



# Agenda

CITY CLERK'S OFFICE

DATE 1/5/15 TIME 12:11pm

PREPARED BY Caryn Grosse

APPROVED BY Alicia Marti

## SANTA FE WATER CONSERVATION COMMITTEE MEETING

CITY HALL - 200 LINCOLN AVE.

CITY COUNCILORS' CONFERENCE ROOM

TUESDAY, JANUARY 13, 2015

4:00 PM TO 6:00 PM

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF CONSENT AGENDA
5. APPROVAL OF MINUTES DECEMBER 9, 2014 WATER CONSERVATION COMMITTEE MEETING
6. CONSENT ITEMS

### DISCUSSION ITEMS:

7. OPEN GOVERNMENT & BOARD PROCEDURES IN THE "MODERN WORLD" (Zachary Shandler, 10 minutes)
8. SANTA FE 2013 OSE GPCD CALCULATOR (Tim Michael, 10 minutes)
9. DROUGHT, MONSOON AND WATER RESOURCE UPDATE (Rick Carpenter, 10 minutes)
10. CLIMATE ACTION TASKFORCE (Councilor Ives, 10 minutes)
11. DOMESTIC WELLS WITHIN CITY LIMITS (Stephan Wiman, 10 minutes)
12. DISCUSSION OF AGENDA TEMPLATE (Tim Michael, 10 minutes)
13. REVIEW OF MEETING PARLIAMENTARY PROCEDURE (Tim Michael, 10 minutes)
14. PROPOSED NEW WORKING GROUP: WATER SYSTEM MAP (Stephen Wiman, 10 minutes)

### INFORMATIONAL ITEMS:

15. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE INITIATIVES: (Councilor Ives, 30 minutes)
  - A. GROUP #2- WATER CONSERVATION EDUCATION/OUTREACH (10 minutes)
  - B. GROUP #3- WATER CONSERVATION CODES, ORDINANCES & REGULATIONS (10 minutes)
  - C. GROUP #4- REESTABLISH TREND OF NET ANNUAL REDUCTIONS IN PER CAPITA WATER USAGE AND IDENTIFYING LARGE WATER USERS (10 minutes)

### MATTERS FROM STAFF:

### MATTERS FROM COMMITTEE:

### MATTERS FROM PUBLIC:

### NEXT MEETING – TUESDAY, FEBRUARY 10, 2015:

CAPTIONS: JANUARY 26, 2015 @ 3 pm

PACKET MATERIAL: JANUARY 28, 2015 @ 3 pm

ITEMS FOR NEXT AGENDA:

- New Working Groups/Priorities
- 
- 

### ADJOURN.

Persons with disabilities in need of accommodations, contact the City Clerk's office at 955-6520, five (5) working days prior to meeting date.

WATER CONSERVATION COMMITTEE  
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DECEMBER 9, 2014

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Call to Order and Roll Call	The Chair, Councilor Ives at 4:00 pm in the City Councilor's Conference Room, called the Water Conservation Committee Meeting to order. A quorum was declared at roll call.	Page 2
Approval of Agenda	<b><i>Ms. Randall moved to approve the Agenda as presented, second by Ms. Piburn, motion carried by unanimous voice vote.</i></b>	Page 2
Approval of Consent Agenda	<b><i>Ms. McDonald moved to approve the Water Conservation &amp; Drought Management Plan 2015 for purpose of discussion, second by Ms. Randall. Ms. McDonald withdrew motion.</i></b>  <b><i>The Chair noted that this item was not approved by the WCC; it will go forward through the city process without a WCC recommendation.</i></b>	Page 3
Approval of Minutes, November 4, 2014 Corrections: Cheri Vogel – throughout minutes should be referred to as CR Vogel Consulting, LLC List Diana Catanach under staff in attendance list. #10: change setting to funding End of Paragraph: Allan is Alan Hook #12A: QWEL – (Qualified Water Efficient Landscapes)  Next training will be offered in March. Ms. Busher is welcome to register.  D: Water Fiesta, not River Fiesta.	<b><i>Ms. Piburn moved to approve the minutes as corrected, second by Mr. Roth, motion carried by unanimous voice vote.</i></b>	Page 3
City of Santa Fe Water Conservation and Drought	Informational, no formal action.	Page 3-4

Management Plan (Rick Carpenter)		
Consent Approval Water Conservation and Drought Management Plan 2015	<b><i>The Chair noted that this item was not approved by the WCC; it will go forward through the city process without a WCC recommendation.</i></b>	Page 4
Discussion Items Drought Monsoon and Water Resources Update Climate Action Task Force Santa Fe Basin Study: Preliminary and Future Planning Providing for Santa Fe Basin's Future Water Supply Needs: Regional Reclaimed Wastewater Feasibility Study Reservoir Improvements	<b>Informational and Narrated Power Point Presentations. No formal action.</b>	Page 4-5
Informational Items Group #1 Group #2 Group #3 Group #4 Group #5	No formal action, informational items. Group #5 – Point #4 to be discussed at next month meeting	Page 5-7
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**SANTA FE WATER CONSERVATION COMMITTEE MEETING  
CITY COUNCILORS' CONFERENCE ROOM**

TUESDAY, DECEMBER 9, 2014

4:00 PM TO 6:00 PM

**1. CALL TO ORDER**

The Chair called the meeting to order at 4:00 pm, City Councilor's Conference Room, Santa Fe, New Mexico. Roll call reflects a quorum.

**2. ROLL CALL**

Councilor Peter Ives, Chair  
Melissa McDonald  
Stephen Wiman  
Giselle Piburn  
Bill Roth  
Grace Perez, telephonically  
Nancy Avedisian  
Tim Michael  
Lisa Randall

Excused:  
Doug Pushard  
Karen Schmitt

Staff:  
Caryn Grosse, Water Conservation Specialist  
Robert Wood, Water Conservation  
Rick Carpenter, Water Conservation Resource Manager  
Andrew Erdman, Water Resources Coordinator  
Bill Schneider, Water Resources Coordinator

Others Present:  
Jim Lodes, Citizen  
Andy Otto, Santa Fe Watershed Association

**3. APPROVAL OF AGENDA**

No changes from staff or the committee.

***Ms. Randall moved to approve the agenda as presented, second by Ms. Piburn, motion carried by unanimous voice vote.***

**4. APPROVAL OF CONSENT AGENDA**

Mr. Wiman asked for a clarification between discussion items, informational items and needs action. This question was related to a request to have Well Permitting discussion on this month's agenda as an action item. Mr. Wiman would like, if time permits, for the discussion on well permitting to be heard today and placed on next month agenda as an action item.

Committee members noted that they would have appreciated receiving a word document of the City of Santa Fe Water Conservation and Drought Management Plan 2015 vs. a PDF. It would have facilitated any redlining much easier for feedback. Thank you for the suggestion.

It was clarified that Approval of this action item on the consent agenda constitutes approval of the Water Conservation & Drought Management Plan 2015.

***Ms. McDonald moved to approve the Water Conservation & Drought Management Plan 2015 for purpose of discussion, second by Ms. Randall. Ms. McDonald withdrew motion.***

***The Chair noted that this item was not approved by the WCC; it will go forward through the city process without a WCC recommendation.***

5. APPROVAL OF MINUTES NOVEMBER 4, 2014

Corrections:

Cheri Vogel – throughout minutes should be referred to as CR Vogel Consulting, LLC  
List Diana Catanach under staff in attendance list.

#10: change setting to funding

End of Paragraph: Allan is Alan Hook

#12A: QWEL – (Qualified Water Efficient Landscapes)

Next training will be offered in March. Ms. Busher is welcome to register.

D: Water Fiesta, not River Fiesta.

***Ms. Piburn moved to approve the minutes as corrected, second by Mr. Roth, motion carried by unanimous voice vote.***

6. City of Santa Fe Water Conservation and Drought Management Plan

Committee members were not pleased that their edits were not included, the consensus was that this item got pushed up against a deadline and the feeling is that professionally it does not reflect a good working process for comments and inclusion of input.

Mr. Jim Lodes, (Community) commented that he felt there was not a lot tied in to water supply and demand issue that you would see in the water plan. He reviewed the water plan for the city of Santa Fe where it showed that right now the city would be consuming 12,000 ac. ft. per year; in fact that would be for 5 years vs. 10 years. It was assumed that you were going to get 5500 ac. ft. from the Buckman Diversion, no comments whatsoever on the San Juan Water \_\_\_\_\_, how much of that 5500 ac. ft. was not known how much of that we could actually get. In 2019 it says we will run in to a water deficit yet it says with an enhanced water conservation plan it could extend out to 2021. If you look at the water plan now out to the end of study period it requires something in the range of about 1300 ac. ft. a year equivalent to enhanced water conservation. That is going to equate to another 10-20% reduction in perpetual consumption. Nothing in the water conservation plan talks about the reduction or any of these issues. Mr. Lodes stated that in reality the water plan needs to be completely redrafted to include current information; having the Water Conservation and Drought Management Plan 2015 be out there for 5 years is irresponsible. If this plan is passed it needs to be re-done next year in line with the Water Plan. The Water Conservation Plan does not indicate that things will be done differently. This plan does not show points of accountability or timelines of what is going to be done. Also, from an economic development standpoint there is concern regarding what the Water Plan reflects; community could react to the lack of water in 2019. The plan calls for 22,000 ac. ft. of potable water.

The Chair did not comment on Mr. Lodes comments and directed the question to Mr. Carpenter on the update of the different plans being referred to.

