

Appendix H

MRGCD Ditchrider Profiles and System Operational Documents

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MRGCD Ditchrider Profiles

Profile of Ditchrider Area 101 Cochiti Division

Area location: Northeast Cochiti Division

Interview Date: No interview conducted.

Primary canals in area: Cochiti East Side Main Canal

Area characteristics:

Water delivery patterns (provided sufficient water supply is available):

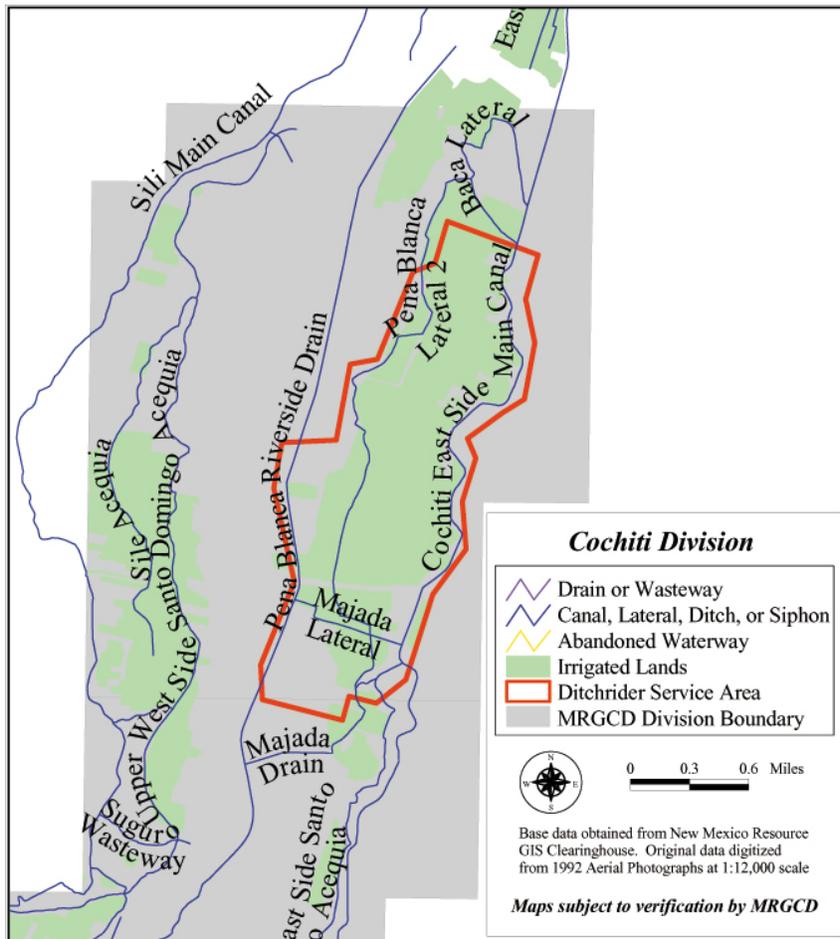
Scheduling requirements for water delivery:

Community ditches:

Free-flow irrigation:

Infrastructure observations:

Operational observations:



**Profile of Ditchrider Area 102
Cochiti Division**

Area location: Northwest Cochiti Division

Interview Date: No interview conducted.

Primary canals in area: Sili Main Canal, Sili Acequia and Upper Westside Santo Domingo Acequia

Area characteristics:

Water delivery patterns (provided sufficient water supply is available):

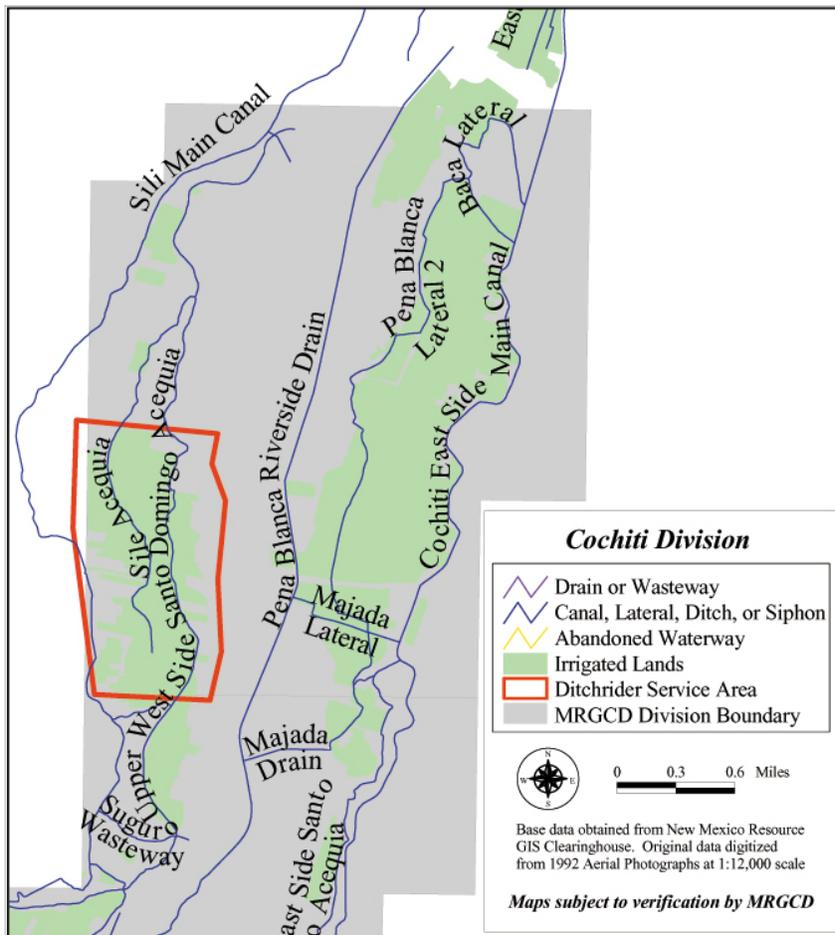
Scheduling requirements for water delivery:

Community ditches:

Free-flow irrigation:

Infrastructure observations:

Operational observations:



**Profile of Ditchrider Area 103
Cochiti Division**

Area location: End of Cochiti Division/Start of Albuquerque Division

Interview Date: No interview conducted.

Primary canals in area: Algodones Acequia, Algodones Lateral, Angostura Lateral and Yeso Lateral

Area characteristics:

Water delivery patterns (provided sufficient water supply is available):

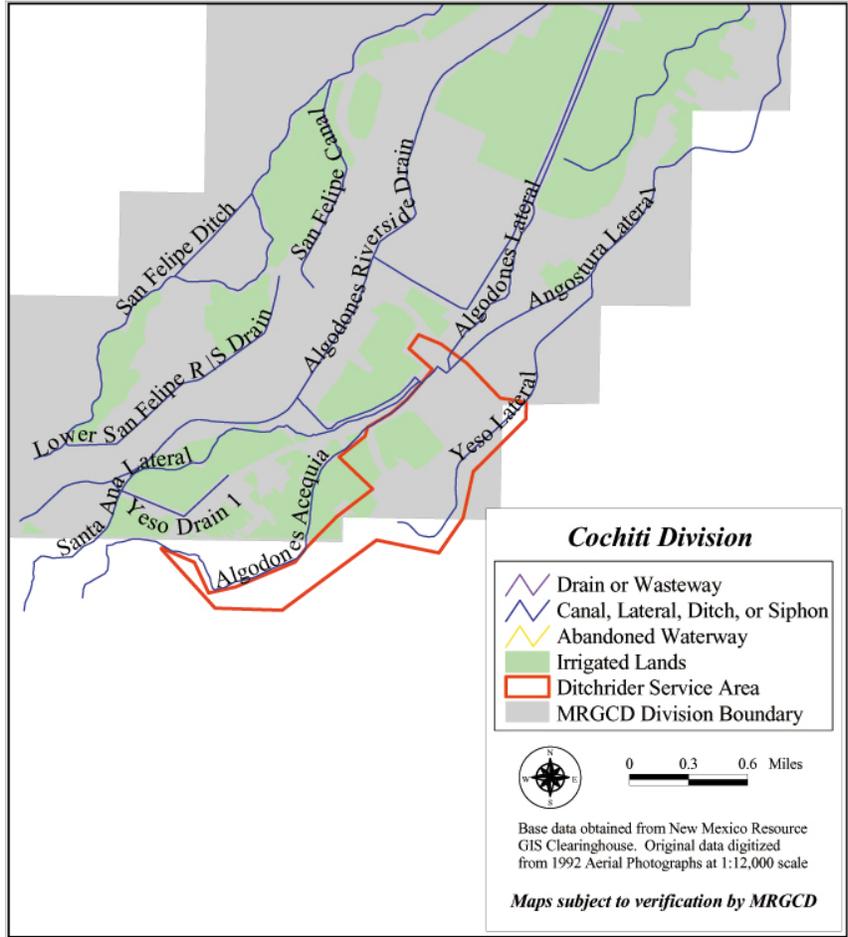
Scheduling requirements for water delivery:

Community ditches:

Free-flow irrigation:

Infrastructure observations:

Operational observations:



Profile of Ditchrider Area 201 Albuquerque Division

Area location: Northeast
Albuquerque Division

Interview Date: June 19, 2001

Primary canals in area:
Algodones Lower Acequia,
Bosque #1, #2, #3, part of
Albuquerque Main Canal,
Corrales Feeder, Mercantile
Lateral, Santa Ana Ditch (not of
MRGCD jurisdiction)

Area characteristics: The
majority of the area includes
both Santa Ana and Sandia
Pueblo lands. Santa Ana, which
is all large-scale agriculture, is
self-contained. (Note: Though
the MRGCD is rarely involved
with operations of Santa Ana,
this is not the case with Sandia.)

**Water delivery patterns
(provided sufficient water
supply is available):** All canals
are operated as close to capacity
as possible to provide adequate
water for the Pueblos. There is
no rotation among or within laterals
and checks. On-demand use is
from non-Pueblo irrigators only.

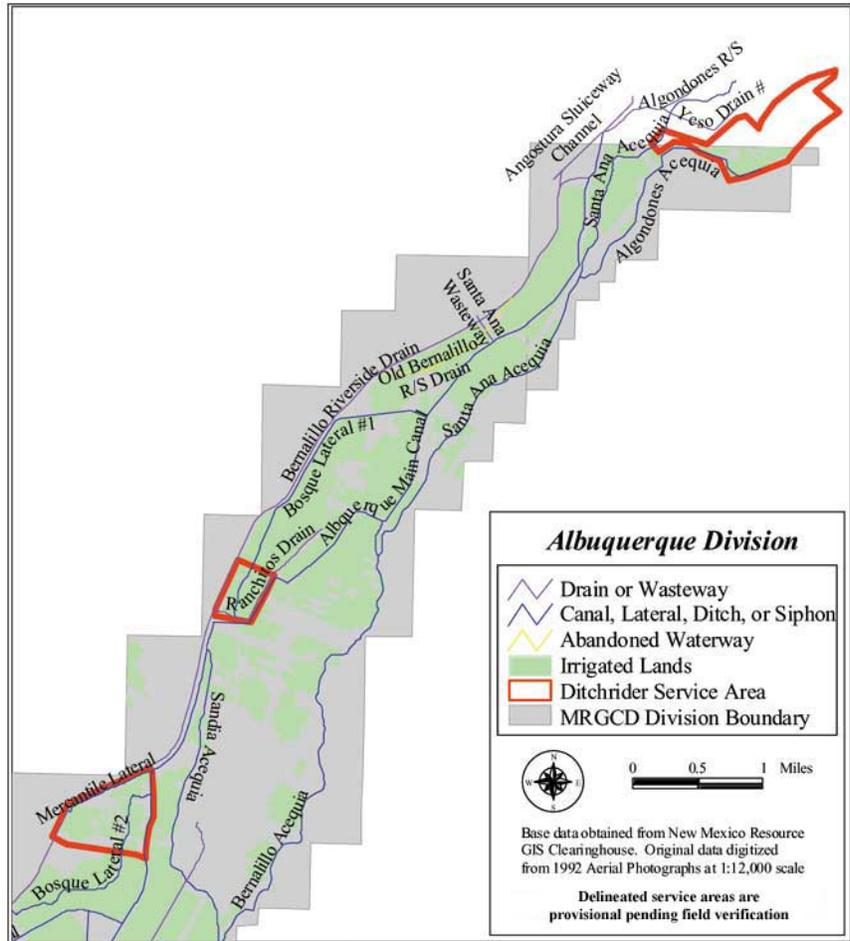
Scheduling requirements for water delivery: Pueblo irrigators are not required to schedule, but all non-Pueblo irrigators are. Non-Pueblo irrigators are required to call the night before irrigating. Approximately 60% of the non-Pueblo irrigators schedule in the pre-season.

Community ditches: Present

Free-flow irrigation: Present, however because the ditchrider interviewed is relatively new in the area, he is still becoming familiar with the area and the extent of this type of irrigation.

Infrastructure observations: Gophers and siltation are a constant problem in maintaining the canals.

Operational observations: Uncoordinated use by Pueblos, who are not required to schedule, can at times cause difficulty in supplying adequate water to Corrales Siphon.



Profile of Ditchrider Area 202 Albuquerque Division

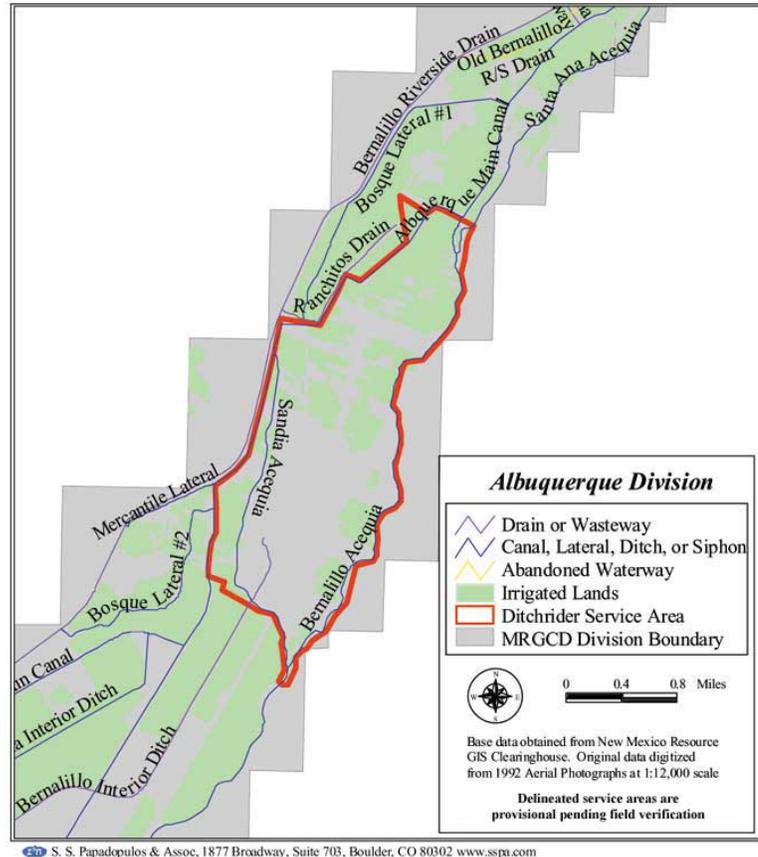
Area location: Heading of Albuquerque Division

Interview Date: June 19, 2001

Primary canals in area: Heading of Albuquerque Main Canal, Bernalillo Lateral (originates from a pump) and Sandia Lateral

Area characteristics: Includes the Angostura diversion weir, the diversion point for the Division. Area is primarily large-scale farming, with both Pueblo and non-Pueblo lands. There is no residential development in the area.

Water delivery patterns (provided sufficient water supply is available): During irrigation season, all canals are fully charged for the whole season (primarily to provide water to the rest of the Division) and the area does not use rotation within laterals or checks. Bernalillo Lateral is a pumped canal making use of two pumps, both of which only run if needed to supplement Sandia Pueblo demand.



Scheduling requirements for water delivery: Pueblo irrigators are not required to schedule, but all non-Pueblo irrigators are. Non-Pueblo irrigators are required to request water delivery three days in advance, however most non-Pueblo irrigators do not abide by this requirement and are rarely denied. Some of the irrigators will schedule in the pre-season. Pueblos are not required to irrigate at night and can therefore stop/start during an irrigation event, which can affect the scheduling of other deliveries.

Community ditches: Not present in non-Pueblo lands; unknown in Pueblo

Free-flow irrigation: Not present

Infrastructure observations: Five crossings on the Sandia Lateral limit capacity to supply both non-Pueblo and Pueblo irrigators on this ditch during crucial demand times. The effectiveness of the Tyback Levy, which is used to waste water from the Sandia Lateral to the Albuquerque Main Canal, may be affected by the existing dog-leg turn in the pipe, which causes significant plugs.

Operational observations: There is an inability, by lack of jurisdiction, to schedule Pueblo water users in areas where both non-Pueblo and Pueblo irrigators use the same canal or water source (i.e. Sandia Lateral). Suggestions to improve situation include (1) increase capacity of Sandia lateral through removal of crossings, (2) build an independent source of supply for Pueblo and non-Pueblo, (3) implement rotational scheduling and (4) pump water from wastewater treatment plant near the tail-end of the system.

