

The Governor has appointed a flood control committee to consider regulation and storage alternatives and to make recommendations within two years. Alternatives discussed at this meeting included the building of dams at either the Orme Dam site or at Tanglecreek, the raising of Horseshoe and/or Roosevelt Dams, and the changing of Salt River Project responsibilities so that the existing system could be used with additional early warning procedures. Both channelization and control structures are required if the job is to be done properly. While Orme Dam may offer the best structural solution, social and environmental costs may preclude its construction.

The following recommendation was made to the Commission for study prior to discussion and vote at the Wickenburg meeting in October:

- It is recommended that studies and data collection activities be conducted within the Committee's 2-year time frame. They should also include Rio Salado considerations. It is also recommended that Rio Salado be considered separately by the Committee because land purchases and exchanges should occur prior to dam construction so that costs are minimized.

This resolution was amended at the Wickenburg meeting and was withdrawn for further study.

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The Clean Air Act Amendments of 1977 was moderated by Jeffrey H. Schwartz, Counsel for Environmental Legislation, Interstate and Foreign Commerce Committee, U. S. House of Representatives, Washington, D. C. Panelists were: Muriel E. Beroza, Air Specialist, League of Women Voters, Paradise Valley; Dr. Allyn M. Davis, Director, Air and Hazardous Materials Division, U. S. Environmental Protection Agency, Region IX, San Francisco, California; Dr. Raymond E. Kary, Manager, Environmental Management Department, Arizona Public Service Company, Phoenix; and Nils I. Larson, P. E., Chief, Bureau of Air Quality Control, Arizona Department of Health Services, Phoenix.

The panelists and moderator provided a broad, comprehensive overview of the Clean Air Act Amendments of 1977, with an analysis of the major provisions applicable to Arizona's growth. The problems of economic costs, social impact and enforcement sanctions were noted. The importance of local officials in the implementation of the amendments was particularly emphasized as was the need for the public to involve itself in the development and execution of the State Implementation Plan. Clearly, more questions than answers arose, but the consensus was that the appropriate solutions would be found.

The following recommendation was made to the Commission for study prior to discussion and vote at the Wickenburg meeting in October:

- That the Governor's Commission on Arizona Environment establish an ad hoc committee to study and contribute to the development of the State Implementation Plan for the Clean Air Act Amendments of 1977, advise the Governor and report to the Commission on a regular basis. Particular issues are: (1) particulate standards in nonclassifiable areas, (b) input on proposed regulations reflective of scope of the membership of the Governor's Commission on Arizona Environment, and (c) recommended ways to solicit public participation. This ad hoc committee should invite local officials to participate in its proceedings. It should integrate land use, water quality and transportation considerations in its recommendations. It should also maintain and provide progress reports on all aspects of the State Implementation Plan.

With minor rewording, this recommendation was adopted by GCAE at the Wickenburg meeting.

Natural Resource Management was moderated by Thomas G. Rockenbaugh, State Conservationist, Soil Conservation Service, U. S. Department of Agriculture, Phoenix. Panelists were: Kent Bingham, Assistant Resource Manager, Southwest Forest Industries, Flagstaff; James K. Henness, President, Arizona Association of Conservation Districts, Casa Grande; Wayne Pruett, Immediate Past President, Arizona Chapter, Society for Range Management, Tucson; and Desmond G. Wood, Director, National Association of Conservation Districts, Buckeye.

Discussion was extensive and intensive on the subjects of food and fiber, land use and the impact of government regulations on farm/ranch operations. Major issues discussed were

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inflated costs of pesticides, removal of practical management techniques through wilderness activities, the degree of environmental protection imposed, the uncertainty of who benefits from stringent controls, the limits of water resupply and associated costs (pumping, distribution systems, new methods of application), and the ultimate inability of the farm and ranch system to pass costs on to the consumer. The ultimate result is the consolidation of farms by large corporations and the forcing out of the small and middle-size farms. Another problem is that young people seem unable or unwilling to enter the farming profession.

The 208 non-point water pollution program was also an issue. Major concern was shown for preservation of prime farmlands in Arizona. Crops found nowhere else can be grown here under ideal conditions (water being the limiting factor). Good conservation practices can (a) increase per acre yield, (b) aid nature species, (c) increase other public uses, and (d) produce good on-ground land managers in private industry. However, on state lands there is little incentive to place conservation improvements.

Conservation district boards act as conservation entities all over the state. They conduct a wide range of activities such as flood control, recreation, mosquito control and youth education.

Emphasis was placed by all panelists on the importance of conservation in their present activities. Conservation is the true profit margin for these beleaguered industries.

The workshop participants felt that the issues discussed were too complex in nature to be submitted for vote at this time. However, the following conclusions were reached:

- The 208 management of non-point water pollution should be managed by existing institutions at the local level. Adequate legal, financial, technical and management capabilities should be secured to ensure 208 goals by this existing institution. State and local representatives need to work together on this problem.
- Land use legislation might address prime farm lands, i. e. , support for viable farm units between cities by tax breaks, and tax restructuring to support upkeep and improvement of land and property.
- Communication should be increased between regulatory agencies and their constituents.

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RECOMMENDATIONS AND RESOLUTIONS

Twenty-five recommendations pertaining to Arizona environment were adopted by the Commission in 1978:

Air Pollution

1. That the Governor's Commission on Arizona Environment reaffirm and continue its support of the auto emissions inspection/maintenance program and oppose SB 1061 and any associated bills or amendments that are designed to repeal or weaken the vehicular emissions testing program. (Legislative Committee at Tucson Workshop)
2. That the Governor's Commission on Arizona Environment reaffirm and continue its support of the auto emissions inspection/maintenance program and support SB 1061 as amended, which provides for a five-man commission to study auto emissions inspection problems. (Legislative Committee at Mesa Workshop)
3. That the Governor's Commission on Arizona Environment adopt the recommendation which emanated from the Flagstaff workshop on the Clean Air Act Amendments of 1977 (with an amendment) which reads: That the Governor's Commission on Arizona Environment establish an ad hoc committee to study, review, and assist in revising the State Implementation Plan for the Clean Air Act Amendments of 1977; report to the Commission on a regular basis, and (through the Commission) advise the Governor. Particular issues are (a) particulate standards in nonclassifiable areas, (b) input on proposed regulations reflective of scope of the membership of the Governor's Commission on Arizona Environment, and (c) recommend ways to solicit public participation. This ad hoc committee should invite local officials to participate in its proceedings. It should integrate land use, water quality and transportation considerations in its recommendations. It should also maintain and provide progress reports on all aspects of the State Implementation Plan. (Health/Environmental Hazards Committee at Wickenburg Workshop)

Education

1. That the Governor's Commission on Arizona Environment provide support for a full-time coordinator of environmental education in the Arizona Department of Education. (Growth Management/Human Resources Committee at Wickenburg Workshop)
2. That the Governor's Commission on Arizona Environment support the establishment of an interagency coordinating committee for environmental education. (Growth Management/Human Resources Committee at Wickenburg Workshop)

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Commission Chairman Roy P. Drachman (center) and others participate in tour of Central Arizona Project Installations in conjunction with Mesa workshop meeting.



Executive Board members discuss important Commission business while in session during the Wickenburg workshop meeting.

Land

1. That the Governor's Commission on Arizona Environment support the concept of river parks and natural resource management by communities throughout the state for the following reasons: (a) it can provide for flood control, open space and recreation; (b) it can serve to recharge main aquifers; (c) it can tend to manage growth and promote sound economic development; (d) it can contribute to inner-city revitalization; (e) it can preserve archaeological and historical sites; and (f) it can improve the environment by cleaning up derelict areas. (Growth Management/Human Resources Committee at Mesa Workshop)
2. That the Governor's Commission on Arizona Environment encourage the Governor to send letters of support for the Santa Cruz Project to the City of Tucson, the Pima County Board of Supervisors and the Pima Association of Governments. (Growth Management/Human Resources Committee at Mesa Workshop)
3. That the Governor's Commission on Arizona Environment encourage the Governor to send letters of support for the Rio Salado Project to the Cities of Mesa, Tempe, Scottsdale and Phoenix, the Maricopa County Board of Supervisors, the

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Maricopa Association of Governments and the Maricopa County Flood Control District. (Growth Management/Human Resources Committee at Mesa Workshop)

4. That the comprehensive consideration of economic effects be incorporated into the wilderness study process. (Land Resources Committee at Prescott Workshop)
5. While recognizing agricultural and grazing lands as having similar but separate positions in legislation, the Governor's Commission on Arizona Environment supports the concept of legislation dealing with the resource and environmental problems related to "40-acre and minor land" divisions as addressed by the Arizona Association of County Planners Report (Parcel Splitting in Arizona - Its Problems and Consequences) of 1977, including such issues as minor land divisions without off-site improvements, without proper access, without provisions for drainage and flood control, though not necessarily the specific solutions proposed in their subsequent recommended legislation. (County "40-Acre Problem" Ad Hoc Committee at Flagstaff Summer Conference)



Bruce B. Hronek makes a presentation at the Wickenburg workshop meeting on archaeological values in Arizona.



Pam Faulconer helps a Wickenburg meeting participant through the registration process.

