



**City of Garden Ridge**

9400 Municipal Parkway  
Garden Ridge, Texas 78266-2600  
(210) 651-6632  
Fax (210) 651-9638

**AGENDA**  
**CITY WATER COMMISSION MEETING**

Tuesday, January 24, 2017 at 6 p.m.

---

The Garden Ridge City Water Commission will meet in a regular meeting on Tuesday, January 24, 2017 at 6 p.m. in the City Council Chambers, City Hall, 9400 Municipal Parkway, Garden Ridge, Texas. This meeting is an open meeting, open to the public, subject to the Open Meetings Law of the State of Texas, and as required by law, notice is hereby posted on Friday, January 20, 2017 before 5:00 p.m., providing time, place, date and agenda thereof. The meeting facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpretive services must be made 48 hours in advance of this meeting.

---

1. Call to Order
2. Roll Call
3. Citizen's Participation – 3 minute limit per citizen

**Rules for Citizen's Participation:**

The Water Commission welcomes citizen participation and comments at all of their Meetings. As a courtesy to your fellow citizens and out of respect to our appointed officials, we must request that if you wish to speak, that you please follow these guidelines.

- a) Direct your comments to the entire Commission, not to an individual member, nor to the audience.
- b) Show the Water Commission the same respect and courtesy that you would like to be shown.
- c) Limit remarks to three (3) minutes per citizen during Item 3 and Item 7.
- d) Citizen comments may be deferred to a specific Business Item set forth in Section 4, below, if such comments pertain to such Business Item.

*NOTE: The Texas Open Meetings Act permits a member of the public or a member of the governmental body to raise a subject that has not been included in the notice for the meeting. However, any discussion of the subject **must be limited** to a proposal to place the subject on the agenda for a future meeting and any response to a question posed to the Commission is limited to either a statement of specific factual information or a recitation of existing policy. TEX. GOV'T CODE § 551.042.*

4. Business Items

The City Water Commission may discuss, consider and/or take possible action on recommendation to the City Council on the following:

- a) Minutes of the October 25, 2017 Water Commission Meeting

- b) Request from Mary Longloy, 9207 Cipriani Way, for a 50% reduction of water bill for the billing period of October 24 through November 21, 2016
  - c) Amendments to Ordinance 54-032016, Section 15.03-Requirements, b. Policy(4)(b)and (c) , (6), (7) and c. Inspections (1), (2) and (3) with amendments being for the purpose of updating ordinance to align with TCEQ rules and administrative in nature
5. Water Manager Monthly Activity Report
- a) Water pumping/usage from city wells
  - b) Water system infrastructure maintenance, repairs and/or projects
  - c) Static levels, drawdown levels and flow rates on the Trinity Well
  - d) Water and/or Drought Management
6. Administrative Items  
The Commission may discuss, consider and/or take possible action on the following items:
- a) Items discussed at the November 2, December 7, 2016 , and January 4, 2017 City Council Regular Meetings
  - b) Set date, time and location for next meeting (February 28, 2017)
7. Citizen Participation – 3 minute limit per citizen
8. Adjourn

### **AGENDA NOTICES:**

#### **Decorum Required:**

Any disruptive behavior, including shouting or derogatory statements or comments may be ruled out of order by the Presiding Officer. Continuation of this type of behavior could result in a request by the Presiding Officer that the individual leave the meeting, and if refused, an order of removal.

#### **Action by Commission Authorized:**

The Commission may vote and/or act upon any item within this Agenda. The Commission reserves the right to retire into executive session concerning any of the items listed on this Agenda, pursuant to and in accordance with Texas Government Code Section 551.071, to seek the advice of its attorney about pending or contemplated litigation, settlement offer or on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas conflict with the Open Meetings Act and may invoke this right where the City Attorney, the Mayor or a majority of the Governing Body deems an executive session is necessary to allow privileged consultation between the City Attorney and the governing body, if considered

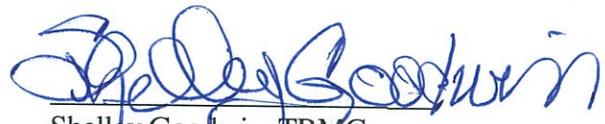
necessary and legally justified under the Open Meetings Act. The City Attorney may appear in person, or appear in executive session by conference call in accordance with applicable state law.

**Executive Sessions Authorized:**

This agenda has been reviewed and approved by the City's legal counsel and the presence of any subject in any Executive Session portion of the agenda constitutes a written interpretation of Texas Government Code Chapter 551 by legal counsel for the governmental body and constitutes an opinion by the attorney that the items discussed therein may be legally discussed in the closed portion of the meeting considering available opinions of a court of record and opinions of the Texas Attorney General known to the attorney. This provision has been added to this agenda with the intent to meet all elements necessary to satisfy Texas Government Code Chapter 551.144(c) and the meeting is conducted by all participants in reliance on this opinion.

**Attendance By Other Elected or Appointed Officials:**

It is anticipated that members of other city board, commissions and/or committees may attend the meeting in numbers that may constitute a quorum of the other city boards, commissions and/or committees. Notice is hereby given that the meeting, to the extent required by law, is also noticed as a meeting of the other boards, commissions and/or committees of the City, whose members may be in attendance. The members of the boards, commissions and/or committees may participate in discussions on the same items listed on the agenda, which occur at the meeting, but no action will be taken by such in attendance unless such item and action is specifically provided for on an agenda for that board, commission or committee subject to the Texas Open Meetings Act.

  
Shelley Goodwin, TRMC  
City Secretary

This is to certify that I, Shelley Goodwin, posted this Agenda at 2:50 pm on January 20, 2017 on the bulletin board located at the entrance to the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas.

  
Shelley Goodwin, TRMC  
City Secretary



# City of Garden Ridge

9400 Municipal Parkway  
Garden Ridge, Texas 78266-2600  
(210) 651-6632  
Fax (210) 651-9638

## MINUTES OF CITY WATER COMMISSION REGULAR MEETING October 25, 2016

### **Members Present:**

Chairman David Heier  
Vice-Chairman Richard Holloway  
Commissioner Andre Bullard  
Commissioner Keven Harshbarger  
Commissioner Ray Pitzen  
Mayor Nadine Knaus, ex-officio

### **Member Absent:**

Commissioner Pat Ramirez

### **City Staff Present:**

Nancy Cain, City Administrator  
Royce Goddard, Water Department Manager  
Shelley Goodwin, City Secretary

### **1. Call to Order**

With a quorum of the City Water Commission present, Chairman Heier called the regular meeting of the Garden Ridge City Water Commission to order at 6:02 p.m. on Tuesday, October 25, 2016 in the City Council Chambers of the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas 78266.

### **2. Citizen's Participation – 3 minute limit per citizen**

No one wished to speak.

### **3. Business Items**

**The City Water Commission may discuss, consider and/or take possible action on recommendation to the City Council on the following:**

#### **a) September 27, 2016 Water Commission Meeting**

**Motion:** A motion was made by Commissioner Holloway, seconded by Commissioner Pitzen, to approve the minutes of September 27, 2016 Regular Water Commission Meeting. The Water Commission voted five (5) for and none (0) opposed. The motion passed unanimously.

**b) Request from William Bondurant to meet with Water Commission to discuss water leak at 20479 Wahl Lane that he feels should have been discovered during plumbing inspection.**

William Bondurant, stated he is building a home at 20479 Wahl Lane and on September 13<sup>th</sup> his water was turned on so an inspection could occur. He stated apparently his water has been leaking since it was turned on and the leak was not noticed until he received his water bill. He stated the leak was found in the foundation and should have been found by the Plumbing Inspector.

Royce Goddard, Water Manager, stated he was contacted to perform a Rough In Inspection, which is an inspection of the water lines at the point of entering the house and within the house. He stated at that time he did not notice the water was entering the house in the foundation in the garage, but that is acceptable in the Plumbing Code. He stated normally the water line enters the house on the side and runs up the wall.

The Water Commission discussed the different types of inspections, certificate of occupancy, and Ordinance 54.

The Water Commission agreed by consensus that Ordinance 54 does not allow for variances and suggested Mr. Bondurant discuss this matter with his plumber and contractor that did the work. They stated that if Mr. Bondurant does not get satisfaction after the discussion with his plumber and contractor then he could consider returning to the Water Commission.

**c) Nominations and vote on:**

**i. Water Commission Chair**

**Motion:** A motion was made by Commissioner Holloway, seconded by Commissioner Bullard, to nominate David Heier as Water Commission Chair. The Water Commission voted five (5) for and none (0) opposed. The motion passed unanimously.

**ii. Water Commission Vice-Chair**

**Motion:** A motion was made by Commissioner Bullard, seconded by Commissioner Harshbarger, to nominate Richard Holloway as Water Commission Vice-Chair. The Water Commission voted five (5) for and none (0) opposed. The motion passed unanimously.

**d) Possible rescheduling of future meetings:**

**i. November 22, 2016**

The Water Commission agreed by consensus to hold the November meeting on November 22, 2016.

**ii. December 27, 2016**

The Water Commission agreed by consensus to not have a December meeting but if the need for a December meeting arises then hold it on December 27, 2016.

**4. Water Manager Monthly Activity Report**

**a) Water pumping/usage from city wells**

Royce Goddard, Water Manager reviewed the monthly water pumping/usage from the city wells and discussed the water system operations (see attached report).

