City of Santa Fe

Agenda

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SANTA FE WATER CONSERVATION COMMITTEE MEETING
SANTA FE COMMUNITY CONVENTION CENTER - 200 LINCOLN AVE.
CITY COUNCILORS' CONFERENCE ROOM
TUESDAY, OCTOBER 7, 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 SEPTEMBER 9, 2014 WATER CONSERVATION COMMITTEE MEETING
6. CONSENT AGENDA

DISCUSSION ITEMS:

7. DROUGHT, MONSOON AND WATER RESOURCE UPDATE (Rick Carpenter, 5 minutes)
8. CLIMATE ACTION TASK FORCE (Councilor Ives, 5 minutes)
9. SAN FRANCISCO BLUEPRINT FOR REUSE (Laurie Trevizo, 10 minutes)

INFORMATIONAL ITEMS:

10. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE INITATIVES: (Councilor Ives, 90 minutes)
    - A. GROUP #5- DOMESTIC WELLS WITHIN THE CITY LIMITS (30 minutes)
    - B. GROUP #1 – WATER CONSERVATION & DROUGHT MANAGEMENT PLAN UPDATE (15 minutes)
    - C. GROUP #2- WATER CONSERVATION EDUCATION/OUTREACH (15 minutes)
    - D. GROUP #3- WATER CONSERVATION CODES, ORDINANCES & REGULATIONS (15 minutes)
    - E. GROUP #4- REESTABLISH TREND OF NET ANNUAL REDUCTIONS IN PER CAPITA WATER USAGE AND IDENTIFYING LARGE WATER USERS (15 minutes)

MATTERS FROM STAFF:

11. WATER CONSERVATION COMMITTEE PROPOSED 2015 SCHEDULE (Laurie Trevizo, 5 minutes)

MATTERS FROM COMMITTEE:

MATTERS FROM PUBLIC:

NEXT MEETING – TUESDAY, NOVEMBER 4, 2014:

CAPTIONS: OCTOBER 20, 2014 @ 3 pm PACKET MATERIAL: OCTOBER 22, 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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October 7, 2014

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Call to Order and Roll Call	Councilor Peter Ives, Chair, called the Water Conservation Committee Meeting to order at 4:05 pm in the City Councilor's Conference Room. A quorum did exist and reflected in roll call.	Page 2
Approval of Agenda	Amend agenda: Group #5 to report under Discussion Items. ***Mr. Pushard moved to approve the agenda as amended, second by Mr. Roth, motion carried by unanimous voice vote.***	Page 2
Approval of Consent Agenda	**None**	Page 2
Approval of Minutes, September 9, 2014	**Corrections:** Mr. Robert Wood was not listed in the attendance list and was present. Group #5 Report: Peter Balleau, correct spelling of name. Consent Agenda Approved: No Monsoon Presentation Group #2 Report, Page 7 – Presented by Grace Perez not Nancy Avedisian ***Mr. Wiman moved to approve the minutes of September 9, 2014 as amended, second by Mr. Roth, motion carried by unanimous voice vote.***	Page 3
Discussion Items 1. Drought, Monsoon and Water Resource Update 2. Climate Action Task Force 3. San Francisco Blueprint for Reuse 4. Group #5 Report	**Informational, no formal action.** **#4 Group 5 Update details the Action Plan Recommendations with WCC member's decision on action.**	Page 4-10
Informational Items A. Group 5 report under discussion items. B. Group 1 C. Group 2 D. Group 3 E. Group 4	**Informational.** **Group 1 and 5 disbanded.**	Page 11-12
Matters from Staff	Water Conservation Committee Proposed 2015 Schedule	Page 13
Matters from Committee	Informational	Page 13
Adjournment and signature	There being no further business to come before the Water Conservation Committee, the meeting was adjourned at 6:10 pm.	Page 13

SANTA FE WATER CONSERVATION COMMITTEE MEETING
CITY HALL - 200 LINCOLN AVE.
CITY COUNCILORS' CONFERENCE ROOM
TUESDAY, OCTOBER 7, 2014
4:00 PM TO 6:15 PM

MINUTES

1. CALL TO ORDER

Councilor Peter Ives, Chair for the Water Conservation Committee called the meeting to order at 4:05 pm. A quorum was declared by roll call.

2. ROLL CALL

Present:

Councilor Peter Ives, Chair
Melissa McDonald
Doug Pushard
Giselle Piburn
Bill Roth
Stephen Wiman
Grace Perez
Nancy Avedisian
Tim Michael
Karyn Schmidt

Not Present
Lisa Randall, Excused

Others Present:
Andrew Erdman, CSF, City of Santa Fe Water Division
Robert Wood, City of Santa Fe
Andy Otto, Santa Fe Watershed Association
Jim Lodes
Caryn Grosse, Water Conservation Specialist
Fran Lucero, Stenographer

3. APPROVAL OF AGENDA

Amend agenda: Group #5 to report under Discussion Items.

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

4. APPROVAL OF CONSENT AGENDA

None

5. APPROVAL OF MINUTES SEPTEMBER 9, 2014

Corrections:
Mr. Robert Wood was not listed in the attendance list and was present.
Group #5 Report: Peter Balleau, correct spelling of name.
Consent Agenda Approved: No Monsoon Presentation
Group #2 Report, Page 7 – Presented by Grace Perez not Nancy Avedisian

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

6. CONSENT AGENDA
None

DISCUSSION ITEMS:

7. DROUGHT, MONSOON AND WATER RESOURCE UPDATE (Andrew Erdman, Water Resources)

Mr. Erdman reported that our region is still suffering through a drought. Our region has gone through three consecutive years of record drought and heat. In fact, recent data suggests that this past summer was the hottest on record (June-August). This fourth consecutive year of drought has eased somewhat but will still likely present significant challenges to all water purveyors, utilities, and irrigators going forward into the next year. Many models are predicting the likelihood of an El Nino weather patterns (70% chance, but down from 75%, of normal to above normal precipitation) over the next several months and into early winter. This could mean good precipitation for the winter months (snow pack). El Nino seems to be weakening relative to early predictions, but normal to above normal snow pack is still likely this coming weather.

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

Mr. Erdman noted that there is a lawsuit that has been filed by the Wild Earth Guardians in relationship to how the water is managed to meet the demands of the silvery minnow. At this time it doesn't involve the City of Santa Fe. In addition the yellow billed cuckoo has been listed as an endangered species. This could become an issue since the cuckoo tends to occupy habitat that is similar to flycatcher and silvery minnow riverine habitat, the cuckoo's habitat is broader and more expansive. Staff will provide updates as available.

Mr. Wiman asked about the water storage related to McClure. Mr. Erdman said that they are still behind; there are 3000 ac. feet of water available from the reservoir. Construction will be delayed but expected to move forward.

It was noted that conditions could significantly worsen for San Juan Chama Project deliveries next year, if the drought persists, due to a lack of carry-over storage in Heron

Reservoir and other reservoirs in the system. Heron Reservoir is currently at a very low level.

Mr. Wiman asked about the implications from the McClure construction project regarding storage of water and asked if this limits the capacity.

Mr. Erdman said that they have a substantial amount of capacity at McClure and are behind schedule on that for a number of reasons. Staff is already working on the management of a substantial loss from that source and while they are still behind they have started the run off. That being said, something like 3,000 acre feet of water, surface water may be water that we do not have early next year.

Mr. Wiman asked if it is anticipated that the construction will just be delayed.

Mr. Erdman said that he understands that construction will move forward.

Ms. Perez asked for clarity on something she heard at a previous meeting; the thinking for sometime was that McClure would not be able to take water during the snow season.

Mr. Erdman said that he would need to get a more information from Mr. Carpenter to answer correctly.

Ms. Trevizo said that this is Conservation and Water Resources; we are not the project managers engineering this. Ms. Trevizo asked the WCC members if they wanted a more detailed presentation, staff can ask some of the Engineers to come to the WCC meeting. It was noted that staff does not want to accidentally mis-speak when talking about someone else's task.

Ms. Perez feels it is important to know where the snow melt will be stored as McClure is a major reservoir.

Chair Ives said he has not heard much on what the current delay in terms of the prior schedule.

Chair Ives asked that for November meeting that staff ask for an in-depth report from the Engineers regarding the McClure project.

Mr. Pushard asked for the projection for coming year water sources by month are included in the November request.

Ms. Trevizo stated that this is at staff level and not ready for public level, it will not be available by next month, staff is working on this and it could possibly be ready by December.

Mr. Wiman asked about the amount that the San Juan Chama allotment has cut back for the first time.

Mr. Erdman said that they are projecting to get 85% of their allotment and there is a possibility that they will get more from the San Juan Chama as the year goes on. Unless something changes with the Bureau of Reclamation they are projected to get 85% of the total allowance for 2014.

Mr. Michael asked what water schedule they follow. Mr. Erdman confirmed that this is based on calendar year.

Chair Ives asked about more clarity on the yellow billed cuckoo and the habitat similar to flycatcher and silvery minnow riverine habitat, could more information be provided at the November meeting.

8. CLIMATE ACTION TASK FORCE

Chair Ives said that they have been assigning working groups within that task force. The members of the task force themselves have selected committee assignments and they are now taking names from the community who are material experts in these areas. There is one that combines, water, land conservation and food as a working group of the Task Force. That is an area we will seek direct input on and certainly making sure that we identify what is doing what in water conservation. There will be good interaction within the groups.

The next meeting is scheduled for Thursday, October 16, 2014 from 4-6 pm at the Convention Center.

9. SAN FRANCISCO BLUEPRINT FOR REUSE (Laurie Trevizo)

Ms. Trevizo provided the background; San Francisco Public Utilities organized a technical meeting to host different agencies to discuss challenges and strategies for reducing demand, water reuse, new technologies and consideration. Ms. Trevizo attended this meeting held on May 29-30, 2014.

The Blueprint "How-To" was finalized and is included in the WCC packet today. The purpose of the blueprint is to give other communities who have never been faced with water scarcity a path to water resiliency. The blueprint is a step-by-step guide to developing local programs and is geared toward utilities and municipalities that haven't done it before or haven't even considered looking at how to reuse their different water supply sources. There are 10 outcomes listed. (Exhibit A-1) It was noted that these are lengthy steps that would take time to accomplish. Ms. Trevizo is very supportive of the final document as it is very clear. (Exhibit A-2)

The Chair asked if there is anything that they propose that we are not doing.

Ms. Trevizo said that they recommend that you work with the Public Health Department. In San Francisco the Health Department is part of the city government which is different in Santa Fe. We have done a lot of what is listed in the 10 Outcomes list, if we wanted to start with Item #5 or 6, we would need to find a partner agency, it could be the state or it could be the Land Use Department from the city if they wanted to be involved. Keep in mind that ½ of the stakeholders were Department of Health officials so they wanted to be involved in some way and they wanted to create standards when in our opinion the EPA already has tertiary standards out there for treated effluent. Why couldn't we just use those? Ms. Trevizo stated that she is of the belief that if EPA already has those standards then we should utilize those. Ms. Trevizo noted that there is nothing in the report about scale, nothing that says your city (xyz) population of 80,000. Their programs that say scale down or tip it up. We want to be conscious here in Santa Fe if we did decide to do something like this how would if affect the permitting process with the Land Use

Department which is understaffed, we don't want to burden them with additional things or do we need to hire a new position of someone who has this background already. It is broad enough to where you could adopt things and identify what doesn't fit your municipality.

The Chair asked if Ms. Trevizo had recommendations of what the Water Conservation Committee should do about this blueprint.

Ms. Trevizo is in communication with the San Francisco office and more information could follow on implementation and engineering reports and utilities and the different levels and what their opinions are and timeframe. Once the WCC members have reviewed the blueprint we will welcome questions and feedback. Implementations, she feels the guidelines are good; Cross Connections are important, Monitoring Requirements depend on the level of scale, these are a few of what Ms. Trevizo pointed out as very good steps forward.

Mr. Michael asked if there were any Water Department representatives in San Francisco.

Ms. Trevizo said that everyone who participated is listed on the back cover of Exhibit A-2 the blueprint lists those in attendance at the back of the report. Ms. Trevizo responded to a question on department structure in San Francisco; they operate the Utility Department and have a Department of Public Health. They also operate their own water and sewer department.

Mr. Pushard referred to Page 8, Step 4, Establish Water Quality Standards, plumbing codes for IPC and UPC. Ms. Trevizo clarified that New Mexico is indicated, the map is in color and the map in packet is black/white.

Ms. Trevizo said that in her mind this is a simple fix that could be done to make things easier on the installers, the plumbers and have something universal. On a state fiscal level, Ms. Trevizo does not see any implications other than a positive one to change over to one particular code tie. Ms. Trevizo stated that she isn't aware of who does plumbing inspections.

Chair Ives recommended that the Blueprint be shared with Senator Peter Wirth. The Blueprint for Onsite Water Systems can be found online at: www.sfwater.org/np/iuws

10. Group #5 – Domestic Wells Within the City Limits

Mr. Wiman explained the origin of this topic which started by asking how many wells there were about 5 years ago and the answer then was about 2,000 and 3,500 and numbers fluctuated. It was noted that the number in the annual report was left out for no apparent reason. The workgroup within WCC was created to research this item. A great deal of progress was made and there are many recommendations in the Action Plan. It was noted that many of the private well owners do not even know that the ordinances pertain to them. The committee made progress and has a range of private wells and there were a series of recommendations. Mr. Wiman said that he would like to go through the action plan and discuss the recommendations. Mr. Wiman understands that not everyone on the WCC will agree and asked for open dialogue.

(Exhibit B) – Report was included in the packet for all members. Page 3 of 13 – Mr. Erdman, City of Santa Fe Water Resources Coordinator states that there is no comprehensive list of all domestic wells in Santa Fe. He goes on to say that the best source for data on the number of wells is the OSE waters database. Cautioning that the database may not be complete because there are wells that were in place before 1956 when the Office of the State Engineer (OSE) began requiring permits for private wells for household or domestic use in the Santa Fe area, Mr. Erdman stated that there are about 753 domestic wells located with the City of Santa Fe's current boundaries.

