



Agenda

CITY CLERK'S OFFICE

DATE 1/13/15 TIME 2:56pm

STYLED BY Caryn Grosse

DESIGNED BY Alicia Hartung

SANTA FE WATER CONSERVATION COMMITTEE MEETING

CITY HALL - 200 LINCOLN AVE.

CITY COUNCILORS' CONFERENCE ROOM

TUESDAY, JANUARY 20, 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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Mr. Pushard nominated Lisa Randall as temporary Chair, seconded by Mr. Roth, motion carried by unanimous voice vote.	The Water Conservation Committee Meeting was called to order by the Interim Chair, Lisa Randall at 4:00 pm in the City Councilor's Conference Room. Councilor Ives, Chair, resumed leadership at 4:30 pm Mr. Pushard nominated Lisa Randall as temporary Chair, seconded by Mr. Roth, motion carried by unanimous voice vote.	Page 2
Approval of Agenda Amend Agenda: Accommodate Mr. Shandler's presentation when he arrives.	<i>Mr. Roth moved to approve the Agenda as amended, second by Mr. Michael, motion carried by unanimous voice vote.</i>	Page 2
Approval of Consent Agenda	No Action needed	Page 2
Approval of Minutes, December 9, 2014 <u>Corrections:</u> Mr. Michael clarified that his reason and desire not to vote on approval of the Water Conservation Drought Management Plan was not due to text of plan but the fact that it was listed as a consent agenda approval item. In fact it did not belong there in conformance with the spirit of the Open Meetings Law. No change to the minutes noting reasons for abstaining from vote.	<i>Mr. Roth moved to approve the minutes of December 9, 2014 as amended, second by Mr. Michael, motion carried by unanimous voice vote.</i>	Page 3
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Informational Items Group #2 Group #3 Group #4	No formal action, reports provided verbally.	Page 10-11
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**SANTA FE WATER CONSERVATION COMMITTEE MEETING
CITY HALL - 200 LINCOLN AVE.
CITY COUNCILORS' CONFERENCE ROOM
TUESDAY, JANUARY 20, 2015
4:00 PM TO 6:00 PM**

MINUTES

1. CALL TO ORDER

In the absence of the Chair and Vice Chair, the committee members present elected Lisa Randall, member to Chair the meeting. Councilor Ives, Chair resumed chairmanship at 4:30 pm.

Mr. Pushard nominated Lisa Randall as temporary Chair, seconded by Mr. Roth, motion carried by unanimous voice vote.

2. ROLL CALL

Present:

Councilor Peter Ives, Chair
Doug Pushard
Bill Roth
Stephen Wiman
Nancy Avedisian
Tim Michael
Lisa Randall

Not Present/Excused

Melessia McDonald
Grace Perez
Karen Schmitt

Member Absent

Giselle Piburn

Others Present:

Caryn Grosse, Water Conservation Specialist
Robert Wood, Water Conservation
Andrew Erdman, Water Resources Coordinator
Alan Hook
Zack Chandler, Assistant City Attorney
Andy Otto, Santa Fe Watershed Association
Elizabeth Martin for Fran Lucero, Stenographer

3. APPROVAL OF AGENDA

Amend agenda: Accommodate Mr. Shandler's presentation when he arrives.

Mr. Roth moved to approve the agenda as amended, second by Mr. Michael, motion carried by unanimous voice vote.

4. APPROVAL OF CONSENT AGENDA

None

5. APPROVAL OF MINUTES DECEMBER 9, 2014

Corrections:

Mr. Michael clarified that his reason and desire not to vote on approval of the Water Conservation Drought Management Plan was not due to text of plan but the fact that it was listed as a consent agenda approval item. In fact it did not belong there in conformance with the spirit of the Open Meetings Law. No change to the minutes noting reasons for abstaining from vote.

Mr. Roth moved to approve the minutes of December 9, 2014 as amended, second by Mr. Michael, motion carried by unanimous voice vote.

6. CONSENT AGENDA

DISCUSSION ITEMS:

7. Open Government & Board Procedures in the “Modern World” (Zachary Shandler)
City Attorney Shandler spoke to the WCC regarding the Open Meetings Law and stated that this committee sits at an intersection of two dynamic forces; water and technology. Many of you have served on this committee and other boards and have worked with the State Open Meetings Act and the State Inspection of Public Records Act. During the last 12 months with the explosion of social media there have been some changes to this area of the law. Technology is moving faster than we can keep up with. Mr. Shandler focused on three main areas:

- 1) State Open Meetings Act which applies to the City
Mr. Shandler that a quorum cannot be existent at a luncheon meeting or if you are discussing WCC business. A quorum is a quorum if you have more than ½ of the members, no matter where they are at. It was also noted that if you respond “reply all” in an e-mail that is known as an electronic rolling quorum which means you are talking and listening to each other not in the view of the public. That is a modern violation of the act.

Debate over Gila River. Everyone wants to know everything about what is said or thought about who are working on water issues. The one unofficial exception to this rule in an electronic quorum is that if a city staff sends out an e-mail about a meeting or meeting availability, you can reply to that. You can respond if our are or not available but if you go in to more detail and reply all then it starts talking about the topic of the electronic lunch. You may ask how anyone would even know about any of this stuff and this leads in to the Inspection of Public Records Act which also applies to the City. As 2015 committee members you have to accept that your life on e-mail has changed.

- 2) Inspection of Public Records and
According to the Attorney General, if you conduct business over e-mail this is constituted as public record even if you are using your private e-mail account or phone.
- 3) Open Meetings Act and Inspection of Public Records Act Impact.
Mr. Shandler informed the committee that when making public presentations on behalf of the WCC they could be recorded by a public attendee. They sometimes

result in attendees sending a tweet on content. If in fact you are making a statement that is your own personal comment, it should be delivered in that manner noting to the public that it is a “private opinion” not a statement from the WCC.

