

## MEMORANDUM TO E. R. FRYER

In accordance with your request for data to be made for Mr. Humphreys in connection with the Protection of Indian Water Rights, the following reported information is submitted:

1. Age of each project on the San Juan drainage going back to the earliest Indian use.
2. Land under cultivation under water diversion projects.
3. Amount of water used historically and at present.
4. The economic need of agricultural lands.
5. Approximation of the amount of water contributed to the San Juan and Little Colorado drainages showing what proportions arise within the drainage area as distinguished by the executive order of the Reservation.
6. J. Turley's declaration of old water rights as submitted by Mr. Yeo.

The report prepared by Mr. Van Valkenburgh of the History of Navajo Agriculture is also made a part of this report to you.

*James D. Seery*  
James D. Seery,  
Assistant Engineer.  
*William H. Brown*

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PART I

HISTORICAL DATA

Early use of water of the San Juan drainage by  
the Navajo Indians for agricultural purposes.

Historical data indicates that the earliest use of water of the San Juan River for agricultural purposes was made in the 15th century by the Navajo Indians. The areas adjacent to the mouth of the Largo Canyon on both sides of the San Juan River was the scene of this early use.

No attempt is being made to outline and tabulate ages, acreages and capacities of any projects prior to 1888.

Following is a history of location and size of the irrigation projects located on the San Juan River in 1905.

#### The Hogback Ditch.

This ditch was built in 1894 with a carrying capacity of 15 cubic feet per second and serving 767.7 acres as shown by survey and maps made by Charles F. Holly, County Surveyor for San Juan County, in 1905. The headgate structures of this ditch was located approximately 1 mile down stream from the present Hogback Project heading. The entire area covered by this project is now served by the present Hogback Irrigation System.

#### The Hosteen Tah Ditch.

This ditch was located on the south side of the San Juan River and directly south of Jowett, New Mexico. Surveys made by Charles F. Holly, County Surveyor of San Juan County, show a canal with a capacity of 5 cubic feet per second covering 320 acres of farm land. The diversion of water for use in this canal was probably made in the early 1880's and has been in continuous use since that time. However, on the completion of the Fruitland Project, this area will be included under that system.

#### Costiano Ditch.

This ditch was located on the south side of the San Juan River with the heading 1/2 mile below the present Fruitland suspension bridge. The canal was built in 1860 by Indians and the system covered 100 acres of farm land which has been in continuous use since that time. In 1905, the system was reconditioned and enlarged to 481.9 acres as shown on maps made in that year by Charles F. Holly, County Surveyor of San Juan County. This ditch is today called Lower Fruitland (Corn Fields) and is in operation. The Fruitland project system will deliver water to the farms on the project in the near future and it is believed the present heading of the old canal will be abandoned.

San Juan Navajo Ditch No. 4.

This canal, also known as the Tse-he-ya-be-ga Ditch, was built by Indians between 1800 and 1824 and serving 100 acres of land during that time. The following Legend is taken from a map made by Charles F. Holly, County Surveyor of San Juan County, February 6, 1905. About 1884, Tse-he-ya-be-ga, a Navajo Indian, took out a ditch and farmed under the same. Part of this ditch, the river washed away and part is plainly to be seen and is marked on this map. In 1894, Tse-he-ya-be-ga built the ditch that has its present heading and he and another Indian have tilled and irrigated their lands from said ditch each and every year since; tilling and irrigating approximately 100 acres of land each year and for which water is hereby claimed. On February 6, 1905, a survey was made for the purpose of improving said Tse-he-ya-be-ga Ditch using the same heading the same ditch line to Station 15, where it diverges and runs as shown on the map. Total length of ditch is 2 miles, 3140 feet. Acres of land under ditch is 548 and carrying capacity is 11 cubic feet of water per second, for which claim is hereby made. Owner of the San Juan Navajo Ditch No. 4 is the United States Government, holding the same in trust for Tse-he-ya-be-ga and such other Indians as are now settled or may hereafter settle on lands under said ditch. The heading for this old ditch was located approximately 1 mile south and 1 mile west of the present headquarters of the Hogback Irrigation Project.

