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COMMITTEES—
GOVERNMENTAL EFFICIENCY (CHAIRMAN)
ELECTIONS
FINANCE
JUDICIARY
REVENUE AND TAXATION

Senate

California Legislature

January 21, 1944

Honorable Ed Fletcher
1020 Ninth Street
San Diego, California

Dear Senator Ed:

I am herewith enclosing a copy of tentative report which I have prepared on the Colorado River-Needles situation.

I would appreciate it if you would read the report over and be familiar with it so that, if you approve, you can sign it when we get to Sacramento.

Please take this copy with you to Sacramento as we shall need it up there.

Very truly yours,

RES:dh
Enclosure

January 27, 1944

To The Legislature
of the State of California
and To Each House Thereof
Sacramento, California

Gentlemen:

Pursuant to Senate Resolution No. 108, adopted at the Fifty-fifth Session, a committee was appointed to give further study to conditions at Needles, California, caused by the Colorado River since the construction of Boulder and Parker Dams. The committee has pursued its work in accordance with such resolution, and because of the seriousness of the situation and the necessity for immediate action, a partial report of the committee's activities and its recommendations is submitted at this Extraordinary Session.

The Colorado River forms the boundary between California and Arizona. It is a navigable stream and as such is under the complete domination and control of the Federal Government. The source of the Colorado River is in the Rocky Mountains and it empties into the Gulf of California. It carries great quantities of detritus, debris and silt eroded from the higher water sheds, which, during past centuries, was carried down and deposited along and in the bed of the stream throughout its course, to be again in part picked up and eroded during flood times and carried to its final resting place in the Gulf of Lower California.

An accurate and detailed description of the action of the river and of the bed of the stream prior to Federal interfer-

once with its natural tendencies is not now nor is it here necessary. Suffice to say that until controlled by Boulder and Parker Dams, the Colorado River, while a menace during flood times, never seriously endangered the City of Needles or the Santa Fe Railway installations at that point since the construction of the Santa Fe dike in the year 1914.

With control and development, the Colorado River has gradually and effectively been transformed into a great national asset from which unlimited and untold benefits are now flowing and will continue for all time to come.

For years the Federal Government gave study to the utilization of this river for the developing of power and for furnishing necessary water for irrigation and domestic uses in and among the states bordering thereon. As a part of the river development, the Federal Government has now constructed, in the order named, the Laguna Dam, primarily an irrigation project for the benefit of lands in Arizona and California; the Boulder Dam, primarily a river control and power project; the Imperial Dam, for the diversion of water into the All American Canal; and the Parker Dam, as a means of diverting water from the Colorado River to and for domestic use within the metropolitan areas of Southern California.

These are all Federal projects and are under Federal control. The State is without power to regulate or to interfere with the operation of any of them. River regulation and development by means of the projects aforesaid, while laudable and beneficial to great numbers of people both in California and in adjacent

states, has not been accomplished without some injury and detriment to communities and entities which, prior to such development had acquired certain established and firm rights which should not and cannot be completely ignored, as the development of said river continues and the operation of the aforementioned projects is carried on for the benefit of others. This situation is particularly true of Needles, California, and of the Santa Fe Railway Company insofar as its Needles division is concerned.

Long before the construction of any of the Federal projects hereinbefore mentioned, the Atchison, Topeka and Santa Fe Railway Company established its division headquarters on the California side of the Colorado River, at what is now known as Needles, and immediately following the construction of such railroad and the establishment of division headquarters at that point, the City of Needles sprung into existence and has grown and developed into a sizeable community with a population of upwards of 4,000 people and a valuation of approximately $5,000,000.00.

