

PROCEEDINGS OF MEETING  
OF  
NEW MEXICO FLOOD CONTROL ASSOCIATION  
Council Chamber, City Hall,  
Santa Fe, New Mexico  
October 30, 1941

REPORTED BY:  
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Minutes of 10/30/1941 Meeting

PROCEEDINGS

Meeting called to order by the Honorable John E. Miles, Governor of the State of New Mexico.

GOVERNOR MILES: If the house will please come to order I will try to express my thoughts. The purpose I had in mind in calling this delegation together -- evidently I didn't consult the weather man before I set the date; it looks a little bad. I don't know any more about conducting a flood meeting than a frog and I am talking about one of these dry land terrapins. When I first came to New Mexico I filed on a homestead and I met a man hauling water. I asked him how far he was hauling it and he said five miles. I asked if it wouldn't be cheaper to drill a well and he said it would be about the same distance both ways. That is about all I know about flood control. We have had some serious floods, and except in one or two places it has been something unusual and very serious. There are certain parts of the State where it seems that they have been a little more unfortunate than others in the way of floods and they probably know a little more about it than some of the rest of us. I don't know that there is anything that the State of New Mexico could do about matters of that kind other than to call in the representatives of the State to formulate some plan in which eventually in the future, the problem could be discussed and some relief afforded those who have been already damaged by floods, and as I say, I am just as much at a loss to make suggestions along that line as a man could be, but I have asked people to come in who do know something about floods and flood control work and are in a position to make suggestions that would be valuable. I would like, in the beginning, to just open the meeting. I suggest we start with this row and have each person rise and state his name and where he is from, and if he represents any State Department or Federal Department, state the name of such department.

Delfin Salazar	State Planning Board
W. G. Koogler	U. S. Forest Service, Albuquerque, New Mexico
Hugh G. Calkins	Soil Conservation Service Albuquerque, New Mexico
Frank C. W. Pooler	U. S. Forest Service, Albuquerque, New Mexico
Mrs. C. H. Dietrich	Chairman of New Mexico Association on Indian Affairs
Miss Catherine Farrelly	With Mrs. Dietrich and interested in tile same Association
W. A. Losey	Pecos Valley Artesian Conservancy District, Hagerman, New Mexico
R. H. Grissom	Educational Budget Auditor, Santa Fe, New Mexico
R. L. Malone, Jr.	City Attorney, Roswell, New Mexico
Thomas J. Hall	Mayor of the City of Roswell
L. H. Hewett	U. S. Corps of Engineers, Galveston, Texas
J. H. Mullis	Pecos Valley Artesian Conservancy District, Roswell, New Mexico

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Fred Witty	President of Transportation System for the Schools
Roy Daniel	City Councilman, Roswell, New Mexico
Sophia D. Aberie	U. S. Indian Service, Albuquerque, New Mexico
Ted Formhalls	U. S. Indian Service, Albuquerque, New Mexico
Walter Goodwin	Interested in general problem of flood control districts
Dick Westaway	Interstate Streams Commission
H. R. Rodgers	State Land Office
Harry Puryear	Chairman, County Board of Commissioners, Chaves County
J. D. Hannah	Assistant State Comptroller
Frank Butt	Middle Rio Grande Conservancy District
H. Vearle Payne	Representing the people on the Gila River
Will Robinson	Public Relations Officer, Selective Service Board
E. C. Minton	New Mexico CCC District Office, Galveston, Texas
A. T. Hannett	Interstate Streams Commission
R. S. Carter, Jr.	State Engineer's Office
Wm. C. G. Sinkpiel	U. S. Geological Survey, Denver, Colorado
Sam Samson	City Engineer, Carlsbad, New Mexico
S. J. Horne	Mayor of the City of Carlsbad
C. W. Beeman	Carlsbad Irrigation District
L. E. Foster	Bureau of Reclamation, Carlsbad, New Mexico
Paul H. Berg	Secretary, Rio Grande Compact Commission, Santa Fe, N. M.
D. C. Cameron	U. S. Weather Bureau, Albuquerque, New Mexico
Henry Rockwood	U. S. Weather Bureau, Fort Worth, Texas
Berkeley Johnson	U. S. Geological Survey, Santa Fe, New Mexico
Stanley Phillipi	Middle Rio Grande Conservancy District, Albuquerque, New Mexico
Tom McClure	State Engineer for New Mexico
Tom Summers	Chief, New Mexico State Police
C. B. Beyer	County Engineer, Bernalillo County, Albuquerque, New Mexico
O. J. Todd	Bureau of Reclamation, Albuquerque, New Mexico
Lea Rowland	City Engineer, Roswell, New Mexico
Burton G. Dwyre	State Highway Engineer
John McMillan	Grant County Farm Bureau

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Stewart Sterling  
Walter McDonald  
J. C. O'Leary

Felix Rayme  
Ola C. Jones  
George A. Titsworth  
Mrs. Louise Coe

A. T. Pfingston  
R. H. Runder

Representing the people in Grant County  
Grant County Boosters Group  
Representing people in Grant County, Silver  
City, New Mexico  
County Clerk, Carrizozo, New Mexico  
Superintendent of Schools, Lincoln County  
Lincoln County, Capitan, New Mexico  
Representing Water Users' Association,  
Glencoe, New Mexico  
Lincoln, New Mexico  
U. S.. Corps of Engineers  
Galveston, Texas:

GOVERNOR MILES: At the time when I first fixed a date to hold a meeting such as this one called here today that date was in conflict with a meeting that was being held in Phoenix concerning water matters. There was a meeting held in Los Angeles at a later date which pertained to the same matters, so this meeting was delayed until this date. At the time when I called the meeting so many people were calling me about floods that I didn't know what else to do but call the meeting. I knew that some of them were desperate and needed relief of some kind. Since the date has been set and between then and now I believe there have been some meetings held. I am sure that there was, one held at Roswell and I believe one at Carlsbad and one at Alamogordo, and one at Silver City. Probably matters were discussed at those meetings and some of these problems solved. Not having been advised as to just what took place at those meetings and what problems were worked out I am not in position to say, but probably there are those here who can tell us what was accomplished. Before we start on that I would like to have us organized into some kind of a committee so that what we do here can be of value to others and we will have a definite record and something that we can present to Washington.

New Mexico is not in a position to compete with what is happening in the State in the way of floods and we are going to have to go to the Government, In my opinion, if the proper kind of relief is given. I would like to have somebody make a suggestion as to what we should do here in the way of setting this up. I would like to elect a Chairman, a Secretary, and as I said before, I know nothing about water or flood hearings and I want someone selected who has already sat in at one of these hearings and knows what to do. I would like to have some advice along that line. Tom McClure, Governor Hannett, and I am sure Mr. Mullis sat in at the meeting in Roswell. Will someone make a suggestion as to organization and what procedure we can follow here today? In calling the meeting I called it for the relief for myself. I had so many calls I couldn't answer. Mr. McClure, would you care to make a suggestion?

MR. McCLURE: Governor, if you think that it would be advisable to get all damages as near as possible; estimate of damages that occurred in these floods so that they could be compiled and correlated and the various sections set up in proceedings of some kind that might be of value to the Congressional delegation, that would be one suggestion that I would make.

GOVERNOR MILES: Suppose we start off by electing a chairman to conduct this meeting.

MR. HANNETT: I suggest you be made chairman of this meeting and appoint someone to act as Secretary.

GOVERNOR MILES: I would much prefer that someone else be selected as chairman; someone else who has conducted meetings of this kind.

MR. RODGERS: I would like to suggest Torn McClure: as Chairman.

MR. CALKINS: I second the motion. Motion carried.

GOVERNOR MILES: You heard the motion. Mr. McClure, will you come forward and take the chair, please sir? I am sure while Mr. McClure is taking his seat you gentlemen won't be backward about making statements as to what you think should be done and about what has happened, and any other suggestions. We want to accomplish something if it is at all possible to do so.

MR. RODGERS: I move that the chair appoint a secretary. Motion seconded and carried.

MR. McCLURE: Would that be someone who has the facilities of a State office where he could have stenographic work done, or should we name just a temporary secretary for this one meeting, such as one of the ladies here at the desk?

MR. WESTAWAY: I suggest that you appoint one of the ladies present to act as temporary secretary.

MR. PAYNE: Mr. Chairman, my idea is that we should have a secretary to take care of the correspondence after this meeting is over with. We are just going to be starting. It is my suggestion, and I so move, that whoever is appointed secretary be authorized to keep in touch with the various groups. In my opinion, we should have someone to correlate those efforts.

MRS. COE: I second the motion. Motion carried.

MR. McCLURE; I think that would be a better idea. The information will have to come in after this meeting, as I see it, to get a complete picture of the whole State and also probably statements as to damages that are not prepared and ready to present right now. I believe I will appoint Mr. Vearle Payne to act as Secretary.

GOVERNOR MILES: I suggested Mr. Payne to Mr. McClure for one reason; because he is here at the capitol and attorney for the Tax Commission, and will be in position to work with Mr. McClure. I know he has the ability and I know he will make a good secretary.

MR. McCLURE: We have our organization now. I would like to have suggestions as to procedure that we will carry out at this meeting; things you want to accomplish here and what procedure we should follow.

MR. HANNETT: I notice from the roll call that there are representatives of the War Department, Reclamation Service and Soil Conservation here -- three of the major Government agencies who have intimate knowledge of the situation. The War Department is charged with

making surveys of flood control; the Reclamation Service is in close touch with the situation everywhere in the State and the Soil Conservation Service likewise. It seems to me that if those representatives were called upon that they could be of service in giving us estimates of damage in various communities and what, if anything, the Government is doing at this time or would be willing to do in cooperating and formulating a comprehensive plan for flood control throughout the State.

MR. SALAZAR: Mr. Chairman, I have had occasion to attend the meetings down at Alamogordo and some places near Cloudcroft (at Mayhill). I noticed they were preparing to make a survey of the damages over there. As I understand it, a number of Federal Agencies have been quite active in making such surveys and estimates. Perhaps it would be well if they submitted them and a report on them before we can tell where we are and before we can take action.

MR. McCLURE: I think those suggestions are very good. We might start with the Federal agencies first and find out what is being done along those lines and then get down to communities, if possible, and what surveys are completed and their estimates as to damages, and get those of record if that is agreeable? That is the way we will proceed. I think I will call on Colonel Hewett, in charge of the Pecos River, to explain their set-up, what work they are doing, their plans, etc.

COLONEL HEWETT: Mr. Chairman, gentlemen, ladies, as you know, the War Department, is charged with flood control, among some of its other duties, and we are at the present time actively engaged in preparing a flood control project on the Pecos River. This report, which has been delayed, and I am sure beyond the time when all you people had hoped it would be submitted, is now being further delayed in an effort to secure all the damages which occurred as a result of the recent floods. The residents of the different localities have been and are cooperating with our Department to the fullest extent.

Of course, in recommending to the War Department that certain flood protection works be constructed, or that some others be omitted, we have to be guided by the fact that the benefits to be derived from these proposed structures are economically feasible, and that the amortization of those is less than the average loss due to floods. The recent floods have changed the picture to a considerable extent. The frequency curves which we used in our original studies are entirely out at the present time because we have had, during the past two years, several floods which have been more dangerous than any we have had previously and which occurred much more frequently, so that the probability of making our report appear economically justified is greater now than it was some time in the past.

I would hesitate to say at this time that a favorable report can be made. However, we will make every effort to accumulate all the damages that have occurred in this area and if you gentlemen and ladies present will assist us so that we do not omit any particular area in our study and furnish us with that detail, it will assist us greatly in the preparation of our report and also in the preparation of a favorable report, which I am sure you are all interested in. The Bureau of Reclamation (Department of the Interior) and Department of Agriculture are also cooperating on this work.

We are getting a great deal of cooperation and valuable information from those Departments, as well as State Departments and governments of various localities. All of that when accumulated, consists of a tremendous amount of information which must be evaluated and properly presented so that we can work up our figures. If I might suggest it, I would think that we should have all the information rather than submitting to the State for action. I believe it is a good idea for the State to know about everything that is being done, but I believe that the Federal Agencies who, according to the statement of the Governor, are going to be called upon to do the work, probably should have the full data submitted to them so that we can make our reports as strong as possible.

I do not feel that the Federal Departments are taking it out of the State's hands at all, but if we are going to accomplish anything we have to have all the information available that you have or can get, and the sooner we can get this information the better off all of us will be, and the better we will all like it. If we can get a committee formed which will accumulate the damages that have occurred in the various counties and localities and submit that to the secretary and have the secretary forward that to the various Governmental departments interested in this work, I believe that would act to the best interests of all concerned.

GOVERNOR MILES: On behalf of the representatives in Washington, who were all invited along with Mr. Dempsey, they have written and stated it would not be possible for them to be here, but that they were very interested in the matter and would like to have a report of this meeting sent to them for analysis. Invitations were sent to the various departments in Washington and they have expressed regret that they could not be present today.

MR. McCLURE: I would like to hear from Mr. Calkins.

MR. CALKINS; Mr. Chairman, Ladies and Gentlemen: It seems to me that the problem that now confronts the people of New Mexico might be divided into two parts; first, the emergency problem of repairing the damage that has been done during the past several months, particularly in the State, and which perhaps is now going on in some parts of the State at this very moment. The other is the long range job of preventing future damage from floods. Touching on the latter first, the Soil Conservation Service is one of the agencies in the Department of Agriculture which is responsible under flood control legislation passed by the Congress to make surveys that supplement those of the Corps of Engineers of the War Department in the upper parts of the water sheds and which are primarily concerned with what is known as water retardation and soil erosion control. That means that in a less extensive way—in a less massive way—we are concerned very directly with this problem of flood control. I might say that we leave off in the lower reaches of these rivers where the work of the War Department begins and stop in the upper reaches, more or less, where that of the Forest Service starts, because the fact we have lost sight of, I think is that the Forest Service in the headwaters has a very real responsibility for helping to check these peak flows when they start; and in the lower reaches, and sometimes that is pretty well up, the Bureau of Reclamation is very directly concerned.

In the matter of surveys, we are very much in the same position regarding the Pecos, that Colonel Hewett described, and that was that we should have completed our surveys sometime ago, but they have been held up recently because of the necessity of getting in damage data in these upper reaches, and we hope that the report will be submitted in a very short time. Whatever damage data we get or gather are either gathered in cooperation with representatives of the Corps of

Engineers in the field or are of the type with which they are not ordinarily concerned, those that effect the very small tributaries in the upper part of the watershed. We are now conducting a separate survey in a part of the Rio Grande watershed and have completed a survey on another watershed. We are in about the same stage of progress on the Upper Gila except that this survey has been going on so very long that I feel very apologetic about it. On all of these we have men out in the field who have gathered a great deal of data not only about current damages but also about what can be expected in the future unless remedial measures are taken. What all these surveys are leading to is another thing. The surveys will contain a plan of flood control supplementing that of the Corps of Engineers, or other Departments or agencies, such as the Reclamation Service. All I can say on that is that we are just as anxious as we can be to get the surveys in and acted upon in Washington and we sincerely hope that they will lead to action. On the other hand,

It seems to me that it is perfectly logical to take the position that we cannot allow this sort of thing to go on if there is any way to prevent it. Every year the situation gets worse and the correction of the trouble is going to be just that much more serious. I don't know what can be done about it. I might say that this other field of work is that of emergency help and the Soil Conservation Service has attempted to be helpful in a number of cases; notably, in the case of floods on the Rio Grande early last summer. We have done work in other areas of that nature on parts of the Pecos and Upper Gila, but there again, our facilities are very limited. A few years ago if this had happened we would have been in a very fine position to help because of the large number of CCC camps and emergency labor. Now, this hits us at a time when our CCC camps and other sources of labor or other sources of money to employ labor, are at the very lowest ebb, so that with all the willingness in the world to help in both long range operations and in immediate emergency repairs, we find ourselves unable to be of as much practical assistance as we should like.

