

CONGRESSIONAL INTEREST IN WATER RESOURCES

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This is a rare privilege.

At last I have the opportunity to do something I've wanted to do for many years. That is to tell the fascinating story of the historic interest of Congress in charting the development of our natural water resources.

When I received your invitation to speak here, Dr. Roger Corbett, who extended the invitation, said the topic should be "Congressional Interest in Water Resources." That was almost like suggesting that I sit down and tell my life story.

Water, like sunlight and air, is one of the basic ingredients of life. Hence, you would think there would be universal interest in water and its conservation and utilization. But I have not always found it so--due, probably, to the fact that some persons, some regions, must struggle to get enough water to drink, to use in industry, and to grow crops while others get too much water and must work to meet the constant threat of flood. There are in these United States many examples of drouth and flood. Likewise, there are divergent views as to the need to develop water resources and still more arguments on opinions as to how it should be done in those cases where agreement is possible as to need.

It is this story which we will visit about this morning--the story of the role played by Congress throughout our national history in recognizing and responding to the water needs not only of the nation but of local communities. In the process, the Congress established a vital right to provide for transportation, flood control and the generation of electricity. Each of these steps encountered fierce opposition but none so enduring as the question of constitutionality. Congress time after time has been challenged by the Executive Branch when water resources programs were proposed. Initially, almost without exception the Executive Branch raised Constitutional objections. While the objections in the end were cast aside, on more than one occasion they succeeded in delaying individual works.

So the first conclusion the historian must draw in any review of Congressional interest in water resources is that the Congress had to secure for itself the right to act in this area of the national interest.

Accordingly, my comments today will center first on the great Constitutional debate between the Congress, the Executive and the Courts. Then we will see how water-resource policy concentrated first upon navigation, then flood control, then irrigation, then power--and ultimately broadened to encompass the multiple-purpose approach which includes

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insofar as possible all purposes as they are applied both to individual projects and to comprehensive river basin development.

Without the insistent jabbing of Congress, this country might never have opened the rivers and harbors to commerce, might never have harnessed the mighty rivers of the Tennessee, Colorado, Columbia and Rio Grande. The country might never have supplied electric energy and irrigation water to stupendous networks of homes, farms and factories; might never have controlled floods in the far-flung valleys of the Mississippi and Missouri; might never have written an amazing chapter in world history.

In the beginning, the abundance of water in the United States was, in itself, the greatest problem. To grow, to prosper, the infant United States had to find ways to use its rivers and harbors. So the Congress first turned its attention to the problem of developing commerce on rivers and canals and thus began the struggle with the Executive Branch which has continued unabated to the present.

It would not be possible for me to attempt here to lay out even a brief history of the numerous judicial opinions upholding the Congressional right to legislate on water resources, but in nearly every instance they have come to rest upon Article I, Section 8, of the Constitution. This section enumerates the powers of the Congress and grants to the Congress the power:

To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.

With this section in mind, but without any judicial opinion to guide it, the Senate on March 2, 1807, passed a resolution directing the Secretary of the Treasury to prepare a report on the means for improving waterways as an aid to transportation.

Albert Gallatin, then Secretary of the Treasury, prepared a report magnificent in concept and historic in importance, but it was born 100 years too soon. He proposed that the United States not only improve its individual waterways, but develop entire watersheds and link them in a comprehensive national system. He declared that the United States government alone was of a size to match the task which he estimated would cost \$20 million.

In general he proposed a system of great canals on the Atlantic seacoast to unite New England and the South, roads and canals to connect the Atlantic rivers and Western waters, canals between the Atlantic rivers, St. Lawrence river and the Great Lakes, and interior canals and roads. He insisted that the plan, to yield benefits worthy of the undertaking, be developed as a unit.

But the ears of the nation were not accustomed at that time either to the sound of \$20 million or such vast concepts. The plan was laid aside. Nonetheless an idea had been born.

When the war of '1812 brought with it the irresistible demand for better transportation a chain of events was triggered which brought Congress face to face with the need to find ways to develop waterways.