Royce Goddard, Water Manager reported 64.83 acre feet were pumped from the Edwards Aquifer and no water was pumped from the Trinity. He stated the average daily usage is 287,651,487.2 gallons.

**b) Water system infrastructure maintenance, repairs and/or projects**

Royce Goddard, Water Manager stated waterline construction will begin on Sumac and Teakwood.

**c) Static levels, drawdown levels and flow rates on the Trinity Well**

Royce Goddard, Water Manager reported as of September 27, 2016 the Edwards static level was at 128.7 feet and the Trinity static level was at 193.5.

**d) Water and/or Drought Management**

The City of Garden Ridge is currently under no watering restrictions.

**5. Administrative Items**

**The Commission may discuss, consider and/or take possible action on the following items:**

**b) Items discussed at the October 5, 2016 City Council Regular Meeting**

Nancy Cain, City Administrator, reported the reappointment of Commissioner Bullard was the only Water Commission item on the City Council Regular Meeting held on October 5, 2016.

**c) Set date, time and location for next meeting**

Next Water Commission meeting will be held on Tuesday, November 22, 2016 in the City Council Chambers.

**6. Citizen Participation – 3 minute limit per citizen**

No one wished to speak.

**7. Adjourn**

Motion to adjourn was made by Commissioner Holloway and seconded by Commissioner Pitzen. The motion passed unanimously and the meeting adjourned at 7:05 p.m.

---

David Heier, Chair

ATTEST:

---

Shelley Goodwin, TRMC  
City Secretary

**Water Commission  
As Of 25 October 2016**

	2015						2016							
	Edwards		Trinity		Total	Quarterly	Edwards		Trinity		Total	Quarterly		
	Gallons	Acre Feet	Gallons	Acre Feet	Acre Feet	Acre Feet	Gallons	Acre Feet	Gallons	Acre Feet	Acre Feet	Acre Feet		
January	2,633,000	8.08	11,167,000	34.27	42.35		15,309,000	46.98	431,000	1.32	48.30		Actual	
February	324,000	0.99	14,774,000	45.34	46.33		512,000	1.57	19,825,000	60.84	62.41		Actual	
March	14,394,000	44.17	1,922,000	5.90	50.07	138.76	3,234,000	9.92	16,359,000	50.20	60.13	170.84	Actual	
April	17,561,000	53.89	327,000	1.00	54.90		494,000	1.52	18,620,000	57.14	58.66		Actual	
May	8,147,000	25.00	8,066,000	24.75	49.76		4,348,000	13.34	14,693,000	45.09	58.43		Actual	
June	1,394,000	4.28	20,378,000	62.54	66.82	171.47	29,247,000	89.76	1,608,000	4.93	94.69	211.78	Actual	
July	38,650,000	118.61	10,880,000	33.39	152.00		33,379,000	102.44	12,029,000	36.92	139.35		Actual	
August	29,573,000	90.76	30,889,000	94.79	185.55		24,439,000	75.00	7,880,000	24.18	99.18		Actual	
September	13,883,000	42.61	28,345,000	86.99	129.59	467.15	23,578,000	72.36	1,715,000	5.26	77.62	316.16	Actual	
October	29,538,000	90.65	7,472,000	22.93	113.58		21,124,000	64.83	0	0.00	64.83		10/1-10/25	
November	16,496,000	50.62	1,000	0.00	50.63		0	0.00	0	0.00	0.00		Actual	
December	15,997,000	49.09	0	0.00	49.09	213.30	0	0.00	0	0.00	0.00	64.827176	Actual	
<b>TOTAL</b>	<b>188,590,000</b>	<b>578.76</b>	<b>134,221,000</b>	<b>411.91</b>	<b>990.67</b>		<b>155,664,000</b>	<b>477.72</b>	<b>93,160,000</b>	<b>285.90</b>	<b>763.61</b>			
	<b>EAA Stage 0, -0%, Available 847.077 Ac/Ft, Unused 268.317 Ac/Ft</b>							<b>EAA Stage 0, -0%, Available 882.77 Ac/Ft, Unused 405.05 Ac/Ft</b>						<b>882.77</b>
<b>Current Edwards Permits</b>														
Allocated Pumpage	CO00139 P100-767			511.951 Acre Feet	<b>Total Available Edwards Water</b>				<b>882.77 Ac/Ft</b>					
Purchase	BE 00109I P100-327			2.000 Acre Feet					<b>287,651,487.2 Gals</b>					
Purchase	ME 00417D P101-185			1.301 Acre Feet					Connections: 1573 Avg. usage per connection: 13,429.116 gals					
Purchase	ME 00479I P101-315			3.895 Acre Feet					Avg. Daily Usage: 10/01 - 10/25: 844,960.00 gals					
Purchase	UV 00437I P101-699			2.000 Acre Feet					Avg. connections 2015: 1551 Avg. usage per connection for 2015: 208,130.88 gals					
Purchase	UV 00461I P101-752			4.000 Acre Feet					Leak Adjustments / month 0 Leak Adjust. YTD 1					
Purchase	UV 00478I P101-801			2.000 Acre Feet										
Purchase	UV 00537H P101-959			2.000 Acre Feet										
Purchase	UV 00576I P102-040			14.000 Acre Feet										
Purchase	UV 00630G P102-146			1.760 Acre Feet										
Purchase	BE 00081AE P100-200			62.000 Acre Feet										
Transfer	K. Zar Pool	UV00435 P106-186		1.000 Acre Foot										
Transfer		CO00118B P103-312		4.500 Acre Feet										
Transfer		CO00119AA P102-416		2.000 Acre Feet										
Transfer		CO00119AA P102-564		0.660 Acre Feet										
Lease	City of Schertz			200.000 Acre Feet										
Lease	Lloyd Loehman	P107-429		3.000 Acre Feet										
Lease	M. Friesenhahn	P100-745		65.000 Acre Feet										
Lease	BVFD	1/1/2015 - 12/31/2015		-0.300 Acre Feet										
<b>Total</b>	<b>Edwards</b>	<b>Allocation</b>		<b>882.77 Acre Feet</b>										

**Monthly Well Progress Report**

Trinity Well Status:	Static Level: Oct 1 <sup>st</sup> : 196.2'	Oct 25 <sup>th</sup> : 198.0'	Diff. of: 1.8'
GPM: 853	Pumping Level: Oct 1 <sup>st</sup> : 0.00'	Oct 25 <sup>th</sup> : 0.00'	Diff. of: N/A'
Edwards Wells Status:	Static Level: Oct 1 <sup>st</sup> : 130.5'	Oct 25 <sup>th</sup> : 129.6'	Diff. of: 0.9'

Mary Longloy  
9207 Cipriani Way  
Garden Ridge, TX 78266

December 8, 2016

Roger E. Goddard  
Water Manager  
City of Garden Ridge  
9400 Municipal Parkway  
Garden Ridge, TX 78266

Mr. Goddard:

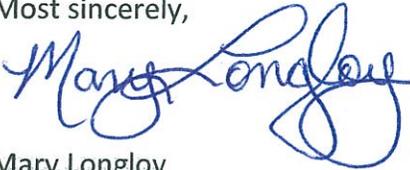
As we discussed at our meeting on Monday, December 5<sup>th</sup>, I am writing to request an audience with the city council of Garden Ridge to request an adjustment to my \$2640.00 water bill. While I most certainly am not asking for the bill to be forgiven, I am asking for a 50% reduction of the bill. As you explained in our meeting, our city council did away with adjustments because people were taking advantage of the policy and misusing our water conservation efforts by overwatering and then presenting the water department with a small repair bill to get their bill lowered. That is certainly NOT true in my case! As a retiree that lives alone, I am very conscientious. I am asking you, and the city council, to review 8 years of my water usage records, take into consideration my current circumstances, and grant me a 50% reduction of my \$2640.76 bill.

When we met on Monday to review my water usage report, it was clearly evident that my sprinkler system is working properly and has only run during designated times, or less. Further, my 8 years of records reflect that I have been a responsible and conscientious water consumer and always paid my bill on time. The report also shows that my drip system for my vegetable garden does not run continuously and was turned off within the time period of the \$26.40.76 bill. The report also shows that I have no leaks, running toilets or problem with my backflow. The report shows an unknown continuous flow for a period of approximately two weeks that you suspected to be a running garden hose. As I explained to you, I have rarely been home this fall for two reasons. My mother fell and broke her hip this summer and I care for her most evenings. My daughter was accepted to nursing school, so, as her sole support, I have gone back to work to pay for her schooling. Working during the day and caring for my mother at night has left me sleep deprived and stressed. As the home owner, I am clearly responsible for any water usage on my property, however, I live on a corner and there have been many, many contractors working in our neighborhood during the time this occurred. In past years they have come into my yard to use my hose and even taken vegetables out of my backyard. I took this up with their supervisor and the problem was resolved. I have also had hoses stolen out of my yard and I made a police report. When I shared this, you asked me why they would do that. Why do people do a lot of things that make no sense or hurt others? Please do not misunderstand, again let me say, I am NOT asking for my water bill to be forgiven, however I am requesting that

it be prorated for 50% of the \$2640.76 charged. I believe that to be more than fair because if I were billed for the water at the base rate, my bill would have been approximately \$900.00. Prorating the charges to 50% would still include a \$450.00 surcharge for over usage, which I believe to be very fair. Further, we are served by SAWS. If I were living in San Antonio, they would adjust the bill. Clearly, 8 years of records show that I have promptly fixed leaks, kept my sprinkler system in good working order and certainly have not abused our water conservation efforts by overwatering and then presenting some bogus repair bill to have my bill lowered. Please know that I have removed the hose in my front yard and put timers on all my faucets to prevent this from occurring in the future.

