**DES MOINES WATER WORKS**
Board of Water Works Trustees

Des Moines Water Works
Water You Can Trust for Life

2201 George Flagg Parkway | Des Moines, Iowa 50321-1190 | (515) 283-8700 | www.dmww.com

September 11, 2015

Mr. Brett Klein
City of Windsor Heights
1145 66th St., Suite 1
Windsor Heights, IA 50324

RE: Capital Improvement Fee

Dear Brett:

Des Moines Water Works has been pleased to serve the City of Windsor Heights and your residents by operating and maintaining the city's water system since 1988. Des Moines Water Works' (DMWW) mission is to "protect public health by delivering outstanding quality water in reliable quantities." DMWW's most important role in the community is to provide safe drinking water *whenever* and *wherever* our customers need it, and we consider it a privilege to serve our customers with a quality and reliable water supply. Our ability to fulfill our mission requires thoughtful planning and a continual evaluation of the performance of the water system in each of our service areas, including Windsor Heights.

Our Engineering staff recently completed a Capital Improvement Plan (CIP) for Windsor Heights' water system, which we reviewed with you and Doug Stone on July 28, 2015. That CIP report outlines fairly significant needs of the system over the next five years, including the need to cathodically protect or replace deteriorated mains, and replace undersized mains. The number and type of main breaks are a "health indicator" of a system, and the Windsor Heights distribution system does not get a "clean bill of health." An increasing trend in the number of main breaks in this service area over the last 20 years, illustrated by the black upward trend line in the chart on page 1 of the CIP report, underscores that the system is aged and deteriorating. If deteriorated mains are not replaced, Windsor Heights customers will be burdened with higher water rates over the long-term due to high repair and operating costs. Main breaks are not only costly to repair, but they are also an inconvenience to customers who value and expect a reliable water supply.

Windsor Heights customers are currently charged a capital improvement fee of $1.00 per thousand gallons. This fee has been in effect since August 2009 (prior to 2009, customers were charged a capital improvement fee of $0.25 per thousand gallons). The capital improvement fee raises approximately $120,000 in revenues per year for replacing infrastructure and improving Windsor Heights' water system.

As you can see from page 4 of the attached CIP report, the needs of your system outpace the available funding of $120,000 per year. Considering the infrastructure needs of your system in

conjunction with the available funding, one can fairly easily conclude the water system in Windsor Heights has capital needs which are not being met through current rates and charges.

***In order to maintain a healthy water system for Windsor Heights, DMWW staff recommends that the capital improvement fee be increased from $1.00 to $2.00 per thousand gallons effective April 1, 2016.*** At a fee of $2.00, an additional $120,000 would be generated each year to invest in the water system.

We are sensitive to the economic impact this recommendation has on customers. You may find it helpful to also know that DMWW staff has recommended to our Board that the Windsor Heights water rate increase from $3.46 to $3.81 effective April 1, 2016. This recommendation is based on:

1. The 2014 Cost of Service analysis, which shows low water consumption in 2014, coupled with rising costs.

2. The net position of the operational water fund was a net loss of ($76,000) as of 12/31/2014.

The economic impact to the average Windsor Heights customer of an increase in both the capital improvement fee <u>and</u> the water rate is estimated at $5.50 - $7.50 per month, assuming a range of 4,000 gallons to 5,500 gallons of water is used.

A final rate recommendation will be presented to our board in early October. While our board has responsibility for setting water rates, it would be helpful to know if Windsor Heights Council and staff is supportive of raising the capital improvement fee from $1.00 to $2.00. If there is strong opposition to increasing the capital improvement fee to $2.00 at this time, we may reluctantly proceed with increasing only the water rate effective April 1, 2015; however, the scope of capital projects will be adjusted downward over the next five years based on the available funding.

I look forward to hearing your comments on this recommendation. We appreciate you and your Council taking the time to understand the capital needs and rates necessary to sustain Windsor Heights' water system.

Sincerely,

Amy

Amy Kahler
Director of Customer Service & Marketing

# WINDSOR HEIGHTS CAPITAL IMPROVEMENT PLAN

Des Moines Water Works

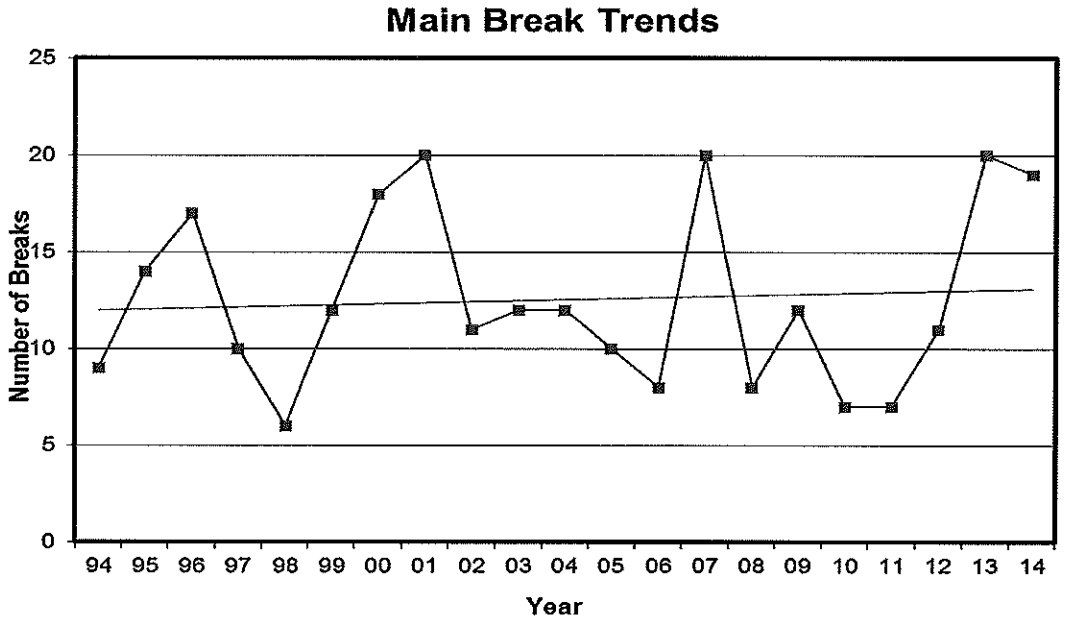
Water You Can Trust for Life

April 2015

The City of Windsor Heights became a full service customer to Des Moines Water Works (DMWW) in 1988. DMWW provides services such as billing for water, reading meters, providing customer service to the property owners, provides engineering services, managing, maintaining, and operating the water distribution system for the City of Windsor Heights. The water distribution system has approximately 23 miles of water main from 4 inches in diameter to 12 inches in diameter. There are also 202 fire hydrants and 223 valves in the water distribution system.

DMWW prefers to coordinate with consultants to include replacing water mains, if needed, with City projects for street or sewer improvements. There has been some success with consultants in the past to coordinate street improvement projects with water main replacement in Windsor Heights. There is a lot of efficiency when a project reconstructs a street, replaces storm sewers and sanitary sewers, and replaces water main. Coordinating this work can be very beneficial to property owners, the City, and existing utilities. A paving program has been developed for the City of Windsor Heights that goes until the end of 2015. This paving program includes HMA overlay with some full-depth patching a few storm sewer structure replacements. Since a paving program has not been developed beyond 2015, DMWW could not coordinate that work with the Capital Improvement Plan. Comparing the existing paving program that was developed for 2015 and this report for a Capital Improvement Plan (CIP) for the water distribution system, most areas of the paving program do not align with this CIP for water distribution improvements. The areas where these projects do align, I would suggest waiting to overlay the street until after the water main has been replaced or anode retrofit has been installed.

As shown on the graph below, the main breaks in the City of Windsor Heights have been high in the last two years with approximately 20 main breaks in a year. The trend line on this graph shows that the number of main breaks in the City of Windsor Heights is increasing.



DMWW has created a CIP to improve the water distribution system for the City of Windsor Heights. This CIP includes both replacing existing water mains with a larger new water main and utilizing an anode retrofit program to cathodically protect existing water mains.

The anode retrofit program uses sacrificial anodes to lower the rate of corrosion that occurs on existing water mains, which lengthens the life of a water main. The cost of implementing an anode retrofit program on an existing water main is significantly less than replacing the same water main. However, there are times where replacing the water main is more beneficial. It is better to replace a water main if the water main is too small to provide fire protection to the community, if there have been too many previous main breaks on a water main, or if the City plans for a project to completely reconstruct the street.

Fire protection is available to a community when a hydrant is placed on a water main that is at least 6 inches in diameter. If a hydrant is on a smaller main than 6 inches, the water available to fight a fire is minimal. The fire department would need to bring a water tank on a truck that has a limited supply of water to the fire to fight the fire. For this reason, the smallest water main that DMWW recommends installing is an 8-inch water main.

