



# WATER PROTECTION ADVISORY BOARD

Annual Report for 2015

# Annual Report

2015

Prepared by the  
Albuquerque and Bernalillo County  
Water Protection Advisory Board

## Members:

J. Steve Glass, Chair  
Elizabeth H. Richards, Ph.D., Vice Chair  
Michael J. Bitner, P.G.  
John S. Derr, Ph.D.  
Kerry J. Howe, Ph.D.  
Russel D. Pederson, P.E.  
Caroline Scruggs, Ph.D.  
Jennifer A. Thacher, Ph.D.  
Erik K. Webb, Ph.D.

This report presents an overview of the Water Protection Advisory Board's (WPAB) areas of focus, activities, and accomplishments during calendar year 2015. In addition to summarizing WPAB activities, this report offers a list of the threats to water quality in the basin 2015.

## **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). 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.

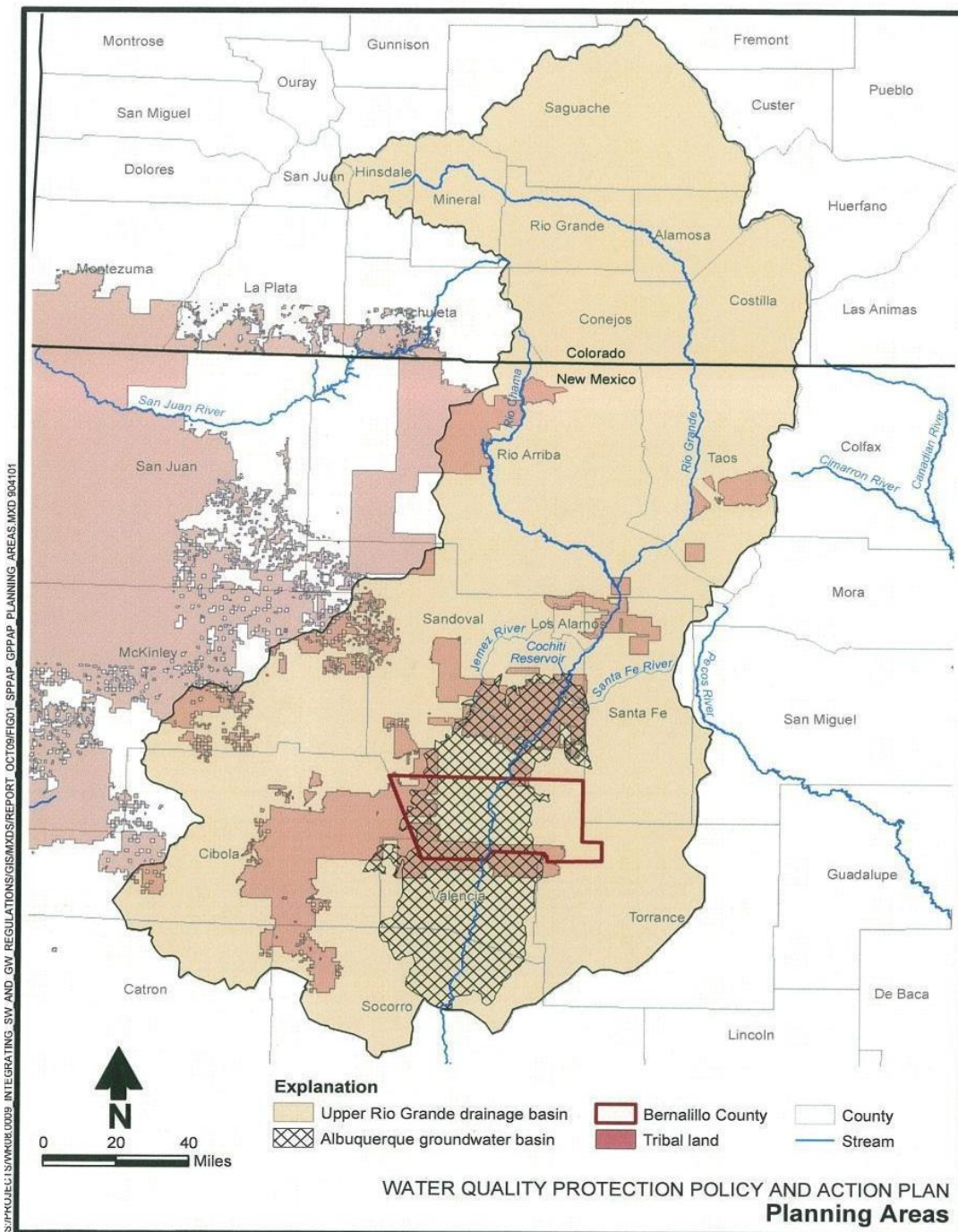


Figure 1

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 as established by ordinance 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 of 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

City of Albuquerque

- Environmental Health Department
- Stormwater Management Section

## Water Protection Advisory Board Activities for 2015

The WPAB is required to hold meetings at least once a quarter, 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 2015, 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. Foster 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 2014 calendar year.

