



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

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Minutes: May 11, 2018  
Location: Bernalillo County Public Works Division, 2400 Broadway Blvd. SE  
Time: 8:30 to 10:30 a.m.

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**Board Members Present:** Chair Kerry Howe, Vice Chair Russell Pederson, Suzanne Busch, Julia Maccini, Roland Penttila, Caroline Scruggs, and Jennifer Thacher

**Board Members Absent (excused):** Steve Glass

**PIC Members Present:** Diane Agnew, Liz Anderson, Shellie Eaton, Bart Faris, Mark Kelly, Dan McGregor, Kate Mendoza, Rick Shean, Kathleen Verhage, and Ken Ziegler

**Guests:** Andre Ritchie (USGS) and Andrew Robertson

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**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. Mr. Roland Penttila motioned to approve the agenda and Ms. Suzanne Busch seconded the motion. Motion to approve the agenda carried unanimously.

**III. Approval of Minutes**

Chair Howe asked board members if there were any comments on the April meeting minutes that were emailed to the board. Since hard copies were not available for the meeting, the board postponed the approval of the April meeting minutes until the June meeting.

**IV. Board Business**

**a. PIC Agency Updates**

Mr. Ken Ziegler and Mr. Bart Faris, PIC members, informed the board that Water Quality Control Commission (WQCC) deliberations on the proposed changes to the groundwater quality standards had been postponed for later this summer. The postponement was because all parties who submitted testimonies disagreed with the findings report generated by the hearing officer. Each party will be revising the report for resubmission to the WQCC in June.

Mr. Ziegler told the board that the Laun-Dry Supply Co. groundwater contamination site was working on installing the remediation barrier at the site during the first week of May. The remediation barrier is created with “plume-stop” which is primarily activated carbon with biological amendments. Mr. Faris added that a regional monitoring well, located at 8<sup>th</sup> St. and Haines, had measured a concentration of 320 micrograms per liter (µg/L) of trichloroethylene (TCE) about a mile and a half from the source area.

Chair Howe asked if Bernalillo County (County) had any updates for the WPAB and Ms. Kali Bronson, PIC member, said that the County did not have any updates. She reminded the board about the EPA Region 6 Stormwater Conference that will be in Albuquerque in August 2018.

Ms. Diane Agnew, PIC member, told the board about the Customer Conversation meetings the Water Authority is hosting during the month of May. Ms. Agnew said that there have been two meetings already, one in the South Valley on May 1<sup>st</sup> and one at the Manzano Mesa Multi-Generational Center on May 8<sup>th</sup>, and that both meetings were successful. She added that the meeting in the South Valley had a lot of questions about the proper disposal methods for household hazardous waste and pharmaceuticals. The meeting at Manzano Mesa had a lot of questions about fracking in the Middle Rio Grande. Ms. Agnew told the board that the Manzano Mesa meeting had many additional people show up in addition to people already registered for the full meeting because many customers attended a presentation by Don Phillips, geologist, about fracking the day before the Customer Conversation meeting. Ms. Agnew said she is tracking oil and gas permits in the Middle Rio Grande and said that Water Authority staff are working with local agencies, including the PIC, to be proactive on the oil and gas issue.

#### **b. Discussion of letter on Kirtland AFB Bulk Fuels Facility jet fuel leak**

Ms. Agnew recused herself from the conversation. Mr. Rick Shean, PIC member, led a discussion about the Kirtland Air Force Base (AFB) Bulk Fuels Facility (BFF) jet fuel leak project (BFF project) and the development of a resolution for the board to adopt. Mr. Shean shared that the resolution as proposed was prepared by PIC agency members including the City of Albuquerque (City), County, and Water Authority. Mr. Shean explained that the resolution would memorialize the feelings and stance of the board and the entities for which it represents. Mr. Faris added that the City, County, and Water Authority are in concert with the resolution as it is drafted. Chair Howe stated that the board typically sends letters and the resolution would certainly represent a different perspective. Mr. Shean added that letters are addressed to specific people and this resolution would be available to a broader audience. Ms. Busch asked who the audience would be and Mr. Shean stated that the resolution would be forwarded to the

