

EXCERPTS FROM: RESERVATION - NAVAJO, PROJECT - ALL PROJECTS

HISTORY OF RESERVATION.

(Pages 1 thru 10, 19, 20, 21)

The Navajo people became subject to the United States Government through the Treaty of Guadalupe Hidalgo. No reservation had been established for them but they occupied most of the area of the present reservation. After their return from Fort Sumner, they received under the Treaty of June 1, 1868, (15 Stat. 667) the area now known as the Treaty Area. This was a block of land covering 3,328,000 acres in the northeastern part of the present Navajo Reservation. This piece of land is almost bisected by the Arizona - New Mexico boundary. The returning Navajos did not all live on the Treaty Area, but returned to their former homes regardless of location.

See map showing boundaries of original reservation, additions and dates of establishment.

Due to controversy over land granted to the newly constructed Atlantic & Pacific Railroad along the southern boundary of the present reservation, the Navajos were given a strip of land west of the Treaty Area by Executive Order of October 29, 1878. By Executive Order of January 6, 1880 they received strips on the south and east of the Treaty Area. This increased the area of their reservation to 6,750,000 acres. In addition it was estimated they used 6,000,000 acres surrounding their reservation. Thus they occupied most of the present reservation.

By Executive Order December 16, 1882, a block of land covering 2,477,780 acres in the west central part of the present Navajo Reservation was set aside for the use of the Hopi Tribe and such other tribes as the Secretary saw fit to settle thereon. This land comprised what is now known as the Hopi Reservation. The Hopi Agency at Keams Canyon was established in 1899.

After many years of conflict, the Navajos were granted the Paiute strip in Utah and Arizona south of the San Juan River by Executive Order May 17, 1884. A small area south of the San Juan River in the vicinity of Fruitland originally included in Executive Order January 6, 1880 and excluded by Executive Order May 17, 1884, was recovered by Executive Order April 24, 1886.

The Allotment Act of Feb 8, 1887, (24 Stat. 388) was an attempt to encourage the Navajos to take up land on Public Domain adjacent to their reservation, but very little land was allotted until 1908. From 1908 to 1930 over 5,000 applications were filed for individual Indians. There are now approximately 4,700 patented allotments of 160 acres each.

An area of 1,750,000 acres on western Navajo, in the vicinity of Tuba City, was added to the Navajo Reservation by Executive Order January 8, 1900. The Tuba City townsite and adjacent land was bought from the Mormons in 1903. The Tuba Agency was started soon thereafter.

The Loupp area was acquired by Executive Order November 14, 1901. 600,000 acres of land were added to the Navajo Reservation through this action.

Largely through the effort of former Commissioner Loupp the Pueblo

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Bonito Reservation on the present eastern Navajo was created by Executive Order Nov. 9, 1907 and Jan. 28, 1908. Subsequently this area was restored to public domain Dec. 30, 1908 and Jan. 6, 1911, but many Indians had received allotments under the Act of 1887. The first agency on the eastern Navajo Reservation was built at Chaco Canyon in 1909 and later moved to Crownpoint, New Mexico.

The Shiprock Agency was founded in 1904 under Superintendent Shelton. The total area of the Navajo Reservation in 1910 was 10,929,244 acres.

The area in Utah, north of the San Juan, was acquired by Executive Orders Mar. 10, and May 15, 1904 and Act of Mar. 1, 1923.

President Roosevelt issued Executive Orders Nov. 9, 1907 and Jan. 28, 1908 adding approximately one and a half million acres in the southern Navajo area. Exchanges were not completed until 1911 in this area. The Grey Mountain country west of Cameron, Arizona, south of the Little Colorado, was acquired for the Navajos by Executive Order Jan. 19, 1918, May 23, 1930 and Act of June 14, 1934. Act of May 23, 1930 also acquired the area north of the Little Colorado and east of the Colorado River. Some of the Navajo mountain country in the Paiute Strip which had been established by Executive Order in 1884 was restored to Public domain by Executive Order Nov. 19, 1892, 1908 and by Act of August 17, 1922, but re-acquired for the Navajos by Act of Mar. 1, 1933.

