

CITY OF LONGMONT

2024
2025

WATER SUPPLY & WATER
SHORTAGE
IMPLEMENTATION PLAN





City of Longmont 2024/2025 Water Supply & Water Shortage Implementation Plan

Purpose:

The purpose of the City of Longmont's 2024/2025 Water Supply & Water Shortage Implementation Plan is to manage the City's Water Supply and to anticipate, identify and respond to water shortage in the Saint Vrain Creek watershed area. This plan evaluates the impact on raw water availability for the City of Longmont and recommends responses to the current water supply and demand forecast. This plan also formalizes the City's planning for future water shortages.

Methodology and Responsibility:

The City of Longmont's Water Supply & Water Shortage Implementation Plan will be managed by the Water Resources Divisions of the Water and Waste Department, referred to as Division. As outlined in this plan, indicators of water shortage will be monitored by personnel in the Division. The Division will recommend appropriate action guided by this plan for implementation of differing levels of water shortage.



Definition of water shortage:

For this plan, water shortage, sometimes referred to as drought, is defined as a single or multiple consecutive water years with below average stream flow. For the purposes of water shortage implementation planning, the water shortages of interest would only include water shortages that because of severity directly impact and stress the raw water availability for the City of Longmont.

City of Longmont

2024/2025 Water Supply & Water Shortage Implementation Plan

"Conserving our Water to Preserve our Quality of Life"

I. City of Longmont's Drought Supply Policy

The City of Longmont's raw water drought supply policy is outlined in the Raw Water Master Plan. This plan describes the City's policy of using the 1-in-100 year water shortage recurrence interval as the basis of planning for the City's raw water supply. This water shortage interval is based upon a water shortage of approximately 7 years in length with a total Saint Vrain Creek watershed deficit of 237,000 acre-feet. This plan also describes water shortage indicators and potential forecasting methodologies to be used to predict water shortage and determine its severity and impacts on the City's raw water supply.

Longmont is uniquely situated at the foothills of the Saint Vrain basin. Many of the most senior water rights in the South Platte River Basin originate in the Saint Vrain basin. Longmont has had a long-standing policy that requires transfer of the historical water right appurtenant to properties annexed. As such, Longmont has developed a diverse water rights portfolio that includes many of these senior water rights and through Water Court has changed several to include municipal use. Consequently, Longmont's water supply is very resilient when compared to other water providers along the Front Range.

During 2023, the Saint Vrain River Basin experienced above average streamflow conditions because of above average snowpack and above average rainfall. Water Board recommended and City Council concurred in May 2023 to remain at a Sustainable Conservation Level for the year. As a result of the average stream flows, Longmont finished the 2023 irrigation season (October 31, 2023) with average storage in its local reservoirs at 86% capacity. Current projections are that by July 15, 2024, select reservoir storage will be 96% full. During 2024, Division staff will continue to implement demand management strategies outlined in this plan. Division staff will also continue to pursue opportunities to exchange additional water to supplement existing water supplies.

Water Data	2023	2024
Total Water Supply Available	22,536 acre-feet	25,072 acre-feet
Total Treated Water Demand	14,980 acre-feet	17,524 acre-feet

Snowpack by Date	South Platte River Basin	Colorado River Basin
As of April 11, 2024	105%	106%

For 2024, Longmont expects to continue to utilize native basin water rights, trans-mountain water rights, and local storage water rights.

Description of Indicators and Forecasting Methods:

- **Natural Resources Conservation Service’s Monthly Streamflow Forecast**
Streamflow Forecast can be used to evaluate impacts upon Longmont's water rights on an average and dry basis. Based upon the streamflow forecast, the projected yield of direct flow and storage decrees will be used for calculation of raw water availability during water shortage conditions. This effort will focus on the April 1 and May 1 streamflow forecasts as an indicator of water shortage in the upcoming irrigation season.
- **Natural Resources Conservation Service’s Monthly Snowpack Survey**
The Snowpack Survey will be used in validating and/or adjusting the Streamflow Forecasts. These surveys also provide real-time measurement of snowpack to assist in reviewing projections in the time between monthly streamflow forecasts.
- **Saint Vrain Creek Basin Reservoir Storage Levels**
Total reservoir storage in the Saint Vrain Basin varies with the availability of water during the storage season (usually November through June). The total Saint Vrain Creek storage levels will be used in conjunction with target storage levels in Ralph Price Reservoir. When comparing storage levels in reservoirs with storage rights senior to Ralph Price Reservoir, water supply availability can be projected for the storage components of Longmont's water portfolio. An example of this information for Ralph Price Reservoir is shown in Exhibit B.
- **Trans-Mountain Water Supply Availability**
Colorado-Big Thompson Project (C-BT) Quota Declaration and Longmont carry-over of C-BT allocation from the previous year will be utilized in establishing trans-mountain water supply availability for 2024 and projections for later years. This trans-mountain water availability includes C-BT quota declarations, Upper Baldwin Ditch Replacement water, Carry-over C-BT water, Exchanged C-BT water, and Windy Gap water supplies. As of April 11, 2024, Longmont had a total trans-basin water supply yield of 15,584 AF.
- **Raw Water Availability for City of Longmont**
Raw water availability will be updated and revised by the Division staff to estimate Water Treatment Plant demands and projected raw water availability for Longmont. A graph of raw water availability for prior years and the projected water availability for this year is attached as Exhibit A. Projected demand in this graph is based upon a Sustainable Conservation Level water shortage implementation assumption.

- **City of Longmont Treated Water Demands Greater than Normal**
As water shortage conditions occur, water use often increases and raw water availability decreases. Treated water demand projections will be adjusted in accordance with this expected increase. Actual use as the water shortage progresses will be included in the evaluation of projected water demands.
- **City of Longmont Water Supply Projections for Multi-Year Water Shortage Projections**
As an additional tool in evaluating the current year water shortage implementation level, Division staff will complete a multiple year water supply evaluation. The current and next water year of that projection will be used to determine the water shortage implementation level for the City.

II. Description of Water Shortage Supply Implementation Levels

Division staff is responsible for monitoring water shortage indicators and forecasting raw water availability. The following guidelines will assist Division staff and Water Board in advising City Council to determine the appropriate course of action to undertake in varying degrees of water shortage intensity. These will serve as a guideline only, with the experience and year by year specific details also guiding the City's actions in any given water shortage scenario. The City Manager, with the advisement of Division staff, will have the power to declare a specific implementation level in the case of an emergency. Division staff will compare raw water supply with projected demand and monitor the storage levels in Ralph Price Reservoir and the Saint Vrain Creek Basin. If the combination of supply and available storage exceed projected demand by more than 135%, the City's water supply will not be considered in a water shortage scenario. The City will continue to take water conservation actions at all times, especially during years of below average streamflow. Percent of water savings goal referred to hereafter shall be with respect to last year's actual demand.

Sustainable Conservation Level:

At this level, the City will continue to implement Best Management Practices to conserve the water resources of the City.

Target Water Savings Goal: Sustainable demand management at all times to ensure reasonable water conservation methods are followed utilizing best management practices and that the overall goal of a 10% water savings as outlined in the Raw Water Master Plan is realized.

This level will include a projection of the following indicators:

- Storage volumes in Ralph Price Reservoir greater than target levels for the Mild Water Shortage Implementation in Exhibit B; and
- Raw water supply availability projections for the current and next water year at a level greater than **135%** of projected water demand.

Mild Water Shortage Implementation Targets:

At this level, conditions will mildly impact the City's supply vs. demand.

Target Water Savings Goal: Sufficient demand management, up to 10%, to ensure demand does not exceed raw water availability.

This level will include a projection of the following indicators:

- Storage volumes in Ralph Price Reservoir lower than target levels in Exhibit B.
- Raw water supply availability at a level of **120% - 135%** of projected water demand.

Moderate Water Shortage Implementation Targets:

At this level, conditions will moderately impact the City's supply vs. demand.

Target Water Savings Goal: 10% to 25%

This level will include a projection of the following indicators:

- Storage volumes in Ralph Price Reservoir lower than target levels in Exhibit B.
- Raw water supply availability at a level of **105% - 120%** of projected water demand.

Severe Water Shortage Implementation Levels:

At this level, conditions will severely impact the City's supply vs. demand.

Target Water Savings Goal: To be determined at time of Severe water shortage, goal dependent upon water shortage severity and water savings needs.

This level will include a projection of the following indicators:

- Storage volumes in Ralph Price Reservoir lower than target levels in Exhibit B.
- Raw water supply availability at a level less than **105%** of projected water demand.