6. In light of Governor Bruce E. Babbitt's address during the luncheon on Wednesday, August 9, 1978, that the Governor's Commission on Arizona Environment expend its energies again in 1979 to secure passage of legislation in the

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following areas: (a) land use planning, (b) state resource inventory, (c) legislation to resolve the 40-acre minor land division problem, and (d) other such areas of legislation as the Commission through its various ad hoc, administrative and resource committees approves. (Legislative Committee at Flagstaff Summer Conference)

7. That the Governor's Commission on Arizona Environment support whatever is needed to obtain a complete inventory of all land resources in Arizona. (Growth Management/Human Resources Committee at Flagstaff Summer Conference)
8. That the Governor's Commission on Arizona Environment resubmit prior to September 25, 1978 its statement regarding the Navajo land selection problem in order that it be included in the final environmental impact statement. (Land Resources Committee at Flagstaff Executive Board Meeting)
9. Since less than 1% of Arizona is composed of riparian growth, the Legislative Committee recommends that the Governor's Commission on Arizona Environment support the concept proposed in draft legislation concerning protection of the riparian environment in Arizona, and further recommends that the following agencies and associations be consulted regarding their opinions and recommendations: State Parks Natural Area Advisory Council, Arizona Mining Association, Arizona Cattlegrowers Association, state forest and lumbering industry, Arizona Farm Bureau Federation, Arizona Homebuilders Association, Arizona State Land Department, and the Arizona Game and Fish Department. (Legislative Committee at Wickenburg Workshop)

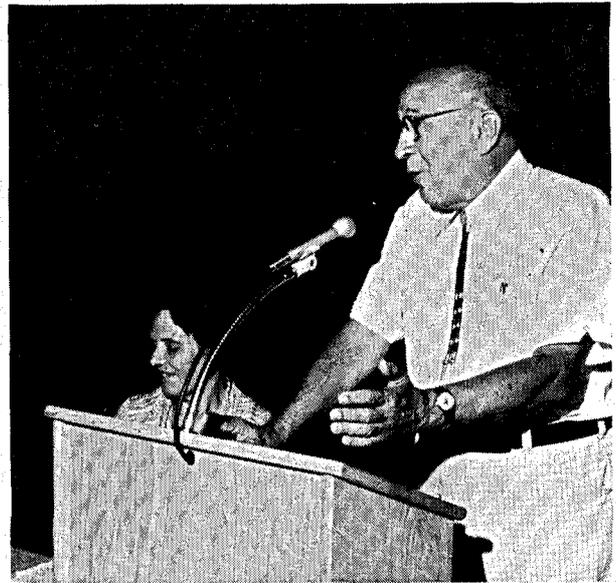
Off-Road Vehicles

1. That the Governor's Commission on Arizona Environment continue its support of off-road vehicle registration legislation. (Legislative Committee at Tucson Workshop)
2. That the Governor's Commission on Arizona Environment make no further attempt to secure passage of legislation to require the registration of off-road vehicles by the Arizona Game and Fish Department. (Legislative Committee at Flagstaff Summer Conference)
3. That the Governor's Commission on Arizona Environment urge the Governor to support the budget request of the Arizona Game and Fish Department for general funds to enforce off-road vehicle laws as per Title 17, and urge that emphasis be placed on enforcement in certain problem areas where the impact of thoughtless use of off-road vehicles is particularly severe. (Growth Management/Human Resources Committee at Wickenburg Workshop)

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Wickenburg workshop meeting participants take part in a tour of the Desert Caballeros Western Museum



Vice Mayor Art Woelffer of Wickenburg extends greetings and a special welcome to workshop meeting participants.

Transportation

1. That the Governor's Commission on Arizona Environment endorse a State Transportation Day which will be coordinated through the Transportation Issues and Systems Committee and held during National Transportation Week, May 15 - 19, 1978. If approved, Commission members will be asked to serve on a committee to develop the program. (Transportation Issues and Systems Committee at Tucson Workshop)
2. That the State of Arizona be encouraged to use state vehicles which are energy efficient and then apprise the public of their conservation efforts. (Transportation Issues and Systems Committee at Flagstaff Summer Conference)
3. That the Governor's Commission on Arizona Environment recommend additional funding to activate the already legislatively-authorized Transit Division of the Arizona Department of Transportation. (Transportation Issues and Systems Committee at Wickenburg Workshop)

Water

1. That the Governor's Commission on Arizona Environment support SB 1105, which would give authority to the Arizona Department of Health Services to

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license water laboratories such that water purveyors would find it easier to acquire the necessary analyses to show compliance with the Federal Safe Drinking Water Act. (Legislative Committee at Mesa Workshop)

2. That the Governor's Commission on Arizona Environment endorse the concept of negotiation between Indian and non-Indian entities in all environmental matters. (Water Resources Committee at Wickenburg Workshop)
3. That in the current water-related negotiations, the Governor's Commission on Arizona Environment urge all parties to adopt a mutual basis for discussion which takes into account a wide range of social and economic values. (Water Resources Committee at Wickenburg Workshop)
4. That the Governor's Commission on Arizona Environment urge the Federal Government to provide the Indian tribes with necessary technical assistance to facilitate their planning process. (Water Resources Committee at Wickenburg Workshop)
5. That the Governor's Commission on Arizona Environment actively seek greater tribal participation in future Commission activities so that their views on environmental issues can be considered and better understood. (Water Resources Committee at Wickenburg Workshop)

Five resolutions were adopted regarding internal operations of the Commission in 1978:

1. That the portion of the final draft of the operating guidelines pertaining to legislative affiliate membership be deleted. (Membership Committee at Tucson Executive Board Meeting)
2. That the Governor's Commission on Arizona Environment Executive Board accept the following as procedures for processing Commission recommendations:
(a) Subject matter is presented to a resource committee or to the entire Commission, and then to a resource committee; (b) It is studied by a resource committee which makes a recommendation to the Commission at a regular meeting; (c) The Commission may vote on the recommendation, vote to hold the recommendation for study by the entire Commission, or vote to hold a ballot-by-mail; (d) In any case, a majority of votes cast will determine if the recommendation goes to the Governor as a recommendation; (e) If the recommendation fails, the information behind it may be sent to the Governor for his enlightenment; and (f) If the vote is close, or if the Commission so decides, a minority position may also be sent to the Governor. (Planning and Issues Committee at Prescott Executive Board Meeting)
3. That the Commission office distribute the background information and recommendations from the public-forum workshops held on Wednesday and Thursday,

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August 9 and 10, 1978 and the special program held on Wednesday, August 9, 1978 with the minutes of the Summer Conference for study prior to discussion and vote at the Wickenburg meeting in October. (Water Resources Committee at Flagstaff Summer Conference)

4. That the Commission's ad hoc committees be scheduled to meet prior to administrative committee meetings at future workshops. (Water Resources Committee at Wickenburg Executive Board Meeting)
5. That the Governor's Commission on Arizona Environment request the Governor to fund two youth interns to serve on the Commission at an approximate maximum cost of \$500.00. Youth intern applications for membership would be taken and reviewed. The interns would be appointed to serve one-year terms that could be renewed. (Membership Committee at Wickenburg Executive Board Meeting)



Dr. Melvin G. Marcus, Chairman of the 1979 Summer Conference Program Planning Committee, discusses conference arrangements with other committee members.

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AWARD RECOGNITION

Seven Certificates of Appreciation, the Commission's highest award, were presented in 1978 to officially recognize and express the Commission's gratitude for outstanding efforts and contributions to the protection and enhancement of Arizona's environment.

The Sierrita Division of the Duval Corporation, represented by George B. Atwood, Chairman and Chief Executive Officer, received a Certificate at the Tucson workshop on January 20, 1978. The certificate stated:

"This award was specifically prompted by your pioneering in the protection of air quality at the Duval Sierrita Mine with the installation of two Model 500 Turbulent Contact Absorbers using calcium hydroxide as the scrubbing medium on the discharge of two electrostatic precipitators treating gases emanating from the molybdenum roasters. These scrubbers were designed to remove 95% of the input sulfur from two gas streams, each discharging 25,000 standard cubic feet per minute. Despite many operating difficulties, they have provided excellent gas treatment for six years of operation.

"A second major advance in prevention of air pollution is the use of the patented CLEAR-process or hydrometallurgical process of copper recovery used since the spring of 1976, with a complete absence of solid, liquid or gaseous pollutants from the 32,500 tons of copper crystals produced annually.

"We recognize the commendable motivation of the Sierrita Division of the Duval Corporation, an attitude which will encourage others to engage in activities similarly beneficial to the State of Arizona. Therefore, it is our hope that you will accept this token of appreciation for cooperation and assistance toward achievement of a quality environment."

Tucson Unified School District was represented by Herbert V. Summers, Assistant Superintendent for Business Services, when it received a Certificate presented at the Tucson workshop. The certificate stated:

"This award was specifically prompted by your use of solar energy for the Howenstine and Urquides Schools when faced with fossil fuel shortages and increasing utility rates.

"We are aware that the Howenstine School is the first solar energy school in the United States. The solar energy system is based on a heliothermal process using flat plate collectors, underground storage tank, instantaneous electric supplemental heat and a combination solar-heated water heat exchanger and electric immersion heater for domestic hot water. This produces space heating and domestic hot water for the entire 31,148 square foot school.

"The Urquides School is equipped with the same type system and is totally air conditioned with filtered air. The second building and the system are designed to provide solar energy for its next-door neighbor, Lynn Elementary School, in future years.

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"We recognize the commendable motivation of the Tucson Unified School District, an attitude which will encourage others to engage in activities similarly beneficial to the State of Arizona. Therefore, it is our hope that you will accept this token of appreciation for cooperation and assistance toward achievement of a quality environment."

Arizona Commission of Agriculture and Horticulture received a Certificate on April 1, 1978, at the Mesa workshop. Accepted by James R. Carter, Director, the certificate stated:

"This award was specifically prompted by your pioneering and leadership efforts in environmental protection of Arizona's unique and beautiful desert vegetation, which is constantly threatened by vandalism. These efforts have succeeded in (1) having the Native Plant Law of 1929 amended annually for better protection through stronger penalties and additional personnel; (2) initiation of an 'educate rather than prosecute' program of speaking before civic clubs, schools and garden clubs to enlist the public in helping protect native plants; (3) initiation of a survey and appraisal program of native plants on rights-of-way sales on state land which has resulted in substantial monies being deposited in state land trust funds; and (4) giving assistance to many states and South Africa by making available copies of Arizona's Native Plant Law and regulations so that they could write legislation to protect their native plants. It should be noted that some of these states have formulated native plant legislation which has been enacted into law.

"We recognize the commendable motivation of the Arizona Commission of Agriculture and Horticulture, an attitude which will encourage others to engage in activities similarly beneficial to the State of Arizona. Therefore, it is our hope that you will accept this token of appreciation for cooperation and assistance toward achievement of a quality environment."

Graham County, Arizona, represented by Dr. Hugh G. Hamman, Chairman of the County Board of Supervisors, also received a Certificate at the Mesa workshop. It said:

"This award was specifically prompted by your innovative program of solid waste disposal in a large sparsely-populated county formerly having many promiscuous open dumps.

"We are aware that the new system replaces both collection and disposal functions, with solid waste delivered at five land-disposal sites by private or municipal crews or private citizens. The sites are conveniently open seven days a week, 24 hours a day. The trench method of operation minimizes blowing litter and makes it possible for a one-man crew to maintain all of the sites with cooperatively-owned equipment at a total cost of \$2.00 per capita per year.

"We recognize the commendable motivation of Graham County, an attitude which will encourage others to engage in activities similarly beneficial to the State of Arizona. Therefore, it is our hope that you will accept this token of appreciation for cooperation and assistance toward achievement of a quality environment."

