My name is Raymond Matthew. I am chief engineer of the Colorado River Board of California. I appear here on behalf of the Colorado River Board of California, which is a State agency created by act of the legislature in 1937. The board is charged with the responsibility for protecting the interests of California in the waters of the Colorado River. It is composed of six members appointed by the governor, each representing one of the public agencies having established rights to the use of water or power from the Colorado River.

Proposed Project

The proposed Fryingpan-Arkansas Project sought to be authorized under H.R. 236, 83rd Congress, 1st Session, would divert water from the Colorado River Basin to the Arkansas River Basin in Colorado and conserve and reregulate Arkansas River waters in combination with imported Colorado River Basin water, for the purposes of supplying supplemental irrigation water to 309,000 acres of presently irrigated lands in the Arkansas River Basin, furnishing additional municipal water supplies and generating hydroelectric power. Trans-mountain diversions would be made from Hunter Creek and Fryingpan River, tributaries of the Roaring Fork River branch of the Colorado River in west central Colorado.
The plans for the proposed project are summarized in Senate Document 106, 82nd Congress, 2nd Session, to which the pending bill refers; but are more fully described with substantiating materials in the report of the Bureau of Reclamation (Project Planning Report No. 7-8a.49-1, dated January 1950) entitled "Initial Development, Roaring Fork Diversion, Gunnison-Arkansas Project", which was approved and adopted by the Secretary of the Interior on May 4, 1951. It is understood that cost estimates and related financial aspects have recently been revised.

Official Comments of State of California

The project planning report referred to was submitted in May 1951 to interested states, and federal departments and agencies, for review and comment under the provisions of the Flood Control Act of 1944. The views and recommendations of the State of California, including the comments of the Colorado River Board of California, were submitted to the Secretary of the Interior on August 27, 1951. A copy of those comments is submitted herewith, with the request that the same be made a part of the record in connection with this statement.

It will be noted that the State of California in its comments favors the authorization of the proposed project, provided it "qualifies under criteria, policies and procedures established by the Congress", and provided "the diversion and utilization of the waters of the Colorado River System by and through the project works will not impair the rights of the State of California or any of its agencies to the waters of the system as defined and set
forth in the Colorado River Compact and related documents and laws, or will not adversely affect the quality of such waters to which California has rights."

Interest of Colorado River Board of California

The primary interest of the Colorado River Board of California in this proposed development is in certain basic factors involved therein affecting or relating to water supply and the rights of California and its agencies in and to the use of Colorado River water. I appear here, therefore, to emphasize those basic factors and the need for certain clarifications in the interest of protecting California's rights.

Limitation in Project Scope

The Bureau's report above referred to states that the Roaring Fork Diversion is planned as a completely independent project. Water proposed to be diverted from the Colorado River Basin would be taken entirely from the headwaters of the Roaring Fork River, a tributary of the Colorado River not connected with the Gunnison River.

However, the report referred to also states that the Roaring Fork Diversion could become the first stage of a much larger potential Gunnison-Arkansas Project which would involve the exportation of a relatively large quantity of Colorado River water, possibly as much as 900,000 acre-feet or more annually according to the Bureau's report on the Colorado River (H. R. 419, 80th Cong., 1st Sess.). The Regional Director of the Bureau of Reclamation
recommends the appropriation of funds for the continued investigation of the comprehensive plan.

The proposed project described in the Bureau's report, as summarized in Sen. Doc. 106, 82nd Cong., 2nd Sess., to which the pending bill refers, has been redesignated as the Fryingpan-Arkansas Project. However, the language of the pending bill might be construed as giving "blank check" authorization for substantial modifications and additions to the works described in Sen. Doc. 106.

Any implication that the project proposed to be authorized by H.R. 236 is to be the forerunner of a much larger project for exportation of Colorado River water should be eliminated. Any request for funds to investigate the larger potential Gunnison-Arkansas Diversion should be dissociated from the request for authorization of the Fryingpan-Arkansas Project.

It is the position of the Colorado River Board of California that should the proposed Fryingpan-Arkansas Project be authorized by the Congress, the legislation should, as recommended by the Regional Director, include suitable language providing that such authorization shall constitute no commitment, real or implied, to further exportation of water from the Colorado River System.

