recovery of oil but I am sure there are those present who have the vision and ambition to seek more than a job, the opportunity is here for this person with the proper technical training, vision and ambition to earn his first million within ten years as there are hundreds of minor oil fields throughout the United States that will, within the next ten years, reach their economic limit of primary production, many of which are suitable for secondary recovery by waterflooding but due to the diverse ownership and other factors, may well be abandoned unless the man with the necessary ability and ambition furnishes the catalyst to assemble the field into a workable secondary recovery project.

In recent years, the nerve center of research for both industry and government has evolved at a very rapid pace to our universities and colleges. A recent article in Readers Digest stated that in 1951, the Federal Government spent 295 million dollars in the colleges and universities for research and development, by 1965 that figure had grown to 1.7 billion dollars, if this trend continues, certainly the research departments of our colleges and universities are going to face a very awesome responsibility as it has been and will continue to be through research in all fields, and this is particularly true in the oil and gas industry, that our free enterprise system and our Government receive the tools to keep our country in its enviable economic position that it holds today.

GOVERNMENT CAREER OPPORTUNITIES IN WATER RESOURCES

F. C. Koopman[1/]

Billions of dollars are spent yearly toward solutions to the problems and projects pertaining to water. It has been estimated (1) that by the year 2000, less than 35 years from now, water needs will have reached crisis proportions. It is the intent to plan so that such a crisis could be lessened, averted, or at least forestalled by planning and initiating programs to conserve or develop our water reserves. The importance of the research and development activity in water resources cannot be underestimated. A considerable number of government agencies are engaged in projects involved with the optimum use of water resources in the future and the conservation of the present supplies. A recent review (2) of the functions of federal agencies found that only the Post Office Department, of the eleven cabinet-level departments, lacked responsibilities in the field of water resources. Within the Federal

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complex there are 38 agencies and 25 commissions or committees, that have functions pertaining to water resources. Add to this the number of State agencies and that portion of private enterprise that deal with water and it becomes evident that water is an important part in our present national economy.

Water studies by colleges, industry, and government demand a steady increase in scientific manpower. The manpower working with water is not composed only of hydrologists, but includes other professionals such as geologists, geochemists, oceanographers, physicists, mathematicians, lawyers and others. The actual number of professionals assigned as hydrologists account for less than 5 percent of those active in Earth Science.

Hydrology is a young science and it uses the talents and abilities of engineers, and geologists, as well as those trained in basic and life sciences. Because of its significance, the search continues for those with education or experience in hydrology. The demand has caused a shortage of "water based" scientists and engineers. Those with sufficient academic background in related subjects, and who can qualify as hydrologists, are considered to be within a shortage category for Federal employment. An on-the-job special training program for those meeting entrance requirements as hydrologists has been initiated so that these individuals can accelerate their professional participation in water resources programs. The professional advancement depends upon the individual's ability and initiative.

Because hydrology is one of the young sciences, it offers many challenges in research and investigation. Because of the diversified nature, solutions to most of the problems in water resources can be obtained only by physicists, chemists, mathematicians and statisticians working together with engineers and earth and life scientists.

Engineers and scientists who choose Federal service in the Water Resources Division of the U.S. Geological Survey have the opportunity to work in their field of interest in research or development within an atmosphere of intellectual freedom. Employment benefits including annual and sick leave, insurance and retirement, compare favorably to those offered by industry. Because of the world wide shortage of experienced hydrologists, there are opportunities to work in foreign countries after a relatively few years of experience in water resources.

There is a great deal of satisfaction in working with water resources and water problems because of the urgent need for this work. Solutions to problems and development of new water resources projects that are so vital to the future will be a stimulating challenge.

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CAREER OPPORTUNITIES IN THE WATER RESOURCES FIELD AS THEY APPEAR TO STUDENTS AND SPECIFICALLY IN THE EDUCATIONAL FIELD

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Career opportunities in the Water Resources field as they appear to students is a function of the year, the time of the year, and the degree which the student has obtained. During the past five years, most students have had sufficient opportunities for job employment. Some of New Mexico State Universities' students have had anywhere from five to ten offers during one year. Since most students graduate during May or June, job opportunities at this time seem to be in greater number than during the fall semester.

The degree which the student has obtained is the most important variable as far as the educational field career opportunities are concerned. A student with a bachelor's degree in Water Resources has only a few opportunities in the educational field. The largest number in the educational field will go on for a master's degree in Water Resources. He can either obtain a fellowship (full-time graduate courses) or he can work half-time on a teaching assistantship or on a research assistantship. The following is a comparison of the salaries earned and the time required for completion of the degree.

Type	Salary	Time
Fellowship	$3000-$3500 per year	one year
Teaching Assistantship	$3400-$3800 per year	1½ years
Research Assistantship	$3800-$4200 per year	1½ years

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