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Valley Forward Association received the third award presented at the Mesa workshop. Accepted by A. LeRoy Ellison, Chairman of the Environmental Quality Committee, the certificate had this to say:

"This award was specifically prompted by your sponsorship of a program to restore natural beauty to mountain-scarred areas. First, by sponsoring a workshop on the subject from which emanated a determination by Dr. Jerry Cripe to create within the laboratory a substance which would chemically restore the 'desert varnish' and patina to the disturbed terrain; then, following through with the project by encouraging media feature articles which publicized the material and process; and, finally, making recommendations for financing and marketing which have been well received.

"We recognize the commendable motivation of the Environmental Quality Committee of Valley Forward Association, an attitude which will encourage others to engage in activities similarly beneficial to the State of Arizona. Therefore, it is our hope that you will accept this token of appreciation for cooperation and assistance toward achievement of a quality environment."

Trail Access Citizen Advisory Committee of Pima County, Arizona, represented by Jan Bell, Chairperson, received a Certificate at the Flagstaff Summer Conference on August 9, 1978, which stated:

"This award is specifically prompted by the committee's success in producing, over a period of a year and a half, a Trail Access Plan for Pima County which was adopted by the Pima County Board of Supervisors. The committee was made up of a large representation of homeowner, recreation and environmental organizations, and its plan establishes a number of trailheads in the Tucson basin where the need for permanent public access to existing trails on public lands such as national forests and national parks is recognized as subdivision development approaches these boundaries.

"The committee also wrote enabling legislation which was enacted into state law giving counties the authority to prepare ordinances requiring rights of way for trails during the subdivision process. It is hoped that these accomplishments will serve as a precedent to solving similar access problems in other areas of Arizona.

"We recognize the commendable motivation of the Trail Access Citizen Advisory Committee of Pima County, an attitude which will encourage others to engage in activities similarly beneficial to the State of Arizona. Therefore, it is our hope that you will accept this token of appreciation for cooperation and assistance toward achievement of a quality environment."

Flagstaff Junior High School received an award the following day. Accepted by Jim David, Teacher, the certificate commended the school as follows:

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"This award is specifically prompted by the development of The Pond Project by Jim David and his biology class at Flagstaff Junior High School over a period of five years.

"The pond made by damming the Rio Flag has been changed from a pest-breeding marshland surrounded by a dumping ground into a small lake with a definite shoreline, a growing population of fish and an island which is a refuge for wildlife. This body of water is the focal point of some 18 acres, much of which has been cleaned up and beautified with plantings of trees, an Indian-type amphitheater, trails and a barbeque and picnic area.

"In addition to the scenic and recreational values, The Pond Project is a source of community pride involving many organizations and citizens, and students and others use the project for observation and scientific research. Six booklets have been printed about the project, and it has had a tremendous impact in teaching young people to become involved, cooperative members of a community environmental project.

"We recognize the commendable motivation of The Pond Project of Flagstaff Public Schools, an attitude which will encourage others to engage in activities similarly beneficial to the State of Arizona. Therefore, it is our hope that you will accept this token of appreciation for cooperation and assistance toward achievement of a quality environment."

OPERATIONS

CLEARINGHOUSE

As prescribed in the Governor's Executive Order, one of the Commission's major roles is that of a clearinghouse on environmental information. Some of the activities included in this vital service are the following:

- Correspondence control.
- Distribution of documents from numerous environmental, conservation and other organizations.
- Distributing minutes of Commission meetings and conferences.
- Publishing 'Governor's Commission on Arizona Environment general information brochure'.
- Publishing 'Governor's Commission on Arizona Environment speakers bureau list'.
- Publishing 'Governor's Commission on Arizona Environment Membership Directory'.
- Publishing 'Directory of Arizona Environmental and Conservation Organizations'.
- Publishing the Commission's 'Annual Report'.

Correspondence control continued at a high level throughout the year. Table 2 summarizes the activity for the period covered by this report. It indicates a substantial contribution to the Commission's effectiveness by the office of the Executive Director.

A number of periodic publications pertaining to environmental and conservation matters are received from other organizations on a continuing basis. Table 3 lists some of these organizations and their publications. The Commission makes every effort to take advantage of information available from other states.

Minutes of Commission meetings and conferences are distributed not only to the membership itself, but to an additional list of organizations that find them beneficial.

The 'Governor's Commission on Arizona Environment Membership Directory' is usually printed twice a year. It lists the members, their committee and special assignments, their mailing addresses and telephone numbers and the organizations they represent.

OPERATIONS

TABLE 2 - CORRESPONDENCE LOG SUMMARY

<u>Month</u>	<u>Documents Received</u>	<u>Documents Prepared</u>	<u>Copies Distributed</u>
November 1977	83	21	973
December 1977	87	56	1,519
January 1978	200	50	2,373
February 1978	120	48	714
March 1978	225	41	1,981
April 1978	97	50	3,072
May 1978	228	43	2,392
June 1978	115	33	1,126
July 1978	215	30	2,258
August 1978	167	117	1,964
September 1978	172	32	1,733
October 1978	<u>92</u>	<u>34</u>	<u>3,882</u>
TOTAL, 1978 REPORT	1,801	555	23,987
TOTAL, 1977 REPORT	(1,931)	(648)	(22,699)

OPERATIONS

TABLE 3 - PERIODIC PUBLICATIONS RECEIVED BY THE COMMISSION

<u>Title</u>	<u>Distributed</u>	<u>Published By</u>
"Access"	Bi-monthly	Council for Environmental Studies, College of Agriculture, University of Arizona, Tucson, Arizona 85721
"Activity Schedule"	Monthly	U. S. Environmental Protection Agency, 215 Fremont Street, San Francisco, California 94105
"Alumineus"	Monthly	Adolph Coors Company, Public Relations Department 802, Golden, Colorado 80401
"Arcosanti Newsletter"	Monthly	Cosanti Foundation, 6433 Doubletree Road, Scottsdale, Arizona 85253
"Arizona Health"	Monthly	Arizona Department of Health Ser- vices, 1740 West Adams Street, Phoenix, Arizona 85007
"Arizona Heritage News"	Monthly	Arizona State Parks Board, Heri- tage Conservation Section, 1688 West Adams, Phoenix, Arizona 85007
"Arizona Water Resources News Bulletin"	Monthly	Water Resources Research Center, The University of Arizona, Tucson, Arizona 85721
"Arizona Wildlife News"	Monthly	Arizona Wildlife Federation, P. O. Box 27573, Phoenix, Arizona 85017
"ARM Bulletin"	Monthly	ARM Information Center, Keep America Beautiful, Inc., 99 Park Avenue, New York, New York 10016
"Bulletin"	Monthly	Arizona Commission on the Arts and Humanities, 6330 North 7th Street, Phoenix, Arizona 85014

OPERATIONS

<u>Title</u>	<u>Distributed</u>	<u>Published By</u>
"CAP Watergram"	Monthly	Central Arizona Project Association, 1124 Arizona Title Building, Phoenix, Arizona 85003
"Directions"	Quarterly	Arizona Office of Economic Planning and Development, 1700 West Washington, Phoenix, Arizona 85007
"EPA Journal"	Monthly	U. S. Environmental Protection Agency, Office of Public Awareness, Washington, D. C. 20460
"Field Notes"	Monthly	Arizona Bureau of Mines, The University of Arizona, 845 North Park Avenue, Tucson, Arizona 85719
"Forest-Gram West"	Monthly	U. S. Department of Agriculture, Forest Service, P. O. Box 3623, Portland, Oregon 97208
"Humanities"	Quarterly	Arizona Council on the Humanities and Public Policy, 34 West Monroe Street, Phoenix, Arizona 85003
"Ideas for Arizona Communities"	Monthly	Cooperative Extension Service, College of Agriculture, The University of Arizona, Tucson, Arizona 85721
"Pay Dirt"	Monthly	Pay Dirt, P. O. Drawer 48, Bisbee, Arizona 85603
"Phoenix District News-letter"	Monthly	U. S. Department of the Interior, Bureau of Land Management, Phoenix District Office, 2929 West Clarendon Avenue, Phoenix, Arizona 85017
"Regional Outlook"	Monthly	Pima Association of Governments, 405 Transamerica Building, Tucson, Arizona 85701

OPERATIONS

<u>Title</u>	<u>Distributed</u>	<u>Published By</u>
"Research News"	Bi-monthly	Office of the Vice President for Graduate Studies and Research, Arizona State University, Tempe, Arizona 85281
"Salt Talk"	Quarterly	Colorado River Basin Salinity Control Project, Lower Colorado Region, Bureau of Reclamation, U. S. Department of the Interior, P. O. Box 427, Boulder City, Nevada 89005
"Southern Arizona Environmental Council Minutes"	Monthly	Southern Arizona Environmental Council, P. O. Box 40966, Tucson, Arizona 85717
"State and Community Leader Notes"	Monthly	Keep America Beautiful, Inc., 99 Park Avenue, New York, New York 10016
"Water Research in Action"	Monthly	Texas A & M University, Office of Educational Information Services, College Station, Texas 77843
"Week in Review, The"	Weekly	Motor Vehicle Manufacturers Association of the United States, Inc., 300 New Center Building, Detroit, Michigan 48202
"Western States Water"	Weekly	Western States Water Council, 220 South 2nd East, Salt Lake City, Utah
"Wildlife Views"	Monthly	Arizona Game and Fish Department, Information-Education Division, 2222 West Greenway Road, Phoenix, Arizona 85023

OPERATIONS

The "Directory of Arizona Environmental and Conservation Organizations" was again updated and reprinted in 1978 because all 800 copies of the last edition were distributed during the year. The Commission receives requests for this important source document from within and outside the State of Arizona. There is a great deal of work entailed in maintaining and updating this document, and notices of omissions and corrections are welcomed by the editor.

After delivery of the Commission's "1977 Annual Report" to the Governor prior to the December 15th due date, approximately 600 copies were distributed to Commission members, a wide range of environmental and conservation organizations, Legislators, the Arizona Congressional Delegation, selected departments of local, state and federal government and other interested parties.

1979 MEETING SCHEDULE

Six meetings are planned for 1979. As noted in Table 4, four will be workshops... at Tucson, Phoenix, Lake Havasu City and the Globe-Miami area. The summer public forum conference will again be held in Flagstaff. The type and site of the sixth meeting have not yet been decided.

