



Agenda

DATE 5/5/14 TIME 2:15 PM
BY Caryn Grosse
BY [Signature]

SANTA FE WATER CONSERVATION COMMITTEE MEETING
CITY HALL - 200 LINCOLN AVE.
CITY COUNCILORS' CONFERENCE ROOM
TUESDAY, MAY 13, 2014
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 8, 2014 WATER CONSERVATION COMMITTEE MEETING
6. APPROVAL OF MINUTES OCTOBER 8, 2013 WATER CONSERVATION COMMITTEE MEETING
7. CONSENT AGENDA
 - A. DROUGHT, MONSOON AND WATER RESOURCE MANAGEMENT UPDATE (Rick Carpenter)
 - B. RESERVOIR IMPROVEMENTS UPDATE (Alan Hook)

DISCUSSION ITEMS:

8. GREEN LODGING INITIATIVE RESOLUTION (Councilor Ives, 10 minutes)
9. FOREST AND WATER CLIMATE ADAPTATION (Esha Chiocchio, SF Watershed Association, 10 minutes)
10. 2013 GALLONS PER CAPITA PER DAY (Alan Hook, 10 minutes)

INFORMATIONAL ITEMS:

11. WATER CONSERVATION COMMITTEE OUTREACH OPPORTUNITIES (Laurie Trevizo, 10 minutes)
12. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE INITIATIVES: (Councilor Ives 60 minutes)
 - A. GROUP #4- REESTABLISH TREND OF NET ANNUAL REDUCTIONS IN PER CAPITA WATER USAGE AND IDENTIFYING LARGE WATER USERS (12 minutes)
 - B. GROUP #5- DOMESTIC WELLS WITHIN THE CITY LIMITS (12 minutes)
 - C. GROUP #1 - WATER CONSERVATION & DROUGHT MANAGEMENT PLAN UPDATE (12 minutes)
 - D. GROUP #2- WATER CONSERVATION EDUCATION/OUTREACH (12 minutes)
 - E. GROUP #3- WATER CONSERVATION CODES, ORDINANCES & REGULATIONS (12 minutes)

MATTERS FROM STAFF:

MATTERS FROM COMMITTEE:

NEXT MEETING - TUESDAY, JUNE 10, 2014:

CAPTIONS: MAY 28, 2014 @3 pm

PACKET MATERIAL: MAY 30, 2014 @3 pm

ADJOURN.

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

WATER CONSERVATION COMMITTEE
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	Committee members followed a verbal presentation based on the handout.	
Informational Items Water Conservation Committee Outreach Opportunities, Laurie Trevizo Group #4 Group #5 Group #1 Group #2 Group #3	All reports informational. Agenda topics for next meeting: * F/U Letter in City Attorney's Office re: City Wells * Timeframe for completion for the Water Conservation Drought Plan at next meeting. * F/U for staff to get WCC presentation to Public Works, Public Utilities and Finance Committee. The Chair would like the presentation filmed. * Mr. Pushard would like to have a formal review of the model they are working on with Build Green NM.	Page 8-11
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**SANTA FE WATER CONSERVATION COMMITTEE MEETING
CITY HALL - 200 LINCOLN AVE.
CITY COUNCILORS' CONFERENCE ROOM
TUESDAY, MAY 13, 2014
4:00 PM TO 6:00 PM**

MINUTES

1. CALL TO ORDER

The Chair called the meeting of the Santa Fe Water Conservation Committee to order at 4:00 pm in the City Councilor's Conference Room. A quorum was declared by roll call.

2. ROLL CALL

Present:

Councilor Peter Ives, Chair
Nancy Avedisian
Doug Pushard
Tim Michael (Telephonically)
Giselle Piburn
Stephen Wiman
Karyn Schmitt
Lisa Randall
Bill Roth
Grace Perez

NOT PRESENT:

Melissa McDonald, Excused

Others Present:

Laurie Trevizo, Water Conservation Manager
Caryn Grosse, Water Conservation Specialist
Rick Carpenter, Water Department
Andy Otto, Santa Fe Watershed Association
Esha Chiocchio
Anna Serrano for Fran Lucero, Stenographer

3. APPROVAL OF AGENDA

Staff noted that Item #9 presented by Esha Chiocchio; she might be late and need to be accommodated.

Ms. Randall moved to approve the agenda as noted, second by Ms. Perez, motion carried by unanimous voice vote.

4. APPROVAL OF CONSENT AGENDA

Mr. Wiman asked to move Item 7-a and 7-b to discussion items.

Ms. Randall moved to approve the agenda as noted, second by Ms. Perez, motion carried by unanimous voice vote.

5. APPROVAL OF MINUTES APRIL 8, 2014

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PAGE 4: 1ST paragraph, 4th line – for ~~red wet~~ water on the Santa Fe River

It was noted that the minutes should reflect who is absent with an excuse and who is not. Minutes of April 8, 2014 to reflect that Mr. Doug Pushard was excused.

Ms. Piburn moved to approve the minutes of April 8, 2014 as amended, second by Ms. Randall, motion carried by unanimous voice vote.

6. MINUTES, OCTOBER 8, 2013.

Mr. Wiman moved to approve the minutes of October 8, 2013 as presented, second by Ms. Perez, motion carried by unanimous voice vote.

7. CONSENT AGENDA (Moved to Discussion Items)
(DISCUSSION ITEMS)

- A. Drought, Monsoon and Water Resource Management Update (Rick Carpenter)
The Committee Members were presented with a memo dated April 22, 2014 – 32nd Monthly Update on Drought and Water Resource Management. (Exhibit A)
- B. Reservoir Improvements Update

It was noted that this is the 4th year of a drought; this current drought is extreme and what sets it apart from previous extreme droughts is that, the region will enter into summer without very much carry-over water from the previous year in regional reservoirs – they are at low levels (except for the local McClure reservoir in Santa Fe).

The notices of intent were to be filed by Wild Earth Guardians setting dangerous species Act issues against BOR service at McClure and the State of Colorado. It was expected for those lawsuits to be filed this week; they did not get filed this week. We believe it is because we are in what they call minnow spike which is something that the Feds are doing, they started late last week and we are trying to mimic the snowmelt runoff that would normally have happened. The flows in the river as of Monday, May 12th were at about 2300 cfs.

The last update from BOR on San Juan Chama project deliveries was; they felt short of saying that we were at 100% but they said it would probably be more like 85% dive or take. That was before we had the small storms. With the storm as we have right now and in northern New Mexico it might creep up from the San Juan Chama project this year.

Mr. Carpenter said that we are moving closer to 100% especially with this latest storm. The only thing that could throw us off is if we otherwise had 100% of runoff, if we have a real warm spell like they are predicting this weekend, we could actually have too much runoff from the diversion structures on the Blanco can't handle it and we end up bypassing, that could happen if it melts too fast.

Nothing has really changed on Nichols and McClure; we have drawn down the reservoir quite a bit. We were a couple of days behind schedule; originally we wanted to begin filling Nichols around May 9th. We are retreating as much water as we possibly can.

Mr. Pushard asked about the source of supply utilization summary, on the columns – 6.3 million gallons and the 19.59 AF, what are the headers on those columns? Mr. Carpenter said that is his mistake; it should read 6.3 mgp (million gallons per day). Mr. Carpenter confirmed that the table reflects the totals for the month.

Mr. Pushard asked about the 5-year average in the combined reservoir is about 57% and we are currently at 43% because we had one reservoir off line. Mr. Carpenter said that when this was written we were actually at a low of 30%. Mr. Pushard asked what is the max it could be given we only have one – 49%? Mr. Carpenter said that Nichols is 25% the size of McClure, together they can pump 4,000 ac. ft. at one time. The max of one is 3000 and the other is 1000 ac. ft. Mr. Pushard asked if we get full delivery the Buckman should do the line and share of the water? Mr. Carpenter said we would get as much as we can from the canyon and that will be 4 mgp (million gallons per day). We have had some pumps off line and some shaft and valve issues but those are getting back on line. We should be at full capacity, as they should be fixed within 2 weeks. We should be, mechanically speaking, at full capacity within about 2 weeks and that could be up to about 15 mgp. With BDD churning away, whatever we get from the canyon that is enough what we can expect full maximum these days and if we go over that we can make that up with well water.

Ms. Perez asked on the work and timeline of the reservoirs, she asked Mr. Carpenter if in retrospect this worked well or not and what could be differently on timing of this project.

Mr. Carpenter said that the construction was done through an Engineer and once construction is done it is done but it happened to coincide with a big drought. It did heighten awareness through the rains. There were other items listed and some of the answers did not coincide with the timeline. There were safety and operational concerns otherwise we would have been done.

The Chair asked what was the planning process on the timeframe to work through those improvements? Mr. Carpenter said that we have been talking about it for a while; there was a safety hazard on opening and closing of the gates and the defined space issues. For years we knew what needed to be done, we were fortunate to get grant money from the state and we were ready, we issued the contract and we were in the drought.

Thank you to Mr. Carpenter for his report.

DISCUSSION ITEMS

8. Green Lodging Initiative Resolution (Councilor Ives)

The proposed resolution endorses the green lodging initiative and directs staff to explore ways to continue, fund and extend the green lodging initiative to all lodging facilities in the city of Santa Fe. It is referred to as the Green Concierge Certificate program.

This is a program designed to certify lodging facilities in various aspects of being green. This company comes in and works with the properties to make them more water efficient, more energy efficient to reduce the use of chemicals in all their processes to increase their recyclables. The initial launch was funded with \$50,000 from a grant and there were 17 participating hotels representing 50% of the downtown rooms available. All of these hotels qualified for the Bronze level concierge certificate and they can work up to a gold level as they continue to improve their operations.

The Chair said he is interested in branding the city as intentional, creative and sustainable and part of that sustainable is being as energy efficient, as water efficient as chemical efficient, etc., as we can be across the entirety of the city. The Chair stated that he wanted to see the City move up to the plate and be supportive and this is the reason for introducing the resolution. The Chair understands that there is funding available from various sources that have been identified.

Mr. Pushard asked in on page 3 of the resolution; Toilets & Showerheads (partial calculation), I know when this came to us before the number was calculated on EPA standards and was higher than our existing standards. Do we know if that math has actually been fixed?

The Chair said that he did not. He offered that Nick Schiavo has reviewed and he hopes that that this is accurately reflecting reality based on city stats review. Hopefully yes, but unable to answer at this time.

Andy Otto, Santa Fe Watershed Association

The Chair commented that this Green Lodging Initiative was due in large part to the efforts of the Santa Fe Water Association.

Mr. Otto stated that the EPA Grant was used and very supportive of this program. In answer to the question, the Santa Fe Watershed Association worked together with the City and PNM to come up with savings. There were very broad numbers but we should have the final report within the next two months and they are local numbers. We have 14 who earned their Bronze certification and we were just notified that one has elevated to Silver. The concept is that these properties will keep moving forward and getting oxygenated dishwashing systems and these sorts of things, which would increase the savings in water and power.

Mr. Pushard asked about the blanks in the resolution on volume for metric tons of Co2 in the water category, will those also be filled in the final report?

Mr. Otto said that they should be included in the final report.

The Chair commented that he brought this forth to the committee as the city is in the midst of the budget and it will be presented with a sense of urgency.

The committee members expressed there thanks to the Chair for this effort.

Ms. Trevizo added a clarification and asked if it is expected for the Water Division to manage in assisting the Watershed Association on the Green Concierge Program?

The Chair said that the quick answer is, hopefully it will be run functionally similar to what we have done this past go round. Unless you were involved in the last go round except at the end we are doing figures.

Ms. Trevizo said that she has asked Caryn to work with Betty on the Green Concierges piece; her experience as a LEED AP would be helpful.

The Chair said that all participants welcome any additional help.

The general consensus of the Water Conservation Committee was to voice their support of the Resolution.

9. Forest and Water Climate Adaptation (Esha Chiocchio, Santa Fe Watershed Association)

Ms. Perez moved to postpone Item #9, second by Mr. Wiman, motion carried by unanimous voice vote.

(Exhibit C – Forest and Water Climate Adaptation: A Plan for the Santa Fe Watershed
The Water Conservation Committee members followed a verbal presentation based on the handout.

Climate Projections: Hotter, dryer, more evaporation, erosion and runoff, extreme heat and cold and more risk of multi-year drought. They looked at many of the sectors, and they looked at the water sector as a whole and looked at the climate sectors, decrease surface water supply, decrease ground water supply, and reduce snow pack and more stream precipitation and greater evaporation. They also have the non-climate sectors, impermeable surfaces, too many impermeable surfaces and not enough infiltration right now that is leading to a lot of the erosion of the arroyos and our riverbeds. It

encourages all of that precipitation to leave the system. We have less recharge from all of the impermeable surfaces.

These are some of the solutions that they came up with, aside from Ms. McDonald not being at the meeting tonight as she had inquired about this topic. The question is how we can conquer the land, how can we increase that infiltration. Another solution, increase water conservation and that is where all of you come in, how do we really make that happen. What are the specifics? Increase use of reclaimed wastewater to reduce our ground water pumping. Another solution is reducing the over population of trees so that they have the moisture they need, reducing the risk of catastrophic fires.

Energy –it is an adaptation piece, we need to be prepared to reduce water supplies we are using for steam producing energy and shifting the water sources elsewhere. We will be seeing less water available for those things. Ms. Chiocchio spoke about the climate and non-climate stressors.

There is so much potential with renewable energy development, increasing infiltration, perma-culture, increase rainwater catchment. With all these systems, can we train our youth to really implement these and have innovative projects happening? One of the other things talked about was coordinating the workforce training. The other thing is working with financing structures.

The overall goals are outlined in the packet. Basically, increase the water security, improve the forest health, expand and develop that workforce, increase energy efficiency, renewable energy and establish the financing structures. Ms. Chiocchio requested from the WCC specifically the water related pieces; there are two sections on goals 1 and 2 that really look at that piece. How can we increase water conservation; she would like to learn what the WCC is doing and integrate that in to this plan.

There was a question on the financing. Ms. Chiocchio said she had a conversation with the Mayor and they talked about a concept of community banking. Keeping the money in this community and being able to take some of that money to finance certain things on longer terms.

The Chair said that conversation in city hall is on establishing renewable energy districts which was a portion of the state statutes passed about 4-5 years ago which allows for the creation of a district which would then allow certain taxing to occur on properties that opt in for purposes of trying to create a fund that could fund implementation of roof top solar and those types of things.

The Chair asked the committee to submit their comments to Esha Chiocchio via email or to set up a meeting. She would like this committee to feel good about this plan, if there are any recommended changes, she welcomes that input.

Ms. Chiocchio said ultimately she would like the Water Conservation Committee to endorse the plan and move forward to their clients and ideas on how to implement it.