I might add that our activities cover the State of New Mexico fairly well in that we have the State divided up into what we call "Administrative Areas," with headquarters at Santa Fe, Albuquerque, Las Cruces and Clovis. The Clovis office reports to the Regional Office of the Soil Conservation Service at Amarillo, but it is all a part of the same organization. Each of these areas is divided up into smaller units where we have men who are in position to help to be best of their ability. We have all the facilities to be helpful except money and labor, and I think another medium through which a good deal might be accomplished in the future is that of the Soil Conservation districts. They are now being formed in a good many parts of New Mexico and with which most of you are familiar. There again, the amount of assistance which can be rendered depends on the ability of the people who organized the districts to take an active part and contribute machinery, some money, etc., and the ability of the Federal agencies to help. Just off-hand, all I have to add is that we are, as I said before, actively engaged in getting information together on damages in some places we are cooperating with other agencies in getting data on stream flow and related factors so that any information that we may have is available to this group at any time. We are not prepared to submit to them any complete plans for flood control or soil or moisture conservation in the upper watershed because those areas that I mentioned have not been completed.

I imagine that one step worth considering would be to divide the State into major areas, divided pretty well by drainage, and have some local groups work in those areas so that they can bring

the various agencies together and get whatever help and information the various agencies—state, local and federal—can contribute.

MR. McCLURE: Thank you, Mr. Calkins. Mr. Pooler of the Forest Service.

MR. POOLER: Mr. Calkins said we in the Forest Service are very closely interested and associated with the upper watershed areas in our national forests and we are connected with the various survey projects that he has referred to. Now, in the immediate past we have been making some supplemental informal surveys of our own. They are not very accurate, but they are based upon estimates of damage as we could hurriedly get them together and we have some data that gives a general idea of what has happened. We have also had men on the ground going over the watershed areas in a rather extensive sort of way to see what happened to the watersheds themselves, to see if there is any relationship between the volume of flow and the condition of the cover. We have been checking on the flow conditions in the timber areas, virgin forests, and coming from where they cut over, whether constructively large or consecutively long. While we have nothing specific to report at the present moment, we do think that there is a problem that probably the administration would have to take care of currently. That is through management practices to reduce the effects of these floods.

I am not so sure but what it might be possible to get some legislation through Congress that would be helpful in improving the cover conditions on privately owned land. For example, there are in the Lincoln Forest, from which a great deal of this water came, some private lands that are being cut over. They were private lands, but they became Government lands either through the process of Government land exchange or through outright purchase, but those lands were secured subject to timber rights and those timber rights are being exercised. Through close cooperative arrangements we are getting those lands left in somewhat better condition than the operator would be compelled to leave them under his timber rights. It seems to me that if we could get some legislation which would enable the Federal Government to exchange some standing timber for standing timber that this operator is able to take under his existing timber rights, we could probably induce him to leave the heavier timber as his logging progresses. I think that is something of merit and something that could be presented and might get long-time results that would be important.

I had prepared a draft of a measure of that kind. It would simply be extending the principle of land exchange to timber and provide for certain timber exchanges that would leave the private lands as cut-over in much better condition and at no additional cost to the individual because he would be compensated by additional timber, so in the recent past we have been making some of these studies to see what did happen. One of the things that we have established pretty well is that there is a relationship, of course, between cover and ability of the soil to hold moisture. What we have run into particularly is that the rains came in such volume that no cover could hold the water back. As the soil became completely saturated, additional storms came and the water ran off and accumulated in the channels and gouged out those channels and made them larger than they were before. Some of the most serious damage in the upper country is due to that very fact—that the channels were cut deeper—and it is going to be much more difficult to irrigate these lands in the future than it was in the past. The water is deeper and harder to get it to the lands involved. On the Lincoln Forest a rough estimate of the damage to the channel facilities is

somewhat in the nature of a quarter of a million dollars, and that is represented in damage to fences, stock-tanks that have been built and washed out, etc.

In damage of that kind we haven't anything reliable as to damage to private lands except what came in from County Committees who have made cursory examinations and have made some effort to estimate what happened. It is just as Mr. Calkins said, there are two sides to this whole problem; one is long term planning and long term measures to, as far as possible, prevent recurrences of what happened, and the other is to do what we can to remedy what has happened so far as that can be done. We are interested in both of those. As Mr. Calkins says, our facilities also have been, like his, very seriously cut down.

We now have in the state only four CCC Camps. One of those camps happens to be at Ruidoso. It was scheduled to move somewhere else for the winter and back again for the summer. We are making every effort to have that camp put in condition to have it occupied throughout the winter. The camp is located in the very best place it could possibly be to be helpful during the coming winter. We are making every effort to assure you of the cooperation of all parties. The Director of the CCC aided in accomplishing the immediate steps for winter occupancy. What we have been engaged in there is simply repair—making certain impassable roads passable; putting in temporary bridges so that people could get across the streams where they were absolutely blocked before, and in various other ways doing a sort of temporary job or rehabilitation. There remains a more extensive job that will take longer and will require perhaps more than we can give in the way of facilities. Our camp, as far as is available, is going to be engaged exclusively on this type of work. There is a lot of channel clearing that I think is of very great importance above the Ruidoso. Where we have a back-store condition of fallen virgin timber it is going to block the channel and present a menace as long as it is there. We have to clear that out, and our men are going to be engaged on that as long as they are up in the mountain country.

In whatever way we can, we are using those facilities that we have to be helpful in correcting some of the damage that has occurred. I think that any information that we get that is reliable as to damages, we would be very glad to turn over to whatever agency is set up to receive the reports of that kind. To date our work has been somewhat preliminary, but it does give us an idea of what happened and I think it points in a long-time way to perhaps less reliance than we have been given in the past on proper management of the forest itself.

We have felt that something like this couldn't occur, but we didn't look for such rainfall either, and we got too much rain, and I think perhaps that out of it will come some determinations as to up-stream structures that will be needed to help hold the water back, but of course, that is just looking into the future. I can assure you that whatever we have in the way of resources will be used in trying to improve this situation. We have these few camps and they are distributed—each forest has had its share of this sort of emergency damage growing out of a very wet season, and these several camps are all engaged in rectifying some of the damage. For instance, we have a camp that has moved into the Glenwood country. That is above the Gila on the Gila watershed. It will probably be engaged in doing this work on that watershed. I don't know that there is anything further I can add to that.

MR. McCLURE: Thank you, Mr. Pooler. Right now I will call on Mrs. Coe of the Water Users' Association to outline and present the damage done in her particular area.

GOVERNOR MILES: I believe there are some here who have come in since we organized. If there are, will they please give their names.

MR. RUNDER: R. H. Runder, Corps of Engineers, Galveston, Texas.

MRS. COE: Mr. George Titsworth of Capitan, is chairman of our delegaton and is from our county. I would like to have Mr. Titsworth speak at this time.

GOVERNOR MILES: Most of my troubles have been coming from those people who have been damaged. That is where I get my telephone calls and I want some of those who have been damaged by the floods to express themselves here as to what they do need to help them, and then see if there are any agencies. Before I forget it, I certainly want to thank all government agencies and all state departments for their cooperation. We have never called on any of them who have not given us their full cooperation, and I want them to know I appreciate it. I am sure I am speaking for all the people of the state. If not for their assistance I don't know what we would have done.

MR. TITSWORTH: We vote 100 per cent. I don't want to have anything to say about long range propositions, and we are not greatly concerned about them right now. We have some needs that are urgent. Our irrigated lands, most of the lands in Lincoln County are on the Ruidoso, Bonito and Hondo. Every irrigation dam on our main streams has been washed out and the damage is done. What we need is some help in restoring those and we must have it soon or those valleys will be depopulated. Many of them are poor people and lost their crops. They were ready to harvest them. There are some of us who are solvent but we are not able to put back those dams and ditches without assistance. The river needs cleaning out from the top of the White Mountains to Roswell, I guess. There are only about three months in which to put those dams and ditches back. However, that we cannot do.

Personally, I am interested more in the vicinity of the Hondo. We have some dams—there are three or four of them. They are all gone. The channels have widened and deepened. It will take \$3.00 to \$1.00 to put another dam back. We haven't the money to do it with. What we want is some of that three per cent money that is available, and we want some labor and machinery. If we can get those dams back and they work, then those valleys will probably come out of it. If they don't they will be largely depopulated and those people won't come back. The Forest Service people could help quite a lot if they would donate some logs to help on those dams, and no doubt they would do so if properly approached. The labor is going to be a big item. We have a camp at Hondo and another at Ruidoso. The camps are undermanned and I would like to criticize some of their work, if permitted to do it. They have some rather long range propositions and contracts signed up for building fences, tanks and things out there in the mountains. If that work is delayed for a year it won't hurt much. We need work on the dams on the river and need it bad, but can't get it. The man in charge says he has some definite contracts. Why can't they get those contracts changed? By the time they get the work done that they have outlined our time for fixing up these places to irrigate will be largely gone.

There are extensive orchards up on the Ruidoso and Hondo. There are hundreds of thousands of tons of debris in those orchards. Some hang in the branches. The silt is two to four feet around the trees. The trees are going to die if silt not dug out. There are rocks in the orchards. The

streams cut new channels. If heavy machinery could be brought in they could rectify this damage to a large extent. I can check back on this valley for 72 years and nothing like this ever happened before. We have had floods and damages and had dams go out but we have never had all of them go out. That is what happened this time.

If there are any camps where the work they have is not urgent—we have the accommodations over there to take care of lots of men. The new camp at Hondo is understaffed and they do not have enough men. I don't know if they are furnished with the money to buy material. We are willing to buy material to put in dams if we can borrow the money and get labor. Most of us, especially on the Hondo, can pay it back after a while. Some of those people on the Ruidoso—I don't know how they can pay it back.

There are native people who have been making their way and will continue to do so if they can get some help. If they don't the country will be abandoned and those people will go on relief. Unless we can get relief the valley is going to be abandoned to a very large extent at least, and that land for taxation purposes is valued at \$60.00 per acre. If it goes back to dry land it will be valued at about \$1.70 per acre. Those are nice little valleys. We like them. We think they are worth saving, but no long range proposition is going to save them. It will help them after a while, but we must have some immediate help or there will be trouble. Mrs. Coe can tell you much better about conditions on the Upper Ruidoso. There are many small tracts in the Upper Ruidoso. From the Hondo down the lands are held in larger tracts. The people there are able to help themselves if they can get some assistance.

MR. McCLURE: We will be glad to hear from Mrs. Coe.

MRS. COE: Mrs. Jones is County Superintendent of Schools of Lincoln County—Mrs. Jones.

MRS. JONES: I don't know that I can say anything further. Mr. Titsworth stressed the need for immediate aid, and in asking for aid some of those people are going to have to have aid, not only in labor and equipment, but also in materials. Personally speaking, unless some aid is given it is going to effect the entire county set-up because in these valleys so much of our revenue is derived from this valuable land. I don't think it would be worth \$1.70 per acre as dry land. Nothing to graze on it. What crops weren't completely destroyed washed away entirely in my section of the valley. The land is covered with sand from two to five feet. We have located furniture and doors and logs and most anything. We don't know what else we might find. We do have to have aid. First, we need bridges to be able to cross the river. Many people are not able to get to their homes unless they climb high to cross the river and walk a mile. We had some homes that were washed completely down. I know that we must have aid and we must have it right away if we do replace our dams. Without the water to irrigate our lands there is nothing we can do toward making our livelihood.

MRS. COE: Going back to the camps—I have spoken to at least half a dozen boys whose time has expired. They have been in the camp for two years and they cannot return, although they would like very much to return to the camps. I wonder if we, today, could not make some type of resolution to change the rule to allow the boys to have more time. They would like to have more time. They would like to go back and work in the CCC Camp. After two years they have learned to be efficient in that work. At Ruidoso I have spoken to at least six boys who would

like to go back but because of that limited time they cannot go back. Then I understand the Grazing Division has two camps that are doing some work over in the Socorro country. Those camps have been moved over. I feel the Grazing Service Division camps and the work they are doing in building fences, should be delayed to assist in the work in these particular valleys where unless we can get this work in the next few weeks or few months it will be absolutely too late.

We must have labor from the CCC Camps. We must have heavy equipment. We need a drag line, a steam shovel and many trucks and caterpillars. I understand the Game Department has some heavy equipment North of Roswell, about eight miles, that is not being used. This information is abroad in the Ruidoso area. I hope that the Game Department is represented here so we may know if they have such equipment available. If they have why can't that be brought to the Ruidoso Valley to assist us in the emergency? Our land is covered with sand and rock. A good many of our trees have been washed down. Those trees will have to be dug out and replaced with small trees. The land is going to have to be reclaimed by most of us on the Ruidoso and we are willing to do our part. We will borrow the money, mortgage our farms if necessary, because we still think, despite the flood and damage, that there are great possibilities in the Ruidoso Valley.

Some of the people have been there for from sixty to seventy years. We know what the valley produces and what fine living it provides and do not expect to leave it. But I think the Soil Conservation Service and the Forest Service are willing to agree that our needs are specific and are immediate, and I hope that we may have the opportunity for these agencies to get the bridge timbers. We have been trying to get logs. The men who supplied logs at \$1.50 to \$5.00 apiece have now gone up to \$15.00 to \$20.00 apiece. We cannot afford to pay for the logs. We must look to the Forest Service to cut that timber to provide for the bridges. The rock is available and we can get the cement if we can get trucks to haul it. We need a drag line and a steam shovel to clean out our channels.

It seems odd to me the fact that the Ruidoso, Bonito and Hondo Valleys are a populated section of this state, a wonderful agricultural area, and we have not had the service of the REA. There is no area more entitled to it. It is going to be impossible on some of the farms to rebuild a dam to get up the water at a cost that would be comparable to what we could pay. If we had REA we might be able to put pumps in and irrigate in that valley. I think the committee could do a great deal about bringing the REA to that vicinity. It would provide cooperative marketing for our apples, cabbage and corn, but our immediate need is the CCC labor and big equipment. We hope today we may be able to take back to those people, something definite from the various agencies.

Speaking of the Highway Department, we know the roads are important. We can go over bad roads. We have done it before, and can for two or three weeks to get equipment off the highways for a few days in order to fix up a farm that pays the taxes to keep up the roads. I telephoned our Highway Engineer about an emergency because we had another flood. I told the Highway Engineer that one day's work with a bulldozer would clean that out so it would not endanger farms for at least a mile. He informed me that when the bridge in the highway went out they would fix it and not before. That isn't right. One day with the bulldozer would have cleaned out the channel and prevented the fear of not having the highway and bridge out by our homes and farms. I don't like to go into such specific details because some of you are not interested in a small valley, but I think our situation is comparable to the Penasco and I know it is

to the Hondo and Bonito Valleys. We should delay some of the work in the long range prevention plan and give us immediate relief to get us back on our feet and we will pay the taxes and help in any way we can.

MR. McCLURE: Now, the Roswell area. Mr. Hall.

MR. HALL: Mr. McClure, we down there are getting along fairly well with our proposition. We have sustained a great deal of damage and we will call on Mr. Lea Rowland a few minutes later to give us that amount. We are proceeding with our own little problem of flood control within the city itself. We hope to get started next week. We have our drag line on the ground, and feel that we have to move along with the Federal Agencies showing good faith and doing our part in making the Spring River carry seven times the amount of water it has carried previously, the Hondo four times, and we hope it will dovetail the proposition any Federal Agency devolves down there to prevent any flood in the future. We are intensely interested, of course, in the proposition of prevention in the future. In a city of 14, 000 we will stand together 100 per cent on any such proposition, or behind any Federal Agency that will take the job and move into it. Mr. Rowland has detailed information as to the damages sustained within the city and I know Mr. Losey and Mr. Mullis are here and Mr. Puryear, Chairman of County Commissioners, is here to give you a statement as to county wide damage.

