



Agenda

DATE 4/29/13 TIME 12:42 p
PREPARED BY Laurie Trevizo
SIGNED BY [Signature]

SANTA FE WATER CONSERVATION COMMITTEE MEETING
CITY HALL - 200 LINCOLN AVE.
CITY COUNCILORS' CONFERENCE ROOM
TUESDAY, MAY 14, 2013
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 APRIL 12, 2013 WATER CONSERVATION COMMITTEE MEETING
6. CONSENT AGENDA
 - A. INFORMATIONAL
 - i. DROUGHT, MONSOON AND WATER RESOURCE MANAGEMENT UPDATE (Rick Carpenter)
 - ii. WATER CONSERVATION MARKETING UPDATE (Laurie Trevizo)
 - B. ACTION
 - i. REQUEST FOR APPROVAL OF BILL NO. 2013-__ AN ORDINANCE RELATING TO WATER CONSERVATION; AMENDING SECTION 25-4.2 SFCC 1987 TO ESTABLISH COMMERCIAL WATER USER REBATE REGULATIONS (Councilor Ives) (Laurie Trevizo)
 - ii. REQUEST FOR APPROVAL OF RESOLUTION NO. 2013-__ A RESOLUTION ADOPTING "RECLAIMED WASTEWATER RESOURCE PLAN" AND DIRECTING STAFF TO DEVELOP A PROGRAM TO IMPLEMENT THE ACTIONS IDENTIFIED IN THE PLAN. (Councilor Ives, Councilor Calvert) (Claudia Borchert)

DISCUSSION ITEMS:

INFORMATIONAL ITEMS:

7. VOLUNTARY WATER RESTRICTIONS OUTREACH CAMPAIGN (Councilor Ives, 20 minutes)
8. SPECIAL PRESENTATION OF GREEN LODGING INITIATIVES BY SANTA FE WATERSHED ASSOCIATION (Councilor Ives, 10 minutes)
9. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE INITIATIVES INCLUDING IDENTIFYING OBJECTIVES AND GOALS OF INITIATIVES (Councilor Ives, 40 minutes)

MATTERS FROM STAFF:

10. PRESENTATION OF WATER CONSERVATION MEDIAN (Robert Wood, 20 minutes)
11. 2012 ANNUAL WATER REPORT (Alan Hook, 20 minutes)

MATTERS FROM COMMITTEE:

ITEMS FOR NEXT AGENDA – TUESDAY, JUNE 14, 2013:

CAPTIONS: MAY 28, 2013 @ 3 p.m.

PACKET MATERIAL: MAY 30, 2013 @ 3 p.m.

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.

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WATER CONSERVATION COMMITTEE
Tuesday, April 9, 2013

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**MINUTES OF THE
CITY OF SANTA FE
WATER CONSERVATION COMMITTEE
Tuesday, April 9, 2013
4:00 p.m. to 6:00 p.m.**

1. CALL TO ORDER.

A meeting of the Water Conservation Committee was called to order by Councilor Peter N. Ives, Chair, at approximately 4:00 p.m., on April 9, 2013, in the City Councilor's Conference Room, City Hall, 200 Lincoln Avenue, Santa Fe, New Mexico.

2. ROLL CALL

Roll call indicated the presence of a quorum as follows:

MEMBERS PRESENT

Councilor Peter N. Ives, Chair
Lise Knouse
Tim Michael
Grace Perez – telephonically
Giselle Piburn
Doug Pushard
Lisa Randall
Karyn Schmitt
Stephen K. Wiman
[vacancy]

MEMBERS EXCUSED

Melissa McDonald, Vice-Chair. Excused

OTHERS ATTENDING

Laurie Trevizo, Water Conservation Officer
Rick Carpenter, Water Resources and Conservation Manager
Caryn Grosse, Water Conservation Specialist
Alan Hook, Water Resources Analyst
Bill Roth, guest
Nancy Avedisian, guest
Elizabeth Martin [for Melessia Helberg], Stenographer

There was a quorum of the membership in attendance.

3. APPROVAL OF AGENDA

Ms. Trevizo would like to postpone Item 11 to the next meeting on May 14, 2013.

Mr. Michael would like to move *Items for the Next Agenda* after *Informational Items* and before *Matters from Staff*.

MOTION: Doug Pushard moved, seconded by Giselle Piburn, to approve the agenda as amended.

VOTE: The motion was approved unanimously on a voice vote.

4. APPROVAL OF CONSENT AGENDA

Mr. Michael asked the purpose of the consent agenda.

Chair Ives stated it means we accept and approve these agenda items at face value without discussion.

Mr. Michael asked if action needs to be taken on items on the Consent Agenda.

Chair Ives said action will be needed to approve the Resolution on Item 6(C).

Ms. Schmitt asked the Committee can ask questions about items on the Consent Agenda.

Chair Ives said no, and if there are questions on an item the Committee can remove that item for discussion.

Mr. Pushard asked if this will be standard on agendas in the future, and Chair Ives said yes.

MOTION: Tim Michael moved, seconded by Stephen Wiman, to approve the Consent Agenda as amended.

VOTE: The motion was approved unanimously on a voice vote

5. APPROVAL OF THE MINUTES: MARCH 12, 2013, WATER CONSERVATION COMMITTEE MEETING

MOTION: Giselle Piburn moved, seconded by Karyn Schmitt, to approve the minutes of the meeting of March 12, 2012, as presented.

VOTE: The motion was approved unanimously on a voice vote.

6. CONSENT AGENDA

- A. *[Removed for discussion by Chair Ives]*
- B. **WATER CONSERVATION MARKETING (LAURIE TREVIZO).**
- C. *[Removed for discussion by Chair Ives]*

ITEMS REMOVED FROM CONSENT FOR DISCUSSION

6(A) DROUGHT, MONSOON AND WATER RESOURCE MANAGEMENT UPDATE. (RICK CARPENTER.

Chair Ives asked Rick Carpenter, regarding Article VII on page 2 of his Memorandum, regarding the Rio Grande Compact, is currently in effect.

Mr. Carpenter yes.

Chair Ives asked if it was in effect before the lawsuit.

Mr. Carpenter yes.

Chair Ives asked for how long.

Mr. Carpenter said it was in effect for several years.

Chair Ives spoke about the history of the Rio Grande River and its importance to New Mexico.

Chair Ives asked Mr. Carpenter asked the current capacity of the City's reservoir.

Mr. Carpenter said the reservoir is at 25% capacity.

Ms. Schmitt asked if the capacity considers unusable water at the bottom of the reservoir.

Mr. Carpenter asked if she is speaking of the dead pool, and Ms. Schmitt said yes.

Mr. Pushard said he thought the amount in the dead pool is 15% of the reservoir capacity.

Mr. Carpenter said it is not that much.

Mr. Pushard disagreed, saying he thinks it is that much.

Mr. Carpenter said he will check that out, but that it is not that high.

Alan Hook said there is a water quality issue with 10-15% of the water, and it has to go through the treatment process.

Chair Ives asked the capacity at Abiquiu and Elephant Butte.

Mr. Carpenter said there is 7,000 afy in Abiquiu and 15,000 afy in Elephant Butte. We noted that about 15% a year is lost due to evaporation.

Chair Ives asked about relinquishment credits.

Mr. Carpenter said they are working on issue of relinquishment credits.

Chair Ives asked if that relates to strategic water use, and Mr. Carpenter said no.

Mr. Carpenter said the available pool is around 7,000 afy. He said it is not replenished.

Chair Ives said he would like to see the reports.

Mr. Carpenter said Alan Hook recently shared the numbers with him. He said portions of the Rio Grande will dry up this year, noting there will be water available for irrigation through July.

Mr. Pushard asked if we will be using the Buckman well this summer.

Mr. Carpenter no, we will be using the Northwest well. He said the 10 year permit is about ready to expire.

Chair Ives asked how many protests have we had in the application for the new permit.

Mr. Carpenter said there were 3 or 4 groups that now have bended together into one group that is protesting.

Ms. Schmitt said she is concerned we will not get the flow we need this summer.

Mr. Carpenter again spoke about the probability of the Rio Grand drying up this year.

Mr. Pushard commented that we better go rafting early.

Chair Ives asked Mr. Carpenter to provide a copy of the Rio Grande Compact to him and to Mr. Wiman.

Mr. Carpenter said he will do so

Mr. Michael observed that the numbers in Mr. Carpenter's report are different from the last report.

Mr. Carpenter that was months ago and it was still cold so we did not have as much runoff.

Mr. Michael said the report references the same date.

Mr. Carpenter looked at report and said he forgot to change the date from February to March. He said the report should say March 25, 2013.

Mr. Michael said the date needs to be changed on the 5 year average as well.

Mr. Carpenter that is correct and he will do so.

Chair Ives said in the prior month the ground was dryer and there was more absorption of the runoff.

Mr. Wiman asked, regarding using the Buckman wells, if that will be a temporary issue.

Mr. Carpenter said yes. He said they will not be pumping the Buckman wells any more than is necessary during this time.

Ms. Knouse asked what does the acronym MGPD stand for on the report.

Mr. Carpenter said it stands for Million Gallons Per Day.

6(C) WORKING DRAFT OF RESOLUTION 2013- _____. A RESOLUTION IN SUPPORT OF A WATER CONSERVATION CAMPAIGN FOCUSING ON VOLUNTARY OUTDOOR IRRIGATION.

Ms. Trevizo distributed copies of the redlined Resolution indicating the changes. A copy of the Resolution is included in the Committee packet.

Chair Ives said he has a small change to the Resolution.

MOTION: Doug Pushard moved, seconded by Stephen Wiman, to approve the Resolution.

FRIENDLY AMENDMENT: Chair Ives would like to add "implement immediately," on Page 2, line 4 and in Section 2 at the bottom of the page. **THE AMENDMENT WAS FRIENDLY TO THE MAKER AND SECOND AND THERE WERE NO OBJECTIONS BY THE OTHER MEMBERS OF THE COMMITTEE.**

DISCUSSION ON MOTION AS AMENDED: Ms. Trevizo said she is in agreement, commenting that she deleted the dates for the watering season, which are May 1 to October 31.

Ms. Randall thanked Ms. Trevizo for her hard work.

Mr. Pushard said this is a step in the right direction, a good step.

VOTE: The motion, as amended, was approved unanimously on a voice vote.

DISCUSSION ITEMS:

7. REVIEW OF PARLIAMENTARY PROCEDURE (ROBERT'S RULES OF ORDER). (COUNCILOR IVES).

Chair Ives presented information to the Committee from the information in the Committee packet. He commented in the event of a conflict, the Rules for City Committees take precedence over Robert's Rules.

8. CONSIDERATION OF PAPERLESS PACKETS. (COUNCILOR IVES)

Chair Ives presented a proposal to the Committee regarding paperless packets.

The Committee discussed the pros and cons of receiving their packets in paper or electronically.

Lise Knouse said she prints her own packet, and prefers to receive the packet electronically.

Chair Ives said packets can be printed for those who want a paper packet.

Lise Knouse said it would be helpful if we had colored copies of various charts, graphs and maps.

Ms. Trevizo said her copier does not print in color, commenting that there are associated operational problems.

Chair Ives asked Ms. Trevizo to share with him her specific needs for equipment.

Mr. Michael stated he hasn't made up his mind as to whether he wants a paper or an electronic packet.

Chair Ives said that the goal here is to have City information such as agendas, etc., on the City website the Friday before the week of the meeting.

Ms. Trevizo said she will remove Ms. Knouse from the list receiving paper packets.

Mr. Michael asked if action by the Committee is needed to make this change, and Chair Ives said no.

Chair Ives said it would be nice to have the agenda and packet linked at the website.

Ms. Trevizo we do not have the ability to link the agenda at this time.

Ms. Grosse said the Agenda could be bookmarked.

Chair Ives it would be easier if it was linked to the agenda. He would like to work toward getting that done.

MOTION: Stephen Wiman moved, seconded by Tim Michael, that each member of the Committee be allowed to say how they want to receive the Committee Packet – paper or electronic – and this is the way they will receive their packet in the future.

VOTE: The motion was approved unanimously.

At the direction of the Chair, the stenographer asked each of the Committee members their preference for receiving the packet – paper or electronically:

Doug Pushard– paper
Stephen Wiman – electronically
Tim Michael – electronically
Lisa Randall – electronically
Giselle Piburn – paper
Karyn Schmitt – electronically
Chair Ives – electronically
Grace Perez – electronically

Ms. Perez said sometimes things are added after the agenda and/or packet items are sent to the Committee members, commenting that the Committee needs to get the final Agenda.

Chair Ives we will do the best we can.

Mr. Wiman asked where all the items are posted.

Ms. Schmitt and Ms. Trevizo diagramed instructions to access the agenda, packet and minutes on the City's website.

9. CONSIDERATION OF EXTENDING WATER CONSERVATION COMMITTEE MEETING TIMES.

Chair Ives said he spoke with the City Manager, who said, with the tight budget, if we make changes to the meeting times, we need to start earlier rather than stay later.

Mr. Michael noted that his proposal is that the meeting be extended to a three-hour meeting.

Chair Ives said yes that is the case.

Mr. Pushard thanked Mr. Michael for getting this on the agenda.

Ms. Piburn said she cannot come any earlier, and would be late to the meetings.

Mr. Pushard said 2 hours should be the goal but the end time should not be absolute. He said he is concerned that presentations and discussions are cut off to meet the end time posted on the Agenda.

Chair Ives said he takes responsibility and apologized for not running a better meeting.

Ms. Piburn said if the Committee is more focused, we can get more work done. She suggested two or three people could come at 3:00 p.m. to discuss whatever they need to discuss and the balance of the Committee could come at 4:00 p.m.

Ms. Trevizo said perhaps she could reserve this room an hour earlier.

Ms. Schmitt said our meetings could be 2 hours if the subcommittees would do their work and submit their reports to the Committee prior to the meeting.

Ms. Randall said, "Ditto."

Chair Ives said the committees could submit their reports for inclusion in the Committee packet which are sent out prior to the meeting.

Mr. Wiman said "we" have made efforts in that direction in the last month.

Chair Ives said everyone needs to follow the time frames for submission of materials for the packet that are shown on the agenda.

Mr. Michael asked if there is a clock time associated with the deadline dates.

Ms. Trevizo said yes, it is 3:00 p.m.

Ms. Perez thanked Ms. Trevizo for putting the dates for submitting agenda captions and packet material on the agenda. She asked why the 3:00 p.m. deadline, commenting that some people like to work at night and might want to send items the next morning.

Ms. Trevizo said the 3:00 p.m. deadline is firm, and was agreed to during her meetings with Chair Ives. She said perhaps people should work the night before the day of the 3:00 p.m. deadline if they have items to submit for the Committee packet.

Chair Ives asked if we can just agree to do better in committees and try that before we extend the meeting times.

Mr. Michael said that would be fine with him.

Chair Ives asked Ms. Trevizo to see if she can reserve the room an hour earlier.

Ms. Trevizo said she would reserve the room, if it is available, on a month to month basis, commenting she will need to know whether or not it will be needed.

INFORMATIONAL ITEMS:

10. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE INITIATIVES, INCLUDING IDENTIFYING OBJECTIVES, GOALS AND PRIORITIZATION OF INITIATIVES. (COUNCILOR IVES)

Chair Ives asked for Committee reports.

1. Update Santa Fe Water Conservation and Drought Management Plan

Mr. Pushard said this one is problematic and they need City staff assistance.

Ms. Trevizo said, for clarification, City staff cannot comment on fiscal impact or research, commenting that she does not feel City staff can be a member of these committees.

Mr. Pushard said he just needs someone to be there to answer questions or for clarifications. He said they have gone through the first 2 chapters and are making progress. He said they will report at the next meeting.

Chair Ives asked if they are going to seek Committee comment.

Mr. Pushard said yes, and they will have a draft for Committee comment at the next meeting.

Ms. Randall said Ms. Trevizo has been present at all meetings as well as Ms. Schmitt and Mr. Carpenter.

Ms. Perez asked who actually calls the meetings and schedules them.

Chair Ives said the *ad hoc* groups are the ones who call the meetings – the members themselves consult and schedule the meetings.

Ms. Randall said City staff has indicated that they will send out meeting notices via email on behalf of the committees.

Mr. Pushard said his Committee is meeting every two weeks with a break from meetings in April.

Ms. Trevizo said the committee members are invaluable in updating the plan.

Responding to the Chair, Ms. Trevizo said the Water Conservation and Drought Management Plan is approximately 80 pages.

2. Water Conservation Education/Outreach Program.

Mr. Wiman said he would like to use the slogan "Water By the Numbers" used by the City of Albuquerque. He said he called and received permission from the City of Albuquerque to use the slogan, commenting that it is not copyrighted.

Bill Roth asked if we could "piggy back" on their efforts.

Mr. Wiman said we will do our thing, but we could work with them on events, or such things, commenting that he would not rule that out. He would like City staff to participate in their next meeting, to get feedback on the slogan/name concept.

Chair Ives said there is an elegance to the simplicity of the slogan, Water by the Numbers. He said is a good slogan to begin, and we can tweak it in time if we want to.

Mr. Wiman said that occurred to him as well, commenting we have to start somewhere.

Mr. Roth asked how Albuquerque handles enforcement.

Mr. Wiman said the "water police."

Mr. Roth asked if limits are set for the amount of water that can be used.

Mr. Wiman said no.

Chair Ives said that is a valid issue.

Ms. Perez said we could add a sentence that says these are recommended and are not mandatory.

Lise Knouse said most Santa Feans are aware that there is a need to conserve water. This would be more of a name recognition thing.

Mr. Michael said it is a simple sentence.

Ms. Perez suggested that the committee determine what needs to be done, because we need to get something out ASAP.

Mr. Wiman said the Albuquerque program is voluntary except during drought restrictions.

Chair Ives asked the steps to implement the outreach plan using the new slogan.

Ms. Trevizo said she would like some time to look at this proposal and make comments to the plan.

Chair Ives said we will go over all of this at the next meeting.

Chair Ives asked Ms. Trevizo to ask Brian Snyder if this needs to be heard by the Public Utilities Committee.

Ms. Trevizo said she would like to get PUC input before rolling it out for consideration.

Ms. Trevizo noted that the Childrens Water Fiesta is April 15-16, 2013.

Ms. Perez said reiterated that we need to move on this as quickly as possible so we don't lose the season.

Chair Ives thanked the committees for their reports. He said Committee 4 has had some communication.

Mr. Michael said so far, Committee #5 has agreed on goals, objectives and tasks.

Chair Ives asked that all committees meet and provide a report at the next meeting.

Ms. Schmitt asked if we send the information to staff, and Chair Ives said yes.

MATTERS FROM STAFF

11. ANNUAL WATER REPORT (ALAN HOOK)

This item is postponed to the meeting of May 14, 2013.

12. 2012 REPORT ON GALLONS PER CAPITA PER DAY.

Alan Hook, Water Resources Analyst, reviewed his Memorandum of March 22, 2013, with attachments, to the Public Utilities Committee, which is in the Committee packet. Please see this Memorandum for specifics of this presentation.

Ms. Randall asked Alan to let her know if she can help with the public schools.

Mr. Wiman said he understands there has been an historical decline in the numbers, and Mr. Hook said this is correct.

Chair Ives asked Mr. Hook to call the OSE and get his calculation formula, and get that to Ms. Trevizo to email to the Committee.

MATTERS FROM THE COMMITTEE

There were no matters from the Committee

ITEMS FOR NEXT AGENDA – TUESDAY, MAY 14, 2013

1. Water By The Numbers
2. Water Supply

Chair Ives said they should invite someone from city staff to come at 3 to discuss this.

Ms. Trevizo stated that she will email to see what committee members will be here, so staff time isn't wasted if no one shows up.

3. Elasticity Study

ADJOURN

There being no further business to come before the Committee, and the Committee, having completed its agenda, adjourned the meeting at approximately 6:10 p.m.

Peter N. Ives, Chair

Melessia Helberg, Stenographer

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

VIA: Brian Snyder, Public Utilities Department and Water Division Director

DATE: April 18, 2013

SUBJECT: Update on Drought, Monsoon, and Water Resource Management

CURRENT PUC UPDATE

As the Committee is aware, our region is still suffering through a severe drought. Our region has gone through two consecutive years of record drought and heat. It is now apparent that we are in a third consecutive year of severe drought and heat which will present significant challenges to all water purveyors and irrigators. This situation is unprecedented and the City's Water Division takes this situation very seriously.

The National Oceanographic and Atmospheric Administration (NOAA) recently updated its monthly report on its El Nino/Southern Oscillation (ENSO) Diagnostic. This report indicates that current model predictions more strongly favor El Nino conditions to be neutral to weak (dry) through the Spring of 2013. Above average temperatures are also expected.

The 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.

Water Resource Management

Some recent BoR/USACoE models indicate the possibility of critically low flows that could affect BDD diversion capability later this summer. The Canyon Road Water Treatment Plant may also experience significant supply shortfalls later this year. However, City water resource managers are closely monitoring the water supply situation and are prepared to offer a variety of options to decision-makers. For example, the City has several years-worth of San Juan-Chama Project water stored in reservoirs, in case deliveries from the federal Bureau of Reclamation of San Juan-Chama Project water are curtailed. The City could therefore choose to release some of that water if needed. Additionally, the City has been "resting" the Buckman well field since early 2010 in case decision-makers opt to pump significant amounts of water from the aquifer. Also, policy makers may consider implementation of Emergency Drought Stages pursuant to the Conservation Ordinance. Therefore, City decision-makers and resource managers have a variety of policy options available in order to meet water supply demands during times of drought.

Local Conditions

	Reservoir Level	Santa Fe Snow Gage	Reservoir Inflow
April 18, 2013	33.8%	29 inches	0.71 MGD
5-Year Average This Date (2008 – 2012)	66.40%	41.25 inches	9.85 MGD

The City of Santa Fe has rights to a total of up to 5,040 acre-feet per year in Nichols and McClure Reservoirs. City Water Division staff are estimating receiving only about 1,200 – 1,300 acre-feet of water from the upper Santa Fe River watershed this year.

Rio Grande Basin

Surface flows in the Rio Grande and its tributaries have been well below normal, storage levels in regional reservoirs are very low currently, and the federal BoR recently stated that if there is no “meaningful moisture” received this winter/spring then this would mark the lowest water levels ever in New Mexico reservoirs prior to entering into a new irrigation season. With large moisture deficits deeply entrenched across the region, meaningful improvement seems unlikely. For example, the most recent forecast of runoff into the Rio Grande at Otowi Gage (upstream from the BDD diversion structure) is for about 30% of normal flow.

San Juan Basin

According to the NRCS’ March 1, 2013 Basin Outlook Report, “streamflow forecasts for the San Juan River Basin is 75 percent of the 30 year avg. (1981-2010). The San Juan-Chama Project delivery forecast was recently updated by BoR (March 18th). BoR is now projecting a full allocation of San Juan-Chama Project water to San Juan-Chama contractors for this year (up from a previous forecast of only 80%); however, 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. If conditions do not change, after deliveries are made out of Heron Reservoir this year, that reservoir will be heading into the next water –year at historically low levels.

