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DEPARTMENT OF THE INTERIOR

In the Matter of:

SECRETARY'S CONFERENCE

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DEPARTMENT OF THE INTERIOR

SECRETARY'S CONFERENCE

WEDNESDAY, JANUARY 24, 1962 11:00 a.m.

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Philander P. Claxton	Deputy Assistant Secretary of State for Congressional Relations
L. H. Hewitt	U. S. Commissioner (International Boundary & Water Commission)
Joseph Friedkin	Principal Engineer (Supervising) U.S IBWC
Robert M. Sayre	Officer in Charge of Mexican Affairs, State Department
Alan Neidle	Office of Legal Adviser, State Department
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Congressman D. S. Saund	California
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Robert McConnell

CONFERENCE MINUTES

SECRETARY UDALL: Gentlemen, we might as well get started. We appreciate having all of you here, and we are particularly delighted to have Senator Hayden with us here today. He not only has a better understanding because he has been around longer than most of us, has a whole history of this area under this problem, but he has participated in most of the events leading up to the situation we now find ourselves in. He has done, I think, some of the best thinking that has been done lately about where we go from here.

Let me just say a few things in a general way and then I would like Deputy Assistant Secretary of State. Mr. Claxton, to review the situation as the State Department sees it, Colonel Hewitt of the International Boundary and Water Commission and Commissioner Dominy.

We want primarily, however, because I think it is the thing above all that is needed, an understanding of facts to keep this on as factual a level as possible, both in terms of everyone getting the facts clearly in mind and directing our attention to possible solutions. We don't want simply to have a futile argument with our neighbors to the south, we would like to understand how to handle this water problem so that it is, if possible, tolerable to us and tolerable to them. That is about the best that we can hope for.

Let me make just a few general points on this. Of

Treaty which is a watter of record. Some of the people here know more than I about the background of the treaty, the things that were its terms, the things that were discussed when it was up for ratification. The treaty, as I gather it, is silent with regard to quality of water. Indeed there was, I think, discussion at the time of the treaty which indicated that of course since the Mexican farmers are the last men on the ditch, the last man on the ditch never gets the quality of water that the first man does or the people along the middle. This is a very important part of the problem.

As I think all of you know, and Floyd can cover the highlights on this, in the type of soils that we have in the Wellton-Mohawk project in Arizona and the project in the Yuma area, we have salinity problems. All of this area, or much of it was at one time under water, it was part of an inland sea. When you put water on it and begin irrigating, the salt comes up. We have had problems in most of these projects, and we have drains provided for most of these projects.

These drains, as Floyd was telling me this morning, they take the Wellton-Mohawk project and they put water on it. That has about 900 parts of Set. The water that goes in and comes back out and goes into the river has 6,000. We knew this, this is no surprise. We knew it when the projects were put in.

One of the obvious solutions to the problem is that we help as best we can on the things that we control in terms of blending water so that the water as they get it has the minimum that is possible under the circumstances. I think the second part of the problem, however, rests beyond the international boundary with the farmers in Mexico where they have an opportunity to do blending of their own through wells so that if there are periods when the salinity content of the water is higher than other periods they can do a blending process.

There is also the question of whether drainage, which is the ultimate solution to serious problems of this kind, whether their system of drainage is adequate. Senator Hayden himself suggested sometime ago, we want to give him credit for thinking ahead on it, that it might be worth some thought and consideration as to whether using our experts and knowhow that we could help the Mexicans solve their drainage problem which apparently they are not doing too much about, perhaps as part of the Alliance for Progress Program, something of that sort.

These are some of the very broad and general considerations about which we will now hear from Secretary Claxton. I am sure he will want to give us some particular insight that some of us don't have as to what the internal politics are, if I may say so, and what the situation is in

this part of Mexico. All of us have seen the ads in the newspapers, we have seen some articles, but I think we would like to know among other things just what is going on down there.

MR. CLAXTON: Mr. Secretary, we have prepared a very brief statement which we will pass around so you may take it with you referring quite briefly to our legal views of the situation and the Mexican views and some other matters which have transpired in the last few months. This will be distributed, and since you will have it I won't read it actually but merely indicate a few of the points.

Let me say, sir, we have tried to bring with us this morning experts who would be able to answer questions of various points of view in this matter. We have with us Colonel Hewitt who is the United States Commissioner on the International Boundary and Water Commission. We have Mr. Joseph Friedkin who is his principal engineer. We have Mr. Sayre who is the officer in charge of Mexican affairs who is of course much more closely acquainted with the Mexican viewpoint and much better informed than I am and can answer questions directly on that. We have Mr. Neidle from the office of the Legal Advisor in the State Department. We have Mr. Tipton who was one of the negotiators on the Treaty at the time the treaty was negotiated and who is able to discuss from his own recollection the intention of the

parties at the negotiation of the treaty.

As to this document, the first paragraph merely explains the approaches which have been made to us by the Mexican Government first on an informal basis and then formally when a protest was lodged on November 9 by the Mexican Government in which the Mexican authorities stated their belief that the high salinity in the water reaching them is the result of pumping of underground and drainage water by the Wellton-Mohawk Irrigation District in Arizona and suggested that if the pumping were suspended then the problem of salinity of the water reaching Mexico might be solved.

The State Department has moved forward with the Department of the Interior to try to decide what the legal position of the United States Government is in this matter, what our legal rights are, and what could be done under the treaty to protect our legal rights in relation with Mexico and to take proper action in our relationships with this very good neighbor to the south.

In general, the 1944 Water Treaty we believe obligates the United States to deliver quantity — that is to say, 1,500,000 acre feet of water annually to Mexico — but it makes no reference to the matter of quality as Secretary Udall pointed out. The treaty makes no reference to the quality of the water but states in Article 10 that the water

allotted to Mexico may come "from any and all sources" and in Article 11 that the deliveries shall be made from the Colorado River "whatever their origin."