Q: What if I want to provide electronic material to group?

A: If you are providing material to your other committee members it will become a public document. If you have a handout you should provide it to staff before a meeting so it gets in the packet for the public to read.

Mr. Michael asked about documents for the WCC packet. If they are available on the City website does WCC need to have hard copy available at meetings?

Mr. Shandler said that it should be on the website so the public can see exactly what is being reviewed. If you are providing material that you have isolated from one meeting and you want to make sure that it is discussed in the next meeting, you need to make sure that staff gets that in advance so everyone comes to the room with this basic knowledge of what is going to be discussed.

Councilor Ives stated that on that note that on the agenda it lists when material is due for the packet so we are trying to be decent on the formalities.

Mr. Michael stated that was not his question. He stated if he did not have the documents with him could he direct the WCC to the website during meeting.

Mr. Pushard. As an example, I am going to talk tonight about a link to the spreadsheet, how do we do that.

Mr. Shandler stated that it might need to be printed out in advance. Mr. Shandler received a call from a reporter asking for the material for a specific meeting, they follow the agendas and it is their expectation if it says something it has to be in the packet.

Ms. Grosse stated that everything that is given to staff is included in the packet and anything that is handed out during a meeting is attached to the minutes and filed with the City Clerk’s office.

Mr. Roth asked about quorum for working groups.

Mr. Shandler stated that as soon as you have a quorum you have to notice it as a public meeting.

Mr. Pushard stated that the process they have been following is that the work group reports are brought to the recorder and referred to in the minutes. Recorder includes it in next packet.

Mr. Shandler stated that he was trying to encourage WCC members to provide material in advance. The expectation that the media has is they want the report in advance and I am sure that is the public expectation.

Councilor Ives stated that he has proposed that we provide uplink for all city meetings as there is no unified system in place. Councilor Ives will speak to Melissa Byers regarding this procedure request.

Mr. Michael asked how documents are received for City Council Meetings. Councilor Ives stated that they are received as PDF files, no live links.

Ms. Grosse clarified that the PDFs in WCC packets do have live links.

Mr. Wood asked how long the live links need to be maintained.

Mr. Shandler will speak to the City Clerk's office and get word back to WCC.

Mr. Shandler stated that the inter-stream experience has really made him aware of what is expected.

Councilor Ives added the recent circumstances regarding the PRC hearing dealings with PNMs proposed shut down of plant. Councilor Ives Commented that much is happening as we speak.

Mr. Shandler offered his assistance to the WCC members should they have any questions. Thank you.

8. Santa Fe 2013 OSE GPCD Calculator (Tim Michael)
(Exhibit A)

The purpose of this paper is to describe the OSE GPCD Calculator. It is based on the City of Santa Fe's 2013 submittal to the OSE. A PDF 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.

Mr. Michael explained the summary of the table.

Mr. Roth asked about the 20% difference.

Mr. Michael noted that the denominator is different and it should line up a bit more in 2014.

Mr. Roth: In which way?

Mr. Michael stated that some served are not in the city but they will come in to the city.

Mr. Roth: So 119 will go down?

Mr. Michael: Yes

Mr. Roth: Does that mean that people not living in the city use less water overall than city residents? Mr. Roth commented that a total of 81,000 people are being served, some live in the city some don't; all you are doing is taking from that 81,000 and putting them in to the city of 68,000; the 81,000 probably is not going to change. Mr. Roth said that he is more concerned if there are 81,000 people using the water what is the average amount

they are using whether they live in the city or the county. Are you taking the same gallons and dividing it by 59,000 people; why would you do that?

Mr. Roth said if someone asked him what the GPCD is in Santa Fe it would be more that number.

Mr. Michael made reference to page 2, 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).

Mr. Roth asked what the average number around the country is on water systems.

Mr. Pushard said that it is 9-10 average and asked why did they do this?

Mr. Pushard asked Mr. Michael; why did you do this?

Mr. Michael: Because I wanted to know and I found the other format confusing. I thought it to be useful for an annual report; which shows the comparison. In some way this is a suggestion.

Mr. Pushard: I concur that I like this format because it summarizes the year so I definitely would support to get this into written reports. Would it be possible for you to bring at next meeting, the value column for over the range of time. We could see the family, multi-family over time; to see which numbers are changing and which numbers aren't changing to help us focus where we are not getting much change.

Mr. Michael: I can do that, can estimate from 2002-2013.

Mr. Roth: Looking at the difference from multi-family and single family; is this because of landscaping? If it is a 28 gallon difference if you have a family of 4 living in an apartment vs. a family of 4 living in a house in Tierra Contenta, why is one using 1/3 more than the other. Is that outdoor water heaters, would that be a safe assumption that the number is going in to gardens and lawns.

Ms. Randall: It is a safe assumption on Santa Fe Public school property. They use triples or quadruples in the irrigation months.

Mr. Pushard said it is going to be assumed that our irrigation numbers are going to be about 40% of our total.

Councilor Ives said that it reflects that single-family use is 55% outdoor use.

Ms. Randall said for the next meeting agenda it would be by Mr. Michael bringing back a change to column to those particular groupings.

Thank you to Mr. Michael.

Councilor Ives resumed Chairmanship.

9. Drought, Monsoon and Water Resource Update (Rick Carpenter)
Andrew Erdman reported on behalf of Rick Carpenter. (Exhibit B)

Predictions for El Nino are 65% above normal precipitation, which is, up from the September prediction and down from the summer prediction. It appears to have been the hottest summer on record, June through August record. Rio Grande flows look good, storage bad. Snow bank is at 70% of normal for this time of year. The settlement for Wild Earth Guardians excludes San Juan Chama Water from being encumbered for endangered species to the silvery minnow.