TABLE 4 - 1979 MEETING SCHEDULE

<u>Date</u>	<u>Type of Meeting</u>	<u>Location</u>	<u>Coordinator</u>
January 11 - 12	Workshop	Tucson	I. Dewhirst
March 8 - 10	Workshop	Phoenix	R. B. Scott
May 10 - 11	Workshop	Lake Havasu City	G. McCulloch
August 14 - 17	Summer Conference	Flagstaff	M. Marcus W. Morrall
October 11 - 12	Workshop	Globe-Miami Area	T. G. Chilton
December 6 - 7	To Be Determined - - - - -		

APPENDICES

APPENDIX A. EXECUTIVE ORDER

EXECUTIVE ORDER 75-2

GOVERNOR'S COMMISSION ON ARIZONA ENVIRONMENT (Formerly designated Governor's Commission on Arizona Beauty and Advisory Commission on Arizona Environment)

Amends and Supersedes Executive Orders 65-4, 67-2 and 70-4

WHEREAS, statewide change and growth have created major problems relating to Arizona environment both natural and man-created, and solutions, therefore, have become significant goals;

NOW, THEREFORE, by virtue of the authority vested in me as Governor of the State of Arizona by the Arizona Constitution and the Laws of Arizona, it is ordered as follows:

I. Establishment of the Governor's Commission on Arizona Environment (formerly designated Governor's Commission on Arizona Beauty and Advisory Commission on Arizona Environment).

A. There is hereby established a Governor's Commission on Arizona Environment referred to herein as the "commission".

B. The commission shall be composed of such members as are appointed by the Governor from among persons with a competency and true interest in the various areas of Arizona environment, both natural and man-made, and shall serve at the Governor's pleasure. The Governor shall designate from among the membership a chairman and a vice-chairman.

C. The commission shall meet at the call of the chairman.

II. Duties of the Governor's Commission on Arizona Environment.

A. The commission shall act as a clearinghouse and means of exchange of opinion and information relating to the problems of Arizona environment and the solution thereof. Conclusions and data resulting from this exchange of opinion and information shall, from time to time, be transmitted to the Governor for such consideration as he shall deem proper.

B. The commission shall endeavor to communicate with all sectors of the Arizona population and economy so that conclusions by the commission will represent as nearly as possible a cross-section of Arizona thought on the subject of environment.

APPENDICES

C. The commission shall submit an annual report to the Governor on or before December 15 of each year.

III. Miscellaneous.

A. Members of the commission shall serve without compensation or expense to the State of Arizona, except that expenditures may be made from federal funds received by the state and allocated to the commission for normal expenses of the commission and its members if such expenditures are in accordance with law.

APPENDICES

APPENDIX B. MEMBERSHIP DIRECTORY

Chairman:

Roy P. Drachman, Trustee and Past President, Urban Land Institute, Tucson

Southern Arizona Vice Chairman:

Jeanette Bideaux (Mrs. George A.), Past President, The Tucson Garden Club, Inc., Tucson

Central Arizona Vice Chairman:

F. J. "Mac" MacDonald, Executive Vice President, American Institute of Landscape Architects, Phoenix

Northern Arizona Vice Chairman:

William R. Morrall, Coconino Sportsmen, Flagstaff

James D. Altenstadter, Planning Director, Cochise County Planning Department, Bisbee

Keith L. Andresen, Executive Vice President, Arizona Automobile Dealers Association, Phoenix

Ariel B. Appleton, Secretary, The Research Ranch, Inc., Elgin

Joseph C. Arundale, Liaison Officer - Arizona, Bureau of Mines, U. S. Department of the Interior, Phoenix

Edwin D. Bailey, Arizona Consulting Engineers Association & Arizona Society of Professional Engineers, Phoenix

Josephine Bailey, Chairman, Santa Cruz County Planning and Zoning Commission, Tumacacori

Fred S. Baker, Chairman, Research and Education Committee, Arizona Cattle Growers Association, Elgin

Gilbert R. Bass, Regional Director, Technical Advisory Service for Attorneys, Phoenix

Patricia M. Bergthold, Coordinator - Natural Areas and Trails, Arizona State Parks Board, Phoenix

Andrew L. Bettwy, State Land Commissioner, Arizona State Land Department, Phoenix

Dr. Brent W. Brown, Executive Director, Arizona Office of Economic Planning and Development, Phoenix

APPENDICES

George A. Buckmaster, Member - Executive Committee, Arizona Classroom Teachers Association, Phoenix

Robert O. Buffington, State Director, Bureau of Land Management, U. S. Department of the Interior, Phoenix

Marie Anita "Mim" Burling, Conservation Chairman, Huachuca Audubon Society, McNeal

The Hon. Lawrence A. Caldwell, Mayor, City of Prescott

Dr. Roger L. Caldwell, Director - Council for Environmental Studies, College of Agriculture, The University of Arizona, Tucson

Marybeth Carlile (Mrs. Robert N.), Immediate Past President - Tucson Branch, American Association of University Women

John N. Carr, President - Arizona Chapter, The Wildlife Society, Phoenix

T. G. Chilton, Assistant to the President, Magma Copper Company, Superior

John H. Clay, General Superintendent, Southern Arizona Group, National Park Service, U. S. Department of the Interior, Phoenix

William R. Coffeen, Conservation Committee Advisor, Theodore Roosevelt Council, Inc., Boy Scouts of America, Phoenix

G. Vincent Colf, President, Better Mohave Valley Association

Richard A. Countryman, Assistant Director, Arizona Commission of Agriculture and Horticulture, Phoenix

Peter J. Cowgill, Outdoor Editor, THE ARIZONA DAILY STAR, Tucson

Roy P. Coxwell, Director, Desert Caballeros Western Museum, Wickenburg

Kelly R. Crosson, President, Johnson-Stewart-Johnson Mining Company, Inc., Mesa

Robert D. Curtis, Chief - Wildlife Planning and Development Division, Arizona Game and Fish Department, Phoenix

Kevin A. Dahl, Arizona Representative, Friends of the Earth, Tempe

Dr. Richard O. Davies, Dean, College of Public and Environmental Service, Northern Arizona University, Flagstaff

APPENDICES

- Donald S. "Dan" Devers, Executive Director, Valley Forward Association, Phoenix
- Iris O. Dewhirst (Mrs. Leonard W.), Young Women's Christian Association, Tucson
- Lt. Col. Verne L. Doyle, Special Assistant to the District Engineer for Arizona and Nevada, Corps of Engineers, U. S. Department of the Army, Phoenix
- Dr. William H. Drescher, Director - Bureau of Geology and Mineral Technology, Dean - College of Mines, The University of Arizona, Tucson
- Paulette M. "Polly" Dryden (Mrs. David M.), President, Southern Arizona Environmental Council, Tucson
- Dr. Robert W. Durrenberger, State Climatologist, The Laboratory of Climatology, Arizona State University, Tempe
- Ted A. Edmundson, Vice President and Director of Community Relations, Eller Outdoor Advertising Company of Arizona, Phoenix
- Stanley A. Eisner, APA, President - Arizona Chapter, American Planning Association, Flagstaff
- James W. Elmore, FAIA, Central Arizona Chapter, American Institute of Architects, Phoenix
- Lucille Fetterly (Mrs. Lee A.), Tucson Environmental Committee
- William M. Fisher, Vice President, Pratt Properties, Inc., Fountain Hills
- Jack Flashberg, Counselor-Advisor, National Association of Auto and Truck Recyclers, Mesa
- Dr. Kenneth E. Foster, Associate Director, Office of Arid Lands Studies, The University of Arizona, Tucson
- Seth L. Franzman, Administrator - Utilities and Mines Section, Division of Property Taxation, Arizona Department of Revenue, Phoenix
- Eugene G. Gabrielli, President, Ecology Paper Products Company, Inc., Phoenix
- Edmund C. Garthe, Arizona Public Health Association, Payson
- Catharine "Kay" Gianopulos (Mrs. Philip G.), Past President, Arizona Education Association, Tempe

APPENDICES

Donald C. Gilbert, Executive Director, Arizona Atomic Energy Commission, Phoenix

Robert W. Hacker, Manager - Plant Engineering, Phoenix Computer Operations, Honeywell Information Systems, Inc.

Pam K. Hait (Mrs. Glen), Urban Affairs Editor, PHOENIX MAGAZINE, Scottsdale

Stanley E. Hancock, Director, Communications and Public Affairs, Salt River Project, Phoenix

The Hon. Timothy D. Hayes, Senate Health & Welfare Committee, Phoenix

The Hon. John U. Hays, Vice Chairman, House Agriculture Committee, Yarnell

Dr. Ray Henkel, Arizona-Nevada Academy of Science, Tempe

Robert L. Hesse, Assistant Administrator, Information Resources Division, Arizona State Land Department, Phoenix

Vernon L. Hoy, Director, Arizona Department of Public Safety, Phoenix

Bruce B. Hronek, Forest Supervisor, Tonto National Forest, U. S. Department of Agriculture, Phoenix

The Hon. Arthur J. Hubbard, Sr., Chairman, Senate Health & Welfare Committee, Ganado

Kenneth E. Ingols, Arizona Parks and Recreation Association, Flagstaff

Albert W. Jackson, Area Manager, Area Office - Arizona-New Mexico, Fish and Wildlife Service, U. S. Department of the Interior, Phoenix

Jeanne James, Executive Vice President, Arizona Hotel and Motel Association, Phoenix

Duncan T. Jennings, Chairman of the Board, Jennings & Thompson Advertising, Inc., Phoenix

John H. Jett, Director, Arizona Department of Mineral Resources, Phoenix

Blanche N. Johnson (Mrs. Hosea E.), President - Southwest Region, National Association of Colored Womens Clubs, Inc., Tucson

Dr. Jack D. Johnson, Director, Office of Arid Lands Studies, The University of Arizona, Tucson

Dr. Raymond E. Kary, Manager, Environmental Management Department, Arizona Public Service Company, Phoenix

APPENDICES

William Kemp, Northern Arizona Board of Realtors, Flagstaff

Wayne Kessler, Arizona Section, Society for Range Management, Phoenix

Paul Klores, Assistant Vice President, Public Affairs Division, Valley National Bank, Phoenix

The Hon. Jim Kolbe, Senate Natural Resources Committee, Tucson

LeRoy C. Kopisch, Director, Pinal-Gila Counties Air Quality Control District, Florence