The Sarbo Wero Ditch.

The headgate of this ditch was located on the south bank of the San Juan River and near what is known as the Kirtland (Jensen) ditch heading. This is 3 1/2 miles down stream from the Fruitland Project heading and no doubt will be abandoned this year.

The early canal served 153.2 acres and was extended to serve 255 acres in 1904, and still later enlarged to approximately 500 acres or its present size. Surveys were made by Charles F. Holly, County Surveyor of San Juan County, April 27, 1905. The entire area is included in the present Fruitland Project.

Sandavol Ditch or San Juan Ditch No. 2.

The heading of the San Juan No. 2 (Sandavol) Ditch was

located on the south bank of the river opposite the San Juan School. Capacity of the Canal was 13-1/2 cubic feet per second and the area under the canal was 622 acres as shown by survey and maps made in 1905, by Charles F. Holly, County Surveyor for San Juan County. No record is found of the age of this project, however, it is believed to have been started about 1690.

Navajo Pete's Ditch.

The heading of this project was on the south side of the San Juan River and opposite the mouth of the La Plata River. The capacity of the canal was 2 cubic feet per second and it served 55.4 acres of land as shown by maps made by Charles F. Holly, County Surveyor of San Juan County, in April, 1905. No information is given as to the age of this ditch, but at the present time it is completely obliterated.

San Juan Ditch No. 3.

The headgate of this ditch is located on the south side of the river, 5-1/2 miles down stream from the Shiprock School. This project was probably operated as early as 1880 and has been in continuous use since that time. It is known at present as the Cudai Canal. A survey in March, 1905 by Charles F. Holly, County Surveyor of San Juan County, shows 632.2 acres of land under the canal with a carrying capacity of 13.56 cubic feet per second.

The Be-leen-tza-za Ditch.

The headgates of this ditch are located on the north side of the San Juan River, 4 miles down stream from the Shiprock School. This project was in operation in 1905, as shown by maps made by Charles F. Holly, County Surveyor of San Juan County. The capacity of the canal was 2 cubic feet per second and the area served was 109 acres.

Dena-yaz-ya Ditch.

No record of the location of this ditch can be found at present. However, the report of Superintendent Shelton of the San Juan School to the Commissioner of Indian Affairs as of May 23, 1905 furnishes the following information; "there was 1.35 miles of canal, 244 acres of land and 18 Indian families living on the project.

The Carrizo Ditch.

This ditch was located on the wash of the same name and near the foot of the Carrizo Mts. The Indians had made use of it for many years and in 1895, an engineer made repairs for reconditioned the project. The ditch was 1 mile long and served 300 acres of land.

Two Grey Hills (Wetherill). Canal.

This ditch was located near Two Grey Hills and was built by Indians in 1880. In 1904, a new ditch was built and called the Wetherill Canal. This canal did not prove satisfactory and was used only a short time and finally completely abandoned. The Indians in the area then made repairs and resumed operation of the old ditch.

Wheatfields Ditch.

This ditch is located in the headwaters of the Chinle drainage, approximately 45 miles north of Fort Defiance, Arizona. Records show that the canal was repaired and reconditioned in 1897 by a government engineer. However, the Indians had made use of it for many years before this time. In 1897, the canal was 3 miles long and covering 500 acres of land. Another supply was by direct diversion from the Wheatfields Creek.

Cottonwood Ditch.

This ditch was located 25 miles north of Fort Defiance, Arizona, and was repaired and reconditioned by a government engineer in 1897. At that time the canal was 1 mile long and served 200 acres of land.

The Red Lake Project.

This project is located 15 miles north of Fort Defiance, Arizona, on Black Creek and is included in the lower Colorado drainage. In 1899, the project was repaired and reconditioned by a government engineer and at that time it consisted of the following features: Diversion dam in Black Creek; storage dam and distribution system. There were 625 acres of farm land under the canal.

Bonito Creek.

This project is located at Fort Defiance, Arizona, and it has been in use since the Agency at that point was established.

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PART II

Land under cultivation under water Diversion  
Project on the Navajo and Hopi Reservations. Ar-  
ranged by states for Upper and Lower Colorado Drain-  
age Basin. Data obtained from the 1937 Annual Report  
of Indian Irrigation Projects.

