

2019

Water Protection Advisory Board

ANNUAL REPORT FOR 2019

**SUBMITTED TO THE
ALBUQUERQUE CITY COUNCIL
BERNALILLO COUNTY COMMISSION
AND THE
ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY
AUTHORITY GOVERNING BOARD**

Annual Report

2019

Prepared by the
Albuquerque and Bernalillo County
Water Protection Advisory Board

Members:

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Roberto Roibal, Vice Chair
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Acronyms

Air Force	United States Air Force
AMAFCA	Albuquerque Metropolitan Arroyo Flood Control Authority
BEMP	Bosque Ecosystem Monitoring Program
BFF	Bulk Fuels Facility
City	City of Albuquerque
County	Bernalillo County
DCE	Dichloroethylene
EA Engineering	EA Engineering, Science, and Technology, Inc., PBC
EDB	Ethylene dibromide
EPA	Environmental Protection Agency
ft	Feet
GPPAP	County Ground-Water Protection Policy and Action Plan
GSI	green stormwater infrastructure
HWB	Hazardous Waste Bureau
KAFB	Kirtland Air Force Base
Laun-dry	Laun-dry Supply Co.
LID	low impact development
MOA	Memorandum of Agreement
MRCOG	Mid-Region Council of Governments
MRG	Middle Rio Grande
MS4	Municipal Separate Storm Sewer System
MWL	Mixed Waste Landfill
ng/L	Nanograms per liter
NMAC	New Mexico Administrative Code
NMBGMR	New Mexico Bureau of Geology and Mineral Resources
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and gas
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethylene
PPCP	Pharmaceuticals and Personal Care Products
ppmv	Parts per million by volume
PIC	Policy Implementation Committee
PSTB	Petroleum Storage Tank Bureau
RAPP	Rivers and Aquifer Protection Plan
S2AP	Stage 2 Abatement Plan

SNL	Sandia National Laboratories
SVE	Soil vapor extraction
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
UCMR4	Unregulated Contaminant Monitoring Rule
UNM	University of New Mexico
µg/L	Micrograms per liter
USGS	United States Geological Survey
VOC	Volatile Organic Compound
VRP	Voluntary Remediation Program
Water Authority	Albuquerque Bernalillo County Water Utility Authority
WPAB	Water Protection Advisory Board
WQPPAP	Water Quality Protection Policy and Action Plan
WRB	Water Resources Board

This report presents an overview of the Water Protection Advisory Board's (WPAB) areas of focus, activities, and accomplishments during calendar year 2019. In addition to summarizing WPAB activities, this report offers a list of the threats to water quality in the basin in 2019 and a description of the WPAB's priorities for 2020.

Background

Starting in 1988, the City of Albuquerque (City) and Bernalillo County (County) passed resolutions calling for action to clean up and protect the Middle Rio Grande's (MRG's) shared groundwater resources. After five years of planning and research, the Albuquerque/Bernalillo County Ground-Water Protection Policy and Action Plan (GPPAP) was adopted by the County in November 1993, by the City in August 1994, and subsequently by the Albuquerque Bernalillo County Water Utility Authority (Water Authority) after its creation in 2003.

GPPAP was updated and revised in 2009 to include surface water quality protection activities, resulting in a single Water Quality Protection Policy and Action Plan (WQPPAP). In 2018, the Water Authority began the process of completing updated source water assessments for both groundwater and surface water, as well as an update to the WQPPAP. The updated WQPPAP, renamed the Rivers and Aquifers Protection Plan (RAPP), was finalized by the Water Authority in February 2019. The RAPP, plus its groundwater and surface water assessments serve as the Water Authority's source water protection plan. For the purpose of this document and consistency with the founding ordinances for WPAB, the RAPP will continue to be referred to as the WQPPAP in this annual report.

The WPAB was established to oversee implementation of the WQPPAP with members of the community appointed to WPAB by the City, County and Water Authority. The WPAB as established by ordinance is to:

- Study and advise the Water Authority, City, and County on surface and groundwater protection concerns;
- Oversee implementation of the WQPPAP;

- Periodically review and evaluate the effectiveness of the WQPPAP and make recommendations for changes, as necessary;
- Promote consistency in Water Authority, City, and County actions to protect surface and groundwater quality; and
- Advocate for effective protection of surface and groundwater quality.

The WPAB consists of nine members: two appointed by the Water Authority; three appointed by the Mayor with the advice and consent of the City Council; and three appointed by the County Commission. One member is appointed jointly with the advice and consent of the County Commission and the Mayor with the advice and consent of the City Council. A summary of the current members' qualifications is located in Appendix A.

Additionally, the WPAB works with members of a Policy Implementation Committee (PIC) through which member agencies provide solutions aimed at improving public health, protecting the environment, water quality, and enhancing area residents' quality of life. The PIC is comprised of members from the City, County, and Water Authority staff that are involved in environmental protection, compliance reporting, water quality monitoring and water resource planning activities. The Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) is also represented on the PIC. PIC members help the WPAB fulfill its purpose by providing technical assistance, administrative services and staffing resources. Core PIC entities and agencies that implement activities related to the WQPPAP, in addition to other environmental and public health services, include:

Albuquerque Bernalillo County Water Utility Authority

- Compliance Division
- Water Resources Division

Bernalillo County

- Natural Resource Services

City of Albuquerque

- Environmental Health Department
- Stormwater Management Section

- Solid Waste Management Department
Albuquerque Metropolitan Arroyo Flood Control Authority
- Stormwater Runoff and Quality

Water Protection Advisory Board Activities for 2019

The WPAB is required to hold meetings at least once a quarter, but typically meets on the second Friday of each month to address specific water quality concerns included on an agenda agreed to by the board members. An annual work plan is developed and approved by WPAB members at the first meeting of each calendar year. The board receives much of its information from formal presentations by government agencies or environmental advocates conducting investigations or outreach activities on topics of interest. In 2019, the WPAB meeting agenda topics included presentations in the following areas, consistent with the board's established priorities for the year:

- I. Protection of groundwater quality in the Albuquerque Basin;
- II. Protection of surface water quality and watershed health, and;
- III. Fostering intergovernmental coordination, cooperation, and communication.

Below is a summary of significant action items taken by the board and technical presentations heard by members during the 2019 calendar year.

