Report to Stillwater Utilities Authority
Nov. 7, 2016
Semi-Annual Report for 1st Half of 2016
(January - May)

Prepared by: Robert H. Sitton, Jr., Chairman
Stillwater Rural Water Advisory Board

Report #18

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Purpose:
The purpose of the Stillwater Rural Water Advisory Board, as stated in the Ordinance of Establishment is to advise and make recommendations to the City Council on matters pertaining to operation and maintenance of rural water systems operated and/or maintained by the City of Stillwater thru the Stillwater Utility Authority.

Meeting Information:
Normal meeting time for Stillwater Rural Water Advisory Board (SRWAB) is on the third Thursday each month at 12:00 noon. The meetings are open and I invite any of you, that want to come, to the meetings. We usually meet in Meeting Room B.

Membership:
Current Members of SRWAB are:

Robert H. Sitton, Jr. Chairman	5717 W. Deanita Ln. Stillwater, OK 74075 Home (405)377-9555 Cell (405)612-5777	Term expires 2016 E-Mail sittonjrrobert@aol.com
Jerry Horn Vice-Chairman Resigned Moved to Town	9315 W. Fagan Ln. Stillwater, OK 74075 Home (405)707-7143 Cell (405)742-7388	Term expires 2018 E-Mail jhorneval@aol.com
Norman Durham	3719 S. Coyle Rd. Stillwater, OK 74074 Home (405)372-7096 Cell (405)747-5166	Term expires 2017 E-Mail njdurhamranch@gmail.com
Adam VanDeventer	2921 W. Yost Rd. Stillwater, OK 74075 Cell (405)742-7679	Term expires 2016 E-Mail avandeventer@kicker.com

Kenneth McKinley	9100 Sleepy Hollow Stillwater, OK 74074 Home (405)377-4367 Cell (405)269-6657	Term expires 2017 E-Mail mck2@brightok.net
Charles Rice	5418 W. 37th Stillwater, OK 74074 Home (405)377-6772	Term expires 2018 E-Mail ladonnaar13@gmail.com
Jim George	4645 S. Western Stillwater, OK 74074 Home (405)372-3299 Cell (405)612-0540	Term expires 2017 E-Mail jimg408@brightok.net

Report Sections:

1. **Health of the System**

The monthly data series being considered are:

A. Total gallons of water distributed to PCRWC#3 area:
B. Total gallons of water billed to PCRWC#3 customers:
C. Water loss or unaccounted for in the PCRWC#3 area:
D. Active customers and new customers in the PCRWC#3 area:
E. Net increase/(decrease) in customers in the PCRWC#3 area:
F. New meters requested and installed in the PCRWC#3 area:
G. General Comments:

Data tables that show items A.-C. are on Attachment One, attached at the end of this report. Data tables that show items D.-E. are on Attachment Two, attached at the end of this report. Data tables that show item F. is on Attachment Three, attached at the end of the report. Please keep in mind that we started this data in 2007 and some in 2010. Trends may start to show as more years are compiled.

G. General Comments:

We, as customers of the City of Stillwater, should be talking to our neighbors and friends that are on this rural system, to help the City of Stillwater acquire the necessary easements for all the above and below ground facilities. We should all want the City of Stillwater to have the ability to access all the facilities so they can maintain them and make any needed additions or corrections to the system.

2. **Activities related to the PCRWC#3 area.**

Improvements – Those items listed in Amended Exhibit C of the agreement between City of Stillwater and Payne County Rural Water Corporation #3, which was accepted September 16,2010. The Amended Exhibit C was accepted into the City of Stillwater budget fiscal year

2012, which began July 1, 2011 and runs thru June 30, 2012.