There have been six water mains within the City of Windsor Heights that anodes for controlling corrosion has been installed. The first anode retrofit project was implemented in 2006 in the City of Windsor Heights. Since implementing the anode retrofit program to these water mains, the main breaks on these streets have decreased significantly, which has shown to prolong the lifespan of the water main. Below is a table that shows the streets that have been cathodically protected using the anode retrofit program in the City of Windsor Heights.

## Anode Retrofit Program Installed

| Year | Street | From | To | Water Main Size | Length (ft) |
|---|---|---|---|---|---|
| 2006 | Timmons Drive | 69th Street | 68th Street | 6" | 555 |
| 2008 | 74th Street | College Drive | Wilshire Boulevard | 6" | 1,444 |
| 2009 | Sunrise Boulevard | 73rd Street | 70th Street | 6" | 1,486 |
| 2011 | Colby Avenue | 73rd Street | 70th Street | 6" | 1,279 |
| 2013 | College Drive | 75th Street | 73rd Street | 6" | 620 |
| 2013 | 68th Street | Timmons Dr | Hickman Road | 6" | 1,287 |

There have been three water main replacement projects in the last 10 years. The first main replacement project was constructed in 2009 on 64th Street from School Street north to the dead end and on Mott Avenue from 64th Street to 65th Street. This water main was replaced because of the high number of main breaks on the existing water main, and the size of the existing water main is too small for fire protection. The second main replacement project was constructed in 2011 underneath Walnut Creek just north of I-235. This water main became too shallow underneath the creek after the 2008 floods. This project was paid for by FEMA funding. The third water main replacement project was constructed in 2011 in a City of Windsor Heights project. The water main in this project was replaced on Hickman Road from 63rd Street west for

approximately 1,100 feet. Completing this project of replacing City infrastructure and existing utilities at the same time allowed for the inconvenience to drivers and property owners to be at a minimum.

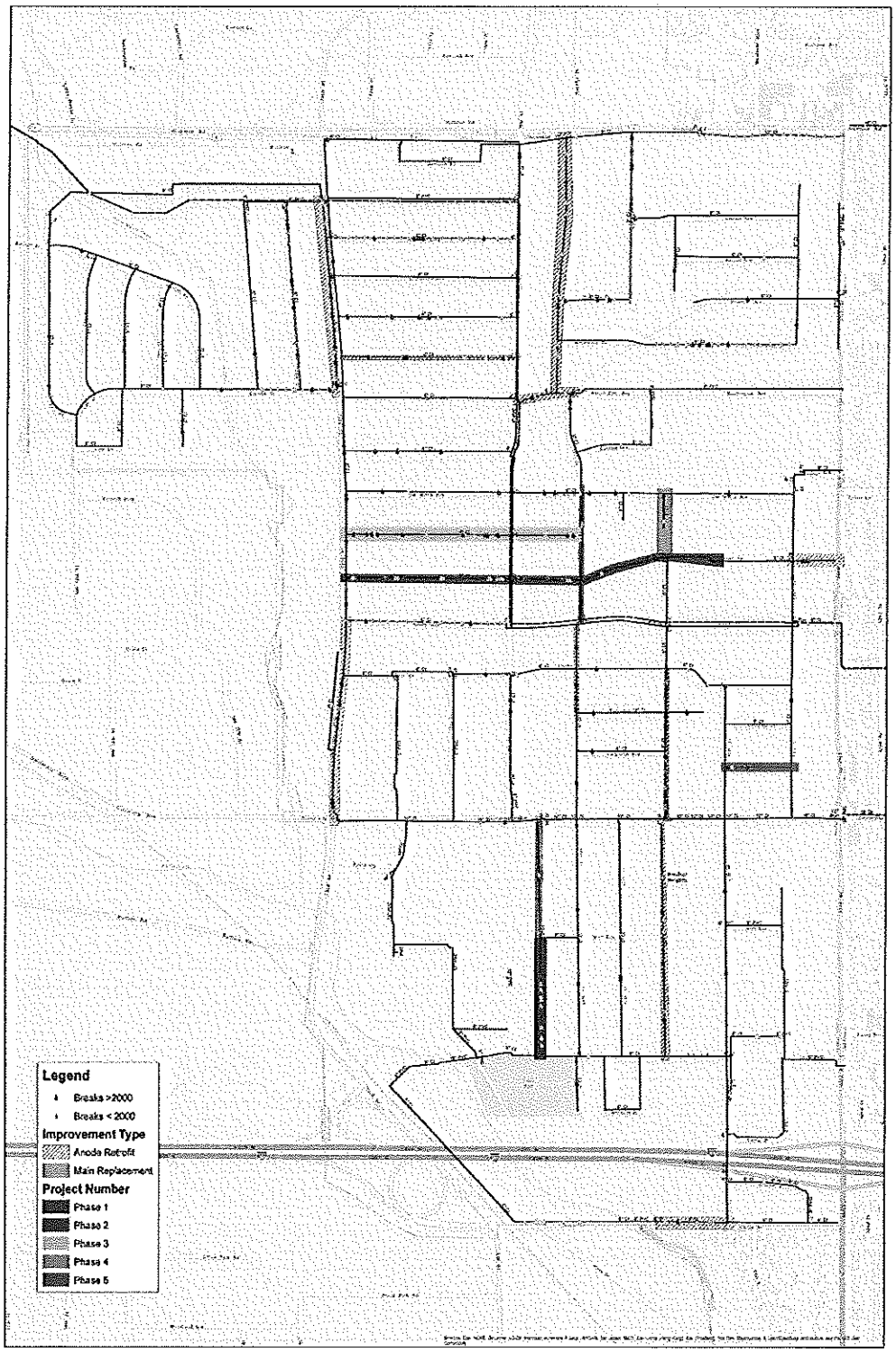
The CIP that DMWW has created is divided into five different projects that total approximately $1,500,000 as shown in the table on page 4. The projects were created with the main break to length ratio in mind, as well as the cost for each project. The streets with the water mains that have the highest main break to length ratio are near the top of the table, and the streets with water mains that have a low main break to length ratio are near the bottom. Streets were grouped together so the construction cost for each project was approximately $300,000. The projects can either be completed all at once, do one project every year, or complete the projects every other year as funding is available.

The map on page 5 shows the City of Windsor Heights and the CIP projects. Implementing this CIP will definitely reduce the main breaks that are experienced and improve the water distribution system in the City of Windsor Heights. Coordinating projects with City street projects will help keep costs down, be more efficient, and not cause as much inconvenience to the property owners in the areas of construction.

# Windsor Heights CIP Summary

| Project | Street | From | To | Replacement Total Cost | ARP Total Cost | $/ft | Total Cost Each Year | Replace/ARP |
|---|---|---|---|---|---|---|---|---|
| 1 | 69th Street | School Street | Mott Avenue | $184,200 | | $202.42 | $198,450 | Replace |
| 1 | 66th Street | University Avenue | Forest Court | | $14,250 | $12.37 | | ARP |
| 2 | Sunset Terrace | 73rd Street | 6500 Sunset Terrace | $437,400 | | $173.57 | $437,400 | Replace |
| 3 | Reite Avenue | 73rd Street | 68th Street | $309,000 | | $169.32 | $309,000 | Replace |
| 4 | Sunset Terrace | 64th Street | 63rd Street | | $6,400 | $17.30 | $279,400 | ARP |
| 4 | Center Street | Walnut Creek | 65th Street | | $7,000 | $13.06 | | ARP |
| 4 | 73rd Street | Wilshire Boulevard | College Drive | | $16,800 | $11.36 | | ARP |
| 4 | 69th Street | University Avenue | Mott Avenue | $153,000 | | $170.00 | | Replace |
| 4 | 73rd Street | University Avenue | Colby Avenue | | $22,400 | $14.51 | | ARP |
| 4 | 66th Street | Del Matro Avenue | Sunset Terrace | $73,800 | | $150.61 | | Replace |
| 5 | 68th Street | Elmcrest Drive | Colby Avenue | | $8,400 | $12.43 | $321,500 | ARP |
| 5 | Jefferson Avenue | 73rd Street | 70th Street | | $15,400 | $11.35 | | ARP |
| 5 | Carpenter Avenue | 65th Street | 64th Street | $95,500 | | $181.90 | | Replace |
| 5 | 66th Street | University Avenue | School Street | | $20,300 | $11.16 | | ARP |
| 5 | Washington Avenue | 70th Street | 68th Street | | $7,000 | $12.64 | | ARP |
| 5 | 69th Street | Washington Avenue | Hickman Road | | $22,400 | $11.42 | | ARP |
| 5 | 68th Street | Colby Avenue | Del Matro Avenue | $152,500 | | $152.50 | | Replace |