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Upper Colorado Drainage Basin

Arizona

Project	Water Supply	Area Under Const. Canal	Acroage Irrigated
Chin Lee Proj.	Direct diversion from ChinLee	800	711
Denehotso	" " Laguna Creek	800	712
Lower Rock Point	" " Chin Lee	1,000	325
Marsh Pass	" " Laguna Creek	250	193
Nazalini	" " Nazalini Wash	60	60
Piute Canyon	" " Piute Creek	150	90
Red Rock Valley	Diversion and Storage	275	275
Upper Rock Point	Direct Diversion Lukachukai wash	300	Dry farms
Round Rock	Diversion & Storage " "	400	136
Segihotsoci	Diversion from Segihotsoci "	62	18
Sehili	Diversion " Sehili Creek	500	144
Tenospos	" " Washes	800	302
Tochenlini	" " "	100	22
Todenstani	" " "	200	
Tolthlakan	" " Walker Creek	341	41
Wheatfields	Diversion & Storage Wheatfields Creek	375	206

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Upper Colorado Drainage Basin

New Mexico

Project	Water Supply	Area Under Convt. Canal	Acreage Irrigated
Beautiful Mts.	Direct Diversion Sanostee Wash	50	21
Soelabito	Diversion and Storage	80	50
Captain Tom Wash	" " "	2,700	650
Cudai	Diversion from San Juan River	630	600
Casavera	Storage	00	00
Choiska	Diversion from Choiska Wash	350	235
Crystal	" " Crystal Wash	500	169
Fruitland	" " San Juan River	5,100	775
Hogback	" " " " "	3,526	3,005
Juan's Lake	Storage	250	160
Naschiti	Diversion and Storage	100	26
Sanostee	" from Sa-Nos-Tee Wash	784	94
Toadlena	Diversion and Storage	100	25
Tocito	Diversion from Sa-Nos-Tee Wash	250	21
Zilbetod	" " Wash	21	21
<u>Utah</u>			
Aneth	Diversion from McElmo Wash	240	65
Montezuma Creek	" " Montezuma Creek	80	40

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Lower Colorado Drainage Basin

Arizona

Project	Water Supply	Area Under Const. Canal	Acreage Irrigated
Sogashibito	Springs and Storage	100	40
Ft. Defiance School	Diversion from Bonito Creek	78	25
Ganado	Diversion from Rio Pueblo, Colorado and Storage	1,200	456
Hauck	Diversion from Black Creek	350	350
Kinlechee	" Rio Pueblo Colorado	267	130
Klagetoh	Storage	400	179
Lower Denebito	Diversion from Denebito Wash	Not complete	
Lower Moencopi	" " Moencopi "	" "	
Moencopi	Springs	35	32
Moencopi Wash	Diversion from Moencopi Wash	624	304
Natural Bridge	" " Black Creek	80	28
Oraibi Wash	" " Oraibi Wash	450	
Reservoir Canyon	Springs	212	212
<u>New Mexico</u>			
Chas. H. Burke School	Springs	60	60
Mariano Lake	Storage	60	60
Red Lake	Storage from Black Creek	700	128

PART 3

AMOUNT OF WATER USED HISTORICALLY AND AT PRESENT

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AMOUNT OF WATER USED HISTORICALLY

Upper Colorado Drainage Basin

Note: All estimates are based on a use of 4 acre feet per acre for all irrigated land on permanent streams and 3 acre feet per year on ephemeral streams with and without storage.

Project	Area	Canal Capacity	Acre Ft. Per Year	Remarks
Carriso Ditch	300	4 c.f.s.	1900	Upper Drainage Basin
Wheatfields Ditch	500		2000	" " "
Hogback Ditch	767	15 c.f.s.	3068	San Juan Diversion
Hosteen Tah Ditch	320	5 c.f.s.	1280	" " "
Costiano Ditch	482		1928	" " "
San Juan No. 4	548		2192	" " "
Barbe Wero Ditch	500		2000	" " "
Sandavel Ditch	322	13.5 c.f.s.	3288	" " "
Navajo Pete's Ditch	55		220	" " "
San Juan No. 3	832	13.58 c.f.s.	3328	" " "
Boleentzaza Ditch	109	2 c.f.s.	436	" " "
De Ka Yaz Ya Ditch	244		976	" " "
Misc. Ditches	1455		5820	" " "
<b>Total---</b>	<b>6,934</b>		<b>27,276 acre ft.</b>	

AMOUNT OF WATER USED AT PRESENT ON THE  
Upper Colorado Drainage

Note: Estimate of amount used per acre is 4 acre feet per year for all projects.