Profile of Ditchrider Area 203 Albuquerque Division

Area location: Corrales

Interview Date: July 16, 2001

Primary canals in area: Corrales Main Canal, Corrales Acequia, Sandoval Lateral and Summerford Lateral

Area characteristics: Water is independently controlled in this area through the Corrales Siphon and returned to the river through drains or wasteways. The area has some large farms growing trees, alfalfa, corn and other row crops. “Weekend farmers” are the largest group in the area, growing pasture, alfalfa, trees, orchards, gardens and residential lawns.

Water delivery patterns (provided sufficient water supply is available): During the entire irrigation season, all canals are fully charged. No rotation is used among laterals. The upper-half of canals irrigate Sunday through Wednesday, and the lower-half, Thursday through Saturday. No rotation among checks or within laterals is used during this schedule. The ditchrider controls the usage by locking the upper checks when not in use (Thursday – Saturday). He does not lock the lower-half.

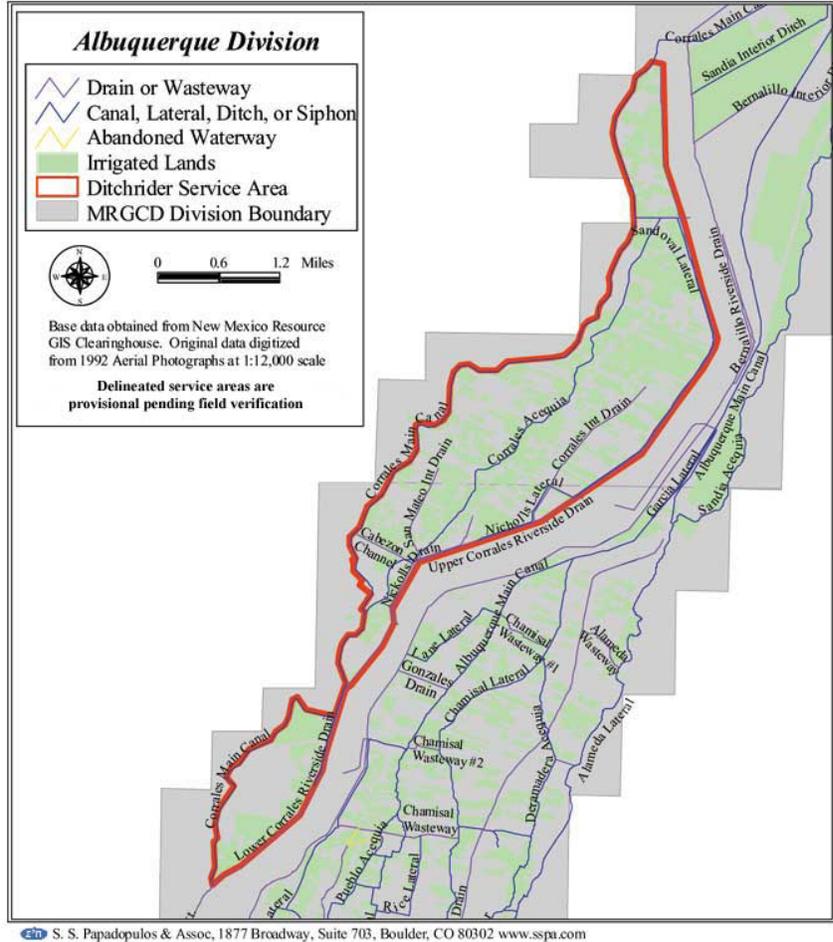
Scheduling requirements for water delivery: Scheduling is set during preseason planning. Emphasis is placed on the difference between seven-day and ten-day watering periods. Users are scheduled to take water for long durations (either three-days or four-days) to compensate for this difference. The ditches serving free-flow irrigators are pre-arranged to be flowing on Saturdays and Sundays only; on these days the ditchrider unlocks all checks.

Community ditches: At least 20 to 30, and possibly more.

Free-flow irrigation: Present

Infrastructure observations: Locked checks prevent users from taking water out of turn, so replacing wooden checks with mechanical screw checks would allow all checks to be locked when not in use.

Operational observations: A more dependable water supply is needed because of the variability of the water-use practices of Sandia Pueblo. Currently, on-farm improvements and opportunities for improvements only apply to farms of five or more acres and could be expanded to apply to all farms.



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Profile of Ditchrider Area 204 Albuquerque Division

Area location: East side of the Rio Grande

Interview Date: June 20, 2001

Primary canals in area: Part of Albuquerque Main Canal, Alameda lateral, Garcia Lateral and 650 Check Structure (point of control)

Area characteristics: Though both large-scale and small-scale farming are present, the latter is in majority. Irrigation is used for large-scale alfalfa and pasture production, as well as residential lawns and gardens. This area provides water for a small section of Sandia Pueblo land around Sandia Lakes. Not much subdividing occurs in the area because most of it has already been subdivided.

Water delivery patterns (provided sufficient water supply is available): All canals are operated as close to capacity as possible, to provide users with adequate head at the time most convenient to them. Some check structures have been removed because they were not needed to provide head.

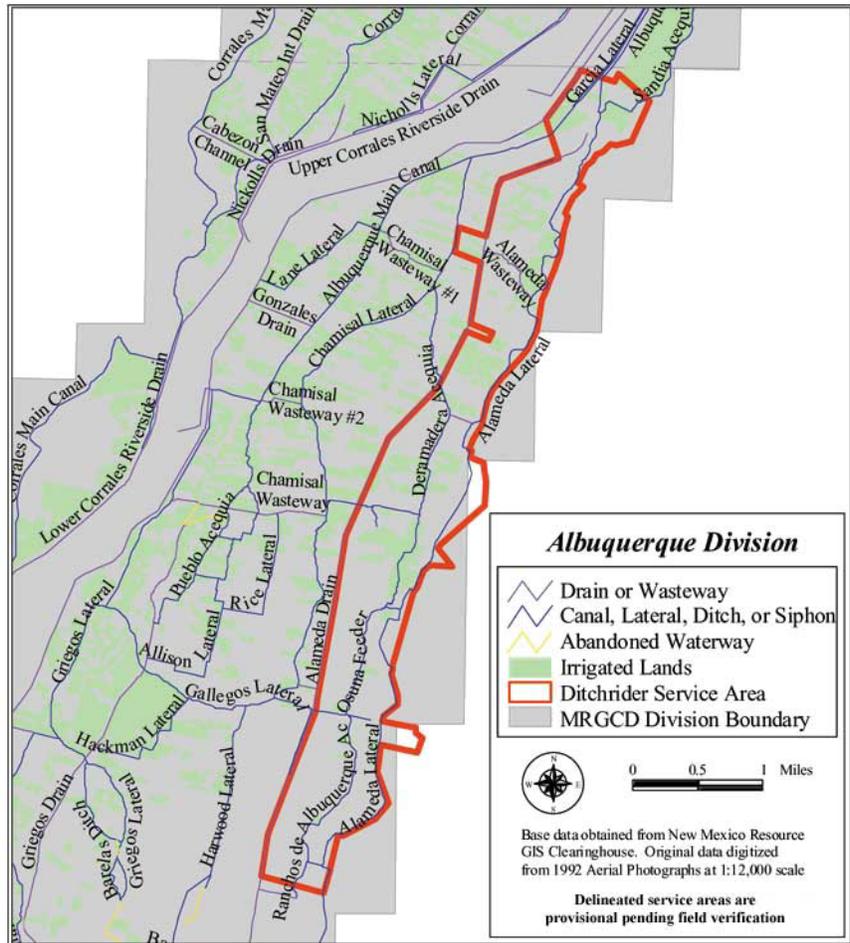
Scheduling requirements for water delivery: Irrigators are required to schedule two days in advance and are rarely denied requests. A handful of irrigators have a set, pre-season schedule. The presence of free-flow irrigation was not discussed, so it is not known if all irrigators are required to schedule.

Community ditches: Present

Free-flow irrigation: Unknown

Infrastructure observations: The check on the Garcia Lateral is used to supply water to Sandia Lakes. The canal's freeboard appears too low so that water is checked high and often overbanks to create adequate head to supply water to the lakes. This service area has a large number of private crossings along the canals. The largest number is along Alameda Lateral, which has 195 crossings in 19 miles. These crossings can create bottlenecks, catch debris and are difficult to maintain properly. Additionally, gophers are a concern in this area.

Operational observations: None recorded



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Profile of Ditchrider Area 205 Albuquerque Division

Area location: East side of Rio Grande

Interview Date: June 20, 2001

Primary canals in area:
Albuquerque Main Canal, Chamisal Lateral, Alameda Drain, Lane Lateral, Pueblo Acequia, Allison Lateral and Rice Lateral

Area characteristics: This area is densely populated and there are only a few large-scale irrigators in this Division. The majority of farmers are small-scale, “weekend farmers”, who mainly irrigate pasture, alfalfa and residential lawns and gardens.

Water delivery patterns (provided sufficient water supply is available): During the entire irrigation season, all canals are fully charged and the area does not use rotation. The exceptions are Rice Lateral and Chamisal Wasteway—neither of which service many irrigators. Flow is alternated between the Rice Lateral and Chamisal Wasteway.

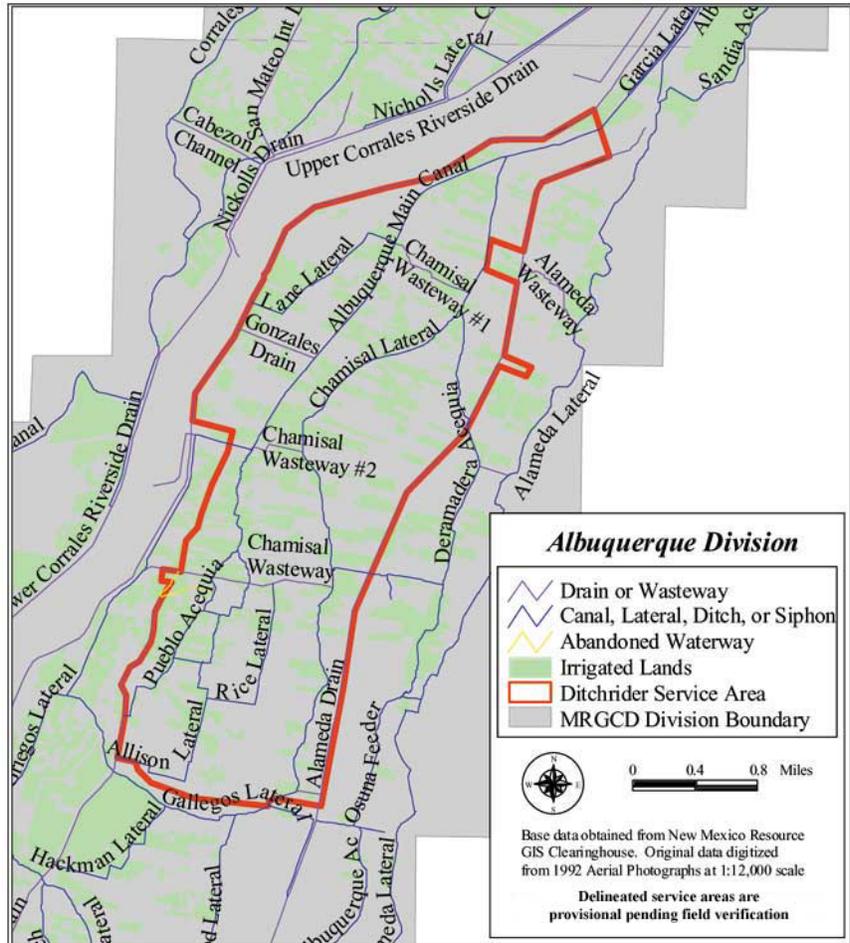
Scheduling requirements for water delivery: Only large-scale irrigators are required to schedule water delivery. Check structures in the area are kept locked unless a delivery is scheduled. Small-scale irrigators operate from free-flow, with exception of the tail-end users who may require a dropped check. Those irrigators who are required to schedule must do so two days in advance. No pre-season scheduling is practiced, because the demand by “weekend farmers” is high in this area. This arrangement provides flexibility to schedule deliveries equitably among users.

Community ditches: Present; some have professional irrigators

Free-flow irrigation: Present

Infrastructure observations: None recorded

Operational observations: More farmer education might help prevent the overuse of water by some irrigators in this area. Also, smaller ditchrider service areas would help manageability.



Profile of Ditchrider Area 207 Albuquerque Division

Area location: East side of Rio Grande

Interview Date: July 16, 2001

Primary canals in area:
Duranes Lateral (main canal),
Old Albuquerque Canal,
Duranes Acequia, Zearing
Lateral, and Pierce Lateral

Area characteristics: Mainly residential plots consisting of gardens, lawns and pastures. There are also several larger plots, though none exceed 100 acres.

Water delivery patterns (provided sufficient water supply is available): During the entire irrigation season, all canals are fully charged. There are two exceptions, Pierce Lateral and another not recorded. Of these two ditches, one is open Friday to Sunday and the other is open Monday through Thursday. Rotation among checks appears to be in operation (excluding free-flow irrigation).

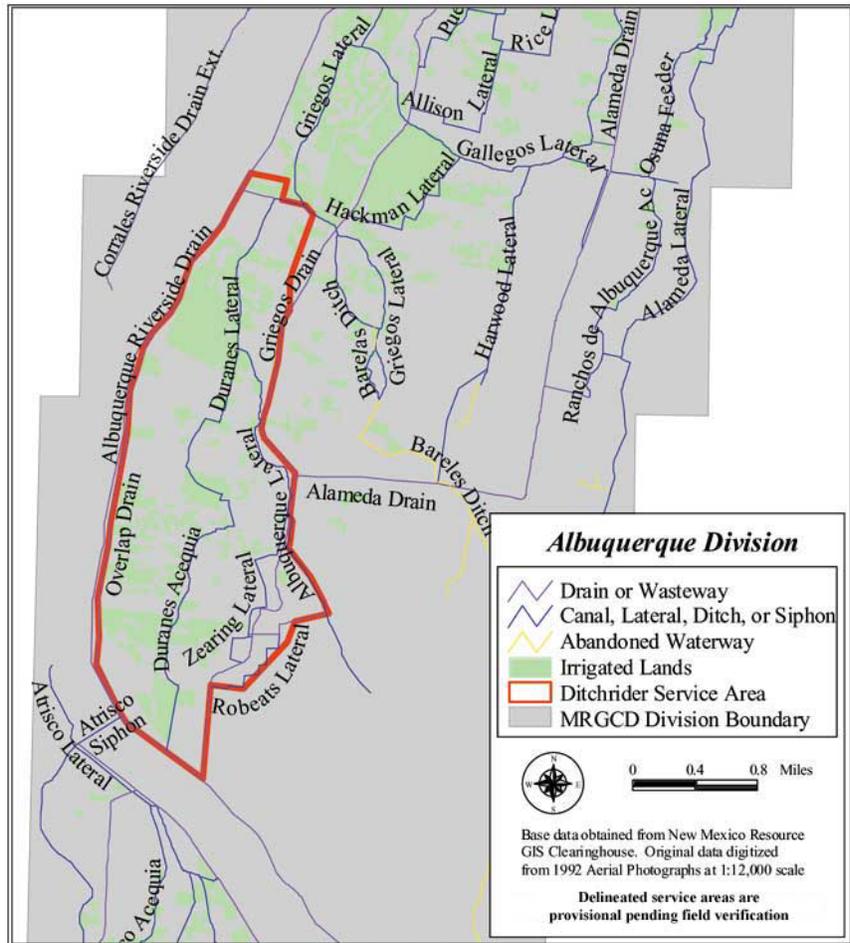
Scheduling requirements for water delivery: 20 to 30 irrigators in this service area are required to schedule. Those required to schedule are farmers who require a locked check to be dropped. The remaining irrigators are free-flow irrigators.

