



CITY CLERK'S OFFICE  
Agenda DATE 4/2/18 TIME 2:00  
PREPARED BY Caryn Grasse  
APPROVED BY [Signature]

**SANTA FE WATER CONSERVATION COMMITTEE MEETING**  
**CITY HALL – 200 LINCOLN AVE.**  
**CITY COUNCILORS' CONFERENCE ROOM**  
APRIL 10, 2018  
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 FROM THE MARCH 13, 2018 MEETING

**CONSENT AGENDA:**

6. WATER CONSERVATION PROGRAM SCORECARD UPDATE FOR MARCH 2018 (Christine Chavez)
7. UPDATES TO IRRIGATIONS REBATES (Christine Chavez)
8. UPDATE ON CURRENT WATER SUPPLY STATUS (Christine Chavez)

**INFORMATIONAL ITEMS:**

9. 2016 AWWA WATER LOSS AUDIT (Amy Ewing, Christine Chavez, 30 minutes)
10. ROUND TABLE DISCUSSION WITH WATER DIVISION DIRECTOR (Rick Carpenter, Christine Chavez, 20 minutes)
11. COMMITTEE INTRODUCTIONS TO COUNCILOR ROMERO-WIRTH (Christine Chavez, 20 minutes)
12. SUSTAINABLE SANTA FE COMMISSION REPORT FEEDBACK (Christine Chavez, 20 minutes)
13. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE WORKING GROUPS
  - A. GROUP 1 – IRRIGATION SUBCOMMITTEE (Doug Pushard, Christine Chavez, 5 minutes)
  - B. GROUP 2 – GENERAL EDUCATION PROGRAM/ GRANTS (no update)
  - C. GROUP 3 – SCORECARD SUBCOMMITTEE (Stephen Wiman, Christine Chavez, 5 minutes)
  - D. GROUP 4 – WATER CONSERVATION CODES / ORDINANCES / REGULATION (Doug Pushard, Christine Chavez, 5 minutes)

**MATTERS FROM PUBLIC:** (5 minutes)

**MATTERS FROM STAFF:** (5 minutes)

**MATTERS FROM COMMITTEE:** (5 minutes)

**NEXT MEETING – (Councilor's Conference Room):** TUESDAY, MAY 8, 2018

**CAPTIONS:** due by 3:00 pm, Monday, April 23, 2018

**PACKET MATERIAL:** due by 3:00 pm, Wednesday, April 25, 2018

**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.

**SUMMARY OF ACTION  
 SANTA FE WATER CONSERVATION COMMITTEE MEETING  
 SANTA FE COMMUNITY CONVENTION CENTER - CORONADO ROOM  
 201 MARCY STREET  
 TUESDAY, MARCH 13, 2018, 4:00 PM**

<u>ITEM</u>	<u>ACTION</u>	<u>PAGE</u>
CALL TO ORDER		1
ROLL CALL	QUORUM	1
APPROVAL OF AGENDA	APPROVED	1-2
APPROVAL OF CONSENT AGENDA	APPROVED	2
APPROVAL OF MINUTES FEBRUARY 13, 2018	APPROVED	2
 <u>CONSENT AGENDA</u>		
WATER CONSERVATION PROGRAM SCORECARD UPDATE FOR FEBRUARY 2018	APPROVED	2
UPDATES TO REBATE PROGRAM	APPROVED	2
UPDATE ON CURRENT WATER SUPPLY STATUS	APPROVED	2
 <u>INFORMATIONAL ITEMS</u>		
WATER 2120: SECURING OUR WATER FUTURE, ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY	INFORMATION/DISCUSSION	2-7
RESULTS BASED ACCOUNTABILITY DISCUSSION	INFORMATION/DISCUSSION	7-11
GPCD DRAFT REVIEW	INFORMATION/DISCUSSION	11-12

<b>GROUP REPORTS FROM WATER CONSERVATION COMMITTEE WORKING GROUPS</b>	<b>INFORMATION/DISCUSSION</b>	<b>12</b>
<b>MATTERS FROM THE PUBLIC</b>	<b>NONE</b>	<b>12</b>
<b>MATTERS FROM STAFF</b>	<b>NONE</b>	<b>13</b>
<b>MATTERS FROM COMMITTEE</b>	<b>INFORMATION/DISCUSSION</b>	<b>13</b>
<b>NEXT MEETING</b>	<b>APRIL 10, 2018</b>	<b>13</b>
<b>ADJOURN</b>	<b>ADJOURNED</b>	<b>13</b>

**SANTA FE WATER CONSERVATION COMMITTEE MEETING  
SANTA FE COMMUNITY CONVENTION CENTER - CORONADO ROOM  
201 MARCY STREET  
TUESDAY, MARCH 13, 2018, 4:00 PM**

**1. CALL TO ORDER**

The meeting of the Santa Fe Water Conservation Committee was called to order by Lisa Randall, Chair, at 4:00 pm on Tuesday, March 13, 2018 at the Santa Fe Convention Center, Coronado Room, 201 Marcy Street , Santa Fe, New Mexico.

**2. ROLL CALL**

**MEMBERS PRESENT**

Lisa Randall, Co-Chair  
Aaron Kauffman  
Tim Michael  
Stephen K. Wiman  
Doug Pushard  
Scott Bunton  
Justin Lyon  
Ken Kirk  
Bill Roth  
Robert Coombe

**MEMBERS ABSENT**

Councilor Peter Ives, Chair, Excused

**OTHERS PRESENT**

Christine Chavez, City of Santa Fe, Water Conservation Manager  
Caryn Grosse, Water Conservation  
Patricio Pacheco, Water Conservation  
Katherine Yuhas, Albuquerque, Bernalillo County Water Utility Authority  
Andrew Erdman, Water Division  
Rick Carpenter, Director, Water Department  
Elizabeth Martin, Stenographer

**3. APPROVAL OF AGENDA**

**MOTION** A motion was made by Mr. Coombe, seconded by Mr. Roth, to approve the agenda as presented.

**VOTE** The motion passed unanimously by voice vote.

**4. APPROVAL OF CONSENT AGENDA**

**MOTION** A motion was made by Mr. Roth, seconded by Mr. Coombe, to approve the consent agenda.

**VOTE** The motion passed unanimously by voice vote.

**5. APPROVAL OF MINUTES  
FEBRUARY 13, 2018**

Mr. Michaels said on page 2 the 1<sup>st</sup> paragraph, it should say thinks and on page 10 it is Mr. Lyons.

**MOTION** A motion was made by Mr. Wiman, seconded by Mr. Roth, to approve the minutes as amended.

**VOTE** The motion passed unanimously by voice vote.

**6. CONSENT AGENDA**

- A. WATER CONSERVATION PROGRAM SCORECARD UPDATE FOR FEBRUARY 2018**
- B. UPDATES TO REBATE PROGRAM**
- C. UPDATE ON CURRENT WATER SUPPLY STATUS**

**7. INFORMATIONAL ITEMS**

- A. WATER 2120: SECURING OUR WATER FUTURE, ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY**

Ms. Yuhas passed out a presentation that is attached herewith to these minutes as Exhibit "1". She reviewed the presentation.

Mr. Bunton asked what is the source of the surface water.

Ms. Yuhas said it is San Juan/Chama water.

Mr. Pushard asked the GPCD on this, is this the old calculation.

Ms. Yuhas said we switched over to the OEC model 7 years ago.

Mr. Roth asked how does the water use dropping effect the overall financial health of Albuquerque water.

Ms. Yuhas said you are asking how do we fund all the projects we need to do that will increase conservation while encouraging our customers to lower water use. We have increased rates 7 times since she has been there. Albuquerque still has very inexpensive water.

Mr. Coombe asked what is the sense of the drivers for the reduction in DPCD.

Ms. Yuhas said a lot of public education. 22 years of an aggressive conservation water program. There are customers who take a lot of pride in their efforts toward conservation. The rebates effect the numbers as well.

Mr. Wiman asked the surface water is all San Juan/ Chama. There are no native water rights.

Ms. Yuhas said we have them, but do not use them. We have a big diversion. We have an inflatable dam that is moveable.

Mr. Roth asked have any of the wells suffered from the ground water plume.

Ms. Yuhas said some in the southern part of the City in the path of the plume of Kirkland AFB. One well is impacted by the digital site.

Mr. Coombe said it seems remarkable that the curves in the chart are so smooth. Is there no effect from drought.

Ms. Yuhas said there is a bit of up and down on this. Seasonal pumping causes more variation than drought.

Mr. Lyon asked does extraction from underneath the Rio Grande count for surface water.

Ms. Yuhas said yes, but it is a separate permit.

Mr. Wiman asked in doing the pilot project what was done to see if the aquifer was suitable to do this.

