MEMORANDUM REGARDING OUT-OF-BASIN USES OF COLORADO RIVER WATER

1. Introduction. This memorandum is prepared pursuant to the request made by Director Stone of the Colorado Water Conservation Board in his letters of May 22, 1952, and July 15, 1952. In those letters Director Stone called specific attention to the following statement which appears in the comments of the Colorado River Board of California and which is attached to the official comments of the State of California on the Fryingpan-Arkansas Project located in Colorado:

"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. Any authorization of the project should require adequate assurances from the State of Colorado that the water exported to the Arkansas will be consumptively used in Colorado, i.e. that it will not permit the flow of the Arkansas River at the Colorado-Kansas state line to be augmented by return flows from the Colorado River water."

Director Stone also indicated that he deemed the question was of importance in connection with the consideration by the Board of the proposed Narrows Dam to be located in the channel of the South Platte River near Fort Morgan. The Narrows Dam...
will permit the storage of flows in the South Platte so that they may be utilized as a supplemental supply for downstream lands in Colorado and also for the irrigation of lands not presently irrigated. This is in addition to the flood control benefits to be derived from the Narrows Dam.

It is expected that the diversion of 310,000 acre feet of water from the Colorado River into the South Platte by means of the Colorado-Big Thompson Project, which is now nearing completion, will result in increased South Platte flows in the Fort Morgan area and that unless these flows are impounded by a dam such as Narrows much of this water will flow into Nebraska. Also, the proposed Blue-South Platte Project will bring additional Colorado River water into the South Platte basin and may result in an even greater increase in the South Platte flows to Nebraska.

The pertinent query is whether Colorado will violate the Colorado River Compact of 1922 and the Upper Colorado River Basin Compact of 1942 if it permits its appropriators to divert into the basin of an Eastern Slope stream water from the Colorado River Basin and by their failure to use consumptively all of such imported water some of it flows
out of Colorado and into Nebraska or Kansas, neither of which is a Colorado River Basin State.

Consideration of the problem was deferred until a copy of the April 4, 1936 opinion of the Solicitor of the United States Department of the Interior dealing with transmountain diversions of Colorado River water could be obtained. A copy of that opinion, to which reference will later be made, was transmitted with Director Stone's letter of July 15, 1952.

2. The Colorado River Compact of 1922. Rights to the rights to the use of waters of the Colorado River are appor tioned between the Upper and Lower Basins of that River by the 1922 Colorado River Compact. Basically the issue under consideration in this memorandum must be determined by reference to the provisions of that Compact. The following definitions contained in Article II are pertinent:

"(a) The term 'Colorado River System' means that portion of the Colorado River and its tributaries within the United States of America.

(b) The term 'Colorado River Basin' means all of the drainage area of the Colorado River System and all other territory within the United States of America to which the waters of the Colorado River System shall be beneficially applied.

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- 3 -
(f) The term 'Upper Basin' means those parts of the States of Arizona, Colorado, New Mexico, Utah, and Wyoming within and from which waters naturally drain into the Colorado River System above Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are now or shall hereafter be beneficially served by waters diverted from the System above Lee Ferry.

(g) The term 'Lower Basin' means those parts of the States of Arizona, California, Nevada, New Mexico and Utah within and from which waters naturally drain into the Colorado River System below Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are now or shall hereafter be beneficially served by waters diverted from the System below Lee Ferry."

Apportionment of water between the two Basins is made by Article III as follows:

"(a) There is hereby apportioned from the Colorado River System in perpetuity to the Upper Basin and to the Lower Basin respectively, the exclusive beneficial consumptive use of 7,500,000 acre-feet of water per annum, which shall include all water necessary for the supply of any rights which may now exist.

(b) In addition to the apportionment in paragraph (a), the Lower Basin is hereby given the right to increase its beneficial consumptive use of such waters by one million acre-feet per annum."

Other provisions of that Compact will be mentioned later herein.

