MINUTES OF THE

SANTA FE COUNTY

WATER POLICY ADVISORY COMMITTEE

October 9, 2014

Santa Fe, New Mexico

This meeting of the Santa Fe County Water Policy Advisory Committee (WPAC) was convened at approximately 6:00 p.m. by Chair Charles Nylander on the above-cited date at the Santa Fe County Public Works Building Conference Room, 424, NM 599, Santa Fe, New Mexico.

A quorum was established as follows:

Members Present:	**Member(s) Excused:**
Charles Nylander, District 2	Mukhtiar S. Khalsa, District 1
Shelley Winship, Northern Planning Area	Bill King, Soil & Water Conservation
Anna Hamilton, District 4	Consuelo Bokum, BDD Board
Rita Loy Simmons, District 3	Steve Rudnick, District 5
Sigmund Silber, Central Water Planning Area	
Gil Tercero, Mutual Domestic Water Consumers Assoc.	
Martha Trujillo, Acequia Association	

Staff Present:
Claudia Borchert, Public Utilities Division Director
Paul Casaus, Public Utilities Division

Others Present:
Rick Thompson, Estancia Valley Water Planning Committee

III. Approval of Agenda

Ms. Simmons moved approval of the agenda as published. Ms. Winship seconded and the motion passed without opposition.

IV. Approval of Minutes:

June 12, 2014: Ms. Simmons moved approval and Mr. Tercero seconded. The minutes were approved by unanimous voice vote.

July 20, 2014: The following corrections were offered and accepted to the July minutes:
Page 2: Second paragraph, Ms. Bokum reminded ~~that~~ the participants…
Page 2: Third paragraph, last sentence was revised as follows: Aside from the wastewater piece, the BCC has already directed staff ~~what~~ that committee R~~r~~ecommendation ~~two~~ 2…

Ms. Hamilton moved to approve the July minutes as corrected. Her motion was seconded by Mr. Tercero and passed by unanimous voice vote.

V. Matters from the Public

Rick Thompson introduced himself as having been involved in water and wastewater issues for many years as well as being a farmer, cattleman and engineer. He was attending the meeting as an observer upon the request of the Estancia Valley Water Planning Committee to possibly fill the position left vacant by Bud Hagerman.

Ms. Borchert said Paul White has inquired as to whether this Committee would be interested in looking at the water impacts of the new Sustainable Land Development Code and zoning maps. Chair Nylander said it could be considered when the 2015 work plan is drafted in January. He added that the Board of County Commissioners had listed the SLDC review regarding water as a possible review issues.

Mr. Silber said he too talked with Paul White and he requested that Mr. White provide a statement outlining his concerns and issues for the Committee's assessment. He said he was pleased there were individuals interested in this Committee's work.

VI. Action Items

A. Annual Election of Committee Chair and Co-Chair

Mr. Silber nominated Charlie Nylander to serve as Chair and Ms. Winship seconded.

Mr. Silber praised Mr. Nylander for the work he has done and said continuity in the Committee's leadership was very important for the new few years.

Additional nominations were solicited; none were offered. Mr. Tercero moved to close the nomination and Charlie Nylander was elected Chair by acclamation.

Current Co-Chair Winship advised the Committee that family health issues require she resign from her position as a member. Ms. Winship was thanked for her outstanding and valuable contributions with well wishes extended to her family.

Ms. Simmons nominated Gil Tercero to the position of Co-Chair. Mr. Tercero reminded the committee that he did not use electronic communications and Chair Nylander said that hasn't proved an impediment to date. Ms. Trujillo seconded.

There were no other nominations and Gil Tercero was named Co-Chair by acclamation.

[Ms. Winship excused herself from the remainder of the meeting.]

VII. Discussion Items

A. Proposed technical approach for the Aquifer Storage and Recovery (ASR) White Paper and Recommendations Task

B. Description and ranking of 13 potential ASR projects

[*Exhibit 1: Draft ASR Alternatives in Santa Fe County for discussion purposes*]

Chair Nylander said an initial discussion on ASR began at the last meeting with direction to staff to develop a paper for review. He and Ms. Borchert met with County Hydrologist Torres and discussed ASR in the area. Ms. Borchert developed a spreadsheet identifying 18 potential ASR projects.