Action Plan Recommendations to the Water Conservation Committee:

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

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

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

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

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

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

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

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

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

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

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

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

WCC members are in concurrence.

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

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

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

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

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

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

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

The Chair concurred, yes.

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

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

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

***Agenda Item for November meeting**: Chair Ives stated that the WCC members should come prepared to discuss the wording at the next meeting for penalties for non-compliance. Whatever the law provides approved by the governing body should be observed.*
Mr. Wiman said that it sounded reasonable but they will only be addressing a small amount of wells.

#5 - Require private well owners to register their wells with the City, install meters and submit monthly usage readings to the city.

Mr. Wiman said that this item in particular is controversial and might require adjudication.

Ms. McDonald made the comment that the assumption should not be made that all well owners have money.

The Chair asked how many connections we have throughout the city.

Ms. Trevizo said approximately 38,000.

Mr. Roth shared with the WCC members that most recently he knew that a meter was approximately $80.

The Chair said at the forefront should be that there could be legal implications on this item. We could express our general consensus that anyone with a meter's usage should be calculated.

Mr. Pushard said that #5 and #6 he was in disagreement. The issue on litigation for the city to do, he is opposed to. They would need to re-drill their well. Mr. Pushard said he is more in favor of educating and incentivizing them and assisting them; he feels that this should be a last option.

Ms. Schmidt agrees to put the onus on the owner to install their meters. Many of the individuals she knows who have meters are presuming that the city will go out and read the meters which never happen. It would be good to have a person who reads meters from the city.

The Chair clarified that until there is a general consensus on #5. He stated, "We recognize that this is an issue of potential significance in the city and its water supply and we recognize that this needs more work."

Chair Ives turned over the Chairmanship to Ms. McDonald: 5:30 pm

Ms. Trevizo asked the Group to prioritize the Action Plan as quasi staff direction is also being given. Ms. Trevizo would like to have clear consensus on a few things but no clear direction. Ms. Trevizo noted that the Stenographer has 10 days to submit her minutes to the City Clerk's office.

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

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

WCC members are in concurrence.

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

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

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

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

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

WCC member consensus is to move forward on #7

#8 - Investigate the potential benefits of identifying private wells posted with signage as secure, safe and sanitary sources of community drinking water in an emergency.

Mr. Michael said that on his list, this one is of less priority.

Ms. Perez asked if the city supports looking into this moving forward.

#8 there is not a general consensus by the WCC members.

#9 – Encourage the City, in the spirit of inclusiveness and concern for our common aquifer, to find out how many private wells are actually producing water in order to estimate more accurately how much water is being withdrawn from the regional aquifer.

There is no objection to include #9 in the report.

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

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

#11, 12 and 13 can be viewed on Page 12 of 13, Exhibit B.
The next three go together: #11, #12 and #13.

No consensus, information only.

Group #5 is disbanded as final report has been presented.

Congratulations to Group #5, incredible work.

INFORMATIONAL ITEMS:

11. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE INITATIVES: (Councilor Ives, 90 minutes)

A. GROUP #5- DOMESTIC WELLS WITHIN THE CITY LIMITS

- Reported under Discussion Items.
- Group #5 is disbanded with this final report.

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

Ms. Trevizo reported that the plan is progressing. There are 4 chapters that have been compiled with a remaining 3 chapters being worked on by staff. Goal is to get this out to WCC members as soon as possible. The PUC will have this update on their agenda for November 5th meeting and it would be considered a conditional approval. Ms. Trevizo clarified that once the document is complete it will be sent to the WCC members as discussed to get a finalized document for the other committees.

Ms. Perez reported that Group #1 is disbanded. Lisa Randall is on the committee and proxy message and she agrees with this action.

C. Group #2 - Water Conservation Education/Outreach
Nothing to Report.

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

A summary is included in the packet on public outreach. (Exhibit C-1) Ms. Avedisian reported that there were over 40 people at the presentation. Mr. Pushard talked about the programs that are out there and how they overlap. The goal was to get input from the community on the WERS tool.

- *Staff Direction: Mr. Pushard asked for 30 minutes at the next meeting to discuss the WERS Tool.*

Mr. Pushard stated that the tool now is mathematically, there will be an innovative practice that is not included in the word "score". This is for indoor and outdoor efficiency and allows us to include what is currently in Santa Fe code as part of the score of the tool. Distribution of the Innovative Practices was made to the WCC members for feedback. (Exhibit C-2) The working group would like to get feedback as to what is missing.

Clarification: Indoor and water brought in through the purple pipe not included in the WERS score.

Ms. McDonald asked permission to distribute Exhibit C-2 to the Landscape community so they have time to digest and return comments.

Ms. McDonald asked if follow up was made with anyone who attended that meeting.

Mr. Pushard said no, he did not contact anyone directly. It was reported that input would be in the next meeting packet. Mr. Pushard said he would be happy to distribute to attendees from the last public meeting and it would be sent electronically to those attendees and to the WCC members.

Ms. Schmidt said, basically the WERS are included indoor conservation and piped from grey water harvesting or grey water systems running back in to the_____, so the recommendations would not be included in the total WERS score.

Mr. Pushard said that first part of what Ms. Schmidt has said is yes, the second part where you say recommendations the answer is no. That is not what we are doing; we are giving them a list of things that they could consider doing. In this situation the work recommendation would be very strong.

Ms. McDonald asked why is the word recommendation is being used if we aren't going to put it in, this is very confusing.

Ms. Avedisian said that she does not agree, it is not confusing, it provides them with a good list in front of them where they can choose to do some things outside and they can choose to do.

Ms. Perez further clarified that this document is an educational piece.

Ms. McDonald will present it to the landscape committee and ask them to provide Mr. Pushard with any feedback or ideas that could be innovative practices. (Mr. Pushard will provide his e-mail address off-line to Ms. McDonald).

Legislative Committee Report:
Mr. Pushard informed the WCC members that there will be some water conservation budget legislation going forward as part of the Sustainable Building Tax Code which Senator Wirth is putting forth. There is a meeting on Wednesday, October 7, 2014 at 3:00 pm at the State Capitol, Room 305.

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

Report in packet. (Exhibit D)

MATTERS FROM STAFF:

WATER CONSERVATION COMMITTEE PROPOSED 2015 SCHEDULE (Laurie Trevizo)

Staff provided the WCC members with two options for meeting schedule 2015. The months in question are October and November, 2015. WCC members will review the options and vote at the November, 2014 meeting in order to provide the calendar to the City Clerk's office.

- *Action Item at meeting in November, 2014.*

MATTERS FROM COMMITTEE:

2013 annual water report, when will it be released?

Ms. Trevizo reported that it is being worked on and Alan Hook will bring it to the WCC when it is complete.

WCC members would like to receive reports on the Basin Study Update and Reclaimed Effluent Water Plan. Ms. Trevizo said that it would be difficult from a timeline perspective to have both reports at the November meeting. It was agreed that there would be 1 informational report in November and 1 in December based on the availability of the Engineers.

MATTERS FROM PUBLIC:
None

NEXT MEETING – TUESDAY, NOVEMBER 4, 2014:

Reminder:
CAPTIONS: OCTOBER 20, 2014 @ 3 pm PACKET MATERIAL: OCTOBER 22, 2014 @ 3 pm

ADJOURN.

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

Signature Sheet:

Councilor Peter Ives, Chair

Melissa McDonald, Co-Chair

Eran Lucero, Stenographer

City of Santa Fe, New Mexico

memo

Date: September 29, 2014

To: Water Conservation Committee

From: Laurie Trevizo, Water Conservation Manager

Via: Rick Carpenter, Water Resources and Conservation Manager
Nicholas Schiavo, Public Utilities Department and Water Division Director

RE: "Innovation in Urban Water Systems" Blueprint for Onsite Water Systems

Background: San Francisco Public Utilities organized a technical meeting to host different agencies to discuss challenges and strategies for reducing demand, water reuse, new technologies and conservation. The meeting was held May 29-30, 2014.

Purpose: The technical meeting was to share knowledge and lessons learned on managing water supplies (both potable and non-potable) and controlling stormwater as an opportunity of scaling on-site water reuse systems in other cities and states. The strategies identified in the meeting will be translated into a Blueprint "How-To" Guide to assist public agencies in advancing on-site water reuse across the country.

Results: The Blueprint "How-to" was finalized and sent to workshop participants. The purpose of the blueprint is to give other communities who have never been faced with water scarcity a path to water resiliency.
Onsite water treatment systems offer a broad range of benefits:

- Augmenting existing water supply by treating alternate water sources for beneficial use
- Treating water only as needed for its end use application
- Reducing potable water consumption for toilet flushing and irrigation
- Minimizing stormwater flows to combined and separate sewer systems or storm drains
- Increasing resiliency and adaptability of our water and wastewater infrastructure

The Blueprint focuses on **10 steps** to developing a local program:

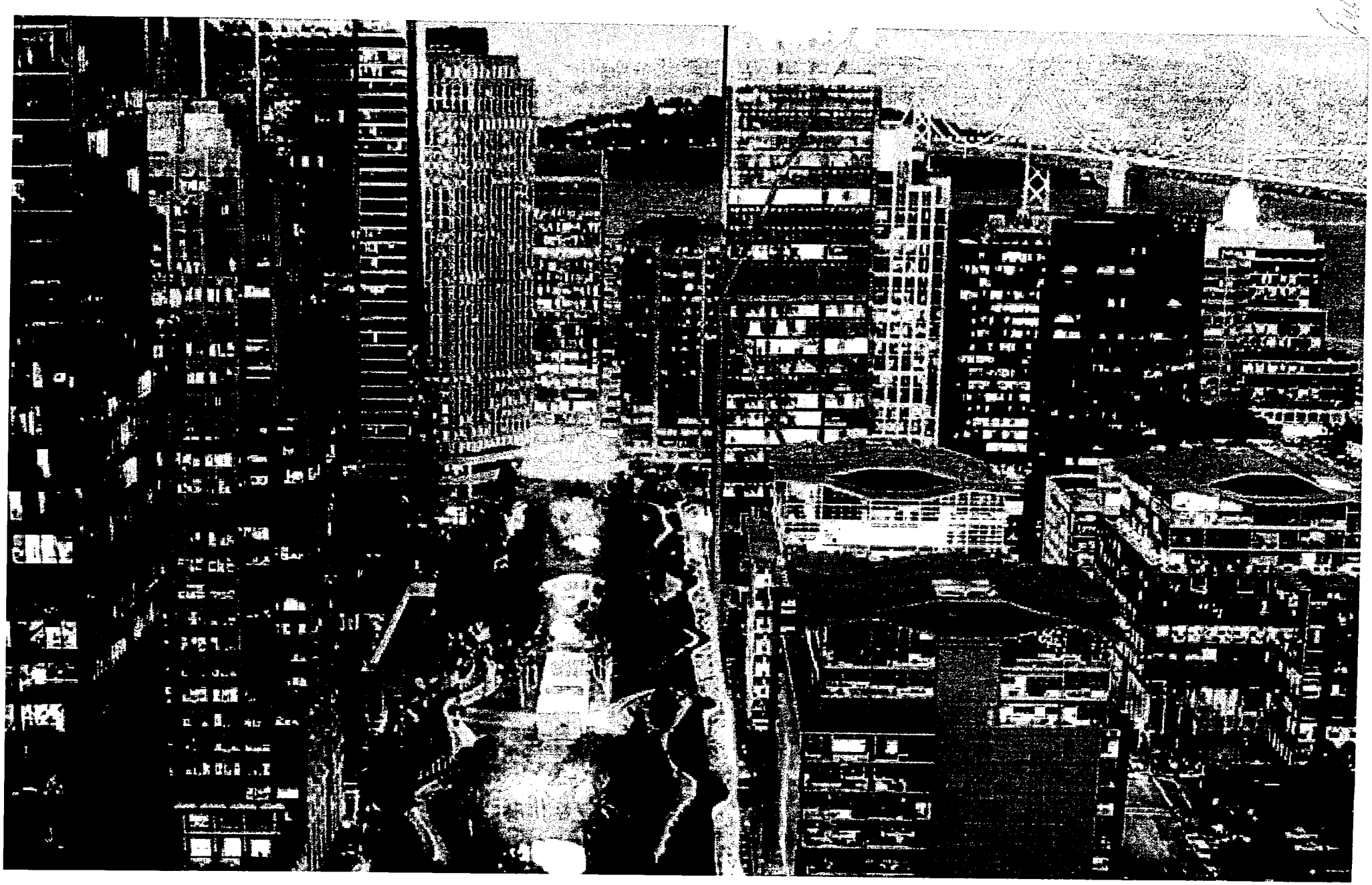
1. Convene a Working Group: establish a group to guide the development of the program
2. Select Types of Alternate Water Sources: narrow the specific types of water sources
3. Identify End Uses: classify specific non-potable end uses
4. Establish Water Quality Standards: for each alternative water source and end use
5. Identify and Supplement Local Building Practices: integrate building permit process
6. Establish Monitoring and Reporting Requirements: determine water quality for ongoing operations
7. Prepare an Operating Permit Process: for initial and ongoing operations for onsite water systems
8. Implement Guidelines and the Program: Publicize the program to provide clear
9. Evaluate the Program: promote best practices for onsite water systems
10. Grow the Program: explore opportunities and expand and encourage onsite water systems

The Blueprint for Onsite Water Systems can be found online at: www.sfwater.org/np/iuws

Exhibit A-1

BLUEPRINT for Onsite Water Systems

A Step-by-Step Guide for Developing a Local Program to Manage Onsite Water Systems



On May 29-30, 2014, the San Francisco Public Utilities Commission partnered with representatives from local, state, and federal public agencies across North America, along with research institutions to discuss onsite water systems at the ***Innovation in Urban Water Systems*** meeting. The purpose of the convening was to discuss the barriers, opportunities, and research needs for onsite water systems for non-potable applications.