While I appreciate the fact that I am allowed to make payments on the bill, I simply cannot afford this bill or believe it is right for me to have to pay for the use of the water at the increased rates. Further, even paid over time, this bill has created a great hardship on me and my family. I ask that you, and the city council, please grant me a reduction of 50% of the \$2640.76 bill.

Most sincerely,



Mary Longloy

Date	Time	Max Flow	Consumption	9207 Cipriani Way Longloy 12/5/16			
12/5/2016	9:44 AM	0	0	12/3/2016	11:43 AM	0	0
12/5/2016	8:44 AM	0	0	12/3/2016	10:43 AM	0	0
12/5/2016	7:44 AM	37.45	3	12/3/2016	9:43 AM	44.45	17.44
12/5/2016	6:44 AM	0	0	12/3/2016	8:43 AM	35.7	35.03
12/5/2016	5:44 AM	0	0	12/3/2016	7:43 AM	41.65	5
12/5/2016	4:44 AM	0	0	12/3/2016	6:43 AM	15.4	2.97
12/5/2016	3:44 AM	0	0	12/3/2016	5:43 AM	0	0
12/5/2016	2:44 AM	0	0	12/3/2016	4:43 AM	0	0
12/5/2016	1:44 AM	0	0	12/3/2016	3:43 AM	0	0
12/5/2016	12:44 AM	0	0	12/3/2016	2:43 AM	0	0
12/4/2016	11:44 PM	23.1	1.2	12/3/2016	1:43 AM	0	0
12/4/2016	10:44 PM	0	0	12/3/2016	12:43 AM	0	0
12/4/2016	9:44 PM	0	0	12/2/2016	11:43 PM	16.8	2.99
12/4/2016	8:44 PM	28	11.58	12/2/2016	10:43 PM	33.6	6.88
12/4/2016	7:44 PM	39.9	9.42	12/2/2016	9:43 PM	42.7	44.51
12/4/2016	6:44 PM	0	0	12/2/2016	8:43 PM	0	0
12/4/2016	5:44 PM	0	0	12/2/2016	7:43 PM	0	0
12/4/2016	4:44 PM	37.1	3	12/2/2016	6:43 PM	20.65	0.14
12/4/2016	3:44 PM	36.4	4.47	12/2/2016	5:43 PM	0	0
12/4/2016	2:44 PM	40.6	16.48	12/2/2016	4:43 PM	0	0
12/4/2016	1:44 PM	20.3	1.18	12/2/2016	3:43 PM	0	0
12/4/2016	12:44 PM	0	0	12/2/2016	2:43 PM	0	0
12/4/2016	11:44 AM	0	0	12/2/2016	1:43 PM	0	0
12/4/2016	10:44 AM	0	0	12/2/2016	12:43 PM	0	0
12/4/2016	9:44 AM	0	0	12/2/2016	11:43 AM	0	0
12/4/2016	8:44 AM	0	0	12/2/2016	10:43 AM	0	0
12/4/2016	7:44 AM	0	0	12/2/2016	9:43 AM	0	0
12/4/2016	6:44 AM	15.4	0.73	12/2/2016	8:43 AM	37.45	405.47
12/4/2016	5:44 AM	39.9	4.4	12/2/2016	7:43 AM	33.25	767.19
12/4/2016	4:44 AM	0	0	12/2/2016	6:43 AM	33.6	840.79
12/4/2016	3:44 AM	0	0	12/2/2016	5:43 AM	31.5	1064.74
12/4/2016	2:44 AM	0	0	12/2/2016	4:43 AM	36.75	466.61
12/4/2016	1:44 AM	0	0	12/2/2016	3:43 AM	36.4	742.97
12/4/2016	12:44 AM	0	0	12/2/2016	2:43 AM	40.25	421.1
12/3/2016	11:44 PM	0	0	12/2/2016	1:43 AM	0	0
12/3/2016	10:44 PM	19.95	0.49	12/2/2016	12:43 AM	37.45	3.15
12/3/2016	9:44 PM	32.2	2.77	12/1/2016	11:43 PM	0	0
12/3/2016	8:43 PM	0	0	12/1/2016	10:43 PM	0	0
12/3/2016	7:43 PM	0	0	12/1/2016	9:43 PM	15.05	0.3
12/3/2016	6:43 PM	0	0	12/1/2016	8:43 PM	37.8	1.64
12/3/2016	5:43 PM	0	0	12/1/2016	7:43 PM	0	0
12/3/2016	4:43 PM	48.65	3.03	12/1/2016	6:43 PM	0	0
12/3/2016	3:43 PM	32.2	16.06	12/1/2016	5:43 PM	0	0
12/3/2016	2:43 PM	0	0	12/1/2016	4:42 PM	39.55	4.91
12/3/2016	1:43 PM	0	0	12/1/2016	3:42 PM	0	0
12/3/2016	12:43 PM	0	0	12/1/2016	2:42 PM	0	0

12/1/2016	1:42 PM	0	0	11/29/2016	2:42 PM	0	0
12/1/2016	12:42 PM	0	0	11/29/2016	1:42 PM	0	0
12/1/2016	11:42 AM	0	0	11/29/2016	12:42 PM	0	0
12/1/2016	10:42 AM	24.15	1.48	11/29/2016	11:42 AM	0	0
12/1/2016	9:42 AM	0	0	11/29/2016	10:42 AM	0	0
12/1/2016	8:42 AM	20.65	1.21	11/29/2016	9:42 AM	0	0
12/1/2016	7:42 AM	36.4	5.37	11/29/2016	8:42 AM	0	0
12/1/2016	6:42 AM	45.15	39.3	11/29/2016	7:42 AM	34.3	5.26
12/1/2016	5:42 AM	0	0	11/29/2016	6:42 AM	39.55	10.04
12/1/2016	4:42 AM	0	0	11/29/2016	5:42 AM	0	0
12/1/2016	3:42 AM	0	0	11/29/2016	4:42 AM	0	0
12/1/2016	2:42 AM	0	0	11/29/2016	3:42 AM	0	0
12/1/2016	1:42 AM	0	0	11/29/2016	2:42 AM	0	0
12/1/2016	12:42 AM	0	0	11/29/2016	1:42 AM	0	0
11/30/2016	11:42 PM	39.55	3.02	11/29/2016	12:42 AM	0	0
11/30/2016	10:42 PM	40.25	7.84	11/28/2016	11:41 PM	0	0
11/30/2016	9:42 PM	33.25	1.4	11/28/2016	10:41 PM	20.65	1.73
11/30/2016	8:42 PM	14	3.01	11/28/2016	9:41 PM	0	0
11/30/2016	7:42 PM	46.2	8.72	11/28/2016	8:41 PM	35.7	1.74
11/30/2016	6:42 PM	0	0	11/28/2016	7:41 PM	0	0
11/30/2016	5:42 PM	48.65	123.6	11/28/2016	6:41 PM	0	0
11/30/2016	4:42 PM	38.85	1.26	11/28/2016	5:41 PM	43.4	23.56
11/30/2016	3:42 PM	0	0	11/28/2016	4:41 PM	0	0
11/30/2016	2:42 PM	0	0	11/28/2016	3:41 PM	0	0
11/30/2016	1:42 PM	0	0	11/28/2016	2:41 PM	0	0
11/30/2016	12:42 PM	0	0	11/28/2016	1:41 PM	0	0
11/30/2016	11:42 AM	0	0	11/28/2016	12:41 PM	0	0
11/30/2016	10:42 AM	0	0	11/28/2016	11:41 AM	0	0
11/30/2016	9:42 AM	0	0	11/28/2016	10:41 AM	0	0
11/30/2016	8:42 AM	26.95	1.42	11/28/2016	9:41 AM	0	0
11/30/2016	7:42 AM	40.25	28.74	11/28/2016	8:41 AM	29.4	5.39
11/30/2016	6:42 AM	0	0	11/28/2016	7:41 AM	40.6	3.04
11/30/2016	5:42 AM	0	0	11/28/2016	6:41 AM	0	0
11/30/2016	4:42 AM	0	0	11/28/2016	5:41 AM	0	0
11/30/2016	3:42 AM	0	0	11/28/2016	4:41 AM	0	0
11/30/2016	2:42 AM	0	0	11/28/2016	3:41 AM	0	0
11/30/2016	1:42 AM	0	0	11/28/2016	2:41 AM	0	0
11/30/2016	12:42 AM	0	0	11/28/2016	1:41 AM	0	0
11/29/2016	11:42 PM	0	0	11/28/2016	12:41 AM	0	0
11/29/2016	10:42 PM	39.2	3.93	11/27/2016	11:41 PM	0	0
11/29/2016	9:42 PM	0	0	11/27/2016	10:41 PM	38.5	3.81
11/29/2016	8:42 PM	0	0	11/27/2016	9:41 PM	0	0
11/29/2016	7:42 PM	0	0	11/27/2016	8:41 PM	0	0
11/29/2016	6:42 PM	0	0	11/27/2016	7:41 PM	20.65	0.24
11/29/2016	5:42 PM	36.75	3.27	11/27/2016	6:41 PM	0	0
11/29/2016	4:42 PM	31.5	5.63	11/27/2016	5:41 PM	9.1	0.05
11/29/2016	3:42 PM	0	0	11/27/2016	4:41 PM	39.55	8.38

