112 WATER SHORTAGE PLAN

The water shortage plan below is adopted by Urbandale Water Utility effective as of May 1st, 2025. Such Water Shortage Plan may be amended by Board action at any time.

112.1 INTRODUCTION

This plan will apply to all Central Iowa Water Works (CIWW) Member Agencies and shall be implemented by each Member Agency with its customers.

The intent of the CIWW water shortage plan is to manage system demand so customers do not experience pressure, quality, or availability issues during periods of extreme water demand or during other times when water availability may be limited due to other events, such as raw water shortage, water quality events, or mechanical failures.

The goal at each stage in the plan is to reduce CIWW system demands to 85% or less of the "Current Capacity" of CIWW to produce safe drinking water, as defined in this plan.

The premise of Stage I is that reducing lawn watering is the most effective way to reduce demand without undue hardship during periods when lawn watering is a significant source of demand. Stage I may be skipped if a water shortage occurs during a time of year when lawn watering demand is not significant.

The premise of Stage II is that particularly high demand may occur when heavy lawn watering events occur. Stage II may be skipped if a water shortage occurs during a time of year when lawn watering is not significant.

The premise of Stage III is that lawn watering comprises the most readily curtailed use during water shortage events. Stage III may be skipped if a water shortage occurs during a time of year when lawn watering demand is not significant.

Limiting consumption to a representative average of off-peak months, plus or minus a small allowance, will result in a significant demand reduction compared to peak consumption. This is the premise of Stage IV.

The stages of this plan are not necessarily consecutive. When a water shortage occurs, the stage deemed most appropriate for the conditions will be implemented.

Urbandale Water Utility (UWU) purchases all of its water from CIWW. As a result, this plan will mirror the CIWW plan in the event of a regional water shortage and provide for a local strategy in the event of a UWU shortage. If the event only affects the Urbandale system, the stages, triggers, and goal deduction percentages will be the same but be based on the "current capacity" (CC) of the UWU's ability to provide water.

112.2 CURRENT CAPACITY TO PRODUCE SAFE DRINKING WATER AND EXPECTED PEAK DEMAND

1. Current Capacity. The Current Capacity to produce safe drinking water on any day is referred to "Current Capacity" or C total. Current capacity is defined as the amount of water CIWW can deliver on any day taking into consideration raw water availability and quality, seasonal treatment efficacy, and any mechanical or operational issues on that given day. The number will vary seasonally and may vary day to day depending on specific water quality and operational conditions. Current Capacity is computed as the sum of the daily capacities of the individual CIWW source treatment plants and may be expressed in the following formula:

   C Total= C Fleur + C McMullen + C Saylorville + C WDMWW + C Polk City + C Grimes + any new plant capacity

   Current Capacity will be evaluated on a daily basis when there is potential for a water shortage. Producers responsible for CIWW water production will perform the daily evaluation and report the Current Capacity in Million Gallons per Day (MGD).

2. Expected Peak Demand. "Expected Peak Demand" is defined as the peak daily demand that is expected by CIWW without implementation of water shortage measures under this plan.

112.3 PLAN STAGE I: VOLUNTARY 25% REDUCTION IN LAWN WATERING

1. Trigger. During a period of substantial lawn watering demand, when expected peak demand reaches 90% of current capacity or system demand is generating a high number of areas with low pressure, or there are other indications that without wise usage of water, a shortage will occur.

2. Anticipated Impact. It is anticipated that Stage I will most likely be triggered during peak lawn watering season. In a typical year lawn watering can account for as much as 40% of demand on peak day. If this is the case, a 25% reduction in lawn watering will result in a 10% reduction in total demand.

