



Kerry Howe, *Chair*  
Steve Glass, *Vice-Chair*  
Suzanne Busch  
Camilla Feibelman  
Julia Maccini

Roland Penttila  
John Pietz  
Roberto Roibal  
Caroline Scruggs

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

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Minutes: May 10, 2019  
Location: Bernalillo County Public Works Division, 2400 Broadway SE, Bldg. N Conf. Room  
Time: 8:30 to 10:30 a.m.

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**Board Members Present:** Dr. Kerry Howe, Steve Glass, Julia Maccini, John Pietz, Roberto Roibal, Dr. Caroline Scruggs, Suzanne Busch, Camilla Feibelman, and Roland Penttila

**Board Members Absent (excused):** None

**PIC Members Present:** Diane Agnew, Liz Anderson, Kate Mendoza, Dan McGregor, Kali Bronson, Ken Ziegler, and Kathleen Verhage.

**Guests:** Andrew Roberts, Andre Ritchie, Zach Shepard, and Kim Beisner (U.S. Geological Survey)

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**I. Call to Order**

Chair Dr. Kerry Howe called the meeting to order at 8:32 a.m.

**II. Approval of Agenda**

Chair Howe requested a motion to approve the agenda. Vice-chair Steve Glass moved to approve the agenda and Mr. Roland Penttila seconded the motion. Motion to approve the agenda carried unanimously.

**III. Approval of Meeting Minutes**

Chair Howe asked board members if there were any comments on the April meeting minutes and board members had no additional edits. Vice-chair Glass moved to approve the April meeting minutes and Mr. Roberto Roibal seconded the motion. Mr. Penttila abstained from the vote. Motion to approve the April meeting minutes carried unanimously.

**IV. Board Business**

**a. PIC Agency Updates**

Mr. Ken Ziegler, PIC member with the City of Albuquerque (City), told board members that the public notice period recently closed for the downtown railyards site voluntary

remediation plan. He said the City hosted a well-attended meeting for contractors interested in performing remediation activities at the site, including cleaning up soil vapor, soil contamination, and addressing high concentrations of dissolved manganese in groundwater. Mr. Ziegler said the City will be installing two additional groundwater monitoring wells upgradient of the railyards site to determine if the high concentrations of manganese are a regional or local condition.

Mr. Ziegler shared that the City was dewatering an area with shallow groundwater near Iron Avenue and 14<sup>th</sup> Street for stormwater infrastructure maintenance when an old underground petroleum storage tank and a petroleum groundwater plume was discovered. Ms. Kathy Verhage, PIC member with the City, said the New Mexico Environment Department (NMED) was aware of the underground storage tank and is providing funding to cleanup the petroleum plume. Mr. Roibal asked how efficient dewatering an area is for removing petroleum products and Mr. Ziegler said that NMED is providing guidance for cleaning up the petroleum.

Mr. Ziegler told board members that there were several meetings in April pertaining to the Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) jet fuel leak. He said PIC members attended technical working group, stakeholder, and public meetings in April. Ms. Diane Agnew, PIC member with the Albuquerque Bernalillo County Water Utility Authority (Water Authority), added that a public hearing for the U.S. Environmental Protection Agency's draft National Pollutant Discharge Elimination System (NPDES) permit for the fuel spill's groundwater treatment system has been scheduled for June 26<sup>th</sup>. Vice-chair Glass asked where the discharge would occur and Ms. Agnew said the discharge would come from the fuel plume's groundwater treatment facility and be discharged into the Tijeras Arroyo.

Mr. Ziegler shared that Governor Michelle Lujan Grisham appointed new members to the New Mexico Water Quality Control Commission including Ms. Kelsey Rader from the City (member at large) and Ms. Stacy Timmons (designee for the New Mexico Bureau of Mines and Mineral Resources).