Additions also were made to the reservation north of Winslow and in the vicinity of Houck by Act of June 14, 1934.\* These and the above enumerated acquisitions and restorations brought the Navajo Reservation to its present status of about 15,000,000 acres with a population of 44,600.

#### IRRIGATION

##### HISTORY OF IRRIGATION.

The history of irrigation on this reservation dates from 1885 when some small ditches were constructed by the Indians. This was followed by investigations and surveys made by the Indian Service as early as 1904. Several small projects were constructed within a few years after this and the development has continued at an ever increasing rate since that time. The work was principally carried on through the office of the supervising engineer, located at Albuquerque, until the beginning of the Fiscal Year 1936, when the work was transferred to the reservation superintendent.

A brief detailed history will be found under each project in the following descriptions, which include the features of History of Irrigation, Water Supply and Project Works. The details of Project Works, also Works Needed to Complete, will be found in table No. 1. Estimated Cost to Complete and Economic Program for Completion will be found in tables 2 and 3 covering the entire list of projects in the three states.

The location of each project will be found on the attached key map and the symbols (6-D etc.,) shown under the project data in table attached.

\* For additional information as to recent purchases submitted by Supt. Fryer June 3, 1939, see page 35.

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Attention is directed to the fact that records of stream flows on the Navajo Reservation are very meager. It should be understood that until a long record of stream flow is available it is necessary to evaluate the project water supplies by observations. Some of the projects known to have an assured water supply are indicated by "A" and others where there is doubt are indicated by "Q" in the accompanying table No. 1. The column headed "Annual Water Supply" shows not the amount of water which might be diverted or needed, but the estimated amount which passes the headgates.

ARIZONA.

Beautiful Valley - This is an Indian project located at the junction of Nazlini Creek and Beautiful Valley Wash. During the past year the Indians secured water from Nazlini Creek by the use of a temporary heading and about 2 miles of canal.

The heading has been totally destroyed and it is proposed to construct a permanent diversion, rebuild canals and necessary structures and subjugate the land.

Begashibito - This project, located just west of the Cow Springs Trading Post secures its water from the natural Begashibito Lake supplied by a wash of the same name in Klothla Valley. The project consists of a small dam for storage, pipe line, gate tower and main canal, and was completed in 1934.

It is proposed to subjugate the land and build adequate laterals and structures, also some flood protection work. A supplementary diversion from the west is feasible and will be undertaken when additional storage is required.

Chin Leo - The first surveys on this project were made in 1904, when a small reservoir was proposed. The two units of this project, known as Chin Leo and Frazer Heading, divert water from the Chin Leo Wash at the mouth of Canyon deChalley. The upper or Chin Leo Heading, serves the land below the Chin Leo Day School in the triangle between Chin Leo and Nazlini Wash. The lower, or Frazer Heading, serves the land in the Chin Leo Valley between Nazlini Wash and Frazer's Store through a siphon under the Wash. Concrete headings, 2 main canals and a siphon were constructed in 1935-36 under a W.P.A. program, supplementing previously constructed works which have been in use for many years.

It is proposed to construct a permanent weir, improve the 2 main canals, and subjugate the land. There is an ample water supply, but control is difficult on account of the continual movement of sand in this wash.

Donohotso - This project is on Laguna Creek and had been used by the Indians for 20 years prior to 1923 when the Government built a log crib diversion dam. This diversion dam was replaced by a concrete diversion in 1929-30, and a pipe flume was also constructed at the diversion on the south side. The main canal on the south side was recently completed while the main canal on the north side is yet to be rebuilt. Repairs to the dam and installation of sluice gates were carried out in 1933-35 under W.P.A. funds. The Soil Conservation Service built a new highline

canal on the south side in 1937-38, and also did some work on the north side of the canal.

It is proposed to construct a new main canal on the north side, provide adequate sluice facilities and subjugate the land.

