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STATE ENGINEER OFFICE
SANTA FE, N. M.

IMPORTANT — READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

APPLICATION FOR PERMIT

To Appropriate the Public Surface Waters of the State of New Mexico

Book No. M-3 File No. 2883

1. Date of receipt of formal application April 14, 1959
2. Name of applicant United States of America, Department of the Interior
   c/o Regional Director, Region 4, Bureau of Reclamation
   Post Office address P. O. Box 360, Salt Lake City, Utah County of Salt Lake
   State of Utah
3. If applicant is a corporation give: (a) Date and place of organization
   (b) Amount of capital stock, $ (c) Amount paid in, $
   (d) Names and addresses of directors

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4. Quantity of unappropriated water applied for 49,510 (delivered to the land) acre feet;
   (a) By direct diversion acre feet; (b) by storage acre feet;
   (c)
5. Period of annual use January 1 to December 31
6. Source of water supply: (a) Name of stream or watercourse Animas and La Plata Rivers
   (b) which is a tributary of San Juan River, a tributary of Colorado River
   (c) or is situated in Section Township , Range
7. Location of point of diversion or outlet from channel-reservoir storage: quarter of the Various - See Explanatory quarter of Section , Township ,
   Range , N. M. P. M., at a point whence the
   of Section , Township , Range
   bears , feet distant.
8. To be used for irrigation, stock, domestic, industrial and miscellaneous purposes.
9. If used for IRRIGATION AND DOMESTIC PURPOSES fill in the following:
   (a) Application is hereby made for a variable rate not to exceed 3.1 acre feet of water per acre for irrigation purposes; (b) if application is made for water during the non-irrigation season, ~~(and domestic)~~ state the need for the same: For stock, domestic, industrial and miscellaneous uses,
   (c) number acres to be irrigated 20,600 acres, described as follows:

Subdivision	Sec.	Twp.	Rge.	Acres	Owner
See Explanatory					

10. If used for MANUFACTURING, MINING, POWER OR LIKE PURPOSES fill in the following:
(a) Application is hereby made for ..... second feet of water to be used for ..... purposes; (b) power to be generated ..... horsepower; (c) conducted by .....
..... (give size and description of conduit)
..... feet in length; (d) from a point in the ..... quarter of ..... quarter of Section ....., Township ....., Range ....., N. M. P. M., (e) to a point where the water will be returned to the stream substantially undiminished in quantity in the ..... quarter of ..... quarter of Section ....., Township ....., Range ..... whence the ..... of Section ....., Township ....., Range ..... bears ....., ... feet distant; (f) the amount of water which will be consumptively used in the above operation is: .....

11. Describe diversion dam, stating construction materials, character of foundation, dimensions, etc. ..... See Explanatory .....

12. Hydraulic properties of main canal or conduit ..... See Explanatory ..... (name or number); Bottom width ..... feet; depth of water at full operating capacity ..... feet; total depth including freeboard ..... feet; side slopes ..... horizontal to 1 vertical; diameter (pipe line or circular flume) ..... feet; slope ..... feet per 1000 feet; hydraulic radius ..... feet; coefficient of roughness (n) .....; velocity at full capacity ..... feet per second; capacity ..... cubic feet per second; length of canal ....., the location being as shown on the filing maps accompany this application.

12a. Hydraulic properties of main canal or conduit ..... (name or number) Bottom width ..... feet; depth of water at full operating capacity ..... feet; total depth including freeboard ..... feet; side slopes ..... horizontal to 1 vertical; diameter (pipe line or circular flume) ..... feet; slope ..... feet per 100 feet; hydraulic radius ..... feet; coefficient of roughness (n) .....; velocity at full capacity ..... feet per second; capacity ..... cubic feet per second; length of canal ....., the location being as shown on the filing maps accompanying this application.

13. Hydraulic properties of Meadows storage dam: Maximum height above foundation 65 feet; length of crest 1475 feet; maximum width at base 355 feet; crest width 30 feet; slope of upstream face 3:1; slope of downstream face 2:1; elevation at crest of dam ..... feet; elevation of spillway crest 5622 feet; elevation of flow line of outlet conduit 5584 feet; freeboard (above high water line at maximum spill) 6 feet; width of spillway 40 feet; discharge capacity of spillway 300 cubic feet per second; size and character of outlet conduit .....; discharge capacity of outlet under full head 220 cubic feet per second; type of dam, construction material, etc. rolled earth-fill with impervious earth section.