Maxine Lakin (Mrs. C. A.), Arizona Farm Bureau Federation, Phoenix

Nancy K. Laney (Mrs. Jerry L.), Environmental Student, Tucson

George W. "Bill" Larson, Arizona Chapter, American Society of Landscape Architects, Mesa

Morris A. Lerner, President, Imperial Litho/Graphics, Phoenix

The Hon. C. W. "Bill" Lewis, Chairman, House Natural Resources & Energy Committee, Phoenix

Sue Lofgren (Mrs. Robert E.), Water Chairman, League of Women Voters of Arizona, Tempe

Dr. John F. Lounsbury, Director, Center for Environmental Studies, Arizona State University, Tempe

The Hon. James A. Mack, Senate Natural Resources Committee, Tempe

Lawrence S. Madsen, Director, Arizona Agricultural Chemicals Association, Phoenix

Dr. Melvin G. Marcus, Immediate Past President, Association of American Geographers, Tempe

Gordon J. McCulloch, Vice President, R. B. Williams and Associates, Inc., Lake Havasu City

Dr. Edgar J. McCullough, Jr., Head - Department of Geosciences, College of Earth Sciences, The University of Arizona, Tucson

Jack L. McDonald, Arizona Representative, Keep America Beautiful, Inc., Phoenix

David E. McDowell, Vice President - Coronado Section, American Camping Association, Phoenix

APPENDICES

Jacqueline B. McNulty (Mrs. James F., Jr.), Bisbee Council on the Arts and Humanities

Laura M. McRae, LDS Church Relief Society, Scottsdale

Carlos Nagel, Cultural Exchange Council, Tucson

Charles H. Newton, Regional & State Affairs Representative, United States Brewers Association, Inc., Phoenix

Larry F. Nicholas, P.E., Arizona Council of Professions, Phoenix

Richard B. Nicholls, Real Estate Commissioner, Arizona Real Estate Department, Phoenix

Andrew W. Nichols, M.D., Department of Family and Community Medicine, College of Medicine, The University of Arizona, Tucson

Fred J. Nobbe, Arizona Water Resources Committee, Phoenix

Ernie Oliphant (Mrs. George B.), Chairman, Governor's Council of Arizona Women for Highway Safety, Phoenix

James L. Olmstead, P.E., Institute of Electrical and Electronics Engineers, Tucson

W. A. "Bill" Ordway, Director, Arizona Department of Transportation, Phoenix

The Hon. Richard Pacheco, House Health Committee, Nogales

Eva C. Patten (Mrs. Duncan), Tempe

Lloyd J. Perper, Professional Engineer, Tucson

David N. Perry, David Perry Public Relations, Inc., Scottsdale

Julia B. Perry (Mrs. J. B.), Junior League of Tucson, Inc.

A. J. "Jerry" Petrie, General Manager, Beverage Industry Recycling Program, Mesa

Lois E. Prosser, R.N., Arizona State Nurses Association, Associate Professor - College of Nursing, The University of Arizona, Tucson

R. J. Pursley, Public Affairs Coordinator, Inspiration Consolidated Copper Company, Phoenix

William H. Pynchon, Kingman Area Chamber of Commerce

APPENDICES

Michael A. Ramnes, State Parks Director, Arizona State Parks Board, Phoenix

Prof. Sol Resnick, Director - Water Resources Research Center, College of Earth Sciences, The University of Arizona, Tucson

James K. Richardson, Executive Board Member, Mining and Metallurgical Society of America, Phoenix

Clarence L. Roberts, Recreation Consultant, City of Winslow

Thomas G. Rockenbaugh, State Conservationist, Soil Conservation Service, U. S. Department of Agriculture, Phoenix

Lawrence L. Roeser, Executive Director, Arizonans for Jobs and Energy, Phoenix

Paul H. Rossman, Director - SAVE, INC. (Sportsmen Against Vandalism Everywhere), Phoenix

John S. Rountree, Public Affairs Area Manager, Chevron U.S.A. Inc., Phoenix

George A. Schade, Jr., Arizona State Association of Four Wheel Drive Clubs, Phoenix

Donald B. Schwenn, AIA, Men's Art Council, Phoenix

R. Bruce Scott, Assistant Director, Environmental Health Services, Arizona Department of Health Services, Phoenix

Dr. Emory Sekaquaptewa, Hopi Tribal Representative, Tucson

Douglas W. Shakel, Executive Board - Rincon Group, Grand Canyon Chapter, Sierra Club, Tucson

Roland H. Sharer, State Liaison Officer, Arizona Outdoor Recreation Coordinating Commission, Phoenix

Dr. Ivan J. "Tiny" Shields, Agricultural Agent in Charge, Maricopa County Agricultural Extension Service, Phoenix

Richard E. Shunick, Manager - Arizona Projects Office, Bureau of Reclamation, U. S. Department of the Interior, Phoenix

Paul C. Smith, Tucson Wheelmen, Inc.

Peggy Spaw, Secretary, Arizona Roadside Council, Phoenix

APPENDICES

Jeffrey J. Stein, Architect, Cosanti Foundation, Scottsdale

Wesley E. Steiner, Executive Director, Arizona Water Commission, Phoenix

Robert M. Sternberger, Vice President - Special Projects, Southwest Forest Industries, Inc., Phoenix

David B. Stone, Colonel (Ret.), U. S. Army, Tucson

Thomas J. Sullivan, Executive Director, Arizona Wildlife Federation, Phoenix

The Hon. William L. Swink, Chairman, Senate Natural Resources Committee, San Manuel

Glenn Taylor, Williams Air Force Base Representative

Alberta C. Tippeconnic, Southwestern Indian Development, Inc., Phoenix

Richard Treon, Governor's Economic Planning and Development Board, Phoenix

Troy Upchurch (Mrs. Barney W.), Arizona Federation of Garden Clubs, Inc., Phoenix

J. Thomas Via, Jr., Vice President, Tucson Gas & Electric Company

Profr. Gabriel Villegas M, Direccion General de Educacion Publica del Estado de Sonora, Hermosillo, Sonora, Mexico

Charles E. Walters, Officer in Charge, Immigration and Naturalization Service, U. S. Department of Justice, Nogales

Carolyn Warner (Mrs. Ronald H.), State Superintendent of Public Instruction, Arizona Department of Education, Phoenix

Laura M. Watson, Chairman, Arizona Conservation Council, Mesa

Robert R. Wearanga, Plant Manager, Continental Can Company, Tempe

Robert B. Whitaker, President, Arizona Outdoor Writers Association, Phoenix

Major Henry W. "Will" Worthington, Manager - Urban Studies Task Group, Corps of Engineers, U. S. Department of the Army, Phoenix

Philip C. Wright, Director - Planning and Contracts, Government Electronics Division, Motorola, Inc., Scottsdale

APPENDICES

L. V. Yates, Jr., President, Yates Army-Navy Stores, Inc., Phoenix

Dr. Ervin H. Zube, Director, School of Renewable Natural Resources, College of Agriculture, The University of Arizona, Tucson

APPENDICES

APPENDIX C. DIRECTORY OF NON-MEMBER RESOURCE PERSONS

Cathy J. Arthur, Senior Planner, Support Systems Group, Transportation Planning Division, Arizona Department of Transportation, Phoenix

C. Lee Fox, Director, Air Pollution Control District, Pima County Health Department, Tucson

Christine G. Gibbs, Legislative Analyst, Government Affairs, Salt River Project, Phoenix

Grant W. Johnston, Chief, Bureau of Air Pollution Control, Maricopa County Department of Health Services, Phoenix

Alexander Kelter, M. D., Assistant Director for Disease Control Services, Arizona Department of Health Services, Phoenix

Nils I. Larson, P. E., Chief, Bureau of Air Quality Control, Arizona Department of Health Services, Phoenix

Priscilla G. Robinson, Southwest Environmental Service, Tucson

Robert E. Yount, Director, Division of Natural Resource Conservation, Arizona State Land Department, Phoenix

Christopher P. Williams, Public Information Officer, Soil Conservation Service, U. S. Department of Agriculture, Phoenix

APPENDICES

APPENDIX D. 1979 COMMITTEE ROSTER

RESOURCE COMMITTEE ROSTER

Energy Resources (Conservation, needs and demands, plant siting, supply and production, use management, economic and educational aspects):

Stanley E. Hancock, Chairman
Dr. Jack D. Johnson, Vice Chairman
Lloyd J. Perper, P.E., Legislative Liaison
James D. Altenstadter
Dr. Roger L. Caldwell
John H. Clay
Kevin A. Dahl
Donald C. Gilbert
Robert W. Hacker
State Representative John U. Hays
State Representative C. W. "Bill" Lewis
Dr. Melvin G. Marcus
Gordon J. McCulloch
James L. Olmstead, P.E.
Lawrence L. Roeser
John S. Rountree
Douglas W. Shakel
Dr. Ivan J. "Tiny" Shields
Richard Treon
Troy Upchurch (Mrs. Barney W.)
J. Thomas Via, Jr.