Chair Nylander said the proposed task before the Committee was not to determine economic or geologic feasibility but rather rank the projects for possible future investigation.

Mr. Silber said the topic is definitely appropriate as a tool once the overall plan is established. At this point, there is no pressing ASR project that the County requires advice on. An application should be established followed by the technology and tools to achieve the application.

Remarking that the BCC approved the Committee's work plan which included ASR, Chair Nylander suggested ranking the projects and drafting a document stating recommendations are premature but as indicated by the ranking these are the areas that could be further examined. He felt a cover document could be drafted and circulated for adoption at the Committee's January meeting.

Ms. Borchert said the projects were based on her understanding of what water is available throughout the County. Each of the 18 alternatives contain source water. Injection of water has to meet two criteria: 1) treated to potable standards and, 2) compatible with the groundwater source. Many of the projects require permits from OSE and/or ED. There must be a cost benefit for doing the project. She understood from other entities that have ASR that the cost is easily three to six times the cost of other water supplies.

The 18 alternative projects were presented in a spreadsheet [*Exhibit 1*] identifying water source, water rights, whose water, maximum water produced, estimated energy use and costs.

The notion of using the Buckman well field as an injection site, #1, would allow the wells a chance to replenish, stated Chair Nylander.

Mr. Silber suggested adding a column delineating the reason for the project. As an example, Bear Canyon was mentioned as solution to pollution by dilution project in order to address arsenic levels. A common reason for ASR is to move water when the temperature is lower to reduce evaporative losses and increase availability for seasonal fluctuations in the requirements for the water.

Ms. Borchert referred to her memo that asks why the County might consider/pursue ASR.

A. To increase the longevity and reliability of mined groundwater supplies (e.g., stormwater captures in alternative #17 – an AS project rather than ASR)
B. To supplement the County Water Utility's water supply
C. To store excess water supply/long-term until the demand comes online
D. To increase seasonal operational flexibility [added during discussion]

The 4,000 acre-feet water supply available at the river through the Aamodt system is likely more than the demand that that system requires. A fraction of it could be pumped and stored in the aquifer and at the time the Buckman facility is unable to operate, that water could be withdrawn from the aquifer.

Mr. Tercero pointed out that A through D are not exclusive and as needs changes they will overlap. He recommended reviewing and ranking the 18 alternatives by merit.

Mr. Tercero said #3 appeared to be a win/win. By maximizing what is taken from the river, the City could reduce pumping its basin well fields and the Buckman wells. It would save the reserves without having to inject water into the ground.

There appeared to be consensus that #3, which maximizes diversion by using San Juan Chama and native waters was a desirable alternative that would preserve the aquifer.

Chair Nylander noted that Buckman supplies the County and City with approximately half of their water supply with the remainder coming from the well fields and from Santa Fe Canyon. While #3 is not aquifer storage it clearly is aquifer saving by reducing pumping. Many residents are asking why the $225 million Buckman treatment facility was not operated at maximum capacity: why aren't you driving the car more?

Ms. Borchert clarified that the water availability assumptions in the alternatives assume water rights and the ability to divert. She concurred with Ms. Hamilton that the alternatives that refer to capacity and other issues would require resolution and the dollar figures were guestimations.

Alternative #4 basically diverts from the Rio Grande via the Buckman and infiltrates it into arroyo(s) with the intent of infiltration recovery. It is a passive ASR system. It is direct diversion that does not require treatment.

Alternative #3 requires the City's buy-in but appeared to be preferable to #4 and thus #4 was eliminated

Alternative numbers 5, 7, 8 and 9 include City of Santa Fe water.

Alternative #5: SF Living River Recovery: The city releases water from Nichols Reservoir that goes down the river. Wells could be installed to specifically recover that infiltrated water. Along the river, close to downtown, the sitting depth to water is around 300 feet. Those wells do not have much tritium – a tracer for young water – the majority of the water being pumped out of the ground is more than 50 years old, indicating that it has not been affected by recharge.

Alternative # 6: The regional water system for Aamodt will take time before it grows into its demand. This would take that water before it is needed and put it into the ground to pump out later as a backup supply. The passive arroyo infiltration system is under consideration.