# Capital Improvements for Windsor Heights



# Windsor Heights

## Capital Improvement Funds

**For the Twelve Months Ended December 31, 2014**
**For the Twelve Months Ended December 31, 2011**

## Capital Improvement Funds

| | 2014 | 2013 | 2012 | 2011 |
|---|---|---|---|---|
| Prior Year Ending Balance | $216,275 | $132,705 | $54,391 | $128,865 |
| Collected thru CRM | 114,044 | 124,197 | 131,345 | 124,159 |
| Paid to City of Windsor Heights | 0 | (15,000) | (42,417) | (15,000) |
| Capital Expenditures | (4,257) | (32,470) | (14,283) | (187,226) |
| Interest Credit (2014: 4.00% APR, 2013: 4.00% APR) | 10,847 | 6,843 | 3,669 | 3,593 |
| **Ending Capital Fund Balance** | $336,909 | $216,275 | $132,705 | $54,391 |
| **Historical Consumption (1000 Gallons)** | 114,520 | 124,607 | 132,058 | 124,669 |

## Possible Increase in Capital Improvement Fee

| Average Yearly Consumption (1000 Gallons) | | 120,000 | Additional Revenue | Total Revenue |
|---|---|---|---|---|
| Current Rate: | $1.00 | $120,000 | | $120,000 |
| Increase by: | $0.25 | | $30,000 | $150,000 |
| | $0.50 | | $60,000 | $180,000 |
| | $0.75 | | $90,000 | $210,000 |
| | $1.00 | | $120,000 | $240,000 |

# Windsor Heights

## Revenue and Expenditure Analysis

**For the Twelve Months Ended December 31, 2014**
**For the Twelve Months Ended December 31, 2011**

| | 2014 | 2013 | 2012 | 2011 |
|---|---|---|---|---|
| **Revenue** | | | | |
| Water Sales | $512,926 | $530,378 | $552,961 | $513,050 |
| Fire Service Fees | 7,479 | 7,291 | 7,291 | 7,291 |
| Total Revenue | $520,405 | $537,669 | $560,252 | $520,341 |
| **Expense** | | | | |
| Operations and Maintenance: | | | | |
| Water Production | $102,056 | $86,663 | $85,212 | $79,523 |
| Water Transmission | 83,529 | 69,287 | 67,012 | 65,490 |
| System Maintenance | 111,597 | 80,246 | 79,942 | 53,355 |
| Customer Related | 129,944 | 127,178 | 125,179 | 121,185 |
| Total | $427,126 | $363,374 | $357,345 | $319,553 |
| Return on Investment | $51,264 | $50,024 | $47,345 | $48,769 |
| Depreciation Expense (DMWW System) | $100,322 | $102,481 | $97,780 | $99,073 |
| Total Expense | $578,712 | $515,879 | $502,470 | $467,395 |
| **Net Position** | ($58,307) | $21,790 | $57,782 | $52,946 |
| **Summary of Accumulated Net Position:** | | | | |
| Prior Year Ending Balance | ($18,040) | ($39,830) | ($97,612) | ($150,558) |
| Net Position | (58,307) | 21,790 | 57,782 | 52,946 |
| Capital Expenditures | 0 | 0 | 0 | 0 |
| **Ending Revenue & Expense Balance** | ($76,347) | ($18,040) | ($39,830) | ($97,612) |

Des Moines Water Works
2015 Water Rates
Effective April 1, 2015

Des Moines Water Works
Water You Can Trust for Life

| | 2014 Rate Per 1,000 Gallons | 2015 Rate Per 1,000 Gallons | Increase | Percent Increase | Dollar Monthly Increase for Average Home With: 2 Person 3,750 gal | 4 Person 7,500 gal |
|---|---|---|---|---|---|---|
| Des Moines Inside City | | | | | | |
| Residential (Step 1) | $3.18 | $3.40 | $0.22 | 7% | $0.82 | $1.65 |
| Commercial (Step 2) | 2.13 | 2.28 | 0.15 | 7% | | |
| Industrial (Step 3) | 1.64 | 1.75 | 0.11 | 7% | | |
| Des Moines Outside City | | | | | | |
| Residential (Step 1) | $3.45 | $3.69 | $0.24 | 7% | $0.90 | $1.80 |
| Commercial (Step 2) | 2.59 | 2.77 | 0.18 | 7% | | |
| Industrial (Step 3) | 1.85 | 1.98 | 0.13 | 7% | | |
| Polk County | | | | | | |
| Residential (Step 1) | $6.25 | $6.69 | $0.44 | 7% | $1.65 | $3.30 |
| Commercial (Step 2) | 3.83 | 4.10 | 0.27 | 7% | | |
| Industrial (Step 3) | 2.99 | 3.20 | 0.21 | 7% | | |
| Capital Improvement Fee* | 0.00 | 1.50 | 1.50 | | $5.63 | $11.25 |
| Windsor Heights | $3.23 | $3.46 | $0.23 | 7% | $0.86 | $1.73 |
| Warren County | | | | | | |
| Step 1 | $11.72 | $12.54 | $0.82 | 7% | $3.07 | $6.15 |
| Step 2 | 8.61 | 9.21 | 0.60 | 7% | | |
| Pleasant Hill | | | | | | |
| Residential (Step 1) | $5.82 | $6.23 | $0.41 | 7% | $1.54 | $3.08 |
| Commercial (Step 2) | 4.91 | 5.25 | 0.34 | 7% | | |
| Outside City | 8.73 | 9.35 | 0.62 | 7% | $2.33 | $4.65 |
| Runnells | | | | | | |
| Water | $5.52 | $5.91 | $0.39 | 7% | $1.46 | $2.93 |
| Waste Water | 5.99 | 6.41 | 0.42 | 7% | | |
| Cumming | $5.43 | $5.81 | $0.38 | 7% | $1.43 | $2.85 |
| Alleman | $6.16 | $6.59 | $0.43 | 7% | $1.61 | $3.23 |
| PCRWD #1 | $4.00 | $4.00 | $0.00 | 0% | $0.00 | $0.00 |
| Berwick | $4.00 | $4.00 | $0.00 | 0% | $0.00 | $0.00 |
| Wholesale | | | | | | |
| Purchased Capacity | $1.46 | $1.53 | $0.07 | 5% | | |
| With Storage | 3.17 | 3.33 | 0.16 | 5% | | |
| Off Peak | 1.64 | 1.72 | 0.08 | 5% | | |

* In addition to the regular water rates (Step 1 and Step 2), a capital improvement fee of $1.50 per thousand gallons will be implemented for the unincorporated Polk County service area.

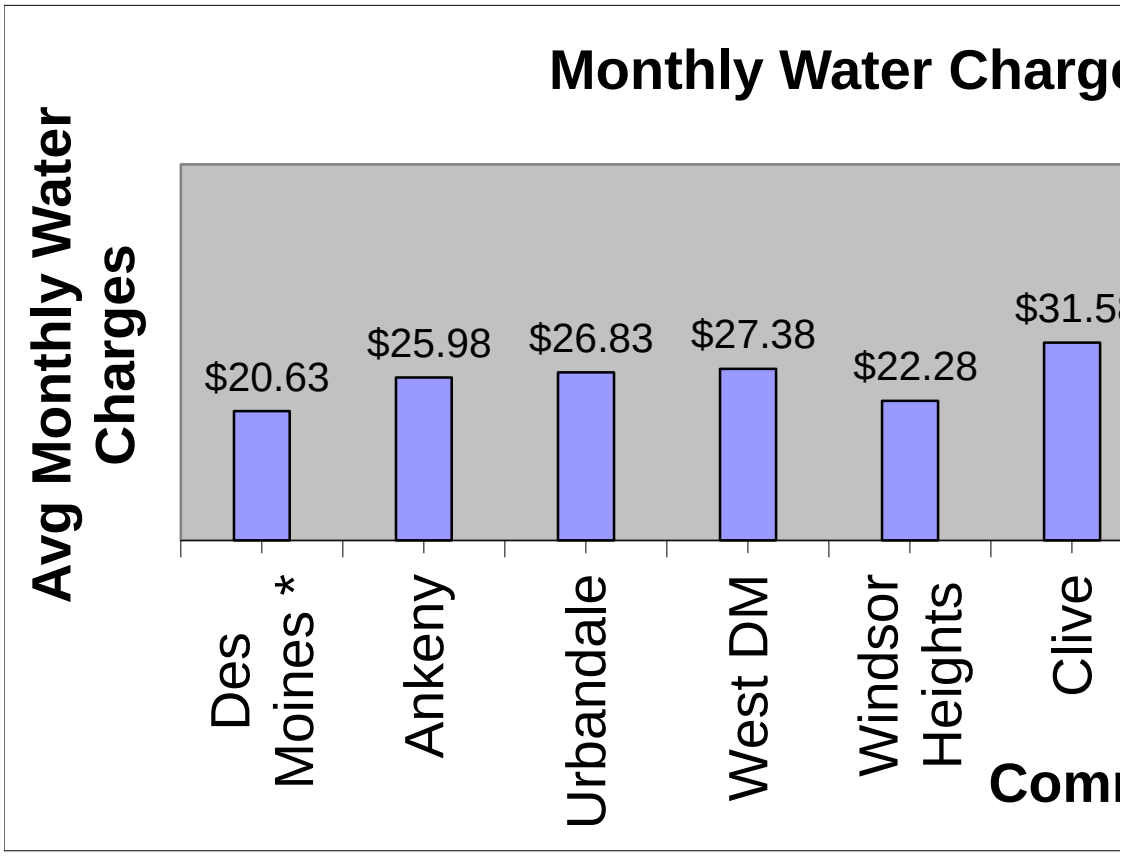
+ $1.00/1000 gallons capital improvement
+ 6.00 availability