3. Goal. A 10% reduction in CIWW system demands as compared to Expected Peak Demand.

4. Actions.
   a. Request a metro-wide 25% reduction in lawn watering.
   b. Encourage customers to optimize their lawn watering systems so water is not directed onto impervious surfaces and lawns are not overwatered.
   c. Continued reinforcement that customers water on alternate days and excluding Mondays (historically a peak demand day), by a system under

which even numbered addresses water only on Wednesday, Friday, and Sunday, and odd-

numbered addresses water only on Tuesday, Thursday, and Saturday.

d. Suspend all hydrant flushing programs except for water quality purposes.
e. Request that City officials minimize high water use activities such as street sweeping and watering golf course fairways.
f. Coordinate with Member Agencies to ensure they are relaying the same message.

5. Enforcement. There will be no enforcement at this stage.

112.4 PLAN STAGE II: VOLUNTARY 50% REDUCTION IN LAWN WATERING

1. Trigger. During a high period of substantial lawn watering demand, after Stage I has been implemented and failed to achieve an adequate reduction in consumption, when Expected Peak Demand exceeds 90% of Current Capacity, or system demand continues to generate areas of low pressure, or there are other indications that without further reductions in demand, a shortage could occur.

2. Anticipated Impact. It is anticipated that Stage II will most likely be triggered during the peak outdoor water use season. In a typical year, lawn watering can account for as much as 40% of demand on a peak day. If this is the case, a 50% reduction in lawn watering will result in 20% reduction in total demand.

3. Goal. A 20% reduction in system demands as compared to Expected Peak Demand.

4. Actions. Request customers further reduce water consumption by taking the following measures in addition to those implemented in Stage I:
    a. Request a metro-wide 50% reduction in outdoor water use.
    b. Remind customers to optimize their lawn watering systems so water is not directed onto impervious surfaces and turf is not overwatered.
    c. Reinforce the recommendation for customers to irrigate on alternate days and excluding Mondays.
    d. Encourage wise use of water during outdoor activities including washing cars, playing in the sprinkler, playing with water toys, and filling swimming pools.
    e. Encourage wise use of indoor water including identifying and repairing leaking fixtures, washing only full loads in dishwashers and washing machines, shorter showers, etc.
    f. Coordinate with Member Agencies to ensure that they are relaying the same message.

g. Request that public agencies (City, County, or State) set an example by: closing recreational facilities with known water inefficiencies and suspend the operation of decorative fountains.

5. Enforcement. There will be no enforcement at this stage.

112.5 PLAN STAGE III. LAWN WATERING PROHIBITED AND NO USE OF AUTOMATIC LAWN WATERING SYSTEMS

1. Trigger. During a period of substantial lawn watering demand, after Stage I and Stage II have been implemented and failed to achieve adequate reduction in consumption, when Expected Peak Demand exceeds 90% of Current Capacity, or system demand continues to generate areas of low pressure, or there are other indications that without further reductions in demand, a shortage could occur.

2. Anticipated Impact. It is anticipated that Stage III will most likely be triggered during peak lawn watering season. In a typical year, lawn watering can account for as much as 40% of demand on peak day. If this is the case, prohibiting lawn watering will result in 40% reduction in total demand.

3. Goal. A 40% reduction in system demands as compared to Expected Peak Demand.

4. Actions. Require members to further reduce water consumption by suspending all lawn watering and the use of all automatic lawn watering systems of their customers. This reduction is in addition to all steps implemented in Stage I and Stage II. The requirement for placing a new sod should be suspended until Stage III is lifted.

5. Enforcement. Customers observed by CIWW of Member Agencies watering their lawn in violation of this policy will be notified. If lawn watering is not suspended within 48 hours, water service will be terminated by Member Agency and any published fees will apply. Water service will be restored only upon receipt of an undertaking by the customer that the customer understands and will comply with the mandatory conservation measures. Any subsequent violation will result in further termination of service. In addition, the use of water for lawn watering in violation of this plan shall be deemed an unauthorized use of water and Charges for the Unauthorized Use of Water/Metering Tampering shall apply and must be paid before service will be restored.