Mr. Carpenter stated that the Long Range Water Supply Plan is a living document; as things change the plan is updated. As data and statistics become available, the plan is updated. They are open on how to better marry with the Water Conservation Plan; he does not believe they are quite so disjunct; they are bridging the draft.

Ms. Perez commented that one of the sets of comments was related to goals in Section 5; goals need to be measurable. Not every comment could be incorporated, this particular needs to set measurable and quantifiable goals. Ms. Perez said it is ok to submit, as it is the Water Conservation Committee who needs to come up with goals to review on an annual basis and it could tie the two reports together.

Mr. Carpenter said that the Water Supply Plan is reviewed annually and they could tie the two reports together as well.

7. CONSENT-APPROVAL

A. WATER CONSERVATION & DROUGHT MANAGEMENT PLAN 2015  
(Alan Hook for Laurie Trevizo)

November 7, 2014 memo included in packet for WCC. The City Manager has indicated that the timeline is to get this plan to the OSE and Water Trust Board by January 2, 2015. (Exhibit A)

**DISCUSSION ITEMS:**

8. DROUGHT, MONSOON AND WATER RESOURCE UPDATE, Rick Carpenter

Mr. Carpenter provided the committee with a verbal report referencing his November 18, 2014 memorandum to the PUC and WCC. 39<sup>th</sup> Monthly Update on Drought and Water Resource Management. No questions from the committee members. (Exhibit B)

9. CLIMATE ACTION TASKFORCE, Councilor Ives

Task Force is up and running, work groups have been created.

Ms. Randall commented that there is an overlap on working groups and she would like to be assured that the works of the WCC comments are also recognized. Ms. Randall looks forward to collaboration vs. working in private forces.

Next meeting is scheduled for December 19, 2014. Ms. McDonald is also on the Task Force and commented that there are others who want to be assured that the work that has been done by this committee is included.

10. SANTA FE BASIN STUDY: PRELIMINARY FINDINGS AND FUTURE PLANNING Andrew Erdmann

**Power Point: Narrated by Andrew Erdman (Exhibit C)**

The purpose of this study is to assess how to meet future water demand assuming increased population and diminished surface water supplies.

Adaptations to Climate Change for the City and County

11. PROVIDING FOR SANTA FE BASIN'S FUTURE WATER SUPPLY NEEDS:  
REGIONAL RECLAIMED WASTEWATER FEASIBILITY STUDY, Bill Schneider

This project is on an 18-month cycle.

**Power Point Presentation narrated by Mr. Schneider. (Exhibit D-1 & 2)**

In terms of direct potable, no one in the state of New Mexico has done this; in Texas there are a few.

Mr. Roth noted that people are using potable water for their yards, and they should not.

Thank you to Mr. Schneider and Mr. Erdman for their presentations. The WCC would like to have them in attendance at future meetings for updates.

12. RESERVOIR IMPROVEMENTS, Alan Hook (Rick Carpenter)

Memo dated 11/24/14 provides Item and Issue, Background Summary and Recommendations by Alex Puglisi, Interim Manager, Source of Supply Section for the Water Division and addressed to the Public Utilities Committee. (Exhibit E-1)

Mr. Carpenter reported that due to the unanticipated problems during the draining of the reservoir completion is not expected until November 2015. The valves were not in good condition and it made it even harder for the divers to reach those key points.

It was asked if there are any credits due to this delay and Mr. Carpenter stated that there are not any credits.

The attached graph and chart outlines PUD's initial project treatment volumes for CRWTP in 2015 to utilize available water from the Santa Fe Watershed, as well as all other sources of water available to the City. (Exhibit E-2)

**INFORMATIONAL ITEMS:**

13. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE INITIATIVES: (

A. GROUP #3 - WATER CONSERVATION CODES, ORDINANCES & REGULATIONS

Mr. Pushard has been working with Rep. Trujillo on legislation. Mr. Pushard is working on outdoor water conservation. Mr. Pushard will provide Rep. Trujillo the cost of outdoor water conservation and he would like as many examples from the WCC members who can contribute on cost. Mr. Pushard would like to have this information e-mailed to him by Friday, December 12<sup>th</sup>

Mr. Roth offered information on Water Sense Fixtures and cost savings. The phasing is in line with the WERS number.

Councilor Ives asked if implementing an ordinance change should be directed indicating that only water sense appliances will be considered for rebate. In order to engage in continued water conservation it is important to educate the public and changeover the ordinances.

Councilor Ives looks forward to seeing the WERS tool at the next month meeting.

B. GROUP #4 - REESTABLISH TREND OF NET ANNUAL REDUCTIONS IN PER CAPITA WATER USAGE AND IDENTIFYING LARGE WATER USERS

Ms. McDonald reported that Ms. Randall shared what is being done at Santa Fe Public Schools related to reducing water use by optimizing water use by large water users. Members of this committee in addition to Ms. McDonald; Karyn Schmitt, Giselle Piburn, Tim Michael, Athena Busher. Consulting: Lisa

Randall (school reductions methods) and Nate Downey (Legislative) for bio info LinkedIn <http://permadesign.com/about>. POSAC continues to meet with the new parks Director Richard Thompson. POSAC is close to finishing Community Garden Assessment report for the Mayor and the City's Urban Agriculture policy group. Currently they are reviewing the drafts and will bring to the WCC for concurrence. Representatives also attended the Mayor's taskforce on Food, Land and Water.

Legislative: Participated in sustainable building tax credit meeting.

Ms. McDonald attended the American Society of Landscape Architects (ASLA) in Denver, Colorado. One of the things that continues to re-surface is the idea of Eco-Districts. She was not sure if the city of Santa Fe has considered this a planning entity, (she circulated a handout for the Board members to review) – attached. She is also researching what other cities are looking at Eco districts as a planning tool. This is a project that they did and was sponsored by the EPA. They are basically looking at how to incorporate storm water and grey water. They are collecting the water in LID measures and converting it to potable use. Ms. Ms. Donald urged that the WCC consider looking at this. There is one section on water demand and potable use. How do we get homeowners, landscape owners to understand and know this is a great resource and would like the WCC to have a role in this discussion? Eco districts could be a way to combine water and energy in a planning mechanism that might work for a lot of people. Looking at smaller entities and larger entities is very important.

#### C. GROUP #2- WATER CONSERVATION EDUCATION/OUTREACH

Mr. Michael and Ms. Perez reported – including information possibly on the upcoming WERS. Mr. Michael asked if they should know anything on the outdoor irrigation rebates. Ms. Grosse said that one application was received and it was withdrawn. There were no irrigation rebates for the 2014 season. Ms. Perez stated that the irrigation rebates was on a term and Mr. Wood reported that a decision has not been made if it will be extended.

#### 14. (TIME PERMITTING) GROUP #5-DOMESTIC WELLS WITHIN CITY LIMITS Stephan Wiman

- 1) Question on the sample letter, status. Staff reported that they will follow-up; last known it was in the City Attorney's office. The Chair would like to have it go out at the beginning of 2015.
- 2) Thank you from the Working Group on the work that has been done by the city on public information.
- 3) How many city permits have been issued and how does it break down with respect to development. If this is something that needs to be retrieved by the clerk's office, some of the members from the committee are happy to assist in looking up the records and files. Mr. Erdman said that since the beginning of the ordinance he has issued 6 permits; 4 are in the area that has been annexed.

Mr. Wiman asked if they are replacement wells or new well. Mr. Erdman responded that they are new wells. Basically they way they know they need a permit from the city is they go to OSE to get a domestic well permit and they are told about the city domestic well ordinance.



The Chair asked if an ordinance is needed to clarify the correlation between the OSE and the City. The Chair directed staff to work with Ms. Byers to draft language for an ordinance to clarify this matter. Timeline is that once the ordinance is drafted it would come to the WCC, next to City Council with an approximate 60-day turnaround time.

4) Point number 4 will be discussed at next meeting.

15. (TIME PERMITTING) SANTA FE 2013 OSE GPCD CALCULATOR, Tim Michael  
Defer to next meeting.

**MATTERS FROM STAFF:**

Note that in the electronic packet the caption schedule and meeting schedule for 2015 will require approval. Due to the holidays captions will be due by December 23<sup>rd</sup> or earlier. The Chair asked that the meeting dates sheet be sent to the WCC for review.

**MATTERS FROM COMMITTEE:**

THANK YOU TO THE WATER RESOURCES STAFF FOR ATTENDING THE MEETING.

Early bird registration for Xeriscape conference is coming up; Water Conservation office is the sponsor. Rate is \$425 up to Friday and the rate will go up to \$475 for registration.

**MATTERS FROM PUBLIC:**

NONE

**NEXT MEETING – TUESDAY, JANUARY 13, 2015:**

CAPTIONS: DECEMBER 23, 2014 @ 3 pm      PACKET MATERIAL: DECEMBER 29, 2014 @ 3 pm

ITEMS FOR NEXT AGENDA (if time does not permit):

- GROUP #5 DOMESTIC WELLS WITHIN CITY LIMITS (Stephen Wiman)
- SANTA FE 2013 OSE GPCD CALCULATOR (Tim Michael)

**ADJOURN**

There being no further business to come before the Water Conservation Committee, the meeting was adjourned at 6:00 pm.