Ms. Borchert explained the compatibility of water having to do with geochemistry/minerals in water.

Depth to water varies in Santa Fe – around town from 200 to 300 feet and at Buckman wells it is easily 500 feet. Tano Road is at 600 feet. ASR wells typically go deeper than the water table.

Alternatives #7 - #16 deal with wastewater: surface water, wastewater and stormwater. Wastewater and stormwater are considered the two untapped resources. Alternatives #7 through #14 are being considered in the study the City is conducting with BOR to optimize the use of regional wastewater. The source of water of numbers 7, 8 and 9 are City and 10 is the County. Numbers 11-14 are small wastewater treatment facilities south of I-25 and generally the idea with those is to treat the water, obtain an EPA discharge permit and run it down the arroyo for recovery.

Number 13, Ranchlands, was isolated because Rancho Viejo pumped the waste and reinjected it in a neighboring injection well to determine how well it would work. While Rancho Viejo has an injection well ready, the quality of their wastewater is not ready. It requires advanced treatment to reach drinking water level prior to injection into the groundwater. However, at the rate of injection the system worked.

The systems in numbers 11-14 are small subdivisions that do not want to be in the wastewater business and many are failing systems that want the County to take them over. The County is considering how to pump the waste to the Quill plant located by the state penitentiary. Currently the small systems pump the waste for irrigation purposes.

The Pojoaque wastewater treatment facility, #15, was removed from the list because all of the water is used for irrigation on the golf course year-round.

Following a discussion about Edgewood's inoperable WWTF, #16, a decision was made to retain it on the list and delineate it as "premature."

Paa-Ko Ridge Subdivision which is not within Santa Fe County was noting there is controversy whether it is connected to the Estancia Basin. Paa-Ko uses their effluent to irrigate the golf course. The solids are trapped and the liquid is treated and put to use.

Alternatives #17 and #18 deal with stormwater capture: #17 is passive with a series of structure/check dams, ponds or vegetation to slow the stormwater. Alternative #18 is active with side channel ponds and deep caissons in the ground to create an underground infiltration storage area.

It was mentioned that there is a limit to the amount of water that can be dammed and it may require a permit.

Referring to a previous issue the County had with the OSE regarding the capture of roof water, Ms. Borchert said capture is allowed as long as one does not take water that would have run off the land in a pre-development condition.

Mr. Tercero said Agua Fria Village recently drilled a well and needed to conduct a 96-hour pump test and because the lot where the well was drilled was not sufficient in size to contain the water. The Village sought a permit to channel it to the Santa Fe River. The OSE denied the permit citing incompatible water. The water could not be released into the City's sewer system because it was incompatible. The County allowed for the water to be placed on County open space. Ms. Borchert said the City had a similar problem with the Cañada well and permission was finally granted for release into the Santa Fe River.

Ms. Borchert said Australia is in the forefront of exploring how to manage with less water. She provided a diagram of a combination basin infiltration and injection well system which ties into Alternatives 17 and 18. Israel and El Paso were also mentioned as being in the forefront of water management.

Chair Nylander identified three general categories from the alternatives list: Surface water from the Rio Grande; wastewater from existing systems; and stormwater. Wastewater alternatives generally cost less than pumping Rio Grande water, excluding #3.

Ms. Borchert said the small wastewater systems, La Pradera, Oshara, Las Lagunitas and Ranchlands are beating on the County's door for help with their failing systems.

Mr. Silber said a map of systems throughout the County would facilitate a more developed conversation.

Ms. Borchert said the Committee can make a broad statement that it likes the idea of trying to wastewater supplies for ASR. There appeared to be support for that broad statement.

Chair Nylander said wastewater effluent that is usually discarded could be utilized to recharge the aquifer. Ms. Hamilton strongly agreed, adding that reuse of treated wastewater should be a high priority.

Chair Nylander said he would prepare a draft document explaining the Committee's review along with a set of recommendations ranking and noting merits of the alternative projects for the BCC.