With the development of the West the Santa Fe railroad became one of the most important transportation systems of our Nation, and as a result of the demands made upon this company for transportation of freight and passengers, repair shops, yards and necessary facilities were constructed at Needles, and it has now become one of the most important division headquarters on the Santa Fe line. The Santa Fe now has an investment of approximately $4,000,000.00 in its installations at that point. Approximately 24 passenger trains and 32 freight trains are operated daily through Needles, and 60% of the passenger traffic is military

personnel. Interruption of these transportation facilities would seriously impede and delay the movement of military personnel and foodstuffs necessary for the war effort.

The Santa Fe yards, machine shops and other facilities were of necessity constructed upon lands bordering on the Colorado River and with an elevation only slightly above the normal flow of the river. The City of Needles is likewise located upon lands with a similar elevation.

Prior to the construction of the aforementioned Federal projects on the Colorado River, the only damages suffered by either the Santa Fe Railway Company or the City of Needles were the damages which resulted from periodic floods. Danger from such floods was well overcome by the construction by the Santa Fe Railway Company, about the year 1914, of a dike along the California bank of the Colorado River for a distance of about 8,000 feet. While the margin of safety provided by this dike was not great, still, under normal and natural conditions, it proved a sufficient protection and safeguard for more than 30 years and would still furnish adequate protection were it not for the rise of the bed of the stream caused by the construction of the Federal projects hereinbefore referred to.

Along about April 1941, shortly after the Parker Dam was put into operation, sand bars began to appear along and in the channel of the Colorado River, both above and below Topock. Since then the bed of the Colorado River from Topock up to and beyond Needles has gradually filled in so that the river along and adjacent to Needles has continued to rise. On December 8th, 1943,

when no flood was present, the river elevation opposite the Santa Fe yards had risen to 471 plus feet, whereas the top of the dike at that point has an elevation of only 473 plus feet. It requires no stretch of the imagination to visualize what would happen to the City of Needles and to the Santa Fe installations and to its freight and passenger service if only a normal flood should now occur.

Deposition of silt in the backwater reaches of a reservoir is not a peculiar phenomenon. It is the inevitable result of stream laden materials meeting slackened velocity. The Engineers of the United States Bureau of Reclamation recognized this action while they were constructing Boulder Dam. Mr. E. W. Lane, Research Engineer for the Bureau, in an article appearing in Engineering News-Record on June 20, 1934, stated, "When a dam is constructed in a stream with a bed of movable material, part of the material which the stream transports will be deposited in the backwater area of the reservoir".

Engineers estimate that approximately 38,000 acre feet of material have been eroded from the Colorado River bed between Boulder Dam and Needles from the time storage began in Parker Dam in 1938 to January 1943. This is enough material to cover 60 square miles one foot deep. Available measurements show that most of this material was deposited in the backwater area of Havasu Reservoir from Needles to Topock.

We are informed that had there been no release of clear water at Boulder Dam there would have been no additional scouring of the stream bed between the Dam and Needles, and if there had

been no storage behind Parker Dam this eroded material would not have been deposited between Needles and Topock. We are advised that the river bed past Needles would have been lowered by the operation of Boulder Dam had it not been for the backwater of Havasu Reservoir.

This action of scouring above and deposition in the vicinity of Needles is still continuing and offers a continuing and increasing menace to the inhabitants of the City of Needles and to the Santa Fe Railway property. Engineers of the United States Bureau of Reclamation, in April 1948, prepared and submitted to the Chief Engineer of that Bureau plans for the solution of this problem. Copy of such plans and estimates of costs, together with recommendations of the Bureau, has been filed with this committee. The plan so submitted offers the only satisfactory solution of the problems thus far brought to the attention of this committee.

The situation at Needles as it existed on February 19th, 1948, was described to the committee by Mr. William M. Claypool, Jr., Mayor of Needles, as follows:

"The river has always been a problem with the city, away back in the early days even. At that time the river, during the spring flood season, would often cut its banks and endanger the whole community. It was a real menace until about 1914 when the Santa Fe Railway, to protect its own property, put in the present Santa Fe dike.

