

PANEL - CITIZENS WATER CONFERENCES

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Introduction

New Mexico's 10 major water problems were identified and ranked in importance during a series of area and statewide meetings held in 1971. Representatives of all sections of the State discussed the overall situation in detail, considered problems of specific areas, and then recommended a course of action. Since the present and the future of New Mexico are so closely allied to water supplies, the identified problems, recommendations regarding them, and the manner in which such recommendations were arrived at all bear significance for New Mexicans in general and their leaders in particular.

Purpose of the Conferences

The primary purposes of these conferences were:

1. To provide an opportunity for a wide cross-section of citizens interested in water to discuss some of the most pressing water situations and problems of their communities and of the State of New Mexico.
2. To have those attending the Citizen's Water Conferences make suggestions and recommendations about which problems they believe to be the most important in their areas and in the state, and what they believe might be done to solve these problems.

Participation

A request was mailed to each county extension agent in New Mexico asking for a list of up to 25 persons in the county who had an interest in water and who, as a group, would represent a cross-section of various water users. A list was received from every county, and letters and questionnaires were then mailed to the approximately 700 names submitted. Usable questionnaires were received from 211 persons.

Area Conferences

Two Citizens' Conferences on Water were held in each area. The first was to discuss the general water situation in the area and to develop a list of the water problems which those attending felt were the most important in their area. The second was held about two weeks

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later. During the period between the meetings, many persons talked with their neighbors and gathered information which was brought back to the second meeting. At the second meeting the area water problems were ranked in order of importance by the group, and further discussion followed this ranking. At each conference those attending were assembled in small discussion groups to permit everyone to participate. Extensive notes were taken in these discussion sessions and in the general discussion. At the end of the second meeting two delegates were elected by the group to attend a State Citizens' Conference on Water and present the problems for their areas. Two hundred and six individuals attended the conferences.

State Meeting

The 16 area delegates met together for one-half day and discussed the recommendations from each of the eight areas. They then met for one and one-half days with the Advisory Committee of the Water Resources Research Institute. Also attending the state meeting were the leaders of the several research units in the state and five county extension agents.

Our Most Important Water Problems

Out of the many extensive analytical sessions came the identification of New Mexico's most pressing problems in the area of water supply and use. The 10, ranked in order of degree of significance assigned them by the delegates and their consultants, are these:

1. Declining ground-water table and diminishing surface-water supply.
2. Need for improved irrigation systems and water-use management in irrigated agriculture.
3. Water pollution
4. Need for knowledge of present and future supplies and demands of water.
5. Shortage of water for industrial, recreational, and municipal uses.
6. Need for equitable adjudication of water rights.
7. Necessity of improvement of water laws.
8. Salinity of water and its effects on human and plant life.
9. Reuse of water wherever practical by recycling.
10. Establishment of land and water planning and zoning.

Ground-Water Table and Surface-Water Supply

Large-scale pumping of ground water for irrigated acreage and increasing requirements for industrial and municipal uses of water have caused the lowering of the water table in many areas of New Mexico. Considerable ground-water mining is carried on in many parts of the State and may limit the future development of New Mexico. About 58 per cent of the irrigated land is now supplied from ground-water sources (747,450 acres), and an additional 14 per cent (174,310 acres) receives both surface and ground water. Almost all of our municipal and industrial water comes from ground-water sources.

Full appropriation and court decrees limit surface-water development in this state. As a result, many areas have experienced shortages of such water for agricultural and some municipal and industrial uses.

Irrigation

In certain sections of northern New Mexico only 20 to 30 per cent of the water diverted from rivers and streams reaches croplands needing irrigation. Small, obsolete, poorly designed and constructed ditches lacking adequate maintenance cause transportation and excessive seepage losses. They also become silted by flow from arroyos and streams. These small ditches need to be consolidated into larger, better designed conveyance ditches in order to conserve and deliver adequate irrigation water to cropland. Many instances of over-irrigation were cited as present in most areas of the State. On-farm management of ground water could be made more efficient by the lining of ditches, by changes in field layout, and/or through use of better irrigation systems such as sprinklers, trickle irrigation, or subsurface irrigation.

Meters are now used on irrigation wells in the Roswell Artesian Basin and in the Gila and San Francisco drainages to the Colorado River. If irrigation efficiency were increased by only 10 per cent, a large amount of water currently used for agricultural purposes could be made available for industries, municipalities, and recreation, or it could be used for additional irrigated land.

Pollution

Among the forms of pollution mentioned during the conferences were sewage and industrial pollution of both surface and ground water and sediment pollution of surface-water streams and rivers. Many subdivisions and trailer parks have placed tanks and domestic wells too close together, thus causing pollution from septic tanks to be recycled into the domestic wells. Largely because of improperly designed, installed, and operated sewage plants, some inadequately treated wastes are being discharged into rivers and streams. Also, the population is increasing faster in many areas than sewer developments are installed; consequently, delegates recommended that developers in rural areas be required to provide adequate water and sewage systems for housing developments.

Discussions pointed out that sediment can be controlled by proper range and watershed management which can help hold the soil in place, and flood-control dams can reduce the silt and sediment reaching our major streams and rivers.