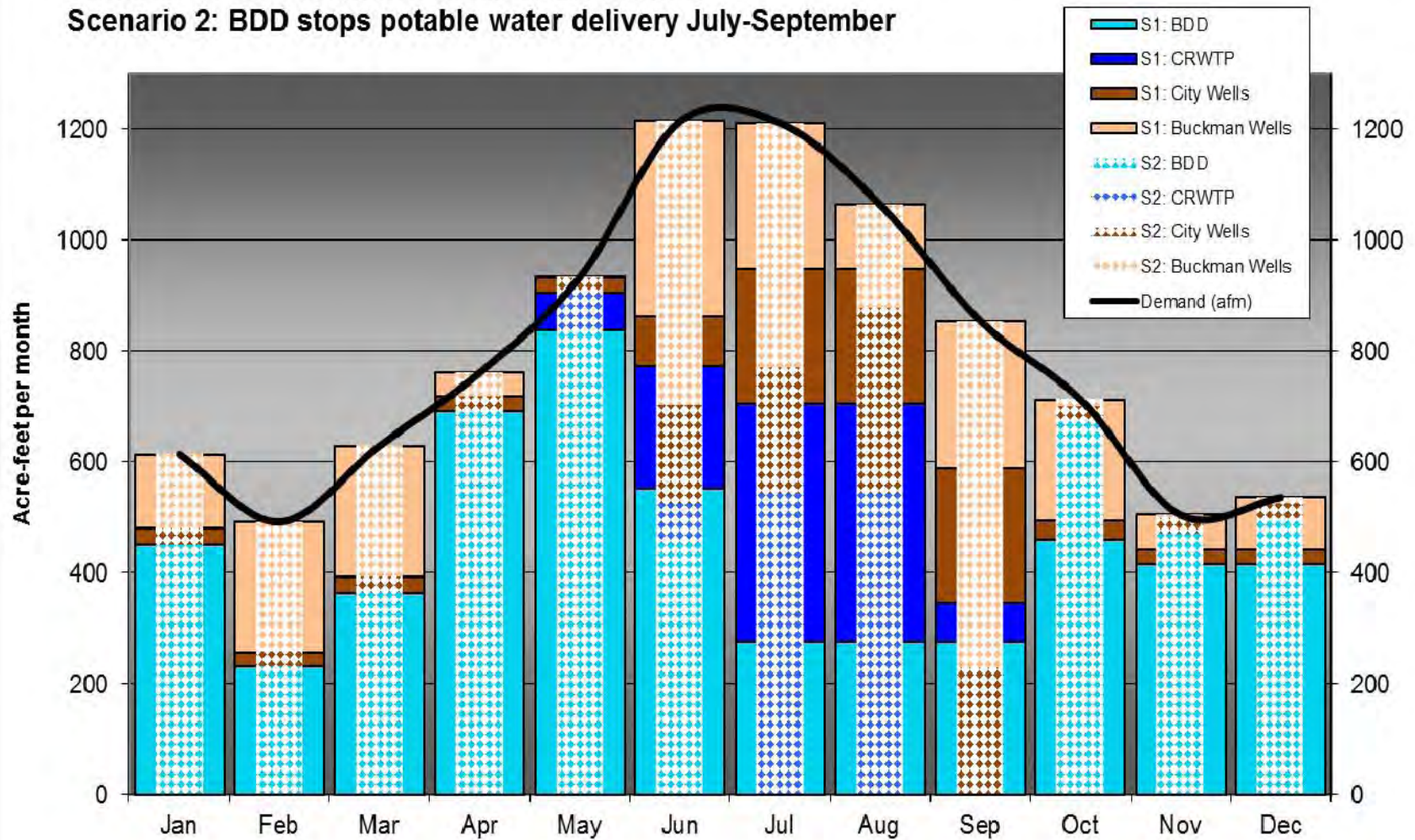
For the last two weeks, the snowpack, as measured in inches of snow water equivalent (SWE), in the San Miguel, Dolores, Animas, and San Juan basins has been declining. These basins may have already reached their peak snowpack, around March 22nd, and begun to melt. April 1 snow surveys reported the snowpack at just 73 percent of the median, which is a drop of 10 percentage points from the March 1 surveys. Mountain precipitation recorded at the SNOTEL sites in these basins during March was just 56 percent of average. Year to date precipitation has also decreased from last month to 70 percent of average as of April 1.

PAST PUC UPDATES

For the past 19 months, the Water Division has provided the PUC a monthly memo as part of the consent agenda. These memos, collectively and individually, provide a comprehensive background of the status of drought, winter precipitation, and summer monsoonal precipitation.

Scenario 1: BDD continues to divert all summer

Scenario 2: BDD stops potable water delivery July-September



SUMMARY - POTABLE WATER USE RESTRICTIONS

	NON-EMERGENCY	EMERGENCY	
STAGES	NORMAL	WARNING	CRISIS
	Green	Orange	Red
TRIGGERS	Supply \geq Unrestricted Demand	Supply 80 - 100% of Unrestricted Demand	Supply < 80% of Unrestricted Demand
AUTHORITY	City Code Chapter XXV	City Manager (based upon supply/demand data from Water Division Director)	City Manager (based upon supply/demand data from Water Division Director)
WATER RATES			
Rate	Seasonal Tiered Rates	Seasonal Tiered Rates	Seasonal Tiered Rates
Surcharges	None	None	None
PLANTING			
Warm Season Grasses	Allowed	Allowed; Comply with 2 days/Week by Address (odd-Tues.&Sat./even-Wed.&Sun.)	Prohibited
Cool Season Grasses or Kentucky Blue Grass	Prohibited	Prohibited	Prohibited
All Other Plant Materials	Allowed	Allowed, Strongly Discouraged; Comply with 2 Days/Week by Address (odd-Tues.&Sat./even-Wed.&Sun.)	Prohibited
IRRIGATION - RESIDENTIAL & COMMERCIAL			
Days of Week Watering Using Potable Water May 1 – October 31	Prohibited 10AM-6PM; Maximum 3 Days <u>Recommended</u>	Prohibited 10AM-6PM; 2 Days/Week by Address (odd-Tues.&Sat./even-Wed.&Sun.)	Prohibited

SUMMARY - POTABLE WATER USE RESTRICTIONS (CONTINUED)

	NON-EMERGENCY	EMERGENCY	
STAGES	NORMAL	WARNING	CRISIS
	Green	Orange	Red
TRIGGERS	Supply \geq Unrestricted Demand	Supply 80 - 100% of Unrestricted Demand	Supply < 80% of Unrestricted Demand
AUTHORITY	City Code Chapter XXV	City Manager (based upon supply/demand data from Water Division Director)	City Manager (based upon supply/demand data from Water Division Director)
IRRIGATION - PUBLIC SPACES			
Parks, Public School Athletic Fields and Roadside Landscaping	Allowed	Based upon evapotranspiration (ET) to maintain health of plants	Reduced by 35%
MISC. OUTDOOR USE			
Vehicle Washing with Positive Shut-Off Nozzle	Yes	Yes	No
Water Features	Allowed	Allowed	Prohibited
CONSTRUCTION			
Building Restrictions	None; Must comply with WBAQ	None; Must comply with WBAQ	None; Must comply with WBAQ
SWIMMING POOLS & SPAS			
Filling (Indoor and Outdoor)	Allowed	1 Initial Filling Only	Prohibited
SALES OF POTABLE WATER OUTSIDE SERVICE AREA			
Sales At Potable Water Filling Station	Allowed	Allowed	Prohibited

City of Santa Fe, New Mexico

memo

Date: May 1, 2013

To: Water Conservation Committee

From: Laurie Trevizo, Water Conservation Manager

Via: Rick Carpenter, Water Resources and Conservation Manager
Brian Snyder, Public Utilities Department and Water Division Director

RE: Update Water Conservation Marketing Outreach April 2013

Background: Water Conservation Marketing Status

All news releases are submitted to more than 25 print and broadcast media outlets and list serves with specific targeting to appropriate beat reporters and editors and broadcast/social media community calendar announcements. Follow-up calls are made when appropriate. Background materials are provided to media as appropriate.

Water Conservation Marketing for the month of April consisted of press releases, hosting three major children's or educational events and resulted in the following media coverage:

Mayors Water Conservation Challenge:

News Release "*City announces 2nd Annual Water Conservation Challenge*"

- Ad in GreenFire Times "Building a Sustainable Economy" Issue Number 2
- Ad in Santa Fe Hometown News

Coverage:

1. ***Front- page Santa Fe New Mexican***
City Report Helps Residents Monitor Daily Water Use (front page)
2. ***Sunday Santa Fe New Mexican Editorial***
Our View: Save Water Like It's Second Nature (Mayor Challenge)
3. ***Santa Fe Reporter***
Running Dry. It's Earth Month; Save Some Water (Mayor Challenge)
4. **Green Fire Times**
City of Santa Fe Announces 2nd Annual Mayor's Water Conservation Challenge
5. **HomeTown News**
Article Take the Pledge: Mayor's Water Conservation Challenge
6. **Round-the-Roundhouse Article**
Mayor's Water Conservation Challenge
7. **KSFR Public Radio**
Interview with Mayor on Water Conservation

Water Conservation Challenge reminder in 12:00 news hour

8. **KVSF – Voice of Santa Fe Talk Radio**

“The Julie Goldberg Show” Interview with Laurie Trevizo on Mayors Challenge

11th Annual Children’s Water Fiesta (News Release and Photo Advisory):

News Release April 11, 2013

Photo Advisory Release April 15, 2013

Event sponsored by the City of Santa Fe Water Conservation Office in partnership with numerous local, state, federal and nonprofit organizations, and the fiesta draws approximately 650 fourth graders from throughout Santa Fe to the convention center for hands-on learning about all aspects of water, from conservation and wastewater to ecosystems, watersheds and pollution. Each student group participates for one day of the two-day fiesta.

Coverage:

9. **Albuquerque Journal North**

Children’s Water Fiesta Announced

10. **Front Page Albuquerque Journal, April 18, 2013**

Children’s Water Fiesta Photos (front page)

11. **City of Santa Fe Newsletter and Facebook page**

National Coverage: April 15, 2013

12. **The Wichita Eagle**

- *“Keys to Making Water Conservation Successful is to involve community. Santa Fe: A lot of carrot”*
- Newspaper printed article and Social Media article

Social Media: *Print Articles also appear on media websites

- City of Santa Fe Facebook Announcement - Mayor’s Water Conservation Challenge
- City of Santa Fe Facebook photos of Children’s Water Fiesta
- City of Santa Fe Water Division Website
- Fandango Movie Website Banner
- SantaFe.com Website Banners – Drought and Time of Day Watering (KTRC Talk, Outlaw Country, ESPN, Project 101.5, Radio Free SF, blu 102.9)

Booths and Events:

Earth Day Events: April 19-22, 2013

1. Earth Day Celebration at Genoveva Chavez Community Center
2. Whole Foods Earth Day Celebration

Educator Training: Project WET Teacher Training April 27, 2013

May 2013:

- May 1: Time of day watering reminder (ongoing throughout high demand season)
- May 1: Annual Manual Ads Water Conservation Office and Public Utilities Department combined ad
- May 8: 10th Annual Children’s Water Conservation Poster Contest Winners Announcement, Awards at City Council
- May 11: CommUnity Days
- May 25: Drought Survival kit and peak demands: “Knowing When to Water”
- May 25: Website tools and useful information: Under Construction



EDDIE MOORE/JOURNAL

Michael Skelly of Sandia National Laboratories uses a model to demonstrate how groundwater interacts with surface water. Watching his demonstration Wednesday are fourth-graders from Amy Biehl Community School at the Santa Fe Children's Water Fiesta held in the Santa Fe Community Convention Center.

WATER, WATER ... NOT ALWAYS EVERYWHERE

Some 650 fourth-graders from Santa Fe Public Schools descended on the Santa Fe Community Convention Center on Tuesday and Wednesday to learn more about water than what they see

coming out of the faucet.

Sponsored by the city of Santa Fe and its Water Conservation Office, the Santa Fe Children's Water Fiesta was intended to get the youngsters thinking more about where water comes

from, how it travels and how it contributes to the ecosystem, and more. And maybe, while playing Water Jeopardy or studying a water bug up close, they'll come to an appreciation of the importance of conserving water and preventing its pollution.



This model shown by Michael Skelly of Sandia National Laboratories shows how lake and river water relate to water stored beneath the ground.



Christina Dean, left, and Cristina Perez, both 10, are among fourth-graders from Kearny Elementary School listening to Christine Chavez of Los Alamos County telling them about water and wastewater Wednesday.



Sunday, April 14, 2013

Posted on Sat, Apr. 13, 2013

Key to making water conservation successful in Wichita is to involve community, city officials say

The Wichita Eagle

The water conservation battle that Wichita is joining this summer isn't unique to Kansas.

Nor is it unwinnable, say officials and national water experts.

One key, according to those experts: Use more carrot than stick — a lot more carrot than stick — to help residents embrace conservation as a lifestyle.

Public meetings begin Tuesday as the city and its water customers try to craft a long-term water strategy. City officials say Cheney Lake, source of 60 percent of the city's water, will cease providing water for Wichita in August 2015 unless the drought abates.

About two-thirds of the country is dealing with drought problems, said David LaFrance, executive director of the National Water Works Association. "It's just incredible what's happening to the United States."

Wichita can't follow one core philosophy suggested by cities that have succeeded in water conservation. They recommend conserving water to avoid a shortage, not to deal with one already occurring. It's too late for that.

But LaFrance said Wichita officials are right to take the problem to the public.

"What a utility does to manage a drought is figure out successful ways to partner with their customers," he said. "Under normal operations, the key to providing successful, safe drinking water lies with the utility staff and board. But when it comes to the most precious resource on Earth, the utility needs to look to their customers to manage the demand."

Every conservation and restriction option is on the table, Wichita City Manager Robert Layton said. Among them: raising rates for excessive water users by at least 50 percent and, in some cases, more than 100 percent; possible rebates for water-efficient appliance purchases; and discounts for users who meet conservation benchmarks.

Santa Fe: A lot of carrot

Longtime Santa Fe residents can empathize with Wichitans. Their own water supply was jeopardized in the early 2000s by a six-year drought.

So city officials embarked on an ambitious plan: Engage residents and work hard on conserving water. Then, generate new water supplies.

Today, the city has two new significant water supplies, for a total of four, and a citizenry that has bought in to the prudent use of water, said Laurie Trevizo, Santa Fe's water conservation manager.

"We've moved out of mandatory drought restrictions," Trevizo said. "Conservation has become a way of life here."

Santa Fe's road back to a good water supply began with a mandatory retrofit of toilets: 8,000 toilets down to 1.6 gallons of water per flush. The move saved the city 325,000 gallons of water a day, or about an acre-foot.

The city launched a huge rainwater harvesting push for residents, driven by the presence of infrequent cloudbursts in the summer and winter, with the idea that rainwater for growing was a better alternative than further depleting the city's water supply. The city initially gave rainbarrels away, but backed off when retailers objected.

"We had to," Trevizo said. "Storage is essential to watering plants here."

Then the carrot really came out for water users: The city launched an appliance rebate program. New toilets flushing only 1.28 gallons of water a flush earned a \$175 rebate on the water bill. Replacing a top-loading clothes washer with a front-loading one that met water efficiency standards was good for a \$350 rebate. Motels and hotels were rewarded for more efficient toilets. Rebates were tied to a city formula calculating the approximate water savings of the changeouts.

The rebates have been a huge success, Trevizo said — so much so that the city is working on a plan to reward businesses that make similar moves.

Santa Fe residents have jumped on board, Trevizo said.

"Many people let their lawns go," she said. "People have transferred over to xeriscaping (a low-water style of landscaping), more native plantings."

But here's the stick in Santa Fe: The city also has successfully used an idea initially greeted with jeers in Wichita — punitive pricing to discourage heavy residential water use.

"Water bills are the best incentive, we feel, to conserve water," Trevizo said. "People in town now have a huge awareness about water conservation."

Santa Fe charges for water from a two-tiered system that Trevizo calls a "conservation rate structure." On the first tier, users are billed in the winter for up to 7,000 gallons of water. In the summer, the limit is 10,000 gallons. Exceed either, and the price jumps by \$21 per extra thousand gallons of water.

Highland Park, Texas: A good neighbor

There's no water shortage in Highland Park, Texas, an upscale Dallas suburb. And if Brad Boganwright, manager of town services, has his way, there never will be.

More important, Highland Park is not going to overuse the region's water supply.

"There isn't a pressure from a water shortage here," Boganwright said. "It's a perception, because Highland Park is a community with high-end homes. Other communities might say, 'We can't water, but Highland is watering in the summer.' We're not going to get to that point. We want to be a good partner to the metroplex."

Highland Park, a community of 9,000, has implemented several measures to encourage residents wealthy enough to pay any size water bill to conserve. Boganwright said city officials are happy with the results and have turned their attention to the city.

"We want credibility," he said. "We want to be an example to the community, so what we've started this year is cleaning up our own yard."

The city is using more water-friendly plants in its own landscaping, more native plants and mulches. It is transitioning all of its park irrigation systems to smart controllers, replacing nozzles on irrigation systems to regulate water pressure.

The city also will supply materials for education programs in schools and is working with the school district to design a conservation website.

Highland Park also uses a passive "drought police" approach with residents, built around door hangers for notification. The city prohibits irrigation between 10 a.m. and 6 p.m. from April 1 through Oct. 31.

"If there's runoff, say, more than 20 feet off the property line, we issue a notification," Boganwright said. "We ask the resident to call in, the resident calls, and we talk to them about their irrigation situation. It could be a leak. It could be watering too much."

Boganwright advises Wichita: Take your message to conserve water directly to the public, and work hard over time to engage consumers so water conservation becomes a lifestyle.

"The residents control what we do," he said. "Get them aware of when and how they can save water."

How Wichita goes into the public meetings

Layton doesn't buy the idea that the city is late to the water conservation effort.

The city's three-tiered water rate structure already sets up clear financial penalties for homeowners who go through a lot of water.

"Our rates, though, don't drive people to quit watering lawns or filling pools," he said. "They are a penalty for those who use more household water than normal."

Layton does want City Hall to scrutinize its own water use. The city used about 464 million gallons in 2012 and provided 20.1 billion gallons to its customers, public works officials said. The city accounted for about 2.3 percent of water use last year.

He said the city is already implementing many of the changes used in Santa Fe.

"We're going to reduce our irrigation," he said. "And as we go forward, there will be a lot more focus on xeriscaping and other landscaping alternatives."

"We may have to put up with some brown turf for awhile, but over time we'll work to replace fescue with more drought-tolerant grasses. It's a balancing act, because we have a substantial investment in our existing landscaping. We don't want to be poor stewards of that, but we do want to recognize the restrictions we face."

Wichita can mount a successful water conservation drive, LaFrance said, if it is initially effective and if it is consistent long term with a good public relations campaign.

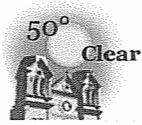
"Public relations is always critical to a utility," he said, "but even more so during a drought. A partnership with your customers is essential to manage demand on a water supply below its normal level."

"But if you can do that, it's absolutely amazing how an entire community can transform into conservationists and how neighbors will help neighbors."

Reach Bill Wilson at 316-268-6290 or bwilson@wichitaeagle.com.

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Our View: Save water like it's second nature

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Posted: Monday, April 8, 2013 10:00 pm

The New Mexican | [3 comments](#)

With New Mexico's drought situation dire, snow runoff among the worst years ever and no expectation of moisture any time soon, it makes sense for Santa Fe to push for more water savings from citizens. Conserve, conserve, conserve is the message — and we are pleased that the city wants to take that message from individuals to larger commercial customers.

Key to understanding how to save is looking at the gallons-per-day number. In 2012, it was 106 gallons per person per day. That's low but misleading because it includes all of the city — even hotels with 500 rooms or commercial laundries. A better number, 59 gallons per day for single-family water use in 2012, has been developed. The State Engineer's Office came up with a water-wise calculator to help cities make it easier for people to see how much water they are using. Now families can estimate daily water use by timing showers, counting laundry loads, dishes washed and monitoring other household uses. With this system, families and individuals can do even more to save this precious resource.

More promising, since individuals already are doing a good job, is the move to include businesses in conservation efforts. The city wants to start a program through which businesses will meet with the city, agree on investments in water-saving technology that will be monitored for a year, with a rebate promised per amount of water saved. Businesses could buy better washing or dish washing machines or update their irrigation systems. This more ambitious program will need an ordinance from the City Council, and one is in the works.

Citizens, in the meantime, can keep doing their part. Remember not to water in the heat of the day. Run the dish washer or washing machine only when full. Turn off the faucet when brushing teeth. Take shorter showers. Sweep, rather than hose off hard surfaces. All common-sense ways to save water, ones that most Santa Fe residents do as a matter of course. Residents here also know that when choosing what to water, it's important to take care of trees. They provide shade and are good for our environment, and in this drought, without supplemental water, we could lose many trees if we are not careful.

For fun, people can join the national water-wise movement (as well as other energy savings) at www.mywaterpledge.com. During the month of April, people will promise to do everything from pick up poop to take their own shopping bags

to the store, as well as watch their water use. Santa Fe is third in pledges right now, so join up.

As a city, Santa Fe is done with the easy water savings. Every house, it seems, has a low-flow toilet and many have low-flow shower heads. The savings to come will be more difficult to find. But find them we must, because living in an arid land — much less a region stuck in drought — requires all of us to use our water with care.

Around Northern New Mexico

By Journal Staff

KVSF to focus on news, events

Hutton Broadcasting owner and general manager Scott Hutton has announced a format change for KVSF-FM, 101.5. Billed as The Voice of Santa Fe, the new station will focus on local news, events and personalities.

"Santa Fe needs a station like KVSF," said Hutton. "It will be a valuable forum for dialogue from many of the diverse viewpoints in this eclectic listening marketplace."

Leading the new line-up is "The Julia Goldberg Morning Show," airing weekdays, 8-10 a.m. Mayor David Coss hosts a show from 10-11 a.m. every Thursday, while former judge Art Encinias hosts a "hometown project" bringing Santa Fe's past back to life with music, news and memories on Sunday nights.

Shows with business leaders, local musicians and much more round out the schedule. The station also will air four hours of national news, America's Morning News, on weekdays from 4-8 a.m. Stream the new programming at www.santafe.com.

Sutton Broadcasting also owns KVSF-AM, KBAC-FM, KQBA FM and KTRC-A.M.

Children's Water Fiesta slated

Hundreds of fourth-graders throughout Santa Fe will descend on the Santa Fe Community Convention Center Tuesday and Wednesday from 9:30 a.m.-noon for the 11th Annual Santa Fe Children's Water Fiesta.

During the event, sponsored by the Santa Fe Water Conservation Office, students will learn about all facets of water, from conservation and wastewater to ecosystems to watersheds and pollution through hands-on activities. For example, students will play Water Jeopardy, act as water droplets moving through the water cycle, and observe water bugs up close and personal.

Some 600 students from 10 public schools are scheduled to participate.

Vets can get answers April 25

Los Alamos RSVP is hosting a free Armed Forces Veterans Benefits Outreach on April 25 from 10 a.m.-noon at the Mesa Public Library in Los Alamos.

Two officers from the New Mexico Department of Veterans' Services will be on hand to assist veterans and their families with filing for, or answering any questions about, VA and state veterans' benefits — ranging from health care needs, mental health counseling, VA pensions and compensation, finding employment, utilizing a veteran's G.I. Education Bill, and more.

City pushes for more household water savings

By Julie Ann Grimm
The New Mexican

Santa Fe already has a reputation for using less water per capita than any other city in the Southwest, but a new report from the city shows more details about residential customers' conservation efforts.

The city's overall water use in 2012 was 106 gallons per person per day. When only single-family home consumption is considered, however, that number drops to 59 gallons per day.

City officials still want more. Water Conservation Program Manager Laurie Trevizo said the lower number is more accurate and will allow families to track their water use and take deeper conservation measures.

The figures come from a water-use calculator developed by the State Engineer's Office that helps cities break per-capita water use into figures that are easier to digest. Instead of including water used by every car wash, hotel and restaurant in just one per-capita figure, it also calculates just the water used by residential customers.

"We realize that [the larger number] is not really relatable to our customers, and so we wanted to give them a number they can work with," Trevizo said, noting that families can estimate daily water use by timing showers, counting loads of laundry and dishes, and monitoring other household uses.

WATER WISE

**Overall Santa
Fe water use
in 2012:**

106

gallons per
person per day

**Single-family
water use only
in 2012:**

59

gallons per day

Savings: This month's water bills to include \$4 'conservation charge'

Continued from Page A-1

For the second year in a row, the water conservation office is asking people to participate this month in what Trevizo calls "a friendly community-based competition between cities across the nation to see who can be the most 'water wise.'"