**Summary of Water Rates**
**Des Moines Metro Area**

| | | | | |
|---|---|---|---|---|
| Rate per 1,000 gallons | $2.35 | $2.44 0 - 5,000<br>$3.43 Over 5,000 | $3.21 | $3.25 |

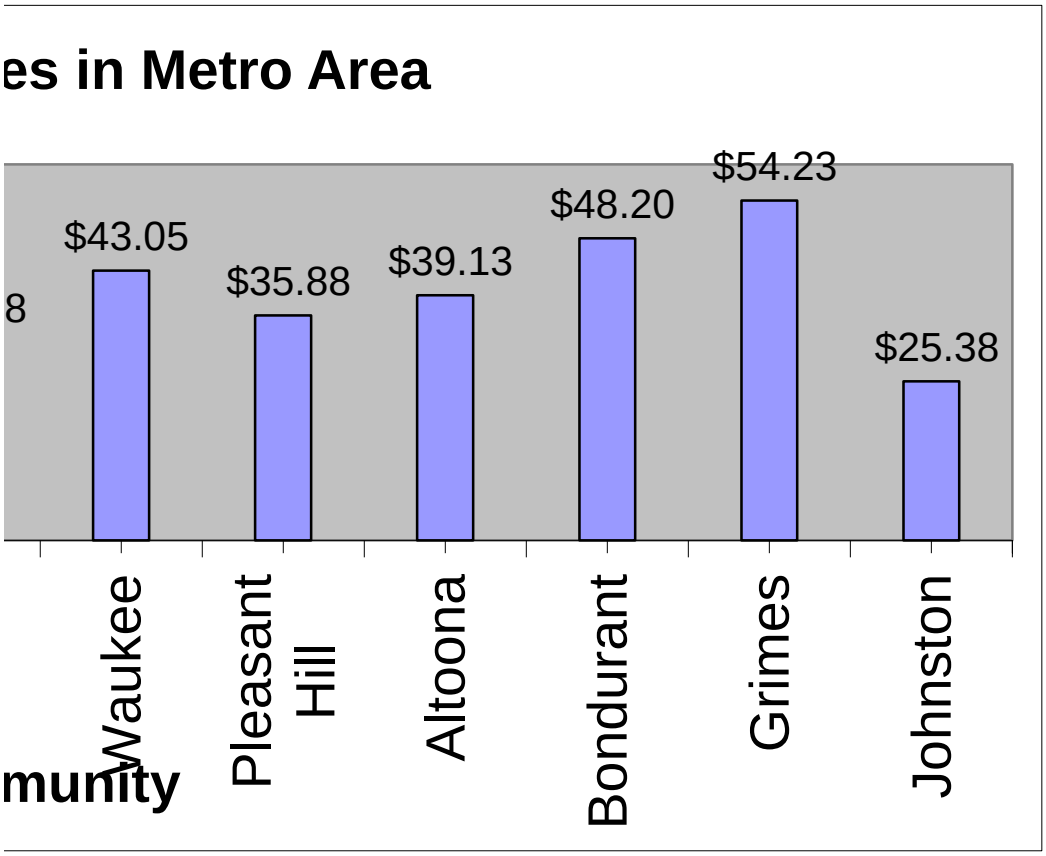
**Avg Monthly Water Charges based on 7,500 gallons:**

| | Des Moines * | Ankeny | Urbandale | West DM |
|---|---|---|---|---|
| Water | 17.63 | 20.78 | 24.08 | 24.38 |
| Water Availability | 3.00 | 5.20 | 2.75 | 3.00 |
| Avg Monthly Water Charges | $ 20.63 | $ 25.98 | $ 26.83 | $ 27.38 |
| Equivalent per 1000 gal rate | $ 2.75 | $ 3.46 | $ 3.58 | $ 3.65 |
| Billed wholesale rate | | $0.83 | $0.83 | $0.83 |



| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | $2.57 | $4.21 | 0 - 1,000 | 7.95 | | $3.85 | $4.55 | $5.67 | 0 -1,000 7.23 |
| | | | Over 1,000 | 5.40 | | | | | |

| Windsor Heights | Clive | Waukee | Pleasant Hill | Altoona | Bondurant | Grimes |
|---|---|---|---|---|---|---|
| 19.28 | 31.58 | 43.05 | 28.88 | 34.13 | 42.53 | 54.23 |
| 3.00 | - | - | 7.00 | 5.00 | 5.67 | - |
| $ 22.28 | $ 31.58 | $ 43.05 | $ 35.88 | $ 39.13 | $ 48.20 | $ 54.23 |
| $ 2.97 | $ 4.21 | $ 5.74 | $ 4.78 | $ 5.22 | $ 6.43 | $ 7.23 |
| | $0.83 | $0.83 | | | $0.83 | |



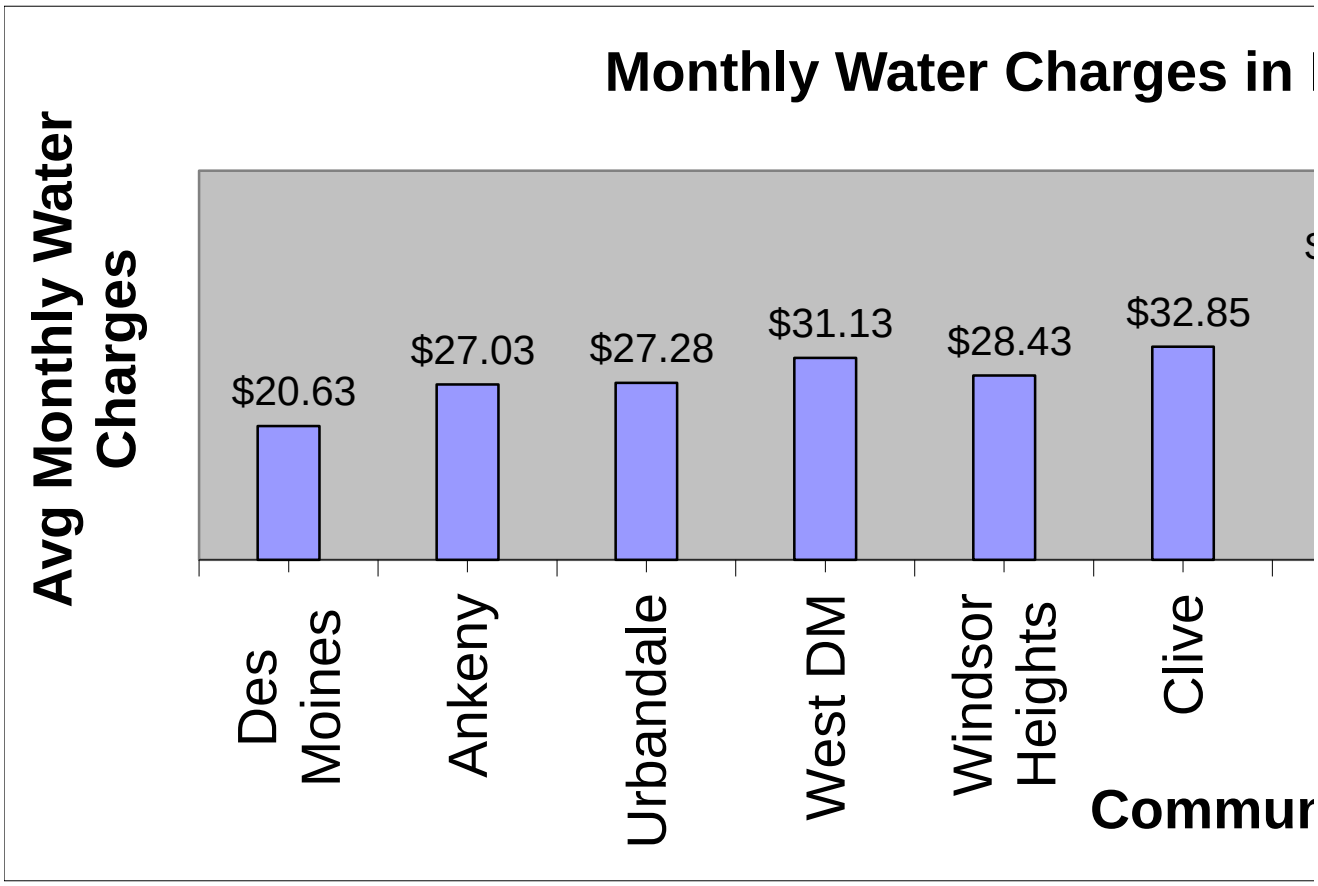
| | |
|---|---|
| 0-1,000 | $4.25 |
| Over 1,000 | $3.25 |