Ms. Borchert said there is $1.2 million in the County's budget allocated for an ASR project. She said her predecessor had a clear idea of how to spend the money and the Commission supported it. She supported the Committee giving guidance to the BCC on what sort of ASR projects should be considered but until the utility master plan is developed, it was Ms. Borchert's opinion that ASR is not ready for implementation.

Acknowledging that ranking is a good tool, Ms. Hamilton said it is the narrative that will inform the Commission. She suggested providing additional information on alternatives #7 and #8 would be valuable. Alternative #3, while appealing, contains political considerations.

Chair Nylander said he intended on framing each alternative with a description and pros and cons.

It was mentioned that highlighting the options that are within the City's control would be beneficial.

Mr. Tercero said his preference was #3 but that depends on the City agreeing to stop pumping their water rights. City customer water rates would rise because pumping is a cheaper source of water. Politically it may not be wise to recommend what the City should do. Chair Nylander said the alternatives would be presented to the BCC parallel to the Committee's first report recommending that the County work with the City to explore utilizing the Buckman Direct Diversion regional treatment plant to its full capacity to avoid pumping the wells including a cost/benefit analysis of doing so.

Ms. Borchert said rather than ranking, the Committee can promulgate the overall strategy of reuse of wastewater rather than choosing one.

Mr. Silber said once the report is written and circulated for the Committee's approval, it can serve as guidance to the BCC on how to use the information.

Banking on better science in the future, Ms. Simmons supported saving the aquifer and using river water and passive stormwater before implementing the ASRs.

Mr. Silber said the Committee is not an engineering firm but they can provide the BCC with guidance as how to look at ASR and part of that guidance is informing them that it is premature.

Chair Nylander said he would work with Ms. Borchert and hoped to get a document out by the end of the month in the event a November meeting was necessary.

VIII. Matters from the Committee

Mr. Silber said the Advisory Committee should be responsive to the BCC's requests. He suggested contacting the Commissioners to ascertain whether there is anything aside from what was outlined in the resolution that the Committee should focus on. Ms. Borchert said the list from the enabling resolution was sensible and broad. She suggested forwarding the resolution list to the Commissioners and asking whether they have priorities. Chair Nylander offered to write the BCC and solicit information for the 2015 work plan.

Chair Nylander said the Commissioners were very appreciative and complimentary of the Committee's previous report.

IX. Matters from County Staff

Ms. Borchert said she reviewed the County's supply and its commitments/demand for the present and future. Unfortunately the County has more water commitment than water supply. This fact concerned her greatly. The County took over a large number of City customers as part of the July 2013 annexation process. The City was to commit a transfer of water to the County. The City estimated that demand at 300 acre-feet; however, at this point is over 800 acre-feet. Former Utility Director Guerrerortiz saw the commitments and demands as a fluid process with time to get the necessary water until the full commitment is necessary. The obligations are based on signed water service agreements. She and Mr. Casaus counted lots within the service area where the County is committed to providing water as well as additional demands in bulk water agreements, approved water requests, and commitments to mutual domestics, i.e., Cañoncito, Hyde Park Estates. Her office currently has a list of over 200 af/y requests.

Ms. Borchert said that in 2002 the City of Santa Fe was in a similar situation with the demand outstripping supply. Resources were stretched through aggressive conservation. The question is whether to stop new water commitments or figure out a way to live within existing water supply. In terms of water conservation, Ms. Borchert said the recently annexed northwest sector is not as water conservation oriented as the overall County population. She added that Santa Fe's residential is use is low in comparison to the country.

X. Adjournment

Having completed the agenda and with no further business to come before this Committee, Chair Nylander declared this meeting was adjourned at approximately 9:05 p.m.