Ms. Randall asked what the benchmark for normal snow pack this time of year.

Mr. Hook responded that a 30-year average of the snow pack was determined 1980 – 2010.

Mr. Wiman asked, the number for San Juan Chama was 89% of allotments for 2014, is that correct? Mr. Erdman said that is correct. Mr. Wiman asked if there is a projection for 2015? Mr. Erdman said the projection is 100%, it is still with preliminary data. Mr. Wiman asked if they are still saying 100%. Mr. Erdman said, yes.

Mr. Pushard asked staff if they have gauges coming out of tunnels or reservoirs and if they monitor the depth of those reservoirs.

Mr. Erdman said that through the Bureau of Reclamation they are all monitored. Mr. Pushard said he has never seen in Mr. Carpenter's memo mentioning the depth of those because those reflect a good leading indicator if we are going to get our full allocation or not.

Mr. Erdman said that they will try to include that. It is fairly complicated because of the way some of the contracts are written for the individual reservoirs, staff will try to get a fact sheet put together. Mr. Pushard said that would be very helpful.

10. Climate Action Taskforce

Councilor Ives announced that Commissioner Holian is the Chair. The effort currently is to come forward by the end of the month for recommendations in the energy sphere. They will relatively be known as issues related to land, water and food security. As that working group makes recommendations up to the Climate Action Taskforce, Councilor Ives will bring to the WCC. It may be a little challenging in terms of timing since the meetings don't all align in such a way that insure that issues will be seen in a timely fashion. Climate Action Taskforce is fundamentally grateful for the work that this committee has done over time at looking at water conservation measures. Councilor Ives has tried to assure that the reports put out by the WCC get to the Climate Action Taskforce members.

Ms. Randall asked if Councilor Ives is in attendance with these working groups. Councilor Ives reported that he is not consistently there as the working groups meet at different times.

Ms. Randall said that she sits on the Energy Efficiency and Renewable Energy and Financing, and she heard that the working group was focusing mostly on food.

Councilor Ives said that with the food plan put together by non-profit organizations in the city and county that has been an initial focus on food.

Mr. Andy Otto: A member of the sub-working group on water said that initially food was targeted but they actually have a sub working group of water and a sub working group on land.

WCC members were happy with the update.

11. Domestic Wells Within City Limits (Stephan Wiman)

Mr. Wiman asked about the status of the letter submitted last May.

Mr. Erdman answered that the letter is considered by the legal department to be sufficiently flawed and un-editable. The City Attorney feels that there are numerous problems with the letter and does not think that this letter is something that we are able to send out because there are a lot of questions about the jurisdictional issues about what rights the city has in relationship to these peoples wells.

Councilor Ives asked if the City Attorney could draft a letter that would provide notice to city water users including well users with regards to the cities rules and regulations and the necessity of anyone to comply with those.

Mr. Erdman added that he can talk to the City Attorney about the language for the letter and shared with the WCC that there is a concern about the mail list as well. We generated the mailing list through the State Engineers office. He will inquire as to what the concern is from the City Attorney.

Mr. Pushard said his recollection was that they had agreed it would be for all residents. That was the intent and that is why the letter was written in the way it was, a friendly reminder of water conservation and if you happen to have a well; just a reminder that you are covered by the water. Mr. Pushard said that if the City Attorney's issue is with mailing list they had already discussed and come to an agreement that it should go to all.

Mr. Erdman said that the concerns were more detailed and not related only to the mailing list.

Councilor Ives offered to meet with Mr. Erdman and Marcos in the City Attorney's office if an appointment could be coordinated. Ms. Randall asked if it was prudent for the working group to be included in this meeting. Councilor Ives stated that this might be possible, he would prefer to meet with the City Attorney first.

Mr. Michael reiterated that it is important to assure that Marcos was looking at the second version, not the first. Mr. Erdman will make sure that the correct version is being reviewed.

Mr. Pushard suggested wording for city code violations that WCC have submitted. He also expressed thanks to Mr. Michael for putting this together. They would like to get the city to approve as an amendment to the ordinance. This language we believe represents what is stated in the Ordinance. How do we move this forward?

Councilor Ives stated that in his mind the path forward is for him to sit down with our legislative liaison, Melessia Byers and bring back a draft of possible wording to the WCC.

Mr. Pushard said this is acceptable.

12. Discussion of Agenda Template (Tim Michael)

Mr. Michael (noted in packet) that he had expressed he did not want to vote on consent without the drought plan and therefore he abstained. He stated, “My primary reason was that I thought if we are voting on approval for something, it should be listed as voting item, not consent.”

Councilor Ives stated that the agendas for the city are set by the chairman of the committee. When it comes to consent agendas they are frequently used and no violations of open meeting act. Consent agendas usually are brought into play when there are items that will not involve significant discussion or controversy.

Mr. Pushard directed the question to Mr. Michael, “If I understand there are 2 things that you want to change? One is an addition of a new item which is voting items.”

Mr. Michael said; “yes, and I think I have a vision of the press going to meetings. I want to assure we are clear.”

Mr. Pushard said he supports that. Second question is on grouping of the consent agenda and consent items. “I did not follow your logic on that.”

Mr. Michael responded that he wasn’t sure that his logic is good. He stated that when they approve the agenda he would like to see the consent agenda.

Councilor Ives said that he is following a format that he has used for all his time on the city council and will continue within that order. The Chair said he is happy to look at blocking off action items.

13. Review of Meeting Parliamentary Procedure (Tim Michael)

Mr. Michael stated that as a reminder he found himself failing to address the chairman and the recorder. There was a member of the public here and they should participate in the discussion. They should be reminded that there is a place on the agenda for extended comments.

Councilor Ives agreed.