Users complete an online survey at www.mywaterpledge.com, in which they promise to clean up pet waste, take shorter showers and ride the bus.

Even though it's based on the honor system, Trevizo said the pledge is also a good reminder for residents about

rules already in place in Santa Fe, such as those governing outdoor watering between 10 a.m. and 6 p.m. Seasonal restrictions come into play in May. This month, residents will get another reminder on water bills that contain the yearly \$4 "conservation charge" to fund rebates and education programs.

Meanwhile, officials appear closer to taking a crack at increasing conservation among commercial users. If the City Council approves the idea later this year, businesses that meet with the city and agree on an investment plan for water-saving technology would then be monitored for a year

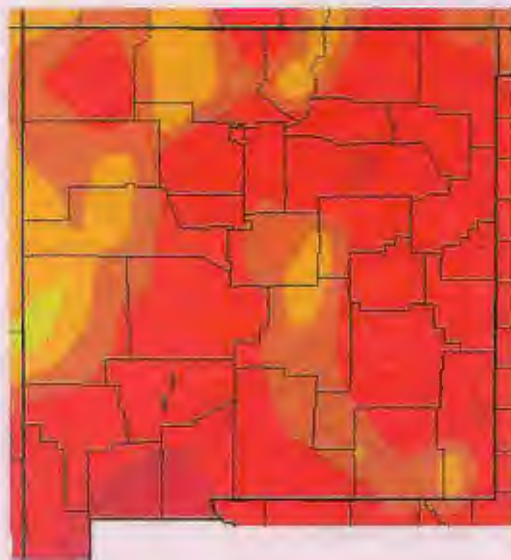
and awarded a rebate based on the amount of water saved. Examples of investments include irrigation-system updates, better washing machines and ice machines that are air-cooled instead of water-cooled. City councilors at Wednesday's Public Utilities Committee meeting told Trevizo to move ahead with the plan. It will require a city ordinance amendment that should be introduced soon.

Contact Julie Ann Grimm at 986-3017 or jgrimm@sfnewmexican.com. Follow her on Twitter @julieanngrimm.

Running Dry

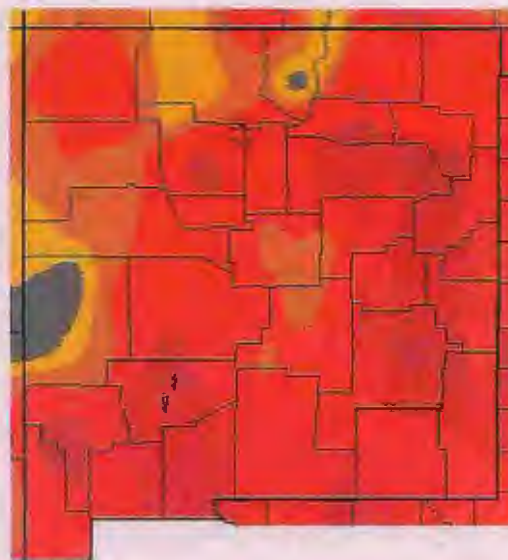
It's Earth Month; save some water

Percent of Average Precipitation
March 2010-March 2013



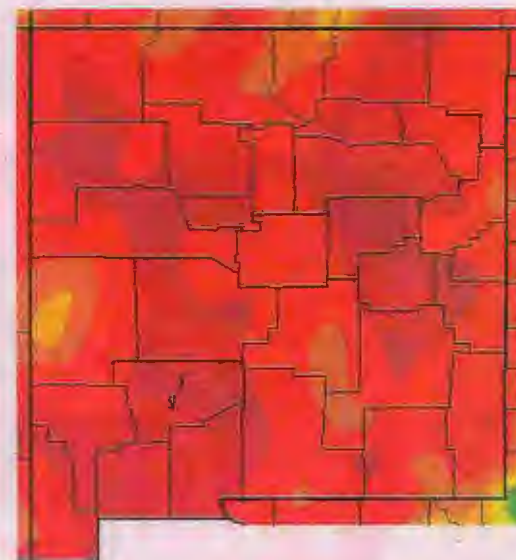
Generated 3/31/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

Percent of Average Precipitation
2011-2013



Generated 3/31/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

Percent of Average Precipitation
2012-2013



Generated 3/31/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

The above maps provide a stark visual representation of New Mexico's drought. Taken as a whole, precipitation over the last three years (far left) was generally 50-80 percent of normal. In just the past year, however (far right), New Mexico has seen a starker aberration, with precipitation across the state dipping to 25-50 percent of normal. Data released March 26 found just under 90 percent of the state in "severe" to "exceptional" drought.

BY ALEXA SCHIRTZINGER
@aschirtz

In case you didn't know, it's Earth Month. Sure, Earth Day isn't until April 22, but Earth Month starts on April 1 (no fooling). And given the fact that New Mexico currently faces one of the worst

droughts on record (see above), it's an opportune moment to talk about water conservation.

To that end, Mayor David Coss is urging Santa Fe residents to join the Wyland Foundation's annual Challenge for Water Conservation by pledging to conserve water in ways that range from the expect-

ed—like fixing leaky faucets and taking shorter showers—to the more obscure (picking up your dog's poop, for instance, helps prevent water contamination and eutrophication). The foundation, an environmental nonprofit, rewards lucky pledgers with a prize sweepstakes, in addition to

ranking each city according to the percentage of residents who sign the pledge.


Laurie Trevizo, a water conservation specialist with the city, says the pledge helps remind Santa Feans about water conservation right before the "high-demand season," which starts May 1.

"The No. 1 take-home message is, 'Water is a precious resource, and don't waste it,'" Trevizo says. "People should be conscious of how they're using water—through the summer, and throughout their lives."

To take the pledge, visit wylandfoundation.org/mywaterpledge

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KEEP IT UP
KEEP IT DOWN

Take the Pledge To Save Water

Are you great at saving water? Not so great? You can find out good you are, maybe learn some new ways to conserve, and possibly win prizes by joining the National Mayor's Challenge for Water Conservation.

It's Easy! During April, go online to **mywaterpledge.com**. If Santa Fe gets the most pledges, every Santa Fean who signs will be entered in a contest to win thousands of prizes, including a Toyota Prius.

Conserve

Santa Feans are among the best in the Southwest at saving water. The Mayor's Challenge is our chance to brag about it. Keep up the good work, Santa Fe, and keep water use down.

For information on the rebate program, water-saving tips, water-use rules, and all about water conservation in Santa Fe, visit www.santafenm.gov/waterconservation.

Lead

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City of Santa Fe
Water Conservation Office
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

City of Santa Fe, New Mexico

memo

Date: May 1, 2013

To: Public Utilities Committee

From: Laurie Trevizo, Water Conservation Manager 

Via: Brian Snyder, Public Utilities and Water Division Director 
Rick Carpenter, Water Resources and Conservation Manager 

RE: Ordinance 2013- Water Conservation Commercial Process Efficiency Rebate

Item and Issue:

Adoption of an ordinance amending Chapter 25, Section 4.2 of the City Code from an incentive for Water Rates Adjustments for commercial water users to a one time rebate program for commercial water users.

Background and Program Opportunities:

For the purposes of the commercial rebate ordinance, commercial water users are defined as a City of Santa Fe Water Division customer with a commercial sector designation within the current billing system, and examples of existing city customers includes but are not limited to:

- commercial laundromats installing a reclaimed water system
- commercial car-washes installing a reuse water system
- full service hotel/motels installing air cooled ice machines and/or recycled laundry systems
- institutional customers such as schools or government facilities

Below is a summary of the components of the Commercial Rebate Program:

Application Criteria:

- Must be a City of Santa Fe Water Division Customer
- Applies to commercial customers that are identifying innovative efficiency measures, either hardware or systems, that relate to the applicants commercial water processes.
- Applicants must include an estimate on the amount of water saved.
- The applicant must make an attempt to minimize water use and eliminate water waste. At least 80% of fixtures must be water efficient and must be free of all leaks.
- New and existing commercial water customers may apply, regardless of meter size.

Commercial Processes Efficiency Rebate:

A one-time incentive or credit to be applied to the applicant's water bill when:

- Rebate will be applied after 1 year or water use monitoring and evaluation of quantifiable water savings
- Applicants must coordinate with the Water Conservation Office prior to installations or retrofits of efficiency measures.
- The incentive is for proven and reliable water saving hardware or systems, but for complex or untested measures, the feasibility must be verified.

- The incentive amount will be based on the amount of water the device or innovation has saved.
Note: the other water conservation rebate amounts are administered in the same manner.

Application Evaluation:

- Applicants must participate in a water evaluation with City Staff including a pre-application meeting and a post-installation inspection.
- Applicants must provide original receipts.
- City staff will monitor consumption of the applications over the course of the first year to determine whether the overall water consumption per unit has decreased. If after one year applicants show no indication of water savings then the incentive will not be applied to the account as a credit.

Examples of Equipment Changes Eligible for a Rebate:

- Replacement of water-cooled equipment with new air-cooled equipment
- Process water reclamation systems
- Elimination of water intensive phases of industrial processes
- Cooling tower modifications
- Industrial laundry equipment upgrades or reuse
- Large scale irrigation improvements

Recommendation:

Staff recommends approval of the Commercial Water Conservation Rebate program.

Commercial water use incentives offered to commercial customers will help reduce the City's overall gallons per capita per day (GPCD) water use amount, further, solidifying the City of Santa Fe as a leader in water use and conservation.

Attachment:

Fiscal Impact Report

CITY OF SANTA FE, NEW MEXICO

BILL NO. 2013-__

INTRODUCED BY:

Councilor Peter Ives

AN ORDINANCE

RELATING TO WATER CONSERVATION; AMENDING SECTION 25-4.2 SFCC 1987 TO REMOVE THE EXPIRED COMMERCIAL WATER RATE ADJUSTMENT PROVISIONS; AND CREATING A NEW SECTION 25-4.3 SFCC 1987 TO ESTABLISH COMMERCIAL WATER USER REBATE REGULATIONS.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF SANTA FE:

Section 1. Section 25-4.2 SFCC 1987 (being Ord. #1995-19, §1, as amended) is amended to read:

25-4.2 Rates and Charges Adopted.

[A.] Rates and charges related to water service by the Santa Fe municipal water system are hereby adopted by reference and incorporated as part of this chapter as Exhibit B. **

****Editor's Note:** The exhibits referred to herein may be found at the end of this chapter.

~~[B.] The water division director may approve an adjustment to the rate schedule set forth in Exhibit B, located at the end of this chapter, as follows:~~

~~(1) Only commercial customers with meters that are one (1") inch or less may~~

1 apply.

2 ~~(2) — The customer shall submit an application by May 12, 2010 (thirty (30) days~~
3 ~~from the effective date of this amended subsection), to the water division demonstrating:~~

4 ~~(a) — That there are unique circumstances regarding the type of business~~
5 ~~resulting in water delivered to the applicant from the city's water distribution system~~
6 ~~being a substantial part of the finished product and/or service offered by the applicant~~
7 ~~at the service address in question.~~

8 ~~(b) — That the customer's previous water use exceeded the established Tier~~
9 ~~I allotment for the applicant's meter size by at least ten percent (10%) in each of the~~
10 ~~preceding twelve (12) months; and~~

11 ~~(c) — That the customer has made a reasonable attempt to minimize water~~
12 ~~use and eliminate water waste.~~

13 ~~(3) — Upon receipt of an application staff shall:~~

14 ~~(a) — Review the application;~~

15 ~~(b) — Conduct an inspection of the customer's service address to evaluate~~
16 ~~the extent of the customer's conservation efforts and to verify the efforts claimed by~~
17 ~~the customer in the customer's application. Staff shall evaluate customer's water~~
18 ~~conservation efforts based on the following criteria:~~

19 ~~(i) — The customer has installed certified low-flow fixtures,~~
20 ~~appliances, equipment, and devices such that eighty percent (80%) of all~~
21 ~~fixtures, appliances, equipment, and devices at the service address are low-~~
22 ~~flow, consistent with Uniform Plumbing Code and industry standards.~~

23 ~~(ii) — Customer fixtures as well as primary service connection at~~
24 ~~the meter are free of leaks.~~

25 ~~(iii) — Any irrigation equipment located at the service address is~~

1 equipped with rain gauge out offs, smart controllers, or other similar
2 technology to prevent irrigation when such irrigation is unnecessary due to
3 favorable weather conditions.

4 (iv) ~~Water processing equipment or processes at the customer's~~
5 ~~service address are free of leaks, including water lost to evaporation.~~

6 (e) ~~Review the customer's previous twelve (12) month water use history~~
7 ~~and costs to determine if usage has exceeded the Tier I allotment by ten percent~~
8 ~~(10%) or more for the entire previous twelve (12) months.~~

9 (d) ~~Compare the customer's water demand with the water division's~~
10 ~~engineering criteria to determine if a larger size meter is appropriate.~~

11 (e) ~~Present a written recommendation to the water division director~~
12 ~~regarding the options set forth in paragraph (4) below.~~

13 (4) ~~The water division director may decide one of the following options:~~

14 (a) ~~A change in the actual meter is not warranted, but rather a rate~~
15 ~~adjustment is appropriate establishing a commercial water rate eliminating the high~~
16 ~~water use charge; or~~

17 (b) ~~A change in the meter is warranted and the corresponding rate~~
18 ~~change with all applicable fees shall be paid; or~~

19 (c) ~~A change in the meter is warranted with all applicable fees paid with~~
20 ~~a rate adjustment eliminating the high water use charge; or~~

21 (d) ~~No rate adjustment is warranted because:~~

22 (i) ~~The customer has not met the criteria provided for in~~
23 ~~paragraph (3)(b) to minimize water use and eliminate water waste; or~~

24 (ii) ~~The customer's usage does not exceed the established Tier I~~
25 ~~allotment by ten percent (10%) or more for each of the previous twelve (12)~~

1 months.

2 (e) ~~No meter change is warranted because the customer's water demand~~
3 ~~does not exceed the water division's engineering criteria.~~

4 (5) ~~If a rate adjustment is approved, staff shall monitor the customer's~~
5 ~~water use and water conservation efforts and if the water use is not consistent with the initial~~
6 ~~application, recommend to the water division director revocation of the adjusted rate.~~

7 (6) ~~Appeals of decisions of the water division director may be heard by~~
8 ~~the public utilities committee as per Rule 22. Customer Complaint Procedures of Exhibit A~~
9 ~~located at the end of this chapter.]~~

10 Section 2. A new Section 25-4.3 SFCC 1987 is ordained to read:

11 25-4.3 [NEW MATERIAL] Commercial Water User Rebate Regulations.

12 A. *Purpose.* The purpose of this Section is to provide rebate incentives for commercial
13 water users to lower water consumption through the installation and use of high-efficiency water-
14 saving equipment or technology.

15 B. *Commercial Water User.* For purposes of this section, a commercial water user is a
16 city of Santa Fe water division customer with a commercial sector designation within the current
17 billing system that has installed high-efficiency water-saving equipment. Commercial water users
18 include schools and governmental entities.

19 C. *Applicability of Commercial Water User Rebate.*

20 (1) The city water conservation office shall apply the one-time rebate to an
21 applicant's bill after one year of water use monitoring and an evaluation of water savings. For
22 new commercial customers, the one year monitoring period will begin after the water saving
23 equipment or technology is installed, not at the time water service is established.

24 (2) ~~The rebate shall be applicable to water saving hardware or systems and for~~
25 ~~complex or untested measures which shall be verified by the city.~~

1 (3) An applicant shall coordinate with the water conservation office prior to the
2 installation of retrofits or high efficiency water saving equipment.

3 (4) The rebate amount shall be based on the amount of water the high efficiency
4 water saving equipment has saved.

5 D. *Application for Commercial Water User Rebate.* A new or existing commercial
6 water user may apply for a rebate, regardless of meter size. An applicant for a commercial water user
7 rebate shall provide the following information on the application:

8 (1) The address and account of the commercial water user to show that the
9 commercial water user is a city of Santa Fe water utility customer;

10 (2) The high-efficiency water-saving measures, including hardware or systems
11 that relate to the commercial water user's commercial water processes that minimize water
12 use and eliminate water waste;

13 (3) Data to show that at least 80% of water fixtures are water efficient and free
14 of leaks; and

15 (4) An estimate of the amount of water the commercial water user has saved as a
16 result of the high-efficiency water-saving measures.

17 E. *Application Evaluation.*

18 (1) An applicant for a commercial water user rebate shall:

19 (a) Participate in a pre-application meeting with the water conservation
20 office for a water use evaluation prior to installation of the equipment or technology.

21 (b) Participate in a post-installation inspection of the high efficiency
22 water saving equipment with the water conservation office.

23 (c) Provide original receipts for the purchase of the equipment that the
24 rebate is being applied for.

25 (2) The city water conservation office shall monitor water consumption of the

1 applicant over the course of the first year after the application has been submitted to
2 determine whether the overall water consumption per unit is has decreased. If after one year
3 an applicant's water consumption shows no indication of water savings then the rebate shall
4 not be applied to the account.

5 *F. Administrative Procedures.*

6 (1) The city shall establish administratively minimum standards of water-use
7 efficiency for qualifying rebates for commercial fixtures, appliances and landscape
8 efficiencies, which include, but are not limited to:

9 (a) Replacement of water-cooled equipment with new air-cooled
10 equipment

11 (b) Process water reclamation systems

12 (c) Elimination of water intensive phases of industrial processes

13 (d) Cooling Tower modifications

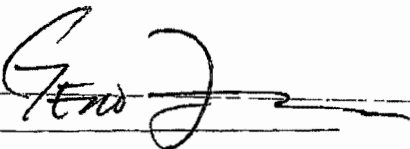
14 (e) Industrial laundry equipment upgrades or reuse

15 (f) Large scale irrigation improvements (when applying under this
16 category, monitoring of water savings will be two watering seasons).

17 (2) All rebates are given in the form a credit that is applied to the customer's
18 water bill.

19 (3) The city shall also establish administratively the quantity of water conserved
20 by each piece of high-efficiency water-saving equipment and the amount that the water bill
21 will be rebated.

22 APPROVED AS TO FORM:

23 
24

25 GENO ZAMORA, CITY ATTORNEY

CAO/M/Melissa/Bills 2013/Commercial Water Rebate Ordinance

City of Santa Fe Fiscal Impact Report (FIR)

This Fiscal Impact Report (FIR) shall be completed for each proposed bill or resolution as to its direct impact upon the City's operating budget and is intended for use by any of the standing committees of and the Governing Body of the City of Santa Fe. Bills or resolutions with no fiscal impact still require a completed FIR. Bills or resolutions with a fiscal impact must be reviewed by the Finance Committee. Bills or resolutions without a fiscal impact generally do not require review by the Finance Committee unless the subject of the bill or resolution is financial in nature.

Section A. General Information

(Check) Bill: X Resolution: _____
(A single FIR may be used for related bills and/or resolutions)

Short Title(s): Amending Chapter 25 Section 4.2 Water Rates Adjustment to Water Conservation Commercial Process Efficiency Rebate

Sponsor(s): Councilor Peter Ives

Reviewing Department(s): Finance

Person Completing FIR: Laurie Trevizo Date: April 17, 2013 Phone: x4223

Reviewed by City Attorney: _____ (Signature) Date: _____

Reviewed by Finance Director: _____ Date: _____
(Signature)

Section B. Summary

Briefly explain the purpose and major provisions of the bill/resolution.

The proposed amendments to the Code are a result of an evaluation of existing language, as a result of the evaluation the existing program is exclusive, too rigid, and does not provide an opportunity or incentive for all commercial customers.

Section C. Fiscal Impact

Note: Financial information on this FIR does not directly translate into a City of Santa Fe budget increase. For a budget increase, the following are required:

- a. The item must be on the agenda at the Finance Committee and City Council as a “Request for Approval of a City of Santa Fe Budget Increase” with a definitive funding source (could be same item and same time as bill/resolution)
- b. Detailed budget information must be attached as to fund, business units, and line item, amounts, and explanations (similar to annual requests for budget)
- c. Detailed personnel forms must be attached as to range, salary, and benefit allocation and signed by Human Resource Department for each new position(s) requested (prorated for period to be employed by fiscal year)*

1. Projected Expenditures:

- a. Indicate Fiscal Year(s) affected – usually current fiscal year and following fiscal year (i.e., FY 03/04 and FY 04/05)
- b. Indicate: “A” if current budget and level of staffing will absorb the costs
 “N” if new, additional, or increased budget or staffing will be required
- c. Indicate: “R” – if recurring annual costs
 “NR” if one-time, non-recurring costs, such as start-up, contract or equipment costs
- d. Attach additional projection schedules if two years does not adequately project revenue and cost patterns
- e. Costs may be netted or shown as an offset if some cost savings are projected (explain in Section 3 Narrative)

X Check here if no fiscal impact

Column #:	1	2	3	4	5	6	7	8
	Expenditure Classification	FY _____	"A" Costs Absorbed or "N" New Budget Required	"R" Costs Recurring or "NR" Non- recurring	FY _____	"A" Costs Absorbed or "N" New Budget Required	"R" Costs – Recurring or "NR" Non- recurring	Fund Affected

Personnel* \$ _____ _____ _____ \$ _____ _____ _____ _____

Fringe** \$ _____ _____ _____ \$ _____ _____ _____ _____

Capital
Outlay \$ _____ _____ _____ \$ _____ _____ _____ _____

Land/
Building \$ _____ _____ _____ \$ _____ _____ _____ _____

Professional
Services \$ _____ _____ _____ \$ _____ _____ _____ _____

All Other
Operating
Costs \$ _____ _____ _____ \$ _____ _____ _____ _____

Total: \$ _____ _____ _____ \$ _____ _____ _____ _____

* Any indication that additional staffing would be required must be reviewed and approved in advance by the City Manager by attached memo before release of FIR to committees. **For fringe benefits contact the Finance Dept.

2. Revenue Sources:

a. To indicate new revenues and/or

b. Required for costs for which new expenditure budget is proposed above in item 1.

Column #:	1	2	3	4	5	6
	Type of Revenue	FY _____	"R" Costs Recurring or "NR" Non- recurring	FY _____	"R" Costs – Recurring or "NR" Non- recurring	Fund Affected

Water \$ _____ _____ _____ _____ _____
Conservation
Levy Fund

_____ \$ _____ _____ \$ _____ _____ _____

_____ \$ _____ _____ \$ _____ _____ _____

Total: \$ _____ _____ \$ _____ _____ _____

3. Expenditure/Revenue Narrative:

Explain revenue source(s). Include revenue calculations, grant(s) available, anticipated date of receipt of revenues/grants, etc. Explain expenditures, grant match(s), justify personnel increase(s), detail capital and operating uses, etc. (Attach supplemental page, if necessary.)

Water conservation rebate programs are funded by the Water Conservation Levy Fund and new development water offsets. The amendments will not change the funding for the program.

Section D. General Narrative

1. Conflicts: Does this proposed bill/resolution duplicate/conflict with/companion to/relate to any City code, approved ordinance or resolution, other adopted policies or proposed legislation? Include details of city adopted laws/ordinance/resolutions and dates. Summarize the relationships, conflicts or overlaps.

None that staff is aware of

2. Consequences of Not Enacting This Bill/Resolution:

Are there consequences of not enacting this bill/resolution? If so, describe.

This amendment offers the opportunity to improve the rebate program while reducing water demand and the water credits would be available for new development offsets

3. Technical Issues:

Are there incorrect citations of law, drafting errors or other problems? Are there any amendments that should be considered? Are there any other alternatives which should be considered? If so, describe.

None that staff is aware of

4. Community Impact:

Briefly describe the major positive or negative effects the Bill/Resolution might have on the community including, but not limited to, businesses, neighborhoods, families, children and youth, social service providers and other institutions such as schools, churches, etc.

The rebate offers incentives to business owners and commercial water use customers to purchase and install the most efficient appliances and water conserving technologies for use by their businesses.