III. Description of Water Shortage Implementation Action Plans

Action Summary Table						
City of Longmont Water Shortage Action Plan						
	Implementation Level	Sustainable Conservation	Mild	Moderate	Severe	
Type of Water Use	Customer	Turf/Lawn Watering	Best Management Practices	3 days/ week between 6 PM and 10 AM 10% reduction in historic use suggested	2 days/ week between 6 PM and 10 AM 10% reduction in historic use required	1 day/week
		Trees, Shrubs, Perennials	No Restrictions	Hand/drip/subsurface or 3 days/week	Hand/drip/subsurface or 2 days/week	Hand/ drip/subsurface only
		Non-Automated Car Washing	Best Management Practices	Best Management Practices	Best Management Practices	Not allowed
		Irrigation Meters	Best Management Practices	3 days/ week between 6 PM and 10 AM 10% reduction in historic use required	2 days/ week between 6 PM and 10 AM 20% reduction in historic use required	90% reduction in historic use required
		Spraying Impervious Surfaces	Only as necessary for health & safety	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)
	City	Public Facilities/Parks/Schools/ Lawn Watering	Best Management Practices	Separate approved plans for equal or greater reductions 10% reduction in historic use required	Separate approved plans for equal or greater reductions 20%-90% reduction depending on the severity of water shortage required	Separate approved plans for equal or greater reductions Reduction of 90% of use required School district lease eliminated
		Golf Courses	Best Management Practices	10% reduction in historic use required	20%-90% reduction depending on the severity of water shortage required	Limited to watering greens and trees
		Non-Automated Car Washing	As needed	As needed	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)
		Fire Hydrant Flushing & Testing	As needed	Limited to transmission lines or critical situations Use of hydrants for irrigation not allowed	Limited to critical situations Use of hydrants for irrigation not allowed	Limited to critical situations Use of hydrants for irrigation not allowed
Water Leases and water sales			Surplus water rental reduced or eliminated	Surplus water rental eliminated Historic leaseback of raw water reduced or eliminated	Surplus water rental eliminated Historic leaseback of raw water eliminated	

				Historic leaseback of raw water reduced or eliminated No water leases are guaranteed Bulk water permits will be reviewed for use and total demand on system Normal use of water through bulk permits will be allowed	Bulk water permits will be reviewed for use and total demand on system Normal use of water through bulk permits may be allowed	Bulk water permits will and sale of water through fire hydrants will not be allowed
Fines	Residential Fines per Violation	Water Waste Ordinance (Section 14.04.490)	Water Waste Ordinance (Section 14.04.490)	Water Waste Ordinance (Section 14.04.490)	Water Waste Ordinance (Section 14.04.490)	Water Waste Ordinance (Section 14.04.490)
	Business Fines per Violation	Water Waste Ordinance (Section 14.04.490)	Water Waste Ordinance (Section 14.04.490)	Water Waste Ordinance (Section 14.04.490)	Water Waste Ordinance (Section 14.04.490)	Water Waste Ordinance (Section 14.04.490)

Sustainable Conservation Level:

Upon determining that actionable water shortage conditions do not exist for the City of Longmont, any or all of the following may be performed:

Customer –

- Turf/ Lawn Watering- Best Management Practices
 - Trees, Shrubs, Perennials- No restrictions
 - Non-Automated Car Washing- Best Management Practices
 - Irrigation Meters- Best Management Practices
 - Spraying Impervious Surfaces- Only as necessary for health & safety
- Continue public information concerning impacts to the City of Longmont's water supply to encourage that best management practices (BMP's) are followed. The City will continually promote a public water conservation campaign. BMP's include but are not limited to:
 1. No water being wasted.
 2. Time-of-day watering restrictions, such as NO irrigation between the hours of 10:00 am and 6:00 pm, is strongly encouraged.
 3. Use Cycle Irrigation. Longmont's clay soils can only absorb a limited amount of water at one time. Cycle irrigation reduces runoff and allows more water to be absorbed resulting in deeper root growth and more water shortage-tolerant lawns.
 4. Use soil amendments and mulch in conjunction with appropriate plant selections.
 5. Check and replace leaky faucets and toilets.
 6. Wash only full loads of clothes and dishes.
 7. See our Water Conservation website to learn more best management practices: bit.ly/water-matters

City –

- Voluntary measures for raw water reduction in municipal and school use of water :
 1. Parks & Recreation will conserve water where possible and utilize BMP's.
 2. Golf courses will conserve water where possible and also utilize BMP's.
 3. School District will be encouraged to follow BMP's and conserve water where possible.
 4. City owned facilities will strive to set the benchmark for water use practice.
 5. Encourage all customers served by Longmont Water Utilities to implement BMP's for total water use.