Now Mr. Tipton as I have said is here and at a later point he may give his views on what the intention of the negotiators were as he recalls them, being there at the time of the treaty. The hearings before our Senate clearly show that it was widely understood before ratification of the treaty that the saline condition of the water might increase and that the United States believed it would satisfy its obligations under the treaty by delivering water of relatively high salinity. In short, from our point of view the treaty deals primarily with quantity and not with quality.

Understandably, of course, the Mexican Government is taking a different point of view. They urge on us that the treaty was intended to allot the waters of the Colorado River for usable purposes, and they refer to the stated purposes in the treaty which include domestic and municipal uses and agriculture. As stated here, Article 3 of the treaty provides that preferential attention shall be given to sanitation problems and that as a guide the order of preference shall then be domestic and municipal uses, agriculture and stock raising, electric power, other industrial uses, navigation, fishing and hunting, and any other beneficial uses.

The Mexican view would acknowledge that the deliveries

that the water being discharged into the Colorado River system by the Wellton-Mohawk Irrigation District are in the words of the Mexicans. In this sense, the difference with Mexico is not legal, but a factual one; that is to say, Is the pumping from the Wellton-Mohawk Irrigation District return flow resulting from normal irrigation practice? In our view it is and does result from normal irrigation practice.

Now turning from the legal issue and getting to the question of the usability of the water which comes down the river to the Mexicali Valley area, the board of consulting engineers which studied the problem on an emergency basis in December 1961 advised us that the usability of the water does not depend solely on the quality of the water as the Mexicans tend to imply but in fact depends on at least six items. One of those of course is the quality but also the soil conditions, the crops to be grown, the irrigation system which is used, the practices of irrigation, and finally on the drainage system which exists in the area where the water is used.

Our engineering consultants concluded that the present Colorado River water could be temporarily used advantageously for Mexicali Valley irrigation by following good water and soil management practices. It should also be noted that the treaty contemplated many uses for the water other than irrigation, the uses which I refer to at the top of

page two.

Now leaving aside the legal problem, our view is of course that we should try to take such action as is possible to find a permanent solution for the problem. One offer of a solution has already been made so far as municipal water supply of Mexicali Valley is concerned. Our Imperial Irrigation District offered to supply water through the All-American Canal if arrangements could be worked out to receive it. The Mexican authorities declined this offer because it did not provide any solution to what Mexico considered to be the basic problem; that is to say, irrigation water for the Mexicali Valley itself.

On December 12 of last year the Mexican authorities decided that the water being delivered would be injurious to crops and land in the Mexicali Valley and they stopped diverting water at Morelos Dam. In an effort to bring about a solution to what the Mexicans considered an emergency situation, the Departments of State and Interior sent consulting engineers to the Mexicali and Yuma Valleys during the week before Christmas. These engineers rendered a report on December 26.

The report of the engineers found that the crops in the Mexicali Valley did not appear to have suffered damage that could be attributed to the salinity of the water delivered to Mexico under the treaty. They advised that, on the

contrary, the scheduled water might have been used for the crops planted without important damage to them. They stated that with the existing drainage system in the Wellton-Mohawk Irrigation District substantial curtailment of drainage pumping would probably cause adverse effects on the groundwater situation. They concluded that the Mexican farmers should have used the water. They pointed out, however, that water of high salinity might cause injury to crops in the Mexicali Valley if used indefinitely without modification of the irrigation system and suggested that certain drainage and other measures should be undertaken in the Mexicali Valley.

The Department of State discussed the substance of the report with the Mexican Ambassador on December 27 and later on the Mexican Government requested, and the United States agreed, to an extraordinary revision of the 1962 schedule of water deliveries to Mexico. This temporarily solved the problem but a permanent solution is required.

The Department of State has requested the United States Commissioner on the Boundary Commission to have the Commission undertake the necessary studies looking toward such a solution. Our belief is that unless some changes are made, we do not anticipate in the foreseeable future an improvement in the salinity of Colorado River waters during the winter months. We have therefore requested that the Boundary Commission handle the problem as a matter of urgency

in the hope that changes may be made to effect an improvement before this coming winter.

SECRETARY UDALL: Was there any exploring done with the Mexican Ambassador at this stage with regard to whether their reaction to this initial report or their reaction to our proposal that long range programs and solutions would be worked out perhaps on a cooperative basis, did we get any initial reaction there?

MR. CLAXTON: Mr. Sayre could better answer that.

MR. SAYRE: Well, the Mexican Ambassador's position on that is that we should proceed immediately to work out a solution to the problem and leave to a later time the interpretation of what the treaty means. He is most interested in getting an immediate solution of the problem.

important that we act and behave like a good neighbor without indicating we have a bad conscience or that we think the treaty is unfair or that we are not adhering to it. If we move in this way, we might be able to work out a program; otherwise, if they get to feeling that they have got us on a spot or that we are in the wrong or something, that all they have to do is stir up a rumpus and put some ads in the newspapers back here and they can get us to change our method of handling our problems. This is what has been of particular concern to the Department here, and we cooperated all the way.

Indeed, we have had our Bureau of Reclamation people making a study on their own.

Let us get one or two other presentations here and we can throw it open for questions. Colonel Hewitt, do you want to make a statement at this time or do you just want to answer questions later?

MR. HEWITT: I think we probably better wait and answer the questions which undoubtedly these gentlemen would like to ask.

SECRETARY UDALL: Floyd, do you want to round out any other general matters?

MR. DOMINY: I think, Mr. Secretary, your statement and that of Assistant Secretary Claxton has presented a factual and accurate statement as to the chronology of this current problem. As I understand it there was complete agreement between our two departments on the interpretation of the treaty and the intent when it was negotiated from a legal standpoint.

We are now without authority to schedule releases in excess of 1,500,000 acre feet under the treaty except when a finding can be made that there is surplus waters in the Colorado River. All of the development on that river already in place and under construction of this can hardly be done. The present situation was certainly anticipated in my judgment when the treaty was negotiated as is evidenced by the 1945 hearings before the Senate Foreign Relations Committee. You

will recall also that at that time there was contemplated irrigating many times more land in the Wellton-Mohawk area than is now being irrigated so that actually a much more serious situation was actually evidenced.