'That dike starts here at the north end of the town and goes up past what we call the old smelter site and down the river here to the lower end of the town. Now, since that time, 1914, flood waters have not been a menace here. At times, during the big floods, we have had high water over there and it has been rather a problem, but it has never been -- we have never been threatened with being washed out like we were before.

'Now, when the Boulder Dam was built the City naturally felt that their flood problems were over because the Boulder Dam would regulate the flow of the river and would eliminate those big floods that we formerly had. Our first intimation that all was not well was contained in a letter from William Zimmerman, Assistant Engineer of the Office of Indian Affairs, from Washington, D. C., dated January 16, 1939, in which he, in part, says:

> 'It appears impossible to determine in advance what the effect will be on the Colorado River as a result of the construction of the Boulder and Parker Dams and the possible construction of the Bullshead Dam. It is known, of course, that the water issuing from the Boulder Dam will be clear. The present gradient of the river was established by muddy water and it is reasonably certain that the clear water will pick up and transport silt and sand to a greater or lesser extent. Just how far this recession and subsequent deposition will go seems to be a problem over which even hydraulic engineers differ widely.'

'Now, the things in Needles went along about the same as usual until early in 1941. That was after the Parker Dam had been completed and Lake Havasu was fairly well filled. During March of 1941 the seepage from the river had become a major problem. During that month the City Council of the City of Needles, under date of March 25th, instructed their City Attorney to write letters of protest to the Department of Interior, Bureau of Reclamation, Washington, D.C., and to the Metropolitan Water District in Los Angeles, in which they stated the conditions then prevalent, and that we felt that the erection of the dams and their work on the river was the cause, and asked that something be done. However, we got no action.

'In May 1941, due to the fact that they had a large run-off of water in the upper Colorado, and due to the fact that they did not have sufficient storage in Lake Mead, they let a large amount of water down the river -- I believe at first it was thirty thousand second feet, and then thirty-five thousand, and when they let that large amount of water in, the whole north part of the town was flooded. A lot of families were flooded out and it was a serious proposition, and the local Red Cross secured twenty tents from the

Red Cross inside and there people were moved out of that area and also lots of the other families moved and lived with friends and relatives on higher ground.

* * * *

'The water level that we have had up to now (February 10, 1943) has forced probably 20 families to actually move their homes. If the water should raise a foot higher than it was in the past, it will force probably from 100 to 150 families to lose their homes. I might say that in all that district that is now flooded we have five hydrants, water mains, and also one year before the big flood we paved all those streets over in that district. Those are all submerged now, from six inches to two feet."

Mr. J. A. Ward, President of the California Pacific Utilities Company, which operates the gas and electric works at Needles, California, described the situation to the committee as follows:

"We have a gas generating station and an electric Diesel generating station. We have a transmission line here from Boulder Dam and supply this area and Southern Nevada with power. This plant was established back in about 1906.

'The plant in its present location has operated without any serious interference from the river in all these years, and it has had the protection of the small dike along that river there that was built by the Santa Fe Railroad which has protected all of that area for a great many years, regardless of what the stream flow has been. It has never, since we have operated the gas and electric plant, we have never been faced with a serious water situation as we are today.

'Last December the water rose to a point where we had to construct a dike entirely around our power plant and the gas plant to keep the water out of it so we could operate it.

'The dike is about 20 feet wide and about 5-1/2 feet high, and runs from the end of our property clear around the side of it. That protects our substation pump. We had to raise the substation and put in pumping equipment there

to pump the water out from behind the dike so as to keep the water down. We have spent about $4,000.00 so far to continue our operations in that area under these present conditions.

'I am fearful that if the elevation of the river is raised to 450 feet at Parker Dam that we will have to abandon our gas plant and our electric generating plant entirely and move it out of there because it would not be safe to attempt to continue to operate it there under present conditions."

Captain Ivan D. Talley, who is connected with the United States Army and was with the troops stationed in the vicinity of Needles at the time of the committee hearing, described the situation at Needles as follows:

"I have made some observations and I have talked with citizens of the town regarding their problems of sanitation, and I have made some trips on the other side of the track down to the laundry, and observed the numerous dwellings that have been surrounded with water and stagnant pools.