11/27/2016	3:41 PM	0	0	11/25/2016	4:40 PM	35.35	3.79
11/27/2016	2:41 PM	42	2.01	11/25/2016	3:40 PM	0	0
11/27/2016	1:41 PM	0	0	11/25/2016	2:40 PM	0	0
11/27/2016	12:41 PM	38.85	8.44	11/25/2016	1:40 PM	0	0
11/27/2016	11:41 AM	36.75	4.26	11/25/2016	12:40 PM	0	0
11/27/2016	10:41 AM	24.15	9.6	11/25/2016	11:40 AM	43.75	6.74
11/27/2016	9:41 AM	0	0	11/25/2016	10:40 AM	33.25	5.03
11/27/2016	8:41 AM	20.3	3.06	11/25/2016	9:40 AM	0	0
11/27/2016	7:41 AM	10.15	3.04	11/25/2016	8:40 AM	37.45	389.47
11/27/2016	6:41 AM	0	0	11/25/2016	7:40 AM	33.25	789.48
11/27/2016	5:41 AM	0	0	11/25/2016	6:40 AM	35.7	1055.08
11/27/2016	4:41 AM	0	0	11/25/2016	5:40 AM	31.5	1108.33
11/27/2016	3:41 AM	0	0	11/25/2016	4:40 AM	43.4	458.48
11/27/2016	2:41 AM	0	0	11/25/2016	3:40 AM	35.7	732.82
11/27/2016	1:41 AM	0	0	11/25/2016	2:40 AM	40.6	393.7
11/27/2016	12:41 AM	0	0	11/25/2016	1:40 AM	0	0
11/26/2016	11:41 PM	0	0	11/25/2016	12:40 AM	0	0
11/26/2016	10:41 PM	0	0	11/24/2016	11:40 PM	0	0
11/26/2016	9:41 PM	38.85	15.25	11/24/2016	10:40 PM	0	0
11/26/2016	8:41 PM	39.9	2.78	11/24/2016	9:40 PM	0	0
11/26/2016	7:40 PM	36.4	4.97	11/24/2016	8:40 PM	0	0
11/26/2016	6:40 PM	0	0	11/24/2016	7:40 PM	37.8	1.17
11/26/2016	5:40 PM	0	0	11/24/2016	6:40 PM	11.55	281.68
11/26/2016	4:40 PM	0	0	11/24/2016	5:40 PM	33.6	88.64
11/26/2016	3:40 PM	0	0	11/24/2016	4:40 PM	0	0
11/26/2016	2:40 PM	15.4	17.56	11/24/2016	3:40 PM	0	0
11/26/2016	1:40 PM	0	0	11/24/2016	2:40 PM	0	0
11/26/2016	12:40 PM	40.6	4.38	11/24/2016	1:40 PM	0	0
11/26/2016	11:40 AM	0	0	11/24/2016	12:40 PM	0	0
11/26/2016	10:40 AM	42.7	3	11/24/2016	11:40 AM	0	0
11/26/2016	9:40 AM	35	6.1	11/24/2016	10:40 AM	0	0
11/26/2016	8:40 AM	31.85	2.7	11/24/2016	9:40 AM	40.6	10.2
11/26/2016	7:40 AM	38.15	3.02	11/24/2016	8:40 AM	36.75	4.84
11/26/2016	6:40 AM	0	0	11/24/2016	7:40 AM	0	0
11/26/2016	5:40 AM	0	0	11/24/2016	6:40 AM	8.05	281.52
11/26/2016	4:40 AM	0	0	11/24/2016	5:40 AM	10.15	87.99
11/26/2016	3:40 AM	0	0	11/24/2016	4:40 AM	0	0
11/26/2016	2:40 AM	25.2	0.43	11/24/2016	3:40 AM	0	0
11/26/2016	1:40 AM	0	0	11/24/2016	2:39 AM	0	0
11/26/2016	12:40 AM	0	0	11/24/2016	1:39 AM	0	0
11/25/2016	11:40 PM	9.8	4.02	11/24/2016	12:39 AM	33.6	3
11/25/2016	10:40 PM	0	0	11/23/2016	11:39 PM	9.8	0.11
11/25/2016	9:40 PM	36.4	4.66	11/23/2016	10:39 PM	0	0
11/25/2016	8:40 PM	0	0	11/23/2016	9:39 PM	40.95	3.02
11/25/2016	7:40 PM	0	0	11/23/2016	8:39 PM	0	0
11/25/2016	6:40 PM	39.55	12.05	11/23/2016	7:39 PM	41.65	6.75
11/25/2016	5:40 PM	43.05	13.72	11/23/2016	6:39 PM	7.7	280.75

11/23/2016	5:39 PM	34.3	88.95		11/21/2016	6:39 PM	10.15	280.96
11/23/2016	4:39 PM	0	0		11/21/2016	5:39 PM	45.15	84.05
11/23/2016	3:39 PM	45.15	1.17		11/21/2016	4:39 PM	0	0
11/23/2016	2:39 PM	19.95	5.63		11/21/2016	3:39 PM	0	0
11/23/2016	1:39 PM	0	0		11/21/2016	2:39 PM	0	0
11/23/2016	12:39 PM	43.75	17.58		11/21/2016	1:39 PM	0	0
11/23/2016	11:39 AM	0	0		11/21/2016	12:39 PM	23.45	0.72
11/23/2016	10:39 AM	15.75	2.16		11/21/2016	11:39 AM	39.55	4.08
11/23/2016	9:39 AM	40.6	3.02	*	11/21/2016	10:39 AM	39.2	3.02
11/23/2016	8:39 AM	0	0		11/21/2016	9:38 AM	0	0
11/23/2016	7:39 AM	40.6	3.02		11/21/2016	8:38 AM	29.75	1.34
11/23/2016	6:39 AM	7.7	279.54		11/21/2016	7:38 AM	0	0
11/23/2016	5:39 AM	40.25	86.14		11/21/2016	6:38 AM	13.3	282.04
11/23/2016	4:39 AM	0	0		11/21/2016	5:38 AM	42	85.49
11/23/2016	3:39 AM	37.8	3.18		11/21/2016	4:38 AM	0	0
11/23/2016	2:39 AM	0	0		11/21/2016	3:38 AM	0	0
11/23/2016	1:39 AM	0	0		11/21/2016	2:38 AM	0	0
11/23/2016	12:39 AM	0	0		11/21/2016	1:38 AM	0	0
11/22/2016	11:39 PM	0	0		11/21/2016	12:38 AM	0	0
11/22/2016	10:39 PM	0	0		11/20/2016	11:38 PM	0	0
11/22/2016	9:39 PM	0	0		11/20/2016	10:38 PM	36.75	7.2
11/22/2016	8:39 PM	0	0		11/20/2016	9:38 PM	37.1	3.02
11/22/2016	7:39 PM	0	0		11/20/2016	8:38 PM	28.7	0.45
11/22/2016	6:39 PM	7.7	280.56		11/20/2016	7:38 PM	37.45	6.49
11/22/2016	5:39 PM	46.2	85.63		11/20/2016	6:38 PM	41.65	284.96
11/22/2016	4:39 PM	0	0		11/20/2016	5:38 PM	37.1	88.31
11/22/2016	3:39 PM	0	0		11/20/2016	4:38 PM	0	0
11/22/2016	2:39 PM	0	0		11/20/2016	3:38 PM	0	0
11/22/2016	1:39 PM	0	-0.02		11/20/2016	2:38 PM	31.5	91
11/22/2016	12:39 PM	0	0		11/20/2016	1:38 PM	32.9	6.83
11/22/2016	11:39 AM	0	0		11/20/2016	12:38 PM	44.8	6.09
11/22/2016	10:39 AM	19.6	18.65		11/20/2016	11:38 AM	37.8	12.27
11/22/2016	9:39 AM	36.75	1.58		11/20/2016	10:38 AM	40.25	18.9
11/22/2016	8:39 AM	38.5	4.76		11/20/2016	9:38 AM	38.85	13.19
11/22/2016	7:39 AM	38.5	9.1		11/20/2016	8:38 AM	35.7	1.13
11/22/2016	6:39 AM	7.7	277.96		11/20/2016	7:38 AM	37.45	3.03
11/22/2016	5:39 AM	44.1	84.15		11/20/2016	6:38 AM	8.05	286.3
11/22/2016	4:39 AM	0	0		11/20/2016	5:38 AM	45.15	83.66
11/22/2016	3:39 AM	0	0		11/20/2016	4:38 AM	0	0
11/22/2016	2:39 AM	0	0		11/20/2016	3:38 AM	0	0
11/22/2016	1:39 AM	0	0		11/20/2016	2:38 AM	0	0
11/22/2016	12:39 AM	0	0		11/20/2016	1:38 AM	0	0
11/21/2016	11:39 PM	35	6.86		11/20/2016	12:38 AM	0	0
11/21/2016	10:39 PM	0	0		11/19/2016	11:38 PM	9.8	0.15
11/21/2016	9:39 PM	0	0		11/19/2016	10:38 PM	43.4	2.22
11/21/2016	8:39 PM	0	0		11/19/2016	9:38 PM	0	0
11/21/2016	7:39 PM	25.55	3.04		11/19/2016	8:38 PM	39.2	3.75