Approved by:

Charles L. Nylander

Charles Nylander, Chair

Respectfully submitted by:

Karen Farrell, Wordswork

COUNTY CLERK
GERALDINE SALAZAR
SANTA FE COUNTY NEW MEXICO

COUNTY OF SANTA FE)
STATE OF NEW MEXICO) ss

WATER POLICY ADVISORY
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I Hereby Certify That This Instrument Was Filed for Record On The 12TH Day Of May, 2015 at 09:57:40 AM And Was Duly Recorded as Instrument # 1764245 Of The Records Of Santa Fe County

Witness My Hand And Seal Of Office
Geraldine Salazar
Deputy Laura Hernandez County Clerk, Santa Fe, NM

SFC CLERK RECORD05/12/2015

List of Aquifer Storage and Recovery Alternatives in Santa Fe County

	Potential ASR Projects	Injection/ Infiltration Location	Source	Water Rights	Whose Water	Max Water Produced (afy)	Cost	Energy use	Notes	Rating (1-5)	Comments on Rating
1	RG->BRWTP-> BWF Direct Inject	Buckman well field	Rio Grande	SJC/native	SFCo + CiSF	4000	$$$	$$$	requires supplemental EIS		
2	RG->BRWTP-> New well(s)	close to BRWTP	Rio Grande	SJC/native	SFCo + CiSF	4000	$$$	$$$	requires supplemental EIS		
3	RG->BRWTP maximization--> less gw pumping	NA	Rio Grande	SJC/native	SFCo + CiSF	1200	$	$	within existing permit		
4	RG raw--> arroyo--> BWF	Arroyo Calabasa	Rio Grande	SJC/native	SFCo + CiSF	1200	$	$			
5	SF Living River Recovery	CiSF downtown SFRiver	Santa Fe River	NA	CiSF	600	$$	$$			
6	Aamodt RWS	Arroyos and river in Pojoaque Basin	Rio Grande	SJC/native	RWS Board	2500	$$$	$$$			
7	CiSF WWTF>BRWTP-> BWF Direct Inject	Buckman well field	Airport Rd WWTF	City and Co sources	CiSF	2000	$$$	$$$	requires additional treatment; assumes other water needs met		
8	CiSF WWTF->BRWTP-> New well(s)	close to BRWTP	Airport Rd WWTF	City and Co sources	CiSF	2000	$$	$$	requires additional treatment; assumes other water needs met		
9	CiSF WWTF--> lower SF River	CiSF Lopez Lane/ SF River area	Airport Rd WWTF	City and Co sources	CiSF	2000	$	$	assumes other water needs met		
10	Quill WWTF--> arroyo--> Penn wells	Hwy 14/ Upper La Cienega	Quill WWTF	SFCo	SFCo	550	$	$	if 1/2 mgd treatment plant; assumes a new WWTF is built		
11	Oshara WWTF--> arroyo	S of I-25	Oshara WWTF	Oshara/ SFCo?	Oshara/ SFCo?	20?	$0	$	after irrigation needs met		
12	La Pradera WWTF--> arroyo	S of I-25	La Pradera WWTF	La Pradera/ SFCo?	La Pradera/ SFCo?	20?	$0	$			
13	Ranchlands WWTF--> arroyo	Rancho Viejo	Ranchlands WWTF	Ranchland/ SFCo?	Ranchland/ SFCo?	50	$	$	after irrigation needs met		
14	Ranchland WWTF--> Rancho Viejo Injection Wells	Rancho Viejo	Ranchlands WWTF	Ranchland/ SFCo?	Ranchland/ SFCo?	50	$	$$	after irrigation needs met; requires additional treatment		
15	Pojoaque WWTF --> arroyo	Pojoaque Basin	Pojoaque WWTF	Pojoaque Pueblo	Pojoaque Pueblo +	?	$?	$	after irrigation needs met		
16	Edgewood WWTF-->	Estancia Basin	Edgewood WWTF	Town of Edgewood	Town of Edgewood +	?	$?	$			
17	Stormwater capture: passive	suitable arroyos and streams throughout SFCo	rain and snow	none	project entities	10s to 100s	$	-			
18	Stormwater capture: active	suitable arroyos and streams throughout SFCo	rain and snow	TBD	project entities	10s to 100s	$$	-			
19											
20								-			

Abbreviations: RG=Rio Grande; BRWTP=Buckman Regional Water Treatment Plant; BWF=Buckman well field; RWS=Regional Water System; CiSF= City of Santa Fe; SFCo; WWTF=wastewater treatment facility

Currently under consideration in a Feasibility Study to Optimize the Use of Regional Reclaimed Wastewater (Partners: CiSF, SFCo and Bureau of Reclamation)

May be considered in the above mentioned Feasibility Study

EXHIBIT 1