City, County, Water Authority, and the New Mexico Environment Department (NMED). Mr. Faris said that the resolution could impact other groups and adopting the resolution is up to the board. Chair Howe stated that a letter to NMED could also be public and Mr. Faris clarified that a resolution is a strong statement of position and recommendation. Dr. Caroline Scruggs asked if the resolution is public record and Mr. Shean stated that yes, it would be public record. Mr. Shean added that the resolution, if passed by the board, could be given to the Water Authority governing board as a statement, not asking them to make a resolution of their own. Mr. Penttila asked if the board can advise anyone else besides the Water Authority and Mr. Shean said the WPAB advises the City, County and Water Authority, but the board can influence other bodies with letters of support, for example. Mr. Penttila asked about sharing the resolution with the City and the County and Mr. Faris clarified that the Water Authority is the big player in the BFF project because they are the key water management stakeholder and protection of the water resources supply lies with the Water Authority. Mr. Faris further explained that the jet fuel spill does impact the City, but only in ways related to land management, such as rights-of-way. Mr. Faris asked Ms. Julia Maccini to review the board by-laws and see if a resolution is in line and Ms. Maccini replied that yes, if resolutions have been created in the past, then a resolution is certainly in line with precedence. Mr. Penttila asked how much money the Air Force has spent on the BFF project to date and Mr. Faris replied that there has been approximately \$130 million spent on BFF project remediation activities. Dr. Jennifer Thacher said that the BFF project is a very serious issue and a resolution provides a notion of seriousness that is warranted. Board members said they would work on revising the draft resolution for the June 8<sup>th</sup> board meeting and PIC members said they would be available for questions and support should the board need it.

2018 KAFB BFF Project Strategic Plan: <https://www.env.nm.gov/kafbfuelplume/kafb-fuel-plume-documents/>

## **V. Groundwater Assessment Update**

Ms. Agnew told the board that she and Ms. Mendoza have been working on the update to the Water Quality Protection Policy and Action Plan (WQPPAP) that includes both a surface water assessment and a groundwater assessment. Ms. Agnew said the plan will likely be renamed the Rivers and Aquifers Protection Plan (RAPP) based on public opinion from Customer Conversations meetings. Ms. Agnew said that drafts of both the groundwater and surface water assessments will be ready for the board to review in May and June, respectively. Comments on the groundwater assessment will be due to Ms. Mendoza by June 1<sup>st</sup>. Ms. Agnew added that the Water Authority will be developing recommendations from the results of the assessments and document for the board to review.

Ms. Agnew continued the discussion about the groundwater assessment by showing the board a preliminary map of the source water protection areas and groundwater contamination plumes in the Albuquerque area. Ms. Agnew then showed a map of the Lomas well field and explained how the final susceptibility determinations are made for

each well. Ms. Agnew explained that the susceptibility score is a combination of the source's sensitivity and vulnerability, while the sensitivity score for a well considers the well infrastructure and hydrogeology. Ms. Agnew added that the vulnerability score for a well examines all known sources and potential sources of contamination (PSOCs) in the source water protection area, defined as 0.5 mile from the wellhead for the groundwater assessment. Each type of PSOC (e.g., dry cleaners, gas stations, industrial facilities, etc.) is assigned a risk score based on the potential contaminates a site may have and the potential fate those contaminates may have in groundwater. Once each type of PSOC is scored, an inventory of PSOCs around each well is completed and the vulnerability is calculated by summing the risk score for each PSOC, the proximity to the well, and the number of PSOCs present in the source water protection area. Ms. Agnew further explained that PSOCs that span multiple protection zones are counted in each zone that they occur; with Zone A being 0-200 feet from the wellhead, Zone B is 200-500 feet, Zone C is 500-1,000 feet, and Zone D is 1,000 to 2,640 feet.

Dr. Caroline Scruggs asked if Ms. Mendoza and Ms. Agnew are examining both active and inactive wells and Ms. Agnew explained that they are examining all wells that are currently active and have the potential to be used in the near future. Ms. Agnew said that if the well has been plugged and abandoned according to state law then it was not included in the analysis. Ms. Agnew explained that the Water Authority used the well scoring system from the Water Authority's Well Asset Management Plan to build the rankings in the sensitivity analysis and the results from the groundwater assessment will be integrated into the Well Asset Management Plan. Ms. Maccini asked how many wells were being examined as part of the assessment and Ms. Agnew replied that there are 82 wells being assessed.