112.6 PLAN STAGE IV: WATER RATIONING

1. Trigger. During periods of substantial lawn watering demand, or other potential shortage after Stage I, II and III have been implemented a failed to achieve an adequate reduction in consumption, when Expected Peak Demand exceeds 90% of Current Capacity, or system demand is generating a high number of areas with low

pressure, limited source water supply, or there are other indications that without wise usage of water, a shortage could occur. Stage IV may also be invoked, without resort to Stages I through III, if Expected Peak Demand for any reason and/or limited source water supply cannot be addressed by the measures contemplated by Stages I through III.

2. Anticipated Impact. It is anticipated that Stage IV will only be triggered in the event of a significant and severe water shortage, or other event, which severely reduces capacity relative to demand. In this case a reduction in demand to the lowest level which will meet public health and safety standards and, when reasonably possible, animal health and safety standards for livestock producers will be sought.
   The definition of "livestock producer" is the same as stated in 7 U.S.C § 147(1) to be "(A) a person that is actively engaged in farming and that receives a substantial amount of total income from the production of grain or livestock, as determined by the Secretary, that is:
      i. An established producer or husbander of livestock or a dairy producer who is a citizen of, or legal resident alien, in the United States; or
      ii. A farm cooperative, private domestic corporation, partnership, or joint operation in which majority interest is held by members, stockholders, or partners who are citizens of legal resident aliens"

3. Goal. A reduction in system demands as compared to Expected Peak Demand sufficient to allow the CIWW to meet public health and safety standards, and when reasonable possible, animal health and safety standards.

4. Actions. Water rationing measures will be required to be implemented by all Member Agencies and enforced by application of an Emergency Water Shortage Rate. In order to implement such a demand, Member Agencies in consultation with the CIWW Technical Committee shall set a target level for demand consistent with its Current Capacity and shall use such a target to establish a "Rationed Demand" as defined in this plan. All Member Agencies will be responsible for asking their customers to reduce their consumption to a level to meet the "Stage IV Rationed Demand". Member Agencies will be expected to initiate efforts to reduce consumption above such a level and will be charged at the Emergency Water Shortage Rate intended to strongly discourage consumption above such level.
      i. Water rationing shall consider livestock health and safety needs. The expected decrease for members supplying such needs shall be set by the Technical Committee taking into consideration livestock health and safety needs.

ii. At Stage IV, Member Agencies with alternative available sources of water meeting state drinking water stands shall supplement and/or replace CIWW water from those sources.

5. Enforcement. "Stage IV Rationed Demand" means for each Member Agency will be responsible for implementing measures to ensure this Rationed Demand is not exceeded. Should the "Stage IV Rationed Demand" be exceeded, the Member Agency will be subject to an Emergency Water Shortage Rate which will be equal to 10 times the established variable rate for any amount in excess of the Rationed Demand.

113 SCHEDULE OF CHARGES

113.1 METERED WATER

All water shall be supplied to customers by meter measurement, except as herein otherwise provided, at rates established by the Water Board (see Appendix A - Fee Schedule).

113.2 FIRE PROTECTION CHARGES

113.2.1 The annual standby charge for fire hydrants outside the city shall be paid by the owner of the property on which the hydrant is placed (see Appendix A - Fee Schedule). If such property is owned by a public agency or is part of a public thoroughfare, the responsible agency or government desiring to establish and maintain the hydrant shall agree, in writing, to make the payments and show evidence of their ability to make proper levy to obtain funds for such propose.

113.2.2 In consideration of the annual charge made for such hydrants outside the city, the Water Utility will provide water to the service connection at the main. All such hydrants will be installed at the owner's expense, but the Water Utility shall specify the size and type of hydrant used and the location and method of installation.

113.2.3 Fire protection service charges will be determined as follows:

1) For one tenant, one building, and one connection to the Water Utility's distributions system, there shall be one charge according to size.
2) For one tenant, one building and more than one connection to the Water Utility's distribution system, each connection shall be charged by size.
3) Shopping centers, industrial and apartment complexes shall be charged for each fire service connection to the Water Utility's distribution system.