**Johnston**

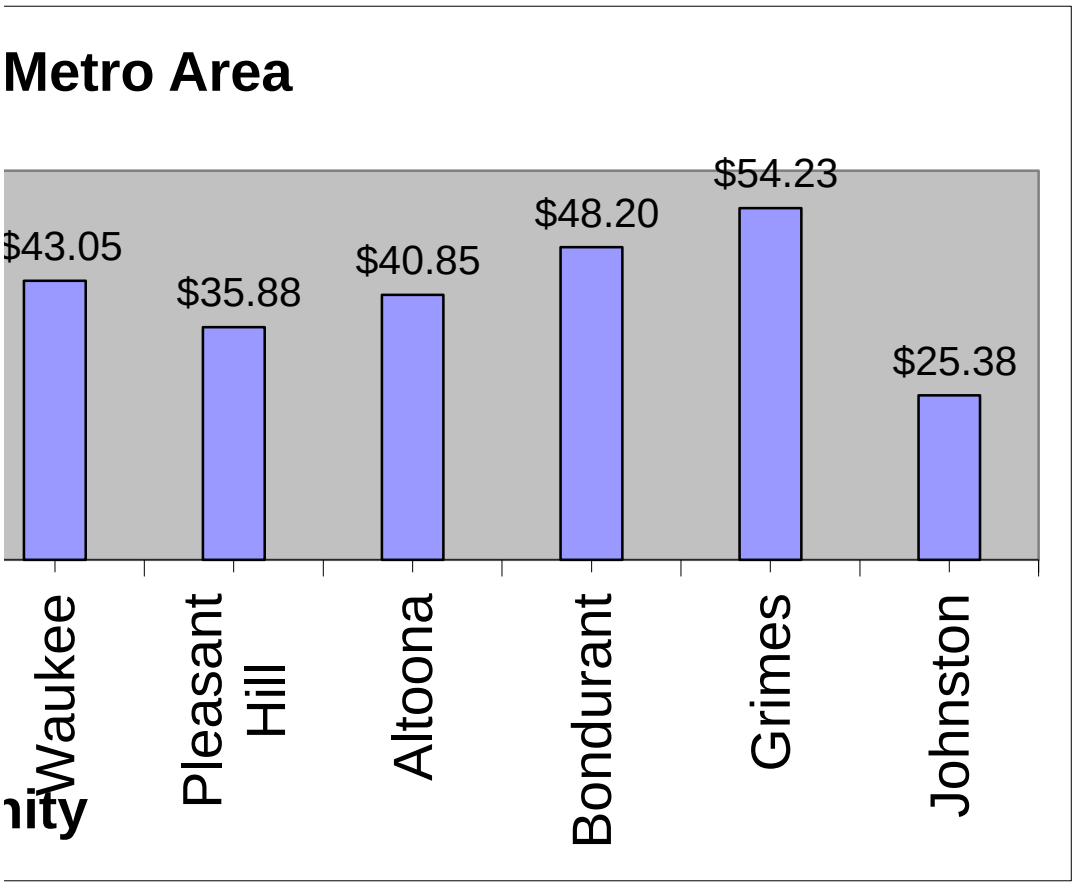
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 25.38 | | | | | | |
| | - | | | | | | |
| $ | 25.38 | | | | | | |
| $ | 3.38 | $ | - | $ | - | $ | - |
| | $2.00 | | | | | | |

**Summary of Water Rates**
**Des Moines Metro Area**
Updated September 10, 2008

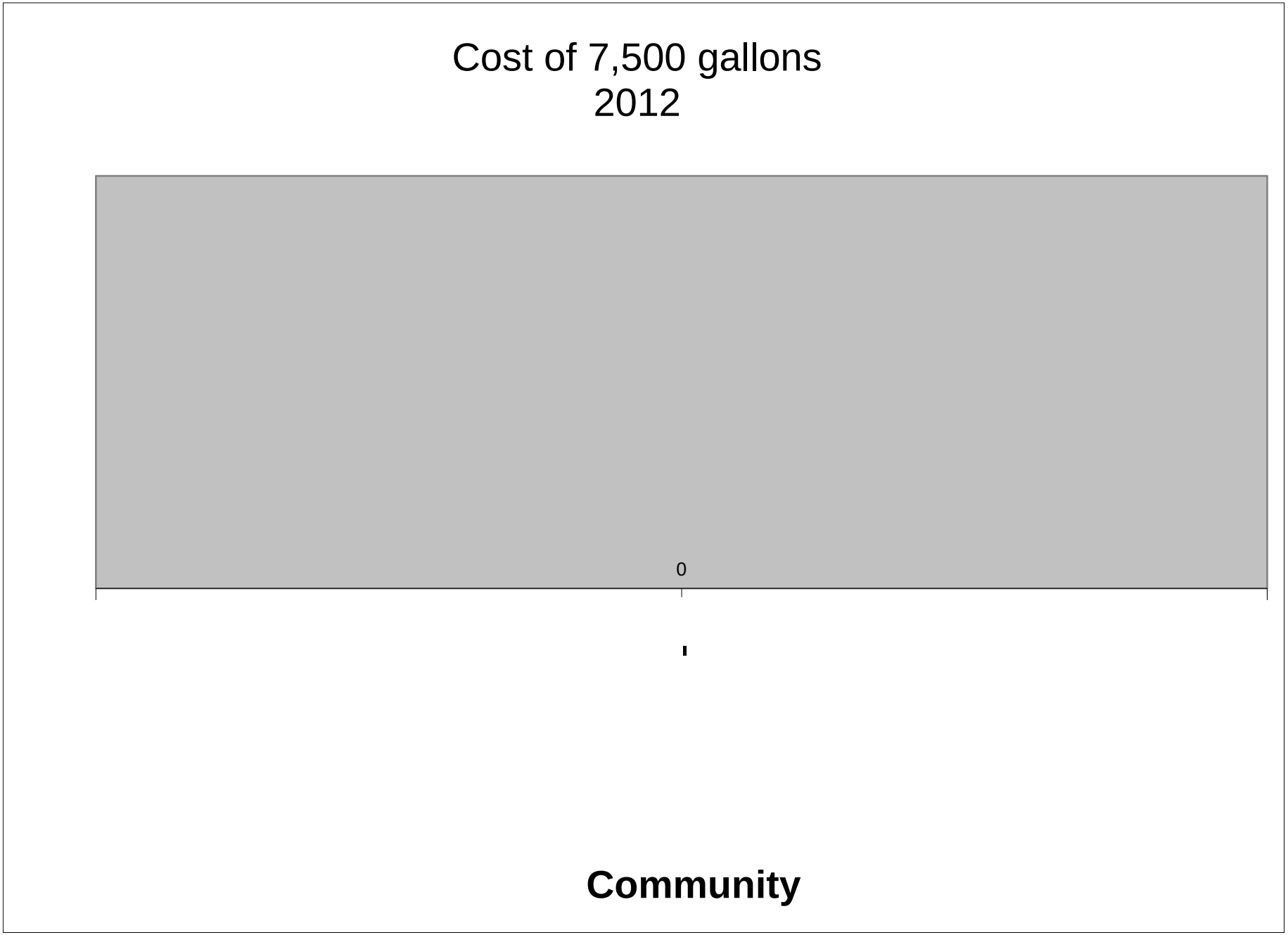
| Rate per 1,000 gallons | $2.35 0 - 5,000 (daily)<br>$1.56 5,000 - 15,000<br>$1.12 15,000+ | $2.54 0 - 5,000<br>$3.57 5,000+ | $3.27 | $3.75 |
|---|---|---|---|---|
| **Avg Monthly Water Charges based on 7,500 gallons:** | | | | |
| | **Des Moines** | **Ankeny** | **Urbandale** | **West DM** |
| **Water** | 17.63 | 21.63 | 24.53 | 28.13 |
| **Water Availability** | 3.00 | 5.40 | 2.75 | 3.00 |
| **Avg Monthly Water Charges** | **$ 20.63** | **$ 27.03** | **$ 27.28** | **$ 31.13** |
| **Equivalent per 1000 gal rate** | $ 2.76 | $ 3.61 | $ 3.65 | $ 4.16 |
| **Billed wholesale rate** | | $0.88 | $0.88 | $0.88 |



