DEPARTMENT OF NATURAL RESOURCES

Water Conservation Report Summaries for Public Water Suppliers

North and East Metro Groundwater Management Area

Table of Contents

Additional Details at [DNR Water Conservation Reporting System webpage]

Bayport, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... -1.1 percent
Residential gallons per capita per day 95
Non-residential: Annual percent Reduction 14.1
Trend in total per capita demand ..... -31.5
Total Peaking Factor 2.49

Water Accounting

Total water to Treatment..... 115,861,000 gallons
Total water to Distribution ..... 115,861,000 gallons
Number of Residential connections..... 1,029
Number of Non-Residential connections..... 80
Residential versus Non-Residential Use..... 94.3 million gallons versus 22.8 million gallons
Date of Highest Use 6/16/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): 100,000 gallons -- $10,000
- Meter Repair/Replace: 500,000 gallons -- $5,000
- Hydrant repair: 100,000 gallons -- $50,000
- Add non-irrigation meters: 30,000 gallons -- $2,000

Date of last Audit/Percent done: No data reported

Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Irrigation restrictions regulations
- Soil preparation requirements (Inches of topsoil)
- Allow native plants and low water use turf/plants
- Wellhead protection ordinance and zoning

Education and Outreach

- Billing inserts or tips printed on the actual bill – 4
- Consumer Confidence Reports – 1
- Social media distribution – 1
- Staff training -- 2
- Community newsletters – 4
- Direct mailings – 1
- Website -- 2

Collaboration

- Collaborated with watershed group(s)
- Collaborated with MDH on wellhead protection project

Rate structure

- Increasing Block

Blaine, City of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... No data reported
Residential gallons per capita per day ..... No data reported
Non-residential: Annual percent Reduction ..... -2.41
Trend in total per capita demand ..... No data reported
Total Peaking Factor ..... No data reported

Water Accounting

Total water to Treatment ..... 2,671,849,800 gallons
Total water to Distribution ..... No data reported
Number of Residential connections..... No data reported
Number of Non-Residential connections..... No data reported
Residential vs. Non-Residential Use..... 1,809.7 million gallons versus 720.9 million gallons
Date of Highest Use ..... No data reported

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances: None listed

Education and Outreach: None listed

Collaboration: None listed

Rate structure: None listed

Centerville, City of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 0 percent
Residential gallons per capita per day 64
Nonresidential: Annual percent Reduction..... -0.4 percent
Trend in total per capita demand ..... -19.4
Total Peaking Factor 2.49

Water Accounting

Total water to Treatment ..... 102,186,000 gallons
Total water to Distribution ..... 102,186,000 gallons
Number of Residential connections..... 1,245
Number of Non-Residential connections..... 59
Residential versus Non-Residential Use..... 95.1 million gallons versus 7.1 million gallons
Date of Highest Use 6/17/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Irrigation restrictions regulations
- Wellhead protection ordinance and zoning

Education and Outreach

- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 1
- Staff training -- 1
- Community newsletters -- 1
- Water week promotions -- 1
- Website -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with neighboring communities to manage timing/amount of water withdrawal of shared water resource
- Collaborated with MDH on wellhead protection project
- Collaborated with MDA on improving water quality and agricultural concerns
- Collaborated with DNR on improving on decreasing our permit allotment or enhancing conservation measures

Rate structure

- Base Rate Zero Gallons
- Increasing Block

Circle Pines, City of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 19.8 percent
Residential gallons per capita per day 57
Non-residential: Annual percent Reduction 4.81
Trend in total per capita demand ..... -7.03
Total Peaking Factor 1.77

Water Accounting

Total water to Treatment ..... 150,539,000 gallons
Total water to Distribution ..... 150,539,000 gallons
Number of Residential connections..... 1,815
Number of Non-Residential connections..... No data reported
Residential versus Non-Residential Use..... 106.5 million gallons versus 14.3 million gallons
Date of Highest Use 6/17/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Irrigation restrictions regulations
- Water consumption regulation
- Allow native plants and low water use turf/plants
- Track enforcement

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 1
- Consumer Confidence Reports -- 1
- Community newsletters -- 4

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)
- Collaborated with neighboring communities to manage timing/amount of water withdrawal of shared water resource
- Collaborated with MDH on wellhead protection project

Rate structure

- Flat
- Increasing Block

Columbus, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 21.1 percent
Residential gallons per capita per day 125
Non-residential: Annual Percent Reduction 14.91
Trend in total per capita demand ..... -28.17
Total Peaking Factor 10.6

Water Accounting

Total water to Treatment ..... 16,092,300 gallons
Total water to Distribution ..... 16,092,300 gallons
Number of Residential connections 28
Number of Non-Residential connections 14
Residential versus Non-Residential Use ..... 1.8 million gallons versus 10.9 million gallons
Date of Highest Use 10/13/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances: None listed
Education and Outreach: None listed
Collaboration: None listed
Rate structure: None listed

Cottage Grove, City Of - Public Works Dept Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 6.2 percent
Residential gallons per capita per day 79
Non-residential: Annual percent reduction 39.43
Trend in total per capita demand ..... -31.37
Total Peaking Factor 2.26