At the request of Senator Hayden which you mentioned a moment ago the Bureau of Reclamation has prepared an outline of actions, and it could be taken in Mexico and in the United States, that relate to the problem and the total water conservation on the Colorado River. We can go into that as fully as you would like. I personally believe that the greatest good can come from this meeting if we let everyone answer questions here and bring the information out. I might point out one or two things.

During 1961 from the Wellton-Mohawk Division there was 153,000 acre feet of return flow into the river with an Per Million (f.P.m.) average quality of 6,000 parts of vermilton. South Gila contributed 50,000 acre feet with an average quality of 3,000 P.Pm. parts vermilton. The Yuma Valley, 100,000 acre feet and 1,800 P.P. m. and 2,000 parts vermilion.

Now from Mexico back into the United States it might
be interesting to note that in the New River they contributed

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used to be in the will in the will not go into the details of various proposals of long range nature, Mr. Secretary, at this time unless you so desire.

SECRETARY UDALL: Floyd, let me ask one question that occurs to me and seems to be quite important. These lands in what they call Mexicali Valley, are they similar in soil content and salinity and all to the other lands in Arizona and California?

MR. DOMINY: Well, generally so, I think. There is a great deal of difference in various parts of the valley.

Some of it is, and it is quite heavy and cannot take the saline water to very good advantage unless very extensive drainage is provided. Other soils in the Mexicali Valley are similar to those in Arizona and California. They are more porous and under proper management could use water quite saline in quality without adverse effect.

SECRETARY UDALL: Do they have any of the type of drains that we have already established in some of our projects at the present time?

MR. DOMINY: It is my understanding from my own observations, plus those of this drainage, that only a portion of the Mexicali Valley has actually a semblance of a reasonably good drainage system. Most of the Mexicali Valley is without a well constructed and maintained drainage system.

SECRETARY UDALL: I see.

We are also happy to have Congressman-Song who is the next door neighbor to this problem with us this morning.

Any questions, gentlemen?

Senator Hayden might have a few comments. He has been with this problem longer than any of us.

SENATOR HAYDEN: The statement with respect to the treaty is the way I understood it when we ratified the treaty, when I wrote it for them. With respect to the area under cultivation in the Mexicali Valley, my understanding is, and I have looked at the maps, they are actually cultivating more land down there now than could be cultivated with a million and a half acre feet of water. In other words, there has been a surplus of water going into Mexico over the years. They have spread it out and spread it out so that when the time comes that they must confine themselves to a million and a half acre feet they put in more land than there is water for. I think that is a factor that we have to take into consideration.

Now as to the drainage of that area, I am not clear.

At the present time ti goes down into the Salton Sea?

MR. DOMINY: Virtually. Well, most of the Mexicali Valley would naturally drain toward the Salton Sea rather than back to the river.

SENATOR HAYDEN: Now if you established a general drainage system in Mexico, increased the amount of water that

was saline water that came out, would that not have an effect of raising the Salton Sea and have a detrimental effect on the United States?

MR. DOMINY: It could.

SENATOR HAYDEN: Then does not consideration have to be given in a program we work out that the drainage water taken out of these Mexican lands be dumped either into the Gulf of Mexico or the lower reaches of the Colorado River?

MR. DOMINY: I think this would be desirable from our standpoint, yes.

SENATOR HAYDEN: It just occurs to me that the situation there, that the Anderson Clayton Company want as much cotton continued down there as they possibly can and encourage the development of this area beyond what the amount of water allowed by the treaty will irrigate. That is a fact that has got to be faced, I think.

SECRETARY UDALL: Floyd, do we have any drains from the Imperial project into either the New River or the Alamo River?

MR. DOMINY: Yes. The Imperial irrigation drains into the Salton Sea as well.

SECRETARY UDALL: Is the draining system the type we have in the Yuma District?

MR. DOMINY: Yes, that has a very extensive irrigation system.

THECRETARY UDALL: Of course the type of land does not change when you hit the border, generally speaking.

MR. DOMINY: Not abruptly, no, sir.

I have two people here that I want to introduce.

Mr. Oliver, who is our river control man, and Mr. Langley

from our operational maintenance staff.

SECRETARY UDALL: What is the present level of the Salton Sea and what has been the trend there in recent years? Can anybody answer that?

MR. DOMINY: Mr. Langley or Mr. Oliver.

MR. OLIVER: It has risen to an elevation ef 210,

SECRETARY UDALL: There has been a tendency for it to rise?

MR. OLIVER: There has been since 1950 an increase in elevation.

SECRETARY UDALL: I notice some of the **Toreign* lands here, judging by this map I have here anyway, come right up to what would, I suppose, be a theoretical high water mark of the Salton Sea area.

MR. OLIVER: Very close to the Salton Sea down at the lower end.

SECRETARY UDALL: The only factors you have working with an inland sea of this kind is a normal evaporation depleting and whatever is put in is what comes in from the rivers and

drainage nearby.

MR. OLIVER: Yes.

MR. TIPTON: I think, Mr. Secretary, the stabilization has been reached when about a million acre feet goes in, million acre feet evaporated. It has been the policy of the Irrigation District as I understand it to keep the sea about that level. It was at one time down at 235. The waters come in and again develop land and then claim water. They don't want that.

SECRETARY UDALL: We have a tough and wiry breed of squatters in our part of the country, I will say that. It is probably attributed to the native American strain.

SENATOR HAYDEN: I happened to see the Salton Sea when I was a young man when it was dry. They were shipping salt out of there before the river broke through. With three carloads of cattle and my prod pole, we stopped at a siding for a passenger train to pass and I had a chance to go out there. Liverpool Salt Company was then sacking salt and shipping it out there.

SECRETARY UDALL: I want to ask you what year that was, Senator.