3. The Upper Colorado River Basin Compact of 1948.

The Upper Basin States by Compact signed in 1948 and ratified in 1949 apportioned among themselves the rights to the use
of water apportioned to the Upper Basin by Article III (a) of the 1922 Compact. The apportionment provisions of the Upper Basin Compact are found in Article III which reads as follows:

"ARTICLE III

(a) Subject to the provisions and limitations contained in the Colorado River Compact and in this Compact, there is hereby apportioned from the Upper Colorado River System in perpetuity to the States of Arizona, Colorado, New Mexico, Utah and Wyoming, respectively, the consumptive use of water as follows:

(1) To the State of Arizona the consumptive use of 50,000 acre-feet of water per annum.

(2) To the States of Colorado, New Mexico, Utah and Wyoming, respectively, the consumptive use per annum of the quantities resulting from the application of the following percentages to the total quantity of consumptive use per annum apportioned in perpetuity to and available for use each year by Upper Basin under the Colorado River Compact and remaining after the deduction of the use, not to exceed 50,000 acre-feet per annum, made in the State of Arizona.

State of Colorado..................51.75 per cent,
State of New Mexico...............11.25 per cent,
State of Utah.....................23.00 per cent,
State of Wyoming................14.00 per cent.

(b) The apportionment made to the respective States by paragraph (a) of this Article is based upon, and shall be applied in conformity with, the following principles and each of them:

(1) The apportionment is of any and all man-made depletions;
(2) Beneficial use is the basis, the measure and the limit of the right to use;

(3) No State shall exceed its apportioned use in any water year when the effect of such excess use, as determined by the Commission, is to deprive another signatory State of its apportioned use during that water year; provided, that this subparagraph (b) (3) shall not be construed as:

   (i) Altering the apportionment of use, or obligations to make deliveries as provided in Article XI, XII, XIII or XIV of this Compact;

   (ii) Purporting to apportion among the signatory States such uses of water as the Upper Basin may be entitled to under paragraphs (f) and (g) of Article III of the Colorado River Compact; or

   (iii) Countenancing average uses by any signatory State in excess of its apportionment.

(4) The apportionment to each State includes all water necessary for the supply of any rights which now exist.

(c) No apportionment is hereby made, or intended to be made, of such uses of water as the Upper Basin may be entitled to under paragraphs (f) and (g) of Article III of the Colorado River Compact.

(d) The apportionment made by this Article shall not be taken as any basis for the allocation among the signatory States of any benefits resulting from the generation of power."

In its Article II the definitions of Colorado River Basin, Upper Basin, and Lower Basin as found in the 1922 Compact are adopted in identical language. By Article I (b) it is speci-
fically recognized that all of the provisions of the
Upper Basin Compact are subject to the 1922 Compact.

4. The Solicitor's Opinion of April 4, 1936. In
response to a request from the Secretary of the Interior
as to whether or not the Colorado River Compact permits
the transmountain diversions of waters of the Colorado
River from the natural watershed into other watersheds,
the Solicitor of the Interior Department stated it to be
his opinion that:

"... the Compact authorizes such diversions
if the diverted water is to be used within the bound-
daries of the States through which the Colorado River
System extends and, of course, if the amount of that
diversion does not create a use of Colorado River
water in excess of that allowed by the provisions
of the Compact." (Emphasis supplied)

The Solicitor quotes Sections (f) and (g) of Article II
of the Compact defining respectively the Upper Basin and
the Lower Basin and states that from such provisions "there
can be no doubt that the Compact authorizes the diversion
of allocated water into other watersheds within those States."

The Solicitor calls attention to Article II (b) defin-
ing the term "Colorado River Basin" and he says that it is
ambiguous because of the reference to the other territory
which
within the United States/might be either within or without
the States through which the Colorado River System extends. He concludes that this ambiguity is resolved by the provision of Article I which is to the effect that the Colorado River Basin is divided into two basins and an apportionment of the water of the Colorado River System is made to each of them. He summarizes:

"Thus it becomes clear that the Compact does not contemplate the diversion of Colorado River waters for use in any State other than those specifically mentioned as Basin States, namely, Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming." (Emphasis supplied)

It should be noted that in the first quotation from the Solicitor's Opinion he uses the phrase "to be used" and in connection with that phrase does not use the word "consumptively." Also in the second quotation he refers to "the diversion of Colorado River waters for use," but does not insert "consumptive" before "use."