14. Proposed New Working Group: Water System Map (Stephen Wiman) (Exhibit C)

Mr. Wiman has a vision for another project and Mr. Michael has signed up to assist. Proposed working group consolidated in to one location. Map view. GIS. I have done various components of this. (In packet)

Mr. Roth said that he knows the GIS person and WCC should make time to talk to him. He will provide staff with the contact information.

Councilor Ives said that he did not think that GIS technology is either new or extraordinary. From his perspective it is a storied map and does not think it would be terribly difficult for staff to create.

Ms. Gross stated that there is a number of city staff that could do it. There are not enough GIS licenses to go around.

Councilor Ives is someone who does have a GIS license. It was recommended that Claudia Borchert be contacted at Santa Fe County and see what is available.

Mr. Wiman asked if there is a contact for the city.

Ms. Grosse said the contact is Rick Carpenter. Ms. Grosse said that they would need to prioritize with other project and task items.

Councilor Ives will contact GIS staff.

Mr. Wiman stated that he knows pieces of the map out there.

Mr. Pushard asked if they are all in agreement to form another working group, water system map.

Councilor Ives by consensus to replace domestic wells.

Councilor Ives asked who would like to be a part of this working group. Tim Michael and Stephen Wiman.

INFORMATIONAL ITEMS:

15. Group Reports From Water Conservation Committee Initiatives

- A. Group #2 – Water Conservation Education/Outreach
No report, have not met.

- B. Group #3 – Water Conservation Codes, Ordinances & Regulations
Mr. Pushard asked for time on the next agenda for an action item on WERS. He will provide a verbal report.

Mr. Pushard reported that version one is complete. He will send out an active link ahead of the meeting. It has spread sheets and best practices. It is a similar version to Senator Wirth's bill.

Mr. Roth offered information on an overarching organization called RESNET who works with HERS. They proposed drafting. WERS. One of the people driving it runs KD homes. Mr. Pushard would like the support of the WCC and expressed at next meeting. He would like the city to take credit for this.

Councilor Ives said that there are two aspects to this; one is the Ordinance and the other is a Resolution in support of measures to be introduced by Senator Wirth.

Ms. Grosse said that it would be useful to committee if they would write a short memo to committee for packet. Mr. Pushard will take on this task.

Mr. Pushard said that he will try to break out into 2 votes. We are going to sustainable Santa Fe. They voted to endorse and put together a group to get it into the building code.

Councilor Ives – 2 resolutions.

Mr. Roth: Plumbing code.

- C. Group #4 – Reestablish Trend Of Net Annual Reductions in Per Capital Water Users
Nothing to report.

MATTERS FROM STAFF:

Ms. Grosse informed the members that she has hard copies of the drought plan if anyone would like to have one.

Ms. Grosse provided the WCC members with the 2015 meeting calendar. (Exhibit D)

MATTERS FROM COMMITTEE:

Mr. Pushard asked if the 2013 water report has been published.

Ms. Grosse said no, she will ask Mr. Hook for a timeline.

MATTERS FROM PUBLIC

None

Staff Follow Up for Future Meetings:

- NEW WORKING GROUP PRIORITIES

NEXT MEETING – TUESDAY, FEBRUARY 10, 2015

Reminder:

CAPTIONS: JANUARY 26, 2015 @ 3 pm

PACKET MATERIAL: JANUARY 28, 2015 @ 3 pm


ADJOURN.

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

Signature Sheet:


Lisa Randall, Interim Chair


Fran Lucero, Stenographer


Councilor Peter Ives, Chair

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)	2.12409		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
Volume Avail to Customers (Demand)	2,989,288,000	9,174	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	101.16		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)

Exhibit A

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

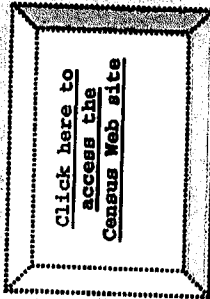
- City Population (persons).

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

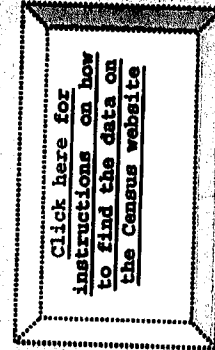
- GPCD based on City Population (gallons per capita day; volume (gallons) Available to Customers (Demand) divided by (City Population times 365 days).

Census Information Data Table 2.1

INFO



OR



2013	TO	2007
------	----	------

Use the most recent census data



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.

DATA INPUT SHEET

City of San Jose, California
Instructions

3. SINGLE-FAMILY RESIDENTIAL (SFR)

MONTHLY DATA

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	92,041,500	92,711,100	90,827,800	114,598,300	145,272,500	168,880,400	183,318,800	150,985,400	158,705,900	134,168,000	98,870,100	95,186,500
2012												
2011												
2010												
2009												
2008												
2007												

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	28,370	28,389	28,454	28,811	28,825	28,487	28,843	28,835	28,828	28,833	27,783	28,483
2012												
2011												
2010												
2009												
2008												
2007												

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

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	60,280	60,322	60,430	60,772	60,802	60,503	60,840	60,823	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

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	53.02	54.88	48.48	62.80	77.07	102.85	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

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	53.02	54.88	48.48	62.80	77.07	102.85	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 San Jose de Cristo Water Division's active Single Family Residential (SFR) accounts queried through the customer billing database.