So on December 16, 1816, John C. Calhoun introduced a resolution in the House of Representatives proposing:

That a committee be appointed to inquire into the expediency of setting apart the bonus, and the net annual proceeds of the National Bank, as a permanent fund for internal improvement.

Calhoun declared that Congress should examine domestic affairs "of all which, internal improvement was not exceeded in importance by any." A committee was formed and it caused the introduction of a bill to build canals and finance them from Federal funds. The Congress passed the measure and sent it to President Madison who vetoed it on his last day in office, asserting it was unconstitutional.

Though he vetoed the bill, Madison said he fully recognized the great importance of canals and improved navigation. He hinted that the Constitution might be amended to give to Congress the power to enact such laws.

The waterways question did not die. As battle in Congress often do, it arose again with renewed vigor. To the 15th Congress, which brought in many new members, President Monroe recommended an amendment to the Constitution to provide for such legislation. He was countered by Henry Clay who said Congress already possessed such powers. In the debate which resulted, a special committee found several precedents to support its contention that Congress needed no further authorization to act, declaring:

...if the Constitutional majority of the two Houses should differ with the Executive Department, the opinion of the latter, however respectable, must yield to such an expression of their will...

The committee then reported a bill almost identical with the measure vetoed by Madison. A 10-day debate on it opened on March 6, 1818. Despite pleas by Clay and others, the bill suffered a narrow defeat--not because the Congress failed to recognize the need for waterway improvement--but because the issue had become a struggle for supremacy between the Legislative and Executive branches.

Two years later Chief Justice Marshall broke up the argument by ruling in favor of the Congress. In the most famous of all opinions on the Commerce Clause of the Constitution, Justice Marshall said, in

his decision on the appropriation of funds for a survey of Mississippi and Ohio tributaries:

The power of Congress...comprehends navigation within the limits of every State in the Union, so far as that navigation may be, in any manner, connected with 'commerce with foreign nations, or among the several States, or with the Indian tribes...'

Thus it was not until 1824 and 1825 that Congress was able to establish the general policy of Federal improvement of rivers and harbors.

Subsequently, President Jackson agreed that the Congress had the power to appropriate money for the construction of a national system of improvements, but he thought nevertheless that an amendment to the Constitution should be passed, carefully defining Congressional powers in such matters. He said he believed that the Congress had no power to make local improvements, and he vetoed several bills which, to him, seemed primarily to aid local enterprises. Jackson and Congress seldom found themselves in agreement on whether or not a proposed project was local or national in character.

President Van Buren viewed Constitutional provisions as even more restrictive than had Jackson and as a consequence internal improvement ceased to all practical purposes during Van Buren's administration. But neither Jackson nor Van Buren was able to quiet the clamor in Congress.

The debate attracted such wide attention that President Tyler in his message of 1843 recommended that appropriations for harbors be made, but that they be limited to western harbors. Congress promptly passed bills providing appropriations for both western and eastern harbors. Tyler vetoed the eastern harbor bill but accepted the western bill.

President Polk continued the war with Congress and bitterly denounced in veto messages the bills presented to him in 1846 and 1847. A river and harbor bill finally was enacted in 1854 but again encountered a veto, this time from President Pierce.

The Constitutional debate subsided in 1865 when the Supreme Court reaffirmed the power of Congress to regulate commerce and control navigable waters. The next year the Congress succeeded in getting a Presidential signature on a rivers and harbors bill and from that day forward waterway improvements fared somewhat better.

The next step in the long struggle by Congress to meet the water needs of the nation--in this case flood control--began much later in our history than did the transportation struggle. Historically, flood control has been viewed as local in character although debates in Congress even in Colonial days reflected indirectly many arguments in favor of Federal responsibility.

In 1845, John C. Calhoun suggested assigning certain public lands to the states for use in flood protection. In effect, he proposed to aid the states through gifts of land rather than money. The idea gained support following severe floods in 1849 and 1850 and as a consequence Federal aid for levee building was offered for the first time.

Congress acted first by granting under the Swamp Lands Acts of 1849 and 1850 unsold swamp and overflowed lands to Louisiana, Arkansas and other states. State legislatures were empowered to dispose of the grants and use the proceeds for drainage, reclamation and flood-control.