Arizona - 1937

Project	Area Irrig.	Canal Capacity	150 days Acre Ft. Per Year	Remarks
Chin Leo Proje.	711		2133	Ephemeral Stream
Denohotso	712		2136	" "
Lower Rock Point	325		975	" "
Marsh Pass	193		579	" "
Nazalini	60		120	" "
Flute Canyon	90		270	" "
Red Rock Valley	275		825	Storage @ 3 acre ft.
Upper Rock Point				Ephemeral Stream
Round Rock	136		408	Storage @ 3 acre ft.
Segihotsodi	18		54	Ephemeral Stream
Seheli	144		576	Permanent Stream
Tes Nos Pos	302		906	Ephemeral Stream
Tochenlini	32		66	" "
Todenstani				" "
Tolthlakan	41		123	" "
Wheatfields	206		824	Storage- Permanent Stream
<b>Total--</b>	<b>3,235</b>		<b>9,995</b>	

New Mexico

Beautiful Mts.	21		84	Permanent Stream
Beclabito	50		150	Storage @ 3 acre ft.
Capt. Tom Wash	650		1950	" " " "
Cudai	600		2400	San Juan Diversion @ 4 ac.
Cacanera				" " " "
Choiska	236	10 c.f.s.	708	Ephemeral Stream
Crystal	169		676	Perm. Stream @ 4 ac. ft.
Fruitland	775	100 c.f.s.	3100	@ 4 acre ft. per year
Hogback	3005	85 c.f.s.	12020	@ 4 " " " "
Juan's Lake	160		480	Storage @ 3 acre foot
Naschiti	26		78	" @ 3 " "
Sanostee	94		282	Ephemeral Stream
Toadlena	25		75	" "
Toocito	21		63	" "
Zilbetod	21		63	" "
<b>Total--</b>	<b>5,852</b>		<b>22,128</b>	

Utah

Anoth	65		195	Ephemeral Stream
Montezuma Creek	40		120	" "
<b>Total--</b>	<b>105</b>		<b>315</b>	

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ESTIMATE OF WATER USED AT THE PRESENT TIME

in the Lower Colorado Drainage Basin

Note: The estimated amount of water used on lands as follows: 4 acre feet a year on all permanent streams, 3 acre feet per year on ephemeral streams with and without storage.

Project	Area	Canal Capacity	Acre Ft. Per Year	Remarks
<u>Arizona</u>				
Bogashibito	40		120	Ephemeral Stream
Ft. Defiance School	25		75	" "
Canado	456		1368	" "
				and Storage
Houck	350		1050	Ephemeral Stream
Kinlecho	130		390	" "
Klagetoh	179		537	Storage
Lower Densbito				Not Completed
Lower Moencopi				" "
Moan Ava	52		96	Springs
Moencopi Wash	304		912	Ephemeral Stream
Natural Bridge	23		69	" "
Oraibi Wash				Not Completed
Reservoir Canyon	212		636	Springs
<b>Total--</b>	<b>1,751</b>		<b>5,253</b>	
<u>New Mexico</u>				
Chas. H. Burke School	60		180	Springs
Mariano Lake	60		180	Storage
Red Lake	128		384	Ephemeral Stream & Storage
<b>Total--</b>	<b>248</b>		<b>744</b>	

