



Kerry Howe, *Chair*
Russell Pederson, *Vice-Chair*
Suzanne Busch
Steve Glass

Julia Maccini
Roland Penttila
Caroline Scruggs
Jennifer Thacher

Water Protection Advisory Board
c/o ABCWUA
P.O. Box 568
Albuquerque, NM 87103

Minutes: June 8, 2018
Location: Bernalillo County Public Works Division, 2400 Broadway SE, Bldg. N Conf. Room
Time: 8:30 to 10:30 a.m.

Board Members Present: Chair Kerry Howe, Vice Chair Russell Pederson, Julia Maccini, Roland Penttila, and Caroline Scruggs

Board Members Absent (excused): Steve Glass, Suzanne Busch, and Jennifer Thacher

PIC Members Present: Bart Faris, Dan McGregor, Kate Mendoza, Rick Shean, Patrick Chavez and Ken Ziegler

Guests: Meagan Oldham (ABCWUA), Bob Wessely, Mike Neas, and Alan Friedman

I. Call to Order

Chair Dr. Kerry Howe called the meeting to order at 8:33 a.m.

II. Approval of Agenda

Chair Howe requested a motion to approve the agenda. Vice Chair Russell Pederson motioned to approve the agenda and Mr. Roland Penttila seconded the motion. Motion to approve the agenda carried unanimously.

III. Approval of April Minutes

Chair Howe asked board members if there were any comments on the April meeting minutes. Dr. Caroline Scruggs and Vice Chair Pederson abstained from the minutes approval due to their absence from the April meeting. There was a motion to postpone approval of the April meeting minutes to the August meeting because there was not a quorum to approve the minutes.

IV. Approval of May Minutes

Chair Howe asked board members if there were any comments on the May meeting minutes. Chair Howe then asked for a motion to approve the May meeting minutes. Vice

Chair Pederson motioned to approve the minutes and Dr. Scruggs seconded the motion. Motion to approve the May meeting minutes carried unanimously.

V. Board Business

a. PIC Agency Updates

Mr. Dan McGregor, PIC member, told board members that there was a segment on the New Mexico Living show on Fox New Mexico that highlighted the “Scoop the Poop” initiative. Mr. McGregor shared that a link to the news story is posted on both the Bernalillo County (County) and news station website (<http://www.krqe.com/fox-new-mexico/living/bernalillo-county-s-message-there-is-no-poop-fairy-/1222387577>).

Mr. Ken Ziegler, PIC member, informed the board that the City of Albuquerque (City) is working on sharps disposal options to prevent sharps from being carried into storm drains. He mentioned that Albuquerque Fire Department spent \$90,000 in 2017 on calls to pick up sharps. Mr. Ziegler also added that the Railyards area downtown is an area of interest for cleanup for future redevelopment. Mr. Ziegler said that he noticed a pond forming in the area and the City would like to address it. The area was built up between 1914 and 1924 and there are concerns about diesel contamination in runoff.

Mr. Bart Faris, PIC member, informed the board that there was a meeting about the Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) jet fuel leak New Mexico Environment Department (NMED) 2018 Strategic Plan this week. Mr. Faris added that there will be a KAFB BFF project stakeholders meeting and technical working group meeting the week of June 11th. Mr. Faris also talked about the benefits of drone imagery for landfill surveys and how several of the City landfills have successfully been captured in images using drones with an accuracy of .0023 feet. Mr. Ziegler added that the drone imagery is very useful and helping look at runoff and water quality issues for the landfills.

Ms. Kate Mendoza, PIC member, discussed the success of the four Customer Conversations that were held by the Albuquerque Bernalillo County Water Utility Authority (Water Authority) in the month of May. There was a lot of wonderful feedback and were very fun for all. Ms. Mendoza also mentioned that the Water Authority sent out their Consumer Confidence Reports to the public in the mail. Ms. Mendoza added that the next Customer Conversation meetings will likely be hosted by the Water Authority’s compliance division this fall or winter and will focus on how to improve the Consumer Confidence Report.

b. Oil and Gas Advisory Board Recommendations:

Mr. McGregor announced that the Mid Region Council of Governments (MRCOG) executive board meeting will take place on June 14th. He asked if any board members would be willing to sit on the oil and gas advisory board the MRCOG may form to develop the regional template for an oil and gas ordinance and encouraged board

members to get ahold of him if interested. Mr. McGregor, Mr. Faris, and Ms. Diane Agnew, PIC member, all plan to attend future MRCOG meetings to assist with public outreach and technical expertise for the oil and gas ordinance template development. Mr. Faris added that members of MRCOGs Water Resources Board will likely assist with the ordinance development process as well.

