

Water Supply Reduction Management Plan

Updated February 2015

Introduction

Water demand management planning is important for Gilbert in order to meet the community's water requirements. The Gilbert Integrated Water Resources Master Plan is updated every five years, and was prepared to plan for the water demands of the town. The Master Plan addresses water demand management during periods of normal water supply and reduced water supply. An action plan for water demand management during periods of reduced supply is a necessary component to the water demand management plan because losses of supply or system failures can seriously impact Gilbert's water system and the ability to deliver water to customers. Such a plan must clearly establish the criteria for action at each stage of a reduced water supply. The plan must also have the flexibility to allow water managers to react quickly and to implement appropriate restrictions early in each event. Nothing in this plan shall prohibit Gilbert from imposing a moratorium pursuant to ARS Section 9-463.06.

The goal of the Management Plan is to provide competent implementation of demand reduction measures in order to:

- Protect public health and safety
- Provide sufficient water to meet the needs of Gilbert's customers
- Share the impacts and hardships equitably and in proportion to the magnitude of the event
- Minimize disruption of the economy so that jobs are protected and regional economic stability is preserved.

Supply Management Guidelines

Normal operations of Gilbert's water system include direct use of surface water at treatment plants, storage of surface water for annual recovery or long term savings, reclaimed water delivery to decrease potable water use, and groundwater pumping to meet all customer demands. These operational components allow Gilbert to maintain reliable water service while maximizing the use of renewable surface water supplies. During periods of diminished surface water supplies, Gilbert will necessarily change its operating routines in order to continue the maximization of those surface water supplies that remain. While these supply management techniques are essential during all stages of the demand management plan, they are especially important in the earlier stages, as they are the main mechanism that Gilbert will use to continue to meet demand with minimal impact to water customers. Their proper use will ensure that the public would have no perceived changes in water delivery, if not for the voluntary requests for water use reductions. The following list of supply management guidelines is not considered all inclusive, and can be amended as necessary to meet the service area needs:

- Shift deliveries of surface water from storage facilities for long term savings to treatment plants for direct use;
- Continue the well maintenance program as a backup supply for the recovery of stored water;
- Apply to the Arizona Department of Water Resources for a drought pumping exemption, if necessary;
- Increase well pumping, accessing Gilbert's groundwater reserves and stored water reserves;
- Purchase excess CAP water, if available, if SRP supplies are reduced;
- Closely monitor watershed conditions and communicate with water suppliers to ensure proper selection of water reduction stage implementation; and
- Attempt to increase supplies by utilizing existing emergency connections with other municipal partners, if available.

Water Use Reduction Guidelines

Demand reduction may be necessitated by a number of factors impacting Gilbert's water supplies. As supplies diminish, a comprehensive monitoring of available potable and non-potable supplies, the modeling of demands, and the availability of emergency water supplies will determine the response trigger points at which information campaigns or regulation will be implemented to manage the available resources. The Town Council has authorized the Town Manager to declare the stage of deficiency and the appropriate level of response for the Gilbert water service area.

The response trigger points have been categorized into Stages 1 through 4, according to the severity of the water supply reduction. The response stage points are triggered by a percentage reduction range in surface water supply, with the corresponding response action calling for a specific percentage reduction in water demand. The numbers were modeled based upon peak month daily demand at build-out, using the planned water supplies listed in the 2012 Integrated Water Resources Master Plan Update, which will be updated accordingly. The corresponding demand reduction percentage will allow Gilbert to meet peak month daily demand, while holding the capacity of one production well in reserve within each zone during an event. If the target demand reduction percentage is not met within the corresponding event stage, the Town Manager is authorized to implement elements of the next highest event stage until the targeted demand reduction is met. While the response measures are independently identified within the appropriate event stage, all measures are cumulative as a supply reduction or a system failure progresses through the stages. Gilbert has sole jurisdiction to define the stages of reduced water supplies and the appropriate levels of response.

Event Stage Points and Responses

STAGE ONE: WATER ALERT

The Town Manager may initiate a Stage One Water Alert when the surface water supply allocation to the Gilbert water service area is reduced by 10 to 15% for a duration that will significantly constrain water service operations. The targeted water demand reduction percentage for Stage One is 5% from the most recent Water Resources Master Plan projection. Such a supply reduction may be system-wide or confined to a segment or portion of the service area. Gilbert will be capable of providing water to meet current demands with the remaining surface water and groundwater supplies.

The Town Manager is authorized to terminate a Stage One Water Alert upon the Water Resources Manager's or a designee's written determination that the conditions that prompted the alert no longer exist, or when a more advanced stage of reduced water supply is declared.

Responses Triggered by Stage One Water Alert:

Municipal Action

- Implement intensive water conservation public education information program
- Mandatory 5% water use reduction (Facilities, Parks)
- Implement water wasting actions:
 - Educational letter and/or home water audit for "waste of water"

Requested Customer Action for all Water Customers

- Voluntary Water use reductions per sector:
 - Residential
 - Commercial & Industrial
 - Schools
 - HOAs
 - PKIDs

Requested Action for Construction Customers

- Construction meters may be subject to limitations on time of day use

STAGE TWO: WATER WARNING

The Town Council may declare a Water Warning when the surface water supply allocation to the Gilbert water service area is reduced by 16 to 25% for a duration that will significantly constrain water service operations. The targeted water demand reduction percentage for Stage Two is 10% from the most recent Water Resources Master Plan projection. Such a supply reduction may be system-wide or confined to a segment or portion of the service area. Gilbert will be capable of providing water to meet current demands with the remaining surface water and groundwater supplies. Upon declaration by the Town Council of a Stage Two Water Warning, Stage One responses will apply. In addition, the responses set forth below will apply.

