



Ordinance 10-06

Presentation to
City of Bloomington Common Council

April 28, 2010

WATERWORKS CAPITAL IMPROVEMENTS PROGRAM

City of Bloomington Utilities Department





Need for Capital Improvements

Our mission is to reliably deliver high-quality water to residential customers and to the employers in our community.

- Protect and enhance our public water system
- Meet current and future water demands
- Upgrade a 43-year-old plant to meet current standards and regulations
- Provide a second water line for reliability
- Attract and maintain economic development



History of Monroe Water Treatment Plant Improvements

- 1967 Plant and Intake Facility placed into operation at 18 mgd
- 1988 Improvements and expansion to 24 mgd
- 2002 Standby engine generators installed
- 2002 Residuals Management Facilities constructed
- 2003 Monroe Water Treatment Plant Improvements
- 2004 Intake Facility Improvements
- 2008 Filter Rehabilitation



Long Range Water Capital Planning

2001 Long Range Waterworks Capital Planning Study

2003 Long Range Water Capital Plan Finalized

2007 Water Supply Evaluation Report

2009 City of Bloomington Water Conservation Plan





City of Bloomington Water Conservation Program

cbu 2009

Water Conservation Plan
*City of Bloomington
Utilities*

Wittman Hydro Planning Associates
10/2/2009





Capital Improvements Overview

Mike Bengtson, Assistant Director
City of Bloomington Utilities Department





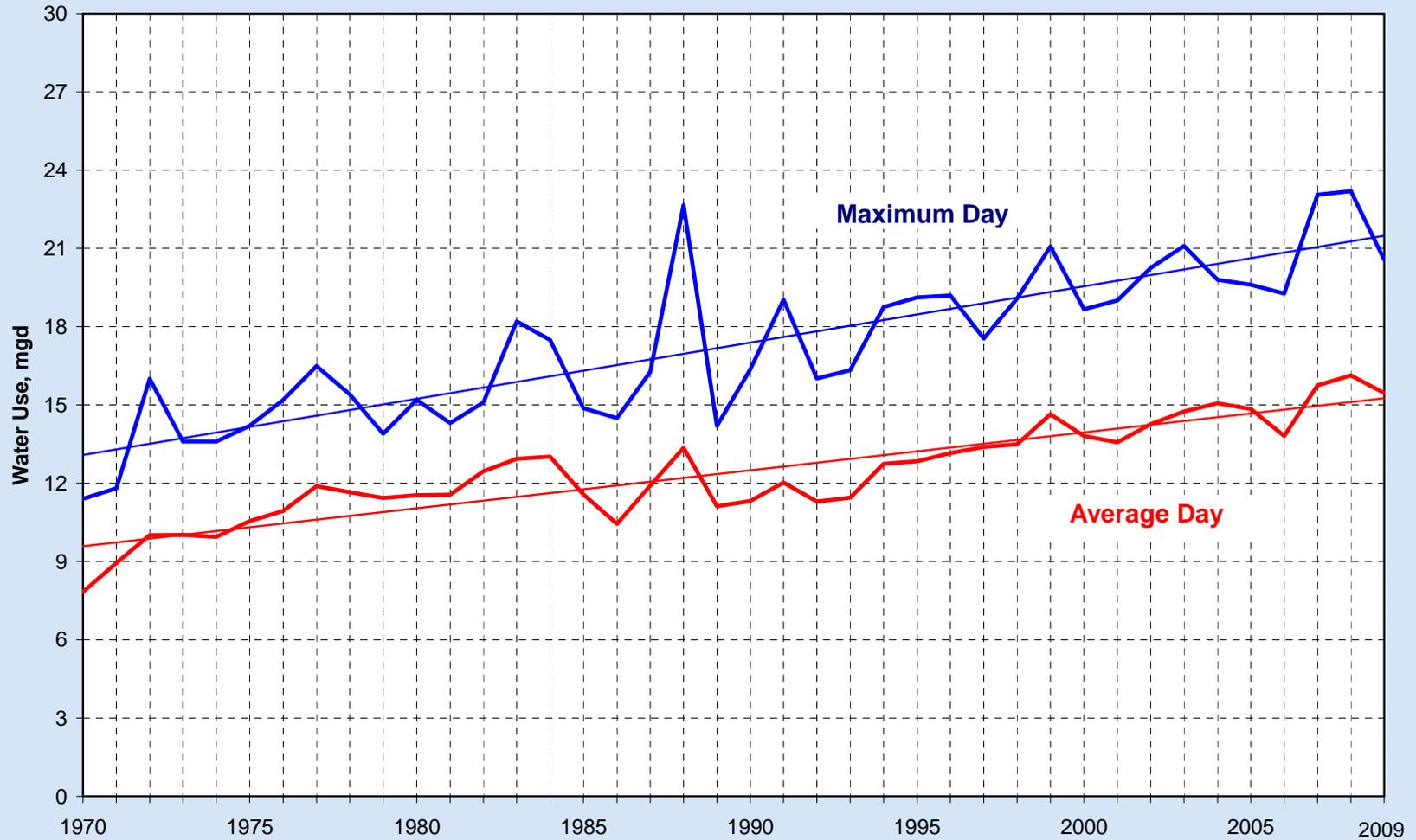
Water Usage May Exceed System Capacity

- Water demands have steadily increased
- Current Plant Capacity is 18 mgd with one filter out of service
 - 18 mgd was exceeded 149 days in 2007 - 2009
 - 21 mgd was exceeded 19 days in 2007 - 2009
- Maximum Daily Demands
 - September 5, 2007 23.1 mgd
 - August 12, 2008 22.8 mgd
 - August 22, 2008 23.2 mgd
 - September 2 & 3, 2008 22.8 mgd
 - September 16, 2009 20.6 mgd

Historical Water Production