Phase 1-Items to be Completed July 1, 2011 thru June 30, 2013

Project #	Project Location	Project Description
1	Hilltop Booster Pump Station STATUS-**Completed Summer of 2012**	Replace all piping in the vault of the lift station. Install second pump and refurbish electrical controls. Shown as Item 3a in Proposed Water Utilities General Capital Projects.
2	Various locations STATUS-**Completed Summer of 2013**	Install flush/fire hydrants at locations to be determined by field operations personnel. Shown as Item 3b in Proposed Water Utilities General Capital Projects.
3	Country Club between 37th and 44th (map #01-31) STATUS-**Under Contract to Start Work August 2016**	Install 650 feet of 4" line. Shown as Item 3c in Proposed Water Utilities General Capital Projects.
4	Vicinity of 19th – Location TBD STATUS-**On Hold: To be included as a project in the SouthWest Pressure Zone Improvements**	Install chlorine injection facility to boost chlorine residual in the system. Shown as Item 3d in Proposed Water Utilities General Capital Projects.
5	OSU Plant STATUS- **Completed in 2009**.	Remove meter, abandon 3,000 feet of 10" line.
6	44th and Country Club STATUS- **Completed in 2011**.	Install three cross-connections between parallel 4" pipes on 44th.
11	Hidden Oaks STATUS- **Completed as a city project**.	Install Booster Pump station – 2 pumps, 3 Hp – at intersection of Hidden Oaks and 19th (**annexed into the city limits)**.
13	Nottingham Tower and Pump Station Shown as Item 3e in Proposed Water Utilities General Capital Projects. STATUS-**On Hold:To be included as a project in the SouthWest Pressure Zone Improvements**	Add 20 feet to standpipe and build new pump station at Cottonwood and 19th, 2 pumps – 200 GPM at 100 ft of head (approx.. 10 Hp).
14	Karsten Area Shown as Item 3f in Proposed Water Utilities General Capital Projects. STATUS-**Delayed due to Additional Projects (ODOT Projects and Yost Pump Station and Yost Tower)**	Extend waterline to Fire Academy to improve water quality – Install 400 LF of 6" line.

17 Bilyeu Tower

Take out of service and remove. Relocate to property on Vista Drive. Install 650 feet of 6' line to connect to system and altitude valve. Shown as Item 3g in Proposed Water Utilities General Capital Projects.

STATUS-**Tower has been taken out of service.** Moving to Vista Dr. and the 650' of water line is on hold pending the SW Pressure Zone Sturdy.

18 Range Road Pump Station

Demolish

STATUS- **Completed in 2009**

24 School, Nottingham, Twin (2), Tan-Tar-A, Coyle Towers

Remove altitude valves or install bypass so that tank floats on system.

STATUS-**Completed in 2012**.

25 Redlands Rd between SH 51 and Lakeview

Cap off 2.5" near Redland/Airport, connect 2.5" going north to T of 4"/3", move 5 individual services to 4", move connections for 2.5" pipes on W 2nd and West Virginia to the 4" line. Shown as Item 3h in Proposed Water Utilities General Capital Projects.

STATUS-**Completed Fall 2012**

Phase 2-Items to be Completed July 1, 2011 thru June 30, 2015

Project #	Project Location	Project Description

7 Lakeview between Redland and Cottonwood

Install 1/2 mile of 4" line on Lakeview to complete the loop.

STATUS-**Delayed due to Additional Projects (ODOT Projects and Yost Pump Station and Yost Tower)**

12 Yost Booster Pump Station and School Tower

Added: To replace #14, since this is needed now. Relocate and rebuild the pump station. It continues to flood during heavy rains. Add 20 feet to School Tower standpipe.

STATUS- **Internal discussion to choose Designer**

27 19th between Range and Country Club

Connect dead ends with 600 LF of 3" line, including a creek crossing and bore under the road, install a flush hydrant.

STATUS-**Completed in 2010.** Abandoned approximately 1 mile of small diameter water line and made connections between the rural and municipal systems to eliminate the dead end.