11/19/2016	7:38 PM	37.45	28.16	11/17/2016	8:37 PM	0	0
11/19/2016	6:38 PM	7.7	284.66	11/17/2016	7:37 PM	0	0
11/19/2016	5:38 PM	36.75	82.61	11/17/2016	6:37 PM	10.85	296.74
11/19/2016	4:38 PM	0	0	11/17/2016	5:37 PM	34.3	81.66
11/19/2016	3:38 PM	0	0	11/17/2016	4:37 PM	10.5	0.01
11/19/2016	2:38 PM	42.7	3.01	11/17/2016	3:37 PM	0	0
11/19/2016	1:38 PM	0	0	11/17/2016	2:37 PM	18.9	0.87
11/19/2016	12:38 PM	0	0	11/17/2016	1:37 PM	0	0
11/19/2016	11:38 AM	0	0	11/17/2016	12:37 PM	0	0
11/19/2016	10:38 AM	0	0	11/17/2016	11:37 AM	38.85	3.19
11/19/2016	9:38 AM	37.45	2.33	11/17/2016	10:37 AM	39.2	7.16
11/19/2016	8:38 AM	0	0	11/17/2016	9:37 AM	0	0
11/19/2016	7:38 AM	15.75	3	11/17/2016	8:37 AM	32.9	1.86
11/19/2016	6:38 AM	7.7	283.91	11/17/2016	7:37 AM	18.2	1.41
11/19/2016	5:37 AM	48.3	82.77	11/17/2016	6:37 AM	8.05	288.76
11/19/2016	4:37 AM	0	0	11/17/2016	5:37 AM	30.45	83.19
11/19/2016	3:37 AM	0	0	11/17/2016	4:37 AM	0	0
11/19/2016	2:37 AM	0	0	11/17/2016	3:37 AM	0	0
11/19/2016	1:37 AM	0	0	11/17/2016	2:37 AM	0	0
11/19/2016	12:37 AM	0	0	11/17/2016	1:37 AM	0	0
11/18/2016	11:37 PM	39.9	3.04	11/17/2016	12:37 AM	0	0
11/18/2016	10:37 PM	25.2	6.68	11/16/2016	11:37 PM	0	0
11/18/2016	9:37 PM	10.85	3.02	11/16/2016	10:37 PM	38.15	6.88
11/18/2016	8:37 PM	0	0	11/16/2016	9:37 PM	39.2	3
11/18/2016	7:37 PM	42	9.95	11/16/2016	8:37 PM	36.75	5.34
11/18/2016	6:37 PM	13.65	286.24	11/16/2016	7:37 PM	36.75	16.85
11/18/2016	5:37 PM	39.55	80.91	11/16/2016	6:37 PM	16.1	289.64
11/18/2016	4:37 PM	37.45	3.26	11/16/2016	5:37 PM	40.6	79.29
11/18/2016	3:37 PM	24.5	0.46	11/16/2016	4:37 PM	0	0
11/18/2016	2:37 PM	20.3	0.75	11/16/2016	3:37 PM	0	0
11/18/2016	1:37 PM	0	0	11/16/2016	2:37 PM	0	0
11/18/2016	12:37 PM	0	0	11/16/2016	1:37 PM	0	0
11/18/2016	11:37 AM	0	0	11/16/2016	12:36 PM	0	0
11/18/2016	10:37 AM	0	0	11/16/2016	11:36 AM	0	0
11/18/2016	9:37 AM	0	0	11/16/2016	10:36 AM	0	0
11/18/2016	8:37 AM	37.1	387.88	11/16/2016	9:36 AM	0	0
11/18/2016	7:37 AM	33.25	818.32	11/16/2016	8:36 AM	0	0
11/18/2016	6:37 AM	35	1060.87	11/16/2016	7:36 AM	0	0
11/18/2016	5:37 AM	31.15	1082.73	11/16/2016	6:36 AM	7.7	286.3
11/18/2016	4:37 AM	47.95	450.66	11/16/2016	5:36 AM	40.25	78.08
11/18/2016	3:37 AM	36.4	719.9	11/16/2016	4:36 AM	0	0
11/18/2016	2:37 AM	42.35	362.36	11/16/2016	3:36 AM	0	0
11/18/2016	1:37 AM	0	0	11/16/2016	2:36 AM	0	0
11/18/2016	12:37 AM	0	0	11/16/2016	1:36 AM	0	0
11/17/2016	11:37 PM	0	0	11/16/2016	12:36 AM	0	0
11/17/2016	10:37 PM	0	0	11/15/2016	11:36 PM	0	0
11/17/2016	9:37 PM	0	0	11/15/2016	10:36 PM	0	0

11/15/2016	9:36 PM	0	0	11/13/2016	10:35 PM	41.3	1.15
11/15/2016	8:36 PM	0	0	11/13/2016	9:35 PM	36.75	4
11/15/2016	7:36 PM	0	0	11/13/2016	8:35 PM	36.05	1.68
11/15/2016	6:36 PM	9.1	287.88	11/13/2016	7:35 PM	10.5	0.07
11/15/2016	5:36 PM	39.9	79.87	11/13/2016	6:35 PM	7.7	292.12
11/15/2016	4:36 PM	14	1.23	11/13/2016	5:35 PM	42.35	92.9
11/15/2016	3:36 PM	0	0	11/13/2016	4:35 PM	31.5	3.03
11/15/2016	2:36 PM	0	0	11/13/2016	3:35 PM	0	0
11/15/2016	1:36 PM	0	0	11/13/2016	2:35 PM	25.2	2.07
11/15/2016	12:36 PM	0	0	11/13/2016	1:35 PM	0	0
11/15/2016	11:36 AM	0	0	11/13/2016	12:35 PM	42	25.23
11/15/2016	10:36 AM	0	0	11/13/2016	11:35 AM	36.4	351.01
11/15/2016	9:36 AM	0	0	11/13/2016	10:35 AM	10.85	419.74
11/15/2016	8:36 AM	25.2	2.57	11/13/2016	9:35 AM	13.65	423.55
11/15/2016	7:36 AM	29.05	5.18	11/13/2016	8:35 AM	14.35	428.23
11/15/2016	6:36 AM	14.35	289.81	11/13/2016	7:35 AM	8.75	421.23
11/15/2016	5:36 AM	40.6	79.35	11/13/2016	6:35 AM	16.45	704.33
11/15/2016	4:36 AM	0	0	11/13/2016	5:35 AM	16.45	495.5
11/15/2016	3:36 AM	34.3	3.03	11/13/2016	4:35 AM	13.65	426.44
11/15/2016	2:36 AM	0	0	11/13/2016	3:35 AM	8.75	424.42
11/15/2016	1:36 AM	0	0	11/13/2016	2:35 AM	8.75	424.51
11/15/2016	12:36 AM	0	0	11/13/2016	1:35 AM	8.75	424.9
11/14/2016	11:36 PM	0	0	11/13/2016	12:35 AM	9.1	424.72
11/14/2016	10:36 PM	0	0	11/12/2016	11:35 PM	14	430.05
11/14/2016	9:36 PM	38.15	6.8	11/12/2016	10:35 PM	13.3	430.31
11/14/2016	8:36 PM	39.2	4.07	11/12/2016	9:35 PM	8.75	419.53
11/14/2016	7:36 PM	9.45	0.12	11/12/2016	8:35 PM	8.75	417.94
11/14/2016	6:36 PM	22.05	296.61	11/12/2016	7:35 PM	8.75	417.29
11/14/2016	5:36 PM	42	76.11	11/12/2016	6:35 PM	19.95	700.12
11/14/2016	4:36 PM	0	0	11/12/2016	5:35 PM	16.1	529.68
11/14/2016	3:36 PM	0	0	11/12/2016	4:35 PM	12.6	421.79
11/14/2016	2:36 PM	0	0	11/12/2016	3:35 PM	8.75	420.96
11/14/2016	1:36 PM	0	0	11/12/2016	2:35 PM	12.95	423.9
11/14/2016	12:36 PM	0	0	11/12/2016	1:35 PM	10.85	422.93
11/14/2016	11:36 AM	0	0	11/12/2016	12:35 PM	11.55	451.3
11/14/2016	10:36 AM	0	0	11/12/2016	11:35 AM	8.75	424.15
11/14/2016	9:36 AM	0	0	11/12/2016	10:35 AM	8.75	424.72
11/14/2016	8:35 AM	0	0	11/12/2016	9:35 AM	11.2	427.82
11/14/2016	7:35 AM	24.15	1.26	11/12/2016	8:35 AM	12.95	427.55
11/14/2016	6:35 AM	14.35	292.34	11/12/2016	7:35 AM	8.75	423.3
11/14/2016	5:35 AM	41.3	78.07	11/12/2016	6:35 AM	20.65	707.22
11/14/2016	4:35 AM	0	0	11/12/2016	5:35 AM	16.1	493.8
11/14/2016	3:35 AM	0	0	11/12/2016	4:35 AM	8.75	418.34
11/14/2016	2:35 AM	0	0	11/12/2016	3:35 AM	8.75	416.91
11/14/2016	1:35 AM	0	0	11/12/2016	2:35 AM	8.75	417.58
11/14/2016	12:35 AM	0	0	11/12/2016	1:35 AM	8.75	418.21
11/13/2016	11:35 PM	0	0	11/12/2016	12:35 AM	8.75	418.9

