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cal services or excessive charges for certain services. It is felt that such a program would be mutually beneficial to the employees and annuitants, the taxpayers, and the carriers. Should it not be feasible for the Civil Service Commission to conduct a program of this nature directly, it is recommended that the Commission exert its influence and prestige upon the participating carriers toward its development and implementations.

EFFECTIVE DATES

The amendments made by sections 1 and 4 are effective as specified in the sectional analysis. The amendments made by sections 2 and 3 are effective on the date of the enactment of this legislation.

COAST GUARD RESERVE LAWS

The bill (H.R. 13716) to improve and clarify certain laws affecting the Coast Guard Reserve was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-1152), explaining the purposes of the measure.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE

The purpose of the bill is to modify in several respects the law affecting the Coast Guard Reserve. In general, the modifications are designed not only to meet the particular problems of the Coast Guard, but also to conform more closely to practices obtaining in the other armed services.

The major change involves the substitution of a best qualified system of promotion as used in the other armed services for the present fully qualified system now in operation in the Coast Guard. The need for this arises from the composition of the Coast Guard Reserve which was established in 1941. A disproportionate number of officers entering at that time have arisen to the ranks of captain, commander, and lieutenant commander. The presence of large numbers of officers in those grades has seriously inhibited the promotion of younger officers from junior grades and has prevented the proper operation of the running-mate system. That system established a relationship between individual Reserve officers and those in the Regular Establishment. By reason of the disproportionate number of higher grade officers in the Reserves, the reservists are up to 4 years behind their running-mates in promotions and the gap is widening.

By the substitution of the selection method of best qualified, it is anticipated that this problem will be solved in a reasonable time and will increase the quality of the Reserve Officers Corps.

In view of the small size of the Women's Reserve, it is not practicable to utilize a corresponding system and, as a result, it has been determined that the continuation of a fully qualified promotion system with some modifications is most desirable. To achieve the best results, the fully qualified method of selection is retained, through the grade of lieutenant commander, and best qualified is substituted as the test above that grade. Again, in an effort to relieve the present stagnation, it is proposed to eliminate those officers who have twice failed of selection to a higher grade, thus making openings for the promotion of younger junior officers.

Another provision would assign an officer on the active duty promotion list as the running mate of a reservist not on the active duty promotion list, and it is believed that this will effect an administrative improvement. In this connection, the House of

Representatives adopted a single amendment to H.R. 13716 with respect to Reserve officers who are commissioned on one date but not called to active duty until some later date. In order to correct an inequity that might otherwise occur in that situation, the House amended the bill to provide that the effective date of the reserve commission was the date of appointment.

Another provision is that Reserve admirals are limited to an active status for not more than 5 years. This will increase the opportunity of promotion for captains to flag rank and it is believed that such a time limit is desirable.

The committee is of the opinion that the bill will serve to increase the effectiveness of the reserve system in the Coast Guard.

COST OF LEGISLATION

Enactment of the legislation is projected to result in additional cost for pay and allowances of \$38,000 in the first year of enactment. This cost should increase to zero over the next 4 years. The bill will also result in additional cost of \$18,000 per year in retirement pay, to commence approximately 8 years in the future.

WATER RESOURCES RESEARCH ACT AMENDMENTS

The Senate proceeded to consider the bill (S. 3553) to amend the Water Resources Research Act of 1964 to increase the authorization for water resources research and institutes, and for other purposes, which had been reported from the Committee on Interior and Insular Affairs, with amendments, on page 1, at the beginning of line 6, strike out "\$250,000", and (B) by adding a sentence at the end of the subsection to read as follows: "The amounts authorized to be appropriated by this subsection to assist each participating State shall be increased or decreased in fiscal year 1972 and each year thereafter in proportion to the average increase or decrease of the costs of such research and training as determined by the Secretary of the Interior in accordance with a suitable formula to reflect the average increase or decrease adjustments in Federal employee salaries as determined by the United States Civil Service Commission based on findings derived from Bureau of Labor Statistics figures comparing Federal salaries with industrial salaries." and insert "\$200,000."; and on page 2 after line 23, insert a new section, as follows:

SEC. 3. Section 306 of the Water Resources Research Act of 1964 is amended by inserting immediately before the period at the end thereof a comma and the following: "the District of Columbia, and the territories of the Virgin Islands and Guam."

So as to make the bill read:

S. 3553

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 100(a) of the Water Resources Research Act of 1964 (78 Stat. 329; 42 U.S.C. 1961a), is amended (A) by striking out "\$100,000" and inserting in lieu thereof "\$200,000."

SEC. 2. The second sentence of section 100 (b) of the Water Resources Research Act of 1964 (78 Stat. 329; 42 U.S.C. 1961a) is amended by inserting after the word "problems", the following: "and scientific information dissemination activities, including identifying, assembling, and interpreting the results of scientific and engineering research

deemed potentially significant for solution of water resource problems, providing means for improved communication regarding such research results, including prototype operations, ascertaining the existing and potential effectiveness of such for aiding in the solution of practical problems, and for training qualified persons in the performance of such scientific information dissemination;".