Water Accounting

Total water to Treatment ..... 1,339,972,289 gallons
Total water to Distribution ..... 1,339,972,289 gallons
Number of Residential connections 11,513
Number of Non-Residential connections 183
Residential versus Non-Residential Use ..... 1,115.5 million gallons versus 142 million gallons
Date of Highest Use 7/17/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): 216,000 gallons -- $10,800

Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF ET Irrigation Controllers:
  Quantity: 146
  Gallons saved: 1,314,000

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Irrigation restrictions regulations

Education and Outreach

- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 1

Collaboration: None listed
Rate structure: Increasing Block

Forest Lake, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 5.7 percent
Residential gallons per capita per day 70
Non-residential: Annual Percent Reduction 8.24
Trend in total per capita demand ..... -17.55
Total Peaking Factor 1.91

Water Accounting

Total water to Treatment ..... 450,401,000 gallons
Total water to Distribution ..... 450,401,000 gallons
Number of Residential connections 3,837
Number of Non-Residential connections 418
Residential versus Non-Residential Use ..... 291.7 million gallons versus 132.8 million gallons
Date of Highest Use 6/17/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): 2,318,000 gallons -- $31,851
- Meter Repair/Replace: no gallons reported -- $998,624
- Hydrant repair: no gallons reported -- $12,486

Date of last Audit/Percent done: 7/10/2019; 50 percent audit
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF ET Irrigation Controllers:
  Quantity: 8
  Gallons saved: 72,000

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Irrigation restrictions regulations
- Wellhead protection ordinance and zoning

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 1
- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) – 1
- Marketing rebate programs (e.g., indoor fixtures & appliances and outdoor practices) -- 1
- Website -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)
- Collaborated with MDH on wellhead protection project

Rate structure

- Flat
- Increasing Block

Fridley, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 8.6 percent
Residential gallons per capita per day 60
Non-residential: Annual Percent Reduction ..... -0.94
Trend in total per capita demand ..... -9.72
Total Peaking Factor 1.91

Water Accounting

Total water to Treatment ..... 776,622,000 gallons
Total water to Distribution ..... 1,231,781,000 gallons
Number of Residential connections..... No data reported
Number of Non-Residential connections..... No data reported
Residential versus Non-Residential Use..... 648.6 million gallons versus 477.4 million gallons
Date of Highest Use 6/18/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): 11,000,000 gallons -- $0
- Hydrant repair: 12,000,000 gallons -- $0
- Add irrigation meters: 2,000,000 gallons -- $0
- Increase Treatment Efficiency: 3,000,000 gallons -- $0

Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF Toilet Retrofits:
  - Quantity: 28
  - Gallons saved: 168,000
- SF Clothes Washer Rebates:
  - Quantity: 29
  - Gallons saved: 145,000
- SF Rain Barrels:
  - Quantity: 7
  - Gallons saved: 9,100
- SF ET Irrigation Controllers:
  - Quantity: 9
  - Gallons saved: 81,000
- MF Showerhead and Aerator Kits
  - Quantity: 85
  - Gallons saved: 426,530

- MF LF Showerheads
    - Quantity: 38
    - Gallons saved: 72,124

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances:

- Critical/Emergency Water Deficiency Ordinance
- Irrigation restrictions Regulations
- Tree ratio requirement
- Allow native plants and Low water use turf/plants
- Wellhead protection ordinance and zoning
- Ordinances that permit stormwater irrigation or reuse
- Track enforcement

Education and Outreach:

- Consumer Confidence Reports -- 2
- Social media distribution (e.g., emails, Facebook, Twitter) -- 23
- Presentations to community groups -- 2
- Displays and exhibits -- 1
- Marketing rebate programs (e.g., indoor fixtures & appliances and outdoor practices) -- 1
- Community news letters -- 1
- Direct mailings (water audit/retrofit kits, showerheads, brochures) -- 1
- Information kiosk at utility and public buildings -- 1
- Cable TV Programs -- 1
- Website -- 3
- Targeted efforts (large volume users, users with large increases) -- 2

Collaboration:

- Collaborated with watershed group(s)
- Collaborated with other high volume water users (commercial, industrial, institutional or agricultural)
- Collaborated with SWCD or NRCS on land/water management practices
- Collaborated with MDH on wellhead protection project

Rate structure: Increasing block

Hugo, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 2.5 percent
Residential gallons per capita per day 63
Non-residential: Annual Percent Reduction ..... -13.36
Trend in total per capita demand ..... -11.17
Total Peaking Factor 4.59

Water Accounting

Total water to Treatment ..... 370,116,000 gallons
Total water to Distribution ..... 370,116,000 gallons
Number of Residential connections 3,636
Number of Non-Residential connections 104
Residential versus Non-Residential Use ..... 286.7 million gallons versus 74.3 million gallons
Date of Highest Use 8/31/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF ET Irrigation Controllers:
  - Quantity: 172
  - Gallons saved: 1,548,000

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances: none listed

Education and Outreach

- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 1
- Community newsletters -- 2
- Direct mailings (water audit/retrofit kits, showerheads, brochures) -- 1
- Information kiosk at utility and public buildings -- 1
- Website -- 1
- Targeted efforts (large volume users, users with large increases) -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)
- Collaborated with neighboring communities to manage timing/amount of water withdrawal of shared water resource