Ms. Agnew told the board that she and Ms. Mendoza are meeting with City Councilors Pat Davis and Diane Gibson and County Commissioner Maggie Hart Stebbins on May 30<sup>th</sup> to discuss the results of the groundwater assessment. As part of this discussion, Ms. Agnew expects to talk about oil and gas in the Albuquerque Basin. Ms. Agnew informed the board that she is tracking the oil and gas permits near the service area and noted that there is one permit near Corrales Well 9 that she will continue to track. Dr. Thacher asked how oil and gas was being incorporated into the groundwater assessment and Ms. Agnew explained that the source of oil and gas in our basin is the Mancos Shale. Ms. Agnew also said that the Water Authority did a thorough search for permitted oil and gas wells in the Albuquerque Basin as well as additional research on oil and gas resources in the basin to include in the discussion of PSOCs in the groundwater assessment. Ms. Agnew said that the groundwater assessment will recommend an ordinance be developed for protection of water resources during oil and gas operations in the basin and the assessment will also include a discussion about hydraulic fracking in a highly fractured basin like the Albuquerque Basin.

Dr. Thacher pointed out that only stationary risks can be mapped as PSOCs and noted that there could be mobile risks that could cause contamination. Dr. Thacher asked how mobile risks were documented as part of the assessment. Ms. Agnew told the board that the Water Authority hopes the next update will include capture zones for each well. Ms. Agnew added that the assessment treats PSOCs as stationary because it is difficult to map mobile sources. Ms. Mendoza added that the discussion of PSOCs in the groundwater assessment would be where mobile risks are discussed.

Dr. Scruggs asked about how the transportation of hydraulic fracking produced water in the basin was incorporated into the assessment and Ms. Agnew said that that information is in the surface water assessment. Ms. Agnew added that a result of both assessments would be to clarify the notification chain for spills and other source water protection issues. Ms. Agnew also said that major roads are counted as PSOCs and they are counted in every zone for which they occur. Ms. Agnew showed the board an example from the vulnerability assessment that helped clarify how the calculations were completed for each well. Mr. Penttila asked if cemeteries were included as PSOCs and Ms. Agnew replied that they were. Dr. Scruggs asked about the data mining process for completing the assessment and Ms. Agnew elaborated on the data sources, the process for developing the maps and tables for the analysis, and the review process for refining the final results for the assessment. Ms. Agnew added that the Water Authority could share the resulting data with NMED and their database (see the Drinking Water Bureau's [EnviroMap](#)) could be improved as a result.

## **VI. Presentation: MRG Surface Water Quality Monitoring**

Mr. Andre Ritchie, hydrologist with the U.S. Geological Survey (USGS) at the Water Sciences Center, told the board about the surface water quality monitoring the USGS performs annually for the Water Authority. Mr. Ritchie told the board that the monitoring program started in 2004 with samples being collected at Taos, Chamita, Otowi, Cochiti, San Felipe, Jemez, and Alameda gages; all above the Water Authority's San Juan-Chama Project diversion. Mr. Ritchie said that the active sampling sites are Cochiti, Jemez, and Alameda and those sites have been sampled regularly since 2010. Mr. Ritchie explained the purpose of consistent monitoring is to establish background water quality data to use for comparisons and trend analysis.

Mr. Ritchie discussed the potential factors affecting water quality including snowmelt, irrigation diversions, rainfall, urban runoff, tributary inputs, wastewater inflows, groundwater inflows, evapotranspiration, and reservoir operations on the Rio Grande. To account for some of these factors influencing water quality, Mr. Ritchie said the USGS has established three sampling periods: 1) spring snowmelt and runoff that typically occurs from March through June (snowmelt) 2) summer irrigation and monsoon season that occurs from July through October (irrigation) and 3) fall and winter baseflow occurring from November to

February (baseflow). Mr. Ritchie showed the board a list of all the constituents that are sampled for the monitoring program that included major elements, trace elements, nutrients, and other special compounds of interest. Mr. Ritchie explained the acronyms used for sampling including the units for detection (e.g., milligram per liter [mg/L], µg/L, and maximum contaminant level [MCL] etc.).

Mr. Ritchie presented the board with the preliminary summary of results that included both inorganics and physical properties. Mr. Ritchie stated that no inorganic constituents have exceeded the MCL in filtered samples from the Rio Grande at Alameda and there have been no exceedances for the aquatic life standards at the Alameda sampling point indicating that water quality is appropriate for aquatic life. Mr. Ritchie noted that there have been drinking water standard exceedances for total dissolved solids (TDS), sulfates, and pH at the Alameda sampling point during the irrigation season. Chair Howe asked about the number of samples that exceeded the drinking water standards and Mr. Ritchie replied that roughly 1 out of 45 total samples had an exceedance and the only exceedance for pH occurred in each sampling season (baseflow, snowmelt, and irrigation) prior to 2010. Mr. Ritchie added that there was a sulfate exceedance in the same sampling event as pH exceedance during the irrigation season. Chair Howe clarified to the board and Mr. Ritchie that these sampling results are being compared to the finished drinking water standards. Chair Howe asked what the turbidity for that particular sample was and Mr. Ritchie replied that he did not know the exact number, but noted that the turbidity was high.