SEC. 3. Section 306 of the Water Resources Research Act of 1964 is amended by inserting immediately before the period at the end thereof a comma and the following: "the District of Columbia, and the territories of the Virgin Islands and Guam."

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-1153), explaining the purposes of the measure.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE MEASURE

As introduced, S. 3553 would amend the Water Resources Research Act (78 Stat. 329) to increase the amount authorized to be appropriated for a water resources research center in each of the States from \$100,000 to \$250,000 annually for each center. It also would provide for future automatic adjustments in the authorized amounts based upon Civil Rights Commission salary studies.

Section 2 of S. 3553 would provide for the establishment of information retrieval and dissemination activities at each research center.

The committee also considered another bill, S. 1051, which as introduced would amend the act to authorize the Consortium of Universities of the Washington, D.C., metropolitan area to receive institute grants.

The Water Resources Research Act was enacted July 17, 1964. The principal concepts of the act grew out of the recommendations of the Senate Select Committee on National Water Resources. Section 200 of the act was amended in 1966 (80 Stat. 129) to increase the amounts authorized to be appropriated for the Title II grant program, which is not directly related to the research centers.

The major provisions of the act in its present form are as follows:

Title I provides for grants of \$100,000 annually to each of the States (and Puerto Rico) to assist in establishment and operation of a water resources research institute, center, or equivalent entity. It further authorizes \$5 million annually for matching fund research grants administered through the institutes.

Title II authorizes appropriations of \$10 million for each of fiscal years 1972-1976 (lesser amounts for earlier fiscal years) for research grants to educational institutions and private foundations, firms, and individuals not directly related to the centers established by title I.

Title III contains miscellaneous provisions. Among them are establishment of a Federal center to catalog water resources research being conducted under Federal and non-Federal programs. Section 306 defines the term "State" as used in the act as including Puerto Rico.

PRESENT LEGISLATION

S. 3553 was introduced by Senator Moss on March 5, 1970. The Subcommittee on Water and Power Resources held a hearing on July 20, 1970. At that time the subcommittee also took testimony on S. 1051, a bill introduced by Senator Bible on February 18, 1969, which has the purpose of including the District of Columbia as a State for the purposes of the act. The comments

of the Department of the Interior and the Office of Management and Budget on both measures are included later in this report. The committee has included the amended subject matter of S. 1051 within S. 3553 as reported.

The amendments were agreed to.

The bill was ordered to be engrossed for a third reading, read the third time, and passed.

Mr. MONDALE. Mr. President, I have received a letter from the distinguished dean of the Graduate School, University of Minnesota, which I shall place in the RECORD.

The Senate today indicated its support of State water resources research institutes by passing S. 3553 which increased annual allotments from \$100,000 to \$200,000 per State.

Dean Crawford's letter outlines the kinds of needs to be met by this vital legislation, and the importance of adequate funding for these programs seeking the scientific knowledge by which to better protect our precious water resources.

I believe that his letter is a valuable document in support of State water resources research, and should become part of its legislative record.

I ask unanimous consent that the letter from Dean Bryce Crawford be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

UNIVERSITY OF MINNESOTA GRADUATE SCHOOL,
Minneapolis, Minn., August 10, 1970.

Senator WALTER F. MONDALE,
Senate Office Building,
Washington, D.C.

DEAR SENATOR MONDALE: Recently bills have been introduced into Congress to amend the Water Resources Research Act of 1964 (S. 3553 and H.R. 15957, 16274, 16279, 16285) by increasing the authorized annual allotments for State Water Resources Research Institutes from \$100,000 to \$250,000 and authorizing programs for the transfer of research results into practice. The amendments have been endorsed by the National Association of State Universities and Land Grant Colleges, the Universities Council on Water Resources and the President's Science Advisor.

In my opinion, expansion of the scope of the proposed legislation is appropriate; inflation has substantially reduced the annual allotment research program and there is at present a lack of clear-cut authorization and funding for the additional activities necessary to effectively move the research results into the hands of the ultimate user.

I would like to bring to your attention the way in which programs under the Water Resources Research Act of 1964 are being utilized by the University of Minnesota through our Water Resources Research Center. Our Center was established in the Graduate School on September 1, 1964. The government, management, and control of the Center and its affairs are vested in an Advisory Committee and a Consulting Council composed of 34 representatives of 15 units of our University and 19 Federal, State, local and private organizations in Minnesota concerned with water resources. All State and private colleges in the State are encouraged to participate in its programs and research is now being conducted on the campuses of St. Mary's College at Winona, Bemidji State College, at Bemidji, St. Cloud State College at St. Cloud, Winona State College at Wi-

nona, and Gustavus Adolphus College at St. Peter.