ANNUAL DATA

Year	ANNUAL CONSUMPTION
2013	1,587,384,000
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

Year	ANNUAL CONNECTIONS
2013	28,485
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

Year	ANNUAL CALCULATION
2013	28,485
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

Year	ANNUAL SFR POPULATION
2013	60,528
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

Year	ANNUAL SFR GPCD
2013	70.08
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

DATA INPUT SHEET

City of Sonoma, State of California

Instructions

4. MULTI-FAMILY RESIDENTIAL (MFR)

MONTHLY DATA

TABLE 4.1

MFR BILLED WATER CONSUMPTION (Monthly) (Gallons (US))

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	29,567,300	28,885,900	19,770,800	18,546,200
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 4.2

NUMBER OF MFR UNITS (Monthly)

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

MFR POPULATION (Monthly)

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

MFR GPCD CALCULATION (Monthly)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	33.70	36.19	32.51	30.64	40.63	57.53	65.96	52.62	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
29,582,400
N/A
N/A
N/A
N/A
N/A

TABLE 4.6

ANNUAL CALCULATION
29,582,400
N/A
N/A
N/A
N/A
N/A

TABLE 4.7

No. CURRENT UNITS
10,414
N/A
N/A
N/A
N/A
N/A

TABLE 4.8

ANNUAL UNIT CALCULATION
10,414
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

TABLE 4.10

VACANT MFR CONNECTIONS
1500
N/A
N/A
N/A
N/A
N/A

TABLE 4.11

ANNUAL MFR GPCD
42.87
N/A
N/A
N/A
N/A
N/A

DATA INPUT SHEET

5. INDUSTRIAL, COMMERCIAL & INSTITUTIONAL (ICI) AND OTHER METERED

San Diego Gas & Electric Water

Instructions

TABLE E-1

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	45,311,500	42,435,300	41,599,000	48,599,700	57,216,100	65,480,300	66,294,100	61,237,800	59,807,400	51,257,100	48,552,300	41,742,100
2012												
2011												
2010												
2009												
2008												
2007												

MONTHLY DATA

TABLE E-2

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	105,200	182,800	230,500	5,039,100	25,121,200	31,145,700	31,867,500	20,957,000	27,598,500	14,981,500	5,629,600	159,100
2012												
2011												
2010												
2009												
2008												
2007												

COMMENTS:

The ICI Water Consumption (Table E-1) is based upon the San Diego Gas & Electric Water Division's active Commercial accounts' consumption queried through the customer billing database. The Other Metered consumption (Table E-2) is based upon active San Diego Gas & Electric Water Division's 1. Firm account usage and 2. Ingestion account usage, queried through the customer billing database.

ANNUAL DATA

TABLE E-3

ICI ANNUAL CONSUMPTION
2013
2012
2011
2010
2009
2008
2007

TABLE E-4

ICI GPCD
2013
2012
2011
2010
2009
2008
2007

TABLE E-5

ICI ANNUAL CALCULATED
2013
2012
2011
2010
2009
2008
2007

TABLE E-6

OTHER ANNUAL CONSUMPTION
2013
2012
2011
2010
2009
2008
2007

TABLE E-7

OTHER METERED GPCD
2013
2012
2011
2010
2009
2008
2007

TABLE E-8

OTHER ANNUAL CALCULATED
2013
2012
2011
2010
2009
2008
2007

DATA INPUT SHEET

6. REUSE

City of San Jose, San Jose de Gracia Water

2013

TO

2017

TABLE 6.1

REUSE DIVERSIONS (Monthly) (Gallons (US))

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	1,230,000	1,630,000	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
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.

ANNUAL DATA

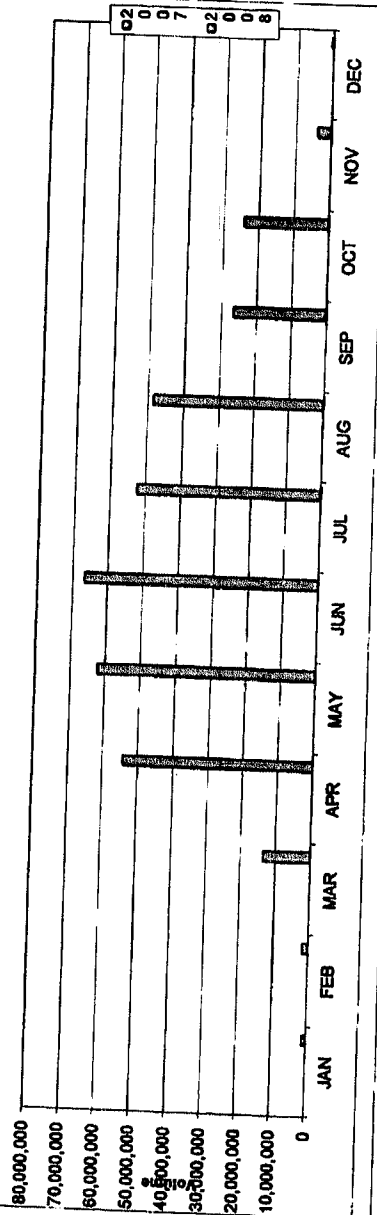
TABLE 6.2

REUSE ANNUAL DIVERSIONS

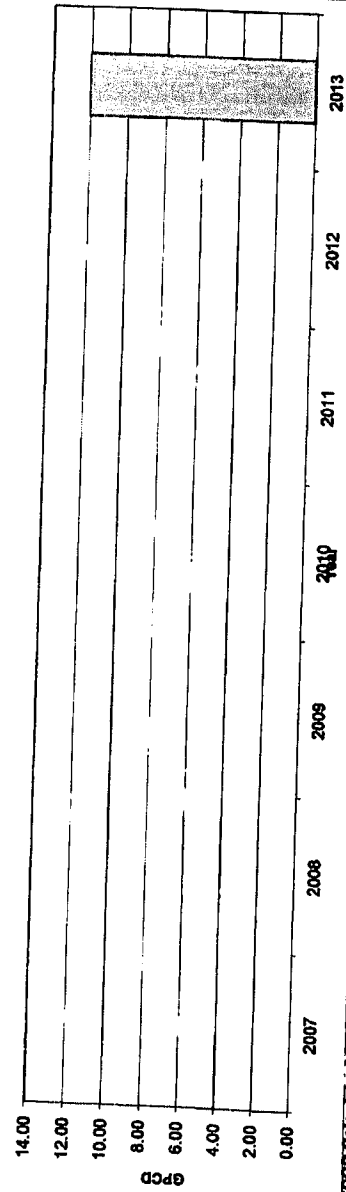
TABLE 6.3

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, San Juan and Rio Grande Waters