c. Kirtland Air Force Base, Bulk Fuels Facility Jet Fuel Leak Project Resolution:

After the May board meeting, board members reviewed an electronic copy of the drafted KAFB BFF jet fuel leak project resolution (Resolution) and submitted changes to Ms. Mendoza to create a finalized version for board approval. Mr. Rick Shean, PIC member, told board members that the Water Authority and City met with both the Air Force and NMED about the NMED 2018 Strategic Plan and NMED removed mention of monitored natural attenuation from the document in response to Water Authority and other stakeholder comments. Mr. Penttila asked Mr. Shean if he would suggest removing the first bullet in the findings section of the Resolution because the point was addressed and Mr. Shean suggested that the point be moved to the background section. Chair Howe agreed that the point be moved to the background section and suggested that language about stakeholders being sidelined be softened. Dr. Scruggs agreed with Chair Howe and said that moving the point to the background section keeps it from being overlooked should it be presented in the future. Mr. Penttila asked if the other findings in the Resolution were still valid and Ms. Mendoza replied yes.

Mr. Faris stated that the final NMED 2018 Strategic Plan will be published with all comments from the Water Authority and other stakeholders by July 12th. He also recommended softening the wording about stakeholder sidelining. Mr. Faris added that although more cooperative efforts are being made among stakeholders, there is still more room for improvement.

Mr. Penttila asked Ms. Mendoza if she would rewrite the section since she was the original author and she responded that she could. Chair Howe asked if the changes could be made over the next month and could be voted on at next meeting. Board members agreed that time was of the essence and the Resolution should be passed sooner rather than later. Chair Howe asked for a motion to allow electronic changes to the document, vote via email to approve the Resolution, and ratify the decision at the next meeting. Dr. Scruggs motioned to approve digital changes and voting with ratification and Mr. Penttila seconded the motion. Motion carried unanimously.

VI. Presentation: Groundwater Assessment Update

Ms. Mendoza, Water Resources Specialist at the Water Authority, presented to the board the 2018 Groundwater Source Water Assessment (SWA) update. Ms. Mendoza started by explaining the history of source water protection that started in 1994 with the Groundwater

Protection Policy and Action Plan (GPPAP) and focused only on groundwater sources. In 2002, NMED completed a source water assessment for the Water Authority's wells. In 2008, the San Juan-Chama Drinking Water Plant came online and surface water was added to the Water Authority's drinking water supplies. The addition of surface water prompted the development of an all-inclusive source water protection plan and in 2009, the GPPAP became the Water Quality Protection Policy and Action Plan (WQPPAP). Last year, the Water Authority, with assistance from NMED and Daniel B. Stephens & Associates, started a Surface Water SWA and began updating the Groundwater SWA. As part of the public outreach process for the source water protection plan and SWAs, the Water Authority hosted four Customer Conversations meetings in Albuquerque to inform the public about source water protection. Additionally, the public was asked to rename the WQPPAP and the source water protection plan is now known as the Rivers and Aquifers Protection Plan (RAPP). Dr. Scruggs asked about who was responsible for the SWAs and Ms. Mendoza reiterated that the assessments were completed by NMED and the contractor, but had significant input and assistance from the Water Authority. Ms. Mendoza then explained that the purpose of updating the plan and its assessments was to inform Water Authority operations, monitoring, and planning efforts to protect source water from potential contamination and provide excellent quality water to customers. She mentioned that Surface Water SWA is currently under internal review and that both the Groundwater and Surface Water SWAs should be finalized this summer. Ms. Mendoza added that the RAPP is still being developed and a draft should be available for board review in July.

Ms. Mendoza showed the board an example of one of the 83 wells that were analyzed in the Groundwater SWA and pointed out the source water protection area that consists of four different buffer zones, A through D, that were examined to identify potential sources of contamination (PSOC) around the wellhead. She explained that although the NMED recommends examining a 1,000 feet zone around a wellhead, the Water Authority decided to go out to 2,640 feet (½ mile) for each well.