JANUARY

Board Actions:

Members elected Dr. Kerry Howe as Chair and Mr. Steve Glass as Vice Chair for 2019.

Members approved the Open Meetings Resolution for 2019 (Appendix B).

Discussion Summary:

Members discussed establishing a procedure for drafting official board documents and correspondence and an initial draft for discussion purpose was provided by Chair Howe and PIC member Ms. Diane Agnew (Water Authority). Board members wanted the procedure to prevent a rolling quorum. A final draft of the procedure would be presented

for board approval at a later meeting, incorporating edits and discussion from the meeting. Members discussed the draft 2019 presentation schedule and recognized the evolutionary nature of the schedule based on presenter availability. Members also discussed pre-filed legislation for the upcoming 2019 New Mexico State legislative session.

FEBRUARY

Presentation Summary:

Middle Rio Grande Stormwater Quality Team Overview: Kathy Verhage, City of Albuquerque, Kali Bronson, Bernalillo County, and Patrick Chavez, Albuquerque Metropolitan Arroyo Flood Control Authority

Ms. Kathy Verhage, City stormwater engineer, updated the board members about the National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit assigned to federal, state and local agencies in the MRG. Ms. Verhage discussed the various aspects of the stormwater permit, including water quality, and how the permittees cooperate and collaborate to meet the requirements. Mr. Patrick Chavez, AMAFCA stormwater quality engineer, told board members about the sediment pollutant load reduction study and discussed water quality sampling events and locations for the NPDES MS4 permit. Ms. Kali Bronson, Stormwater Program Compliance Manager for the County, highlighted public outreach and public involvement events the permittees have hosted to improve stormwater quality. Ms. Bronson highlighted the permittees efforts to implement green stormwater infrastructure/low impact development (GSI/LID) to promote stormwater treatment, infiltration and to mitigate impacts to stormwater quality and the Rio Grande.

City of Albuquerque Green Team Overview, Kelsey Rader, City of Albuquerque

Ms. Kelsey Rader, City sustainability officer, gave an overview of the City's new Green Team. Ms. Rader told board members that the City won a grant from the Bloomberg American Cities Climate Challenge to help reduce energy and vehicle use, increase renewable energy use, and support sustainable energy choices. Ms. Rader discussed the goals of the Green Team which included Earth Day initiatives, reducing Albuquerque's carbon footprint and hosting lunch-and-learn meetings to educate departments in the city on the various initiatives to promote sustainability. Board members suggested considering stormwater quality to the Green Team goals and Ms. Rader said the Green Team primarily focuses on employee behaviors, but there are hopes to include other sustainability initiatives in the future.

Discussion Summary:

None.

MARCH

Board Actions:

Board members voted to approve the WPAB *Procedures for Drafting and Finalization of Official Board Correspondence and Documents* (Appendix B).

Presentation Summary:

Bosque Ecosystem Monitoring Program (BEMP) Overview, Mr. Sean O’Neill

Mr. Sean O’Neill, biologist for the Bosque Ecosystem Monitoring Program (BEMP), provided board members with an overview of BEMP’s long-term ecological monitoring of the Bosque and MRG. Mr. O’Neill said BEMP has been in collaboration with the University of New Mexico (UNM) and the Bosque School since 1996 and has engaged with over 94,000 students. Students monitor sites monthly for a variety of parameters, including groundwater levels, litterfall, precipitation, surface water levels, water quality, and site observations. Mr. O’Neill said BEMP monitors water quality at five sampling locations to assist the MRG Stormwater Quality Team and to teach students about the connection between urban watersheds and surface water quality.

Mr. O’Neill described sampling locations and highlighted several results from the BEMP Program’s 2017 and 2018 stormwater quality monitoring, including *Escherichia coli* (*E. coli*) concentrations and pharmaceutical and personal care product (PPCP) monitoring results in the Albuquerque reach of the MRG. Board members discussed the potential for additional studies to track *E. coli* sources and characterize PPCPs in the MRG.

New Mexico Aquifer Mapping Program Overview, Ms. Stacey Timmons

Ms. Stacey Timmons, hydrogeologist with the New Mexico Bureau of Geology and Mineral Resources (NMBGMR), provided an overview of the NMBGMR aquifer mapping program that compiles critical information on groundwater quality and quantity across New Mexico in cooperation with federal, state, and local agencies. Ms. Timmons showed board members an interactive map produced in collaboration with the New Mexico Environment Department (NMED) that displays New Mexico’s geologic resources, including mining, water quality, and energy resources. Ms. Timmons told board members about the groundwater level and aquifer storage mapping projects and described how groundwater monitoring data can be used to estimate how long an aquifer will continue to produce water using current groundwater pumping rates. Ms. Timmons said that in almost all cases, groundwater is declining in most of New Mexico’s aquifers, but highlighted the local rise in groundwater that can be attributed to the Water Authority’s shift to using more surface water for its drinking water supply. Ms.

Timmons said the data provided by the aquifer mapping program can play an important role in decision making and NMBGMR is collaborating with local communities to broaden the groundwater level monitoring network across the state.

Discussion Summary:

PIC member Ms. Elizabeth Anderson with the Water Authority Compliance Division, informed board members that the Water Authority samples for both *E. coli* and PPCPs. Ms. Anderson shared her concern about the potential for sample contamination for BEMP's PPCP sampling results, due to strict sampling procedures and extremely low detection limits. There were also concerns from Ms. Anderson and Ms. Agnew about using single point sampling results to infer *E. coli* concentrations for larger sections of the Rio Grande. Ms. Anderson said PPCP results for the Water Authority sampling would be available upon report completion.

Board members discussed reaching out to both Sandia National Laboratory (SNL) and NMED to provide a presentation on the SNL Mixed Waste Landfill (MWL) site remediation 5-Year Review. Board members also discussed wanting to learn more about the advantages and disadvantages of on-site disposal options in contrast to excavation and relocation of hazardous materials for SNL MWL.

APRIL

Board Actions:

None.