SENATOR HAYDEN: About nineteen nundred three or four.

SECRETARY UDALL: Not so long ago.

MR. HOLUM: I think it might be useful to open up

the discussion.

SECRETARY UDALL: Floyd, why don't you go through the suggested possible courses of action type of problem that you people have there.

MR. DOMINY: Recognizing that over the long pull the Colorado River is a river in very short supply in terms of demand of quantity, we feel that there are a number of things that ought to be considered both in Mexico and in the United States over the long range to make certain that the full utilization of the Colorado River can be made possible for agriculture and other economic developments.

In Mexico we certainly feel that a detailed land classification to select land resources best suited for sustained irrigation, considering the long term quantity and quality of water resources available to them from the river, ought to be undertaken.

We feel that there ought to be an evaluation of their existing wells and potential ground water source for additional wells for supplemental irrigation water supply.

This would involve a further interconnection of the wells having suitable quality of water with their main canal system.

We certainly feel that a land classification ought to be supplemented with a drainage survey.

Then there ought to be a layout of a long term drainage works program, together with recommendations for

operation and maintenance. We understand that Mexico may have a drainage system designed but only a very little of it is constructed. Assistance in review of designs and work programs might be accepted by Mexico.

Certainly there ought to be a construction and maintenance of at least the main drains.

There ought to be an effort to coordinate the cropping pattern, selection of crops and seasons, with the quality and quantity of water available under optimum monthly scheduling plus supplemental water from wells. That could be supplemented from the ground water.

There ought to be an extensive educational program on irrigation and soil management practices, especially as related to short term use of the more saline waters in the winter months.

On the basis of ground water supply and guaranteed annual water quantity under the treaty, schedule the treaty water in such a manner as to get maximum utilization from the total available water resources.

In the United States a long term program would involve a full scale activization of the Colorado front and levy system river channelization and rectification program.

A reconnaissance report on a fifteen year program for this work will be completed within the next sixty days. This would involve the field and office surveys preparatory to right-of-

way acquisition.

We ought to initiate dredging in the Cibola Division.

We ought to activate dredging programs below the Imperial Dam in the Yuma Division.

We ought to initiate an active phreatophyte control program along the river for water salvage.

considerable benefit could be accomplished by improving the stream regulation below Imperial Dam to avoid waste and over-deliveries beyond schedule when there are sudden changes in weather and irrigation demand and it is not needed because there is local rain, for example. In calendar year 1961 approximately 290,000 acre feet were delivered to Mexico over and above the 1,500,000 acre feet of treaty water and the 40,000 acre feet ex gratia water delivered in August and early September. This came about although we only released a total 5,000 acre veet above that that had been called for under our scheduling but sudden rains made it necessary, some of these deliveries, and went on down to Mexico.

For example, there is a pump back storage prospect at Senator Wash Reservoir just above Imperial Dam that could be used to divert this water.

Approximately 500 cubic feet per second ground water pump regulation in the Yuma area might be feasible so as to more accurately meet daily master schedules when storage releases reaching Imperial Dam are insufficient to supply

daily orders.

Of course we need to improve the system of river gages above and below Imperial Dam.

Maximum pumping of Wellton-Mohawk and South Gila drainage pumps in the summer months when the greatest amount of storage water is available for dilution, then minimum pumping in winter months would be desirable. This of course would require increased capacity in the Wellton-Mohawk drainage conveyance system. We doubt that this would be a proper charge against the Irrigation District if this were to be undertaken.

We ought to determine the feasibility of a separate conveyance channel to transport drainage water from the confluence of the Gila and Colorado Rivers to a point below Morelos Dam in the limitrophe section of the river, and permit the drainage water to waste if Mexico is willing to count this waste in its allotment. This would leave approximately 1,000 acre feet per day of good quality water out of Mexico's minimum daily schedule during the winter months.

While providing only a token solution to the immediate problem, a saline water conversion plant in the Yuma area offers distinct possibilities and should be considered. It is our understanding that there is interest in establishing a combination power generation and saline water conservation plant on a small scale using process steam reactors in the

40 thermo-megawatt size range. This size plant would process only about 3,000,000 gallons of water per day but would serve as a nucleus for later expansion, if feasible, and would be the first such plant coordinated with a Reclamation drainage program.

The limited amount of brine from a small plant could be utilized at, or near, the plant site for a small recreational area, or could be disposed of through evaporation beds. The power generated could be tied into the Federal Parker-Davis system and serve a critical demand need in connection with the above-mentioned regulatory pumping.

Now we recognize that all of these things are fairly long range in nature, many of them would be extremely expensive, but we submit that they may be something we ought to be shooting for over the long pull.

SECRETARY UDALL: I do not think there is any question, Floyd, on your last suggestion. Water being as valuable as it is, sooner or later when we get the solution, get the costs down, all of this water will be reclaimed by saline plants of one kind or another and this will be one of the answers to the problem.

We are still left with the more immediate problem.

I was curious about one other thing. I wonder if the State

Department people can enlighten us on this. Now this decision

made to not release water into the canal from Morelos by the

Mexicans, our people looked at it and said it would not hurt the crops; they decided that it would. Was this done, do we think, simply to precipitate this crisis, make it more severe, or was this based on someone's judgment who simply did not agree with our conclusions?

MR. HEWITT: Mr. Secretary, I feel that the desire of Mexico to eliminate all divisions from Morelos Dam was with the hope that the United States would realize that they needed drinking water in Mexicali Valley and that we probably would be glad to take care of that situation; but if they could tie the irrigation on to it, why they might be able to get the whole thing at once.

I believe that their decision was faulty. Certainly our investigation indicated that the water could have been used possibly for irrigation at the time. While it may not have been suitable as far as drinking water is concerned, they had the opportunity of getting that through the All-American Canal and they failed to take advantage of the offer. I think it was a forced play that went astray.

MR. MITCHEM: The statement is that Mexican authority decided; Mexican authority, local.