Fort Defiance.-

Bonito Creek - Mr. Shoemaker, first Superintendent of Irrigation on the Navajo Reservation, supplementing his report of 1897, described the temporary loose rock and brush diversion and crude canal in use at that time. Both Agency and Indian lands were irrigated. He made some changes and repairs to the system. Surveys for reconstruction were made in 1903. A concrete diversion and headgate and 300 feet of new canal were constructed in 1922. Some subjugation work was done in 1937, mainly from CCC-ID funds. There is a concrete heading and outlet gate which diverts water from Bonito Creek on the north side and serves the irrigable land between Bonito Creek and Black Creek, immediately west of the Fort Defiance School.

Black Creek - This is a masonry diversion dam with outlet gate constructed in 1937-38 under the Irrigation-CCC-ID, cooperative, to serve land adjacent to Black Creek in the area north of the Good Shepherd Mission. About 1000 feet of main canal has been constructed. The 1939 program calls for installation of steel headgate and flumes to replace the wooden structures.

It is proposed to construct a new main canal on Bonito Creek, complete the main canal on Black Creek and subjugate the land.

Ganado - This project is located on the Pueblo Colorado drainage just east of the Ganado Community Center. A canal was constructed by J. L. Hubbell in 1903 to irrigate 160 acres. Under an agreement with Hubbell, approved by the Department May 31, 1913, he gave up his water rights and ditch in exchange for rights in the proposed reservoir. Funds were appropriated by Congress for construction of the project, including a storage dam and 5-1/2 miles of ditch to cover 707 acres of land. The estimated cost was \$60,000 and construction work was begun in the spring of 1913. In 1923 extensive repairs were made to the headworks, following a severe flood. Again in 1931 the diversion was destroyed and the headworks were again rebuilt as they stand today. The project works consist of a masonry diversion, feeder canal, and an earth fill primary storage dam. About 9 miles north of the project there is another small masonry diversion from the headwater of Beautiful Valley drainage, with a short feeder canal to the Pueblo Colorado where the water is impounded by an earth fill secondary storage dam. The main canal from the Ganado primary storage follows the north side of the Pueblo Colorado Wash to a siphon just above the Ganado Mission, where the water is divided.

It is proposed to construct an additional diversion into the secondary storage.

Operation and maintenance of the present project, and of several closely related projects, as later defined, is carried on with pitifully inadequate funds. Needs for 1940 and succeeding years are \$3,000, increasing to \$5,000 in 1941, \$10,000 in 1942, \$15,000 in 1943 and thereafter.

Annual assessments at the rate of \$3.00 per acre are made in accordance with order of the Washington Office.

The Ganado Water User's Association is composed of all Indian farmers on the project. There is no organization among the few white users.

Collections in past years have been made at stipulated rates from white users and at the rate of about \$1.00 per acre from Indian users. The collections from Indian users have been in the form of endorsed checks issued in payment for labor in connection with spring ditch cleaning.

Present plans call for consolidation of several closely related developments under the one title of Ganado Project. These include Cornfields, Coldfields, Klagetoh and the present Ganado Project. Under such a consolidation, one foreman can be responsible for all operation and maintenance activities, justification for more adequate funds can be based on a larger and more effective Indian Water User's Organization. A more comprehensive program of education in land usage is instituted.

Cornfields - The Cornfield unit is also on the Pueblo Colorado, about 6 miles below Ganado. Proposals for development were recommended between the years 1900-20. Government assistance was given the Indians in construction of a diversion and main canal during 1921-23. The Soil Conservation Service did a small amount of work in 1936. The project works consist of a loose rock diversion of the main canal with 5 masonry turnouts. The 1939 program includes construction of a wood pile throat and silt trap and realignment of the old Indian ditch.

It is proposed to extend the system and subjugate additional land as the Indians request it.

Houck - This is an Indian built system which has been used for many years and is located near lower Black Creek just above the junction of the Rio Puerco. The Soil Conservation Service gave some assistance in the form of bank protection in 1935. A permanent diversion and headgates are included in the 1939 program.