32 Lakeview Rd between Country Club Rd and Range Rd.

Install about 5300 LF of 6" line to connect 8" line

at Country Club Rd and 6" line at Range Rd

STATUS-**Delayed due to Additional Projects (ODOT Projects and Yost Pump Station and Yost Tower)**

Phase 3-Items to be Completed July 1, 2011 thru June 30, 2017

Project #	Project Location	Project Description
8	Sangre 1/2 mile North of 44th	Install master meter to city system and 1/2 mile of 6" pipe between meter and 44th.
	STATUS-**On Hold-To be included in Water 2040 Plan**	
9	Karsten Road south of SH 51	Install 130 feet of 6" pipe to loop 3".
	STATUS-**Delayed due to Additional Projects (ODOT Projects and Yost Pump Station and Yost Tower)**	
10	Western between 56th and 44th	Install 1300 feet of 6" pipe to connect new tower at 56th to water line on Western.
	STATUS-**To be done as a City Project**	
15	44th and Country Club-Boersma Pump Station	Add VFDs, controller and telemetry to Boersma Pump Station.
	STATUS-**Replaced the Complete Station 2012**	
16	White Tower	Remove
	STATUS-**On Hold-To be included in Water 2040 Plan**	
19	OSU Pump Station	Take out of Service, install 7,600 feet of 4" pipe connecting OSU Farm with existing 2.5" pipe on 44th between Hackelman Rd. and Karsten Creek Rd.
	STATUS-**Delayed due to Additional Projects (ODOT Projects and Yost Pump Station and Yost Tower)**	
20	Booster Pump Stations	Connect to WTP SCADA system to monitor
	STATUS-**Karsten Pump Station-Improvements Delayed** **Hilltop Pump Station-Station is Scheduled for Demo** **OSU Pump Station-N/A** **Yost Pump Station-SCADA Installed in 2012** **Boersma Pump Station-SCADA Installed in 2012** **Range Pump Station-N/A**	
21	Eight Standpipes	Install 8 foot security fence along perimeter of easement.
	STATUS-**Tan-Tar-A Tower-Completed Summer of 2014** **No Information Provided on the other Seven**	
22	Eight Standpipes	Add Diffusers-Mixing Systems (Eight Tanks).
	STATUS-**Tan-Tar-A Tower-Studing Mixing Systems** **No Information Provided on the other Seven**	

23 Eight Standpipes — Connect to WTP SCADA system to monitor

STATUS-**No Information Provided**

26 Country Club Rd. between 6th and McElroy

Install 3500 LF of 6" line between end of City line on Country Club and RWC #3 line north of Creek.

STATUS-**Completed Summer of 2015**

28 Woodlake Subdivision — Install 350 feet of fusible PVC along the damn to cross the lake.

STATUS-**Completed in 2012 as a City Project, Since They were Annexed into the City**

29 Karsten Creek, Hilltop Pump Station — Install VFDs, controls and telemetry: add equipment to communicate with SCADA system at WTP.

STATUS-**Karsten Creek Pump Station-To be removed in Water 2040 Plan Hilltop Pump Station-Delayed due to Additional Projects (ODOT Projects and Yost Pump Station and Yost Tower)**

30 Tan-Tar-A Subdivision — Install 1,200 feet of 4" pipe to complete a loop to the Tan-Tar-A Subdivision.

STATUS-**Delayed due to Additional Projects (ODOT Projects and Yost Pump Station and Yost Tower)**

31 Range Rd., Lakeview to Airport — Connect dead end- Install 2,900 feet of 6" pipe.

STATUS-**Delayed due to Additional Projects (ODOT Projects and Yost Pump Station and Yost Tower)**

Additional Projects-Some of the additional projects have been "must-do" and diverted financial and staff time resources from the other projects in Amended Exhibit C, thus delaying their completion.

A ODOT Project-Harrington Creek Crossing on S. H. 51 East Bound Lane

The bridge was replaced by DOT and the water lines had to be moved per design.

STATUS-**Completed January 2012**

B ODOT Project-Range and McElroy Bridge Re-arranged

The bridge was re-arranged by DOT and the water lines had to be moved per design.

STATUS-**Completed Summer of 2013**

C Water 2040 Plan

Upgrade the existing water systems (pumping, piping and storage) to improve service to municipal and rural system customers and allow for future development.