Following closely on the heels of these Acts came authorization for comprehensive studies of the Mississippi and appropriations by Congress for topographical and hydrological studies. Much comprehensive work was underway when the Civil War intervened. Some levees were destroyed in the military campaigns of that conflict.

Immediately after the Civil War, Congress found itself inundated with control bills, reports and recommendations. On March 27, 1867, the Senate Finance Committee reported that it was satisfied of the "constitutional power and the expediency and good policy" of granting Federal aid in the construction of levees along the lower Mississippi. The committee recommended the expenditure of \$3 million to accomplish the aims of its findings.

Although through the years scores of bills had been introduced and much discussion heard, Congress was unable to pass any flood control measure of a constructive nature until 1874 when it provided for a commission of engineers to investigate and then report on a permanent plan for reclamation of the Mississippi areas subject to flooding. A flood in the spring of that year caused widespread suffering and Congress appropriated \$90,000 for relief.

It is interesting to note that the right of Congress to participate in navigation improvements was so well established by this year that most flood control proposals were advanced in the name of navigation.

Until 1890 funds appropriated for levees were described as "for navigation improvements and incidentally for flood protection."

This concept changed gradually and by 1917 the subject of flood control was being openly approached. The result was the authorization on March 1, 1917, of \$50 million for flood control on the Mississippi and Sacramento rivers.

Following this came the Flood Control Act of 1917 which introduced the principle of sharing of costs by Federal and local governments. This Act specified that for every \$1 put up locally for flood protection, the Government would put up \$2, providing that local interests paid right-of-way and other costs.

Flood control legislation of more recent origin is within the memory of most of us, particularly following the disastrous Mississippi floods of 1927 and 1928 which prompted Herbert Hoover, then head of a special flood relief commission, to urge that the Federal government learn its lesson and provide engineering works adequate to the flood need. He argued that the cost of construction would by no means equal flood loss in 1927 alone.

So out of the disaster came broadened flood control responsibility for Congress. The responsibility now extends into hundreds of millions of dollars annually. Omnibus "Rivers and Harbors" and "Flood Control" bills now are among the largest expenditures authorized by Congress outside national defense.

I think it should be mentioned here also that along with the expansion of U. S. flood control activities, the Congress, in the Flood Control Acts of 1936 and 1938, established a nationwide program for run-off and water flow retardation and for the control of soil erosion. This watershed protection is carried out by the Secretary of Agriculture as a corollary to the flood-control program of the Corps of Engineers. Progress on this phase of the program was slow until 1954 when the Congress enacted the Watershed Protection and Flood Prevention Act which set up a program for Federal cooperation with local organizations.

With amendments to this program, which became law in 1956, the program now is gaining momentum. A broad multiple-purpose program for conservation and development of water and related land resources in small watersheds all over the country is under way and will be completed within a few years--tribute to Congressional attention and interest in the smallest water problem of the land. The small watershed program is under way.

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There is one remaining major area of Congressional interest in water resources which will occupy the major portion of my discussion. That is the Congressional role in the reclamation and utilization of arid lands, hydro-power and recreation areas.

The history of reclamation in the United States is as old as the country itself and is conclusive evidence of the enlightenment and good judgment which guided the pioneers.

As settlers in the years following the Civil War filled up what had been called the American Desert, they discovered an important fact: unless they could irrigate, they were doomed.

So during the 30 years between 1870 and 1900, anguished demands for Federal irrigation works swelled into a sustained roar. Individuals did what they could; small companies were formed; but their engineering, their resources and their endurance were puny in comparison with the need. Men

of meager means were pitted against river basins of appalling size, where the rivers they sought to harness had pitiless disregard during the Spring runoff for the ditches and headgates so painfully constructed the year before. Help--big help--had to be found or the dreams of a people--and a region--would die.