Ms. Kali Bronson, PIC member with Bernalillo County (County), told board members that development of the Upper Tijeras Arroyo watershed-based plan is underway. She said the Tijeras Arroyo watershed restoration working group met with the consultant who will be developing the plan to kickoff the work at the beginning of May.

Ms. Bronson shared that the Bureau of Reclamation is beginning a study on the Rio Grande basin from Colorado to Elephant Butte Reservoir to address the impact of climate change and precipitation variability on future water availability in the basin. Ms. Bronson said she attended a Bureau of Reclamation meeting in Santa Fe to hear an overview of the study. She told board members that there are opportunities to participate on the study's steering committee for entities willing to provide funding.

Ms. Bronson told board members that the County met with NMED about the municipal separate storm sewer system (MS4) NPDES permit and heard that the permit will most likely be under administrative continuance with the U.S. Environmental Protection Agency (EPA) when it expires in December. Ms. Bronson said the permittees are not yet clear on what impacts the administrative continuance of the permit may have on

sampling requirements over the next year or until the new permit can be issued. Ms. Bronson said that NMED is interested in getting primacy for NPDES permits but that the agency lacks the staffing needed to administer the permits.

Mr. Dan McGregor, PIC member with the County, provided an update on the oil and gas ordinance guidance document that the Mid-Region Council of Governments (MRCOG) Water Resources Board is developing. He said the Water Resources Board assigned a technical advisory group to draft the guidance document over the next two years. Mr. McGregor said the technical advisory group reported to the Water Resources Board on May 1<sup>st</sup> and provided initial background information required for the guidance document. He added the Water Resources Board is now accepting written public comments on the issue (five pages or less).

Mr. McGregor told the board members about an ordinance proposal for the unincorporated portions of Bernalillo County that would ban plastic bags and polystyrene distribution. He said the proposal will be introduced at the next county commission meeting and the proposal will be open for comment for 30 days.

Ms. Liz Anderson, PIC member with the Water Authority, said the utility's newly designed consumer confidence report is finished and being distributed to customers during the month of May. She said the Water Authority revamped and improved the document based on customer feedback from a series of public meetings last fall. Ms. Anderson said the goals of the re-design were to improve readership and public understanding of water quality. Mr. Penttila asked if per- and polyfluoroalkyl substances (PFAs) were included in the consumer confidence report and Ms. Anderson said the report includes a note and some discussion about PFAs.

Ms. Anderson told board members that the Water Authority is still waiting to hear back from the U.S. Environmental Protection Agency about their draft NPDES permit.

Ms. Diane Agnew, PIC member with the Water Authority, shared that Mr. Mark Correll, Deputy Assistant Secretary of the Air Force for the Environment, Safety and Infrastructure, came before the utility's governing board on April 17 to provide an update on the Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) jet fuel leak project. She said that his presentation raised additional questions about the project among Water Authority board members, particularly regarding the cleanup budget. Ms. Agnew said Mr. Correll stated that there would be no additional projects or extraction wells at the cleanup site until the Corrective Measures Evaluation (CME) report has been completed. She said the Water Authority is working with NMED to ensure contamination is not worsening and that the appropriate remediation takes place while the CME report is being developed. Ms. Agnew also highlighted stakeholder involvement in the KAFB BFF jet fuel leak project and expressed the Water Authority's concern that the technical information presented and process of collaborative decision-making by the Air Force is not as meaningful as it has been in the past. Ms. Agnew said NMED and the Water Authority will be responding to Mr. Correll's April presentation at the August Water Authority governing board meeting. She added that the Air Force will be coming to present to the Water Protection Advisory Board this fall.