- Collaborated with other high volume water users (commercial, industrial, institutional or agricultural)
- Collaborated with SWCD or NRCS on land/water management practices
- Collaborated with MDH on wellhead protection project
- Collaborated with MDA on improving water quality and agricultural concerns
- Collaborated with DNR on improving on decreasing our permit allotment or enhancing conservation measures

Rate structure

- Increasing Block

Lake Elmo, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 32.2 percent
Residential gallons per capita per day 56
Nonresidential: Annual Percent Reduction 33.03
Trend in total per capita demand 17.02
Total Peaking Factor 2.72

Water Accounting

Total water to Treatment ..... 307,928,000 gallons
Total water to Distribution ..... 307,928,000 gallons
Number of Residential connections 2,775
Number of Non-Residential connections 179
Residential versus Non-Residential Use ..... 179.5 million gallons versus 29.2 million gallons
Date of Highest Use 9/24/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): 200,000 gallons -- $35,000
- Meter Repair/Replace: zero gallons -- $80,000
- Reduce unauthorized water use: 25,000 gallons -- $0
- Meter testing: zero gallons -- $2,500
- Add irrigation meters: zero gallons -- $6,000

Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF Toilet Retrofits:
  - Quantity: 2
  - Gallons saved: 12,000
- SF ET Irrigation Controllers:
  - Quantity: 1
  - Gallons saved: 9,000

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Irrigation restrictions regulations
- Water consumption regulation for toilets
- Water consumption regulation for showerheads
- Water consumption regulation for urinals
- Soil preparation requirements (inches of topsoil)

- Tree ratio requirement
- Allow native plants and low water use turf/plants
- Mandatory “green” building or plumbing codes
- Wellhead protection ordinance and zoning
- Non-Zoning Wetlands Ordinance (beyond state/federal laws)

Education and Outreach

- Consumer Confidence Reports – 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 60
- Presentations to community groups -- 1
- Staff training -- 6
- Marketing rebate programs (e.g., indoor fixtures & appliances and outdoor practices) -- 3
- Community news letters -- 3
- Direct mailings (water audit/retrofit kits, showerheads, brochures) -- 2
- Information kiosk at utility and public buildings -- 1
- Public service announcements -- 2
- Website -- 6
- Notices of ordinances -- 1

Collaboration

- Collaborated with MDH on wellhead protection project

Rate structure

- Base Rate Zero Gallons
- Increasing Block

Lexington, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... - 7 percent
Residential gallons per capita per day 58
Non-residential: Annual percent Reduction 11.62
Trend in total per capita demand ..... -24.14
Total Peaking Factor 1.33

Water Accounting

Total water to Treatment ..... 49,456,484 gallons
Total water to Distribution ..... 49,456,484 gallons
Number of Residential connections 570
Number of Non-Residential connections 60
Residential versus Non-Residential Use ..... 45 million gallons versus 8 million gallons
Date of Highest Use 8/4/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances: none listed

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 4
- Consumer Confidence Reports -- 1

Collaboration: None listed

Rate structure

- Increasing Block

Lino Lakes, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 2.3 percent
Residential gallons per capita per day 69
Non-residential: Annual Percent Reduction ..... -651.4
Trend in total per capita demand 99.9
Total Peaking Factor 2.16

Water Accounting

Total water to Treatment ..... 559,892,000 gallons
Total water to Distribution ..... 559,892,000 gallons
Number of Residential connections..... 5,002
Number of Non-Residential connections..... 173
Residential versus Non-Residential Use..... 440.2 million gallons versus 106.6 million gallons
Date of Highest Use 8/20/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- MF/CII ET Irrigation Controllers:
  - Quantity: 6
  - Gallons saved: 1,500,000
- CII Automatic Faucets:
  - Quantity: 18
  - Gallons saved: 36,000

Reuse or other customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Irrigation restrictions regulations
- Soil preparation requirements (inches of topsoil)
- Tree ratio requirement
- Wellhead protection ordinance and zoning

Education and Outreach

- Consumer Confidence Reports – 1
- Press releases to traditional local news outlets (e.g., newspapers, radio and TV) -- 1
- Staff training -- 4
- Community newsletters -- 4

- Information kiosk at utility and public buildings – 1
- Public service announcements -- 1
- Website -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with MDH on wellhead protection project

Rate structure

- Increasing Block

Mahtomedi, City of Summary of Water Conservation Report

2019 Report based on 2018 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 14.4 percent
Residential gallons per capita per day 64
Non-residential: Annual Percent Reduction 22.96
Trend in total per capita demand ..... -12.2
Total Peaking Factor 2.23

Water Accounting

Total water to Treatment ..... 235,994,000 gallons
Total water to Distribution ..... 235,994,000 gallons
Number of Residential connections..... 2,731
Number of Non-residential connections..... 48
Residential versus Non-Residential Use..... 191.8 million gallons versus 10.3 million gallons
Date of Highest Use 6/17/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF Toilet Retrofits:
  - Quantity: 13
  - Gallons saved: 78,000
- SF Clothes Washer Rebates:
  - Quantity: 9
  - Gallons saved: 45,000