Future works will include reconstruction of the main canal with structures, construction of a lateral system and subjugation of the land.

Jeddito - This is a new project on the lower Jeddito Wash. Construction of a diversion, headwork and main canal is included in the 1939 program.

Future works will ultimately consist of a two-way diversion or a siphon in order that land on both sides of the wash may be served, also construction of a lateral system and subjugation of the land.

Kinlichee - This project was begun in 1925, prior to which the Indians were using crude and temporary methods. It is located on the Pueblo

Colorado upstream from Ganado. It is designed to irrigate land on the north side of the wash near the Kinlichee Day School. During 1925-26, a crib diversion, main canal and several flumes were constructed. A new masonry diversion was constructed in 1933 from W.P.A. funds. The project works include a masonry diversion weir, concrete headworks, main canal and 2 siphons.

Future plans call for construction of a lateral system and subjugation of the land.

Klagetoh - This project is located on a tributary to Wide Ruins Wash near the Klagetoh Day School. It includes the Demonstration Area fenced by the Soil Conservation Service. A storage dam and distribution system was built under W.P.A. funds in 1933-36. A small amount of maintenance work was done in 1937 by the Soil Conservation Service.

Future works will include some reconstruction of the main canal and laterals, subjugation and maintenance.

Lower Dinebito - This project is located on the Dinebito Wash northeast of Hotevilla. It is a new project recently completed. The project works consist of a concrete diversion and main canal, begun in 1936 and completed in 1937. Laterals, subjugation of the land and fencing of 230 acres were completed in 1938.

No future work is planned at this time, but should include extension of the irrigable area if needed, planting of windbreaks and maintenance.

Lower Moencopi - This is a new project located on Moencopi Wash about 9 miles below Tuba City. The project works consist of a concrete diversion and headworks and a main canal built under P.W.A. in 1933-35. Project works consist of a masonry arch dam with concrete apron and stilling pool, concrete headworks, main canal with masonry drops constructed under P.W.A. in 1933-35. The Soil Conservation Service did some maintenance work in 1936 in cooperation with the Irrigation Service and placed a reinforced concrete blanket on the spillway and provided tailwater outlets on the irrigable area.

Future work will consist of construction of a lateral system, fencing, windbreak planting, erosion protection and subjugation of about 400 acres. Improvement of the headworks and dam must be prosecuted immediately to save the structures.

Lower Rock Point - This is one of the larger new land projects. It is located on Chin Lee Wash, just below its junction with Lukachukai Wash. The project works consist of a large earth diversion dam with a solid rock spillway, concrete headworks and main canal. Work was begun under P.W.A. in 1933. Construction of a lateral system, subjugation, fencing and windbreak planting has been partly constructed on about 800 acres. Additional subjugation and investigation of ground water supply by well drilling were included in the current program.

Future work will consist of completing the lateral system, better sluicing facilities on the main canal and subjugation. This is one

of the large potential land areas on the reservation near an assured water source and the future is expected to develop a need for more extensive construction in this area. A large storage dam on Lukachukai Creek has been considered. A permanent weir may become necessary.

Operation and maintenance appropriations of \$3,500 in 1940, \$5,000 in 1941, \$5,000 in 1942, \$8,000 in 1943, \$10,000 in 1944 and \$12,000 in 1945 should be made specifically for this project.

Lukachukai - Tohtso - This is located on Tohtso Creek, a large tributary of the Lukachukai. Project works include a concrete diversion weir with a main canal to supply land on the north side of Tohtso Creek. 80 acres under the Tahtso Canal have been subjugated.

Future work includes the extension of the Tohtso Canal or construction of a new canal from the Lukachukai diversion on the south side to serve additional land between the two washes. The latter would require either a flume or siphon across Tohtso Creek. Construction of a storage reservoir on the headwaters of Lukachukai may be found desirable in the future.