11/11/2016	11:35 PM	8.75	419.67	11/10/2016	12:34 AM	8.75	419.05
11/11/2016	10:35 PM	13.65	427.02	11/9/2016	11:34 PM	13.65	425.45
11/11/2016	9:35 PM	8.75	421.16	11/9/2016	10:34 PM	9.8	421.72
11/11/2016	8:35 PM	10.85	429.45	11/9/2016	9:34 PM	8.75	420.69
11/11/2016	7:35 PM	10.85	427.99	11/9/2016	8:34 PM	8.75	421.74
11/11/2016	6:35 PM	21.7	714.39	11/9/2016	7:34 PM	8.75	422.71
11/11/2016	5:35 PM	18.55	497.4	11/9/2016	6:34 PM	18.55	718.57
11/11/2016	4:35 PM	9.1	425.75	11/9/2016	5:34 PM	16.45	495.49
11/11/2016	3:34 PM	9.1	426.04	11/9/2016	4:34 PM	9.8	425.6
11/11/2016	2:34 PM	9.1	424.1	11/9/2016	3:34 PM	17.5	474.95
11/11/2016	1:34 PM	9.1	421.92	11/9/2016	2:34 PM	13.65	429.61
11/11/2016	12:34 PM	8.75	419.81	11/9/2016	1:34 PM	10.85	425.35
11/11/2016	11:34 AM	8.75	417.79	11/9/2016	12:34 PM	12.6	421.37
11/11/2016	10:34 AM	9.1	417.34	11/9/2016	11:34 AM	9.1	418.88
11/11/2016	9:34 AM	11.55	417.81	11/9/2016	10:34 AM	9.1	417.67
11/11/2016	8:34 AM	41.65	815.44	11/9/2016	9:34 AM	9.1	418.02
11/11/2016	7:34 AM	38.5	1200.93	11/9/2016	8:34 AM	8.75	418.68
11/11/2016	6:34 AM	40.95	1433.34	11/9/2016	7:34 AM	8.75	419.18
11/11/2016	5:34 AM	37.45	1437.54	11/9/2016	6:34 AM	16.1	707.37
11/11/2016	4:34 AM	40.95	858.04	11/9/2016	5:34 AM	16.1	489.41
11/11/2016	3:34 AM	42.35	1117.56	11/9/2016	4:34 AM	8.75	422.6
11/11/2016	2:34 AM	45.5	749.48	11/9/2016	3:34 AM	8.75	424.1
11/11/2016	1:34 AM	8.75	425.91	11/9/2016	2:34 AM	9.1	425.03
11/11/2016	12:34 AM	8.75	426.51	11/9/2016	1:34 AM	8.75	423.79
11/10/2016	11:34 PM	9.1	427.65	11/9/2016	12:34 AM	8.75	421.97
11/10/2016	10:34 PM	9.1	428.45	11/8/2016	11:34 PM	8.75	419.9
11/10/2016	9:34 PM	9.1	429.3	11/8/2016	10:33 PM	8.75	418.03
11/10/2016	8:34 PM	9.1	430.81	11/8/2016	9:33 PM	8.75	417.16
11/10/2016	7:34 PM	9.1	431.88	11/8/2016	8:33 PM	8.75	417.73
11/10/2016	6:34 PM	21.35	731.57	11/8/2016	7:33 PM	8.75	419.26
11/10/2016	5:34 PM	16.8	507.82	11/8/2016	6:33 PM	16.45	708.64
11/10/2016	4:34 PM	9.45	424.37	11/8/2016	5:33 PM	16.45	489.31
11/10/2016	3:34 PM	12.6	422.91	11/8/2016	4:33 PM	8.75	421.72
11/10/2016	2:34 PM	9.1	423.04	11/8/2016	3:33 PM	9.1	422.22
11/10/2016	1:34 PM	12.6	423.8	11/8/2016	2:33 PM	9.1	422.67
11/10/2016	12:34 PM	9.1	424.24	11/8/2016	1:33 PM	9.1	423.09
11/10/2016	11:34 AM	10.15	424.67	11/8/2016	12:33 PM	9.1	423.46
11/10/2016	10:34 AM	9.1	424.78	11/8/2016	11:33 AM	9.1	423.94
11/10/2016	9:34 AM	9.45	424.81	11/8/2016	10:33 AM	9.1	425.14
11/10/2016	8:34 AM	9.1	424.28	11/8/2016	9:33 AM	12.6	422.78
11/10/2016	7:34 AM	14.35	427.41	11/8/2016	8:33 AM	8.75	420.47
11/10/2016	6:34 AM	20.65	715.08	11/8/2016	7:33 AM	13.65	426.81
11/10/2016	5:34 AM	20.65	492.17	11/8/2016	6:33 AM	16.45	713.06
11/10/2016	4:34 AM	8.75	418.79	11/8/2016	5:33 AM	16.45	490.83
11/10/2016	3:34 AM	8.75	417.31	11/8/2016	4:33 AM	9.1	424.29
11/10/2016	2:34 AM	8.75	417.53	11/8/2016	3:33 AM	13.65	426.8
11/10/2016	1:34 AM	8.75	418.32	11/8/2016	2:33 AM	8.75	422.92

11/8/2016	1:33 AM	8.75	421.09	11/6/2016	2:32 AM	8.75	420.92
11/8/2016	12:33 AM	8.75	419.1	11/6/2016	1:32 AM	13.3	426.8
11/7/2016	11:33 PM	8.75	417.06	11/6/2016	12:32 AM	8.75	417.2
11/7/2016	10:33 PM	13.3	421.25	11/5/2016	11:32 PM	12.6	420.7
11/7/2016	9:33 PM	8.75	418.4	11/5/2016	10:32 PM	8.75	417.88
11/7/2016	8:33 PM	10.15	420.34	11/5/2016	9:32 PM	12.95	424.83
11/7/2016	7:33 PM	11.2	423.3	11/5/2016	8:32 PM	9.1	419.97
11/7/2016	6:33 PM	20.65	715.22	11/5/2016	7:32 PM	10.5	424.02
11/7/2016	5:33 PM	16.45	490.03	11/5/2016	6:32 PM	16.45	716.4
11/7/2016	4:33 PM	10.85	424.52	11/5/2016	5:32 PM	16.45	492.16
11/7/2016	3:33 PM	13.3	424.31	11/5/2016	4:32 PM	13.3	426.33
11/7/2016	2:33 PM	9.1	424.93	11/5/2016	3:32 PM	9.8	424.97
11/7/2016	1:33 PM	9.1	425.11	11/5/2016	2:32 PM	12.95	426.78
11/7/2016	12:33 PM	9.1	425.53	11/5/2016	1:32 PM	12.95	426.08
11/7/2016	11:33 AM	12.6	432.78	11/5/2016	12:32 PM	9.8	422.85
11/7/2016	10:33 AM	16.8	457.84	11/5/2016	11:32 AM	12.95	422.06
11/7/2016	9:33 AM	13.3	424.19	11/5/2016	10:32 AM	16.45	426.84
11/7/2016	8:33 AM	12.95	422.03	11/5/2016	9:32 AM	10.85	419.48
11/7/2016	7:33 AM	10.85	420.08	11/5/2016	8:32 AM	8.75	417.53
11/7/2016	6:33 AM	22.05	722.49	11/5/2016	7:32 AM	12.95	419.95
11/7/2016	5:33 AM	19.25	482.43	11/5/2016	6:32 AM	20.65	713.67
11/7/2016	4:33 AM	8.75	417.66	11/5/2016	5:32 AM	16.1	484.26
11/7/2016	3:33 AM	8.75	418.95	11/5/2016	4:32 AM	8.75	421.88
11/7/2016	2:33 AM	8.75	420.38	11/5/2016	3:32 AM	8.75	423.4
11/7/2016	1:33 AM	13.3	424.04	11/5/2016	2:32 AM	13.3	426.74
11/7/2016	12:33 AM	8.75	421.78	11/5/2016	1:32 AM	12.6	423.94
11/6/2016	11:33 PM	10.15	422.81	11/5/2016	12:32 AM	8.75	421.44
11/6/2016	10:33 PM	12.6	424.15	11/4/2016	11:32 PM	9.8	419.44
11/6/2016	9:33 PM	9.1	424.05	11/4/2016	10:32 PM	9.45	423.68
11/6/2016	8:33 PM	13.3	429.38	11/4/2016	9:32 PM	8.75	416.03
11/6/2016	7:33 PM	10.85	427.62	11/4/2016	8:32 PM	13.3	420.85
11/6/2016	6:32 PM	20.3	718.01	11/4/2016	7:32 PM	8.75	418.85
11/6/2016	5:32 PM	16.45	487.08	11/4/2016	6:32 PM	16.1	713.37
11/6/2016	4:32 PM	16.1	431.44	11/4/2016	5:32 PM	16.45	484.72
11/6/2016	3:32 PM	18.9	433.37	11/4/2016	4:32 PM	10.85	422.21
11/6/2016	2:32 PM	13.3	422.36	11/4/2016	3:32 PM	13.65	426.06
11/6/2016	1:32 PM	13.3	427.73	11/4/2016	2:32 PM	9.1	422.9
11/6/2016	12:32 PM	8.75	419.58	11/4/2016	1:32 PM	9.8	423.92
11/6/2016	11:32 AM	10.85	421.05	11/4/2016	12:32 PM	9.1	424.34
11/6/2016	10:32 AM	12.95	425.8	11/4/2016	11:32 AM	9.1	424.69
11/6/2016	9:32 AM	12.95	426.51	11/4/2016	10:32 AM	9.1	423.86
11/6/2016	8:32 AM	8.75	422.17	11/4/2016	9:32 AM	9.1	422.52
11/6/2016	7:32 AM	13.65	425.8	11/4/2016	8:32 AM	42.35	858.6
11/6/2016	6:32 AM	16.45	717.8	11/4/2016	7:32 AM	39.2	1217.85
11/6/2016	5:32 AM	16.45	492.19	11/4/2016	6:32 AM	41.65	1463.1
11/6/2016	4:32 AM	8.75	424.33	11/4/2016	5:32 AM	40.6	1444.07
11/6/2016	3:32 AM	12.6	423.46	11/4/2016	4:32 AM	40.95	858.24

