



UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF SALINE WATER
WASHINGTON 25, D. C.

December 21, 1960

Hon. Carl Hayden
United States Senate
Washington 25, D. C.

Dear Senator Hayden:

This letter is sent to you and some of my other former colleagues in the Congress in a personal endeavor to keep you fully informed of the activities of the Office of Saline Water.

This Office was established by the Secretary of the Interior pursuant to the provisions of the Saline Water Act which was approved by the Congress in 1952. Secretary Seaton greatly honored me by appointing me Director of the Office on February 17, 1959. Appropriations for research and development sponsored by the Office during the seven years it was in operation prior to my appointment averaged a little less than \$575,000 per year. During the two years I have been Director, the appropriations granted for research and development were \$1,755,000 for each year.

In 1958 the Congress added a new responsibility to the Office by authorizing \$10 million for the construction, operation and maintenance of not less than five saline water conversion plants to demonstrate the reliability, engineering, operating, and economic potentials of sea or brackish water conversion processes.

The law provides that three of these plants shall be for the conversion of sea water to fresh. One is to be located on the east coast, one on the west coast, and one on the gulf coast. At least two of these plants shall have a capacity of 1-million gallons of fresh water per day. Two of the plants will be designed to convert brackish water to fresh. One is to be located in the Northern Great Plains and the other in the arid areas of the Southwest. One of these plants must have a capacity of at least 250,000 gallons per day. Each of the five plants must utilize a different process.

The processes to be utilized in these plants were selected and announced on or ahead of the rather rigorous schedule established

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*The way best to
you in 1961
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by Congress. Four of the five sites for the plants have been selected. They are Freeport, Texas; San Diego, California; Webster, South Dakota; and Roswell, New Mexico.

Over 50 east coast cities asked to be considered as a site for the demonstration plant authorized for that area. A special site selection board composed of eminently qualified engineers from outside of Government has studied and evaluated the more than 200 sites that were proposed for the five plants. Early this month the site selection board made a personal inspection of the cities under consideration as a site for the east coast plant. This site will demonstrate a freezing process. I hope the Secretary can make a recommendation to the Congress as to the location of this site early in January 1961.

The Office of Saline Water is a rather unique government agency. All of the research work sponsored by the Office is conducted by contract with universities, private research or industrial organizations, and other Federal Agencies. We consider it one of our prime responsibilities to interest organizations outside of Government in the problems and potentials of saline water conversion. This Office is pleased with the number of large reliable private companies that are now interested in the conversion of sea and brackish water. They are putting their time, money and know-how into finding the answers we seek. They are helping to develop some new and exciting processes that offer considerable promise for cheaper water. While our efforts in this direction have been quite successful, we have been hampered in this endeavor because we lack the necessary authorization to conduct market surveys to determine the prospective markets for saline water conversion equipment.

During fiscal year 1960 the Office awarded 50 research and development contracts dealing with a variety of technical problems associated with saline water conversion. These contracts were about equally divided between private enterprises and universities. By conducting our experimental work in this manner we have the advantage of selecting top scientists from all over the Nation to deal with the complex problems of saline water conversion.

In addition to the contracts awarded for research we have also awarded seven contracts for the design or construction of demonstration plants. Four of these are for architect and engineering services and three are for construction contracts.

Even though the research contracts awarded in fiscal year 1960 set a new record for the Office, both in size and number of contracts,

we find that our present level of appropriations does not permit us to begin work on a number of worthy projects that offer promise of developing new and urgently needed scientific data.

During the two-year period I have been privileged to be Director of the Office of Saline Water we have had meetings with representatives of the United Nations, the Office of Civil and Defense Mobilization, Bureau of Ships, Bureau of Mines, Atomic Energy Commission, Department of Health, Education and Welfare, National Science Foundation, Bureau of Standards, Department of Agriculture, International Cooperation Administration, and the Department of State. We have also held meetings with our consultants, contractors, and proposers on freezing, distillation, membrane, and solar conversion processes. These meetings have served to disseminate information and stimulate interest in the activities of this Office.

Each year this Office publishes a Saline Water Conversion Report that covers the general scope of the work undertaken and the progress achieved during that period. In addition, information and data of a technical nature obtained from our research contracts are made available to the public through the Office of Technical Services of the Department of Commerce. To date, 45 such reports have been released and are for sale for a small fee by the Department of Commerce. By utilizing the Office of Technical Services we are able to make this information available to all interested persons without cost to the Government.

We have entered into cooperative agreements with the States of California, New Mexico, Arizona, Florida, Texas, South Dakota, New Jersey, and North Carolina. Cooperative agreements have also been signed with the four cities selected as sites for demonstration plants. These agreements provide for an exchange of information and in some instances the State or the city has provided financial assistance for specific projects.

The cost of converting sea water to fresh in 1952, when this Office was established, ranged upward from \$4 per thousand gallons. The demonstration plant at Freeport, Texas, which is now 40 percent complete, will produce drinking water from the ocean for an anticipated price of about \$1 per thousand gallons. Our engineering extrapolations indicate that this same process, incorporated in a plant of 15-20 million gallons per day capacity, would produce fresh water in the range of 50-60 cents per thousand gallons. Improvements in this and other processes may make it possible to produce fresh water from the ocean at even lower cost than those that can now be reasonably predicted.

I am sincere in my convictions that the Federal Government should continue to spearhead this cooperative scientific endeavor. With the proper support, the scientists of this country will be able to develop processes that will enable us to produce fresh water from sea or brackish water sources at a price that will be competitive with prices now charged by many private and public water supply utilities. The Department of the Interior will be submitting legislation for the consideration of the Congress to expand and extend the Saline Water Conversion Program.

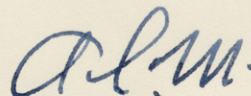
I hope I have not dealt in too much detail as to the activities of this Office. I have been greatly enthused about the possibilities of producing fresh water from the sea and brackish water sources. It is an interesting and challenging field.

It is my deepest hope that you will be able to give this program your full support in the coming session of Congress.

In the days ahead I expect to be on the Hill occasionally shaking hands and visiting with my old friends.

May I offer you the Season's Greetings.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "A. L. M.", is written over the typed name.

A. L. Miller, M.D.
Director