### JANUARY– NO MEETING WAS HELD

### FEBRUARY

#### Discussion Summary

Members discussed the water-related legislation that had been introduced during the state's legislative session for the year. The board discussed supporting the Forest and Watershed Restoration Act, which was part of the Rio Grande Water Fund's efforts to create a state-led program to thin forests and create a timber economy to prevent forest fires and improve watershed health along the Rio Grande.

Comments were made that while there is general widespread support for the concept of forest thinning, there are obstacles in that Legislative Finance has a preference that insurance fees go to General Fund and in that the State Forester may also be in opposition.

## Board Actions

The Board unanimously voted to prepare and send a letter of support to the sponsors of the bill with copies to the Chairpersons of the City Council, the Board of County Commissioners, and the Water Authority Governing Board.

## **MARCH**

### Presentation Summary

Dr. Adria Bodour of the Air Force Civil Engineering Center (AFCEC), Mr. Dennis McQuillan of the New Mexico Environment Department (NMED), and Dr. John Sigda (INTERA, consultant for the Albuquerque Bernalillo County Water Utility Authority or Water Authority) provided the board with a progress report on the interim activities occurring at the KAFB Bulk Fuels Facility (KAFB BFF) Spill.

AFCEC and NMED provided highlights for the critical work to begin in 2015, including the installation and sampling of new groundwater monitoring wells being drilled at the estimated edge of the EDB plume, the soil vapor extraction rebound test, the in situ respiration testing and the starting of the first extraction well to begin collapsing the EDB plume. Dr. Sigda presented an animation showing the stratigraphy of the vadose and saturated zones that is controlling the flow of the plume towards the Albuquerque Basin's regional cone of depression.

### Discussion Summary

Discussion of Draft Water Authority Governing Board Resolution for the Mixed Waste Landfill – Members Mr. Mike Bitner and Dr. Erik Webb abstained from discussion.

Mr. Rick Shean, Water Quality Hydrologist for the Water Authority, provided the board with a summary of the proposed resolution that was to be introduced at the March 18 Water Authority Governing Board. Mr. Shean explained that the resolution noted Citizen Action of New Mexico's (CANM's) assertions regarding the contents of the Mixed Waste Landfill at the Sandia National Laboratory and requested that the U.S. Department of Energy (DOE) respond to CANM's claims at an upcoming Water Protection Advisory

Board meeting. Mr. David McCoy, Executive Director of CANM, and Dr. Eric Nuttall, independent expert, were present for the meeting and explained that they had reviewed DOE documents that revealed that high-level nuclear waste and potentially explosive metallic sodium were present in the classified sections of the Mixed Waste Landfill, and the only appropriate course of action was to excavate the impoundment.

Board members discussed the resolution and suggested recommendations that would clearly identify CANM as the source of the information about the contents of the mixed waste landfill and associated dangers and to provide the board an appropriate option for reporting DOE's response to CANM's assertions.

### Board Actions

Members approved the 2014 Annual Report and Work Plan for 2015. The board (members Mr. Mike Bitner and Dr. Erik Webb abstained from the Mixed Waste Landfill discussion) voted unanimously to endorse a revised resolution for the Water Authority's governing board to consider at their March meeting.

## **APRIL**

### Presentation Summary

Members were provided with a summary of the corrective action and administrative activities occurring at the Sandia National Laboratories' (SNL) Mixed Waste Landfill (MWL) by Mr. Will Moats, Geologist with the New Mexico Environment Department (NMED). Mr. Moats told the board that all of the corrective actions occurring at the MWL were based on the Final Order issued in May 2005. The Long-Term Monitoring and Maintenance Plan that was approved in Jan. 2014 was the last element of work needed for the SNL to request a "Corrective Action Complete" with controls from NMED. If issued, NMED will require SNL to monitor and maintain the MWL, including completing regular five-year reviews of the corrective measure (i.e., the MWL's cap). Mr. Moats also told the board that there was only low-level waste in the MWL, and high-level waste created at the lab was put in storage. Mr. Moats added that there is not enough moisture in the MWL to come into contact with the metallic sodium to combust,



despite what CANM had asserted.