Division staff will prepare for implementing Mild policies in the event this level occurs. The Division will monitor water shortage implementation effectiveness, recommend adjustments, and report to public regularly. The Division will also continue training and assigning staff to

monitor outdoor water use to ensure sustainable conservation efforts are followed and prepare in the event that a mild water shortage declaration is determined.

Mild Water Shortage Projection:

Upon determining a mild water shortage exists, Longmont may perform any or all of the following efforts, utilizing the actual previous year's water use as the base year for comparison purposes:

Customer –

- Voluntary water conservation by service customers:
 1. Encourage all customers served by the Longmont Water Utilities to implement a ten percent (10%) reduction in water use from historical levels.
 2. Water users who normally use raw water, well water, or other sources of water for irrigation will be requested to not increase use of water through the potable water system during water shortage emergencies.
 3. Irrigation class tap customers may be required to reduce demand by 10%.
 4. Community garden users, as well as private garden users, will be encouraged to implement a ten percent (10%) reduction in water use from historical levels.

City –

- Mandatory measures for raw water reduction in municipal and school use of water:
 1. Parks & Recreation will conserve water where possible, resulting in a net 10% reduction of historical annual use. Voluntary reductions apply to municipally owned critical sports fields and parks.
 2. Golf courses will conserve water where possible, resulting in a net 10% reduction of historical annual use.
 3. School District irrigation water lease reduction as appropriate, resulting in a minimum of 10% reduction of historical annual use.
 4. Saint Vrain Creek Corridor water lease reduced (or eliminated) to the extent that water is unable to be recaptured for use at the Water Treatment Plants.
 5. All other municipal water use (Building use, Fire Dept., etc.) will be reduced by 10% of historical annual use.
- Raw water leases and bulk water sales.
 1. Surplus water rental reduced or eliminated.
 2. Historic lease back of raw water reduced or eliminated.
 3. No water leases are guaranteed during a mild water shortage (except by existing contracts). If leases are approved, the City may elect to increase the lease rate to recover investment costs and to discourage non-essential uses.
 4. Bulk water permits will be reviewed for use and total demand on system. Normal use of water through bulk permits will be allowed, but use of fire hydrants for irrigation will not be allowed.

In water shortage years, there are many uses of water that will change compared to use during average and above average water years. Following are some examples of these changes in that water usage:

1. Use of water in Golden Ponds will gradually change from primarily piscatorial to supply. In a mild water shortage, water levels in the west pond will be allowed to equalize with the middle pond, with use of that amount. In addition, if the level of Golden Ponds lowers, water will not normally be replaced in this facility until the water shortage ends.
2. Union Reservoir water levels will be lower than normal resulting in lowered ability to conduct late season recreational activities on the reservoir.

Division staff will develop plans for implementing moderate policies in the event this level occurs. The Division will monitor water shortage implementation effectiveness, recommend adjustments, and report to public regularly. The Division will also continue training and assigning staff to monitor outdoor water use in the event that a moderate water shortage is determined.

Time of day watering restrictions, such as no unattended irrigation between the hours of 10:00 am and 6:00 pm, will be evaluated for practicality of implementation.

- Increase public information about the water shortage severity and review and enact appropriate conservation efforts. Conservation efforts are outlined in the City of Longmont's Water Conservation Master Plan. The City will promote a public water conservation campaign emphasizing moderately dry conditions existing at that time.

Moderate Water Shortage Projection:

Upon determining a moderate water shortage exists, Longmont may perform any or all of the following:

Customer –

- Mandatory water conservation by service customers:
 1. Require all customers served by Longmont Water Utilities, including community garden users, to implement a minimum ten percent (10%) reduction in water use.
 2. Implement a formal mandatory watering program to be followed by customers.
 3. No additional water use through the potable system to replace water normally used through raw water, well water, or other water supply scenarios.
 4. Irrigation class tap customers will be required to reduce demand by a minimum of 20%

Suggested 2 Day Watering Schedule

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Last number of Addresses	EVEN	X	OTHER	ODD	EVEN	OTHER	ODD
Property Type	Residential (single-family and duplexes)	No watering	Non-residential (commercial, multi-family, HOAs, other)	Odd Residential (single-family and duplexes)	Residential (single-family and duplexes)	Non-residential (commercial, multi-family, HOAs, other)	Residential (single-family and duplexes)