Ms. Yuhas said for 2 years, 2008 and 2009, we did pilot studies. We put in a lot of instrumentation to see that the water made it to the water table. It is a super location. We operate in the winter. We are injecting the rest of the non potable San Juan/ Chama water. We operate every other winter starting in October. It is 400 acre feet a

year.

Mr. Erdman said regarding the diversion, is that to avoid the sediment you would bring in.

Ms. Yuhas said yes.

Mr. Bunton asked is the water potable.

Ms. Yuhas said yes, it is a mile long. The constraint on it is there is a golf course. They don't want us to overflow the golf cart crossing.

Mr. Pushard asked why the 100 year plan.

Ms. Yuhas said it is to help us set out what sort of projects we should put in place now. That is what we were thinking of. Also what will climate change do to Albuquerque. What do we need to get the population ready for. It is setting the stage to look out that far.

Mr. Erdman said for population projections we use the state standard from UNM to plan. It looks like you did a range.

Ms. Yuhas said we also compared that to Beaver/UNM and the Council of Governments number so we were not planning for some crazy outlier. We found what we were looking at encompassed all of their numbers.

Mr. Roth asked you have x amount of acre feet from San Juan/ Chama, what percentage of that are you using. If you are getting the same amount would it cover you in 50 years.

Ms. Yuhas said we set a management level in the aquifer that we want to maintain. The projection is we will continue to rise for a decade then depending on use and climate change we will see where we are and then it will start to drop. We identified 40 different alternatives for what we could do for water supply.

Mr. Roth asked are there any long range plans to treat affluent as drinking water.

Mr. Pushard said this is best case scenario. The question is he is assuming that then the likely scenario is upper middle. Is that the case.

Ms. Yuhas said we thought of 40 different alternatives and ranked them in terms of implement ability, acceptance by the public and things like that. We narrowed them down to 3 portfolios that would all fill in that gap. We decided on number 1 to start working on. A description of that is in your hand out.

Ms. Yuhas said we are looking at treating affluent water.

Mr. Roth asked what about using it to offset your native rights.

Mr. Carpenter said we are still looking at alternatives such as putting back in the other water. There are other alternatives as well.

Ms. Yuhas said we already get credit for it. The impact we have on the river in 10 to 12 years will be less. Letting it go would be losing water that belongs to the customers.

Mr. Erdman said Albuquerque operates a bit different from us. They are able to divert and use San Juan/Chama water with 10 diverted and 5 returned. We end up returning 7. It takes more from us than them. We are looking at opportunities.

Ms. Yuhas said yes, we can take out twice as much as we return.

Mr. Pushard asked the 40% reduction on the GPCD, did you chart out some programs to help you get there.

Ms. Yuhas said yes. We have identified where we want to get that reduction. We are looking at our commercial and institutional customers to have that big reduction over time. We are also looking at more outdoor program with efficient irrigation systems and xeriscaping.

Mr. Roth asked are you pushing grey water use.

Ms. Yuhas said no. We want to treat it and use it ourselves. We are not incentivising it. We can treat it and reuse it in bulk.

Mr. Roth asked what are you looking at in terms of stormwater capture.

Ms. Yuhas said we are talking about recharging the aquifer with stormwater. We have increased the amount of storm flow by growing and increasing the surface cover. It will be a long and difficult process.

Mr. Pushard asked where will the thinning be on the San Juan.

Ms. Yuhas said the Chama Peak Land Alliance is doing the work.

Mr. Pushard asked do you have an emergency water plan

Ms. Yuhas said for drought, yes. It is triggered by us as soon as the majority of Bernalillo County is in severe drought. Then we also look at where we are in terms of ground water pumping and GPCD for the year to decide if other measures are needed.

We do have a written plan.

Mr. Lyons asked does the lawsuit Texas brought against New Mexico mess with this plan.

Ms. Yuhas said she does not think so. We meet all of our obligations of the compact.

Mr. Roth asked what accounts for the difference of the higher usage in Albuquerque than Santa Fe.

Ms. Yuhas said we are 2,000 feet lower and 10 degrees hotter. We also spent a lot of time telling people to put in grass. Here you plant native plants. It is 60% indoor usage and 40% outdoor usage.

Mr. Pushard said thank you for all your advertising.

Mr. Roth asked how does Rio Rancho compare to Albuquerque.

Ms. Yuhas said they have a few less programs and their funding is less. Their water price is higher.

Mr. Pushard asked did you produce this document in house.

Ms. Yuhas said we worked with anyone we could find to help us. We built a model and can manipulate it ourselves, but most of the time CH2m does it for us.

Mr. Coombe said if you are getting to 110 through community conservation you should be able to get below 110.

Ms. Yuhas said yes, we can.

Mr. Wiman asked what is the low hanging fruit for conservation.

Ms. Yuhas said multi family is an opportunity for us. Commercial properties definitely. Those are the biggest opportunities.

Mr. Roth asked how have you dealt with the Federal installations in Albuquerque.

Ms. Yuhas said they have their own wells. For the most part their water use does not effect us in numbers. It effects the aquifer. Kirkland has their own water conservation program. There was a large fuel spill there. The water table has risen above the plume. That makes it harder to clean up.

Mr. Roth asked are they 100% ground water.

Ms. Yuhás said yes.

Ms. Chavez asked Ms. Yuhás to speak about her education program for 4<sup>th</sup> graders.

Ms. Yuhás said we have won 2 national awards for it. We take every 4<sup>th</sup> grader in Albuquerque on a trip to the river. We pay for everything. They hike to the river and look at artifacts and talk about how animals use water. We talk about the watersheds and fire. We want every 4<sup>th</sup> grader to do that. In 5<sup>th</sup> grade all of the 5<sup>th</sup> graders go on a trip to the mountains. We talk about the mountains and they reflect on the river. We do puppet shows for K - 2<sup>nd</sup> grade. There are tours of water reclamation plant. We also go out to classrooms and do experiments in class. We do 300 classrooms a year.

Ms. Chavez said we are putting a small piece of the 4<sup>th</sup> graders on our Passport Program.

Ms. Yuhás said we take about 20,000 students to the river. It costs about \$150,000 a year. That pays for educators, buses and a staff person.

Mr. Roth asked how big are the groups.

Ms. Yuhás said we take 2 classes at a time. The whole 4<sup>th</sup> grade of a school at a time. Maybe we reach 20,000 people a year. It is a lot of kids.

Ms. Yuhás said anyone is welcome to come join us. Thank you for your time.

Chair Randall said thanks for coming up and for the great work you do.

## **B. RESULTS BASED ACCOUNTABILITY DISCUSSION**

Ms. Chavez passed out a handout which is herewith incorporated into these minutes as Exhibit "2".

Ms. Chavez said there is a lot of discussion now about how we approach our 5 year goals and align that with results based accountability. We all met and one of the first things we started to do was to figure out what our boundaries are. What can be addresses within our plan and what will have to be addressed outside of the plan.

Mr. Wiman reviewed the handout and said the big eyeopener was making a list of the things we cannot control. Wells are certainly one of them. We think we need to get a handle on what that draw down is. Thanks to Andrew we have more information than we ever have had. The problem is we that only have recent data on 25 or so. The

other issue was regionalization and working with the County. The Living River and quality of life issues were brought up as well. Are we going to have the amount of water the City has agreed to put into the Living River. There are watershed issues. During drought what is the effect of the recharge of the aquifer and what do we do with water reuse in the city. These are things we cannot control.

Ms. Chavez said this was hard. The Committee is very passionate about these other issues. We can address them, but not in the 5 year plan. Maybe we can address them in a sit down or a document to the Mayor.

Mr. Roth asked can a goal of the 5 year plan be more coordination with the County.

Ms. Chavez said it has to start with the goals of the City. She feels like that needs to be revisited, but at a higher level. Then we can support it.

Mr. Pushard said there are a lot of things we do control. For example outreach and education programs. Why does this list look like it does.

Mr. Wiman said a lot of things are in the scorecard. We shifted them to the larger plan.

Mr. Pushard said they will also be in the 5 year plan.

Ms. Chavez said in the left column are new things that we have not worked on yet and are not identified in the plan. This was a brainstorming discussion.

Mr. Roth asked has new construction been discussed.

Ms. Chavez said yes, but we don't incentivize anything in that area.

Mr. Pushard said we are not touching 90% of the homes. Going after a whole house conservation program is what he would add. We are piecemealing it now. Over a 5 year period of time we could figure out how to do that.

Ms. Chavez said we could.

Mr. Roth said there already is an incentive. It is a big deal to show you are using less water. You can save on the permit using that program.

Mr. Pushard said he agrees, but the other one we do not have on the list is multi family. We have not touched that.

Ms. Chavez said we could give an extra incentive.