MR. HEWITT: They were the local people first. I believe eventually that the Government then did not do anything to change their decision.

I believe the Ambassador also came through with that

same idea, did he not, Mr. Sayre?

MR. SAYRE: The Mexican Ambassador in Washington told us that this had been done. I must assume that the Mexican Government is responsible for the decision but we have never been able to pin down exactly who made the decision.

SECRETARY UDALL: I forget whether it said on its face who sponsored this. Who paid for these newspaper ads?

This is a rather unusual international incident. Does anyone know?

MR. HEWITT: There was a group of local people in the Mexicali Valley.

SECRETARY UDALL: Farmers?

MR. HEWITT: Well, agents of various different associations, cotton growers and various others. There was some indication also that there was a Communist element that joined in on it.

MR. WITHER: I think it might be useful, Mr. Secretary, to know who the members were on our behalf if that is not Top Secret.

MR. HEWITT: Mr. Dienty was the member that was appointed by the Commission. Mr. Sorenson was appointed by the Department of the Interior. A representative of the Department of the Interior from the North Pacific area was also appointed, Mr. Peters.

SECRETARY UDALL: Do you have any expert here on the Alliance for Progress Program? I had assumed there are two types or several types perhaps of loans and funds perhaps to do some of this work, and we have done this. We have had some of the best people in our Department and the Department of Agriculture working on this problem in Pakistan, for example.

We could send teams of our people in to do some of the work if we could lay out a cooperative program, and that part of this wight be done in effect at our expense under a grant phase of the program. If we could work out a long term drainage solution that would be beneficial, this might be worked out on a long term loan basis.

I certainly think Senator Hayden's idea here is worth very careful consideration and ought to be explored fully because it is quite plain, I think, that we are going to have this thing flare up again from time to time unless we work for long term solution.

MR. CLANTON: I think I could comment on that, Mr. Secretary. The proposal which both the Senator and you have made does fall within the general scope. This is the type of thing we can supply technical assistance on to this country or any other country. It is clearly understood that agriculture will be one of the major elements in the Alliance of Progress Program. Loans for the sort of agricultural irrigation

development which would presumably be necessary here in the Mexicali Valley are typical of the sort of loan which the Inter-American Bank would consider under the trust fund which the United States has made available to it. One cannot prejudge what would happen but it is the kind of thing which could properly be considered.

MR. HEWITT: Could we inquire as to the nature of the water deliveries of Mexico set out in the statement?

MR. DOMINY: Yes. This is extraordinary rescheduling because under the treaty they have to give us a schedule several months in advance. We waived the requirements of the treaty and permitted them to reschedule in January and February, to take out quantities of water during those two months. They may have previously scheduled for calendar 1962. By doing this they of course are deleting the water with their own water into the river with their own allotment.

This of course proposes the question whether next summer when there will be reduced quantities available, less than that originally proposed in their original schedule, whether or not we won't have the same problem again next July and August as we had this winter in December and January. I personally know when the cotton needs water they will be back wanting as much as they had this winter.

MR. HEWITT: The same with the additional 40,000 next year, although at that time we did say that that would

not be allowed.

MR. OLSON: Mr. Secretary, we have seen here a list of possible programs that might be initiated by the United States. We would be interested in knowing which of these might provide some immediate relief in line with the State Department's expression of hope that something might be done before next winter.

MR. DOMINY: I personally think that the quickest aid to Mexico within their own resources under the treaty would be a careful analysis of their potential ground water existing and possibly additional wells. The quality of water that is good, that could be interconnected to better advantage with their main chanel system to provide the dilutent necessary during the winter months. I certainly do not see any immediate prospect of persuading the Wellton-Mohawk people to produce less drainage water than they are now producing. The drainage system was very carefully calibered to fit their requirements and they have to keep it pumping on an around the clock basis to keep their water table down within reasonable means.

I am sure Wellton-Mohawk, for example, will willingly Maintenance
schedule their allotment on their drainage pumps during the
critical period and they will cooperate in every reasonable
manner. Our estimates of how long it will be before the return
flow from the drainage pumping will improve. Of course this is
a fairly difficult matter to predict with any degree of accuracy.

We certainly do not anticipate any improvement for at least ten or twelve years. Following that there ought to be a gradual improvement in the quality of water of the river. This will give some long range assistance to this problem.

MR. TIPTON: Mr. Secretary, may I ask Floyd a question.

SECRETARY UDALL: Yes.

MR. TIPTON: I have read these recommendations, I read them before I came here. I think they are excellent. I think those with respect to Mexico, what should be done there, are just fine, excellent. One item might be added which I think is implied and that is leveling of the land. That is quite an important specimen in using the water, but every single item is very excellent. Drainage is certainly indicated.

Now on the United States side, the No. 3 item, the Wellton-Nohawk and South Gila drainage pumps might be used a greater amount in the summer months than they are in the winter months. I should think that a fairly rapid solution in that particular area might be the installation of additional wells and pumps at a cost to the United States so that the pumping would not have to be around the clock but the pumping could dominate the situation in the summer months and lay off a little bit in the winter months. An entire solution could be done in that fashion. Even having the pump in Pakistan where we identify

what was a very, very major project, millions and millions of acres of land, of water log and saline, we used that method.

The next point involves 2,000 miles and when the second part is ready to go there will be 32,000 pounds in all, many thousands of miles of surplus taking care of storm water. There we are sizing the pumps and water and so forth so they have to operate maybe 40 per cent of the time. You have a great flexibility. I should think the same thing should be done.

There would have to be a consent arrangement because you turned the operation over to them. They would have to consent to this type of program. I agree with the Mexico side that there is water potential there beyond that which has already been exploited, and that should be looked into. Canals to sufficient capacity to take that water to the wheat fields are not in the true Mexicali Valley, they are out on the edge. I should think the same should be done.

MR. DOMINY: Unfortunately, Mr. Tipton, it would involve more than the additional wells. The conveyance channels have been calibered to fit the existing wells.