City –

- Mandatory measures for raw water reduction in municipal and school use of water :
 1. Parks & Recreation water reductions at a level between 20% and 90% depending upon severity of water shortage and overall implementation to demand reductions. To the extent possible, the identified critical sports fields, trees, and non-turf landscaped areas will continue to be irrigated with a 10% reduction in application of water.
 2. Golf course watering will be reduced between 20% and 90% depending upon severity of water shortage and overall implementation to demand reductions.
 3. School District irrigation water lease reduction at a level between 20% and 90% depending upon severity of water shortage and overall implementation to demand reductions.
 4. Saint Vrain Creek Corridor water lease eliminated to the extent that water is unable to be recaptured for use at the Water Treatment Plants.
 5. All other municipal water use will be reduced to the maximum extent possible (Building use, Fire dept., etc.).

- Raw water leases and bulk water sales
 1. Surplus water rental eliminated.
 2. Historic lease back of raw water reduced or eliminated.
 3. No water leases are guaranteed during a mild water shortage (except by existing contracts). If leases are approved, the City may elect to increase the lease rate to recover investment costs and to discourage non-essential uses.
 4. Bulk water permits will be reviewed for use and total demand on system. Normal use of water through bulk permits may be allowed, but use of fire hydrants for irrigation will not be allowed.

Continue public information about the water shortage severity and enactment of increasing conservation efforts. Conservation efforts are outlined in the City of Longmont's Water Conservation Master Plan. The City will promote a public water conservation campaign emphasizing severely dry conditions. As part of the conservation strategies, the City has developed a conservation rebate program, which will provide rebates for purchase of low volume toilets to replace high volume toilets.

Division staff shall develop plans for implementing severe policies, including mandatory water use reductions. The Division will monitor water shortage implementation effectiveness, recommend adjustments, and report to the public regularly.

The Division will continue to train and assign staff in monitoring, issuing warnings and imposing penalties for water waste and violations of any permits and noncompliance with any water restrictions.

Severe Water Shortage Projection:

Upon determining a severe water shortage exists, Longmont may perform any or all of the following:

Customer –

- Mandatory Water Conservation by Service Customers
 1. Mandatory water use reduction equal to projected water supply availability deficit for all customers served by the Longmont Water Utilities, including community gardens. Outdoor watering restrictions will be set based upon severity of water shortage. Restrictions will result in severely cutting back or eliminating watering based upon magnitude of the severe water shortage.
 2. Water rates to be adjusted to provide clear financial incentive to limit outside water use using the increasing block structure. Adjust water rates to maintain revenue during the water shortage as needed.
 3. Impose a moratorium on new water taps.
 4. No additional water use through the potable system to replace water normally used through raw water, well water, or other water supply scenarios.
 5. Irrigation class tap customers will be required to reduce demand by a minimum of 90%, or possibly eliminated.

City –

- Mandatory measures for raw water reduction in municipal and school use of water. All outdoor watering of public facilities may be eliminated depending upon the severity of the water shortage at this level:
 1. Parks & Recreation water reductions, resulting in a reduction of 90 % of use. Minimal watering of critical sports fields and parks will occur. The primary intent of Parks and Recreation watering will be to maintain economic

investments in non-turf landscaping, trees, and municipal facilities. Field use will be restricted or eliminated to protect facilities as needed.

2. Golf course watering will be limited to greens and tees.
3. School District irrigation water lease eliminated.
4. Saint Vrain Creek Corridor water lease eliminated to the extent that water is unable to be recaptured for use at the Water Treatment Plants.
5. All other municipal water use will be reduced to the maximum extent possible (Building use, Fire dept., etc.).

- Raw water leases and bulk water sales
 1. Surplus water rental eliminated.
 2. Historic lease back of raw water eliminated.
 3. Bulk water permits and sale of water through fire hydrants will not be allowed. Hydrant use for irrigation will not be allowed.

Division staff will continue to further develop plans for responding to the water shortage. The Division will monitor water shortage implementation effectiveness, recommend adjustments, and report to public regularly. Division staff will continue to monitor and enforce watering restrictions as necessary.

Continue public information about the water shortage severity and enactment of mandatory conservation efforts. Conservation efforts are outlined in the City of Longmont's Water Conservation Master Plan. The City will promote a public water conservation campaign emphasizing critically dry conditions.