The Blueprint for Onsite Water Systems is a result of the two-day meeting. We would like to thank all of the participants for their time and input.

We also thank the Water Environment Research Foundation and Water Research Foundation for funding this project and for recognizing the need for collaborative action on decentralized, onsite water systems.

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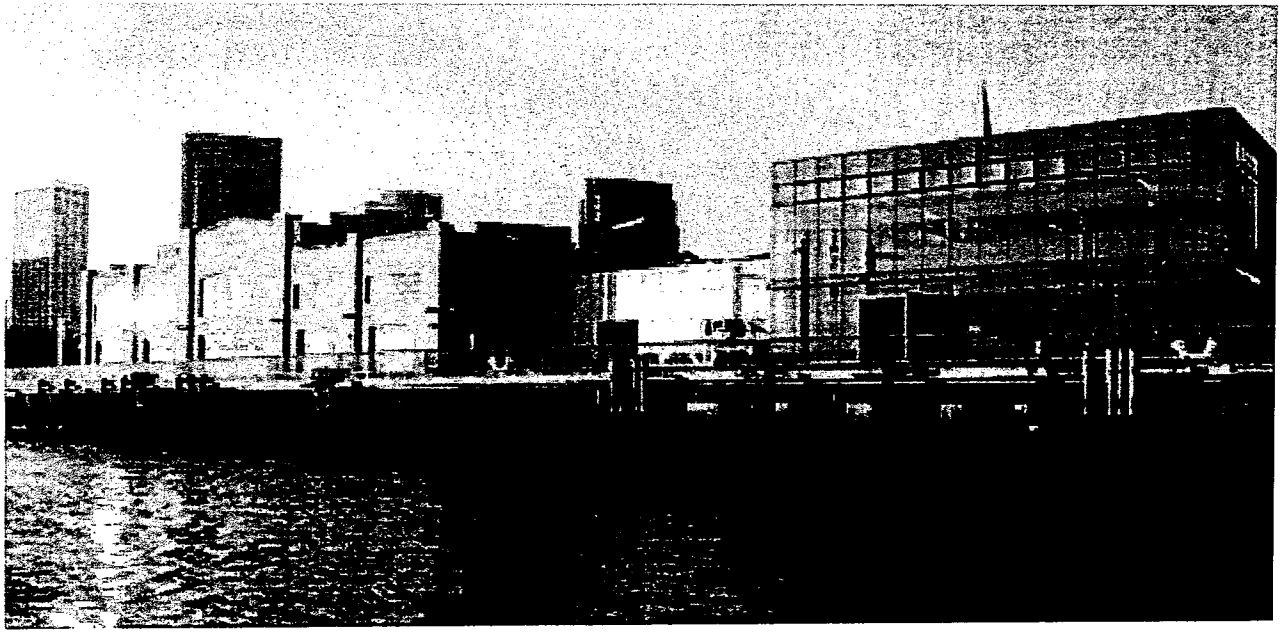

Exploratorium, San Francisco, by Amy Snyder © Exploratorium

INNOVATION IN URBAN WATER SYSTEMS

www.sfwater.org/np/iuws

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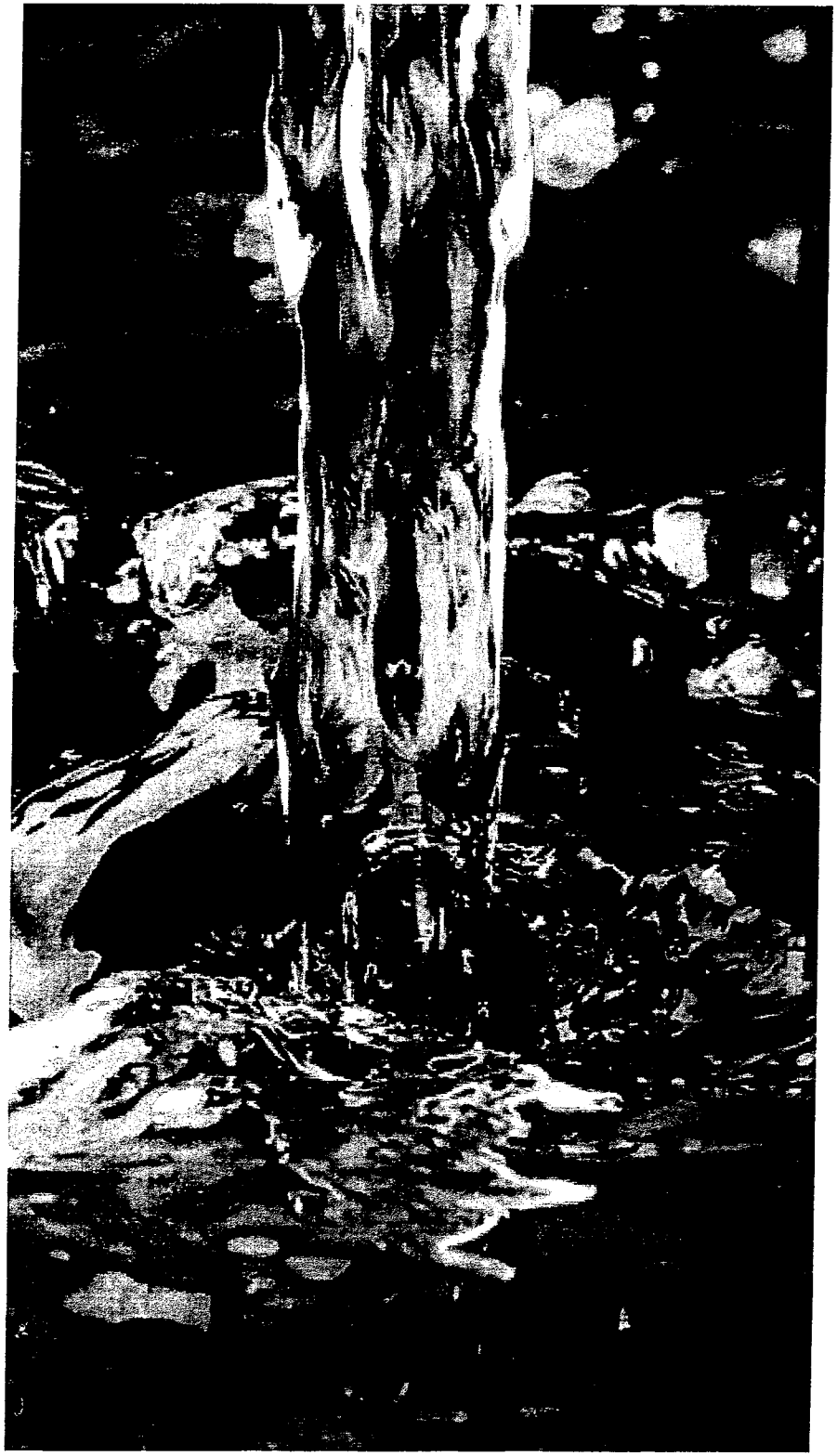
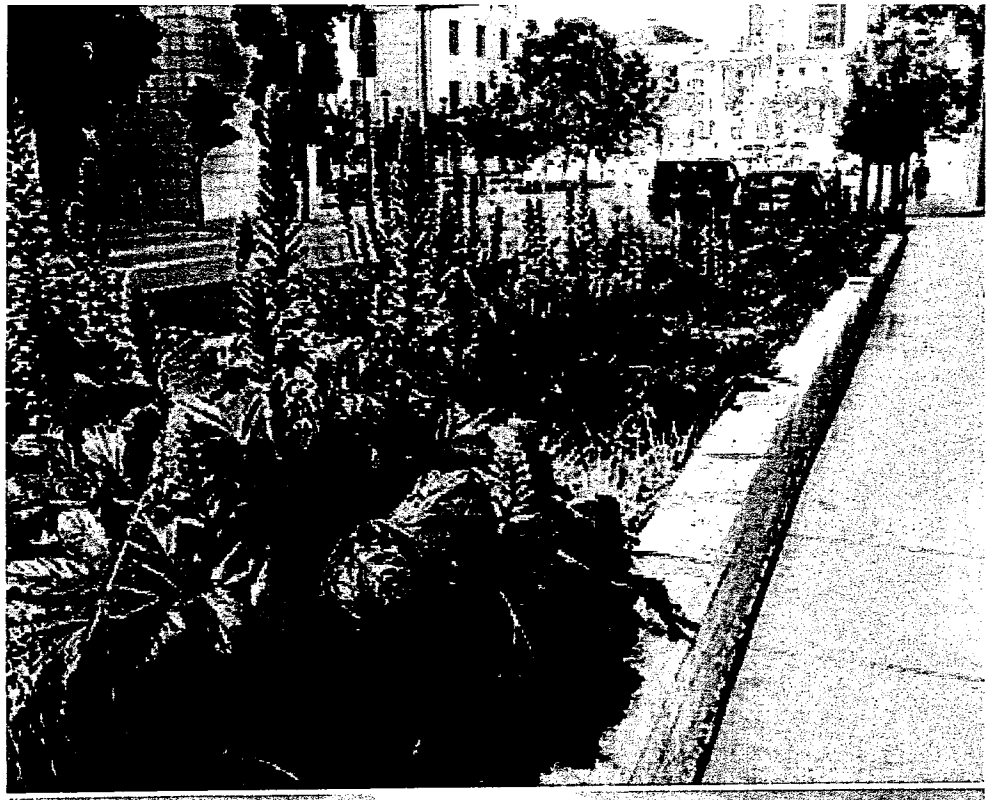


Create a New Water Paradigm

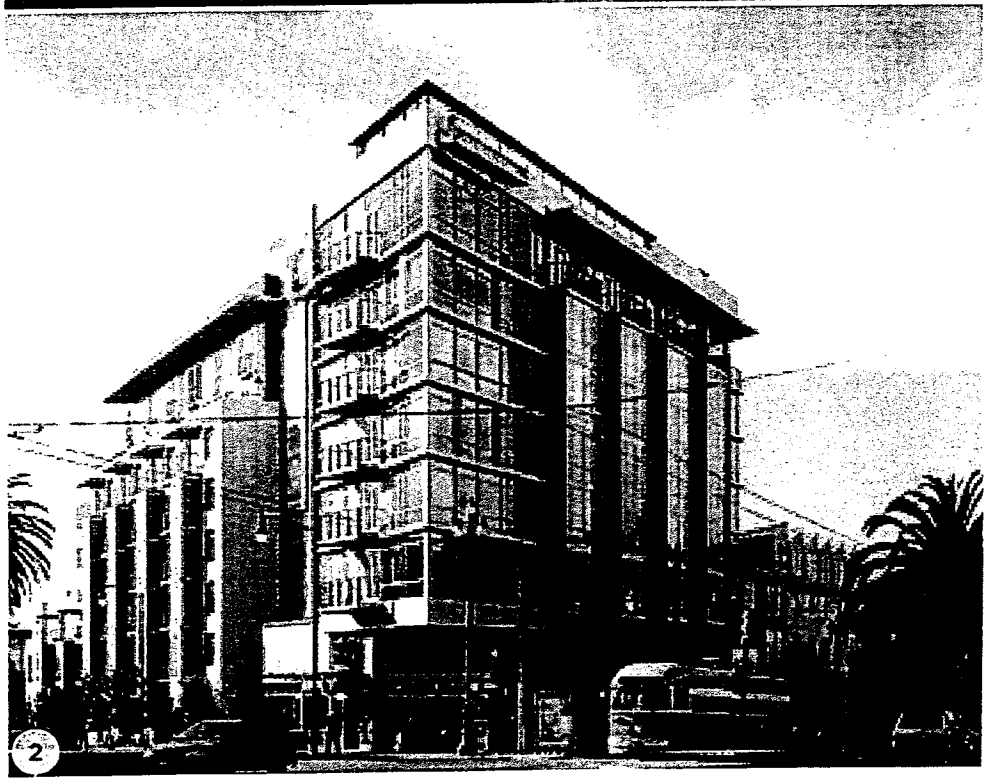
Water is vital to maintaining healthy communities, vibrant economies, and a thriving natural environment, but managing water is not an easy task. We face many challenges, including dwindling freshwater supplies, long-lasting droughts, and rapid urbanization. As the strain on our centralized water and wastewater facilities increase, many cities are looking for new ways to develop and manage local water resources.

We have the opportunity to create a new water management paradigm by incorporating innovative strategies to conserve, reuse, and diversify our water supply. One of those strategies is integrating smaller, decentralized, onsite water systems into our broader centralized systems. Today, buildings in New York, San Francisco, Santa Monica, Seattle, Tokyo, Sydney, and many other cities throughout the world are collecting and treating water onsite to serve their own non-potable needs in place of potable water.

The Blueprint for Onsite Water Systems was created to assist communities with developing a local program to manage and oversee onsite water systems that protect public health. A local program can build on existing plumbing, public health, and building standards and codes while addressing water, stormwater, and wastewater management programs in a coordinated and streamlined manner.



San Francisco Public Utilities Commission Headquarters, San Francisco



2001 Market Street, San Francisco, by BAR Architects

Build Water Resilience

Onsite water systems can be tailored to the needs of the local community and implemented at a variety of scales, including building, block, district, and region with the appropriate safeguards in place. These systems can be a valuable component of a broad strategy to create a new water paradigm and build water-resilient communities across the country.

Onsite water systems offer a broad range of benefits, including:

- Augmenting existing water supply portfolios by treating alternate water sources for beneficial use
- Treating water only as needed for its end use application
- Reducing potable water consumption for toilet flushing and irrigation
- Minimizing stormwater flows to combined and separate sewer systems and/or storm drains
- Increasing resiliency and adaptability of our water and wastewater infrastructure

Onsite water systems in green buildings, suburban developments, and urbanized areas are often integrated with existing centralized water and wastewater infrastructure without negatively impacting centralized systems. Onsite water systems build water resilience as they help communities stretch drinking water supplies by decreasing demand on potable water sources and can help extend the life of centralized wastewater infrastructure by redirecting stormwater flows and relieving stress on the system.