GOVERNOR MILES: At that meeting held at Roswell sometime ago were there any other matters discussed except those in that area?

MR. HALL: You mean the time Mr. Dempsey was there?

GOVERNOR MILES: Yes, sir.

MR. HALL: We talked about the matter as to whether or not it was a Reclamation Service proposition. Mr. Dempsey was of the opinion that it was a Reclamation proposition and could be carried on under the Reclamation Service in that we were not interested in the water itself. We didn't claim the water. Carlsbad and Red Bluff were trying to divide that water among themselves. We didn't care who got it but the proposition was as I stated at the meeting, we didn't want it to run in our front door and out our back door in order to get it to them. We would fix the Hondo channel so that it would carry 3,000 second feet of water which would be ample to drain any waters that would be stored to the West, and a very short time after the flood peak had passed we would fix the channel for them to use, but we don't want any sloshed out in town. Mr. Rowland.

MR. ROWLAND: I have these figures representing damage sustained in Roswell and I will file this here, and also one from the County Agent as to crops and if that is in order, I will file it. Damage is over \$1,000,000 in Chaves County.

GOVERNOR MILES: Was any suggestion made as to remedies?

MR. ROWLAND: The Army Engineers are working on that problem now and I know that the State Engineer has evolved plans to take care of Roswell. We are full of ideas. What we need is money and action.

MR. HALL: Colonel Hewett is conversant with that situation down there. Colonel Hewett and his Corps of Engineers have a very minute set-up on that whole area down there, and we in Roswell are very much encouraged over the outlook and feel that something is going to be done. We are going to stay on the job until we can get the job done. Any assistance we can give these agencies will be forthcoming.

MR. McCLURE: Colonel Hewett, do you have anything to say on that particular project?

COLONEL HEWETT: The only thing I can say is more or less what I said before. I think that the City of Roswell has a very definite problem and there is a very definite answer. Whether the answer will be within the funds available or not, I cannot say until our survey is completed. The situation at Roswell is not insurmountable—the answer is fairly evident.

MR. McCLURE: Is there any possibility of the Corps of Engineers making a specific report on projects in areas like Carlsbad and Roswell? Assuming that the Pecos River as a whole was not feasible as a flood control district, could you go in and specifically set out any parts of the stream system, such as the Hondo or any other particular area? Is that allowable under your regulations?

COLONEL HEWETT: It is our intention to set forth what we consider to be the most economical remedial measures to be taken in these various places where they have encountered the most damages. We will set those out, whether economical or not economical. If we are able to justify them so much the better. If not, they are something to shoot at.

MR. McCLURE: What I was more or less anxious to know was whether you could recommend in your report any particular parts of a drainage basin.

COLONEL HEWETT: Yes, there is no objection whatsoever. If the damages to any particular locality justify that protection there certainly would be no objection to including it in the report, and we shall do so.

MR. POOLER: Something has been said about replacing certain beneficial structures and irrigation structures on the Ruidoso and some of the mountain streams. I wonder if that is going to be possible without a very definite engineering survey in there to see what will now serve in the way of structures and how they would have to be placed, because it doesn't seem to me that you can go right back to the old plan and replace one dam with another dam of very much larger size. It seems you are starting from scratch again and that before putting in more dams there should be a comprehensive engineering survey by qualified irrigation engineers to determine what kind of a system is going to be required now to replace the one that is gone, and unless such a survey is made it seems to me it is going to be very difficult to work very intelligently on that proposition.

MR. McCLURE: I think that is true in many cases.

MR. TITSWORTH: If all of this is done, by that time we will be pretty well out of the picture.

MR. McCLURE: As I see it—I have not been personally on the ground, but what you need is immediate relief for next spring. I realize that, but the whole thing is if a permanent structure

goes in there with your river as I understand it, that is twice as wide in many places and cut deeper, the type of dams are not sufficient for the channel now and it will take some kind of designing to set them up so they will stay in there.

MR. TITSWORTH: That is a serious condition, but it is getting worse all the time. Some of the dams have stood for fifteen or twenty years.

MR. McCLURE: I realize that.

MR. TITSWORTH: If it is delayed a great deal we will not need any dams. We are willing to assume the obligation of getting the money ourselves.

MR. McCLURE: I realize what you need is right now and before next spring so that you will be ready for next year. That is true of all our flood areas, but in many cases if they did go in with small log dams those won't stay in at all now if they attempt that kind of construction. In some cases they would. That is not a point to argue. Is there anyone here from the Penasco area?

MR. SALAZAR: I have a report that has been submitted to the State Planning Board from Mr. Spence, Chairman of the Planning Commission for Otero County, and I will submit it to you. (see Appendix C)

MR. MULLIS: Mr. Losey and I are here, and I would like to have him make a report.

MR. McCLURE: I noticed that we did have the Conservancy District that includes the area of Eddy and Chaves Counties represented here today.

MR. LOSEY: It includes practically all the Artesian Basin in Eddy County, City of Roswell and City of Artesia and incorporated communities of Dexter, Lake Arthur and Hagerman. The report I have covers the damage within the Conservancy District outside of the incorporated cities and towns. There were 758 farms. The damage amounts to more than \$400,000, a figure arrived at by personal contact with each farmer and land operator. You people have begun to realize we did have a flood in Chaves County doing unprecedented damage, so large that we have very definitely come to the conclusion that we ourselves cannot take care of the situation, and that we are going to have to have some help.

We cannot do it all ourselves. We are of the opinion that we are going to have to have some federal help. The purpose of the survey of the Conservancy District was to assist the governmental agencies in arriving at figures covering damage outside of the incorporated cities and towns to see whether or not it would be justifiable for them to come in and spend government money to prevent recurrence of these conditions that recently existed.

There is one point I would like to make. I think the matter of a flood control is of primary importance, some type of construction that will prevent the damage to our homes and property, as well as to our lives. Next to that, it seems to be very necessary that whatever we do in this arid State of New Mexico that we try to incorporate in that activity some conservation of the water involved. The water is very valuable to us. We must protect our homes and people and property, but we must try to do it in some manner where the water will give us the greatest efficiency. I request that in any consideration given to the matter of flood control that we not

overlook the possibility of conserving every drop of water we can. I will file this copy of our Conservancy District report with Mr. McClure as a matter of permanent record. I thank you (See Appendix D).

MR. TITSWORTH: I would like to submit this report (See Appendix E).

MR. McCLURE: I believe we had better recess this meeting until after lunch and reconvene here at 1:30. Will that be agreeable to everyone?

GOVERNOR MILES: I do want to ask that each and every one be present here this afternoon. If at all possible, we want to get something constructive before this meeting, so I am going to ask everyone to be present this afternoon. There are a lot of people we have not heard from and I am anxious to hear from them and I know the rest of you are.

Meeting recessed until 1:30 P.M.

GOVERNOR MILES: Mr. Chairman, I want to say a few things, but I don't want to do all the talking. If possible, we do want to get down to where we can accomplish something. We don't want to leave anyone unheard but we will have to make it as short as possible in order to hear from all of them. Mr. Barker is here of the Game and Fish Department and he is very busy. Something was mentioned this morning about machinery that belonged to the Game & Fish Department. I find out from him that what often happens to us is that a lot of times people call us and tell us that machinery is sitting idle or that machinery which belongs to us is not in use and they would like to be allowed to use it. When an investigation is made we find the machinery is not ours but belongs to someone else and we can't use it. I was talking to Mr. Barker about his machinery and he advised me that was what happened.

Another thing, I do wish we were in position so that every time the 'phone rang we would have a piece of machinery to send down to open up a road to someone's home or fix a road. They usually say it will take a half day. We find that sometimes it takes from ten days to two weeks, but if we let this machinery travel on the road every time it was requested, it would wear out the wheels and it wouldn't do anything else but wear out the road. Where it can be of service, or where there are emergencies, we are anxious to have it serve that purpose, but we have had several roads that are Federal Aid roads that have been blocked ever since the flood last spring. Not a day passes but what I get several calls, and the Highway Department gets calls, asking as to when we will get them open, and if we don't they will send a delegation in to see us. We are doing everything possible. We may sometimes have some lost motion that we can't control at all times, but our machinery and our men have been doing everything possible since the floods began last spring. We have been pretty busy keeping the roads open. All we try to do is to keep them open to travel on. I am sure that Mr. Dwyre will have an opportunity to talk after a while. We are doing everything we can, under the circumstances. Mr. Barker.

MR. BARKER: Governor, Mr. Chairman: I don't have any desire to take up more than just a moment of your time this afternoon, but I did want to explain just a little about the machinery that was referred to this morning. I think it was the impression that it belonged to the Game & Fish Department. I think that machinery was at the Bitter Lake Project somewhere northeast of Roswell. All of that machinery belongs to the Fish & Wildlife Service. You might think it is

tied in with the Fish & Game Department. That is a Federal Bureau operating under the Interior Department, and our department or the State of New Mexico has nothing in the world to do with that. They do have some big machinery out there, I understand, but whether or not it is available I couldn't say. We do not have any big machinery. One little bulldozer and caterpillar are the only pieces of road machinery that are owned by the Game Department. That has been busy most of the time this summer in protecting our own property up in the Red River Country from the floods there. We have, however, at Roswell had a couple of trucks in that area. We had them last spring and also during the flood the last of September. We sent them in both instances to Carlsbad to help in moving out people.

I want you to know that the Game Department is desirous of being helpful in any way possible at any time. We are not equipped with construction machinery to do very much. If we have been negligent at any time, and if something has happened that we could have been more helpful and failed, I am glad to have that brought to our attention. Should these floods be repeated or recur and our Department or any personnel of our Department, or if any of our machinery can be used, what little we have, we will certainly be glad to help out.

Of course, our department is interested in the long range program for this flood control. Our immediate needs naturally must turn to rehabilitation and helping out those who have been so severely damaged by the recent floods, but we believe that while that remedy, of course, is very important and necessary, that it is high time that we were looking to a long range flood control program over the State as a whole. As I see it, that will take two things—the very careful protection of our watersheds and the very careful use of the watersheds so as to minimize the run-off just as much as possible, and if we do get those floods and run-off any way, regardless, we simply must have some flood control projects that we can dam up the water and prevent a recurrence of what has happened in the past. It seems to me that unless we can work out some program, both on the Pecos and its various tributaries and the Rio Grande and its tributaries, that we will be headed for trouble from now on. I hope some way will be found that we can work it out. Building of flood control dams will react to the State's benefit in many other ways.

The point we are interested in is in making a program of flood control and reclamation projects that will handle floods and thus bring more money to the State.

GOVERNOR MILES: Does any one know whether Colonel Minton is coming back or not?

MR. McCLURE: Colonel Minton talked with me before the lunch hour and stated he had to leave this afternoon and he said his only interest and the only thing he could do was in regard to the CCC Camps—in feeding them or moving them in and setting up barracks. He was ready to do that any time that they got their orders to move the camps or increase the camps. That was the only function where he came into the picture. He said he was moving winter barracks into the Ruidoso. He said all we would have to do in moving in and setting up the camps would be to notify him and he would be ready to act. I believe on the Pecos we got down about to the Carlsbad Area. If we could hear from Mayor Horne of the Carlsbad Irrigation District.

MR. HORNE: Mr. Chairman, Ladies and Gentlemen: I can sympathize with the Governor about the telephone calls because it seems to me as though everyone in the State called me during the two floods we had. Of course, they were our neighbors. The calls were about

chickens on up. They complained seriously, and with reference to machinery we borrowed everything we could get our hands on. The streets and roads are in very bad shape. We had two floods—one in May and one in September, at Carlsbad. The one in May did more damage to our local housing situation in Carlsbad than the last one, although the last one reached out and did damages that the previous one didn't. We haven't attempted to compile a report for filing here today for the reason that it is impossible. Our reports are being made and will be analyzed by the Army Engineers who are working there now and reconciled properly with theirs and any necessary reconciliation will be checked. After the last flood I immediately began contacting our representatives in Washington for some kind of definite relief for the Pecos Valley, Carlsbad included. Out of it came a meeting of the various mayors in the Pecos Valley held at Carlsbad on October 16. Colonel Scott and Colonel Hewett of Galveston met with us.

I believe Colonel Hewett was here this morning. It was a gathering something the size of this, representing the interested districts comprising the Pecos Valley. Some of them were from up in the Hondo Valley, some were from Roswell, some from Penasco, some from the Red Bluff District, Barstow, Carlsbad and various other effected districts. At that meeting there seemed to be harmony. The spirit of the meeting was that it was one time for everybody to work together and forget any selfish interest or motive and apply for relief and work together for it, but I noticed a certain headline—not a headline necessarily but a news item—in the Fort Worth Star Telegram yesterday morning that some of our good neighbors were seriously concerned over any attempt we were making to retard the water on the Pecos.

Well, I don't have the solution. I have often made the remark that it was too highly technical. I understand the Army Engineers complained seriously of no contour maps of the surrounding country and nothing definite to work with. They have had to hunt it out for themselves in their minds, gather pictures, etc. Consequently, it is a slow job, but I see no reason why we should not definitely depend upon the surveys now being made of the Pecos Valley by the Army Engineers. I think there are around 18 or 20 headquartered in Carlsbad right now. They definitely promised me that the report will be complete and ready to deliver to the Rivers & Harbors Committee within 60 days, and then, of course, when that is analyzed our representatives in Congress will be able to take up with each effected community and inaugurate legislation, as they think best, to relieve the distressed areas.

Carlsbad is a highly technical location in this flood area. We are like most of the rest of the valley—we are dependent upon the water, and at the same time we are just like, so to speak, sitting on the bluff of all the storage, and the question that arises is as to any arrangements that can be made to protect us from it; whether it will effect the water supply; or whether it is economically sound, or in other words, whether we can afford it. Of course, that is to be taken into consideration from the standpoint of possible loss of life and property. I have never attempted to suggest to you gentlemen any definite remedy. As I stated before, I have confidence in those boys who are there. I think they are among the best, if not the best. It doesn't necessarily mean that their report will be final. I think the residents in the effected area reserve the right to reverse it if it is found that it should be desirable, or necessary, and I think within 60 days the report will be available as to what the Army's recommendations are and then we can begin to fight, but I want to say this that during our troubles in Carlsbad we have certainly had the cooperation from the Governor on down so far as the State officials are concerned, from the different departments of the Governmental agencies, CCC Camps, Red Cross, and Soil

Conservation. They did everything that you could imagine—so many of them that I didn't know who all they were.

Of course, we thanked them and the CCC boys. I can appreciate their position. Their power of doing things is delegated to them and they just can't exceed those things, and God knows I don't know what we would have done without them, and we appreciate them. I don't know whether it would be any remedy to ask for any delegated authority change for supervision of their work. We have found them to cooperate with us in everything they could do. I don't know but that you folks will probably be asked to sponsor some relief. We expect it and I don't think any of these communities expect someone to come in and do all the work for them. We don't expect it.

We are sitting in the most precarious or dangerous position in the entire flood area. We have a possibility in our part of the valley of being completely wiped out and the Dark Canyon Draw is serious and also the Hackberry Draw. We have other tributaries—the Penasco and Rocky Arroyo—any of them under maximum rainfall such as fell in the Dark Canyon on one day and three days on the Penasco—either one of them are capable of flooding Carlsbad if the river at the time they would meet with the Pecos waters was as high as it was at its maximum, such as in May. We have about five or six tributaries meeting right in and around Carlsbad that are very dangerous. I don't know of any permanent suggestion to make to this meeting—only that I can gladly say that I am willing to cooperate in any way in the world and that we are not selfish enough to ask any favors. We are willing to go 50/50 with any of them, and if any disaster hits your community we will work with the same spirit.

MR. McCLURE: I think in order not to deprive anyone of being heard and in order to get everything before the meeting and allow us to get over the areas, we will try to limit all the talks to not exceed ten minutes for any one. Now, we have cleared the Pecos pretty well with the exception of the upper regions. Any one here from the upper regions of the Pecos—Santa Rosa, Fort Sumner or up into the Las Vegas area? Anyone from the Penasco here? Mr. Salazar, we have the report from Otero County.