Website Links:

City of Longmont Public Works & Natural Resources Department:
<http://longmontcolorado.gov/departments/departments-n-z/water>

Snow Survey Data:
<https://www.nrcs.usda.gov/wps/portal/wcc/home/quicklinks/states/colorado/products/basingraphs>

Reviewed by:

Longmont Water Board on April 15, 2024

Exhibit A

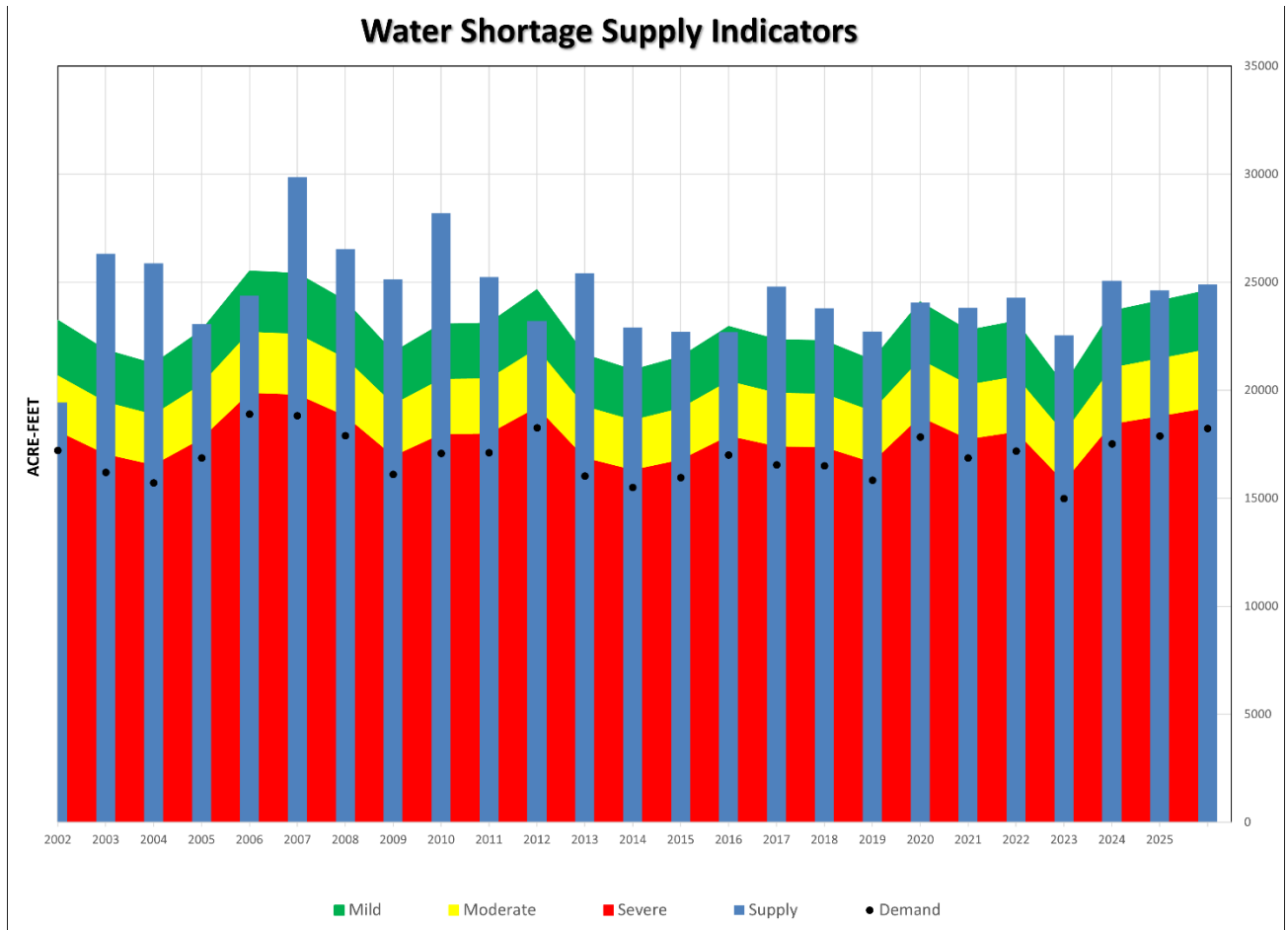


Exhibit B