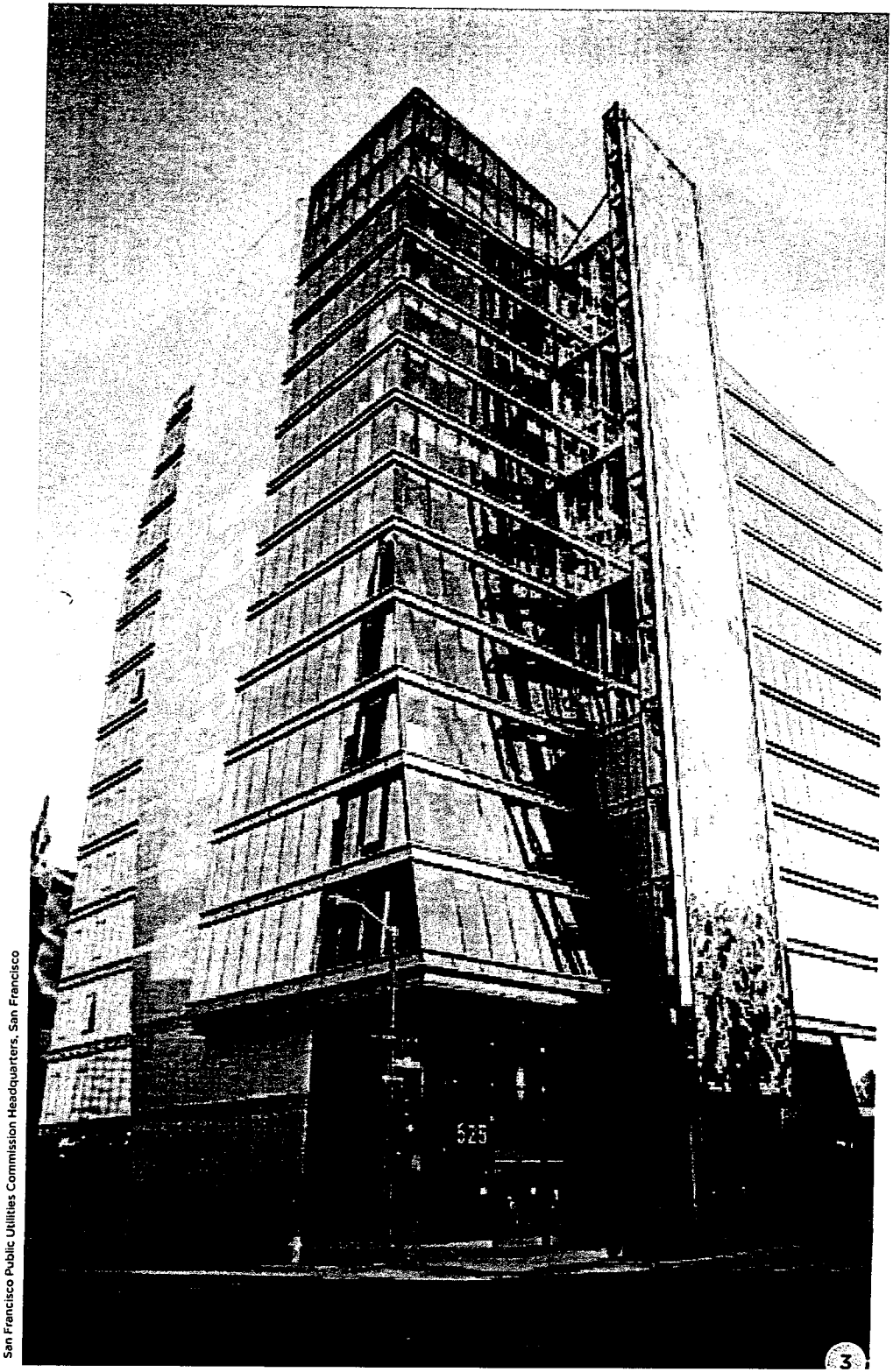
Stay Ahead of the Curve

Developers and designers are incorporating innovative onsite water systems into their projects, such as treating graywater for toilet/urinal flushing and using rainwater and stormwater for irrigation. Throughout the world, onsite water systems have been successfully operating for decades.

Green building programs, like the LEED® rating system and Living Building Challenge™, often encourage onsite water systems as a sustainable water management tool. The proliferation of net zero and water neutral buildings emphasizes the need for a local oversight program to ensure consistency and safety, and improve the efficiency of implementing these systems.

Green buildings strategies and practices are the future of building construction. Developing a local program to promote the safe installation and operation of onsite water systems allows municipalities to adapt to local issues while proactively supporting the green building movement. Institutionalizing a process will help your community build a cohesive and collaborative initiative.

By developing programs to manage the implementation of these systems, local officials can stay ahead of the curve and create a process that helps streamline and scale onsite water projects. The remainder of this Blueprint is designed to serve as a step-by-step guide to help communities develop and launch local programs to manage onsite water systems.



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10 Steps for Developing a Local Program

Developing a local program to manage onsite water systems offers a proactive way to increase water resiliency and promote green building practices while protecting public health. The development of a program should follow a sequence of steps and associated actions, which will inform critical decisions regarding the scope, structure, and implementation of the program.

1 Convene a Working Group

Establish a small working group to guide the development of the local program.

2 Select the Types of Alternate Water Sources

Narrow the specific types of alternate water sources covered in the program.

3 Identify End Uses

Classify specific non-potable end uses for your program.

4 Establish Water Quality Standards

Establish water quality standards for each alternate water source and/or end use.

5 Identify and Supplement Local Building Practices

Integrate your program into local construction requirements and building permit processes.

6 Establish Monitoring and Reporting Requirements

Establish water quality monitoring and reporting requirements for ongoing operations.

7 Prepare an Operating Permit Process

Establish the permit process for initial and ongoing operations for onsite water systems.

8 Implement Guidelines and the Program

Publicize the program to provide clear direction for project sponsors and developers.

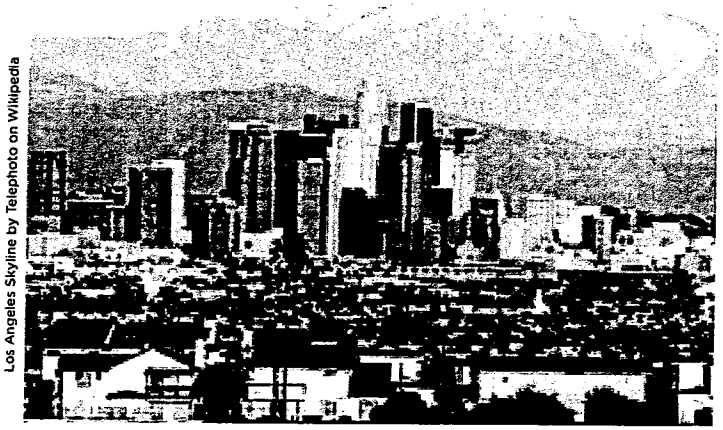
9 Evaluate the Program

Promote best practices for onsite water systems.

10 Grow the Program

Explore opportunities to expand and encourage onsite water systems.

The State of Hawaii has established a collaborative working group to develop water quality standards for treated alternate water sources for non-potable applications. The working group includes members from the Governor's Office, public health officials, landowners, and union members.



Los Angeles Skyline by Telephoto on Wikipedia

The Los Angeles County Department of Public Health collaborated in a two-year process with the City of Los Angeles, the City of Santa Monica, and a number of environmental organizations led by Heal the Bay and TreePeople in the development of their "Rainwater Harvesting Matrix". Produced in 2011, the document establishes guidelines for harvesting rainwater, stormwater, and dry weather urban runoff for outdoor non-potable use within Los Angeles County. The document includes information on system requirements, water quality standards, and treatment processes.

STEP 1 Convene a Working Group

There is no single approach to developing a local program for onsite water systems; however, protecting public health is the essential foundation of any initiative. The chosen format of the program depends upon local circumstances and traditional levels of regulatory authority. Stakeholders that are likely to participate in program oversight need to be involved in its development. Engage a small group of public health, planning, and building officials along with water and wastewater utilities that have jurisdictional authority in your area.

The core group will guide how the program develops and unfolds. The group will also:

- Identify roles and responsibilities of individual agencies
- Evaluate existing authorities and potential policy or regulatory changes
- Agree on water quality criteria, monitoring, and permitting requirements
- Ensure the program reflects needs of its core members
- Establish fees
- Provide an identity for the program
- Determine appropriate incentives

Private developers, non-profit organizations, or other non-governmental stakeholders that are heavily engaged in the local green building movement or water reuse can also be invited to participate or provide feedback.

STEP 1 Outcome

Establish a small working group to guide the development of the local program.

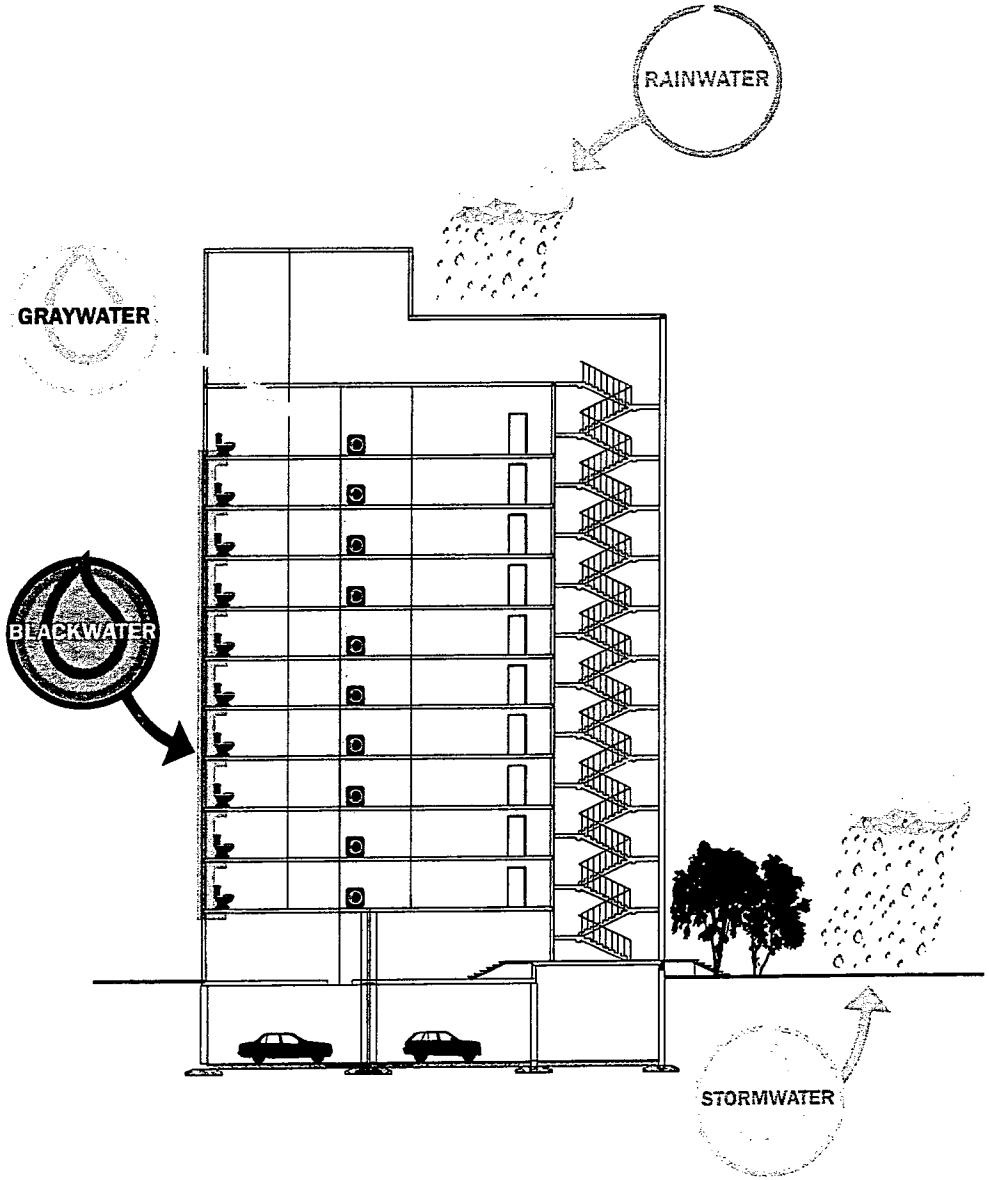
STEP 2 Select the Types of Alternate Water Sources

To establish manageable parameters for your program, identify the specific types of alternate water sources that will be approved for collection and treatment. The amount of resources and staff needed for a program can increase with the number of alternate water sources that are incorporated. Therefore, the selection of a single water source, such as rainwater, may be ideal for initiating a program with the potential to incorporate additional water sources as the program progresses.

