

WATER CONSERVATION POLICY

Section #1: Organization of the District

Delta Lake Irrigation District (The District) was established on June 22, 1928. The District is a political subdivision of the State of Texas, organized under and by virtue of Article XVI, Section 59 of the Constitution of the State of Texas. The District is operated under the statutes of Chapter 58 and 49, in part, of the Texas Water Code.

Section #2: Structural Facilities

A: Service area.

The District provides irrigation, drainage and raw water supply functions to 149 square miles in Hidalgo and Willacy Counties. The District delivers water to approximately 69,936 acres of irrigated land. The District also delivers raw water to the city of Monte Alto, La Sara, Hargill, Raymondville, Lyford and North Alamo Water Supply Corporation.

The District owns 175,026.375 acre-feet of Class A Water Rights, 202.500 acre-feet of Class B Water Rights and 1,230.000 acre-feet of Domestic Water Rights.

B: Canal System:

The District's canal system consists of 129 miles of lined canals and 48 miles of unlined canals. Lined canals range in width from 3' to 25'. Unlined canals range in width from 40' to 65'.

C: Pipeline System:

The District's pipeline system consists of 316 miles of concrete or PVC pipelines. Pipelines range in size from 10" to 72".

D: Reservoir System:

The District operates four reservoirs. The two main reservoirs, Delta Lake Reservoir Unit #1 and Unit #2, have an approximate storage capacity of 10,750 acre-feet of water: 1,350 acre-feet for Unit #1 and 9,400 acre-feet for Unit #2, at a water surface elevation of 49'. Water is diverted from the river to either of the two main reservoirs. Water is then diverted from the reservoirs to the District and Municipalities. The District also has two other reservoirs: the Hargill Reservoir, with a storage capacity of approximately 120 acre-feet of water and the Nile Reservoir, with a

storage capacity of approximately 40 acre-feet of water. The total combined storage capacity for the District's Reservoirs is approximately 10,910 acre-feet of water.

E: Relift Pumps:

The District operates 49 relift pump stations. Of these pumps, 14 are powered by diesel motors ranging from 40 hp to 139 hp and 35 are powered by electric motors ranging from 20 hp to 200 hp. The pumps range in size from 10" to 30".

F: Pumping Plants

The District's main pumping plant (River Plant) is located on the Rio Grande River. Water is diverted from the Rio Grande River through the main canal system 32 miles to the Delta Lake Reservoirs Unit #1 and #2. The District's secondary pumping plant (Relift #1) is located on Delta Lake Reservoir Unit #1. The River Plant has four 450 hp pumps with 48" discharge pipes capable of pumping 160 cfs each. Relift #1 has five 350 hp pumps with 42" discharge pipes capable of pumping 120 cfs.

G: Metering Practices:

The District uses various different metering practices depending on the application. Field turnouts are measured with propellers, pipelines with Sea metric meters and Siemens Sonoflow meters.

The main canals utilize Rubicon automated gates with telemetry and metering control. Meters are read on a daily basis and reconciled at the end of the irrigation.

H: Field turnouts:

The District's standard turnouts are alfalfa type valves ranging in size from 10" to 14". The District uses canal gates in most areas to control flow to the turnouts and to isolate areas of the system if repairs are needed.

I: Canal System Conditions:

The concrete canal system was originally constructed in the late 1930's through the late 1940's. The system overall is in fair to excellent condition. The District repairs structural damages as needed. The District started installing pipelines to replace parts of the antiquated system in the mid 1970's. In total, to date, the District has installed 130 plus miles of new concrete and PVC pipe. During the last 5 years, the District replaced 15 miles on concrete lined canals with PVC pipe.

J: Relift Pumps and Pumping Plants Condition:

The original pumping system was constructed in the late 1930’s through the late 1940’s.

In 2008, the District started replacing all the older diesel motors with new Deutz and John Deere diesel motors. The electric motors are repaired as needed. The District rebuilds and replaces the relift pumps as needed.