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Private well ordinance (private wells in a city must comply with water restrictions)
- Irrigation restrictions regulations
- Water consumption regulation
- Tree ratio requirement
- Allow native plants and Low water use turf/plants
- Wellhead protection ordinance and zoning

Education and Outreach

- Consumer Confidence Reports -- 1
- Staff training -- 6
- Community newsletters -- 6

- Information kiosk at utility and public buildings -- 3
- Public service announcements -- 2
- Cable TV Programs -- 365
- Website -- 365
- Notices of ordinances -- 4

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)
- Collaborated with SWCD or NRCS on land/water management practices
- Collaborated with MDH on wellhead protection project
- Collaborated with DNR on improving on decreasing our permit allotment or enhancing conservation measures

Rate structure

- Increasing Block

Minneapolis, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 8.9 percent
Residential gallons per capita per day 52
Annual Percent Reduction-Nonresidential 18.1
Trend in total per capita demand ..... -8.32
Total Peaking Factor 2.49

Water Accounting

Total water to Treatment ..... 19,105,171,000 gallons
Total water to Distribution ..... 12,779,020,932 gallons
Number of Residential connections..... 93,096
Number of Non-Res. connections..... 7,079
Residential versus Non-Residential Use..... 8,330.2 million gallons versus 3,314.3 million gallons
Date of Highest Use 6/18/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.):

- Meter Repair/Replace: zero gallons -- $1,376,892
- Hydrant repair: zero gallons --$1,404,386

Date of last Audit/Percent done: 12/31/2015; 87 percent completed
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Private well ordinance (private wells in a city must comply with water restrictions)
- Soil preparation requirements (x" of topsoil)
- Allow native plants and low water use turf/plants
- Non-Zoning Wetlands Ordinance (beyond state/federal laws)
- Ordinances that permit stormwater irrigation or reuse

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 12
- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) – 1
- Website -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)

- Collaborated with neighboring communities to manage timing/amount of water withdrawal of shared water resource

Rate structure

- Base Rate Zero Gallons
- Uniform

Mounds View, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 12.1 percent
Residential gallons per capita per day 63
Annual Percent Reduction-Nonresidential 13.46
Trend in total per capita demand ..... -16.34
Total Peaking Factor 2.21

Water Accounting

Total water to Treatment ..... 431,388,000 gallons
Total water to Distribution ..... 431,388,000 gallons
Number of Residential connections 3,158
Number of Non-Res. connections 139
Residential versus Non-Residential Use ..... 301.0 million gallons versus 78.3 million gallons
Date of Highest Use 7/30/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.):

- Meter testing: 3 gall -- $300

Date of last Audit/Percent done: 6/5/2019; 100% completed
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Irrigation restrictions regulations

Education and Outreach

- Consumer Confidence Reports -- 1
- Facility tours -- 1
- Displays and exhibits -- 1
- Community newsletters -- 4
- Website -- 1

Collaboration: None listed

Rate structure

- Increasing Block

North St. Paul, City of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 5.4 percent
Residential gallons per capita per day 52
Non-residential: Annual Percent Reduction ..... No data reported
Trend in total per capita demand ..... No data reported
Total Peaking Factor 1.81

Water Accounting

Total water to Treatment ..... 351,370,000 gallons
Total water to Distribution ..... 351,370,000 gallons
Number of Residential connections 4,438
Number of Non-Residential connections 261
Residential versus Non-Residential Use ..... 240.5 million gallons versus 91.9 million gallons
Date of Highest Use 6/16/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances: none listed
Education and Outreach: none listed
Collaboration: none listed
Rate structure: none listed

New Brighton, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 6.4 percent
Residential gallons per capita per day 62
Non-residential: annual percent reduction ..... -0.29
Trend in total per capita demand ..... -1.80
Total Peaking Factor 2.35

Water Accounting

Total water to Treatment ..... 1,118,616,000 gallons
Total water to Distribution ..... 718,013,000 gallons
Number of Residential connections ..... not reported
Number of Non-Residential connections ..... not reported
Residential versus Non-Residential Use ..... 534.2 million gallons versus 138.2 million gallons
Date of Highest Use 6/15/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- Meter Repair/Replace: no gallons reported -- $90,103
- Add irrigation meters: 4 gallons -- $6,000

Date of last Audit/Percent done: not reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: none listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Irrigation restrictions regulations
- Soil preparation requirements (Inches of topsoil)
- Allow native plants and low water use turf/plants
- Wellhead protection ordinance and zoning
- Non-Zoning Wetlands Ordinance (beyond state/federal laws)
- Track enforcement

Education and Outreach

- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 2
- Presentations to community groups -- 1
- Facility tours -- 15

- Displays and exhibits -- 1
- Community newsletters -- 4
- Information kiosk at utility and public buildings -- 1
- Website -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)
- Collaborated with MDH on wellhead protection project

Rate structure

- Uniform

Newport, City of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 12.7 percent
Residential gallons per capita per day 52
Non-residential: Annual Percent Reduction 9.35
Trend in total per capita demand ..... -14.86
Total Peaking Factor 1.43

Water Accounting

Total water to Treatment ..... 109,716,000 gallons
Total water to Distribution ..... 109,716,000 gallons
Number of Residential connections 1,010
Number of Non-Residential connections 78
Residential versus Non-Residential Use ..... 70.8 million gallons versus 25.0 million gallons
Date of Highest Use 7/16/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: 7/3/2017; 100 percent completed
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Wellhead protection ordinance and zoning