SECRETARY UDALL: You will have to excuse me. I will ask Secretary Holum to preside.

MR. DOMINY: This is of course district operation and we are without authority to direct them to operate any differently than they have operated. I am sure they would be

fully cooperative if someone else were to stand the additional costs involved.

MR. CLAXTON: Could I just underscore what Mr. Tipton was saying. We were impressed also with the same point that was discussed, Point 3, in the suggested program by the Department as to the possibility of both supplying the needs of the Wellton-Mohawk District to move the ground water and at the same time to avoid putting the ground water into the river during the winter months, by doing just what you suggest here in installing additional pumps and having the same year around release, pumpage, by doing it in the summer. We would like to suggest that and emphasize that whatever considerations are undertaken by the Commissioners and by the Department as this thing develops, that this be given very serious consideration.

MR. HOLUM: I am sure it will be but I would underscore this is not a matter for the local people, it is a part
of the overall program to improve water quality in the Colorado
River.

SENATOR HAYDEN: Is it necessary to put on an overall program before this particular feature is considered?

MR. DOMINY: No, I think all of these points we make are independent one of the other, you won't get full results without doing them all.

MR. CLAXTON: This seemed to us to move very near the heart of the problem.

SENATOR HAYDEN: I think it is.

MR. CLAXTON: If it could be considered and undertaken first perhaps with the improvements on the Mexican side, it might move forward to solving the problem reasonably soon.

MR. DOMINY: I would like to ask Mr. Langley to comment on what would be involved in terms of time and money, if you have any estimate on increasing the size of that conveyance channel and the number of pumps and so on.

MR. LANGLEY: It depends some on how fast you want to step up this pumping course, but to do any good by next winter I assume you would have to step it up 50 per cent during the summer months. Based on the cost of the original channels, about the only guide we have, the original well system, there are about \$12,000,000 invested in the present drainage system up to this time.

I might mention also the would not only be a capitalization cost but this type pumping would increase the operation and maintenance costs on an annual basis, too, for two reasons. Particularly you would be pumping against a little greater head and you would have more wells to maintain, and the cost of maintenance is more related per well than it is per acre to be pumped.

MR. TIPTON: Twelve million dollars, that includes wells and conveyance now?

MR. LANGLEY: That is right. Some additional

picture would probably be added to the present conveyance system, so-called side boards on the conveyance channels, but this would not give you a very large percentage or cutback. Unless you would get a 50 per cent cutback during those four winter months, it would not make a significant contribution, or four and a half winter months.

MR. TIPTON: Six and a half million dollars, would that do it?

MR. LANGLEY: I can make an appropriate guess on this type of figure.

MR. TIPTON: Could it be done? I know what type of program it would be, it would be a crash program.

MR. DOMINY: It would have to be done in time to permit heavier pumping this summer. I think we are already too late.

MR. TIPTON: I think we will have the same situation next winter.

MR. DOMINY: As far as next winter, I don't think this would give us any alleviation.

MR. HEWITT: Two year program?

MR. DOMINY: Yes.

MR. LANGLEY: You cannot shut it down. You are going in reverse order if you shut it down to change.

MR. HEWITT: Is that channel entirely lined?

MR. DOMINY: Yes. See, we have the same problem. If we try to put this back in the river, we have the old fights and problems. We felt it would be waterlogging the land right back again so we made a line conveyance channel and pulled it out of the project entirely.

MR. TIPTON: The thing to do is double barrel.

MR. DOMINY: It is possible.

SENATOR HAYDEN: How would you increase the size of that?

MR. DOMINY: It is entirely possible. It is pointing out you may be able to do it by just building an additional
free board on your conveyance system. It depends a little bit
on how the thing is designed and so on. I cannot state categorically that this would be possible. It might be necessary
to put a parallel line in. You might have to put a second
barrel in, and there are probably some siphons and features
like that that could not be increased in capacity. You would
have to build a second tube. It is not a simple problem.

The right-of-way acquisition will be difficult because this is right down through the irrigated land. There will be some resistance to an additional construction program right through the irrigated farms, I am quite sure.

MR. TIPTON: Let me ask this question, you have put it down as a possibility. To us, and when I am saying "us" I am speaking for the International Boundary and Water Commission,

this is a very important item and we have been offered a pretty good solution. As far as the Department of the Interior is concerned, it would have no objection to studying it in detail.

MR. DOMINY: None whatsoever. We would certainly have to take a very careful look as to what it would do to the irrigated areas and how much additional land, and all of that would have to be taken into account as to its ultimate feasibility.

MR. TIPTON: If you put side boards on, you might siphons have double barrels on the side boards.

MR. DOMINY: It is entirely possible. We listed it because we think it is one of those things that may be realistic, practical of achieving.

MR. HEWITT: That would, as contrasted with No. 4, make a considerable difference in that Mexico of course objects and will continue to object to salt water. That would, under those circumstances, permit us to utilize all of our return flows which is desirable from the point of view of the United States.

MR. DOMINY: Exactly.

MR. WITMER: Is that a year around figure?

MR. HEWITT: Actually, I think it is a little higher than that now.

MR. OLIVER: It is a little higher. A good average, all the wells are new and none are down for maintenance at this

time from a factual standpoint.

MR. HEWITT: After adding some of the water to that?

MR. LANGLEY: That is the second figure there which is not up to that figure yet. It would be the South Gila.

MR. WITMER: The reason I ask that is, Is there any place in which part of that 300 second feet could be dumped during those years in which you can deliver the 1,500,000 otherwise?

MR. DOMINY: That would be Point 4.

MR. WITMER: It is part of Point 4?

MR. DOMINY: Yes.

MR. TIPTON: I think it implied it might be dumped into the river.

MR. WITMER: I am just asking.

MR. CLAXTON: What is the practicality of Point 4?
What are the considerations around it to determine the feasibility? What would your estimates be of feasibility?

MR. DOMINY: I personally think that this offer is a little to hope for, a practical solution to the problem.