Community ditches: Present

Free-flow irrigation: Present

Infrastructure observations: None recorded

Operational observations: None recorded



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Profile of Ditchrider Area 208 Albuquerque Division

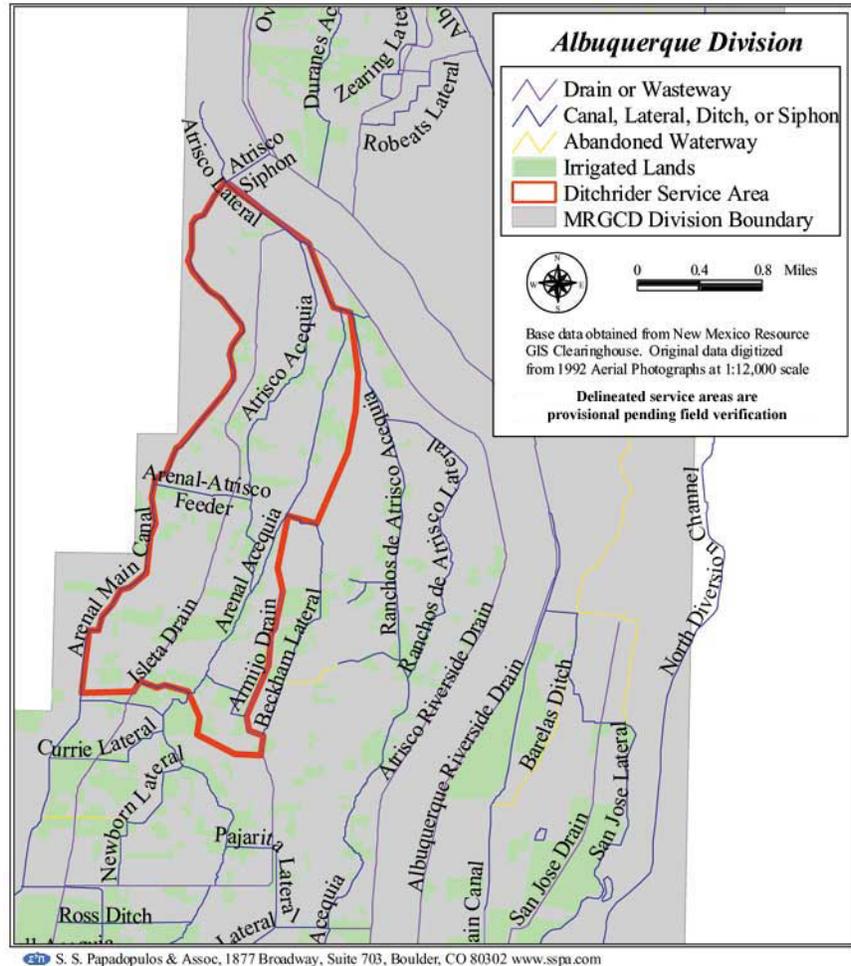
Area location: South Valley

Interview Date: July 17, 2001

Primary canals in area:

Heading of Arenal Main, Atrisco Feeder, Herrera Acequia (pumped), Arenal Acequia, Atrisco Acequia, Aldone Ditch and Trujillo Lateral

Area characteristics: This ditchrider area is the heading of the entire South Valley and Southwest Albuquerque Division. The largest irrigated parcel is 25 acres; all other irrigators own small residential plots. The main usage is for gardens, orchards, lawns, small pastures and small alfalfa fields, some as small as 400 square feet. A large amount of land has recently been left fallow, resulting in abandoned turnouts. New subdivisions or other development/urbanization are not the reason for the fallow fields, people are just not irrigating.



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Water delivery patterns (provided sufficient water supply is available): During the entire irrigation season, all canals are fully charged. Two exceptions are the Aldone Ditch, which is a dead-end ditch, and Herrera Acequia, which requires pumping from another ditch in order to flow. These are turned on when users request and are not used in rotation. The remaining canals are on-demand, with only a few large plots, and large free-flow irrigation presence.

Scheduling requirements for water delivery: Scheduling is required for those using Aldone Ditch and Herrera Acequia, and by the few large-scale irrigators. The majority of the users are free-flow irrigators, who are not required to schedule.

Community ditches: Present

Free-flow irrigation: Present

Infrastructure observations: None recorded

Operational observations: None recorded

Profile of Ditchrider Area 209 Albuquerque Division

Area location: South Valley

Interview Date: July 17, 2001

Primary canals in area:
Pajarito Acequia, Pajarita Lateral, Currie Lateral, Beckham Lateral, Newborn Lateral, Hubbell Lateral, Armijo Acequia, Bennett Lateral and Rogers Lateral

Area characteristics: Contains some large-scale farms with the main activity being alfalfa, pasture and large gardens. The rest of the area consists of many small-scale farms/residential yards.

Water delivery patterns (provided sufficient water supply is available): During the entire irrigation season, all canals are fully charged, except for the Rogers Lateral, Currie Lateral, Beckham Lateral, and Bennett Lateral. Currie Lateral is charged when requested by irrigators, it is otherwise not in the rotation schedule. Bennett Lateral runs every Monday through Wednesday, and every-other Thursday to Sunday. Rogers Lateral is used on weekends only.

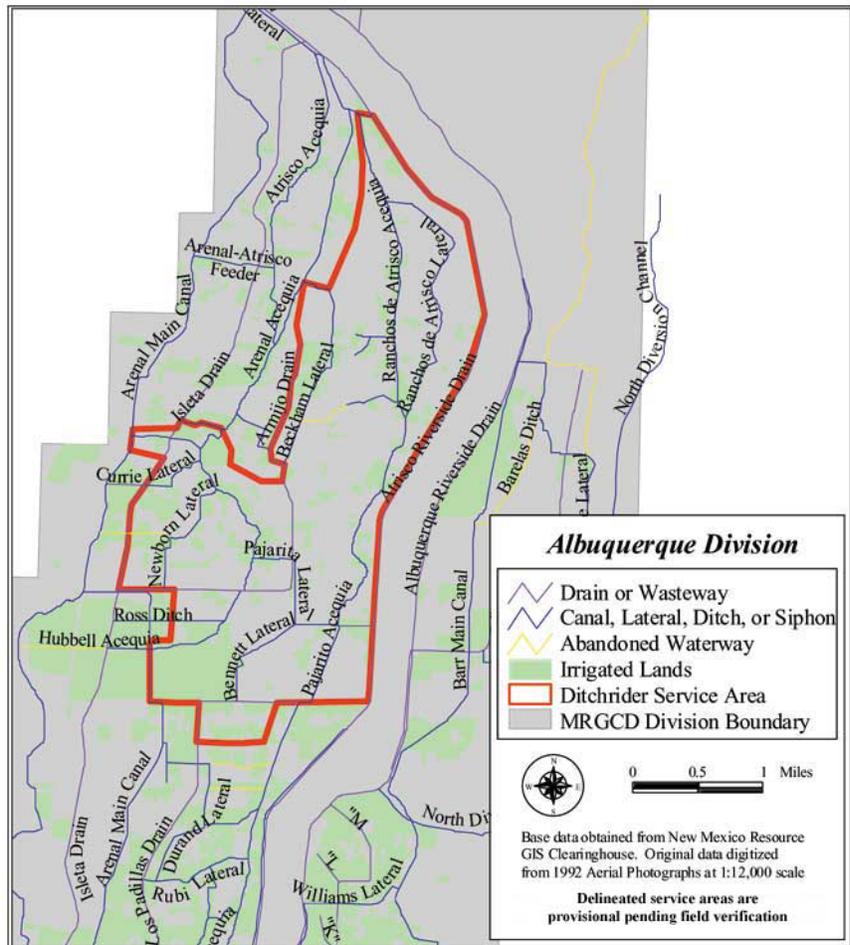
Scheduling requirements for water delivery: Large-scale farms are required to schedule, though usually this is determined in the pre-season and does not require water delivery requests. Free-flow irrigators are not required to schedule.

Community ditches: Present

Free-flow irrigation: Present

Infrastructure observations: External agency crossings, such as gas lines over a canal, tend to collect debris and restrict canal dredging. Trash collection and maintenance in residential areas is a problem. Long sections of canal do not service land and therefore piping is suggested for these sections. Shot-crete does not last as long as regular cement lined ditches and requires higher maintenance.

Operational observations: This area may benefit from more farmer/MRGCD involvement.



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Profile of Ditchrider Area 210 Albuquerque Division

Area location: Southeast corner of Albuquerque Division

Interview Date: June 21, 2001

Primary canals in area: Barr-Main Canal and Williams Lateral

Area characteristics: This area consists mainly of large-scale irrigators with very little urbanization. Farming includes alfalfa, large-scale gardens, nurseries, tree farms and 3-season cropping (oats, corn, and winter wheat). Industrial development appears to be increasing in this area.

Water delivery patterns (provided sufficient water supply is available): Delivery is on-demand, and there is no rotation among or within laterals.

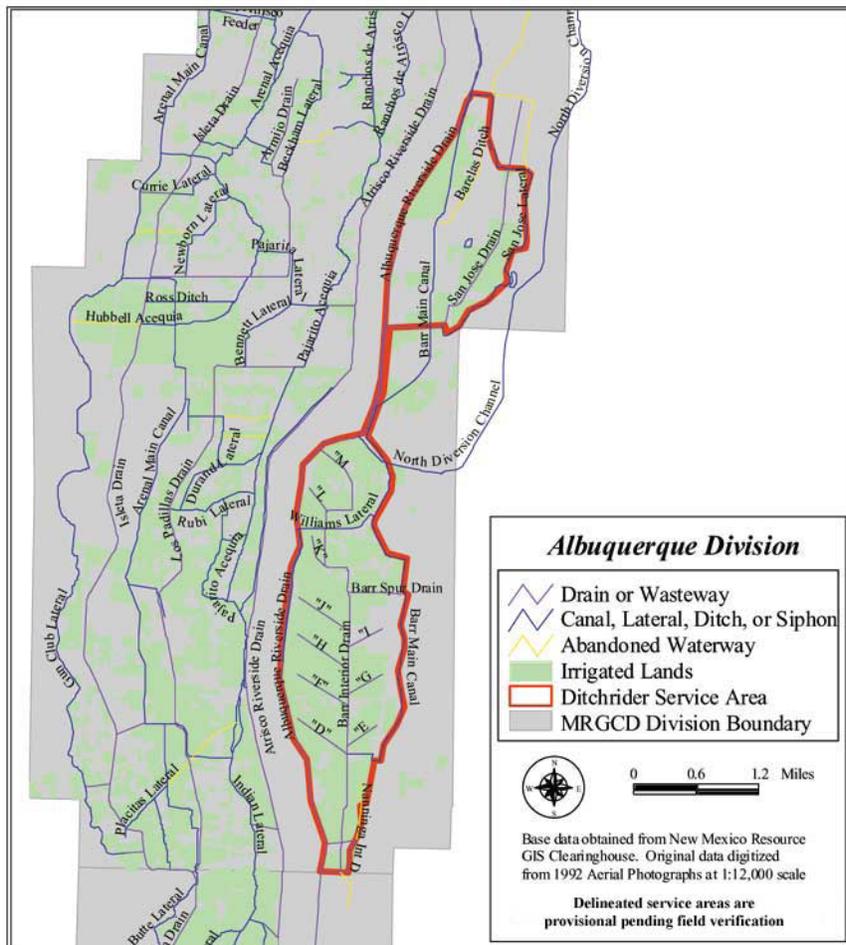
Scheduling requirements for water delivery: All irrigators are required to schedule between 24 hours and seven days in advance. There is no pre-season scheduling because it limits flexibility to irrigate specific crop types. Typically, two large-scale irrigators and four to six small-scale irrigators are allowed to irrigate simultaneously from Barr Main Canal. Scheduling times are very exact because irrigation times are known on each farm and do not vary significantly. Scheduling is enforced by locking check structures.

Community ditches: Present

Free-flow irrigation: Not present

Infrastructure observations: None recorded

Operational observations: None recorded



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Profile of Ditchrider Area 211 Albuquerque Division

Area location: South Valley

Interview Date: July 19, 2001

Primary canals in area: Arenal Main Canal, Gun Club Lateral, Rubi Lateral, Breeze Lateral, Durand Lateral and Kramer Lateral

Area characteristics: There are some large-scale irrigators in this service area, the largest having 450 acres. Trash and vandalism are problem in this service area. Some small irrigated plots are dispersed throughout established residential areas.

Water delivery patterns (provided sufficient water supply is available): Delivery is on-demand for large acreages or those requiring a dropped check. Some delivery patterns are set before the irrigation season begins. Delivery to laterals is rotated. Breeze & Rubi Laterals are run only when irrigators call. Free-flow irrigation is on set days.

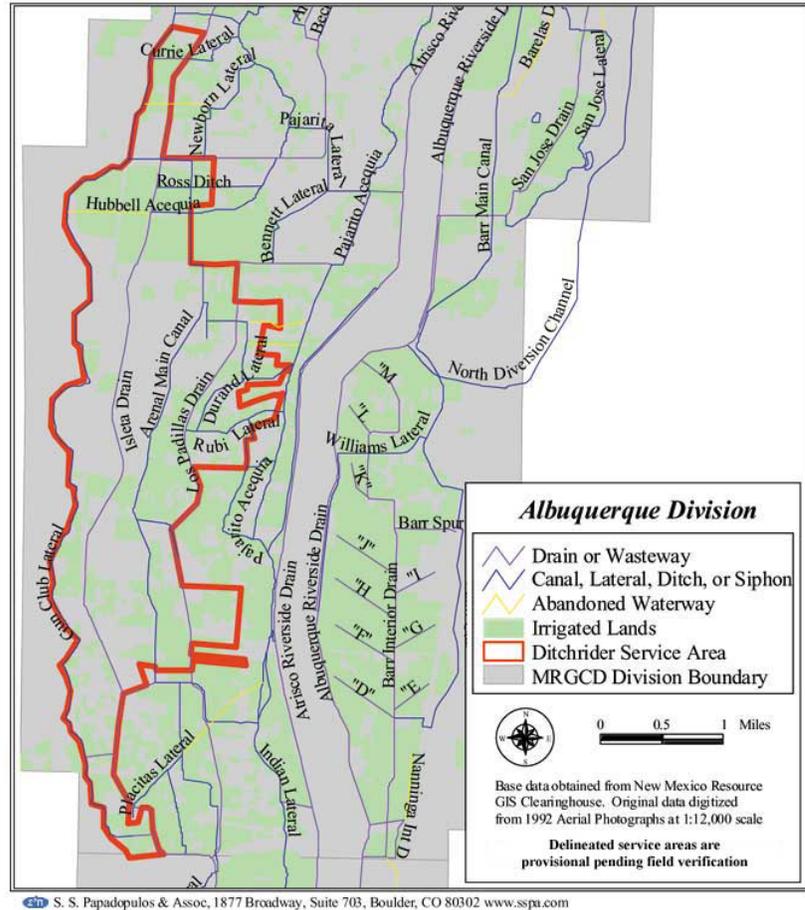
Scheduling requirements for water delivery: Some schedules are set in the pre-season for Arenal Main Canal and its laterals. (i.e. Kramer Lateral runs Thursday through Sunday.) The largest irrigator, on Arenal Main, is allowed to use 2-18 inch and 1-24 inch turnouts simultaneously and on any day. The largest irrigator on the Gun Club Lateral is scheduled for Thursdays. Small residential plots mostly use free-flow irrigation, and some large plots as well. Warnings are issued for unscheduled irrigation and go on record.

Community ditches: Present (e.g. People organized to pay for underground pipe system used to irrigate several parcels of 3 or more acres.)

Free-flow irrigation: Present

Infrastructure observations: Rubi & Breeze Laterals (both walking ditches) appear to have a siltation and weed problem; some irrigators do not use their allotment because it is too difficult. A long stretch of the Gun Club Lateral does not service irrigators. Piping is suggested for this stretch. Ditches could benefit from more maintenance, and attention to the water tightness of checks may be warranted. Gopher damage is a continual problem.

Operational observations: Rotation would likely work, and help efficiency, if adequate head for all irrigators could be guaranteed. Also, present rotation among laterals could be increased.



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Profile of Ditchrider Area 212 Albuquerque Division

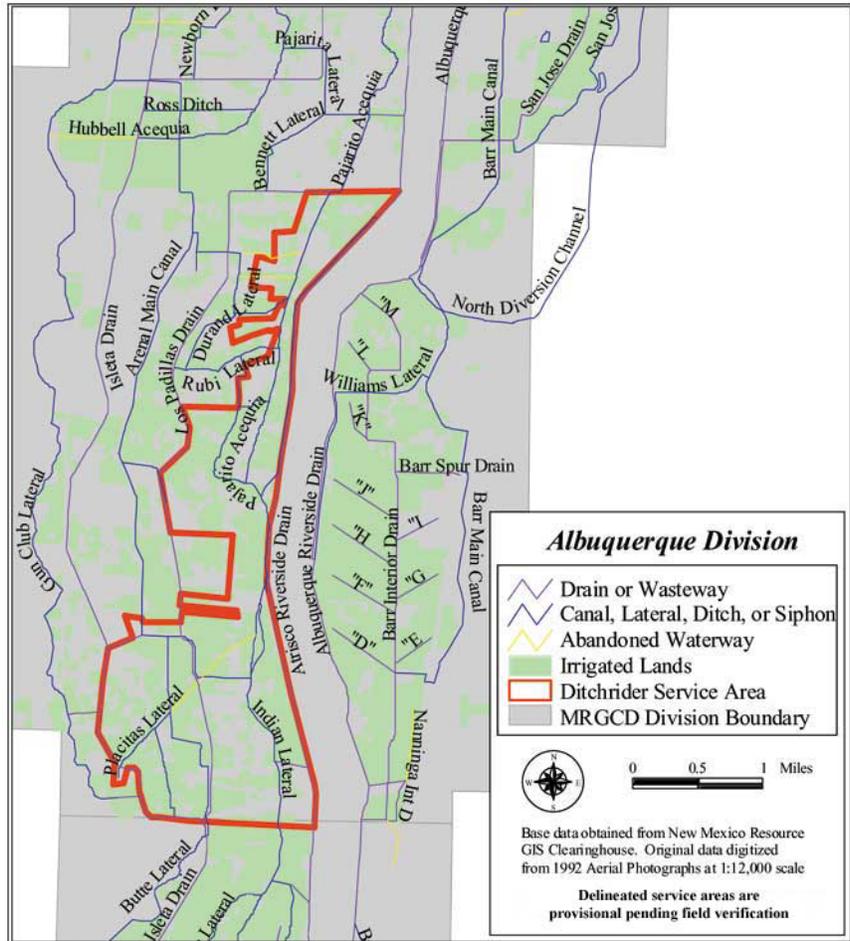
Area location: South Valley;
South end of Albuquerque
Division

Interview Date: July 19, 2001

Primary canals in area: Part of
Arenal Main Canal, Old Bird,
Cherry Lateral, Butte, Indian
Ditch, Los Padillas Acequia and
Drains to Belen Division

Area characteristics: This area
services both Isleta Pueblo and
non-Pueblo lands. There is only
large-scale farming in this
area—the smallest is two acres.
There are no residential plots.