SIGNATURE PAGE:

\_\_\_\_\_  
Councilor Peter Ives, Chair

  
\_\_\_\_\_  
Fran Lucero, Stenographer

## OSE GPCD Calculator

The purpose of this paper is to describe the OSE GPGD Calculator. It is based on the City of Santa Fe's 2013 submittal to the OSE. A pdf copy of the city submittal is attached. Although the full calculator is based on monthly data, 2013 annual results can be obtained as indicated in the summary table below.

Input data is shown in non-shaded cells. Calculated results are shown in grey-shaded cells.

**Summary Table**

Variable Title	Year 2013 Value		Description
Household Size (Persons)	2,124	09	Persons per housing unit (household)
Occupancy Status (Residential Units)	37,134		Number of housing units
Occupied (Residential Units)	31,570		Number of occupied housing units
Vacancy Rate (Percent)	15.0		1 – (Occupied / Occupancy Status) (%)
Group Quarters Population (Persons)	1,624		Group quarters population

	Gallons	AF	
Volume Diverted	1,665,588,000	5,112	Water diverted from local sources
Volume Imported	1,401,900,000	4,302	Water imported via Buckman Direct Diversion
Volume Total Supply	3,067,488,000	9,414	Sum Volume Diverted and Volume Imported
Volume Exported	78,200,000	240	Water exported to customers outside the city
<b>Volume Avail to Customers (Demand)</b>	<b>2,989,288,000</b>	<b>9,174</b>	Volume Total Supply minus Volume Exported

Volume SFR Billed	1,548,384,400	4,752	Single-family residential customers
Volume MFR Billed	294,927,400	905	Multi-family residential customers
Volume ICI Billed	636,430,700	1,953	Industrial, commercial and institutional customers
Volume Other Metered	162,445,700	499	Other metered customers
Volume Provided to Customers	2,642,188,200	8,109	Sum Volume SFR, MFR, ICI Billed and Other Metered
Volume Non-revenue (Demand-Provided)	347,099,800	1,065	Volume Avail to Customers (Demand) minus Volume Provided
Volume Reuse	355,930,000	1,092	Reclaimed wastewater

Number SFR Accounts	28,495		Average number of single-family residential accounts or households
Number SFR Inactive Accounts	0		Average number of inactive single-family residential accounts or households
Number Active SFR Accounts	28,495		Active minus inactive SFR accounts
Number MFR Units	10,414		Average number of multi-family residential units or households
Number Occupied MFR Units	8,854		Average MFR units times occupancy ratio

SFR Population	60,526		Number SFR accounts times Household Size
MFR Population	18,806		Number MFR accounts times Household Size
Group Quarters Population	1,624		
Total Population	80,956		Sum SFR, MFR and Group Quarters Population

GPCD SFR	70.09		Volume (gallons) SFR Billed divided by (SFR Population times 365 days)
GPCD MFR	42.97		Volume (gallons) MFR Billed divided by (MFR Population times 365 days)
GPCD ICI	21.54		Volume (gallons) ICI Billed divided by (Total Population times 365 days)
GPCD Other Metered	5.50		Volume (gallons) Other Metered divided by (Total Population times 365 days)
GPCD Overall	<b>101.16</b>		Volume (gallons) Available to Customer (Demand) divided by (Total Population times 365 days)

City Population	68,677		2010-2012 3-Year Estimate
GPCD based on City Population	119.25		Volume (gallons) Available to Customer (Demand) divided by (City Population times 365 days)

## Discussion

The annual GPCD calculation is based on the following formula:

$$GPCD = \text{gallons annual water demand} / (\text{the number of persons served} \times 365 \text{ days per year})$$

Annual water demand is the annual volume of water supplied to the utility minus water exported to customers not directly served by the utility. It includes non-revenue water and delivery system losses. In 2013, the water demand was 2,989,288,000 gallons (9,174 acre-feet).

The number of persons served by the utility includes persons living in single-family residences, multi-family residences, and group quarters. The population living in single-family residences is obtained by multiplying the average number (28,495) of active single-family residential accounts (taken to be households) by the household size of 2.12409 persons per household, for a single-family residential population of 60,526 persons.

The population living in multi-family residences is obtained by multiplying the number (8,854) of occupied multi-family units (households) by the household size of 2.12409 persons per household, for a multi-family residential population of 18,806 persons.

The group quarters population is from American Community Service data. It is 1,624 persons.

Adding these classifications together results in a total population served by the water utility of 80,956 persons. This value is different than the population of Santa Fe city (69,969) from American Community Survey. The difference is 10,987 persons. Dividing this difference by the household size of 2.12409 indicates that the water utility services 5,172 accounts that are not in the city. The water utility should have data to verify this.

The water use rate in gallons per capita-day (GPCD) for the three classifications is:

For single-family residents, by dividing the volume of water billed to single-family accounts by the single-family population times 365 days.

$$\text{Single-family Residential GPCD} = 1,548,384,000 / (60,526 \times 365) = 70.09$$

For multi-family residents, by dividing the volume of water billed to multi-family accounts by the multi-family population times 365 days.

$$\text{Multi-family Residential GPCD} = 294,927,400 / (18,806 \times 365) = 42.97$$

Overall, by dividing overall demand to single-family accounts by the total population times 365 days.

$$\text{Overall GPCD} = 2,989,288,000 / (80,956 \times 365) = 70.09$$

## Input Data

### A. Demographic Data

#### Data is based on ACS 2012 3-year Estimate (2010-2012)

- Household Size (persons per household).

To find Household Size

American Fact Finder <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

Choose Advanced Search, Show Me All

Choose Geographies

Choose Place – 160, State – New Mexico, Santa Fe city, New Mexico, Add to Your Selections, Close

Choose Topics, Housing, Occupancy Characteristic, Household Size, Close

Search by Average Household Size, Use Table B25010

2.12 owner occupied, 2.13 renter occupied

- Occupancy Status (total number of housing units).
- Occupied (number of occupied housing units).

To find Housing Occupancy

Housing Type, DP04, Selected Housing Characteristics

37,134 Total Housing Units. 31,529 Occupied Housing Units

- Group Quarters Population (persons). Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, and workers' dormitories.

To find Group Quarters Population, Table B26001

People, Basic Count/Estimate, Group Quarters Population

### B. Water Supply Data

- Volume Diverted (gallons of water diverted from local sources: Santa Fe River watershed, city wells and Buckman wells). The value is converted to acre-feet in the column to the right.
- Volume Imported (gallons of water imported from the San-Juan Chama via the Buckman Direct Diversion).
- Volume Exported (gallons of water exported to customers outside the city such as the county or Las Campanas).

### C. Billing Data

- Volume SFR Billed (gallons of water billed to single-family residential customers).
- Volume MFR Billed (gallons of water billed to multi-family residential customers).
- Volume ICI Billed (gallons of water billed to industrial, commercial and institutional customers).
- Volume Other Metered (gallons of water billed to other metered customers).
- Volume Reuse (gallons of reclaimed wastewater applied to other uses).

### D. Account Data

- Number SFR Accounts (average number of single-family residential accounts or households).
- Number SFR Inactive Accounts (average number of inactive single-family residential accounts or households).
- Number of MFR Units (average number of multi-family residential units or households).

Using the above 4 values of demographic data and 11 values of city-supplied water supply, billing and account data, the summary results can be calculated.

## Calculated Results

- Vacancy Rate (percent; one minus the ratio of occupied single-family residents units to occupied single-family residential unit). The value is not used in the calculator, however, the occupancy ratio, or the ratio of occupied units to total units is used to calculate the number of occupied multi-family units.
- Volume Total Supply (gallons of water, the sum of the volume of water diverted and imported)
- Volume Available to Customer (Demand) (gallons of water, Volume Total Supply minus Volume Exported). This City Customer Demand is referred to in city documents as Demand and is the basis for the GPCD calculations.
- Volume Provided to Customers (gallons of water, the sum of SFR, MFR and ICI billed and Other Metered).
- Volume Non-revenue (Demand-Provided) (gallons of water). This value is not calculated by the calculator, but is readily available from the data.
- Number Active SFR Accounts (accounts, active minus inactive single-family residential accounts). An average based on monthly data.
- Number Occupied MFR Units (housing units, number multi-family residential units times the occupancy ratio, the ratio of occupied units to total units). An average based on monthly data.
- SFR Population (persons, the number of single-family residential accounts times the household size).
- MFR Population (persons, the number of multi-family residential accounts times the household size).
- Total Population (persons, the sum of single and multi-family and group quarters population).
- GPCD SFR (gallons per capita day; volume (gallons) SFR Billed divided by (SFR Population times 365 days).
- GPCD MFR (gallons per capita day; volume (gallons) MFR Billed divided by (MFR Population times 365 days).
- GPCD ICI (gallons per capita day; volume (gallons) ICI Billed divided by (Total Population times 365 days).
- GPCD Other Metered (gallons per capita day; volume (gallons) Other Metered divided by (Total Population times 365 days).
- GPCD Overall (gallons per capita day; volume (gallons) Available to Customers (Demand) divided by (Total Population times 365 days).

## Auxiliary Data and Calculated Results

- City Population (persons).

To find City Population  
ACS 2012 3-Year Estimates  
Persons, Basic Count, Table DP05

- GPCD based on City Population (gallons per capita day; volume (gallons) Available to Customers (Demand) divided by (City Population times 365 days).