Presentation Summary:

Have You Seen the Poop Fairy? Mr. Sergio Lozoya, UNM

Mr. Sergio Lozoya, UNM Master's candidate in Community and Regional Planning, presented board members with his graduate research on community responsiveness to the Poop Fairy campaign, titled *Have You Seen the Poop Fairy?* The County initiated the Poop Fairy campaign in 2014 in response to sampling results for *Escherichia coli* (*E. coli*) detected in 2005, funded by NMED Surface Water Quality Bureau, County, and AMAFCA. Analysis of *E. coli* sampling results confirmed domestic dogs to be a substantial source it in the Albuquerque reach of the MRG. Two years into the Poop Fairy campaign, sampling results indicated a decrease in *E. coli* concentrations throughout the Albuquerque reach; Mr. Lozoya wanted to evaluate whether the results could be attributed to the Poop Fairy campaign. Mr. Lozoya surveyed dog owners and found a positive relationship between an owner observing a Poop Fairy campaign sign

and increasing their frequency of cleanup, demonstrating the Poop Fairy campaign's effectiveness in motivating owners to cleanup pet excrement.

Benthic Invertebrates: The Macro Side of Water Quality, Ms. Mo Hobbs, UNM

Ms. Mo Hobbs, UNM Master's candidate in Water Resources, gave a presentation on her graduate research that is focused on linking aquatic macroinvertebrate communities to local physical and chemical conditions in the Rio Chama. Ms. Hobbs explained that there has been extensive research into life-history requirements of aquatic macroinvertebrates and that similar life-history requirements of distinct taxa are often categorized into group metrics, including functional feeding group (i.e. method of feeding), degree of tolerance to impairment or pollution, and habitat utilization (collectively "metrics"). Ms. Hobbs said the distribution of groups within each metric can provide information about chemical and physical conditions occurring in a stream over a longer timeframe, because the composition of aquatic macroinvertebrates community at a location is a result of continuous exposure to local water quality conditions. Ms. Hobbs said she is still in the data processing phase.

Discussion Summary:

None.

MAY

Board Actions:

None.

Presentation Summary:

Summary of Results from Seasonal Water Quality Monitoring on the Rio Grande Above Albuquerque, Mr. Andre Ritchie

Mr. Andre Ritchie, hydrologist with the U.S. Geological Survey (USGS), presented results of triannual Rio Grande surface water quality monitoring from 2004 to 2018 collected in partnership with the Water Authority. Mr. Ritchie explained that the objective of the monitoring is to document long-term and seasonal variations in water quality at three locations upstream of the Water Authority's drinking water diversion. Sampling takes place during spring runoff, summer monsoons, and baseflows, with consideration of natural (e.g. snowmelt, tributaries, etc.) and anthropogenic (e.g. irrigation returns, urban runoff, etc.) inputs. Mr. Ritchie said monitoring includes sampling for major ions, major elements and trace elements, general chemistry, nutrients, bacteria, organic compounds, pesticides, and radioisotopes. Mr. Ritchie highlighted trend analysis results

for several parameters and discussed seasonal variation by site. Mr. Ritchie said the USGS and Water Authority plan to continue monitoring surface water quality at each site and that the USGS will expand trend analyses by incorporating historical data.

Preliminary Assessment of Polychlorinated Biphenyl (PCB) Loads into the Rio Grande from Selected Stormwater-Collection Basins in the Albuquerque Metropolitan Area, Mr. Zach Shepard

Mr. Zach Shepard, hydrologist with the USGS, provided board members with a presentation on results of the characterization and load estimation of polychlorinated biphenyls (PCBs) at four sites located in stormwater drainage basins within the Albuquerque urbanized area. The study was done in cooperation with the County to fulfill requirements of the NPDES MS4 permit. Mr. Shepard said both water and sediment samples were collected under dry scenarios (i.e. no precipitation 72-hours prior to sampling) and storm runoff scenarios (i.e. precipitation events totaling 0.25 inches or more prior to sampling).

Mr. Shepard said PCBs were detected in 34 of 36 water samples and in 12 of 13 sediment samples. While concentrations of PCBs in water samples did not exceed the 200 nanograms per liter (ng/L) limit specified in the NPDES MS4 permit, there were six water samples from storm season sampling that exceeded the New Mexico surface water quality standard of 14 ng/L for the protection of wildlife habitat and aquatic life. Mr. Shepard said the sources of PCBs detected in the study are from a mixture of legacy sources (e.g. Aroclor) and current sources (e.g. ink from printed materials and packaging). Mr. Shepard explained that the concentrations of PCBs detected in this research are within the range of samples collected from other rivers impacted by urban runoff. Additionally, the USGS estimated load calculations to explore potential concentrations of total PCB load during a storm; however, there was a high degree of uncertainty due to insufficient stormwater discharge data. Ms. Kimberly Beisner, fellow hydrologist at the USGS and co-author of the PCB report, said the report is still in review and anticipates the report to be published before the end of 2019.

Discussion Summary:

None.

JUNE

Board Actions:

Board members voted and approved the WPAB 2018 Annual Report.

Board members voted to hold a special meeting on June 21, 2019, to review and revise

a draft letter to NMED and SNL requesting a presentation on SNL's MWL 5-Year Review and an extension of the public comment period.

Presentation Summary:

Update on Laun-Dry Supply Co. Stage 2 Abatement, Mr. Jay Snyder EA Engineering, Science, and Technology, Inc., PBC

Mr. Jay Snyder, with EA Engineering, Science, and Technology, Inc. (EA Engineering), delivered an update on the Laun-Dry Supply Co. (Laun-Dry) Modified Stage 2 Abatement Plan (S2AP). The Laun-Dry site, a laundry and dry-cleaning supply distribution facility, has tetrachloroethylene (PCE) and PCE degradation products trichloroethylene (TCE), *cis* 1,2- dichloroethylene (*cis* 1,2-DCE), and *trans* 1,2 dichloroethylene (*trans* 1,2-DCE) contamination in both soil and groundwater. Mr. Snyder said S2AP will continue to utilize soil vapor extraction (SVE) due to its success with contaminant remediation in Stage 1. Additionally, S2AP incorporates the injection of Regenesis PlumeStop® Liquid Activated Carbon™ to inhibit plume migration and injection of Aqua ZVI™ to dechlorinate the contaminant plume. EA Engineering injected both from approximately 20 feet (ft) below grade to 50 ft below grade to act as a permeable reactive barrier that prevents smearing and migration resulting from groundwater rise. However, Mr. Snyder said some smearing is likely and rising groundwater may have an impact on plume morphology.