Mr. Otto added that the report is on the Watershed website.

(Q&A: Inaudible, individuals did not speak loud enough to capture this session).

10. 2013 Gallons Per Capita Per Day Laurie Trevizo for Allan Hook

Mr. Hook via Mr. Carpenter provided a memorandum dated April 25, 2013 regarding the listed topic. (Exhibit B)

Ms. Trevizo reported that this is specifically related to the GPCD with the OSE calculator. The way that the calculator works is that we take the consumption of all of the active accounts which is divided by the number of occupied households x 365 days a year. His footnote, Item 1 – Mr. Hook wanted to express that the City of Santa Fe's water utility customers diverted 2,989 million gallons or 9,174 ac. ft. with an additional 78.2 million gallons or 240 ac. ft. of potable water exported to Santa Fe County per the 2005 Water Resources Agreement. The total production is 9,414 ac. ft. and instead of the total

production (strike 9,654 ac. ft.). Santa Fe's total production for water utility customers was 9,174 ac. ft. Mr. Hook conveyed that this is the lowest amount of production that the City of Santa Fe Water Division has produced in the last 10 years. No GPCD calculation takes in to account any sort of precipitation or weather events that is not how these calculations work. We can see some variations and seasonality between year-to-year. One thing nice about the calculators is that it actually gives us a bar graph of what the GPCD is on a monthly basis.

Mr. Hook and Ms. Trevizo want everyone to know that we have done a remarkable job of conserving water over the past year. We are looking at 10 years of the lowest production. Mr. Hook says that the last 3 years of drought we have done a remarkable job of conserving.

The Chair gave heartfelt congratulations to Group #4 that was charged to re-establish the annual reductions.

Mr. Pushard stated that in 2012 we adjusted the models for multi-tenancy. In 2013 were there any adjustments to the model, either to the numerator or the nominator, for example moving customers off the city to the county?

Ms. Trevizo answered that the multi center units, all the population data comes from the US Census. The multi-family units actually give a further breakdown by county and further breakdown by housing type and other demographics. When they break it down they also break down the number of units per partial. We make the distinction that anything with 2 or less units is single-family residential, 3 or more goes up to multi family. The most recent numbers that the census has are used and we figure out multi family.

Mr. Pushard said that 2012 made a change to the model and if you go back and look at it, we could not compare 2012 to 2011 because of how we had done the numbers. If you look at the minutes from last year, you will see that 2011 was all blank because we could not do a comparison because we had actually changed the map of how we had done the calculation of 2012 and Allan had stated it would be too difficult to go back and try to show 2011 and how we had done it again 2012. In last year you supplied us with the pages out of the model for the totals. I was wondering, a) if we could get those same pages this year and would we know whether the 2012 is now comparing to the 2013 to see if there are any differences for example in the multi family, commercial and residential.

Ms. Trevizo said she did not remember the details of that conversation, that doesn't mean it didn't happen. Mr. Carpenter said that he does remember that conversation and that Mr. Hook would be best to bring this information update to the committee.

What you have for single-family use is an industry standard. Without doing a study to individually put meters past the consumption meter, we don't know. That is an industry standard and has been a part of the updates to that residential in use water study; National standards are what we will need to go by how water is used inside the home. It was reiterated that this is not estimation, it is an industry standard.

Ms. Trevizo said that they did include the irrigation as they know how much is used or they can make that assumption. Given in the summer as the calculator does give them nice bell curves and there is an understanding of indoor consumptive use. How it is used, we are not able to do that. We can give an estimate of the difference of our indoor water use given our winter average over our summer average because we get that good bell curve.

Mr. Wiman asked if Ms. Trevizo was saying that we use the same percentage.

Ms. Trevizo asked if Mr. Wiman was requesting an update on the indoor irrigation. Yes

Caryn asked if the numbers are gallons or percentages?

Mr. Wiman said they are percentages.

Caryn responded that the percentages would probably remain pretty similar because they are based on the industry standard. It is still about 37% of single-family water consumption.

Mr. Wiman said unless they hear differently they would continue to use the single-family use number updating the use by sector.

Ms. Trevizo said they would continue to look at it but she agreed with Caryn and there would probably not be a lot of change.

11. Informational Items

Water Conservation Committee Outreach Opportunities (Laurie Trevizo)

Ms. Trevizo reported that in the spring every year is a busy time of year. She recognized that the entire Water Conservation is in attendance, there are a total of 3 staff. There is an outreach sub-committee and there have always been requests as to where committee members can help. This is a way committee members can help; staff cannot attend every event. The department does have brochures and material to assist conservation committee members would assist and help, it would be greatly appreciated.

The Chair also asked conservation committee members to recognize the busy time for staff and to manage the flow of requests from staff. Ms. Trevizo is the contact for any water-based questions that come in.

Mr. Pushard said that he is on the list to do the Master Gardner's and asked if there is a table banner for the table? Ms. Trevizo said they have a tablecloth that says Water Conservation. Mr. Pushard pointed out that the Recycle Department was there and had really nice handouts. Literature racks came back empty. They really do help attract people. Mr. Pushard said it was very easy to do these events because all conservation committee members know the topic of discussion. He recommends that committee members volunteer.

Mr. Koch announced that the Green Festival would be Saturday, May 17, 2014. He welcomed committee member support. Mr. Koch will have a booth and will allow that the WCC handouts be placed.

Ms. Perez asked the status of brochures.

Ms. Trevizo will get the brochures re-printed and would like to get them in the bills for May.

A. GROUP #4- REESTABLISH TREND OF NET ANNUAL REDUCTIONS IN PER CAPITA WATER USAGE AND IDENTIFYING LARGE WATER USERS
(Materials in Packet)

B. GROUP #5 - DOMESTIC WELLS WITHIN THE CITY LIMITS
(Materials in Packet)

Mr. Wiman included in the packet a draft report from the meeting with OSE. He reported that they met with John Romero, Water Rights Division Director, OSE and it was a very positive meeting, he had 4 others at the meeting. Mr. Wiman said they went through the questions and it allowed them time to ask any questions they wanted to ask. The meeting ended because our WCC members ran out of questions. OSE was very friendly and they answered the questions willingly. OSE is very relieved that they don't have to deal with private wells in the City of Santa Fe. They feel that it is in the jurisdiction of the City of Santa Fe. They made a comment that the drilling contractors know the regulations and they are the ones that should bring up the questions. If it ever arises, OSE said they would do the right thing. Andrew Erdmann also came to the meeting and in the packet you will find an overview done by Mr. Erdmann of the permitting process in the city. Group #5 will report and discuss questions with Mr. Erdmann. Mr. Wiman said that he

informed the OSE that they will be sending letters to the well owners and asked Ms. Trevizo the status of the letter.

Ms. Trevizo reported that the letter is at the City Attorney's office for review and approval. The Chair said he would follow-up with the City Attorney.

Mr. Koch asked if there was policy in place that the city code utilize to enforce or is there no regulation in the books?

The Chair said he would get that clarity from the City Attorney on what exactly in our capacity we can project, power if you will.

Mr. Wiman said that he has not heard this from the City but OSE's opinion is that the City has control of the wells and the case follow up confirms that; it would be great to hear this from the City Attorney.

C. GROUP #1 – WATER CONSERVATION & DROUGHT MANAGEMENT PLAN UPDATE

Ms. Trevizo noted that they are working to get things on board for the next FY and contracting with someone to help staff finish this plan as part of the budget projection for next year.

Ms. Perez reported that she has received from other work group's strategic topics they would like to work on. The next step is to pull this information together and create a draft list for consideration.

The Chair asked in terms of having the final plan before the WCC, originally March was the date.

Ms. Trevizo reported that originally, yes. The way it was planned without the OSE putting a monkey wrench in the things, given the template that they would like to see the formatted plans from now on. It is an edited version of the old plan. Ms. Trevizo felt that they needed to move forward with the way OSE wants to see things. Some of it doesn't apply to the city because it is a template for utilities who have never done it before and we have done it multiple times. There are some things that don't apply and there are some things that we have never included and it would be good to include it. One of them being, the AWWA which is the American Water Works Association, part of industry standards; it a professional organization that utilities follow. They put out something similar to the OSE calculator; it is a calculator type spreadsheet that gives a performance audit on our system wide leak, those kinds of things. We are going to include that and it was not an original part of the timeline either. OSE wants to see that and staff feels that it is a worthy exercise. This is an apple-to-apple comparison to other utilities and where we are in places like non-revenue water, unbilled, etc.

The Chair said there is no argument that we need to take what they have given in terms of providing and what we need to turn in to them. The curiosity is what the new timeline schedules are.

Ms. Trevizo does not feel it will take long; the information is there, it is a matter of formatting it and putting it in. She will rewrite some things that are long overdue. She will put us back on track, Ms. Trevizo is assured of that. Ms. Trevizo said that she has sent the new person all of the edits as we have made those edits, the edits for lack of a better word are superficial. The problem is not the edits that we made; the problem is the original content. That is what she is re-working, the original content. That plan was done in the late 90's early 2000's when the city took over the utility from PNM.

The Chair requested that the timeframe be brought back to the next meeting based on discussions with the new person.

D. GROUP #2 – WATER CONSERVATION EDUCATION/OUTREACH

Ms. Perez responded to last meeting questions from Ms. Trevizo on some dates. The Water Presentation will be done this summer and the city will help by advertising it. This is the presentation that was approved by the committee with some updates. The dates for consideration for the presentation are June 17th and June 19th, Tuesday and Thursday one would be held in the north end of town and the other on the south side of the city.

Ms. Perez said they have taken this a step forward and informed the committee that she had spoken to Mr. Otto from the Watershed Association and talked about the possibility of doing these or other presentations in a co-sponsored way so that we might appeal to a broader audience. When you have a co-host it tends to speak to a broader audience. Ms. Perez said they have not identified a venue and asked how this should be coordinated. Ms. Trevizo said it was her understanding the sub-group would coordinate everything and provide her with the information for the Press Release.

Mr. Pushard recommended the large meeting rooms at the Southside and Main Library. Ms. Perez will follow up with the venue.

The Chair said he would also like to get the WCC presentation on the City Council agenda at some time.

Ms. Trevizo said Ms. Grosse does a great job in coordinating with the City Clerk and she has requested time for WCC to go to City Council. The City Clerk has a big issue with a 20-minute time slot; Ms. Trevizo is proposing that other committees be looked at such as Public Utilities Committee, Public Works Committee – those are actually more relaxed committees. There is more room for dialogue and although the city councilors are not there, sometimes councilors will hear it twice as they are on both Public Works and Public Utilities, this is not a bad thing. What you are going to get at City Council is, thank you for your presentation, there are no questions. If that is the response you want than staff will pursue the city council. If you want to have a dialogue with the policy makers I would recommend that it go through the other sub-committees. It was noted that this presentation is 45 minutes in length and they don't expect that City Council will give more than 20 minutes in total. It is recommended to get this information in an alternative way to the council.

Mr. Pushard said he agrees with the recommendation when staff set it out. Having been to City Council meeting, they are not the forum for this presentation. If we could get the Finance Committee we would get the full city council and the other two committees we get at least ¾ of the city council members. WCC is in support of getting the presentation invitation to the three committees; Finance Committee, Public Works and Public Utilities. The Chair recommended asking Councilor Dominguez if he would welcome this presentation.

Ms. Trevizo was clear that she will get the dates set for this request and one of the WCC members has to take the responsibility to assure there is a presenter.

The Chair would like to film it and have it on the website.

Ms. Perez will provide information on the Green luncheon and possibility of doing the presentation.

E. GROUP #3 – WATER CONSERVATION CODES, ORDINANCES & REGULATIONS

Mr. Pushard reported that they are working on the model for indoors only and are getting close. Steve Hale from Build Green NM is also working on a model. Ours is more comprehensive than what Steve is working on; we will have a meeting and try to rationalize what they are doing with the green build and hopefully come up with one model. Mr. Pushard would like to have it on the agenda at the next meeting for a formal review.

Ms. Trevizo asked that the topic of discussion be sent to Caryn and cc to Laurie.

Mr. Pushard noted that he is on the Joint Consensus Committee on Rainwater Collection System Design and Installation (IS-RCSDI) through the International Code Council and Canadian Standards Association. (Exhibit included)

Information on the first meeting was included and the second meeting will be in June 2014. This will be codifying the rainwater standards normally used in the southern part of the state and also used in commercial buildings. The intent is to try to have code to vote on by March 2015. Code is on the ICC website of CSA's website.

The Chair asked if there is code that they would like to see adopted by the city?

Mr. Pushard said yes, there is code they would like to see adopted and this is one of them as well as a green code they would like to see adopted.

MATTERS FROM STAFF

Ms. Treviso stated that with packet materials or any captions, please copy Caryn so she is in the loop on the WCC matters.

MATTERS FROM COMMITTEE

- Mr. Pushard announced that he has been working with the SFCC and the American Rainwater Association and they will be doing a press release very soon. The SFCC will be the first community college in the United States that will be able to take the rainwater harvesting class and get certified directly by ARCSA and become accredited rainwater professionals. It will result in jobs by having that accreditation. Thanks to Laurie she helped push to the County the ability for AP's to be designers of systems. The program is 16 weeks, 3 credit hours. The Chair said this would be something that they should be able to link through the Water Conservation website. Ms. Trevizo has been very helpful and commented that this class is very hard.
- Rebate Analysis – we will have a sub-set of that article in the June Water Efficiency magazine; the article will be highlighting Santa Fe water. It will give Santa Fe good national exposure. The numbers are being corrected together with Ms. Trevizo's review.
- Mr. Pushard proposed to the committee that with Group #5 getting to roll out, he would like to put as a discussion item setting up a group initiative on grey water and the impact it will have on water conservation. Mr. Pushard would like to have input from the complete committee. If this could be placed under group 6 as grey water/black water.
- Ms. Perez asked if there was a way to get draft minutes sooner after each meeting. The chair noted that it might be challenging there are 60-70 meetings and there are 4 stenographers. Ms. Trevizo has asked and they are receiving them at the 11th hour and the timeline is creeping back to back. These ladies do a great job.
- Mr. Wiman said he would like to discuss a city water budget for all sources.
- Recommended that Rick Carpenters report should be a standard report ON each month agenda. Chair Ives asked that it be taken off the consent agenda and be a regular discussion item.

NEXT MEETING – TUESDAY, JUNE 10, 2014:

CAPTIONS: MAY 28, 2014 @3 pm

PACKET MATERIAL: MAY 30, 2014 @3 pm

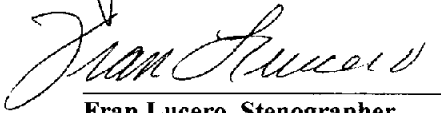
ADJOURN.

