Statement of Commissioner Gilbert G. Stamm, Bureau of Reclamation, witness for the Department of the Interior, before the Subcommittee on Water and Power Resources, Senate Committee on Interior and Insular Affairs, on S. 3740 to amend Public Law 87-590 (76 Stat. 389) in order to increase the amount authorized for the construction of the Fryingpan-Arkansas Project, Colorado, and to authorize construction of the second 100-megawatt unit at the Mt. Elbert Pumped Storage Powerplant site of the project. (July 18, 1974)

Mr. Chairman and members of the Subcommittee, we are here today to offer the Department's views on S. 3740, a measure to amend Public Law 87-590 for the purpose of increasing the amount authorized for construction of the Fryingpan-Arkansas Project which is located in south-central Colorado and to authorize construction of a second 100-megawatt unit at the Mt. Elbert Pumped Storage Powerplant site.

The Department's position recommending enactment of S. 3740 with amendments is presented in a letter to the Chairman of the Committee.

Public Law 87-590 requires that all reimbursable costs be repaid within a period of 50 years following completion of project construction. It also established an appropriation ceiling of $170 million, adjusted for fluctuations in construction costs as indicated by engineering cost indexes, plus such additional sums as may be required to investigate, plan, construct, operate, and maintain public facilities for recreation, fish and wildlife, and scenery conservation incurred under section 4 of the act.

Section 7 of Public Law 87-590 authorized an amount of $170 million for construction of the Fryingpan-Arkansas Project based on June 1961 prices.
Application of the cost index factor for January 1974 price levels raises the total authorized appropriations to $342 million.

The installation of the second 100-megawatt unit and construction of the expanded municipal and industrial water delivery system would require an increase in the authorized ceiling of $90 million to $432 million. The Department supports an increase of $28.0 million to cover the added power features, but desires to defer support of the $62.0 million for the municipal and industrial system pending restudy and recertification of the finding required by section 1(c) of Public Law 87-590. Assuming the municipal and industrial conveyance system were to be built, the total project cost estimate of $501 million would be comprised of the $432 million, which is subject to ceiling restrictions, plus $69 million of section 4 and highway improvement costs. Without the municipal and industrial system, the total estimated cost is $403 million.

In March 1967, the Bureau of Reclamation reported to this Committee by letter on its postauthorization planning for the project's power system. The plan described in that letter provided for the construction of two powerplants: (1) Mt. Elbert Pumped Storage Powerplant with 100 megawatts of initial installed capacity and provisions for the later installation of a second 100-megawatt pump-back generating unit, and (2) Otero Powerplant with 11 megawatts of installed capacity.

It was also noted in the report that the costs of the second 100-megawatt unit at Mt. Elbert Pumped Storage Powerplant when added to the other estimated project costs would exceed the appropriation ceiling. At
that time, we indicated that the initial 100-megawatt unit would be installed and the second 100-megawatt unit would be deferred until a market for the power developed. We further indicated that congressional authorization to cover the costs of the second unit would be sought when that market developed.

This testimony updates and explains changes that have occurred since March of 1967 in support of the request for an increase in the appropriation ceiling for the project.

The power market has expanded because of a broader based need for peaking power and the development of power pooling and transmission facilities that permit service to a larger geographical area. A study considering these circumstances indicates that 950 megawatts of peaking capacity for Colorado will be required by 1980. Currently, powerplants used strictly for meeting peak demands in Colorado have a total installed capacity of 444 megawatts. The Fryingpan-Arkansas Project additions of two 100-megawatt units are the only major peaking power installations currently planned in Colorado. Even with the total project peaking capacity in operation by 1980, there would still remain about 295 megawatts of peaking requirement that would need to be supplied from less efficient sources.

Five preference customers and two private utilities have expressed an interest in purchasing the project peaking power. Therefore, it is evident that a market for the second unit exists and will be utilized at the earliest date that construction can be accomplished.
Construction of Mt. Elbert Pumped Storage Powerplant, Mt. Elbert Forebay, and Twin Lakes Dam enlargement will include $7.3 million in costs specifically to accommodate the second 100-megawatt unit installation. Of the $7.3 million, about $4.6 million is included in the present contract for the Mt. Elbert Pumped Storage Powerplant and will represent a "sunk cost" irrespective of whether or not the second unit is installed.