Mr. Snyder said during the initial stages of SVE the concentration levels of contaminants in soil vapor were between approximately 4,000 parts per million by volume (ppmv) and 5,000 ppmv, but have since fallen to approximately 1 ppmv. Mr. Snyder said the concentrations of PCE and TCE are currently below the maximum allowable concentration outlined in the New Mexico Administrative Code (NMAC) groundwater standards, of 20 micrograms per liter (µg/L) and 100 µg/L, respectively. A new standard of 5 µg/L for both PCE and TCE goes into effect on July 1, 2020, which could lead to a somewhat larger defined plume area. Mr. Snyder said there is concern that a nearby automotive shop is an additional source of contamination, but that determination would require additional sampling. Mr. Snyder said EA Engineering is also investigating potential vapor intrusion pathways in S2AP with vapor monitoring locations in both residential and commercial locations. Mr. Snyder said in his opinion, fully remediating the site to the new 2020 groundwater quality standards for PCE and TCE will likely require at least a decade of treatment.

Discussion Summary:

During the public comment period, Mr. Dave McCoy informed board members that the

public comment period for the SNL MWL 5-Year Review was ending on July 23, 2019. Mr. McCoy expressed his concern over SNL's decisions to utilize a biointrusion barrier rather than excavate. Board members agreed that without a presentation by SNL or NMED they did not have enough information to provide comments prior to the public comment period deadline. Board members discussed drafting a letter to NMED and SNL to provide an update on the SNL MWL 5-Year Review and to extend the public comment period.

JUNE 21, 2019 – SPECIAL MEETING

Board Actions:

Board members voted and approved a letter to NMED and SNL requesting a presentation on SNL's MWL 5-Year Review and an extension of the public comment period (Appendix B).

Presentation Summary:

None.

Discussion Summary:

Board members reviewed and revised a draft letter to NMED and SNL regarding the SNL MWL 5-Year Review.

JULY – NO MEETING WAS HELD

AUGUST

Board Actions:

None.

Presentation Summary:

Update on the Development of an Oil and Gas Guidance for Mid-Region Council of Governments (MRCOG) Water Resources Board, Mr. Bart Faris, City of Albuquerque Environmental Health Department

Mr. Bart Faris, the City's Environmental Health Manager and PIC member, provided board members with an update on the development of oil and gas (O&G) ordinance guidelines for the Mid-Region Council of Governments (MRCOG). The MRCOG Water

Resources Board (WRB) assigned a technical advisory group to develop O&G ordinance guidelines that review and address concerns related to the social, economic and environmental issues associated with O&G development, including water quality, earthquakes, climate change, health impacts, economic impacts, and local government. Mr. Faris highlighted the separation between production areas for O&G development and drinking water aquifers in the MRG Basin.

Mr. Faris said the technical advisory group has been assessing how the jurisdiction of an O&G ordinance would apply to various land ownership and existing ordinances within the emerging O&G ordinance boundaries. This led board members to discuss regulatory authorities and corresponding federal and state laws that must be taken into consideration when in development of an O&G ordinance, along with the legal limitations of applying any ordinance to federal or tribal lands. Mr. Faris said local ordinances can protect surface water quality but cannot prevent withdrawals of water or access to mineral rights. Mr. Faris said the technical advisory group is seeking public input on the draft document, which is available through the MRCOG WRB website.

Overview of Petroleum Storage Tank Bureau Sites in Albuquerque and Bernalillo County, Ms. Lorena Goerger, New Mexico Environment Department Petroleum Storage Tank Bureau

Ms. Lorena Goerger, NMED Petroleum Storage Tank Bureau (PSTB) Remedial Action Program Manager, provided an overview of the PSTB mission, updated regulations, and PSTB oversight in Albuquerque and surrounding Bernalillo County. Ms. Goerger said the PSTB incorporates four programs to reduce, mitigate and eliminate threats to the environment posed by underground and above ground storage tanks. The four programs are: 1.) *Tank Operations and Support*; 2.) *Prevention and Inspection Program*; 3.) *Remedial Action Program*; and 4.) the *Reimbursement Section*. Ms. Goerger said new regulations for spill prevention, scheduled inspections and tank operation regulations went into effect on July 24, 2018 [NMAC 20.5 101-124] and were aligned to conform to Environmental Protection Agency (EPA) revised underground storage tank regulations. Additionally, corrective action regulations received minor changes to help facilitate cleanup and reimbursement regulations were clarified for what is needed with compliance determinations, which costs are ineligible, and contractor fee schedules. Reimbursement regulations were also amended to provide small sites an option for limited remediation.

Ms. Goerger explained that leaks are typically found when tanks are removed, an alarm signals a problem, or a concerned owner notifies NMED. Ms. Goerger said there are 102 active releases in Albuquerque and 850 across the state. Ms. Goerger went into

greater detail of site cleanup and oversight by the PSTB by providing examples of the Chevron Isleta site and the Yale Auto site. Ms. Goerger concluded her presentation by highlighting that the PSTB wants to encourage economic vitality and growth by helping business owners with replacing aged systems and with remediation assistance where needed.

Discussion Summary:

Vice-Chair Glass informed board members that both SNL and NMED declined requests to present on the SNL MWL 5-Year Review, as well as the request to extend the public comment period.

SEPTEMBER

Board Actions:

PIC member Mr. Ken Ziegler announced that the City had appointed two new board members, Ms. Alejandría Lyons and Mr. Darrell Kundargi. Board members recognized and thanked Ms. Suzanne Busch and Mr. Roland Penttila for their service.

Presentation Summary:

City of Albuquerque, Environmental Services Update, Mr. Ken Ziegler, City of Albuquerque Environmental Health Department

Mr. Ziegler presented an update on the City's Voluntary Remediation Program (VRP) workplan for the Rail Yards site. The Rail Yards site was a former railroad maintenance and storage facility, and operation of the site led to extensive soil contamination of total petroleum hydrocarbons (TPHs), volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and metals. The various buildings located on-site also require restoration for exposed asbestos and creosote-soaked floors. Mr. Ziegler said the City purchased the site in 2007, taking on the role of responsible party for site remediation. Mr. Ziegler said the City has already excavated a substantial amount of soil to physically remove contaminants and has provisions to remediate soil vapor contamination in the VRP workplan. Mr. Ziegler said the City is not proposing ground water remediation in the VRP workplan because initial groundwater monitoring detected low levels of contamination. However, the City will continue to monitor groundwater for contaminants and plans to add additional monitoring wells. There are no drinking water supply wells downgradient from the Rail Yards site. Mr. Ziegler said a large portion of funding for the site is acquired through general obligation bonds, and that the City is very serious about acquiring funding because they recognize the benefits of environmental remediation for residents of Albuquerque.