There being no further business to come before the Water Conservation Committee, the meeting adjourned at 6:10 pm.

Signature Page:

A handwritten signature in black ink, appearing to read 'Peter Ives', written over a horizontal line.

Councilor Peter Ives, Chair

A handwritten signature in black ink, appearing to read 'Fran Lucero', written over a horizontal line.

Fran Lucero, 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 *RC*

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

DATE: April 22, 2014

SUBJECT: 32nd Monthly Update on Drought and Water Resource Management

CURRENT UPDATE – GENERAL WATER RESOURCE MANGEMENT

As the Committee/Board is aware, our region is still suffering through a severe drought. Our region has gone through three consecutive years of record drought and heat. It is now apparent that we are in a fourth consecutive year of severe drought and abnormal heat which will present significant challenges to all water purveyors, utilities, and irrigators going forward into the rest of this year. Weather prediction models indicate that, at least through the early part of this summer, if not longer, drought conditions in the southwest (especially Arizona and New Mexico) should be neutral to below average precipitation (snow) and above average temperatures, therefore, overall drought conditions will likely still persist at least through July. Fire season is also expected to be very challenging which could have significant water quality implications for the BDD water treatment plant and/or Canyon Road water treatment plant. Runoff into regional river basins and reservoirs is expected to be slightly below normal to significantly below normal. However, some computer models are starting to suggest the possibility that "El Nino" conditions may be setting up in the Pacific Ocean. This could signal the possibility of increased regional precipitation in late summer and heading into Fall/Winter.

This current drought is extreme, but what sets it apart from previous extreme droughts is that, the region will enter into summer without very much carry-over water from the previous year in regional reservoirs – they are at low levels (except for the local McClure reservoir in Santa Fe). For example, Heron reservoir (San Juan-Chama Project water) is currently at about 29% of capacity. However, early runoff forecasts from the San Juan watershed seem to indicate substantial accumulation into Heron from this year's snow pack.

It is worth noting, however, 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

Y. Subit A

field, City well field, Canyon Road Water Treatment Plant on the Upper Santa Fe River, and the Buckman Direct Diversion on the Rio Grande. Supply from these groundwater and surface water sources are expected to be adequate in meeting local demands through the coming high-demand season.

LOCAL CONDITIONS

Source of Supply Utilization Summary

February 2014

City Wells	6.38mg	19.59af
Buckman Wells	0.00mg	0.00af
CRWTP	44.08mg	135.29af
BRWTP	157.58mg	483.59af
<i>Other Wells (Osage, MRC, etc)</i>	<i>0.04mg</i>	<i>0.13af</i>

Upper Santa Fe River/CRWTP

	Total Combined Reservoir Level	Santa Fe Snow Gage	Reservoir Inflow
March 24, 2014	43.1%	30.0 inches	3.81 MGD
5-Year Average for This Date (2009 – 2013)	56.95 %	36.0 inches	9.97 MGD

Heading into September, water resource managers for the City were expecting the Canyon Road Water Treatment Plant to experience significant supply shortfalls later this year and into next year – due in part to severely reduced inflows resulting from the drought, but also due to the planned construction projects inside of the reservoir footprints. However, as of April 21st, and due to the heavy rains in mid-September and some minor winter snow storms, total combined storage in Nichols and McClure reservoirs is up to 43.1% (or about 1,700 acre-feet of storage). Flows are being by-passed due to construction on the new intake facilities. Inflows are expected to continue for the near future and so the reservoirs have been releasing water to allow for water treatment plant production, active construction, and draining/drying.

Buckman Regional Water Treatment Plant

Flows in the Rio Grande are relatively low but the BDD Project is able to divert water. Turbidity and suspended solids are very low and raw water quality is good. Demand in the system has been low to moderate, requiring only 4 to 6 mgd from the BDD Project.

REGIONAL CONDITIONS

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. The September rains helped river flows and regional reservoirs are receiving needed inflow, but the basin did not receive a good snow pack through the winter and spring. Reservoir levels will still be critically low heading into irrigation season. Native flows in the Rio Grande will likely be low to very low through the spring and summer.

San Juan Basin

It should be stressed that, conditions could significantly worsen for San Juan Chama Project deliveries next year, if the drought persists, due to a lack of carry-over storage in Heron Reservoir and other reservoirs in the system. Heron Reservoir is currently at a historic low level of 23% of capacity for this time of year. It is still too early in the year to quantify with a lot of confidence, but the Bureau of Reclamation has recently indicated that it is very likely that SJCP deliveries this year will be at or near 100% due to good snow pack in the San Juan watershed, high soil moisture, and the storage that was already in Heron at the beginning of the snow melt season. The Bureau of Reclamation will provide an update (quantified percentage) in late April with regard to the projected runoff available to San Juan-Chama contractors this coming year.

McClure Reservoir Restoration Project Updates

- The original plan was to have the reservoir water elevation to be at 49% of the total storage capacity at McClure Reservoir by April 30th.
- On April 29th the storage elevation at McClure Reservoir was 45% of the total storage capacity.
- Currently, 13.1 Million Gallons per Day (MGD) is being released from McClure Reservoir. Previously, flow from McClure Reservoir was 10 MGD until April 23rd when reservoir releases increased to the present outflow of 13.1 MGD.
- As of April 29th, 4.2 MGD (6.5 cubic feet per second) of inflow from the Santa Fe River is entering McClure Reservoir.
- 6.2 MGD is being treated by Canyon Road Water Treatment Plant.
- 3.0 MGD is being diverted to Acequia Madre and other irrigation systems beginning on May 2nd.
- The Public Utilities Department recommends that plans for an Annual Fish Derby be set for Saturday, June 14, 2014.
- Nichols Reservoir will begin to fill on May 15th after the "stop log" is placed into the reservoir drain outlet pipe.

Where can I find more information?

The City provides daily information on water production, reservoir capacity, total system storage at http://www.santafenm.gov/daily_water_production_reports.

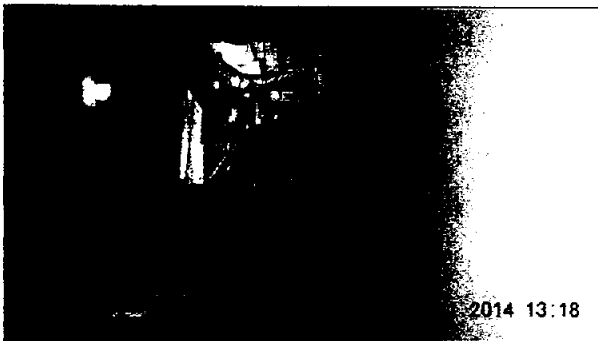
For drought management information and water conservation, please visit www.savewatersantafe.com

McClure & Nichols Reservoirs Improvements, CIP Project #3038
Project Status - April 29, 2014

Work on the Nichols Dam intake structure is nearing completion. The final concrete pour was made today. Piping and valving has been installed with electrical work underway. Nichols Dam and Reservoir is scheduled for filling in mid-May.



Final concrete pour at Nichols Dam (WCM photo)



Piping inside Nichols Dam intake structure (WCM photo)

Flows into Nichols Reservoir from McClure Reservoir are scheduled to be cut off beginning on May 9, 2014 in order to complete final work at Nichols Dam and set the stop log. Filling of Nichols will be done at a controlled rate to slowly load the dam embankment. Water releases from Nichols Dam to feed the Santa Fe River and the Canyon Road Water Treatment Plant will be suspended for approximately 16 days from May 9th thru May 25th.



McClure Reservoir water level (WCM Photo)

Work at McClure is scheduled to begin September 1, 2014.

City of Santa Fe, New Mexico

memo

DATE: April 25, 2013

TO: Public Utilities Committee

VIA: Rick Carpenter, Water Resources and Conservation Section Manager
Nick Schiavo, Acting Public Utilities & Water Division Director

FROM: Alan G. Hook, Water Resources Analyst
Laurie Trevizo, Water Conservation Program Manager

RE: The 2013 gallons per capita per day of 101 utilizing the NM Office of the State Engineer methodology.

Introduction: Since 2011, Santa Fe and other parts of New Mexico have experienced persistent drought conditions, despite exceptional precipitation in the fall of 2013, resulting in higher customer peak daily demands. Despite these challenges, the 2013 City of Santa Fe Water Division's (City) water production for the service area customers remained under 10,000¹ acre-feet (af), due to water conservation efforts practiced by the community. Another measurement of water conservation success is the use of the gallons per capita per day (gpcd) calculation. Staff has completed the annual gpcd report of 2013 data, using the New Mexico Office of the State Engineer (OSE) methodology referenced below. The new gpcd calculation for 2013 data resulted in 101 gallons per capita per day. As part of the City's Permit SP 4842 Condition No. 10 for the Buckman Direct Diversion Project, the City must annually submit an annual gpcd calculation to the NM Office of the State Engineer. Though this region of New Mexico has experienced climatic and seasonal challenges, the calculated gpcd of 101 is a result of progressive on-going water conservation efforts by the City's water customers.

New Mexico Office of the State Engineer GPCD Calculator Methodology:

To better regulate municipal water use, the NM Office of the State Engineer (OSE) began to condition municipal water-rights permits with the gpcd measurement and began a program to standardize the gpcd methodology (Vogel, et al. 2009, Southwest Hydrology, see attachment 1). On March 16, 2009, the OSE released the standardized gpcd methodology using the OSE gpcd calculator, 2.04 Beta Version. 2010 was the first year the OSE tool was required.

¹ The City of Santa Fe's production for water utility customers was 9,414 af with an additional 240 af of potable water exported to Santa Fe County, per the 2005 Water Resources Agreement, for a total production of 9,654 af in 2013.

Exhibit B

Results of the 2012 NM OSE GPCD Calculator:

The NM OSE gpcd for 2013 is 101 gallons per capita per day for the City of Santa Fe. The previous year, the NM OSE gpcd for 2012 was 106 gallons per capita per day. In comparison to other western cities, the City's gpcd is one of the lowest and continues to remain low.

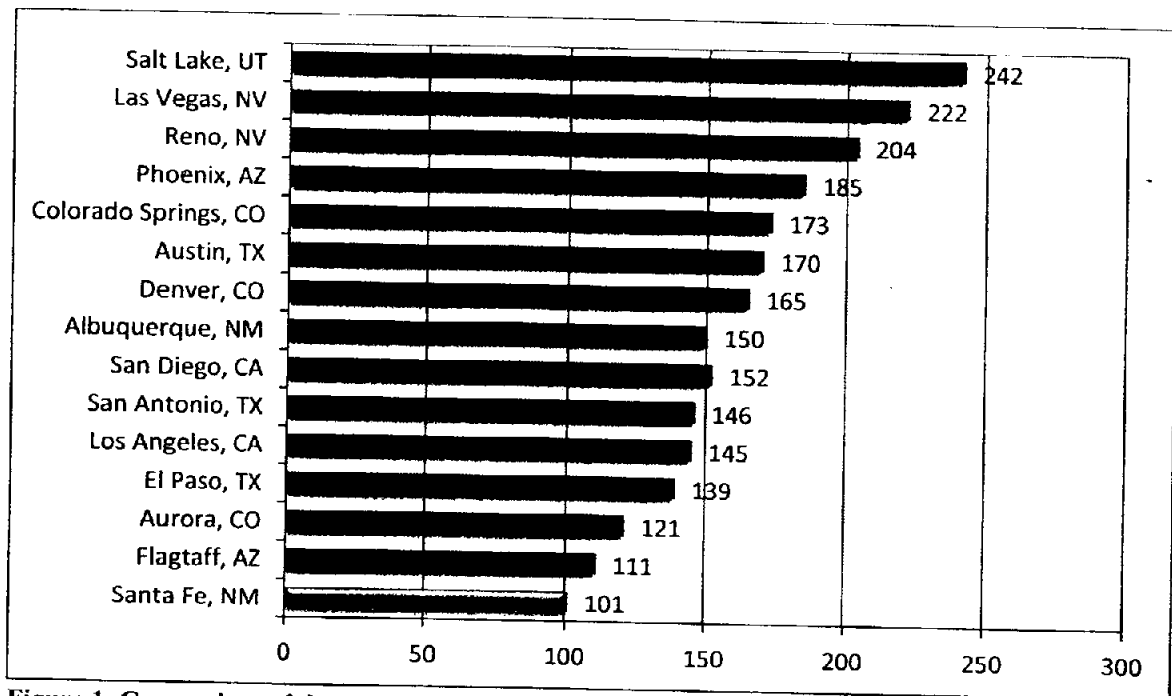


Figure 1. Comparison of the gallons per capita per day of 15 western cities from 2008 to 2013 data

In conclusion:

The City has achieved lower consumption through public outreach, ordinances requiring customers to comply with water conservation conditions and utilizing incentives. The City's single-family residential customer uses approximately 52 gallons per day or an average of 1,582 gallons per month. Several residential water conservation outreach tips to reduce water usage during these drought conditions are as follows:

- Average household leaks waste 11,000 gallons of water, equal to 270 + loads of laundry.
- High-efficiency washing machines use less than 27 gallons per load compared to 50 gallons used by traditional models. Wash laundry using only full loads. Small laundry loads use twice as much water per pound of laundry compared to full loads. On average, each person does 3 loads of laundry per week.
- Turning off the tap while brushing your teeth or shaving can save more than 200 gallons per month. A family of four would save 1600 gallons per month.

Attachments:

1. Vogel and Longworth, *Apples to Apples: A Standardization Measure for Municipal Water*, Southwest Hydrology. November/ December 2009.

Spring 2014 Upcoming Events

[illegible]

FOREST AND WATER CLIMATE ADAPTATION: A PLAN FOR THE SANTA FE WATERSHED

Santa Fe Watershed Association

City of Santa Fe

Model Forest Policy Program

Cumberland River Compact

December 30, 2013
Revised, April 7, 2014

Author:

Esha Chiocchio

Editors:

Gwen Griffith, Toby Thaler, Todd Crossett, Alyx Perry, and Ray Rasker

Esha C

EXECUTIVE SUMMARY

Long periods of drought, unprecedented storm events, warmer average temperatures, rising seas, unpredictable weather patterns - we are already seeing the impacts of a changing climate. Whether we like it or not, we are entering a period of warming on a global scale that is shifting weather patterns everywhere.

Here in the southwestern United States, these changes are being expressed through reduced snow pack, shifting precipitation patterns, decreased water supplies, and increased temperatures. As a result, we have already experienced catastrophic wildfires, flooding and reduced agricultural yields. Trends we expect to continue.

Fortunately, there is something we can do about it. Seeing these patterns taking hold, The Santa Fe Watershed Association (SFWA) contracted with the Model Forest Policy Program (MFPP) to develop a climate adaptation plan through their Climate Solutions University (CSU) planning process. A team of experts from the greater Santa Fe community worked with CSU to develop this plan from a holistic perspective to identify the most pressing vulnerabilities and create an action plan to add long-term resilience to the Watershed and Santa Fe community.