**Water delivery patterns
(provided sufficient water
supply is available):** During
the entire irrigation season, all
canals are fully charged and the
area does not use rotation. Non-
Pueblo plots use an on-demand
system and Isleta Pueblo
irrigators are not required to use
systematic water delivery.



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Scheduling requirements for water delivery: Some usage is scheduled before the irrigation season begins. For example, Arenal Main Canal (Monday, Tuesday and Wednesday only) split usage with ditchrider area 211 (to the West). Non-Pueblo irrigators are required to schedule delivery 24 to 48 hours in advance. Requests are rarely denied. However, sometimes the ditchrider will request area users to irrigate when he schedules a specific check to drop; most users are responsive to this. Isleta Pueblo is not required to schedule.

Community ditches: Present and they are required to schedule use (non-Pueblo only).

Free-flow irrigation: Not present

Infrastructure observations: None recorded

Operational observations: Being the last ditchrider area in the Albuquerque Division, all the water must be moved through the area and delivered to the Pueblo. If the amount of water needed for irrigating land could be scheduled, it is estimated that the area would use half the amount of water presently used. Over-irrigation in this area may need to be addressed.

Profile of Ditchrider Area 301 Belen Division

Area location: Beginning of Belen Division, east side of Rio Grande

Interview Date: June 29, 2001

Primary canals in area: Riverside Lateral, Jackson Acequia, Otero Drain and San Fernandez Drain

Area characteristics: This specific ditchrider area was not visited, but rather the entire northeast side of the Belen Division.

Water delivery patterns (provided sufficient water supply is available): Primarily, an on-demand system is used. Rotation is practiced in water-short situations. During the irrigation season, all canals are fully charged for the whole season, with exception of San Fernandez #1, #2, and #3.

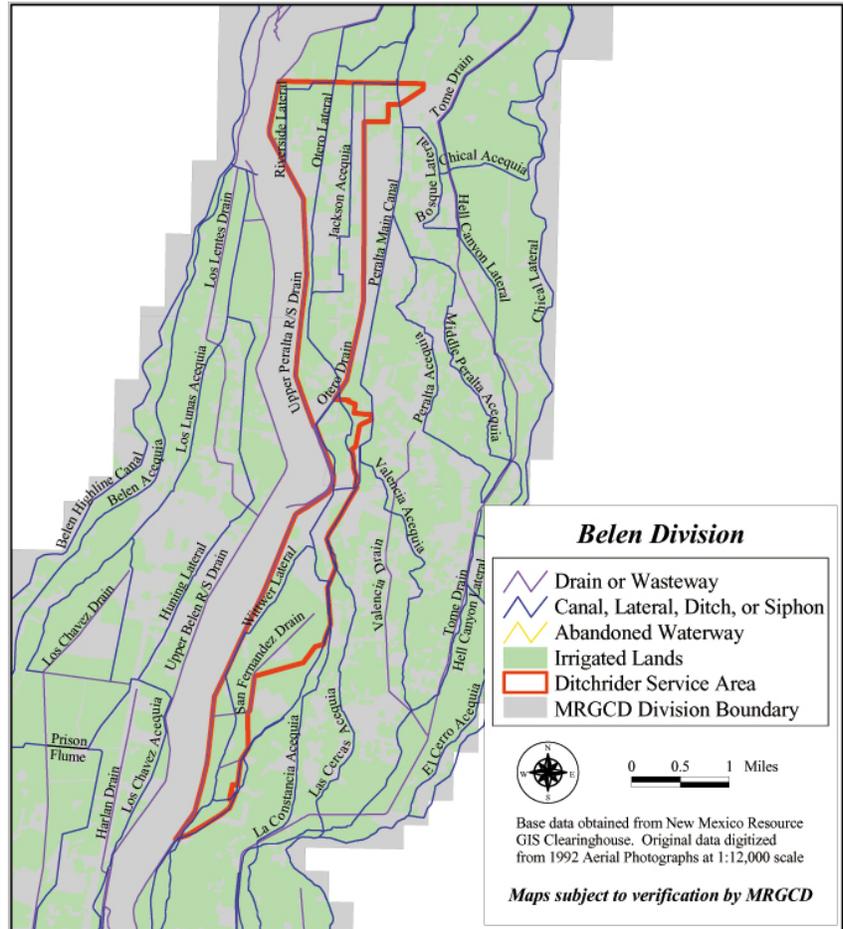
Scheduling requirements for water delivery: Ditchrider dependent.

Community ditches: Present

Free-flow irrigation: Unknown

Infrastructure observations: Gopher problems exist in this area.

Operational observations: A rotational schedule in operation year round—not just in shortage situations—would better control who has water when. Because on-farm water use is a concern, more MRGCD involvement, including education about water conservation, is recommended.



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Profile of Ditchrider Area 302 Belen Division

Area location: Northeast side of Belen Division

Interview Date: June 29, 2001

Primary canals in area: Peralta Main Canal, Peralta Acequia, Valencia Acequia, Middle Peralta Acequia and Bosque Lateral

Area characteristics: This specific ditchrider area was not visited, but rather the entire northeast side of the Belen Division.

Water delivery patterns (provided sufficient water supply is available): Primarily, an on-demand system is used. Rotation is practiced in water-short situations. During the irrigation season, all canals are fully charged for the whole season, with exception of San Fernandez #1, #2, and #3.

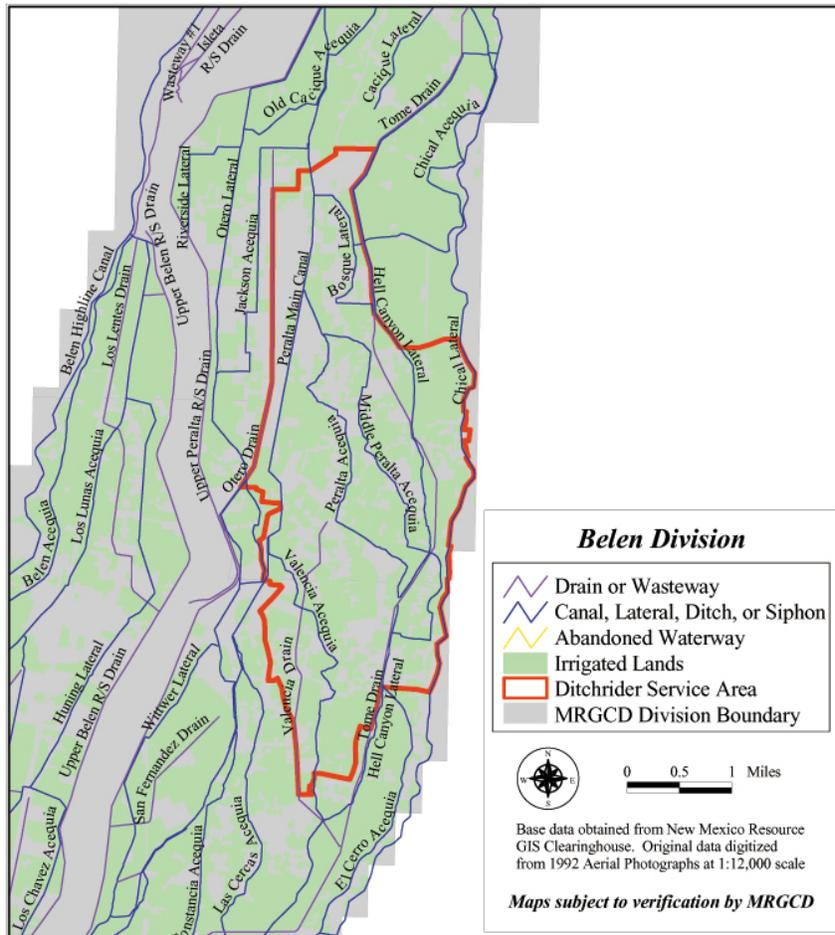
Scheduling requirements for water delivery: Ditchrider dependent.

Community ditches: Present

Free-flow irrigation: Unknown

Infrastructure observations: Gopher problems exist in this area.

Operational observations: A rotational schedule in operation year round—not just in shortage situations—would better control who has water when. Because on-farm water use is a concern, more MRGCD involvement, including education about water conservation, is recommended.



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Profile of Ditchrider Area 303 Belen Division

Area location: Northwest Belen Division

Interview Date: No interview conducted.

Primary canals in area: Upper and Lower Belen Riverside Drains, Los Lunas Acequia, Los Chavez Acequia, Belen Acequia, Los Chavez Drain, Los Lentes Drain and Huning Lateral

Area characteristics:

Water delivery patterns (provided sufficient water supply is available):

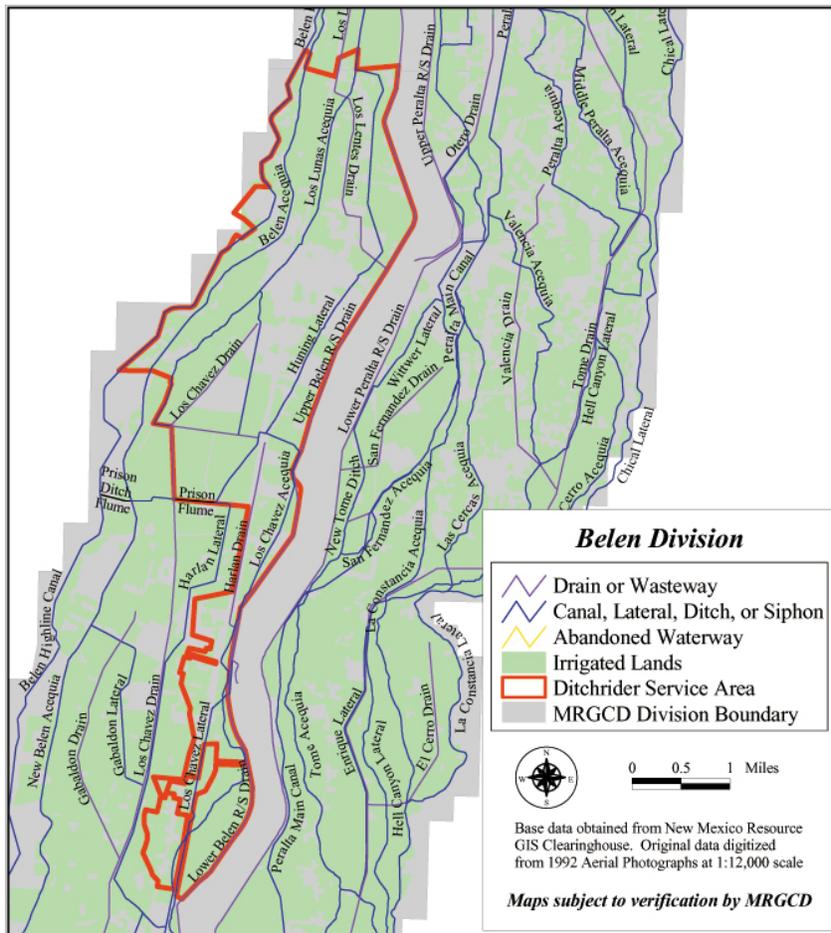
Scheduling requirements for water delivery:

Community ditches:

Free-flow irrigation:

Infrastructure observations:

Operational observations:



Profile of Ditchrider Area 304 Belen Division

Area location: Northeast side of Belen Division

Interview Date: June 29, 2001

Primary canals in area: Las Cercas Acequia, El Cerro Acequia, La Constancia Acequia, Hell Canyon Lateral and El Cerro Drain

Area characteristics: This specific ditchrider area was not visited, but rather the entire northeast side of the Belen Division.

Water delivery patterns (provided sufficient water supply is available): Primarily, an on-demand system is used. Rotation is practiced in water-short situations. During the irrigation season, all canals are fully charged for the whole season, with exception of San Fernandez #1, #2, and #3.

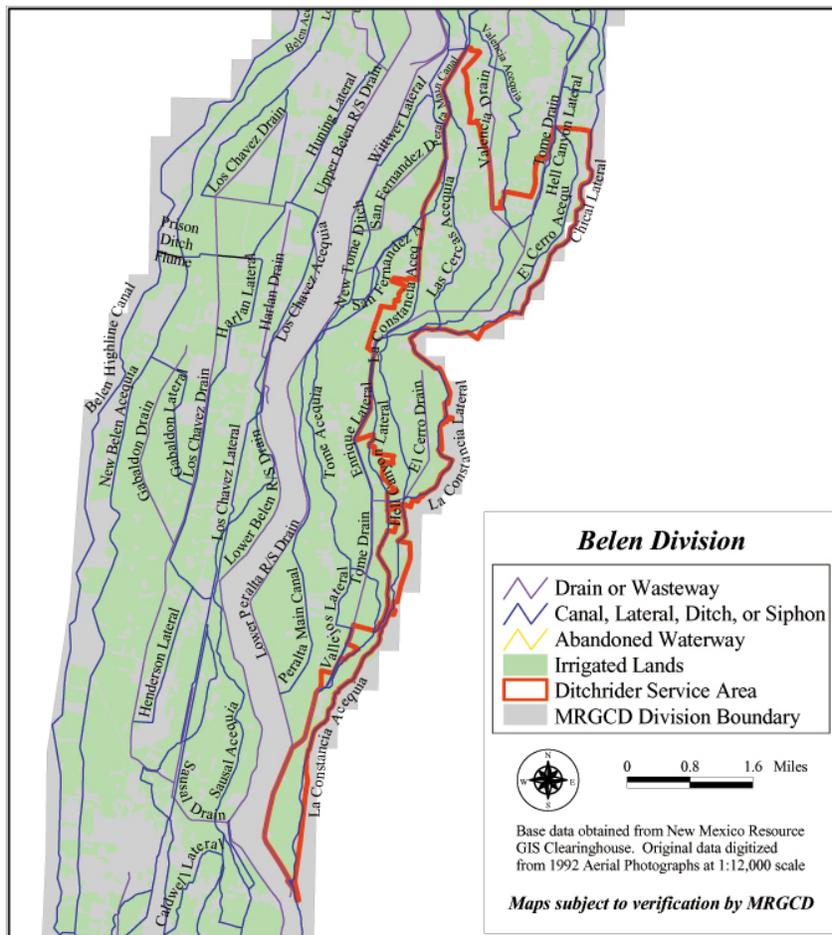
Scheduling requirements for water delivery: Ditchrider dependent.

Community ditches: Present

Free-flow irrigation: Unknown

Infrastructure observations: Gopher problems exist in this area.

Operational observations: A rotational schedule in operation year round—not just in shortage situations—would better control who has water when. Because on-farm water use is a concern, more MRGCD involvement, including education about water conservation, is recommended.



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Profile of Ditchrider Area 305 Belen Division

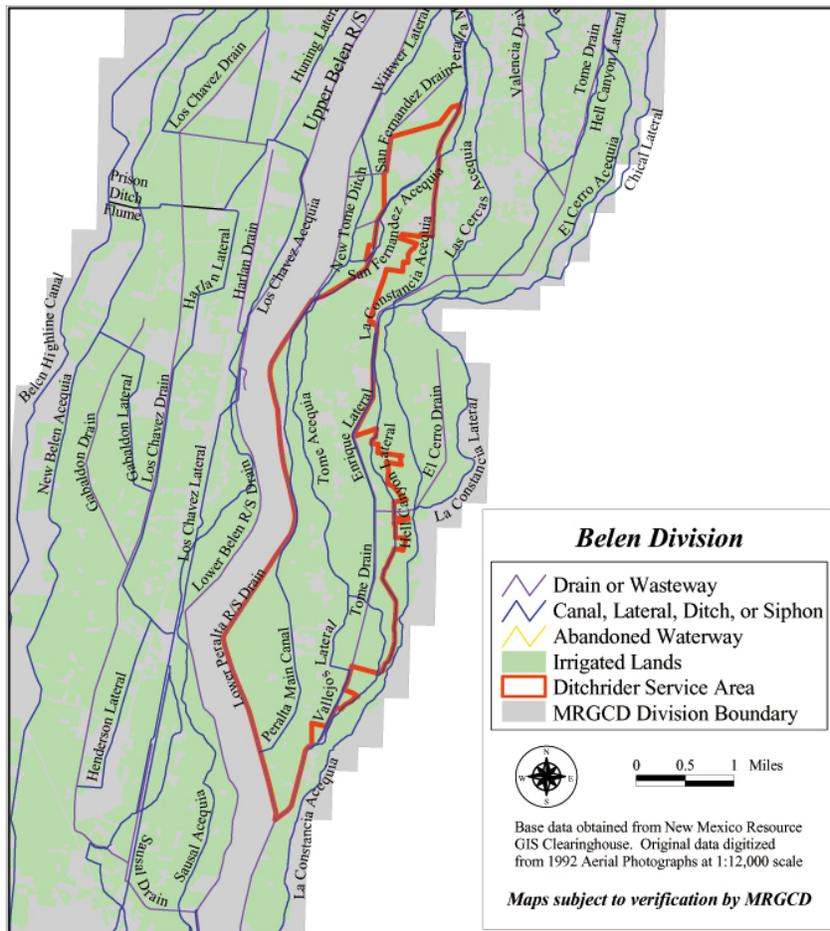
Area location: Northeast side of Belen Division

Interview Date: June 29, 2001

Primary canals in area: Peralta Main Canal, San Fernando Acequia, Enrique Lateral, Tome Acequia, Lower Peralta Riverside Drain and Vallejos Lateral

Area characteristics: This specific ditchrider area was not visited, but rather the entire northeast side of the Belen Division.