Mr. Ritchie showed the board results for the Cochiti gage sampling. Mr. Ritchie noted that there were exceedances occurring during the snowmelt season and the secondary drinking water standard MCLs were exceeded twice; once for pH and once for manganese. Mr. Ritchie showed the board the results for the Jemez sampling and pointed out that the Jemez sampling location is only sampled during the snowmelt season because it does not flow year-round. Mr. Ritchie said there are typically many exceedances of the secondary drinking water standard MCLs for pH, TDS, and arsenic at this location. One sample from 2015 exceeded the secondary MCL standards for aluminum and iron.

Mr. Ritchie reiterated that there have been no exceedances for drinking water standards at the Alameda and Cochiti gages, but the highest values for constituents occur during the irrigation season sampling event. Mr. Ritchie added that the radiochemistry have no exceedances for MCLs, but the highest values occur during the irrigation and baseflow seasons.

Mr. Ritchie told the board about the organic compounds sampling for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and wastewater indicator compounds. Mr. Ritchie said that there have been no pesticides (plus gross PCBs) detected. There has been one VOC detection at Alameda; 8 SVOCs detected at Alameda and 3 SVOCs detected at Cochiti; and 35

wastewater indicators detected at Alameda and 28 wastewater indicators detected at Cochiti. Mr. Ritchie said that there was a sample at Cochiti during the 2017 irrigation season that had a detection of phthalate. Dr. Scruggs asked if USGS had looked into any potential sources for that particular contaminant and Mr. Ritchie replied that they have not.. Mr. Ritchie showed the board the results for the VOCs and SVOCs and Chair Howe asked about the 1000 µg/L toluene MCL because it seemed high. Chair Howe said that the results appear to be high or may have the wrong units attached. USGS clarified that the MCL for toluene is 1 mg/L. Mr. Ritchie then showed a table of the wastewater indicator compounds and indicated that there is a similar baseflow and irrigation season pattern of maximums.

Mr. Ritchie concluded his presentation by reiterating that there have been no drinking water standard exceedances of MCLs and some infrequent secondary drinking water standard MCL exceedances for TDS, sulfates, pH, and manganese. He added that the Jemez River regularly exceeds the MCL for arsenic, pH, and TDS. Mr. Ritchie said that the concentrations for inorganic compounds are largest during the snowmelt and irrigation seasons at Alameda and largest during the snowmelt and baseflow seasons at Cochiti. Mr. Ritchie said that future work includes continuing seasonal surface water sampling and further analyzing the surface water quality data including trends in contaminants, comparison of trends with other basins, and examining how concentrations of constituents change over time. Mr. Ritchie concluded his presentation and asked for questions. Chair Howe asked if the Cochiti sampling location was the northernmost sampling point and Mr. Ritchie replied that it is. Mr. Ritchie added that there is historical water quality sampling data for Otowi and Taos from 2004 to 2010 but those locations have been phased out of the current sampling program because USGS feels that they have a good idea of baseline water quality at those locations.

More information on water quality data for New Mexico can be found on the USGS website: <https://waterdata.usgs.gov/nm/nwis/nwis>

## **VII. Board Discussion of Presentations**

Mr. Penttila asked if there was a raw water standard and board members clarified that the surface water quality monitoring results are screened and compared to drinking water standards because that is what the water is used for. It was mentioned that other basins examine the aquatic life standards because they do not utilize surface water for drinking water. Ms. Bronson said that there are surface water standards for pueblos and aquatic life that the MS4 stormwater permittees must adhere to for their permit. Ms. Bronson added that the EPA is looking at PCBs in Rio Grande silvery minnow fish tissue and reiterated that aquatic life standards matter. Mr. Faris added that the Rio Grande silvery minnow is threatened because of quantity problems, not quality problems. Ms. Agnew also clarified that the USGS data is to support the Water Authority in diversions. She also added that she too was curious about the 13 µg/L of phthalate measured at Cochiti during the irrigation season of 2017 and Mr. Faris said that it is a plasticizer and could be a result of gluing

agricultural pipes or other pipes right above the sample area. Mr. Ritchie said that the 2018 irrigation sample will be collected in a few months at the same location.