| | | | | | |
|---|---|---|---|---|---|
| $3.39 | $4.38 | $7.95 0 - 1,000<br>$5.40 1,000+ | $3.85 0 - 20,000<br>$3.20 20,000+ | $4.78 | $5.67 |
| **Windsor Heights** | **Clive** | **Waukee** | **Pleasant Hill** | **Altoona** | **Bondurant** |
| 25.43 | 32.85 | 43.05 | 28.88 | 35.85 | 42.53 |
| 3.00 | - | - | 7.00 | 5.00 | 5.67 |
| **$ 28.43** | **$ 32.85** | **$ 43.05** | **$ 35.88** | **$ 40.85** | **$ 48.20** |
| $ 3.80 | $ 4.39 | $ 5.75 | $ 4.80 | $ 5.46 | $ 6.44 |
| | $0.88 | $0.88 | | | $0.88 |



| | |
|---|---|
| $7.23 | $4.25 0 - 1,000<br>$3.25 1,000+ |
| **Grimes** | **Johnston** |
| 54.23 | 25.38 |
| - | - |
| **$ 54.23** | **$ 25.38** |
| $ 7.25 | $ 3.39 |
| | $2.12 |


Cost of 7,500 gallons
2012
0
Community

**Summary of Water Rates**
**Des Moines Metro Area**
Updated April 2015

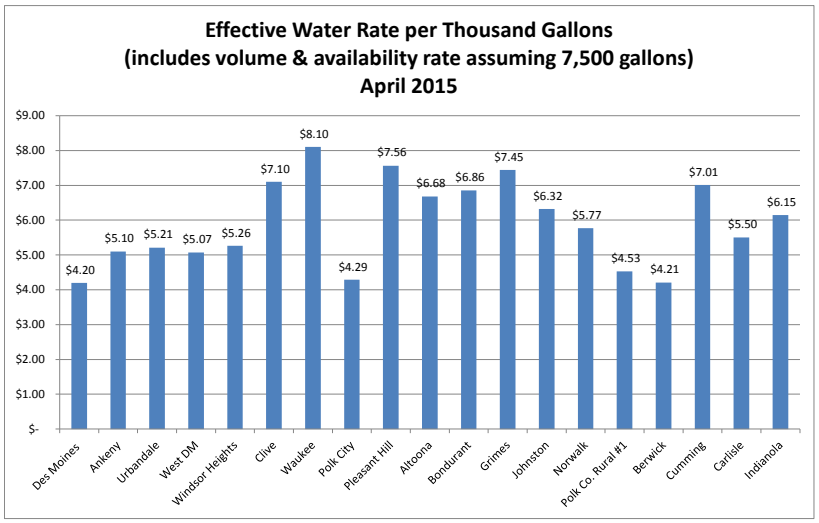
CURRENT

| | Des Moines | Ankeny | Urbandale | West DM | Windsor Heights | Clive | Waukee | Polk City | Pleasant Hill | Altoona | Bondurant | Grimes | Johnston | Norwalk | Polk Co. Rural #1 | Berwick | Cumming | Carlisle | Indianola | Average | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rate per 1,000 gallons | $3.40 0 - 5,000 (daily) $2.28 5,001 - 15,000 $1.75 15,001+ | $3.59 0 - 5,000 $5.05 5,001+ | $4.61 | $4.55 | $4.46 | $7.10 | $11.22 0 - 1,000 $ 7.62 1,001+ | $8.95 0 - 1,000 $3.57 1,001+ | $6.23 $5.25 | $6.01 | $6.10 | $7.23 | $5.36 | $5.37 | $4.00 | $4.00 | $5.81 | $5.50 | $8.75 0 - 1,000 $5.75 1,001+ | | |
| Date of last rate change: | April 1, 2015 | April 1, 2015 | May 1, 2015 | January 1, 2015 | April 1, 2014 | April 1, 2011 | July 1, 2102 | July 1, 2014 | April 1, 2015 | 7/1/2013 | 7/1/2015 | | 7/1/2015 | 7/1/2015 | April 1, 2012 | April 1, 2014 | April 1, 2015 | | 7/1/2011 | | |
| Avg Monthly Water Charges based on 7,500 gallons: | | | Irrigation $5.62 | Irrigation $4.75 | | Irrigation $7.10 up | | | | | | | Irrigation = $6.44 | | | | | | | | |
| Water | 25.50 | 30.58 | 34.58 | 34.13 | 33.45 | 53.25 | 60.75 | 32.16 | 46.73 | 45.08 | 45.75 | 54.23 | 40.20 | 40.28 | 30.00 | 28.58 | 43.58 | $41.25 | 46.13 | | |
| Water Availability | 6.00 | 7.64 | 4.50 | 3.90 | 6.00 | - | - | - | 10.00 | 5.00 | 5.67 | 1.62 | 7.21 | 3.00 | 4.00 | 3.00 | 9.00 | - | 0.00 | | |
| Avg Monthly Water Charges | $ 31.50 | $ 38.22 | $ 39.08 | $ 38.03 | $ 39.45 | $ 53.25 | $ 60.75 | $ 32.16 | $ 56.73 | $ 50.08 | $ 51.42 | $ 55.85 | $ 47.41 | $ 43.28 | $ 34.00 | $ 31.58 | $ 52.58 | $ 41.25 | $ 46.13 | $ 44.36 | $ 43.28 |
| Equivalent per 1000 gal rate | $ 4.20 | $ 5.10 | $ 5.21 | $ 5.07 | $ 5.26 | $ 7.10 | $ 8.10 | $ 4.29 | $ 7.56 | $ 6.68 | $ 6.86 | $ 7.45 | $ 6.32 | $ 5.77 | $ 4.53 | $ 4.21 | $ 7.01 | $ 5.50 | $ 6.15 | $ 5.91 | $ 5.77 |
| Billed wholesale rate | | $1.54 | $1.46 | $1.46 | | $1.46 | $1.46 | $2.27 | | | $1.85 | | $3.05 | $1.46 | $0.00 | $0.00 | | | | | |

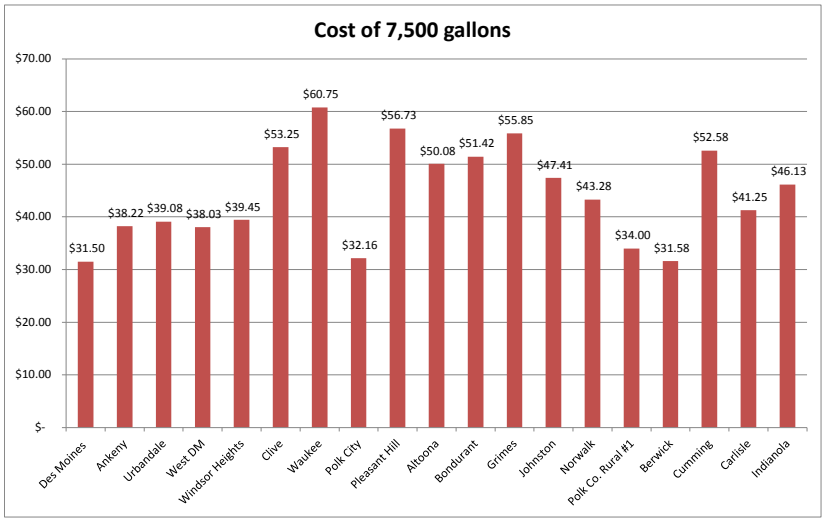
| | | | |
|---|---|---|---|
| Average Equivalent Rate = | $ 5.91 | 36.8 | |
| | | $7.48 | |
| | | $4.92 | |