Mr. Charles Leder, Division Director for the Albuquerque Bernalillo County Water Utility Authority (Water Authority) provided the board with an update on the investigation of the recent spill at the Water Authority's wastewater treatment plant. Mr. Leder told the board that in the early morning of Feb. 27, six million gallons of partially treated wastewater were inadvertently released from the plant due to a power surge and failed back-up power supply at the plant. Mr. Leder told the board that the Water Authority contacted the Pueblo of Isleta and New Mexico Environment Department in the immediate aftermath of the spill, but new protocol in the event of a future spill will ensure that Water Authority staff speak with a live person at Isleta instead of relying on voicemail. Mr. Leder added that Water Authority executives met with the Pueblo of Isleta Governor and Council and formally apologized to them. Mr. Leder assured the board that the Water Authority had made sure that their back-up generator and co-generation system will be ready for a future power outage event and spill containment is being constructed on site that would stop another spill of this size from leaving the treatment facility. An independent investigation into the power failure that led to the spill was also to be conducted.

## MAY

### Presentation Summary

Ms. Sarah Holcomb of the New Mexico Environment Department (NMED) Surface Water Quality Bureau provide the board with a status update on the Middle Rio Grande Watershed-based Municipal Separate Storm Sewer System Permit (WBP). Ms. Holcomb told the board that the U.S. Environmental Protection Agency – Region 6 (EPA-R6) Stormwater Quality Program issued the new WBP in Dec. 2014 with two separate deadlines for permittees, depending on the type of permit that was being pursued by the permitted agencies. Ms. Holcomb added that the NMED has requested more assistance for EPA-R6. The board was made aware that local building and development organizations were performing legal review of the permit requirements.

In addition, Mr. Ken Ziegler of the City of Albuquerque Environmental Health Department (EHD) provided the board with a summary of the EHD's environmental database. Mr. Ziegler told the board that the EQUIS database was used to store environmental data for the City's compliance monitoring programs, in addition to other sites within the City limits, such as the Kirtland Air Force Base Bulk Fuels Facility Spill Corrective Action. Mr. Ziegler added that the database, which handles approximately 80,000 analytical results per year, was upgraded in Dec. 2014 making the data available online.

## **JUNE – FIELD TRIP TO ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY'S BEAR CANYON AQUIFER STORAGE AND RECOVERY PROJECT SITE**

### **JULY**

#### Presentation Summary

Dr. Laura Bexfield and Dr. Anne-Marie Matherne of the U.S. Geological Survey New Mexico Water Sciences Center provided the board with an update on their 11 year-long study of the water quality in the Rio Grande above Albuquerque. Dr. Bexfield told the board the study was initiated at the request and co-funded by the Albuquerque Bernalillo County Water Utility Authority (Water Authority). The study has looked at organic, inorganic, radionuclides, nutrient, and wastewater indicator constituents, with no exceedances of the maximum contaminant levels (drinking water standards).

Ms. Mandy Griego, a Sustainability Officer of the U.S. Housing and Urban Development (HUD) provided the board with an overview of the agency's Federal Urban Water Partnership, which includes the sponsorship of three federal agencies and 28 non-governmental organizations. Ms. Griego told the board that the partnership has 14 different agencies working together on varying water-related projects involving transportation planning, riparian restoration and regulatory collaboration.

Ms. Griego showed the group the, “Urban Waters Voices” video on Denver’s South Platte River partnership.

### Discussion Summary

Members discussed the status of the implementation of the U.S. Environmental Protection Agency’s watershed-based municipal separate storm sewer system (MS4) pilot permit. Members were informed by local agencies present that the new MS4 permit is not being operated like a pilot project.

The board was told that the new federal Clean Water Rule was effective Aug. 28, 2015, and five lawsuits involving 27 states, including New Mexico through the State Engineer’s Office and the Environment Department, have been filed.

