

## Annual Report

2013

Prepared by the

Albuquerque and Bernalillo County  
Water Protection Advisory Board

### Members:

J. Steve Glass, Vice Chair (2013), 2014 Chair-elect  
Elizabeth H. Richards, Ph.D., 2014 Vice Chair-elect  
Erik K. Webb, Ph.D., Chair (2013)  
Michael J. Bitner, P.G.  
John S. Derr, Ph.D.  
Pete Domenici Jr., J.D.  
Thomas McHugh (Term ending August, 2013)  
Caroline Scruggs, Ph.D.  
Jennifer Thacher, Ph.D.

This report presents an overview of the Water Protection Advisory Board's (WPAB) areas of focus, activities, and accomplishments during calendar year 2013. In addition to summarizing Board activities, this report offers a brief evaluation of the progress and effectiveness of the implementation of the Surface Water Protection Policy and Action Plan, in keeping with the Board's stated mission.

## **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. The groundwater plan was updated and revised in 2009 to include a Surface Water Protection Policy and Action Plan, resulting in a single Water Quality Protection Policy and Action Plan (WQPPAP). The WPAB was established by parallel City, Authority, and County ordinances and is made up of citizen members appointed by those governments. Policy Implementation Committee (PIC) member agencies work to provide solutions to improving public health, protect the environment, engineer water quality and enhance area residents' quality of life.

The WPAB was charged with studying surface and groundwater protection concerns and advising the City, the Authority, and the County accordingly. The WPAB was also tasked with overseeing implementation of the Groundwater Protection Policy, including conducting periodic reviews and evaluations of the effectiveness of the Groundwater Protection Policy and Action Plan and recommending any necessary changes to it. Figure 1 shows the WQPPAP planning area within the MRG basin. The planning area corresponds to the watersheds that either lie within or cross the Bernalillo County border.