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PART 4

THE ECONOMIC NEED FOR AGRICULTURAL DEVELOPMENT

By S. T. Kimball

Assistant Soil Conservationist

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The general impression which exists among those who are only superficially acquainted with Navajo economy is that farming is of minor economic importance. Several factors may be held accountable for this impression. Perhaps it is largely due to the involuntary comparison one makes with commercial agriculture. Such impressions distort the true picture of the relative importance of farming since the contribution of agriculture to Navajo livelihood is primarily subsistence and not commercial. By subsistence farming we do not intend to imply a poverty stricken condition, rather we mean that the farm production is organized in terms of home consumption rather than commercial sale. The considerable contribution of farming to Navajo livelihood is shown by the fact that approximately one-fourth of the total income according to the Navajos each year comes from this source. The other three-fourths are derived from wage work, the sale of livestock and their products, rug weaving, silversmithing, and such miscellaneous items as sale of pinons and wood.

The agricultural survey of 1937 found approximately 41,509 acres cultivated. This figure includes 12,126 acres on irrigated projects. With the present reservation population of 47,168 (including 3,000 Hopis) there would be an average of nine-tenths of an acre per person, or slightly over six acres per consumption group.

In addition to cultivated land there are 23,778 acres of potential lands. This means that potentialities of development of agricultural land are far from being exhausted and a program for the extension of the agricultural resource is feasible.

(Note: The following figures taken from Irrigation Report to the Superintendent May 28, 1937.)

1. Total ultimate area irrigable lands considering available water supply and feasible development with additional storage -- 85,285 acres.
2. Total area under construction works -- 28,566 acres.
3. Total area irrigated, 1937 -- 12,126 acres.

It is estimated that nearly three-quarters of a million dollars worth of producible foodstuffs are imported and sold each year to the Indians, and this figure does not include the value of canned vegetables and fruits, the need for which may

quite possibly be met by home production. It should be pointed out that over one-third of this amount, or \$275,000.00, represented the value of such raw agricultural products as alfalfa hay, oats, potatoes, melons, onions, and other fruits and vegetables in contra-distinction to the processed products such as oat meal, corn meal, and flour. Of these three, flour is by far the most important and some \$450,000.00 worth is sold by traders each year.

These figures are certainly indicative of a deficiency of land for production of foods which can be easily grown under the given conditions, but which are now imported. In other words, the spread between production and consumption is such that the development of additional acreages for farming would probably serve to diminish the quantities of products which must now be secured on the commercial market and imported for Navajo consumption.

These facts have particular significance in terms of the whole program of land management, for they provide us with a cue to meet the problem of any decreased income which might result from livestock adjustment to carrying capacity. The question arises, can we provide a supplementary form of income to meet such losses as may occur? On the basis of our present knowledge it seems that the answer is "yes". We can develop additional quantities of agricultural land and this land can be used to produce those products of which a deficiency now exists. If the Navajos can and will utilize such additional land, the increased production will obviate the necessity for the Navajos to secure from the traders products which they are now importing, and will to that extent increase their total annual income and decrease the dependence they have placed in the past upon income from livestock, handicrafts, and labor to supply the necessary money to buy these products commercially.

Let us see to what extent a loss in income may result from stock adjustment. The average per sheep unit income in 1935 from productive livestock (which includes horses) amounted to \$2.60. The estimated necessary reduction will come to 122,300 sheep units, which means an estimated loss in income to the Navajos of \$318,000.00. It should be emphasized, however, that this figure is probably a maximum, inasmuch as any reduction program would eliminate unproductive livestock first, particularly horses, and that with better range and better range practices, it can be anticipated that the per sheep unit return will probably increase.

If we proceed on the assumption that we should maintain Navajo income at its present level, there are two methods by which we can supplement their income to prevent any decrease. We can do this through a program of government work projects, or by increasing the opportunities for the more efficient utilization of present resources - the forest, the range, and the farm lands.

Wage income is more of an immediate stopgap, and we should think and act in terms of the development of resources which will provide the Navajos means for making a living in succeeding years. One resource which is capable of being further expanded is that of additional farm land.

If we do no more than meet the present deficiency in raw agricultural products, all but \$38,000.00 of the expected loss from livestock reduction can be met through the production of the \$275,000.00 worth of raw agricultural products which are now imported. It is equally probably that present consumption does not define the possible limits and that we may even increase farm land to produce foodstuffs considerably in excess of this amount, and still find that they are absorbed on the reservation.