Water delivery patterns (provided sufficient water supply is available): Primarily, an on-demand system is used. Rotation is practiced in water-short situations. During the irrigation season, all canals are fully charged for the whole season, with exception of San Fernandez #1, #2, and #3.



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Scheduling requirements for water delivery: Ditchrider dependent.

Community ditches: Present

Free-flow irrigation: Unknown

Infrastructure observations: Gopher problems exist in this area.

Operational observations: A rotational schedule in operation year round—not just in shortage situations—would better control who has water when. Because on-farm water use is a concern, more MRGCD involvement, including education about water conservation, is recommended.

Profile of Ditchrider Area 306 Belen Division

Area location: West side of Belen Division

Interview Date: June 28, 2001

Primary canals in area: New Belen Acequia, part of Belen Highline Canal, Los Lunas Acequia, Huning Lateral, Gabaldon Lateral and Harlan Lateral

Area characteristics: This area supports both large- and small-scale agriculture. Subdivision of irrigated land is evident and increasing in this area. It is also the site of NMSU Agricultural Experiment Station and the Los Lunas Correctional Facility.

Water delivery patterns (provided sufficient water supply is available): Rotation is regularly practiced among laterals, among checks and sometimes within laterals. Strict rotation is enhanced in water-short years, under mandatory division rotation. For example, the Gabaldon runs 12-days on, and 7-days off (during those 12 days, rotation among checks is practiced). Some exceptions are made to the rotation schedule; a user can request out-of-rotation water in certain instances.

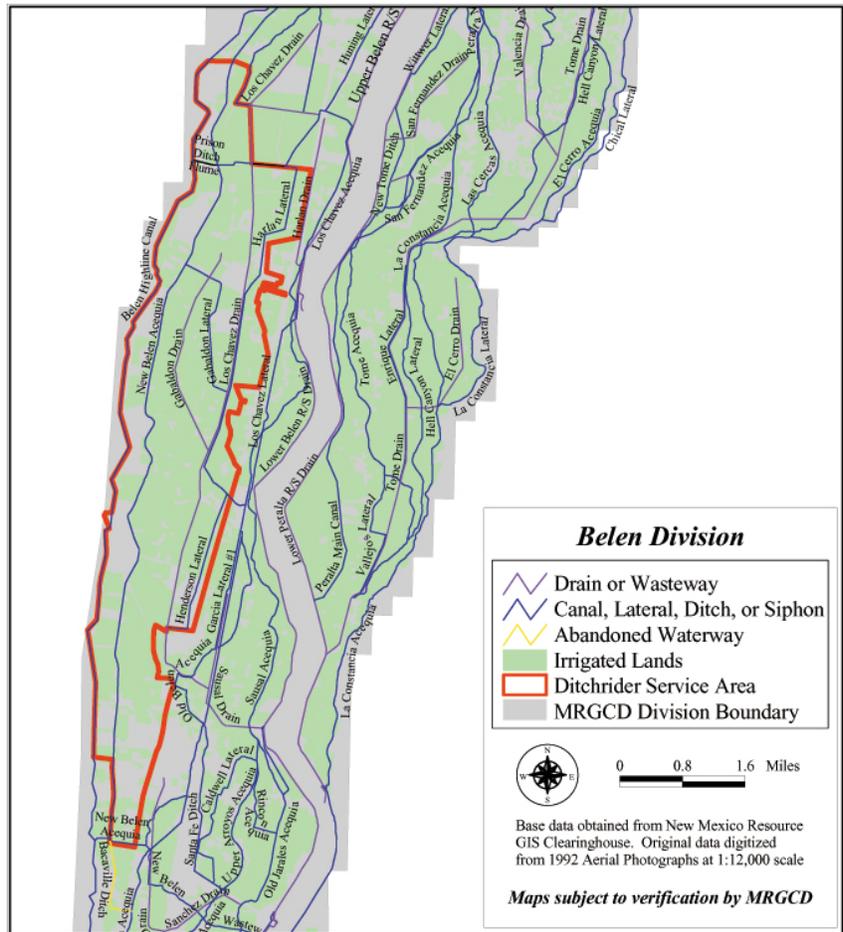
Scheduling requirements for water delivery: This area uses a pre-set schedule based on place in rotation schedule.

Community ditches: Present, and increasing with subdivision of irrigated land

Free-flow irrigation: Unknown

Infrastructure observations: There are arroyo and siltation problems along the Belen Highline Canal.

Operational observations: It is recommended that a rotation schedule be implemented for the entire irrigation season, to eliminate the scheduling of water delivery.



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Profile of Ditchrider Area 308 Belen Division

Area location: Middle of Belen Division, West side of Rio Grande

Interview Date: No interview conducted.

Primary canals in area: New and Old Jarales Acequias, Lower Arroyos Acequia, Garcia Acequia, Sabinal Ditch and Feeder Ditch #3

Area characteristics:

Water delivery patterns (provided sufficient water supply is available):

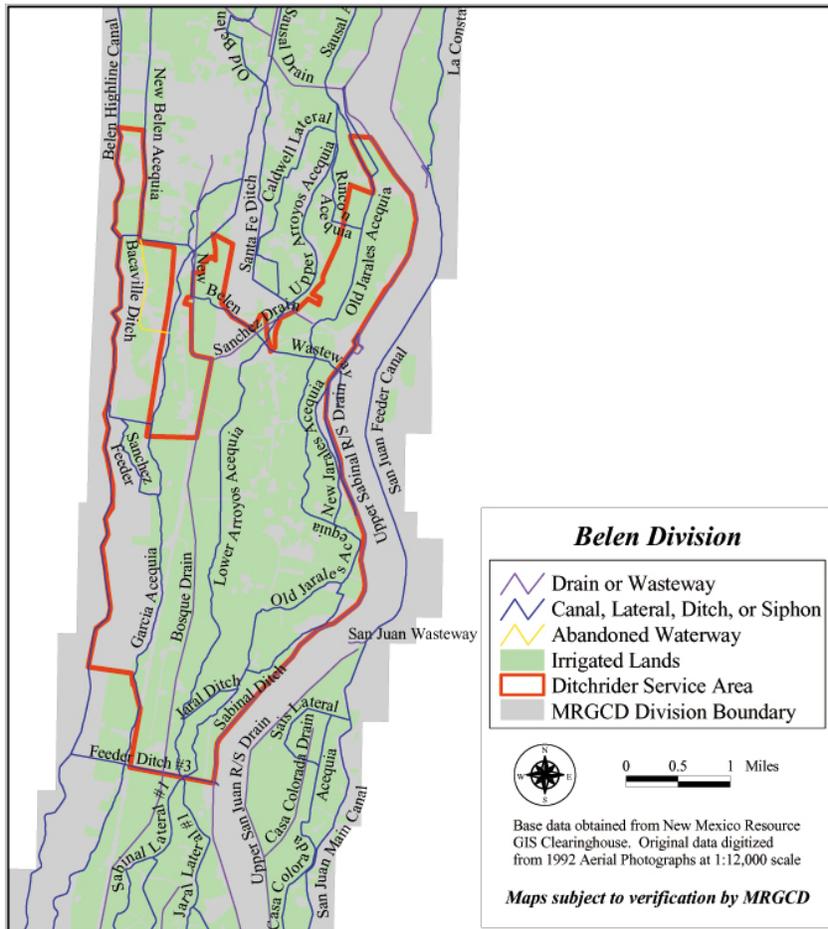
Scheduling requirements for water delivery:

Community ditches:

Free-flow irrigation:

Infrastructure observations:

Operational observations:



Profile of Ditchrider Area 309 Belen Division

Area location: End of Belen Division, Southwest Belen Division

Interview Date: No interview conducted.

Primary canals in area: Upper and Lower Sabinal Riverside Drains, San Francisco Riverside Drain, Bernardo Drain, Abeytas Lateral #1 and #2 and Drain Unit #7

Area characteristics:

Water delivery patterns (provided sufficient water supply is available):

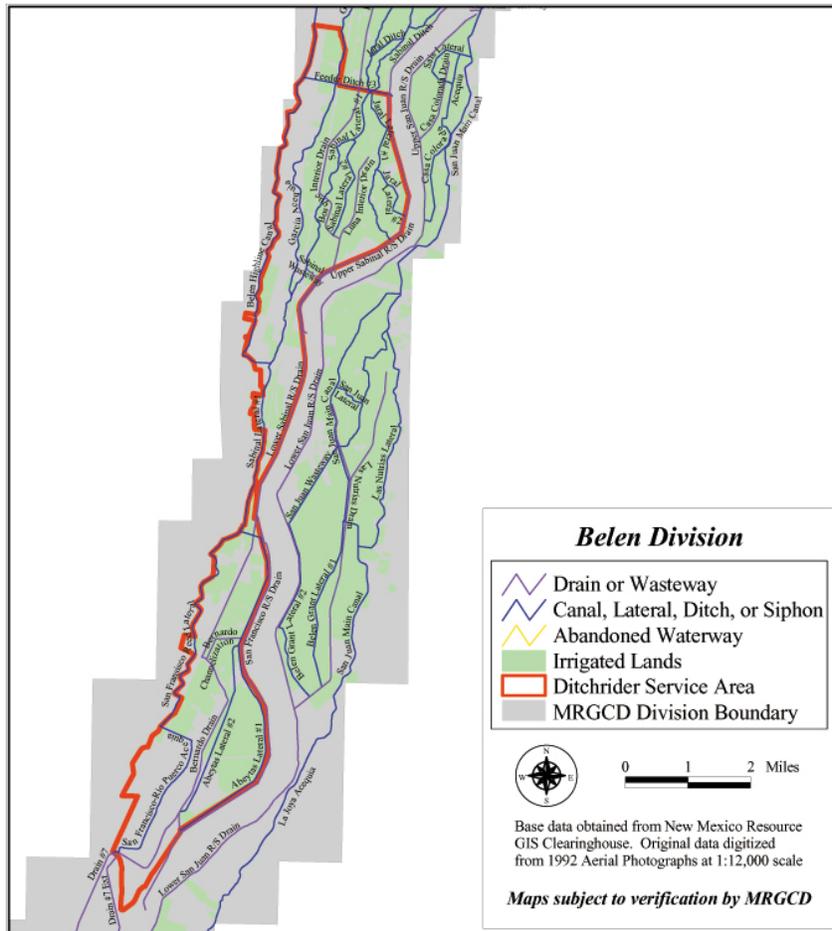
Scheduling requirements for water delivery:

Community ditches:

Free-flow irrigation:

Infrastructure observations:

Operational observations:



Profile of Ditchrider Area 310 Belen Division

Area location: End of Belen Division, east side of Rio Grande

Interview Date: July 20, 2001

Primary canals in area: San Juan Main Canal, Casa Colorada, Sais Lateral, San Juan Lateral, San Juan Acequia, Las Nutrias, Grant #1, Grant #2 and several wasteways

Area characteristics: This area is one of the largest ditchrider areas in the MRGCD. It is a large-scale agriculture area, including large farms and dairies. Crops here include alfalfa, pasture, combinations of corn-wheat-oats-sorghum and some row crops.

Water delivery patterns (provided sufficient water supply is available): Delivery is primarily on-demand, and there is no rotation among laterals. Attempts are made to practice rotational delivery within laterals or among checks as much as possible, though exceptions happen frequently. Strict rotation is practiced in extremely water-short years (both within and among laterals).

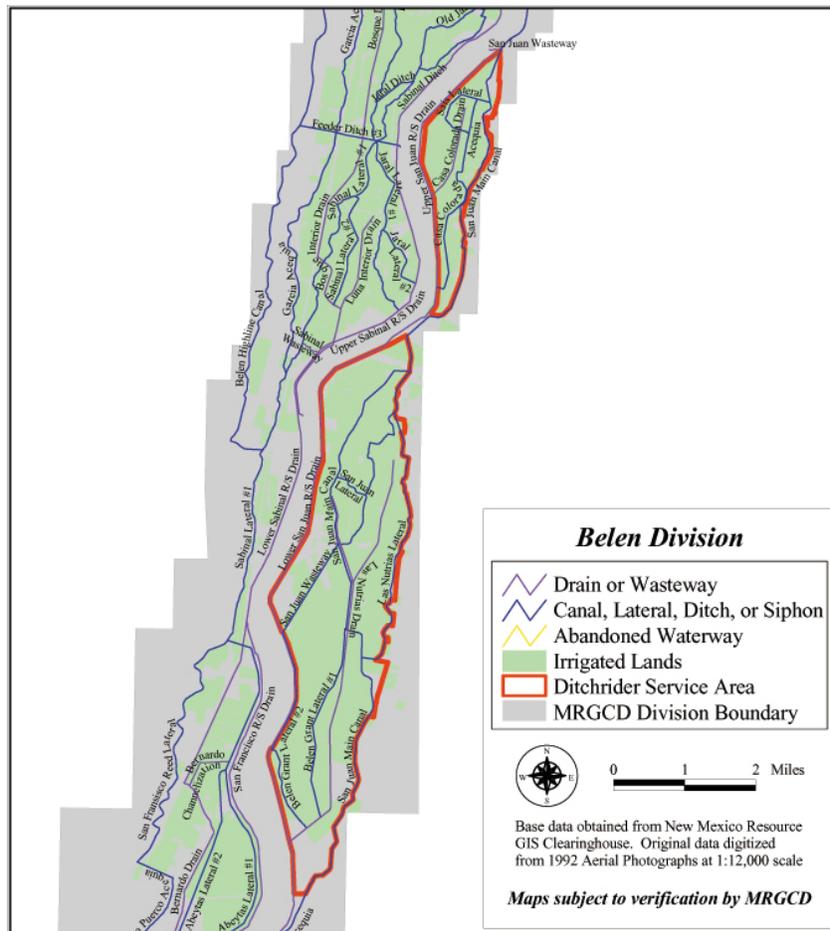
Scheduling requirements for water delivery: All irrigators are required to schedule. Sometimes the farmers are contacted to let them know when it is preferable for them to take water. Requests must be made 24 hours in advance of taking water. This area does not use pre-season scheduling.

Community ditches: Not present

Free-flow irrigation: Not present

Infrastructure observations: The head gate of the San Juan Acequia prevents a complete turn-off to this canal when water in the main canal is significantly high. There are problems with the Storey Wasteway. The area contains waterlogged land below the upper half of the San Juan Main Canal. This part of the area has some interior drains, but saturation is still a problem in places. It is recommended that this section of the Main Canal be piped or concrete lined. Arroyos are also a problem in this area. Presently, only a few canals are siphoned under arroyos.

Operational observations: None recorded



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Profile of Ditchrider Area 401 Socorro Division

Area location: Heading of Socorro Division: San Acacia Diversion to San Lorenzo Drainage

Interview Date: June 6, 2001

Primary canals in area: Socorro North Main Canal, Rinconada Acequia, San Acacia Feeder, San Acacia Lower Drain and Alamillo Acequia

Area characteristics: This is the smallest service area in Socorro Division, with the majority of irrigators practicing large-scale agriculture. Most of the farmers in this service area make use of the latest conservation efforts to grow pasture, alfalfa, and row crops.

Water delivery patterns (provided sufficient water supply is available): During the irrigation season all canals are fully charged (to supply the rest of the Division), with the exception of the Rinconada Lateral and the Salangre Ditch. These are small ditches and do not service much land; both are dead-end ditches.

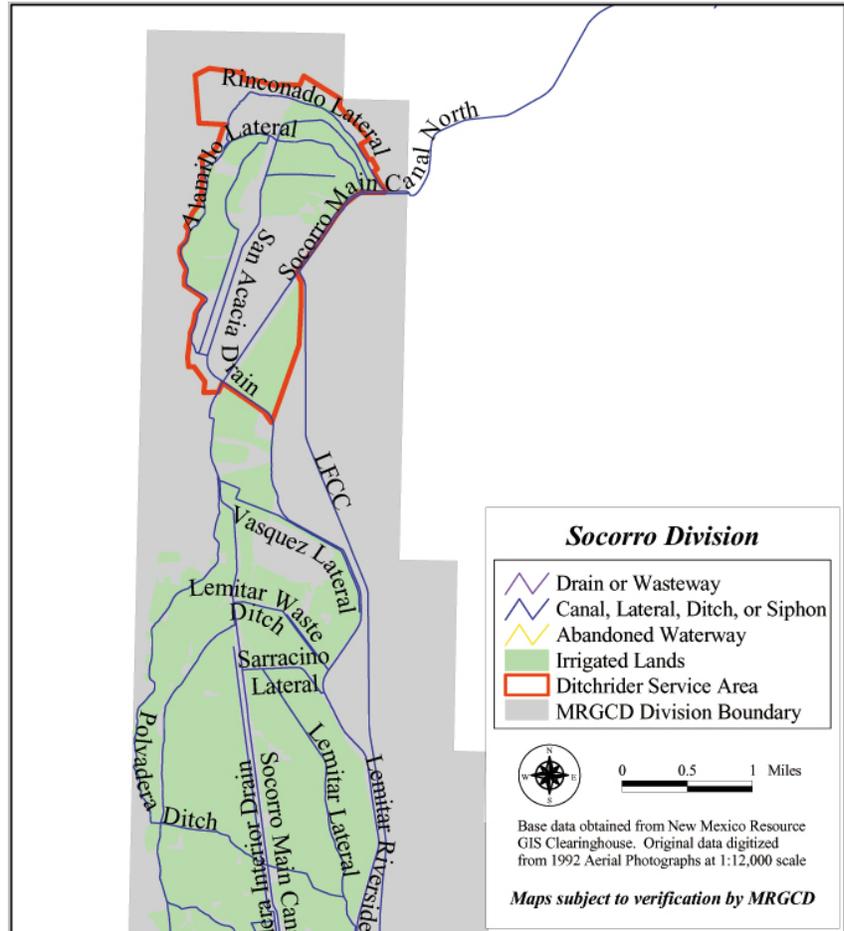
Scheduling requirements for water delivery: Some irrigators are required to schedule. If large-quantity irrigators are scheduled in this section, the diversion at San Acacia may be increased to offset this amount and supply the rest of the division. Many of the irrigators are self-sufficient and can take water without scheduling.