Congress, perhaps in anticipation of these outcries, passed a general law in 1866 designed to develop water resources in the West. It was the aim of this law to grant, prior to settlement, rights of way for ditches and canals on public lands to any holder of valid water rights. By 1867 several bills were introduced in Congress to encourage irrigation and reclamation of unproductive California lands. Bills soon were submitted to provide the same help for other Western states. Most of the bills constituted requests for land grants to aid in the construction of irrigation canals, similar to the grants for the construction of railroads.

On March 3, 1873, Congress passed a bill setting up a board to examine and report on a system of irrigation for the San Joaquin, Tulare and Sacramento Valleys of California. Recommendations for the system came a year later as a result.

In 1877 Congress passed the Desert Land Act which provided for reclamation of arid lands in the states of California, Oregon, Nevada and (later) Colorado; and the territories of Washington, Idaho, Montana, Utah, Wyoming, Arizona, New Mexico and (the) Dakotas. The act authorized the sale of 640 acres of land at \$1.25 per acre to any person who would irrigate it within three years. The Act also specified that:

All surplus water over and above such actual appropriation and use, together with the water of all lakes, rivers and other sources of water supply upon the public lands and not navigable, shall remain and be held free for the appropriation and use of the public for irrigation, mining and manufacturing purposes subject to existing rights.

In 1890--because 640 acres proved to be too much land for an individual to irrigate, and because the Act and other laws had given rise to land speculation which allowed one person to acquire up to 1120 acres--Congress limited all entries to a maximum of 320 acres per person.

Even though the Desert Land Act was supposed to have been "all inclusive," Congress continued to exercise leadership in the matter of Western water resources, authorizing a number of investigations which resulted in several comprehensive and detailed reports on the state of irrigation, with recommendations for Federal action. Major John Wesley Powell's "Report on the Lands of the Arid Region of the United States" appeared in 1878. Subsequently a Senate resolution led to a report by Richard J. Hinton, dated 1886, on "Irrigation in the United States." Three years later another Senate resolution authorized a seven-member

'Select Committee on Irrigation and Reclamation of Arid Lands' whose job it was to come up with the "best mode" for reclaiming the arid lands of the American West. A year later--in 1890--the committee submitted a very significant and comprehensive report on a Senate bill (S. 2401, 51st Cong. 1st session, Rpt. 928) proposing the creation, with consent of the states or territories, of a system of Natural Irrigation Districts.

The proposal was that three classes of districts be set up throughout the arid regions, to be supervised by a board of irrigation commissioners, an irrigation court, and district superintendents of irrigation, forestry and pasturage. The report had a great impact on the public and was largely responsible for educating Americans at large to the importance of irrigation. Legislation which followed in Congress found strong support in the investigations upon which the report was based.

In 1890 Congress passed a law reserving to the United States right of way for Federally-constructed ditches and canals on Western Lands to which patents were being issued. The following year the law was broadened to include rights of way to canal and ditch companies for reservoirs and canals, and authorized entrymen on public lands to associate in the construction of reclamation works.

Thus the stage was set for full-scale reclamation development of the West, and for 12 years state and local organizations attempted to proceed. Again there was the old miscalculation of the size of the job. Attempts to proceed on the state level began about 1886 and continued until passage of the National Reclamation Act in 1902. In nearly every case they fell short.

In an effort to beef up the program the Carey Act of 1894 was enacted. It authorized Federal donations to each public-land state of a maximum of one million acres of desert land to aid:

in the reclamation of the desert lands therein, and the settlement, cultivation and sale thereof in small tracts to actual settlers...

Participating states were required to agree to cause the lands to be irrigated, reclaimed, occupied, and cultivated by actual settlers. Tracts sold by the states were limited to 160 acres for one person, and the lands were to be used only for reclamation, cultivation, and settlement. An amendment in 1896 empowered the states to provide for liens against reclaimed lands to repay reclamation costs.

Even the Carey Act was not enough.. Land could not replace cash. The states -- and particularly the newly-forged Western commonwealths-- were in no position to assume such responsibilities. There were other

last-ditch efforts and legislation to encourage reclamation prior to 1902, but they are remarkable because of their ineffectiveness. Albert Gallatin's prediction was proved at last. The Government alone was competent to undertake this program. Hence the national platforms of both major political parties that year favored Federal reclamation programs for the arid lands. Said the Republican platform:

In further pursuance of the constant policy of the Republican party to provide free homes on the public domain, we recommend adequate national legislation to reclaim the arid lands of the United States, reserving control of the distribution of water for irrigation to the respective States and Territories...