STATUS-**1. Awarded Bid for New Water Line from 6th St. Pump Station to 19th and Range Tower**
2. New Towers are out for Bids

D 6th Avenue and Country Club Road Pump Station

Replace the pump station by moving it west and building a new above the ground pump station.

STATUS-**Moved into Water 2040 Plan**

E ODOT Project-Country Club Rd. between McElroy & Lakeview

Installing a new water line in the new easement.

STATUS-**Waterline is Complete, Waiting for Final Grade**

F Hydrant Flushing Schedule

A Monthly Flushing Schedule has been made and the public is informed thru the City website.

STATUS-**Completed Spring 2016**

I have listed all current and prior year's projects and projects that have already been completed as a way to keep everyone up-to-date where we are on our agreement. The SRWAB will track each project so everyone will be equally informed.

Studies -

a. **Southwest Pressure Zone Report** was presented to us April 30, 2012 by C. H. Guernsey & Company.
b. **Yost Road Booster Pump Station Improvement Project Report** was presented to SRWAB July 18, 2013 by Mary Elizabeth Mach from Garver Design.
c. **Water 2040** has had a hydraulic analysis completed from the engineer CH2MHill. Real estate acquisition and design are underway.
d. **Mixing Systems for Towers**

3. **Awareness Items to Stillwater Utility Authority.**

1. To be aware that there are oil companies in the area drilling. They are needing water and we should be the ones providing them the water thru meters. We all should be on the look out for water tankers near a hydrant. We should look for a meter and if there is not, we should report it by calling 372-3292.

2. To be aware that the "one water meter per parcel of land policy" is still in effect, for a specific area. This may limit the development of undeveloped properties within the affected area. This also limits families with large parcels of land to break them down into smaller parcels, since water will be an issue. This policy went into effect Aug. 2011 for the Twin Towers Service Area, which is in the Southwest Pressure Zone Report Area (32nd and Range, South and East).

4. **General comments to Stillwater Utility Authority.**

Comments from rural customers –We continue to get comments from customers in the rural water service area about their appreciation for the service they are receiving from the employees of the City of Stillwater.

Communication -Improvements have been made to communicate to all water customers. The city has created a way to communicate repairs, water outages and hydrant flushing that are being done. This is done thru the internet e-mail. You must be put on the WUSC Alerts list. If you are wanting to be put on the list call Staci Cundiff at 405-533-8048 or e-mail her at scundiff@stillwater.org. The rural hydrant flushing schedule is on the City of Stillwater website. Once there, click on Government (on the top of the page), Stillwater Utilities Authority (left side of page), Water Utilities (in pop down), Hydrant Flushing Program (left side of page), look for Flushing Schedule Map on this page and choose the month. This will show you a map of the hydrants and weeks of the month where the hydrants will be flushed.

This report is submitted to Stillwater Utilities Authority as a semi-annual report and will be submitted and updated semi-annually.

Respectfully submitted,

Robert H. Sitton, Jr.

s/Robert H. Sitton, Jr.
Chairman

Attachment One

Water Provided to PCRWC#3 Area (Gallons)