Our Center has pioneered in efforts to bring the research capabilities of the State's Universities and colleges to bear on State water problems. Methods used include seminars, conferences, short courses, study committees, newsletters, information circulars and bulletins. Dialogue with Federal, State, local and private agencies has been enhanced through the efforts of our Center's Director who served on a part-time basis during the period June 1967 to November 1969 as Water Resources Planning Director, Minnesota State Planning Agency and as Governor LeVander's representative on the Great Lakes Basin Commission, Souris-Red-Rainy River Basins Commission and Upper Mississippi River Basin Coordinating Committee.

One of the purposes of the Center is the stimulation of educational offerings for students which will prepare them for careers in the field of water resources. Since the Center was established, 26 new courses bearing on water resources have been developed at our University. A new graduate option in hydrogeology has been announced and a program of graduate education in water resources has been established.

Research conducted through the Center is highly relevant to water resources problems in Minnesota and the Nation. The main thrust of the Center's programs has been directed toward:

Establishing a practical baseline of water quality for Lake Superior through the use of the continuous plankton recorder technique; the analysis & interpretation of existing Federal, State, and local water resources legislation and court decisions and ways and means for improving water laws in Minnesota; ascertaining the physiological and ecological requirements of the algal species responsible for severe blooms on lakes scattered throughout the State to assist in controlling the excessive productivity of polluted lakes; determining methods for rain fall-runoff predictions which are based on the physical characteristics of ungaged small watersheds and rainfall characteristics of ungaged small watersheds; reconciling and integrating water quality management with the ecological and social-economic objectives of the total water resources management in Minnesota; determining the role of potholes in the groundwater recharge; formulation of an economic optimizing model for water quality and sewage disposal on selected stretches of the Upper Mississippi River; investigation of programs that appear to have special merit relative to hydrologic analysis for determination of design floods and for design of spillways and related structures; investigation of soil dynamic changes when interacting with water to assist in solving water problems such as infiltration, water spreading and flow properties in soils; determination of runoff-time distribution for a variety of watershed sizes and slopes; determining the role of bottom sediments in the phosphorus cycle for lakes of different types to assist in devising corrective measures for overfertilized lakes; development of techniques that will pinpoint polluted areas in reaches of the Upper Mississippi River where algicides might be profitably administered to control pollution; investigation of mist irrigation as a method of reducing water stress in potato crop production and thereby reducing transpiration; and investigation of the mechanics of soil moisture movement and retention to assist water resources developers and managers in estimating recharge to groundwater reservoirs and the effect of soil moisture movement on surface water runoff; inventorying, appraising, and evaluating water resources administration in Minnesota to provide background information for legislative action concerning reorganization of State water resources agen-

cies; biomass determination and productivity measurements in the west end of Lake Superior to assess the extent of eutrophication; investigation of the ecology of the periphyton in the wavewashed and near-shore areas of the west end of Lake Superior for detection of advancing eutrophication in the lake; study of citizens groups involved at the grass roots to improve the water resources environment in the Minneapolis-St. Paul, Miami and environs, and two other metropolitan areas and environs in the USA; and determining existing ecological conditions in the Mississippi River near Monticello, Minnesota before operation of a large nuclear power plant and monitoring environmental changes due to the thermal discharge from the power plant generator.

Minnesota has provided on the average about \$30,000 per year to defray overhead and indirect costs associated with the Center's annual allotment programs. The State has continuously provided non-federal funds to match federal funds associated with the Center's matching grant programs. Non-federal funds provided in fiscal year 1970 amounted to about \$107,000. In addition, the University has provided office space for the Center.

Past development and management practices in Minnesota, as substantial as they are, have not kept pace with the steadily growing demands placed upon water and related land resources. Many undesirable and serious, but not critical problems have emerged associated with pollution, water-oriented recreation, floods, water supply, navigation, and land use. With the prospect that within 50 years water and related land resources demands and needs may approach or exceed the availability of resources and existing facilities in some areas, the State cannot expect to continue to avert critical problems without an acceleration in resource research, development, and management. The University of Minnesota through the Center has demonstrated its interest and its capability and it is willing to further develop a truly outstanding water resource research facility for Minnesota. It has provided the mechanism for unifying water resources research throughout our State.

While substantial progress has been made in assuring that research results are made available to prospective users in forms that are comprehensible to the variety of disciplines and levels of skill involved in water resources, the Center's capability to transfer research results into practice needs to be strengthened. The present annual allotment is far too small for research alone irrespective of related needs to facilitate the utilization of new research information.

I sincerely hope the information presented in the letter will be useful in your assessment of the proposed amendments. You are urged to encourage the enactment of amendments; it would be helpful if you were to arrange for the text of this letter to be inserted in the Congressional Record (see CONGRESSIONAL RECORD, pp. 15701 to 15703).

Sincerely yours,

BYRCE CRAWFORD, Jr., Dean.

EXECUTIVE SESSION

Mr. MANSFIELD. I ask unanimous consent that the Senate go into executive session to consider nominations on the Executive Calendar.

There being no objection, the Senate proceeded to the consideration of executive business.

The ACTING PRESIDENT pro tempore. The nominations on the Executive Calendar will be stated.