I think it would be extremely expensive. I am sure that the Mexican Government would never want that water below Morelos and charged to their allotment. I am not sure we would not want to do it and not charge it to allotment except as Mr. Witmer points out in such years as we may be in a position.

MR. WITMER: What I was thinking of is this. If I

understood you correctly, you say in ten or twelve years you hope this salinity factor in this range will start going down. In the meantime until the upper basis gets developed and you presumably can meet the 1,500,000 commitment without too much trouble, whether during those years there is any practical way of doing it. In effect you are mixing the process in reverse by not allowing so much of this heavily ladened water to reach the rich Morelos.

MR. TIPTON: May I reply to that. No. 4 would involve the same difficulties as would be involved in No. 3, and even more could be carrying the water through in separate channels to the South Gila irrigated lands and much greater distance. So No. 3 I would think would be a much better solution to involve less problems.

MR. WITMER: I say probable, not practical.

You have given me the answer.

MR. TIPTON: Possible.

MR. HOLUM: It seems if anything is to be done to improve the situation next winter it falls into the category of items in Mexico and what are the possibilities?

MR. TIPTON: Mexico has instructions now in the wheat and alfalfa area -- I do not know whether it is the sufficient capacity to take the desired amount of water, but that is the quickest solution as far as Mexico is concerned, is to connect the fields now to the wheat and alfalfa area.

MR. HEWITT: Which we are doing now.

MR. HOLUM: Is there a lot of work that needs to be done here? Is this an extensive program?

MR. HEWITT: There are some areas that cannot be reached.

MR. TIPTON: They are relatively short now, resulting from a lease that is flat.

MR. DOMINY: You can run water in practically any direction.

SENATOR HAYDEN: How long would it take to get it estimated back by the State Department how much Congress ought to appropriate to do this job?

MR. DOMINY: I presume we could come up with a fairly realistic estimate in a matter of about thirty days. We would have to do some engineering calculations. I believe you could have a fairly useful estimate within thirty days.

MR. HEWITT: Do you think we could get one on both 3 and 4?

MR. DOMINY: On 4 I am sure we need much more time than that because this is something -- you guesstimate on that one. You do a great deal of engineering work, but as much today as we have on it that is already available I am satisfied they could come up with it.

MR. TIPTON: May I inquire of the Senator, your statement was directed at the increasing of the drainage

facilities on Wellton-Mohawk.

SENATOR HAYDEN: Yes.

MR, TIPTON: Does it also go to the work that should be constructed in Mexico?

SENATOR HAYDEN: Well, I do not know enough about the situation in Mexico to say what ought to be done there, but one thing apparently is that they want better water supplied in Mexico.

MR. HEWITT: That would take a very short time.

MR. TIPTON: Everything that is said here about what should be done in Mexico in my opinion is excellent, but that will be a long range program.

SENATOR HAYDEN: It is bound to be. When you start out with the fact they are cultivating more land than they have water for and second what are you going to do with the salt water that you get out of it, then whether you are going to dump it into the Salton Sea or whether you are going to drain into the Gulf of California, it is a long range matter.

MR. TIPTON: A study would require considerable time, so no estimate would be made at this time I presume. Reversing the drains, the drains would not be too difficult. Are any new drains going toward the river?

SENATOR HAYDEN: Yes.

MR. HEWITT: I understand, Senator, sometime ago the water that was being pumped by Mexico, they are pumping now

about 500,000 acre feet per year.

SENATOR HAYDEN: That goes out to Salton Sea.

MR. HEWITT: That is in Mexico, and the drainage of course does go to the Salton Sea.

SENATOR HAYDEN: Yes.

MR. TIPTON: And that is summer pumping for cotton.

MR. CLAKTON: Mr. Chairman, the statements which have been suggested, the proposals which have been put up at least on a tentative basis by the Department of the Interior and what Colonel Hewitt and Mr. Tipton have said suggest that the steps which need to be taken in Mexico and the steps which might be taken in the Mohawk District as indicated in Point 3 here would probably not be accomplished effectively until after next winter. That would require, I take it, the congressional request and appropriations. This would certainly run through and ought to be done, if to be done at all, at this session of the Congress. Then the work would be started and then could be finished for the winter after next.

We certainly need to think in terms of what can we do to provide a permanent solution which cannot be approached until after next winter, what can we do which will alleviate the situation and take care of it in at least a reasonable satisfactory fashion with the coming winter. I would think then that our planning ought to be through that step as well.

MR. DOMINY: As a matter of fact, Mr. Claxton,

assuming we had money in the fiscal 1963, started July 1, 1962, you actually get this engineered and under construction, I seriously doubt that we could have it in effect in time to do much good even in the second winter, the winter of 1962-1963, I am sure no effect. I think even though partial effect, progress in the winter of 1963-1964. That would be my own guess in terms of time involved in constructing these works and putting down the additional wells.

MR. TIPTON: I think on the amount of time that that is too serious because this consulting board and myself personally think this water could be used for a few years. Now any water they use, water level 1100 or 1600 parts vermilion, if they are going to have much more effective drainage than they do now the land is going to become saline.

SENATOR HAYDEN: That is right.

MR. DOMINY: They are on the borderline now without drainage.

SENATOR HAYDEN: It would take though some work to be done by both the United States and Mexican engineers to determine what kind of a project you would develop in California to drain that area and what you are going to do with the drainage water. That would have to be on the basis that the two governments look into the problem and determine its cost. Then if under this money made available for that American loan and things like that, why money might be provided

that way to do it. It is going to take quite a bit of time it seems to me to arrive at just what is needed to be done and what the cost is to be in Mexico.

MR. DOMINY: I would like to bring out one other point. Senator Hayden, much to my amazement the Salton Sea is becoming a tremendously developed recreational area. The level of that sea is going to become greatly important to the United States and to many interests. The level is going to be controlled by the use and return flow in the Imperial District and in the Mexicali Valley. We have an interest here that might justify us even contributing outright as the Federal Government a part of this drainage so that we might say that some months it goes this way and some months it goes into the Gulf to help control the level of the Salton Sea.