## **V. Presentation: Summary of Results from Seasonal Water Quality Monitoring on the Rio Grande above Albuquerque**

Mr. Andre Ritchie, hydrologist with the U.S. Geological Survey (USGS), presented results of Rio Grande surface water quality monitoring from 2004 to 2018 collected in partnership with the Water Authority. Mr. Ritchie said the objectives of the project were to determine seasonal and long-term variations in water quality upstream of the Water Authority's drinking water diversion and to document potential effects of natural and anthropogenic factors on water quality. He told board members that sampling occurred at three sites: the Rio Grande below Cochiti Reservoir, at the Alameda stream gage, and the Jemez River below Jemez Reservoir. Dr. Caroline Scruggs asked how the sites were chosen and Mr. Ritchie said the locations were chosen to look at potential upstream impacts to the Water Authority's diversion dam. Mr. Ritchie showed the board a figure of historical surface water quality sampling locations in the Rio Grande and highlighted the current sampling location on the map.

Mr. Ritchie told board members that there are many factors that could impact water quality, including snowmelt, irrigation diversions and return flows, rainfall, urban runoff, tributaries, and wastewater inputs. He said USGS uses three sampling periods to characterize surface water quality: 1) Spring runoff (March through June), 2) Summer monsoons (July through October) and 3) Fall and winter baseflow (November through February). Mr. Ritchie said that water quality samples are analyzed for major ions, major elements and trace elements, nutrients, bacteria, anthropogenic compounds such as volatile organic compounds and pesticides, and radioisotopes. He then provided the board an overview of the terminology used to describe the water quality, such as maximum contaminant levels and action levels, and said he would be describing results in groups of related analytes.

Mr. Ritchie discussed the results of the monitoring for major ions and physical parameters and highlighted that there have been no exceedances of the maximum contaminant level (MCL) for any inorganic compound in filtered samples during the sampling period from 2004 to 2018. Ms. Anderson clarified for board members that the MCL and secondary MCL (SMCL) are drinking water standards used for a comparison of the untreated river water quality to treated drinking water. She further clarified that river water is not held to drinking water standards because it is untreated and not meant for drinking. Ms. Anderson also explained that river water exceedances refer to secondary or primary drinking water standards for the USGS monitoring and are not referring to surface water quality standards, which are different. Further, she explained that exceedances in the USGS work do not necessitate a regulatory action for the Water Authority because untreated river water is not held to drinking water standards.

Mr. Ritchie showed the board selected results for the Rio Grande surface water quality monitoring at the three sampling locations for the period of record (2004-2018). Chair Howe asked why the detection limit for certain sampling periods was higher than others and Mr. Ritchie said that lab methods for analysis may have changed over time. Ms. Kim Beisner, USGS, said that it could be that lab method reporting limits may have changed in the sampling period. Mr. Ritchie then showed the board the monitoring results for nutrients, total organic carbon, and radiochemistry. He said radiochemistry parameters are analyzed from the Alameda and Cochiti sampling locations, not the Jemez River.

Mr. Ritchie discussed the results of the organic compounds monitoring which included pesticides, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and wastewater indicator compounds. He told board members that there have been some detections of VOCs, SVOCs and wastewater indicator compounds at the Alameda and Cochiti sampling locations during the period of record. All detected compounds, however, were below MCLs with the exception of bis(2-ethylhexyl) phthalate (Bis-2) at Cochiti. Ms. Anderson said that Bis-2 is a common lab contaminant and pointed out that the state water quality lab has had laboratory or sampling errors with that contaminant in the past. She said the Water Authority resamples when Bis-2 is detected to ensure the detection was not the result of a sampling or lab error. Mr. Ritchie said the highest concentrations of detected compounds tend to occur during the baseflow sampling period in the winter.

Mr. Ritchie showed board members summary tables of the wastewater indicator compounds and said 37 wastewater indicator compounds have been detected at the Alameda sampling location during the period of record. Chair Howe pointed out that the few wastewater discharges above the sampling point include Bernalillo, Rio Rancho, Española, Alamosa, and a few more plus septic system influences. Chair Howe added that sucralose is another good indicator compound for detecting wastewater because it does not biodegrade. Ms. Beisner said the USGS Kansas lab has partnered with the USGS New Mexico Water Science Center to look at wastewater indicator compounds in Tijeras Arroyo and could consider adding sucralose to the list of analytes although sucralose is not currently part of the study.