Form adopted: 01/12/05; revised 8/24/05; 4/17/08

REPORT



City of Santa Fe

Reclaimed Wastewater Resource Plan

April, 2013



*Marty Sanchez Links de Santa Fe golf course relies entirely
on reclaimed wastewater for turf irrigation*



Prepared by:

Claudia Borchert¹, Water Resources Coordinator

in collaboration with

The Reclaimed Wastewater Working Group: John Allen¹, Felicity Broennan, Rick Carpenter¹, Michael Crawford, Brian Drypolcher¹, Kathleen Garcia¹, David Harrington, Jerry Lowance, Charlie Nylander, Neva Van Peski, Bryan Romero¹, Karen Torres², and Robert Wood¹

1 City of Santa Fe; 2 Santa Fe County

The City would like to express their deep appreciation to the members of the Working Group for their engagement, ideas, and perspective.

Acknowledgments

The authors would like to thank the insightful input provided to this process by the public who attended the December 1, 2011 and January 24th, 2012 public meetings, the reclaimed wastewater users who convened on January 7th, 2013, the participants of the weighted comparison exercise, and the reviewers of the report: Brian Snyder, Caryn Grosse, Dale Lyons, Marcos Martinez, and Alex Puglisi.



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Appendix F: Criteria Used in Scoring and Ranking of Options
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Executive Summary

Reclaimed wastewater (RW) is a vital and valuable water resource that helps the City of Santa Fe meet its current water supply needs; it can also play a critical role in meeting future potable water supply demand. Since the adoption of the previous RW plan, the Treated Effluent Management Plan (TEMP) in 1998, the quantity of available RW has been reduced by 29% because of the City's comprehensive indoor water conservation programs while RW use has more than doubled (Figure 3). This Reclaimed Wastewater Resource Plan (RWRP), developed with the assistance of the "Working Group" members identified on the cover page, prioritizes current RW uses and identifies strategies and implementing actions to optimize current and future use of the resource. This analysis concluded that RW availability is currently limited during the peak summer irrigation months and that the shortfall will increase in the future with new RW uses anticipated by the City. The methodology used for prioritizing RW uses herein can be applied in the future to new circumstances; thus, this plan serves not only as a blueprint for RW use today, but also serves as a roadmap for the future.

This RWRP considers the City's current and projected RW needs through the 2020s. RW availability is projected 40 years in to the future through 2052. Based on the City's average RW production of 1,887 million gallons/yr (5,790 af/yr) over the past five years, this RWRP assumes that 1,825 mg/yr (5,600 af/yr) and 152 mg/mo (467 af/mo) of RW is available (Section 4) at a steady daily and monthly rate for the 40-year planning period. The difference (62 mg/y; 190 af/yr) between the RW produced and the amount allocated in this Plan is reserved to accommodate for changes in use, metering uncertainty, and/or changes in future conditions.

The RW use options considered in this analysis include current uses: direct sale for dust control and other construction purposes; irrigation of municipal recreational fields at the Municipal Recreational Complex (MRC) and the infield at Santa Fe Downs; irrigation of the Marty Sanchez Links de Santa Fe and the Santa Fe Country Club golf courses; dust control at the regional landfill; watering livestock on the Caja del Rio; irrigation of the education-scape at the New Mexico Game and Fish facility; and for Santa Fe River flows downstream of the City's wastewater treatment plant to support the river/riparian ecosystem and local agriculture (Section 5). The analysis also includes potential future uses: irrigation of the turf at the Santa Fe Equestrian Center (also a previous use); irrigation of the Southwest Area Node Park; irrigation of turf at schools, the library and other open space along the Southwest Sector effluent pipeline; offsetting the surface water depletions in the La Cienega area caused by the City's pumping of the Buckman well field; piping RW upstream to the Santa Fe River; and future potable water supply (Section 5).

For this analysis, an annual, monthly and maximum peak daily RW budget for all of the current and potential future RW uses was determined, either based on past usage, contracts, requests, or estimates (Section 6). The demand for monthly and daily RW is great. The combined monthly demand for all the options, except RW for potable water supply, is 213 mg/d (Table 2), 40% more than the RW available; the combined daily demand of all the options (except RW for potable water) supply is 6.9 mg/d (Table 2), 38% more than the available amount. Hence, RW demand is greater than available supply under



current average conditions, which will only worsen under drier hotter drought and projected climate change-impacted conditions.

The RW options were ranked according to criteria and methodology (Section 5) approved in May 2012, by the City's governing body. Using the ranking methodology and then prioritizing uses that are non-discretionary (long-term contracts and permit requirements), the RW options were prioritized; the first three options retain equal ranking, because no distinction is made within these uses required by permits versus long-term contracts):

1. Buckman Well Field Permit Compliance- 33 mg/yr; 100 af/yr
1. US Forest Service Livestock Water – 2.3 mg/yr; 7 af/yr
1. Santa Fe Country Club Golf Course- 130 mg/yr; 400 af/yr
4. Municipal Recreation Complex – 54 mg/yr; 165 af/yr (65 mg/yr requested)
5. On-demand Sales for Dust Control, Construction– 31 mg/yr; 95 af/yr (65 mg/yr in 2007)
6. Dust Control at Regional Landfill – 6 mg/yr; 17 af/yr (12 mg/yr requested)
7. Marty Sanchez Links de Santa Fe Golf Course– 168mg/yr; 517 af/yr (196 mg/yr requested)
8. Recreational Infield at Santa Fe Downs – 43.5 mg/yr; 134 af/yr
9. Future Potable Water Supply – approximately 717 mg/yr; 2,200 af/yr
10. Southwest Area Node Park - 19 mg/yr; 57 af/yr
11. New Mexico Game and Fish Educational Landscape – 1 mg/yr; 4 af/yr
12. Southwest Area Irrigated Parks and Open Space – 48 mg/yr; 149 af/yr
13. Downstream Santa Fe River – 600 mg/yr; 1,843 af/yr
14. Upstream Santa Fe River – 177 mg/yr; 543 af/yr
15. Santa Fe Equestrian Center – 41 mg/yr; 127 af/yr
16. Urban Food Production (originated from 2nd public meeting; no RW budget developed)

These options and their monthly RW budgets were then compared to the available RW (Section 7) to see how much of the RW needs could be met. The assessment was performed in three different time frames - 'current', 'near-future', and '2020s', including only those projects relevant to the different timeframes (Section 7). For example, since potable use of RW will likely take a decade to implement, the use is shown to first come 'online' in the 2020s analysis.

This analysis showed that all but two of the 'current' RW options can be met with the available RW at this time (Figure 12 and 13); the exception is that there are insufficient flows to fully meet the Downstream Santa Fe River 3 mg/d, target flows in June and the Santa Fe Equestrian Center RW request in May, June and July. In the near future (approximately 2018), the shortfall in RW will be even greater: using the Plan's criteria and ranking method, the Downstream Santa Fe River, the Santa Fe Equestrian Center, and the Upstream Santa Fe River option do not have adequate supply during the summer months (Figure 14). By the 2020s, when the infrastructure and permits to use RW for potable supply may be ready, no RW is available for the SF Equestrian Center or the Upstream Santa Fe River, and there continues to be insufficient RW to meet the 3 mg/d target flows for Downstream Santa Fe River in June (Figure 15). By the 2020s, using the RW that is not



needed during the irrigation season, the Plan estimates that approximately 717 mg/yr (2,200 af/yr) of RW will be available for potable supply.

The determination of the RW shortfall is based upon current uses, anticipated uses, and assumptions regarding necessary or desirable flows in the Santa Fe River below the wastewater treatment plant, about which there is considerable uncertainty. Downstream river system flow dynamics are continually changing because of drought, increasing riparian vegetation, ongoing groundwater use, shifting wetlands, beaver activity and river management activities. Additionally, the objectives to be satisfied by the river flows are not well defined and Santa Fe River water rights have not been adjudicated.

RW is a valued resource and the cost to produce it is not insignificant. This plan reiterates the recommendation of the 2003 Wastewater Reuse Advisory Task Force that all RW users, municipal, non-municipal, and commercial facilities alike, should pay for their RW use (Section 8.2), thus treating all users equitably and increasing the incentive to use the resource more efficiently. This may result in RW costs shifting from those who supply it (via the City's sanitary sewer system) to those who benefit from it (e.g. sport recreationalists, golfers, and irrigators). The shift would recognize RW as a municipal asset and may help pay for wastewater treatment and/or implementing actions identified in this plan. Although not addressed in this document, it is likely that increased RW treatment associated significant capital improvements will be needed in the future. Currently 98 percent of Santa Fe RW is assigned to users without any monetary compensation. Only 2 percent of the current RW uses generate revenue.

Above-ground use of the RW is currently regulated by the New Mexico Environment Department (NMED) through surface and groundwater discharge permits. The City's wastewater treatment plant produces Class 1B wastewater, as defined by the "NMED Ground Water Quality Bureau Guidance: Above Ground Use of Reclaimed Domestic Wastewater", which can be used for irrigating turf provided that public physical exposure to RW is avoided through access controls, application methods, and setback distances. While the RW-use recommendations set forth in this Plan are designed to be protective of public health and the environment, the water quality standards and requirements may change in the future, at which time treatment processes may need to be added or enhanced and/or land application methods altered. Although the current regulations provide safeguards, inappropriate use of RW and/or sporadic reductions in treatment performance may result in human exposure to bacteriological pollution where RW is applied.

To guide current and future decision-making regarding RW, this RWRP identifies the following strategies (Section 8), grouped into water supply, economic, water quality, operational/management, stewardship, and green themes. Section 8 also lists proposed implementing actions associated with each strategy.

Water Supply: ➤ Use RW as a non-potable water supply.
➤ Use RW to meet Buckman Wells permit offset requirements.
➤ Use RW to supplement the City's future potable water needs.
➤ Measure RW production and use.

Economic: ➤ Value RW as a municipal asset.



- Use RW to generate revenue.
- Seek financial assistance to implement recommendations of this plan.

Water Quality: ➤ Produce high quality RW.
➤ Minimize the public health risk in land application of RW.

Operational: ➤ Optimize existing RW delivery capacity.
➤ Develop necessary and equitable contracts, resolutions, and ordinances.
➤ Determine shortage sharing and emergency guidelines.
➤ Build Resiliency into RW allocations.

Stewardship: ➤ Provide adequate flows to the Santa Fe River.
➤ Collaborate and coordinate with downstream agricultural communities and other stakeholders.

Green: ➤ Use RW efficiently.
➤ Optimize energy consumption and production in RW transmission and use.
➤ Build resiliency and adaptation to climate change into RW planning and management.



"By the Numbers" Summary Reclaimed Wastewater Fact Sheet
(Courtesy of Brian Drypolcher, City of Santa Fe)

1. City's Reclaimed Wastewater (RW) available
 - 1,825 million gallons per year (mg/yr)
 - 5,600 acre feet per year
 - 152 million gallons per month (mg/mo)
 - 467 acre feet per month


 - or, approximately 5 million gallons per day
2. For all options identified (pre-ranking), **average RW demand exceeds production**
 - annual demand: 2,072 mg/yr (6,358 af/yr)
 - annual available: 1,825 mg/yr (5,600 af/yr)
 - maximum monthly demand: 213 mg/mo (654 af/m)
 - maximum monthly available: 152 mg/mo (467 mg/mo)
 - daily demand is 6.9 mg/d, or 38% more than the daily amount available
3. Trend: Reduction in RW **production**
 - 1997: 2,300 million gallons (7,140 acre feet)
 - 2011: 1,780 million gallons (5,600 acre feet)
4. Trend: Increase in RW **use**
 - 1997: 247 million gallons (750 acre feet)
 - 2011: 505 million gallons (1,535 acre feet)
5. Trend: Reduction **per capita water consumption**
 - 1997: 170 gallons per capita per day
 - Current: 106 gallons per capita per day
6. "**RW Return Factor**" – city potable water delivered, water consumed, wastewater reclaimed
 - **62%** of potable water produced for customers ends up at wastewater treatment plant
 - 38% is "consumed"
7. Percentage of RW released to the SF River, **seasonal variation**
 - 99% in January
 - 50% in June
8. Potential RW available for **future potable water supply** (long term, 2020 scenario, water not allocated to other uses identified in the plan)
 - 717 million gallons per year
 - 2,200 acre feet per year
 - annual value, \$2.15 million
9. Percent of RW **currently sold** (revenue generation) = 2%

City of Santa Fe, New Mexico

memo

Date: May 1, 2013

To: Public Utilities Committee / Finance Committee / City Council

From: Laurie Trevizo, Water Conservation Manager 

Via: Brian Snyder, Public Utilities and Water Division Director *BKS*
Rick Carpenter, Water Resources and Conservation Manager *RC*

RE: Resolution 2013- A Resolution in support of "A Water Conservation Campaign Focusing on Voluntary Outdoor Irrigation"

Item and Issue:

Santa Fe is entering a third year of drought conditions, the Santa Fe Water Conservation Committee has proposed a marketing campaign to raise drought awareness and encourage water conservation during the irrigation season which begins May 1 and runs through October 31 of each year, at this time watering between 10 am and 6 pm is not permitted.

Background and Program Opportunities:

The Water Conservation Office in conjunction with several members of the Santa Fe Water Conservation Committee are working together to create marketing materials for the upcoming irrigation season.

The Water Conservation Committee contains landscape professionals whose expertise will be utilized in determining how to get the message out to Water Division customers on when to irrigate. A bill insert will be developed with an easy to use checklist for determining the best days and times to irrigate.

Recommendation:

Staff recommends approval of the Water Conservation Campaign Focusing on Voluntary Outdoor Irrigation

Attachment:

Fiscal Impact Report

CITY OF SANTA FE, NEW MEXICO

RESOLUTION NO. _____

INTRODUCED BY:

Councilor Peter Ives

A RESOLUTION

**IN SUPPORT OF "A WATER CONSERVATION CAMPAIGN FOCUSING ON
VOLUNTARY OUTDOOR IRRIGATION".**

WHEREAS, the City of Santa Fe aspires to become the water conservation capital of the nation; and

WHEREAS, the City of Santa Fe has invested in a robust and diverse portfolio of water sources and the City has many options available to meet the water supply needs of its residents; and

WHEREAS, the City of Santa Fe, the region of Northern New Mexico and the State of New Mexico continue to explore ways to conserve residential consumption of water and power and to inspire its residents to care for our natural resources; and

WHEREAS, pursuant to the City's Water Emergency Plan Ordinance, 25-5 SFCC 1987, the City could declare and impose water restrictions to reduce demand which could cause economic hardship for Santa Fe businesses and residents; and

WHEREAS, the summer irrigation season has the highest water use and the biggest demand on our precious and limited water resources; and

WHEREAS, the National Oceanographic and Atmospheric Administration (NOAA) has updated its forecast model to predict a dry spring and above average temperatures; and

WHEREAS, the City of Santa Fe's reservoir levels are at/or seasonal near record lows, therefore, peak irrigation demand will require increased pumping of aquifers in the City and Buckman well fields; and

WHEREAS, surrounding communities are adopting either voluntary or mandatory water restrictions; and

WHEREAS, with the encouragement of the Mayor and City Council, residents and businesses are encouraged to voluntarily reduce their water consumption; and

WHEREAS, from May , to October , 2013, the City of Santa Fe wishes to inspire its residents and its neighboring communities to conserve water.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE
CITY OF SANTA FE that:

SECTION 1. The City of Santa Fe agrees and supports a "Water Conservation Campaign focusing on Voluntary Outdoor Irrigation" for Santa Fe residents and said campaign will be administered by the City of Santa Fe's Water Conservation Office;

SECTION 2. The program is to be implemented immediately and will continue into future years, through a series of communication and outreach strategies, either new or existing, to encourage Santa Fe residents and businesses to conserve water.

SECTION 3. This resolution shall be effective immediately upon adoption.

PASSED, APPROVED, and ADOPTED this _____ day of _____, 2013.

~~DAVID COSS, MAYOR~~

1 ATTEST:

2

3

4 YOLANDA Y. VIGIL, CITY CLERK

5 APPROVED AS TO FORM:

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8 GENO ZAMORA, CITY ATTORNEY

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25 M/Melissa/Resolutions 2013/Water Conservation Campaign

DRAFT

FIR No. _____

**City of Santa Fe
Fiscal Impact Report (FIR)**

This Fiscal Impact Report (FIR) shall be completed for each proposed bill or resolution as to its direct impact upon the City's operating budget and is intended for use by any of the standing committees of and the Governing Body of the City of Santa Fe. Bills or resolutions with no fiscal impact still require a completed FIR. Bills or resolutions with a fiscal impact must be reviewed by the Finance Committee. Bills or resolutions without a fiscal impact generally do not require review by the Finance Committee unless the subject of the bill or resolution is financial in nature.

Section A. General Information

(Check) Bill: _____ Resolution: X
(A single FIR may be used for related bills and/or resolutions)

Short Title(s): A Water Conservation Campaign on Voluntary Outdoor Irrigation

Sponsor(s): Councilor Peter Ives

Reviewing Department(s): Finance

Person Completing FIR: Laurie Trevizo Date: April 17, 2013 Phone: x4223

Reviewed by City Attorney: _____ Date: _____
(Signature)

Reviewed by Finance Director: _____ Date: _____
(Signature)

Section B. Summary

Briefly explain the purpose and major provisions of the bill/resolution.

To provide outreach to Water Division customers on outdoor irrigation in the form of a bill insert.

Section C. Fiscal Impact

Note: Financial information on this FIR does not directly translate into a City of Santa Fe budget increase. For a budget increase, the following are required:

- a. The item must be on the agenda at the Finance Committee and City Council as a "Request for Approval of a City of Santa Fe Budget Increase" with a definitive funding source (could be same item and same time as bill/resolution)
- b. Detailed budget information must be attached as to fund, business units, and line item, amounts, and explanations (similar to annual requests for budget)
- c. Detailed personnel forms must be attached as to range, salary, and benefit allocation and signed by Human Resource Department for each new position(s) requested (prorated for period to be employed by fiscal year)*

1. Projected Expenditures:

- a. Indicate Fiscal Year(s) affected – usually current fiscal year and following fiscal year (i.e., FY 03/04 and FY 04/05)
- b. Indicate: "A" if current budget and level of staffing will absorb the costs
"N" if new, additional, or increased budget or staffing will be required
- c. Indicate: "R" – if recurring annual costs
"NR" if one-time, non-recurring costs, such as start-up, contract or equipment costs
- d. Attach additional projection schedules if two years does not adequately project revenue and cost patterns
- e. Costs may be netted or shown as an offset if some cost savings are projected (explain in Section 3 Narrative)

DRAFT

 X Check here if no fiscal impact

Column #:	1	2	3	4	5	6	7	8
	Expenditure Classification	FY	"A" Costs Absorbed or "N" New Budget Required	"R" Costs Recurring or "NR" Non-recurring	FY	"A" Costs Absorbed or "N" New Budget Required	"R" Costs – Recurring or "NR" Non-recurring	Fund Affected

Personnel*	\$				\$			
Fringe**	\$				\$			
Capital Outlay	\$				\$			
Land/ Building	\$				\$			
Professional Services	\$				\$			
All Other Operating Costs	\$				\$			
Total:	\$				\$			

* Any indication that additional staffing would be required must be reviewed and approved in advance by the City Manager by attached memo before release of FIR to committees. **For fringe benefits contact the Finance Dept.

2. Revenue Sources:

- a. To indicate new revenues and/or
- b. Required for costs for which new expenditure budget is proposed above in item 1.

Column #:	1	2	3	4	5	6
	Type of Revenue	FY	"R" Costs Recurring or "NR" Non-recurring	FY	"R" Costs – Recurring or "NR" Non-recurring	Fund Affected

	\$			\$		
	\$			\$		
	\$			\$		
Total:	\$			\$		

3. Expenditure/Revenue Narrative:

DRAFT

Explain revenue source(s). Include revenue calculations, grant(s) available, anticipated date of receipt of revenues/grants, etc. Explain expenditures, grant match(s), justify personnel increase(s), detail capital and operating uses, etc. (Attach supplemental page, if necessary.)

The costs of this bill insert campaign is already encumbered within the existing water conservation budget.

Section D. General Narrative

1. Conflicts: Does this proposed resolution duplicate/conflict with/companion to/relate to any City code, approved ordinance or resolution, other adopted policies or proposed legislation? Include details of city adopted laws/ordinance/resolutions and dates. Summarize the relationships, conflicts or overlaps.

This resolution is companion to Emergency Water Regulations, City Code Chapter XXV Section 5.5. If emergency water regulations are invoked, the required watering schedule is determined by Code.

2. Consequences of Not Enacting This Resolution:

Are there consequences of not enacting this bill/resolution? If so, describe.

None that staff is aware of

3. Technical Issues:

Are there incorrect citations of law, drafting errors or other problems? Are there any amendments that should be considered? Are there any other alternatives which should be considered? If so, describe.

None that staff is aware of.

4. Community Impact:

Briefly describe the major positive or negative effects the Bill/Resolution might have on the community including, but not limited to, businesses, neighborhoods, families, children and youth, social service providers and other institutions such as schools, churches, etc.

A successful outdoor irrigation message will result in water reductions during peak demand seasons.

Form adopted: 01/12/05; revised 8/24/05; 4/17/08

Informal Minutes: Education & Outreach Working Group (outdoor irrigation measures brochure), 4/24/13

In Attendance: Laurie, Caryn, Lise, Tim, Stephen, Grace

Voluntary Outdoor Irrigation Resolution Key Dates:

- May 1 PUC, Item #32 – 5pm, City Hall Chambers
- 5/20 Finance
- 5/29 City Council

Laurie proposed and group agreed that brochure should focus on how often/how much to water and include a checklist that consumers can post on their refrigerators

There have been no conversations to date with ABQ attorneys related to our use of their 1-2-3-2-1 program format. (I believe Laurie said she has left a message but has not yet heard back.) Laurie does not feel comfortable copying/referencing the ABQ format at this time. The group agreed that we would not include “water by the numbers” in this brochure.

Format is bifold – 2/3 of a folded 8 ½ x 11” page (4 sides total)

Overall layout, per side:

1. A graphic & title – (Some possibilities: Kick it Up A Notch/Keep it Up-Keep it Down/Buckle Down)
2. Checklist
3. Checklist
4. Rebates, website, more info (possibly websites like OSE’s plant list & irrigation calculator, Sunset Magazine or other publicly available resources)

Possible points to include:

When to water (day, year, ”schedule”)

Where (trees & shrubs vs. lawn)

*** Important to have Melissa’s and Karyn’s input on text. ***

We took a first pass at generating a monthly checklist:

May: water no more than once per week [See NOTE at end]; last frost date is XXX; check irrigation system (leaks, holes in lines, debris) & turn it on; if no irrigation system, check water hose for damage/holes, use egg timer or timer on hose and use shut-off nozzles*; prep plant beds; mulch; if planting, group plants by water needs; avoid watering when windy (increases evaporation); consider reducing the number of sprinklers in favor of drip irrigation; consider upgrading to smart or weather-based controller.

* Required by law/water use violation fees apply.

June: water no more than twice per week; check irrigation system for proper function; add rain barrels under canals (rebates available); if washing car at home use shut-off nozzle and limit to once per month*; make sure that irrigation water remains in your garden (prevent “fugitive” water)*.

July: water no more than three times per week; check irrigation system for proper function; remove unwanted plants/weeds; deadhead flowering plants; consider letting lawn go dormant; pay attention to monsoon rains and adjust watering accordingly.

August: water no more than three times per week; check irrigation system for proper function; if rain has been scarce, apply water slowly so it sinks deeply (e.g., 2-3 ft. for trees); enjoy the fruits and vegetables of your labor.

September: water no more than twice a week; check irrigation system for proper function; plant perennials for next year; cut back watering trees to every three weeks; use broom instead of hose to clean hardscapes*; continue harvesting.

October: water no more than once per week; first frost date is XXX: turn off & winterize irrigation system; drain rain barrels; disconnect hoses from hose bibs; let plants go dormant; add additional mulch for winterizing.