What do you think about that, Mr. Tipton?

MR. TIPTON: I am old-fashioned. Years ago I used to argue with the Commission of Wildlife and others. I will not argue here, I am not here for the purpose of arguing. I think I will subscribe to the statement that that has become a very delightful recreational area, boating, skiing and so forth. You get down that far, it is right below sea level. I do not think the United States contributes to maintain at that level. That is the policy. The United States cannot argue against the policy of the United States.

MR. HOLUM: It looks to me all this list of things

that could be done, and you have several worthwhile things, that there are probably three items in the recommendation of things that could be done in Mexico that could be of some relief. It looks to me that would be 2, 7 and 8 which leads me to ask, Are these areas in which the United States should be of assistance to Mexico, and if so, are we in a position to be of assistance and do they want it?

MR. HEWITT: We could certainly offer our assistance; whether they would be willing to accept it, I cannot say.

MR. HOLUM: We could make quite a little progress there in the summer season on the three items, I believe.

MR. TIPTON: May I say I have known Mexico since 1907 and identified their reclamation program in 1928. I have seen Mexico gradually develop into a very strong country as regards education and so forth. I have had intimate contact with their technical people over the years and I want to say that it is good.

Now you come to Item No. 7. I think that would be a field that they might desire and acquire some help. You get in the agricultural field and so forth. On all the projects of Mexico with which I am familiar there is none that have saline water. There are some experts on the Salton Sea area, I was talking to one the other day. Pakistan was a means of using water 3,000 parts vermilion, successfully using it in raising one of the cotton crops. So there is

talent down in those areas to be drawn upon to help in this particular field. Now they are in the Department of Agriculture and not with the Department of the Interior but they could utilize it, very excellent value.

MR. HEWITT: It has been suggested, Mr. Secretary, that while the problem is not related to this type, yet there is a similar situation in the Rio Grande Valley where the problem is in reverse and Mexico is supplying the United States with water which is highly saline. While it has not been too detrimental to the United States, nevertheless the United States has plenty of times complained about it and Mexico has not seen fit to undertake any efforts to correct the situation up to the present time.

That is in the vecinity where they are delivering through the Rio Grande salt water to the river which has as high a salinity of 12,000, 14,000 parts of vermilion. While the amount delivered is not very great, nevertheless when the drain continues to flow that amounts to a considerable amount of unuseful water which is partially used in the United States and partially in Mexico.

MR. MITCHEM: May I inquire about the quality of water from the wells that are being pumped in Mexico? Isn't it true that much of that has more than 2,000 parts vermilion?

MR. TIPTON: My understanding, and you correct me if I am wrong, is that it is around 1400 parts vermilion and

some of it is less, it varies from well to well. Directly after the last cotton area it will increase to about 2,000 parts. It is about 900 parts water.

MR. HOLUM: Are there other questions?

MR. MITCHEM: What would be the procedure with regard to a possible Alliance of Progress loan to this area in Mexico? What steps are involved, how might we explore the interest of the people in Mexico for such a well, and so forth?

MR. CLAXTON: There would be two stages involved.

The first is technical assistance and advisory which we do
through our Interior people. There are various ways of doing
that.

exactly, I think in all probability would be an application to the Inter-American Eank for a loan which the bank has under the Alliance of Progress under the Inter-American Social Progress Act. The appropriation, the specific responsibility for making loans, is for irrigational purposes. This fits exactly within the understanding or scope of action. What they would do, the Mexican Government, would be to make an application to the Inter-American Bank which would be considered with other applications. The funds are not enormous, \$394,000,000 made available by Congress to cover the whole hemisphere. That is why I say that although this theoretically

falls within the purposes, I obviously could not say what the reaction of the bank would be. It sounds good.

SENATOR HAYDEN: We do not want to step in and say we are going to fix up things that are on the Wellton-Mohawk unless they are doing something at the same time. It has to be the understanding that they are trying to alleviate their own conditions at the same time we are trying to help them do it.

MR. CLAXTON: It would seem to me, sir, that we would have to proceed on that basis. I would assume that the Boundary Commission would consider proposals for both the Mexican side to take steps and the United States side to take steps.

SENATOR HAYDEN: They ought to concur.

MR. CLAXTON: They of course will make their own judgment and recommendation on that. In the meantime the Department of the Interior I think would go ahead as has just been said with the study of how Item 3 might effectively be carried out, what would have to be asked of the Congress. At the same time the Department I would think would want to be working with the Boundary Commission to see what kind of advice and help we might give to the Mexicans to take the essential steps, those three you have mentioned plus any others that seem appropriate on the Mexican side and all done as quickly as we can.

SENATOR HAYDEN: And all at the same time.

MR. HOLUM: I have a feeling that unless there are more questions this conference has just naturally drawn itself to a close. I think it has been very useful, and the Department of the Interior has been very happy to have all of you come up and confer and consult with us. This is something that both the Department of the Interior and the State Department consider a very important and serious matter.

MR. TIPTON: May I make one statement. I am very happy that I did not have to make the statement that I was supposed to make as a background of the negotiation of the treaty because I find both Interior and State interpreting the treaty precisely the way it was intended to be interpreted. The language that is in the treaty speaks for itself, I do not have to tell what the language is.

MR. HOLUM: We are happy to have that comment.

MR. DOMINY: You made a real good record.

MR. CLAXTON: I think we ought to agree, as Secretary Udall said at the very beginning, the problem is not one of standing on our legal rights on the treaty or the Mexicans should do so either but rather a proceeding on a practical basis to solve this problem with a friendly neighbor.

SENATOR HAYDEN: That is right.

MR. HOLUM: I think we have agreed around the table

on a program for going ahead on that basis.

It has been nice to have you.

(Whereupon, at 12:30 o'clock p.m., the conference adjourned.)