The Democrats said:

We favor an intelligent system of improving the arid lands of the West, storing the waters for purposes of irrigation and the holding of such lands for actual settlers.

Hence, there was little surprise when bills were introduced in the 56th and 57th Congresses. Favorable reports on these early bills were soon forthcoming.

But once again, as with nearly every new undertaking proposed for the Federal government, they were challenged as unconstitutional. It was argued there could be no constitutionality in using revenues from the many to provide a benefit for the few.

In reply, supporters of Federal reclamation cited the "general welfare" and "property" clauses of the Constitution -- and said that reclamation would pay for itself. Other opposing arguments were raised, among them the allegation that agricultural overproduction would result. (Does that argument have a familiar ring today?)

Having won the skirmishes, the pro-reclamation members of Congress succeeded in passing a bill. President Roosevelt signed the Act on June 17, 1902 and a new wave of development was made possible in the West.

This law provided that revenues from the sale of public lands in the 16 states (Texas was not included in the reclamation states until 1905) be set aside to finance the construction of irrigation works -- which would be required to repay their construction costs within 10 years. This, as a revolving fund, would serve as a source of financing for further irrigation projects at the direction of the Secretary of Interior. The law restricted to 160 acres the amount of land to which each individual settler would be entitled and required settlers to comply with settlement provisions of the homestead law.

As efforts were made to carry out the Act, it became apparent that some of its provisions should be broadened if they were to be effective. Two such developments provided for the disposal of surplus electric power and for the furnishing of water supplies to towns in the vicinity of the projects.

By 1920 the repayment period had been extended and the Secretary had received authority from Congress to furnish project water under certain conditions for "purposes other than irrigation."

The Act was broadened by Congress through the years to match the growth of the West. This broadening was a clear recognition of changing needs. The Reclamation Act of 1939 extended the authority of the Secretary to make examinations and surveys in connection with existing and proposed irrigation projects and to participate in a multiple-purpose approach to reclamation. The Secretary was authorized to allocate part of the cost of projects to flood control or navigation, to consult with the Corps of Engineers and perform investigations jointly with the Secretary of War, to supply water to municipalities and specify conditions for the sale of electric power generated at reclamation projects.

The Bureau of Reclamation has, through June 30, 1957, performed work on more than one hundred projects at a cost totalling more than \$2.9 billion. Congress made this possible.

The laws enacted by Congress have made it possible today to irrigate more than 7-1/2 million acres of land, which is more than one fourth of all irrigated land in the 17 Western states. In addition, reclamation projects with an installed capacity of more than 5 million kilowatts produce in these states more than 25 billion kilowatt-hours of electric energy annually.

Crops worth one billion dollars are produced each year as a result of these projects and revenues of more than \$60 million come each year from the sale of hydroelectric power. Congressional interest in Federal reclamation in the West has paid off bountifully.

Yet in the face of this record, by 1946, it was being alleged that federal water resources programs were becoming so complex and expensive that many smaller projects were being unduly delayed.

To meet these objections--they were justified--a number of the members of Congress (and I was one of them) sponsored in the 84th Congress a bill which became the Small Reclamation Projects Act of 1956. This Act permits local organizations formed states under state laws to construct projects costing up to \$10 million with interest-free Federal loans toward the irrigation costs of the projects not exceeding \$5 million.

More than 50 local organizations filed formal notice of intent to apply for loans under the program during the first year. Actual work is now getting under way on one of the first such projects to be approved. It is located near Cameron, Texas. This is but another example of the willingness and desire of Congress to make Reclamation workable in the West.

As events have shown, the development of water resources in the West has been spurred on occasion by the potential for generation of power from falling water. As the complexity of projects grew, it became obvious that irrigation alone could not repay their costs. Thus power became the breadwinner for the projects. What began as a single-purpose concept soon contained other purposes.