MR. SALAZAR: Mr. Chairman, perhaps it would be well to read the report. It has a few recommendations that might throw some light into the meeting. It states what they expect over there in the way of relief.

GOVERNOR MILES: Mr. Salazar, could you state in a few words, without reading it now, what is contained in the report? If you have a general idea you could give it to us.

MR. SALAZAR: Well, the meeting that we had at Mayhill—those people were looking forward at the time to having the Federal Agencies, such as the Soil Conservation Service, Farm Security, Forest Service, and all of those agencies participating in farm work, to undertake a program to rehabilitate not only the people but the lands. The flood damages in those areas that I went through are quite disastrous, to say the least. Many people lost their lands; lost their crops; and to top everything they are at the present time indebted to the Federal Government—perhaps to the Farm Security Administration or perhaps to some of the other agencies, and to the banks. To go into a lending program to rehabilitate those people naturally it will burden them to the extent that it is going to discourage further farming operations there.

It is quite likely that a situation similar to the Santa Cruz or the Middle Rio Grand Conservancy District might be worked out whereby the farmers there will undertake a program beyond their ability to pay. It is my opinion that in coordinating our efforts we should, perhaps, follow the recommendations of Mr. Pooler—ask for congressional action. I have known of some other flood damages such as those on the Ohio River some years ago. I might state the position that Mr. Dempsey took while we were discussing these flood damages with him. Mr. Spence from Alamogordo was with me. I asked him if the damages in the southeastern part of the state and the northwestern part, combined with Texas and Arizona, didn't warrant congressional action. He immediately pointed out the position Congress took on the Ohio River flood damages. They voted \$25,000,000 to rehabilitate those people. Well, this may be on a small scale, but it warrants the same consideration unless the agencies over here can undertake the matter themselves.

MR. McCLURE: I guess we can proceed to the Gila now. Anyone here from the Gila?

MR. STERLING: Mr. Chairman, we prepared a brief a number of years ago on flood structures on the Gila River. The matter of the defense program came up and disrupted flood control projects that were considered for the Gila. However, there are a number of men here who were at the National Reclamation meeting at Phoenix a short time ago. One thing that impressed me was the fact that we need a permanent organization to represent New Mexico either on reclamation projects or flood control structures. There also came up at the meeting the question as to just how much water the states were entitled to; a recommendation on authority of States rights was considered.

The brief we prepared became rather archaic after this last flood. We have lots of additional information to put in it. Even the matter of life came in. If that flood had come a few hours later in the evening there would have been 50 people drowned. They hung in willow and cottonwood trees and we could easily have lost 50 there. I believe the thing is simmering down because of shortage of labor and equipment and because of the priority angle. We have to decide just which structures must be put in to protect lives that might be in jeopardy should another flood come on soon, using what equipment and manpower we have for those structures. I believe, after being at Phoenix with 17 western states represented, that water is going to be power and we should have some strong organization in this state to protect our water rights.

We should have a definite, clear brief made on each watershed so that when this critical defense program is over, the millions of men who will be out of employment will have something to do and the hundreds of millions of dollars worth of heavy equipment won't rust and can be put to productive jobs.

There are so many agencies interested; for instance, the Reclamation is tying up very much to the development of electric energy. The flood control money that has been appropriated for flood control has been earmarked and is being kept over. The brief that has been prepared is a little bit archaic. We hope still to be able to take care of the drainage over about 2,000 square miles of country with the Soil Conservation Service and the Federal Projects on the Upper Gila. I hope we can do that. It would increase the lives of our people and Coolidge Dam. Our farms are at the bottom of Coolidge Dam today. Chemistry says nothing that has been created can be destroyed, but in my opinion our farms are at the bottom of Coolidge Dam and in my opinion,

are rather definitely destroyed. I really believe we need a permanent organization. We should get more information on the Wheeler Case Act, and on the different agencies that can help, so that we can correlate their jobs and see what we can do for New Mexico because these other States are looking after themselves quite well—Arizona and Texas. We think Arizona is just a trifle selfish about the water situation.

MR. HANNETT: I might say that the Army officer in charge of the investigation on the Gila prepared a report on the Gila flood control and it will be ready for release about the first of December. A copy will be made available to the State Engineer's Office.

MR. SALAZAR: Do you know anything about the Pecos River Joint Investigation report sponsored by the National Resources Planning Board and participated in by other agencies? Would that be adequate for a basis?

MR. McCLURE: The Pecos report is out with the exception of the flood control part that the Army will supply. They planned to have that report available by June first, but the excessive floods in Dark Canyon and in the area around Carlsbad have held it up for a little more study. By that time they got another flood that was larger, and also on the Hondo and now it is held up again. We hope that it will be out in the near future. The rest of the Pecos River Joint Investigation report is out covering the work of all the other Federal Agencies.

GOVERNOR MILES: The secretary has asked that he have the addresses of all the Government men. I think we know the addresses of most of them in the State. Before you do go away, will you please give the stenographers the address where they can get in touch with you? Several people have asked whether or not a representative from the Disaster Loan Corporation is here, or if anyone here can explain as to just what they have to do to borrow money from the department or corporation. If anybody here can explain it, I am sure a number are interested.

MR. O'LEARY: I would like to report, however, that following this last heavy and disastrous flood on the Gila, Governor Miles sent Colonel Powell over and I spent two days with him while he made a survey of conditions on the Gila and on down into Duncan. He made a report to the Governor and I would like to have that report incorporated in the minutes of this meeting (See Appendix F), showing the actual conditions existing after the most recent flood.

MR. LOSEY: I served as a member of the Board on the Disaster Loan Corporation in 1937. We set up an office in Roswell. We made a number of loans to the people injured in the flood, extending up in the mountains in the Roswell-Hondo area and wherever there was a loss from the flood. Those same people are the same representative of that agency. They came back into the Pecos Valley during the last flood and opened up a branch office at Carlsbad out of the El Paso office. They have recently opened up a branch office of the Carlsbad office in Roswell. I think if any individual who has been damaged by the flood will contact them by letter or telephone, and make application for a loan, those loans will all have very favorable and careful consideration. Those loans are for a period of years and have a very low rate of interest. They take any security that is offered. They consider the loan on the basis of need and security offered. I am sure in the Roswell area and in the Carlsbad area, that those loans are now available on very short notice. They made most of loans in 1937 and are ready to make them again.

MR. HORNE: Mr. R. L. McKennon of El Paso is the man in charge of the Disaster Loan Corporation at El Paso. He asked me to sit in on loans in Carlsbad and we have applications in for over \$100,000 there.

See Exhibit F

MR. PAYNE: I don't see anyone else here from Hidalgo County and the Red Rock area in Grant County. I want to make a brief report, at least on the Virden area, which is in the country I come from. There are several types of aid needed in those districts. Mr. Sterling reported that we needed a flood control dam on the Gila. It should not be limited to one dam. If any of you know the situation on the Gila River, there are several different valleys. Between each valley there are large canyons. In the Virden area we were in one of the worst flood stages before the crest of the water hit us because all water coming down Bear Creek and other large canyons was so large that we had a flood before the flood from the upper Gila ever reached us.

In my opinion we need flood control dams at the head of each valley—one at the head of the Gila Valley would give us some relief but it wouldn't give us adequate relief. We need at least one at the head of Red Rock Valley and one at the head of the Virden Valley. At least, if not large, of a size to give some relief. As you know, in the Virden area we lost the dam as well as losing our bridge connecting us with Lordsburg and the highway, and we are going to need aid in the Highway Division and from the Flood Control Division. The Wheeler Act is something that should be studied and perhaps provisions of it could be put into effect. It provides that forty per cent of the work on these dams can be done by WPA and other agencies.

With reference to these loans, it is true that some of these people need loans but I don't think that should be the ultimate aim. Suppose the Forest people cut off the forest and the grazing people cut off grazing, the farmers down here in the Valley would get the brunt of it. For that reason I don't think we should be called upon to stand all the burden of damage caused by the floods. That is the fate of all of us. I think the State as a whole and the Federal Government as a whole should take hold of these problems rather than leaving them to the device of individual groups effected. In the neighborhood of the Virden area (about 6 miles), a most conservative estimate of personal damage would be \$50,000, which amounts to \$1,000 for each of the fifty families.

Many of the men had to leave and go to the mines and make sufficient money to keep their families this fall. The dam went out and they were unable to raise their second crops. They sometimes raise two crops. They were unable to get the ditches back into shape in time to do anything. They haven't machinery heavy enough to put these ditches back into shape. At the head of the Sunset Canal it took all the soil away and left the bare bluffs. We have had floods there occasionally but this flood is the worst in recorded history. I think that we now have the concensus of opinion on the Upper Gila where even Arizona will join with us in requesting aid on these dams; at least, in the Duncan-Safford Valley the people will join with us in requesting that these flood control dams be put in. These people have always objected under the Federal Decree. Now is the time to strike when these people are with us and we should try to put those things over now. I was requested by the people of that valley to state their position and their desires, and that they are only too happy to cooperate in any way they can, but it is a problem too big for any little group to handle.

MR. McCLURE: Anyone here from the San Juan? Anyone on the Canadian? I guess the Rio Grande is next. I would like to hear from Mr. Butt.

MR. BUTT: We have told our troubles so much and so often there is no use of repeating them. We will all have to get together and have a unified program. I don't think we can get any money from the Government. We ought to have the money now to get any use of it. It won't do us any good in the next two or three years. What we need is money now. It may be necessary to have a special session of the legislature to pass certain laws to get any money, and if necessary, this meeting should go on record as favorable. We ought to do something about it. We can't get anywhere discussing it. Our troubles are plenty, but there is no use in repeating them.

MR McCLURE: Anyone else?

MR. HORNE: With reference to legislation for relief, I don't believe that I am betraying any confidence in saying that I was asked at the meeting in Carlsbad to build up a supporting case for our representatives in Congress. That is why we are definitely determined on the recommendation of the Army officers working there now to help us build that case. We had numerous estimates of damages filed at that meeting. These Army engineers are trying to reconcile their reports with those same problems. To be plain about it, it is like the lawyer building his case. Those men who represent us in Congress have to have some reason to go to that body of men and ask for assistance, but after all there are only three up there from New Mexico and the rest from Louisiana, Maine, or Vermont, or what not. They have intentions of asking for direct appropriation.

Whether this will be in line with the recommendation of the Army I don't know. I built such a case that they asked me to take off a little pressure so that they could report on it, and they promised us a report within sixty days. I know some of the things that they are going to recommend, but I would be treating them unfair to suggest what they have in mind. I think the other communities are entitled to consideration also. We are in danger of our lives if our dam should break. We wouldn't have any sort of protection. You might say, the whole city would be wiped out. That is an emergency that doesn't exist in most towns, but I state this fact because of the gentleman's suggestion over there that a direct appropriation is necessary to get any immediate relief. We can repair small minor dams, with individual communities helping each other, but if it is to be permanent it has to be done in a permanent way.

MR. McCLURE: Mr. Foster, do you have anything to say for the Bureau of Reclamation?

MR. FOSTER: No, I don't believe so. I have been directed by the Denver Office to make some estimates. We are making these estimates of damage up and down the river and we are working in cooperation with the Army Engineers in getting that data. I don't believe there is anything else that I have in mind. You know, the Bureau is not a flood control agency. I has to do with irrigation; however, most of our dams are in a measure flood control projects that flatten out to some extent when floods come down the river, and I think the Reclamation Service is willing to cooperate in every way they can under the law. We will probably go ahead and make some investigations on our own responsibility. I mean the Denver Office when I say "we."

MR. McCLURE: Mr. Humphries of Sierra County and the Hop Springs Chamber of Commerce at Hot Springs was in my office yesterday. The people there are more or less perturbed about what is going to happen next spring from the Elephant Butte project. It has more water now than ever in its history. It has very little capacity left before spilling and naturally they are pretty much perturbed. The river below the dam will have a capacity of approximately 4,000 second feet, and there is a possibility of a much greater spill that would do damage. They requested that I bring that up at this meeting, due to the fact that they could not stay over. Here is a wire addressed to the Governor from the Mayor of Hot Springs: "May I especially urge you to present at your meeting today the matter of river channelization here or other means of flood control. I believe it to be of special importance that immediate precautionary measures be taken against possible flood menace. Thomas B. Williams, M.D., Mayor, Town of Hot Springs."

The estimate now for the first of November for Elephant Butte is 2,100,000 acre foot storage. That is getting pretty well up to its maximum capacity. I would like to hear something from the Weather Bureau, if they are present, I would like to see what they know about the future and whether it is going to rain.

MR. CAMERON: Mr. Fitzpatrick of the New Mexico Magazine solved that with Dr. Krick. I won't make any comments about long range forecast. All we have to do is to look outside to see that we are in a wet stage. We make absolutely no attempt to forecast rainfall or possible snow depths beyond 48 hours on a daily scheme of five days, which we issue twice a week. However, you can see from our weather maps that we prepare each day that apparently at the present time there is no immediate change in view of this wet period. We know why it rains; why it rains hard; but we don't know why the condition continues; that is, what force in nature allows this abnormal condition to continue for twelve full months. We are not ready to say it will continue for one month or whether it will go on for a period of several years.

There is no argument that conditions like now at the end of October, which is normally a dry period, are pretty serious. We have had men up in Colorado establishing snow stations. One of them returned to Albuquerque day before yesterday, and the snow on the ground right now in the Upper Rio Grande watershed is considerably above normal—probably one of the heaviest early months of snow on the ground. They had a flood situation on the San Juan last week—the La Platte. The fact that considerable rain turned into snow probably prevented a much more serious flood. The condition of the ground on the Upper Rio Grand watershed is so different from what is was last year that even a normal snowfall for this winter will concern everyone here next spring. It is possible to get a normal snowfall and have it come off in such a way that it might not be serious, but with reservoirs full and in such condition as they are now, with considerably more water than they should have, such as at El Vado and Elephant Butte, I say a normal season would produce a situation next spring to warrant some concern at this time of the year.

The situation last spring (I wasn't here at that time) was that the ground underneath the snow was of such character it absorbed a considerable portion of the run-off which came in such a series of flows that it was not as serious as it could have been, but we are definitely still in a wet spell. October will rank about the third wettest month in the State, after September, which was the wettest of all history, and even at this early time of the season it should give some concern, but beyond that the Weather Bureau doesn't make any attempt to say what the snowfall will be for

the coming winter or what the run-off will be from that snow. It is absolutely an impossibility, even for Dr. Krick.

MR. McCLURE: We will hear from Dr. Aberle next.

DR. ABERLE: The Indian lands, of course, comprise a small percent of the lands of the State. They are very checker-boarded. The Indian Service works with the Indians and non-Indians. On some of our reservations there are as many non-Indians as Indians. Last May the Indians lost a great deal of good agricultural land, and of course, the loss was heavy. We have made a survey of the damages which occurred during the flood in May which we will be very glad to turn over to this committee when it is available. (See Appendix G) We have offered it to several agencies. We have also made plans with what appropriations we have to do what work we can for the protection of these lands and that is now under way. We do not have the adequate appropriations to do the kind of work that should be done, but we are doing all we can. In planning our work, of course, we plan it in connection with districts of the State or Federal Agencies who are working in this connection, so in protecting Indian lands we always try to adjust our work to be of as much protection to the Indians as to the other inhabitants of the State.

MR. McCLURE: Thank you, Dr. Aberle. We will be glad to receive that estimate of damages if you will send it in as soon as it is available. We will now call on Mr. Dwyre.

MR. DWYRE: Mr. Chairman, Governor, we haven't made an attempt to compile the total damage which has been done to the highways in the State. That will probably require some six or eight months. Many of our more remotely located roads and bridges have been destroyed and damaged to the extent we have not been able to determine and shall not be able to for many months. I was out of the State at the time the estimate of damage to the highways was made and published. When I saw that estimate I was a little afraid it was high, but since I have had time to go over the situation more carefully and actually go into the necessary work to recondition all of our highways, I can say that the damage will reach into several million dollars.