Elevation or Depth Above Outlet	Area of Water Surface, Acres	Storage Capacity, Acre Feet	Remarks
5622	615	12,600	Normal water storage spillway crest
5620	583	11,265	
5615	490	8,585	
5610	393	6,375	
5605	318	4,600	
5600	246	3,190	
5595	195	2,085	
5590	147	1,230	
5585	104	605	
5584	94	600	Flow line - Dead Storage

14. Additional data or explanations .....

15. Estimated costs: Main canal or conduit . . . . $ See Explanatory

Storage Dam . . . . . $

..... $

Total cost ..... $

16. Time required to begin construction Subject to authorization and appropriation of funds by Congress;

time required to complete the works Ten years.;

time required to fully apply water to beneficial use Ten years after completion of construction.

17. References: .....

I, ..., applicant

being first duly sworn, upon my oath, depose and say that I have read the foregoing statements and that the same are true to the best of my knowledge and belief: United States Department of the Interior

c/o Regional Director, Reg. 4, Bureau of Reclamation

By: E O Larson

SEE ATTACHMENT ....., Applicant

Regional Director, Reg. 4, Bureau of Reclamation

Subscribed and sworn to before me this 10th day of April, 1959.

Thomas Kouneles

(Notary Public)

My commission expires Oct. 17, 1961

ENDORSEMENT OF STATE ENGINEER

Number of this filing 2883

Recorded in Book M-3 Page 2883

Notice of Intention received May 1, 1956

It is hereby acknowledged that the attached plans for proposed works to develop and use 49,510 acre feet of water per annum from the Animas and La Plata Rivers have been submitted in compliance with Section 75-5-31, New Mexico Statutes Annotated, 1953 Compilation.

Witness my hand and seal this 12th. day of May, A.D., 1959.

S. E. Reynolds

State Engineer

Water to be applied to beneficial use on or before .....

This is to certify that I have examined the above application for permit to appropriate the public surface waters of the State of New Mexico and hereby approve the same subject to the foregoing provisions and conditions.

Witness my hand and seal this ..... day of ....., A. D., 19.....

.....

State Engineer

Instructions and Explanations for Filling Out This Form

SEE MANUAL OF RULES AND REGULATIONS

This form shall be filled in by typewriter in duplicate and shall be accompanied by the proper filing fee. Maps, plans, specifications, etc., must also be submitted at the time of filing formal application.

Before filling in this form, it is suggested that applicant read the Manual of Rules and Regulations for proceeding before the State Engineer. Section I, VII, VIII and the foreparts of Section II and V, particularly, are pertinent.

If application is to enlarge an existing project or amend a permit, fill out application to cover only the enlarged or amended portion, then, under Section 8, give the date necessary to define or describe the original works.

Sec. 1. This section to be filled in by the State Engineer.

Sec. 2. Fill in the name and address of the applicant.

Sec. 3. If applicant is a corporation, company or firm, fill in blanks under this section. If a corporation, give date of filing certificate of incorporation with the Corporation Commsson.

Sec. 4. The quantity of water to be appropriated for irrigation purposes shall be stated in acre feet delivered on the land. Applicant shall apply for no more water than can be put to reasonable beneficial use (see pps. 5, 177 and 22 of Manual). Excessive and wasteful uses do not constitute a valid water right.

The quantity to be used wholly or in part by direct diversions when a higher rate is permissible.
in part by storage, in (b). Under (c) give any additional information necessary to properly describe or define the proposed use.

The rate of delivery of water shall not exceed the statutory limit of one cubic foot per second for each 70 acres delivered on the land, excepting in the case of flood water diversions when a higher rate is permissible.

Sec. 5. For irrigation purposes, the period of annual use shall be limited to that period when water may be reasonably applied to beneficial use on the land (see Sec 9).

Sec. 6. Fill in each blank in this section. Even though the source of water supply may not normally reach it, the main stream to which the supply is theoretically tributary shall be given.