## **AUGUST**

### Presentation Summary

The board was provided with an update on the former Digital Equipment Corp. (Digital) site’s progress and the recent request by the owners of the former manufacturing facility to end the regulatory requirements for the site based on technical infeasibility to meet the closure standards. Mr. Justin Ball, Environmental Scientist with the New Mexico Environment Department’s (NMED’s) Remediation Oversight Section, made the presentation. Mr. Ball told the board that the site is being handled under an Administrative Order on Consent (AOC) put in place in the early 1990’s. Mr. Ball explained that the AOC allowed closure on technical infeasibility grounds as provided by the process described in state environmental regulations.

Mr. Rick Shean, Water Quality Hydrologist for the Albuquerque Bernalillo County Water Utility Authority (Water Authority) told the board that the Water Authority was preparing a letter requesting NMED deny the closure request at this point. Mr. Shean added that a nearby production well regularly has detectable levels of 1,1 Dichloroethene (1,1 DCE), the last remaining contaminant above standard at the Digital Site, and requested that the board consider endorsing the Water Authority’s letter.

### Discussion Summary

Members discussed how the WPAB could engage or facilitate meetings amongst the watershed-based MS4 permittees, but decided that the WPAB did not have authority to provide regulatory oversight in this situation. Members discussed the potential to engage the MS4 permittees and other basin stakeholders through possible participation and facilitation of future federal partnership of urban waters meetings. The board wanted to discuss this matter at a future time.

### Board Action

Board members voted unanimously to endorse the Water Authority's request to NMED to deny the Digital Site closure at this time.

## SEPTEMBER

### Presentation Summary

David Rast of the U.S. DOE and Mike Mitchell with a contractor supporting the SNL in the corrective action and monitoring of the Mixed Waste Landfill (MWL) provided the board with a background of historical and recent regulatory and corrective action activities at the MWL and provided a point-by-point response to each assertion made by Citizen Action New Mexico (CANM) that were listed in Water Authority Resolution R-15-7. Mr. Rast and Mr. Mitchell had previously presented to the Water Authority governing board in August.

Mr. Rast and Mr. Mitchell told the board that counter to CANM's claims about the presence of "high-level" nuclear waste (HLW) being in the MWL, all HLW was removed from containers it was in prior to disposal of the canister. They added that the canisters that held the HLW, such as rods (a.k.a. pins), during meltdown tests may have become exposed to HLW during tests are not considered HLW, and other radioactive material, such as plutonium- and americium contaminated waste, depleted uranium and other items used during nuclear reactor experiments and the Three Mile Island meltdown accident, are not considered HLW.

Mr. Mitchell added that metallic sodium is present in the MWL, however, it is located in an area of the facility with low moisture content and protected from percolation and

infiltration of surface precipitation.

Members also were briefed by Adrienne Candelaria of the Bernalillo County Solid Waste Program and Jake Daugherty of the City of Albuquerque Solid Waste Department, who provided the board with an update on the City and County's household hazardous waste (HHW) collection programs. Ms. Candelaria and Mr. Daugherty noted a steady increase in resident participation and collection of material at the collection center since 2007, with a complementary increase in pounds of HHW diverted from landfills.

Ms. Candelaria told the board that the county offers HHW collection at neighborhood clean-up events throughout the year. Mr. Daugherty added that the City provided collection at satellite events and neighborhood cleanup events, as well. In fiscal year 2015, the City, which normally holds 2 special collection events each year, was unable to do so due to being short staffed.

## **OCTOBER – NO MEETING WAS HELD**

## **NOVEMBER**

### Presentation Summary

Mr. Steve Jetter, acting manager of the New Mexico Environment Department (NMED) Superfund Oversight Section (SOS), provided the board with an update on the "Superfund sites" in Albuquerque and Bernalillo County, including both active remediation sites and sites that the SOS are investigating for cleanup evaluation.

Mr. Jetter told the board that three sites in Albuquerque / Bernalillo County area are currently being remediated, which include the Fruit Avenue Plume site in downtown Albuquerque, the South Valley and ATSF-Albuquerque Superfund Sites in the South Valley area of Bernalillo County.

In addition, Mr. Jetter told the board that the SOS is investigating three additional sites in Albuquerque for possible inclusion as Superfund sites, including the West Central Avenue-Albuquerque Site, the Randolph Road and University Blvd. Site, and the USFS-CNM/Yale 1 Site. Mr. Jetter provided a summary of the contaminants of concern and currently known extent of contamination for each site.