The Highway Department has made it a matter of policy to be of assistance wherever it can. We haven't statutory authority to do work off the State highways, but for many years we have been doing such work in amounts that we can without seriously crippling operations of the Highway Department. Governor Miles has always insisted that we help wherever we can and we have followed that policy very carefully. Our wide flung operations make us easily and readily available at all times and by reason of this fact we are called upon to do a great deal of work which we can't possibly do. If we were to attempt this the main-line routes of the Highway Department would suffer and this would bring criticism from the Public Roads Administration, which we are obliged to work with.

I know there are instances where our engineers may be a little hasty and may cut people off short on requests that they make for aid. I regret that this is the case but I am always mindful of the fact that these men are only human beings and when they are working on flood control and besieged with telephone calls, there may be times when they don't exercise the best of judgment. I can say at this time, and I believe that the Governor has gone into this matter sufficiently that he will know I am stating the facts, the Highway Department is not in any condition to be of any great service to flood stricken areas. We have many times more work on hand to complete than

we will be able to do and keep our main roads in shape; in fact, if we should have even one more flood next spring of what we might call normal proportions, it is entirely likely and possible that we will have to ask for additional money.

Our maintenance funds this year were raised some \$600,000 over what we normally use and we have spent to date approximately one-half of the new maintenance budget on flood work alone, leaving us \$600,000 less with which to maintain the roads than we normally have. I want to take this opportunity to thank the various Governmental agencies who have been operating in this State for their valuable help to the Highway Department during the many floods we have had, and also I want, from personal observation, to say that I consider the people of the State have been more than patient. I can say that they realize that this is an unusual situation; an unusual amount of rainfall; and that the trouble they are having is not the fault of the Highway Department. We want to get out and fix the roads up as rapidly as possible and with as little inconvenience as possible. I want to stress to you that for us to undertake any operations outside the Highway Department work is going to be very difficult, if not entirely impossible.

MR. PAYNE: Is this question of priorities causing any trouble in securing materials for bridge building in the State?

MR. DWYRE: Not to date. We have given up all hope of obtaining steel. We are redesigning our bridges and using entirely wood. We are getting good service on the supply of timber. The deliveries are made in about sixty days which is not a bad average.

MR. McCLURE: Thank you, Mr. Dwyre. We will now call on Mr. Todd of the Bureau of Reclamation. Mr. Todd.

MR. TODD: The Bureau of Reclamation has initiated investigations on the Rio Grande. They began the investigations last May and we had engineers in the field to watch the progress of the water at the time of the flood. The observations that were made at the time of the flood, ending about June 15<sup>th</sup>, led our engineers to believe that perhaps the emphasis had not been thoroughly stressed on the need for a reservoir system as against the present on the Rio Grande. However, we are not prepared to draw definite conclusions until we complete our investigations. As fast as Civil Service Rules will permit our getting staffed we will get into this from the state line down to Elephant Butte. We hope that within a year to have a report of the efforts put into it. We have in mind not only protecting the interest of irrigation but silt control and floods, and such power as may be developed.

MR. McCLURE: I would be glad to have suggestions and resolutions that we might take up and what procedure to follow to get some action. We might take about a five minute recess. (Recess from 3:05 to 3:10 P.M.)

MR. McCLURE: The meeting will come to order. Are there any suggestions, resolutions, or anything you think we can go ahead with?

MR. TODD: I move a vote of thanks be given to those two State Agencies who helped us so well. I refer to the Office of the State Engineer and the Middle Rio Grande Conservancy District. All governmental agencies are supposed to cooperate with other governmental

agencies. I mention those two State Agencies because they went out of their way to help us in the work we started.

MR. PAYNE: I move you, Sir, that we make a permanent organization that be named some particular or appropriate name, to handle this flood situation such as the Flood Committee. That this organization be comprised of three men chosen from the state of a representative capacity to work with the State Engineer, Mr. McClure, as a permanent flood control committee to coordinate the efforts of various areas. I further move that it be the concensus of this meeting that each of the watersheds, for instance the Gila, San Juan, Rio Grande, Pecos, Hondo and any other water sheds involved—each of those watersheds organize itself into a flood control body in that particular area, and submit from time to time, reports and recommendations to this State Committee, and this State Committee coordinate these reports and the efforts of these various communities; that they make reports from time to time, to our Congressional Representatives in Washington and such other reports deemed necessary; also secure various reports of the governmental bodies and agencies that might be interested in this work and that committee act in this respect; that from time to time future meetings be called of representative bodies to discuss these matters. There may be some amendments.

MR. PHILLIPI: Along the line of Mr. Payne's remarks, we who attended the National Reclamation Association meeting in Phoenix of which there were about 46 from New Mexico representing practically every section of the state, agreed at the time of the meeting which we held in Phoenix to organize a New Mexico Reclamation Association, which seems to me could handle the work which an organization of this sort proposes to do. We organized ourselves there as a temporary organization and called a meeting to be held at Albuquerque, New Mexico, on the 21<sup>st</sup> and 22<sup>nd</sup> of November, in which to perfect the State Organization. We have drawn up a constitution and have prepared it to submit for adoption at the meeting. We are extending invitations to everybody interested in reclamation, flood control and land use problems, to attend the meeting and join the Association which we propose to form and definitely organize at that time.

I can see no reason why all the problems which have been presented at this meeting cannot be handled through that association which is already in the formative stages. At the meeting in Phoenix, Congressman Anderson was there, and Jack Dempsey, former Congressman, and they both strongly supported the move. The fact is, it was at Congressman Anderson's instigation that the move was made. He brought out in a couple of meetings that Representatives in Congress are faced with resolutions, letters and petitions of all sorts from various irrigation districts or areas in the State for aid, and there is no way for him to determine which has merit and which one has any priority over any other. He suggested the Association organize for the purpose of correlating this material and making it a clearing house through which we could present all state problems to the Congressional Delegation for presentation to Congress if necessary.

In the organization and constitution as we have it prepared, but of course which has not been adopted yet, but which it is intended to be adopted at the meeting with such changes as are necessary, the state has been divided into drainage area districts with representation on the board from each of those districts, communities, etc. A representative could be appointed by each district to bring up the problems of each drainage area to the central organization to be passed

upon. I make the suggestion that rather than form a permanent organization here, that the organization be incorporated in the New Mexico Reclamation Association which is now in the formative stages.

MR. PAYNE: I don't want to throw any cold water on anything that is being done by any of these people, but I have in mind certain things that I think will make what I term more effective than this organization mentioned by Mr. Phillipi. I think our organization should have the color at least of a semi-official organization, and that is why I suggested that it clear through the State Engineer's Office. In the first place, I think that our Governmental Agencies, as well as our Representatives in Congress, will pay more attention to an organization that is a semi-official organization working through the State Engineer's Office, in conjunction with the Governor, Interstate Streams Commission and other State Organizations, than if we make it purely a private organization with no official connection with our State Agencies. In the second place, I am afraid there will be more chance for sectional jealousy and strife in securing benefits if it is handled through a group as suggested by Mr. Phillipi.

Mr. Phillipi has a high reputation and my remarks are not to reflect on him. Naturally, Mr. Phillipi is interested in the Middle Rio Grande Conservancy District and others are interested in the Gila. I think that this body would be less apt to become involved in sectional jealousy if matters are cleared through the State Engineer and if our State Engineer who is in charge of all waters in New Mexico, was the clearing house mentioned by Mr. Phillipi.

MR. SALAZAR: Mr. Chairman, in my work in connection with the State Planning Board, one of the hardest things is to keep up with what all organizations are doing. We have the Inter-Agency Council composed of various Federal and State Agencies. We have the Land Use Advisory Council that goes into studies of land use and water facilities and flood control and this and that, and of course, this organization that you are trying to form at this time is to look after this emergency.

MR. PAYNE: My opinion was that it should be made a permanent agency not only to look after this emergency, but to future long range planning as well as to make it a permanent thing, so these people who come up here will feel they have started something. In Arizona and some other states they have had these organizations for years and the Congressman and Senators can keep a finger on the pulse. We want to have it so that our representatives, not only in this emergency but in our long range planning, will be definitely interested in the pulse of this committee and this group.

MR. SALAZAR: One thing that we are trying to work out through the Land Use Council is the duplication of effort in investigating these problems. We find among the Federal Agencies and State Agencies that always, not always, but on many occasions, they are investigating the same thing whereby they are duplicating their efforts for the sake of their own files. I have no objection to the organization—I am for it.

MR. STERLING: I believe what Mr. Payne suggested is a good plan, because the State Engineer's Office is permanent, it located at the capitol and has rainfalls, contour maps, and everything for every area in the State. He could keep every district in touch with the progress of the briefs that they are submitting and what structures they are advancing. It seems to me that

the State Engineer's Office would be a very permanent office with a world and fund of information already available.

MR. SHEPARD: Second the motion.

MR. ROWLAND: The Constitution, as tentatively drawn, provides that the membership of the Association shall be composed of the Governor of the State of New Mexico, the State Engineer, the members of and the attorney for the Interstate Streams Commission, the Congressional Senators and Representative of the State of New Mexico and all individuals and organizations, including irrigation and drainage; then it is cut into six districts. This is the Constitution as is proposed to be adopted at this meeting in November: District (1) San Juan (Northwest); District (2) Canadian (Northeast); District (3) Middle Rio Grande; District (4) Gila; District (5) Lower Rio Grande; and District (6) Pecos (Southeast). Each district has one member on the Board of Directors. There are seven directors. It looks like a duplication of effort if we set up the same thing again.

MR. PHILLIPI: Mr. Payne brought out the fact that Arizona knew what they were about. They have an Arizona Reclamation Association. Montana, Idaho and Washington have. Out of the seventeen western states represented at the meeting, eleven have State Reclamation Associations. I don't believe there is a more powerful lobby in Congress today than the National Reclamation Association. Even in the day with defense spending, they lobbied out of Washington \$113,000,000, which is about \$20,000,000 more than they ever received during any one year prior to that time, and working through that Association I think we can get a lot more than working through individual groups.

MR. McCLURE: There is one thing that I would like to call to your attention in connection with your National Reclamation Association, and that is they don't deal with the question we are dealing with. We are dealing with flood control. They might have lobbied \$113,000,000, but I bet not over \$5,000,000 for flood control, the rest for Reclamation projects. That is the difference as I see it. We must have action on emergency money for flood control, leaving the Reclamation out of it.

MR. HANNETT: Mr. Chairman, I attended a meeting one day in Phoenix when the Association was to be formed. I understand there is a National Reclamation Association and various states have State Associations which belong to the National Association. It has been said the principal function of the National Association is to bring to the attention of the Congress of the United States the needs of various localities in the various states. I can't see how an organization such as proposed here will conflict in any way with this proposed state organization to be affiliated with the national organization. As Mr. McClure pointed out, this gathering was brought together by his Excellency, the Governor, for the express purpose of doing something now on flood control. It is very probable, and I feel certain, that we can count on the fullest cooperation from the Reclamation Association if, as and when the same is formed. They can help build up in their respective communities throughout the state, a lively interest not only in reclamation but in flood control, and I can see no reason why the two organizations would conflict. That is just a thought I have.

GOVERNOR MILES: As I say, when I called the first meeting, or set a date for it, I found there were conflicting dates that interfered with other meetings, so therefore I delayed it until this date. The reason is that I realize for a long range program it takes considerable thought and planning. So many people called me who had had their small farms destroyed and their crops destroyed, and had no means of financing themselves. They were calling on me for help and to know what they should do. That was the purpose of calling this meeting. No one said anything to me about the Reclamation Association or anything else to meet the situation. While I do not want to interfere with the Reclamation Association or any other organization, I do not see why this organization would interfere with the Reclamation Association, or whatever it is termed, because I am sure we would be glad to work in harmony with them. I do believe for the purpose which we are trying to accomplish that this organization would be willing to be organized and to be helpful to the Reclamation Association.

MR. McCLURE: The motion is that this body be made a permanent committee under any name that might be decided on to clear all information and correlate all flood damage through the State Engineer's Office, and use what Government and Federal reports that are available, and what information that Federal Agencies can give us, and correlate that material in such a way that we can keep the Congressional delegation informed of what each individual drainage basin committee organized may want and need, and what its desires are.

MR. CALKINS: I think that probably the idea is incorporated in the motion and it seems it should be made pretty clear, that the local organizations are going to be formed for action as well as planning and reporting. I haven't any wording, but it might be straightened out somewhat by bringing that thought in—in other words, that there is a long range planning job to be done and there is need for emergency action after disasters happen, and organizations for emergency work in anticipation of floods. That latter is particularly important right now because of the situation that some of these areas may be facing this spring and summer.

MR. PAYNE: I suggest that be included as part of motion.

MR. McCLURE: Motion carried. Are there any resolutions that anybody might want to draw up to be sent any place at the end of the meeting?

MR. PAYNE: Mr. Chairman, I haven't talked with anyone else, but I think that a group should be named at this meeting to work with Mr. McClure in the correlation of these reports, and efforts be made to secure the data from all districts and recommendations as to what should be done in those districts; that this body be organized immediately so there won't be any lapse of time between this meeting and the time to get started on this work. I suggest that this organization be carried out at this meeting.

MR. McCLURE: I suppose what we should carry forward is a nomination and voting on who shall be the three members.

MR. PAYNE: I wonder if they would like to have a recess and talk it over.

MR. CALKINS: Wouldn't it be advisable for the State Committee to make some suggestions as to what units should be organized locally? I don't know but that they could suggest some sort of division of the State into local watersheds.

MR. PAYNE: My idea was that this State Committee should be chosen today and that they should contact the leading citizens of the particular communities, or can make suggestions here. For instance, in my area on the Gila, we have three counties—Grant, Hidalgo and Catron. We have Captain Sterling who has acted in that capacity in Grant County, and those men of other groups should get together and call a meeting and perfect an organization of their groups. I think this committee should submit suggestions to these various groups in the different watersheds. That is my idea

MR. McCLURE: Do you want to recess for five minutes?

MR. TITSWORTH: Is this route going to delay the speedy action we are hoping and praying for?

MR. McCLURE: We hope to make it more speedy. It is hoped we may be able to make a clear picture as to what is needed for our Congressional delegation. They are the ones we are going to have to depend on to get the money.

GOVERNOR MILES: Mr. Titsworth, we will be glad to have any suggestions from you as to what could be done to speed it up.

MR. PAYNE: I move that we recess for five minutes.

MR. McCLURE: We shall recess for five minutes.

RECESS

MR. PAYNE: Mr. Chairman, after discussing this thing with some of the people in the congregation, it is suggested that we have a member from each of the major drainage areas so that each would be represented on this committee. It is also suggested that it be the first duty of this committee to take care of the emergency, temporary flood relief, and that it be the second order of business to work out a long range program. Later on, they could look into the matter as to what should be done; therefore, I wish to amend my motion to the effect that a delegation be elected from each of the six major drainage areas: San Juan, Upper Rio Grande, Lower Rio Grande, Gila, Canadian and Pecos, and that these six areas be represented on this committee.

MRS. COE: We feel that our problem is so different to the Pecos problem.

MR. McCLURE: Of course, the Rio Grande has the same thing with its tributary areas, and the Gila has the same thing.

MRS. COE: I guess that's right.

MR. McCLURE: They both have tributaries that need work done on them.

MR. TITSWORTH: Does the Pecos include the Roswell district?

MR. McCLURE: The Penasco and the Upper Pecos—the whole drainage system.

MR. PHILLIPI: I second the motion.

MR. McCLURE: It has been moved and seconded that membership of this committee be increased to the six main drainage basins of the State. If there is no further discussion on it we will put the question to a vote.

Motion carried.