5. The issue to be determined. This memorandum is directed solely to answering the question of whether a violation of the Colorado River Compact of 1922 occurs when water diverted out of the natural basin of the Colorado River is not entirely consumed within a State through which the Colorado River System extends and by reason of such failure
to entirely consume that water all or portions thereof are permitted to flow into a State which is located without the natural basin of the Colorado River. No consideration will be given to the question of the right to control the use of return flow resulting from diversion of water into one stream basin from another stream basin. The controversial subject of the right to control the use of such water and the return flows therefrom is immaterial to a determination of the basic issue.

6. The factual situations. Diversions of water from the natural basin of the Colorado River are now and for a long period of time have been made in substantial quantities in the States of California, Colorado and Utah. In California water is taken from the Colorado River by the All-American Canal for use in the Imperial Valley which lies outside the natural basin of the Colorado River as it now exists. Substantial quantities of such water for long periods of time have been and now are wasted in the Salton Sea. The water so flowing into the Salton Sea results from return flows from irrigated areas and from the use of water in the generation of hydroelectric power at plants located along the All-American Canal which is not thereafter applied
to irrigation or domestic uses.

The Metropolitan Aqueduct diverts water from the Colorado River for use in Los Angeles, San Diego, and other areas of Southern California. The use of water carried through the Metropolitan Aqueduct is primarily for municipal purposes. It is well known that return flows from municipal uses are large and may vary from 50% to 90%. The return flows from such Southern California municipal uses go into the Pacific Ocean.

In Colorado for some sixty years there have been diversions from the natural basin of the Colorado River into the basins of the South Platte and Arkansas Rivers. One of the oldest of such projects is the Grand River Ditch which diverts an annual average of about 18,000 acre feet of water under priorities which antedate the year 1900. The Independence Pass diversion from the Roaring Fork River into the Arkansas amounts to an annual average of some 30,000 to 40,000 acre feet. The City and County of Denver diverts water from the Fraser River through the Moffat Tunnel into the South Platte drainage for municipal uses. It has been estimated by the engineering staff of the Colorado Water Conservation Board that present transmountain diversions of
water from the natural basin of the Colorado River into Eastern Slope streams average 97,400 acre feet annually. The Colorado-Big Thompson Project, which is now nearing completion, is designed to divert 310,000 acre feet of Colorado River water annually. Reliable engineering studies indicate that transmountain diversions of water from the natural basin of the Colorado River to the Eastern Slope in Colorado under the projects now existing, those authorized for construction, and planned extensions of existing diversion projects will amount to slightly over 500,000 acre feet of water annually. Such water is and will be used for domestic and municipal purposes, for irrigation and for the generation of hydroelectric power. Return flows from such uses will be to the South Platte River, which flows from Colorado into Nebraska, and to the Arkansas River, which flows from Colorado into Kansas.

Projects are planned for the exportation of water from the natural basin of the Colorado River to the Rio Grande in New Mexico. Such water will be used for domestic, municipal, irrigation, and power generation purposes. Return flows will go into the Rio Grande which flows from New Mexico into Texas.
The Central Utah Project contemplates the exportation of water from the natural basin of the Colorado River into the closed basin of Central Utah. Apparently return flows from such exported water cannot physically go into a State which is not a Colorado River Basin State.

Arizona has projects for the exportation of water from the basin of the main stream of the Colorado River into the Gila River, a tributary of the Colorado River. Return flows from such uses will go to the Gila River and will not flow into any State which is not a Colorado River Basin State.

At the moment there appears to be no project in Wyoming which will contemplate the use of Colorado River water outside the natural basin of that stream.

7. The legal questions involved. The factual situation being such that there are in existence, and planned for the future, projects which involve the diversion of Colorado River water without the natural basin under conditions wherein all such water is not used within a Colorado River Basin State, but rather permitted to flow either into the Ocean or into another State, it must be determined whether or not there is any legal inhibition of such use. My atten-
tion has not been directed to, and I have no knowledge of, any Federal or State statute which has any bearing on this subject. The only substantive law which has any application is the Colorado River Compact of 1922. As the Upper Basin Compact of 1948 recognizes the 1922 Compact as paramount, it may not in any way directly affect the issue here under consideration. Hence, the terms of the 1922 Compact are controlling.