Present and Future Supplies and Demands

Only incomplete information is available on conditions and amounts of water actually on hand in many New Mexico areas. Studies of ground-water hydrology are lacking for almost all sections, and this lack restricts planning by communities and state agencies. Information is badly needed about both ground water and surface water and about the re-

relationships between the two. Also needed are projections as to expected future requirements of water for agricultural, industrial, municipal, and other uses. Such projections are basic to any long-range planning on a realistic basis.

Industrial, Recreational, and Municipal Shortages

Many New Mexico municipalities are faced with water shortages, and, as the population increases, pressures for more water will also increase--water for municipal and industrial operations and for water-based recreation. Provisions should be developed as rapidly as possible for an orderly transfer of water rights between or among alternative uses. New Mexico has only a small allocation of water for recreational purposes, but a few new projects--notably, Cochiti Lake between Albuquerque and Santa Fe--are now being developed to alleviate this situation.

Adjudication of Water Rights

Many of the people attending the State Citizens' Conference shared the opinion that all claims for water rights in New Mexico should be fairly and equitably adjudicated. Most streams in the State were originally over-appropriated. Adjudications have been completed in several areas, and others are now in process. Adjudication is a court procedure through which each claimant is asked to present his claim for water, following which the court determines and records the amount of water declared to be the "right" for each claimant.

Provision should be made to transfer the financial burden of adjudication from water-right owners to the State of New Mexico. Such provision would help to stabilize the agricultural, municipal, industrial, and recreational uses dependent on such rights.

Water Laws

Topics making up the conference discussions of the improvement of New Mexico's water laws included the following five items:

1. Possible re-evaluation of river compacts to permit larger storage facilities to control flooding and silting and to provide additional recreational facilities.
2. Interstate compacts for ground-water basins.
3. Uniform water-right laws between states.
4. More control by the State Engineer over New Mexico's water resources.
5. Provisions of facilities for an orderly transfer of water rights among uses and within a single use and for the protection of existing rights.

Effects of the Salinity of Water

The general quality of both surface and ground water is decreasing in this State. Part of the problem in surface water arises from increased

sewage flows where ground water is the original source of water, from leaching of salts from the soil and their original source of water, from increasing use and reuse of water, and from industrial wastes being dumped into streams and rivers.

The encroachment of salt water into ground water comes primarily from declining water tables caused by overdrafts. Other sources listed included abandoned livestock and irrigation wells in high salt areas, and salt pollution from oilfield brines and from leaky oil-well casings.

Recycling of Water

Recycled water, properly treated, can be used for golf courses, swimming pools, or municipal water systems. In some cities in the nation as much as 40 to 50 per cent of the city's water supply is such recycled water for city needs--either surface or ground water--could be substantially reduced.

Planning and Zoning

Adequate planning and zoning of land and water can serve to anticipate water needs before problems become acute. Ground- and surface-water pollution can be better controlled through such policies. For example, housing and trailer-park developments can be more closely supervised and controlled than when such zoning is absent, and the probability of ground-water pollution is thereby considerably lessened.

State Water Plan

A State Water Plan for New Mexico is being prepared under the leadership of the Bureau of Reclamation, U.S. Department of Interior, and the New Mexico Interstate Stream Commission. In connection with the Plan, a statement prepared April 1, 1971, by Rowland W. Fife, Bureau of Reclamation Area Engineer, Albuquerque, was read at each of the eight area Citizens' Conferences on Water. The consensus of the conferences was that wide citizen-understanding of the Plan while it is yet in its formative stages is vital to its success. Private citizens, businessmen, industrial leaders, ranchers and farmers, personnel of government agencies--all these people will have many occasions to refer to the Plan for years to come.

The Questionnaire

Two hundred and eleven persons completed questionnaires composed of 34 questions designed to determine interest in water resources, the manner in which information on such resources is obtained, and personal feelings on the vital water problems in specific areas. Included among the informants were participants in the conferences.

Respondents were fairly uniformly distributed throughout the State. About half of the 211 were involved in agriculture, but a cross section of occupations was represented. Respondents included housewives, industrialists, public servants, and professional people.

Answers to some of the more important questions are summarized here. (A few were not answered; therefore, responses may not have added up to 100 per cent.) To begin with, interest in water resources is high throughout New Mexico. Almost 70 per cent of the returns indicated high personal interest, and about 25 per cent suggested moderate interest. More than 80 per cent of persons replying stated that they are concerned about our water resources and do want to see improvement achieved. However, they are not sure as to how such improvement can be brought about. The need for additional information was expressed, and many persons felt that most people in their area shared a desire for such added information. The question eliciting such responses was "Would you say that there is a need for additional water-resources information to meet the needs of local citizens?" Replies totaled 89.6 per cent "Yes"; 3.3 per cent "No"; 6.6 per cent "Not sure."

More than 70 per cent of the respondents said that they had themselves requested information on water-related problems from appropriate agencies. The five agencies most often supplying such information (in order of frequency of response) were the Soil Conservation Service, the State Engineer Office, the New Mexico Cooperative Extension Service, the Bureau of Reclamation, and the Water Resources Research Institute. Most information was received through personal contacts, meetings, and bulletins.