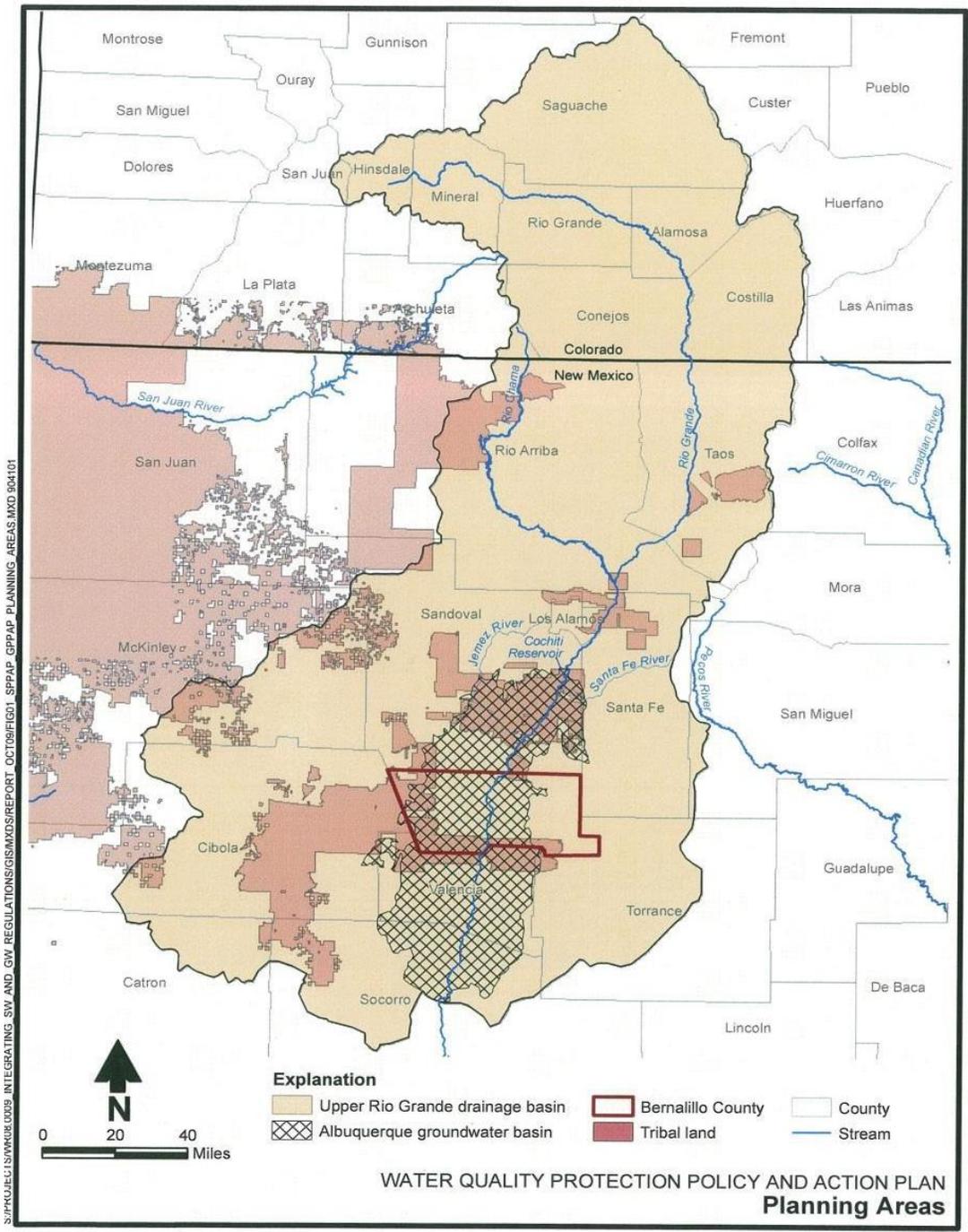


Figure 1

Figure 1. The WQPPAP Planning Areas include the Albuquerque groundwater basin and the Upper Rio Grande surface water drainage basin.

The purpose of the WPAB is to:

- Study and advise the Authority, City, and County on surface and groundwater protection concerns;
- Oversee implementation of the Water Quality Protection Policy and Action Plan;
- Promote consistency in Authority, City, and County actions to protect surface and groundwater quality; and
- Advocate 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 by the County Commission and the Mayor with the advice and consent of the City Council. A Policy Implementation Committee (PIC), comprising members from several organizations with water quality protection programs in the region, is responsible for implementing the WQPPAP. A summary of the current members' qualifications is located in Appendix A. The PIC also helps the WPAB fulfill its purpose through 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 Management Division

Bernalillo County

- Natural Resource Services
- Health and Social Services

City of Albuquerque

- Environmental Health Department
- Stormwater Management Section

## Water Protection Advisory Board Activities for 2013

The WPAB is required to hold quarterly meetings, but usually holds meetings on the second Friday of each month, addressing specific water quality concerns included on an agenda agreed to by the board members. 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 2013, the WPAB meeting agenda topics included presentations in the following areas, consistent with the board's established priorities for the year:

- I. Groundwater contamination in the MRG
- II. Implementation of the new surface water protection measures
- III. Foster intergovernmental coordination, cooperation, and communication

Board activities during 2013 consisted of nine regular board meetings and two special public forums. Below is a summary of significant action items, special events, priority updates and technical presentations by calendar month.

### JANUARY

#### Action Items

Board members voted to have a draft Open Meeting Resolution available for a vote at a future meeting. The board intends to reauthorize and amend the Open Meeting Resolution on an annual basis.

Board members moved to prepare an amendment to the original 2001 Mixed Waste Landfill (MWL) Resolution for discussion and vote during the February meeting, recommending that technical data related to the Sandia National Laboratories' Mixed Waste Landfill be more accessible to the public.

Board members voted to send letters of support for anticipated legislation providing \$400,000 for regional water plan updates that would be introduced during the upcoming 2013 state legislative session. Board staff was asked to monitor water resource and water quality related legislation introduced during the session, and provide an update to the board at the next meeting and during the interim.

## **FEBRUARY**

### Action Items

Board members voted to amend a draft letter of support prepared in the interim and in support of Senate Bill 454, a bill providing funding for three unspecified regional water plans, and to send the letter to legislators hearing the bill in committee during the state legislative session.

Board members voted to approve and publish an amendment to the 2001 Mixed Waste Landfill Resolution, recommending that technical data related to the Sandia National Laboratories' Mixed Waste Landfill be more accessible to the public.

### Priority Updates

Board members were provided an update on the current corrective action activities for the Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) Spill site, including the testing of a two large soil vapor extraction wells previously installed at the site near the contamination source area, and the Water Authority's coordination with the U.S. Geological Survey (USGS) on drilling an observation well nest of three monitoring points within the estimated zone of contribution to Ridgecrest Well No. 5.

### Special Events – Mixed Waste Landfill Public Forum

WPAB co-hosted a public forum with City Councilor Rey Garduño and Water Authority Board member that allowed attendees to voice their concerns and questions about the proposed Long-Term Monitoring and Maintenance Plan for the Mixed Waste Landfill.

The Water Authority recorded the event and the transcription was provided to the NMED Hazardous Waste Bureau to be considered during the public comment period for this document.