'The disposal of waste in this area that has been partially inundated and covered by water makes it a regular breeding place for mosquitoes and from a sanitary standpoint it is impossible for those places, of course, to have cesspools, and outdoor toilets that have been there have been washed away and standing there and soaking, and we would not stand for a similar situation in the Army, and from the standpoint of health of the people here, if they haven't had an epidemic they are indeed fortunate because all the factors are present that are conducive to the possibilities, and take it from the standpoint of troops that are stationed in and around and through this area, they are likewise subject to the same possibilities of infection should an epidemic break out, as are the citizens of this community.

'It is a situation that requires immediate attention and immediate correction, to preserve the health of the people, including the troops that happen to be stationed in this vicinity."

Mr. L. J. Foster, the Construction Engineer for the Bureau of Reclamation, said to the committee:

"Unless something is done and the reservoir (back of Parker Dam) rose up to 450 feet, there will be much more damage than there is now. The clear water coming down from Boulder Dam picks up silt. The silt gets down to the Needles area. In the old days the silt would go through and go down to the Yuma area and on into the Gulf, but now it cannot do that any longer; the backwaters from the Parker Dam stop it, and it stops between here and Topock."

In a report by M. C. Blanchard, Chief Engineer of the Santa Fe Railway Company, filed January 11th, 1944, he says:

"In the years 1915 to 1921 the Santa Fe built along the riverbank a substantial earth dike heavily revetted with riprap to protect its property, and incidentally the town of Needles, against the flood flows of the Colorado River. This dike is some 4,000 feet in length and its location is shown by yellow coloring on the map attached hereto. Its cost in round figures has been $250,000.00.

'At the time of the construction of this dike, neither the Boulder nor the Parker Dams had been built. This dike, therefore, withstood the full effect of the uncontrolled flood flows which annually occurred. The riverbed at that time was a considerable number of feet below the top of the dike, so much so that when the largest floods occurred, there was ample free board between the surface of the flood water and the top of the dike. Until the past year or two it has afforded adequate protection to the facilities of the Santa Fe and the town of Needles, and still is the basic protection of these interests.

'After the building of the Boulder and Parker Dams, the riverbed above, at, and below Needles, began rapidly to rise because of the deposition of silt and sand, this action being progressive and still continuing. This has brought the riverbed, and with it the water level, even with moderate discharges from Boulder Dam, to a point where only a slight free board remains between the water surface and the top of the dike.

'In December of 1943 the water surface of the river was approximately one and one-half feet

below the top of the dike at certain points, the flow at that time being about 20,000 cubic feet per second. The surface of backwater on the lee-ward side of the dike was about one and one-half feet below that of the river surface. This back water had submerged a large part of the area between the dike and the Santa Fe yards, making it necessary for most of the residents in that area to move out. This back water has reached an elevation where it is now about six inches deep in the pit of the Railway Company's turntable, and has also come up to the base of the ballast under the tracks over which engines pass to and from the roundhouse. It also does not have far to rise to reach a point where it will submerge the track and oil unloading facilities which are used for replenishing the supply of fuel oil required for locomotives operating into and out of Needles.

'In the year 1943 it became necessary for the Railway Company to enlarge and extend its yard tracks, most of the extension being to the east. In building these tracks it was necessary to protect the embankment, not only for the extension of the yard tracks, but also the freight mains for a distance as far east as the ice house. This protection work also reclaimed the sewage disposal plant which had been out of commission for the past several years. This sewage disposal plant serves not only the Santa Fe Railway but also the City of Needles. It is now being rehabilitated at a very considerable cost. In explanation of the above protection work, which cost us somewhere between $30,000.00 and $35,000.00, and shown in red on map attached hereto. I might say that the present channel of the river after leaving the easterly end of the long dike referred to above, swings in against the yard and side track area of the Santa Fe and because of the current striking the fill on which these tracks are laid, it was necessary to protect these fills.