Sec. 7. The point of diversion shall be tied by course and distance to some legal subdivision cornor if within reasonable distance thereof, or, if on unsurveyed land, shall be tied to some permanent easily- located natural object. If located on unsurveyed lands, the point of diversion shall be described as accurately as possible by legal subdivision "as projected" from the nearest government survey.

In a direct diversion project, or in case of diversion to an off-channel reservoir, the point of diversion is the location of the canal headgates on the bank of the stream or water-course. If water is to be stored behind a dam across the source of supply, the point of diversion then becomes the location of the outlet gates from the reservoir.

Sec. 8. State all purposes for which water is to be used.

Sec. 9. Fill in this section only if water is to be used for irrigation and domestic purposes. Need must be shown for the use of any water claimed during the non-irrigation season. When necessary to clearly define the acreage to be irrigated the lands shall be described to the nearest 2% acre subdivision.

Sec. 10. Fill in this section only if water is to be used for manufacturing, mining, power or like purposes. The application shall give the maximum flow in second feet required for the above purpose. If is important to show the point of return to the stream and also the amount of water, if any, which will be consumed in the operation.

Sec. 11. This section should describe the pertinent features of the diversion dam and appurtenances.

Sec. 12 and 12a. Fill in all blanks detailing the hydraulic properties of the main canal or canals in the system.

Sec. 13. Fill in blanks detailing the hydraulic properties of the storage dam and spillway. Under "type of dam, construction material, etc.," state whether dam is gravity, arch, gravity-arch, etc.; whether of concrete, earth and rock, masonry, etc.; type and thickness of riprap and of cut-off or core wall. Areas and capacities should be given in the table for each 5-foot interval or less, if necessary in obtaining reasonable accuracy. Under "Remarks" indicate notations such as "flowline," "crest of spillway," "high water line," etc., applicable to the corresponding elevations.

If more space is needed, continue under Sec. 14 or use separate sheet of paper and attach securely hereto.

Sec. 14. Give any additional data necessary to describe or define the proposed works, or old works to be amended or enlarged hereby.

Sec. 15. In this section give reasonable estimates of the cost of the main canal or canals and of the storage dam or dams.

Sec. 16. Give applicant's estimates of the time necessary to start and to complete construction and to apply water to beneficial use.

Sec. 17. Give references of a bank and of a merchant with whom applicant does business or to whom he is well known.

Applicant must sign affidavit before a Notary Public or other proper official qualified to administer oaths.

(If additional space is necessary in filling out any part of application use a separate sheet of paper and attach securely hereto.)

The area to be irrigated consists of 20,600 acres located and described by legal sub-division as follows:

McDermott Area

Section	Twp. (N)	Range (W)	Acres
1	31	13	306
12	"	"	124
13	"	"	109
36	32	"	100
3	31	12	50
4	"	"	446
5	"	"	243
6	"	"	202
7	"	"	142
8	"	"	215
9	"	"	25
17	"	"	127
18	"	"	96
20	"	"	34
9	32	12	53
10	"	"	281
11	"	"	139
12	"	"	161
14	"	"	276
15	"	"	498
16	"	"	339
19	"	"	42
20	"	"	251
21	"	"	478
22	"	"	288
23	"	"	19
27	"	"	220
28	"	"	431
29	"	"	264
30	"	"	226
31	"	"	417
32	"	"	376
33	"	"	472
		Total	7450

La Plata-New Mexico Area

Section	Twp.(N)	Range(W)	Non-Irrigated Acres	Irrigated Acres
6	29	13	25	-
5	30	13	18	88
8	"	"	117	92
16	"	"	34	25
17	"	"	64	38
20	"	"	11	13
21	"	"	45	137
28	"	"	77	-
29	"	"	93	-
31	"	"	6	-
32	"	"	38	-
1	31	13	24	-
2	"	"	41	152
3	"	"	27	356
4	"	"	139	171
5	"	"	9	-
8	"	"	40	-
9	"	"	297	232
10	"	"	24	377
11	"	"	8	89
14	"	"	7	46
15	"	"	72	214