## Census Information Data Table 2.1

Info

Click here to  
access the  
Census Web site

OR

Click here for  
instructions on how  
to find the data on  
the Census website

2013 TO 2007

Use the most recent census data

Return to  
Instructions

### DATA

US Census Table	Description	CENSUS YEAR	INPUT
P37	Group Quarters Population	Total	1,624
H3	Occupancy Status	Total	37,134
from H3		Occupied	31,570
from H3		Vacant	5,564
H12	Ave. Household Size of Occupied Housing Units	Total	2.12409

Formula: Household Size = Total Population / Total Number of Housing Units

Vacancy Rate %

15.0%

### COMMENTS:

1. Since U.S. Census data was not available for 2013, the City of Santa Fe utilized the 2012 American Community Survey's (ACS) 3-year estimate for the group quarters population (Table B26001: 2010-2012 ACS 3-year estimates) and for the occupancy status (Table DP04: 2010-2012 ACS 3-Year Estimates). 2. The ave. household size of occupied housing units was calculated by taking the weighted average of the ave. household size of owner-occupied units with the ave. household size of renter-occupied units (found within Table DP04: 2010-2012 ACS 3-Year Estimates). See formula within row 17: column E.

2014 APR 24 PM 3:50

OFFICE OF STATE ENGINEER  
SANTA FE, NEW MEXICO



# DATA INPUT SHEET

City of Santa Fe, Sangre de Cristo Water

Instructions

## 3. SINGLE-FAMILY RESIDENTIAL (SFR)

### MONTHLY DATA

TABLE 3.1  
SFR BILLED WATER CONSUMPTION (Gallons (US))

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	98,041,500	92,711,100	90,827,900	114,598,300	145,272,500	198,880,400	183,318,800	150,985,400	156,705,900	134,186,000	98,670,100	95,166,500
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 3.2  
NUMBER OF SFR CONNECTIONS (Monthly)

Active Connections Only

You have chosen to enter Active Connections Only, enter the monthly values below, or enter annual values in table 3.3. Check message above Table 3.3 to see if additional data is required.

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	28,370	28,399	28,454	28,611	28,625	28,487	28,643	28,635	28,628	28,833	27,783	28,468
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 3.3  
INACTIVE (ZERO USE) SFR CONNECTIONS (Monthly)

You have entered Active Connections Only in Table 3.2; leave the cells below blank.

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013												
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 3.4  
SFR POPULATION (Monthly)

Formula = (No. of Connections - No. of Zero Use Accounts) \* Ave. Household Size

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	60,260	60,322	60,439	60,772	60,802	60,508	60,840	60,828	60,808	61,244	59,014	60,489
2012	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2011	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2010	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2009	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2008	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2007	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

TABLE 3.5  
SFR GPCD CALCULATION (Monthly)

Formula = Billed Water Consumption (SFR only) / Calculated Population (SFR only)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	53.02	54.89	48.48	62.86	77.07	102.95	97.20	80.08	85.90	70.87	55.73	50.78
2012	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2011	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2010	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2009	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2008	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2007	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

#### COMMENTS:

Table 3.1 and Table 3.2 are based upon the Sangre de Cristo Water Division's active Single Family Residential (SFR) accounts queried through the customer billing database.

### ANNUAL DATA

TABLE 3.6  
ANNUAL CONSUMPTION


TABLE 3.7  
ANNUAL CALCULATION

1,548,384,400	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

TABLE 3.8  
AVG. ANNUAL CONNECTIONS


TABLE 3.9  
AVG CONN. CALCULATION

28,485	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

TABLE 3.10  
CALCULATED GROWTH RATE

N/A	
N/A	
N/A	
N/A	
N/A	

TABLE 3.11  
NO. VACANT SFR CONNECTIONS


Are you sure growth is zero?

TABLE 3.12  
SIZE OF HOUSEHOLD

2,12409	
2,12409	
2,12409	
2,12409	
2,12409	
2,12409	
2,12409	

TABLE 3.13  
SFR ANNUAL POPULATION

60,325	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	

TABLE 3.14  
ANNUAL SFR GPCD

70.09	
N/A	
N/A	
N/A	
N/A	
N/A	
N/A	



# DATA INPUT SHEET

City of Santa Fe, Sangre de Cristo Water

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## 4. MULTI-FAMILY RESIDENTIAL (MFR)

### MONTHLY DATA

TABLE 4.1

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	19,645,000	19,056,700	18,952,600	22,363,900	23,861,300	32,458,400	32,624,800	30,794,500	29,967,300	26,885,900	19,770,800	18,546,200
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 4.2

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	10,414	10,414	10,414	10,414	10,414	10,414	10,414	10,414	10,414	10,414	10,414	10,414
2012												
2011												
2010												
2009												
2008												
2007												

If only Current Number of Units is Known, put this number in Table 4.7

TABLE 4.3

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	18,806	18,806	18,806	18,806	18,806	18,806	18,806	18,806	18,806	18,806	18,806	18,806
2012	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2011	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2010	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2009	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2008	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2007	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Formula = (Number of Units - Vacant MFR Connections) \* Ave. Household Size

TABLE 4.4

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	33,770	36,19	32,51	39,64	40,93	57,53	55,96	52,82	53,12	46,12	35,04	31,81
2012	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2011	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2010	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2009	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2008	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2007	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Formula = MFR Billed Water Consumption (Monthly) / MFR Population (Monthly)

### ANNUAL DATA

TABLE 4.5

ANNUAL CONSUMPTION

TABLE 4.6

ANNUAL CALCULATION
294,927,400
N/A
N/A
N/A
N/A
N/A
N/A

TABLE 4.7

No. CURRENT UNITS

TABLE 4.8

ANNUAL UNIT CALCULATION
10,414
N/A
N/A
N/A
N/A
N/A
N/A

TABLE 4.9

MFR POPULATION
18,806
N/A
N/A
N/A
N/A
N/A
N/A

TABLE 4.10

VACANT MFR CONNECTIONS
1560
N/A
N/A
N/A
N/A
N/A
N/A

TABLE 4.11

ANNUAL MFR GPCD
42.97
N/A
N/A
N/A
N/A
N/A
N/A





DATA INPUT SHEET

City of Santa Fe, Sangre de Cristo Water

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TABLE 6.1

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	1,290,000	1,690,000	13,610,000	54,280,000	62,290,000	66,700,000	52,530,000	48,460,000	26,620,000	24,100,000	3,760,000	520,000
2012												
2011												
2010												
2009												
2008												
2007												

COMMENTS:

2013 reuse diversions (Table 6.1) are based upon the monthly accounting of treated effluent users provided by the wastewater division.

MONTHLY DATA

6. REUSE

ANNUAL DATA

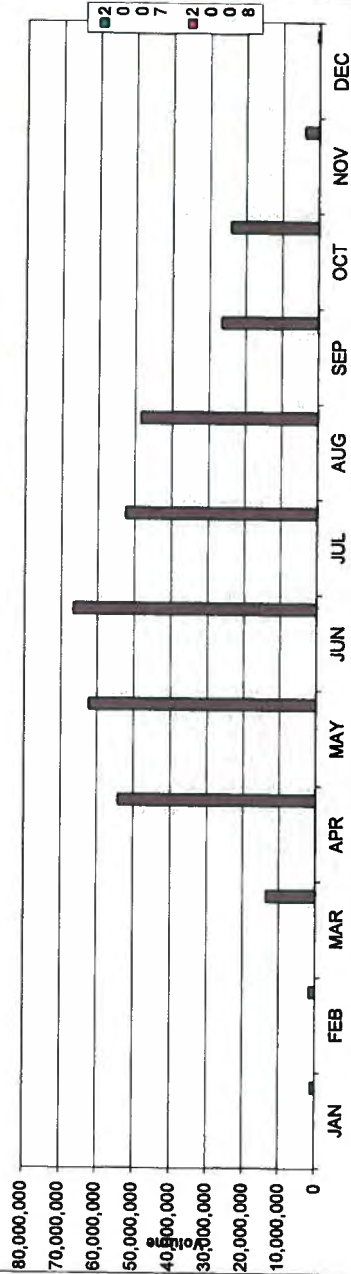
TABLE 6.2

REUSE ANNUAL DIVERSIONS

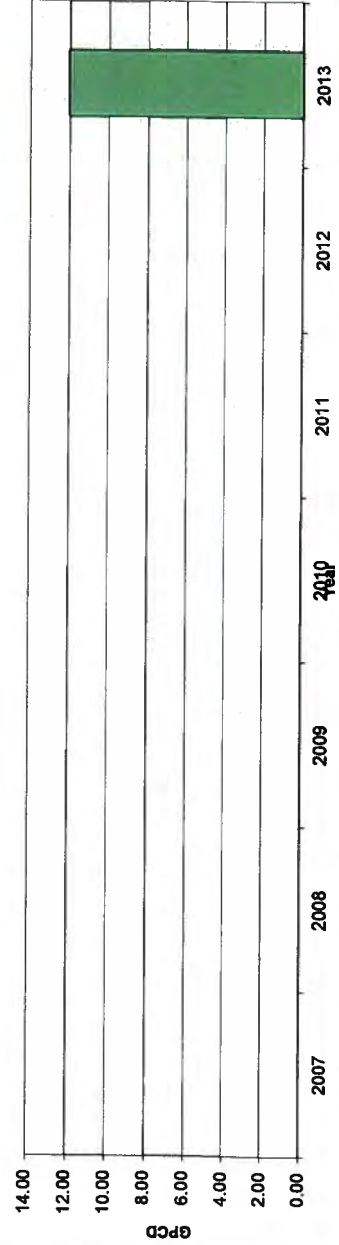
TABLE 6.3

REUSE GPCD
12.04
N/A
N/A
N/A
N/A
N/A
N/A

Reuse Volume  
Graph 6.1



Reuse GPCD  
Graph 6.2





## DATA INPUT SHEET

City of Santa Fe, Sangre de Cristo Water

## 7. TOTAL WATER DIVERTED AND SUPPLIED

## MONTHLY DATA

TABLE 7.1

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	52,846,000	97,290,000	86,579,000	38,905,000	52,327,000	98,835,000	218,642,000	359,976,000	284,062,000	170,995,000	97,707,000	107,514,000
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 7.2