Monroe Water Treatment Plant





Recent Example of Operational **Stress**

August 6 - 10, 2008

Plant's South Basin Train is taken out of service due to broken mechanism.



Plant's production is cut in half to 12 mgd during the 4-day repair.



Recent Example of Operational **Stress**

December 15 - 16, 2008

Plant's ammonia backpressure valve failed.



Results in full plant shut down to identify problem.



Recent Example of Operational **Stress**

November 30 - December 13, 2009

Alum chemical feed pipe plugged. Full plant shut down for 8 hours. The North Settling Basin was out of service.



Plant production is cut in half to 12 mgd during the 13 day repair.



Recent Example of Operational **Stress**

December 14, 2009

16-inch water main break on 17th Street.



Utility crews work 12 hours to replace pipe - water loss is 3 MG



Proposed Capital Improvement Projects

Contract One

Monroe Water Treatment Plant Expansion

Contract Two

Southeast Water System Improvements –
Section I
Southeast Pump Station and Tank

Contract Three

Southeast Water System Improvements –
Section II
Southeast Transmission Mains



Scope of Capital Improvements

Contract One - Monroe Water Treatment Plant Expansion

- Increase Low Service PS from 24 mgd to 30 mgd firm capacity
- Flocculation / sedimentation basins from 24 mgd to 30 mgd
- Add two media filters to provide 30 mgd firm capacity
- Increase Transfer PS from 24 mgd to 30 mgd firm capacity
- Increase High Service PS from 24 mgd to 30 mgd firm capacity



Scope of Capital Improvements (*Continued*)

Contract Two - Southeast Pump Station and Tank

- New 12 mgd Southeast Pump Station expandable to 24 mgd
- New 2 MG Southeast Tank

Contract Three - Southeast Transmission Mains

- Second raw water pipeline from Intake Facility to the Plant
- Second pipeline from the Plant to the distribution system

Approximately 39,000 linear feet of transmission mains



Questions / Comments