Growth Management/Human Resources (Comprehensive land use planning, institutional changes, population, societal interactions, zoning, economic and educational aspects):

Duncan T. Jennings, Chairman
Laura M. Watson, Vice Chairman
William Kemp, Legislative Liaison
Josephine Bailey
Ted A. Edmundson
Stanley A. Eisner, APA
James W. Elmore, FAIA
Pam K. Hait (Mrs. Glen)

State Senator Timothy D. Hayes
Robert L. Hesse
Morris A. Lerner
Jacqueline B. McNulty (Mrs. James F., Jr.)
Carlos Nagel
Michael A. Ramnes
Donald B. Schwenn, AIA
Roland H. Sharer
David B. Stone
Profr. Gabriel Villegas M
Dr. Ervin H. Zube

Health/Environmental Hazards (Air pollution, community improvement, fertilizers, household products, industrial toxic substances, noise, pesticides, resource recovery, sanitation, solid waste management, radiation, water quality, economic and educational aspects):

R. Bruce Scott, Chairman
Iris O. Dewhirst (Mrs. Leonard W.), Vice Chairman
Lawrence S. Madsen, Legislative Liaison
Gilbert R. Bass
G. Vincent Colf
Lucille Fetterly (Mrs. Lee A.)
Eugene G. Gabrielli
Edmund C. Garthe
State Senator Arthur J. Hubbard, Sr.
Blanche N. Johnson (Mrs. Hosea E.)
Dr. Raymond E. Kary
LeRoy C. Kopisch
Jack L. McDonald
Laura M. McRae
Charles H. Newton
Andrew W. Nichols, M.D.
David N. Perry
A. J. "Jerry" Petrie
Lois E. Prosser, R.N.
Paul H. Rossman
Glenn Taylor
Robert R. Wearanga
Philip C. Wright

APPENDICES

Land Resources (Biological land resources (fish and game), critical areas, geological aspects, land management, non-renewable land resources (minerals, soil), open space, recreation, renewable land resources (native plants, food and fiber, timber), economic and educational aspects):

Robert D. Curtis, Chairman
Thomas G. Rockenbaugh, Vice Chairman
Thomas J. Sullivan, Legislative Liaison
Ariel B. Appleton
Patricia M. Bergthold
George A. Buckmaster
Robert O. Buffington
Marie Anita "Mim" Burling
T. G. Chilton
William R. Coffeen
Richard A. Countryman
Peter J. Cowgill
Kelly R. Crosson
Dr. William H. Dresher
Seth L. Franzman
Dr. Ray Henkel
Kenneth E. Ingols
Albert W. Jackson
John H. Jett
Wayne Kessler
George W. "Bill" Larson
Dr. John F. Lounsbury
Dr. Edgar J. McCullough, Jr.
David E. McDowell
Richard B. Nicholls
Eva C. Patten (Mrs. Duncan)
Julia B. Perry (Mrs. J. B.)
R. J. Pursley
George A. Schade, Jr.
Dr. Emory Sekaquaptewa
State Senator William L. Swink
Robert B. Whitaker
L. V. Yates, Jr.

Transportation Issues and Systems (Total Arizona transportation: aviation - airports (intrastate, interstate, expansion); vehicles - off-road, trucks, cars, motorcycles, lifestyle utilization, alternatives and improvement measures; mass transit - buses, rail, people-movers; highways - construction, routes, funds, bikeways, parkways, scenic roads; land - access, bikeways, hiking, energy use lines; effects relative to air, noise, water and land use pollution aspects):

Jeffrey J. Stein, Chairman
Dr. Richard O. Davies, Vice Chairman
Clarence L. Roberts, Legislative Liaison
Keith L. Andresen
Roy P. Coxwell
Paulette M. "Polly" Dryden (Mrs. David M.)
Jack Flashberg
Vernon L. Hoy
Jeanne James
Maxine Lakin (Mrs. C. A.)
Nancy K. Laney (Mrs. Jerry L.)
Larry F. Nicholas, P.E.
Ernie Oliphant (Mrs. George B.)
W. A. "Bill" Ordway
Paul C. Smith
Charles E. Walters

Water Resources (Balancing conflicting uses, conservation, dams-channelization, needs and demands, reuse, supply, use management, economic and educational aspects):

Dr. Kenneth E. Foster, Chairman
Sue Lofgren (Mrs. Robert E.), Vice Chairman
Fred J. Nobbe, Legislative Liaison
Joseph C. Arundale
Edwin D. Bailey
Fred S. Baker
Andrew L. Bettwy
Dr. Brent W. Brown
Mayor Lawrence A. Caldwell
Marybeth Carlile (Mrs. Robert N.)
John N. Carr

APPENDICES

Donald S. "Dan" Devers
Lt. Col. Verne L. Doyle
Dr. Robert W. Durrenberger
William M. Fisher
Catharine "Kay" Gianopulos (Mrs.
Philip G.)
Bruce B. Hronek
Paul Klores
State Senator Jim Kolbe
State Senator James A. Mack
State Representative Richard Pacheco
William H. Pynchon
Prof. Sol Resnick
James K. Richardson
Richard E. Shunick
Peggy Spaw
Wesley E. Steiner
Robert M. Sternberger
Alberta C. Tippeconnic
Carolyn Warner (Mrs. Ronald H.)
Major Henry W. "Will" Worthington

ADMINISTRATIVE COMMITTEE ROSTER

Awards

Maxine Lakin (Mrs. C. A.), Chairman
Marie Anita "Mim" Burling
Donald S. "Dan" Devers
Duncan T. Jennings
Blanche N. Johnson (Mrs. Hosea E.)
Nancy K. Laney (Mrs. Jerry L.)
Jack L. McDonald
Troy Upchurch

Communications

David N. Perry, Chairman
Pam K. Hait (Mrs. Glen)
Paul Klores
Morris A. Lerner
Ernie Oliphant (Mrs. George B.)

Legislative

Ted A. Edmundson, Chairman
Glenn Taylor, Co-chairman

William Kemp
Lawrence S. Madsen
Fred J. Nobbe
Lloyd J. Perper, P.E.
Clarence L. Roberts
Thomas J. Sullivan

Membership

Jeanette Bideaux (Mrs. George A.), Chair-
man
Richard A. Countryman
Robert W. Hacker
Carlos Nagel
Andrew W. Nichols, M.D.
Prof. Sol Resnick
Paul C. Smith

Planning/Issues

F. J. "Mac" MacDonald, Chairman
Dr. Richard O. Davies
Iris O. Dewhirst
Dr. Jack D. Johnson
Sue Lofgren
Thomas G. Rockenbaugh
Laura M. Watson

AD HOC COMMITTEE ROSTER

Arizona's Archaeological Heritage

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APPENDIX E. ENVIRONMENTAL STUDIES

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1. Economic and Environmental Costs
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3. Keeping Rangelands Productive

Water Resources

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2. Water Quality
3. Overdraft of Groundwater Resources
4. Indian Water Rights
5. Colorado River Salinity

Energy Resources

1. Problem: The transition from using traditional energy sources to using alternate energy sources for home heating and other heating uses is proceeding too slowly.

Discussion: In part, the problem is caused by public feeling that the economics of solar use preclude development and by public distrust of solar installation contractors. Energy Resources Committee discussions during the year included the following:

- (a) Tucson Workshop, January 20, 1978:

Presentation by Dr. Ivan J. "Tiny" Shields, Agricultural Agent in Charge, Maricopa County Agricultural Extension Service, Phoenix, on bio-mass conversion of farm products to obtain energy. Some work has been done, such as the Four Corners Study on manure conversion, and potentially, bio-mass is a large energy source. But there are many aspects that need more research and study.

The following documents are available to any Commission member upon request to the Commission office: (1) summary of recent state energy legislation; (2) summary of 1977 national energy legislation; (3) methane gas from bio-mass; and (4) Oil Daily Newspaper summary of 1977 energy programs.

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Discussed recent Arizona energy legislation. There seems to be a need for public education of the availability of tax credits for solar and home insulation.

(b) Mesa Workshop, April 1, 1978:

Presentation by April Julian of Citizens for Environmental Responsibility regarding an initiative which would create a state energy agency that would mandate greater focus on renewable energy resources and the phasing out of nuclear and all fossil fuel generating facilities. Ms. Julian indicated that she is not sure that the initiative will be placed on the ballot due to the lack of signatures. Citizens for Environmental Responsibility believes that insufficient funds are presently being allocated to renewable energy resources other than solar (hydrogen, bio-mass, ocean thermal-gradient, wind, etc.). At the suggestion of Dr. Roger L. Caldwell, the committee will be conducting further discussion on future energy options.

Presentation by Katharine Howden of the Arizona Office of Economic Planning and Development on proposed Arizona energy legislation. Legislation has been prepared to fulfill federal conservation requirements. Of the three bills introduced (HB 2313, HB 2209 and SB 1183), only SB 1183, which would create an Arizona Department of Energy, has passed the Senate and is back in the House Natural Resources and Energy Committee. Because the House objects to the potential concentration of power in the Department and the possible resulting autonomy, they may try for a compromise of HB 2313 and SB 1183.

(c) Prescott Workshop, May 19, 1978:

Discussed whether the Commission can play a larger role in selling solar energy; availability of solar water heating and competitive costs; demonstration projects, i. e., homes, irrigation pumping; and solar repowering.

(d) Flagstaff Summer Conference, August 11, 1978:

Discussed the environmental impacts of solar units in residential areas and the visual impact they have.

Solar use was broken down into the following categories: (1) generating electricity, (2) water heating for individual buildings, and (3) heating of buildings and air conditioning. Water heating is the most practical use now as other uses are far from being perfected.

Several organizations are experimenting with application of solar energy in houses to develop data for future application.

Difficulties of dealing with energy problems because of uncertainties of future governmental actions.

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(e) Wickenburg Workshop, October 6, 1978:

Discussed and designated a subcommittee to pursue discussions with the Registrar of Contractors and the Solar Energy Research Commission staff regarding licensing of solar energy installation contractors for the purpose of assuring that proper steps are being taken to build public confidence in contractors in this field.

Discussed and designated a subcommittee to investigate the solar powered water pumping installation near Theba for purposes of possible award consideration.

Recommendations: None.

2. Problem: Utilities seem to have unrestricted freedom in siting of power transmission lines in undeveloped areas of Arizona.

Discussion: The public is ignorant of the extensive regulations and necessary reviews that must precede power line sitings, of the public's demand for power, and of the economics of alternative choices. Energy Resources Committee discussions in 1978 included the following:

(a) Tucson Workshop, January 20, 1978:

Presentation by Frank Darmiento, Energy Analyst, Salt River Project, Phoenix, on transmission line siting. He covered the legal, economic, and engineering, as well as environmental, aspects of such studies.

(b) Mesa Workshop, April 1, 1978:

Presentation by Ramon Fierros, Environmental Consultant for Arizona Public Service Company, regarding transmission line siting procedures used by APS. Two questions arise when planning for transmission line siting: Where will the plant be built? and, Should voltages be increased to lessen the need for more transmission lines? Possible answers to these questions are: (1) Power plants must be built in relationship to water supply and load centers; (2) Fewer transmission lines create wider problems when power outages occur. Wherever a plant is built, there will be environmental impacts. Several transmission line corridors under study by APS were described. The committee members and other interested persons were invited to submit comments on these proposals. Mr. Fierros cited the increasing level of cooperation between utilities in transmission line siting to help overcome undesirable environmental impacts and to keep down transmission costs to the consumer.

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(c) Prescott Workshop, May 19, 1978:

Committee discussion of administrative problems with Arizona Power Plant and Transmission Line Siting Committee that make true environmental decisions difficult.

Recommendations: None.

Health and Environmental Hazards

1. Problem: Hazardous wastes, such as toxic chemicals, spent industrial compounds, pesticides, and dangerous organic materials, are by-products of many industrial operations. A mechanism for the proper handling and disposal of such hazardous wastes in order to protect public health does not presently exist in the state.