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 4
- Consumer Confidence Reports -- 1
- Community newsletters -- 4

Collaboration

- Collaborated with watershed group(s)

Rate structure: Increasing Block

Oak Park Heights, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 15.1 percent
Residential gallons per capita per day 60
Non-residential: annual percent reduction 8.7
Trend in total per capita demand ..... -7.45
Total Peaking Factor 2.63

Water Accounting

Total water to Treatment ..... 209,626,000 gallons
Total water to Distribution ..... 209,626,000 gallons
Number of residential connections 1,181
Number of non-residential connections 192
Residential versus non-residential Use ..... 99.9 million gallons versus 78.1 million gallons
Date of Highest Use 8/1/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: 1/6/2020; no percent reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Private well ordinance (private wells in a city must comply with water restrictions)
- Irrigation restrictions regulations
- Tree ratio requirement
- Allow native plants and low water use turf/plants
- Wellhead protection ordinance and zoning

Education and Outreach

- Consumer Confidence Reports -- 1

Collaboration

- Collaborated with watershed group(s)

Rate structure

- Increasing Block

Shoreview, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 1.6 percent
Residential gallons per capita per day 62
Non-residential: Annual Percent Reduction 7.01
Trend in total per capita demand ..... -12.0178
Total Peaking Factor 2.18

Water Accounting

Total water to Treatment ..... 821,905,800 gallons
Total water to Distribution ..... 821,905,800 gallons
Number of Residential connections..... 8,489
Number of Non-Residential connections..... 240
Residential versus Non-Residential Use..... 625.9 million gallons versus 182.6 million gallons
Date of Highest Use 6/17/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): zero gallons -- $7,400
- Meter Repair/Replace: zero gallons -- $9,709
- Hydrant repair: zero gallons -- $1,800
- Rice Creek Fields stormwater re-use: 2,800,000 gallons -- $3,000

Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Private well ordinance (private wells in a city must comply with water restrictions)
- Irrigation restrictions regulations
- Allow native plants and low water use turf/plants
- Wellhead protection ordinance and zoning
- Track enforcement

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 3
- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 4
- Staff training -- 3
- Facility tours -- 4

- Community newsletters -- 2
- Information kiosk at utility and public buildings -- 1
- Website -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)

Rate structure

- Increasing Block

Spring Lake Park, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 7.1 percent
Residential gallons per capita per day 70
Non-residential: Annual percent reduction ..... - 4.5
Trend in total per capita demand ..... -11.64
Total Peaking Factor 2.18

Water Accounting

Total water to Treatment ..... 287,786,000 gallons
Total water to Distribution ..... 287,786,000 gallons
Number of Residential connections 2,031
Number of Non-Residential connections 173
Residential versus Non-Residential Use ..... 171.4 million gallons versus 96.0 million gallons
Date of Highest Use 6/18/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No date reported; 98 percent completed
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Private well ordinance (private wells in a city must comply with water restrictions)
- Irrigation restrictions regulations
- Tree ratio requirement
- Permit required to fill pool or require pool to be covered
- Allow native plants and low water use turf/plants
- Mandatory “green” building or plumbing codes
- Wellhead protection ordinance and zoning
- Track enforcement

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 2
- Consumer Confidence Reports -- 2
- Press releases to traditional local news outlets (e.g., newspapers, radio and TV) -- 2
- Social media distribution (e.g., emails, Facebook, Twitter) -- 1
- Paid advertisements (e.g., billboards, print media, TV, radio, web sites, etc.) -- 1
- Staff training -- 2
- Community newsletters -- 4
- Information kiosk at utility and public buildings -- 4

- Website -- 5
- Targeted efforts (large volume users, users with large increases) -- 4
- Notices of ordinances -- 2

Collaboration

- Collaborated with watershed group(s)
- Collaborated with MDH on wellhead protection project

Rate structure

- Increasing Block

St. Anthony, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 2.6 percent
Residential gallons per capita per day 61
Non-residential: Annual percent reduction 10.55
Trend in total per capita demand 0.35804
Total Peaking Factor 1.99

Water Accounting

Total water to Treatment ..... 270,990,422 gallons
Total water to Distribution ..... 270,990,422 gallons
Number of Residential connections..... 2,221
Number of Non-Residential connections..... 126
Residential versus Non-Residential Use..... 201.9 million gallons versus 62.0 million gallons
Date of Highest Use 7/14/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF Rain Barrels:
  - Quantity: 8
  - Gallons saved: 10,400

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Private well ordinance (private wells in a city must comply with water restrictions)
- Irrigation restrictions regulations
- Water consumption regulation
- Allow native plants and low water use turf/plants
- Wellhead protection ordinance and zoning
- Ordinances that permit stormwater irrigation or reuse

Education and Outreach

- Consumer Confidence Reports -- 1
- Staff training -- 1
- Facility tours -- 1
- Community newsletters -- 2
- Information kiosk at utility and public buildings -- 1
- K-12 education programs (Project Wet, Drinking Water Institute, presentations) -- 2