Section #3: Management Practices

A: Water Deliveries:

The District’s total available water rights are 176,548.875 acre-feet (Certificate of Adjudication No. is 23-811) with the maximum storage amount of 248,392.709 acre-feet. The District delivers water under contract to the cities of Lyford, Raymondville and North Alamo Water Supply Corporation. The District also delivers water to Valley Acres Irrigation District and Engelman Irrigation District. The District’s average annual water diversions in acre-feet for the last three years are 106,213. The District’s average annual water deliveries to customers for the last three years are 123,381 acre-feet.

Year	Annual Rainfall (in./yr.)	Total Annual Water Diverted (acre/feet)	Annual Irrigation Water Delivered (acre/feet)	Annual Municipal and other Districts Water Delivered (acre/feet)	Total Water Delivered Annual (acre/feet)	Estimated Delivery Efficiency (%)
2021	36.7	71,088	67,578	18,454	86,032	79%
2022	20.8	74,362	77,303	22,776	97,138	70%
2023	22.4	75,055	69,006	21,655	96,710	72%
Average	26.6	73,502	71,296	20,962	93,293	74%

B: Practices used to account for water deliveries:

The District uses four different methods for water deliveries: 1) Flood Irrigation, 2) Metered Flood Irrigation, 3) Metered Drip Irrigation, 4) Metered Pond Irrigation. Water is metered to field turnouts through propeller type meters with the water being sold on a volumetric procedure. This method allows irrigators to monitor their usage rate, helping conserve their water. Water deliveries to Municipalities are metered through Sea metric meters.

C: Agriculture Water Deliveries Rate:

Water diverted to agriculture land is sold at a rate of \$16.00 per acre of flood irrigation, \$8.00 per acre of drip and sprinkler irrigation and \$32.00 per acre-foot for all other applications.

D: Municipal Water Delivery Rate:

Water diverted to municipal accounts are billed on the rate of \$88.66 per acre-foot (\$0.2721 per 1000 gallons)

Section #4: User Profile

A: Total number of acres in service area: 69,936

B: Average number of acres irrigated annually: 69,995 (3-year average)

C: Projected number of acres to be irrigated in 10 years: 750,000

D: Number of active irrigation customers: 445

E: Total irrigation water delivered annually (ac/ft): 73,485 (3-year average)

F: Types of crops grown by customers: cotton, grain, sugar cane, corn, vegetables, citrus, soybeans, sesame and grass

G: Types of Irrigation Systems:

1. Furrow flood irrigation accounts for approximately 70% of the irrigation deliveries. This type of irrigation is used for most of the pastures, sugar cane, cotton and grain crops, plus about 25% of the orchard crops.
2. Drip systems or micro spray emitter systems account for approximately 29% of the irrigation deliveries. This type of irrigation is used for most citrus and vegetable crops.
3. Sprinkler systems account for about 1% of the irrigation deliveries in the District.

H: Types of Drainage Systems:

The District installs drop structures and discharge pipes from the fields to the drainage facilities.

I: Entities within the District with Municipal Water Rights:

1. North Alamo Water Supply Corporation: 4,566.916 acre-feet
2. City of Lyford: 610.000 acre-feet
3. City of Raymondville: 5,670.000 acre-feet

Section #5: District's future plans for water conservation:

A: The District replaces 1-2 miles of concrete canal with PVC pipeline annually. The District also re-lines sections of the larger concrete canals with an EPDM liner on an as needed basis. The District annually installs 1-2 Rubicon automated control gates on main canals to meter and control the water deliveries more efficiently.

B: The District currently monitors all pipelines (when in use) daily with canal riders. Work orders are turned in on a daily basis for needed repairs on lines that can be isolated and shut off.

C: The District encourages growers to convert to poly pipe if applicable. Drip irrigation is also encouraged in areas where the District can provide an adequate supply of water. In areas within the District where it is not feasible for the District to keep the system full for a drip system, the District encourages the grower to install a holding pond to reserve water for the drip system.

D: The five-year target for water savings is 1,000-1,500 acre-feet per year. The ten-year target is 1,000 acre-feet per year.

Section #6: Effective Date of Policy

The effective date of this policy shall be February 21, 2024.