Discussion: The Health and Environmental Hazards Committee discussed the problem at the Tucson Workshop January 20, 1978. A slide presentation entitled "Hazardous Wastes, the Gross National By-Product", was viewed, and early efforts by the State of Arizona to handle hazardous wastes were discussed. The committee heard a presentation by Charles Bourns of Region IX of the U. S. Environmental Protection Agency on the Resource Conservation Recovery Act of 1976 and its impact on hazardous wastes and disposal. Also discussed was the future direction to be taken by the Arizona Department of Health Services on the development of its regulations to implement the Act. Dr. Kenneth Schmidt, a hydrogeological consultant to the State, presented the results of the detailed selection process in locating an acceptable hazardous waste site in Arizona.

A "cradle to grave" mechanism for handling hazardous wastes is needed. An acceptable hazardous waste disposal site is needed in Arizona to allow proper disposal by industry.

Recommendations:

- (a) The Arizona Department of Health Services should prepare rules and regulations for proper handling of hazardous wastes in accordance with the Resource Conservation Recovery Act of 1976.
- (b) A disposal site should be located in the state.
- (c) Efforts of the Arizona Department of Health Services in developing rules and regulations and locating a disposal site should be supported.

Land Resources

1. Problem: Federal settlement of the Hopi-Navajo land dispute requires a land exchange having significant disadvantages.

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Discussion: William R. Morrall of Coconino Sportsmen, Flagstaff, discussed this problem with the Land Resources Committee at the Flagstaff Summer Conference on August 11, 1978, and at the Wickenburg Workshop on October 6, 1978. The Congress of the United States tried to resolve the 100-year dispute between the Navajo and the Hopi Indians by providing 250,000 acres of Bureau of Land Management land to the Navajos. The Indians selected House Rock Valley in Arizona, which is occupied by ranchers who lease grazing rights there. The final environmental impact statement is currently being prepared. Alternative solutions are (a) to acquire private land for the Indians from willing sellers, or (b) to pay the Indians a cash settlement and let them buy what land they need wherever they want.

Recommendation: Comments on the environmental impact statement should come from state agencies that would be affected by the land selection.

Note: The Governor's Commission on Arizona Environment resubmitted its previous statement regarding this settlement in order that the statement would appear in the final EIS.

2. **Problem:** There is still some public unawareness of the many environmental problems that face Arizona.

Discussion: Thomas G. Rockenbaugh, State Conservationist, Soil Conservation Service, U. S. Department of Agriculture, Phoenix, discussed the problem. There is apathy among the public as well as unawareness. Agencies are failing to get their message across, and should seek to improve the process of trying new techniques which will encourage public awareness and participation in solutions to environmental problems.

Recommendation: Work to improve communications with the public and private sectors to open lines of understanding.

3. **Problem:** The lack of programs to manage state urban lands surrounding Phoenix and Tucson has created uncertainty among cities, towns, counties and development interests.

Discussion: Robert D. Curtis, Chief, Wildlife Planning and Development Division, Arizona Game and Fish Department, Phoenix, discussed the problem. Sound programs to manage urban lands belonging to the State of Arizona have been lacking. Other programs provided "give away" of state lands. Governor Bruce E. Babbitt has created a State Urban Lands Task Force to come up with procedures and proposed legislative changes to resolve the problem. GCAE members Robert D. Curtis, R. Bruce Scott and Roland H. Sharer are state agency staff people assigned to the Task Force to assist in the resolution.

Recommendations: None.

4. **Problem:** Wilderness areas will be lost if they are not protected by federal action.

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Discussion: Presentations were made at the Prescott Workshop, May 19, 1978 by: Bruce B. Hronek, Forest Supervisor, Tonto National Forest, U. S. Department of Agriculture, Phoenix; Richard L. Morgan, Staff Specialist, Arizona-New Mexico Area Office, Fish and Wildlife Service, U. S. Department of the Interior, Phoenix; and Robert B. Whitaker, Bureau of Land Management, U. S. Department of the Interior, Phoenix. There is unawareness of the American public that unique areas of wild land and their ecosystems will be lost if not protected by federal action. Few states have ever protected wilderness areas. If all lands are used under the multiple-use concept, destruction of unique features and creations is risked.

Recommendation: There should be a comprehensive consideration of economic effects incorporated into the wilderness study process. (A resolution to this effect was adopted by the Commission at the Prescott Workshop, May 19, 1978.)

Natural Resource Management

1. **Problem:** High economic and environmental costs are forcing small and middle farmers and ranchers out of business.

Discussion: The problem was discussed in Workshop IV on Natural Resource Management at the Flagstaff Summer Conference August 10, 1978. Speakers were: James K. Henness, President, Arizona Association of Conservation Districts, Casa Grande; Wayne Pruett, Immediate Past President, Society for Range Management, Tucson; and Desmond G. Wood, Director, National Association of Conservation Districts, Buckeye. There are four reasons for the problem: (a) escalating costs of the products used to produce crops, (b) high and inequitable tax and property improvement systems, (c) environmental quality restrictions drawn up without input from the farming industry, and (d) inability of the farmers to pass the increased cost of doing business on to the consumer. Alternative solutions to the problem are preservation of prime farmland, agricultural easements, tax restructuring, and public education about the unique role farming and ranching play in Arizona in productivity and value to the state.

Recommendations:

- (a) Enact land use legislation to address prime farmlands such as support for viable farm units near cities.
- (b) Restructure taxes to support improvements which increase capacity and trend of range and farm productivity.

2. **Problem:** Environmental protection requirements create high costs for the producer which are not passed on to the consumer, but the benefits of such protection accrue to the public.

Discussion: Kent Bingham, Assistant Resource Manager, Southwest Forest Industries, Flagstaff, and Desmond G. Wood, Director, National Association of Conservation Districts,

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Buckeye, described this problem in the Natural Resources Management Workshop at the Flagstaff Summer Conference on August 10, 1978. The problem comes about because U. S. Environmental Protection Agency restrictions do not consider producers' constrictions. Solving the problem requires public education instead of prosecution as well as involvement of industry before regulations are passed.

Recommendation: Keep management of regulations at the local level, with technical help and support from state and federal agencies.

3. Problem: Keeping rangelands productive under existing conditions is difficult.

Discussion: Wayne Pruett, Immediate Past President, Society for Range Management, Tucson, described the problem in the Natural Resources Management Workshop at the Flagstaff Summer Conference on August 10, 1978. The problem is caused by changes in climates, past rangeland abuses, a lack of understanding of range dynamics, and a tax structure which penalizes the private rancher who leases state land. The problem can be solved by management to protect productive native species, land manipulation strategies, education of on-site managers, and restructuring taxes to provide incentives for good range management.

Recommendation: Restructure taxes to support upkeep and improvement of land and property.

Water Resources

1. Problem: The Federal Water Pollution Control Act of 1972 (PL 95-500) contains a Section 208 that provides a procedure to clean up pollution sources of water. Several agencies and political subdivisions claim responsibility for the 208 program, causing a problem.

Discussion: Ed Swanson, P. E., Public Health Engineer, Bureau of Water Quality Control, Arizona Department of Health Services, Phoenix, discussed the problem at the Flagstaff Summer Conference on August 11, 1978. A solution would be the assignment of clear-cut responsibility for the 208 program by the Legislature.

Recommendation: The Land Resources Committee recommended at the Flagstaff Summer Conference August 11, 1978, that GCAE support the statement of classification on state policy for management of non-point source pollution control under Section 208 of PL 92-500. The Commission approved a motion to table the resolution.

2. Problem: Water quality is a problem of various magnitudes in virtually every part of the state. The problem can be traced to both natural causes and human activities.

Discussion: At the Prescott Workshop on May 19, 1978, Kathy Ferris, Executive Director, Arizona Groundwater Study Commission, Phoenix, discussed her Commission's activities

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and bills before the Legislature. At the same meeting, Bruce B. Hronek, Forest Supervisor, Tonto National Forest, U. S. Department of Agriculture, Phoenix, reported on water quality studies on the Salt and Verde Rivers. There is no simple solution to the problem. However, we must gain a better understanding of the natural phenomenon which cause water quality problems and of the human activities which contribute to these problems.

Recommendations: None.

3. Problem: Overdraft of groundwater resources is a source of increasing concern.

Discussion: Kathy Ferris, Executive Director, Arizona Groundwater Study Commission, Phoenix, discussed this very complex problem at the Prescott Workshop on May 19, 1978. Historically, Arizonans have used surface water resources as required in the development of the state. As the demand for water exceeded surface water availability, Arizonans have been forced to rely to an increasing extent upon groundwater reservoirs. We are overdrafting these at an alarming rate, and need to come to grips with this problem.

Recommendations: None. The Water Resources Committee considered this problem for educational purposes only. Alternative solutions to the problem are being developed by the Arizona Groundwater Study Commission.

4. Problem: Indian water rights is a growing source of concern among the western states. Many Indian tribes and communities throughout the western states maintain that their rights have been ignored and violated by non-Indians throughout the period of development of the west. Much litigation to reinstate their rights has been initiated by Indian communities and by the Bureau of Indian Affairs on behalf of the Indians. The resolution of this problem among conflicting demands for the water poses serious consequences for the western states unless the problem is very carefully resolved in the best interest of all concerned. The cause of the problem can generally be attributed to the historic development of the western United States. As non-Indians moved into the area they were not aware of or ignored the rights that Indians had to the waters of the area.

Discussion: At the Tucson Workshop on January 20, 1978, Roger Schwartz, Office of the Solicitor, U. S. Department of the Interior, Phoenix, discussed pending litigation concerning Indian water rights. In a joint meeting with the Land Resources Committee, he discussed five pending cases. Three, which are in U. S. courts, relate to the problem which arises when one groundwater pumper lowers the water table of adjacent land owners, and specifically address this problem in Tucson, Safford and Gila River Indian Community areas. The other two, in state courts, concern sanctioning the water use changes that have occurred in the Salt River Project and the validation of the Central Arizona Project contract. Mr. Schwartz also discussed ten proposed cases which his office is considering submitting to the courts. Copies of Mr. Schwartz's presentation are available to anyone upon request to the Commission office.

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Alternate solutions to the problem are:

- (a) Adjudication by the federal court system.
- (b) Legislation by U. S. Congress or state legislatures.
- (c) Negotiation by the various interested parties. (It is recognized by virtually everyone aware of the Indian water rights issue that this alternative solution is by far preferable to other solutions.)