Discussion Summary:

Chair Howe requested glyphosates be added to the 2020 WPAB workplan after Mr. Roibal informed board members about the growing concern of glyphosate contamination by members of acequia associations throughout the South Valley.

OCTOBER – NO MEETING WAS HELD

NOVEMBER

Board Actions:

The Board welcomed new board members Ms. Lyons and Mr. Kundargi.

Board members voted to hold a meeting on December 13, 2019 to review and revise a letter requesting the U.S. Air Force (Air Force) renew their cooperative funding agreement with NMED to provide additional funding for NMED oversight of Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) abatement.

Presentation Summary:

Kirtland Air Force Base Jet Fuel Release Update, Ms. Stephanie Stringer, New Mexico Environment Department Resource Protection Division

NMED Resources Protection Division Director Ms. Stephanie Stringer provided an update on NMED oversight and progress of the KAFB BFF site abatement. Ms. Stringer said the NMED Hazardous Waste Bureau (HWB) and the Air Force are jointly working towards selecting a final remedy for the BFF site by 2021. Ms. Stringer emphasized that this is an ambitious goal and that the NMED HWB will not make a final remedy selection in 2021 if there is inadequate information to do so. Ms. Stringer said the NMED HWB is currently requiring KAFB to address data gaps in the source area and throughout the plume footprint caused by the rising water table. Ms. Stringer said KAFB performed additional monitoring for source zone characterization and is utilizing groundwater modeling to address data gaps.

Ms. Stringer said there is still ethylene dibromide (EDB) present in groundwater samples north of Ridgecrest Drive, but pump-and-treat wells will continue operation to capture EDB and prevent plume migration. Ms. Stringer said it is the opinion of HWB and KAFB that contaminants south of Ridgecrest Drive are stabilized and not a threat to public health. Ms. Stringer said the HWB is implementing a new structure for technical working group meetings that is focused on driving progress towards a final remedy, and

that she anticipates a slow transition initially. Ms. Stringer informed board members that the Air Force generally provides additional funding to the NMED for project oversight; however, the agreement still had not been signed. Ms. Stringer said without the funding agreement in place, there could be gaps in progress and the goal of selecting a final remedy in 2021 will be difficult to achieve.

Discussion Summary:

Board members discussed drafting a letter to the Air Force in support of the Air Force fulfilling their cooperative funding agreement with NMED.

Board members discussed concerns held by members of the South Valley Pajarito Village Association of glyphosates transferring from non-organic farms to organic farms.

DECEMBER

Board Actions:

Board members voted and approved the letter to Mr. Mark Correll, Air Force Environment, Safety, and Infrastructure Deputy Assistant Secretary, requesting the Air Force renew the cooperative funding agreement with the NMED to provide additional funding for NMED oversight of KAFB BFF abatement (Appendix B).

Presentation Summary:

None.

Discussion Summary:

Board members were informed that there is a draft memorandum of agreement (MOA) between the Air Force and NMED to provide additional funding for NMED oversight, with the draft MOA currently in review by NMED. Board members decided to proceed with review and finalize the letter to Mr. Correll supporting renewal of the cooperative funding agreement and include acknowledgement of the draft MOA.

Board members discussed potential topics and presentations for the upcoming 2020 WPAB workplan and presentation schedule, including an update on the Produced Water Act (HB-546-2019), the City's Green Team, and the County's glyphosate ban.

Top Areas of Focus for Water Quality Protection in 2020

Members of the WPAB and PIC evaluated several identified threats as well as actions to improve water quality in the MRG using the following criteria:

1. Nature and extent of contamination;
2. Proximity to drinking water supplies;
3. Regulatory effectiveness and efficiency;
4. Costs associated with not eliminating the threat; and
5. Efforts to improve and prevent water quality impairment

Below is a table of the topics of significant concern to the WPAB.

Area of Focus	Explanation
KAFB BFF Project	Several production wells are downgradient of known contamination sites and the extent of contamination and corrective action activities should be monitored.
SNL Environmental Restoration	The Mixed Waste Landfill (MWL) contains a mixture of toxic chemical and radioactive wastes in a legacy unlined disposal pit. SNL is currently implementing a long-term maintenance and management plan for the MWL, of which the WPAB is pursuing regular updates.
Groundwater Contamination Sites	Several groundwater contamination sites are being investigated / remediated in the basin, including leaking underground storage sites, Superfund sites and former industrial sites. These sites are regulated by the NMED under the PSTB, Ground Water Quality Bureau or the HWB.
Stormwater Quality	Large stormwater discharge above the Water Authority's San Juan-Chama Drinking Water Project water diversion. NPDES MS4 permit compliance and studies associated with the NPDES MS4 permit and stormwater management and protection. Understanding of stormwater impacts and healthy watersheds.
Watershed Health	Primary threat to surface water quality. No regulatory requirements for prevention activities but support for restoration and watershed protection activities. Support Rio Grande Water Fund initiatives for watershed restoration to protect source water. Understand agricultural impacts to surface water quality.
Septic Systems	Septic systems are designed to treat household wastewater underground. Local ordinances are in

	place to minimize impacts, but numerous septic systems remain to be brought into compliance.
O&G Operations in the MRG basin	Review the environmental risks to water quality associated with O&G operations in the MRG basin and understand the regulatory process and compliance structure for this industry. Continue receiving regular updates on the development of a regional O&G ordinance guidance by the MRCOG WRB sub-committee. In 2020, WPAB will receive an update on the Produced Water Act rule-making and produced water research consortium progress.
USGS Studies	Review USGS Albuquerque Basin groundwater model and how it can be utilized for understanding groundwater dynamics in current and future scenarios. Review the potential sources of nitrate contamination to the groundwater below Tijeras Arroyo as presented in a study being prepared by the USGS and funded by the Air Force. Review USGS surface water and stormwater monitoring studies in the MRG.
Intergovernmental Collaboration	Provide a forum to foster communication between local, state and federal agencies. Review how agencies coordinate regulatory efforts, the status of the NPDES MS4 permit and interaction between local and federal agencies. Advocate for continued communication across and within agencies to ensure successful implementation of adopted policies.
Future Water Quality Issues	Receive presentations and updates on emerging contaminants and issues related to water quality. Identification of “future risk” and recommendation of actions to be taken.