Mr. Ritchie provided an overview of the general observations from the surface water monitoring results. He said there have been no exceedances for drinking water MCLs or SMCLs for inorganics in filtered samples although there have been infrequent inorganic SMCL exceedances for total dissolved solids, aluminum, and pH at the Jemez River sampling location. He said maximum concentrations of nutrients at Alameda, Cochiti and Jemez River are very low and have not exceeded drinking water MCLs. Mr. Ritchie said maximum concentrations of radiochemicals, organic compounds, and wastewater indicator compounds at Alameda and Cochiti are very low with the exception of the Bis-2 drinking water MCL exceedance at Cochiti during the 2017 irrigation season sampling event. He said the majority of organic compounds detected at Alameda and Cochiti are from wastewater compounds. Mr. Ritchie said the highest concentrations of inorganics occurs at Alameda during the snowmelt (spring runoff) and irrigation seasons while the highest concentrations of inorganics occurs at Cochiti during the spring runoff and winter baseflow sampling periods. He said the concentration of nutrients at Alameda and Cochiti are largest during the irrigation season. Mr. Ritchie concluded his presentation by telling board members that seasonal sampling will be continued at the current sampling locations and the USGS plans to further analyze the historic and current surface water quality trends.

**VI. Presentation: Preliminary Assessment of Polychlorinated Biphenyl (PCB) Loads into the Rio Grande from Selected Stormwater-Collection Basins in the Albuquerque Metropolitan Area**

Mr. Zach Shepard, USGS, told board members that the USGS, in cooperation with Bernalillo County, performed a study to characterize and assess polychlorinated biphenyls (PCBs) in stormwater and the Rio Grande to follow up on a 2009 study where the New Mexico Environment Department (NMED) found PCBs exceeding water quality standards in Albuquerque. He said this study was completed to fulfill a requirement of the municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit issued for the Middle Rio Grande. Mr. Shepard said the study looked at stormwater runoff and soil samples from four stormwater watersheds in Bernalillo County under a range of flow scenarios and time periods.

Mr. Shepard explained that PCBs are a category of man-made organic chemicals comprised of carbon, hydrogen and chlorine atoms and include 209 individual compounds, also known as congeners. He said PCBs have a varying range of toxicity and are not readily biodegradable. Mr. Shepard said there was a historical commercial mixture of PCBs, commonly known as Aroclor, that was typically used in electrical equipment, oils, thermal insulations, inks and dyes.

Mr. Shepard described the methods and approach for the PCB study. He said there were four primary water and sediment sample sites that included the Alameda pump station, Paseo pump station, Sanchez Farms, and the Adobe Acres pump station. The study also included four precipitation gage locations. He said storm season samples were collected between July and October during 2017 and 2018 during storms with more than 0.25 inches of rain. Dry season samples were collected during December 2017 and November 2018 when no precipitation event occurred within 72 hours prior to the sampling event. Mr. Shepard said water and sediment samples were analyzed for 209 PCB compounds.

Mr. Shepard told board members that PCBs were detected in 34 of 36 water samples and 12 of 13 sediment samples. He said that although there were no water samples with PCBs in excess of the 200 nanogram per liter (ng/L) limit specified in the MS4 NPDES permit, there were six water samples with PCB concentrations greater than the 14 ng/L New Mexico surface water quality standard for protection of wildlife habitat and aquatic life. Mr. Shepard said the exceedances of the surface water quality standard occurred during the storm season from July to October and four of six exceedances occurred at the Sanchez Farms sampling location. Mr. Roibal asked if the concentrations of PCBs at Sanchez Farms are concerning for produce farming and Ms. Bronson clarified that the concentrations of PCBs are below the human health exposure limits, meaning PCB concentrations at Sanchez Farms are not harmful to human health, and most PCBs are found in the sediment that comes from the stormwater runoff. Ms. Suzanne Busch asked about plant uptake of PCBs and Ms. Bronson said PCBs are naturally occurring in the environment at low levels. Mr. Ziegler said PCBs can be bioaccumulated and stored in fat cells of animals. He said plants uptake PCBs, but PCBs move around naturally in the environment. Ms. Bronson said the plants at Sanchez Farms are irrigated with groundwater instead of stormwater.