## MARCH

### Action Items

Board members asked staff to continue the regular updates on the KAFB BFF Spill site, including updates by KAFB and NMED. Board members also unanimously voted to send a letter to the Legislature in support of House Bill 489, which amended a section of the municipal code to provide for the adoption and enforcement of ordinances and resolutions by the Water Authority and providing for the ability of the Water Authority to levy penalties up to \$1,000 for certain offenses. The modification of the municipal code was necessary to comply with the U.S. Environmental Protection Agency (EPA) Industrial Pretreatment Regulations.

### Priority Updates

Board members were provided an update on the investigation and remediation activities at the KAFB BFF Spill site. A summary was provided for the latest groundwater quality data for the site, the new estimated extent of the plume and two technical memos that the Water Authority had drafted regarding concerns regarding the KAFB work plans for the “Soil Vapor Extraction (SVE) System Final Design” and the “In-Well Treatment Interim Measures” to be used by KAFB to address the contamination in the vadose zone and the floating product plume. The board was informed by NMED during the meeting that the plume created by the spill was much larger than previously estimated.

## APRIL

### Action Items

Board members voted to approve the revised Open Meetings Resolution for the 2013 calendar year and agreed to review the resolution on an annual basis, and amend the

resolution, if needed.

Board members also reviewed a request from the Water Authority Governing Board to evaluate the U.S. Department of Health and Human Services proposed optimal level for fluoride (0.7 parts per million) in drinking water based on a study performed by the National Academy of Science (NAS). Members concluded that the WPAB was not a technical board with the expertise or resources to evaluate the appropriateness of the proposed level, and has no basis to disagree with the NAS's assessment of fluoride and its conclusion that there is an optimal level of fluoride in drinking water. Also, members felt that the issue of fluoridation of drinking water was better dealt with by the Customer Advisory Committee, because the water served by the Water Authority was a refined product and WPAB's purview was the protection of water quality at its source. The board voted that a message be sent to the Water Authority Governing Board sharing the WPAB's opinion on this topic.

#### Priority Updates

Board members were provided an update on the status of the EPA – Region 6's Draft Middle Rio Grande Basin Watershed-based Municipal Separate Sanitary Sewer System (MS4) Pilot Permit (WBP). A summary of the elements of the draft permit, including minimum measures for storm water management plans put in place by the existing Phase II permit holders, and the tiered requirements for the Phase I permit holders was provided.

Board members also were provided a presentation by Dr. John Sigda of INTERA, Inc., the contractor providing independent expert review of KAFB BFF Spills documents and activities for the Water Authority. Dr. Sigda summarized the conceptual model of the spill-related contamination and the Water Authority's concerns for the dual-phase Soil Vapor Extraction and In-Well Treatment Systems that have been proposed, noting design flaws that may cause system inefficiencies and lead to slower cleanup schedules than have been reported.

**MAY** – MEETING CANCELED.

## **JUNE**

### Action Items

In response to a request by the Water Authority Governing Board, WPAB members voted and moved to host a public forum providing a presentation of the Agency for Toxic Substances and Diseases Registry's (ATSDR's) draft health consultation for the KAFB BFF Spill on July 30.

Board members also asked that staff from KAFB be invited to the next meeting so they could provide the WPAB with a status of the corrective action activities at the KAFB BFF site.

### Priority Updates

Board members were provided with the City's comments on the draft WBP. The board learned that the City commented on the WBP's dry weather sampling program and how in arid climates, such as ours, samples can only be collected during storm events, creating a situation where these surges contain more illicit discharges than true baseline conditions. Also, the board was told that the WBP required a 72-hour dry period between rain event sampling, which during monsoonal rain events may be difficult to achieve given the nature of the occurrence of rain during this time of year. It was shared with the board that the County shared the City's concerns for these WBP elements, and also on the implementation of items involving interagency cooperation.

In addition, board members were provided a summary of a meeting held between EPA Region 6 Administrator Ron Curry and Water Authority staff regarding recent events related to the KAFB BFF Spill. Mr. Curry pledged EPA Region 6's support to the Water

Authority with respect to the jet fuel spill clean-up activities. The board also learned that samples collected from the Water Authority's new observation wells had no detections of jet fuel contaminants (e.g., ethylene dibromide and benzene) found in aviation gas or jet fuel in any of the three well screen depths.

Board members were informed by NMED on the status of hazardous waste remediation activities at three groundwater sites, including the Digital Site, the Gulton Industries Site and the Fruit Avenue Plume Superfund Site.