ASSUMING CAPITAL IMPROVEMENT IS RAISED TO $2.00

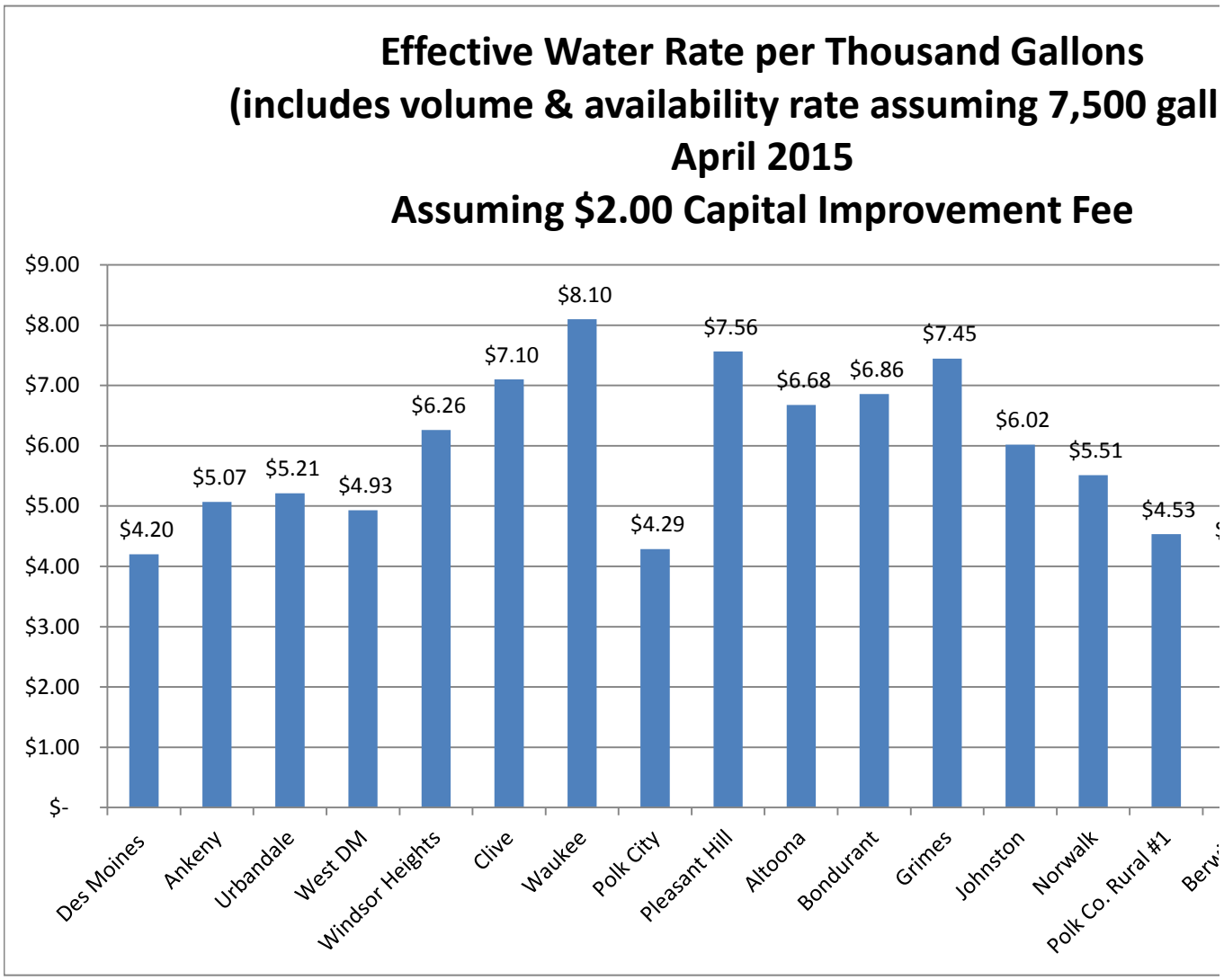
| | Des Moines | Ankeny | Urbandale | West DM | Windsor Heights | Clive | Waukee | Polk City | Pleasant Hill | Altoona | Bondurant | Grimes | Johnston | Norwalk | Polk Co. Rural #1 | Berwick | Cumming | Carlisle | Indianola | Average | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rate per 1,000 gallons | $3.40 0 - 5,000 (daily) $2.28 5,001 - 15,000 $1.75 15,001+ | $3.59 0 - 5,000 $5.05 5,001+ | $4.61 | $4.45 | $5.46 | $7.10 | $11.22 0 - 1,000 $ 7.62 1,001+ | $8.95 0 - 1,000 $3.57 1,001+ | $6.23 $5.25 | $6.01 | $6.10 | $7.23 | $5.15 | $5.11 | $4.00 | $4.00 | $5.81 | $5.50 | $8.75 0 - 1,000 $5.75 1,001+ | | |
| Date of last rate change: | April 1, 2015 | April 1, 2015 | May 1, 2011 | January 1, 2012 | April 1, 2014 | April 1, 2011 | July 1, 2102 | July 1, 2014 | April 1, 2015 | 7/1/2012 | 7/1/2015 | | | | April 1, 2012 | April 1, 2014 | April 1, 2015 | | 7/1/2011 | | |
| Avg Monthly Water Charges based on 7,500 gallons: | | | Irrigation $5.62 | Irrigation $4.75 | | Irrigation $7.10 up | | | | | | | Irrigation = $6.44 | | | | | | | | |
| Water | 25.50 | 30.58 | 34.58 | 33.38 | 40.95 | 53.25 | 60.75 | 32.16 | 46.73 | 45.08 | 45.75 | 54.23 | 38.63 | 38.33 | 30.00 | 28.58 | 43.58 | $41.25 | 46.13 | | |
| Water Availability | 6.00 | 7.42 | 4.50 | 3.60 | 6.00 | - | - | - | 10.00 | 5.00 | 5.67 | 1.62 | 6.50 | 3.00 | 4.00 | 3.00 | 9.00 | - | 0.00 | | |
| Avg Monthly Water Charges | $ 31.50 | $ 38.00 | $ 39.08 | $ 36.98 | $ 46.95 | $ 53.25 | $ 60.75 | $ 32.16 | $ 56.73 | $ 50.08 | $ 51.42 | $ 55.85 | $ 45.13 | $ 41.33 | $ 34.00 | $ 31.58 | $ 52.58 | $ 41.25 | $ 46.13 | $ 44.46 | $ 45.13 |
| Equivalent per 1000 gal rate | $ 4.20 | $ 5.07 | $ 5.21 | $ 4.93 | $ 6.26 | $ 7.10 | $ 8.10 | $ 4.29 | $ 7.56 | $ 6.68 | $ 6.86 | $ 7.45 | $ 6.02 | $ 5.51 | $ 4.53 | $ 4.21 | $ 7.01 | $ 5.50 | $ 6.15 | $ 5.93 | $ 6.02 |
| Billed wholesale rate | | $1.54 | $1.46 | $1.46 | | $1.46 | $1.46 | $2.27 | | | $1.85 | | $3.05 | $1.46 | $0.00 | $0.00 | | | | | |