In addition, Ms. Michelle Hunter, NMED Ground Water Quality Bureau Chief, provided the board with an update about the Laun-Dry Supply Company site located in the Wells Park neighborhood of Albuquerque.

Ms. Hunter told the board that the Laun-Dry Site has been under regulatory enforcement by the NMED Ground Water Quality Bureau for several years. Contaminants of concern at the site include tetrachloroethene (PCE) and trichloroethene (TCE), with a TCE plume that has moved almost a mile and a half from the source. Ms. Hunter added that the source of the spill is located at a former loading dock used by Laun-Dry immediately adjacent to railroad tracks, with high levels of PCE and TCE in the soil in the immediate area. Members were told that NMED is also investigating another site in the area that is potentially contributing to the groundwater contamination, based on high levels of the same solvents in the soil.

Ms. Hunter told the board that Laun-Dry has offered to collect indoor air quality samples from residences above the groundwater plume. She added that this site is potentially eligible for Superfund oversight, if NMED chooses to begin the regulatory process through the SOS. Ms. Hunter added that NMED would be providing the affected neighborhoods updates on the progress of the Laun-Dry corrective action in presentations to the neighborhood associations.

## **DECEMBER – NO MEETING WAS HELD**

## 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 and Tijeras Arroyo Groundwater Contamination Site	The mixed waste landfill contains a mixture of toxic chemical and radioactive wastes in a legacy unlined disposal pit. DOE-SNL is currently implementing a long-term maintenance and management plan for this impoundment, of which the WPAB is pursuing regular updates. WPAB also wants to receive an update on the progress by DOE-SNL in mitigating the Tijeras Arroyo Groundwater contamination site.

Oil and Gas Operations in the MRGB	WPAB would like to study the environmental risks to water quality associated with oil and gas operations in the MRGB, and understand the regulatory process and compliance structure for this industry.
------------------------------------	---

## Summary of Board Priority Activities for 2016

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 2016.

### ***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, and environmental restoration activities at the Sandia National Laboratories, including the Tijeras Arroyo Groundwater contamination sites, and oil and gas operation activities in the MRGB. The board will also review the implementation of Bernalillo County’s new septic system ordinance.

### ***PROTECTION OF SURFACE WATER QUALITY AND WATERSHED HEALTH***

WPAB will monitor the progress of the surface-water protection measures outlined in the Water Quality Protection Policy and Action Plan, adopted in 2009, which are now in the early stages. The Board will work with the Policy Implementation Committee to help ensure adequate progress occurs on these measures. Watershed health, implementation of the watershed-based municipal separate storm sewer system permit 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, 2015 Chair

- County appointment
- Second term – August, 2015 to August, 2018
- Master of Science level of education, 39 years' professional experience in environmental chemistry and biology applications in environmental science and regulation.

#### Elizabeth H. Richards, Ph.D., 2015 Vice Chair

- City appointment
- Second term – August, 2013 to August, 2016
- Ph. D. level of education, 31 years' professional experience addressing energy and water sustainability problems.

#### Erik K. Webb, Ph.D.

- City appointment
- Second term – August, 2013 to August, 2016
- Ph. D. level of education, 29 years' professional experience addressing and developing policy for groundwater, environmental restoration, and water resources problems.

#### Michael J. Bitner, P.G.

- Water Authority appointment
- Second term – March, 2013 to March, 2016
- Masters level of education, 31 years' experience in water resources management, environmental and hydrology issues.

#### John S. Derr, Ph.D.

- County appointment
- Second term -- August, 2015 – August, 2018
- Ph. D. level of education, fifty years' of experience in studying and reporting geological, planetary and seismological phenomena.

#### Kerry J. Howe, Ph.D.

- Joint City – County appointment
- First Term – August, 2014 to August, 2017
- Ph.D. level of education, over 21 years of experience in water treatment technologies and professional engineering.

Russel D. Pederson, P.E.

- City Appointment
- First Term – December, 2015 to December, 2018
- Masters level of education, over 20 years' experience as a professional engineer manager and environmental health support.

Caroline Scruggs, Ph.D.

- County appointment
- Second term – October, 2015 to October, 2018
- Ph.D. level of education, 21 years' experience in civil and environmental engineering, and water resource planning.

Jennifer Thacher, Ph.D.

- Water Authority appointment
- Second term – Sept. 2015 to Sept. 2018
- Ph.D. level of education, 12 years' experience in environmental economics, international water utility infrastructure, and watershed management.