Ms. Mendoza defined susceptibility and explained that it is a determination of the risk of each source (e.g., well) to contamination and is a result of a well's sensitivity and vulnerability. Ms. Mendoza explained that the susceptibility of each well will be used to inform Water Authority policies, operations, monitoring, and agency coordination for public outreach and protection of source water. Each well is given a sensitivity score that is a combination of a well's productivity, infrastructure condition, and operation criticality as assigned by Water Authority engineers from the Well Asset Management Plan. The sensitivity score also includes a hydrogeology score that considers the location of the well screen in relation to the A2 clay unit in the aquifer. The hydrogeology score considered that the A2 clay unit acts as a barrier for contamination between the shallow aquifer and the deeper production zones. Ms. Mendoza showed the board a graphic of different types of PSOCs and discussed the different potential sources.

Ms. Mendoza told the board that oil and gas were also discussed as PSOCs in the Groundwater SWA. The Office of the State Engineer (OSE) and Oil Conservation Division (OCD) databases keep track of oil and gas extraction permits in New Mexico and are being reviewed by the Water Authority on a regular basis. Additionally, the Water Authority also reviewed Albuquerque Basin literature for oil and gas reserves, hydrogeology, etc. to better understand potential impacts of oil and gas extraction operations within the Albuquerque

Basin. Ms. Mendoza said that Ms. Agnew is the point of contact for oil and gas discussions with the Water Authority. Overall, the Water Authority concluded that since there are no oil and gas operations currently occurring in the Albuquerque basin, there is no immediate risk to the Water Authority's groundwater supply.

Ms. Mendoza showed the board an example of three wells in close proximity that had intersecting source water protection areas. Each source water protection area had four zones: Zone A is 0-200 feet from the wellhead, Zone B is 200-500 feet, Zone C is 500-1000 feet, and Zone D is 1000 feet to 2,640 feet ($\frac{1}{2}$ mile). Ms. Mendoza explained how the vulnerability analysis examined land use around each well and identified PSOCs such as automotive shops, dry cleaners, and gas stations in the source water protection areas for each well. Chair Howe asked for some clarification of the scoring methodology for the vulnerability analysis and Ms. Mendoza further explained that the vulnerability scores were a combination of the PSOC Risk score, Proximity to the Source, and the number of PSOCs present. The PSOC Risk score is a sum of the probability that a contamination event may occur and the severity of potential contamination impact, scored on a 1-10 scale, for each type of PSOC. The proximity score considers how close a PSOC is to the wellhead and is scored from 1 to 5 with a 1 representing PSOCs in Zone D and 5 representing a known source of contamination to a well. The PSOC count score considered the actual number of PSOCs in each source water protection area, by zone. Mr. Penttila asked if the scoring methodology was explained in detail in the assessment so the assessment could be updated in the future. Ms. Mendoza added that her and Ms. Agnew's intent with the assessment were to take an objective approach so that someone unfamiliar with the project could recreate the assessment and get the same results. Ms. Mendoza said that after generating scores for all of the wells, there were several iterations to make sure the process was repeatable and produced rational answers. Mr. McGregor asked how major sewer facilities such as lift stations were being included in the analysis and Ms. Mendoza replied that Water Authority infrastructures were removed from the analysis but agreed that Mr. McGregor had a very good point and lift stations and related infrastructure should have been part of the analysis. Ms. Mendoza said that she would note this oversight and add it to the list of suggested improvements for future analyses. There was then an open discussion about septic systems and how they were included in the analysis. Ms. Mendoza said that the analysis included septic systems with permits from County and City, but recognized that there could be additional septic systems that exist without proper permits. Mr. McGregor was concerned that septic systems were scored too high in the analysis because the impact of contamination that was assessed was for municipal wells that are typically much deeper than domestic wells and therefore less susceptible to contamination. Ms. Mendoza said that the scoring was broad enough to account for wells with very long screen intervals and was a conservative approach.

Ms. Mendoza showed the board a chart of how the susceptibility rankings compared to the number of PSOCs at each well and the vulnerability ranking for each well. She told the board that the height of the colored bars showed how many PSOCs were present at each well and the grey bars represented the vulnerability score that each well received. She added that the color of the bars represented the susceptibility score for each well with green being low and red being high. Ms. Mendoza discussed the results shown in the charts and pointed out an example of a source water protection area with a large number of

private wells in the source water protection area. She explained that although a given water supply well could have a high number of low-risk PSOCs (such as private wells), she wanted to ensure that the ranking methodology was designed to account for these types of occurrences so scores were not biased unnecessarily high. After looking at the charts, Dr. Scruggs suggested adding additional labels to the charts for clarification and Ms. Mendoza said that she would make those edits to the charts.

