

# 7597

DEPARTMENT OF THE INTERIOR,

UNITED STATES INDIAN SERVICE,

Navajo Extension Agency,

Tolchaco Arizona 4/20/1908.

Hon. Commissioner of Indian Affairs,

Washington D.C.

Sirs:-

In compliance with Sec. 645 Regulations of the Indian Office 1904, I have the honor to make the following report, regarding Irrigation for this reservation.

The Indians of this reservation have no land that they can plant and have any assurance that they will harvest a crop. Their only support depends on farming and stock raising. If they ever become prosperous, it will be necessary to develop some system of irrigation for them. In years gone by they have planted small patches along the river that have been watered by the natural overflow in the winter or spring of each year. There have been times that this overflow has not come, and other times when it has come, the very high water during the late summer and fall destroys their crops when nearly matured.

Since taking charge of this reservation, I have made a careful and constant study of the conditions and the topography of the country with the view of developing some water for irrigation. There are several plans that seem feasible; but one especially I desire to submit for the consideration of the Indian office at this time, is as follows:

There in the San Francisco wash about two miles or less above where it enters into the Little Colorado river, a natural reservoir, which seems to be complete except at one point, and at this point it will be necessary to construct a dam about 450 feet long and about 30 or 35 feet high. There is only few yards distance from this point an abundance of good building stone that could be used in the construction of said dam. The distance from this point to the nearest

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DEPARTMENT OF THE INTERIOR,  
UNITED STATES INDIAN SERVICE,

railroad point ( Canon Diablo ) is less than 14 miles , this distance has been measured with a cyclometer).

To reach all of the land that can be irrigated from this reservoir it will be necessary to construct about 10 miles of ditch also a flume across the Little Colorado river. There is inclosed herewith a map of the reservation showing the location of the San Francisco wash, and the location of the reservoir in the wash the location of the dam the location of the site of the agency , and the location of the different tracts of land that can be irrigated from this reservoir. There is also inclosed a drawing showing the outline of the reservoir.

The reservoir if completed will cover an area of something like like three or four square miles, it is very hard to estimate as there are many small arms to it not shown in the drawing. It is estimated that this reservoir can be filled to the average depth of 10 feet of water , making at least 20000 acre feet of water. The water supply to fill this reservoir is surface water only : but as the San Francisco wash drains a large area of country and all of one slope of the mountains west and south and south west of here it will afford an abundance of good water that will be free from alkali. The country drained by this wash and its tributaries is very stony and the soil is mostly hard clay, so that the water of this wash contains very little silt.

I have talked to several persons both white and Indians , as to the amount of water that flows through this wash each year , and have found that in the most droughty times there is probably enough of water flows here and goes to waste , to fill this reservoir twice within a year. Since I came here last September enough of water has gone through this wash to fill this reservoir ten times. I am of the opinion that that should there be no local rains that an abundance of water will come from the snow and the rains in the mountains to supply

DEPARTMENT OF THE INTERIOR,

UNITED STATES INDIAN SERVICE,

all of needs of this reservoir. The bed of this reservoir is nearly all if not all composed of hard clay underlaid with limestone, making a very small <sup>loss</sup> of water through seepage.

The land available to irrigate from this reservoir is nearly if not altogether 5000 acres and this can be increased by about 2000 acres by extending the ditch some 5 or 6 miles. All of this land has an underflow at a depth of from 10 to 12 feet under the ground making a sub-irrigation. This soil is all fairly fertile and is good alfalfa and fruit land and where it has been farmed by irrigation it has never failed to produce good crops of ordinary farm products.

This reservoir can undoubtedly be made to afford sufficient water to irrigate all of this land. There is sufficient land in these bodies to afford each Indian on this reservation a comfortable farm, which will not only enable him to eek out an existance but if he has proper instruction and is industrious he can soon become a prosperous citizen which is as I understand the object of the Indian Service.

As to the cost of this irrigation plant I <sup>am</sup> unable to make an intelligent estimate; for the reason that I have not sufficient data at hand, and for the reason it very hard to get reliable information as to the cost of labor and materials in this country. I do think that cost will not exceed \$6.00 or \$7.00 per acre for the land reclaimed and it will probably be a great deal less than that amount. The land that can be reclaimed in this manner is practically worthless now. While a great number of Indians are trying to farm where there is little if any hope of them reaping any reward for their labor.

I have the honor to request that some competent person who is an engineer in the service of the Indian Department be sent here to look this proposition over and make the necessary surveys if the plan seems practicable.

Very respectfully,

*Joseph Maxwell*  
1881