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	147,100,000	75,200,000	119,600,000	203,000,000	273,400,000	283,400,000	98,200,000	6,800,000	17,300,000	57,600,000	73,700,000	67,600,000
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 7.3

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	0	0	0	0	0	0	10,500,000	32,800,000	34,900,000	0	0	0
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 7.4

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	199,946,000	172,480,000	205,179,000	241,905,000	325,727,000	362,235,000	306,342,000	333,976,000	266,462,000	228,505,000	171,407,000	175,114,000
2012	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0	0	0

Formula = Total Water Diverted + Imported water - Exported Water

TABLE 7.5

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	80	76	82	100	130	149	122	133	110	91	71	70
2012	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2011	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2010	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2009	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2008	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2007	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

## COMMENTS

The Total Water Diverted values (Table 7.1) exclude water supplied from the Buckman Direct Diversion Project to the City of Santa Fe (City). The Imported Water values (Table 7.2) are the City's portion of water delivered from the Buckman Direct Diversion Project (BDD Project). The sources of total water diverted include: the City Wells, Canyon Rd Water Treatment Plant & St. Michael's Well, Buckman Wells, and occasionally Osage Well. The Exported Water values (Table 7.3) represent non-BDD Project water delivered to Santa Fe County by the City under the Water Resources Agreement.

## ANNUAL DATA

TABLE 7.6

ANNUAL TOTAL DIVERTED

TABLE 7.7

ANNUAL TOTAL DIVERTED CALC
1,965,588,000
N/A
N/A
N/A
N/A
N/A

TABLE 7.8

ANNUAL TOTAL IMPORTED

TABLE 7.9

ANNUAL TOTAL IMPORT CALC
1,401,900,000
N/A
N/A
N/A
N/A
N/A

TABLE 7.10

ANNUAL TOTAL EXPORTED

TABLE 7.11

ANNUAL TOTAL EXPORT CALC
N/A
N/A
N/A
N/A
N/A
N/A

TABLE 7.12

ANNUAL TOTAL WATER SUPPLY
3,067,488,000
0
0
0
0
0
0

TABLE 7.13

TOTAL POP EST
80,955
N/A
N/A
N/A
N/A
N/A

TABLE 7.14

Year	SYSTEM TOTAL GPCD
2013	161.17
2012	NA
2011	NA
2010	NA
2009	NA
2008	NA
2007	NA



## 8. GPCD REPORTED DATA

of Santa Fe, Sangre de Cristo W

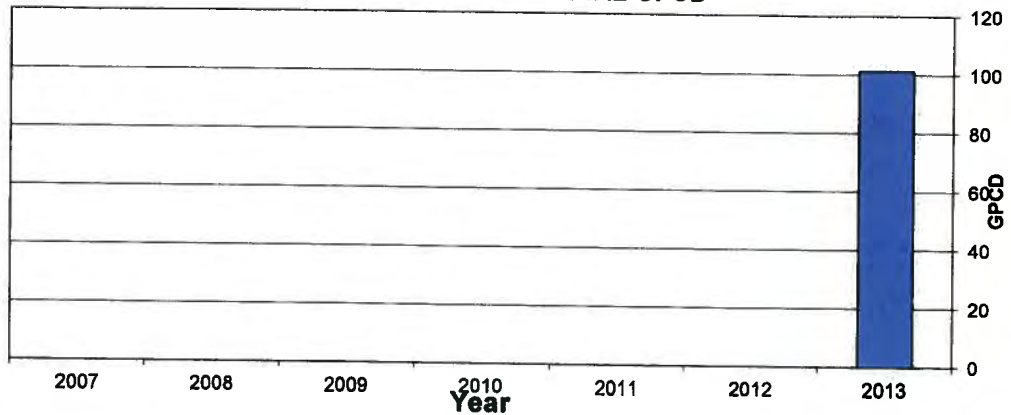
Return to  
Instruction

### ANNUAL

2013 To: 2007

Year	SYSTEM GPCD
2013	101.17
2012	NA
2011	NA
2010	NA
2009	NA
2008	NA
2007	NA

ANNUAL - SYSTEM TOTAL GPCD



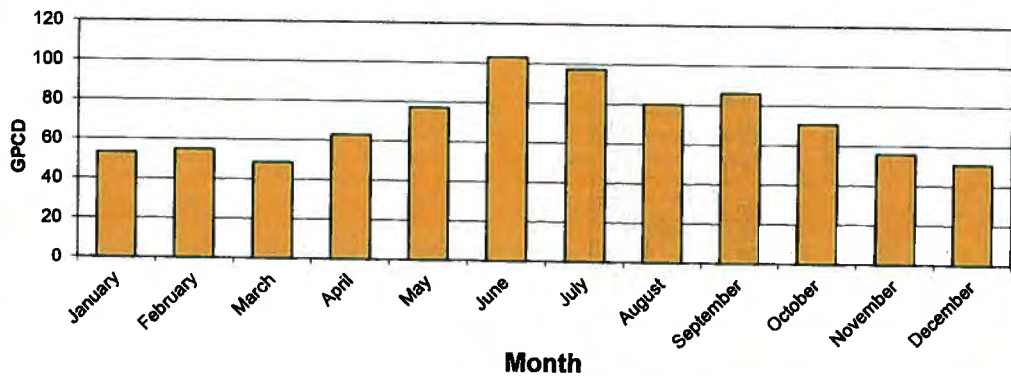
### MONTHLY

Month	SFR GPCD
January	53.02
February	54.89
March	48.48
April	62.86
May	77.07
June	102.95
July	97.20
August	80.08
September	85.90
October	70.67
November	55.73
December	50.78

Year 2013

Peak/Ave 1.47

Monthly - Single-Family Residential GPCD  
Sector Specific Population

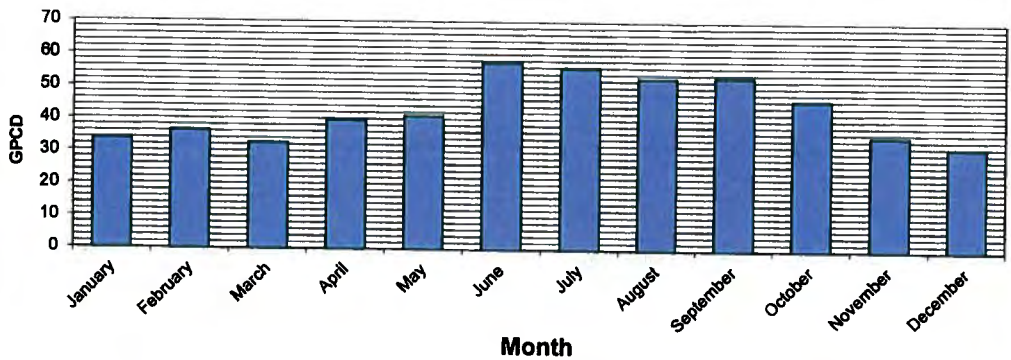


YEAR 2013

Monthly - Multi-Family Residential GPCD  
Sector Specific Population

Month	MFR GPCD
January	33.70
February	38.19
March	32.51
April	39.64
May	40.93
June	57.53
July	55.96
August	52.82
September	53.12
October	48.12
November	35.04
December	31.81

Peak/Ave 1.34



YEAR 2013

## 9. Annual Reporting Performance

Return to Instructions

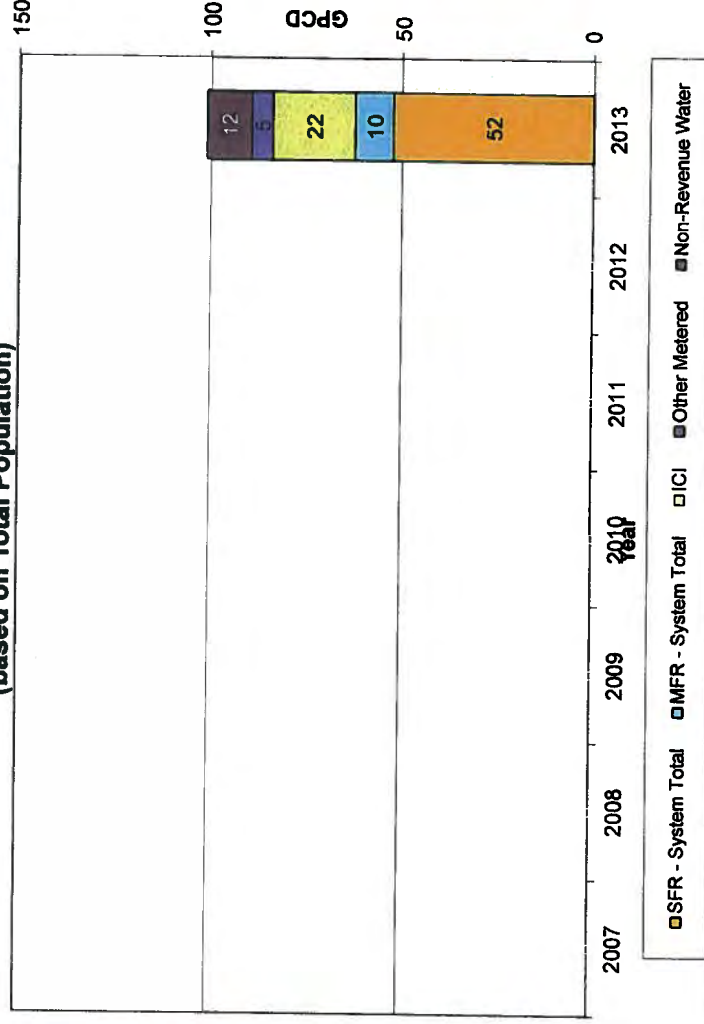
Overall Annual GPCD (based on Total Population)