NOTE: I realized that we hadn’t explicitly reiterated the recommended number of times/month to water (i.e., the 1-2-3-2-1 that the group adapted for SFe), so I took the liberty of adding this in & removing the vaguer “decrease/increase” watering references. This is obviously up for debate.

Grace is to add asterisk for each item that is required by law, per “City of Santa Fe Comprehensive Water Conservation Requirements”.

Comments by 5/1.

5/10 – hard paper packets going out to WCC members

5/14 – present brochure at WCC – informational only, no formal approval required

Brochures will go out during June billing.



Santa Fe Watershed Association Green Lodging Initiative

Purpose: The main purpose of the Green Lodging Initiative is to help the incredibly valuable lodging industry decrease water consumption and decrease toxic waste disposal (chemicals used in soaps, shampoos, laundry soap, carpet cleaner...all those pesky “convenient” items stocked in hotel rooms) that is eventually discharged into the Santa Fe River. A lot of people don’t realize what happens when they use these products; they flow down the drain and end up south of town at the wastewater treatment plant which eventually discharges the “treated” water back in the Santa Fe River! This water is used on crops in La Cienega, La Cieneguilla, and La Bajada. We also want to support the lodging industry reduce their carbon emissions.

We designed the program to take a proactive approach where we could support the lodging industry shift to different, healthier systems and products that would make a seamless transition for them and their staff, and, at the same time, give them the benefit of marketing to a new demographic – one that cares about the health of their environment.

Goals:

1. Form and support a public-private sector collaborative Working Group that can serve as the Think-and-Do Tank to develop cross-marketing strategies, share best management practices, and create the longer-term vision such as future projects and networking of ideas, talents, resources, and contacts.
Members include:
 - Santa Fe Convention and Visitors Bureau
 - City of Santa Fe Environmental Services Division
 - New Mexico Lodging Association
 - Santa Fe Lodgers Association
 - Santa Fe Green Chamber of Commerce
 - La Posada de Santa Fe Resort and Spa
 - La Fonda on the Plaza
 - Santa Fe Community College Sustainable Technologies Center
 - City of Santa Fe Water Division
 - Inn of the Governors
2. Provide training, coaching, and tailored technical assistance leading to third-party green certification to hotels, motels, B&Bs, and resorts. By adopting streamlined sustainable practices, these lodging providers will save money, upgrade their facility to meet growing market expectations, and increase their competitive advantage in an expanding green hospitality marketplace. Participating providers, listed below, represent 36% of the total number of Santa Fe hotel rooms and more than 50% of the downtown hotel rooms.
 - La Fonda on the Plaza
 - La Posada de Santa Fe Resort and Spa
 - Old Santa Fe Inn
 - Inn on the Alameda
 - Silver Saddle Motel
 - Eldorado Hotel and Spa
 - Santa Fe Sage Inn
 - Hotel Santa Fe
 - Inn of the Governors
 - Ten Thousand Waves
 - Inn at Santa Fe
 - Inn of the Five Graces
 - Fort Marcy Suites
 - Casa Cuma Bed and Breakfast

3. Quantitatively measure the lodging providers' new sustainable practices impact on environmental indicators such as amount of water conserved and reduction of toxic chemicals going into the watershed, as well as savings in operational expenses.
4. Promote and market the Green Lodging Initiative and participating lodging providers to internal and external markets and target audiences.
5. Share lessons learned and plan next steps to expand the Initiative in a Green Lodging Forum in early 2014.

Outcomes:

1. Quantified environmental impact in terms of pounds of hazardous waste reduced; metric tons of carbon dioxide and greenhouse gases reduced; amount of water conserved; and decreases in toxic chemicals through substitutions of safer cleaning compounds.
2. Quantified economic benefits in terms of business operating costs savings.
3. Trained and qualified Green Teams in fourteen leading lodging provider businesses implementing improved sustainable operation practices.
4. Empowered and active Working Group continuing to develop cross-marketing strategies, share best management practices, and create the longer-term vision.
5. Scalable demonstration project that incorporates specific techniques for sustainable materials management and other source reduction strategies.
6. Reduced pressure on the Santa Fe water supply that will be increasingly reduced due to climate change, while still supporting our economy and local livelihoods.

The Santa Fe Green Lodging Initiative is funded by a grant from the Environmental Protection Agency.

Training, coaching and technical assistance is being provided through a sub-contract with HospitalityGreen LLC, founder of the nationally-recognized Green Concierge Certification® program.

For more information, contact Felicity Broennan, SFWA Executive Director at 820-1696 felicity@santafewatershed.org or Bette Booth SFWA Santa Fe Green Lodging Coordinator at 795-5316 or ebooth13@comcast.net.



#	Issue	Strategic Goal	Objectives	Tasks	Working Group Members	Reference Material	Fiscal Impact	Notes
1.	Update Santa Fe Water Conservation and Drought Management Plan		Assist in the 2015 Water Conservation Plan and create strategic framework and implement schedule	Read 2010 Plan and record suggested updates next meeting	Doug Pushard Grace Perez Lisa Randall Bill Roth Councilor Ives	City staff: Laurie Trevizo Caryn Grosse		Draft timeline created. Goal: Jan 2015
2.	Water Conservation Education/Outreach Program Including marketing ideas for voluntary water use				Giselle Piburn Stephen Wiman Tim Michael Grace Perez Lise Knouse		Costs associated with a bill insert (printing and insert)	
3.	Evaluate/draft ordinances to promote outdoor water conservation	Reduce GPCD through selective use of ordinances		1.Research ordinances by other cities for effectiveness 2.Research current ordinances for possible improvements	Doug Pushard Bill Roth Councilor Ives Tim Michael			<i>Request from Doug Pushard to City Parks clarify Land Use Code 14-8.4 in E (4)</i>
4.	Reestablish Trend of Net Annual Reductions in Per Capita Water Usage				Karyn Schmitt Melissa McDonald			
5.	Proper Regulation of Water Usage and Waste Avoidance by Large Water Users	Contribute to annual water reductions in water use	Optimize water use by large water users	1. Identify large water users 2.Estimate contribution to total demand 3.Identify ways to optimize water consumption 4.Engage in discussion	Tim Michael Melissa McDonald	Water Use in Santa Fe, Borchert, et al, July 2009	Needs to be determined	Melissa will focus on Parks

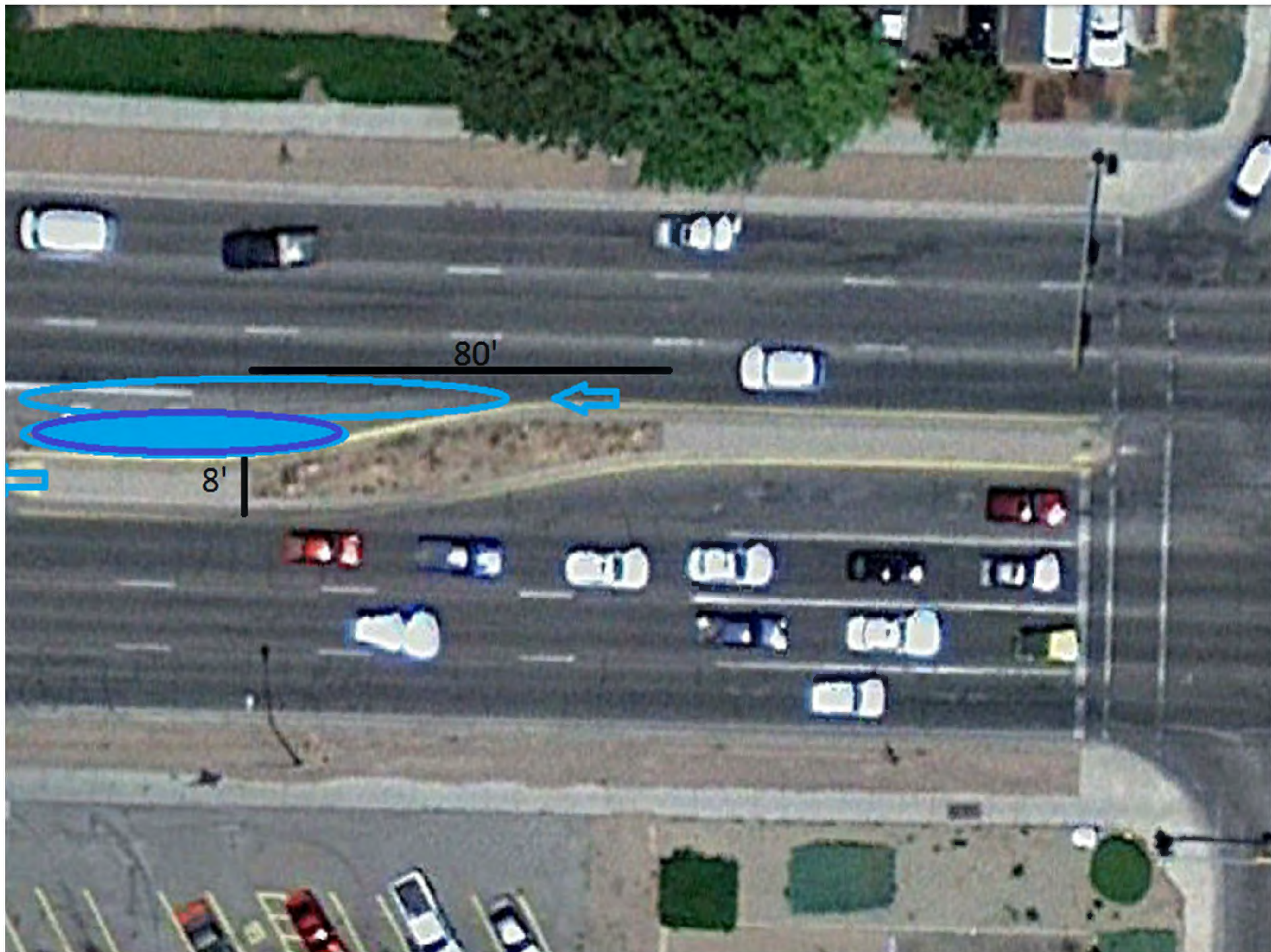
	Task Name	Start Date	End Date	Duration	% Complete	Assigned To	At Risk	Comments
1	Strategic Planning							
2	Create SmartSheet	10/01/12	10/05/12	5	100%	Caryn Grosse		
3	Check State Statute	01/21/13	01/25/13	5	100%	Laurie Trevizo		
4	Check Clerks office re:quorum	01/21/13	01/25/13	5	100%	Laurie Trevizo		
5	Climate Change Report				95%	Claudia Borchert		
6	Reclaimed Wastewater Report				95%	Claudia Borchert		
7	Stella Modeling					Rick Carpenter		
8	Annual Water Reports				95%	Alan Hook		
9	Demand Elasticity Report				90%	Jim Fryer		
10	Residential End Use Study				90%	National Research Center		
11	Identify Updates to Plan	01/17/13	05/02/13	76	28%	Working Group		
12	section 1: Overview	01/17/13	02/14/13	21	100%	Working Group		update ordinances, meter size rates
13	section 2: Water Conservation Program	02/15/13	03/01/13	11		Working Group		
14	section 3: Drought Management Plan	03/04/13	03/18/13	11		Working Group		
15	section 4: Regional Water Plan	03/19/13	04/02/13	11		Working Group		
16	section 5: Continued Improvements Plan	04/03/13	04/17/13	11		Working Group		
17	section 6: Conclusions	04/18/13	05/02/13	11		Working Group		
18	Prepare Documents	01/02/13	12/20/13	253		Water Conservation Office		
19	Committee Process							
20	Informational update to PUC/WCC	12/23/13	01/17/14	20		Water Conservation Office		
21	Include 2013 Annual Report	03/03/14	03/31/14	21		Water Conservation Office		
22	Revisions	03/03/14	03/31/14	21		Water Conservation Office		
23	GPCD Calculator	04/01/14	04/30/14	22		Water Conservation Office		
24	PUC	05/01/14	05/30/14	22		Water Conservation Office		
25	Finance	06/02/14	07/31/14	44		Water Conservation Office		
26	Info Item to Council	08/01/14	09/30/14	43		Water Conservation Office		
27	Finalize Edits/Comments to Water Conservation Plan							
28	In House Deadline	11/28/14	11/28/14	1		Water Conservation Office		
29	Approval							
30	Vote to Accept/Present to OSE	12/01/14	12/19/14	15				
31	Water Conservation Plan due to OSE	10/01/12	01/15/15	599				















Basic Design Layout
Identify Planting Areas
Identify Flow Pattern



Water will seep through
"Weep Wall"


Both sides of wall use
fabric to prevent clogging

Larger cobble on top of
fabric holds it in place





Areas Excavated



Block removed from
another median is
used due to 50%
porous air space



Double Wrapped

"French
Drain"
36"



Additional Cobble placed on top of wrapped block, this was also wrapped



Entire area covered with fabric





City of Santa Fe, New Mexico

memo

DATE: April 28, 2013

TO: Water Conservation Committee

VIA: Laurie Trevizo, Water Conservation Program Manager
Rick Carpenter, Water Resources and Conservation Section Manager

FROM: Alan Hook, Water Resources Analyst

RE: **Allocation of water credits and approval of the 2012 Annual Water Report by the Public Utilities Committee for City Council's final approval**

Purpose:

The 2012 Annual Water Report, as cited in City Code §25-9.5 Annual Water Budget, compiles and summarizes useful information about the City of Santa Fe Water Division including the water supply, water production, deliveries, conservation programs, potable and wastewater resources, and customer use. The information presented in the report contains water data through December 2012 and year 2013 projections.

The adoption of this report annually is required by the Water Budget Ordinance. The purpose is to provide the elected officials an understanding of the past, present and future water supply picture and the option to allocate any unallocated water credits generated from the City of Santa Fe Water Division's water right acquisition program.

Status of water credits (in acre-feet):

Affordable housing credits:	36.91
Water conservation rebate credits (for development):	16.05
Publicly-owned water right credits (for allocation):	40.73
Privately-held water credits (for development):	498.90

Allocation of Water Credits:

40.73 acre-feet of water is available for allocation by the governing body to the City of Santa Fe's (City) needs like new parks, municipal buildings and facilities, or to City supported efforts like affordable housing units or target flows in the Santa Fe River (see p. 9 of the 2012 Annual Water Report). In 2011, the governing body left the balance of 39.64 acre-feet remain within the publicly-owned water right credits reserve, since an adequate balance of approximately 41 acre-feet remained in the affordable housing credits for future development.

Requested Action:

Staff requested that the Public Utilities Committee approve the 2012 Annual Water Report and forward it on to the full City Council for final approval. The Affordable Housing Credits contain sufficient water credits, 36.91 acre-feet, for future housing development. At an annual average dedication of 4.30 acre-feet in 2009 to 2012 to affordable homes built, the existing affordable housing credits will last for approximately 8 years.

2012 Annual Water Report



City of Santa Fe Municipal Reservoir, Autumn 2012

City of Santa Fe April 2013



Water Division

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City of Santa Fe

David Coss, Mayor
Robert P. Romero, City Manager

City Councilors
Rebecca Wurzbarger, Mayor Pro-Tempore, Dist. 2
Patti Bushee, Dist. 1
Chris Calvert, Dist. 1
Peter N. Ives, Dist. 2
Carmichael A. Dominguez, Dist. 3
Christopher M. Rivera, Dist. 3
Ronald Trujillo, Dist. 4
Bill Dimas, Dist. 4

Compiled, written, and edited by:
Alan G. Hook, Sangre de Cristo Water Division

Comments and Questions
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For more information visit: www.santafenm.gov

Contributing Divisions and Departments

- City Attorney’s Office
- ITT Department
- Land Use Department
- Utility Billing Division
- Wastewater Division
- Water Budget Office

Acknowledgments

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Peter Ortega
Jonathan Phillips
Alex Puglisi
Bryan Romero
Erica Schwender
Brian Snyder
Laurie Trevizo

Introduction



Santa Fe Watershed 1926

As water resources in northern New Mexico become increasingly limited and the region’s population continues to grow, the improved understanding of water-related issues is imperative. As one of the largest municipal water suppliers in the state, the City of Santa Fe Water Division delivers billions of gallons of water each year to customers in the greater Santa Fe urban area.

The purpose of this report is to provide the Santa Fe community with an annual report that summarizes the state of the City of Santa Fe’s Water Division and the water resources we depend upon. This report compiles and summarizes information about the City of Santa Fe’s Water Division including water demand, conservation, water supply, water rights, offsets

and credits, types of water use, water quality, system maintenance, energy use, climate change, and utility financial information.

This report fulfills the reporting requirements of the City of Santa Fe Ordinance 2009-38 “Water Budget Requirements.” The information presented within this report contains water data through December 2012 and the anticipated 2013 water and supply projections. Averages from previous years are included for comparison. For the sake of brevity, not all the supporting data is included here in this report. Supporting information is available on the City of Santa Fe’s website at www.santafenm.gov or by contacting the City of Santa Fe Water Division directly.

The information presented within this report contains water data through December 2012 and the anticipated 2013 water and supply projections.

2013 Water Demand and Supply Projections

Anticipated Demand (acre-feet)

Total: approximately 10,000 acre-feet*		10,005
City Customers		9,850
Water Deliveries:	Santa Fe County	150
	Hyde Park Estates	5

*assumes a minimum of 100 gallons per capita per day and limited, new water demand.

Anticipated Supply Source (acre-feet)

Total Production:	10,000
Santa Fe River use (CRWTP ¹)	2,020
City well use	1,150
Buckman well use	1,600
Buckman Direct Diversion	5,230

1. Canyon Road Water Treatment Plant

Storage Projected for December, 2013 (acre-feet)

Target end of year storage in Santa Fe municipal reservoirs	1,576
Total anticipated stored San Juan-Chama Water:	
Heron Reservoir	5,230
El Vado Reservoir	0
Abiquiu Reservoir	3,600
Elephant Butte Reservoir	14,000
Total storage in the Rio Grande Basin	24,406

Anticipated Santa Fe River flows (acre-feet)

Santa Fe River target flows	320
Effluent releases to the Santa Fe River	4,000

Anticipated 2013 Offset Requirements (acre-feet)

Rio Grande	1,200
Rio Tesuque	35
Rio Nambe-Pojoaque	59
La Cienega Area	2
Total Offsets	1,296

Private Wells

Estimated number of private wells within the city limits	3,000
Anticipated number of replacement wells drilled	0
Anticipated number of new private wells	0

2013 basic 5/8" meter residential water rate

Monthly service charge	\$18.42
Sept-April	\$6.06/1,000 gallons for first 7,000 gallons, \$21.72/1,000 gallons thereafter
May-Aug	\$6.06/1,000 gallons for first 10,000 gallons, \$21.72/1,000 gallons thereafter

An acre-foot is equivalent to 325,851 gallons.

This page summarizes the City's anticipated water demand and supply picture for 2013. Further details can be found in subsequent sections of this report.

Water Demand

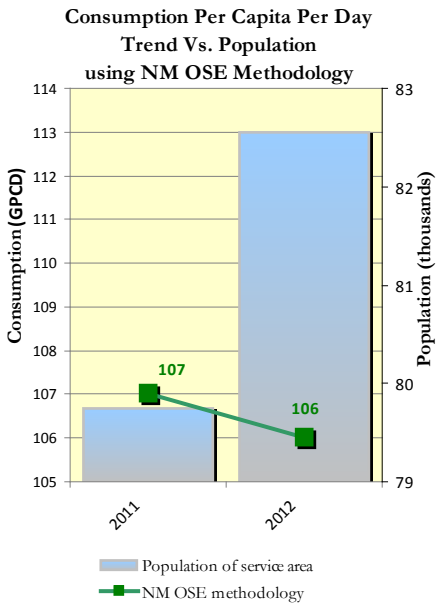
Per Capita Consumption

A common metric for comparing annual water use and water conservation effectiveness is gallons per capita per day (gpcd); which is derived by dividing the amount of water supplied to the City of Santa Fe by the population of water division customers served.

In 2012, the City of Santa Fe Water Division customer demand of 9,777 acre-feet resulted in a service-area gpcd of 106, based upon the New Mexico Office of the State Engineer's (NM OSE) methodology, one of the lowest gpcd values of any comparable city in the country. The calculated gpcd does not include deliveries to wholesale customers, such as Santa Fe County or Las Campanas (see page 18, Wholesale Water Deliveries, for water usage by these wholesale customers).

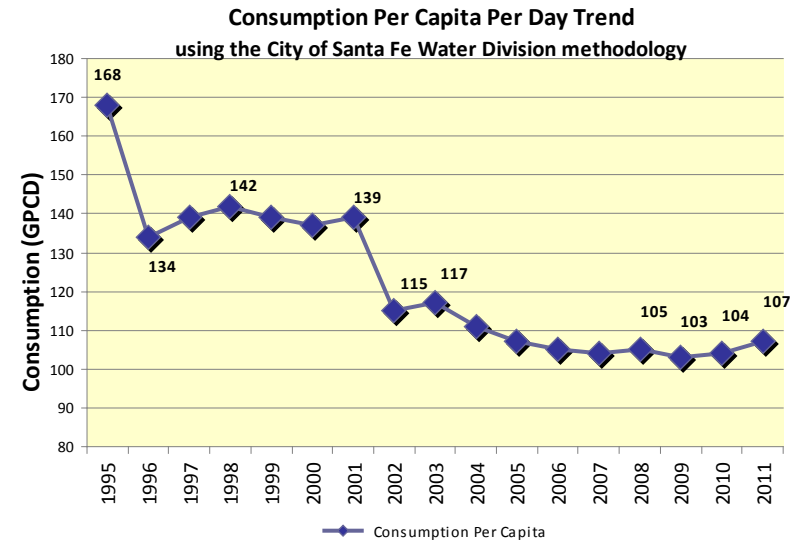
The NM OSE methodology bases the population served upon the number of water division residential customers multiplied by an American Community Survey (ACS)-derived vacancy rate, now based upon 2011 data, and an ACS-based residents per occupied household value. The submittal of the NM OSE gpcd fulfills compliance with the NM OSE's diversion permit for surface water to the Buckman Direct Diversion facility.

The creation of a new multi-family billing category in 2006 caused a shift in total water usage from commercial to residential/multi-family. In 2012, the largest sector of water usage for the 106 gpcd was single-family residences at 56%. Multi-family residences accounted for 10% and commercial accounts 20% of total water usage.



Comparative graph of the City of Santa Fe's NM OSE gpcd vs. the estimated water utility customer population for 2011 and 2012

Prior to utilizing the NM OSE gpcd methodology, the City of Santa Fe Water Division gpcd method, used for the previous seventeen years, determined the population served upon the most recent (2010) U.S. Census population data (adjusted for households that rely solely on domestic well water) and updated it annually utilizing growth rates from annual housing permits.



Historical comparative graph of the City's gpcd for 1995 to 2011

In 2012, the City of Santa Fe Water Division customer demand of 9,777 acre-feet resulted in a service-area gpcd of 106, based upon the New Mexico Office of the State Engineer's methodology, one of the lowest gpcd values of any comparable city in the country.

Water Bank

The City of Santa Fe (City) has a series of ordinances that require all new projects to offset their demand to the City of Santa Fe Water Division supply. The options available for the offset of new water demand include water rights acquisition and conservation in existing development. The City’s water bank tracks the inflows (credits), outflows (debits), ownership, and designated use. For detailed information, please refer to the following ordinances and city code; 2005 Water Transfer Ordinance, 2009-38 Water Budget Requirements (effective January 1, 2010), and Water Conservation provisions in City Code Chapter 25.

- Water credits are derived from multiple sources:
- a. Transfer of Middle Rio Grande water rights for development projects as required under the 2005 Water Bank Ordinance (and modified by 2009-38) or for water banking;
 - b. Transfer of Middle Rio Grande water rights for water banking as per the 2009-38 Water Bank Ordinance
 - c. Water conserved through the current conservation rebate program;
 - d. Toilet retrofits credits verified by June 30, 2010 by Water Budget Administration Office;
 - e. City of Santa Fe Water Division’s water right acquisition program;
 - f. Water conserved by City-initiated conservation programs; and
 - g. Water conserved via a conservation credit program.