Section	Twp. (N)	Range (W)	Non-Irrigated Acres	Irrigated Acres
16	31	13	259	115
17	"	"	164	-
20	"	"	214	-
21	"	"	257	159
22	"	"	54	215
27	"	"	31	61
28	"	"	175	17
29	"	"	36	-
32	"	"	41	17
33	"	"	102	60
31	32	12	2	-
10	32	13	8	80
15	"	"	8	125
22	"	"	19	73
25	"	"	223	-
26	"	"	252	-
27	"	"	88	165
28	"	"	5	6
33	"	"	8	78
34	"	"	19	364
35	"	"	107	63
36	"	"	144	-
	Total La Plata-New Mexico Area		3432	3628

Meadows Area

Section	Twp. (N)	Range (W)	Acres
2	30	14	56
3	"	"	22
5	"	"	236
6	"	"	573
7	"	"	331
8	"	"	9
18	"	"	15
1	30	15	182
2	"	"	8
11	"	"	49
12	"	"	461
13	"	"	368
14	"	"	444
15	"	"	134
21	"	"	205
22	"	"	271
23	"	"	198
24	"	"	56
28	"	"	192
33	"	"	81
34	"	"	5
18	31	13	29
13	31	14	17
24	"	"	196
25	"	"	207
26	"	"	21
27	"	"	122
28	"	"	83
29	"	"	3
31	"	"	188
32	"	"	431
33	"	"	312
34	"	"	196
35	"	"	190
36	"	"	199
		Total	6,090

EXPLANATORY STATEMENT

General

This application is in conformity with the Upper Colorado River Basin Compact, dated October 11, 1948, approved February 2, 1949, by the State of New Mexico, and is filed to acquire a water right in the Animas and La Plata Rivers for the portion of the Animas-La Plata Project located in New Mexico. The Animas-La Plata Project is a potential participating unit of the Colorado River Storage Project authorized by the Act of April 11, 1956.

The water applied for was reserved by Notice of Intention No. 2883, filed by the State of New Mexico, May 1, 1956, and assigned to this applicant, United States of America, Department of the Interior, April 6, 1959, _____.

The following documents are attached and by this reference made a part of this application.

1. "Attachment A" - A map showing in general the New Mexico portion of the project features, location, and irrigable lands.

2. "Attachment B" - Paragraph 9 - Description of acres to be irrigated.

3. "Attachment C" - Status report of the Animas-La Plata Project, Colorado and New Mexico, dated November 1954.

Paragraph 4

As described under Paragraph 7, water will be diverted from natural streamflows of the Animas and La Plata rivers to the extent natural flows are available. Any deficiencies in natural flow in supplying the water sought to be appropriated will be made up by storage releases from project reservoirs.

Paragraph 7

The points of diversion for the New Mexico portions of the Animas-La Plata Project are:

(1) McDermott Area - Natural river flows and storage water in Teft Reservoir will be diverted at Teft Dam site and conveyed by a system of canals and tunnels to a point on the Ring Cone Canal and the Colorado-New Mexico State line whence the Northeast Corner of Section 1, Township 32 N., Range 12 W., bears east 1,850 feet distant. Teft Dam site is located in unsurveyed territory but when surveys are made it appears the dam site would be located in the $SW\frac{1}{4}SW\frac{1}{4}$ of Section 5, and the $NW\frac{1}{4}NW\frac{1}{4}$, Section 8, Township 38 N., Range 8 W., N.M.P.M.

(2) La Plata - New Mexico Area - The points of diversion will be at various points along the La Plata River in New Mexico. From Teft Dam site water will be transported by a system of canals and tunnels to the Hay Gulch Dam and Reservoir site in Colorado. Hay Gulch Dam site is located in Lot 4, Section 12, Lots 1 and 2, Section 11, and Lots 2 and 3, Section 3U, in Township 34 N., Range 12 W., N.M.P.M. From Hay Gulch Dam, canals will convey water west to the Dry Side and east to Red Mesa to lands in Colorado. Residual inflows to the La Plata River from these areas, plus direct releases from Hay Gulch Reservoir, will be diverted in New Mexico into various existing ditches to provide a supplemental water supply for 5,540 acres of land presently being irrigated, and full service to 1,520 acres.

(3) Meadows Area - Water for the Meadows Area will be obtained in the same manner as described for the La Plata-New Mexico Area. The water will be diverted from the La Plata River into the Meadows Diversion Canal at the Meadows Diversion Dam which is located in the $SW\frac{1}{4}$ of $SE\frac{1}{4}$ of Section 15, Township 32 N., Range 13 W., N.M.P.M., a point whence the SE corner of Section 15, Township 32 N., Range 13 W., bears S 65°33' E., 2,090 feet distant.