Ms. Mendoza gave the board an overview of the susceptibility scores for the analysis and explained how the sensitivity and vulnerability rankings determined the susceptibility score for each well. Each well was assigned a susceptibility of low, moderately low, moderate, moderately high, or high. Ms. Mendoza added that the susceptibility rankings are conservative and favor the ranking that is the higher susceptibility ranking (higher potential for contamination) for each source.

Ms. Mendoza then discussed the recommendations that the Water Authority developed based on the results of the Groundwater SWA. Recommendations were grouped into multiple categories including priority contamination sites, monitoring and coordination, ordinance and policy actions, agency coordination, and source water protection outreach. Ms. Mendoza added that the Water Authority was pleased to find that many of the conclusions from the assessment supported source water protection efforts the City, County, and Water Authority were already implementing. Additional recommendations from the assessment are meant to further improve the source water protection program.

Chair Howe asked why the Laun-Dry environmental site was not included on the list of priority contamination sites and Ms. Mendoza replied that it was more than two miles from the nearest well. Chair Howe asked for clarification in the criteria for selecting priority sites in the assessment and Ms. Mendoza replied that that would be an excellent addition and the change would be added to the Groundwater SWA. Mr. Penttila suggested for PIC agencies do outreach to PSOCs such as dry cleaners to discuss best management practices and educate smaller shops on source water protection. Board members discussed dry cleaners as PSOCs and the chemicals involved in the dry cleaning process. Mr. Ziegler and Mr. Faris said that many dry cleaners use a closed system where chemicals are reused and carefully tracked to ensure harmful chemicals are not exposed to workers or the environment. Chair Howe then asked about gas stations and leaking underground storage tanks. Ms. Mendoza said that the Water Authority would also like to see groundwater contamination footprints for leaking underground petroleum storage tanks in addition to solely the location the analysis includes now. Ms. Mendoza added that NMED is notorious in the nation for surprise inspections on storage tanks and it has resulted in a robust program to protect groundwater from leaks. Dr. Scruggs asked if there are funds for gas stations and semi-conductor manufacturers like there are for the dry cleaners and Mr. Faris replied no, but many companies like General Electric, Sparton Technologies, and Gulton have been identified as the responsible party for remediation and must clean up the contamination.

Ms. Mendoza told the board about some of the lessons her and Ms. Agnew have learned during the project and discussed some of the changes they would make for future assessments. Ms. Mendoza discussed the importance of data quality and the difficulties in combining multiple data sets from different sources. She explained the importance in

having a robust quality assurance and quality control process that results in iterations of the assessment and takes a significant amount of time. Ms. Mendoza suggested that future assessments use data directly from Google Maps to get the most up-to-date land use information for the analysis. She also discussed the importance of selecting wells and sites for analysis for the utility. This Groundwater SWA analyzed wells identified as active or inactive but operational by Water Authority engineers. Ms. Mendoza suggested that potential well locations could be added to the assessment for determining the best locations for future utility assets.

Ms. Mendoza told the board about the short-term and long-term goals for the Groundwater SWA. Short-term updates and goals included, dataset updates including septic systems and Water Authority wastewater assets, linking the Well Asset Management Plan with the Groundwater SWA, partnering with the City and County to host source water protection days, and presenting the results to the Water Authority Governing Board in August. The long-term goals included, defining the capture zones for each well and establishing formal source water protection areas to be recognized by the City and County. Ms. Mendoza said the long-term goals will ideally be completed with the five-year update of the source water protection plan and corresponding assessments.

Ms. Mendoza concluded the presentation by reminding the board that the RAPP draft is being developed and will be distributed to the WPAB in July 2018 followed by a public comment period in August 2018. Board members were pleased with the amount of detail and work on the project and provided kudos to Ms. Mendoza. In regards to one of the recommendations from the Groundwater SWA, Ms. Julia Maccini said there should be a goal of due diligence and to review Phase 1 Environmental Site Assessments when working with brokers and buyers. Ms. Maccini explained that the state cannot control how property is purchased and results in buyers not typically conducting a Phase 1 Site Assessment for properties although it would be to the buyer's benefit to complete one. Ms. Maccini suggested to Ms. Mendoza to do outreach with the Commercial Association of Realtors New Mexico, lenders, title companies, etc. to get the best results for protecting property buyers from inheriting environmental sites and going bankrupt.

VII. Other Board Business

Ms. Mendoza reviewed the future deadlines for WPAB to provide comment on the Surface Water SWA and RAPP. Ms. Mendoza said that the Surface Water SWA is being wrapped up and should be submitted to the board for review during the week of June 18th or June 25th. She told board members she anticipates having a draft of the RAPP by the end of June or early July. Ms. Mendoza asked for any comments from the board to be submitted to herself and Ms. Agnew by end of July so that changes can be incorporated before the August WPAB meeting.