Recommendation: No specific recommendation resulted from Water Resources Committee discussions at the Tucson Workshop. However, several recommendations were adopted by the Commission at the Wickenburg Workshop as a result of Public Forum Workshop I at the Flagstaff Summer Conference as noted in the Operations section of this report.

5. **Problem:** Colorado River Salinity has posed an international problem in that it exceeds limits which the downstream user, Mexico, cannot tolerate. The salinity comes from natural sources and from upstream agriculture and evaporation.

Discussion: The problem and the International Salinity Control Project designed to solve it were studied by the Water Resources Committee, the Land Resources Committee and the Water Salinity Ad Hoc Committee in a series of meetings:

- (a) Mesa Workshop, March 31 - April 1, 1978:

Prior to the morning resource committee meetings, a special presentation was held entitled "Water Salinity in the Lower Colorado River Area", encompassing such topics as Background and Overview, Treaty and Organizational Constraints, and Remaining Alternatives. Participants were as follows: Lloyd J. Perper, P. E., Tucson, moderator; Dr. Kenneth E. Foster, Associate Director, Office of Arid Lands Studies, The University of Arizona, Tucson; Joseph F. Friedkin, Commissioner, International Boundary and Water Commission, El Paso, Texas; Manuel Lopez, Jr., Regional Director, Lower Colorado Region, Bureau of Reclamation, U. S. Department of the Interior, Boulder City, Nevada; David B. Stone, Former Arizona State Representative, Tucson; and Dr. Jan van Schilfgaarde, Director, U. S. Salinity Laboratory, Riverside, California. They discussed the International Salinity Control Project. Of particular interest was the proposed desalinization plant at Yuma. The discussion included a description of the proposed features, the alternatives which were considered and rejected, and the attitudes of the most affected agencies. Several important points surfaced: (1) Unless Wellton-Mohawk Irrigation and Drainage District return flows are of adequate quality for further use, they will be counted as consumptive use by the State of Arizona as part of its Colorado River allocation; (2) There are a lot of high-level political considerations involved; and (3) The Ad Hoc Committee on Water Salinity will need to discuss and digest the presentations made to the Commission before its next meeting.

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(b) Prescott Workshop, May 18, 1978:

The Tucson members of the committee reviewed a working draft that they had used in discussing the problem of Lower Colorado River salinity. It was their feeling that at present they could not offer a practical solution to the problem. After discussion, the committee concurred and decided the following:

- That the Tucson group will prepare a report based on the working draft which would outline the issue, the technical problems and the political situation. This will serve as a readable summary for future Commission use.
- That the committee will review the report and finalize its work by October.
- That the Water Resources Committee should monitor the Lower Colorado River situation on an annual basis.

(c) Flagstaff Summer Conference, August 11, 1978:

Wesley E. Steiner, Executive Director, Arizona Water Commission, Phoenix, presented an understanding of salinity standards and salinity control plans for the Colorado River. Estimated salinity concentration at Hoover Dam is primarily due to natural diffuse sources, irrigated agriculture and evapotranspiration. In 1972, the seven Colorado River Basin states adopted a salinity policy for the river system with no numerical criteria included. In 1972, as a result of PL 92-500, the U.S. Environmental Protection Agency developed numerical criteria for state review. The basin states in response formed the Colorado River Basin Salinity Control Forum. Numerical standards equal to the flow-weighted average annual salinity during 1972 were established below Hoover Dam, 723 mg/l, below Parker, 747 mg/l, and Imperial, 879 mg/l. The plan for maintaining these values contains a number of projects between now and 1990 to reduce salt input to the system.

(d) Wickenburg Workshop, October 5, 1978:

A final report was submitted for the committee's consideration. The conclusions of the report (which is available in its entirety from the Commission office) were as follows:

In considering these various solutions to the salinity problems of the Colorado, national aims or goals have traditionally provided guidance in planning water projects, especially in the southwest. As described by the National Academy of Science, these aims can generally be classified in five groups: (1) national economic efficiency, i. e., bringing a net increase in national wealth; (2) income redistribution, e. g., limiting the availability of water from federal projects to small (320 acre or less) family farms, subsidizing the economic growth of the southwest to assure it continues at about the same rate as in the past,

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rescuing areas threatened with floods such as Imperial Valley, or diminishing water supplies such as Phoenix; (3) political equity, e.g., expressing international goodwill through the Mexican Treaty of 1944, meeting Indian water rights claims; (4) controlling the natural environment, i.e., the view that places a premium on technical proficiency in regulating volume and quality and reflects the notion that an uncontrolled resource is a wasted resource and that if man has the capacity to control and completely utilize the waters of a river he should do so; and (5) environmental protection, preservation and esthetics, e.g., the view that a free flowing river through natural canyons may be of greater value than the power and irrigation benefits resulting from reservoirs partially filling those canyons.

In the context of these goals and aims the ones which have dominated the Colorado salinity control program are income redistribution and political equity.

One basic, underlying attitude held uniformly by the Colorado Basin states was that salinity control for the benefit of Mexico should be considered a national (not a regional) responsibility and financial obligation; indeed this philosophy has been implemented in subsequent congressional action, discussed below. Salinity control for the benefit of the Colorado River Basin states was urged to be a shared obligation between the United States and the Basin states. Thus Public Law 93-320 splits the repayment of the costs of these salinity control projects 75% to the Federal Government and 25% to the basin funds paid for by the states.

The aim of political equity is served through the agreement with Mexico to provide agriculturally usable quality water at the border, and the decision to spend federal dollars to implement this through construction of the Wellton-Mohawk drain extension and the Wellton-Mohawk desalination plant. Similarly the basin states have been persuasive in arguing that the allocation of water among the basin states under compacts, supreme court decisions, and federal laws should be recognized and affirmed by the Federal Government and that the nations, as well as regional objective should be "full development of the water supply allocated to each state by the applicable water laws and compacts." The basin states have also consistently supported international comity arguments to the effect that the obligation to provide Mexico with usable quality water is a "national" obligation and should not be the burden solely of the basin states.

The problem of excessive salinity ordinarily does not arise until a river is already intensively appropriated for irrigation, power, industrial, and municipal uses. By that time facilities are in place, rights are established and investments made. The problem ordinarily arises from the cumulative impact of many, many users. This makes solutions exceptionally difficult.

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The optimal solution will generally be found by considering the problem on a basin-wide basis. In fact the solution should often reach beyond the basin, e. g., where water is exported from or imported into the basin.

In most cases the optimal solution is one that would result in the least total cost per unit of salinity reduction. To achieve such a solution is especially difficult when there exists a multitude of public and private entities within the basin, each with economic, legal, political and social investments in existing projects, facilities and waters, and where any particular plan of implementation will fall unevenly.

At the very least the optimal solution requires extensive voluntary cooperation among all water users.

A comprehensive basinwide or regional entity to plan and implement a salinity control program for the Colorado Basin has, to date, resulted in a voluntary, cooperative interstate discussion group, the "Colorado River Basin Salinity Control Forum." This discussion group has been a dynamic force to date in approaching the Colorado Basin salinity problem, having established the plan of implementation, conducted comprehensive computer and other studies and carried out complex interstate and federal-state negotiations on salinity issues. One can only conjecture whether time, and the gradual but predictable worsening of the salinity problem in the basin will necessitate the creation of an entity with more substantial legal powers of management.

Salinity management poses complex challenges for legal and institutional structures. In general, private law systems will only partially be able to meet these challenges. While the optimal solution, one that produces the largest reduction in salinity for the least unit cost, may theoretically result from the creation, or existence of a comprehensive basin or regional management entity with power to consider, plan, and implement the widest possible range of alternative solutions, real-world constraints, as on the Colorado will often dictate otherwise. In view of the great complexity of the problems concerning physical causes of salinity, uncertain legal rights, potential for protracted litigation, and the potential falibility of new layers of bureaucracy, the best results seem best attained through existing institutions.

Recommendations: No action need be taken at this time. However, an annual review of progress should be made available to GCAE in order to keep abreast of new activities and actions as the project progresses, and the GCAE Water Resources Committee should look at the problems of how to manage water effectively with regard to water quality and quantity.

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APPENDIX F. ENVIRONMENTAL LEGISLATION

The status of legislation of interest to GCAE was as follows in November, 1978:

Comprehensive Land Use Planning

This subject was not addressed this year.

Energy

HB-2209 Office of Energy Programs and Conservation - held in Natural Resources and Energy

HB-2313 Arizona Energy Institute - held awaiting Committee of Whole

Water

HB-2342 Groundwater Technical Amendments - held in Agriculture

40-Acre and Minor Subdivision Regulations

SB-1313 Counties Minor Land Subdivisions - held in committee

SB-1340 Cities Subdivision Regulations Land Splits - passed Senate, held in House Natural Resources and Energy

HB-2031 Counties, recording of minor land divisions - withdrawn Commerce

HB-2064 Subdivision and unsubdivided land regulations

(Comments: Although opinions differ greatly, many people believe that this bill does not fully address or resolve the "40-acre problem" or minor subdivision problems which result in land locked parcels, inadequate streets and utilities and helter-skelter type subdivisions.)

County Home Rule

SB-1123 Ordinance authority for County Board of Supervisors - held in Rules

SB-1126 Consolidation of cities, towns and counties - held in House awaiting third reading

Access to State Lands

No legislation addressing this problem this year.

Safe Water Testing

SB-1109 Licensing of environmental water laboratories - passed Senate amended, held in House

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Other Legislation of Interest to the Commission

- SB-1307 State Resources Division - passed.
- HB-2210 Off Highway Recreational Vehicles - held in Natural Resources and Energy
(Comments: The Commission will not sponsor this legislation next year. We found little support for it this year. Next session the Commission will encourage the Legislature to appropriate funds to allow enforcement of present laws which regulate off-road recreational vehicles.)
- HB-2250 Outdoor Advertising Displays - passed amended
(Comments: This amends the present law and allows certain advertising displays to remain standing in economically depressed areas if certain requirements are met.)
- HB-2306 Agriculture Land Tax Deferment - held in Agriculture
- HB-2324 Radioactive Tailings - passed amended
- HB-2325 Geothermal resources policy - held awaiting Committee of Whole
- HB-2326 Counties, Adoption of standards by Boards of Supervisors to protect water courses and riparian environment - held in committee
- HB-2391 Military Airport zoning regulations - passed amended