Mr. Roth said the discussion has started to put together a proposal for a density increase for an opportunity to increase the density of your project. You would have more efficient homes in the project. There is going to be a push for it. The idea is we will put benchmarks in the program. We will arbitrarily determine the target WERS score for a multi family home. It will be based on reasonable use.

Ms. Chavez said within 5 years, all those things are reasonable for us to look at.

Ms. Chavez said we looking at grey water, stormwater, commercial rebates and programs and outdoor irrigation. One huge partner we have not worked with is Parks. There is so much opportunity for us to work with Parks. If we are going to ask people to not have yards we need to give them a place to enjoy that. In other cities they give Parks a better deal in the price of water. She is establishing a good relationship with Parks management now. They want to do creative, great things. Lets help them. It was a hard discussion to keep it within the boundary of this 5 year plan. Everyone is so passionate.

Mr. Lyons said alternative water sources include Sewer Scalping. Has that been discussed at all.

Ms. Chavez said she has never heard that term. We talked about the concept. She doesn't know where that resides. It could be Land Use or another department. We don't know what the County does for offsets. She thinks that is another one where she doesn't know if it would be within the Water Conservation Program and plan or that we could implement here.

Mr. Roth asked can't we try to instigate a joint meeting with Water Conservation at the County so we are updating each other.

Mr. Kirk said at the County Water Advisory Committee the issue of Conservation came up. He learned there is an agreement with the City and County that goes back many years and is part of a settlement. It says regarding conservation the County must follow all directives of the City. If the City implements measures the County must do so as well.

Mr. Roth said they do not have the same day to day restrictions that we do. He thinks it would be interesting to have more coordination with the County.

Ms. Chavez said it is important to have those discussions.

Ms. Chavez said the regionalization part we did discuss. We should be more organized in presenting these ideas with the new Mayor and let him decide how those conversations come about. She does think there is an opportunity with the new Administration for this Committee to write a position paper on some of the big issues as opposed to a discussion in a public input forum. A position paper and a meeting with

the Mayor to discuss it with him would be a positive direction to take.

Ms. Chavez said back to the 5 year plan. She wants everyone to think about this more and let her know of anything else you can think of for the subcommittee and these lists. We have also decided on a process for the plan. After the Committee is in agreement and has voted on the left and right hand columns, we will take this to public input sessions. We want to make it a very integrated process. She has been meeting with Jeff Gopal on consensus processes. He was part of our conference. He is helping her develop focused questions that will give the public a chance to address the issues. Will have to train all of us on this process. After public input, we will develop the 5 year goals for the plan and short term goals. Then we want to get our 5 year plan to be approved in the fall of 2019. We need to move quickly on starting this process.

Mr. Michael said he is not sure who said this, but his understanding was that this 5 year plan is a programmatic plan for the Water Conservation Office. You are not in charge of drought management. Is he right in saying this. That it is a 5 year programmatic plan for Water Conservation Office.

Ms. Chavez said Tim helped us stay organized. She should have just called it the 5 year plan on this handout. It is the programmatic planning document for the Water Conservation Office.

Mr. Michael said it is about what you can do with a program within a limited time frame and budget. We can figure out the scope of what this plan can encompass.

Ms. Chavez said we should have started out with that. He is correct.

Mr. Michael said we as the Water Conservation Committee, with the support of the Water Conservation Office, should and will address those issues. For the plan, they need to figure out what they can actually influence as a matter of focusing this work. It is up to this Committee to help the office focus their efforts.

Mr. Bunton asked would he be correct in suggesting that with the 5 year work plan that the Committee not only has that as an obligation, but can take the opportunity to look more broadly and come up with a more aggressive, expansive approach to water conservation that extends beyond the plan to figure out what to recommend to the City to move forward.

Mr. Coombe said it begs the question that the results should be in terms of how much water is saved, not activities, by each of these things that may be part of the plan. What is the plan of the City. Albuquerque has a number. We don't. It is hard to build a plan without clarity of that objective. That is what we don't have. We need to find a way to engage the other elements of the City in order to develop that sort of qualitative, objective for the work we do.

Mr. Kirk asked is there a reason why we could not do that.

Ms. Chavez said we pulled 5 studies and were going to decide what Water Conservation could support. We are looking at recommendations that could be made. The long range water supply plan is something of use as well for a bigger picture. We have made an aggressive timeline.

Mr. Bunton said the language used in the Basin Study, we could use that.

Coordination with the Sustainability Santa Fe Plan and the Parks Plan was mentioned.

Mr. Pushard said this Committee has requested a copy of that plan. He requested the plan and we requested participation, but we never got the plan and were not able to participate. We wanted to be proactive with that plan.

Ms. Chavez said we have been given the opportunity to participate from a City staffing level. We are hoping for input.

Mr. Coombe asked can the Committee make a request that the City develop a comprehensive water plan that informs the need for conservation.

Ms. Chavez said the Sustainability Plan does not include anything against anything we do.

Mr. Roth said the input for the plan came from concerned citizens only.

Chair Randall said understood and heard.

Ms. Chavez asked if you have any ideas for the columns let her know. She has put some feelers out to the new Mayor to meet with him.

Mr. Roth said a lot of the stuff Albuquerque has done gives us a good template for going forward. She is a great resource.

### **C. GPCD DRAFT REVIEW**

Ms. Chavez said Patricio is here today. He is working on the GPCD and has done a really great job. Thank you for taking this on.

Mr. Michael handed out his spreadsheet which is incorporated herewith into these minutes as Exhibit "3".

Mr. Michael said the real point is the amount of water available to customers.

Less water was produced last year. There is a problem though. We were going to base the new GPCD on population estimates and they are not out yet. He reviewed the chart. Sometime soon there will be a new population estimate. He expects the final GPCD will be the same as last year.

Ms. Chavez said she wanted to call the Committee's attention to last the row on the bottom. In 2016 the GPCD was 86 without population adjustment. In 2017 it was 86.11 with no adjustment. When we adjust the population it will go up to 89 or 90. It will be much more accurate. This is a great start. Our goal for this is April 1<sup>st</sup>. That is our deadline to present this to the State Engineer. She and Patricio are going to go through every entry and double check them and have someone double check us.

Mr. Michael said there is a thing called non revenue which is leaks. When more is used than produced it is a problem. There is about 100 acre feet there.

Ms. Chavez said the AWA audit will help us look at that. We wanted to update you on the progress.

#### **D. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE WORKING GROUPS**

##### **1. IRRIGATION SUBCOMMITTEE**

Ms. Chavez said she and Doug went through all the outdoor irrigation rebate materials. The final design will be pushing out in April. We will bring the finals to you to look at for the next meeting.

##### **2. GENERAL EDUCATION PROGRAM GRANTS**

No report.

##### **3. SCORECARD SUBCOMMITTEE**

This was previously discussed.

##### **4. WATER CONSERVATION CODES/ORDINANCES/REGULATION**

No report.

##### **8. MATTERS FROM THE PUBLIC**

None.

**9. MATTERS FROM STAFF**

None.

**10. MATTERS FROM COMMITTEE**

Mr. Roth asked that staff put out an invite on email.

Ms. Chavez said we will do that as a reminder.

**11. NEXT MEETING  
APRIL 10, 2018**

**12. ADJOURN**

There being no further business before the Committee the meeting adjourned at 6:00 pm.

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Councilor Peter Ives, Chair



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Elizabeth Martin, Stenographer



# Water Conservation Office

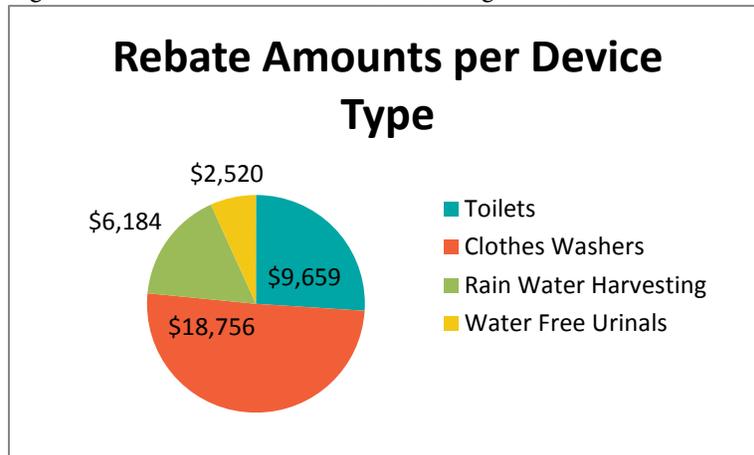
## Monthly Overview of Scorecard Progress – March 2018