7. TOTAL WATER DIVERTED AND SUPPLIED

MONTHLY DATA

TABLE 7.1

Year	TOTAL WATER DIVERTED (Monthly) (Gallons (US))											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	52,846,000	97,290,000	98,579,000	38,935,000	52,327,000	58,635,000	218,642,000	359,979,000	284,062,000	170,865,000	97,707,000	107,514,000
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 7.2

Year	IMPORTED WATER (Monthly) (Gallons (US))											
	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	57,800,000	73,700,000	67,500,000
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 7.3

Year	EXPORTED WATER (Monthly) (Gallons (US))											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	0	0	0	0	0	0	0	0	0	0	0	0
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 7.4

Year	TOTAL WATER SUPPLY (Monthly) (Gallons (US))											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	188,948,000	172,490,000	205,179,000	241,905,000	325,727,000	382,235,000	308,242,000	333,875,000	299,452,000	228,595,000	171,407,000	175,114,000
2012												
2011												
2010												
2009												
2008												
2007												

TABLE 7.5

Year	SYSTEM TOTAL GPCD (Monthly)											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2013	80	78	82	100	130	148	122	133	110	91	71	78
2012												
2011												
2010												
2009												
2008												
2007												

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 Osgood 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
2013	1,951,508,000
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

TABLE 7.7	ANNUAL TOTAL DIVERTED CALC
2013	1,951,508,000
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

TABLE 7.8	ANNUAL TOTAL IMPORTED
2013	1,401,300,000
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

TABLE 7.9	ANNUAL TOTAL IMPORT CALC
2013	1,401,300,000
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

TABLE 7.10	ANNUAL TOTAL EXPORTED
2013	0
2012	0
2011	0
2010	0
2009	0
2008	0
2007	0

TABLE 7.11	ANNUAL TOTAL EXPORT CALC
2013	0
2012	0
2011	0
2010	0
2009	0
2008	0
2007	0

TABLE 7.12	ANNUAL TOTAL WATER SUPPLY
2013	3,867,895,000
2012	0
2011	0
2010	0
2009	0
2008	0
2007	0

TABLE 7.13	TOTAL POP. EST.
2013	80,955
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

TABLE 7.14	SYSTEM TOTAL GPCD
2013	161.17
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A

8. GPCD REPORTED DATA

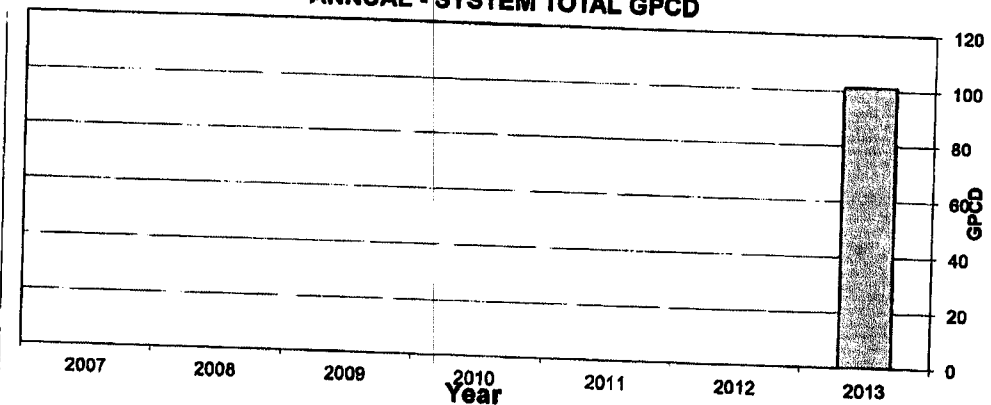
ANNUAL

of Santa Fe, Sangre de Cristo V

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



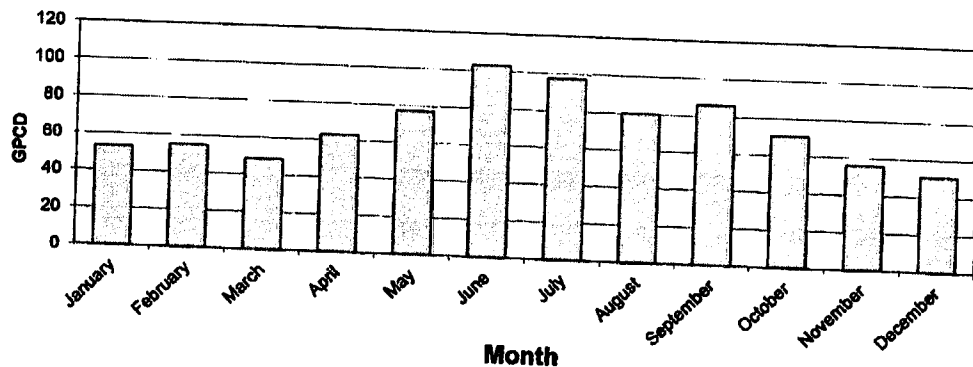
MONTHLY

Month	SFR GPCD
January	53.02
February	54.89
March	48.48
April	62.86
May	77.07
June	102.85
July	87.20
August	80.08
September	85.90
October	70.87
November	55.73
December	60.78