Over the course of several months, the planning team studied the predicted climate shifts as well as the forest, water and economic vulnerabilities of the area. From this information, they used a prioritization system to analyze the climate risks and determine the areas of highest priority. Perhaps not surprisingly, the resulting priorities include: reduced water supplies; increased risk of wildfire and forest degradation; flooding; and a dearth of job opportunities to retain and attract working families. Taking into consideration the pillars of sustainability, (environmental stewardship, economic health and social justice) the planning team developed five goals that

GOAL 1: Increase the water security and ecological integrity of the Santa Fe Watershed through conservation, infiltration, groundwater recharge, and reuse.

GOAL 2: Improve forest and ecosystem health for resilience in the face of climate change.

GOAL 3: Expand and develop the workforce-training programs needed to implement this plan.

GOAL 4: Increase energy efficiency and renewable energy (EERE) to reduce the use of fossil fuel-derived and water consumptive energy sources.

GOAL 5: Establish financing systems that facilitate investments, emergency funds, and cash flow availability to fund climate adaptation and innovation initiatives.

address these issues and have the greatest chance of long-term success.

The implementation of these goals will take time and resources. However, it is imperative that we continue to tackle the vulnerabilities we know exist on multiple levels. History tells us that when communities are faced with changes such as these, there are three potential strategies and outcomes: 1) they do nothing and are subject to the environmental impacts that ultimately destroy their cities, 2) they migrate from the area, or 3) they proactively work to adapt to the changes and ultimately thrive. What do we want for Santa Fe?

Through climate adaptation planning we can increase the resilience of our landscapes while improving our economy and creating new job opportunities. Specific strategies are available to safeguard water resources and reduce hazards from storms, fires and floods. These strategies include increasing rainwater infiltration, developing water reuse systems, expanding forest thinning treatments, improving the functionality of our rivers and arroyos and developing long-term financing structures that enable all of this work to be implemented.

As this plan is put into practice, its progress should be continually monitored and evaluated to determine if benchmarks are being met and changes should be made. This is a living document that provides suggestions to strengthen our resilience given the information that we have today. With time, conditions and resources may change, requiring a nimble approach to the implementation of the action steps.

Our overarching goal is to ensure that Santa Fe thrives for centuries to come. What will be your role in shaping Santa Fe's future?

ANTICIPATED OUTCOMES

As the strategies for this plan are implemented, we hope to decrease our vulnerabilities from the identified risks associated with climate change. The five stated goals address areas of high impact that reflect the greatest possibilities for tangible results. Accordingly, our anticipated outcomes correspond to each goal as outlined below:

GOAL 1: Increase the water security and ecological integrity of the Santa Fe watershed through water conservation, infiltration, groundwater recharge and reuse.

The future of human habitation in Santa Fe depends upon an adequate water supply. In this high desert environment, the projections indicate decreased precipitation, increased groundwater dependence, hotter temperatures, and an increase in severity of storm events. Therefore, the outcomes we anticipate from this goal are:

- a) Increased groundwater recharge and storage
- b) Increased capacity for stormwater capture and infiltration
- c) Increased coordination among water planning entities
- d) Increased productivity of existing wastewater supplies
- e) More reliable water supply for the agricultural communities in the lower watershed
- f) Capacity for population and economic growth in the watershed with available water supply without compromising ecological health

GOAL 2: Improve forest and ecosystem health for resilience in the face of climate change.

Our forests and water supplies are intimately linked. Without healthy, functioning forests, our water supplies would be significantly compromised. In addition to their contribution to the water cycle, the Santa Fe forests provide habitat, beauty and recreation opportunities and are an essential grounding element for the region. Through the implementation of this goal, we expect the following outcomes:

- a) Increased percentages of treated forest areas to reduce the risk of catastrophic wildfire and pest infestation
- b) Expanded management of invasive tree species
- c) Increased resilience of the urban forest
- d) Increased soil health
- e) Mutually beneficial collaborations between the city, USFS, and SFWA that support financial resources, on-the-ground projects, and monitoring for forest health
- f) Sustainable healthy headwater streams in the upstream national forest lands
- g) Forest ecosystems that flourish long term without damage from catastrophic wildfire

GOAL 3: Expand and develop the workforce-training programs needed to implement this plan.

In order to implement the goals identified in this plan, as well as expand the diversity of job opportunities in the area to both retain and attract working families, the development and coordination of workforce training will be necessary. Through this effort we expect:

- a) Increased diversity of job training and opportunities
- b) Local workers will increase their economic status with greater job skills and income levels
- c) Successful restoration projects to result in a healthy watershed and attract more economic development to the region
- d) Investments in local restoration projects to generate a positive return on investment for the entire community resulting in greater revenues from recreation and tourism and increases in property values and tax revenue

GOAL 4: Increase energy efficiency and renewable energy (EERE) to reduce the use of fossil fuel-derived and water consumptive energy sources.

As the combination of drought and higher temperatures reduce water supplies, it is increasingly necessary to conserve water across all sectors. Many energy production technologies use and pollute significant quantities of water. By increasing efficiency to reduce energy demand and integrating non-polluting, water thrifty renewable energy into the State's energy portfolio, we can increase water availability. By carrying out the objectives of this goal, we hope to:

- a) Shift regulatory structures to expedite integration of EERE
- b) Decrease water use for energy production
- c) Decrease the carbon footprint from energy production
- d) Increase energy efficiency and renewable energy use
- e) Merit recognition for climate leadership in both mitigation and adaptation initiatives
- f) Ensure that long term energy sources will not be subject to rising prices for either fossil fuels or declining water sources
- g) Support abundant sustainable energy sources to drive economic growth in the region
- h) Ensure that Santa Fe and Northern New Mexico are more able to meet water demands for cities and nature far into the future
- i) Reduce the magnitude of climate impacts by reducing greenhouse gas emissions

GOAL 5: Establish financing systems that facilitate investments, emergency funds and cash flow availability to fund climate adaptation and innovation initiatives.

In order to achieve any of the goals in this plan, funding will be necessary. By developing new financing structures that enable long-term and emergency fund availability, the community will be more able to invest in climate adaptation strategies and weather the storms ahead. The benefits of this goal include:

- a) Newly developed financing structures create accessible capital for climate adaptation initiatives
- b) The development of a virtuous cycle where restoration investments bring positive economic returns through the increase of jobs, property values, and sustainable ecosystem services
- c) Natural disaster costs will be reduced and insurance rates can remain reasonable

IMPLEMENTATION OF THE PLAN

Implementation of the plan will be conducted through the actions of several key organizations involved in the stakeholder planning team:

The Santa Fe Watershed Association will help coordinate ongoing team interactions and will focus their activities around energy and water conservation initiatives, with a particular focus on education and community outreach.

The U.S. Forest Service will integrate recommendations, where appropriate, into their forest management plans and track their results through the national forest climate scorecard process. The national forest short term priorities will center on continuation of prescribed burns, community education and outreach, integrating climate projections in all planning processes, and securing financing and garnering support for expanded treatment areas.

The City of Santa Fe Water Utility will focus on implementing the Reclaimed Water Use Plan. The City's Water Conservation Program will incorporate this Climate Adaptation plan into their 2014 planning activities. The City of Santa Fe's River and Watershed Coordinator will incorporate these goals into the 2014 work plan with an emphasis on rainwater harvesting and infiltration.

The Santa Fe County Water Policy Advisory Committee will research and review the concept of regional water authorities and will make recommendations to the board of County Commissioners. They will also research and evaluate possibilities for Aquifer Storage and Recovery within the County and present them to the County Commissioners.

The short-term implementation priorities for 2014 include the following activities:

- The planning team will meet on a quarterly basis to monitor progress and ensure that the goals of this plan are being carried forward. These meetings will be facilitated by the Santa Fe Watershed Association and the Jemez y Sangre Regional Water Planning Council.

Near term windows of opportunity that can work in synergy with the plan include:

- Development and implementation of the Santa Fe 75-year urban forestry plan
- The recent passage of updated county building codes that will increase water and energy efficiency in all new construction.
- Potential adoption of recommendations in the *Santa Fe municipal watershed Pecos Wilderness prescribed burn project – final environmental assessment* that would permit the treatment of wilderness areas in the Santa Fe Watershed to reduce the risk of wildfire.
- The Interstate Stream Commission recently updated their guidebook in which they call for an update to the Jemez y Sangre Regional Water Plan. This new update will incorporate the goals of this Climate Adaptation plan thereby integrating our action steps into their larger regional plan.
- River Source will be installing water harvesting earth works into several Santa Fe locations, thereby increasing infiltration and reducing runoff.
- The Sustainable Santa Fe Commission Energy Committee will pursue the development of

community solar and will work with solar installation companies, financial institutions and citizens to encourage investments in rooftop solar.

- The City of Santa Fe will restore ten arroyo segments as funded through the GO Bond.

The longer-term implementation of adaptation strategies will proceed as funding, resources, and organizational capacity allows. Each party will support ongoing tracking of progress and monitoring of conditions according to agreed-upon cooperative efforts.

As implementation proceeds, progress will be assessed and the adaptation plan will be modified as needed to stay on track with progress toward climate resilience and economic stability.

Climate Adaptation Plan Table

In the following section, we have listed each of these goals with the objectives, strategies and actions we feel will be necessary to achieve the identified goals. Monitoring will be necessary to provide feedback and help those implementing the goals to refine their strategies over time.

GOAL 1: Increase the water security and ecological integrity of the Santa Fe Watershed through water conservation, infiltration, groundwater recharge, and reuse.					
OBJECTIVE 1- 1: Increase Aquifer Storage and Recovery (ASR).					
Strategy 1-1a: Work with the City and County of Santa Fe to secure funding for analysis, feasibility and implementation of Aquifer Storage and Recovery (ASR).					
Measure: Funding secured.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Review funding sources and seek partnerships for ASR.	TBD	M (1-2 yrs.)	Hire an intern to research funding opportunities.	Funding secured.	See Goal 5 for funding possibilities.
Strategy 1-1b: Conduct an analysis of the Watershed's soil and hydrological modeling to determine the best areas for water infiltration.					
Measure: Watershed map is available to define best areas for water infiltration.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Compile and review the existing hydrological and soil studies.	Contract Scientists TBD.	M	Review existing studies.	Inventory of studies.	Possibilities: Peggy Johnson, Neil Williams, Paige Grant.
2. Map watershed according to potential for water infiltration and groundwater recharge.	Contract Scientists TBD.	M-L	GPS mapping.	Complete site map.	Possibilities: Peggy Johnson, Neil Williams, Paige Grant.
Strategy 1-1c: Conduct a feasibility study to determine the possibilities and priorities for ASR.					
Measure: Feasibility study is complete and identifies a plan of action for implementation.					
1. Engineering firm conducts feasibility study.	TBD	L 3-5 years	City and County send out RFP for study.	Complete feasibility study.	

Strategy 1-1d: Implement ASR projects.					
Measure: ASR projects implemented					
1. Utilize information in preceding action steps to implement project.	TBD	L			Dependent upon success of previous steps.
OBJECTIVE 1-2: Optimize water infiltration from the full range of precipitation events, up to and including runoff from a 500-year storm event.					
Strategy 1-2a: Develop joint City/County codes involving City/County Public Works, City/County Planning, and other relevant local government resources to increase water infiltration from runoff from buildings, roads, and parking lots.					
Measure: New codes are in place and being implemented.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Establish a joint City/County working group to review existing codes and suggest amendments to improve water infiltration from runoff from buildings, roads, and parking lots.	TBD	Spring 2014	Draft new codes and requirements.	New building and road drainage plan.	Review existing County Sustainable Land Use code.
2. Ensure that code amendments are adopted by City/County local governments.	Working group	Winter 2014	City/County Agenda.	New codes for building and roads.	
Strategy 1-2b: Incorporate new codes into the City/County Capital Improvement Plan (CIP) projects to increase infiltration of runoff from buildings, roads, parkings lots, etc.					
Measure: Number of green infrastructure (GI) projects that have been implemented.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Coordinate with City/County Public Works Departments to integrate new codes into CIP projects.	TBD	S-M	Set initial meeting to develop initiative.	Comprehensive list of CIP projects.	Dependent upon review from 1-2a.
2. Improve public awareness of City/County initiatives to increase water infiltration by publishing information on CIP projects.	TBD	S-M	News Media Release.	News articles published.	

Strategy 1-2c: Develop City/County guidelines for remodeling, repair, and maintenance projects to optimize the number of projects that incorporate green infrastructure (GI).

Measure: Published guidelines for integration of GI for remodeling, repair, and maintenance projects.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Establish a joint City/County Working Group to integrate GI for remodeling, repair, and maintenance projects within the watershed.	City/County Public Works	S	Coordinate initial joint meeting.	Draft guidelines for integration of GI.	
2. City and County Public Works Departments adopt final guidelines.	City/County Public Works	S	City/County Public Works Approval.	Final guidelines for integration of GI.	

Strategy 1-2d: Design and construct GI into the prioritized reaches of the ten major arroyo systems of the Santa Fe Watershed.

Measure: Identified arroyo GI projects are implemented.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Monitor the GO Bond funded arroyo restoration pilot projects for success and lessons learned to use for subsequent arroyo GI.	Arroyo Working Group	M	Establish monitoring benchmarks and monitor progress.	Identified best management practices	This project is funded and RFP will be released imminently.
2. Integrate the lessons learned in 1-2d-1 for future arroyo restoration projects.	Arroyo Working Group	M-L	TBD	TBD	

OBJECTIVE 1-3: Promote the creation of a Regional Authority to focus water planning and management on a Santa Fe basin-wide scale to maximize efficiency (eg. Water, Waste Water, Storm Water, and Energy).

Strategy 1-3a: Work with City/County/State governments to create a Regional Authority for the Santa Fe Basin by December 1, 2015.

Measure: Regional Water Authority is in place by December 1, 2015.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Create a Working Group to develop draft legislation to create the statute for the development of Regional Water Authorities and provide educational support materials & events.	TBD	Fall 2013	Establish initial City/County meeting.	Draft legislation.	Nylander, Leigland
2. Identify New Mexico Legislative sponsor for introduction of legislation in the 2014 session.	TBD	Fall 2013	Contact potential legislative sponsor.	Legislative sponsor.	Sen. Wirth?
3. Ensure that Regional Authority legislation is passed in the 2014 session.	TBD	Winter 2014	Lobby legislators to garner support.	Bill passed.	Nylander, Leigland

OBJECTIVE 1-4: Work with the City and County of Santa Fe to increase the use of reclaimed waste water.