	<b>Education Outreach:</b>
<b>Education Initiative:</b>	
<ul style="list-style-type: none"> <li>• Mayor’s Youth Advisory Board tour of BDD and the WWTP on 3/6 (Lisa Noriega)</li> <li>• Scheduling beginning for final Passport Program tour to the WWTP</li> </ul>	
<b>General Outreach:</b>	
<ul style="list-style-type: none"> <li>• Restaurant audit on 3/1 at the Loyal Hound (Lisa Noriega and Patricio Pacheco)</li> <li>• Restaurant audit on 3/2 at Jinja (Mario Torres)</li> <li>• Restaurant audit on 3/6 at the Tea House (Caryn Grosse)</li> <li>• Restaurant audit on 3/7 at Coyote Café (Mario Torres)</li> <li>• Restaurant audit on 3/9 at the Compound (Patricio Pacheco and Lisa Noriega)</li> <li>• Restaurant audit on 3/13 at 2<sup>nd</sup> Street Taproom (Caryn Grosse)</li> <li>• Restaurant audit on 3/13 at Andiamo (Lisa Noriega)</li> <li>• Restaurant audit on 3/20 at the Pantry (Caryn Grosse and Patricio Pacheco)</li> <li>• Staff worked booth at the 2018 Home Show on 3/10 and 3/11</li> </ul>	
	<b>Communication and Customer Service:</b>
<b>Strategic Marketing Plan:</b>	
<ul style="list-style-type: none"> <li>• Save Water Santa Fe radio show guests (Andrew Erdman, Alan Hook, Jeff Dupew, Glenn Schiffbauer)</li> <li>• Finalized seasonal ad campaign strategy plan with timeline, digital, print, broadcast mix of ad spec requirements and due dates.</li> <li>• Developing 2 how-to videos for Laundry to Landscape and graywater; scheduling video shoot.</li> <li>• Rebate and Irrigation package design components drafted for final review</li> <li>• Designed bill insert promoting indoor and outdoor rebates</li> <li>• Scripted “how to” videos for irrigation including gray water. Video shoot scheduled for 2/28</li> <li>• Paid boosts on social media to promote Restaurant Pilot Project</li> <li>• Drafted ads for outdoor irrigation rebate rollout and seasonal high demand</li> </ul>	
<b>Eye On Water Rollout:</b>	
<ul style="list-style-type: none"> <li>• 2,952 sign ups as of 3/20/2018</li> </ul>	
<b>Indoor Water Audits:</b>	
<ul style="list-style-type: none"> <li>• Carruthers Building water audit 3/8</li> </ul>	
<b>Enforcement Activity:</b>	
<ul style="list-style-type: none"> <li>• 150 continuous consumption letters sent this month</li> <li>• 3 water waste hotline calls 2/22/18-3/19/18</li> <li>• 2/28/18 Guadalupe St/Alcaldesa-Citation: Fugitive water/using water to clean hard surfaces/water waste/power washing</li> <li>• 3/6/18 Calle Lorca/Richards Ave/Rodeo Rd-Warning: Fugitive water/wasting water/power washing car</li> <li>• 3/15/18 St Francis/Zia Rd/Sawmill Rd-Warning: Fugitive water/wasting water/open end hose</li> </ul>	

**Residential and Commercial Rebates:**

Remaining fund balance as of March 22, 2018: \$262,881.50

Water savings resulting from rebates: 2.44 acre-feet (795,076 gallons)



Rebates awarded FY-to-date:

- HET (all types) -157
- Clothes Washers (all types) -72
- Rain Water Harvesting (including rain barrels) -35
- Water Free Urinals- 4



**Effective Program Management**

**Organizational Development:**

- Christine attending Essentials for Supervisors Training on Friday mornings through April
- Christine meeting with Richard Thompson of the Parks Division on 3/26
- Meeting with customer service on 3/14 on continuous letters/ coordination on bill inserts (Patricio and Christine)
- Meeting with customer service and T&D on water shut off processes on 3/27

**Water Conservation Committee:**

- Results based accountability subcommittee meeting on 3/8 and 3/21
- Meeting with Scott Bunton on review of commercial and enforcement policies on 3/21
- Christine and Caryn attended Sustainability Committee meeting on 3/21

**Integration with Water Resources:**

- Finalizing 2016 AWWA Audit, have collecting info for 2017 AWWA Audit
- 2017 GPCD in final review
- Christine attending monthly project status meetings with Water Resources
- Christine working with Water Resources on a joint RFP for expansion of passport program
- Caryn/ Christine working on coordinating water conservation pieces into the Long Range Water Supply Plan work



**Stewardship and Conservation:**

**Regional Collaborations:**

- Patricio Pacheco is serving on the NMWCA board-attended 3/7/2018 meeting
- 2018 Next Generation Water Summit-April (Christine)

# City of Santa Fe, New Mexico

# memo

**Date:** March 7, 2018

**To:** Shannon Jones, Public Utilities Director   
Rick Carpenter, Water Division Director

**Via:** Christine Y. Chavez, Water Conservation Manager 

**From:** Caryn Grosse, Water Conservation Specialist Sr. 

**RE:** Irrigation Efficiency Rebates

**Background:**

The rebate amounts for the City of Santa Fe's irrigation efficiency program were set in Exhibit A of Resolution 2009-55, A Resolution Adopting the Irrigation Efficiency Program Guidelines and Authorizing Rebates for the Installation/Retrofit of Efficient Irrigation Hardware (see attached). The program guidelines are similar to those used by most other utilities, including pre-installation evaluation and post-installation inspection requirements, however there have been changes in technology and costs since 2009, as well as information which allows the Water Conservation Office to better quantify the water savings which may result from customers upgrading their irrigation systems. In addition, the Water Conservation Office has developed a "Laundry to Landscape" graywater rebate for 2018 which could be used in conjunction with an irrigation system.

With the prospect of 2018 being a drought year, this may be a good time to re-examine the device types, rebate amounts and to look at the feasibility of including the anticipated water savings from irrigation rebates in the annual water bank accounting.

**Potential Water Savings:**

A number of studies have been done, including several from California, which compare the water savings from SMART controllers with older model controllers. Some of these studies even compare usage between controllers installed by the homeowner versus controllers installed by irrigation professionals. If the homeowner is properly adjusting their controller throughout the irrigation season, replacement with a SMART controller may actually cause the water usage to increase, however, as most homeowners are more inclined to "set and forget" their controller at the warm season levels, the studies have found that most landscapes are being overwatered.

EPA WaterSense estimates that replacing a standard clock timer with a WaterSense labeled irrigation controller can save an average home approximately 8,800 gallons of water annually. Using the values associated with previous rebates, this would translate into a \$400 rebate and water saving factor of 0.02701 AFY. (In the past, irrigation rebates have not had an associated water saving factor, and therefore have not been included in the savings going to the Water Bank each year.)

**Other Utilities' Rebate Programs:**

An examination was made of the irrigation efficiency rebates offered by several other utilities:

Agency	State	Rebate Type(s)	Rebate Amount(s)	Additional Requirements
The Woodlands Joint Powers Agency	TX	Rain barrels, rain sensors, drip irrigation, SMART controllers	50% up to \$150	one-time rebate, ineligible for any future rebates. Receipts must be submitted in person
Zone 7 (Livermore, Dublin, San Ramon, Pleasanton)	CA	SMART controllers, lawn replacements	\$75, 50% up to \$750	replace 1,000 sf turf
Washington County Water Conservancy District	UT	Cost up to max: SMART controllers, hi-eff sprinkler nozzles, PRV, spray to drip conversion, capping a station, professional audit	max total \$500: PRV max \$100, nozzles & spray to drip max \$60/station, SMART controller max \$150, audit max \$75	pre-approval required
Gilbert	AZ	Free controllers, etc.		Pre-approval/audit/monitoring required. Does not include single family residential.
SoCal Metropolitan Water District	CA	Controllers, rotating popup nozzles, rotary nozzles, flow regulators, soil moisture sensors	\$35/station, \$2/nozzle, \$13/set, \$1/ regulator, \$35/station	
Miami-Dade Water	FL	cost up to specified amount: rain sensor, soil or ET controller (not both), irrigation removal, drought tolerant plants, hydrozone redesign of system, nozzles, submeter, rain water collection (min 70 gal)	Max total \$500: \$120 \$400  \$200 \$400 \$400  \$400 \$100 \$400	pre-evaluation, post-inspection
Medford Water Commission	OR	SMART controllers, less than 12 stations, more than 12 stations	\$200- \$250 or cost	pre-audit/post-inspection 1/2 rebate, 2 irrigation seasons, follow up inspection 2nd 1/2 rebate
West Sacramento	CA	waterwise house call-10 nozzle kit SMART controller	\$150	pre-approval required, must be completed within 60 days of approval
Chandler	AZ	SMART controller	50% up to \$250	
Citrus County Utility	FL	SMART controller rain sensor replacement	\$150 \$50	post-installation inspection required, must replace existing (FL law requires rain sensors on all irrigation systems)

**Recommendations:**

While the irrigation rebates offered by the City of Santa Fe thus far have been fairly consistent with those currently offered by other utilities both in terms of value and requirements, we have been trying to revitalize our rebates program to keep pace with changes in standards and technology. The cost of SMART controllers has decreased. More of the SMART controllers are being designed to be intuitive, making them more likely to be installed and programmed by Do-It-Yourselfers. And many of the smaller properties in Santa Fe utilize drip systems instead of sprinklers. Simplifying the rebate program may ultimately improve uptake, as well as making the program easier for staff to manage.