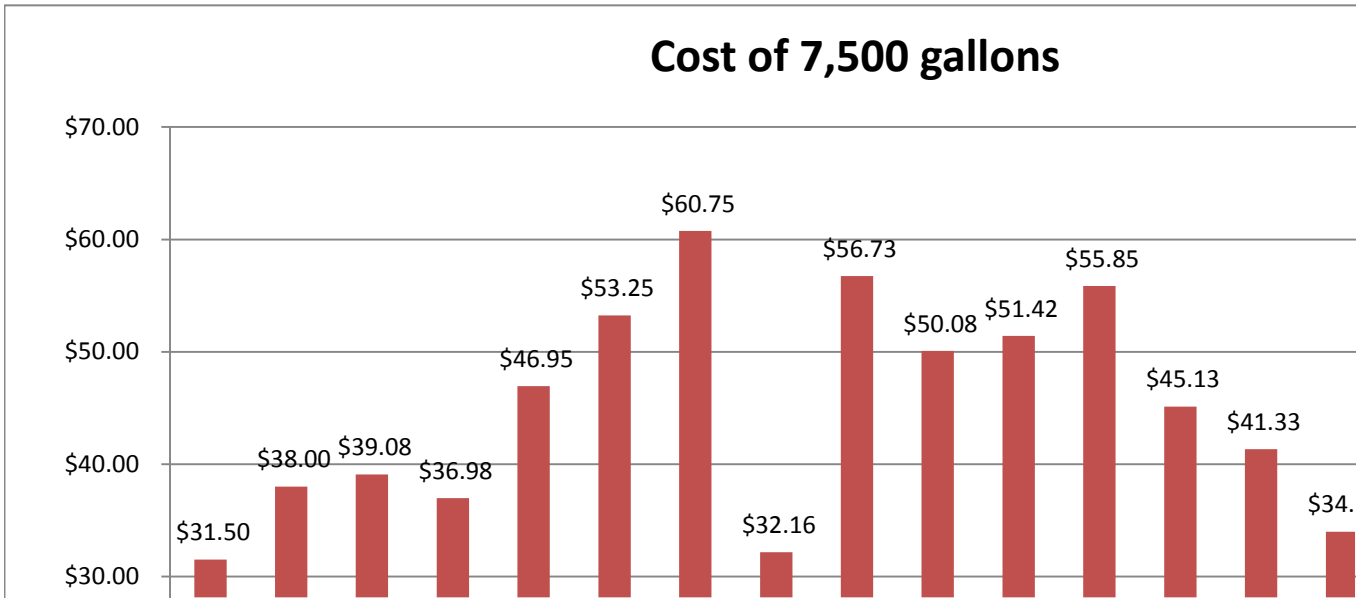


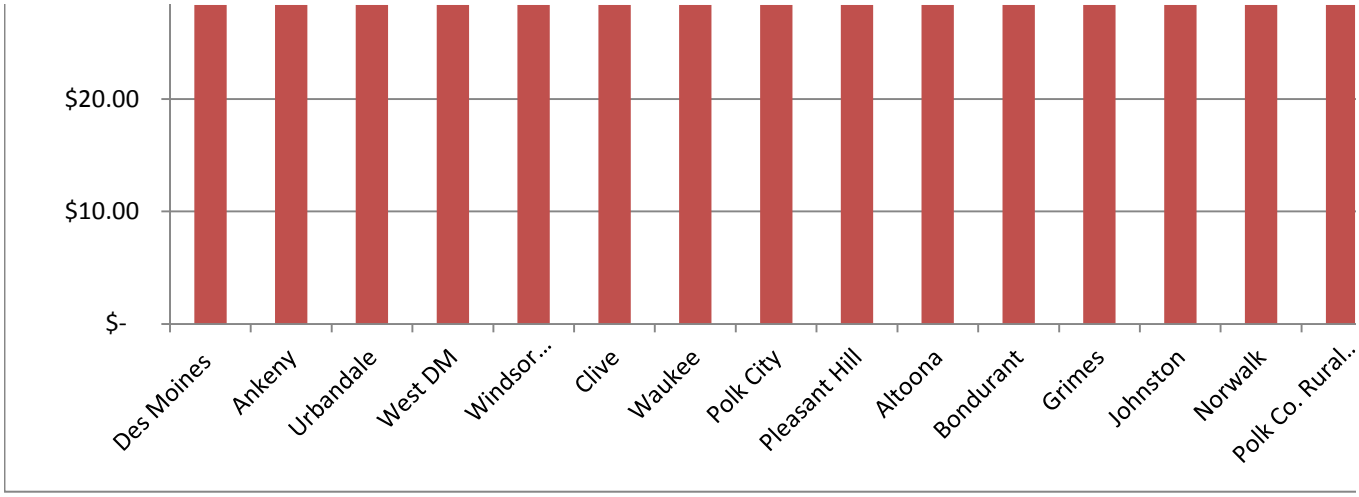
| | | |
|---|---|---|
| WH | $ | 5.26 |
| Median | $ | 5.77 |
| Average | $ | 5.91 |

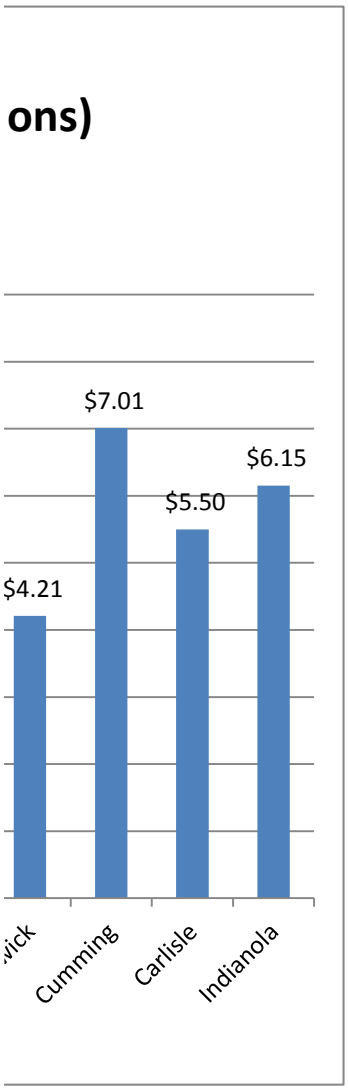


| | | |
|---|---|---|
| WH | $ | 39.45 |
| Median | $ | 43.28 |
| Average | $ | 44.36 |

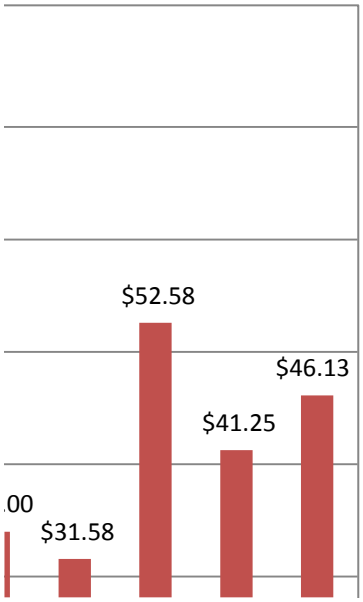

Effective Water Rate per Thousand Gallons
(includes volume & availability rate assuming 7,500 gall
April 2015
Assuming $2.00 Capital Improvement Fee
$9.00
$8.00
$7.00
$6.00
$5.00
$4.00
$3.00
$2.00
$1.00
$-
$4.20
$5.07
$5.21
$4.93
$6.26
$7.10
$8.10
$4.29
$7.56
$6.68
$6.86
$7.45
$6.02
$5.51
$4.53
Des Moines
Ankeny
Urbandale
West DM
Windsor Heights
Clive
Waukee
Polk City
Pleasant Hill
Altoona
Bondurant
Grimes
Johnston
Norwalk
Polk Co. Rural #1

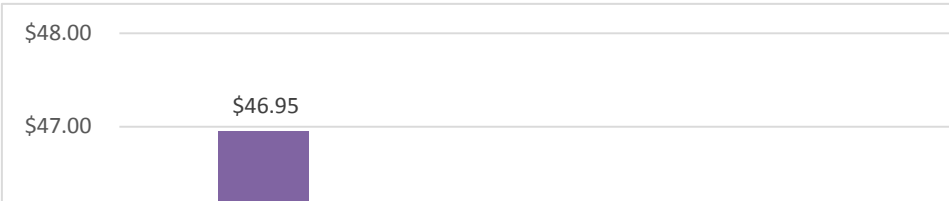

Cost of 7,500 gallons
$70.00
$60.00
$50.00
$40.00
$30.00
$31.50
$38.00
$39.08
$36.98
$46.95
$53.25
$60.75
$32.16
$56.73
$50.08
$51.42
$55.85
$45.13
$41.33

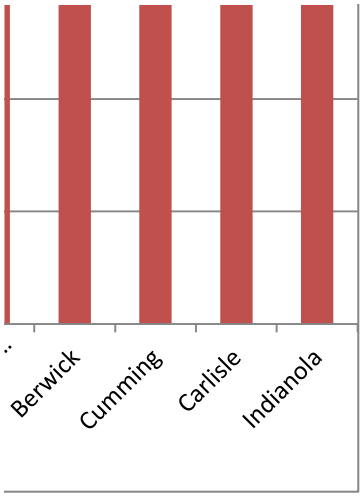

$20.00
$10.00
$-
Des Moines
Ankeny
Urbandale
West DM
Windsor...
Clive
Waukee
Polk City
Pleasant Hill
Altoona
Bondurant
Grimes
Johnston
Norwalk
Polk Co. Rural..

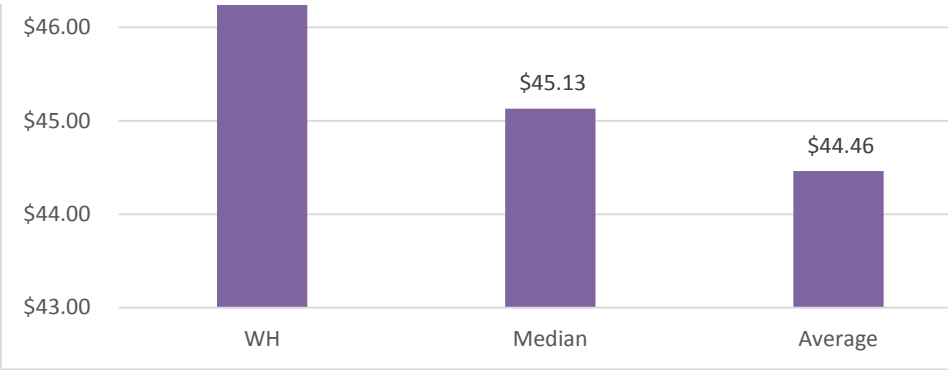


| | | |
|---|---|---|
| WH | $ | 6.26 |
| Median | $ | 6.02 |
| Average | $ | 5.93 |






| | | |
|---|---|---|
| WH | $ | 46.95 |
| Median | $ | 45.13 |
| Average | $ | 44.46 |