Many Farms - This is a large new land project begun in 1933 by the CCC-ID. It is located on the Chin Lee Wash, just below the Frazer Store. The project works consist of a loose rock diversion, concrete headworks, main canal and laterals. Subjugation and fencing of 500 acres was also completed in 1937-38.

Future plans include extension of the main canal to serve the old Indian project of Many Farms, about 3 miles north of the present project, where the Indians for many years have been irrigating from the temporary heading, and it is planned to provide water from the main canal now being completed.

Marsh Pass - This is located on Laguna Creek near the Government School at Kayenta. After completion of the school in 1914, Engineer Baker made the first investigations. Work was started in 1916 and the project formally accepted by the Agency in 1919. Floods caused much damage and necessitated considerable maintenance work in the following year. The present works consist of a masonry dam, feeder canal, earth storage dam and main canal to the farm lands. Considerable work was done on the project under P.W.A. funds in 1933-35.

Future work will include construction of a lateral system, reconstruction of a portion of the feeder canal, excavation and protection of a portion of the main canal now endangered by blow sand, repairs to the dam, construction of a lateral system, fencing, windbreak planting and subjugation.

Moanava - The five small units at Moanava are located in small valleys below the high escarpment west of Tuba City. They were old Mormon projects acquired by the Indians in 1900, where there are many natural springs. The work consists mainly of collecting the water from these springs into small storage reservoirs. Some work was done under P.W.A. in 1932-35. Extensive development took place in 1935-36 under the Soil

Conservation Service. The five units, namely, Old Moenave, Upper and Lower Vanzee Ranch and Upper and Lower Littlefields, are within the Soil Conservation Service Moenave Demonstration Area. A complete system of laterals and feeders was built and the land subjugated.

Future work will include construction of a small storage dam if found feasible by investigations now being made.

Moencopi Wash - This project is located on Moencopi Wash near Tuba City on land formerly owned by the Mormons. The land was acquired in 1903 by purchase. A dam originally built by the Mormons washed out in 1909 and was repaired that year. It again washed out in 1910, and was later destroyed by floods. A concrete diversion was provided in 1915 and work on the canal, sluice gate and wasteway was done in 1921-24. The present works consist of a concrete diversion, main canal and lateral system. The irrigated areas have been fairly well subjugated.

Future work should include the construction of a more efficient lateral system, bank protection on Moencopi Wash and additional subjugation.

Natural Bridge - This was originally an Indian project designed to divert water from Black Creek through a concrete heading into an earth storage on the west side of the wash, which was constructed, together with a distributary system, under P.W.A. in 1933-35. Since then Black Creek has changed its course so as to leave the intake.

To make the diversion system operative it will be necessary to construct a diversion crest across Black Creek, build a new main canal and structures, raise the present storage capacity to 5500 acre feet and subjugate the land.

Nazlini - This project is located on Nazlini Creek near the Nazlini Store. Project works consist of a concrete heading and main canal. Natural rock in the stream bed is used as the diversion crest. The main canal was built primarily for land west of the Nazlini Creek, however, construction of a small canal and wooden flumes provided water for small farms adjacent to the stream. A diversion and canal was constructed under P.W.A. in 1933-35. Flumes carrying water to the old Indian lands in the canyons were repaired in 1936. They are again in need of some work.

Investigations have shown that the soil in this area is of poor quality and the possible silting of the proposed reservoir would render it useless in a short time. Due to these factors the project is likely to be condemned and no more developments made.

Oak Springs - This is an old Indian project consisting of a masonry storage dam impounding water from springs and small perennial streams serving a small area through the main canal. Work was done on this project by E.C.W. and the Soil Conservation Service in 1935-38.

Completion of the project will require work on the main canal which will be done chiefly by the Indians with some assistance by the Government in supervision and furnishing of materials, also subjugation of the irrigable area.