Any new water demand on the City water system requires a water credit

from the credit bank in an equal amount. As defined by ordinance, development projects that require less than 10 acre-feet of water (residential), less than 7.5 acre-feet of water (mixed use), or less than 5 acre-feet (commercial) can acquire the necessary water from the alternatives “a”, “b”, “c”, and “d” above. All projects with larger water demands must use option “a” or “b”. Water credits generated through City efforts (i.e. “e” and “f” previously listed) are available for the water needs of the City (e.g. new parks, municipal buildings, convention center, etc.) or City-supported projects (e.g. affordable housing dwelling units, Santa Fe River). Once water is allocated to a project from a water credit account, the appropriate “debit” is made from the appropriate account in the water bank.

By the end of 2012, 39.64 acre-feet of water was available for allocation to the City’s needs or City supported efforts (e.g. new parks, municipal buildings, convention centers, affordable housing dwelling units, and the Santa Fe River).

For 2013, the affordable housing unit credits are adequate. In 2012, 4.05 acre-feet was allocated to affordable housing units, leaving an ending balance of 36.91 acre-feet. If, as in 2012, 27 homes are built a year under the Santa Fe Homes Program (SFHP) and Housing Opportunity Program (HOP) using approximately 0.15 acre-feet from the water bank per home, the affordable housing units credit pool of 36.91 will last for nine years.

Water Bank Accounting

Affordable Housing Offsets	2009	2010	2011	2012
Initial balance	-5.20	51.67	45.46	40.96
Governing body allocations to affordable housing	59.32	0.00	0.00	0.00
Annual dedications to affordable housing	-2.45	-6.21	-4.50	-4.05
End-of-year affordable housing water credit pool balance, comprised of water rights and conserved water	51.67	45.46	40.96	36.91
Developer Offsets	2009	2010	2011	2012
Initial balance	0.00	0.00	26.28	25.45
Conservation credits generated	0.00	32.46	9.04	7.15
Annual dedications to private projects	0.00	-6.19	-9.87	-16.54
City revenue from sales		\$100,000	\$160,000	\$270,000
End-of-year conserved water credit reserve balance for sale to developers	0.00	26.28	25.45	16.05
City Water Rights Credits	2009	2010	2011	2012
Initial balance	0.00	0.00	39.64	39.64
Deposits into water bank	9.62	39.64	0.00	1.09
Withdrawals (allocations by governing body)	-9.62	0.00	0.00	0.00
End-of-year balance of city owned water rights not yet allocated by governing body	0.00	39.64	39.64	40.73
Privately Owned Water Credits	2009	2010	2011	2012
Initial balance	403.28	455.89	483.50	518.21
Deposits into water bank	62.74	33.32	41.75	0.00
Withdrawals (dedications by developers to their projects)	-10.13	-5.71	-7.04	-19.31
End-of-year balance of privately owned water rights	455.89	483.50	518.21	498.90
Privately Owned Water Credits from Old Toilet Retrofit Program	2009	2010	2011	2012
Initial balance	150.00	111.00	93.00	80.00
Withdrawals (dedications by developers to their projects)	-39.00	-18.00	-13.00	-18.00
End-of-year balance of privately owned water rights	111.00	93.00	80.00	62.00

Water Bank Accounting Table in acre-feet except as noted

Water Conservation Retrofit & Rebate Programs

In addition to gallons per capita per day, the City of Santa Fe can quantify the success of the Water Conservation Program through the retrofit, rebates and incentives programs.

Quantifying the success of a water conservation program can be difficult. Many cities rely upon their annual gallons per capita per day (gpcd) calculation as a measure of the success of their water conservation program. In addition to gpcd, the City of Santa Fe can quantify the success of the Water Conservation Program through the retrofit, rebates and incentives programs. These programs and the credited water savings have changed over the years, including the revised or new regulations associated with these programs.

The chronology below summarizes the ordinances and resolutions pertaining to how water is conserved, and also the incentive programs (retrofits and rebates) which were created as a way to encourage community participation in the water conservation requirements.

2002 Annual Water Budget Requirements (adopted by Resolution 2002-55 and revised by Resolution 2003-106). All new construction served by the City water utility must implement stringent water conservation requirements and offset new demand through retrofitting high-use toilets, typically 3.5 or 5 gallons per flush (gpf), with low flush toilets (1.6 gpf) or by purchasing pre-1907 Middle Rio Grande surface water rights.

2002 The City of Santa Fe purchased 75 gallon rain barrels for distribution; 1,000 customers were able to purchase one rain barrel each for \$35, a significant savings from the actual cost of \$74.95. This program only lasted a few months before the supply of rain barrels was exhausted.

2003 Establishment of the Water

Budget Program, also known as the Toilet Retrofit Program, was created to track the number of toilet retrofits and accumulated water savings. Pre-certifications are water credits awarded to entities that have retrofitted any number of toilets but have not designated the water credits to a future project.

2004 A Rebates Program was introduced for hot water recirculators (\$100), washing machines (\$100) and rain barrels (\$30) resulting in water savings of 67.26 acre/feet between 2004 and 2009, when the program ended.

2005 The Water Rights Transfer Program (SFCC 1987 § 25-12). The ordinance modified offset requirements for new development. The City code now requires offsets with Middle Rio Grande surface water rights, transferred to the City, instead of toilet retrofits for commercial developments greater than 5 acre-feet and residential developments greater than 10 acre-feet.

2009 A 1998 analysis "Water Use in Santa Fe" was updated to include additional customer sectors. These sectors (e.g. single family, apartment, office, medical, religious, schools, parks) are used in creating development water budgets. The report, Water Use In Santa Fe (2009), is available on the City's website at: <http://www.santafenm.gov/DocumentView.aspx?DID=5017>

2009/10 Water Demand Offset Requirements (adopted by Ordinance #2009-38). The ordinance replaced the Annual Water Budget Requirements (Toilet Retrofit Program). Outstanding

toilet retrofit credits are moved into the Water Bank as they are being redeemed. Components of the new City code include:

- The development of a Water Budget and a Building Permit Requirement (SFCC 1987 § 14-8.3): Applicants are required to offset demand through dedication of water conservation credits or transferred water rights.
- City's Water Budget (SFCC 1987 § 25-9): Water managers are required to prepare annual accounting of current and projected supply and demand, and allocate water made available by water rights purchases, leases, and conservation measures to meet priorities, including affordable housing.
- City Water Bank (SFCC 1987 § 25-10): A water bank was established to account for water credits derived from conservation programs and water rights transfers to offset future demand. Some of the credits are available for purchase by developers or for allocation to City priorities.
- Conservation Credit Programs (SFCC 1987 § 25-11): credits generated by water conservation rebates and water conservation contracts.
- Water Rights Transfer Program (SFCC 1987 § 25-12): requires that new commercial development greater than 5 acre-feet and residential development greater than 10 acre-feet acquire and transfer water rights to City before obtaining building permit.

2010 A new rebate program was instituted for which credits would now go into the Water Bank instead of the Water Budget Program. Rebates

were offered for high-efficiency toilets (HET) (\$175/residential, \$504/commercial), water free urinals (\$630), high-efficiency clothes washers (\$480), rain barrels (\$12-\$50 depending on size) and water harvesting systems (\$0.25/gallon), and for commercial process efficiency, resulting in 32.4626 acre/feet of conservation credits delivered to the Water Bank.

Note: This program was funded in part with a grant from the American Recovery and Reinvestment Act of 2009. The program was ended in July 2010 due to depletion of funds.

2011 Beginning, May 1, 2011, rebates were offered for high-efficiency toilets (HET) (\$175/ residential, \$125, \$250, or \$500/commercial depending on type), water free urinals (\$500), high-efficiency clothes washers (\$150 or \$350 depending on type), rain barrels (\$12-\$50 depending on size) and water harvesting systems (\$0.25/gallon), and for commercial process efficiency, resulting in 9.0402 acre-feet of conservation credits delivered to the Water Bank.

2012 Rebates for the same products and at the same values as 2011 were continued in 2012, resulting in 7.1504 acre/feet of conservation credits delivered to the Water Bank (see the chart on the next page.)



Water Conservation Office

The City of Santa Fe has built a comprehensive and effective water conservation program from incremental steps that began in 1997. Currently, the Water Conservation Office provides educational activities for all ages, administers rebate and incentive programs, enforces the water conservation requirements of various City ordinances, uses media for public outreach and leads by example with xeriscape demonstration gardens. Tiered water rates have also played a key role in reducing consumption.

A number of strategies have been developed to engage the many audiences that make up the City of Santa Fe. These programs are designed to educate each audience about the benefits of conserving water as well as provide the tools and knowledge necessary to make the desired changes. Some of the most popular programs are summarized below:

Children’s Programs
9th Annual Children’s Water Conservation Poster Contest: The 2012 theme for the posters and related educational activities was “Living in a Drought”.



- 375 posters were submitted by 1st-6th grade students
- 18 posters were selected for the 2013 Water Conservation calendar

- The grand prize winner’s poster is featured on the back of a City bus for one year

10th Annual Children’s Water Fiesta, April 11-12, 2012:

- 650 4th grade students from 9 different Santa Fe Public Schools attended the Fiesta
- 14 organizations donated their time and effort for both days
- 14 activities were presented each day, of which 5 were new activities for this year.

RiverXchange: This was a new program in 2012, which provided a year-long curriculum for students to explore key water concepts through study of their local river ecosystem, hands-on activities, field trip and service project.

- 125 5th grade students participated
- Field trips to Santa Fe River, Buckman Regional Water Treatment Plant and Waste Water Treatment Plant
- Guest speakers from five partner agencies, including New Mexico Office of the State Engineer, New Mexico Environment Department, presented on water conservation, water quality, stormwater, river ecosystems and wastewater treatment.

Adult Programs
Mayor’s Challenge for Water Conservation: This is a friendly competition between U.S. cities, sponsored by a non-profit organization, The Wyland Foundation, to see which city can be the most water conscious. 2012 was Santa Fe’s first year to participate, and despite having been misclassified as a city of 100,000 or more, Santa Fe came in 4th in this water conservation pledge campaign,

The Water Conservation Office provides educational activities for all ages, administers rebate and incentive programs, enforces the water conservation requirements of various city ordinances, uses media for public outreach and leads by example with xeriscape demonstration gardens.

2012

Commercial Use	Qty of Rebates	\$ Amount per Rebate	Water Savings In Acre-Feet per Rebate	\$ Amount for all Rebates	Water Savings In Acre-Feet for Water Bank
Flushometer Valve HET		\$ 500	0.0336	\$ -	0.0000
Tank Type HET	6	\$ 250	0.0168	\$ 1,500	0.1008
Hotel/Motel HET		\$ 125	0.0022	\$ -	0.0000
Water Free Urinal		\$ 500	0.0420	\$ -	0.0000
HE Clothes Washer replacement for top loading washer		\$ 350	0.0233	\$ -	0.0000
HE Clothes Washer exchange for any front loading Clothes Washer		\$ 150	0.0088	\$ -	0.0000
CPE (Commercial Process Efficiency)			0.4500	\$ -	0.0000
Sub Total				\$ 1,500	0.1008 acre-feet
Residential Use					
HET Residential	254	\$ 175	0.0053	\$ 44,450	1.3462
HE Clothes Washer replacement for top loading washer	228	\$ 350	0.0233	\$ 79,800	5.3124
HE Clothes Washer exchange for any front loading Clothes Washer	41	\$ 150	0.0088	\$ 6,150	0.3608
Rain Barrel 50-99 g	12	\$ 12	0.0008	\$ 144	0.0096
Rain Barrel 100-199 g	3	\$ 25	0.0015	\$ 75	0.0045
Rain Barrel 200-299 g	1	\$ 50	0.0031	\$ 50	0.0031
Water Harvesting	865	\$ 0	0.0000	\$ 216	0.0130
Sub Total				\$ 130,885	7.0496 acre-feet
Total				\$ 132,385	7.1504 acre-feet

Conserved water allocated to the Water Bank in 2012.

demonstrating our residents' commitment to water conservation.

Fix-A-Leak Week: This is a nationwide EPA WaterSense campaign, which occurred on March 12-18, 2012. The Water Conservation Office partnered with NM OSE to create the "Bad Flapper" campaign, featuring a 1920's silent-movie style villainess, to demonstrate the number one cause of leaky toilets - a faulty flapper. The campaign included:

- Commercials shown on KOAT channel 7
- Commercials in both DeVargas and Regal Santa Fe Theaters
- Newspaper ads
- Bill inserts
- Radio commercials
- Dye tab cards for detection of leaky flappers were handed out to customers at the Water Division

Santa Fe Master Gardener Association: Presentations on drip irrigation to the Master Gardener Association Intern Class.

Qualified Water Efficient Landscaper (QWEL) Certification Training:

- QWEL class offered at Santa Fe Community College in Fall 2012
- The City of Santa Fe is the only New Mexico agency offering this training which is endorsed by the U.S. EPA WaterSense program

Weekly Radio Talk Show: Now in its 10th year, "Water Talk", a 30 minute radio show on KSVE 810 am is hosted by City staff. The hosts discuss water conservation, with contributions from guests, including The City of Santa Fe's Water Resources Coordinators, Public Utilities Engineer Technician, Public Utilities Department and

Water Division Director, Public Utilities Billing Director, Public Utilities Planner, Water Resources and Conservation Manager, City Councilors and others.

Public Outreach and Marketing Commercial Outreach: 5,500 letters from the Water Conservation Office were included with business license renewal notices sent out in December. The letters provided the City of Santa Fe Comprehensive Water Conservation Requirements, information about rebates, and contact information to order restroom signage. As a result of the letter, 100 signs were sent out.

Water Conservation Median: St. Michaels at Calle Lorca - Sponsored by the Water Conservation Office, with assistance from City Parks, Water Transmission and Distribution, and Custodial Services, the median was redesigned to capture 1,200 gallons of stormwater runoff to water the new drought tolerant trees and shrubs.

Demonstration Gardens: Water Division Office and Water Division Annex for the Water Conservation program have gardens showcasing water harvesting techniques, recycled water feature powered by solar, themed plantings and efficient irrigation with a weather based controller. A new active water harvesting system, with two 1,000 gallon tanks, was installed to collect parking lot stormwater runoff for use on plantings at the Water Division Annex.

Water Rate Structure

The City of Santa Fe maintains a pricing structure that encourages water conservation. A two-tier rate structure with water usage based upon meter size

and time of year is in place as approved by the governing body. This rate structure benefitted the success of the City of Santa Fe's Water Conservation and Drought Management Programs.

For a basic 5/8" meter the residential, multi-family, and commercial rate, including the monthly service charge, water rates are as follows:

- Monthly service charge: \$18.42
- During the months of Sept.-April the water rate charge is \$6.06/1,000 gallons for the first 7,000 gallons, \$21.72/1,000 gallons thereafter.
- During the months of May-Aug. the water rate charge is \$6.06/1,000 gallons for the first 10,000 gallons, \$21.72/1,000 gallons thereafter.

Drought

According to the National Weather Service the 2011 to 2012 24-month period up to December 2012 was the warmest and driest period in New Mexico since the late 1890's. Also, The City of Santa Fe received only 47% of normal, annual precipitation in 2012.

The basic definition of drought by the National Drought Mitigation Center (NMDC) is a deficiency of precipitation over an extended period of time, usually a season or more. Furthermore, drought is a normal, recurrent feature of climate. The most commonly used definitions of drought are based on meteorological, agricultural, hydrological, and socioeconomic effects.

The Natural Resources Conservation Service (NRCS) annually provides streamflow forecasts in the spring for the Rio Grande Basin based upon snowpack moisture content, soil conditions, forecasted precipitation,

and seasonal temperatures. In 2012, the Santa Fe River streamflow forecast was 60% of the 30 year average. In 2013, the streamflow forecast for the Santa Fe River is 32% of the 1981-2010, 30 year average.

For the Rio Grande, the NRCS' 2012 streamflow forecast at Otowi Bridge was 39% of the 30 year average. At Otowi Bridge is the USGS' gaging station to measure flow for deliveries to the BDD Project. In 2013, the NRCS' 2013 streamflow forecast is only 30%; however, storage in the Rio Grande basin, is 31 percent of the 30 year average and 63 percent of the storage levels from one year ago. Critically low flows in the Rio Grande are of concern to the BDD Project because the facility is required to curtail diversions during critically low flow periods pursuant to federal permit conditions associated with endangered species as stated by in the BDD Project's Environmental Impact Statement and Record of Decision. Also, when flows are below approximately 200cfs, the facility cannot physically divert water from the river. Even if supplemental stored San Juan-Chama project water is released from upstream reservoirs there must be enough "carriage water" with adequate flows in the Rio Grande to deliver the City of Santa Fe's portion of surface water to the BDD Project's intake structure downstream.

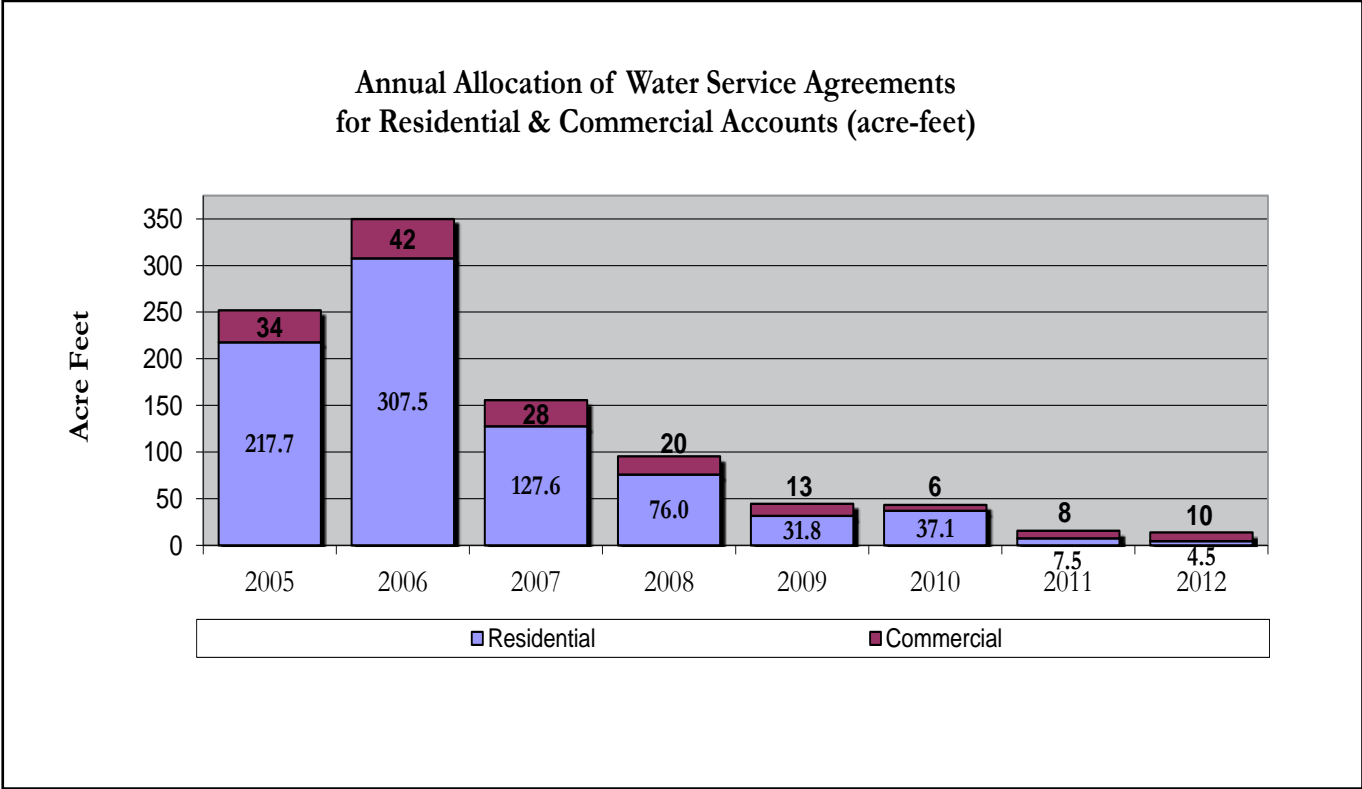
Despite two years of persistent and severe drought with high peak daily water demands and because of water conservation efforts, the City of Santa Fe Water Division's total water production has remained under 10,000 acre-feet and the customers water demand has consistently remained under 110 gallons per capita per day.

According to the National Weather Service the 2011 to 2012 24-month period up to December 2012 was the warmest and driest period in New Mexico since the late 1890's.

Near-future Water Demands

Any entity seeking new water service within the City limits must complete either an Agreement for Metered Service (AMS) or an Agreement to Construct and Dedicated (ACD). An AMS is typically an agreement to connect a single meter or multiple meters, such as a subdivision or commercial centers, to the City of Santa Fe Water Division's distribution system. An AMS is typically used when the applicant is not seeking fire

service or a main extension. An ACD is an agreement for fire service or a main extension for any size of meter. The applicant must specify the type of connection on the application from which staff establishes a water budget based on standard water usage criteria. The annual water allocation in AMS and ACD showed a sharp decrease from 2006-2007; demand for new services for 2012 stood at 14.5 acre-feet.