The question of the production of wheat and its processing into flour is another potentiality, but merits consideration in excess of the time allotted this morning.

The question of the amount of land which will be necessary to produce crops to this value is another of our problems, but one which can be met rather easily. On the basis of present yields it is estimated that an additional 5,400 acres would be sufficient. You will remember that the Original Agricultural Survey found twice as much potential land.

For the reservation as a whole, and for the separate districts, there is a deficiency of certain agricultural foodstuffs which can be produced on the reservation. This deficiency may be attributed in part, if not in its entirety, to the lack of sufficient land. The natives supplement their farm yields with products purchased from the traders and if additional land were supplied and farmed, foodstuffs could be produced to obviate the necessity of the expenditure of income from other sources for these products. Through the increase of agricultural income may lie the partial, if not the entire answer to the problem of providing supplementary income to compensate for loss of income from livestock adjustment.

PART 5

Approximation of the amount of water contributed to the San Juan and Little Colorado drainages showing what proportions arise within the drainage area as distinguished by the executive order of the Reservation.

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Statement of Annual Water Discharges into the San Juan River  
from the Navajo Reservation

(Treaty Area)	Annual Acre Feet	Square Mile Area
Walker Creek	3,588	490
Chin Lee Creek	45,000	2,400
Miscellaneous Arroyos, vicinity of Shiprock to east boundary	800	125
Chaco River	9,000	1,200
Pajarito Creek	1,750	233
Shiprock Wash	1,200	243
Red Wash	<u>700</u>	<u>102</u>
Annual Total	65,130	4,793

Estimate of Annual Water Discharges into Little Colorado  
from the Navajo Reservation

<u>(Treaty Area)</u>	<u>Annual Acre Feet</u>	<u>Square Mile Area</u>
Black Creek	1,200	160
Pueblo Colorado	<u>800</u>	<u>75</u>
Annual Total	2,000	235

Estimates of Annual Water Discharges into the San Juan  
River from the Navajo Reservation

Drainage	Annual Acre Feet	Square Miles Area
Navajo Creek	8,600	1,100
Plute Canyon	2,200	550
Nakai Canyon	1,500	250
Moonlight Canyon	1,600	260
Monument Valley	1,700	320
Conab Ridge	2,800	500
Tyende - Laguna	6,300	780
Chin Lee	12,000	600
Aride	4,500	800
Montezuma Creek	650	70
McElmo Creek	1,800	90
Kanees Creek	150	30
Shiprock and Vicinity	600	125
Miscellaneous Arroyos - Farmington and Bloomfield	400	80
Chaco	<u>9,000</u>	<u>1,200</u>
Annual Totals	53,800	6,605

Estimates of Annual Water Discharges into the Little Colorado  
River from the Navajo Reservation

Drainage	Annual Acre Feet	Square Mile Area
Miscellaneous Small Arroyos north side near mouth	1,900	190
Moencopi Wash	22,000	2,600
Miscellaneous Arroyos east of Cameron	2,800	280
Dennibto Wash	7,500	1,100
Area between Dennibto and Corn Washes	1,600	160
Polacca and Corn Washes	8,300	1,200
Jeddito Wash	6,500	950
Craibi Wash	2,200	700
Ivra Mesa	2,000	210
Cottonwood and Pueblo Colorado	12,000	1,600
Leron Wash	3,500	480
Puerco River	16,800	1,800
Zuni River	4,200	555
Miscellaneous Arroyos South Side near Mouth	4,500	455
Canyon Diablo	1,600	225
Clear Creek	800	90
Annual Totals	88,300	12,795

PART 6

J. Turley's Declaration of Old Water Rights

As  
Submitted by-  
Mr. Yoo

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COPY

UNITED STATES  
DEPARTMENT OF AGRICULTURE  
Soil Conservation Service

Rio Grande District  
Albuquerque, New Mexico  
January 13, 1938

Mr. Arthur Fife  
District Engineer  
Soil Conservation Service  
Gallup, New Mexico

Subject: Turley Water Rights

Dear Mr. Fife:

After considerable delay, I wish to submit the following concerning the Turley water rights.