The Town Manager is authorized to terminate a Stage Two Water Warning upon the Water Resources Manager's or a designee's written determination that water allocation, deliveries, storage, or distribution system conditions are sufficient to meet consumption demand, or when a more advanced stage of reduced water supply is declared.

Responses Triggered by Stage Two Water Alert: Municipal Action

- Mandatory 5% facility water use reduction, mandatory 10% irrigation reduction
- Intensify water conservation public education information program, including public notification of status
- Implement water wasting penalty options:
 - Citation/fine for "waste of water" violation

Requested Customer Action for all Water Customers

- Voluntary Water use restrictions:
 - No seasonal over-seeding
 - Time of day watering limits
 - Odd/even address watering
 - Prohibit use of fountains
 - No home car washing
 - Water for restaurant customers only upon request

STAGE THREE: WATER EMERGENCY

The Town Council may declare a Stage Three Water Emergency when:

1. The surface water supply allocation to the Gilbert water service area is reduced by 26 to 40% for a duration that will significantly constrain water service operations or
2. Stage two water use reduction measures, inter-service area water transfers, water withdrawals from wells, and other feasible water supply augmentation measures will be insufficient to meet water demands in the service area without restrictions.

The targeted water demand reduction percentage for Stage Three is 15% from the most recent Water Resources Master Plan projection. Such a supply reduction may be system-wide or confined to a segment or portion of the service area. Upon implementation by the Water Resources Manager, or designated representative, mandatory water use reduction programs will be implemented in addition to any other remedy available, and water prices in the form of a surcharge, or surcharges, may be set. Any such surcharges shall be imposed pursuant to ARS Section 9-511.01 and may be adopted by the Town Council in accordance with ARS Section 9-511.01.

The Town Manager is authorized to terminate a Stage Three Water Emergency when upon the Water Resources Manager's or a designee's written determination, water allocation, deliveries, storage, or distribution system conditions are determined to be sufficient to meet consumption demand without mandatory use reduction, or when a more advanced stage of reduced water supply is declared.

Responses Triggered by Stage Three Water Emergency:

Municipal Action

- Mandatory 10% facility water use reduction, mandatory 15% irrigation reduction
- Implement residential reduced supply rate surcharge based upon use (in 1,000's gallons):
 - 0 to 10: no surcharge
 - 11 to 20: 25% surcharge
 - 21 to 30: 50% surcharge
 - 31+: 75% surcharge

Required Customer Action for all Water Customers

- Stage Two voluntary actions become mandatory.

Required Action for Construction Customers

Only reclaimed water may be used for construction, and such use must be approved by the Public Works Director

STAGE FOUR: WATER CRISIS

The Town Council may declare a Stage Four Water Crisis when it determines additional measures must be instituted to protect human health and safety. The Town Council shall declare Stage Four water crisis when;

1. The surface water supply allocation to the Town of Gilbert water service area is reduced by more than 40% or,
2. Stage Three emergency supply and use reduction programs are insufficient to meet water demand or,
3. A catastrophic water supply failure occurs.

The targeted water demand reduction percentage for Stage Four is 20% from the most recent Water Resources Master Plan projection. Upon declaration by the Town Council of a Stage Four Water Crisis and publication of that declaration, elements of Stage Four Water Crisis become mandatory. Enforcement may include the installation of water flow restrictors and water service shutoff for excessive use, in addition to any other remedy available. Such a supply reduction may be system-wide or confined to a segment or portion of the service area.

The Town Manager is authorized to terminate a Stage Four Water Crisis when upon the Water Resources Manager's or a designee's written determination, water allocation, deliveries, storage, distribution system conditions are determined to be sufficient to meet consumption demand without mandatory use reduction.

Responses Triggered by Stage Four Water Crisis:

Municipal Action

- Mandatory 15% facility water use reduction, mandatory 20% irrigation reduction, no non-essential turf watering
- Determine residential water use allocation based upon previous year water usage (new move ins based upon existing local water use averages)
- Implement flow restrictor installation for excessive use (3 months overuse)

Requested Customer Action for All Customers

- No Lawn Watering

Requested Action for Construction Customers

- No construction water use

Water Use Reduction Implementation at All Stages

During periods of reduced water supplies, the Water Resources Manager will monitor the projected supply and demand for water on a daily basis, and will advise the Town Manager. The extent of the water demand reduction required and the level of implementation of use reduction measures to be placed in effect to assure Gilbert can prudently plan for and supply necessary water will also be determined on a daily basis. The Town Manager may order or recommend that the appropriate phase of water use reduction be implemented or terminated in accordance with the applicable provisions of this plan and enabling codes of the Town of Gilbert. Implementation orders will be made public and are effective following publication in a daily newspaper a minimum of one time. Restrictions shall take effect and be enforceable upon publication of the notice. Restrictions due to a sudden or catastrophic water treatment or delivery system failure, or unforeseen sudden increases in demand for water, are enforceable immediately following the filing of intent with the office of the Town Clerk. Restrictions will remain in effect until such time as they are rescinded.