VIII. Public Comment Period

Mr. Bob Wessely, citizen of Sandoval County, came to speak about his concern with Sandoval County oil and gas development. Mr. Wessely apologizes for the redundancy of the subject, but reiterates how a company had come in a few years ago to drill outside of Rio Rancho and purchased the mineral rights lease. Mr. Wessely said that the Sandoval County citizen's advisory group (about 18 people) formed in January to rework the oil and gas ordinance for the county. Mr. Wessely expressed how he thinks that Albuquerque, and the Water Authority, should be concerned for how these possible future actions in Sandoval County could affect downstream users and that the Water Authority should consider Sandoval County as a PSOC. Mr. Wessely encouraged the board to stay engaged on what is happening in Sandoval County. Mr. Penttila stated that the board is interested and has been keeping track of the oil and gas ordinance development in Sandoval County. Mr. Penttila added that the MRCOG meeting on June 14th will mark the beginning of the oil and gas ordinance development process for the Middle Rio Grande regional area. Mr. David Craig, citizen of Sandoval County, added that Mr. Wessely is a part of the Sandoval County citizen's advisory group.

Mr. Mike Neas, citizen of Sandoval County, discussed the hundreds of houses in North Albuquerque Acres that have septic tanks and personal wells on one-acre plots and he was pleased to see those were acknowledged in the groundwater assessment. Mr. Neas stated that he looks forward to reviewing the surface water component of the new source water protection plan and how it addresses fire and oil and gas operations in the watershed. Mr. Neas gave the board an open invitation to come on a tour of his land on the Rio Chama and that he would be happy to show folks where our water comes from and some of the threats in the watershed including overgrown forests. Mr. Neas then asked for some clarification as to why the Water 2120 document does not have the words "oil and gas" in it. He acknowledged that the groundwater assessment addresses oil and gas as a known threat and understands that it is not an immediate threat right now. Mr. Neas said he was aware that the City and County are working to develop ordinances for the future, and that the MRCOG will also be addressing these issues for the future, but his biggest concern is ensuring oil and gas will be addressed in future ordinances. Mr. McGregor responded to Mr. Neas by explaining that the RAPP is the latest version of the WQPPAP and that the RAPP will be the updated version. Mr. McGregor added that the RAPP will be the document that the City and County will refer to in order to address threats to source water. In regards to the oil and gas ordinance, Mr. McGregor stated that the County does not want to get ahead of the MRCOG and that the MRCOG will be creating an ordinance template for everyone in the region. Mr. McGregor said the concept is for MRCOG to create the regional template for individual entities in the region to use to format their ordinances so protections are consistent in the region and adoptable in an acceptable format for each entity. Mr. McGregor concluded by stating that the City and County ordinances will likely not be identical in protection plans, but will certainly have commonalities.

Mr. Alan Friedman, citizen of Sandoval County and member of the Sandoval County citizen's advisory group, asked if the risk ranking analysis used for identifying PSOCs was in place 30 years ago, would it have affected how the KAFB BFF jet fuel leak was identified and remediated. Mr. Penttila stated that it may have been part of a threat assessment, but since the source area of the jet fuel leak is not within half a mile of any drinking water supply wells, it may have not been identified for quite some time. Mr. Penttila used the example of the Laun-Dry contamination plume and how it is on the radar now even though

it is not in the ½ mile radius of a well. He also reiterated that the Water Authority samples more frequently than required to ensure drinking water is always safe. Chair Howe stated that people forget about the many other issues beyond the KAFB BFF jet fuel leak. The legacy environmental issues are the issues to keep track of and promote remediation. Ms. Mendoza explained that best management practices were not priorities for many industries and have since become more standard practice to prevent environmental harm. Mr. Wessely asked what makes folks follow the rules when they already have all the sensors and protections in place and Chair Howe responded that regulations and enforcement provide protections. Mr. Penttila continued to state that financial liability for not following regulations helps deter poor decisions. Mr. Faris cited an example of poor management decisions that resulted in the South Valley Superfund Site where three drinking water wells were impacted and abandoned due to contamination.

IX. Adjourn

Chair Howe asked for a motion to adjourn. Ms. Maccini motioned to adjourn the meeting and Mr. Penttila seconded the motion. Motion to adjourn the meeting passes unanimously. The meeting was adjourned at 10:28 a.m.