Year 2013

Peak/Ave 1.47

Monthly - Single-Family Residential GPCD
Sector Specific Population

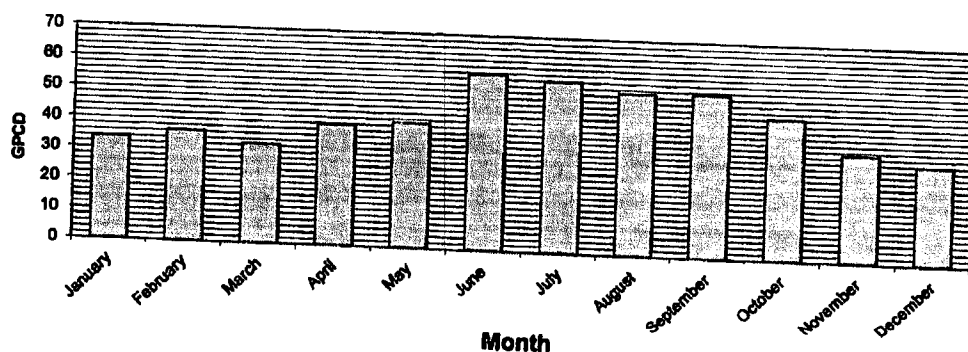


YEAR 2013

Month	MFR GPCD
January	33.70
February	36.19
March	32.51
April	39.64
May	40.93
June	57.53
July	55.98
August	62.82
September	53.12
October	48.12
November	35.04
December	31.81

Peak/Ave 1.34

Monthly - Multi-Family Residential GPCD
Sector Specific Population



YEAR 2013

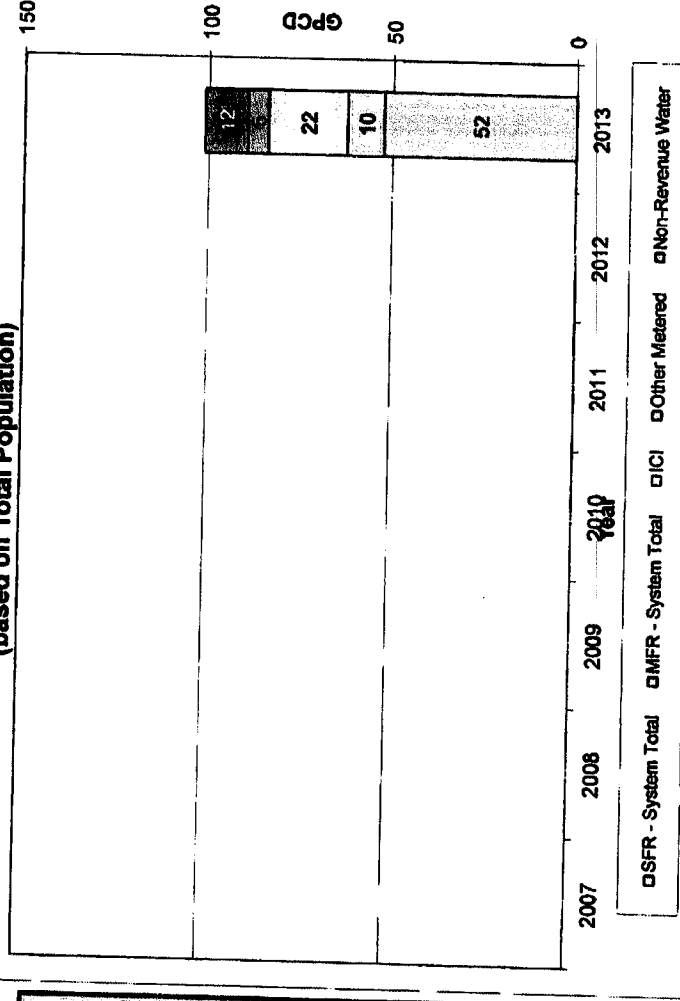
9. Annual Reporting Performance

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)
2013	2012	52.40	9.98	21.54	5.50	11.75	113.20	425.32
2012	2011	N/A	N/A	N/A	N/A	N/A	\$VALUE	-
2011	2010	N/A	N/A	N/A	N/A	N/A	\$VALUE	-
2010	2009	N/A	N/A	N/A	N/A	N/A	\$VALUE	-
2009	2008	N/A	N/A	N/A	N/A	N/A	\$VALUE	-
2008	2007	N/A	N/A	N/A	N/A	N/A	\$VALUE	-

City of Santa Fe, Sangre de Cristo Water	
2013	2007

Annual Analysis of GPCD - Viewer (based on Total Population)