Below are proposed changes to the rebates:

Device	Rebate amount	Proposed changes
Rain Sensor	\$40	Same
Soil Moisture Sensor	\$75	Same
ET Controller		Change to WaterSense labeled SMART controller up to 12 stations- cost of controller up to \$400
1-6 stations	\$300	Eliminate
7-9 stations	\$375	Eliminate
10-12 stations	\$450	Eliminate
13-8 stations	\$575	Change to WaterSense labeled SMART controller more than 12 stations- cost of controller up to \$750
19-24 stations	\$750	Eliminate
Pressure Reducing Valves:		PRVs for drip systems are available for less than \$25 ea. While PRVs save water, the current rebate values are not cost effective.
3/4"	\$120	Eliminate
1"	\$150	Eliminate
1 1/2"	\$400	Eliminate
2"	\$525	Eliminate
Pressure Regulating Spray Nozzle (each)	\$2	Eliminate
Precision Spray Nozzle (each)	\$3	Eliminate
Pressure Regulating Spray Head (each)	\$5	Eliminate
Matched Precipitation Rotors	\$2	Eliminate

In addition, we would like to double the rebates for having a landscape water audit performed by a QWEL (Qualified Water Efficient Landscaper) or IA (Irrigation Association) certified professional to \$100 for residential and \$150 for commercial properties. (Determination of residential or commercial status is typically be determined by the account classification in the Utility Billing System.) It is hoped that the larger incentive will encourage customers to get a professional audit of their irrigation system.

For the Laundry to Landscaping gray water harvesting rebate, we plan to offer a rebate of up to \$175 towards the cost of parts for customers who add a diversion system to use water from their clothes washers for outdoor irrigation. The terms for this rebate will require that the applicant provides the following items:

- itemized receipts for the parts (at a minimum, a brass 3-way diverter ball valve, air vent, and distribution tubing to direct the water to their landscape) and
- photos of the installed diversion, including valve, air vent and distribution system
- Application must be submitted within 90 days of purchase/installation.

**Resources:**

Aquacraft, Evaluation of California Weather-Based "SMART" Irrigation Controller Programs, July 2009, <http://ucanr.edu/sites/UrbanHort/files/99641.pdf>

California Water Efficiency Partnership, California Urban Water Conservation Council, Weather Based Irrigation Controllers – Residential, 2014, <http://calwep.org/Research-Portal/Weather-Based-Irrigation-Controllers>

Bureau of Reclamation, Reclamation: Managing Water in the West, Weather- and Soil Moisture-Based Landscape Irrigation Scheduling Devices, Technical Review Report – 5<sup>th</sup> Edition, May 2015, <https://www.usbr.gov/lc/socal/reports/2015Report.pdf>

EPA WaterSense Labeled Irrigation Controllers Factsheet, February 2013, <https://www.epa.gov/sites/production/files/2017-01/documents/ws-products-factsheet-irrigation-controllers.pdf>

Urban Farmer Store Laundry to Landscape Graywater Starter Kit handout, <http://www.urbanfarmerstore.com/wp-content/uploads/2013/09/L2L-Full-Page-Handout.pdf>

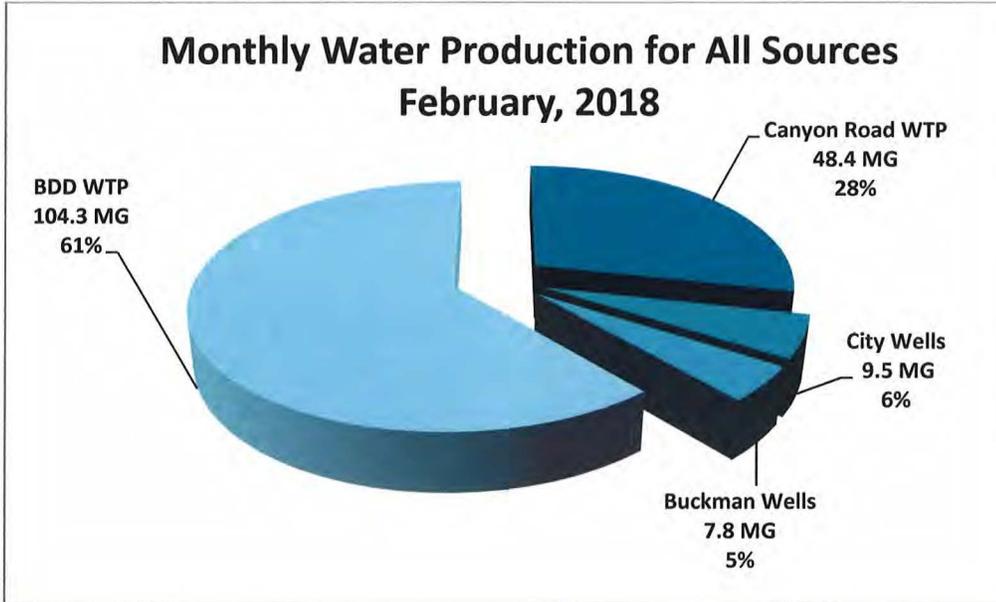
Clean Water Components Laundry to Landscape Kit, <https://cleanwatercomponents.com/content/barbed-laundry-landscape-kit>

Oasis Design Laundry to Landscape Grey Water System, <http://oasisdesign.net/greywater/laundry/>



**City of Santa Fe, Source of Supply Section  
Water Production and Environment Office Update  
April 4, 2018**

**Water Production Update for February, 2018**



**Total Production of System**

**Sum: 170 MG million gallons (MG) for 28 days**

**Daily Average Production (to meet demand/maintain storage): 6.07 Million Gallons per Day (MGD).**

**Current (03/26/2018) Reservoir Storage Levels:**

**McClure: 32.6% or 355.5 MG**

**Nichols: 49.3% or 106.3 MG**

**Combined: 35.4% or 461.8 MG**

**Santa Fe River Flow (03/26/2018):**

**Below Nichols (Living River Flows): 0.15 cubic feet per second (cfs) or 0.097 MGD**

**Streamflow at Gage below Nichols: 0.16 cfs or 0.10 MGD (Actual including Living River Flows)**

**Above McClure (Reservoir Inflow): 2.20 cfs or 1.40 MGD**

**Santa Fe (aka, Baca Street) Well at the Former PNM Santa Fe Generating Station**

The City met with NMED Petroleum Storage Tank Bureau (PSTB) on December 12<sup>th</sup> for review and discussion of a continued and revised work plan for investigation of the Santa Fe Well (aka, Baca Street Well) and former SF Generating Station site. Subsequent to that meeting, a new Investigation Work Plan and Cost Estimate for Additional Site Investigation and Groundwater Monitoring Activities was also submitted by INTERA, PNM's chosen contractor under the Petroleum Corrective Action Fund (CAF), on December 19<sup>th</sup>. This revised plan contained many of the revisions previously requested by the City and it was fully approved and funded on February 7, 2018. The Santa Fe Well is listed as A Priority 1 site under the New Mexico CAF and is currently

NMED's highest priority site for funding. This fiscal year's efforts will include soil borings, field screening for Volatile Organic Compounds (VOCs), soil and groundwater sampling/monitoring, and seven new monitoring well and is expected to cost approximately \$750,000.00 in the remainder of FY 17/18.

Work at the site was initiated on March 6<sup>th</sup> with the drilling of four wells on PNM property within the footprint of the former PNM Santa Fe Generating Station. All wells are expected to be completed by the end of April upon completion of two wells next to the Acequia Trail and one additional well at the City's Santa Fe Well site. Upon completion of the well drilling, the contractor for PNM and the PSTB will be submitting a "Letter Report", which will include field soil boring lithologic logs; monitoring well construction diagrams; the results of field analyses; and photograph logs" for each well. Staff shall provide an update to the Committee after receipt of this report.

### **Downtown Groundwater/Soil Investigations**

The City of Santa Fe is working with the New Mexico Environment to perform another round of monitoring at five groundwater monitoring sites in, and around the Plaza, and downtown area. This work is being performed to further investigate possible sources of formerly detected chlorinated solvents, provide insight into groundwater flow direction, and inform the development, if necessary, of strategies to remove and remediate the problem.