Strategy 1-4a: Increase the use of reclaimed waste water for non-potable uses.

Measure: Acres of land that are being irrigated by reclaimed waste water above 2013 levels.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Refer to "Implementing Actions" in the Reclaimed Wastewater Resource Plan http://www.santafenm.gov/index.aspx?NID=2576 .					Borchert, April 2013

Strategy 1-4b: Increase the use of reclaimed waste water for potable uses.

Measure: Please refer to the Borchert April 2013 report. Note that this is beyond to scope of this plan but we would like to recognize that this is within the foreseeable 20-year future of the desert southwest.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Refer to "Implementing Actions" in the Reclaimed Wastewater Resource Plan.					Borchert, April 2013

Objective 1-5: Safeguard the groundwater supply in the La Cienega, La Cieneguilla and La Bajada communities.

Strategy 1-5a: Convert residential well-users to Santa Fe County water supply.

Measure: One-third of identified residents are connected to County water supplies by 2016 with another third connected by 2019.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Finalize negotiations with the county public utilities.	La Cienega Valley Association	Ongoing	Organizing community meetings with County.	Homeowner and County agreement.	
2. Secure financing to build the infrastructure necessary to connect homeowners to County water supplies.	Santa Fe County	M	Apply for federal funding.	Funding secured.	BOR WaterSmart grant
3. Build infrastructure and connect area residents.	Santa Fe County Public Works Dept.	L	Planning, design and construction.	Infrastructure complete	

GOAL 2: Improve forest and ecosystem health for resilience in the face of climate change.

OBJECTIVE 2-1: Reduce the risk of catastrophic wildfire.

Strategy 2-1a: Promote understanding of methods and benefits of forest thinning and prescribed burning.

Measure: number of talks, PSAs, letters, blogs posts, etc.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Meet with various community, political and business groups, to inform the public about forestry practices as tied to the water cycle.	USFS, SFWA, TNC, etc.	Ongoing	Contacting groups and presenting material.	Presentations	
2. Media outreach: PSAs (radio, TV, newspapers, movie theaters, etc.), letters to the editor, blogs, public presentations, etc.	USFS, SFWA, TNC, etc.	Ongoing	Creating media outreach products.	Media products	

Strategy 2-1b: Encourage forest treatment projects for the areas bordering the Santa Fe Watershed (Pecos Wilderness, the greater Tesuque drainage area and Glorieta/Thompson Ridge areas).

Measure: Forest treatments are implemented in adjacent forests.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Explore funding opportunities (grants, NMED, insurance companies, cooperative funds for landowners, etc.).	Community organizations, non-profits, USF, NRCS, etc.	Ongoing	Research.	Data base/list of available funds.	See goal 6 for funding strategies.
2. Establish a volunteer cadre to help citizens to treat private forested land.	USFS, City of SF and private citizens	M	Community volunteer contact person.	Volunteer cadre trained and organized.	
3. Encourage land/homeowners in the WUI to put land into conservation easement and to use funds to leverage grant opportunities to thin and treat private lands.	Land owners, Conservation Trust, Quivera Coalition	Ongoing	Contact potential land owners.	Number of acres placed in conservation.	

OBJECTIVE 2- 2: Reduce the risk of disease and pest infestation.

Strategy 2-2a: Encourage proper forestry practices on private lands to ensure healthy tree spacing, adequate irrigation, and treatment/removal of pest infested trees.

Measure:

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Gather public education materials and disseminate to owners of forested land.	State and Federal forestry departments.	Ongoing	Compile materials and make availability known through libraries, websites, PSAs, etc.	Materials compiled and disseminated.	

OBJECTIVE 2-3: Reduce invasive tree species and replace with natives and non-invasive ornamentals.

Strategy 2-3a: Pass an ordinance to ban the selling and planting of invasive tree species (Russian olive, Siberian Elm, Ailanthus (Tree of Heaven), Salt Cedar, etc.)

Measure: Ordinance is in place and enforced.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Propose ordinance to City Council.	Bob Wood	S	Presentation to City Council.	Ordinance passed.	Ask Bob if in place.

Strategy 2-3b: Remove non-native invasive tree species from City and County property, where appropriate.

Measure: Removal of non-native invasive tree species.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Earmark funding to be spent annually for a 3-5 year period to remove invasive tree within the City and County.	Bob Wood, County counterpart	S-M	Work with City Council and County Commissioners to secure funding.	Funding mechanism established	
2. Coordinate and implement invasive tree removal program.	Bob Wood, County Counterpart	M-L	Tree removal.	Map of treated areas	Dependent upon financing.

OBJECTIVE 2-4: Develop a healthy urban forest.

Strategy 2-4a: Support the development and implementation of the 75-year urban forest plan.

Measure: 75-year urban forest plan is written and being implemented.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Encourage City support of financing and implementation of the 75-year urban forest plan.					Bob Wood is leading this effort.

Strategy 2-4b: Educate homeowners and landscapers about appropriate plantings and landscape design techniques to maximize urban forest health.

Measure: Landowners and landscapers are implementing updated techniques.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Ensure QWEL, Master Gardener, and other information sources provide information appropriate to changing climate limitations for successful urban forest health.	Melissa McDonald, Master Gardener Program Lead, Nurseries	S-M	Integrate climate prediction information into training seminars.	Lectures and published materials.	
2. Develop a landscaping guide to be distributed to homebuyers through the SF Realtor Assn.	County Ag Extension Service, Master Gardener Program, SFCC, etc.	M	Develop landscaping guide.	Landscaping guides distributed to homebuyers.	

OBJECTIVE 2-4: Increase soil health in public and private land and urban forest cover to improve the water absorption capacity of soils and support the flora of the area.

Strategy 2-4a: Develop and expand composting programs throughout the City and County.

Measure: Composting programs in place and compost is spread on public lands to improve soil health.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Work with hotels, restaurants, grocery stores, schools, etc. to collect food waste for composting.	City Solid Waste Management	M-L	Work with Solid Waste Management Department.	Composting program established.	

2. Develop public education campaign to encourage residential composting and mulching.	SFCC, Farmer's Market Institute, Carbon Economy Series	Ongoing	Coordination among various entities, development of programs.	Public Education campaign developed.	Master Gardener Program, SF Women's Club.
3. Establish an annual residential chipping service to shred yard waste in the fall and create mulch for residential gardens and landscapes.	City Solid Waste Department	M-L	Trucks, equipment, personnel, advertising.	Program established.	Reduces risks and impacts of flooding.
4. Work with Parks department to utilize compost on public lands.	City Parks, Solid Waste Dept.	L	Trucks.	Compost being utilized.	

GOAL 3: Expand and develop the workforce-training programs needed to implement this plan.					
OBJECTIVE-1: Efficiently develop training capacity across the range of sectors identified in this plan.					
Strategy 1: Provide workforce training for the jobs needed to implement this Plan.					
Measure: Number of participants in selected and developed training programs.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Convene a gathering of City and County Economic Development leaders and Institutions of Higher Education to identify training needs to both prepare for the jobs needed to implement the plan (skills needed to improve forest health and provide water and energy security) and to meet the goals of diversifying the economy.	Plan Implementer (yet to be identified or funded)	S	Pre-meetings with City and County Economic Development staff, Event organization.	Training and education plan designed to meet the needs of the jobs identified, including a funding strategy.	
2. Implement training and education plan developed in Action Step 1.	Local institution of higher education and possibly some non-profits, depending on plan	M	Submit grant applications and other instruments to obtain necessary funding/and tuition assistance.	New and updated training programs developed that meet training needs identified.	
3. Conduct a periodic review of the programs and evolving training needs and make appropriate adjustments to the training programs.	To be assigned in the Training and Education Plan.	L	Annual assessment and possible convening of partners.	Recommendations for program adjustments.	SFCC, NNMC, Highlands, UNM, St. Johns, Center for Higher Education, Youth Works

GOAL 4: Increase energy efficiency and renewable energy (EERE) to reduce the use of fossil fuel-derived and water consumptive energy sources.

OBJECTIVE 1: Participate in the Georgetown University Energy Prize (GUEP) (<http://www.guep.org/>) to develop and implement a comprehensive EERE program.

Strategy 1a: Work with the GUEP advisor to refine the goals, objectives, strategies and actions steps listed below to achieve maximum EERE by 2016.

Measure: Full action plan is developed and being implemented.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Submit letter of intent to GUEP to participate in their 2 year program.	John Alejandro	S: Dec. 2013	Draft letter.	Letter of intent.	
2. Work with assigned advisor and participating parties to create a full action plan.	SFCEA, Got Sol, SSFC, SFGCC, County	S: Winter 2014	Draft action plan.	Action Plan, buy-in from participating entities.	NEE, SFCC, GCC, SC, SSFC, PNM, Legis., City, County, etc.

OPTION 4-1: Establish a City/County municipal electric utility, called Santa Fe Public Power (SFPP).

OBJECTIVE 4-1-1: Conduct preliminary assessments and engage in community outreach.

Strategy 4-1-1a: Develop a working group to carry out the steps necessary to shift from PNM to Santa Fe Public Power.

Measure: Working group in place and carrying out the steps necessary to make the transition to a municipal electric utility.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Consult with those currently working on this effort to establish a working group.	Mariel Nanasi, Paul Campos	S: Winter 2014	Contact necessary parties and set up meeting.	Commitment of participants.	

Strategy 4-1-1b: Launch an educational campaign to inform the public about the pros and cons of a municipal electric utility.

Measure: Number of attendees, number of articles in papers, public-opinion assessment results, etc.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Establish a working group to design and produce an educational campaign.	Maribel Nanasi, Paul Campos	Already in place?		Action Plan	
2. Public Education Forum.	New Energy Economy	9/18/13 Forum, more?	Venue, speakers, etc.	# of attendees?	
3. Conduct a public opinion assessment to gauge the level to which the public understands the issues and to what extent they support the project.	Municipal utility working group	M	Create poll, distribute to City/County residents.	Polling results	

Strategy 4-1-1c: Conduct a technical-level engineering analysis of PNM's load profile in the County, the location, age and condition of PNM's distribution system and the extent to which SFPP could acquire and pay for a sustainable power supply sourced entirely from natural gas, solar and wind.

Measure: Analysis results indicate whether or not this is a feasible endeavor.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Designate funds to pay for a full feasibility analysis.	Municipal utility working group	M: 2014	Approval by City Council/ County Commissioners	Funding secured.	
2. Contract with a firm to conduct a full analysis of the feasibility of a shift to a municipal utility.	Municipal utility working group	M: 2014	Need all technical data from PNM.	Full engineering analysis report.	

Strategy 4-1-1d: Conduct an analysis of the wholesale energy markets for near-term availability of natural gas-derived electricity and renewables and the constraints of the regional transmission system.

Measure: Analysis results indicate the possibilities and constraints of purchasing wholesale energy on the open market.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Consult with turnkey developers on the availability of long-term supply contracts for Santa Fe in the range of 100 MW of daily capacity.	Municipal utility working group	M-L	Research and contact potential developers.	Developers contacted and data compiled.	

Strategy 4-1-1e: If the results of the technical analysis are favorable, secure funding to transition to a municipal utility.

Measure: Funding proposal chosen and supported.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Establish a working group to evaluate funding possibilities (bonds, tax levees, lease agreement with PNM, etc.).	Municipal utility working group	M	Evaluation of funding possibilities.	Analysis of funding options.	
2. Work with community to support the suggested funding proposal.	Municipal utility working group	M-L	Public education and outreach.	Funding supported and secured.	

Strategy 4-1-1f: Transition to SFPP from PNM.

Measure: Full transition is complete.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Purchase electrical infrastructure from PNM.	City/County	L	Financing	Transaction complete.	
2. Contract with RE developers to provide electricity to SFPP.	City/County	L	Negotiate with independent utility scale developers.	RE contracts.	
3. Establish aggressive energy conservation incentive program.	City/County	L	Plan development and implementation.	Plan and outreach efforts.	
4. Begin construction on SFPP gas fired power plant.	City/County	L	Financing.	Plant complete.	

5. Install solar panels at all municipal facilities.	City/County	Ongoing	Financing, City/ County approval.	Installations complete.	
6. Encourage the installation of solar panels at homes/businesses through financing incentives.	City/County, Home Wise	Ongoing	Public education and outreach.		
OPTION 4-2: Within the PNM (electric) and NM Gas Co. (natural gas) statutory/regulatory structure, encourage a transition to increased energy efficiency and renewable energy (EERE).					
OBJECTIVE 4-2-1: Make regulatory and legislative changes to state energy policies and requirements to encourage the development of EERE.					
Strategy 4-2-1b: Implement decoupling legislation to increase utilities' incentives to improve EERE for electricity, natural gas, and other non-renewable, water intensive energy forms.					
Measure: Decoupling legislation is in place.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Develop a public education campaign to help citizens and legislators understand decoupling and the need for this legislation.	SSFC Energy Committee and affiliates	S	Funds for PSAs, letters to editor, radio interviews, etc.	Public education campaign in place.	Review examples from other states (CA, AZ, VT, etc.).
2. Work with legislators to draft decoupling legislation.	SSFC Energy Committee and affiliates	M	Meet with legislators and write legislation.	Drafted and submitted legislation.	Egolf, Soules, Wirth?
2. Ensure passage of decoupling legislation in 2015 legislative session (Jan-March).	SSFC Energy Committee and affiliates	M: 2015 session	Lobbying, public outreach.	Legislation passed.	PRC, PNM, Legis., Gov. lobbying efforts.
Strategy 4-2-1a: Revise the NM Efficient Use of Energy Act and the Renewable Energy Act to increase the EERE targets.					
Measure: EERE targets are revised and implemented.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Draft and pass legislation to increase the RPS to 30% renewables by 2020 and 40% by 2030; and replace the "Reasonable Cost Threshold" provision with "Reasonable Market Price" provision.	TBD	M-L	Draft and pass legislation.	Renewable Energy Act revised.	

2. Draft and pass legislation to increase requirements in the Efficient Use of Energy Act to 20% by 2020.	TBD	M-L	Draft and pass legislation.	Efficient Use of Energy Act revised.	
OBJECTIVE 4-2-2: Enhance renewable energy education and outreach efforts.					
Strategy 4-2-2a: Establish an education and outreach campaign to inform public of the benefits of renewable energy and the options available for financing their RE projects.					
Measure: Number of people who switch to RE and who take advantage of the financing options.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Create an education and outreach plan.	City, County, Home Wise, PNM	Spring 2014	Plan, outreach materials.	Plan developed and financing secured.	
2. Host community meetings, create PSAs, distribute information, etc.	City, County, Home Wise, PNM	Fall 2014	Distribute info., host community meetings, etc.	Documentation of efforts.	
OBJECTIVE 4-2-3: Increase energy efficiency for residential, business and municipal buildings.					
Strategy 4-2-3a: Launch aggressive energy efficiency incentive programs for residential and business customers.					
Measure: Percentage of reduction in overall energy load.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Procure financing to expand the energy efficiency incentive programs as stated in updated Efficient Use of Energy Act.	City, County, Home Wise, PNM	M-L	Financing, program development.	Program developed and implemented.	To be done after the EUE Act is revised.
2. Promote and implement incentive program	City, County, Home Wise, PNM	L	Public education and outreach.	Measurable decreases in energy use.	