It should first be noted that there is no express prohibition in the 1922 Compact against the use in a State other than a Colorado River Basin State of waters resulting from the return flows of exported Colorado River waters. Any such prohibition, if it exists, must be based upon some implication arising from the language of the Compact.

The Compact in Article I states that the Colorado River Basin is divided into two basins and an apportionment of the use of part of the water of the Colorado River System is made to each. The Upper Basin and the Lower Basin are each defined in Article II so as to include parts of the Colorado River Basin States located without the drainage area of the System and beneficially served by water diverted from the System. Article III apportions to each Basin
"the exclusive beneficial consumptive use" of specified quantities of water. Article IV (b) provides that water may be impounded and used for the generation of electrical power, but such impounding and use is subservient to the use and consumption of such water for agricultural and domestic purposes and shall not interfere with or prevent use for such dominant purposes. Article III (e) of the Compact reads thus:

"(e) The States of the Upper Division shall not withhold water, and the States of the Lower Division shall not require the delivery of water, which cannot reasonably be applied to domestic and agricultural uses."

No other provisions of the 1922 Compact appear to be pertinent.

So far as the apportionment is concerned, water diverted from the natural basin is entirely lost to that basin. This is true whether beneficial consumptive use is measured by the depletion theory, by the diversion-less-returns theory, or by some other theory. Hence, a charge must be imposed against the Basin and against the State in which such trans-basin diversion occurs, and this charge must be in terms of the gross amount of the water actually transported outside of the natural basin of the Colorado River.

Each Basin and each State being subject to a charge in the quantity of the gross amount of water transported
outside the natural basin, it would seem that, except for
the provisions of Article III (e), there can be no justifi-
fiable complaint so long as such water is put to beneficial
use.

It is elementary law in all the Colorado River Basin
States that the use of water for domestic, municipal,
irrigation, and power generation purposes is beneficial.
It is also elementary law in those States that water may
not be wasted.

I find nothing in the Colorado River Compact which
expressly or impliedly forbids the transmountain diversion
of water from the natural basin of the Colorado River when
and if such water is put to beneficial use for domestic,
municipal or irrigation purposes, even though there is a
return flow from such use which enhances the flow of the
stream into the Basin of which such water is brought and
such increased flows pass outside of a Colorado River Basin
State. There is nothing in the 1922 Compact which indicates
that the framers of that Compact, or the States in ratifying
the Compact, or the Congress of the United States in giving
its consent to that Compact intended that Colorado River water
must be entirely consumed within a Colorado River Basin State.
At the time of the negotiation of that Compact the Grand River Ditch diversion existed in Colorado and the Denver municipal diversions and others were known to be under contemplation in Colorado. Also the diversions to the Imperial Valley of California were in existence and the diversions to the Los Angeles-San Diego areas were in contemplation. It is reasonable to infer that the men who wrote the 1922 Compact must have realized that there would be transbasin diversions of water for municipal and irrigation purposes and that there would be substantial return flows therefrom. If the drafters of the Compact had intended that such return flows should not pass without a Colorado River Basin State they could easily have written a direct prohibition in the Compact. They did not do so.

1/ This is conclusively shown by the statements of A. P. Davis, Director, United States Reclamation Service, Department of the Interior, contained in his January 30, 1923 letter to Hon. Carl Hayden. This appears in the Congressional Record January 30, 1923, pages 2713-2717 and is found at pages A45-A56 of the 1948 edition of "The Hoover Dam Documents" by Wilbur and Ely. Therein Director Davis in response to questions by Representative Hayden states that the existing transmountain diversions in Colorado from the Colorado River System amount to 127,000 acre feet annually and the proposed diversions to 317,000 acre feet annually.
It is unreasonable to read into the Compact by inference or implication a provision which would require the City of Los Angeles to prevent any Colorado River water from finding its way to the Pacific Ocean, or which would prevent the City of Denver from returning to the South Platte River any drop of Colorado River water which Denver exported from the natural basin. It is not within the realm of common sense to believe that the signers of the 1922 Compact intended to require the farmers who secured water from the Grand River Ditch to use up all of that water so that none of it might find its way back to the South Platte River and, as a part of that river, to the State of Nebraska.