Summary of Board Priority Activities for 2020

Based on the study and analysis of the topics and issues described above, WPAB identified three areas of focus as priorities for calendar year 2020.

PROTECTION OF GROUNDWATER QUALITY

WPAB will continue to monitor the progress of groundwater remediation and investigation projects in the MRG, including the KAFB BFF leak, Superfund sites,

and other contamination sites that threaten the Water Authority water supply. Additionally, WPAB will be updated on SNL environmental restoration activities including the Tijeras Arroyo Groundwater area of concern, Technical Area - Five Groundwater area of concern and MWL. Board members will monitor O&G operation activities in the MRG basin along with understanding the regulatory process and compliance structure and tracking of regional ordinance(s). The Board will follow the progress of Produced Water Act rule-making and consortium initiatives and receive an update on produced water research from the NMBGMR. The USGS will update board members on the nitrate study along the Tijeras Arroyo.

PROTECTION OF SURFACE WATER QUALITY AND WATERSHED HEALTH

WPAB will monitor projects and progress on watershed health, NPDES MS4 permit activities, and impacts of fire-scarred lands on surface water quality will be examined during the year. The Board will review and be updated on the results of surface water and stormwater monitoring results including the USGS studies, permit compliance activities related to the NPDES MS4 permit, the MRG *E. coli* study, and the Safe Drinking Water Act PPCP and Unregulated Contaminant Monitoring Rule (UCMR4) sampling effort. Additionally, the Board will follow the implementation of a glyphosate ban in Bernalillo County and learn more about pesticide threats to source water.

FOSTER INTERGOVERNMENTAL COORDINATION, COOPERATION, AND COMMUNICATION

The Board intends to continue to serve as a forum and advocate for communication among these groups. Board members will review how agencies coordinate regulatory efforts, the status of the NPDES MS4 permit, and interaction between local and federal agencies on resolving current and potential future threats to water quality in the basin.

APPENDIX A

Summary of Member Qualifications

Julia Maccini, J.D., Chair

- County appointment
- First term – August 2018 to August 2021
- Juris Doctor; 10 years of experience in policy, legal, and real estate development

Roberto Roibal, Vice Chair

- County appointment
- First term – August 2018 to August 2021
- Bachelor of Arts, Anthropology, Fine Art, and History; over 50 years' experience in community organizing, committees, and coalitions

Camilla Feibelman

- City appointment
- First term – January 2019 to January 2022
- Master of Planning in Urban Planning; Bachelor of Arts in Environmental Biology; Director of Rio Grande Chapter of Sierra Club, experience in ecosystem protection and environmental justice communications

J. Steve Glass

- County appointment
- Third term – November 2018 to November 2021; County ordinance allows additional terms to be served beyond the two terms in the WPAB establishing ordinance
- Master of Science, Environmental Science; 40 years of professional experience in environmental chemistry and biology applications in environmental science and regulation

Darrell Kundargi

- City appointment
- First term – September 2019 to September 2022
- Master of Water Resources; Bachelors in Environmental Studies; hydrologist and regional water rights coordinator for U.S. Fish and Wildlife Service for 15+ years

Alejandría Lyons

- City appointment

- First term – September 2019 to September 2022
- Dual Masters candidate in Community & Regional Planning and Water Resources, Bachelor of Arts in Economics and Political Science

John Pietz, P.E.

- Water Authority appointment
- First term – September 2018 to September 2021
- Master of Science, Chemical Engineering; over 35 years of chemical and environmental engineering experience including soil and groundwater remediation, pollution prevention, and risk assessments.

Caroline Scruggs, Ph.D., P.E.

- Water Authority appointment
- First Term – November 2018 to November 2021
- County appointment: October 2012 to October 2018
- Ph.D., Environment and Resources; over 20 years of experience in civil and environmental engineering and water resource planning.

Kerry J. Howe, Ph.D. (*former member*)

- Joint City/County appointment
- Second Term – January 2017 to January 2020
- Ph.D., Environmental Engineering; over 28 years of experience in water treatment technologies and professional engineering.

Suzanne Busch, P.E. (*former member*)

- City appointment
- First term – August 2016 to August 2019
- Bachelor of Science, Civil Engineering; over 25 years as municipal professional engineer and project manager.

Roland Penttila, P.E. (*former member*)

- City appointment
- First term – August 2016 to August 2019
- Bachelor of Science, Civil Engineering; retired after 33 years of experience as a register professional engineer, former supervising engineer for the City in Storm Water Management including compliance with EPA Municipal Separate Storm Sewer Systems Permit.

APPENDIX B

Board Correspondence and Resolutions

WATER PROTECTION ADVISORY BOARD

RESOLUTION WPR-2019-01

DETERMINING REASONABLE NOTICE OF PUBLIC MEETINGS OF THE WATER PROTECTION ADVISORY BOARD.

WHEREAS, the City of Albuquerque, the County of Bernalillo, and the Albuquerque Bernalillo County Water Utility Authority jointly adopted an ordinance establishing the Water Protection Advisory Board (WPAB); and

WHEREAS, the WPAB meets in regular session at Bernalillo County Public Works Building N Conference Room, and other locations; and

WHEREAS, the WPAB follows the Open Meetings Act as provided in the board's three formation ordinances, Bernalillo County Ordinance No. 2007-2 § 1,1-9-07, City of Albuquerque Ordinance § 2-6-8-1 ROA 1994, and Water Authority Ordinance § 5-1-1;

WHEREAS, any meetings at which the discussion or adoption of any proposed ordinance, resolution, rule, regulation or formal action occurs shall be held only after reasonable notice to the public; and

WHEREAS, Section 10-15-1(D) of the Open Meetings Act requires the WPAB to determine at least annually what constitutes reasonable notice of its public meetings.