Year		SFR - System Total		MFR - System Total		ICI		Other Metered		Non-Revenue Water		Total Supplied		Non-Revenue Volume Million Gallons (US)	
On Graph?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
2013	52.40	N/A	9.98	21.54	N/A	N/A	N/A	N/A	N/A	11.75	113.20	425.32			
2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	#VALUE!	#VALUE!	#VALUE!			
2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	#VALUE!	#VALUE!	#VALUE!			
2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	#VALUE!	#VALUE!	#VALUE!			
2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	#VALUE!	#VALUE!	#VALUE!			
2008	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	#VALUE!	#VALUE!	#VALUE!			
2007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	#VALUE!	#VALUE!	#VALUE!			

City of Santa Fe, Sangre de Cristo Water		
2013	to	2007

## Annual Analysis of GPCD - Viewer

(based on Total Population)



# 10. Monthly Reporting Performance

Choose Year for Monthly Analysis

2013

Choose Sector

Single-Family Residential

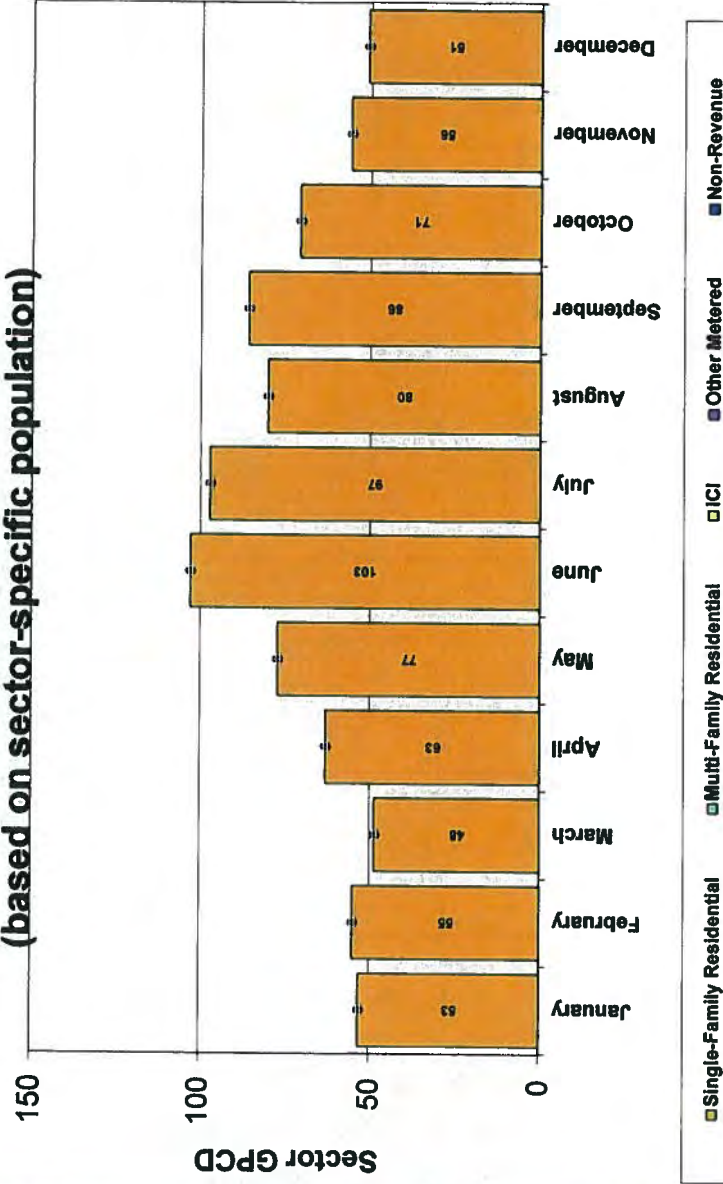
Monthly GPCD

Month	Single-Family Residential	Multi-Family Residential	ICI	Other Metered	Non-Revenue
JAN	53.02	33.70	18.06	0.04	14.28
FEB	54.89	36.19	18.72	0.09	7.88
MAR	48.48	32.51	16.55	0.09	21.37
APR	62.86	38.84	20.00	2.32	20.88
MAY	77.07	40.93	22.80	10.01	29.59
JUN	102.85	57.53	28.20	12.82	17.82
JUL	97.20	55.86	26.42	12.83	-3.02
AUG	80.08	52.82	24.40	8.20	28.04
SEP	65.80	53.12	24.21	11.49	-2.85
OCT	70.87	48.12	23.91	5.60	-1.84
NOV	55.73	35.04	19.17	2.32	0.32
DEC	50.78	31.81	18.03	0.06	7.78

City of Santa Fe, Sangre de Cristo Water

2013 to 2007

## Monthly Analysis of GPCD - Viewer (based on sector-specific population)



# MEMORANDUM

**TO:** City of Santa Fe Public Utilities Committee  
City of Santa Fe Water Conservation Committee  
Buckman Direct Diversion Board

**FROM:** Rick Carpenter, Water Resources and Conservation Manager *RC*

**VIA:** Nick Schiavo, Public Utilities Department and Water Division Director

**DATE:** December 18, 2014

**SUBJECT:** 40<sup>th</sup> Monthly Update on Drought and Water Resource Management

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## CURRENT UPDATE – GENERAL WATER RESOURCE MANGEMENT

As the Committee/Board is aware, our region is still suffering through a drought. Our region has gone through four consecutive years of record drought and heat. In fact, recent data suggests that this past summer was the hottest on record (June-August). This fourth consecutive year of drought has eased somewhat, but will still likely present significant challenges to all water purveyors, utilities, and irrigators going forward into the next year.

July/August/September yielded good summer rains due to a series of moist northeast cold fronts and monsoonal flow, but the monsoons generally exited by early October. Many models are predicting the likelihood of a return of an El Nino weather pattern, 65% chance of normal to above normal precipitation (but down from 75% in spring/summer projections, but up from 50% chance from the September projections) over the next several months. This could mean good precipitation for the winter months (snow pack). El Nino seems to be weakening relative to early predictions, but normal to above normal snow pack is still likely this coming winter. The December 4, 2014 NOAA ENSO update states that:

*ENSO-neutral (El Nino) conditions continue. Positive equatorial sea surface temperature (SST) anomalies continue across the Pacific Ocean. There is an approximate 65% chance that El Nino conditions will be present during the Northern Hemisphere winter and that they will last into the Northern Hemisphere spring 2015 season.*

It is worth noting that City of Santa Fe has invested in a robust and diverse portfolio of four distinct water supply sources that allows for flexibility in meeting demand: Buckman well field, City well field, Canyon Road Water Treatment Plant on the Upper Santa Fe River, and the Buckman Direct Diversion on the Rio Grande. Supply from these groundwater and surface water sources are expected to be adequate in meeting local demands.

## **LOCAL CONDITIONS**

### **Source of Supply Utilization Summary**

November 2014

City Wells	23.14mg/m	64.89af/m
Buckman Wells	00.0mg/m	00.0af/m
CRWTP	38.01mg/m	116.92af/m
BRWTP	132.45mg/m	406.49af/m
<i>Other Wells(Osage, MRC, etc)</i>	<i>0.18mg/m</i>	<i>0.56af/m</i>

### **Upper Santa Fe River/CRWTP**

	Total Combined Reservoir Level	Santa Fe Snow Gage	Reservoir Inflow
December 16, 2014	12.30%	19.00 inches	1.16 MGD
5-Year Average for This Date (2009 – 2013)	46.03 %	20.80 inches	1.44 MGD

As of December 16, total combined storage in Nichols and McClure reservoirs is 12.3% of total (or about 480 acre-feet of storage). Some flows have been by-passed due to construction on the new intake facilities. Minor inflows are expected to continue for the near future and so the reservoirs have been managed to allow for water treatment plant production, active construction, and draining/drying.

### **Buckman Regional Water Treatment Plant (BDD)**

Flows in the Rio Grande are relatively good for this time of year, and turbidity has been generally good. The BDD has been able to divert and treat in line with demand.

## **REGIONAL CONDITIONS**

### **Rio Grande Basin**

Surface flows in the Rio Grande and its tributaries through mid-Dec have been relatively good. However, storage levels in regional reservoirs is still very low. A good snow pack this coming winter is essential if there is to be significant carry over storage in regional reservoirs for next high demand season.



