What's This About Flooding Out the Grand Canyon?

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Mr. UDALL. Mr. Speaker, many of my colleagues have told me they are being deluged these days with letters from honest and sincere people who have been led to believe that someone wants to "flood out" the Grand Canyon. Let me quickly state that, if this were true, I would be at the head of the column marching against the invaders. I am a native of Arizona, I was born not too many miles from the Grand Canyon; one of my great-grandfathers was John D. Lee, for whom Lees Ferry was named. The Grand Canyon means a lot to me, and I would oppose with all my vigor any attempt to mar its great beauty.

Fortunately, there is no plan to mar the beauty of the Grand Canyon. And a kind of negative confirmation of this fact can be found in the arguments of the very people who are stirring up this deluge of mail. In effect, they acknowledge the weakness of their "flooding out" thesis when they resort to what might be called the "foot in the door" argument -- that is, that the real danger lies, not in this project, but in some nebulous but frightful future intrusions into the national park system.

What has prompted this letter-writing campaign is the Lower Colorado River Basin project, undoubtedly the most comprehensive project ever planned to meet the water needs of the American people. In only its initial phase it would serve the interests of more than 11 million people in the Southwest, and in its ultimate development it can assure water security for the entire West for many years to come by a program of efficient utilization of water supplies.

For almost 50 years leaders in my state have discussed plans whereby Arizona's share of the Colorado River could be utilized in our area, which is the fastest growing and driest region of the country. Meanwhile they have given their support to the development of water resources in every other river basin in the United States.

The legislation that is now before Congress emerged when people of the Pacific Southwest recognized their problems were common, and that they could only be solved by working together on concepts of regional and basin planning. Evidence of this common purpose is the fact that 37 Members of the Congress representing this area introduced identical bills to authorize the Lower Colorado River Basin project.

These bills provide for two major control and hydroelectric power dams on the Colorado River, and pumping and diversion facilities to transport the water into the Salt River Valley area around Phoenix and on to Tucson in Arizona. Like all reclamation projects it would serve the multiple purpose of providing water storage needed for irrigation, for industry, and for municipal and domestic use. In addition to the stored water that generates power which helps pay for the project, the reservoirs would serve yet another valuable function: providing recreation and fish-and-wildlife habitats. Of the total Federal investment more than 90 percent would be repaid. Reclamation water development has demonstrated its ability to create prosperous, viable, and self-sustaining local economies while, at the same time, recovering the taxpayers' money.

Mr. Speaker, every President of the United States since Theodore Roosevelt has given his wholehearted support to reclamation developments in the arid and semiarid western half of the Nation. When President Johnson recently signed legislation to authorize the Auburn-Folsom South project for California's Central Valley, he remarked:

I have never seen a dollar invested anywhere in this Nation in water conservation., in multiple-use projects, that in a period of even a decade didn't prove that it was a good investment, and would pay very high returns on what we had spent for it.

Without a doubt a project of this magnitude does raise many questions, and I want to discuss these frankly.

DEMANDS ON RIVER

Is not the Colorado River now overly committed?

The Colorado River is a stream of widely fluctuating annual runoffs which make probable future water supply estimates very difficult. Using one period, for example 1906-59, the average annual yield was over 15 million acre-feet. Through the drought years of 1930-62 the yield was less than 14 million acre-feet.

Compounding this, of course, are future depletions in the Upper Basin States, commitments to the Mexican Government, anticipated salvage works, evaporation, and other factors.

Taking all this into account, the water engineers of the Lower Basin States -- Arizona, California, and Nevada -- have agreed there is an equal chance the supply in the mainstream will equal or exceed the amount needed to provide 4.4 million acre-feet a year for California, water for decreed rights and existing mainstream projects in Arizona and Nevada and the Southern Nevada Water Supply Project, water for

increasing demands of the Upper Basin, and a full supply of 1.2 million acre-feet per annum for the proposed central Arizona project until about the turn of the century, gradually reducing thereafter.

Both basins, they conclude, are ultimately dependent upon substantial importations which should be made available by the last decade of the present century.

NEED FOR WATER

How really serious is the water situation in Arizona now?

Central and southern Arizona with less than 11 inches of annual rainfall and, consequently, a lack of sufficient surface water, have had to depend almost entirely upon underground water. Tucson, a city of some 300,000 people, is the largest city in the United States, if not the world, that derives its entire water supply from pumping. Arizona is mining from its underground reservoirs 2-1/4 million acre-feet more than is considered a safe withdrawal. So the water tables have dropped alarmingly, causing prominent earth fissures to develop, needed agricultural acreage to go out of production, and small communities to wither. Our only relief is through the use of our rightful share of the Colorado River.