11/4/2016	3:32 AM	42.7	1112.47	11/2/2016	4:31 AM	8.75	418.15
11/4/2016	2:32 AM	45.5	723.93	11/2/2016	3:31 AM	8.75	420.72
11/4/2016	1:31 AM	8.75	422.18	11/2/2016	2:31 AM	9.1	422.55
11/4/2016	12:31 AM	8.75	420.43	11/2/2016	1:31 AM	9.1	423.79
11/3/2016	11:31 PM	8.75	418.96	11/2/2016	12:31 AM	8.75	422.94
11/3/2016	10:31 PM	8.75	416.88	11/1/2016	11:31 PM	9.1	421.97
11/3/2016	9:31 PM	12.25	417.59	11/1/2016	10:31 PM	8.75	420.01
11/3/2016	8:31 PM	8.75	418.35	11/1/2016	9:31 PM	8.75	419
11/3/2016	7:31 PM	8.75	420.65	11/1/2016	8:31 PM	8.75	417.33
11/3/2016	6:31 PM	16.45	717.36	11/1/2016	7:31 PM	8.75	416.79
11/3/2016	5:31 PM	16.45	485.09	11/1/2016	6:31 PM	16.1	705.72
11/3/2016	4:31 PM	8.75	423.64	11/1/2016	5:31 PM	16.1	477.3
11/3/2016	3:31 PM	11.2	424.55	11/1/2016	4:31 PM	10.15	418.44
11/3/2016	2:31 PM	9.1	424.64	11/1/2016	3:31 PM	12.6	420
11/3/2016	1:31 PM	9.1	424.99	11/1/2016	2:31 PM	9.1	420.17
11/3/2016	12:31 PM	9.1	425.87	11/1/2016	1:31 PM	13.65	428.68
11/3/2016	11:31 AM	9.1	425.99	11/1/2016	12:31 PM	9.1	420.77
11/3/2016	10:31 AM	9.1	426.4	11/1/2016	11:31 AM	9.1	421.72
11/3/2016	9:31 AM	9.45	424.37	11/1/2016	10:31 AM	9.1	422.23
11/3/2016	8:31 AM	9.1	416.85	11/1/2016	9:31 AM	10.15	423.17
11/3/2016	7:31 AM	9.1	402.87	11/1/2016	8:30 AM	13.65	425.66
11/3/2016	6:31 AM	16.8	683.39	11/1/2016	7:30 AM	9.1	421.32
11/3/2016	5:31 AM	18.2	476.59	11/1/2016	6:30 AM	16.1	703.8
11/3/2016	4:31 AM	8.4	407.57	11/1/2016	5:30 AM	16.1	478.81
11/3/2016	3:31 AM	8.4	410.6	11/1/2016	4:30 AM	8.75	420.13
11/3/2016	2:31 AM	8.4	412.79	11/1/2016	3:30 AM	8.75	420.98
11/3/2016	1:31 AM	8.75	413.74	11/1/2016	2:30 AM	8.75	421.65
11/3/2016	12:31 AM	8.75	414.32	11/1/2016	1:30 AM	8.75	420.57
11/2/2016	11:31 PM	8.75	414.96	11/1/2016	12:30 AM	8.75	418.77
11/2/2016	10:31 PM	8.75	415.76	10/31/2016	11:30 PM	8.75	416.84
11/2/2016	9:31 PM	13.3	421.6	10/31/2016	10:30 PM	13.3	419.38
11/2/2016	8:31 PM	13.65	427.04	10/31/2016	9:30 PM	8.75	414.24
11/2/2016	7:31 PM	10.85	422.86	10/31/2016	8:30 PM	8.75	414.14
11/2/2016	6:31 PM	21	722.93	10/31/2016	7:30 PM	8.75	415.85
11/2/2016	5:31 PM	16.45	490.99	10/31/2016	6:30 PM	15.75	702.25
11/2/2016	4:31 PM	10.85	423.38	10/31/2016	5:30 PM	16.1	475.64
11/2/2016	3:31 PM	10.85	423.88	10/31/2016	4:30 PM	10.85	420.78
11/2/2016	2:31 PM	8.75	423.84	10/31/2016	3:30 PM	15.05	423.37
11/2/2016	1:31 PM	9.1	424.34	10/31/2016	2:30 PM	9.1	421.24
11/2/2016	12:31 PM	9.1	425.18	10/31/2016	1:30 PM	10.5	423.1
11/2/2016	11:31 AM	9.45	425.8	10/31/2016	12:30 PM	13.65	426.02
11/2/2016	10:31 AM	9.8	425.94	10/31/2016	11:30 AM	13.3	432.25
11/2/2016	9:31 AM	9.1	424.6	10/31/2016	10:30 AM	14.35	429.21
11/2/2016	8:31 AM	9.1	421.33	10/31/2016	9:30 AM	13.3	422.15
11/2/2016	7:31 AM	9.1	417.01	10/31/2016	8:30 AM	9.1	416.67
11/2/2016	6:31 AM	16.45	706.26	10/31/2016	7:30 AM	8.75	415
11/2/2016	5:31 AM	16.1	475.03	10/31/2016	6:30 AM	15.75	693.91

10/31/2016	5:30 AM	15.75	470.34
10/31/2016	4:30 AM	8.75	414.93
10/31/2016	3:30 AM	8.75	416.48
10/31/2016	2:30 AM	8.75	418.16
10/31/2016	1:30 AM	8.75	417.37
10/31/2016	12:30 AM	8.75	416.36
10/30/2016	11:30 PM	8.75	414.94
10/30/2016	10:30 PM	13.3	416.68
10/30/2016	9:30 PM	8.75	413.26
10/30/2016	8:30 PM	12.6	419.54
10/30/2016	7:30 PM	8.75	415.32
10/30/2016	6:30 PM	23.1	732.4
10/30/2016	5:30 PM	16.1	514.34
10/30/2016	4:30 PM	40.6	224
10/30/2016	3:30 PM	23.1	1.99
10/30/2016	2:30 PM	21	5.77
10/30/2016	1:30 PM	44.45	1.28
10/30/2016	12:30 PM	0	0
10/30/2016	11:30 AM	15.75	1.24
10/30/2016	10:30 AM	0	0
10/30/2016	9:30 AM	40.25	0.53
10/30/2016	8:30 AM	0	0
10/30/2016	7:30 AM	0	0
10/30/2016	6:30 AM	7.35	293.87
10/30/2016	5:30 AM	36.05	62.9
10/30/2016	4:29 AM	19.6	0.89
10/30/2016	3:29 AM	0	0
10/30/2016	2:29 AM	0	0
10/30/2016	1:29 AM	0	0
10/30/2016	12:29 AM	0	0
10/29/2016	11:29 PM	0	0
10/29/2016	10:29 PM	0	0
10/29/2016	9:29 PM	38.85	14.7
10/29/2016	8:29 PM	25.9	0.41
10/29/2016	7:29 PM	37.1	3.68
10/29/2016	6:29 PM	12.6	307.24
10/29/2016	5:29 PM	27.3	56.04
10/29/2016	4:29 PM	0	0

Average Flow	12.96
Average Consumption	207.66
Total Consumption	183,160.32
Max Flow	48.65
Units	Gallons/Hour
Earliest	10/29/2016 16:29
Latest	12/5/2016 9:44

	Irrigation System
	Continous Flow
	Unusual Flow
	Un. Flow in Cont. Flow

Irrigation flow during continous flow

11/4/2016	8:32 AM	42.35	858.6
11/4/2016	7:32 AM	39.2	1217.85
11/4/2016	6:32 AM	41.65	1463.1
11/4/2016	5:32 AM	40.6	1444.07
11/4/2016	4:32 AM	40.95	858.24
11/4/2016	3:32 AM	42.7	1112.47
11/4/2016	2:32 AM	45.5	723.93

Irrigation flow without continous flow

11/18/2016	8:37 AM	37.1	387.88
11/18/2016	7:37 AM	33.25	818.32
11/18/2016	6:37 AM	35	1060.87
11/18/2016	5:37 AM	31.15	1082.73
11/18/2016	4:37 AM	47.95	450.66
11/18/2016	3:37 AM	36.4	719.9
11/18/2016	2:37 AM	42.35	362.36