## **VIII. Other Board Business**

Chair Howe said there was discussion at the last meeting about the BFF project and Ms. Agnew being recused from the discussion. Chair Howe said they discussed the “cooling off” period when professionals transition to work for a new agency that deals with the same projects, such as a transition from NMED to the Water Authority and working on BFF project that both agencies work together on. Chair Howe said that there was agreement among Water Authority staff that Ms. Agnew’s recusal from working on the BFF project was not a threat to water quality in the basin because there are other great people working on the BFF project from the Water Authority and other agencies.

Chair Howe received a letter from the New Mexico Department of Transportation (NMDOT) about the oil and gas letter that the board mailed to members of Mid-Region Council of Governments (MRCOG). The letter stated that the board should contact someone else, not NMDOT, about appointing professionals to the advisory group that may be created for the development of a regional oil and gas ordinance.

Mr. Dan McGregor, PIC member, told board members that the MRCOG executive board is comprised of multiple entities from around the Albuquerque Basin and they met on May 10<sup>th</sup>. Mr. McGregor said that he attended the MRCOG executive board meeting to answer questions on the oil and gas letter that the WPAB sent in April. Mr. McGregor indicated that the oil and gas letter from the WPAB was favorably received by the MRCOG executive board and the subject will be discussed at the MRCOG full board meeting in June. Mr. McGregor said that there were a few questions about the letter at the May 10<sup>th</sup> meeting and suggested that someone from the WPAB attend the June meeting to answer any additional questions, including clarification from the WPAB on what it is the WPAB wants the MRCOG board to do. He said there were also questions from the MRCOG executive board about what aspects of oil and gas production the state regulates and what aspects, if any, local entities can control for the oil and gas issue. Mr. McGregor suggested that the WPAB come up with a list of agencies to comprise the advisory group for the oil and gas ordinance to present to the MRCOG board in June and suggest that the oil and gas ordinance development be sent to the water resources board, of which Mr. Steve Glass is the chair.

Ms. Agnew provided an update on the Customer Conversations meetings the Water Authority is hosting for public outreach for the source water protection program. Ms. Agnew stated that the next meeting is May 16<sup>th</sup> at the Don Newton Community Center and the last meeting is May 30<sup>th</sup> at the North Domingo Baca Multigenerational Center. Mr. Penttila shared that he attended the May 8<sup>th</sup> meeting and suggested that everyone from the PIC and WPAB should attend a meeting because the Water Authority put on a great presentation. Mr. Penttila said that it is great that the Water Authority received the Exemplary Source Water Protection Plan Award for 2018 from the American Water Works Association (AWWA) and got to share that with the public at these meetings. Mr. Shean said that it was a stiff competition this year and that there are AWWA and ASTM standards that should be met in order to receive the award. Mr. Faris asked about board members attending the Customer Conversations and Ms. Agnew replied that board members are



welcomed and encouraged to attend. Mr. McGregor asked about the comments on household hazardous waste and prescription disposal from the meeting in the South Valley on May 1<sup>st</sup>. Ms. Agnew said that customers were encouraged to call 311 if they have specific concerns related to source water protection. Ms. Agnew said that customers were concerned that stormwater goes back to the river directly without treatment and it was very clear to customers by the end of the meeting that pouring things down storm drains in the street goes to the river. Ms. Agnew said that the Water Authority will likely be teaming up with the City and County to do a household hazardous waste disposal and prescription take-back day as a result of the Customer Conversations. Ms. Bronson said how the follow-up questions for each activity will be useful to understand how to best outreach source water protection events. Ms. Bronson said the County contributes money towards the household hazardous waste disposal facility and Ms. Kathy Verhage, PIC member, added that the City hosts two household hazardous waste disposal events each year in addition to the regular hours the facility is open year-round. Mr. McGregor said the County has targeted neighborhood cleanup events to host a household hazardous waste disposal mobile unit and it is typically not well attended. Ms. Maccini said that she lives in the County, not the City, and that she had been turned away from the household hazardous waste facility. Both Mr. McGregor and Ms. Bronson said that should not happen and the facility has been told to accept items from City and County residents. The County and City entities were particularly interested to see the results of Customer Conversation outreach methods and they are looking forward to a discussion on the results from the meetings this summer.

#### **IX. Public Comment Period**

No members of the public attended the meeting.

#### **X. Adjourn**

Chair Howe asked for a motion to adjourn. Mr. Pederson motioned to adjourn the meeting and Mr. Penttila seconded the motion. Motion to adjourn the meeting passes unanimously. The meeting was adjourned at 10:18 a.m.