USES OF WATER

Where would project water be put to use?

During the early years of the project it is estimated that 70 percent of the water would help sustain Arizona's agricultural economy. No new acreage would be brought into production, but the water would stabilize an agricultural economy whose products are predominantly for the market and not for storage. The project area is the Nation's winter salad bowl, producing 95 percent of its lettuce, 70 percent of its cantaloups, and similarly high proportions of other fruits and vegetables. In fact, agriculture in this area generates far less surplus than the national average.

REPAYMENT PLAN

How would the project be paid for?

Under a, 50-year repayment plan this investment in natural resources development would repay to the Government far more than its construction cost. The sale of water and power would return more than 90 percent of the project's cost, all costs except those allocated to such public benefits as fish and wildlife conservation. In addition, the Federal Government would receive more than half a billion dollars in interest

during the repayment period. This is the essence of reclamation, in which electricity, from falling water, is turned into water for cities and farms at a price a user can pay.

CONTROVERSY OVER DAMS

What is the argument about the dams?

Mr. Speaker, this Nation has taken pride in its abilities to plan and construct great wealth-producing hydroelectric power dams. We all would have been the losers if Congress had heeded the criticisms of some to delay the authorization of Hoover Dam 35 years ago to store water for diversion to southern California. Arizona surely would have been a disaster State had not farsighted men hastened the construction of the Salt River project's Roosevelt Dam that made possible the growth of Phoenix. People in the Northwest would have been the poorer if Grand Coulee had not been built.

And yet the criticisms we hear most often about this project are about building the dams, and the critics have raised a number of doubts about their feasibility and merits. In the main they are:

Is the power marketable? Could it be produced more cheaply by steamplants?

Do such dams make more water available or just cause more water to be lost by evaporation? Would they become obsolete?

Would the dam destroy scenery?

I believe there are full and adequate answers to each of these questions. In this brief discussion space does not permit me to deal with every point and every aspect, but I will attempt to answer each of these main lines of criticism.

President Johnson, speaking on the subject of conservation and development of the Nation's water resources, observed that "the real wasters, the real spendthrifts, are those who by neglecting the needs of today destroy the hopes of tomorrow."

The dams on the Colorado River are our hopes for tomorrow. The revenues from the sale of hydroelectric power make the project feasible. These revenues plus revenues from Hoover and Parker-Davis Dams (available once their costs have been repaid a few years hence) will make possible the ultimate import of water into the basin.

That is what millions of people have at stake in the dams on the Colorado River.

SELECTION OF SITES

Why these particular sites?

The particular dam locations included in this project were selected and approved many years ago, as revealed in a letter written in 1933 to the Commissioner of Reclamation by Horace Albright when he was director of the National Park Service. He wrote:

As I see it the Bridge Canyon project is in no way affected by the Grand Canyon National Monument proclamation; we have had it in mind all the time, the Bridge Canyon project.

The sites have been reevaluated many times since, and they are, in fact, the last remaining locations for power dams on the river.

Marble Canyon site is entirely outside and upstream of Grand Canyon National Park. Bridge Canyon site is located some 80 miles west and downstream of the Grand Canyon National Park boundary. Its reservoir would back up 13 miles, not into but along the boundary of the park, much as Fontana Lake, a manmade reservoir, forms a dramatic boundary for the Great Smoky Mountains National Park.

NEED FOR HYDRO POWER

Why is hydroelectric power preferred? It has been argued by those opposing the dams that cheaper power is available from fossil fuel operating plants. Both private and public power companies will testify they are eager customers for hydroelectric power. In fact, engineers predict there will be a shortage of such power in a few years if new dams are not built. "Peaking power," provided by hydroelectric dams, is needed to realize the most efficient operation of electric utilities depending on steamplants for their "baseload" power. Very simply, generators run by waterpower can be readily regulated to meet fluctuations in demand for power while steamplants are best suited for constant, "baseload" operation. The two types of generation do not compete with one another but are complementary; economic studies show that "peaking" hydroplants would produce the greatest return to the development fund.

It can be anticipated that thermal and atomic powerplants will improve in efficiency in the future, but it is highly unlikely they will ever approach the operating flexibility of hydropower.

The Federal Power Commission has current applications for non-Federal hydroelectric dams at both the Bridge and Marble sites. If the Lower Colorado River project is not approved by the end of 1966, it is entirely possible that the FPC may grant licenses for construction of dams at these sites to State or private bodies.