Uses of water for hydroelectric power generation are in a different category because of the provisions of Article III (e) which state that the Upper Division cannot withhold and the Lower Division cannot require the delivery of water "which cannot reasonably be applied to domestic and agricultural uses." Hence water may not be diverted from the natural basin and withheld when such water is to be used solely for the generation of hydroelectric power and when such water is needed for domestic and agricultural uses. A diversion of water from the natural basin for purely hydroelectric power
generation under circumstances wherein the water after being used for power generation is permitted to flow into a State which is not a Colorado River Basin State constitutes a violation of the 1922 Compact, if at the time of such transmountain diversion the water is needed by a Colorado River Basin State for domestic or agricultural uses.

There would not, in my opinion, be a Compact violation if water diverted from the natural basin and used for power generation is thereafter beneficially used for either domestic or agricultural purposes in a Colorado River Basin State.

The views expressed above do not conflict with the April 4, 1936 Opinion (No. M28389) of the Solicitor of the Interior Department. As I pointed out above, he states that a transmountain diversion of Colorado River water is proper if the diverted water is to be used within a Colorado River Basin State. He does not say "consumptively used." Likewise he states that the Compact does not contemplate the diversion of Colorado River waters for use in any State other than a Colorado River Basin State. This is no holding against the diversion of Colorado River water for use in a Colorado River Basin State and it does not say that such use must be entirely consumptive.
8. The effect of Colorado River discharges into the Gulf of California. At the present time there is an annual discharge from the Colorado River into the Gulf of California of some 8,000,000 to 9,000,000 acre feet of water per year. It may be suggested that until there is a substantial decrease in the quantities of water so lost to the Ocean there is no point in considering the question as to whether or not a Compact violation occurs when Colorado River water diverted from the natural basin of that stream is not entirely consumed within a Colorado River Basin State. In my opinion there is some merit in this argument when it is considered with reference to Article III (e) of the 1922 Compact which provides that the States of the Upper Division shall not require the delivery of water which cannot reasonably be applied to domestic and agricultural uses. Unless and until some Colorado River Basin State is deprived of water to which it is entitled for domestic and agricultural uses by reason of the transbasin diversion of water which is not consumptively used within a Colorado River Basin State, there appears to be no basis which would justify a claim of violation of the Compact because of the exportation of such water from the natural basin.
Any diminution in the Lee Ferry flows decreases the amount of water available for power generation in the Lower Basin. However, the protection of Article III (e) does not apply to hydroelectric power generation. Hence, under the Compact the Lower Basin is in no position to make any complaint against a diminution of Lee Ferry flows when the sole ground advanced is that of a decrease in the quantity of water which may pass through the turbines for power generation.

9. The California situation. Attention has heretofore been directed to the comments of the Colorado River Board of California on the proposed Fryingpan-Arkansas Project. Therein it is stated that adequate assurances should be made by Colorado that water exported to the Arkansas must be consumptively used in Colorado and that the flow of the Arkansas at the Colorado-Kansas State line shall not be augmented by return flows from Colorado River water. If this position of California is well taken, then the water diverted to the Los Angeles-San Diego area must be completely consumed so that none thereof flows into the Pacific Ocean. Most obviously if Colorado is required to consume within its borders every drop of water diverted from the Colorado
River, the same requirement applies to California. In a different way California, if it relies upon the principles stated in the aforementioned comments, is making an improper use of water through diversions by the All-American Canal. Unless the flows into the Salton Sea are only such as result from a reasonable beneficial use of water for domestic and irrigation purposes such discharges into the Salton Sea are improper under the California theory. If there are excessive flows into the Sea because of the application of unreasonable amounts of water for domestic and agricultural uses, then that constitutes a waste of water. It has heretofore been pointed out that uses of water for hydroelectric power generation are subordinate to domestic and agricultural uses. Hence, any uses of water diverted from the Colorado River by the All-American Canal for the sole purpose of power generation may not be asserted as against the claim that the water is needed elsewhere for agricultural and domestic uses.