MR. McCLURE: I believe it was suggested that we appoint temporary members for the other basins that are not represented—the Canadian, San Juan and Lower Rio Grande—so that we can start functioning and so that they can take it up with their people. We would like to have names suggested for the Gila.

MR. McMILLAN: I would like to suggest Mr. Bartley McDonald.

Nomination seconded.

MR. McCLURE: I declare Mr. Bartley McDonald duly appointed. Now, the Pecos.

MR. HALL: I nominate Mr. Lea Rowland.

Nomination seconded.

MR. McCLURE: Mr. Lea Rowland has been duly appointed. Now, the Upper Rio Grande.

MR. BEYER: I nominate Mr. Stanley Phillipi.

Nomination seconded.

MR. McCLURE: I declare Mr. Stanley Phillipi duly appointed. No one here from the San Juan? No one here from the Canadian? No one here from the Lower Rio Grande?

MR. SALAZAR: Mr. Chairman, in view of the purpose of this meeting I want to make a motion that this committee or organization confine its activities or efforts, to start with, the problem that we are confronted with—to the emergency—to take care of the flood damages—before they go into long range plans and programs. I believe it is proper that we should arrive at that conclusion as a result of our gathering here. Later on, if they choose to go into a long range planning program, it is perfectly all right.

MR. HORNE: Mr. Chairman, this is an emergency. We have been called in to discuss ways and means to take care of it and deal with long range problems. I do not think that we should handicap this group by saying that they should do this or that or the other thing. It looks to me like we should have them go ahead and carry on and we try to help them.

MR. PAYNE: I think the idea was to take care of the emergency first, and then take care of the long range planning, if there is no objection. It was my understanding that we would give the emergency priority and then if they intend to branch out they can do so. Is that correct, Mr. Salazar?

MR. SALAZAR: That is correct; that they confine their efforts to this emergency before they go into any long range planning program. Once they have solved this problem I will be glad to join hands with the organization and go into long range planning programs. It will be quite helpful, I am sure.

GOVERNOR MILES: On the Canadian I would like to suggest the name of James L. Briscoe.

MR. HORNE: Mr. Chairman, I object to tying this committee down in any shape or form. They are going to do the necessary things. If it becomes necessary in the emergency to get something done now to be correlated with long range planning a year or two or three years from now, why tie their hands? These are capable and honest men who understand why this meeting was called. Let's give them a free hand.

MR. SALAZAR: My motion does not tie the hands of the committee in any way, except that it gives a priority for action to handle this emergency first. I believe that is the purpose of the meeting and it is entirely in order. If the long range planning program is more important than to handle this emergency, then I am with you, but it must be proven.

MR. BUTT: There are 50 agencies doing long range planning now, and it seems to me it is getting longer all the time.

MR. McCLURE: Any further discussion? A motion is before the house to set up a priority on emergency work by the committee before any long range planning is taken up. Let's have a vote on that motion.

Motion denied.

The committee will act without instructions. The Governor has suggested Jim Briscoe from Tucumcari. I think Jim is a very good man for the Canadian. I have worked with him on flood control committees and I feel he is a good man for the job. We must name three temporary members so that we can notify somebody what action we have taken.

MR. PHILLIPI: Do you want nominations for those areas now? I move that Mr. Briscoe of the Canadian be named a temporary member.

Nomination seconded.

MR. McCLURE: I declare Mr. Briscoe duly appointed.

MR. PHILLIPI: In the San Juan I suggest that Ed Foster be appointed.

Nomination seconded.

MR. McCLURE: I declare Mr. Foster a temporary member of this committee. Do you have any suggestions for the Lower Rio Grande?

GOVERNOR MILES: I suggest the name of J. Minor Beene.

Nomination seconded.

MR. McCLURE: I declare Mr. Beene duly appointed. What does the meeting desire now?

MR. PHILLIPI: I don't believe that this organization has a name. Can we call it something?

MR. PAYNE: I suggest that we call it the "New Mexico Flood Control Committee."

MR. PFINGSTON: I second the motion.

MR. PHILLIPI: Mr. Chairman, may I suggest we change that name to the "New Mexico Flood Control Association" instead of "New Mexico Flood Control Committee"? That throws it open to the entire State.

MR. McCLURE: It has been moved and seconded that the name of the organization be the "New Mexico Flood Control Association." Let's take a vote on it.

Motion seconded and carried.

GOVERNOR MILES: Mr. Coe, do you have any suggestions now as to what should be done?

MRS. COE: Governor, Mr. Chairman, I am just at a loss to know what we can do to get down to brass tacks and be more specific and try to get something definite done. I don't know but what it might do some good to mention that I understand they have taken out seven CCC camps in the State in the last few months. They have had terrific floods in Missouri and in Kansas, and all over the country. Would it do any good for us to petition the authorities to place CCC camps in the emergency areas; for instance, on the Gila? These men tell me that they have no camps. As poor as we are, we are willing to divide with them, but surely there are some camps in the country that are not serving such areas that are in need as badly as they are in the Gila, Penasco, and in our own area. And then another thing, I understand that we have 123 men in our Soil Conservation Camp at Hondo. The capacity is 250. Would it do any good for us to ask that the camps that can take care of more men be given more men until this emergency is over, say six months or three months?

I hate to leave this meeting without us asking for labor and for equipment because we cannot put our land back into condition to farm this spring by our own efforts. If any of the Government agencies do have any equipment that could be transferred for a short period of time, I think we should ask for it. That is the big need in these three areas—the Penasco, Bonito and Hondo areas—we need labor and big equipment. We cannot buy a bulldozer and we cannot buy a steam shovel and we cannot buy a dragline. They are definitely needed. There are many smarter brains than mine here and I wish someone would suggest something definite, at least that we could devolve some resolution for publicity to let the people know what this meeting is trying to do in getting immediate aid to the people who are suffering right now and who need this assistance. Isn't that one of the chief functions of this committee that has just been appointed?

MR. SALAZAR: No, not necessarily.

GOVERNOR MILES: We intend to take up immediate needs first. That is one of them.

MR. TITSWORTH: I would like to ask if there are any CCC camps that are working in grazing districts that could leave their work there without any serious inconvenience?

MR. McCLURE: I couldn't answer.

MR. TITSWORTH: If there are such camps, we need them for a period of sixty or ninety days.

MR. McCLURE: I did notice some bulldozer equipment north between Roswell and Vaughn that was working on stock tanks, but I do not know what department it belongs to.

MR. PAYNE: I move that Mr. McClure, the State Engineer, act as chairman of this committee; at least, for the time being, and call them together as soon as the other members can be notified, and that this committee go into these phases and see what can be done. Unless we have an organization to call these men together it might cause a little friction and delay and that is why I make that suggestion.

MR. HALL: We have heard from every community of its trials and tribulations, and I don't believe that a group of this size can get anywhere with a definite plan. You have selected a committee of six. I think that we have a fine group of men capable of doing the job and I think that the purpose for which this meeting was called has been completed and I think it is time for us to get back to the Pecos Valley.

MR. TITSWORTH: I move that this meeting be adjourned.

Motion seconded and carried.

Meeting adjourned at 4:50 P.M.

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October 11, 1941

Mr. Thos. J. Hall, Mayor  
Roswell, New Mexico

Dear Mr. Hall:

Complying with your request, I have made a complete survey of the damages of the two floods of September 22<sup>nd</sup>, and September 29, 1941. I have confined this report to the damages incurred inside the city limits of the City of Roswell. The very large damages incurred on farms and ranches in this county will be covered by persons more competent than myself to judge same.

You are aware that the City of Roswell through its police power used every means possible to confine the damages to the lowest possible figure. The Home Guard was called out to assist the local and state police. All cars except those having legitimate business were not allowed on the streets of the city. By taking all of these precautions a considerable amount of damage, in my opinion, was prevented. You are also aware that the City was able to warn all citizens of the community that the flood was coming in ample time for them to protect their property in the best possible manner, with the means at hand. The flood of September 22<sup>nd</sup>, was not as high as the one of September 29<sup>th</sup>, however, the flood of September 22<sup>nd</sup>, softened up many of the streets of the city to such an extent that the flood of September 29<sup>th</sup>, washed them completely out of existence. The water from the flood of the 29<sup>th</sup>, stopped running through the west part of the city on October 10, 1941.

You will note that I have listed 1346 houses and business buildings damaged. You will also note that I have averaged this damage at \$150.00 per building. I am positive this is a very low average when we all know that some homes were damaged to the extent of thousands of dollars. We also know that this damage in many instances will show up in years to come.

I have contacted the garages in the city and I am positive that the number of cars I have listed as damaged by the floods is conservative, to say the least. As you know, the damage to cars may be two or three months in showing up and I have only listed the number being repaired at the present time.

Damages to our sewers are extensive. This year I was able to finally clean out all the silt caused by the 1937 flood, in other words, we have been working on our sanitary sewers for four years. This work must be done all over. The figure of \$500.00 a mile is a low estimate. Our man holes were damaged, sewer mains in some instances will have to be relaid, and I might say very little of our sanitary system escaped damage.

Practically every basement in the City of Roswell was flooded and most of them are flooded at the present date because of the ground waters seeping into them. This is a constant expense in pumping and in my estimation will be for sometime to come, in some instances two or three months.

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I have used the 1940 census as a basis to determine the loss in retail business. As you know, our annual fair had to be called off on account of the flooded condition of the city; also, this is a season of the year when our retail business is at its best, therefore I have added 50% to the average in computing the losses in retail business. I am sure this is a fair and reasonable basis to figure this loss.

The losses in wages, I have only figured the people of the community working on an hourly basis because most of the employees in the city work on a monthly basis and, no doubt, received compensation for the days they did not work. I feel sure that you will agree with me that we have at least a thousand people in this city working on an hourly basis and that their wages will amount to \$5.00 per day.

Our loss in tourist travel is exceedingly large and I feel you will agree with me that the amount set up for loss in tourist travel is small, however, I have tried to keep all the figures of losses close to the amount they would be.

I feel that I can substantiate every item listed in the attached itemized list of losses and will be only too glad to do so.

ITEMIZED LIST OF LOSSES

Salaries	(1000 @ \$5.00 for 8 days)	\$ 40,000.00
Homes and Buildings	(1346 @ \$150.00)	201,900.00
Damage to streets and bridges	(377 blocks streets @ \$200.00 per block)	75,400.00
Parks		15,000.00
Sewers	(48 miles @ \$500.00 per mile)	24,000.00
Retail business loss – 8 days	(annual business \$7,664,000.00 1940 census)	168,000.00
Plus 50 per cent for season of year		84,000.00
Damage to cars	(200 @ \$85.00 each)	17,000.00
Loss of tourist travel		<u>150,000.00</u>
		\$775,300.00

Respectfully submitted,

(Signed) Lea Rowland  
City Engineer

**AGRICULTURAL FLOOD DAMAGE SURVEY ON FARMS AND RANCHES  
CHAVES COUNTY, NEW MEXICO**

In computing estimates of flood damage occurring from the recent floods in Chaves County, the first flood being September 21, 1941 and followed by the second on September 27, 1941, all interested agencies cooperating developed insofar as possible, facts and figures to cover the situation.

Under the Hondo drainage, which would involve farms located west of the City of Roswell and continuing through to the northeast and east portion of town, it has been estimated that 944 acres was damaged, on the Felix, approximately 588 acres, and on the Walnut 135 acres, and on the Pecos and at points where the above mentioned streams flow into it, it is estimated 7,035 acres, giving a total of flood damaged lands in Chaves County located along the Pecos Valley, 8,702 acres at an estimated damage of \$268,980.

These above mentioned figures were secured by representatives of the Conservancy District, who in obtaining them made some 110 individual farm contacts, and the estimated amount of damage as shown in dollars were figures compiled from estimates given by the farmers themselves.

The actual crop condition as it pertains to the various crops, are as follows: A considerable acreage of cotton located in the lowlands, was completely destroyed, and is still covered with quite a depth of silt. In some of the other areas, the cotton was somewhat damaged, due to high water, but the crop being late with a very small percentage of bolls open or cracked, did not receive the degree of damage that was anticipated. As a whole, with the exception of the completely destroyed area, the main damage caused by the flood waters in regard to this crop, can be attributed to the loss of growing season. However, it is impossible to determine the extent of loss, as it will largely depend upon the date of the first killing frost, and in addition of course, some damage had previously developed by injurious cotton insects, angular leaf spot, and last, a heavy infestation of leaf worm. It is, however, at present estimated by various individuals, that the county average production of cotton will be in the neighborhood of from 350 to 400 lbs. per acre, as compared to 600 lbs. average in 1940.

Relative to the feed crop situation, there has been a tremendous loss, particularly grain sorghum, which was caused by the flood and by excessive rainfall. In most cases, the feed had been bundled and was stacked in the field, in which event considerable damage was caused by rotting. However, there is still a fairly large percentage of feed available, and insofar as the livestock feeding program is concerned, it is very doubtful if the loss that has occurred will affect the feeding program to any degree.

Regarding alfalfa hay, it can be stated that not more than 5% of the total hay produced in the country, would be classified as U. S. No. 1 extra leafy, extra green hay, nor would it classify as a choice commercial grade. This condition, however, cannot be attributed to the flood, except possibly a couple of thousand acres which were covered by silt and flood waters and were destroyed or mudded down to such a degree that rejuvenation is doubtful. The major factor which caused such a heavy damage to the hay crop was, of course, excessive rainfall during the harvest season, and even during periods when there was no rain, heavy dews were prevalent, and

## Minutes of 10/30/1941 Meeting

caused practically the same degree of damage as light showers, this being discoloration. While in many instances hay crops were not damaged to a degree that they could not be utilized in any way, the commercial value was reduced to where the majority will have to be used and sold through the form of livestock fed out.

The Penasco Valley, located in the southwestern portion of the county, was in my opinion, the worst damaged of any section in the county, but while their acreages and extent of damage does not compare with that occurring in the valley, the percentage of total crop land damaged was far greater. Facts and figures secured by Mr. J. B. Runyan, a farmer and rancher in the Penasco Valley, give in detail the exact situation. It is estimated that in the entire Penasco Valley, there is a total of 867 acres of crop land. Of this amount, 56 acres were totally destroyed and cannot be reclaimed. 90 acres had a loss of the top soil. Regarding their irrigation systems, it is estimated that a 45% damage occurred, this amounting to around \$5,000. 1,840 feet of flumes were destroyed, at an estimated cost of \$5,000. Four bridges were lost, and 11 ditch or diversion dams. In addition to these figures, 228 acres of corn were destroyed, 40,000 lbs. of corn (snapped ears and corn in bid), 9 acres of grain sorghum, 18 acres of cabbage, 62 acres of alfalfa, 101 fruit trees, 97 acres of winter wheat, 1,500 bushels of apples, 48 tons of oat hay, 167 tons of sudan and other hay, 17 acres of rye and 20 acres of hegari. Loss of poultry and livestock was as follows: 20 chickens, 19 turkeys, 15 hogs and 8 sheep.

The remaining area of the county which suffered a large degree of damage, was the ranching area located in the western portion, and while no actual figures can be given, information secured from individual contacts supply the following estimates: Approximately 50 ranches received in some degree, damage during the recent flood, the largest damage being the loss of fences, and in this respect it is estimated that from 100 to 150 miles of fence will have to be thoroughly repaired and in many instances completely rebuilt; also the loss of such permanent structures as stock tanks and reservoirs, which were damaged to where they will have to be repaired, cleaned out, and in many instances, completely rebuilt. The loss of livestock was, of course, lower than anticipated, but nevertheless a few sheep and a few head of cattle, etc. were killed during the flood. Considerable damage was also done to various ranches in that new arroyo channels were developed by water erosion. This, of course, will necessitate the practice of water spreading and replacing of diversion and check dams, which were completely destroyed.