The monitoring wells were first set in place in June, 2016 to analyze groundwater underlying the downtown area and they were sampled again in June 2017. Groundwater in the area under investigation is not currently used as part of Santa Fe's municipal drinking water supply, and there are no City production wells in the immediate area. However, the investigation will help to assess any potential future impacts to City Wells that could result from groundwater contamination in the study area and any possible migration towards city production wells over time. This work is being performed in addition to previous investigations performed along the Santa Fe River Corridor completed in the years 2014 and 2015, indicating the need for a broader area of investigation. The information which the City gathers with the NMED from these monitoring locations will help in the definition of the nature and extent of perchlorethylene contamination previously detected in the groundwater taken from a subset of these wells. Perchlorethylene (aka, Tetrachloroethylene) is widely used for dry-cleaning fabrics and metal degreasing operations and has become one of the most widely detected contaminants of ground water and drinking water sources found in the United States and other countries. The suspected source of the contaminant detected below the Downtown Area/Plaza was a former dry cleaning operation located at the corner of Washington and Palace where Santa Fe Dry Goods now occupies the building.

The data and analytical results obtained through this monitoring effort will determine the need for a more intensive investigation and will help ensure that any clean up strategies, if and when we need to employ them, are as effective as possible. It is the most logical next step in the process of the investigation and delineation of any possible contamination of concern. Sites can be seen on **the attached map**, and include locations near the Plaza, the downtown Library, City Hall and others. The monitoring activities will start on March 28 with the measuring of groundwater levels and the placement of diffusion bag samplers in the existing wells. Two weeks after this placement, the samplers will be removed for laboratory analysis. NMED will also be conducting soil vapor sampling in the downtown area in several off-street locations as part of their investigation beginning on April 2<sup>nd</sup>.

### **Former Ortiz Landfill**

INTERA'S Phase II site investigation report for the former Frank Ortiz Landfill was submitted to the NMED Ground Water Quality Bureau on December 4, 2017. The City met with NMED on January 5, 2018 to discuss the report and its findings. The NMED accepted the findings and conclusions of the site investigation, as well as a proposed amendment of our Stage 1 Abatement Plan pursuant to the findings of the Phase II investigation. In that amendment the City has proposed the installation of two new monitoring wells, groundwater monitoring, and continued/additional soil-vapor monitoring at the Ortiz site. NMED approved the City's amendment contingent

upon their request for two new vapor monitoring points. City staff tentatively agreed to this provision. The City is awaiting official NMED approval of the work plan, as amended.

### **Los Alamos National Laboratory Sitewide Monitoring Program**

Samples were taken in December at three Buckman wells closest to the Rio Grande for High Explosives, Volatile Organic Compounds, Sem-Volatile Organic Compounds, PCBs, Radionuclides, Tritium, Percchlorate, Hexavalent Chromium, Metals, and general inorganic chemicals by Los Alamos National Laboratory and the NMED Oversight Bureau in early December. Sampling results will be provided to the PUC as they become available and have undergone LANL's quality assurance checks. The City's Environmental Compliance Office is working with the NMED to trend and assess all results obtained from this sampling program, and NMED duplicate samples, during the last 5 years.

Public interest regarding this sampling program has been heightened by recent media coverage of the Los Alamos Chromium plume and its possible migration toward Los Alamos County wells. The possible implications of this plume and other LANL related contamination to the Buckman Wellfield is not yet fully understood. However, sampling under this program has not yet detected the presence of LANL related contaminants since it was first implemented approximately ten years ago. The City will be proposing to sample other wells within the Buckman Wellfield as part of its annual budget. It is also hoped that some additional funding might be obtained through the current sampling agreement with Los Alamos National Laboratory.

### **Drought/Monsoon, Storage, and ESA Update**

NOAA has recently (03/08/18) updated ENSO (El Nino/La Niña) status to: **“A transition from La Niña to ENSO-neutral is most likely (~55% chance) during the March-May season, with neutral conditions likely to continue into the second half of the year.”** Heron, Abiquiu, and El Vado reservoir levels on the Chama River are no longer rising. Runoff projections for this year are far below normal. Local Upper Santa Fe River reservoir storage volume is slowly decreasing, but that is normal for this time of year (about 35% full). Recent minor snows may help (?) when runoff season begins later this Spring. The City received 100% delivery (5,230 AF) from BoR of full firm-yield of San Juan-Chama Project (SJCP) water for year 2017, and received a January, 2018 delivery of 2,290 AF. No new deliveries have been made since January but BoR is projecting a full 100% firm-yield delivery of SJCP water by the end of the year. There are no water-related Endangered Species Act (ESA) updates. Updates on ESA issues will be made as needed. Rio Grande Compact Article VII storage restrictions are not in effect, which means the City is allowed to impound “native” runoff into Nichols and McClure Reservoirs above the pre-Compact pool of 1,061 acre-feet (AF); however, Article VII is expected to go back into effect in June. Updates to this condition will be made as needed.

#### **Most Current City of Santa Fe SJCP Reservoir Storage Pools:**

Heron:

5,230 AF. Year-2017 deliveries were 100% of annual total.  
2,290 AF. Year 2018 deliveries through January.

El Vado:

0 AF.

Abiquiu:

9,733 AF. SJCP carry-over from previous years plus 2017 deliveries. No time limit to vacate due to storage agreement with ABCWUA

#### **TOTAL SJCP RESERVOIR STORAGE:**

**17,253 AF**







## 2016 City of Santa Fe AWWA Water Audit



Amy Ewing, P.G.  
April 10, 2018



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## Project Summary

- DBS&A is under contract with the City of Santa Fe to conduct up to 4 years of water audit analyses.
- The contract expires 6/30/2019.
- A water audit for calendar year 2016 has been completed using data compiled by City staff.



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## Project Summary

- Water audits are designed to help utilities reduce water losses and associated revenue losses, thus improving the utility's performance.



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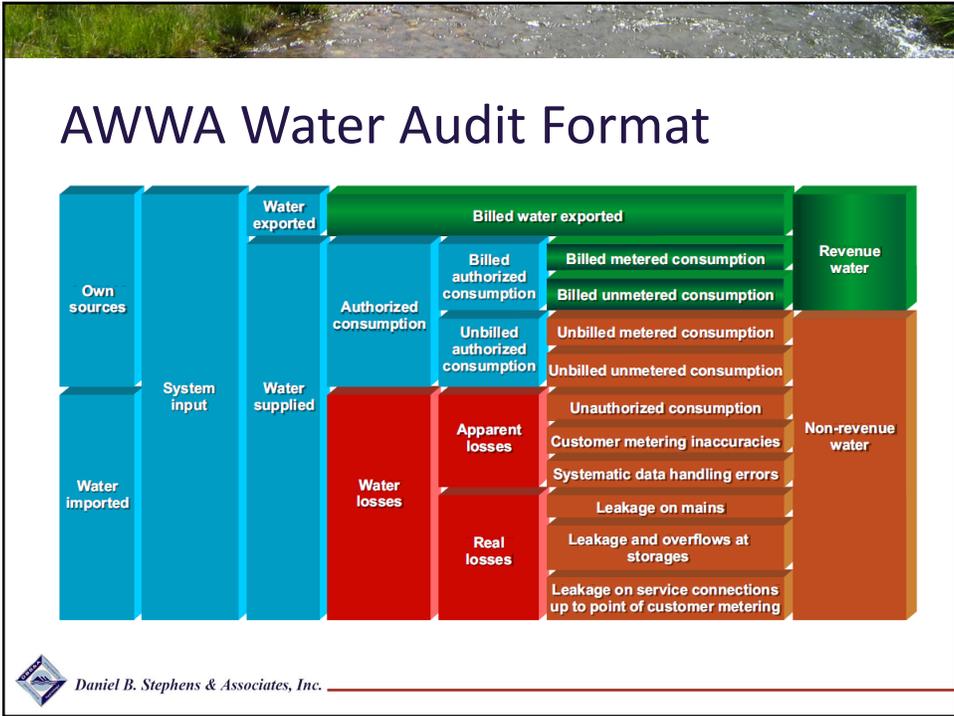
## Project Summary

- The project objective is to
  - Improve the City's operational and financial sustainability by estimating revenue versus non-revenue water.
  - Distinguish real and apparent losses using the water accounting technique based on the American Water Works Association (AWWA) water balance model.



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## Project Summary

- Real water loss
  - Physical water losses from the water system, up to the point of customer consumption.
  - Examples include leakage from mains and service connections, and storage tank overflows.

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## Project Summary

- Apparent water loss
  - Non-physical (paper) losses that result in uncaptured revenue for the water utility and distortion of customer consumption data.
  - Examples include customer meter error, total low-flow inaccuracies, illegal connections and theft, and database errors.