- (a) In the case of premises having auxiliary water supply that is not or may not be of safe bacteriological or chemical quality and that is not acceptable as an additional source by the Water System Manager, the public water system shall be protected against backflow from the premises by installing an approved backflow-prevention assembly in the service line, appropriate to the degree of hazard.
  - (b) In the case of premises on which any industrial fluids or any other objectionable substances are handled in such a fashion as to create an actual or potential hazard to the public water system, the public system shall be protected against backflow from the premises by installing an approved backflow-prevention assembly in the service line, appropriate to the degree of the hazard. This shall include the handling of process waters and waters originating from the utility system that have been subject to deterioration in quality.
  - (c) In the case of premises having (1) internal cross connections that cannot be permanently corrected and controlled, or (2) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impractical or impossible to ascertain whether or not dangerous cross connections exist, the public water system shall be protected against backflow from the premises by installing an approved backflow-prevention assembly in the service line.
- (4) The type of protective assembly required under the subsections 15.03(a), 15.03(b), and 15.03(c) shall depend upon the degree of hazard that exists as follows:
- (a) In the case of any premises where there is an auxiliary water supply as defined in Section 15.02 and it is not subject to any of the following rules, the public water system shall be protected by an approved air gap separation or an approved reduced-pressure principle backflow-prevention assembly.
  - (b) In the case of any premises where there is an irrigation system installed
    - (i) ~~If the premises has a traditional septic system, the public water system shall be protected by an approved double-check valve assembly.~~
    - (ii) If the premises has ~~a septic system with a pump tank~~ *an on-site sewage treatment facility*, the public water system shall be protected by an approved reduced-pressure principle backflow prevention assembly.
  - (c) ~~In the case of any premises where there is water or substance that would be objectionable but not hazardous to health, if introduced into the public water system, the public water system shall be protected by an approved double-check valve assembly.~~
  - (d) In the case of any premises where there is any material dangerous to health that is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected by an approved air gap separation or an approved reduced-pressure principle backflow-prevention assembly. Examples of premises where these conditions will exist include sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries and plating plants.
  - (e) In the case of any premises where there are “uncontrolled” cross connections, either actual or potential, the public water system shall be protected by an approved air gap separation or an approved reduced-pressure principle backflow-prevention assembly at the service connection.
  - (f) In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete in-plant cross connection survey, the public water system shall be protected against backflow from the premises by either an approved air gap separation or an approved reduced-pressure principle backflow-prevention assembly on each service to the premises.
  - (g) In the case of any premises where, in the opinion of the Water System Manager, an undue health threat is posed because of the presence of extremely toxic substances, the Water System Manager may require an air gap at the service connection to protect the public water system. This requirement will be at the discretion of the Water System Manager and is dependent on the degree of the hazard.

In the case of any premises where complete containment is necessary, thermal expansion devices will be required to be properly installed at the water heater.

- (5) Any backflow-prevention assembly required herein shall be a model and size approved by the Water System Manager. The term “approved backflow-prevention assembly” shall mean assembly that has been manufactured in full conformance with the standards by the American Water Works Association titled:

AWWA C510-89-Standard for Double Check Valve Backflow-Prevention Assembly, and

AWWA C511-89-Standard for Reduced-Pressure Principle Backflow Prevention Assembly, and have met completely the laboratory and field performance specifications of the Foundation For Cross-Connection Control and Hydraulic Research of the University of Southern California established by,

“Specification of Backflow-Prevention Assemblies”- Section 10 of the most current issue of the Manual of Cross-Connection Control.

Said AWWA and FCCHR standards and specifications have been adopted by the City of Garden Ridge. Final approval shall be evidenced by a “Certificate of Approval” issued by an approved testing laboratory certifying full compliance with said AWWA standards and FCCHR specifications.

The following laboratory has been qualified by the Water System Manager to test and certify backflow preventers:

Foundation for Cross-Connection Control and Hydraulic Research  
University of Southern California  
University Park  
Los Angeles, Ca. 90089

Testing laboratories, other than the laboratory listed above, will be added to an approved list as they are qualified by the Water System Manager.

Backflow preventers that may be subjected to back-pressure or backsiphonages that have been granted a certificate of approval by said qualified laboratory and are listed on the laboratory’s current list of approved backflow-prevention assemblies may be used without further laboratory testing or qualification.

- (6) It shall be the duty of the customer-user at any premises where backflow-prevention assemblies are installed to have certified inspections and operational tests made at least once per year for high health hazard devices ~~or once every two years for low health hazard devices~~. In those instances where the Water System Manager deems the hazard to be great enough, certified inspections may be required at more frequent intervals. These inspections and tests shall be at the expense of the water user and shall be performed by the assembly manufacturer’s representative, water Department personnel, or by a certified tester approved by the Water System Manager. It shall be the duty of the Water System Manager to see that these tests are made in a timely manner. The customer-user shall notify the Water System Manager in advance when the tests are to be undertaken so that the Water System Manager may witness the tests if so desired. These assemblies shall be repaired, overhauled, or replaced at the expense of the customer-user whenever said assemblies are found to be defective. A copy of all testing results are to be turned in to the Water System Manager. Records by Water Department and customer-user shall be maintained for a minimum period of three years.
- (7) ~~All presently installed backflow prevention assemblies that do not meet the standards of this section but were approved assemblies for the purpose described herein at the time of installation and that have been properly maintained, shall be tested annually and, be excluded from the requirements of these rules so long as the Water System Manager is assured that they will satisfactorily protect the utility system. Whenever the existing assembly is moved from the present location, fails its annual test, or when the Water System Manager finds the existing device constitutes a hazard to health, the unit shall be replaced by an approved backflow prevention assembly meeting the requirements of this section.~~

c. INSPECTION

- (1) The customer shall provide the Department with a customer inspection certification (as required in Section 290.46 j of ~~TNRCC TCEQ~~ rules for public water systems) on all new construction with city water service.
  - (a) Inside city limits- This certification shall be presented to the Department prior to the final inspection of the building. If not received, a Certificate of Occupancy will not be issued and service will be terminated until certification is received.
  - (b) Outside city limits- This certification shall be presented to the Department upon construction completion or service will be terminated immediately until certification is received.
- (2) The customer shall provide the Department with a customer inspection certification (as required in Section 290.46 j of ~~TNRCC TCEQ~~ rules for public water systems) on all renovation construction with city water service.
  - (a) Inside city limits- This certification shall be presented to the Department prior to the final inspection of

the renovation. If not received, service will be terminated until certification is received.  
(b) Outside city limits- This certification shall be presented to the Department upon renovation completion or service will be terminated immediately until certification is received.

- (3) The customer shall provide the Department with a customer inspection certification (as required in Section 290.46 j of ~~TNRCC~~ **TCEQ** rules for public water systems) if the Department has reason to believe that cross-connections or other potential contaminant hazards exist.

## **SECTION 16 -- SERVICE OUTSIDE SERVICE AREAS**

### **16.01 -- WATER NOT FURNISHED BEYOND AREAS AUTHORIZED BY TWC.**

No water shall be furnished by the Water Department beyond the areas authorized by the Texas Water Commission unless all plumbing, including all fixtures and appliances, through which water from the Water Department is to pass has been approved by the Water Department. In the event additional plumbing is installed on such premises, water service shall be discontinued to such consumer, unless such additional plumbing installation is approved by the Water Department.

### **16.02 -- SECTIONS CONSTRUING AGAINST THE WATER DEPARTMENT.**

Nothing in this section or any other section of this Ordinance shall be now or hereafter be construed to compel the Water Department to furnish water to consumers beyond the Texas Water Commission certificated limits or to continue such service once begun, and the Water Department reserves the right to furnish service to such customers it deems advisable and to, at any time, wholly or partially discontinue the water supply upon violation of any of the terms of this Ordinance, the same as though such customer resided within the certificated territory.

## **SECTION 17 -- OPERATIONS MANAGER OF THE WATER DEPARTMENT**

### **17.01 -- CREATION OF OFFICE OF OPERATIONS MANAGER.**

There is hereby created the office of Operations Manager for the Water Department, which officer shall have general supervision of the water system of the Water Department and shall have general supervision over all employees of the Water Department and shall make repairs deemed necessary and consistent with his or her duties. The Operations Manager shall be given the authority to issue citations for violations of this Ordinance.

### **17.02 -- REPORTING VIOLATIONS OF THE WATER SYSTEM.**

The Operations Manager of the Water Department shall report violations of all regulations governing the establishment, maintenance and operation of the Water Department to the City Water Commission.

### **17.03 -- AUTHORITY TO TURN WATER ON OR OFF.**

Employees of the Water Department are the only individuals having authority to turn water on or off at any Water Department valve. No plumber or other person shall turn water on or off at any Water Department valve without written permission first being obtained from the Operations Manager of the Water Department.

### **17.04 -- TAMPERING WITH FIRE HYDRANTS AND OTHER WATER DEPARTMENT PROPERTY.**

It shall be unlawful and subject to the violation provisions of Section 3 of this Ordinance for any person to open or close any unmetered fire hydrant or stop cock connected with or to the water system of the Water Department or to lift or remove the covers of any gate valves or shutoff thereof, without the permission of the Operations Manager of the Water Department, except in case of fire, and then under the direction of officers of the fire department.

### **17.05 -- TURNING ON WATER SERVICE AFTER SERVICE HAS BEEN DISCONNECTED.**

It shall be unlawful and subject to the violation provisions of Section 3 of this Ordinance for any person to turn on the water supply or service to any building or to any supply pipe where the supply of water has been turned off, for any reason, by the Water Department, without permission of the Operations Manager of the Water Department.