## JULY

### Priority Update

Dr. Mark Evans of the Agency for Toxic Substances and Disease Registry (ATSDR) provided the board with a preview of the presentation for the public regarding the draft health consultation for the KAFB BFF Spill. He described how the study used existing data provided by the City, KAFB, CB&I (formerly Shaw Environmental), the Water Authority and NMED. Dr. Evans said he evaluated the potential pathways of exposure to the contaminants of concern for the BFF Spill and compared the previously collected contaminant concentrations for groundwater, drinking water, soil vapor, and indoor and outdoor air quality to established health comparison values to identify exposure of public health concern.

Board members were told that of the contaminants evaluated in each of the potential exposure pathways, only benzene in air and in soil gas near the Veteran's Administration (VA) Hospital had elevated levels, but were still below established health risk concentrations. Dr. Evans said the pathway for groundwater contamination into the drinking water supply is currently considered "incomplete," because the jet fuel plume has not reached any drinking water wells and KAFB is required to remediate the site before this will occur. Also, KAFB has signed a memorandum of agreement with the Water Authority to provide a contingency plan, prepared through funding from the Air Force Civil

Engineering Center (AFCEC), to replace contaminated drinking water in the event a production well is impacted by the fuel spill plume.

Dr. Evans told the board that the draft health consultation recommends that KAFB should continue the ongoing and planned monitoring and remedial actions, and that further characterization of soil gas and/or indoor air quality should be performed by the VA Hospital. Approximately 75 members of the public attended the forum held at the Cesar Chavez Community Center on July 30.

**AUGUST** – MEETING CANCELED.

## **SEPTEMBER**

### Action Items

Board members agreed to review the Water Authority's comments on the ATSDR draft consultation and determine if they want to endorse them.

### Priority Updates

Members of the board who were not able to attend the WPAB's July 30 public forum for the ATSDR draft Health Consultation were informed that the event was successful in terms of attendance, but that some comments made during the meeting by Dr. Evans of the ATSDR were not included in or supported by the draft Health Consultation. The board was also told that based on statements made by both Dr. Evans and members of the audience, some attendees may have left the forum with the impression that there is no technology available to remove ethylene dibromide (EDB) from ground water, nor are there alternative water supplies. Board members were assured that granular activated carbon (GAC) filtering of groundwater has been demonstrated to remove EDB and that new production wells could be drilled in areas unaffected by known contamination, in the event jet fuel contamination reached the Ridgecrest well field. It was apparent to the board members attending the meeting that some in the audience

did not have a clear understanding of the overall problem or the study results.

## OCTOBER

### Priority Updates

Board members received a presentation of the NMED's source water protection program, which is assisting the VA Hospital engineering staff with the development of a plan to respond to the possible impact by the KAFB BFF Spill plume.

Board members also were provided an update on the Contingency Plan being prepared for the Water Authority and funded by the AFCEC. The plan is being prepared to provide the Water Authority with options for providing a new or alternative water supply in the event any Water Authority production wells are affected by the KAFB BFF Spill.

## NOVEMBER

### Priority Updates

Board members were informed by NMED of the status for twenty soil and groundwater contamination sites in the City and County area being regulated by the NMED Remediation Oversight Section through the water quality regulations, administrative compliance orders and judicial orders on consent.

## DECEMBER

### Action Items

Board members voted to send a letter to the U.S. Department of Energy (DOE) and /or Sandia National Laboratories (SNL) requesting performance of a five-year review of the feasibility of remediating the Mixed Waste Landfill capped with a vegetative soil cover with a bio-intrusion barrier per the WPAB's 2001 Mixed Waste Landfill (MWL) Resolution. Members voted in support of this measure with one abstaining and one absent member, Dr. Erik Webb and Pete Domenici Jr., respectively. Consensus among Board members was that the spirit of the MWL Resolution (Appendix B of this report)

was for the DOE and SNL to assess the remediation options of this hazardous impoundment starting from NMED's Final Order on May 26, 2005. Members recognize that the NMED is requiring the DOE SNL to perform a five-year review of the feasibility of the excavation and analysis of the effectiveness of the selected remedy upon the approval of the MWL Long-term Monitoring and Maintenance Plan. However, members felt that sufficient time has passed since the 2001 Resolution for an evaluation of the feasibility of the active remediation of the hazardous waste encapsulated in the engineered impoundment to be performed. [Note, the board concluded at the January 2014 meeting that the letter should go to NMED as the enforcement agency rather than to DOE or SNL.]

Board members elected members Steve Glass and Dr. Elizabeth Richards to serve as the 2014 Chair and Vice Chair, respectively.