Community ditches: Not present

Free-flow irrigation: Not present

Infrastructure observations: None recorded

Operational observations: None recorded



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Profile of Ditchrider Area 402 Socorro Division

Area location: Middle of Socorro Division: San Lorenzo Drainage to Escondida

Interview Date: June 5, 2001

Primary canals in area: Vasquez Lateral, Lemitar Lateral, Polvadera Acequia, Socorro North Main Canal, Morton Lateral, Sarracino Lateral, Isla Lateral, Lemitar Acequia and Chambon Lateral

Area characteristics: This service area is comprised of mainly large-scale agriculture, with the primary crops being pasture, alfalfa, and row crops—chili and corn.

Water delivery patterns (provided sufficient water supply is available): During the irrigation season all canals are fully charged, with the exception of Isla Lateral (a small dead-end ditch that does not service many users). Strict on-demand water delivery is practiced. Strict rotation is practiced in water-short years.

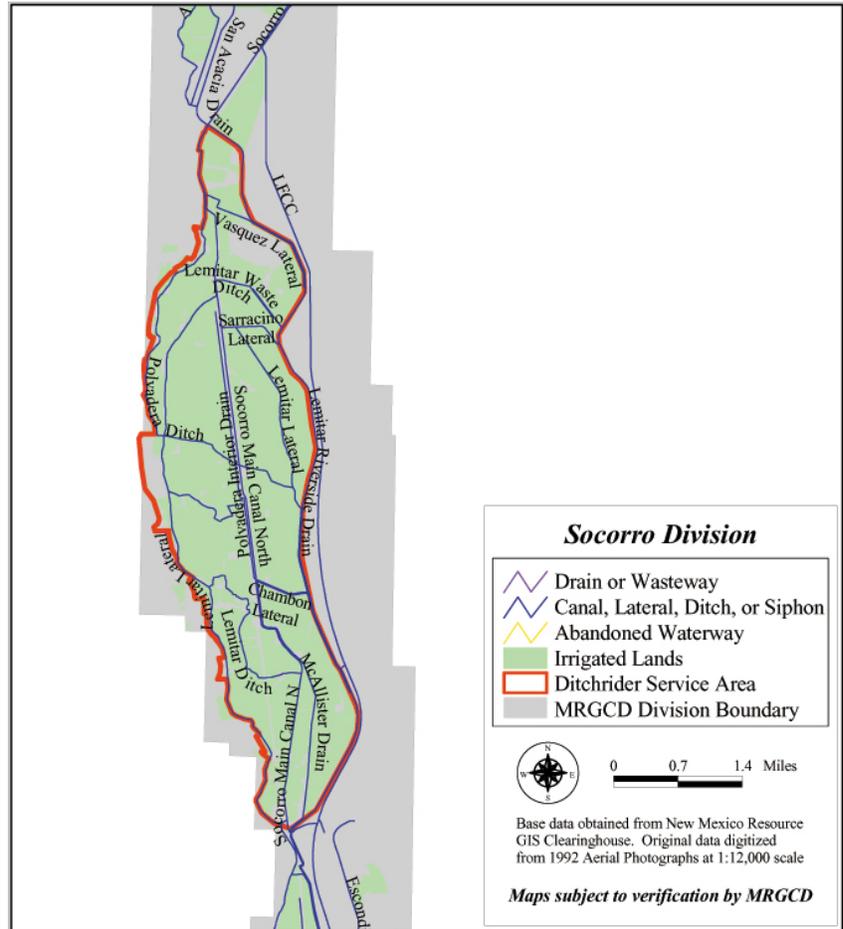
Scheduling requirements for water delivery: All irrigators are required to schedule the night before irrigation, but people are allowed to irrigate the day of request, if possible. Also, scheduling several days in advance is allowed. Most irrigators operate on a 15-day to 20-day watering cycle.

Community ditches: Unknown

Free-flow irrigation: Not present

Infrastructure observations: More maintenance of right of ways, ditches, and drains recommended.

Operational observations: None recorded



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Profile of Ditchrider Area 403 Socorro Division

Area location: Middle of Socorro Division: Escondida to Brown Arroyo

Interview Date: June 5, 2001

Primary canals in area: Socorro Center Main Canal, Florida Lateral, Jaral Lateral, Socorro Acequia and Luis Lopez #1 Acequia

Area characteristics: There are both large-scale and small-scale irrigators, but the service area is the most densely populated section in the Socorro Division and contains a significant number of small-scale, “weekend farmers”.

Water delivery patterns (provided sufficient water supply is available): Delivery is on-demand, with no rotation among laterals. The one exception is a small canal originating from a pump, which runs every-other week (the canal’s name is unknown, but it services approximately 100 acres). Rotation within laterals or among checks (in a head-to-tail fashion) is practiced, but exceptions are frequent. Strict rotation is used in water-short situations.

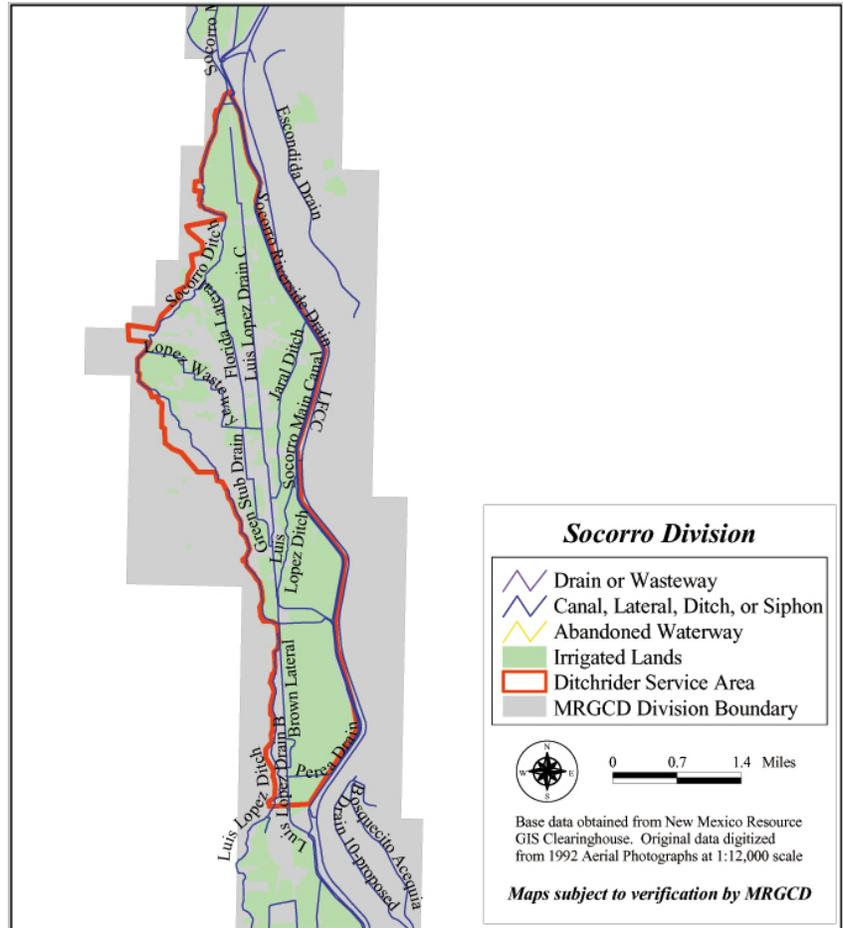
Scheduling requirements for water delivery: The majority of irrigators are required to schedule several days in advance. Attempts are made to schedule users from the head of the service area to the tail of the service area. Pre-season scheduling is necessary for one large-scale irrigator who is allowed three turnouts on Socorro Main and two turnouts on the Luis Lopez at all times. Overall, six turnouts on the Main and three on laterals are all that is allowed, at any given time.

Community ditches: Present

Free-flow irrigation: Unknown

Infrastructure observations: None recorded

Operational observations: More improvements at the farm-level are recommended because it aids in water delivery. More on-farm water-use accountability are also recommended.



Profile of Ditchrider Area 404 Socorro Division

Area location: End of Socorro Division: Brown Arroyo to Bosque Del Apache NWF

Interview Date: June 6, 2001

Primary canals in area: Luis Lopez #2 Acequia, Socorro South Main Canal, San Antonio Acequia, Mosley Lateral and Apodoca Lateral

Area characteristics: This is the largest ditchrider service area in the Socorro Division. The area is composed of mainly large-scale agriculture. The main crops are alfalfa, pasture, and some row crops. The area includes irrigated land in Bosque Del Apache Wildlife Refuge, which is outside of the MRGCD jurisdiction.

Water delivery patterns (provided sufficient water supply is available): Rotation among laterals is practiced only in a few instances, mainly in small laterals not servicing many irrigators. The remainder of canals are fully charged, when water supplies permit, using an on-demand system. Strict rotation is practiced in water-short situations.

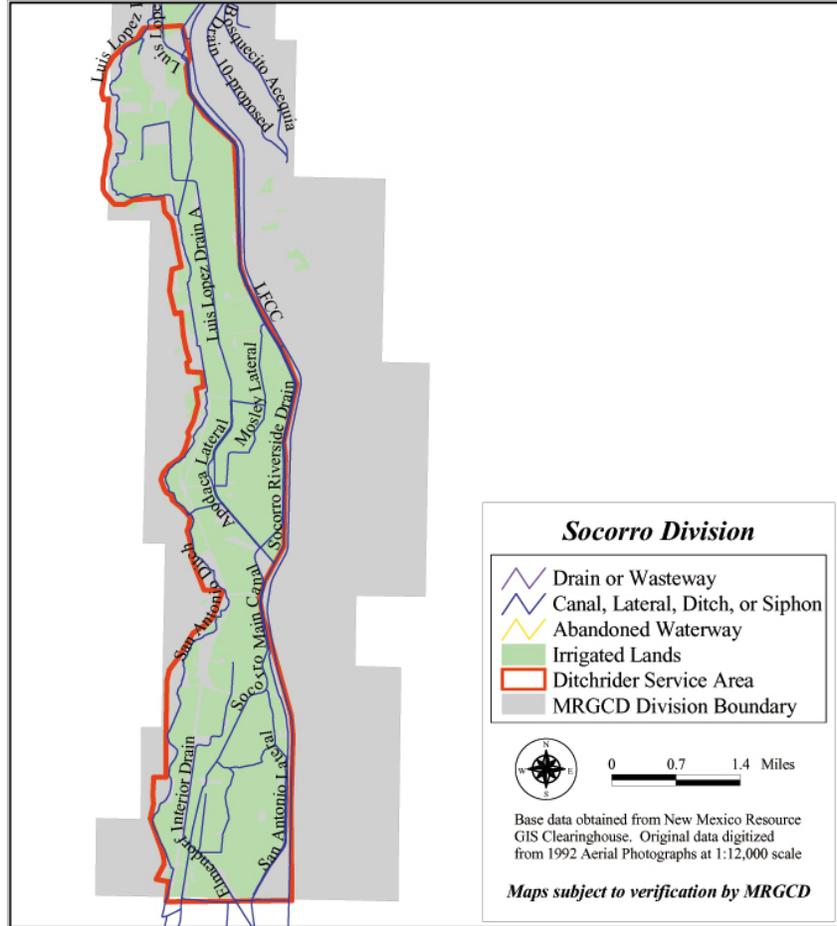
Scheduling requirements for water delivery: Irrigators are required to schedule several days in advance. Scheduling is enforceable in areas where there are locked checks.

Community ditches: Not present

Free-flow irrigation: Not present

Infrastructure observations: Concrete lining of ditches in significant water loss areas is recommended.

Operational observations: None recorded



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Appendix H-2

System Operational Documents



MIDDLE RIO GRANDE CONSERVANCY DISTRICT

POST OFFICE BOX 581
1931 SECOND STREET S.W.
ALBUQUERQUE, NEW MEXICO 87103
(505) 247-0234



DITCHRIDER'S MASTER LOG

DIVISION _____

PROPERTY OWNER _____

DITCHRIDER _____

WATER USER _____
(OR LESSEE)

PHONE _____

ADDRESS _____

MAP _____

SUBDVSN _____

TRACT _____

ACRES _____ LOT _____ BLK _____

LATERAL / ACEQUIA _____

FEEDER _____
(SERVES LATERAL / ACEQUIA)

CONDITION _____

CROP _____

CONC. LINED EARTH LINED

SOIL TYPE _____

PRIVATE DITCH CONDITION _____

LAZED FIELD YES NO

CONC. LINED EARTH LINED PIPELINE

TURNOUT SIZE _____

WEED PROBLEM SILT PROBLEM

DISTANCE FROM CHECK _____

ENCROACHMENTS YES NO

SUPPLEMENTAL WELLS YES NO

REMARKS _____

IRRIGATION PRACTICE:
 GOOD FAIR POOR

SAFETY CONCERNS YES NO

REMARKS: _____

REMARKS: _____

ACTUAL HOURS TO IRRIGATE _____

RODENT CONTROL YES NO

TIME STARTED _____

WEED CONTROL YES NO

TIME ENDING _____

PRIVATE ACCESS TO PROP YES NO

ACCESS VIA DITCH R/W YES NO

LIVESTOCK PASTURE YES NO

OF ACRES _____

NO. OF LIVESTOCK / WINTER GRAZING _____

NOTES - COMMENTS - REMARKS: _____

SANDIA PUEBLO IRRIGATION ROTATION SCHEDULE-SANDIA ACEQUIA

Rev. 3/10/98

TOTAL P. 003

ASSIGNED TO	R. POSTON	R. POSTON	A. SANCHEZ	R. POSTON	M. PASIANO	V. MONTOYA	J. LAURIANO	C. AVILA	L. AVILA	R. BACA	I. BACA	R. BERNAL	M. BERNAL	R. BERNAL	S. MONTOYA	F. LAURIANO	M. MCINTOYA	M. CHAVEZ	J. HOLMES	ASSIGNED TO	
FARMED BY:	50	30	30	30	72	65	61	72	5	52	52	80	20	10	82	119	25	85	72	FARMED BY:	
ACERAGE(AC)																				ACERAGE(AC)	
PHONE #																				PHONE #	
DAY																				DAY	
1	X				X	X									X					1	
2	X				X	X	X														2
3	X				X		X	X	X												3
4							X	X													4
5							X	X													5
6								X	X	X											6
7								X				X	X	X							7
8						X						X	X	X	X			X			8
9						X										X		X			9
10																X	X	X			10
11																X	X	X	X		11
12																X	X	X	X		12
13																X	X	X	X		13
14																X	X	X	X		14
1	X				X	X									X						1
2	X				X	X	X														2
3	X				X		X	X	X												3
4							X	X		X											4
5								X		X	X										5
6								X	X	X											6
7								X					X	X							7
8												X	X	X	X			X			8
9																X		X			9
10																X	X	X			10
11																X	X	X	X		11
12																X	X	X	X		12
13																X	X	X	X		13
14																X	X	X	X		14

MRGCD DITCH RIDER: DON HEUER (505) 887-2178 PAGER # 380-4880
 BIA/SPA DESIGNATED ENGINEER: ALBERT D. GONZALES (505) 788-3049
 PUEBLO OF SANDIA: ROBERT PADGETT (505) 867-3317

NOTE: WATER USERS TO NOTIFY MR. DON HEUER MRGCD AT LEAST 2 HOURS PRIOR TO RELEASING WATER.

SANDIA PUEBLO IRRIGATION ROTATION SCHEDULE - SANDIA ACEQUIA

DAY	R. Poston 60ac.	M. Paisano 72ac.	V. Montoya 35ac.	K. Davis 60ac.	C. Avila 60ac.	R. Poston 5ac.	R. & L Baca 104ac.	R. Bernal 60ac.	M. Bernal 20ac.	R. Bernal 10ac.	S. Montoya 90ac.	P. Lauriano 119ac.	M. Montoya 25ac.	M. Chavez 85ac.	J. Holmes 72ac.
SUN	X		X								X				
MON			X	X							X				
TUE				X	X										
WED				X	X		X								
THU	X					X	X								
FRI							X							X	
SAT		X							X					X	
SUN		X												X	
MON		X						X		X				X	
TUE								X					X		X
WED												X	X		X
THU												X			X
FRI															X
SAT											X				
SUN	X		X								X				
MON			X								X				
TUE					X										
WED					X		X								
THU	X					X	X								
FRI							X							X	
SAT		X							X					X	
SUN		X												X	
MON		X						X		X				X	
TUE								X					X		X
WED												X	X		X
THU												X			X
FRI															X
SAT											X				

Middle Rio Grande Conservancy District
 Post Office Box 581, 1931 Second Street S.W.
 Albuquerque, New Mexico 87103-0581

RULE NO. 24
 WATER SERVICE CHARGE RULES

24-1.00 Preamble.