Installation of the second unit and appurtenant facilities would require an additional $28.0 million, all of which exceeds the existing authorized ceiling. The additional incremental costs associated with installation of the second unit, exclusive of transmission costs, would amount to about $195 per kilowatt of installed capacity. That amount is considerably lower than comparable costs of about $350 per kilowatt of installed capacity for coal-fired steam electric plants which have been recently constructed in the area.

It was originally estimated that about 59,000 acre-feet of the project water supply would be devoted to supplemental irrigation and about 20,500 acre-feet to municipal and industrial water supply. It is now estimated that ultimately only about 22,200 acre-feet will be used for supplemental irrigation and about 57,300 acre-feet for municipal and industrial water supply. Of this amount, the Fountain Valley would receive about 36,000 acre-feet, the Arkansas Valley about 18,300 acre-feet, and the city of Pueblo about 3,000 acre-feet. The initial use of municipal and industrial water would be about 30,000 acre-feet, which would build up to the ultimate use by the year 2020. Water not used for municipal and industrial
purposes is available and marketable for supplemental irrigation.

Return flows from the increased municipal and industrial water supply would be available for reuse for either municipal and industrial purposes or irrigation. It has been assumed that the return flows would be primarily used for irrigation.

The Fountain Valley Conduit was originally designed to deliver project water to Colorado Springs only. The population in the area that could be served by the conduit nearly doubled between 1960 and 1970. The communities of Security and Widefield, which were not reported in the 1960 census of population, had a combined population of more than 15,000 in 1970. As a result of that dramatic growth, a survey of the communities that could be served by the Fountain Valley Conduit was made. The result indicates that the communities of Fountain, Security, Stratmoor Hills, and Widefield need project water in addition to a greatly increased demand by Colorado Springs.

The Arkansas Valley Conduit was originally designed to deliver a supplemental water supply through a main line to communities between Pueblo and Lamar. Recent Colorado legislation and court decisions have made ground water supplies affecting surface water supplies subject to water-right appropriation. Water rights of many of the communities which depend on ground water supplies are now considered to be junior to water rights of surface appropriators. Thus, these communities must look to other sources if they are to maintain dependable water supplies. As a result, it is now anticipated
that many such communities will require a much larger proportion of their water supply from the project and that several communities not previously considered to be served by the project now require such service.

The estimated cost of the expanded municipal and industrial conduits is about $98.3 million. Of that amount, about $62.0 million exceeds the authorized appropriation ceiling under the provisions of section 7 of the authorizing act.

Section 1(c) of Public Law 87-590, which authorized the Fryingpan-Arkansas Project, provides that:

"No part of the single purpose municipal and industrial water supply works involved in the Fryingpan-Arkansas project shall be constructed by the Secretary in the absence of evidence satisfactory to him that it would be infeasible for the communities involved to construct the works themselves, singly or jointly."

The Secretary of the Interior approved and adopted a report on December 5, 1969, which demonstrated that the various entities to be served by municipal and industrial delivery systems did not have the financial capability, either singly or jointly, to construct the work themselves. Five years have elapsed since that study was completed; therefore, the Department believes that a new study should be made to redetermine whether the local municipalities now have the ability to finance the required water works.
The project remains economically justified with the addition of the benefits and costs for the facilities that would be included in the increased appropriation ceiling. The original benefit/cost ratio was 1.48 to 1.00. Adding power features alone the new benefit/cost ratio would be 1.49 to 1.00. If municipal and industrial features were added at current costs and benefits, the benefit/cost ratio would be 1.43 to 1.00.

On either basis, repayment analyses for the project show that the project costs could be repaid within the required 50-year period with the second 100-megawatt unit installed. Without the second unit, an increase in power rates and/or municipal and industrial water supply rates would be required to achieve project payout.

A final environmental statement for the Mt. Elbert Pumped Storage Powerplant was filed with the Council on Environmental Quality on October 19, 1971. The statement included both installation of the first unit and the second unit addition proposed for authorization in S. 3740. A draft statement for the overall project was released on March 18, 1974, and public hearings were held in Aspen and Pueblo, Colorado, during May 1974. The final environmental statement is in preparation and will be filed with the Council on Environmental Quality in January 1975.

In accordance with the Fish and Wildlife Coordination Act, construction of the second unit of the Mt. Elbert Powerplant requires continuation of ongoing studies and development of recommendations.
concerning fish and wildlife resources which might be affected by the powerplant. The construction and operation of the powerplant will be coordinated within the Department to assure reasonable compliance with recommendations.

The facilities that would be installed with the authorized increase in the appropriation ceiling are needed and supported by local interests, and by the executive branch if amended as outlined herein.