Turley made three or more applications for water rights in the San Juan Basin. No work has ever been done on Applications 166 and 207. He still believes he has rights under these applications. About 1917, James A. French, then State Engineer, cancelled these applications because of failure to perform work. The following data pertain to the water right applications on file in the State Engineer's Office:

APPLICATION 207

Date: September 28, 1908  
J. Turley, Turley, San Juan County, New Mexico.

15,000 second feet diversion and storage; 1,640,000 acre feet; 1,000 second feet from October to April; 15,000 second feet from May to September.

Point of diversion - NW4, Sec. 1, T. 29 N., R. 1 W.

Acres to be irrigated; 1,228,600; irrigable area; 1,616,100 acres; T. 30 N., R. 7 to 16 W. 609,000 acres in T. 3 N. to 14 N., R. 1 to 6 W. Navajo Meridian and base line. Manufacturing, mining and power purposes.

- A. To be used for power and construction, etc.  
Amount of power to be generated - 15,000 horse power.  
Estimated cost of work - \$8,000,000.

APPLICATION 240

Date: February 18, 1909  
J. Turley, Turley, San Juan County, New Mexico.

640 second feet on the right side of the San Juan River; for irrigation and other purposes.

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APPLICATION 166

Date: May 23, 1908

J. Turley, Turley, San Juan County, New Mexico.

This application for storage rights (practically same as 207); Point of diversion SW4, Sec. 36, T. 30 N., R. 9 W., NW4, Sec. 1, T. 29 N., R. 9 W.

In 1927 Turley filed in the State Engineer's office and in other states a map with the subject Winning the West, with the following as title:

"Map of arid regions of the great Southwest and how Turley Projects hold water rights and priority in San Juan River in Northwestern New Mexico, being 18% of Colorado River water and the major rights on lower river on this plan may be used in the "Winning of the West", but the plan hereon should have the most careful survey and study. It is recommended for many reasons, including that its one high dam is located above the Colorado Falls Region on the axis of the lower province of the San Juan Basin (on a stiffening rib geo-syncline on the earth surface) such dam would capture about 94% of the Colorado River flow while these waters are pure mountain waters in the Glenn Canyon - practically all of the mineralization and silt originates in and below the Little Colorado River - that these "pure mountain waters" and those conducted by gravity to Los Angeles, and enroute generating some 3,600,000 horse power, as also reclaiming about 200,000 acres in Utah and Arizona, about 80,000 acres in Nevada, about 1,000,000 acres in California in Mohave Desert and on the Pacific Coast, as also to give an adequate supply of pure water for these cities;----" A similar diversion may be made for the Arizona high line to the east for some 4,000,000 acres and 700,000 horse power. This leaves the entire Grand Canyon with about 4,600,000 horse power to Arizona alone.

Note by Yeo: The map shows the diversion dam 1,080 feet high, with diversion at elevation 4,250 feet and below the Escalante River and above Aztec Creek.

Note by Turley: The Turley Projects were originally contemplated for some 2,100,000 of which about 1,600,000 acres are withdrawn and in Indian Reservation lands and not now available for these projects. Therefore, this part of these old rights may be transferred elsewhere as to Arizona or to the Pacific slope. This MAY be only way which Los Angeles may legally ever get water out of the Colorado Basin as California is a "riparian right state" and the waters of one stream system cannot be legally taken out of its drainage basin into another basin.

Note by Yeo: On July 16, 1923 and August 14, 1924, J. Turley filed notice of intention to transfer this part of these waters out of the San Juan Basin.

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In 1935, J. Turley brought suit in a District Court to compel the State Engineer to restore his filings on the San Juan which had been cancelled by James A. French about 1917. The case was carried to the Supreme Court of New Mexico which held that the State Engineer should not restore the filings of Turley after their cancellation.

According to the records in the State Engineer's office, J. Turley's filings on waters which would irrigate the Navajo Reservation have been cancelled.

See Report on San Juan Basin Investigation, Fifth Biennial Report of State Engineer.

Very truly yours

(Signed) Herbert W. Yoo

Herbert W. Yoo  
Associate Agricultural Engineer.

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