Mr. Shepard said concentrations of PCBs observed during the study were similar to concentrations of PCBs for stormwater studies in other parts of the country and in the world. He showed board members graphs of PCB concentrations against suspended sediment concentrations, organic carbon concentrations, and specific conductance and

said there was no relationship with PCB concentrations in this study. Mr. Shepard showed board members graphs of the common PCB congeners and their concentrations contributing to the total amount of PCBs for the Adobe Acres and Alameda sampling locations. He said the PCB congener profiles are similar to the Arochlor profile and suggested that PCBs in stormwater basins are likely from a mixture of legacy sources, such as Arochlor, and current sources, such as inks and pigments. Mr. Shepard said PCB-11 was the most frequently detected congener in water samples, occurring in 24 of 36 samples, and could be coming from trash containing printed materials.

Mr. Shepard said the USGS modeled six rainfall-runoff scenarios at the Adobe Acres location to estimate stormwater discharge around the Albuquerque area and said the results show that storm events tend to be very flashy with peak runoff occurring quickly following a storm and not lasting for a long time. He said many of the storm season samples were likely collected during the tail-end of the runoff for a storm. Mr. Shepard said the USGS did load calculations to explore concentrations for total PCB loads during a storm and said the potential PCB load concentrations for a storm event were calculated with a high degree of uncertainty. Ms. Bronson asked if load calculations were completed for both inlets and outlets at each pump station and Mr. Shepard said the load calculations were only completed for either the inlet or outlet location because it is difficult to separate the groundwater influence out of the calculation.

Vice-chair Glass asked if the water samples were filtered and Ms. Beisner said the water samples were unfiltered and analyzed using Environmental Protection Agency (EPA) method 1668 in the lab. She said the samples were unfiltered prior to extraction for analysis in the mass spectrometer. Vice-chair Glass said he would have expected to see a better correlation between PCB and sediment concentrations from the sampling events and Ms. Beisner said the study report includes calculations to correlate between the water and sediment samples. She added that the report is currently in review and the USGS anticipates the report to be published in September 2019. Vice-chair Glass asked if USGS tried to determine the sources of legacy PCBs at the Alameda location and Mr. Shepard said the USGS did not look into the sources of PCBs. Ms. Bronson said that the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) has been looking into the sources of the legacy PCBs found in this study.

## **VII. Other Board Business**

Vice-chair Glass announced that the County will be phasing out over the next year its use of glycosate, a carcinogenic pesticide. Mr. Roibal asked if the City will also be phasing out glycosate and Ms. Julia Maccini said the City has no plans to do so. Ms. Bronson said pesticides are sampled for occasionally for the MS4 NPDES permit. Mr. Roibal asked if the City would consider presenting on their use of glycosates and if the County would present on the implementation of the phase-out for glycosate in the next year. Ms. Beisner offered to send the board a few articles about glycosate use and phasing out the chemical. Ms. Anderson said that the Water Authority monitors for glycosate and Ms. Agnew added that the Water Authority water treatment plant can remove the chemical in water and that Water Authority wells are properly protected from surface runoff influences to prevent contamination.

Chair Howe asked to delay the vote for the Water Protection Advisory Board Annual Report to the June meeting and board members agreed.

**VIII. Public Comment**

No public comment.

**IX. Adjourn**

Chair Howe asked for a motion to adjourn the meeting. Mr. Roibal motioned to adjourn the meeting and Mr. Penttila seconded the motion. The meeting was adjourned at 10:40 a.m.