These rules are enacted pursuant to N.M. Stat. Ann. 1978 §§ 73-18-6 through 17-18-8.1 (1995 Supp.) and govern the Middle Rio Grande Conservancy District's ("District") procedures in imposing the Water Service Charge on all owners of irrigable property within the District's boundaries. These rules will be adopted by the District's Board of Directors by September 11, 1995, pursuant to N.M. Stat. Ann. 1978 § 73-14-51 (Orig. Pamph.), after publication in two issues, one week apart, of a legal newspaper of general circulation in each county embraced within the District's boundaries and after the posting of these rules in the courthouse of each county within the District. These rules will be in effect twenty (20) days after they are adopted by the District's Board of Directors.

24-2.00 Definitions.

- A. Equalization Hearings: Hearings held by the District's Board of Directors to afford all owners of property within the District's boundaries the opportunity to show why their property should be reclassified and charged according to the reclassification.
- B. Irrigable Land: Land that is capable of being irrigated from the District's Water Delivery System.
- C. Nonirrigable Land: Land that is not capable of being irrigated from the District's Water Delivery System.
- D. Water Delivery System: The system by which water may be physically provided to the District's constituents including, but not limited to, ditches, laterals, flumes, wells, watercourses, levees, dikes, dams, reservoirs, syphons and any other works and improvements deemed necessary by the District's Board of Directors for the physical delivery of water within the District's boundaries.
- E. Water Service Charge: A per-acre annual charge levied against all Irrigable Lands as they appear in the District's records, or lands that are made irrigable pursuant to a Water-Use Contract with the District. The Water Service Charge is separate and distinct from the ad valorem assessment levied by the District but collected by the relevant county. The Water Service Charge is levied by the District and payable directly to the District.
- F. Water Service Charge Protest: A written protest by a property owner who requests that his property be reclassified and that he be charged according to his property's reclassification.
- G. Water-Use Contract: A written contract between the District and a property owner that authorizes use of the Water Delivery System.

24-3.00 Classification of property.

All real property within District boundaries shall be classified as either "Irrigable" or "Nonirrigable" for the purposes N.M. Stat. Ann. 1978 § 73-18-6 through 17-18-9.1 (1995 Supp.).

24-4.00 Application of the Water Service Charge.

- A. To ensure that the Water Service Charge is applied fairly and equitably to property owned within the District's boundaries, the District's Board of Directors shall:
- (1) provide written notice of the Water Service Charge to all individuals who own
 - (a) Irrigable Land as it appears on the records of the District, or
 - (b) land that is entitled to receive water pursuant to a Water-Use Contract with the District;
 - (2) provide any owner with the opportunity to protest the classification of his property as set forth in Section IV of these rules; and
 - (3) if there is a protest, after opportunity for a hearing, determine whether land is irrigable and collect the Water Service Charge for each acre determined to be Irrigable Land by the Board of Directors.
- B. Each acre made Irrigable pursuant to a Water-Use Contract entered into after July 1, 1995, becomes Irrigable Land placed on the records of the District and shall be subject to the Water Service Charge and any other reasonable administrative fee the Board of Directors deems necessary.
- C. Persons wishing to enter into a Water-Use Contract with the District after July 1, 1995, must do so not later than the last day in February of the year in which the property owner is entitled to receive water pursuant to the contract.

24-5.00 Water Service Charge Protests, presumptions, and procedure.

- A. **Presumption of irrigability.** Pursuant to N.M. Stat. Ann. 1978 §§ 73-18-6 through 73-18-8.1 (1995 Supp.), all lands recorded as irrigable in the District's records are presumed to be capable of being irrigated by the District's Water Delivery System. Irrigable Land may be reclassified as nonirrigable if:
- (1) the property owner ("Protestant") submits a Water Service Charge Protest ("Protest") in which he declares and offers proof that his property, or a portion thereof, is nonirrigable, and
 - (2) the District's Board of Directors determines that the property is nonirrigable after it conducts an Equalization Hearing.
- B. **Protest procedure.**
- (1) The Protest shall be made on a form prescribed by the District, signed by the owner or his agent and postmarked or delivered to the District not later than the last day of May of the year to which it applies. The Protestant shall provide proof that the property is not irrigable including, but not limited to:
 - (a) a current photo, a land plat map, proof that the property has not been awarded any greenbelt exemptions by the relevant county;
 - (b) proof of physical or structural conditions that render the property not capable of irrigation; and

- (c) a signed written statement that the property is not currently being irrigated and will not be irrigated after reclassification.
- (2) If applicable, a Protestant may also claim that he is not subject to the Water Service Charge by providing proof that:
- (a) he is not the owner of the property subject to the charge;
 - (b) the land is not classified as Irrigable Land on the records of the District and that he has not entered into a Water-Use Contract with the District; or
 - (c) state law precludes the subject property from receiving irrigation water.
- (3) Field checks. District staff shall review each Protest and may conduct a field inspection to investigate the claims made by the Protestant. Upon review of the Protest and after completing a field check, staff shall submit its written recommendation concerning the status of the property's irrigability to the Board of Directors.
- (a) In making determinations of irrigability of land, staff may consider, but is not limited to considering, the following:
 - (i) whether the land is presently being irrigated;
 - (ii) the property owner's ability to access irrigation water from the District's Water Delivery System; and
 - (iii) whether the land has been granted a greenbelt exemption from the relevant county.
 - (b) In making determinations of nonirrigability of land, District staff may consider, but is not limited to considering, the following:
 - (i) forest wetland edges along the Rio Grande River course, periodically flooded, most commonly referred to by the District as "Bosque" land;
 - (ii) land that has too much salt accumulation and/or scrub grass, and is unsuitable for cultivation, most commonly referred to by the District as "Vega" land;
 - (iii) land that has a high water table, most commonly referred to by the District as "Water-logged" land;
 - (iv) land that has no practical access to irrigation water; or
 - (v) land that contains buildings or other structures.
- (4) Notice of hearing. The Protestant shall receive written notice of staff's recommendation which will include notice of the Board of Directors' Equalization Hearing in which the Protestant will be permitted to present evidence of his land's nonirrigable status.
- (5) Quarter-acre allowance. To promote administrative ease during the Equalization Hearing, the Board of Directors, in its discretion and absent proof to the contrary, may presume a total nonirrigable allowance of .25 acre that reflects the acreage rendered nonirrigable because of buildings and outbuildings on an owner's property.
- (6) Board of Directors' final determination. If the Board of Directors finds that the Protestant's land, or any portion thereof, is nonirrigable, it will make the appropriate entries on the District's records. The Protestant will receive a copy of the board of director's determination by registered mail. Once land has been reclassified by the District, the owner need not protest in subsequent years if the nonirrigable status of the property has not changed.

(7) Appeal procedure. Any owner of real property aggrieved by the decision of the Board of Directors sitting as a board of equalization may appeal to the district court of the second judicial district in the manner prescribed by N.M. Stat. Ann. 1978 § 73-18-5(D) (Orig. Pamph.).

24-6.00 Other changes in irrigability status.

- A. Any person who effectuates irrigation on land classified as nonirrigable shall notify the District in writing of the change in the status of the land no later than the last day of May in the applicable year so that the land may be reclassified as Irrigable Land.
- B. As the Water Service Charge will be imposed on all Irrigable Land, the property owner shall be responsible for communicating to the District any changes in ownership of the property or any subdivision thereof.
- C. The District's Board of Directors may, at anytime, independently reclassify property. All owners of reclassified property shall be given notice of such reclassification.

24-7.00 Late charges, liens, enforcement.

- A. Any person who violates Subsection 24-5.00(B) of this rule by declaring a property which is irrigable to be nonirrigable or who violates Subsection 24-6.00(A) of this rule by failing to declare a change in the property's status shall be liable, for each year to which declaration or failure to report applies, for:
 - (1) all unpaid Water Service Charges;
 - (2) reasonable interest calculated on any Water Service Charges determined to be due under paragraph (1) under this subsection; and
 - (3) any reasonable administrative fees incurred in collecting unpaid Water Service Charges.
- B. Pursuant to N.M. Stat. Ann. 1978 § 73-18-8.1(I) (1995 Supp.), all Water Service Charges of the District constitute prior liens upon the real property on which they are levied and such liens shall be enforced in the same manner as assessments of property taxes for state and county purposes are collected and liens thereof are enforced.
- C. Pursuant to N.M. Stat. Ann. 1978 § 73-14-52 and § 73-14-53, (Orig. Pamph.), the District's Board of Directors shall have all powers available by law to enforce these rules, including the right of injunction and mandamus. Any person wilfully failing to comply with these rules shall be guilty of a misdemeanor, and upon conviction, shall be punished by imprisonment of not less than six months or more than one year, or by a fine not to exceed \$3000, or both such fine and imprisonment within the discretion of the court.

24-8.00 Amendment procedure.

The District's Board of Directors shall have the power to amend these rules pursuant to the notice provisions in N.M. Stat. Ann. 1978 § 73-14-51 (Orig. Pamph.).

24-9.00 Rules available upon request and to protestants.

A copy of these rules and subsequent amendments shall be made available to any person requesting them, and to any person who files a Protest.

2001 WATER SERVICE DELIVERY CONTRACT
(NEW IRRIGATION)



This Agreement is entered into between the Middle Rio Grande Conservancy District (1931 Second St, SW, P.O. Box 581, Albuquerque, NM 87103-0581) ("MRGCD") and the Property Owners, as described below:

Date: _____, 2001

Name of Property Owners/Lessee: _____
Mailing Address: _____ city _____ st _____ zip _____
Telephone: _____ Owner# _____

The Property Owner is desirous of utilizing the MRGCD delivery system for delivery of water to his or her property in the 1997 and subsequent irrigation seasons. Property Owners desires, in the 1997 and subsequent irrigation seasons, to irrigate the following described real property located within the boundaries of the MRGCD and in _____ County, New Mexico:

Property Legal Description: _____

Property Code Number(s): _____

Total Acreage: _____ Total Acreage Irrigated: _____

The MRGCD agrees to provide irrigation water for the 1997 irrigation season and subsequent irrigation seasons for which this contract is in effect through the _____ ditch, lateral or acequia, sufficient to irrigate _____ acres, subject to physical availability and the lawful condition, rules, regulations, notices and orders established by the MRGCD.

The New Mexico Legislature in the Laws of 1993 mandated that for "all irrigable lands in the district as they appear on the records of the district or for which water availability under contract occurs," the District support provision of its services by levying a "water service charge against lands which are served by the district's water delivery system."

N.M.S.A. § 73-18-8.1 1978 (1993 Supp.) also establishes the minimum water service charge as \$28.00 per acre. Pursuant to the mandate of the Legislature and the terms of this Contract, the Property Owner agrees to pay a "Water Service Charge" of \$28.00 per acre in the 1997 irrigation season. Property Owner agrees to abide by the lawful conditions, rules, regulations, notices and orders established by the MRGCD. Pursuant to N.M.S.A. §73-18-8.1, the "Water Service Charge" may be increased in subsequent irrigation seasons.

The Property Owner agrees that, in the event of water shortage, the MRGCD must allocate irrigation water according to the priorities established by law and that if insufficient water is available, the MRGCD may not be able to provide all of the water required by Property Owner. In times of shortage, the MRGCD shall allocate water as prescribed by N.M.S.A. § 73-14-49 1978. In the event of water shortage, the Property Owner shall not receive a rebate of any part of the "Water Service Charge."

The Property Owner further acknowledges that the MRGCD will not furnish water to the Property Owner if the Property Owner is delinquent on payment of MRGCD Assessments, Water Service Charges and/or other charges.

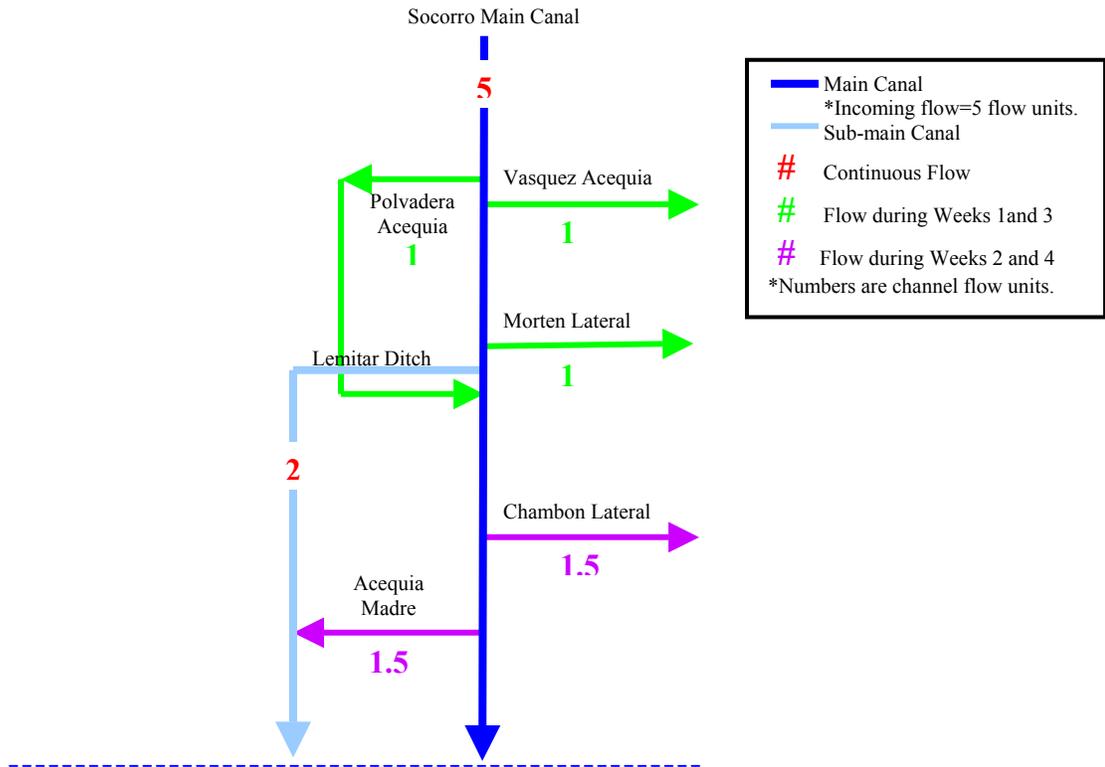
Either party may cancel this Agreement by providing written notice to the non-canceling party at the address listed above. Notice must be received by the non-canceling party on or before February 1, of the year in which the cancellation is to be effective.

This Agreement shall not affect in any manner whatsoever any water rights held by an individual Property Owner.

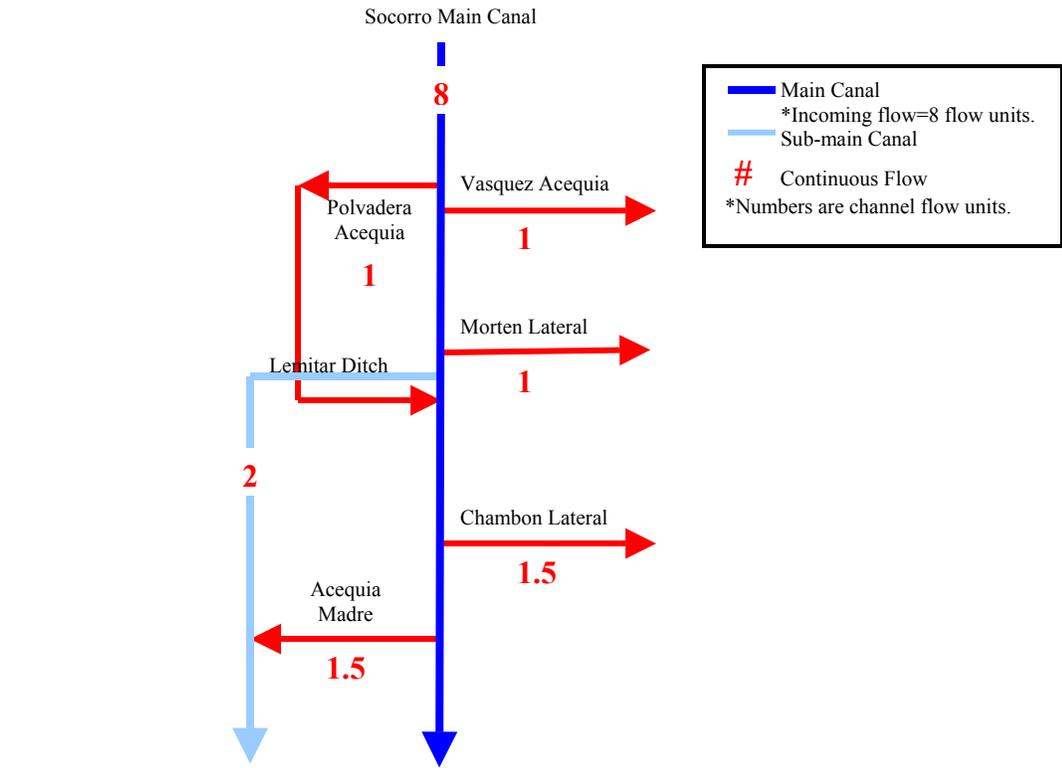
The parties have read, fully understand and agree to the foregoing.