So it will be fitting at this point to review briefly the development under the guiding hand of Congress of the multiple-purpose approach to Reclamation.

Congress passed the first law recognizing the possibility of multiple-purpose projects in 1879. That was an Act for planning the improvement of the Mississippi for navigation and flood control.

A number of developments followed during the succeeding 25 years which defined and secured the principle of Federal participation in hydroelectric generation in the West, even though a number of private developments were authorized in hit-or-miss fashion.

These developments and pro and con arguments culminated in 1925 in the authorization of Hoover Dam, the first large multi-purpose project. This project is so huge and its consequences so widely known that I do not propose to enumerate them. However, Hoover Dam symbolized in a package nearly all of the problems and solutions available to the water needs of the West.

There was a further step in the development of the modern concept of Reclamation. As usual, it was provided by Congress.

In 1933 Congress established the Tennessee Valley Authority and in so doing blazed the trail toward comprehensive, full-scale, multiple-purpose development of entire river basins. Again Albert Gallatin was vindicated. The TVA project--one of the reclamation wonders of the world--was the first project of this type.

But like its predecessors, it followed years of Congressional and national debate.

It hardly seems possible that the issues of constitutionality would still be heard in Congress on this subject, but Senator Norris, who led the final and successful effort to authorize TVA, again had to convince a great many persons and organizations that Congress had the authority under the Constitution to provide for this kind of project.

Having once again established its right to undertake multiple-purpose development of the water resources, the Congress moved ahead to authorize the Missouri River Basin Project, the Columbia Basin Project, and the Upper Colorado River Storage Project.

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As we come abreast of developments in recent months we find that Congress has continued to exercise leadership in formulating, adopting and pushing water resources policies vital to the growth and prosperity of the nation as a whole. Although reclamation historically has been associated with the 17 Western states, it no longer can be looked upon as a benefit solely for the West. Benefits of reclamation are increasingly attractive to other portions of the United States, and wealth created in the West by Reclamation finds its way to all parts of the country.

During the past two Congresses, legislation was enacted to authorize reclamation projects costing about \$1.4 billion. Omnibus river and harbor and flood control authorizations have been approved for another \$1.5 billion. Development of hydropower at Niagara by the state of New York was authorized, adding about 2 million kilowatts to the power capacity of the nation. The project will cost an estimated \$600 million.

The Watershed Protection and Flood Prevention Act has been amended to broaden and expand the small watershed land and water conservation program of the Agriculture Department. Limits for construction of small flood-control projects by the Corps of Engineers have been raised to permit more of this work to go forward under emergency conditions and without attention by Congress.

During the second session of the 85th Congress, the Senate and House took action to spur activity by the Department of Interior in both old and new fields.

Senate Resolution 299, which I sponsored, was adopted expressing the sense of the Senate that the rate of construction of ready-to-go reclamation projects should be accelerated as a means of alleviating unemployment, to provide urgently needed water supplies, and to provide for a permanent strengthening of the economy of the 17 Western States and the nation as a whole. The resolution recommended construction of projects totalling \$330 million this fiscal year, nearly double the President's original recommendation. The result of this resolution was a second Presidential recommendation calling for a considerable increase in the rate of construction on these projects, including Navajo Dam, a part of the Upper Colorado River Storage Project. In this way, the Senate sought to deal with familiar needs.

The 85th Congress also was looking ahead. It foresaw the day when our water resources will require more than a speed-up in the construction rate in order to meet demand.

What Congress had in mind is the fact that by 1975 the demand for fresh water in the country for all purposes will begin to exceed the total available supply. In other words, a national water shortage is on its way, and it will bring to the humid East some of the problems faced for generations by the arid West.

Two steps were taken to recognize this future situation. The first was the passage of the "Water Supply Act of 1958." The second was passage of S.J. Res. 135, to provide for full-scale demonstration of five or more selected processes for the conversion or treatment of saline and brackish waters.