- Water week promotions -- 1
- Website -- 2

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)
- Collaborated with MDH on wellhead protection project

Rate structure

- Base Rate Zero Gallons
- Uniform

St. Paul Regional Water Services Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 15.4 percent
Residential gallons per capita per day 30
Non-residential: Annual percent reduction 8.67
Trend in total per capita demand ..... -5.19
Total Peaking Factor 1.89

Water Accounting

Total water to Treatment ..... 26,179,700,000 gallons
Total water to Distribution ..... 11,745,754,445 gallons
Number of Residential connections 90,815
Number of Non-Residential connections 4,480
Residential versus Non-Residential Use ..... 5,126.4 million gallons versus 4,809.9 million gallons
Date of Highest Use 6/17/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): zero gallons -- $96,000,000
- Hydrant repair: no gallons reported -- $1,187,227
- Meter testing: no gallons reported -- $100,000
- Customer leaks/high users fixed: 166,325,000 gallons -- $1,663,250

Date of last Audit/Percent done: 12/31/2020; 100% completed
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances:

- Irrigation restrictions regulations

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 1
- Consumer Confidence Reports -- 1
- Press releases to traditional local news outlets (e.g., newspapers, radio and TV) -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 1
- Paid advertisements (e.g., billboards, print media, TV, radio, web sites, etc.) -- 1
- Presentations to community groups -- 1
- Facility tours -- 10
- Displays and exhibits -- 1
- K-12 education programs (Project Wet, Drinking Water Institute, presentations) -- 10
- Water week promotions -- 1

- Website -- 1
- Targeted efforts (large volume users, users with large increases) -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with other high volume water users (commercial, industrial, institutional or agricultural)

Rate structure

- Base Rate Zero Gallons
- Seasonal Rate

St. Paul Park, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 6.2 percent
Residential gallons per capita per day 60
Non-residential: Annual Percent Reduction 2.91
Trend in total per capita demand ..... -5.46
Total Peaking Factor 2.15

Water Accounting

Total water to Treatment ..... 178,882,000 gallons
Total water to Distribution ..... 178,882,000 gallons
Number of Residential connections 1,803
Number of Non-Residential connections 88
Residential versus Non-Residential Use ..... 119.6 million gallons versus 48.1 million gallons
Date of Highest Use 4/9/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- Meter Repair/Replace: 10 gallons -- $0
- Hydrant repair: 1 gallon -- $5,000
- Meter testing: 10 gallons -- $0

Date of last Audit/Percent done: 7/20/2020; 100% completed
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Permit required to fill pool or require pool to be covered
- Wellhead protection ordinance and zoning

Education and Outreach

- Consumer Confidence Reports – 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 25
- Staff training -- 12
- Community newsletters -- 6
- Information kiosk at utility and public buildings -- 1
- Website -- 12

Collaboration

- Collaborated with watershed group(s)

- Collaborated with neighboring communities to manage timing/amount of water withdrawal of shared water resource
- Collaborated with MDH on wellhead protection project

Rate structure

- Increasing Block

Stillwater, City of-Board of Water Commissioners Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 7.2 percent
Residential gallons per capita per day 68
Non-residential: Annual Percent Reduction 32.65
Trend in total per capita demand ..... -7.02
Total Peaking Factor 1.92

Water Accounting

Total water to Treatment ..... 685,699,000 gallons
Total water to Distribution ..... 685,699,000 gallons
Number of Residential connections..... 6,374
Number of Non-Residential connections..... 362
Residential versus Non-Residential Use..... 503.9 million gallons versus 132.3 million gallons
Date of Highest Use 8/26/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): None listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF ET Irrigation Controllers:
  - Quantity: 100
  - Gallons saved: 900,000

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Irrigation restrictions regulations
- Tree ratio requirement
- Wellhead protection ordinance and zoning

Education and Outreach

- Consumer Confidence Reports -- 1
- Community newsletters -- 2
- Website -- 1

Collaboration

- Collaborated with watershed group(s)

- Collaborated with neighboring communities to manage timing/amount of water withdrawal of shared water resource
- Collaborated with other high volume water users (commercial, industrial, institutional or agricultural)
- Collaborated with MDH on wellhead protection project
- Collaborated with DNR on improving on decreasing our permit allotment or enhancing conservation measures

Rate structure

- Seasonal Rate

City of White Bear Lake Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 5.8 percent
Residential gallons per capita per day 57
Non-residential: Annual Percent Reduction 8.97
Trend in total per capita demand ..... -10.74
Total Peaking Factor 1.86

Water Accounting

Total water to Treatment ..... 727,055,846 gallons
Total water to Distribution ..... 727,055,846 gallons
Number of Residential connections 7,687
Number of Non-Residential connections 569
Residential versus Non-Residential Use ..... 538.5 million gallons versus 146.5 million gallons
Date of Highest Use 6/16/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): 39,000 gallons -- $8,775
- Meter Repair/Replace: zero gallons reported -- $85,763
- Hydrant repair: 10,000 gallons -- $7,942

Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF Toilet Retrofits:
  - Quantity: 85
  - Gallons saved: 510,000