#### Priority Updates

Members discussed the board's priorities for 2014; these will guide the water quality topics to be investigated by the board during the 2014 calendar year, as well as the associated updates and presentations.

## Top Areas of Focus for Water Quality Protection

Members of WPAB and PIC evaluated several identified threats to 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, and;
4. Costs associated with not eliminating the threat.

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

Area of Focus	Explanation
KAFB BFF Spill	Several production wells could be impacted, and corrective action activities are slow.
Stormwater Quality	Large stormwater discharge above the Water Authority's San Juan Chama Drinking Water Project water diversion.
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.
Watershed Health	Primary threat to surface water quality. No regulatory requirements for prevention activities, but debris flowing to drinking water plant diversion can be eliminated.
Septic Systems	Septic systems are designed to seep contaminants; however, local ordinances are in place to minimize impacts.
Lack of Local Ordinances	Many water quality protection measures in place, but may need to be updated / revised to address new threats.
SNL Mixed Waste Landfill	The mixed waste landfill contains a mixture of toxic chemical and radioactive wastes in a legacy unlined disposal pit. WPAB authored a letter to NMED in January 2014, urging enforcement of a 5-year re-assessment and reporting requirement established by a 2005 order of the NMED Secretary.

## **Summary of Board Priority Activities for 2014**

Based on the study and analysis of the topics and issues described above, the Board identified three areas of focus as priorities for calendar year 2014.

### ***PROTECTION OF GROUNDWATER QUALITY***

WPAB will continue to monitor the progress of groundwater remediation and investigation projects in the MRG, including the KAFB BFF Spill, Superfund sites, and other contamination sites that threaten the Water Authority water supply. Board members will be provided updates on the corrective action contingency planning activities at the KAFB BFF Spill, environmental restoration activities at the Sandia National Laboratories, and other regulated groundwater contamination sites.

### ***PROTECTION OF SURFACE WATER QUALITY***

WPAB will monitor the progress of the surface-water protection measures outlined in the Water Quality Protection Policy and Action Plan, adopted in 2009, is in the early stages. The Board will work with the Policy Implementation Committee to help ensure adequate progress occurs on these measures. Watershed health, stormwater quality, and impacts of fire-scarred lands on surface water quality will be examined during the year.

### ***FOSTER INTERGOVERNMENTAL COORDINATION, COOPERATION, AND COMMUNICATION***

More than a dozen local, regional, state, and federal agencies have the authority and responsibility to further the aims of the Water Quality Protection Policy and Action Plan. Building on the efforts noted above, the board intends to continue to serve as a forum to foster communication among these groups. Board members will review how agencies coordinate regulatory efforts, the status of the WBP, and interaction between local and federal agencies on resolving threats to water quality in the basin.

## APPENDIX A

### Summary of Member Qualifications

J. Steve Glass, Vice Chair (2013), 2014 Chair-Elect

- County appointment
- Term – August, 2012 to August, 2015
- Master of Science level of education, 38 years' professional experience in environmental chemistry and biology applications in environmental science and regulation.

Elizabeth H. Richards, Ph.D., 2014 Vice Chair-Elect

- City appointment
- First term – August, 2010 to August, 2013
- Second term\*
- Ph. D. level of education, 30 years' professional experience addressing energy and water sustainability problems.

Erik K. Webb, Ph.D., Chair (2013)

- City appointment
- First term – August, 2010 to August, 2013
- Second term\*
- Ph. D. level of education, 28 years' professional experience addressing and developing policy for groundwater, environmental restoration, and water resources problems.

Michael J. Bitner, P.G.

- Water Authority appointment
- First term – March, 2010 to March, 2013
- Second term – March, 2013 to March, 2016
- Masters level of education, 30 years' experience in water resources management, environmental and hydrology issues.

John S. Derr, Ph.D.

- County appointment
- First term -- August, 2012 – August, 2015
- Ph. D. level of education, fifty years' of experience in studying and reporting geological, planetary and seismological phenomena.

Pete Domenici Jr., J.D.

- City appointment
- First term – August, 2012 to August, 2015
- J.D. level of education, 27 years practicing water rights, environmental and negligence and nuisance law.

Caroline Scruggs, Ph.D.

- County appointment
- First term – October, 2012 to October, 2015
- Ph.D. level of education, 20 years' experience in civil and environmental engineering, and water resource planning.

Jennifer Thacher, Ph.D.

- Water Authority appointment
- First term – February, 2012 to February, 2015
- Ph.D. level of education, 11 years' experience in environmental economics, international water utility infrastructure, and watershed management.

\*Pending reappointment