The first step declares it to be the policy of the Congress to recognize the primary responsibilities of the states and local interests in developing water supplies for domestic, municipal, industrial, and other purposes, and for the Federal government to participate and cooperate with them in developing such water supplies in connection with existing and proposed Federal water resources development projects. Under the law, water may be stored in Corps of Engineers and Bureau of Reclamation projects as follows:

- 1) State or local interests to agree to pay cost of water supply provisions.
- 2) Up to 30 per cent of cost of any project may be allocated to anticipated future demands where reasonable assurances are received that repayment will be made within the life of the project.
- 3) Entire cost, including interest during constructions, allocated to water supply to be repaid within 50 years after project is first used for storage of water for water-supply purposes, except that payment of the cost of storage for future supplies may be deferred up to 10 years without interest.
- 4) Interest rate to be determined on basis of the computed average interest rate payable by the Treasury on long-term Government bonds.

With the exception of the last provision, this Act should go a long way toward adapting our multiple-purpose river development program now under way. In passing this legislation, the Congress once again had to override Presidential objections. Mr. Eisenhower, in vetoing a similar and previous measure, expressed his

...firm conviction that such important substantive changes affecting water resources policy and costs should be made, if at all, only after full, independent consideration not related to an omnibus authorization bill.

Personally, I object to an interest rate provision tied to the interest rate paid on long-term Government bonds. If the Glen Canyon Dam had not been started when it was, it could not have been charged interest at a rate of 2-7/8 per cent. Only a few months later the rate was 3-5/8 per cent -- enough higher to remove its ability to help finance succeeding dams. If the succeeding dams had been required to pay 3-5/8 per cent interest, they could not have paid out at all.

That is why I introduced a bill during the past Congress to peg interest to be paid on reclamation projects at a maximum of 3 per cent. As you know, interest is charged against only that portion of a project's cost which is attributable to power generation.

To me--possibly because I introduced it--the saline water resolution is of even greater long-range significance to the country than the Act I have just described. This legislation authorized \$10 million for the construction and operation within a seven-year period of five or more full-scale demonstration plants for the production, from seawater or other saline or brackish waters, of water suitable for agricultural, industrial, municipal, and other beneficial consumptive uses. Here again, Congress was looking far ahead to tap a new water resource.

California long has coveted the waters of the Upper Colorado River Basin to supplement the share of the flow she now enjoys. California has a water problem--not of supply but of distribution. Her choices are limited. She can spend the estimated \$11 billion necessary to transport the abundant waters of her northern areas to the parched southern portion, or she can rely upon a saline water conversion program. She has reached and passed the ceiling on Colorado River water.

S.J. Res. 135 was drafted in the hope that demonstration conversion processes could be established in Southern California, on the East coast, the Gulf coast, and in the Northern Great Plains and the Southwest. By the time it became law, the resolution provided for three saline water conversion plants within the United States and a minimum of two brackish-water treatment plants. The geological distribution will follow the pattern I have outlined.

Here again, it must be pointed out, the Congress was forced to act in the face of an adverse recommendation by the Executive Branch. In commenting on this legislation to the Budget Bureau, Assistant Secretary of Interior Aandahl presented an adverse recommendation. Subsequently the Budget Bureau recommended against enactment.

However, to be fair, it should be pointed out that following Senate passage of S.J. Res. 135, the Executive Branch withdrew its objections and indicated a willingness to follow the lead of the Senate. The result was final passage of the resolution by the House and signature by the President.

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There is one further water resources field in which Congress recently showed interest--the field of outdoor recreation. It requires only a moment of reflection for anyone to realize the importance of water to the recreation needs of the nation.

Fishing, boating, hunting, swimming, water-skiing, ice skating--these are but a few of the recreational demands upon our water supply are climbing rapidly. They can be met and should be met, along with all other demands.

In recognition of the impact and interplay of recreation and other demands on our water and other resources, I sponsored along with others during the 85th Congress a bill to create an Outdoor Recreation Resources Review Commission to make a three-year study and report on our total inventory of such resources.