Annual allocation of water through AMS and ACD Water Service Agreements

AMS and ACD Water Service Agreements in acre-feet																	
	2005		2006		2007		2008		2009		2010		2011		2012		
Residential	Demand (AFY)	Units	Demand (AFY)	Units	Demand (AFY)	Units	Demand (AFY)	Units	Demand (AFY)	Units	Demand (AFY)	Units	Demand (AFY)	Units	Demand (AFY)	Units	
Single Family		587	141.8	965	246.4	307	68.8	187	43.2	5	1.3	198	36.9	12	1.9	14	2.96
Apartment/Con		153	32.1	285	59.9	185	38.9	116	24.4	0	0.0	0	0.0	10	1.6	3	1.4
Guesthouse		77	9.2	9	1.1	6	0.7	5	0.6	2	0.2	0	0.0	1	0.1	1	0.1
Mobile Home		0		1	0.2	0		0	0.0	133	30.3	1	0.2	0	0.0	0	0.0
Senior Comple		246	34.4	0		137	19.2	56	7.8	0	0.0	0	0.0	28	3.9	0	0.0
Subtotal Resid		1063	217.7	1260	307.5	635	127.6	364	76.0	140	31.8	199	37.1	51	7.5	18	4.5
Commercial	Demand (AFY)	sq. ft.	Demand (AFY)	sq. ft.	Demand (AFY)	sq. ft.	Demand (AFY)	sq. ft.	Demand (AFY)	sq. ft.	Demand (AFY)	sq. ft.	Demand (AFY)	sq. ft.	Demand (AFY)	sq. ft.	Demand (AFY)
Office (Non-me		44355	2.7	22115	1.3	60923	7.3	83717	4.7	51452	3.1	1600	0.1	22249	1.6	15342	1.07
Office (Medica		52699	7.9	42000	6.3	33281	10.0	20300	3.1	2996	0.4	8272	0.6	0	0.0	8816	0.63
Retail Store		30470	1.8	51993	3.1	33280	4.0	1200	0.1	6929	9.0	29113	2.9	150000	6.8	7000	0.45
Grocery Store		9259	1.1	0		0		0		0	0.0	0	0.0	0		6000	0.76
Restaurant (Fu		0		20525	5.9	0		0		0	0.0	0	0.0	0		144 (seats)	2.88
Restaurant (Lir		1500	2.5	0		0		3022	8.4	1	0.0	0	0.0	0		0	0.00
Wholesale, Wa		4273	0.2	149050	6.0	0		37846	1.5	10612	0.4	2000	0.1	0		0	0.00
Industrial Man		0		4375	0.2	0		0		0	0.0	0	0.0	0		0	0.00
Church (withor		7541	1.2	0		0		0		0	0.0	0	0.0	0		0	0.00
Lodging (Limit		46	6.9	0		0		0		0	0.0	0	0.0	0		0	0.00
Schools, Eleng		0		605	4.8	0				0	0.0	0	0.0	0		550 (students)	2.90
Other (not liste		196249	9.9	64977	14.6	29001	6.7	141	1.7	0	0.0	14368	2.7	0	0.0	7000	0.81
Subtotal Comm		346392	34.2	355640	42.2	156485	28.0	146226	19.5	71990	12.9	55353	6.4	172249	8.3	44158	9.5
Total Allocation:			251.8		349.7		155.5		95.5		44.8		43.5		15.8		14.0

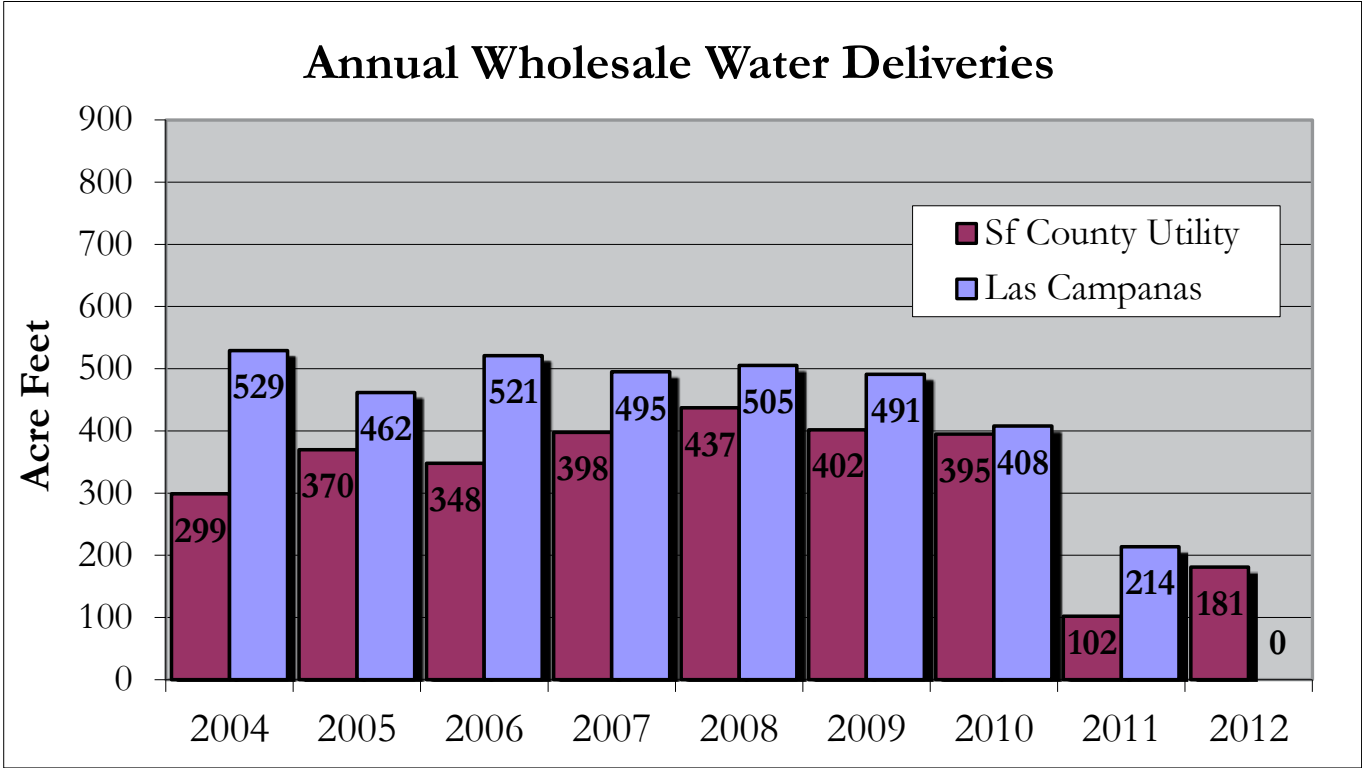
AMS and ACD Water Service Agreements

Wholesale Water Deliveries

In 2012, Santa Fe County water utility took delivery of water under the City/County Water Resources Agreement during the times when the BDD facility was not producing water.

Before 2012, the City has contracts to deliver wholesale water to Las Campanas and Santa Fe County Utility; however, with the successful completion of the Buckman Direct Diversion (BDD) facility in January 2011, the BDD facility has become the primary source of water for Santa Fe County's water utility. Las Campanas' potable water needs are being met by Santa Fe County's water utility under the terms stipulated in a bulk water agreement between Santa Fe County and Las Campanas.

Since the BDD facility has been completed, the 2005 City/County Water Resources Agreement provides Santa Fe County with up to 500 acre-feet per year of wholesale delivery water from the City of Santa Fe, with an additional 850 acre-feet available under drought and emergency conditions. In 2012, Santa Fe County water utility took delivery of water under the agreement during the times when the BDD facility was not producing water.



Annual Wholesale Water Deliveries

Water for the Santa Fe River

As directed by ordinance, in mid-April of each year the annual target flow allocation is determined based upon projections for the year's anticipated watershed yield (Santa Fe River runoff forecasts). The 2013 flow target was set at 320 acre-feet based upon reduced moisture content in the upper Santa Fe watershed snowpack. During the previous year, staff has engaged in a range of activities that are outlined in the Target Flow Administrative Procedures, e.g., establishing the annual hydrograph (flow pattern) for target flows; monitoring flows for time and distance traveled within the river channel; and record-keeping of target flow volumes. The Target Flow hydrograph has also been administered to provide flows that "support community events scheduled along the Santa Fe River" as provided for in the ordinance.

As directed by the Target Flow ordinance, and outlined in the Target Flow administrative procedures, staff shall provide the governing body with an annual report that describes Target Flow operations and flow volumes for the preceding year, plus the planned Target Flow hydrograph for the coming year. This year's annual report on Santa Fe River Target Flow will be provided to the governing body in April, 2013.

Year	Targeted Bypass Flow for the Santa Fe River per Ordinance (Acre-feet)	Actual Flow to Santa Fe River below Nichols Reservoir (Acre-feet)*
2008	200	200
2009	700	719
2010	800	2,033
2011	300	321
2012**	600	542

*Note: Actual Flow to Santa Fe River attributed to the targeted bypass flow, reservoir management releases, reservoir spillover, and stormflow

**2012's actual flow is a partial total from 4/16/2012 to 4/15/2013

Voluntary River Conservation Fund

In accordance with City Code Chapter 25-8.1, the City of Santa Fe set up a voluntary river conservation fund for citizens to donate money to the City for the purchase, acquisition, long-term leasing of consumptive water rights in quantities sufficient to sustain the total water demand for either a living Santa Fe River or for the preservation and continuation of sufficient water flowing through the Rio Grande. Since, Fiscal Year 2006-2007 the volunteer donations have amounted to approximately \$111,500. Currently, with the match provided by the City of Santa Fe, the total amount of the Voluntary River Conservation Fund is approximately \$223,000.

The Santa Fe City Council has adopted an amendment to the Voluntary River Conservation Fund ordinance to expand the purposes for which the fund may be utilized. The amended ordinance expands "the use of the donated funds to include projects that will improve the flow of water in the Santa Fe River in ways that enhance the ecosystems of the Santa Fe River and its riparian corridor." Funds collected prior to March 16, 2013 shall be used as stipulated in the original ordinance.

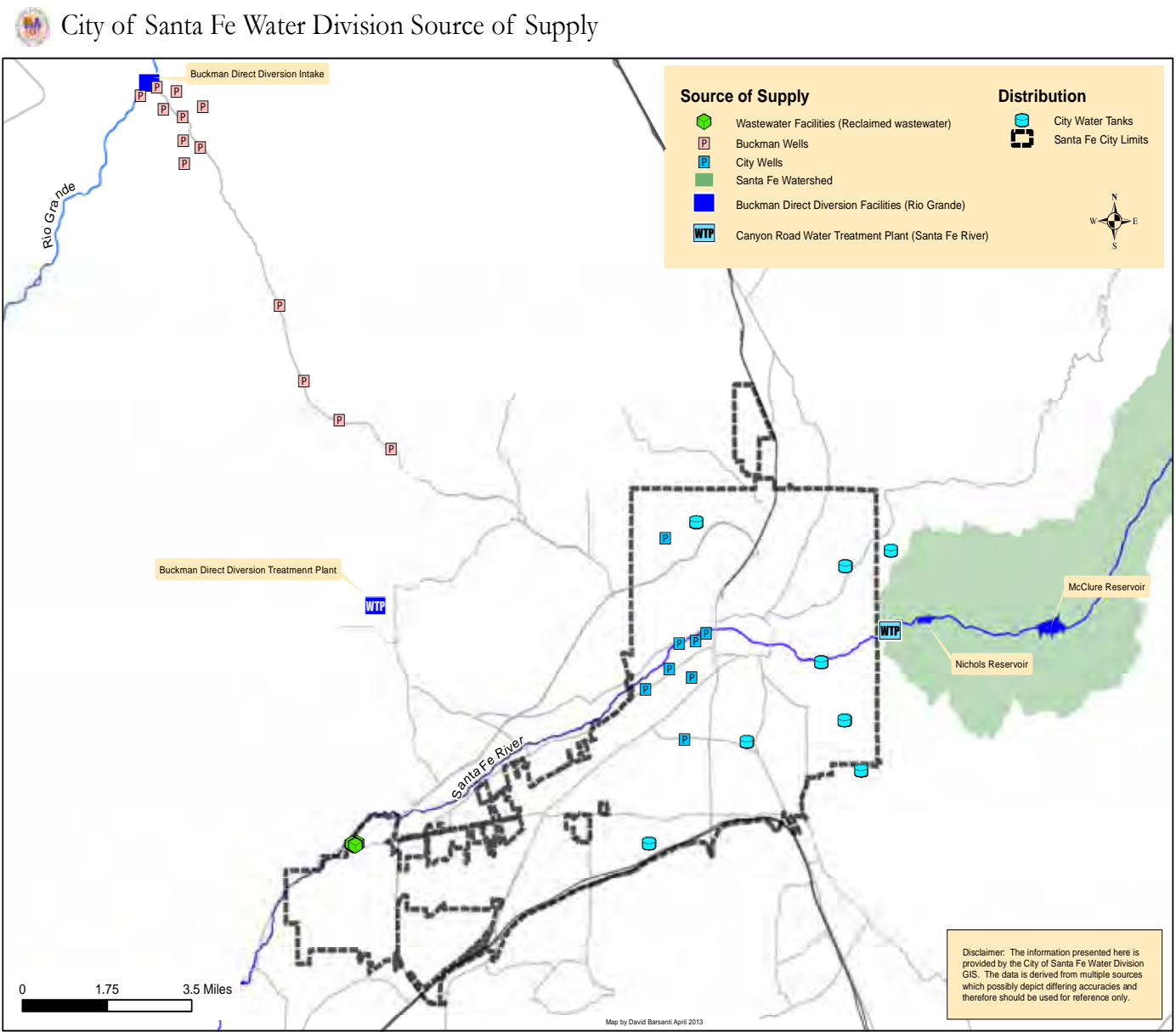


Annual Children's Fishing Derby and River Festival along the Santa Fe River

Our Water Supplies

Sources of Potable Supply

The City of Santa Fe Water Division produces an adequate, reliable, safe and sustainable water supply for its customers from one of the City’s four supply sources: the Santa Fe River, the City well field, the Buckman well field, and the Rio Grande via the Buckman Direct Diversion Facilities, all identified in the map below. Also, the City of Santa Fe Water Division utilizes reclaimed wastewater and water conservation to reduce the total supply of potable water.



Map of the City of Santa Fe Water Division Sources of Supply

The City of Santa Fe has been relying on the Santa Fe River for its community needs since the founding of the City four hundred years ago. Since 1995, when the City purchased Sangre de Cristo Water Company from PNM, the City has managed a declared water right of 1,540 acre-feet per year and a licensed water right of 3,500 acre-feet per year on the river for a total of 5,040 acre-feet. Water from the Santa Fe River is treated at the Canyon Road Water Treatment plant (map on previous page), from which it flows into over 600 miles of distribution lines throughout the City.

Stream gage records dating back to 1915 identify the mean inflow (50th percentile) of the Santa Fe River in the upper watershed to be approximately 4,909 acre-feet with the 25 and 75 percentiles being 3,065 and 7,045 acre-feet, respectively.

The Santa Fe Water Improvement Company built a reservoir on the Santa Fe River in 1881. Currently the City has a license to store up to 3,985 acre-feet (combined) of Santa Fe River water in McClure and Nichols Reservoirs. Both municipal drinking water supply reservoirs are located east of the City within the closed upper Santa Fe River municipal watershed.

Groundwater wells in the Santa Fe area account for a majority of the available municipal water supply. The City has seven active groundwater wells within the City limits, most of which are

focused near the Santa Fe River (see map). The wells were installed in the 1940s and 1950s, and have been re-drilled or upgraded over the years. The City also has thirteen groundwater wells in the Buckman well field, northwest of town (map on previous page). The newest Buckman wells are all 2,000 feet deep and began producing water in 2003.

Buckman Direct Diversion Project

Initially operated by the Design-Build Contractor beginning in January 2011, the Buckman Direct Diversion (BDD) Project produced a total of 4,983 acre feet of high quality drinking water throughout the year. Since assuming operational responsibility in May 2011, BDD staff has undertaken a series of high performance strategic initiatives aimed at becoming an industry leader. On-going efforts to establish “world class” maintenance practices will ensure infrastructure reliability and longevity in order to get the most out of the community’s financial investment. The FY 2012-13 Proposed Budget contains published performance metrics covering financial performance, energy consumption, treatment process efficiency and regulatory compliance. Evaluating and reporting on project performance on a routine, publicized basis will keep citizens and elected officials apprised of the “value” received from the Buckman Direct Diversion Project. The Buckman Direct Diversion project is a \$221-million regional water supply

City of Santa Fe Diversion Water Supply Portfolio		
Source	Water Rights (acre feet)	Available Water (acre feet)
Santa Fe River	5,040	4,040 assuming 1,000 to river
City Wells	3,586*/ 4,865	sustainable use
Buckman Wells	10,000	sustainable use
Buckman Direct Diversion	5,230**	available beginning in 2011

* when the City uses the Northwest well

** City's San Juan-Chama water

The City of Santa Fe Water Division surface water supplies have the advantage of being renewable, high quality, and energy efficient

project that allows water customers in the City and County to use renewable surface water instead of relying mostly on groundwater unsustainably. Construction on the project began in October of 2008 and was completed by December, 31 2010.

The project includes a raw water intake on the east bank of the Rio Grande at Buckman; 6 booster stations; a 15 million gallon per day, \$150 million, state-of-the art water treatment plant; and 26 miles of transmission pipeline (raw and finished). The project is governed by a joint City and Santa Fe County board. More information on the project can be found at www.bddproject.org.

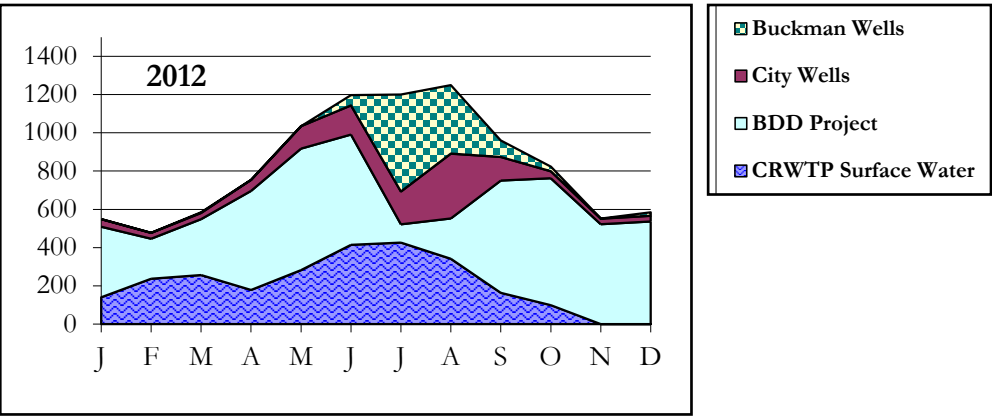
Conjunctive Use and Sustainability

The City of Santa Fe Water Division surface water supplies have the advantage of being renewable, high quality, and energy efficient (e.g. gravity flow). The disadvantage of surface water supplies is the extreme variability and impacts from seasonal precipitation and temperature changes. Groundwater availability does not have the wild fluctuations in variability, and is, therefore, more reliable as

long as it is not overused. To have a sustainable and reliable water supply source, the City municipal utility conjunctively uses both surface water and groundwater. Conjunctive management is a water resources principal that espouses maximizing the use of renewable surface water, and preserving the groundwater when needed for droughts or emergencies, allowing for its more sustainable use.

Production by Supply Source

As shown in the ‘Monthly Water Production by Source’ graphs below, the City has taken advantage of increased availability of surface water from the Buckman Direct Diversion Project to decrease use of the City and Buckman well fields, allowing them to rest for use in drier years, when surface water is not as readily available. In 2012, total production for the City of Santa Fe Water Division was 9,958 acre-feet, which included 181 acre-feet for Santa Fe County Water Utility.



2012 Production by source of supply

Water Rights used for ‘Offsets’

In addition to water rights that the City can directly divert for water supply, the City maintains a portfolio of ‘offset’ surface water rights that are associated with the Buckman well field and the Northwest Well. The purpose of these acquired water rights is to keep the nearby stream systems ‘whole’ or unaffected by the impacts that pumping groundwater has on surface water. The City has acquired sufficient water rights to satisfy its current obligation on the Rio Grande, Rio Tesuque, and Rio Pojoaque through a combination of acquired surface water rights, the City’s San Juan Chama water, leased San Juan Chama water, and stored San Juan Chama water.

City's Surface Water Offsets (Acre-Feet)		
Stream system	Water rights (af)	Offsets needed in 2012 (af)
Rio Tesuque*	49	34
Rio Pojoaque*	88	59
Rio Grande**	1,438	1,173
La Cienega	1	2

* includes water owned by Las Campanas
** includes water owned by Santa Fe County and Las Campanas

Water Storage

The City stores water in three ways: in the municipal reservoirs in the upper Santa Fe River watershed, on the Rio Grande/Rio Chama system, and by ‘relinquishment’ water.

The Municipal Reservoirs

The water utility stores Santa Fe River water in McClure and Nichols Reservoirs in the upper watershed (see map on page 17). Storage levels of the reservoirs for the end of 2011 were 1,522.2 acre-feet or 38.6% of the total storage capacity. While the City water utility has been targeting the carry-over storage of 40% to hedge against drought-induced summer supply

deficit, once the Buckman Direct Diversion comes online, a lower carry-over storage target may be considered.

Stored San Juan-Chama Project Water

For the past decade, the City has been storing its unused portion of San Juan-Chama water in reservoirs along the Rio Chama-Rio Grande river system. As of December 2012, the City had a total of 31,297 acre-feet stored, with 5,230 acre-feet stored in Heron Reservoir, 0 acre-feet in El Vado Reservoir, 9,921 acre-feet in Abiquiu Reservoir and 16,146 acre-feet in Elephant Butte Reservoir.

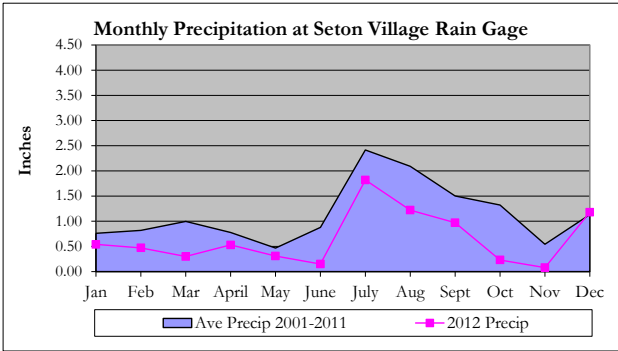
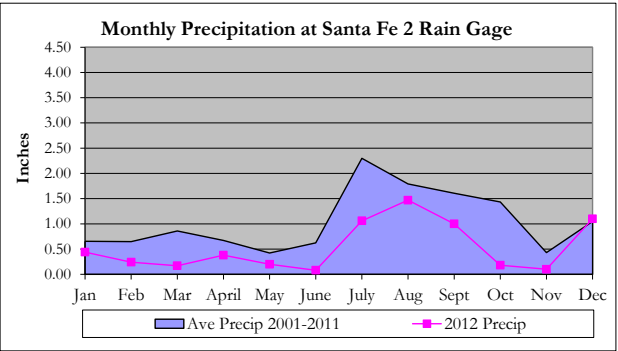
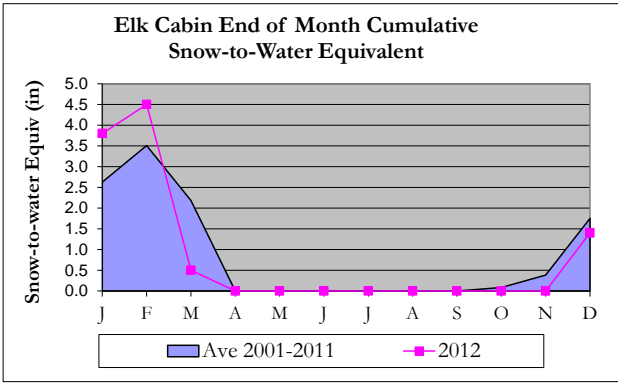
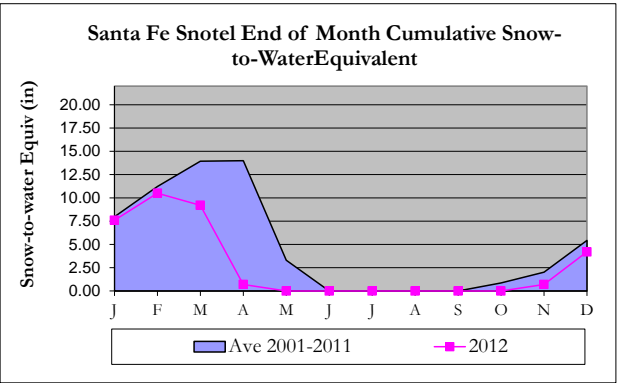
Relinquishment Credits

New Mexico receives relinquishment credits when the quantity of Rio Grande water provided to Texas is above that required by the Rio Grande Compact. Relinquishment water allows the City to store relinquishment ‘credit’ water in the municipal reservoirs during times when the Rio Grande Compact would otherwise limit the City’s right to store surface water. As an alternative to using relinquishment credits, the City often releases its San Juan Chama water into the Rio Grande in exchange for the permission to store Santa Fe River water, which would otherwise be prohibited by the Rio Grande Compact. The New Mexico State Engineer has granted the City a total of 7,500 acre-feet of relinquishment credits: 6,052 acre-feet in 2003 and 1,448 acre-feet in 2008. The City has a current balance of 6,207 acre-feet.

Precipitation

‘SNOTEL’ weather stations accurately measure snow pack as well as precipitation in the form of water (http://www.wcc.nrcs.usda.gov/snotel/New_Mexico/new_mexico.html). The snow-to-water equivalence (SWE), a measurement of how much moisture is within the snow pack, is used to predict spring runoff and watershed yield. There are two Snotel weather stations in the upper Santa Fe River watershed: ‘Santa Fe’ at an elevation of 11,445 feet and, ‘Elk Cabin’ at 8,210 feet. Santa Fe reported a peak accumulation of 12.7 inches of SWE for March, 2012. Elk Cabin reported a peak accumulation of 3.5 inches of SWE for February, 2012.

Precipitation data is also gathered in two additional locations in Santa Fe. Santa Fe 2 (approximately 2 miles southwest from the Santa Fe plaza) reported 6.42 inches for the year of 2012. Seton Village (approximately 4.5 miles south of downtown Santa Fe) reported 7.80 inches for the year of 2012.