BE IT RESOLVED BY THE WPAB:

Section 1. Meetings of the WPAB shall normally be held at the Bernalillo County Public Works Building N Conference Room, Albuquerque, New Mexico.

Section 2. Regular meetings will normally be held on the second Friday of each month, but at a minimum of once a quarter. The agenda will normally be available on the Albuquerque Bernalillo County Water Utility Authority and the Bernalillo County website three (3) days prior to the meeting and/or shall be available at the offices of the Water Authority twenty-four (24) hours before the meeting.

Section 3. Special meetings may be called by the Chair of the WPAB upon twenty-four (24) hours notice. The notice shall include information on how members of the public may obtain a copy of the agenda. The agenda shall be available to the public at least twenty-four (24) hours before any special meeting.

1 Section 4. Emergency meetings will be called only under circumstances when
2 an unexpected occurrence or condition, or the state resulting therefrom requires
3 immediate consideration or action to protect the health, safety and property of
4 citizens or to protect the public body from substantial financial loss. The WPAB will
5 avoid emergency meetings whenever possible. Emergency meetings may be called
6 by the Chair of the WPAB upon twenty-four (24) hours notice. The notice for all
7 emergency meetings shall include an agenda for the meeting or information on how
8 the public may obtain a copy of the agenda.

9 Section 5. For the purpose of meetings described in Section 2 of this
10 resolution, notice requirements are met if notice of the date, time and place is
11 published on the Water Authority website at www.abcwua.org at least five (5) days
12 prior to the meeting and posted in the lobby bulletin board of the
13 Albuquerque/Bernalillo County Government Center. WPAB staff shall also provide
14 copies of the above information as well as copies of the agendas to those broadcast
15 stations licensed by the Federal Communications Committee and newspapers of
16 general circulation in Albuquerque, which entities have made a written request for
17 notice of public meetings.

18 Section 6. For the purpose of special meetings and emergency meetings
19 described in Sections 3 and 4 of this resolution, notice requirements shall be met by
20 posting notice of the date, time, place and agenda in the lobby of the
21 Albuquerque/Bernalillo County Government Center. WPAB staff shall also provide
22 telephone notice to those broadcast stations licensed by the Federal
23 Communications Committee and newspapers of general circulation in Albuquerque
24 that have made a written request for notice of public meetings.

25 Section 7. In addition to the information specified above, all notices shall
26 include the following language, except the last sentence applies only to full WPAB
27 meetings:
28 “NOTICE TO PERSONS WITH DISABILITIES: If you have a disability and require
29 special assistance to participate in this meeting, please contact the Bernalillo County
30 Public Works Department, 2400 Broadway Blvd. NE, Building N, (505) 848-1500,
31 as soon as possible prior to the meeting date.”

1 Section 8. Cancellations and different meeting times and places may be
2 announced at prior meetings of the full WPAB. Weather, lack of quorum and other
3 related issues may cause the cancellation of a meeting.

4 Section 9. Action summary minutes shall be made of all open meetings with the
5 following minimal information:

6 A. Date, time, and place of meeting

7 B. Names of staff in attendance and a list of members present

8 C. A general statement of each discussion topic and of how each member voted
9 on any motion before the WPAB. A draft copy of the minutes shall be available within
10 three (3) working days prior to the next meeting. Minutes become official when
11 approved by the WPAB at a subsequent meeting and will be filed with the City and
12 County Clerks' offices within 10 days of approval.

13 Section 10. Closed meetings shall not be held except as provided in Open
14 Meetings Act.

15 Section 11. All or any part of this resolution may be amended or modified by the
16 WPAB from time to time.

17

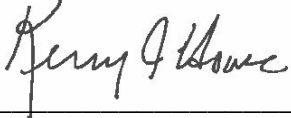
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ADOPTED, APPROVED AND SIGNED THIS 11th DAY OF January 2019.

Handwritten signature of Kerry J. Howe in cursive script.

WPAB Chair

Procedures for Drafting and Finalization of Official Board Correspondence and Documents

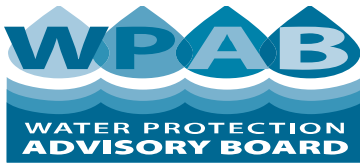
Official correspondence and documents created for and by the Water Protection Advisory Board must comply with provisions of the Open Meetings Act (OMA) as provided in the board's three formation ordinances: Bernalillo County Ordinance 2007-2 § 1, 1-9-07; City of Albuquerque Ordinance § 2-6-8-1 ROA 1994; and the Water Authority Ordinance § 5-1-1. Additionally, the procedures and actions taken by the board should be consistent with the New Mexico Attorney General's OMA Compliance Guide and the Rules of Procedure for the Bernalillo County Commission.

Whenever possible, the board should draft, discuss, and finalize correspondence and documents during meetings. Document/correspondence author(s) can bring a draft to a meeting to initiate discussions at the meeting with additional edits and comments to be made at future meeting dates. The following procedure was drafted to provide board members guidance and procedures to follow when drafting board correspondence that reflects WPAB policy position or relates to any action within the board's delegated authority and that requires a timely response and multiple meetings to finalize the document is not feasible. Board members should refrain from discussions, comments, and edits of documents via group email or telephone, which may convene the notice and public meeting requirement of OMA.

- Step 1:** The board will identify a lead board member or a sub-committee of no more than 4 members to draft a document to bring for board consideration at the next meeting. The sub-committee can share drafts/revisions between committee members but may not send drafts or revisions to non-committee board members.
- Step 2:** Assigned staff member works with lead board member or the sub-committee to generate a formatted and draft document.
- Step 3:** Assigned staff member distributes the document for each member's individual review along with a deadline for board feedback.
- Step 4:** Edits and comments may be sent directly to the assigned staff member **only**; no other board member should be copied or receive the edits and/or comments on the draft document.
- Step 5:** The assigned staff member will consolidate all edits and comments into a single document in redline, track changes. A title block will be added to the document to state that the document is a "Discussion Draft" for board discussion and will include the date of meeting where the document will be discussed.
- Step 6:** The assigned staff member will post the marked-up document to the WPAB public access portal.
- Step 7:** At the following duly noticed board meeting, the document with the consolidated edits and comments will be projected on a screen for board discussion, acceptance of edits, and resolution of comments.
- Step 8:** Once all edits and comments have been addressed by the board through discussion, a final review of the document will occur during the meeting.