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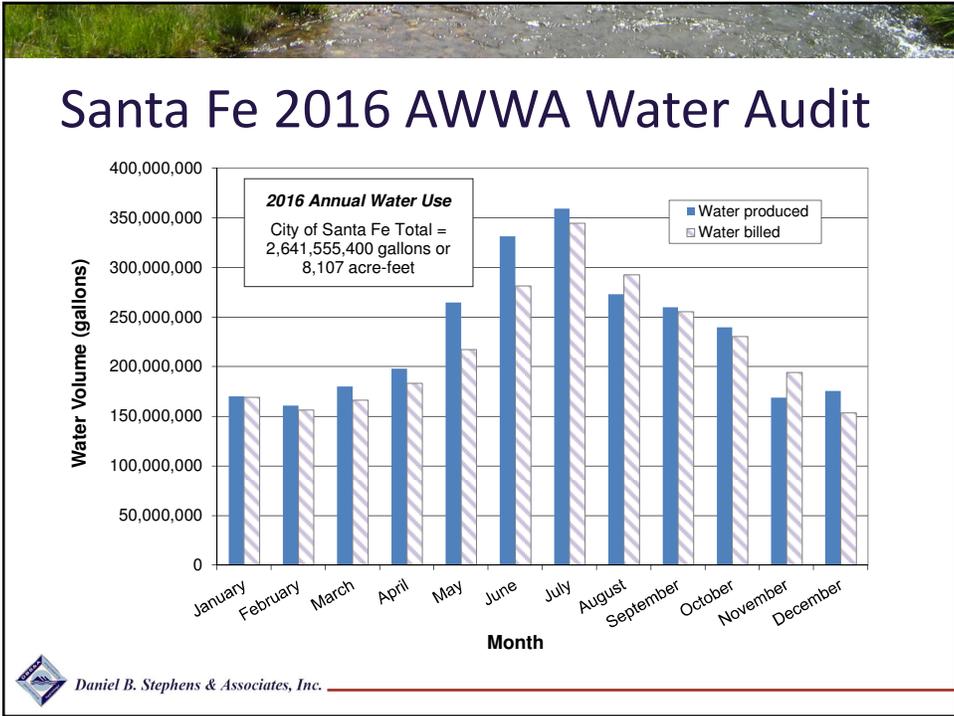
## Project Summary

- The project report includes:
  - A water system summary
  - An analysis of water billing data
  - Results of the 2016 water audit
  - Recommendations for how to minimize non-revenue water



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- ## Santa Fe 2016 AWWA Water Audit
- Revenue water = Billed water by sector.
  - Total revenue water in 2016 (2,641.555 million gallons) was 94.3 percent of the total water supplied.
  - The Santa Fe County sales were treated as exported water in the water audit and are not included in this total.
-  Daniel B. Stephens & Associates, Inc.

## Santa Fe 2016 AWWA Water Audit

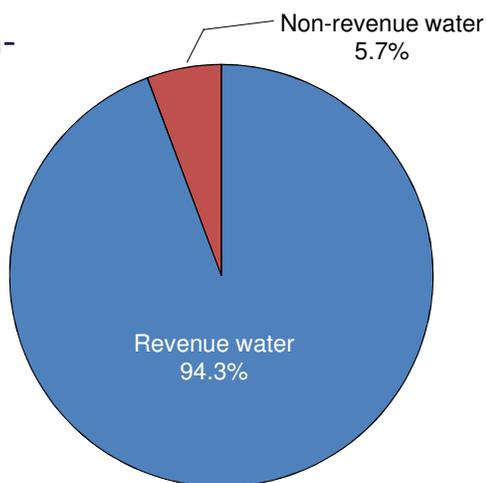
- Non-revenue water
  - Amounted to 5.7 percent by volume of the water supplied.
  - Cost the City \$727,158 (annual costs of real and apparent losses).
  - This is equivalent to 1.8 percent of the cost of operating the system, with the real losses being valued at the variable production cost.



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## Santa Fe 2016 AWWA Water Audit

- Revenue vs. non-revenue water



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## Santa Fe 2016 AWWA Water Audit

- Non-revenue categories include:
  - Total authorized unbilled unmetered use (e.g., fire department)
  - Total apparent losses (estimated customer meter error, total low-flow inaccuracies, illegal connections and theft, and database errors)
  - Total potential real water loss (calculated by subtracting authorized consumption and apparent losses from adjusted production)

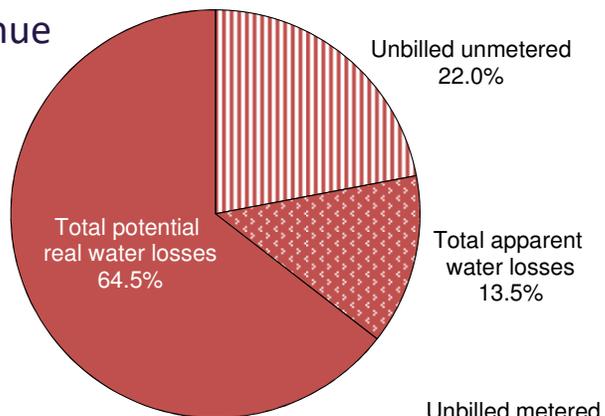


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## Santa Fe 2016 AWWA Water Audit

- Breakout of non-revenue water

- Total non-revenue water:  
159,158,000 gallons



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## Santa Fe 2016 AWWA Water Audit

- The 2016 data suggest that the best target for further reducing the City's non-revenue water is to minimize total potential real water loss, as this is estimated to be the largest component of non-revenue water.



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## Santa Fe 2016 AWWA Water Audit

- Water loss is expected to be higher than estimated by the 2016 water audit analysis.
- In 2016, the City was in the process of replacing all customer meters, and customer water use was estimated for a few months during the meter replacements.
- A new billing system was also implemented in 2016.



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## Santa Fe 2016 AWWA Water Audit

- Meter error has been estimated for most of the sources of water supply.
  - In 2016, the Buckman Direct Diversion meters and a subset of large commercial meters were tested.
  - No production well or Canyon Road Treatment Plant meters were tested.



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## Data Validity

- The AWWA water audit software calculates a data validity score based on grading scores for each of the volumetric and system data inputs.
- This overall score serves as a measure of the overall validity of the input data and can be used to recommend measures for improving the accuracy and comprehensiveness of the data.



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## Data Validity

- Data grading scores were assigned by City customer service and utility billing, water conservation, transmission and distribution, and source of supply staff.
- The overall data validity score for 2016 is 65 out of 100.
- For comparison, the 2011 average data validity score for water audits of 10 utilities with fewer than 50,000 connections was 70.44.



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## Recommendations

- Improved water accounting practices
  - Continue and expand the annual meter testing program.
  - Replace the BDD meters that are not performing well.
  - Install the three new master meters needed to implement the BDD master meter agreements with Santa Fe County.
  - Complete the customer meter replacements.



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## Recommendations

- Operational practices
  - Develop more refined methods of estimating and recording unbilled, unmetered water use.
  - Continue conducting annual water audits, refining the analyses as more data become available.
  - Expand the leak detection program by adding staff to more fully address the daily “high/low report” that lists continuous flows, and consider implementing physical leak detection technologies.



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## Recommendations

- Operational practices (continued)
  - Develop a backflow prevention program and designate staff to support it. This could be done by either expanding the existing program, or by implementing a new program.
  - Work collaboratively with the parks and recreation department to assess the current operational practices, and to identify any opportunities for improvement and/or conservation.



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## Recommendations

- Infrastructure improvements
  - Continue implementing the water line replacement program.
  - Continue implementing SCADA systems to monitor pressures and flows on pressure reducing valve sets.
  - Isolation valve testing, especially in the older sections of town.
  - Identify additional needs and opportunities for other system improvements.



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## 2017 Water Audit Timeline

- Data collection
  - April 2018
- Water audit analysis
  - April-May 2018
- Draft report and presentations
  - May-June 2018
- Final report
  - June-July 2018



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*Questions?*



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# Action Items



**Subcommittee:**

**Meeting Date:**

Item #	Description	Target Date	Responsibility	Status



## Water Efficiency and Conservation Long Form Scorecard: *New Mexico*

The following Scorecard is an extended version of the Scorecard included in the *2017 Water Efficiency and Conservation State Scorecard: An Assessment of Laws*. A total of 75 possible points could be earned from the water efficiency and conservation questions. Another 14 points in extra credit could be earned for having particular additional requirements under certain questions. After each question was scored, the total was summed and states were assigned a grade based on the Grading Scale. Additional information about the rubric and scoring methodology is available in Section III of the report.