Buildings, including commercial and multi-family residential buildings, generate a number of different types of alternate water sources. The most common types of alternate water sources produced by buildings include:

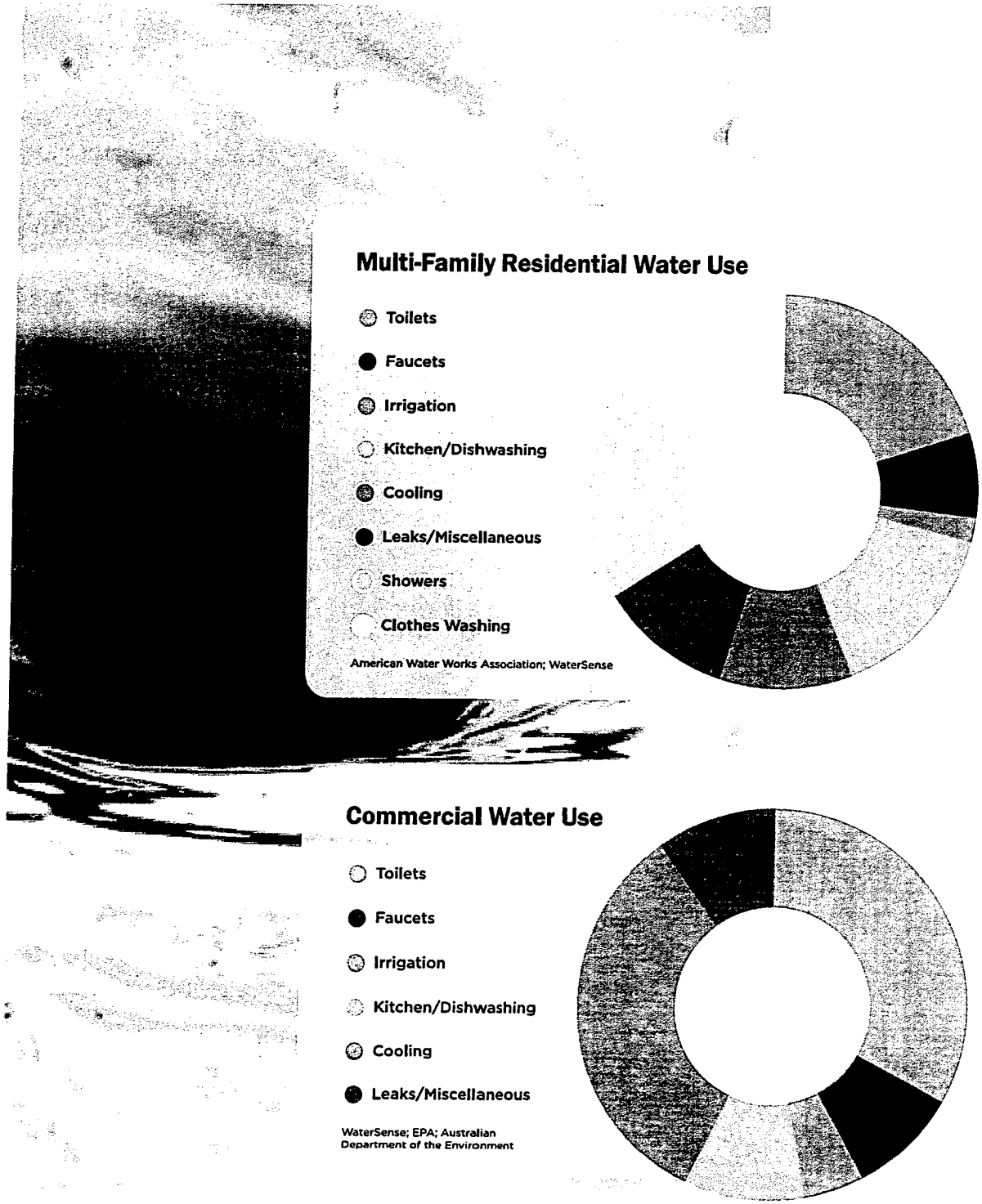
- **Rainwater** – precipitation collected from roofs;
- **Stormwater** – precipitation collected from ground plane;
- **Graywater** – wastewater from bathtubs, showers, bathroom sinks, and clothes washing machines; and
- **Blackwater** – wastewater from toilets, dishwashers, kitchen sinks, and utility sinks.

Terminology and definitions may vary across regions or sectors. When identifying the specific alternate water sources for your program, use the same terminology and definitions that are contained in the local building, plumbing, and health codes and guidelines that will regulate the onsite water systems. Using consistent definitions will help streamline implementation of the program and minimize confusion by developers.



STEP 2 Outcome

Narrow the specific types of alternate water sources covered in the program.



STEP 3 Identify End Uses

Alternate water sources can be used for a variety of non-potable uses within and outside a building. It is important to identify the specific non-potable end uses (e.g., irrigation) that will be allowed in the program and describe how and where the end use is allowed (e.g., spray or sub-surface irrigation).

The most common indoor use is toilet/urinal flushing, which can represent approximately 25% of the total water demand in a residential building and up to 75% of the total water demand in a commercial building (assuming no cooling demand). Other potential non-potable water demands include irrigation, clothes washers, cooling/heating applications, and process water. These additional applications can increase the non-potable water demand up to 50% for residential buildings and up to 95% for commercial buildings.

Incorporating multiple end uses may result in a more complex program structure but potentially more widespread application of non-potable water. The specific type of alternate water sources and end uses selected serve as the foundation of your program. As with alternate water sources, using consistent definitions will help streamline implementation of the program and minimize confusion by developers.

STEP 3 Outcome

Classify specific non-potable end uses for your program.

STEP 4 Establish Water Quality Standards

Once alternate water sources and allowed end uses are identified, the next step is to set water quality standards. Currently, there are no overarching national standards for water quality or required treatment for alternate water sources. Your state and county public health agencies may have applicable requirements. In addition, a number of plumbing codes, guidance documents, and policies can also assist you with developing your own water quality standards.

- UPC administered statewide
- UPC administered at local level
- IPC administered statewide
- IPC administered at local level
- Either UPC or IPC administered at local level
- Other state or local model codes administered

Plumbing Codes

Existing plumbing codes provide a context for a local program and identify the current requirements that can be built upon or expanded. The plumbing codes for most communities are modeled after the International Plumbing Code (IPC) or the Uniform Plumbing Code (UPC).

- **IPC:** The IPC addresses graywater systems for flushing of toilets and urinals and for sub-surface landscape irrigation. The IPC also establishes the minimum acceptable level of safety to protect life and property from the potential dangers associated with supplying potable water and the conveyance of wastewater. (See Chapter 13, IPC 2012.)

- **UPC:** The UPC addresses alternate water sources, including recycled water, rainwater, graywater, and onsite treated non-potable water for a number of identified non-potable applications. The UPC indicates that water quality standards should meet the applicable water quality requirements determined by the Public Health Authority Having Jurisdiction. (See Chapters 16 and 17, UPC 2012.)

The IPC and UPC have been amended by some states and local municipalities to establish their own laws, guidelines, and codes to further refine allowable uses, minimum water quality criteria, and treatment requirements. Some codes may not allow onsite water systems and will need to be amended before a local program can be implemented.

Water Reuse Standards

Absent the guidance of established overarching guidelines, setting water quality standards can be one of the most time consuming and challenging components of a program.

Additional resources that may be helpful to review when setting water quality standards include:

- **EPA Water Reuse Guidelines:** The United States Environmental Protection Agency (EPA) developed water reuse guidelines (last updated in 2012) in support of local regulations and guidelines developed by states, tribes, and other authorities. While the water reuse guidelines provide direction at a national level, currently there are no federal reuse regulations or standards in the U.S.

- **State Municipal Recycled Water Regulations:** Many states already have established water quality limits and monitoring requirements for producing recycled water from municipal wastewater for non-potable applications (e.g., Title 22 of the California Code of Regulations).

- **NSF/ANSI Standard 350 and 350-1:** These standards establish material, design, construction, water quality, and performance requirements for onsite residential and commercial water reuse systems treating graywater and wastewater for non-potable uses.

- **Rainwater Harvesting Potential and Guidelines for Texas:** The Texas Rainwater Harvesting Evaluation Committee paper presents the potential benefits and advantages that may be derived from rainwater harvesting and describes minimum water quality guidelines and treatment methods.

- **Guidelines for Harvesting Rainwater, Stormwater, & Urban Runoff for Outdoor Non-potable Uses:** The Los Angeles County Department of Public Health developed water quality standards for exterior use of harvested rain and dry weather runoff (known as the Matrix).

- **The Wisconsin Plumbing Code, SPS 382.70, Subchapter VII:** This subchapter establishes standards for plumbing systems that supply water including stormwater to outlets based on intended end uses and that is of a quality that will protect public health and the waters of the state.

STEP 4 Outcome

Establish water quality standards for each alternate water source and/or end use.

STEP 5 Identify and Supplement Local Building Practices

It is important to understand the steps of the building plan review, permitting, and construction inspection process in your community in order to integrate the process for review and installation of onsite water systems. For example, onsite water systems may be incorporated into current plumbing permits or may require additional types of applicable plan review and construction inspection procedures.

Some building and plumbing codes may require local amendments to allow for the installation of an onsite water system. Any additional construction requirements included in your program should be consistent with or incorporated into plumbing and building requirements.

Consider the following requirements for inclusion in your local program:

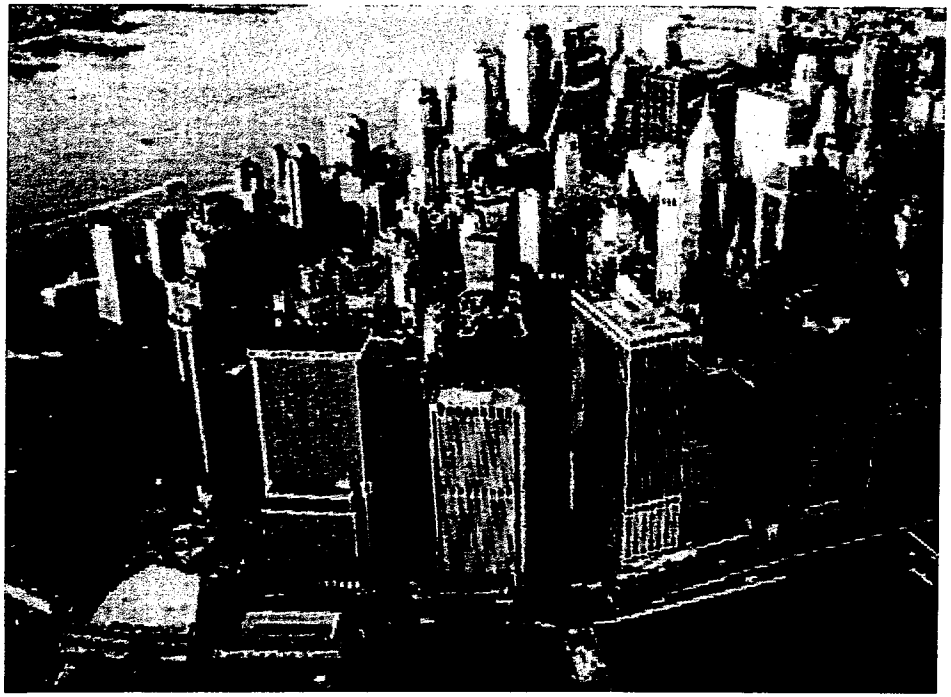
- **System Bypass:** ability to connect to municipal water and sewer services during onsite water system maintenance or outages.
- **Backflow Prevention Devices:** include approved backflow prevention devices on make-up water connections to the onsite water system.
- **Cross Connection Control:** perform cross connection tests to physically verify the potable and non-potable water systems are separate.
- **Storage Tanks:** ventilate storage tanks to prevent odors from entering into the building.
- **Non-potable System Identification:** identify system components by installing signage, valve tags, and purple pipe or other appropriate pipe identification scheme.

STEP 5 Outcome

Integrate your program into local construction requirements and building permit processes.

OHSU 1, Portland, Oregon by M.O. Stevens on Wikipedia

The New York City Building Department's *Building Bulletin 2010-027* established water quality monitoring, reporting, and permitting requirements. The requirements apply to all alternate water sources and end uses except for harvested rainwater used solely for subsurface irrigation, drip irrigation, or washing of sidewalks, streets, buildings, or vehicles. All alternate water sources require monthly monitoring and annual reporting.



Lower Manhattan by Nosha on Flickr

The San Francisco Department of Public Health Director's *Rules and Regulations Regarding the Operation of Alternate Water Source Systems* established monitoring requirements for various alternate water sources. Rainwater, stormwater, and graywater require monthly monitoring and annual reporting. Blackwater requires daily monitoring and monthly reporting.

STEP 6 Establish Monitoring and Reporting Requirements

Most communities will find that standards and guidelines do not exist for the ongoing operation and maintenance of onsite water systems. Building codes, including the plumbing code, are generally enforced at the time of construction and are not intended to mandate or assure ongoing operation and maintenance. Establishing a monitoring regime and reporting requirements are critical to protecting public health and public water systems. The oversight authority may need to be identified or authorized to act.

Monitoring and reporting frequency can vary across alternate water sources and end uses due to different levels of water contaminants and public exposure. More frequent monitoring should be conducted during initial operational phases.

STEP 6 Outcome

Establish water quality monitoring and reporting for ongoing operations.

STEP 7 Prepare an Operating Permit Process

An effective local program should establish procedures for ensuring ongoing compliance with the monitoring and reporting requirements established for the program. Compliance is typically addressed through an operating permit for a treatment system that is administered by a local agency with authority to shut down the treatment system if it fails to comply with permitting requirements.

The operating permit process can include reviewing and approving an engineering or design report, issuing a permit, and reviewing monitoring data. An engineering report would detail the proposed collection of alternate water source(s), treatment system and process, end use applications, entities responsible for treatment system operations and maintenance, a monitoring and reporting plan, and emergency and maintenance procedures. The level of detail and length of the report will be dependent upon the complexity of a project.

Consider the following permit phases for your program:

Start-up Permit: During start-up (first 1-3 months), the alternate water source is treated and discharged to the sanitary sewer if applicable. Potable or recycled water may be supplied to the non-potable applications during this period. Monitoring is necessary on a regular basis until the system operations are fine tuned.

Temporary Use Permit: During temporary use (3-9 months), the alternate water source is treated and supplied to the approved non-potable end uses. Frequent monitoring is necessary and if all water quality requirements are met, a Final Permit may be issued.

Final Permit: Once all water quality standards are consistently met and the system is deemed to be fully operational, safe, and reliable, a final permit can be issued. Ongoing monitoring and reporting requirements are needed for the life of the system, but may be reduced after a period of successful operation.

STEP 7 Outcome

Establish the permit process for initial and ongoing operations for onsite water systems.

Battery Park, New York, by Gryffindor on Wikipedia

In New York, the Battery Park City Authority issued Environmental Residential Guidelines in 2000 which established goals and standards for the creation of environmentally-responsible buildings, including water reuse objectives that exceed LEED® requirements. In response, the NYC Building Department issued *Buildings Bulletin 2010-027* to establish alternative acceptance and maintenance criteria for onsite water recycling systems. The bulletin outlines the water quality requirements as well as the installation, certification, and maintenance requirements for such systems. The phased acceptance and permitting approach outlined in this bulletin has been used by others, like the City of San Francisco, in developing their programs.

