



## Memo

Date: May 21, 2021

To: Joe Grande, Interim General Manager

From: Amy Deming, Interim Public Information and Water Conservation Officer

Re: Demand Reduction Strategies

This memo is a supplement to discussions of supply and demand as a critical water source, Well 15, is out of service. Water conservation can be an effective strategy to help balance supply and demand on Madison's East Side and citywide.

Though the specific discussions are relating to Well 15 and Zone 6e (North and East Madison), citywide implementation of a conservation and demand reduction strategy is recommended. This is because the entire Madison community can share the benefits of alternate day watering and reducing peak demand. In addition, citywide implementation prepares and accustoms residents to the concept of alternate day watering and Level 1-3 alerts in the event of a mechanical failure or other issue in their part of the city. Citywide implementation also creates some communication efficiencies. At the same time, targeted and personalized outreach to alders and community members in critical demand management areas is essential.

In other cities, alternate day watering has been implemented to reduce drawdown and energy use, improve resiliency, defer or avoid the cost of new facilities and additional supply, and raise awareness of how our water use habits affect the community. Established lawns and gardens also benefit from less frequent watering because it encourages plants to develop deeper, more extensive root systems.

The Water Utility General Manager has the authority to impose voluntary or mandatory outdoor water use restrictions on all users within the Utility's service area as provided for under Madison General Ordinances Section 13.04.

## Overview

The strategy outlines progressive demand reduction measures based on specific triggers.

Every Day	June-September	Level 1	Level 2	Level 3
<ul style="list-style-type: none"><li>•Water Saving Measures Recommended</li></ul>	<ul style="list-style-type: none"><li>•Voluntary Alternate Day Watering</li></ul>	<ul style="list-style-type: none"><li>•Mandatory Alternate Day Watering</li></ul>	<ul style="list-style-type: none"><li>•Progressive Mandatory Watering Restrictions</li></ul>	<ul style="list-style-type: none"><li>•Water Supply Emergency</li><li>•All nonessential water use should cease</li></ul>

## Voluntary Alternate Day Watering June-September

### Trigger

Voluntary Alternate Day Watering would begin June 1 each year and end September 30 to maintain pumpage below a specified daily threshold set by the Water Supply Manager.

In the event of short-term supply issues, Madison Water Utility may issue other voluntary advisories such as “no watering days” citywide or in a particular area. Examples of triggers for these advisories would be a major fire or a period of dry weather with rain in the short-term forecast.

### Actions

All residents would be encouraged to limit their water use outdoors to every other day or less. A schedule would be recommended and distributed based on street address. Residents could choose which days they water within their schedule.

Below is an example of an alternate day watering schedule:

Even Address Numbers	Odd Address Numbers
<ul style="list-style-type: none"><li>• Saturdays</li><li>• Tuesdays</li><li>• Thursdays</li></ul>	<ul style="list-style-type: none"><li>• Sundays</li><li>• Wednesdays</li><li>• Fridays</li></ul>

Note: In this example, Mondays are designated as no watering days. This designation will allow Madison Water Utility to fill reservoirs.

### Recommended communication and outreach:

- Create and maintain a webpage that includes:
  - Justification and benefits of alternate day watering for Madison
  - Identification of any critical demand management areas (with map)
  - A “dashboard” that is updated at least once a week with current supply/demand status citywide and in critical demand management areas.

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- Additional water conservation tips
- What residents should expect in a Level 1, Level 2, or Level 3 water emergency, including information about any contingency water supplies
- Exceptions (see below)
- Press Release
- Email to all alders sharing press release, webpage, and suggested language to include in their blogs, newsletters, emails and/or social media posts.
- Individual outreach to alders and neighborhood contacts in critical demand management areas
- Social media campaign
- Article for Inside MWU (automatically sends to News & Alerts email list subscribers when published)
- Brief (3-5 minute) voice-over video in multiple languages
- Virtual and/or in-person public meetings, prioritizing critical demand management areas

#### Enforcement

None.