OBJECTIVE 4-2-4: Increase financing options for energy-related projects.

Strategy 4-2-4a: Expand and promote financing options for residential and commercial customers to increase energy efficiency and shift to renewable energy.

Measure: Number of customers utilizing the proposed financing options.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Promote Home Wise's home improvement financing offers for those with household incomes under \$103,050.	Home Wise, City, County	Ongoing	Public education and outreach.	Increase in Home Wise participants.	
2. Develop low-interest, long-term (15-20 years) on-bill financing option through the City of Santa Fe Water Department for solar installations and energy efficiency projects.	Sangre de Cristo Water Division	M	Development of program, dedicated financing.	Program established and in place.	
3. Develop low-interest financing options for solar installations and energy efficiency projects through local financing institutions.	City, County, Local Financial Institutions	M-L	Negotiations with financing institutions.	Financing options developed and offered.	Credit unions, LANB, other banks? See Goal 5 for more financing options.

OBJECTIVE 4-2-5: Encourage third-party solar development.

Strategy 4-2-5a: Encourage the establishment of LLCs to lease solar arrays to homeowners through Power Purchase Agreements (PPA).

Measure: LLCs established and PPAs in place.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Encourage private sector investment in LLCs through information dissemination.	Dan Baker, Private sector enterprise	S-M	Compilation of financial data.	Establishment of PPAs to develop rooftop PV.	This is becoming less feasible as the REC payments decrease.

Strategy 4-2-5b: Encourage the establishment of a 2-5 MW community solar (CS) array in Santa Fe County.

Measure: Size of array and number of customers who have purchased panels.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Work with PNM to design CS agreement and send out an RFP (Request for Proposal).	SSFC Energy Committee	S-M	Negotiations with PNM.	CS approved and RFP released.	PNM is negotiating with SF team.
2. Work with PRC to change current rules so that CS is permissible.	SSFC Energy Committee	S-M	Negotiations with PRC, Public outreach.	CS development approved.	
3. Third party installer installs CS system.	County, City, project developer, insatallation company	M	Determination of site, financial specifics.	Installation of CS.	Project developer and installation company will be determined through RFP process.
4. Launch education/outreach campaign to encourage business owners, renters and homeowners to purchase CS panels.	SSFC, City, County, Green Chamber of Com.	M-L	Program specifics, development of campaign.	Education/ outreach campaign in place.	

OBJECTIVE 4-2-6: Increase energy efficiency and renewable energy utilization at local government facilities.

Strategy 4-2-6a: Shift >50% of the entire municipal energy load to renewable sources by 2025 (fire stations, schools, administrative buildings, etc.).

Measure: Percentage of energy produced by renewable energy exceeds 50% of the total energy load.

Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Work with City Council to earmark 3% of all City tax revenues for renewable energy projects.	SSFC, Green Chamber	S-M	Develop proposal, public outreach, petitions, etc.	Financing established.	Albuquerque has adopted this with great success.
2. Install solar panels on all City and County buildings/parking lots.	City, County	Ongoing	Funding, political will.		Dependent upon financing.
3. Evaluate the use of biomass to heat municipal buildings	City, County	S-M			Conduct feasibility assessment.

4. Identify sources of waste-derived bio-CNG to be used in CNG fleet vehicles.	City, County	M-L			Conduct feasibility assessment.
OBJECTIVE 4-2-7: Adopt and meet the requirements of the 2030 Challenge.					
Strategy 4-2-7a: City and County adopt ever-increasing water and energy requirements for new buildings.					
Measure: Codes updated and on track to meet the 2030 Challenge.					
Action Step	Responsible Party	Timing (SML)	Requirements	Deliverables	Notes
1. Increase energy efficiency requirements for the City incrementally according to the City Building Codes and the 2030 Challenge.	K. Mortimer (City), K. Shanahan (SFAHBA)	M	Update the City Codes to adhere to the 2030 Challenge.	Codes updated and implemented.	Strict energy and water building codes are already in place in the City and are scheduled to be updated according to the 2030 Challenge.
2. Update County building codes to mirror those of the City.	County	S	Update County Codes to City code standards.	Codes updated and implemented.	Passed on 12/10/13.

GOAL 5: Establish financing systems that facilitate investments, emergency funds, and cash flow availability to fund climate adaptation and innovation initiatives.

OBJECTIVE 5-1: Establish a financial institution (or financial institutions) specializing in (1) holding and distributing funds for ecosystem conservation and restoration programs (e.g., similar to already existing eco-finance banking institutions in some parts of the country); (2) holding revolving loan funds and distributing low/no-interest loans to members for cash flow purposes related to ecosystem restoration and conservation initiatives that require upfront cash outlays before being eligible for reimbursement by government programs or other funding sources; and (3) acquiring and distributing equity investment funds for economic and ecological innovation and stimulus initiatives and for accumulating and distributing disaster relief funds and emergency financing in case of catastrophic events.

Strategy 5-1a: Identify additional financing systems and programs available through Federal, State, and local governments, and seek to adapt and list them in a directory to support the financing needs for programs identified in the Climate Adaptation Plan for the Santa Fe Watershed area (see for example: <http://www.ca-ilg.org/document/financing-local-sustainability-efforts>).

Measure: Number of government financing systems/program found that can be listed in a directory for our local area

Action Step	Responsible Party	Due Date	Requirements	Deliverables
1 Research, identify, and describe existing governmental financing programs	TBD	mid 2014	funds to pay researchers	report
2 List and describe them in a directory for the area	TBD	late 2014	funds to establish directory	directory (web-driven)

Strategy 5-1b: Research and use (link to) sources of information and examples to establish local and state-wide financing mechanisms, based on a variety of sources of information already identified

Measure: Realization of each phase (of a series of phases for the realization of the above listed financing systems/programs for Objective 5.1.

Action Step	Responsible Party	Due Date	Requirements	Deliverables
1 Establish a phased process plan for establishment of financing systems/institutions, and the necessary resources and information (sources) needed to realize the plan	TBD	TBD: mid 2014	Funding to compensate the initiator's work	Report/Plan (Prospectus)
2 Begin working through each step (phase) of the process plan	TBD	late 2014	Funding to compensate the initiator's work	Reports on each phase

OBJECTIVE 5- 2: Establish financing programs tailored to soil conservation and soil improvement, local food production, water management, stream and wetland (i.e., water source) restoration, forest management and restoration, and local/community-driven economic development

Strategy 5-2a: Start at the smallest feasible scale and follow the most desirable up-scaling scenarios through adaptive management, collaboration, and marketing

Measure: One program established (number of programs established; one by one)

Action Step	Responsible Party	Due Date	Requirements	Deliverables
1 As in 5-1				
2 As in 5-1				

OBJECTIVE 5-3: Educate target groups (i.e., the community and environmental and community development/innovation organizations) about the availability of the funds, investment options, and fund utilization opportunities and conditions. Grow membership in case of member-driven financing programs.

Strategy 5-3a: TBD ; e.g., publication of funding directory; offering presentations; launching pilot projects

Measure: TBD: e.g., number of information/education sources and events launched

Action Step	Responsible Party	Due Date	Requirements	Deliverables
1 TBD				
2 TBD				

Working Group 4**Issue: Promoting Conservation Strategies of Large Water Users**

Strategic Goal	Contribute to reducing water use by optimizing water use by large water users
Objectives	Optimize water use by large users
Tasks	<ul style="list-style-type: none"> • Identify large water users • Promote the installation of electronic transmitting water meters • Estimate contribution to total demand • Engage large water users in the discussion of how to optimize water use • Identify ways to optimize the water consumption of large users, and encourage water conservation by large users • Engage in discussion Research on Smart Controllers for rebates/park installations • Explore and suggest potential rebate programs and potential savings for large users • Explore behavioral modification models as a means to reduction of use • Research commercial water budgets • Training & Code Modifications • Expand relationships with the Santa Fe community by creating liaison to better understand issues and solutions
Members	Karyn Schmitt, Melissa McDonald, Tim Michael
Notes	<ul style="list-style-type: none"> • Research on Smart Controllers for rebates/park installations • Exploring with WCC on ways to localizing —adding passive water harvesting info to the curriculum perhaps through the QWEL program • Liaison with Parks and Open Space (POSAC—Melissa McDonald & Tim Michael) • Support AMI efforts for better meter reading and better software packages that help consumers track individual daily water use as a tool for increased efficiency and conservation • Review Green Building Code amendments --- chapter 8 • Smart Tech/Soil metering update coming • Support recognition of successful partners and program
Reference Material	<ul style="list-style-type: none"> • Water Use in Santa Fe, Borchert et al., July 2009 • QWEL Guide and website/WaterSense • US Dept. of Energy, Federal Energy Management Program, Guidelines for Estimating Unmetered Landscaping Water Use • City of Santa Fe Green Building Code & administrative guidelines • EPA WaterSense Documents • SF Watershed Forest & Water Climate Adaptation Plan by Esha Chiochio (DRAFT)
Fiscal Impact	To be determined

Update:

Parks: POSAC's subcommittee on water conservation asked to Tim develop memo to POSAC on analysis of parks water use looking at six parks. Based on this information, Melissa is working with POSAC to develop preliminary draft report for POSAC/Water Conservation.

QWEL: Melissa and Doug attended QWEL kick-off meeting. Water Conservation staff did a good job explaining how the program will work for the pilot project. WC staff went over forms (available May 1st). There were questions around training schedule, agreement language and what type of drip irrigation audits would be accepted. Also, there was mention of including passive water harvesting techniques into the QWEL curriculum.

Sustainable Santa Fe: Reviewed document and gave feedback to author Esha Chiochio from Sustainable Santa Fe Commission (esha@santafewatershed.org). Western Adaptation Alliance is scheduled to hold next training in Santa Fe in May. Topic sustainable agriculture as it relates to water resources. Representatives from the Sustainable Santa Fe Commission, Water Division and POSAC will participate.

Updates: Working Group #4 would like to get updates from WC staff on AMI metering /billing status, QWEL training, green lodging initiative

Group #4

WG#5 MEETING ON 5/5/2014 WITH OSE STAFF

At WG#5 member Peter Balleau's suggestion, I organized the meeting with John T. Romero, PE, Director, Water Rights Division, Office of the State Engineer (OSE). Other attendees from OSE included Julie Valdez & Molly Magnuson from Water Use and Conservation, and Christina Noftsker and Kerri Roybal from the District 6 Water Rights Office. John had selected these staff members in anticipation of the questions we might ask. I found it to be a cordial meeting and everyone was very helpful and attentive.

Bob Kreger was there from WG#5 and Andrew Erdmann, from City of Santa Fe (CSF) Water Resources was present. Andrew actually worked for John Romero when he was at OSE. Andrew reviewed these meeting notes.

I introduced myself and gave an overview of the Water Conservation Committee and how we are now organized into working groups and that most of our work is done between the regularly scheduled monthly meeting of WCC. I also explained that we are trying to reach out to private well owners and inform them that the CSF regulations apply to private wells and do so in an "inclusive" manner with respect to conserving water in our common aquifer. I also mentioned the recently released GPCD calculations. I had sent in advance a list of questions, which were not addressed (but not necessarily in this order, during the meeting).

Does the City have the legal right to regulate all wells within the City limits as per its 1999 ordinance? (Case law from Smith vs. City of Santa Fe, 2006 and Stennis vs. City of Santa Fe, 2008)

There was no discussion of the specific cases and I think that there is no question that the CSF has jurisdiction over these wells and the City may impose restrictions if they are more stringent than OSE requirements.

The OSE does not have jurisdiction over pre-basin wells and the OSE would not enforce CSF ordinances; but the OSE would get involved if there were a flagrant violation concerning a permitted well.

What % of the private wells in the City of Santa Fe have meters?

The first number we heard was 50%, but then the consensus seem to drop to 25% (or even less). OSE staff seemed reluctant to answer this

question without distinguishing between the pre-basin wells (pre-1956), of which there are an unknown number, and the post-basin wells, which are permitted and therefore quantifiable.

If metered, does anyone submit usage numbers to the OSE for wells within the City?

The OSE requires meter readings of shared wells. If there is "good reason" to require private wells to install meters, the OSE can issue a meter order; but the OSE does not intend to issue meter orders within the city. The only time the issuance of meter orders would be expected is when well repairs are required or if the work is required to be advertised. The OSE assumes that no such work will be done in the city without a CSF permit and it seems to count on the City to monitor such work and enforce State and City regulations. No one seemed to know if the CSF turns in its meter readings to the OSE. Andrew will seek an answer to this question and whether there is any enforcement of the requirement of CSF-permitted wells (which also by definition have OSE permits prior to applying to the City) to submit meter readings to the City. In general and state-wide, meter readings which are turned in to the OSE are recorded in the OSE data base.

Are there any requirements for existing well users to install meters?

No. And it seems unlikely that the OSE will make such a requirement. It seemed implicit, however, that the CSF could do so for wells in its jurisdiction and that CSF could impose limitations on water quantity as long as they were more stringent than those imposed by the OSE. When the CSF issues its permit, it is stated that the newly permitted well is limited to 1AFY.

Does the City have any responsibility to remind owners of metering requirements?

No. There really are no requirements except for shared wells and wells permitted by the CSF.

OTHER DISCUSSIONS

Does the City have any responsibility to remind owners of plugging requirements?

No. Licensed well drillers should be aware of these requirements. There is no specific enforcement for wellhead protection. The regulations are in place but not enforced. The OSE depends on the CSF to see that old wells within the City are properly plugged in the case of a replacement well. The unplugged wells that are likely in existence are probably wells that owners simply stopped using – whether due to poor production, mechanical failure, or if they started sharing a well informally with a neighbor or connected to City water. There is no funding or program in place to identify and plug these wells.

Wells drilled before 1956 did not need to be permitted. It is presumed that those wells would be allowed 3AFY.

Wells permitted under 72-12-1 (after 2004) by OSE are allowed 1AFY. (We are checking this date.) Peter: Do you know?

In discussions with Andrew after the meeting, we agreed to work cooperatively to put together a white paper to summarize the private well issue and Working Group #5 will present the report to the Water Conservation Committee. I will take the lead for the WG and address comments by WG members. I will incorporate most of the work we have already done. Andrew noted that he will have to work on our project as his schedule allows.