'The deposition of silt and sand has now raised the level of the riverbed to such a point that should it become necessary to increase the discharge from Boulder Dam to that which may be necessary for the control of flood flows into Lake Mead, there is grave danger that by reason of this increased discharge the present Santa Fe dike may be over-topped and thus precipitate the direct channel of the river immediately against the unprotected portion of the Santa Fe yard, with consequent probability of overflowing that portion of the railway facilities which are used for the handling of engines in and out

of the Needles Terminal, and the further possibility of washing out portions of the yard tracks. In addition to the increased discharges from Boulder Dam there is likelihood of floods in some of the local streams between Boulder Dam and Needles, some of which have water sheds of considerable magnitude, and runoff flood flows in proportion thereto. If one of these local floods should happen to strike at the time of maximum discharge from Lake Mead, the situation at Needles would be serious indeed.

The Santa Fe and the Town of Needles are not responsible for the conditions which have been created by the construction of these dams, and the agency or agencies which own and/or control these dams should be taking immediate steps to rectify the situation which now exists at Needles and which may become seriously aggravated in the near future. All of the transcontinental traffic handled by the Santa Fe Railroad passes through the town of Needles, at which point the Railway Company has important yards and engine facilities. Any action of the Colorado River which would make the Railway facilities at this point inoperative, would seriously affect the transportation of war and civilian supplies to the Southwest Pacific Coast area of the United States. It is, therefore, highly important that the governmental agency or agencies involved take immediate action to construct proper and adequate flood protection for the City of Needles."

The foregoing statement graphically describes the situation which has occurred at Needles, California, since the construction of the Federal projects on the Colorado River and emphasizes the need for immediate action.

So serious and pressing has the situation become, that three different Legislative committees have studied it and endeavored to work out amicable and prompt solutions of these problems. While each committee has taken evidence as to the cause for the rise in the river and the consequential submerging of Needles and the Santa Fe properties, none of them has made any definite finding as to the responsible agency, nor is that here necessary.

Suffice to say that the condition complained of did not exist before the construction of Boulder or Parker Dams, but has developed since and does now exist.

Whatever may be the cause, it cannot be denied that the channel is gradually and persistently filling in the vicinity of Needles, thereby raising the river to higher and ever higher elevations and causing the water to be forced through, around, and eventually over the dike, forming a great stagnant pool, in the very heart of this desert center, which is rapidly becoming a stench to the nostrils and a threat to the welfare of those who must make this community their home.

The end is not yet in sight. The debris, detritus and silt picked up by the clear waters discharged from Boulder Dam will continue to be carried down and deposited along the course of the stream until the river finally adjusts itself to the restrictions placed upon its flow by the act of man. How much more detritus will be deposited along in front of Needles and how much higher the river bed will be forced is a matter of speculation only. A rise in the stream bed of but a very few feet will practically destroy Needles and put the Santa Fe Railway system out of commission.

Hope of averting further damage lies in the immediate raising and extension of the Santa Fe dike, under the plan suggested by Mr. L. J. Foster, Construction Engineer for the Bureau of Reclamation, in his report of April 1942. The committee sought to have this accomplished through an amicable arrangement between the Metropolitan Water District, the Federal Government, and the

Santa Fe Railway Company, and a number of meetings were held with the hope of bringing the interested parties into such an agreement.