Oraibi Wash, -Lower - This project is located on Oraibi Wash, north-east of the Oraibi Village. The project works consist of a masonry diversion dam and headworks, silt trap, main canal with flume, rough leveling and fencing of about 70 acres. It was built under P.W.A. in 1933-35. CCC-ID fenced and rough leveled the land in 1936, also some maintenance work was done on the main canal. Upper Oraibi, or Kardrook, is a potential project on which no work has been done.

Paiute Canyon - This project is located in Paiute Canyon which is a tributary to the San Juan River. The first work was done in 1921 when five flumes were installed in the canal. The present works include a masonry diversion dam and main canal with a number of flumes and drops constructed under P.W.A. in 1933-34. The Soil Conservation Service put in additional flumes and worked on the canal in 1936.

Future works for this project will include subjugation of the irrigable area and construction of laterals and structures and flood protection.

Red Lake - This project is located on Black Creek north of Fort Defiance. This was one of the earliest projects built for the Navajos. A crib diversion dam, feeder canal and storage dam were constructed in 1885. A distribution system to cover 700 acres was provided soon after. The diversion dam washed out in 1906 and was repaired. The system was again damaged in 1916 and again repaired, at which time the land had not been put to use. The present masonry diversion dam and concrete headgates were built in 1936. Feeder canal was also rebuilt in that year. The project works consist of a diversion dam, feeder canal with two sluice ways, earth storage dam, main canal with wooden structures and flume across the flood channel.

It has long been the plan to raise the dike on the storage dam in order to increase the capacity of the lake to care for additional land on Black Creek below the present project. Considerable work on the present main canal and construction of a canal for the new lands will be necessary. Subjugation of all land brought under the project is badly needed.

Red Rock -

Cove - The project works on this unit consist of a concrete diversion, 2 masonry diversions on the main drainage, heading in the Cove Demonstration Area, and main canals to the irrigable lands. The upper diversion and canal was built under P.W.A. in 1933 and the Soil Conservation Service Demonstration Area was opened in 1934 when new diversions and canals and the wasteway on the original diversion were constructed.

To complete this project metal headgates should be installed on the diversion dam, concrete sluice ways provided on the main canal and the land should be fully subjugated.

Unit - This was originally an Indian project. The project works consist of a concrete diversion with headworks and main canal constructed by the Government in 1927.

Sluice way structure and subjugation of the land are needed to complete the project.

Valley - The project works include a masonry arch storage dam on a tributary to Red Rock Wash, constructed in 1937. A small concrete diversion from the channel below the storage dam was completed in the same year.

A metal flume and subjugation of the irrigable area is needed to complete the project.

Zilbetod - This is located on the tributary to Red Rock Wash, north of Red Rock. The project works consist of a concrete diversion with headworks and a main canal built in 1932. These have been partially destroyed and are to be reconditioned in 1939.

In addition to reconditioning the existing work the land should be subjugated.

Reservoir Canyon - This project is located on a short tributary to Mooncopi Wash near Tuba City. Due to the extensive amount of ground water in this area, Reservoir Canyon flows a dependable stream the year around. This was first utilized by Mormon settlers who are said to have been implicated in the Mountain Meadow Massacre. The Mormons had constructed three reservoirs in the canyon and after the lands were purchased in 1903 the Indians began farming them. In 1908 two of the dams were rebuilt and raised and headgates installed. Drifting sand threatened to fill the canal and a stone culvert was built. In later years this was extended by use of corrugated pipe. A new feeder canal was constructed in 1937 by CCC-ID. This project has long been used by the Hopi Indians of the Mooncopi Village and the lands are fairly well subjugated.

Improvement of the reservoir and subjugation of the land would complete this project.

Rock Point - This project is located on Lukachukai Creek just above the large lower Rock Point project. This is an old diversion used by the Indians and improved from time to time by the Government. The concrete diversion, with earth dike and a main canal were constructed in 1932-33. The earth dike on the east end of the concrete weir was subsequently washed out and the Indians have farmed for sometime by making temporary repairs.

It is proposed to construct a permanent diversion weir and improve the main canal by providing sluice structures and subjugate the land.