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Irrigation restrictions regulations
- Soil preparation requirements (Inches of topsoil)
- Tree ratio requirement
- Allow native plants and low water use turf/plants
- Wellhead protection ordinance and zoning
- Non-Zoning Wetlands Ordinance (beyond state/federal laws)
- Track enforcement

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 2

- Consumer Confidence Reports -- 2
- Press releases to traditional local news outlets (e.g., newspapers, radio and TV) -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) – 6
- Marketing rebate programs (e.g., indoor fixtures & appliances and outdoor practices) -- 1
- Community newsletters -- 4
- Community events (children's water festivals, environmental fairs) -- 1
- Website -- 5

Collaboration

- Collaborated with watershed group(s)
- Collaborated with lake association(s)
- Collaborated with SWCD or NRCS on land/water management practices

Rate structure

- Increasing Block

White Bear Township Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss ..... 1.8 percent
Residential gallons per capita per day 74
Non-residential: Annual Percent Reduction ..... -26.2
Trend in total per capita demand ..... -15.02
Total Peaking Factor 2.44

Water Accounting

Total water to Treatment ..... 448,978,900 gallons
Total water to Distribution ..... 444,853,700 gallons
Number of Residential connections 4,811
Number of Non-Residential connections 187
Residential versus Non-Residential Use ..... 322.6 million gallons versus 114.4 million gallons
Date of Highest Use 8/27/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.)

- System leak fixing (before the meter): 21,229,000 gallons -- $49,888

Date of last Audit/Percent done: 7/23/2020; 100 percent completed
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts:

- SF Toilet Retrofits:
  - Quantity: 134
  - Gallons saved: 804,000
- SF Clothes Washer Rebates:
  - Quantity: 36
  - Gallons saved: 180,000
- SF ET Irrigation Controllers:
  - Quantity: 11
  - Gallons saved: 99,000

Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Irrigation restrictions regulations
- Soil preparation requirements (Inches of topsoil)
- Tree ratio requirement
- Wellhead protection ordinance and zoning

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 2
- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 1
- Presentations to community groups -- 2
- Community news letters -- 7
- Website -- 4

Collaboration

- Collaborated with watershed group(s)
- Collaborated with DNR on improving on decreasing our permit allotment or enhancing conservation measures

Rate structure

- Increasing Block

Woodbury, City Of Summary of Water Conservation Report

2021 Report based on 2020 Water Use

Water Conservation Goals

Unaccounted Water Loss..... 3.6 percent
Residential gallons per capita per day 79
Non-residential: Annual Percent Reduction 8.54
Trend in total per capita demand ..... -11.18
Total Peaking Factor 2.07

Water Accounting

Total water to Treatment ..... 2,631,359,959 gallons
Total water to Distribution ..... 2,631,359,959 gallons
Number of Residential connections..... 23,457
Number of Non-Residential connections..... 878
Residential versus Non-Residential Use..... 2,161.6 million gallons versus 375.9 million gallons
Date of Highest Use 8/21/2020

Water Conservation - Direct

Water Supply System Infrastructure Efficiency (leaks, meters, etc.): none listed
Date of last Audit/Percent done: No data reported
Direct Conservation Single Family (SF) and Multi-Family (MF) and Commercial, Industrial, Institutional (CII) Efforts: None listed
Reuse or other Customer conservation projects: None listed

Water Conservation Indirect

Ordinances

- Critical/Emergency Water Deficiency Ordinance
- Private well ordinance (private wells in a city must comply with water restrictions)
- Irrigation restrictions regulations
- Water consumption regulation
- Tree ratio requirement
- Allow native plants and low water use turf/plants
- Mandatory “green” building or plumbing codes
- Wellhead protection ordinance and zoning
- Non-Zoning Wetlands Ordinance (beyond state/federal laws)
- Track enforcement
- Regulation for sensor and smart irrigation controllers (new installs)

Education and Outreach

- Billing inserts or tips printed on the actual bill -- 1
- Consumer Confidence Reports -- 1
- Social media distribution (e.g., emails, Facebook, Twitter) -- 20
- Marketing rebate programs (e.g., indoor fixtures & appliances and outdoor practices) -- 15
- Community newsletters -- 8

- Direct mailings (water audit/retrofit kits, showerheads, brochures) -- 1
- Water week promotions -- 1
- Website -- 4
- Notices of ordinances – 2
- Emergency conservation notices -- 1

Collaboration

- Collaborated with watershed group(s)
- Collaborated with other high volume water users (commercial, industrial, institutional or agricultural)
- Collaborated with MDH on wellhead protection project

Rate structure

- Increasing Block

General Comments and Recommendations for additional conservation efforts:

1. Water Conservation Goals**:** Compare your water supply system results to the statewide water conservation goals that are set in the Water Supply Plans:
   a. Unaccounted for Water Loss <10%
   b. Residential Gallons per Capita Demand (GPCD) Daily <75
   c. Annual % Reduction in Nonresidential Use >1.5%
   d. Trend in Total per Capita Demand >=1.0
   e. Total peaking factor <2.6

Each water supplier should try to achieve the statewide water conservation goals by the time their next Water Supply Plan is due (2026-2028).