There is no way that the above information can be classified as definite and accurate, but an attempt has been made to summarize, insofar as possible, damage occurring from the recent floods. The Conservancy District officials, the Farm Security Administration and the Soil Conservation Service, together with assistance given by various operators, should be given credit for their time and effort in preparing these facts and figures.

Respectfully submitted,

/S/ Tom Reid, County Agent.

October 16, 1941

**NARRATIVE REPORT OF FLOOD DAMAGES AND REMEDIAL MEASURES FOR  
THE PENASCO DRAINAGE AND ITS TRIBUTARIES AND AREAS WITHIN OTERO  
COUNTY**

The recent heavy rains which occurred in the Sacramento Mountains seriously damaged considerable quantities of farm lands, and totally destroyed many crops.

It has been estimated that more than 90% of the crops on the Penasco were completely destroyed, and that approximately 200 acres of farm lands were so damaged that expense of reclaiming would exceed the value of the land. Estimate of damage to irrigation facilities, roads, farms and fences, in terms of dollars and cents is attached.

It is obvious that rain near the summit was in the nature of a steady down pour and not torrential down pour as was the case ten or twelve miles below the summit. Therefore flooding was not as serious as might have been.

Much of the torrential down pour occurred on the Pinon-Juniper type, which is not suitable for timber production but which is used for grazing. It must be recognized that much of the flood was caused by serious over grazing which has been practiced in the past, but in which greatly improved practices have already been effected.

Every possible attention must be given in a long time program to the rehabilitation or improvement of these grazing lands. This will require a closer coordination between private land owners, the Forest Service, AAA, Soil Conservation District and other parties who participate in the use of these lands.

At the same time the fact must not be overlooked that since cut-over timber areas did produce a great deal of un off with a steady down pour a torrential down pour would have resulted in much greater destruction of property. Much closer attention must necessarily be given to prevent this run off, by beginning at the source.

It has been estimated that slightly in excess of one million dollars expenditure will be required for conservation work to reduce the flood hazard on the entire Pecos drainage within Otero County, to a reasonable degree. This is divided into 2,279 man years of common labor, 100 years of technical labor, and with the remainder divided between materials and equipment, facilitating the labor.

On one of the major tributaries, James Canyon, a detailed inventory of conservation work has been made. A total cost of \$351,000.00 is anticipated, divided into 872 years of unskilled labor, 10 years of skilled labor, material cost of approximately \$35,000.00 and equipment consisting largely of terracing machinery, 35,000 hours.

### Mayhill Unit

Undoubtedly the most serious damage occurred on the Penasco Valley, much of which was caused by run off from its main tributaries, James Canyon, Cox Canyon and Wills Canyon. Most of the irrigation facilities were carried away and must be replaced before a new crop can be planted. In several cases great amounts of debris were deposited on the farm land and in some cases farm lands were badly washed. Most of the crops, however, were covered up rather than washed away. A number of farmers must have financial assistance, perhaps three or four in the form of grants and a much larger number in the form of loans, in order to continue farming and produce a crop in the next year.

Requests are being made of the Farm Security Administration to give financial assistance and perhaps additional funds should be requested for this purpose and undoubtedly some grant funds should be requested. Assistance must be given in the restoration of water facilities, which are being planned on a more permanent basis. A water facility program covering all of the area under discussion was prepared sometime in the past and is now before the Water Facility Board in Washington, D. C., for their approval. Funds are available for loan but no funds for grants are available in New Mexico at present. It is probable that water facilities on a loan basis will be adequate for the Penasco unit, but it might be possible to hurry approval of the docket by the Water Facility Board, in order to expedite planning and construction of the needed water facilities which will largely consist of diversion dams.

A Soil Conservation CCC camp, located at Mayhill, has been assisting in removing water from the fields and returning it to its channel. However, water supply at this camp is inadequate and it has, therefore been impossible to fully man this CCC camp.

It might be desirable to urge development of a more adequate water supply at this camp upon the proper authorities. Undoubtedly a much larger work force than is at present available will be necessary, to complete conservation measures, if similar disasters are to be avoided in the future.

Plans for enlarging the channel of the Penasco river have been prepared which will alleviate to some extent the flood problem on this canyon. However it is recognized that the present flood control problem of the Penasco lies in the control of floods from its many tributaries, and that many years work for a large group of men will be required to complete the necessary conservation measures. A conservation program for this purpose has already been prepared.

### James Canyon Unit

James Canyon, one of the major tributaries to the Penasco, on which a work plan for Soil Conservation has been completed, empties into the Penasco immediately above Mayhill and has long been a source of considerable damage. This drainage consists of approximately 35,000 acres, of which about 500 acres are cultivated, the remainder being range and timber land. A considerable portion of timber and range land is state owned land, with a smaller portion being privately owned, while the major portion is Lincoln National Forest property.

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Principal sources of run off are in order of importance:

- (1) Cut-over forest land.
- (2) Cultivated lands.
- (3) Roads and trails.

Plans already under way provided for terracing and contour farming of the cultivated lands, which will largely take care of run off from these lands and from the highways. This work can largely be accomplished by farmers with the aid of technical assistance from the Soil Conservation District and from additional equipment, which has been requested by the Soil Conservation Service for loan to the District.

A series of stabilizing or silt retaining dams have been planned for the gully which runs throughout the length of James Canyon and also for several large tributaries, mainly, Eight Mile Canyon, Hyatt Canyon and others. The labor forces of two CCC Camps would be required for a period of one year to complete all of these structures.

In addition to this, it is highly important that every precaution be taken to fill up all old log trails and to keep new log trails brushed up closely behind the logging crews.

### Cox Canyon Unit

Another major tributary of the Penasco is Cox Canyon, which is very similar to James Canyon with the exception that truck farming is practiced on Cox Canyon as opposed to grain farming. However the problem of watershed control is almost the same, there being slightly less cultivated land in Cox Canyon. The same general type of stabilizing structures for the gullies and tributaries are recommended.

### Wills Canyon Unit

Wills Canyon, another important tributary of the Penasco, is perhaps the least important, in that fewer families live on the canyon itself. However, as the tributary contributes to flood damage below, it must not be overlooked and its importance is accented by the fact that considerable logging operations are under way.

A number of complaints have been received from inhabitants of the valley, that log trails were left open and that logs were left in such a way as to clog up the main channels and cause considerable damage. This situation should be investigated immediately.

### Agua Chiquita Unit

Agua Chiquita is perhaps the largest tributary on the Penasco and provides a livelihood for a considerable number of people.

It differs from the Penasco in that a large channel exists and therefore, damage from overflow to crop lands, occurs in only a few instances. However the problem is greater in that, due to the larger channel, more expensive irrigation diversion dams will be required.

A large number of tributaries such as, Hay Canyon, Spring Canyon, Potato Canyon and others are very similar to James Canyon, except lesser in extent. Considerable assistance in

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reestablishment of water facilities will be essential and very likely some grants should be made. Requests for water facilities funds available for grants for this area should perhaps be made. Also one or two grants may be necessary to assist families through the winter in cases where especially serious damage was experienced by families already in financial difficulty.

Probably the farmers will be able to do the largest part of the work towards rehabilitation of their farms before another crop year, provided the necessary financial assistance can be given through the Farm Security, Water Facilities or other programs.

<u>OWNERS</u>	<u>FARM ACRES</u>	<u>CROP ACRES</u>	<u>OWNERS</u>	<u>FARM ACRES</u>	<u>CROP ACRES</u>
J. O. Arthur	61.0	20.0	J. Cox	1420.0	36.0
Artesia Camp	158.0	25.0	A. Criedbring	160.0	35.0
Mrs. C. A. Arthur	160.0	25.0	Crocket	548.0	18.0
E. T. Baird	268.0	108.0	T. M. Curtis	85.0	25.0
Geo. Towns	160.0	39.0	F. H. Davis	160.0	33.0
J. G. Barkley	96.0	35.0	R. B. Davis	160.0	36.0
Homer Barkley	110.0	35.0	S. Davis	160.0	27.0
N. C. Bass	259.5	20.0	Mrs. W. D. Davis	385.0	20.0
W. R. Batte	80.0	25.0	R. G. Deering	116.0	25.0
W. E. Begley	120.0	35.0	W. H. Eckhorst	140.0	55.0
Chas. Bonnell	480.0	96.0	J. H. Formwalt	320.0	20.5
Frank Bonnell	760.0	87.5	Mamie Frizzell	1120.0	65.0
E. P. Bradshaw	80.0	15.5	J. R. Fuller	160.0	35.0
Fred Brantley	96.0	18.0	W. A. Gage	280.0	56.5
Geo. Brown	320.0	62.0	Howard Goss	80.0	17.6
A. W. Boyce	157.0	25.0	Nedd Goss	320.0	85.0
W. W. Buckner	158.9	26.0	Philip Green	195.0	29.0
Mark Brantley	120.0	13.0	D. Guilliams	45.0	20.0
Vernon Cady	110.0	40.0	H. A. Guilliams	445.0	20.0
L. G. Cady	420.0	50.0	Hadley Brothers	154.0	50.0
E. C. Calentine	465.0	107.0	E. A. Hadley	160.0	11.5
R. P. Calkins	150.0	30.0	V. C. Hadley	160.0	27.0
W. P. Calkins	160.0	28.0	Harvey Fox Farm	80.0	74.0
J. J. Carner	55.0	18.0	J. E. Hudman	317.0	42.0
Carter Watts	40.0	18.0	E. E. Jernigen	480.0	66.0
R. E. Chalk	80.0	20.0	Geo. Jewett	160.0	8.0
E. J. Chandler	94.0	24.0	Otis Jones	160.0	17.0
Garlim - Clark	80.0	29.5	Ross Jones	85.0	30.0

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<u>OWNERS</u>	<u>FARM ACRES</u>	<u>CROP ACRES</u>	<u>OWNERS</u>	<u>FARM ACRES</u>	<u>CROP ACRES</u>
Rex Lewis	320.0	188.0	Leo Rogers	276.0	16.0
J. F. Mahill	637.0	115.0	Jasper Scott	80.0	11.0
Tom Mills	112.0	15.0	V. C. Scott	40.0	11.0
T. M. Mills	134.0	38.0	H. Sewell	160.0	40.0
C. B. Mitchell	240.0	27.0	Nellie Shields	160.0	30.0
Elizabeth & Lee Mosiers	2238.0	38.0	C. W. Talley	160.0	17.0
Mae Mumson	160.0	17.0	Geo. H. Talley	33.0	10.0
Otero Inv. Co.	186.0	165.0	H. C. Talley	320.0	61.5
E. C. Owens	160.0	30.0	Mary L. White	160.0	59.0
C. R. Parker	60.0	55.0	Geo. Wimsatt	552.0	147.0
J. L. Parker	160.0	21.0	J. A. Wofford	40.0	37.0
J. W. Parker	390.0	35.0	R. C. Woods	160.0	25.0
R. W. Parker	360.0	80.0	E. White	6400.0	50.0
A. Patrick	160.0	12.0	D. S. York	160.0	38.0
A. Pendergrass	176.0	23.5	W. F. Culbertson	18.8	18.8
R. P. Polson	160.0	18.0	Bennie Bounds	172.0	17.8
E. H. Posey	306.0	88.0	J. Akers	332.0	59.0
Ollie Posey	154.0	50.0	E. E. Ferguson	160.0	30.0
Kenneth Potter	170.0	16.0	K. S. Weems	112.0	21.0
Roy Roach	161.0	45.0	J. F. Wright	148.0	25.0
Roy Raoch	25.0	7.0	Mrs. J. M. Reed	84.0	26.0
W. F. Robinson	80.0	20.0	Mrs. W. L. Jones	153.0	19.5
			A. A. Russell	120.0	43.3

FLOOD DAMAGE MAYHILL AREA

Replacement of Irrigation Ditches and Small Dams

Penasco Canyon	20 miles @ \$5000 per mile	\$100,000
Agua Chiquita	12 miles @ \$3000 per mile	36,000
James Canyon	10 miles @ \$2000 per mile	20,000
Cox Canyon	5 miles @ \$2000 per mile	<u>10,000</u>
		\$166,000

State Roads

Mayhill to Forest Boundary (7 miles)	\$ 20,000
Mayhill to Cloudcroft	5,000
Mayhill to Weed	20,000
Forest Roads	<u>10,000</u>
	\$ 55,000

Minutes of 10/30/1941 Meeting

Miscellaneous

Fences	150 miles	\$ 25,000
Orchard lands ruined	40 acres @ \$500 per acre	20,000
Leveling farm lands	2,000 acres @ \$50 per acre	100,000
Out of 30 farms, land completely ruined	203 acres @ \$200 per acre	<u>40,600</u>
		\$185,600
	GRAND TOTAL	\$406,600

Note: Above prepared by Mr. Spence, Chairman, Otero County Land Use Planning Board and Mr. Beatty, Otero County Agricultural Extension Agent.

\* \* \* \* \*

PECOS DRAINAGE OF OTERO COUNTY

Inventory of Conservation Work for a Long Time Program  
For Stabilization of the Soil and Flood Control

Terracing	8,000 acres	288 man years	\$120,000
Water spreading dike	90,000 lin. ft.	34 man years	14,000
Fencing	150 miles	59 man years	37,500
Reseeding	400 acres	2 man years	1,200
Stabilizing dams	2,000 each	1173 man years	600,000
Smaller gully plugs	8,000 each	50 man years	6,000
Revetments	1,600 rods	2 man years	3,470
Channel realignment	20 miles	2 man years with dragline	10,000
Detention Reservoir	1 each		<u>60,000</u>
			\$852,170

Geo. D. Perrine, Roswell  
District 1

M. Y. Monical, Hagerman  
President  
District 3

Jessie I. Funk, Lake Arthur  
District 4

J. H. Mullis, Roswell  
Sec'y-Treas.  
District 2

S. A. Lanning, Artesia  
District 5

**PECOS VALLEY ARTESIAN CONSERVANCY DISTRICT**  
**ROSWELL, NEW MEXICO**  
October 17, 1941.

The following estimates of damage suffered by 156 farmers of the Pecos River bottoms and tributaries of the Pecos were obtained by personnel of the Pecos Valley Artesian Conservancy District. They went to each individual farm that they could reach and took the stories and estimates of the owners of damage they suffered. The acreages are estimated as those actually under water. The flood damage on the Pecos River proper takes into consideration a previous flood in May of this year.

This report is confined to the farming population. The towns and cities that are within the Conservancy District have their own facilities for setting up their flood damages and this report does not take any of their damage into consideration nor does it take cognizance of any damage outside the boundaries of the Conservancy District or any damage to roads and bridges.

Pecos River	9727 Acres	\$274,435.00 Damage
Hondo	944 Acres	25,900.00 Damage
Felix	588 Acres	12,245.00 Damage
Walnut	135 Acres	4,050.00 Damage
Cottonwood	690 Acres	23,300.00 Damage
Eagle	272 Acres	7,600.00 Damage
Penasco	918 Acres	52,990.00 Damage
Seven Rivers	<u>250 Acres</u>	<u>3,200.00 Damage</u>
	13,524 Acres	\$403,720.00 Damage

(Signed) M. Y. Monical,  
President

REPORT OF PROGRAM PLANNING COMMITTEE ON FLOOD DAMAGES IN BONITO,  
HONDO AND RUIDOSO VALLEYS

OCTOBER 3, 1941

A special tour of members of the Program Planning Committee, governmental and county officials was organized by the Co. Extension Agent and conducted on Friday, October 3, 1941. The purpose of the tour was to make a survey of the Bonito, Hondo, and Ruidoso Valleys to determine the extent of damage that had been done by the floods which occurred chiefly on September 21 and 28, 1941.