	2011 Distributed	2011 Billed	2011 (Loss%)	2012 Distributed	2012 Billed	2012 (Loss%)	2012 Hydrants Flushed	2013 Distributed	2013 Billed	2013 (Loss%)	2013 Hydrants Flushed
January	10,683,000	9,050,400	15.28%	6,376,000	8,237,900	-29.2%	11	10,634,000	7,954,200	25.2%	10
February	12,939,000	9,205,400	28.86%	4,677,000	6,218,100	-32.95%	18	7,898,000	8,056,400	-2.01%	10
March	10,186,300	5,501,700	45.99%	4,137,000	6,925,900	-67.66%	15	6,995,000	6,767,400	3.25%	11
April	16,858,700	14,433,200	14.39%	4,741,000	7,832,400	-63.1%	24	7,463,000	6,815,200	8.68%	9
May	14,342,000	11,846,700	17.4%	6,578,000	13,648,200	-107.48%	24	10,935,000	8,905,800	18.56%	13
June	22,880,000	16,193,800	29.22%	13,692,000	18,196,700	-32.9%	15	14,651,000	10,984,800	25.02%	4
July	34,119,000	16,205,100	52.5%	29,517,000	23,477,700	20.46%	15	18,810,000	15,689,200	16.59%	38
August	27,277,600	28,348,600	-3.93%	34,108,000	39,977,600	-17.21%	15	17,570,000	12,254,200	30.25%	27
Septembe	26,550,000	20,927,900	21.18%	18,924,000	19,778,000	-4.51%	6	19,468,000	16,829,800	13.55%	2
October	16,307,000	12,430,600	23.77%	8,893,000	11,802,400	-3.27%	12	12,369,000	11,815,500	4.47%	10
November	10,379,000	8,904,500	14.21%	10,708,000	11,881,800	-10.96%	24	11,479,000	8,216,200	28.42%	8
December	5,717,000	8,706,700	-52.3%	10,914,000	9,286,100	14.92%	20	9,639,000	7,851,000	18.55%	2
Totals	208,238,600	161,754,600	22.32%	153,265,000	177,262,800	-15.65%	199	147,911,000	122,139,700	17.42%	144

There was a broken meter Dec. 2011 thru June 2012, which is why the numbers are what they are.

Billing lags behind the usage so it is hard to view the true billed water losses.

Flushing Hydrants and Dead Ends are included in the losses. Gallons flushed is not being recorded when it is done, by the person doing the flushing.
The Fire Departments do not report usage. Rural fires play a part in the losses.

Droughts and earthquakes play a part in water losses, creating breaks in the water pipes. The breaks are not being reported.

Theft of water plays a part in water loss.

Attachment One

Water Provided to PCRWC#3 Area (Gallons)

	2014 Distributed	2014 Billed	2014 (Loss%)	2014 Hydrants Flushed	2015 Distributed	2015 Billed	2015 (Loss%)	2015 Hydrants Flushed	2016 Distributed	2016 Billed	2016 (Loss%)	2016 Hydrants Flushed
January	11,630,000	9,050,400	22.18%	22	17,960,000	9,009,500	49.84%	8	13,089,900	7,451,300	43.08%	11
February	9,860,000	9,205,400	6.64%	14	9,596,200	8,537,600	10.42%	6	11,330,200	6,984,500	38.36%	11
March	9,115,000	7,794,200	14.49	2	17,089,100	6,228,200	63.55%	6	10,802,700	7,208,600	33.27%	11
April	13,803,700	9,633,300	30.21%	3	18,654,500	11,148,900	40.23%	4	62,370,000	10,223,800	83.61%	11
May	18,203,700	16,782,399	7.81%	14	14,985,400	9,589,600	36%	10	18,484,000	8,500,600	54.01%	67
June	12,640,400	12,477,000	1.29%	16	14,251,700	9,980,100	29.97%	9	17,008,600	13,371,800	21.38%	11
July	13,433,000	14,084,600	-4.85%	36	13,790,400	16,438,300	-19.20%	0				
August	16,258,200	15,740,400	3.18%	11	20,599,700	18,167,800	11.81%	0				
Septembe	19,496,100	14,928,100	23.43%	31	17,448,000	15,537,400	10.95%	57				
October	19,443,600	11,768,400	39.47%	20	16,751,400	12,744,500	23.92%	50				
November	19,429,900	9,658,500	50.29%	13	8,871,800	8,911,000	-0.44%	15				
December	15,416,700	6,324,500	58.98%	13	10,182,900	7,469,000	26.65%	18				
Totals	178,730,300	137,447,199	23.1%	195	180,181,100	133,761,900	23.64%	183	133,085,400	53,740,600	45.62%	122

Attachment Two

Customer Base in the PCRWC#3 area:

	Active Customers					New Customers					Customer Turnovers				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
January		1284	1307	1321	1353		8	14	7	16		0.62%	1.07%	0.53%	1.18%
February	1247	1284	1304	1321	1353	7	6	8	10	4		0.47%	0.61%	0.76%	0.3%
March	1249	1284	1307	1326	1365	14	13	13	11	21	0.96%	1.01%	0.99%	0.83%	1.54%
April	1260	1283	1307	1326	1365	19	21	10	10	15	0.64%	1.71%	0.76%	0.75%	1.1%
May	1263	1284	1308	1340	1371	27	14	41	42	29	1.9%	1.01%	3.13%	3.13%	2.12%
June	1263	1287	1308	1340	1371	35	32	24	47	23	2.77%	2.26%	1.83%	3.51%	1.68%
July	1269	1287	1307	1340	1376	28	19	21	20	23	1.74%	1.48%	1.61%	1.49%	1.67%
August	1269	1288	1307	1340	1376	23	23	25	24	22	1.81%	1.63%	1.91%	1.79%	1.6%
September	1279	1299	1307	1346	1384	15	14	5	24	18	0.39%	0.23%	0.38%	1.78%	1.3%
October	1280	1299	1307	1346	1384	20	12	11	18	17	1.49%	0.92%	0.84%	1.34%	1.23%
November	1282	1299	1309	1345	1386	13	11	13	12	14	0.86%	0.85%	0.99%	0.89%	1.01%
December	1282	1299	1309	1345	1386	9	12	16	15	15	0.7%	0.92%	1.22%	1.11%	1.08%
Averages	1268	1290	1307	1336	1373	19	15	17	20	18	1.33%	1.0925%	1.28%	1.49%	1.32%

	Active Customers		New Customers		Customer Turnovers	
	2015	2016	2015	2016	2015	2016
January	1394	1416	19	8	1.36%	0.56%
February	1394	1416	16	21	1.14%	1.48%
March	1394	1416	21	13	1.51%	0.92%
April	1394	1447	14	30	1%	2.07%
May	1396	1447	16	37	1.15%	2.56%
June	1396	1447	42	32	3.01%	2.21%
July	1400		37		2.64%	
August	1400		21		1.50%	
September	1409		14		1%	
October	1409		17		1.21%	
November	1409		9		0.64%	
December	1409		14		1%	
Averages	1400	1432	20	24	1.43%	1.63%

Attachment Three

New Water Meters Requested and Installed in the PCRWC#3 area

	2008 Requested	2008 Installed	2009 Requested	2009 Installed	2010 Requested	2010 Installed	2011 Requested	2011 Installed	2012 Requested	2012 Installed	2013 Requested	2013 Installed	2014 Requested	2014 Installed
January	1	2	0	0	0	0	1	0	0	0	15	18	0	0
February	1	1	0	0	0	0	8	0	0	0	1	1	0	0
March	0	13	0	0	0	1	2	0	3	0	1	1	1	0
April	0	1	0	0	0	2	1	1	1	2	5	4	1	1
May	0	0	4	0	4	10	3	0	3	0	1	1	4	0
June	0	0	1	0	1	0	0	0	3	3	9	6	3	1
July	0	2	4	4	4	0	5	1	1	0	4	9	4	4
August	0	0	6	0	6	0	8	0	0	0	1	3	0	5
September	0	0	5	0	5	1	0	2	1	0	0	1	3	5
October	0	0	4	0	4	6	1	6	0	0	6	12	3	1
November	0	0	4	0	4	4	0	2	1	50	3	0	0	3
December	0	0	0	5	0	0	4	0	11	4	4	0	1	0
Totals	2	19	28	9	28	24	33	12	24	59	50	56	20	20

	2015 Requested	2015 Installed	2016 Requested	2016 Installed
January	0	0	0	0
February	0	0	1	0
March	6	0	3	0
April	2	5	5	3
May	0	1	2	6
June	3	0	3	2
July	1	2		
August	3	1		
September	2	1		
October	1	3		
November	6	2		
December	1	5		
Totals	25	20	14	11