WATER LOSSES

What about evaporation, seepage, and water quality?

There has been considerable comment made about evaporation loss, seepage, and water quality. Granted there would be evaporation losses of approximately 85,000 acre-feet behind Bridge and another 15,000 acre-feet behind Marble, I should like again to emphasize that these wealth-producing power facilities would make it possible to bring into the river as much as 10 to 15 million acre-feet of water annually -- 100 times the loss from evaporation.

Seepage is a recognized fact, too, and critics have made an example of Lake Powell. But the water doesn't just disappear there once the sandstone has absorbed its limit. It is actually stored in the walls and will return to the river as Lake Powell fluctuates from time to time. It should be noted here that the water behind Bridge Canyon Dam would be maintained at an almost constant level.

Fears also have been expressed about increased salinity as a result of the dams, but the Department of Interior finds there is no evidence to support this claim. To the contrary, many professional people maintain that holding water in storage over extended periods of time improves water quality.

LIFE EXPECTANCY OF DAMS

Do dams stay young?

It has been said that sediment problems will make the dams obsolete just a few years after completion. The heavy silt load of the Colorado has been studied by such agencies as the Geological Survey, the Coast and Geodetic Survey, the Bureau of Reclamation and the Department of the Navy since 1925. With the accumulation of all this information engineers have become convinced that the "life expectancy" of dams on the Colorado can be extended indefinitely.

EFFECT ON SCENERY

Do dams destroy scenery?

By far the most often-heard claim is that the Grand Canyon would be damaged and the river forever lost if this project were built. Those who make this claim lose sight of the following:

First of all, this issue was thoroughly explored and decided long ago -- in 1919 -- and spelled out in legislation establishing Grand Canyon National Park.

Second, Grand Canyon would not be flooded. The only water backing into the park would be along the Park boundary for 13 miles in a remote area never visited or seen by the general public.

Third, neither dam would be constructed in Grand Canyon. Bridge Canyon lies 80 miles west of the park boundary; Marble Canyon Dam, lying upstream of the park, could not possibly contribute to "flooding" Grand Canyon.

Fourth, the Colorado River ceased to be a natural, "wild" river many years ago and most recently when Glen Canyon Dam was constructed. However, construction of these dams actually would transform the river below Marble Canyon from a widely fluctuating, muddy river to a clear, uniformly flowing river for more than 100 miles through the park. Thus, for the first time, the river would provide a superb habitat for fishing and a safe course for thrilling visits to the innermost reaches of the canyon.

And finally, these reservoirs themselves would provide access to remote areas, now totally beyond the view of ordinary visitors, above and below the park, forming a river highway to scenes of hidden splendor. Like paved roads to the park rim and trails into the canyon, all attacked once as "intrusions," these reservoirs can open to the public much scenery available now only to the select few.

WILDERNESS CONCEPT INTACT

The Senate Committee on Interior and Insular Affairs concluded in its report on the Lower Colorado River Basin project, dated August 6, 1964, that:

> The reservoir's (Bridge Canyon) impact on the park is minimal. Over 98 percent of the land area in the park will remain in its natural condition * * * In the committee's view it does no violence to the "wilderness concept" which this committee vigorously espouses, to permit this unique opportunity to the public at large to glimpse at first hand the matchless splendor of this most magnificent of American scenic treasures.

Mr. Speaker, imagine the sight of placid, clear blue lakes reflecting the majesty of sheer cliffs 1,500 to 3,000 feet high that form the inner gorge of Marble and Bridge Canyons, or picture miles of fiord-like views, all now within the reach of everyone to see. These are values not to be discounted or written off as "desecration" or "destruction." Reclamation lakes at Grand Teton and Glacier parks have added to the public's enjoyment of these areas of natural beauty, and the same can be true of Bridge Canyon and Marble Canyon.

It is my position that these lakes and clear waters can enhance the beauty of these canyons and, what is more, make them accessible for the first time to the public for viewing and for unlimited recreation. Yet I do not suggest that this project should be constructed for this purpose; rather, I would emphasize that these benefits are

subordinate to the greater purpose of bringing water to an area of critical need. My point is that these purposes are not in conflict.

Mr. Speaker, throughout the history of man the control and use of water have guided his destiny, and civilizations have perished where water supplies failed. The present and proposed construction of dams on the Colorado River is essential to perpetuate much of the western economy. Because a long time is required to bring major water resource projects to completion, 1975 is tomorrow, and the time for action is now.