Round Rock - This project is located on the south side of Lukachukai Creek under an earth storage reservoir supplied by 4 miles of feeder canal diverting water from Lukachukai Creek by means of a concrete diversion dam with radial sluice gate. Two main canals serve the land below the reservoir. Two tracts, totaling 120 acres, have been completely subjugated. The first surveys were made in 1925. The concrete diversion dam was completed in 1934, main feeder canal and part of the distribution system in 1936, while the storage reservoir and the remainder of the distribution system and part of the subjugation of the land were completed in 1937. Additional subjugation will be done in 1939.

(New Mexico)

And south side of the Sanostee Wash, Outlets and sluice gates are being provided on each end of the dam, main canals have been constructed to the farming area on both sides of the wash.

Completion of this unit will require installation of radial gates in place of the shear gates in the diversion structure and the installation of turnouts and checks on the main canals, also subjugation of the land.

Todilto Park - This was originally a small Indian project located on the upper headwaters of Black Creek. In 1935 E.C.W. built a rock sausage type diversion with timber headgate and the following year the Soil Conservation Service built a main canal and a number of masonry structures.

Plans for the future include installation of additional structures on the existing canals and subjugation of the land.

There is another site upstream from the present diversion which may be used. This will entail construction of a diversion and main canal and the land should be subjugated.

#### UTAH.

Aneth - In 1906 James M. Holley, trader at Aneth, with the help of the Indians constructed the first heading and ditch about six miles above Aneth. The Government made surveys for improving the project in 1911, but no work was done until 1926, at which time considerable maintenance and new construction were carried out. A contract between Mr. Tanner, owner of the private land under the project, and the Government was drawn in 1926. This Agreement provided regulations on the basis of area owned and for the work required of Indians and private owners at such time as maintenance and new construction became necessary. Water for the project is taken from MoElmo Creek by means of a throat type intake.

To complete the existing project it will be necessary to reconstruct the present intake or construct a diversion weir. Additional drops and turnouts and side drainage protection are needed for the main canal. The land should be subjugated.

There is a large potential project in the vicinity of Aneth which should be included in the long time plan of irrigation development. This project lies on a bench just east and south of the Aneth Day School. One plan is to take water from the San Juan River by means of a large pumping plant to pump water from the San Juan River to the bench and the other is to take water from the San Juan River by means of a gravity diversion many miles up stream.

Montezuma Creek - This was originally an Indian project. In 1933 the Irrigation Service constructed a concrete intake and a concrete heading with rail, wire and loose rock diversion and a concrete sluice structure on the canal, and regraded a portion of the main canal.

More adequate diversion facilities, additional structures on the main canal and subjugation of the land are needed to complete this project.

Monument Valley - This is a small project on the headwater of the Gypsum Creek where an arch masonry storage dam with outlet tower and short main canal were constructed in 1937.

There is a possibility of developing additional storage on some of the small slick-rock dam sites. The farm land generally lies in the coves and canyons below the dam sites, and Indians on the small tracts can develop their own distribution system.

This ends the history and descriptive matter.

#### PROJECT WORKS.

Detailed descriptions of existing project works are included in the foregoing project histories and on Tabulations attached.

#### WORKS NEEDED TO COMPLETE.

Works needed to complete have been described in the foregoing project histories and are listed by features on Tabulation attached.

#### ESTIMATED COST TO COMPLETE.

This is given in Tabulation attached, showing distribution by project and features.

#### ECONOMIC PROGRAM FOR COMPLETION.

This is shown by project on Tabulation attached based upon a six year program. See also Summary Table.