#### Exceptions

Participation is voluntary. However, in preparation for potential mandatory restrictions the following exceptions could be communicated:

- Customers using rain barrels and other non-potable water sources, drip irrigation/soaker hoses, and handheld hoses and watering implements can water any day of the week.
- New lawns, seedlings, and other situations that require water daily.
- Organizations and businesses that require outdoor water daily such as irrigation professionals, commercial nurseries, public pools and splash pads, car washes, athletic fields, etc.

## Level 1 Alert: Mandatory Alternate Day Watering Restrictions

#### Triggers

Water demand exceeds the Level 1 gallons/day threshold established by the Water Supply Manager. Thresholds would be set citywide and for critical demand management areas. The thresholds would be based on maintaining reservoir levels to provide fire protection requirements.

#### OR

A mechanical failure at one or more critical wells.

#### Actions

- “Alternate Day Watering” schedule above would become mandatory.
- Madison Water Utility may prepare any identified contingency sources of water to go into standby mode. (Note: Well 15 is not considered a contingency water source.)
- Water main flushing would be suspended in critical areas.

**Recommended Communication & Outreach:**

- Webpage and dashboard update.  
If any contingency sources of water will go into standby mode, this information should be included as well as the demand threshold for those supplies to be placed in service.
- Alert on Madison Water Utility and City of Madison website
- Press release
- Communication with Mayor's office and all alders
- Individual outreach to alders and community contacts in critical demand management areas, and/or where contingency water supplies are going into standby.
- Social media campaign
- Outreach to wholesale customers and municipalities in impacted areas served by Madison Water Utility
- Short voice-over video in multiple languages.
- Continued updating of supply/demand dashboard on Madison Water Utility website.

Enforcement

As allowed by MGO Sec. 13.04. Focus should be education, with notification cards hand-delivered or mailed to residents in response to observed or reported violations. Repeated violations could result in enforcement action(s) and a forfeiture of not less than twenty dollars (\$20) nor more than one thousand dollars (\$1,000) for each day a violation continues.

Exceptions

- Customers using rain barrels and other non-potable water sources, drip irrigation/soaker hoses, and handheld hoses could water any day of the week.
- New sod, seedlings, and other plants that require daily watering.
- Certain organizations and businesses that require outdoor water for their essential functions such as irrigation professionals, commercial nurseries, and car washes.

## Level 2 Alert: Progressive Mandatory Restrictions on Outdoor Water Use and/or Contingency Water Supplies in Service

Trigger

Alternate day water restrictions are insufficient to reduce demand. Water demand citywide or in a particular area exceeds the threshold established by the Water Supply Manager, reducing useable water storage and potentially affecting fire flow availability.

**OR**

Mechanical failure at one or more critical wells

**AND/ OR**

Threshold has been met or exceeded for contingency water supplies to be placed in service.

#### Actions

- Updated restrictions would be developed and published to the Madison Water Utility website. (Since restrictions at this level could be progressive, they would be labeled 2A, 2B, etc.)
- The same communication and outreach strategies as a Level 1 Alert would be implemented.
- All water main flushing would be suspended.
- Other City Departments would be asked to suspend any non-emergency outdoor water use.
- Wholesale customers and municipalities served by MWU would be asked to comply with watering restrictions and suspend water main flushing, street washing, and other non-emergency outdoor water uses.

#### Enforcement

Same as Level 1 Alert, above.

#### Exceptions

Same as Level 1 Alert, above.

## Level 3 Alert: Water Supply Emergency - Suspend All Non-Essential Uses of Water

#### Trigger

Water demand significantly exceeds supply or distribution capacity, causing serious fire flow deficiencies and/or low pressure. Causes could include a natural disaster or other event that affects critical facilities and Madison Water Utility's ability to deliver safe water.

#### Actions

Customers would be directed to suspend all non-essential uses of water, both indoors and outdoors.

Madison Water Utility's crisis communication plan would be implemented. This could include boil water and other advisories, depending on the situation.

#### Enforcement

As permitted by MGO Section 13.04. Each day a violation continues could be subject to a forfeiture of not less than twenty dollars (\$20) nor more than one thousand dollars (\$1,000).

#### Exceptions

None.