We are now satisfied that no satisfactory amicable solution can be had due to the attitude of the Metropolitan Water District. This does not necessarily mean that the Metropolitan Water District is not sympathetic and is not in accord with the solution proposed by Mr. Foster. The refusal of the District and the reason therefor is well stated in a report made to its Board of Directors by its Engineering and Operating Committee, filed January 14th, 1944, which is as follows:

"On August 13, 1943, Senator Ralph E. Swing of San Bernardino, Mayor W. W. Claypool of Needles, Construction Engineer R. J. Foster of the United States Bureau of Reclamation at Yuma, Arizona, and other interested officials, appeared before the Board of Directors of The Metropolitan Water District of Southern California, for the purpose of describing a flood condition in the Colorado River at Needles, attributing the condition to the construction and operation of Parker Dam, and urging that the District participate in the construction of protective works at Needles. The matter was referred by the Board of Directors to its Engineering and Operations Committee for consideration and report.

'This subject was discussed at a meeting of the Engineering and Operations Committee on September 3, 1943, and it was concluded that before attempting to reach a decision, the Committee should visit and inspect the site of the alleged damage. Such an inspection was made on November 2, 1943.

'The matter was subsequently discussed by the Committee on November 12, 1943, and on December 17, 1943, at a hearing before the Committee granted to Senator Swing and his committee.

'The members of the Committee are impressed with the seriousness of the situation and with the earnestness and diligence with which the representatives of Needles, and the Legislative Committee, have presented their request. However, to justify the expenditure of District funds, it

must appear that some liability exists or that the interests of the District will be advanced by the expenditure.

'Consideration of the observations made in the field and of the data presented by the engineering and legal staffs of the District discloses the following facts:

'1. That Parker Dam is not responsible for the flood condition and resultant damage occurring at and in the vicinity of Needles.

'2. That Parker Dam is not owned, nor is it operated, by the District. It is owned and operated by the United States. The District has no liability to persons or property injured thereby. The District's only connection with the dam arises out of a contract between the District and the United States. Under the contract, certain benefits from the project are available to the District and, with respect to some types of damage claims, the District is in the position of an indemnitor of the United States.

'3. Thus, even if Parker Dam were the cause of the damages complained of, any liability that the District might have in the matter would be a liability to the United States, based upon and limited by the terms of the contract referred to. Under no circumstances would any liability on the part of the District run to the owners of injured property. Any questions that may arise as to contract liability should be settled by the parties to the contract, in this instance by the District and the United States.

'4. Contributions to the cost of protective works at Needles would not, in the opinion of the Committee, advance the interests of the District.

'It is therefore recommended that the District do not undertake to participate in the construction of protective works at Needles, and that the Legislative Committee of which Senator Swing is Chairman, and the City of Needles, be so advised."

During the meeting referred to in this report, Mr. James H. Howard, Chief Counsel for the District, suggested that an appeal be made by our committee directly to the Federal Govern-

ment and its proper agencies for the necessary action. He further suggested that any liability of the District for the situation complained of, should be adjusted between the District and the Governmental agency and not through this committee. With this suggestion we are in accord. It is not the province of this committee to determine the responsible agency nor to adjust any differences that might arise between any such agency and the Federal Government. The suggestion of Mr. Howard that appeal be made to the proper Federal agency for prompt action is timely, and it is by reason of such suggestion that this committee makes this report and recommends the adoption of a suitable resolution calling upon the Federal Government and its agencies to immediately take action to protect the City of Needles and the Santa Fe Railway Company from further dangers resulting from the river conditions hereinbefore referred to.

The situation is urgent, the danger imminent, and even though this be war times, the Colorado River will not hold back, but continues to roll on, piling up more and more silt and debris along its channel, ever increasing the hazards and dangers caused thereby. The remedy is in appeal by our Sovereign State to the Government of the United States for relief and protection for its citizens from the damage and dangers resulting from the construction of Federal projects along and on this turbulent stream.

We recommend the adoption of the Joint Resolution this day submitted, and further recommend that copies of this report be transmitted with such resolution to the President of

the United States, to the Members of the California Delegation in Congress, and to the United States Bureau of Reclamation.

Respectfully submitted,

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Members of Committee.

Ed Fletcher Papers

1870-1955

MSS.81

Box: 29 Folder: 3

General Correspondence - Swing, Ralph E.