Market Street Place, San Francisco, by CRP/Cypress Market Street, LLC

STEP 8 Implement Guidelines and the Program

The ability to provide clear direction for project sponsors and developers—especially with respect to building standards, permits, fees, and operating requirements—will be a key strategy for any type of program. Clearly defining the process for design, construction, and operation of onsite water systems and determining the responsible agency for each program element are critical to program success. Developing educational materials, such as brochures or guidebooks, is an important part of communicating the objectives and requirements of your program. The outline below suggests various elements that can be incorporated into your program.

Design Phase Requirements:

- **Application** - provides a basic overview of the proposed treatment of alternate water sources and end uses
- **Engineering Report** - details design of treatment systems and means of compliance with water quality standards
- **Construction Permits** - incorporates necessary local permits

Construction Phase Requirements:

- **Treatment System Review** - confirms requirements, such as back flow prevention, are met
- **Construction Certification** - verifies treatment systems were constructed per approved plans
- **Cross Connection Control Test** - confirms no cross connection between potable and non-potable systems

Operation Phase Requirements:

- **Permit** - provides approval to operate an onsite water system
- **Monitoring** - establishes a protocol and schedule for ensuring that regular sampling is taking place and water quality standards are met
- **Reporting** - sets a schedule and framework for providing ongoing documentation certifying that public health is being protected

Implementing a local program can involve approval from city or state agencies having authority in the jurisdictional area. Identifying policy makers and political allies to champion the program will help to ensure successful implementation. Support can take the form of a general resolution, a specific ordinance, or planning policy.

STEP 8 Outcome

Publicize the program to provide clear direction for project sponsors and developers.

Exploratorium, San Francisco, by Amy Snyder © Exploratorium

San Francisco's City Ordinance Streamlines Permitting Process

Water Department	Public Health Department	Building Department
Review onsite non-potable water supplies & demands	Issue water quality & monitoring requirements	Conduct plumbing plan check and issue plumbing permit
Administer citywide project tracking	Review and approve non-potable engineering report	Inspect and approve system installations
Provide technical support & outreach to developers	Issue permit to operate onsite systems	
Provide financial incentives to developers	Review water quality reporting	

STEP 9 Evaluate the Program

After your program has been established and several onsite water systems have been implemented, it is important to reflect on the effectiveness of the initiative, accomplishments, and lessons learned. Take time to assess and evaluate the program's achievements to determine if it is supporting the community's vision. This consideration can help you recognize needed adjustments and identify best practices for moving forward. Local programs should be dynamic and adapt over time to respond to the needs of the jurisdiction, evolution of treatment technologies, and changing water demands and supplies.

Monitor regulatory compliance of projects and collect data on the types and end uses of alternate water sources for inclusion in summary reports and status updates. This sort of documentation will allow you to continue to modify and improve the program over time, as well as provide a case study highlighting the number of buildings participating in the program, describing the types of technologies installed, and showcasing the water and cost savings achieved by the onsite water systems. Additionally, these reports can serve as promotional tools to garner additional interest in onsite water systems among community leaders, elected officials, the development community, and other stakeholders.

To track the effectiveness of onsite non-potable water use in San Francisco, the San Francisco Public Utilities Commission prepared the 2014 *San Francisco's Non-potable Water System Projects Report*. The report includes data on the potable water offset, capital costs, operation and monitoring costs, and project drivers.

STEP 9 Outcome

Promote best practices for onsite water systems.

STEP 10 Grow the Program

Local programs can be expanded by increasing the types of alternate water sources and non-potable applications, and by increasing the scale from a single building to a district or neighborhood level. Programs can also include financial incentives to encourage the proliferation of onsite water systems.

Types of Alternate Water Sources:

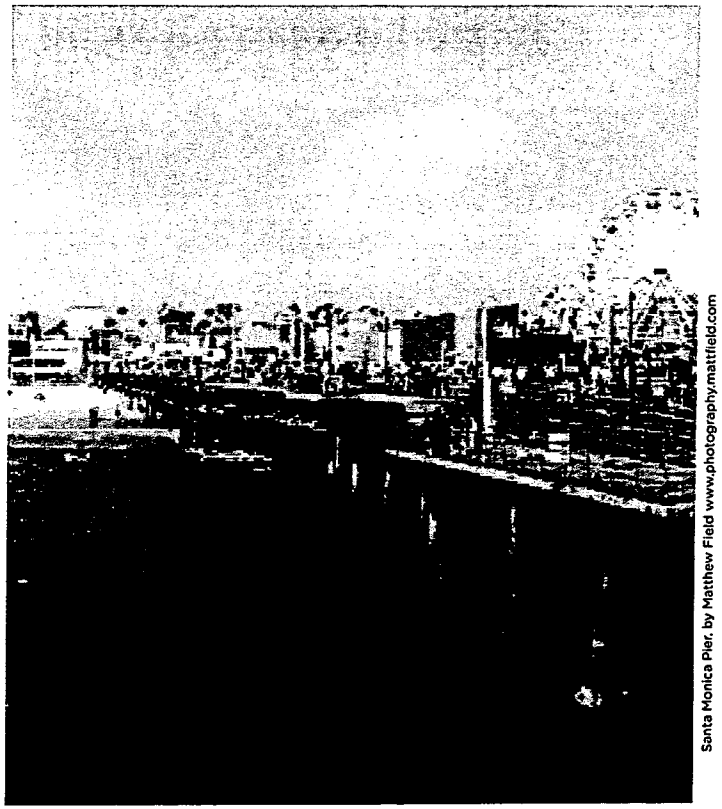
- Rainwater
- Stormwater
- Graywater
- Blackwater
- Foundation drainage
- Cooling tower blowdown
- Condensate water

Types of Non-potable End Uses:

- Toilet and urinal flushing
- Irrigation
- Cooling tower make-up
- Clothes washers
- Process water
- Decorative fountains

Types of Incentives:

- Reduced or waived permit fees
- Property tax and/or stormwater fee reductions
- Water and sewer bill reductions
- Loans or on-bill financing
- Grants or rebates

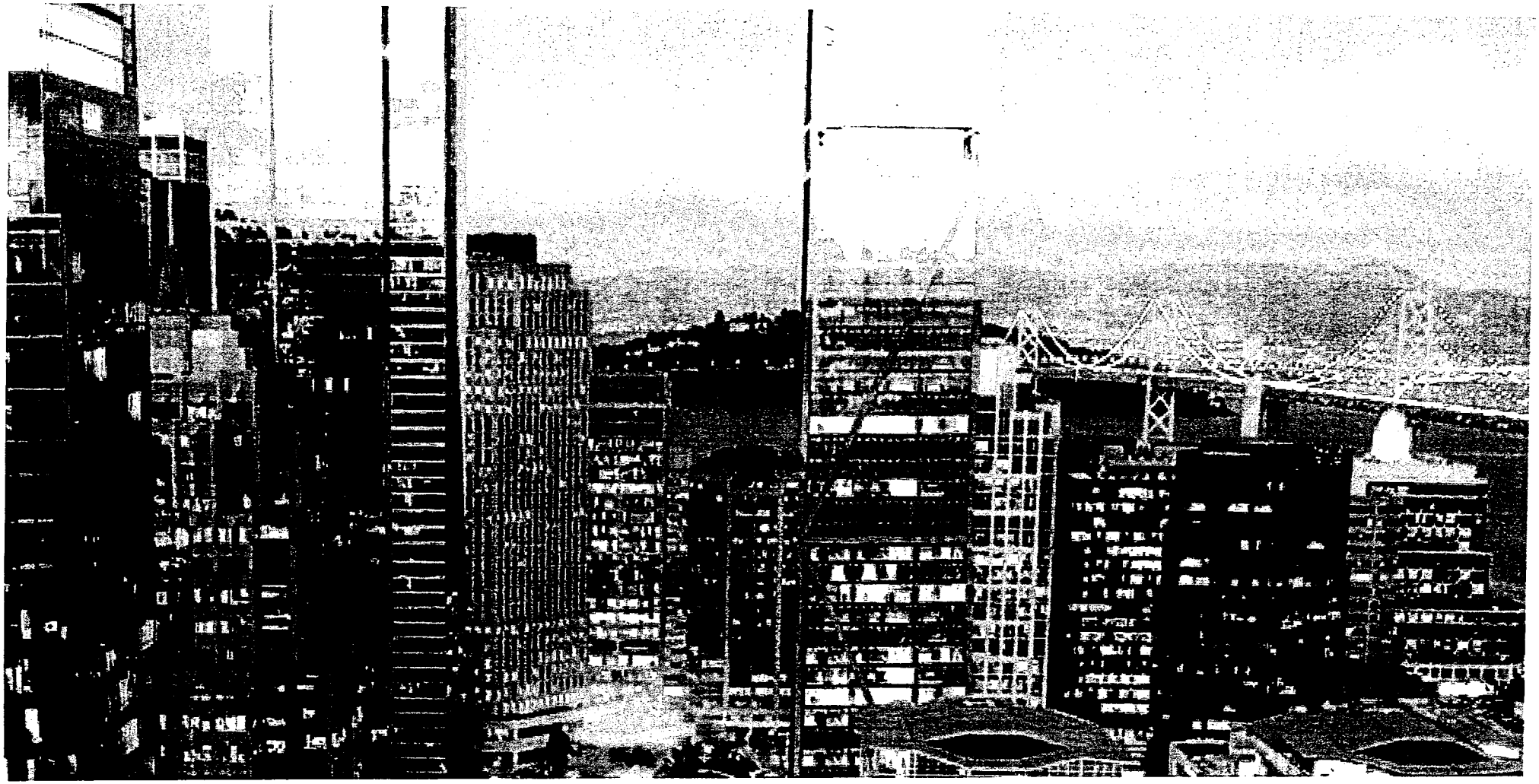


Santa Monica Pier, by Matthew Field www.photography.mattfield.com

STEP 10 Outcome

Explore opportunities to expand and encourage onsite water systems.

Santa Monica waives building permit fees and New York City provides wastewater allowances to qualified properties with onsite water systems. San Francisco provides up to $250,000 for an individual building and up to $500,000 for multiple buildings implementing onsite water systems.



BLUEPRINT for Onsite Water Systems

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THE REGULATION OF PRIVATE WELLS IN THE CITY OF SANTA FE, NEW MEXICO

An Assessment of the Need, Benefit and Powers of the City to Regulate the Use of Private Wells

By

The City of Santa Fe Water Conservation Committee
Working Group #5 - Private Wells in the City

September 2014

SUMMARY

Private wells in the City of Santa Fe have the potential to lower regional aquifer levels and reduce flows in the Santa Fe River. This paper presents an estimate of the number of wells, the amount of water produced on an annual basis, and the impact of private wells in the City on the regional Tesuque Formation aquifer, the alluvial aquifer along the Santa Fe River and surface flows of the Santa Fe River. Cost differences between City-provided water and privately-provided water are discussed. This working group suggests actions that the City could pursue in order to monitor the impact of private wells on underground and surface water resources and to more equitably regulate the use of privately-provided water. It also suggests outreach and education actions to encourage compliance with City water-use regulations. Working Group members concluded that the effect of private wells on water resources is small and an emergency response is not required. There are, however, measures that the City could implement. Private well effects would be best managed in a long-term program of controlling new permits, educating residents on the water use ordinances and water use practices that apply to wells, and taking advantage of the court adjudication process to incentivize well owners to take action in the public record as users of private wells.

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B. Memo, Rick Carpenter, Water Resources and Conservation Manager, 6/3/2013: "Response to Domestic Well Questions"
C. Application for Domestic Water Well Permit Within the City Limits Under 25-1.10 SFCC 1987
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INTRODUCTION

Some Water Conservation Committee members expressed concerns 1) regarding the impact of private wells[1] on the regional aquifer and the Santa Fe River and 2) that private well owners may not be aware that they are subject to City of Santa Fe water use regulations. Other concerns include the following:

- the number of private wells, location and geographic extent (in view of recent annexations) within the City;
- the amount of water pumped annually from private wells;
- the impact of private well pumping on water conservation and on municipal water customers;
- the cost to the well owners to use the groundwater source;
- the cost to the City due to the exclusive use of groundwater by some residents;
- the potential role of private wells during water emergencies;
- the threat of abandoned or improperly plugged private wells on the water quality of the regional aquifer;
- the extent of City authority to regulate existing and new private wells, including replacement wells;
- and whether or not City-scale governance is best suited to address the problem, rather than Santa Fe County or State of New Mexico regulation

Water Conservation Committee Working Group #5 (WG #5), *Private Wells within the City,* was formed in response to these concerns. The group consists of three Committee members and four invited residents. The group's goals were to investigate the impact of private wells on the regional aquifer and related streams, to summarize the State of New Mexico Statutes and City of Santa Fe Regulations that specify the City's powers to regulate private wells within the City (including recently annexed areas), and to make recommendations to the Committee regarding private wells. This document summarizes the work of WG #5.

NUMBER OF PRIVATE WELLS

Andrew Erdmann, City of Santa Fe Water Resources Coordinator states that there is no comprehensive list of all domestic wells in Santa Fe **(Erdmann 2014, Attachment A)**. He goes on that say that the best source for data on the number of wells is the OSE *WATERS* database. Cautioning that the database may not be complete because there are wells that were in place before 1956 when the Office of the State Engineer (OSE) began requiring permits for private wells for household or domestic use in the Santa Fe area, Erdmann states that there are 753 domestic wells located within the City of Santa Fe's current boundaries based on the most current (2011) records in the OSE database.

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[1] For the purposes of this paper, the term "private wells" means all private-sector wells, whether for domestic or household, irrigation, commercial or other uses, and whether permitted under any authority or pre-dating the requirements for permitting. The term excludes public wells operated by the City water utility and industrial wells.