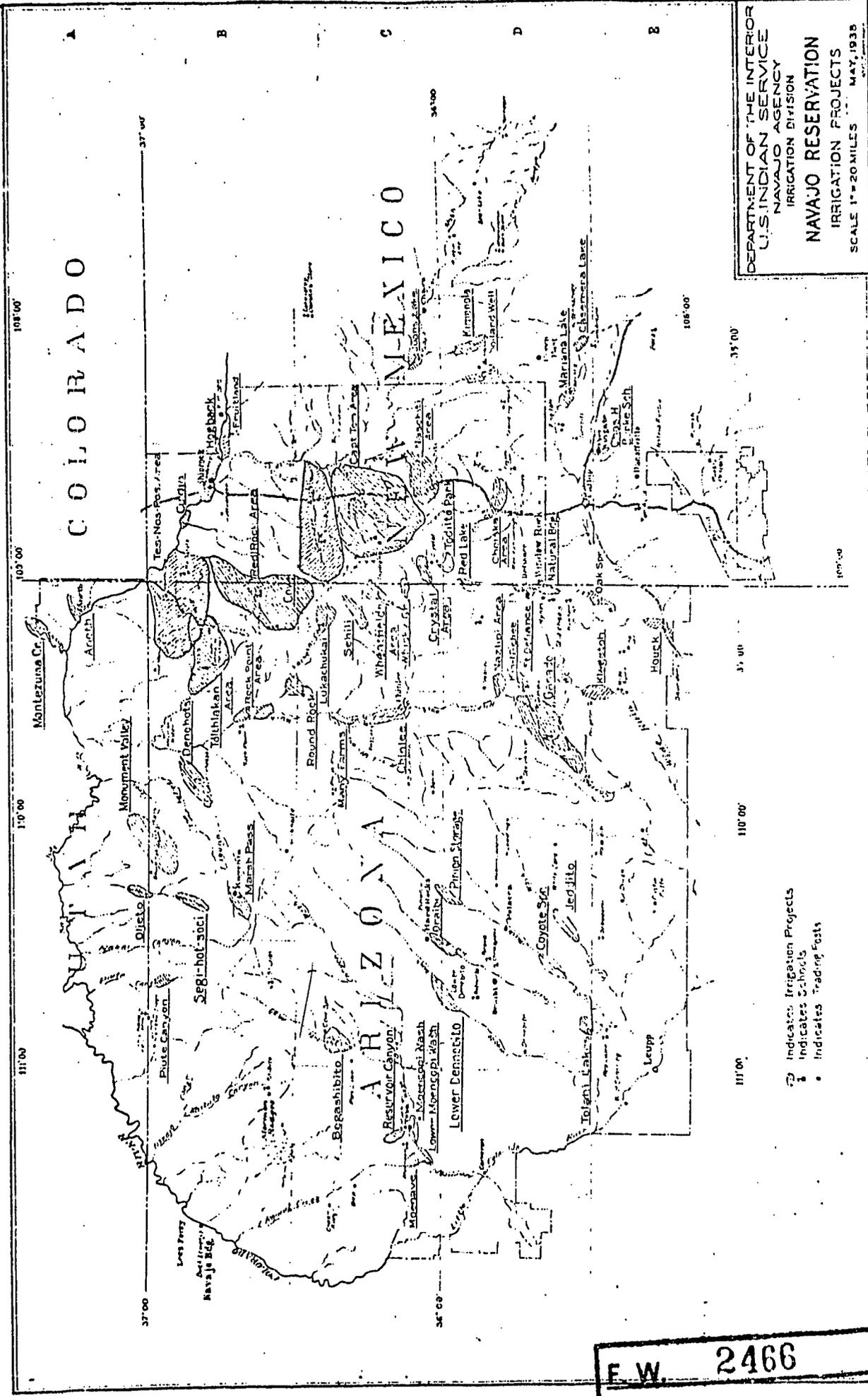
#### PUBLIC NOTICES.

None.

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DEPARTMENT OF THE INTERIOR  
 U.S. INDIAN SERVICE  
 NAVAJO AGENCY  
 IRRIGATION DIVISION  
**NAVAJO RESERVATION**  
 IRRIGATION PROJECTS  
 SCALE 1"=20 MILES MAY, 1938  
 FILE NO. 6-3-3

☐ Indicates Irrigation Projects  
 ● Indicates Schools  
 \* Indicates Trading Posts

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