Availability of Water Supply from Colorado River System

The proposed project contemplates the transmountain diversion of Colorado River System waters, with resulting estimated average annual consumptive use of 90,100 acre-feet. This quantity, of itself, is evidently within the entitlement of the State of Colorado under the Upper Basin Compact; but the full list of
claimant projects in Colorado, and their water requirements, has not yet been determined or made known.

The report states that stream flow in the diversion area on the western slope is in excess of present utilization in that area and that during the period October 1910 through September 1944, flows averaging approximately 84,100 acre-feet a year were available for diversion to the eastern slope. However, the report does not contain sufficient evidence to substantiate the conclusion regarding the physical and legal availability of water in relation to the needs of existing and other potential projects. Also, it does not reveal the probable variation in annual amounts that would have to be diverted in order to average 69,200 acre-feet a year through the project tunnel and 14,900 acre-feet a year through the Twin Lakes Company system. It appears there would be years in which the amount of water available for diversion from the Roaring Fork tributaries would be less than the contemplated average diversion, necessitating diversions above average in other years in order to maintain the average set up in the report as the basis for design of the project.

This project and its proposed operation thus involves one of the questions of interpretation of the Colorado River Compact, which concerns California, namely, whether uses chargeable against Compact apportionment are to be computed on an actual annual basis or a hypothetical average basis.

It is the position of the Colorado River Board of California that the Colorado River Compact under the apportionment made by Article III (a) entitles the Upper Basin to the beneficial
consumptive use of 7,500,000 acre-feet, as a maximum in any one
year and not to an average of that amount reckoned over a period
of years; and that such consumptive use is to be measured at places
of use in the natural basin or at points of diversion in cases of
transmountain export, and not in terms of depletion at some distant
downstream point on the main Colorado River such as Lee Ferry.

It is further the position of the Colorado River Board
of California that if the proposed project be authorized, the legis-
lation should contain suitable language to make it clear that the
Congress does not approve or disapprove any interpretations of the
Colorado River Compact such as may be assumed or implied in the
pending bill or in the report of the Bureau of Reclamation on the
proposed project.

Quality of Water

A problem of great concern and significance to the water
users in the Colorado River Basin, especially those in the Lower
Basin, is the effect of existing and potentially larger future
export diversions of water from the upper Colorado River Basin
upon the quality of water remaining in the Colorado River System.

Generally the water for export is and will be diverted at high
altitudes where the stream flow is much better in quality than in the
lower parts of the System, and the diversion of relatively pure
water leaves a higher concentration of minerals in the residual
flow.

It appears that the overall effect of the increased diver-
sion proposed by the Fryingpan-Arkansas Project would be small.
Nevertheless, in view of the allusions to the much larger potential diversion of the proposed Gunnison-Arkansas Project which the Bureau Report on the Colorado River shows might be in excess of 900,000 acre-feet annually, the principles involved are vital and should be thoroughly examined, analyzed and reported upon in connection with this project together with other proposed developments and uses of the water resources of the Colorado River Basin.

It is the position of the Colorado River Board of California that the Colorado River Compact intends that the water available for use thereunder in the Lower Basin shall be suitable in quality for all necessary purposes. Therefore, it is further the Board's position that additional projects for exportation of water from the Upper Colorado River Basin should be authorized only after thorough investigation of the problem of quality of water and only after satisfactory evidence is presented that the proposed developments would have no harmful effect upon the quality of water remaining for use within the Lower Basin.

Control of Export Diversions

The Colorado River Compact limits use of Colorado River water to the seven Colorado River Basin states. With exportation of any large quantity of Colorado River water to the Arkansas River, substantial return flows to the Arkansas may be experienced.

It is estimated in the report that, under project operation, return flow in excess of 40 per cent of headgate diversion may be expected. With such expectancy it appears possible that return flow from the Colorado River water diverted at canal head-
gates might escape past the Colorado state boundary unless carefully controlled. Such escape beyond the boundaries of an Upper Basin state of any Colorado River System water would constitute a violation of the provisions of the Colorado River Compact.

It is the position of the Colorado River Board of California that, should the proposed project be authorized by the Congress, the legislation should contain suitable language requiring the State of Colorado to give adequate assurances that any water exported from the Colorado River System to the Arkansas River Basin will be consumptively used in Colorado, and to be responsible for controlling the return flow and preventing the escape of any Colorado River System water outside the State.