Those attending the tour were:

L. D. Merchant, Chairman, Program Planning Committee, and Chairman, County Agricultural Conservation Association, Capitan  
George A. Titsworth, Farmer and Rancher, Capital  
Wilbur F. Coe, Farmer and Rancher, Glencoe  
George Smith, Manager, Titsworth Farms, Tinnie  
A. T. Pflingsten, Agent, Southern Pacific Railroad Farms, Hondo  
J. V. Tully, Farmer and Rancher, Glencoe  
B. J. Bonnell, Farmer and Rancher, Glencoe  
Edward Penfield, Merchant, Lincoln  
W. W. Gallacher, Chairman, Board of County Commissioners, Carrizozo  
Manuel Corona, Member, Board of County Commissioners, San Patricio  
Felix Ramey, County Clerk, Carrizozo  
L. A. Whitaker, Representative, Carrizozo Business Mens' Club, Carrizozo  
Mrs. Ola C. Jones, County School Superintendent, Carrizozo  
Mrs. Blanche Shilling, County Supervisor, Department of Public Welfare, Carrizozo  
Mrs. George McQuillen, County Nurse, Carrizozo  
John Paul Jones, R. R. Supervisor, Farm Security Administration, Carrizozo  
Gordon Gray, U. S. Forest Ranger, Capitan  
Clarence A. Henderson, Area Conservationist, Soil Conservation Service, Capitan  
Marvin E. Bezemek, District R. R. Supervisor, Farm Security Administration, Albuquerque  
J. R. Isler, District Manager, Work Projects Administration, Roswell  
Grady Mayfield, Farm Debt Adjuster, Farm Security Administration, Amarillo, Texas  
George D. Hardaway, Associate Engineer, U. S. Forest Service, Albuquerque  
Lee Beall, Assistant Forest Supervisor, U. S. Forest Service, Alamogordo  
Carl P. Radcliff, County Extension Agent, Carrizozo

After the tour, a meeting was held at Mr. B. J. Bonnell's ranch for the purpose of compiling information and to discuss with representatives of the various governmental agencies ways in which their agency could contribute to the solution of some of the problems that resulted from the flood.

The meeting was called to order by Mr. Radcliff, the County Extension Agent. Mr. L. D. Merchant, Chairman of the Program Planning Committee was asked to preside. Mr. Merchant

## Minutes of 10/30/1941 Meeting

discussed the purpose of the meeting, after which the County Agent presented a questionnaire which he had prepared previously, which might be used in obtaining information and recommendations. The questionnaire was approved by the Committee and was followed in obtaining the following information.

- (1) It was found that four families were in immediate need of food, clothing, and shelter.
- (2) There will be approximately 200 families who will need direct aid in the near future. Although their homes were not destroyed, their small farms, which were their chief means of livelihood, were badly damaged or destroyed by the flood.
- (3) Approximately 148 diversion dams, 50 farm and private bridges, and 100 miles of diversion ditches were destroyed or damaged. The cost of reconstruction will be so great that many of the farmers must have financial assistance before reconstruction and repair work can be done. It will be necessary also that laborers be made available, since at this time, there is a shortage of laborers in the valleys. Failure to secure assistance will mean that the irrigation of truck crops and orchards will be impossible in the future. Orchards that survived the flood will soon suffer, and eventually die, for the lack of water.

It was also pointed out that many farmers who own small plots of land depend partly on employment from the higher-income farmers; and, unless help is given to the latter group, as well as to the low-income group, it will mean that many of the families in the valleys will be compelled to abandon their farms, since they are not large enough for an economic unit. This is especially true in the Bonito Valley where practically all of the farmers are tenants.

There was considerable discussion and variation in the opinion of members of the committee as to the cost of reconstructing the dams. Some estimated that it would take a million dollars to replace the dams and diversion ditches. It was finally agreed that it would cost on the average of \$2000 to replace each dam. The committee wished to go on record that these were merely preliminary figures and that an engineer had not estimated the cost. It was the consensus of opinion that although dams had been constructed at a total cost of \$1000 to \$1500 each, as a result of the flood the channel would perhaps be too low an estimate for the building of new dams.

- (4) Approximately 10 per cent of the farm land in the valleys was estimated to be completely destroyed, as a result of the river changing its course in places and in the widening of the channel.
- (5) Approximately 25 per cent of the farm land in the valleys was badly damaged; but, can be reclaimed in time to crop in 1942, provided the farmers can receive assistance through C.C.C. and W.P.A. labor projects.
- (6) Approximately 75 acres of orchards were completely destroyed and 650 acres damaged. The damaged orchards can be reclaimed provided labor can be made available to the farmers in the near future.

- (7) Approximately 110 miles of fence were destroyed. Estimating the total cost of the fence to be \$175 to \$200 per mile, it would cost approximately \$19,250 to \$22,000 to replace the fences.

#### REPORT ON THE RUIDOSO AREA

Since the bridges were out, it was impossible for the committee to visit the Ruidoso area; however, after the committee adjourned, Mr. W. A. Hart, of Ruidoso telephoned the County Extension Agent and asked that the following information on the Ruidoso area be included in this report. It is understood that the information was compiled by Messrs. W. A. Hart, Jack Hull, and Ike Wingfield, of Ruidoso. The information listed was not approved by the Program Planning Committee; but, is being submitted in order that the estimated damages in this area may be included.

- (1) There were 25 cabins destroyed or badly damaged.
- (2) In the resort area there were 15 bridges destroyed at an estimated cost of \$2000 each.
- (3) Four bridges on the main highway were destroyed—one on the Carrizozo; one on the Alto-Ruidoso road; one at the edge of Ruidoso; and one above the Ruidoso Lodge. The total estimated damages of these bridges was \$24,000.
- (4) It was estimated that it will cost \$10,000 to replace highways that are completely washed out. Six miles of paved roads will have to be completely recapped, at an estimated cost of \$21,000.
- (5) It is estimated that it will cost \$15,000 to clean and repair crossings or roads that are now closed.
- (6) Total damages or cost of reconstruction in the Ruidoso area is estimated at approximately \$100,000.

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After the questionnaire on the estimates of damage was completed, representatives of the various governmental agencies were called on to outline the assistance that their agency could offer.

During the discussions, questions and answers revealed:

- (1) That there was not need for National Red Cross assistance. It was pointed out that Mr. Frank Adams, Chairman, of the County Red Cross Chapter, had been authorized to issue relief orders to the extent of \$300. It was the opinion of the committee that this assistance, together with the help that has been given by the County Nurse and the Department of Public Welfare, and the further assistance that can be obtained by the Department of Public Welfare, was sufficient to take care of the immediate emergency needs.
- (2) The Committee was of the opinion that an emergency W.P.A. project or arrangements for special assistance from the C.C.C. Camp should provide labor for reconstructing the dams and diversion ditches. Mr. Isler, District Manager, W.P.A., stated that at the present time

there was no agency established through which a W.P.A. project could be sponsored; therefore, his agency could not assist with labor to rebuild the dams and ditches.

- (3) The question of securing assistance from the C.C.C. Camp was asked, and Mr. Henderson, Area Conservationist, was asked to outline how the Soil Conservation Service could assist with the problems. Mr. Henderson stated that the term "emergency" as interpreted by his agency involved a matter of life and death, and before they could give immediate help that an emergency would have to be declared by some higher official. He commented on the fact that the organization of a Soil Conservation District is well underway, and that two supervisors had been appointed and the date for electing the other three supervisors had been set for October 25. He stated further that after the district was organized, the supervisors had informed him they would be glad to offer whatever assistance was possible.
- (4) Mr. J. V. Tully asked what had developed from the recommendation that the Program Planning Committee had made relative to securing assistance through the Water Facilities Program. Mr. Radcliff explained that the Program Planning Committee had recommended that the Bureau of Agricultural Economics conduct a survey in the county to determine the practicability of developing wells. He then recommended that the Program Planning Committee amend the recommendation and ask the B.Z.E. to make a survey relative to making loans to farmers in the flooded valleys through which they could reconstruct their dams and diversion ditches. The recommendation was accepted, and Mr. Radcliff stated that he would send a report of the meeting to the Bureau of Agricultural Economics and ask that an immediate survey be made.

Mr. John Paul Jones, R. R. Supervisor, F.S.A. and Mr. Henderson then commented as to how their agencies would function in cooperation with the B.A.E. Mr. Bezemek pointed out that application for Water Facilities could be placed with either the Soil Conservation Service, the Farm Security Administration, or the Extension Service and expressed hope of being able to make some loans through the Water Facilities Program.

- (5) Mr. Hardaway, Associate Engineer, of the U. S. Forest Service, was asked to outline the assistance which might be offered by his service. He pointed out that the Forest Service cannot work on private lands, and that they, themselves, were in need of several thousand dollars to reconstruct their own damages, especially roads. Mr. Hardaway then commented on the Wheeler Case and suggested that it be investigated as a possibility of securing aid through this means.
- (6) The chairman called for other recommendations and suggestions for relieving the acute situation. Mr. Gallacher, County Commissioner, stated that the State Comptroller's office had promised \$1500 to repair roads and that the County Commissioners were doing all they could to give as much assistance as possible. He explained that the Commissioners and the County Clerk had asked that the funds on a \$18,000 W.P.A. labor project be transferred as a flood emergency project, but had been informed that this was not possible. He stated further that the County Clerk had received a telegram from Representative Clinton P. Anderson stating that he would do all he could to rush through a project for final approval when it reached the Washington Office.

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- (7) Mr. Merchant pointed out that conservation practices should be carried out as quickly and completely as possible, not only to aid this but future generations also. In discussing conservation practices, Mr. Beall, of the Forest Service, was asked what effect the over-grazing of the ranges had contributed to the flood. He stated that the water sheds in the forest were in exceptionally good condition above the flooded area, and that in his opinion the damages in the areas adjoining the forest were due to the unusual amount of rainfall and not to over-grazing.
- (8) Mr. Whitaker, who was officially representing the Business Mens' Club, of Carrizozo reported that the Club had sent telegrams to government officials requesting immediate aid.

Following the discussions and recommendations, a committee consisting of Mr. George Titsworth, Chairman, Mrs. Ola C. Jones, Mr. J. V. Tully, and Carl P. Radcliff was appointed to prepare a telegram to be sent to the Honorable John E. Miles, Senators Carl A. Hatch and Dennis Chaves, and Representative Clinton P. Anderson, requesting that they use their influence in whatever way possible to secure immediate aid.

The following telegrams was prepared and approved by the committee:

“Members of County Program Planning Committee and County officials have visited as a group flooded areas of Bonito, Hondo, and Ruidoso Valleys to determine extent of flood damages. Committee declares state of emergency exists and appeals to you to use your influence to secure immediate aid as indicated in report that follows.”

(Signed) TELEGRAM COMMITTEE  
Chairman, George A. Titsworth  
Mrs. Ola C. Jones  
J. V. Tully  
Carl P. Radcliff”

The following were appointed as a committee to meet with the Governor at the special flood meeting which the Governor has stated that he will call in the near future. A large committee was appointed, since some of the members were not sure that they could attend. Representatives of some of the governmental agencies stated that their agency would be represented by district officials.

Carl P. Radcliff, Chairman	John E. Hall
Mrs. Ola C. Jones	L. D. Merchant
J. V. Tully	Felix Ramey
W. F. Coe	W. A. Hart
George A. Titsworth	A. T. Pfingsten
George Smith	B. J. Bonnell
W. W. Gallacher	

At the request of the Committee, Mr. Radcliff promised to compile a report of the meeting and submit a copy to each member of the Committee. The meeting adjourned at 7:30 P.M.

First Regiment  
NEW MEXICO STATE GUARD  
Santa Fe

October 9, 1941

Honorable John E. Miles, Governor  
State of New Mexico  
Executive Office  
Santa Fe, New Mexico

Dear Governor Miles:

Confirming my verbal report to you on the Gila flood situation, this report is made as a matter of record.

In compliance with your direction on October 2<sup>nd</sup> I proceeded to Silver City and contacted Mr. John O'Leary, Secretary of the Chamber of Commerce, and we were able with the assistance of Mr. John T. McMillan to survey the upper area affected by the flood, known as the Cliff and Gila area, that afternoon. Thursday evening we met with the various organizations working on the flood situation and were able to develop a coordinated program for the relief of those affected by the flood.

On Friday we attempted to survey the other areas, but it was impossible to reach the Red Rock area as the bridge was out and the only access was by boat. We did however cover the Virden area by going to Duncan, Arizona and going up the north side of the river.

The approximate number of families in all three areas affected by the flood and in need of help seems to be 27, and a check of the number would indicate probably 140 to 150 men, women and children. The families in the Virden area are largely connected with the Mormon Church, which will take care of all of their requirements. Most of the other families are clients of the Farms Security Administration, which will take care of them as soon as they can get action.

We contacted Mrs. Katherine Edward, Disaster Worker for the Red Cross, who had been sent into Duncan by the San Francisco office and found that while New Mexico is normally handled from the St. Louis office that Mrs. Edwards had been authorized to handle the upper Gila territory due to the fact that it was largely one area, and she was expected to arrive in Silver City on Monday, October 6<sup>th</sup>. In the interim period Mrs. Chapman of the Silver City Red Cross was handling the relief in Grant County.

The immediate distress of the families affected would therefore seem to be taken care of, and the remaining necessity would be a long range program covering rehabilitation of the irrigation ditches and diversion dams that were washed out by the flood. Also considerable silt in many instances was deposited on the land and will require deep cultivation with heavy machinery in order to turn it under. In some instances the river cut new channels, causing some loss of cultivated lands. There is the additional problem of removal of debris from the channel bottom areas and fences in order to allow free flow of any additional flash floods.

Minutes of 10/30/1941 Meeting

All of those contacted were highly appreciative of your efforts in their behalf and were particularly pleased that a CCC Camp was being moved in to the area to assist in the clean-up work. The residents of the Virden area were particularly desirous of securing the use of a power shovel for the purpose of reconstructing their diversion dams in order to get water into their upper ditches to finish their crop this year.

The question of flood detention dams on the upper Gila in order to impound these waters was discussed, but it is a matter for detailed survey and future planning by competent authorities.

Respectfully submitted,

(Signed) W. H. Powell  
WILLIAM H. POWELL  
Lt. Colonel, NMSG  
Commanding.

WHP/WD.  
Incls: None.

SUMMARY OF FLOOD DAMAGE WITHIN UNITED PUEBLOS AGENCY JURISDICTION

A study of flood damages was made following the receding of the high water, by Agency personnel, and this study showed that there had been a considerable loss to crops, as well as actual loss of cultivated lands.

At Cochiti 50 acres of cropped land were flooded, resulting in a complete loss from this area, and in addition 152 acres of non-cropped land were flooded.

At Santo Domingo 50 acres of cultivated land were completely washed away, 55 acres of cropped land flooded with only partial returns to be expected in this area, and 60 acres of non-cropped land flooded.

At San Felipe 25 acres of cultivated land were washed away and 462 acres of cropped lands flooded, and an additional 60 acres of non-cropped land flooded.

At Jemez 93 acres of cropped lands were lost and an additional 21 acres cropped land flooded.

The loss of crops for the above flooded lands will mean a considerable loss to the people of the above pueblos. Two Indian Service bridges were damaged, one at Cochiti and one at Santo Domingo, and it will require \$10,000 to repair the damages to the Cochiti bridge, and \$4,000 to repair the Santo Domingo bridge.

In fighting the flood, personnel from the Agency, with field equipment of trucks, tractors, gasoline shovels, and other equipment, resulted in an additional cost to the Agency of approximately \$45,812. This is broken down as follows:

Supervisory personnel	\$ 3,000
Skilled labor	1,350
Enrollee labor	5,100
Cost of operating trucks	29,400
Cost of operating tractors	3,600
Cost of operating gasoline shovels	2,400
Rations & other misc. expense	962

The estimated cost to repair irrigation structures is as follows:

San Ildefonso, revetment work	\$ 2,000
Santa Clara, repair of canal & headworks	6,000
Santo Domingo, repair to laterals	1,000
Jemez, repair to canal, diversion dam and revetment work	30,000
Zia, repairs to diversion dam and canal change	<u>15,000</u>
TOTAL	\$54,000