Step 9: The final version of the document shall be presented for board approval.

Step 10: Following the board approval of the document, the assigned staff member will distribute the document as appropriate without any further edits or modifications. Board members will receive a final version of the document from the assigned staff member and the final version will be posted to the WPAB public access portal.



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

Roland Penttila
John Pietz
Roberto Roibal
Caroline Scruggs

June 21, 2019

Mr. John Kieling, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East
Building 1
Santa Fe, New Mexico 87505-6313

Mr. Jeffery P. Harrell, Manager
U.S. Department of Energy
NNSA/Sandia Field Office
PO Box 5400, MS 0184
Albuquerque, NM 87185-5400

Dear Mr. Kieling and Mr. Harrell:

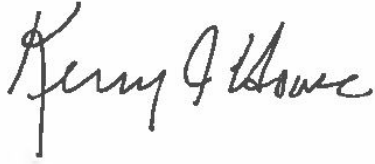
The Water Protection Advisory Board (WPAB) met on Friday, June 14, 2019 during which there was discussion of the Sandia National Laboratories (SNL) Mixed Waste Landfill (MWL) 5-Year Review report that is currently under review by the New Mexico Environment Department (NMED) and open for public comment. In February 2019, the board requested a presentation from both NMED and SNL with an update on the 5-Year Review and an update on the status of the MWL. Both entities declined to present to the WPAB pending completion of the NMED review and public comment period.

The board recognizes that SNL and the Department of Energy hosted a poster session on April 11, 2019 that included a poster on the MWL site. The poster session was not a viable option for this board to receive and discuss information on the site. While the board could attend, Open Meetings Act compliance prohibits the discussion amongst board members. The ability to ask questions and discuss information is valuable to this board, particularly on a site such as the MWL.

The board requests that the public comment period be extended beyond July 23, 2019 and that SNL and NMED present to the board prior to closing of the comment period. The board meets in public session on the second Friday of each month and scheduling should be coordinated with Ms. Diane

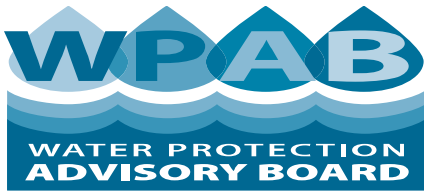
Agnew via phone (505-289-3008) or email (dagnew@abcwua.org). This will allow the board an opportunity to prepare an informed and complete comment on the report.

Sincerely,

A handwritten signature in black ink that reads "Kerry Howe". The signature is written in a cursive style with a large initial 'K' and a long, sweeping underline.

Dr. Kerry Howe, Chair
Water Protection Advisory Board

Cc: Bernalillo County Commission Chair, Commissioner Maggie Hart-Stebbins, District 3
City of Albuquerque Council President, Councilor Klarissa Peña, District 3
Albuquerque Bernalillo County Water Utility Authority Board Chair, Commissioner Debbie O'Malley, District 1



Kerry Howe, *Chair*
Steve Glass, *Vice-Chair*
Camilla Feibelman
Alejandria Lyons
Darrell Kundargi

Julia Maccini
John Pietz
Roberto Roibal
Caroline Scruggs

December 16, 2019

Mr. Mark Correll, SES, P.E.
Deputy Assistant Secretary of the Air Force (Environment, Safety, and Infrastructure)
1665 Air Force Pentagon
Washington, DC 20330-1665

Subject: Expediting the delayed funding agreement between the U.S. Air Force and the New Mexico Environment Department to support regulatory oversight of the Kirtland Air Force Base Bulk Fuels Facility project

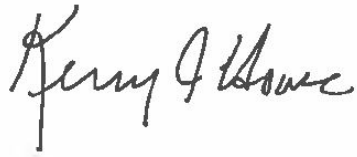
Dear Mr. Correll:

The Water Protection Advisory Board (WPAB) was established as an interagency advisory board to oversee protection of water quality in the Albuquerque, NM metropolitan area by joint ordinances passed by three local jurisdictions. The WPAB is made up of citizen advisors appointed by the City of Albuquerque Council, Bernalillo County Board of Commissioners, and the Albuquerque Bernalillo County Water Utility Authority Board. The purpose of the WPAB is to advise those entities of concerns and make recommendations regarding protection of both groundwater and surface water resources.

The WPAB met on Friday, November 8, 2019 and received an update presentation from the New Mexico Environment Department (NMED) about the status of the US Air Force (USAF) Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) remediation project. During the presentation, the WPAB learned that the USAF has not yet renewed a two-year Cooperative Agreement with the NMED as provided in Paragraph D of the December 2015 Memorandum of Agreement for Funding to Conduct Regulatory Activities at KAFB BFF. While we have since learned that the draft agreement has been provided to the NMED, we are also aware that the process has been significantly delayed and the agreement is not finalized.

The WPAB is concerned about the delay in re-establishing this two-year Cooperative Agreement because the agreement provides the funding resources necessary for the NMED to conduct proper and timely regulatory oversight of the KAFB BFF remediation project. NMED oversight of the KAFB BFF remediation is crucial and beneficial to both the USAF and local community, and we urge the USAF to expedite the renewal of the Cooperative Agreement with the NMED so that needed funding for regulatory oversight is made available.

Respectfully,

A handwritten signature in black ink, appearing to read "Kerry J. Howe". The signature is written in a cursive style with a large initial 'K'.

Dr. Kerry Howe, Chair
Water Protection Advisory Board

Cc: Senator Tom Udall, United States Senate
Senator Martin Heinrich, United States Senate
Representative Debra Haaland, United States House of Representatives
James Kenney, Cabinet Secretary, New Mexico Environment Department (NMED)
Stephanie Stringer, Resource Protection Division Director, NMED
Kathryn Lynnes, Senior Advisor, SAF/IEE, Bulk Fuels Facility Project
Bernalillo County Manager's Office
Bernalillo County Commission
Tim Keller, Mayor of Albuquerque
City of Albuquerque Council
Albuquerque Bernalillo County Water Utility Authority Executive Director's Office