Respectfully submitted,

Stephen Wiman

On behalf of Water Conservation Committee Working Group #5

To: Water Conservation Committee

From: Andrew Erdmann, Water Resources Coordinator, City of Santa Fe Water Division

Re: Domestic Wells Within the City of Santa Fe

The purpose of this memo is to summarize the Domestic Well permitting process at the City of Santa Fe for the Water Conservation Committee. There are two halves of this summary – a summary of the permitting process itself including the administration of the permits subsequent to issuance, and a summary of the domestic wells in the City both under City permit and those believed to exist based on New Mexico Office of the State Engineer (OSE) records.

The Permitting Process:

In order to drill a well within the City of Santa Fe limits, two permits are required. The first of these is an OSE domestic well permit (72-12-1 permit). Santa Fe falls within the OSE's District VI office which is located in Santa Fe, so these permits are relatively easy to get through the office located in the Bataan Building near the State Capital. In order to receive such a permit in New Mexico, the permittee must submit proof of ownership of the property – a deed with a good property description or a plat if the deed is inadequate – and a \$125 filing fee. In the event that the well is existing, located on the property of another owner, intended to be used for multiple households, or intended to be used for multiple purposes, additional steps are required of the owners. A copy of this application is included at the back of this memo.

Additionally, because wells within the City of Santa Fe are regulated in some ways by the City, the OSE requires a letter from the City of Santa Fe validating that the subject property meets the City's criteria for a domestic well before they will issue a permit.

The City Ordinance governing the permitting of Domestic Wells by the City of Santa Fe is 25-1.10 SFCC, first passed in 1999 and revised in 2004. The ordinance prohibits the drilling of wells within City limits without a City-issued permit which is only issued subsequent to the issuance of a domestic well permit by the OSE. The permit shall be issued only if the applicant meets one of the following conditions: 1) the nearest property boundary is greater than 300' of a water distribution line or, 2) the total cost of connecting to the City water system is greater than the cost of drilling a new domestic well.

The ordinance further specifies 7 conditions of approval to be attached to City-issued domestic well permits, some of which are identical to conditions imposed by the OSE. The conditions of approval, as listed in the ordinance, are as follows:

1. The well shall be metered to City specifications and monthly usage shall be recorded and reported annually to the City Water Division.
2. In certain parts of the City, as delineated by the City water division, the well shall be drilled a minimum of fifty feet (50') into the Tesuque formation and a seal constructed to prevent the mixing of water between the Tesuque and Ancha formations.
3. The well shall be constructed to standards established by the City of Santa Fe and shall be drilled by a licensed well driller.

4. The well owner shall agree to dedicate a ten to twenty foot (10' - 20') wide easement along the necessary property lines for the installation of future infrastructure, as delineated by the City Water Division.
5. The well owner shall be subject to all City ordinances and penalties governing the amount and usage of water extracted from domestic water wells as set forth in this chapter.
6. The well owner shall be subject to subsection 14-8.12(F)(3) SFCC 1987, requiring the well owner to demonstrate that the water demand created by the use of the structures for which the domestic water well is sought will be entirely offset in accordance with the annual water budget procedures and subsection 14-8.13(F) prior to use of the well.
7. The City may impose further conditions as necessary to implement the City's ordinances, to prevent waste and conserve the supply of water and for the public health, safety and general welfare of its citizens.

By the time the applicant reaches the water office with a Domestic well permit from the OSE, the City water division will have already evaluated the property in terms of meeting the requirements set forth in the Domestic Well Ordinance, so issuing the permit should not be a lengthy process.

Existing Domestic Wells in Santa Fe:

There is no comprehensive list of all of the domestic wells in Santa Fe. The best existing source for this data comes from the OSE's WATER's database, but because of the age of the City in relationship with the relatively recent requirements to file for a Domestic Well Permit with the State, there are likely many wells which are not in the State's records and some of these may still be in use.

There are 753 domestic wells located within the City of Santa Fe's current boundaries based on the 2011 (most current) OSE well location database. The bulk of these are clustered in and around Santa Fe's east side, likely the result of this area having been the first to develop.

Permitted well owners with City permits, a group that should include all well owners since at least 2004, are required to submit meter readings but this does not appear to be either an established or an enforced practice. In addition, the conditions of approval listed in the ordinance do not address the quantity of water to which well owners are entitled – meaning that the 1-3 afy limit (1 afy for wells permitted since 2005; 3 afy for wells permitted between the declaration of the basin in 1956 and the change in policy in 2004) imposed by the OSE is the only restriction to use – and many of the tools described in the ordinance (a delineation of the Tesuque / Ancha formation, specifications for well construction) have not been developed at this time.

The present regulations are permissible because they are not in conflict with State law. However, if the City were to attempt to regulate beyond what it currently does, we would have to evaluate whether we would be prohibiting an action that the State permits:

The 1999 Ordinance is neither inconsistent with nor antagonistic to Section 3-53-1.1 because it restricts the same activities as Section 3-53-1.1 but does so in a less restrictive manner. *See McCall*, 58 N.M. at 538, 273 P.2d at 644 (concluding that an ordinance, which was less restrictive than the corresponding State statute, “merely complement[ed] the statute and [was] nowhere antagonistic therewith”). The Legislature likely had the 1999 Ordinance in mind when it enacted Section 3-53-1.1 because Section 3-53-1.1 is more restrictive than the 1999 Ordinance: the 1999 Ordinance prohibited drilling within two hundred feet of a water distribution line, while

Section 3-53-1.1 prohibits domestic wells within three hundred feet. Because the 1999 Ordinance was less restrictive than Section 3-53-1.1 and was not in conflict with it, we hold that the 1999 Ordinance was still effective after the enactment of Section 3-53-1.1.

Stennis v. City of Santa Fe, 2008-NMSC-008, ¶ 22, 143 N.M. 320.

NEW MEXICO OFFICE OF THE STATE ENGINEER


**APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS IN ACCORDANCE
WITH SECTIONS 72-12-1.1, 72-12-1.2, OR 72-12-1.3 NEW MEXICO STATUTES**
For fees, see State Engineer website: <http://www.ose.state.nm.us/>**1. APPLICANT(S)**

Name:	Name:
Contact or Agent: <input type="checkbox"/> check here if Agent	Contact or Agent: <input type="checkbox"/> check here if Agent
Mailing Address:	Mailing Address:
City:	City:
State: Zip Code:	State: Zip Code:
Phone: <input type="checkbox"/> Home <input type="checkbox"/> Cell Phone (Work):	Phone: <input type="checkbox"/> Home <input type="checkbox"/> Cell Phone (Work):
E-mail (optional):	E-mail (optional):

2. WELL LOCATION Required: Coordinate location must be New Mexico State Plane (NAD 83), UTM (NAD 83), or Lat/Long (WGS84). District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

NM State Plane (NAD83) - In feet	NM West Zone <input type="checkbox"/>	X (in feet): Y (in feet):		
	NM Central Zone <input type="checkbox"/>			
	NM East Zone <input type="checkbox"/>			
UTM (NAD83) - In meters	UTM Zone 13N <input type="checkbox"/>	Easting (in meters): Northing (in meters):		
	UTM Zone 12N <input type="checkbox"/>			
Lat/Long (WGS84) - To 1/10 th of second	Latitude:	deg	min	sec
	Longitude:	deg	min	sec
Other Location Information (complete the below, if applicable):				
PLSS Quarters or Halves:		Section:	Township:	Range:
County:				
Land Grant Name (if applicable):				
Lot No:	Block No:	Unit/Tract:	Subdivision:	
Hydrographic Survey:		Map:	Tract:	
Other description relating point of diversion to common landmarks, streets, or other:				
Point of Diversion is on Land Owned by (Required):				

FOR OSE INTERNAL USE

Application for Permit, Form wr-01, Rev 6/14/12

File No.:	Trn No.:	Receipt No.:
Sub-basin:	POD No.:	Log Due Date:

3. PURPOSE OF USE

- ☐ Domestic use for one household
☐ Livestock watering
☐ Domestic use for more than one household. Number of households _____
☐ Drinking and sanitary uses that are incidental to the operations of a governmental, commercial, or non-profit facility
☐ Prospecting, mining or drilling operations to discover or develop natural resources
☐ Construction of public works, highways and roads
☐ Domestic use for one household and livestock watering
☐ Domestic use for multiple households and livestock watering
☐ Domestic well to accompany a house or other dwelling unit constructed for sale

4. WELL INFORMATION

File Information: (If existing well, provide OSE no. & indicate below if well is to be replacement, repaired or deepened, or supplemental. If new well, leave blank, as OSE must assign no.)		
OSE Well No. (If Existing)	New Well No. (provided by OSE)	
Driller Name:	Driller License Number:	
Approximate Depth of Well (feet):	Outside Diameter of Well Casing (inches):	
<input type="checkbox"/> Replacement well (List all existing wells if more than one):	<input type="checkbox"/> Repair or Deepen: <input type="checkbox"/> Clean out well to original depth <input type="checkbox"/> Deepen well from _____ to _____ ft. <input type="checkbox"/> Other (Explain):	<input type="checkbox"/> Supplemental well (List OSE No. for all wells this will supplement):

5. ADDITIONAL STATEMENTS OR EXPLANATIONS

--

ACKNOWLEDGEMENT

I, We (name of applicant(s)), _____
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Applicant Signature _____

Applicant Signature _____

ACTION OF THE STATE ENGINEER (FOR OSE USE ONLY)

This application is approved subject to the attached general and specific conditions of approval.

Witness my hand and seal this _____ day of _____ 20 _____, for the State Engineer,

By: _____
Signature _____ Print _____

FOR OSE INTERNAL USE

Application for Permit, Form wr-01, Rev 6/14/12

File No.:	Trn No.:	Receipt No.:
Sub-basin:	POD No.:	Log Due Date:

NEW MEXICO OFFICE OF THE STATE ENGINEER
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTIONS 72-12-1.1, 72-12-1.2, AND 72-12-1.3 NEW MEXICO STATUTES

INSTRUCTIONS

1. The application shall be made in the name of the actual user of the well for the purpose specified in the application (if the agent is submitting the application, check the agent box).
2. The application shall be filed with the appropriate filing fee.
3. A separate application must be filed for each well to be drilled or used.
4. If well to be used is an existing well, an explanation (and the file number, if possible) should be given under Remarks (Item 5).
5. If well is to be used for livestock watering on state or federal land, proof of the following must be included as part of the application; (a) applicant is legally entitled to place his or her livestock on the land where the water is to be used, (b) applicant has been granted access to the drilling site and has permission to occupy the portion of the land as is necessary to drill and operate the well.
6. An application to drill a well on land owned by another person, the state of New Mexico, the federal government, or another entity shall be accompanied by written consent of the landowner.
7. For an application for drinking and sanitary uses that are incidental to the operations of a governmental, commercial, or non-profit facility, the applicant shall demonstrate that no alternative water supply is reasonably accessible or available.
8. An application for a 72-12-1.1 domestic well to serve multiple households shall be filed with documentation listing the number of households to be served by the well, the owner's contact information for each household to be served, and a description of the legal lot of record for each household to be served. A copy of a well share agreement may be filed to support the claim that the 72-12-1.1 domestic well will serve more than one household.
9. The Office of the State Engineer may require an application to be filed with a deed or purchase contract and plat of survey on file with the appropriate county.
10. See General Conditions of Approval for more information.

FEE SCHEDULE FOR APPLICATIONS

72-12-1.1 (domestic) = \$125.00
72-12-1.2 (livestock) = \$5.00
72-12-1.3 (temporary) = \$5.00
Replacement well = \$ 75.00
Supplemental well= \$125.00
Repair or Deepen = \$ 75.00
Amend Domestic Use = \$ 75.00

Application for permit, well records and requests for information in the following basins should be addressed to the Office of the State Engineer at:

Bluewater, Estancia, Gallup, Middle Rio Grande, Northern Tularosa, and Sandia Basins
District No. 1. 5550 San Antonio Dr. NE , Albuquerque, NM 87109 Phone # 505-383-4000

Capitan, Carlsbad, Casey Lingo, Curry County, Fort Sumner, Hagerman Canal, Hondo, Jal, Lea County, Peñasco, Roswell-Artesian, and Portales Basins
District No. 2. 1900 West Second St., Roswell, NM 88201 Phone # 575-622-6521

Animas, Cloverdale, Gila-San Francisco, Hachita, Lordsburg Valley, Mimbres, Mount Riley, Nutt-Hockett, Playas, San Simon, Virden Valley, and Yaqui Basins
District No. 3. P.O. Box 844, Deming, NM 88031 Phone # 575-546-2851

Lower Rio Grande, Southern Tularosa, Hueco, Las Animas Creek, Salt, and Hot Springs Basins
District No. 4. 1680 Hickory Loop, Suite J, Las Cruces, NM 88005. Phone # 575-524-6161

San Juan Basin
District No. 5. 100 Gossett Drive, Suite A, Aztec, NM 87410 Phone # 505-334-4571

Northern Rio Grande and Upper Pecos Basins
District No. 6. P.O. Box 25102, Santa Fe, NM 87504-5102 Phone # 505-827-6120

Canadian River, Clayton, and Tucumcari Basins
District No. 7. P.O. Box 481, 301 East 9th Street, Cimarron, NM 87714 Phone # 575-376-2918

**NEW MEXICO OFFICE OF THE STATE ENGINEER
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTIONS 72-12-1.1, 72-12-1.2, or 72-12-1.3 NEW MEXICO STATUTES**

GENERAL CONDITIONS OF APPROVAL

- 06A The maximum amount of water that may be appropriated under this permit is acre-feet in any year.
- 06B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter (Section 72-12-12).
- 06C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request, or may be printed from the OSE website at www.ose.state.nm.us, under applications & forms.
- 06D The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.
- 06E To request a change to the use of water authorized under this permit, the permittee shall file an application with the State Engineer.
- 06F An application for a new 72-12-1.1 domestic well permit where the proposed point of diversion is to be located on the same legal lot of record as an operational 72-12-1.1 domestic well shall be treated as an application for a supplemental well.
- 06G If artesian water is encountered, all rules and regulations pertaining to the drilling and casing of artesian wells shall be complied with.
- 06H The drilling of the well and amount and uses of water permitted are subject to such limitations as may be imposed by a court or by lawful municipal or county ordinance which are more restrictive than the conditions of this permit and applicable State Engineer regulations.
- 06I The permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.
- 06J The well shall be set back a minimum of 50 feet from an existing well of other ownership unless a variance has been granted by the State Engineer. The State Engineer may grant a variance for a replacement well or to allow for maximum spacing of the well from a source of groundwater contamination. The well shall be set back from potential sources of contamination in accordance with rules and regulations of the New Mexico Environment Department.
- 06K Pursuant to Section 72-8-1 NMSA, the permittee shall allow the State Engineer and his representatives entry upon private property for the performance of their respective duties, including access to the well for meter reading and water level measurement.
- 06L The permit is subject to cancellation for non-compliance with the conditions of approval or if otherwise not exercised in accordance with the terms of the permit.
- 06M The right to divert water under this permit is subject to curtailment by priority administration as implemented by the State Engineer or a court.
- 06N In the event of any change of ownership to this permit the new owner shall file a change of ownership form with the State Engineer in accordance with Section 72-1-2.1 NMSA.
- 06O This well permit shall automatically expire unless the well is completed and the well record is filed with the State Engineer within one year of the date of issuance of the permit. It is the responsibility of the permit holder to ensure that the well record has been properly filed with the State Engineer.