A domestic well is defined in State regulations as "The point of diversion authorized under a 72-12-1.1 domestic well permit." The Office of the State Engineer (OSE) may issue a "72-12-1.1 domestic well permit" for a new well. The OSE may also issue a permit under 72-12-22 and 23 for a replacement well. A replacement well may be for domestic use, although a well is not referred to as a "domestic well" under the replacement well statutes.

This is somewhat different from the number reported in the City's 2012 Annual Water Report[2]. The City reported 711 private wells at the end of 2011. This can be compared to with 695 and 600 private wells listed in the 2010 and 2011 Annual Water Reports, respectively.

Information from the Nambé-Pojoaque-Tesuque Area Water Master Report[3] may be useful in estimating the total number of private wells, including those drilled prior to 1956. That report found 18 % more wells in the field than are listed in the OSE file records of permits since 1956. Applying that factor (18%) to the number (753) listed by Erdmann results in an estimate of approximately 890 private wells within the City limits.

Another source for an estimate of the number of wells is the 1990 US Census, which reported 868 drilled wells and 66 hand-dug wells serving houses in Santa Fe, for a total at that time of 934 private wells. There is little information about how many of these wells are in use or are operational. Because this number was from a survey and not from file records, there is no reason to increase it by a factor to account for wells that are not recorded. The actual current count may be greater as a result of wells drilled since 1990, or that are within the areas recently annexed by the City. However, for the purposes of this investigation, the census count (934) will be used as the best estimate of the number of private wells within the City.

WATER CONSUMED BY PRIVATE WELLS AND IMPACT ON THE REGIONAL AQUIFER, THE ALLUVIAL AQUIFER AND SANTA FE RIVER SURFACE FLOWS

The Nambé-Pojoaque-Tesuque area Water Master Report found that for more than 300 domestic wells in the Nambé -Pojoaque-Tesuque area, the average water use rate was 0.29 acre-feet per year (afy). Similar results were reported in a more recent study published by Santa Fe County (Lewis, 2013), which found a median metered rate of 0.28 afy for shared wells in Santa Fe County. Using this value (0.28 afy) and the estimate of 934 private wells yields an estimate of 260 afy for the private well water use amount. http://www.ose.state.nm.us/PDF/News/2005/pr_2005-05-06_NPT_report.pdf

The 37 square mile area within the City limits contains 3,550 acre-feet per foot of saturation at a specific yield (the ratio of water content in aquifer volume) of 15%, as given in the OSE/USGS model used for water administration (McAda and Wasiolek, 1988). Continued use of 260 afy corresponds to an additional 3 feet of water-level decline in 40 years of domestic-well use, accounting for a little less than 0.1 feet per year of the overall drawdown trend. However, restrictions on the installation of new domestic wells since 1999 prevent the aquifer water level from declining an additional 2 feet in the next 40 years, according to published model projections (Balleau and Silver, 2005). Drawdown projected to be 5 feet is now constrained to about 3 feet due to the City ordinance limiting new wells.

For the wells near the river, the water source may be Santa Fe river alluvium, and pumping may influence alluvial water levels and river flow. Although the specific portion is unknown, some of the

[2] http://www.santafenm.gov/media/files/Public_Utilities_WATER/2012_City_of_Santa_Fe_Annual_Water_Report.pdf
[3] http://www.ose.state.nm.us/PDF/News/2005/pr_2005-05-06_NPT_report.pdf

private well water (and possibly some of the City Well Field water) is derived from the river alluvium. (Models are capable of quantifying the portion derived from the alluvium and from the regional aquifer.) Whatever the amount, the 3 feet in 40 years of domestic well aquifer impacts to the regional aquifer will be reduced by the amount produced by private wells that draw from the Santa Fe River alluvium.

Private wells are concentrated in the eastern mountain-front zone of the city and along the Santa Fe River. Except for the Santa Fe River, there is little relationship of local wells to the adjacent perennial streams, Tesuque Creek and Galisteo Creek, due to their distance. The Santa Fe River is usually flowing for the first four miles through the City center in springtime and is dry in winter. According to City meter records, (Lewis and Borchert, 2009b) about 0.4 cubic feet per second (100 afy over 4 months) is lost in conveyance in the four-mile reach, generally less than 10% of the flow. The relatively efficient conveyance through the City is supported by a lens of saturated shallow riparian water table.

To summarize, private wells in the City have only a few feet of impact on the regional aquifer and tens of afy on the Santa Fe River. Private wells add 2.6 % to the total City supply of 10,000 afy and more than 20% to the City well field withdrawals of 1,150 afy reported in the 2012 Annual Water Report. Alluvial wells near the Santa Fe River may have a larger relative impact on stream flows. The net impact on the regional aquifer is less than the consumption rate due to return flow both to the aquifer and to the wastewater treatment plant. In any case, the demand for water diverted by private wells would otherwise have to be supplied by the City or other sources.

STATUTES, REGULATIONS AND PERMIT REQUIREMENTS

WG#5 has collected and examined the relevant documents on municipal domestic wells to provide a lay citizen's understanding of the controlling legalities. The WG sought review by the City Attorney, but that has not been arranged.

The documents examined include:

1. Domestic Well Statute 72-12-1 NMSA.
2. OSE Rules and Regulations for Domestic Wells 19.27.5 NMAC.
3. City of Santa Fe Code Chapter XXV Water 25-1.10 Regulations for the Drilling of New Domestic Water Wells.
4. Powers of Municipalities 3-53-1 and 2 NMSA.
5. City of Santa Fe Application for Domestic Well Permit Within the City Limits. Appendix C.
6. OSE Application for Well Permit. Appendix D.
7. Anaya Adjudication case docket.
8. NM Court of Appeals and Supreme Court decisions on domestic wells.
9. Water rate schedule, Sangre de Cristo Water Division household water.

72-12-1.1 NMSA Underground waters; domestic use; permit.
A person, firm or corporation desiring to use public underground waters described in this section for irrigation of not to exceed one acre of noncommercial trees, lawn or garden or for household or other domestic use shall make application to the state engineer for a well on a form to be prescribed by the state engineer. Upon the filing of each application describing the use applied for, the state engineer shall issue a permit to the applicant to use the underground waters applied for; provided that permits for domestic water use within municipalities shall be conditioned to require the permittee to comply with all applicable municipal ordinances enacted pursuant to Chapter 3, Article 53 NMSA 1978.

The OSE has required permits for all wells in the Santa Fe area since November 1956, when it declared the Rio Grande Underground Water Basin to be under its administration.

Rick Carpenter, City of Santa Fe Water Resources and Conservation Manager, replied to questions posed by Working Group #5 on private wells within the City (**Carpenter 2014, Attachment B**). Carpenter states that "Domestic well statutes are the subject of considerable legal and legislative attention over recent years."

Domestic wells in the Aamodt case (concerning the basin adjacent to the north of Santa Fe) were decreed court-validated water rights based on levels of historical use, and domestic wells are decreed in other adjudication cases in the state. An excellent overview of the adjudication process is found in an

overview of the Rio Jemez Adjudication (UNM Law School).
http://uttoncenter.unm.edu/pdfs/Rio_Jemez_Background_Papers.pdf

City of Santa Fe Regulations for the Drilling of New Domestic Wells (25-1.10 SFCC[4]) were enacted in 1999 and revised in 2004 after new State of New Mexico legislation in 2001.

The City permit is issued subsequent to the issuance of a domestic well permit by the OSE and also requires a letter from the City of Santa. The application for the City well permit is included as **Attachment C** and the required OSE application for a permit is included as **Attachment D**.

The City permit is issued only if the applicant meets one of the following conditions: 1) the nearest property boundary is greater than 300 feet from 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 City is required to act within thirty days of the request upon all domestic water well permit applications for properties within the municipal boundaries. If the well permit is denied, the City is required to provide water service to that property within ninety days of the denial of the permit application and this service is subject to the City's standard charges and rate schedules. The City is required to issue the domestic well permit if it is unable to provide water service within ninety days due to City ordinance, rules, regulations or actions, but due to no fault of the applicant.

Since the enactment of the City regulations, the City has denied most applications for the installation of new wells. The City has approved permits for probably no more than 25 replacement wells (oral comm. , C. Borchert).

City of Santa Fe Authority
The City of Santa Fe regulates wells under 25-1.10 SFCC, Regulations for the Drilling of New Domestic Water Wells. According to paragraph C of the City regulation, "An application for a city domestic water well permit may only be filed subsequent to approval of a state domestic water well permit issued by the state engineer pursuant to NMSA 1978, § 72-12-1.1." On this basis, the City restricts the drilling of domestic water wells that are both new and permitted by the OSE under 72-12-1.1 NMSA.

In part, the City is authorized to regulate wells by 3-53-1.1 NMSA which states that "a municipality may, by ordinance, restrict the drilling of new domestic water wells..." Statute 3-53-1.1 NMSA does not explicitly authorize the City to approve or deny applications for City permits for wells that are not new and not permitted under 72-12-1.1 NMSA. Statute 3-53-2 NMSA is as follows: "In order to prevent waste and to conserve the supply of water, a municipality which owns and operates a water utility, or has granted a franchise for the operation of a public water system, may by ordinance regulate and restrict the use of water."

City permits are approved subject to seven conditions listed in Paragraph F of the regulation:

[4] http://clerkshq.com/default.ashx?clientsite=Santafe-nm

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 must be 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.

Summary of the Authority of the City to Restrict the Drilling of New and Replacement Wells

NMSA 1978 Section 3-53-1.1[5], enacted by the Legislature of the State of New Mexico in 2001, authorizes municipalities to enact ordinances restricting the drilling of new domestic water wells. The statute became effective June 15, 2001. Other statutes delegate powers to municipalities regarding the use of wells in general, the use of water in general, water conservation, public acequias, irrigation of public grounds and preventing waste or excessive use. The powers to regulate new domestic wells and other water uses in general have been supported after review by the Court of Appeals of New Mexico and the Supreme Court of New Mexico.

[5] http://public.nmcompcomm.us/nmpublic/gateway.dll/?f=templates&fn=default.htm

Pertinent case law confirming the City's power to limit the drilling of new wells is found in:

Stennis v. City of Santa Fe, Court of Appeals of New Mexico, 2006
http://www.nmcompcomm.us/nmcases/NMCA/2006/2006-NMCA-125.pdf
Stennis v. City of Santa Fe, Supreme Court of New Mexico, 2008
http://www.nmcompcomm.us/nmcases/NMSC/2008/2008-NMSC-008.pdf
Smith v. City of Santa Fe, Court of Appeals of New Mexico, 2006
http://www.nmcompcomm.us/nmcases/NMCA/2006/2006-NMCA-048.pdf
Smith v. City of Santa Fe, Supreme Court of New Mexico, 2007
http://www.nmcompcomm.us/nmcases/NMSC/2007/2007-NMSC-055.pdf.

OSE Water Rights Director John T. Romero, at a meeting with WG# 5 members on 5/5/2014 confirmed the City's power to regulate wells within the City so long as its requirements are more restrictive than State regulations.

DISCUSSION

Cities can restrict the drilling of new domestic wells under NMSA § 3.53.1.1. The domestic well ordinance in Santa Fe has been challenged twice in *Smith vs. City of Santa Fe* and in *Stennis v. City of Santa Fe.* In both cases, the municipal restrictions on domestic wells were upheld. There is direction in these cases regarding the need to regulate domestic wells. The opinion in *Smith* highlights the fact that local regulations are necessary because they address different concerns than state law.

Private well owners may feel "entitled" to their wells and an attempt by the City to regulate them may be considered an infringement of their rights. An operable private well can be considered an enhancement of the value of a property. Private well owners may enjoy the feeling of independence from the City water supply and may think that their well is associated with the ownership of a "water right." Although private well owners have the expense of maintaining their own pumps, pipe, tanks, repairing freeze damage, managing water odor and other matters, and the power cost for pumping, water from a private well is generally less expensive than City water.

For most City water customers, the volume water cost is $6.06 per thousand gallons (up to 7, 000 gallons or up to 10,000 gallons during the irrigation season), and $21.72 per thousand gallons for amounts greater than either 7,000 or 10,000 gallons. For private well owners, the volume cost often is less than this, with no premium for increased levels of use. Private wells owners may be able to take advantage of City-supplied domestic water for household use, and use well water for landscape purposes.

Although the OSE requires metering and reporting of shared wells within the City, there is no metering or reporting requirement for other well owners. Conditions of City private well permits that have been

issued since 1999 require monthly metering and annual reporting; however the permit provisions are not enforced and reporting is inconsistent. In comparison, metering of new private wells has been ordered by the adjudication court in the Aamodt case immediately north of the City.

Private wells might be of use to the community in the case of an emergency disruption of the public water supply. However, private wells, either operational or not operational, or improperly plugged, are a possible source of aquifer contamination. There may be a significant number of old wells in the City that remain unplugged after the owners stopped using the wells. There is no funding or program in place to identify and plug these wells. The OSE depends on the City to ensure that abandoned wells within the City are properly plugged in the case of a replacement well. Licensed well drillers are aware of these requirements. The City does not have the responsibility, either by ordinance or regulation, to remind owners of plugging requirements. There is no specific enforcement for private wellhead protection, which EPA applies solely to public water supplies.

CONCLUSIONS

There are in the range of 700 to 900 active private wells in the City. The certainty of this count is unknown.

Using a census well count of 934 and a use rate of 0.28 afy from a recent study, the best estimate if the amount of water produced by private wells in the City is 260 afy. As is the case for the well count, there is little basis for estimating the uncertainty of this value.

Private wells in the City impact a few hundred afy on the regional aquifer and the Santa Fe River. Continued use at the average rate of 260 afy corresponds to an additional 3 feet of water-level decline in 40 years of domestic-well use, accounting for a little less than 0.1 feet per year of the overall drawdown trend.