**Grade: C**

Grading Scale	
A+	67 to 75
A	58 to 66
A-	49 to 57
B+	40 to 48
B	31 to 39
B-	26 to 30
C+	21 to 25
C	16 to 20
C-	11 to 15
D+	6 to 10
D	1 to 5
*.5's round up	

Question	Points	Possible points
1. What state agency or agencies are in charge of drinking water conservation/efficiency?	2	2
2. Does the state have a water consumption regulation for toilets (that is more stringent than the federal standard)?	0	3
Yes or no?	0	2
<i>Extra Credit #1: Yes and the fixture is subject to a replacement mandate in law</i>	0	1
3. Does the state have a water consumption regulation for showerheads (that is more stringent than the federal standard)?	0	3
Yes or no?	0	2
<i>Extra Credit #2: Yes and the fixture is subject to a replacement mandate in law</i>	0	1
4. Does the state have a water consumption regulation for urinals (that is more stringent than the federal standard)?	0	3
Yes or no?	0	2
<i>Extra Credit #3: Yes and the fixture is subject to a replacement mandate in law</i>	0	1
5. Does the state have a water consumption regulation for clothes washers (that is more stringent than the federal standard)?	0	3
Yes or no?	0	2
<i>Extra Credit #4: Yes and the appliance is subject to a replacement mandate in law</i>	0	1
6. Does the state have a water consumption regulation for pre-rinse spray valves (that is more stringent than the federal stand-)	0	3
Yes or no?	0	2
<i>Extra Credit #5: Yes and the fixture is subject to a replacement mandate in law</i>	0	1
7. Do state building codes or plumbing codes require use of water efficient products (that exceed the federal standard)?	0	3

Question	Points	Possible points
8. Does a state statute(s)/regulation(s) limit water loss in utility distribution systems?	0	15
(a) Yes or no? If yes, what is the requirement?	0	2
<i>Extra Credit #6: State is leveraging state-funding for M36-compliant technical assistance to water systems in support of an existing or potential mandate</i>	0	2
(b) To what water suppliers do the laws apply?	0	2
(c) If there is a numeric limit on leakage or a formula for calculating acceptable levels of leakage, what is it?	0	2
(d) Is submitting audit information required?	0	1
(d)(i) If yes, at what frequency must it be submitted?	0	2
(d)(ii) If yes, is audit data validation required?	0	1
<i>Extra Credit #7: Audits are required to be conducted using the AWWA Free Water Audit Software</i>	0	1
(e) Is leak detection required?	0	1
(f) Is leak correction required?	0	1
9. Does a state statute(s)/regulation(s) require water suppliers to plan and/or implement conservation measures as a condition of a water right permit?	3.5	15.5
Yes or no? If yes, what is the requirement?	1.5	2.5
(a) To what water suppliers do the laws apply?	2	2
(b) Is preparing a water conservation plan a prerequisite to obtaining a water right permit?	0	1
(c) Does a state statute(s)/regulation(s) identify required contents of that plan?	0	1
(d) Does a state statute(s)/regulation(s) require the water supplier to incorporate stakeholders in plan development?	0	1
(e) Does a state statute(s)/regulation(s) require the state to evaluate the sufficiency of that plan?	0	1
(f) Does a state statute(s)/regulation(s) identify criteria for evaluating the sufficiency of that plan?	0	1
<i>Extra Credit #8: Especially detailed or pointed set of criteria</i>	0	2
(g) Does a state statute(s)/regulation(s) require that plan to be incorporated into the permit as an enforceable condition?	0	2
(h) Does a state statute(s)/regulation(s) condition approval of municipal water permits/licenses on adoption and/or implementation of water conservation measures?	0	2
10. Does a state statute(s)/regulation(s) require water suppliers to develop a drought preparedness plan?	0	10.5
(a) Yes or no? If yes, what is the requirement?	0	2.5
(b) Does a state statute(s)/regulation(s) identify required content regarding drought in such a plan?	0	1
(c) Does a state statute(s)/regulation(s) require the water supplier to incorporate stakeholders in plan development?	0	1
(d) Does a state statute(s)/regulation(s) require the state to evaluate the sufficiency of that plan?	0	1
(e) Does a state statute(s)/regulation(s) identify criteria for evaluating the sufficiency of that plan?	0	1
(f) How often must a drought preparedness plan be updated?	0	2
<i>Extra Credit #9 &amp; #10: For significantly promoting adaptive management and/or for an exceptionally robust framework of what a drought plan must contain and frequent update requirements</i>	0	2

Question	Points	Possible points
11. Independent of a water right permitting process and drought plans, does a state statute(s)/regulation(s) require water suppliers to develop plans for water conservation and/or efficiency?	3.5	14
Yes or no?	1	1
(a) To what water suppliers do the laws apply?	0	1.5
(b) Does a state statute(s)/regulation(s) identify required contents of those plans?	1	1
<i>Extra Credit #11: Exceptionally robust framework of what a plan must contain</i>	0	1
(d) Does a state statute(s)/regulation(s) require the state to draft guidelines to aid water suppliers in preparing the plans?	0	1
(e) Does a state statute(s)/regulation(s) require the water supplier to incorporate stakeholders in plan development?	0	1
(f) Does a state statute(s)/regulation(s) require the state to evaluate the sufficiency of those plans?	0	1
(g) Does a state statute(s)/regulation(s) identify criteria for evaluating the sufficiency of those plans?	0	1
(h) How often must those plans be updated?	0	2
(i) Does a state statute(s)/regulation(s) explicitly require implementation of plans or other water conservation measures?	0	1
(j) Does a state statute(s)/regulation(s) require water suppliers to: identify financial resources and/or legal authorities necessary for plan implementation, prepare implementation schedules, and/or submit progress reports to the state?	0	1.5
(k) Does a state statute(s)/regulation(s) allow the state to penalize, fine, revoke permits from, or withhold privileges from a water supplier for not implementing those plans?	0	1
12. Does the state offer financial assistance other than DW SRFs to utilities, cities, or counties for urban water conservation?	5	5
13. Does the state offer technical assistance for urban water conservation programs?	2	3
Online resources	1	1
Direct technical assistance	1	1
<i>Extra Credit #12: Other technical assistance</i>	0	1
14. Does a statute(s)/regulation(s) require water connections that are part of a public supply to be metered?	0	2
15. Does a statute(s)/regulation(s) require water suppliers to implement volumetric billing?	0	2
16. Does a statute(s)/regulation(s) require rate structures explicitly designed to encourage water conservation?	0	2
<b>Total</b>	<b>16</b>	<b>89*</b>

\*89 is the absolute maximum number of points available when the base point value of 75 and the additional 14 extra credit points are taken together.



## Climate Resiliency Long Form Scorecard: *New Mexico*

The following Scorecard is an extended version of the Scorecard included in the *2017 Water Efficiency and Conservation State Scorecard: An Assessment of Laws*. The questions below establish an “either, or” structure wherein states could receive points *either* for having a plan, *or* for a legal framework that was comparable to a plan. States with plans could receive a maximum of 28 points and states without a plan could received a maximum of 25 points. These total possible points include points awarded for extra credit offered under select questions. After each question was scored, the total was summed and states were assigned a grade based on the Grading Scale. Additional information about the rubric and scoring methodology is available in Section III of the report.

Grading Scale	
A+	23 to 25
A	20 to 22
A-	18 to 19
B+	15 to 17
B	13 to 14
B-	11 to 12
C+	8 to 10
C	5 to 7
C-	3 to 5
D+	1 to 2
D	0
*.5's round up	

### Grade: C+

Question	Points	Possible Points
<b>1. Does the state have a climate action, adaptation, or resiliency plan?</b>	<b>2.5</b>	<b>5</b>
<b>If Yes:</b>	<b>6</b>	<b>15</b>
What water resource management goals does it include, if any?	2	5
On what water supply-related impacts, if any, of climate change or changing weather patterns does the plan focus?	3	4
What agencies, organizations, or stakeholders are responsible for implementing the water resources strategies in the plan?	0.5	1
<i>Extra credit #1: Well aligned strategies/plans among agencies, between agency and state plans, and/or between stakeholders</i>	0	1
How often is the plan updated?	0.5	2
<i>Extra credit #2: An especially robust combination of enforcement provisions and requirements</i>	0	2
<b>If No:</b>	<b>0</b>	<b>12</b>
What state statute(s)/regulation(s), if any, provide legal authority or requirements regarding climate action or resiliency?	0	1
What water resource management goals does it include, if any?	0	5
On what water supply-related impacts, if any, of climate change or changing weather patterns does the plan focus?	0	4
<i>Extra credit #3: An especially robust combination of enforcement provisions and requirements</i>	0	2
<b>2. Does the state require any climate change-related actions of the water and/or wastewater industries in:</b>	<b>0</b>	<b>5</b>
Resiliency plans?	0	2.5
Statutes/regulations?	0	2.5
<b>3. Does the state have specific benchmarks against which it measures progress toward increased water resource resiliency?</b>	<b>0</b>	<b>3</b>
<b>Total</b>	<b>8.5</b>	<b>28</b>