UPDATE: Wild Earth Guardians (WEG) has either filed law suits or Notices of Intent (NOI's) against the US Army Corps of Engineers, Bureau of Reclamation, State of Colorado, State of NM, and MRGCD, citing endangered species act compliance concerns (SW willow fly catcher and silvery minnow). Other entities continue to contemplate the efficacy of filing as an "intervener" with the Court. The City of Santa Fe, Santa Fe County, and the BDD continue to be unnamed in the suits/NOI's, although there is some indication that imported SJCP water could become part of future legal proceedings.

Additionally, in October the federal government listed the yellow billed cuckoo as an endangered species in portions of the middle and upper Rio Grande basins. The cuckoo's habitat generally includes, but extends, the habitat already occupied by the flycatcher and minnow. The implications of this new listing by the federal government are currently be analyzed by staff and consultants. The Rio Grande meadow jumping mouse may also become listed by the federal government in the coming months. Jumping mouse habitat generally includes that of the cuckoo but also may include adjacent riparian meadows and wetlands further away from the wetted river flood plain. Updates will be provided by staff as necessary.

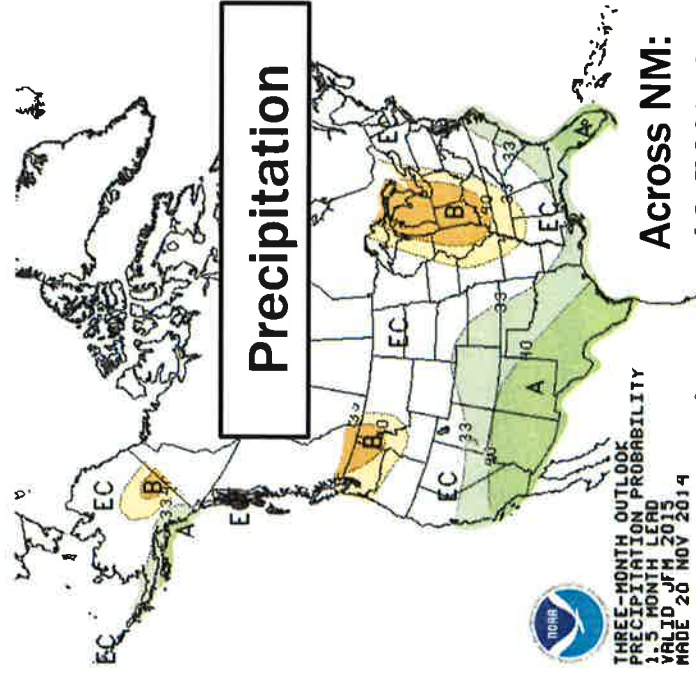
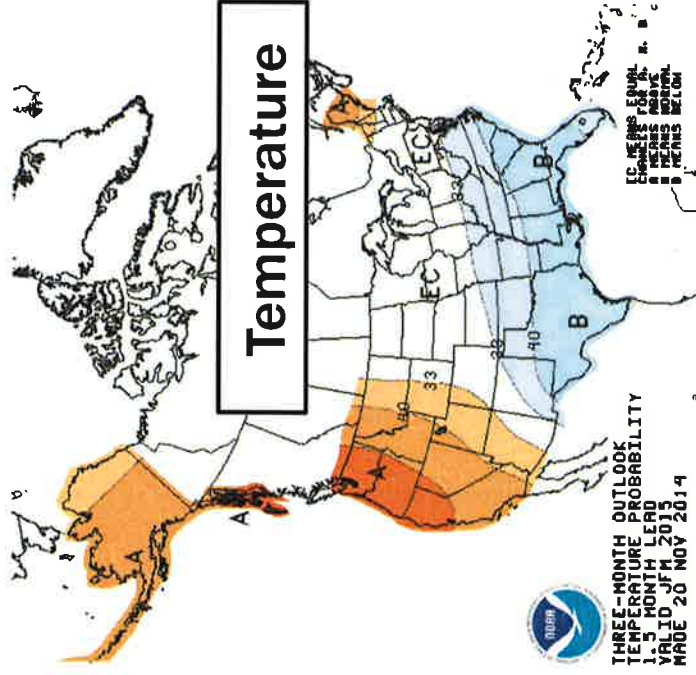
### **San Juan Basin**

It should be stressed that, conditions could significantly worsen for San Juan Chama Project deliveries next year, if the drought persists, due to a lack of carry-over storage in Heron Reservoir and other reservoirs in the system. Heron Reservoir is currently at a very low level. However, the San Juan Basin as well as the local Sangre de Cristo Mountains have already experienced several early and mid-November snow storms.

The Bureau of Reclamation has recently indicated that SJCP deliveries this year will be 89%, which marks the first time since the inception of the SJCP Project that total firm yield deliveries were not completely met.

# Winter 2015 Climate Outlook

issued 20 Nov 2014



Across NM:  
40-50% chance  
of Above-avg  
precipitation

El Niño to the rescue this winter? Maybe ...  
Equatorial Pacific Ocean anomalies have been  
strengthening for the past month

**Action Plan Recommendations to the Water Conservation Committee:**

**#1 – Notify private well owners that even though some or all of their water may be from a private well, they are nevertheless subject to all City of Santa Fe water conservation regulations.**

Mr. Wiman made reference to a letter directed to private well owners from May, 2014 that was sent to have them register their wells. There is no update as to the status of the letters in fact wondering if it was sent out. Last time an update was provided they believed it did made it to the Mayor's Office and Ms. Trevizo's recollection is that it stopped in the Legal Department.

It was the consensus of the WCC members that the concept of the letter which they were in support of was to notifying residents. It would be good to see the letter one more time.

Ms. Trevizo stated that her recollection is that they in the Water Conservation office were fine with the letter as long as it received approval from Legal.

*The WCC members recommended and directed staff to resurrect the letter which was to be sent to private well owners to inform them that they fall under the same regulations. Letter is to be retrieved from the Legal Department and WCC members should be allowed to review one more time.*

A sample letter to private well owners was submitted to Water Conservation Committee by WG#5 at the April Water Conservation Committee meeting. The letter is attached as Page 5. It is noted in the minutes of the 4/8/2014 WCC meeting that it was the consensus of the committee to send a letter specifically to the well owners. Chair Peter Ives noted that the next step was for staff liaison, Ms. Trevizo, to take the letter to the City Attorney, the City Manager and the water company to let them know that this was the recommendation of the committee. See the last page of this document.

**#2 – Publish public notification of this requirement to ensure all well owners, known and unknown to the City, are aware of this ordinance.**

Ms. Grosse stated that the Water Conservation Department assures that all notices are on the Website, it also going out in other mailed communications and the restrictions are explained that it applies to well owners as well and Water Conservation does enforce it.

Mr. Wiman noted that his recollection was that these letters were going to be sent to a target list. The working group discussed the list from OSE and the list from the City of known wells to send the letter to.

*Chair Ives: We applaud the efforts to notify the potential users across the city that their wells are regulated by the city based on time and the letter should go out to known well users confirming that fact. Notices are going out through the brochure and mailed in the utility bills.*

*WCC members are in consensus of the above statement by the Chair.*

The working group acknowledges and appreciates that the City has increased its messages to residents that all water conservation regulations apply to private well owners

**#3 – Clarify the amount of water in afy that may be produced by a well permitted by the City for next meeting.**

This relates to approximately 20-25 wells that have been permitted by the city. Mr. Wiman stated that it was not clear to him when the city issues these permits how much water is assignable to that well and he would like this clarified.

*WCC members are in concurrence.*

The working group respectfully requests answers to these recurring questions:

1. How many total City well permits have been issued to date?

Working group members are willing to assist staff in answering this question.

2. How does the total break down with respect to replacement of existing wells vs. completely new wells?
3. Does the permit specify how much water may be produced per year and, if so, what is that amount?

**#4 - Require compliance with the existing monthly metering and annual reporting requirements for new and replacement wells for which the City has issued permits.**

Mr. Wiman said he had no proof to the statement that this is not being enforced.

The Chair asked what the penalty is for non-compliance.

Mr. Pushard said that in the ordinance there is no penalty for non-compliance. Mr. Pushard said that the working group wanted to make sure that the well owners were notified.

Mr. Michael asked what the steps are to amend the ordinance for non-compliance.

Chair Ives explained the process for this type of amendment to the ordinance.

Mr. Michael asked if the amendment to the ordinance could be prepared by the WCC.

The Chair concurred, yes.

Andy Otto: If they are hooking in to the water system the well owners should be asked.

Mr. Erdman: Water cannot be co-mingled if you hook up to city water.

Ms. McDonald said that if the letter does go out, it might be advantageous to offer someone from the City staff to do an inspection of their wells to assure they have a properly kept well. You can only imagine that there are people who don't know if there well is well kept.

The penalties for non-compliance are written into City Code 25-1.4. Are the owners of wells permitted by the City submitting their monthly usage, on an annual basis, as required? If not, is there a mechanism in place for enforcement?

**#6 – Propose to State legislators a modification of 3-53-1.1 NMSA as follows: “A municipality may, by ordinance, restrict the drilling of both new domestic and replacement water wells....”**

Mr. Michael stated that there is a lot of uncertainty in the state statute as far as what a municipality can regulate. He believes that what has been done in Santa Fe is a mix of replacement and new wells and there is no specific authorization to issue permits for new wells provided that have one from OSE. Clarification is needed from the state level.

*WCC members are in concurrence.*

I am not sure that we made a decision on #6. I am not sure that there is any incentive for the City to do this.



**#7 - Conduct a public-information program to bring private well owners into the city water-conservation programs using rebates applicable toward City of Santa Fe utility bills.**

If we are going to require private well owners to abide by the city regulations and require them to comply with the ordinance, it is reasonable to give them access to the benefit of rebates.