State statute 3-53-1.1 NMSA authorizes the City of Santa Fe to restrict the drilling of new domestic wells. Although the City requires a permit for a replacement well, 3-53-1.1 does not expressly authorize the City to regulate replacement wells. According to State statute 3-53-2 NMSA, a municipality may by ordinance regulate and restrict the use of water. Since 1999, the City has required permits for new and replacement wells. City permits are not required for wells installed before 1999 except when well owners replace these wells.

The City regulates and permits wells under 25-1.10 SFCC. One of the City permit conditions is that the well shall be metered and monthly usage shall be recorded and reported annually to the City Water Division. This permit condition is not being enforced.

Without changing how it regulates private wells, and if it were to decide to do so, subject to court determination, the City, or the court at the City's request, could require private well owners to register their wells, install meters, and submit monthly meter readings.

State regulations under 19.27.5 NMSA limit the amount of water that may be produced by a new domestic well from 0.25 to 3.0 afy.

There is limited legal basis for restricting the amount of water that can be produced by a replacement well or a well that is not permitted. An adjudication court may be the appropriate vehicle to equitably restrict the amount.

Private well effects would be best managed in a long-term program of controlling new permits, educating residents on the ordinances on water use practices that apply to wells, and taking advantage of the court adjudication process to incentivize well owners to take action to put their use on the public record.

An emergency response to the impact of private wells is not warranted.

ACTION PLAN RECOMMENDATIONS TO THE WATER CONSERVATION COMMITTEE

- Notify private well owners that even though some or all of their water may be from a private well, they are nevertheless subject to all City of Santa Fe water conservation regulations.
- Publish public notification of this requirement to ensure that all well owners, known and unknown to the City, are aware of this ordinance.
- Clarify the amount of water in afy that may be produced by a well permitted by the City.
- Require compliance with the existing monthly metering and annual reporting requirements for new and replacement wells for which the City has issued permits.
- Require private well owners to register their wells with the City, install meters and submit monthly usage readings to the City.
- Propose to State legislators a modification of 3-53-1.1 NMSA as follows: "a municipality may, by ordinance, restrict the drilling of both new domestic and replacement water wells..."
- Conduct a public-information program to bring private well owners into the city water-conservation programs using rebates applicable toward City of Santa Fe utility bills (as most private well owners utilize City refuse pickup, sanitary service and most are also connected to the City water system). The issue of providing rebates to private well owners would require an ordinance change as they are currently excluded. But because they must abide by all City water regulations, it is fair to afford private well owners access to the same benefits.

- Investigate the potential benefits of identifying private wells posted with signage as secure, safe and sanitary sources of community drinking water in an emergency.

- Encourage the City, in the spirit of inclusiveness and concern for our common aquifer, to find out how many private wells are actually producing water in order to estimate more accurately how much water is being withdrawn from the regional aquifer.

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

- Seek review by the City Attorney's staff of the merit of a court-ordered procedure to claim the use of private wells within the city for court examination and pursue adjudication of all domestic wells in the Santa Fe Stream System Adjudication (Anaya Case). http://www.ose.state.nm.us/legal_santa_fe_adjudication.html).

- The Working Group considers a court decree of valid well rights to be of potential benefit to the City, insofar as the data on location, owner, and amounts based on historical use would become known. Those who decline to claim and process their well appropriation through the court would likely be declared to have "no right". This could alter the incentive from hiding the information on private wells, to becoming in the owners' interest to make the facts of their claims known. The City or OSE apparently cannot extinguish the validity of existing (old) well rights. That power is reserved for the adjudication courts on evidence of abandonment or forfeiture (Montgomery v. Lomos Altos, Inc., Supreme Court of New Mexico, 2006). http://www.nmcompcomm.us/nmcases/NMSC/2007/2007-NMSC-002.pdf

- In the interest of compiling a more complete record of private wells in the City of Santa Fe, WG#5 recommends that the City Attorney move the court to require that domestic well users claim their historic usage before the court for final action, thereby identifying the location, ownership and decreed amount of each well. The resulting data will aid the City in accounting for valid uses and consequent effects for managing the overall basin water account in the future. Although private well use is a small component of the City's total water consumption, well production data will be helpful for future water accounting and management of City water resources. For the well owner, it is as simple as exchanging a single letter with the Office of the State Engineer. It would be a win-win situation, with the well owner being more likely to obtain a higher declaration for historical use than a court would subsequently rule without petition from the well owner and with the City having a more complete record of the number of private wells within the city limits.

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McAda Douglas P. and Maryann Wasiolek, 1988. Simulation of the Regional Geohydrology of the Tesuque Aquifer System near Santa Fe, New Mexico, USGS WRIR 87-4056 (The basis of the OSE administrative model and of the City's SURFS and WaterMap models for planning). Found at http://pubs.usgs.gov/wri/1987/4056/report.pdf. July 18, 2014.

APPENDIX A

To: Water Conservation Committee

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

Date: May 8, 2014

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 in 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.

APPENDIX B

City of Santa Fe, New Mexico

memo

Date: June 3, 2013

To: Water Conservation Committee

From: Rick Carpenter, Water Resources and Conservation Manager

RE: Response to Domestic Well questions

Background:

This memo is in response to questions outlined in the document titled "Private Wells in the City of Santa Fe"

Response:

Discussion Items Requiring Answers from City

1. What is the city's position on the use of private wells?

The City's position is identified in the City Code Chapter 25 Section 1.01 requiring all new domestic wells be permitted with the City of Santa Fe. Policy decisions on of use of private wells are a matter for elected officials and are not under the purview of staff.

2. What is the policy for the redrilling of existing wells?

The current regulation does not address deepening or rehabilitation of a well, because it's not a new well. However, if a new hole is drilled (new well, supplemental well, etc.) then the well owner must go through the OSE and City permitting process, whereupon certain conditions of permit approval may be applied.

3. What is the requirement (if any) for metering and monitoring of wells within the city?

Chapter 25 Section 1.10
F. For domestic water well permit applications approved within the municipal boundaries the following conditions shall be met:
(1) The well shall be metered to city specifications and monthly usage shall be recorded and reported annually to the city water division.

4. Do property owners in the city have actual water rights or presumptive water rights?

72-12-1 Domestic Well statutes are the subject of considerable legal and legislative attention over recent years. Generally domestic wells are permits and are not a water right.

Questions for Discussion at WCC meeting on 6/11/2013

5. Can we get a better estimate of the number of wells and put a range on how much water they can be pumping from the aquifer?

Amy Lewis has estimated 1,437 active domestic wells serving 6,645 people in the Santa Fe watershed, (which includes the City limits and some of Santa Fe County) and based on the assumption that there is one home per well and 2.2 persons per household. Domestic wells can be shared wells and serve multiple households.

Amy's research has further identified that there are 823 wells in the City limits, out of those 823, 711 are designated as domestic and shared wells. Depending on the date the wells were drilled the allocation of water is 1-3 acre foot per year, which would result in 231 million to 695 million gallons per year, assuming all wells used their total allotment.

Water Conservation Committee volunteers are welcome to visit the NM OSE and expand on or verify the information provided.

The 2012 Annual Water Report has been amended to reflect the information provided above. The revised 2012 Annual Water Report can be found at http://www.santafenm.gov/index.aspx?NID=2300/

6. Is this issue something the city really wants to address, given all the other water issues it faces?

This continues to be an issue that staff tracks for wells that have been drilled since 2007 as stated in the City Code. Enforcement and monitoring meter readings for wells drilled prior to 2007 are under the jurisdiction of the NM OSE and Santa Fe County.

7. Is this an issue in which the Water Conservation Committee can help the city?

Perhaps, but refer to the respective answers to question Nos. 5 and 6 above.

8. Is it the best use of (limited) WCC volunteer resources and time?

The Water Conservation Committee has prioritized and identified important water conservation tasks identified in item #10 on the agenda.

Attachments:

25-1.10 Regulations for the Drilling of New Domestic Water Wells.

APPENDIX C

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**

City Permit No. _____
(Assigned by City)

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 permitee 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 wellincluding 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 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.

_____ Dated: _____
Engineer Supervisor

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

APPENDIX D

File No.

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: check here if Agent ☐	Contact or Agent: check here if Agent ☐
Mailing Address:	Mailing Address:
City:	City:
State: Zip Code:	State: Zip Code:
Phone: ☐ Home ☐ Cell Phone (Work):	Phone: ☐ Home ☐ 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 ☐ NM Central Zone ☐ NM East Zone ☐	X (in feet): Y (in feet):		
UTM (NAD83) - In meters	UTM Zone 13N ☐ UTM Zone 12N ☐	Easting (in meters): Northing (in meters):		
Lat/Long (WGS84) - To 1/10th 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):

☐ Replacement well (List all existing wells if more than one):	☐ Repair or Deepen: ☐ Clean out well to original depth ☐ Deepen well from ____ to ____ ft. ☐ Other (Explain):	☐ 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).

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

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.

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.

Innovative Practices

2.1 Indoor Water Use Efficiency Practices

2.1.1 Toilet Retrofit Exchange

2.1.2 Evaporative Cooling System

2.1.3 Water Softeners

2.1.4 Drinking Water Treatment NSF/ANSI certified, minimum efficiency rating 85%

2.1.5 Hands-free Faucets

2.1.6 Showers Equipped with Shut-off Valves

2.1.7 Water Treatment Backflush Water Use Inside

2.1.8 Water Use Monitoring System

2.1.9 Greywater Stub-in

2.1.10 Purple Pipe Stub-in

2.1.11 Other

2.2 Outdoor Water Use Efficiency Practices

2.2.1 Automatic shut off water device. One of the following automatic shut off water supply devices is installed.

2.2.1a Excess water flow automatic shutoff (OR)

2.2.1b Leak detection system with automatic shutoff

2.2.2 Turf grass species and 80% of shrubs/trees installed are appropriate for the Southwest as listed by The local water authority or the state engineer's office plant list. Must have a tentative plan for the remainder of landscaping not installed with 80% of qualifying plants or grasses identified to receive points. Link to state engineer plant list: http://WUC.OSE.state.NM.us/plants/ (vegetable gardens and fruit trees exempt)

2.2.3 Irrigation supply is stubbed for front and rear irrigation system with either power or wiring for irrigation controls provided.

Group #3 - Doug Pushard
Exhibit C-2

2.2.4 Front is landscaped with 80% low water use plantings and groundcover

2.2.5 Back is landscaped with overall low water use plantings and groundcover with turf not exceeding 1500 $ft.^2$ or 20% (whichever is less) of total landscape area (front and back).

2.2.6 Native landscape with no irrigation needed after established

2.2.7 Automatic sprinkler and drip irrigation controls are installed and cover 80% or more of new plants and turf

2.2.8 Rain sensor or soil moisture sensor is part of irrigation controls

2.2.9 Water Treatment Backflush Water Use Outside

2.2.10 Third-party water audit (EPA or GBC LEED) data performed and provided

2.2.11 Installed passive irrigation system

2.2.12 Installed softscapes and hardscapes whereby no runoff occurs in a 100-year event

2.2.13 Other

SUMMARY:

A public meeting was held at the Convention Center by Working Group #3 on the Water Efficiency Rating System (WERS) – Outdoor tool for New Construction on August 12, 2014.

The event was attended by the Santa Fe Water Conservation Committee and over 40 individuals from the public.

An overview of the current Outdoor evaluation programs for Santa Fe, Green Build New Mexico, GBC, and the EPA was presented to the committee and the attendees. The intent of the presentation was to educate all that there exists already a confusing array of overlapping programs for builders to choose from for evaluating water use outdoors. The meeting was also to solicit public input on the direction of the Outdoor WERS tool for new construction. Comments were written on Post-Its on the walls around the room and are listed below.

The working group greatly appreciates all the time and input gathered from the meeting attendees and the committee. It is apparent from the attendance and the input that is a lot of interest in this topic.

As was stated at the meeting, the working group acknowledges this is a very complex issue as is apparent by the current set of City, County, State, and National programs focused on Outdoor Water Efficiency tools.

Consequently, the committee will work to come up with an outdoor recommendation that reflects the concerns of the citizens and yet simplifies the current process. It is expected that this will take several months and once a draft is formulated another public meeting will be scheduled.

Again, Working Group #3, greatly appreciates the efforts of all to make this effort successful and reflect the values of the community.

NOTES FROM PUBLIC WCC MEETING AT CONVENTION CENTER:

- I would like to see focus on homes other than the new ones. How to incentivize remodels and retrofits... in landscaping.
- I agree 100% need to include existing homes in our thinking - new projects are a small percentage of our use.
- High % of organic matter in soil = better score.
- Lot contouring to capture rain and reduce runoff - minimizes mulch movement
- Permeable paving – any credit for those of us who are ahead of the curve and did some of these things years ago?

Group #3
Exhibit C-1

2015 Meeting Schedule Proposals

Santa Fe Water Conservation Committee

Location: City Councilors' Conference Room, 200 Lincoln Avenue

Time: 4-6 PM

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

Option 1:

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

Option 2:

Meeting Date	Caption Deadline, 3 PM	Packet Material Deadline, 3 PM
January 13, 2015	Tuesday, December 23, 2014	Monday, December 29, 2014
February 10, 2015	Monday, January 26, 2015	Wednesday, January 28, 2015
March 10, 2015	Monday, February 23, 2015	Wednesday, February 25, 2015
April 14, 2015	Monday, March 30, 2015	Wednesday, April 1, 2015
May 12, 2015	Monday, April 27, 2015	Wednesday, April 29, 2015
June 9, 2015	Friday, May 22, 2015	Wednesday, May 27, 2015
July 14, 2015	Friday, June 26, 2015	Monday, June 29, 2015
August 11, 2015	Monday, July 27, 2015	Wednesday, July 29, 2015
September 15, 2015 (Third Tuesday)	Friday, August 28, 2015	Monday, August 31, 2015
October 20, 2015 (Third Tuesday)	Friday, October 2, 2015	Monday, October 5, 2015
November 10, 2015	Monday, October 26, 2015	Wednesday, October 28, 2015
December 9, 2015	Friday, November 20, 2015	Monday, November 23, 2015