Property Owner
BY: _____
MRGCD

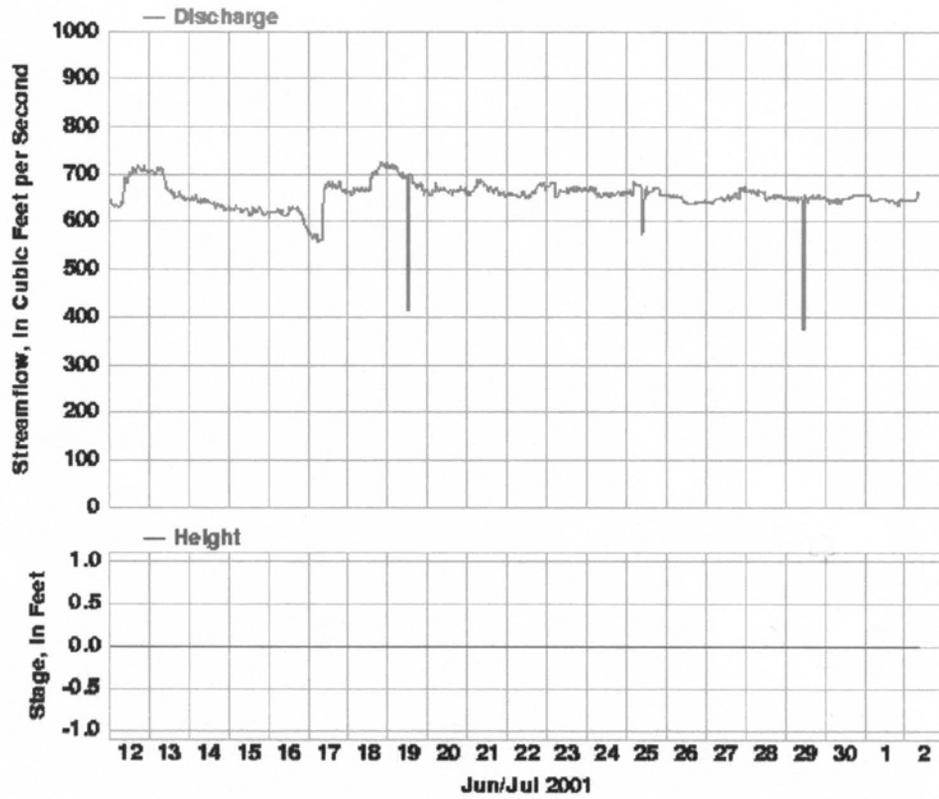
Figure 1. Rotational Delivery: Among Laterals



Continuous Flow Water Delivery



ISLDV - TOTAL ISLETA DIVERSION
updated July 2 08:30 mst 2001



**POLICIES AND PROCEDURES OF THE
MIDDLE RIO GRANDE CONSERVANCY DISTRICT**

(RULES AND POLICIES ESTABLISHED BY THE MIDDLE RIO GRANDE CONSERVANCY DISTRICT
AND U.S. BUREAU OF RECLAMATION, DEPARTMENT OF INTERIOR)

WATER DISTRIBUTION

- a. Water that is available to the District will be delivered among Divisions in proportion with the amount of land served, so far as it is possible to do so, and to lands within each Division in like manner. Indian Lands under cultivation at the present time are considered to have first right to the water.
- b. No water will be delivered to water users who are delinquent in the payment of Conservancy District Assessments.
- c. In the interest of water user welfare and efficient water distribution, ditchriders will not be required to deliver water to silt-laden and weed-clogged community ditches, field ditches and laterals.
- d. Water will be delivered to ditches at the upper end of each division and will be supplied progressively toward the lower end of the division. Irrigation will be completed in each area before transferring the water to another area, provided inter-division water rationing and rotation are not required.
- e. In a similar manner, irrigation deliveries will be started at the upper end of each ditch, and each tract served by that ditch will be irrigated progressively downstream upon request from the water users. No irrigation deliveries will be made except with the express permission of the ditchrider.
- f. During the periods of water shortage, it is essential that water users irrigate both day and night on a seven-day schedule to utilize available supplies. Failure to do so will be construed to indicate no further need for water.
- g. Water users who work outside their farms will, if possible be advised in advance as to when water is scheduled for delivery to their farm so that they can make arrangements for labor that may be required.
- h. Water users will be permitted to open their turnouts and operate checks only at times specifically approved by the ditchrider. The water user shall notify the ditchrider as far in advance as possible of his need for water, and the ditchrider will advise the water user as far in advance as possible when the water will be available.

Each ditchrider will keep a record in a bound book furnished for the purpose of showing water use by ditches. The record will show water users in proper sequence on each ditch, the date water was started and shut off, and whether irrigation was completed. Notes shall be made of any special cases of delivery, wasting of water, turning off at night, or violations of regulations and instructions regarding distribution or use of water. Each violation will be promptly reported to the Division Manager, and each such report will be noted in the record book.

- j. The ditchrider holds a key position and will at all times maintain close contact with the farmer or water user. There shall be no partiality shown in distribution of water regardless of personal feeling, race, creed, relationship, political, or social standing or previous grievances.
- k. A ditchrider shall establish a definite time, preferable around meal time, when water users may call to place orders for water and obtain information. In case ditchrider is not available the irrigator may call appropriate division office for assistance.

The ditchriders and / or superiors are duly constituted representatives of the District and are in charge of operation and maintenance of District works, and shall report any violations of the above rules and regulations.

- m. Water pumped from drains during water shortage seasons is subject to the same regulations of distribution as irrigation water distributed through the regular irrigation canal distribution system.
- n. As of February 25, 1964, the issuance of licenses permitting pumping of water from Conservancy drains is discontinued, except in cases where it is not physically financially feasible for water to be obtained from any other source. Any licensee using water in accord with permit issued prior to this date is required to conform with all rules and regulations herein set forth, and the license of any violator thereof shall be revoked.

2. INSTALLATION AND REPLACEMENT OF FARM TURNOUT STRUCTURES

- a. Farm turnouts will be installed on the basis of one turnout per ownership or farm unit up to 40 acres in size. Where the ownership exceeds 40 acres, additional turnouts may be provided for each additional 40 acres or increment thereof. Additional turnouts may also be installed where the topography of the land makes it impractical to irrigate all of the land from one turnout. Such additional turnouts may be installed only after a careful engineering study has been made. The cost for turnout and its installation shall be borne by the irrigator.
- b. Additional turnouts will not be installed to serve subdivisions of existing ownerships. The subdivider will be required to provide for irrigation deliveries to all subdivisions of holdings through head ditches located outside of rights of way owned by the Conservancy District or the United States. The District's obligation shall end at the original point of diversion previously provided for serving the original tract.
- c. Installation and replacement of farm turnouts will be done in compliance with project design criteria.
- d. Where it is practical to do so, water users in the general vicinity of a turnout will be served their water supply through the use of existing water distribution boxes, which were established at the time of the original construction of the District works and/or rehabilitation by the Federal Government.
- e. The Water User shall reimburse the District for an installation of a new turnout or relocation of an existing turnout if approved by the District.

3. MAINTENANCE AND REPLACEMENT AND CONSTRUCTION OF CANAL, LATERAL, LEVEE AND DRAIN CROSSINGS

- a. Maintenance and replacement of all crossing structures on state, county, or city roads or streets is the responsibility of the agency maintaining the road or street.
- b. Crossing structures which were constructed by the Conservancy District or the Bureau of Reclamation to facilitate operation and maintenance work and located at points other than the intersections with state, county, or city roads and streets, will be maintained by the District.
- c. Bridges constructed by the District because of severance of ownership will be maintained and/or replaced as necessary by the District so long as the ownership continues to be severed.

If all of the land of one side of the ditch is sold, the severance will no longer exist. Maintenance or replacement of a crossing constructed by the District because of severance which no longer exists will no longer be the responsibility of the Conservancy District.

In instances where the District has maintenance responsibility on bridge crossings as requirements demand, the District will up-date these crossings either by revamping the bridge or by the installation of a pipe to meet the load requirements of today's activities.

- d. Crossing structures at private roads must be maintained and replaced as necessary by the individual using the crossing. Bridge or culvert designs must be specifically approved in advance by the District and the Bureau.
- e. No crossing may be constructed without prior written approval of the Conservancy District and the Bureau of Reclamation. Such approval shall be in the form of a license. Licenses for construction of new crossings will be issued only after the responsibility for maintenance has been clearly established.
- f. A license for the construction of a crossing over District facilities may be granted in event of definite inconvenience or hardship imposed by severance or as a result of District or Bureau construction, real estate transactions or developments which result in loss of access detrimental to land use through no fault of the applicant.
- g. Requests for licenses to construct new crossings must be submitted in writing to the Chief Engineer of the Conservancy District. No construction will be permitted until controlling elevations have been established or checked in the field by a representative of either the District or the Bureau.

4. CONSTRUCTION OF CROSS FENCES

- a. No fences may be constructed or maintained across rights of way of the District or the United States unless specifically authorized in writing by the District.

5. FENCES PARALLELING RIGHTS OF WAY OF UNITED STATES OR DISTRICT

- a. Upon request, the Bureau or the District may field inspect the location of the rights-of-way line, established by the owner's surveyor so that parallel fences may be constructed on that line. No parallel fences may be constructed upon rights of way of the United States or the District.

6. FIELD HEAD DITCHES

Field head ditches will not be permitted upon rights of way owned by the United States or the District. It shall be the land owner's responsibility to remove any such existing ditches from rights of way of the District or the Bureau of Reclamation upon notice.

7. OTHER ENCROACHMENTS AND TRESPASSES ON RIGHTS OF WAY OF THE UNITED STATES OR DISTRICT

- a. It is the duty of every employee of both the District and the Bureau to report to his/her superior what may appear or definitely be any encroachment or trespass of any kind upon rights of way of the United States or the District. Failure to do so will be considered grounds for disciplinary action.

8. USE OF OPERATION AND MAINTENANCE ROADS BY THE PUBLIC

- a. The roads adjacent to the canals, laterals, levees, and drains are essential for efficient and economical operation and maintenance. Any unauthorized use shall be discontinued. The cooperation of City, County, State and Federal law enforcement officers will be solicited to aid in achieving this goal.

9. DUMPING TRASH ON RIGHTS OF WAY OWNED BY THE BUREAU OF RECLAMATION OR THE CONSERVANCY DISTRICT

- a. Employees of the District or the Bureau are required to report the description of the vehicle, licensee number, name of driver, if available, time, and place of any observed unlawful dumping of trash or debris

on the rights of way of the District or the United States. Failure to do so will be considered grounds for disciplinary action.

10. **CONTAMINATION OF WATER IN DITCHES OWNED BY THE UNITED STATES OR THE CONSERVANCY DISTRICT**
 - a. It shall be the duty of every employee to advise the public as to regulations concerning contamination of waters conveyed by canals, laterals and drains as may be required, and to promptly report violations to his superior.
11. **CONSTRUCTION OF UTILITIES ON RIGHTS OF WAY OWNED BY THE UNITED STATES OR THE CONSERVANCY DISTRICT**
 - a. Overhead utility lines such as power lines, telephone lines, etc.; gas water, sewage lines; high pressure oil or gas lines, etc., shall be constructed only after an appropriate license has been issued. Application for such license shall be made through the District.

FOR MORE INFORMATION, PLEASE CONTACT YOUR RESPECTIVE DIVISION OFFICE:

GENERAL OFFICE
1931 2ND STREET S.W.
ALBUQUERQUE, NM 87102
PH: 247-0234

ALBUQUERQUE DIVISION OFFICE
1930 2ND STREET S.W.
ALBUQUERQUE, NM 87102
PH: 247-0234

BELEN DIVISION OFFICE
P.O. BOX 45
BELEN, NM 87002
PH: 864-7466

COCHITI DIVISION OFFICE
PO BOX 1210
PENA BLANCA, NM 87041
PH: 465-2298

SOCORRO DIVISION OFFICE
PO BOX B
SOCORRO, NM 87801
PH: 835-1454

Specific Infrastructure Recommendations

Cochiti Division

- Continued flood and sediment control programs for Arroyo flooding be increased and extended to other applicable areas in the District.
 - Siphon canals under major arroyos.
 - Build dikes along canals to act as water retention basins.
 - Bank stabilization with concrete, shot-crete, and fill dirt.
- Piping sections of the highline canals (Cochiti Main Canal and Sile Main Canal) in areas where little irrigation occurs. This would reduce seepage losses and limit flooding and sedimentation caused by arroyos. Current sediment and flood control projects are helping, but piping is believed to be more beneficial in the long run.
 - Suggested piping: Cochiti Main Canal from Pena Blanca to the end of the Canal (approximately 10 miles). Very little irrigation is serviced from this section, with exception to a few Pueblo community ditches and the Augustine Lateral. Currently, the Cochiti Main is siphoned under the Galisteo Wash (52" pipe) and the Tonque Wash (42" pipe).
 - Suggested piping: an 8 miles section on the Sile Main Canal, specific locations unknown.

Albuquerque Division

- Increased maintenance and repair of walking ditches (ditches with no right of ways for maintenance and repair operations). Because access to ditches is limited, many walking ditches have been overgrown and silted beyond efficient use.
 - Parts of the Breeze and Ruby in DR #12's area are not capable of being used because of sedimentation.
 - Includes many other walking ditches and community ditches throughout the District.
- Increased lining and piping of canals in areas where irrigation is limited, seepage is significant, and bank stabilization is a problem.
 - Significant section of the Gun Club Lateral does not service many irrigators and requires much maintenance as a result of residential trash and debris.
 - Several sections in DR #3's area, specifics locations unknown.
 - A 1.5 mile section in DR #12's area, with no irrigation, specific location unknown.
 - In areas where gopher holes constantly decrease bank stabilization. This can be applied throughout the District.
- Inadequate crossings of power, telephone, gas, water, sewage lines, bridges, and culverts should be replaced. Inadequate crossings may limit canal capacity, create bottlenecks in flow, collect trash and debris, and limit the

ability to perform adequate maintenance and repairs on the conveyance system. This can be applied throughout the District.

- Alameda Lateral in DR #10's area has 195 crossings in 19 miles of canal. Majority of these cause problems.
- Sandia Lateral in DR #12's are has 5 crossings that limit the capacity to supply both non-Pueblo and Pueblo irrigators during crucial demand times (estimated capacity is decreased by one-third).
- Tyback Levy (used to occasionally divert water from the Sandia lateral to the Albuquerque Main Canal) has a dogleg turn that clogs often, flooding adjacent lands. Over time, the highway department and the railroad built on top of this culvert, replacing it with inadequate sections that are now a problem for the MRGCD.
- Removal of wooden check structures. Wooden check structures cannot be locked and limit ditchrider capability of controlling water use.
 - In Corrales, many wooden check structures still exist (DR #6)
 - There are wooden check structures still in use throughout the District: not all locations are known.
- Extend use of diagonal weed racks on culvert entrances. Weed racks are effective means of catching debris, however, vertical racks are inadequate because debris blocks flow of water through culverts. Diagonal weed racks catch debris and push debris up the rack, not interfering with water flow. This can be applied through the District.
- Additional canal deficiencies:
 - Check on Garcia Lateral used to supply water to Sandia lakes: The freeboard of canal appears too low such that water is checked high and often over banks in order to create adequate head to supply water to the lakes.
 - Concern for water tightness of check structures in DR #1's area.
 - Many drains throughout the District also serve as feeders, conveying irrigation water to other areas in the District. Because these drains originally served the purpose of draining water logged lands, there is reason to believe the function is diminished when used as a feeder. With increased water head in these drains, they may not be draining land adequately. Specific, problem drains are not known, but should be investigated.
 - Suggestions for problems with Sandia Lateral: (1) remove or raise pipe crossings to increase volume in lateral, (2) build a new canal above the service area to provide water to Pueblo, (3) rotate and schedule among Sandia Pueblo, and (4) pump water from waste water treatment plant to supplement the tail end of the lateral in water short situations.

Belen Division

- Increased flood and sediment control for arroyo flooding in highline canals. Could make use of practices and recommendations for the Cochiti Division.
 - Belen Highline Canal (six major arroyos)

- San Juan Main Canal
- Increased lining and piping of canals where water loss is significant, adjacent lands are water logged, and where bank stabilization is a problem.
 - Belen Highline Canal: sandy soil is believed to contribute to significant water conveyance loss.
 - San Juan Main Canal: Water logged land below the upper half of this canal, most likely a result of significant water seepage. There are some interior drains on this land, but much land is still not capable of being irrigated.
- Additional Concerns:
 - Head gates for the San Juan Acequia and Storey Waste Way may require structural improvements to prevent spill.

Socorro Division

- Increased lining or piping of canals to prevent water seepage, increased bank stabilization, and decrease sedimentation problems.
 - Socorro Main Canal: from San Acacia to San Lorenzo Settling Basin is believed to be a significant water losing section of the canal.
 - Additional water is diverted from the Low Flow Conveyance Channel at four locations in the Division to compensate for water losses on the Socorro Main Canal (Polvadera Check Structure, 1200 Check Structure, Neil Cupp Check Structure, and Bridge on HWY #380 all provide approximately 25 cfs of additional water).
 - Socorro Ditch does not service many irrigators and is significantly long (piping possible). This area needs further study.