10. Policy of the State of Colorado. The law of the State of Colorado permits the transmountain diversion of water and recognizes that there may be return flows from such imported water.
As heretofore stated, this memorandum does not concern the control of return flows from the uses of such foreign water. Be that as it may, there is nothing in Colorado law which requires that all of such water brought from one basin into another must be consumptively used within the State of Colorado.

The South Platte River Compact of 1925 makes an apportionment between Colorado and Nebraska of rights to the use of water flowing in the South Platte River. There is nothing in that Compact which increases the rights of Nebraska when Colorado diverts across the Continental Divide additional water to the South Platte Basin. Uses by Nebraska of South Platte water in excess of the quantities required by the Compact to be delivered to Nebraska do not create in Nebraska any firm right to require the delivery by Colorado of additional quantities of water in the South Platte River.

So far as the Arkansas River is concerned the interstate rights and obligations of Colorado and Kansas are determined by two decisions of the United States Supreme Court and by the 1949 Compact between those two States. The situation
here is comparable to that on the South Platte. Kansas does not secure any firm right to any flows from Colorado which exceed the amounts to which Kansas is entitled.

To accept the principle that every drop of water diverted to Eastern Colorado from the natural basin of the Colorado River must be consumptively used in Colorado is to inject confusion and uncertainty into the administration of the waters which Colorado is entitled to use. It is submitted that from a theoretical standpoint there is no way by which it can possibly be determined that every drop of water diverted from the Colorado River in Colorado is consumptively used within Colorado. The Colorado River water is commingled with the water of the stream basin into which it is brought. After such commingling there may be no exact determination as to the place and extent of use of foreign water as contrasted with native water.

From a practical standpoint Colorado can ill-afford to accept the California principle that the transmountain water must be entirely used within a Colorado River Basin State. Take for example the use of water by the City and County of Denver. Very substantial return flows accrue from such
municipal use. It is not compatible with common sense to say that Denver must see to it that every drop of water which it diverts from the Colorado River Basin is consumptively used within Colorado and that, in the absence of an assurance by Denver that such consumptive use of water will be made, Denver may not divert and use Colorado River Basin water.

If the policy of the State of Colorado is to make beneficial consumptive use of its allotted share of Colorado River water, then it should resist to the utmost any effort to construe the Colorado River Compact in accordance with the principles noted in the California comments above.

11. Conclusion. My conclusions are these:

(a) The transmountain diversion of water from the natural basin of the Colorado River is proper under the Colorado River Compact of 1922 and under Colorado law.

(b) Water so diverted from one basin to another must be used for a beneficial purpose and if used for domestic or agricultural purposes which result in return flows of such water to the stream basin into which the diversion is made and such return flows augment the quantity of water
flowing to a downstream State which is not a Colorado River Basin State, there is no violation of the Compact provided such domestic and agricultural uses are reasonable and not wasteful.

(c) If water diverted across the mountains from the natural basin of the Colorado River is used solely for the hydroelectric generation of power and if such water enters an interstate stream and augments its flows to a State which is not a Colorado River Basin State, such use is a violation of the Compact if the water so used is currently needed in a State of the Lower Division for domestic and agricultural uses.

(d) It is not proper State policy to attempt to justify the construction of a dam upon a stream into the Basin of which Colorado River water is brought upon the basis that a violation of the 1922 Compact will occur unless all of such water is consumptively used within the State of Colorado and that the construction of such dam is necessary to assure such use.

(e) The policy of the State of Colorado should be that it intends to consumptively use within the State all of the water to which it is entitled. Hence, it will make every
reasonable effort to assure such use. The construction of a dam upon a stream into the Basin of which Colorado River water is brought may be justified upon the principle that such a dam will make possible a greater consumptive use of the water allocated to Colorado.

Jean S. Breitenstein
Attorney for Colorado Water Conservation Board

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