Mr. Wiman believes this would only be available by ordinance change as rebates are only available to subscribers to the Sangre de Cristo system.

Ms. Trevizo said that something that might come up is that incentive amounts would probably be different. We would need to ask the committee to look at the incentive to offer for non-rate payers.

Mr. Michael said that access to rebates helps the water savings in the city.

*WCC member consensus is to move forward on #7*

Working group members concluded that this task is not worth the effort as most private well owners use their well water for irrigation and are already connected to a Sangre de Cristo Water Division supply line.

**#10 – Develop a concise statement explaining its policies on permit requirements for replacement wells and clearly stating its policy regarding the permitting of new wells in the City. Current regulations are spread out amount several ordinances and are difficult to both locate and interpret.**

*There is no objection to include #10 in the report.*

Working group members would like to better understand if the City is permitting replacement or new wells, or both. See #4.

## Friendly Reminder to all City of Santa Fe Residents

In the spirit of working together to help conserve our water resources, we are attaching a copy of the brochure, *Saving Water is Always in Season*, which was prepared by the Water Conservation Committee for the City of Santa Fe Water Conservation Office and distributed last summer with City utility bills. You should have received it then because you are connected to City water, have City refuse pickup or are connected to the City wastewater system.

We hope that this brochure, which is a year-round guide to saving water, will be useful to you. If you would like more information about water conservation in Santa Fe, we encourage you to visit the Water Conservation Office website.

<http://savewatersantafe.com> The City offers a wide variety of rebates and incentives for water conservation. You may learn more about these programs on this same website.

<http://savewatersantafe.com/rebates>

With regard to the fact that we all share the common aquifer, we are writing to remind you that all residents of the City, including private well owners, are subject to the same water use guidelines and water restrictions that apply to all residents connected to the Sangre de Cristo Water System. All water users are subject to fines for violating these regulations. A listing of these regulations and fines may be found online.

[http://www.santafenm.gov/water\\_use\\_restrictions](http://www.santafenm.gov/water_use_restrictions)

If you have any questions about your well and how you may use it, please contact Laurie Trevizo, Water Conservation Manager, City of Santa Fe Water Division. Tel. 505-955-4223 or by email [ltrevizo@santafenm.gov](mailto:ltrevizo@santafenm.gov) You may also call the Water Conservation Office, Tel. 505-955-4225.

Thank you.

Working Group #5 (Private Wells in the City)  
City of Santa Fe Water Conservation Committee

## **Suggested Wording for City Code violations by Private Well Owners**

As indicated in Section 25-1.4 SFCC, the water division director is responsible for the enforcement of the regulations of Chapter 25 SFCC. The director may prescribe policies, rules, or regulations to carry out the intent and purposes of the chapter. Administrative fees shall be assessed for violations of the provisions of Section 25-1.10 SFCC by customers of the municipal water system, whether inside or outside the city limits. Fees shall be assessed on the customer's utility bill. Except as otherwise specifically set forth in this chapter, the fees within a calendar year shall be: twenty dollars (\$20.00) for the first violation at a given customer's address; fifty dollars (\$50.00) for the second violation at the same customer address; one hundred dollars (\$100.00) for the third violation at the same customer address, and two hundred dollars (\$200.00) for the fourth and each additional violation. The director may also use any of the other four modes of enforcement provided in Section 25-1.4 SFCC.



## **SUGGESTED AGENDA TEMPLATE**

### **AGENDA**

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA

#### **CONSENT AGENDA**

- A. UPDATE ON JEMEZ Y SANGRE REGIONAL WATER PLAN
- B. ....
- C. ....

4. APPROVAL OF CONSENT AGENDA
5. APPROVAL OF MINUTES

#### ACTION (VOTING) ITEMS

6. PRIVATE WELL DRAFT ORDINANCE
7. WCC 2015 SCHEDULE
8. WATER CONSERVATION AND DROUGHT MANAGEMENT PLAN

#### DISCUSSION ITEMS

9. DROUGHT, MONSOON AND WATER RESOURCE UPDATE
10. CLIMATE ACTION TASK FORCE

#### INFORMATIONAL ITEMS

11. UTILITY BILLING SYSTEM UPDATE
12. RESERVOIR IMPROVEMENTS
13. ANNUAL REPORT UPDATE
14. GROUP REPORTS FROM COMMITTEE INITIATIVES
  - A. Group #
  - B. Group #
  - C. Group #

#### UNFINISHED BUSINESS

15. UNRESOLVED ISSUES FROM PRIVATE WELLS REPORT
16. QUESTIONS ABOUT GPCD CALCULATOR

#### MATTERS FROM STAFF

#### MATTERS FROM COMMITTEE

#### MATTERS FROM PUBLIC

#### NEXT MEETING DATE

Captions due, date and time

Packet material due, date and time

#### ADJOURN

**PLEASE SEE NEXT PAGE**

## DEFINITIONS REFER TO PREVIOUS PAGE

### Definitions:

**Consent Agenda:** Information that is in the committee packet, and that committee members presumably have read and no discussion or action is necessary. If members would like to discuss the information, or if action is needed, consent agenda items should be moved lower on the agenda. Just as the listing of the *agenda* is not the place to *approve the agenda*, the listing of the *consent agenda* is not the place to *approve the consent agenda*. The consent agenda is approved at Item 4, Approval of the Consent agenda. The consent agenda should not be used to approve action (voting) items.

**Action (Voting) Items:** Items that the committee will consider for approval or disapproval. Voting items are shown on the agenda under action (voting) items in order to notify the public of the actions the committee is considering.

**Discussion Items:** Items that may be largely informational, but are ones that committee members would like to discuss or comment on. If the resolution of the discussion will be committee approval or disapproval, discussion items should be moved to action (voting) items and placed on the next month's agenda.

**Informational Items:** Essentially no different than discussion items. Perhaps discussion and information items should be combined into one group – discussion items.

**Unfinished Business:** Issues that were not resolved at previous meetings, and can be quickly resolved or listed for inclusion at another level in the next month's agenda.

**Matters from Staff:** Brief informational materials from staff that was not included in the meeting packet.

**Matters from Committee:** Discussion from committee members on issues that was not included in the packet. Also an opportunity for members to suggest agenda items for the next-month's meeting.

**Matters from Public:** Comments and contributions from the public.

## **PROPOSED NEW WORKING GROUP: WATER SYSTEM MAP**

### **GEOGRAPHIC COMPONENTS:**

Call-out box for San Juan-Chama Project

Water rights & which entities hold them.

Expiration dates, if applicable?

Otowi Gage – as that is the one of the benchmarks for Rio Grande flow

Location of Early Warning System – to detect flooding in Los Alamos Canyon and possible incursion of LANL contaminants above BDD diversion

Diversion Site – and what treatment is accomplished there

Maximum water amount that can be extracted?

Water rights & who owns them

What other processes occur there (such as sand removal)?

Buckman Well Field (and does any BWF water flow to the BRWTP? If any, what %age)

Who owns the water rights? City or County or both?

Expiration dates, if applicable?

Notation that water is moved 11 miles and 1,100 vertical feet from diversion site to BRWTP

Location of solar arrays and rating of each

Buckman Road Water Treatment Plant

Key Storage Tanks

Key Distribution Lines

Outline of Santa Fe River Watershed (from a commonly accepted source)

McClure and Nichols Reservoirs (date built, last refurbished) - I did this for a column article.

Storage capacity of each

Maximum amount of water that can be retained.

Canyon Road Water Treatment Plant

City Well Field

Waste Water Treatment Plant

**BIG PICTURE QUESTIONS to be included on map:**

For every source where we extract water (BDD broken down by native Rio Grande water vs. Chama, well fields, reservoirs), how much water has to be "returned" and what are the specific locations where return must occur?

What are the City's obligations to the Rio Grand Compact?

What, specifically, is required of discharge from the Waste Water Treatment plant?

How do you explain City ownership of water in Elephant Butte?

How much water does the City "own" in Elephant Butte and what are the circumstances under which it can be released?

## 2015 Meeting Schedule

### Santa Fe Water Conservation Committee

Location: City Councilors' Conference Room, 200 Lincoln Avenue

Time: 4-6 PM

Day: Second Tuesday of the month (except as noted)

Meeting Date	Caption Deadline, 3 PM	Packet Material Deadline, 3 PM
January 13, 2015	Tuesday, December 23, 2014	Monday, December 29, 2014
February 10, 2015	Monday, January 26, 2015	Wednesday, January 28, 2015
March 10, 2015	Monday, February 23, 2015	Wednesday, February 25, 2015
April 14, 2015	Monday, March 30, 2015	Wednesday, April 1, 2015
May 12, 2015	Monday, April 27, 2015	Wednesday, April 29, 2015
June 9, 2015	Friday, May 22, 2015	Wednesday, May 27, 2015
July 14, 2015	Friday, June 26, 2015	Monday, June 29, 2015
August 11, 2015	Monday, July 27, 2015	Wednesday, July 29, 2015
September 10, 2015 (Thursday)	Monday, August 24, 2015	Wednesday, August 26, 2015
October 15, 2015 (Thursday)	Monday, September 28, 2015	Wednesday, September 30, 2015
November 10, 2015	Monday, October 26, 2015	Wednesday, October 28, 2015
December 9, 2015	Friday, November 20, 2015	Monday, November 23, 2015