The study will cover such things as timber, minerals, wilderness areas, bays, rivers and lakes. It will take into account the future availability of water as a recreational resource as well as pack trails into wilderness areas. In the process, the Commission may not only discover new uses for established water resources, but justify--along with other purposes--the construction of hitherto by-passed reclamation projects. Someday the multiple-purpose concept of reclamation development may be broadened to enfold recreation as a justification along with navigation, flood control, irrigation and power generation. I am happy to report that I have been appointed to serve on this Commission as a representative of the Senate and its Committee on Interior and Insular Affairs.

Now perhaps we might repeat for the record the story of Elephant Butte Dam. It was one of the first dams to be built following enactment of the Reclamation Act of 1902. I think it tells better than anything I have said so far the real story of Reclamation.

Elephant Butte Dam is a part of the Rio Grande Project which includes Elephant Butte Dam and distribution and drainage systems for the irrigation of about 178,000 acres of land in the Mesilla and Rio Grande valleys of New Mexico and Texas extending 100 miles upstream and 40 miles downstream from El Paso. Power is produced at Elephant Butte Dam and transmitted to private and cooperative utility concerns in New Mexico and the El Paso area of Texas.

The project was authorized in December 1905 and irrigation construction started the next year. Construction of the dam proper did not start until 1912 and was not completed until June of 1916. A spillway channel and dike paving were added in 1921 and construction of the power plant was begun in 1938.

First water was available under the project in 1908 and the first power in 1940. The reservoir has been full only twice--once in 1924 and again in 1942. A few more years like 1958 and it might spill again!

Caballo Dam was authorized and begun in 1936. It was completed in 1938. Together, Elephant Butte Dam and Caballo Dam have a storage capacity of more than 2.5 million acre feet. The power plant has a capacity of 24,300 kilowatts.

The original cost of Elephant Butte Dam was \$6,074,800 and the power plant \$1,460,000. For comparison, I asked the Bureau of Reclamation for estimates of the costs of these units at 1958 prices. I was told that Elephant Butte Dam today would cost \$36,632,000--almost six times what it cost in 1912-16. The power plant would cost \$4,497,000--3-1/2 times what it did in 1940.

There is a great deal more to the story. The project has lived up to the Reclamation promise of growth and wealth. There are 4860 full and part-time farms operating within the project and 178,196 acres being irrigated. Population served by the project totals 237,972 as follows: 14,108 residents on full-time farms; 6271 on part-time farms; 17,593 residents on lands in urban and suburban residential, commercial, and industrial properties, and 200,000 users of municipal water. In addition, Hudspeth County Conservation and Reclamation District No. 1 in Texas receives supplemental irrigation service for 88 full-time farm units on 18,330 irrigable acres with an estimated population of 2000.

Net investment of the United States in Rio Grande project facilities as of June 30, 1957 was \$19 million.

Against this, the U. S. holds repayment contracts valued at \$10.1 million, of which \$7.2 million had been repaid as of June 30, 1957.

Federal tax revenues attributed to construction of the Rio Grande Project from 1940 to 1957 totalled \$240.4 million and \$17.3 million in 1957 alone. In other words, the Federal government got almost all of its money back in one year and through the years it has reaped a colossal profit!

But the story doesn't end even there. As of 1957, the cumulative gross crop value from lands within the Elephant Butte Irrigation District and the El Paso County Water Improvement District No. 1, both served by the project, was \$862,768,821--almost enough to equal the total cost of the Upper Colorado River Storage Project! Gross crop value for the year 1957 in the two districts was \$35,973,181. Gross crop value per acre for the two districts for 1957 was \$261. Not only has the project been a bountiful investment for the United States--and that means for taxpayers in New England as well as California--but a lot of farmers, businessmen and industries have made money too. It is

an absolute truth that the value--the returns--of such projects are too large to calculate. And if I'm not misinterpreting what I see, this project has contributed mightily through the years not only to the frustration but to the contentment of fishermen.

So I say to you, despite the differences of opinion between the Legislative and Executive Branches of our Government, the Congress always has had the courage to press ahead to determine water resources policy and encourage development programs which have and will guide the destiny of our nation for centuries.

The Congress has, from the beginning, peered into the future and demanded bold action and progress unmatched on earth. The results have justified its faith.