10. Monthly Reporting Performance

Choose Year for Monthly Analysis

Choose Sector

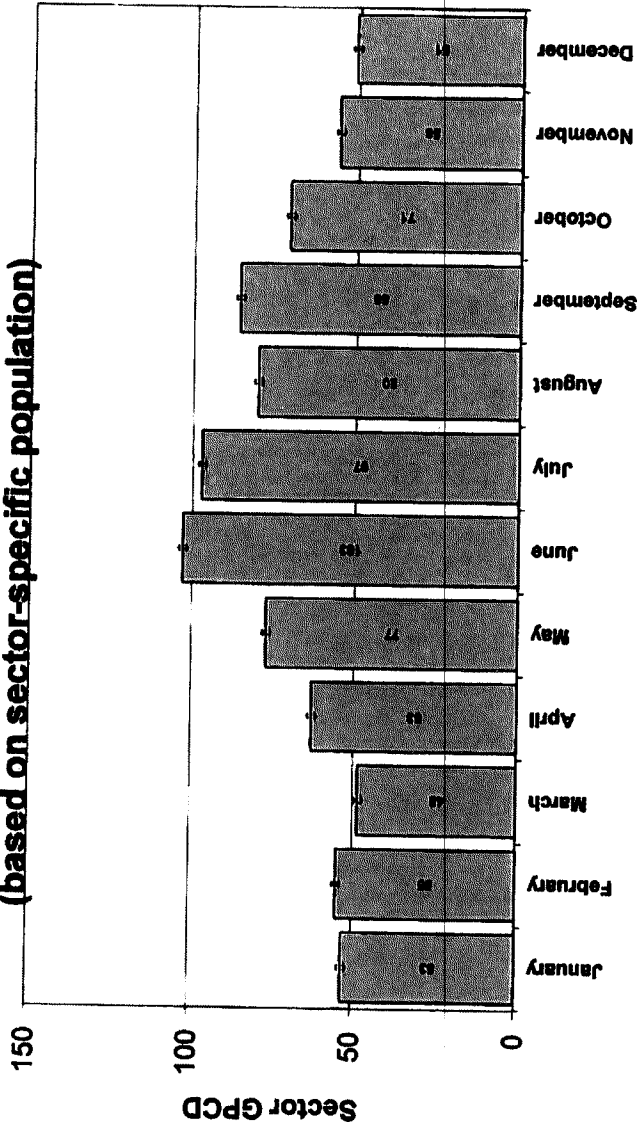
Monthly GPCD

Month	Single-Family Residential	Multi-Family Residential	ICI	Other Metered	Non-Revenue
JAN	13,102	15,710	8,019	0.00	7,428
FEB	12,488	16,148	7,872	0.00	7,708
MAR	20,488	12,851	18,355	0.00	2,437
APR	19,287	10,143	20,100	2.52	20,89
MAY	27,127	48,193	22,400	10,011	20,39
JUN	782,065	62,593	28,200	12,427	11,62
JUL	11,109	53,593	28,420	12,408	3,002
AUG	11,109	53,593	28,420	12,408	3,002
SEP	11,109	53,593	28,420	12,408	3,002
OCT	11,109	53,593	28,420	12,408	3,002
NOV	11,109	53,593	28,420	12,408	3,002
DEC	11,109	53,593	28,420	12,408	3,002

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: 40th Monthly Update on Drought and Water Resource Management

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.

Enb. L.A. B

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.

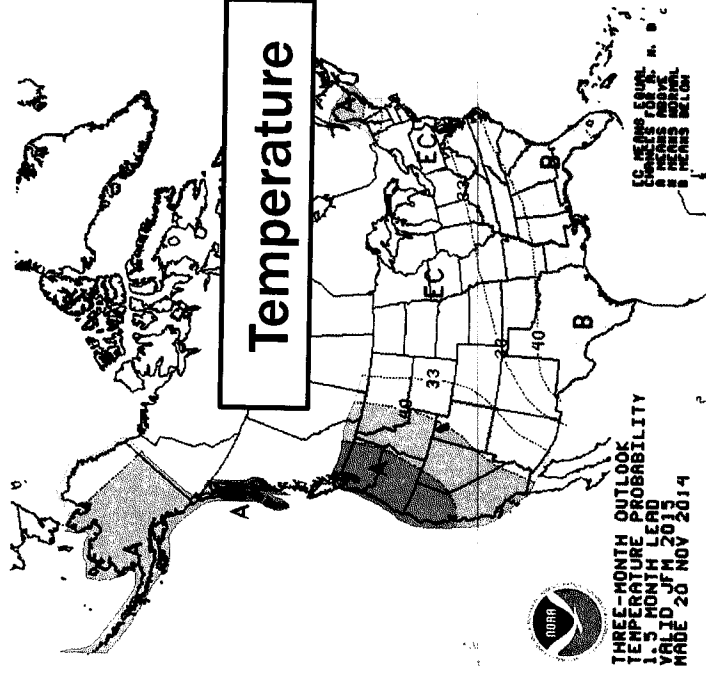
San Juan Basin

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.

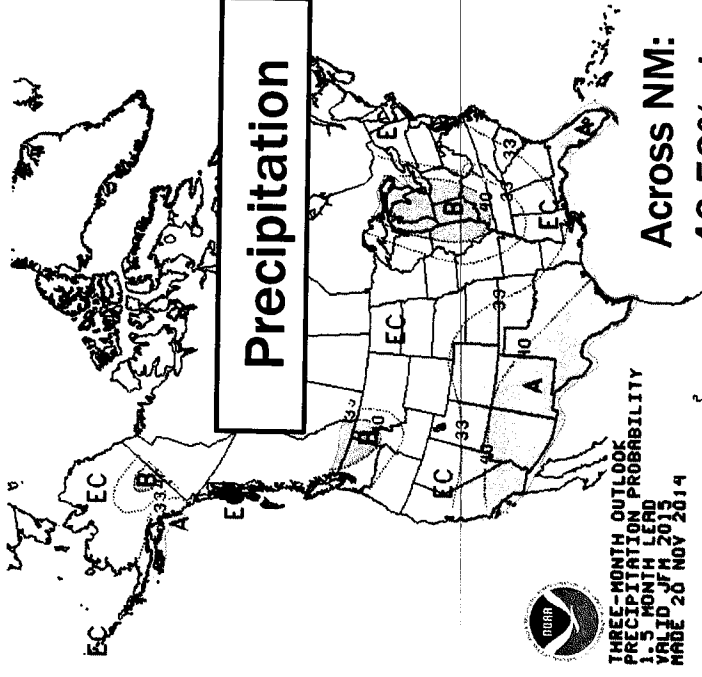
The Bureau of Reclamation has recently indicated that SJCP deliveries this year will be 89%, which marks the first time since the inception of the SJCP Project that total firm yield deliveries were not completely met.

Winter 2015 Climate Outlook

issued 20 Nov 2014



Temperature



Precipitation

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

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 accept 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

San Juan

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

Exhibit D