Paragraph 11

The Meadows Diversion Dam would include a concrete overflow section 240' long, and a headworks 10' wide and 60' long controlled by an 8'x10' radial gate. The wier section would be designed to pass 14,500 c.f.s. at an approximate depth of 7'. A 4' wide sluiceway with a 4' lower sill than the headworks would be controlled by a 10'x4' radial gate.

Paragraph 12

The hydraulic properties of Main Canals or conduits for the various areas are:

(1) McDermott Area - Ring Cone Canal: Bottom width 14 feet; depth of water at full operating capacity 3.4 feet; total depth including freeboard 6.1 feet; side slopes 1-1/2 horizontal to 1 vertical; slope 0.43 feet per 1000 feet; hydraulic radius 2.47 feet; coefficient of roughness (n) 0.0225; velocity at full capacity 2.47 feet per second; capacity 160 cubic feet per second with reduction in capacity at successive turnouts to the end; length of canal 6.9 miles, the location being as shown on the filing maps accompanying this application.

(2) Meadows Area - Meadow's Diversion Canal from Diversion dam to Station 101+00 (portion carrying Hillside Ditch flows); Unlined Canal - Bottom width 14 feet; depth of water at full operating capacity 4.2 feet; total depth including freeboard 6.5 feet; side slopes 1-1/2 horizontal to 1 vertical; slope 0.20 feet per 1000 feet; hydraulic radius 2.93 feet; coefficient of roughness (n) 0.0225; velocity at full capacity 1.94 feet per second; capacity 165 cubic feet per second. Earthlined Canal - Bottom width 14 feet; depth of water at full operating capacity 4.0 feet; total depth including freeboard 6.3 feet; side slopes 2 horizontal to 1 vertical; slope 0.21 feet per 1000 feet; hydraulic radius 2.76 feet; coefficient of roughness (n) 0.0225; velocity at full capacity 1.88 feet per second; capacity 165 cubic feet per second. Siphons - Diameter 5.0 feet; Slope 3.4 feet per 1000 feet; hydraulic radius 1.25 feet; coefficient of roughness (C_s) 0.37; velocity at full capacity 8.4 feet per second; capacity 165 cubic feet per second. Meadows Diversion Canal from Station 101+00 to end: - Unlined Canal - Bottom width 14 and 12 feet; depth of water at full operating capacity 4.0 and 3.6 feet; total depth including freeboard 6.3 and 5.7 feet; side slopes 1-1/2 horizontal to 1 vertical; slope 0.20 and 0.38 feet per 1000 feet; hydraulic radius 2.81 and 2.51 feet; coefficient of roughness (n) 0.0225; velocity at full capacity 1.88 and 2.39 feet per second; capacity 150 cubic feet per second. Earthlined Canal - Bottom width 14 feet; depth of water at full operating capacity 3.8 feet; total depth including freeboard 6.1 feet; side slopes 2 horizontal to 1 vertical; slope 0.21 feet per 1000 feet; hydraulic radius 2.65 feet; coefficient of roughness (n) 0.0225; velocity at full capacity 1.83 feet per second; capacity 150 cubic feet per second. Siphons - Diameter 5.0 feet; slope 2.82 feet per 1000 feet; hydraulic radius 1.25 feet; coefficient of roughness (C_s) 0.37; velocity at full capacity 7.6 feet per second; capacity 150 cubic feet per second. Bench Flume - Bottom width 6 feet; depth of water at full operating capacity 3.55 feet; total depth including freeboard 4.15 feet; rectangular cross section; slope 2.25 feet per 1000 feet; hydraulic radius 1.64 feet; coefficient of roughness (n) 0.014; velocity at full capacity 7.0 feet per second; capacity 150 cubic feet per second. The length of the Meadows Diversion Canal is 11.6 miles, the location being shown on the filing maps accompanying this application.

Paragraph 15

Estimated Costs:

Ring Cone Canal (New Mexico portion)	258,000
Meadows Diversion Canal	883,000
Meadows Diversion Dam	223,000
Meadows Dam and Reservoir	950,000
Canals from Meadows Dam	92,000
Total Cost (New Mexico portion)	2,406,000