2. Water Loss: For most water suppliers, working on reducing water loss should be your top conservation objective. Cities should first make their own water supply system as efficient as possible. In addition to leaks, water can be "lost" through unauthorized consumption (theft), administrative errors, data handling errors, and metering inaccuracies or failure.
3. Leak Repair: Budgeting for and keeping on top of aging pipes and infrastructure will be important in the coming years to reduce water loss. Also check fire hydrants frequently, many cities are finding these to be part of their water loss problem.
4. Meters: A water meter program should include selection, installation, testing and maintenance. Over time meters lose accuracy and inaccurate meters contribute to loss of revenue. Accurate meters are also key to getting a handle on water loss. Focus first on large meter installations.
5. Audit: Water audits are the first step for controlling water loss. AWWA offers free Water Audit Software. The second step is intervention and implementing solutions, and the third step is evaluation and further improvements if needed. Metering and better water accounting are key to improving the city's water loss percentage.
6. Peak Water Day: Generally this number indicates if the city has high summer water use. Conservation education should focus on improving landscape irrigation efficiency on public and private property. The UMN Turfgrass Science website has excellent irrigation resources. If your peak water day was for hydrant flushing, you might evaluate if this amount could be reduced without sacrificing best practices. Some cities are significantly cutting back with hydrant flushing and not impacting water quality.
7. Residential & Non-Residential: Compare the volume of Residential and non-residential water user. Is one significantly more than the other or are they quite close in water use? Focusing on your big water use accounts with education programs or conservation partnerships may make sense.
8. Non-residential education and outreach ideas:
   a. Non-residential use is always an opportunity for water conservation – economically Commercial, Industrial and Institutional users *want* to be as efficient as possible. The city should look at the 2-3 largest non-residential water users and meet with them to see if there are things they can do to conserve water.
   b. Cities often work with the CII categories that are easiest to implement: government/municipal buildings and facilities; large landscape areas; schools and/or

colleges; office buildings; restaurants. Research shows that the degree of success for water conservation are: 1. Schools/colleges, 2. Commercial and apartments, 3. Large landscape areas, 4. Lodging, 5. Public pools/water parks. Target your efforts here for optimal success.

   c. If any of the CII facilities have outdoor lawn irrigation this is an easy and quick way to reduce water use by installing smart meters, doing an irrigation audit to look for leaks and broken heads, or simply turning off the irrigation controllers and only turning them on when there has been a lack of rainfall.

9. Residential education and outreach ideas:
   a. The city may want to offer free toilet leak detection tablets to customers since this is the most common leak and easy to fix. Contact the MN DNR Information Center for a free supply of toilet leak detection info cards and dye tablets.
   b. You may want to try promoting this home water conservation app that only takes a few minutes and is fun and informative http://nrwa.aqkwa.com (try it yourself!). In addition to adults, you can work with the schools, kids may influence their parents to conserve water.
   c. Other new water campaigns the city may want to participate in include: the US EPA WaterSense Program. Membership is free and allows you access to great resources. Also *Value of Water*- US Water Alliance has a Value of Water Campaign http://uswateralliance.org/initiatives/value-of-water with a toolkit that has PDFs of ads, billboards, bill stuffers, bus shelter ads, banners, and social media. The focus is positive, emphasizing that water is essential.
10. Ordinances: City Councils may want to strengthen their water conservation ordinances. League of MN Cities is a great source for sample ordinances.
11. Rate Structure: Cities should regularly evaluate the water rate structure. MN Rural Water Association provides this service (free for a quick review; small fee for a full bookkeeping audit).
12. Future Weather: Northern cities are already experiencing changing seasons and weather patterns. Some of these will impact water supply and demand. Climate science tells us three key trends will likely continue through mid-century:
    1. Extreme rainfall is happening more often.
    2. Minnesota's climate is becoming warmer and wetter.
    3. Winter is warming 13 times faster than summer and there are fewer days of extreme cold.

These changes will likely impact public water supplies in several ways:

   a. Rivers & Streams: Rivers will see altered high and low flows and an increase in contamination due to flooding. Whatever the historic flood level has been in the past, anticipate it to be higher. Are water treatment facilities, water towers, and pumps flood proof/resilient? Are there industries upstream that may contaminate drinking water supplies during a flood? Are communications in place to notify the city of possible contamination and emergency flood preparations in place? If the city is not a member of MnWARN they may want to consider this voluntary option. Warmer winters may mean more ice, which often requires more salt treatment. Chloride contamination is becoming a concern in many areas of the state and may require additional water treatment.

b. Lakes: Longer thermal stratification on lakes means that seasonal mixing may be eliminated in shallow water, resulting in fish kills. This may not affect the city directly. Thin ice may pose safety hazards to citizens and staff.
c. Possible City Infrastructure Impact: direct damage from heavy rain, increased mold/moisture damage, safety and accessibility on ice or trails, damage to culverts and bridges.
d. Invasive species have new advantages. Are zebra mussels a threat at your water or wastewater treatment facilities? If not, they may be in the future. Forest insect pests may migrate further north killing vast forested areas and increasing fire hazards.
e. Warmer winter temperatures: The good news is this may mean fewer frozen water lines.
f. Forests: Boreal species will face increasing hydrothermal stress. The heat stress is more than trees can tolerate and forest communities will change across the landscape and higher temperatures means more drying of vegetation. If geographically appropriate, is the water system prepared for a possible increase in forest fires?