Water Quality

The City was served by four distinct sources of supply in 2012. The 17,000 acre Santa Fe Watershed provides surface runoff to the Santa Fe River where it is stored in the McClure and Nichols Reservoir prior to treatment. Surface water from the Santa Fe River and Rio Grande is treated through conventional and advanced treatment processes at the Canyon Road Water Treatment Plant and Buckman Regional Water Treatment Plant (BRWTP), respectively. The City Well Field is mostly located in close proximity to the Santa Fe River and consists of 7 active wells located within the City limits of Santa Fe. The Buckman Well Field consists of 13 wells located near the Rio Grande, approximately 15 miles northwest of Santa Fe.

All four sources are treated with chlorine which is used for disinfection and pathogenic microorganism removal. Surface water is further treated by the use of conventional and advanced water treatment processes including coagulation and flocculation, sedimentation, and multi-media or microfiltration.

Monitoring Surface and Ground Water Quality

Since 2009, the City has been working with several regional partners in various collaborative efforts to characterize the occurrence of uranium, arsenic and nitrate in the regional groundwater. Over 500 private well samples have been collected and analyzed in the field and in local laboratories. In general the report shows nitrate levels above approximate background of 2mg/L in much of the municipal area, with a few wells showing nitrates above the drinking water standard

of 10mg/L. The results of the 2009 study suggest that naturally-occurring uranium is present in the groundwater in the mountain zone, while arsenic is concentrated in wells along a series of north-south oriented faults in the center of the basin. More information is available on the website of the NM Environment Department at:

[Click here to see report](http://nmenv.state.nm.us/fod/LiquidWaste/documents/SF.Co.09.water.test.results2.pdf) (nmenv.state.nm.us/fod/LiquidWaste/documents/SF.Co.09.water.test.results2.pdf)

The City continues its collaborative efforts to monitor the Buckman Well Field with the New Mexico Environment Department and Los Alamos National Laboratory to ensure that there is no evidence of contaminant migration from past and present Laboratory operations that could potentially threaten the regional aquifer which provides water to the City’s Buckman Wells. All samples taken in 2012 from the Buckman Wells, and shallow aquifer monitoring wells within the Buckman Well Field near the Rio Grande, did not indicate the presence of contaminants which could be associated with Laboratory operations.

Operation of the Buckman Regional Water Treatment Plant commenced on January, 2011, at which time the facility started providing water from the Rio Grande directly to the City of Santa Fe’s water system. All compliance samples taken by the City of Santa Fe and the New Mexico Environment Department’s Drinking Water Bureau show that water treated by the facility is in compliance with all standards and provisions of the Safe Drinking Water Act during calendar year 2012.

The City participated in efforts during

2011 and 2012 with the New Mexico Environment Department to classify Santa Fe Lake and the two City water supply reservoirs, Nichols Reservoir and McClure Reservoir, under a separate “lakes only” classification with appropriate designated uses. The City also worked with the NMED Surface Water Quality Bureau in 2012 to classify formerly unclassified segments of the river throughout its “urban” reach and reclassify a previously classified segment below the City’s wastewater treatment facility. The classifications proposed by NMED and the City were adopted by the New Mexico Water Quality Control Commission on November 12, 2012. These new classifications will better serve the citizens of Santa Fe in protecting both the existing and attainable uses of the river. This is especially important in light of the Santa Fe River target flows planned by the City into the future which, in part, have resulted in flow patterns more characteristic of intermittent streams. The upper intermittent portions of the river below Nichols Dam will now be protected for Coolwater Aquatic Life and Primary Contact Uses. The ephemeral reach below the Guadalupe Street bridge crossing will be protected for primary contact uses and limited aquatic life uses. The segment from Santa Fe’s wastewater treatment plant outfall to the boundary of Cochiti Pueblo will now be classified for Coolwater Aquatic life and Primary Contact uses. The new stream classifications assigned to the urban reach of the Santa Fe River by the NMED will probably also result in more frequent monitoring of water quality by both the City and State and increased controls on nonpoint contributions of contaminants to the River in the future.

Drinking Water Quality

The City of Santa Fe’s drinking water continues to be of excellent quality. The addition of another surface water source to the City’s water supply and less frequent use of the City’s well fields has resulted in the lowering of some naturally occurring contaminants and constituents such as arsenic and calcium & magnesium hardness. The following table (City of Santa Fe 2012 Water Quality Table) lists contaminants which have associated Primary Maximum Contaminant Levels (MCLs) that are regulated by the U.S. Environmental Protection Agency (EPA) and New Mexico Environment Department and were detected in the City’s drinking water samples collected by the City and New Mexico Environment Department (NMED) in 2012. The compounds below represent a small fraction of the substances tested; testing is required for over eighty contaminants. All other EPA and NMED regulated contaminants were not detected in sampling performed during 2012. Drinking water may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that water poses a health risk, especially when they are at levels below the EPA’s MCLs.



City of Santa Fe Regulated Compliance Monitoring

Contaminant	Units	MCL	MCLG	City Well Field ^d	Sample Date	Buckman Tank ^f	Sample Date	Canyon Road WTP	Sample Date	Buckman RWTP	Sample Date	Violation	Typical Source
Inorganic Contaminants													
Arsenic	ppb	10	0	4.6	18-May-11	1.6	17-Jun-11	ND	7-Mar-12	ND	12-Apr-12	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	ppm	2	2	0.8	24-Aug-11	0.073	17-Jun-11	0.0076	7-Mar-12	0.039	12-Apr-12	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	ppm	4	4	0.18 (0.13 - 0.18)	18-May-11	0.25	17-Jun-11	0.13	7-Mar-12	0.22	12-Apr-12	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Selenium	ppb	50	50	1.7 (1.1 - 1.7)	16-May-11	ND	17-Jun-11	ND	7-Mar-12	ND	12-Apr-12	No	Discharge from steel/metals factories; Discharge from plastic and fertilizer
Nitrate [as N]	ppm	10	10	7.1 (2.6 - 7.1)	3-May-12	ND	3-May-12	ND	7-Mar-12	ND	12-Apr-12	No	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion from natural deposits
Radioactive Contaminants													
Gross Alpha Emitters	pCi/L	15	0	1.1	9-Aug-12	1.3	16-Jun-11	0.6	16-Jun-11	0.9	30-Nov-11	No	Erosion of natural deposits
Gross Beta/Photon Emitters	pCi/L	50 ^a	NA	ND	9-Aug-12	2.4	16-Jun-11	0.7	16-Jun-11	2.6	30-Nov-11	No	Decay of natural and man-made deposits.
Radium 226/228	pCi/L	5	0	0.45	9-Aug-12	0.18	16-Jun-11	0	16-Jun-11	0.02	30-Nov-11	No	Erosion of natural deposits
Uranium	ppb	30	0	ND	9-Aug-12	ND	16-Jun-11	ND	16-Jun-11	1	30-Nov-11	No	Erosion of natural deposits;
Surface Water Contaminants													
Turbidity ^f (highest single measurement)	NTU	TT = 0.3	0	NA	NA	NA	NA	1.6	Continuous	0.99	Continuous	No	Soil Runoff
Turbidity ^f (lowest monthly % meeting limits)	NTU	TT = % -0.3 NTU	0	NA	NA	NA	NA	99.4%	Continuous	99.3%	Continuous	No	Soil Runoff
Total Organic Carbon (TOC)	ppm	TT (35%-45% Removal)	NA	NA	NA	NA	NA	39% to 70% removal ^b	Monthly in 2012	NA	NA	No	Naturally present in the environment
Notes:													
a. EPA considers 50 pCi/L to be the level of concern for beta particles. b. The City complies with alternative compliance criteria to meet TOC removal. c. The range represents the high/low values within the compliance period. d. Turbidity is a measure of the cloudiness of water. Turbidity is a good indicator of the effectiveness of the filtration system. e. City wellfield: Alto, Agua Fria, Ferguson, Osage, Santa Fe, St. Mikes & Torreon. f. Buckman Wells 1-13 and Northwest Well.													
Key to Units, Terms and Abbreviations												TT: A Treatment Technique standard instead of Maximum Contaminant Level	
NA: Not Applicable ND: Not Detected NTU: Nephelometric Turbidity Units												ppm: parts per million, or milligrams per liter (mg/l) ppb: parts per billion, or micrograms per liter (ug/l) pCi/l: picocuries per liter (a measure of radioactivity)	

City of Santa Fe Water Division water quality table from Consumer Confidence Report

Microbial and Disinfection Byproducts Rule

The Microbial and Disinfection Byproducts Rules (MDBPs) is a set of interrelated regulations that address risks from microbial pathogens and disinfectants/disinfection byproducts (DBPs). The rule focuses on public health protection by limiting exposure to DBPs (known carcinogens), specifically total tri-halomethanes (TTHM) and five halo-acetic acids (HAAs), which can form in water through the use of disinfectants used to control microbial pathogens.

In previous years the City selected sampling locations that distinguished between production sources and thus, samples from distribution could be referenced back to a particular source. During 2012 however, the City's various sources of drinking water supply were mixed in the distribution system throughout the year and therefore samples are more representative of the water system as a whole, rather than by individual source.

All quarterly sampling performed by the City in 2012 pursuant to the regulatory requirements of the Safe Drinking Water Act indicate that the Santa Fe Drinking Water System readily meets all EPA standards for TTHMs and HAAs.

Lead and Copper Rule

Tests for lead and copper are taken from customer taps located throughout the City once every three years. The most recent round of lead and copper testing took place in August of 2012. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

The results of the City's 2012 lead and copper monitoring determined that all households sampled were below both "action level" concentrations and Maximum Contaminant Levels mandated under the Safe Drinking Water Act for lead and copper.

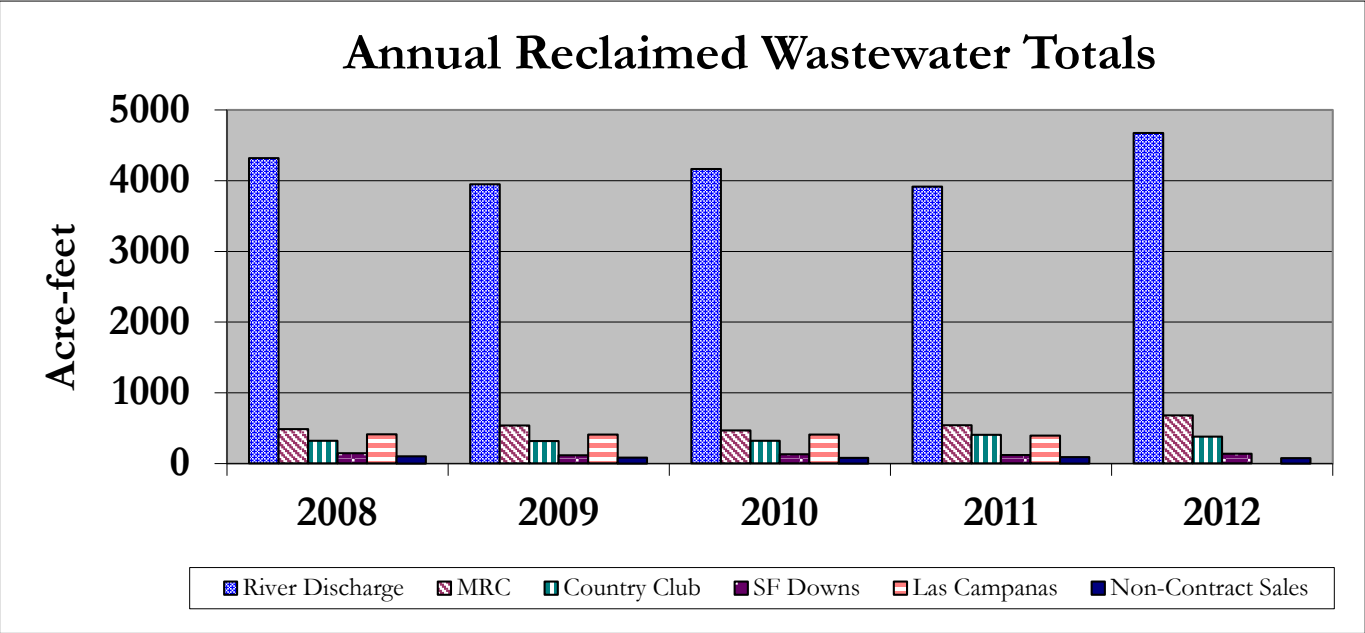
More information about contaminants in the City's public water supply and the potential health effects of specific can be obtained by calling the City at 955-4232 or the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791), or visiting www.epa.gov/safewater. The City's water quality report for 2012, and previous years, is also available at the City of Santa Fe Water Division.

Treated Effluent Water Deliveries

The City of Santa Fe's (City) reclaimed wastewater (treated effluent) has many uses and is an important component of the City of Santa Fe Water Division's water supply portfolio. The reclaimed wastewater from the City's treatment plant is sold directly to contractor's via the onsite stand pipe. The reclaimed wastewater has many uses including: for dust control and other construction purposes; irrigation to the municipal recreational fields at the Municipal Recreational Complex (MRC) and the infield at Santa Fe Downs; irrigation for the Marty Sanchez Links de Santa Fe and the Santa Fe County golf courses; dust control at the Caja del Rio regional landfill; watering livestock and wildlife on the Caja del Rio mesa; contributing to a small flowing stream and pond at the education-scape at the NM Game & Fish facility; and enabling flow in the Santa Fe River downstream of the the City's wastewater treatment plant to support the river & riparian ecosystem and local agriculture. The golf course

at Las Campanas has not been using reclaimed wastewater for golf course irrigation since 2011. The completion of raw water transmission lines from the Rio Grande in 2012 now allows the Club at Las Campanas to irrigate their golf course using surface water.

Production of reclaimed wastewater increased to 1,940 million gallons (5,953 acre-feet) in 2012 versus 1,780 million gallons (5,464 acre-feet) in 2011. In 2012, 21% of the treated wastewater was reused and the remaining 78% (1,523 million gallons) flowed into the Santa Fe River. The City is currently reviewing the Reclaimed Wastewater Resources Plan, which prioritizes current reclaimed wastewater uses and identifies strategies and implementing actions to optimize current and future use of the resource. More information on current reclaimed wastewater (treated effluent) planning efforts is available at www.santafenm.



Preparing for Climate Change

The City of Santa Fe Water Division has the responsibility to prepare the municipal water utility for a range of conditions that might result from global climate changes like less alpine snowpack, earlier peak stream flows, reduction in total streamflow, greater evaporative losses, more extreme weather events, and increased summer demand from a hotter, drier, and longer summer season. Fortunately, much of the future water supply planning that has been incorporated in the adopted Long Range Water Supply Plan contemplates how the City's water supply need can be managed using our diverse water portfolio under a range of conditions, including drought. However, the utility recognizes the need to evaluate the vulnerability of the water system to predicted impacts, develop response strategies to reduce those potential impacts, reduce our own contribution to greenhouse gas emissions and educate ourselves and the community on the impact that global warming will likely have on our water supplies and water utility.

Energy Use in 2012

The City of Santa Fe has worked to increase the use of renewable energy and reduce the total energy consumption associated with running the water utility.

Hydroelectric Facility

This facility, which became operational on June of 2011, captures the energy of the finished water flowing from the Canyon Road Water Treatment Plant 2 miles downhill to the 5 million gallon tank located at Camino Cabra and Upper Canyon Rd. The water pressure in the 20 inch pipeline resulting

from the 180 ft of net head is capable of generating 100 kilowatts of energy using a pump turbine system, which is net-metered with the St. John's booster station. Renewable energy provided by the system offsets energy the City would otherwise need to purchase from PNM, thereby effectively reducing water utility operating costs at this site. In 2012, with only 40% of normal water production from the Canyon Road Water Treatment Plant, the hydroelectric facility generated 161,000 kWh of renewable energy, which saved the City approximately \$13,700 in operational expenses, based on average energy costs (on- and off-peak rate).

In addition to operational cost savings, the City has executed a Renewable Energy Credit (REC) purchase agreement with PNM for RECs generated from the hydroelectric facility. This agreement will generate an additional \$3,220 in revenue for the City.

Buckman Direct Diversion Solar Projects

The BDD Water Treatment Plant Solar project has been operating since February 2011. The facility produces up to 1 megawatt DC of solar electrical energy and provides approximately 1/2 the energy required to run the BDD Water Treatment Plant. Under a Power Purchase Agreement, BDD buys power generated from this privately owned and operated solar facility.

As of the end of 2012, the solar system had generated 2.19 million kWh of renewable energy, for which the BDD paid the solar power provider \$339,000. This cost was offset by the REC payment that BDD received from PNM, amounting to \$328,650. All told, BDD paid approximately \$11,000 (\$0.05/kWh) for

the 2.19 million kWh generated by the solar facility in 2012. Without the solar facility, this same energy would have cost BDD approximately \$180,000. The BDD Booster Station 2A Solar Project is a proposed solar facility that includes high efficiency photovoltaic panels on an 8 acre area adjacent to the Buckman Direct Diversion Booster Station 2A. The project has been approved for \$5 million in funding by the New Mexico Finance Authority. The City has concluded the design-build procurement of the contractor as well as the construction manager and has submitted the interconnection application to PNM. It is anticipated that construction will begin in August of 2013 and the project will be completed by the end of the year.

The 2.016 megawatt AC PV solar system will have an output of 88,644,253 kWhr over 30 years and provide a financial benefit of \$4,589,886 over 30 years, accounting for all O&M costs, loan financing costs, Renewable Energy Credit revenue, energy bill savings and BLM lease costs. The total development cost for the solar PV system, including construction management, will be \$4,611,701.00.

PNM Peak Saver

This is an electrical Demand Management Program designed to relieve PNM's Grid during Peak Periods. It is a no-cost voluntary program that pays performance-based incentives to participants without penalties of any kind. Through the use of real time power monitoring, City of Santa Fe and EnerNOC can monitor and measure the electrical consumption at the facility. The Peak Saver season is from Jun 1- Sept 30 each year. Weather events are most likely to be called in the afternoon on the hottest days of the year and

for the last four hours of the day. The City Buckman Well Field participated in the PNM Peak Saver program in 2012 during which time there were 10 PNM Peak Saver events which resulted \$18,000 in revenue for the City.

Water Utility Energy Efficiency Program

The City of Santa Fe water utility typically incurs approximately \$1.4 million in electricity and \$200,000 in gas costs annually. The City's current on-peak energy usage is 35-40%. In an effort to reduce on-peak energy usage, the Water Division designed, instrumented, and activated an energy efficiency program. This construction phase of this project was completed in August 2012, with funding from the EPA's Drinking Water State Revolving Fund. Since that time the program monitors real-time energy usage at 28 major pumping sites within the water utility and, to the extent possible, automates pump/motor controls to prioritize energy usage in off-peak periods while maintaining minimum water tank reservoirs.

In 2012, the program saved the Water Division approximately \$10,000 in avoided on-peak charges at several pumping sites. In the future, as the water utility develops more water storage capacity and the Hospital Tank returns to service, it is expected that that this program can reduce the water utility's on-peak usage to 10-15%, which will result in substantial operational cost savings.



Fiscal Responsibility

The Water Division is committed to managing the water utility to maintain fiscal responsibility to its customers. This is achieved by an annual review of our 10-year finance plan and 10-year capital improvement plan (CIP) with the goal of maintaining a high level of service while increasing effectiveness and efficiency. In early 2009, the City Governing Body approved a water rate increase in the amount of 8.2% for five consecutive years. The rates increase is needed to pay for the Buckman Direct Diversion project, a key component in providing the community with a reliable and sustainable supply, and approximately \$100 million of infrastructure improvements.

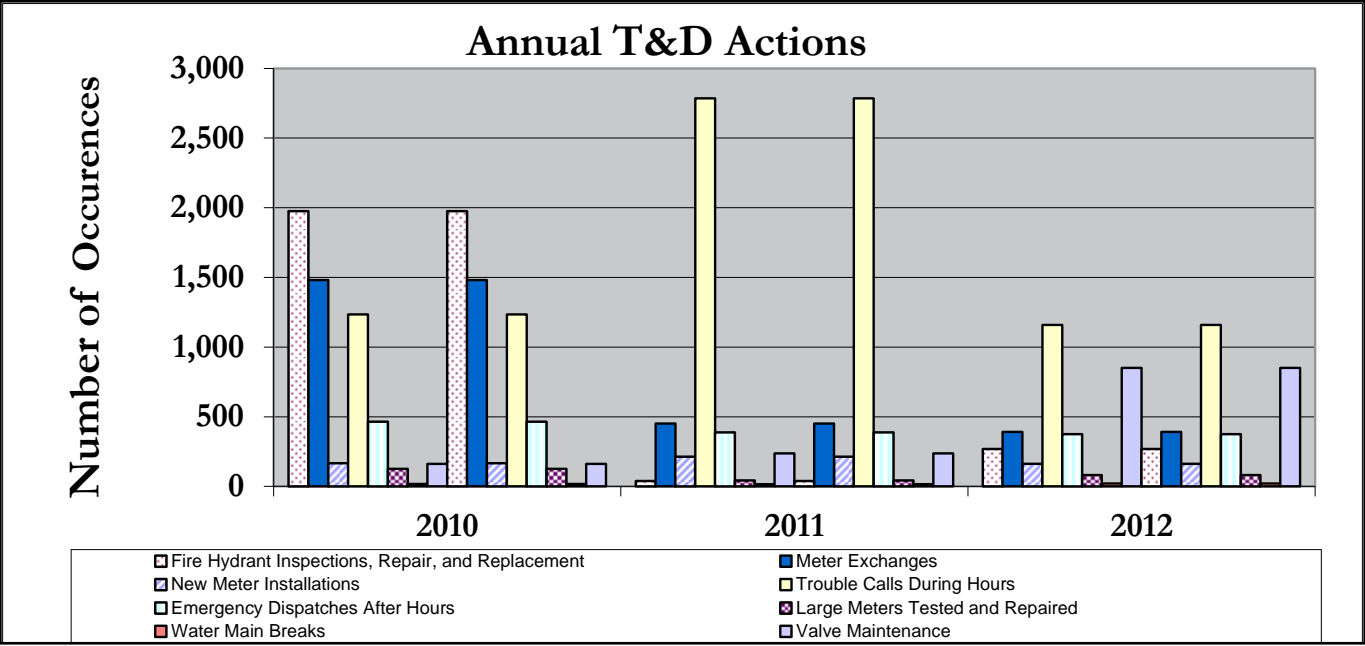
This rate increase coupled with the approved 10-year finance plan and CIP, allowed the Water Division to receive an AA+ rating from Standard & Poors and an AAA rating from Fitch for our \$61 million bond sale in November 2009. These ratings are among the highest received by a water utility west of the Mississippi River. This excellent bond rating translates into a reliable, lower-cost income source for the City of Santa Fe Water Division.

System Maintenance

The City of Santa Fe Water Division, Transmission & Distribution section (T&D) flushes the City's water distribution system to remove accumulated silt and sediment from the distribution system piping and to address customer complaints regarding water quality. Annual flushing is required in maintaining pipelines and removing magnesium and iron build up. In 2012, T&D flushed 58 dead end lines and completed flushing 127

fire hydrants on the city's water mains. Throughout 2012, the Transmission and Distribution section completed the replacement of 8 large meters, 391 meter exchanges, and 162 new meter installs. Also during 2012, the Transmission and Distribution section maintained 850 mainline isolation valves and serviced 3 mainline replacements. Replacing meters is required to record water use. Main line valve maintenance is necessary to assure the proper shut down during emergency situations. During the winter months of 2012, T&D crews serviced 12 frozen meters and service lines. Furthermore, Transmission & Distribution responded to over 1,100 trouble calls over the past year, all of which were completed. The Water Division's Transmission and Distribution department has always worked hard to provide courteous and reliable customer service.

The City of Santa Fe Water Division has recently completed the installation of a Supervisory Control and Data Acquisition pressure monitoring system, which collects real-time water pressure information, monitored 24 hours a day. This allows T&D to identify potential water system problems prior to a problem occurring. The City currently has 17 of these sites installed and working.



City of Santa Fe Water Division, Transmission & Distribution section responses in 2012