City Permit No. _____

(Assigned by City)

City Of Santa Fe Water Division

APPLICATION FOR DOMESTIC WATER WELL PERMIT WITHIN THE CITY LIMITS UNDER CITY OF SANTA FE ORDINANCE No. 25-1.10 SFCC 1987

1. **Applicant Information:**

Name: _____

Address: _____

Phone Numbers: (h) _____

(w) _____

(m) _____

Email: _____

2. **Land Owner Information (if different from applicant):**

Name: _____

Address: _____

Phone Numbers: (h) _____

(w) _____

(m) _____

Email: _____

3. **Information to be provided by Applicant:**

- ☐ Copy of current recorded plat map of property on which well is to be drilled.
 - ☐ Proposed well coordinates including the coordinate system and x & y locations.
 - ☐ Santa Fe County Assessor Office's Parcel Number _____
 - ☐ Office of the State Engineer §72-12-1.1 well drilling permit.
- or**
- Office of the State Engineer existing well permit, well record, and OSE permit to drill a supplemental or replacement well

4. **Applicability**

A. Is this well application for the replacement of an existing well? Yes _____ No _____

B. Is this well application for a supplemental well for an existing well? Yes _____ No _____

C. Do you currently have City water service to your lot? Yes _____ No _____

D. Are you applying for a domestic well based on a claim that your lot property line is more than 300 feet from an existing water line? Yes _____ No _____

If yes, please submit with this application all evidence showing that the nearest property line for which you are applying for a domestic well permit is more than 300 feet from a City water distribution line.

E. Are you applying for a domestic well based on a claim that it will be less expensive to drill a domestic well than to connect to the City water system? Yes _____ No _____

If yes, please submit with this application two written quotes by well drillers licensed by the State of New Mexico for a well completed in a manner consistent with the conditions outlined in Section 4. The quotes need to specify that all the items identified in Section 4, as well as a water line stub out are all included in the price.

5. **Conditions of Approval**

The well shall be constructed in accordance with standards established by the Office of the State Engineer (OSE) reference including being drilled by a well driller licensed in the State of New Mexico. (See <http://www.ose.state.nm.us/doing-business/WellDrillerRegs/WellDrillerRulesRegs-2005-08-31.pdf>)

In addition, the following City's Conditions of Approval shall apply:

- (1) The permittee will notify the Water Division at 505-955-4203 at least 48 hours before drilling is to begin and allow City staff access to site during well drilling.
- (2) The permittee shall install an appropriately-sized, totalizing meter, accessible from the exterior, to measure all of the water produced from the well. Monthly meter readings shall be taken by the well owner and be submitted to the Water Division Director by February 1 of each year.
- (3) Within 30 days of completing the well, the well owner shall provide to the Water Division Director: a) all the information as specified by NMAC 19.27.4.29 (K) (e.g. well record); and b) as-built coordinates for the well including the coordinate system and x & y locations
- (4) The applicant agrees to permit Water Division staff access to install an automatic meter reader on the well meter, if or when the City decides to do so.
- (5) The applicant agrees to permit Water Division staff access to the well and the meter for reading the meter, sampling water quality and measuring the depth to water, provided that Water Division staff gives the well owner 48-hour advance notice.
- (6) This City well permit shall expire if and when the OSE permit expires
- (7) Other Conditions:

6. **Applicant Agreement**

Pursuant to City of Santa Fe Ordinance No. 25-1.10, the undersigned hereby applies for a permit to drill a new domestic water well within the City limits, recognizing the conditions upon the well set forth in Section 5 above, and by the City's Ordinance 25-1.10(E) and by the State of New Mexico statute NMSA 1978, Chapter 3, Article 53 and 72-12-1.1. Obtaining the permit does not relieve the undersigned from the responsibility of obtaining any other permits required under State, County, or City, regulations or ordinances or other requirements of State and Federal law.

To the best of my knowledge, the information provided within this application is true and correct. By signing this agreement, I, the applicant, understand that I must comply with all the conditions and requirements of this permit

Applicant Signature

Date

7. **Sangre de Cristo Water Division Action** (To be completed by City)

Your application for a new domestic water well has been reviewed, and:

- 2.) _____ Pursuant to 25-1.10 A, SFCC 1987, the request to proceed with drilling a new domestic water well within the municipal limits of the City of Santa Fe is hereby denied. The property owner is directed to request water service from the Water Division for domestic water uses.

City Permit No. _____

(Assigned by City)

- 3.) _____ Pursuant to 25-1.10 B, SFCC 1987, the request to proceed with drilling a new domestic water well is hereby granted for the use indicated under the conditions stipulated below.

This application shall become a permit to drill upon acceptance by the Sangre De Cristo Water Division ("Water Division"). The granting of this permit does not supereede any restrictions of record concerning the use of water on this property. Domestic water wells within the municipal boundaries of the City are also subject to all ordinances governing water use within the City of Santa Fe, including water conservation requirements and emergency regulations and drought management stages.

Engineer Supervisor

Dated: _____

Director, Sangre De Cristo Water Division
City of Santa Fe, New Mexico

Dated: _____



City Permit No. _____

(Assigned by City)

City Of Santa Fe Water Division

APPLICATION FOR DOMESTIC WATER WELL PERMIT WITHIN THE CITY LIMITS UNDER CITY OF SANTA FE ORDINANCE No. 25-1.10 SFCC 1987

1. **Applicant Information:**

Name: _____

Address: _____

Phone Numbers: (h) _____

(w) _____

(m) _____

Email: _____

2. **Land Owner Information (if different from applicant):**

Name: _____

Address: _____

Phone Numbers: (h) _____

(w) _____

(m) _____

Email: _____

3. **Information to be provided by Applicant:**

- ☐ Copy of current recorded plat map of property on which well is to be drilled
- ☐ Proposed well location clearly indicated on plat map. If replacement or supplemental well, location of existing well indicated on plat map.
- ☐ Santa Fe County Assessor Office's Parcel Number _____;
- ☐ Office of the State Engineer §72-12-1.1 well drilling permit (OSE permit alone does not grant applicant permission to drill a domestic well. Applicant needs a City permit in accordance to City Ordinance SFCC 25-1.10 and associated regulations).

or

Office of the State Engineer existing well permit, well record, and OSE permit to drill a supplemental or replacement well

4. **Applicability**

A. Is this well application for the replacement of an existing well? Yes _____ No _____

B. Is this well application for a supplemental well for an existing well? Yes _____ No _____

C. Do you currently have City water service to your lot? Yes _____ No _____

D. Are you applying for a domestic well based on a claim that your lot property line is more than 300 feet from an existing water line? Yes _____ No _____

If yes, please submit with this application all evidence showing that the nearest property line for which you are applying for a domestic well permit is more than 300 feet from a City water distribution line.

E. Are you applying for a domestic well based on a claim that it will be less expensive to drill a domestic well than to connect to the City water system? Yes _____ No _____

If yes, please submit with this application two written quotes by well drillers licensed by the State of New Mexico for a well completed in a manner consistent with the conditions outlined in Section 4. The quotes need to specify that all the items identified in Section 4, as well as a water line stub out are all included in the price.

5. Conditions of Approval

The well shall be constructed in accordance with standards established by the Office of the State Engineer (OSE) reference including being drilled by a well driller licensed in the State of New Mexico. (See <http://www.ose.state.nm.us/doing-business/WellDrillerRegs/WellDrillerRulesRegs-2005-08-31.pdf>)

In addition, the following City's Conditions of Approval shall apply:

- (1) Consistent with 19.27.5.9(D)(1) NMRA, the quantity of water available to divert from the well will be limited to 1.0 acre-feet per year.
 - (2) The permittee will notify the Water Division at 505-955-4203 at least 48 hours before drilling is to begin and allow City staff access to site during well drilling.
 - (3) The well shall follow the regulations prescribed by OSE Rules and Regulations (NMCA 19.27.4.29), including providing access to the well for water level monitoring via a 1/2-inch entry point and a well identification tag.
 - (4) In certain parts of the city, as delineated by the city water division, the well shall be drilled a minimum of fifty feet (50') into the Tesuque formation and a seal constructed to prevent the mixing of water between the Tesuque and Ancha formations.
 - (5) The permittee shall install an appropriately-sized, totalizing meter, accessible from the exterior, to measure all of the water produced from the well. Monthly meter readings shall be taken by the well owner and be submitted to the Water Division Director by February 1 of each year.
 - (6) In accordance with OSE Rules and Regulations 19.27.4.30 (C), any replaced well shall be plugged within 10 days of completing the replacement well. The permittee is advised to review the plugging process outlined in OSE Rules and Regulations 19.27.4.30 (C). The permittee shall provide the Water Division Director with a copy of the plan for plugging filed with the OSE and shall provide the Water Division Director with proof of plugging within 10 days.
 - (7) Within 30 days of completing the well, the well owner shall provide to the Water Division Director: a) all the information as specified by NMCA 19.27.4.29 (K) (e.g. well log); and b) as-built coordinates for the well. Coordinates shall be either in latitude/longitude or in units of feet using the NAD83 New Mexico State Plane Coordinate System, Central Zone. Coordinates shall have an accuracy of ± 3 feet. Upon payment of a \$25.00 fee administrative fee, the Water Division will survey the well for necessary GPS coordinates. (To request well coordinates, contact the GIS Analyst with the Water Division Engineering Section at 505-955-4264).
 - (8) The applicant agrees to permit Water Division staff access to install an automatic meter reader on the well meter, if or when the City decides to do so.
 - (9) The applicant agrees to permit Water Division staff access to the well and the meter for reading the meter, sampling water quality and measuring the depth to water, provided that Water Division staff gives the well owner 48-hour advance notice.
 - (10) Upon completion of any well drilled under this new domestic well permit exemption, the applicant shall not use any water from the well before a sworn affidavit by the well driller is submitted to, and accepted by, the city showing the actual costs of drilling the well. If the actual cost of drilling the well exceeds the total cost of connection to the city water system, the well shall be capped and the city shall provide water service to the property. All applicable fees and costs of connection shall be paid by the applicant.
 - (11) The well must be drilled within 90 days of permit issuance. A 90-day extension may be granted when a written request is submitted prior to the expiration date. This City well permit shall expire if and when the OSE permit expires
 - (12) Other Conditions:
-
-
-

6. **Applicant Agreement**

Pursuant to City of Santa Fe Ordinance No. 25-1.10, the undersigned hereby applies for a permit to drill a new domestic water well within the City limits, recognizing the conditions upon the well set forth in Section 5 above, and by the City's Ordinance 25-1.10(E) and by the State of New Mexico statute NMSA 1978, Chapter 3, Article 53 and 72-12-1.1. Obtaining the permit does not relieve the undersigned from the responsibility of obtaining any other permits required under State, County, or City, regulations or ordinances or other requirements of State and Federal law.

To the best of my knowledge, the information provided within this application is true and correct. By signing this agreement, I, the applicant, understand that I must comply with all the conditions and requirements of this permit

Applicant Signature

Date

7. **Sangre de Cristo Water Division Action** (To be completed by City)

Your application for a new domestic water well has been reviewed, and:

- 2.) _____ Pursuant to 25-1.10 A, SFCC 1987, the request to proceed with drilling a new domestic water well within the municipal limits of the City of Santa Fe is hereby denied. The property owner is directed to request water service from the Water Division for domestic water uses.
- 3.) _____ Pursuant to 25-1.10 B, SFCC 1987, the request to proceed with drilling a new domestic water well is hereby granted for the use indicated under the conditions stipulated below.

This application shall become a permit to drill upon acceptance by the Sangre De Cristo Water Division ("Water Division"). The granting of this permit does not supercede any restrictions of record concerning the use of water on this property. Domestic water wells within the municipal boundaries of the City are also subject to all ordinances governing water use within the City of Santa Fe, including water conservation requirements and emergency regulations and drought management stages.

Engineer Supervisor

Dated: _____

Director, Sangre De Cristo Water Division
City of Santa Fe, New Mexico

Dated: _____



**International Code Council and
Canadian Standards Association**



**JOINT CONSENSUS COMMITTEE ON
RAINWATER COLLECTION SYSTEM
DESIGN AND INSTALLATION (IS-RCSDI)**

*BSR/CSA/ICC 805-201x, Standard for Rainwater
Collection System Design and Installation*

TENTATIVE MEETING AGENDA – MEETING #1

Date

April 9, 2014 - 8:00 AM to 5:00 PM CDT &
April 10, 2014 – 8:00 AM to 2:00 PM CDT

Teleconference

800-910-8278 or 231-929-8278
Conference Code 7896875

Location

Hyatt Regency O'Hare, 9300 Bryn Mawr
Avenue, Rosemont, IL 60018 USA

WebMeeting

<http://iccsafe.adobeconnect.com/rcsdi/>
(Click the link & login as Guest)

Secretariats

Shawn Martin, ICC
Paul Gulletson, CSA Group

Project Website

www.iccsafe.org/is-rcsdi

Agenda

1. Call to Order (Martin, Gulletson)
 - a. Committee Member and Guest Self-Introductions
 - b. Approval of Agenda
2. Introductory Comments and Background (Martin, Gulletson)
 - a. ICC's ANSI PINS – review (Martin)
 - b. CSA Terms of Reference – review and approval (Gulletson)
 - c. Review Procedures for Joint ICC/CSA Standard Development
3. General Discussion
 - a. Standard Scope and Table of Contents
 - i. Overview of ICC Resource Document (Martin)
 - ii. Overview of Alberta Rainwater Harvesting Guidelines (Durnie)
 - b. Standard Use and Application
4. Selection of Committee Co-Chairs
 - a. Call for nominations and discussion
 - b. Vote for co-chairs
5. Task Groups
 - a. Review of Task Groups Roles and Approach
 - b. Establishment of Task Groups
 - c. Scope of work and leaders
6. Discussion of Date & Location of Next Meeting
7. Adjourn

Group #3
Doug Rushford