



# Technical Customer Advisory Committee

## AGENDA

### *Members*

|                  |                |
|------------------|----------------|
| David Brookshire | Elaine Hebard  |
| Amy Ewing        | Laura McCarthy |
| Laurie Firor     | Ege Richardson |
| Mike Hightower   | Scott Verhines |
| Dave Hill        |                |

| Thursday, August 4, 2016 | 4:00 PM  | ABCGC – 7th Floor<br>Conference Room 7096 |
|--------------------------|--|---|
| 1.                       | Call to Order – Note presence of quorum, Introductions | 4:00-4:05                                 |
| 2.                       | Approval of Agenda                                     | 4:00-4:05                                 |
| 3.                       | Approval of July 7, 2016 Action Summary                | 4:00-4:05                                 |
| 4.                       | Report on Water 2120 Town Hall                         | 4:05-4:20                                 |
| 5.                       | Recommendation of Approval of Water 2120               | 4:20-5:20                                 |
| 6.                       | Public Comment   | 5:20-5:25                                 |
| 7.                       | Final Comments or Questions                            | 5:25-5:30                                 |
| 8.                       | Adjournment  | 5:30                                      |

NOTICE TO PERSONS WITH DISABILITIES: If you have a disability and require special assistance to participate in this meeting, please contact the Water Utility Authority Office, Suite 5012, Albuquerque/Bernalillo County Government Center, phone 289-3100, as soon as possible prior to the meeting date.



# **Technical Customer Advisory Committee**

## **ACTION SUMMARY**

**July 7, 2016**

**Members Present:**

Amy Ewing  
Elaine Hebard  
Mike Hightower  
Dave Hill  
Ege Richardson

**Members Excused:**

David Brookshire  
Laurie Firor  
Laura McCarthy  
Scott Verhines

**Water Authority Staff Present:**

Frank Roth, Senior Policy Manager  
John Stomp, Chief Operations Officer  
Katherine Yuhas, Water Conservation Officer  
Rick Shean, Water Quality Hydrologist

**Consultants Present:**

David Jordan, INTERA Inc.  
Lee Brown, UNM Economics Dept.

**Item 1 – Call to Order - Note presence of quorum**

The meeting was called to order at 4:00 pm by Vice-Chair Amy Ewing.

**Item 2 – Approval of Agenda**

Dave Hill made a motion to approve the agenda. Ege Richardson seconded the motion. The motion passed on a 4-0 vote.

|            |   |
|------------|---|
| For: 4     | Ewing, Hebard, Hill, Richardson                 |
| Against: 0 |   |
| Excused: 5 | Brookshire, Firor, Hightower McCarthy, Verhines |

**Item 3 – Approval of May 5, 2016 Action Summary**

Elaine Hebard made a motion to approve the action summary. Dave Hill seconded the motion. The motion passed on a 4-0 vote.

For: 4      Ewing, Hebard, Hill, Richardson  
Against: 0  
Excused: 5      Brookshire, Firor, Hightower McCarthy, Verhines

*Mike Hightower entered the meeting at this time.*

**Item 4 – Review of Customer Conversation Meetings**

Katherine Yuhas provided a status report and summary statistics from the Customer Conversation meetings that were held in June 2016.

**Item 5 – Policy Framework**

Katherine Yuhas reviewed the policy framework for the 2017 Water Resources Management Strategy. TCAC members provided input on the policy components.

**Item 6 – Public Comment**

None.

**Item 7 – Final Comments and Questions**

None.

**Item 8 – Adjournment**

The meeting concluded at 5:25 pm.



# Water 2120: Policies

ABCWUA TCAC MEETING  
AUGUST 4, 2016

## Policy Comparison



| 2007 WRMS Policy  | 2017 WRMS Policy  |
|---|---|
| A. Update and Maintain a Water Budget   | A. Implement a Long-term Adaptive Management Water Budget Planning Framework  |
| B. Balance Demand with Renewable Supply by Using San Juan-Chama Water as the Primary Source of Supply | B. Fully Utilize and Protect Existing Water Rights and Resources              |
| C. Establish and Maintain a Groundwater Drought Reserve   | C. Establish and Maintain a Groundwater Reserve                               |
| D. Update and Maintain the Water Conservation Strategy  | D. Update and Maintain the Water Conservation Strategy                        |
| E. Support Regional Water Resources Planning and Management   | E. Support Regional Water Resources Planning and Management                   |
| F. Pursue the Conjunctive Management of Available Water Resources                                     | F. Utilize Conjunctive Management and Diversify the Water Resources Portfolio |
| G. Develop and Implement Long-Term Water Acquisition Plan   | G. Develop and Implement Long-Term Water Acquisition Plan                     |
| H. Implement the Water Quality Protection Policy and Action Plan                                      | H. Implement the Water Quality Protection Policy and Action Plan              |
| I. Equitably Incorporate the Costs of Providing a Safe and Sustainable Water Supply Into Rates        | Completed and Codified in the Rate Ordinance (1-1-3 F, 1-1-1 H, 1-1-8 C)      |
| <b>NEW POLICY</b>   | I. Protect and Enhance Storage of Native and San Juan-Chama Water             |
| J. Protect Valued Environmental and Cultural Resources in the Region                                  | J. Protect Valued Environmental and Cultural Resources                        |
| K. Preserve and Enhance the Quality of Life in the Region   | K. Preserve and Enhance the Quality of Life in the Region                     |
| L. Link Land Use Planning with Water Management   | L. Link Land Use Planning with Water Management                               |
| M. Encourage and Facilitate Public Involvement and Support  | M. Encourage and Facilitate Public Involvement and Support                    |

- No change
- Identical policy with broadened language
- New policy
- Removed and moved to rate ordinance

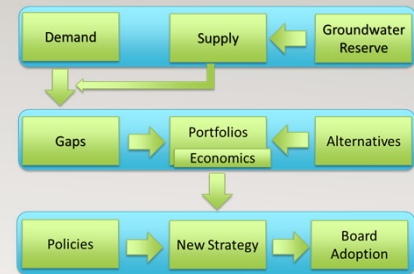
## Policy A. Water Budget Planning and Reporting



The Authority shall utilize an adaptive management approach to water resources planning and reporting. The water budget established shall be reported annually to the Authority Board and updated no less than every five years.

Key Sub-policy:

1. The Authority should update the Water Resources Management Strategy using the best available science following the Adaptive Management Strategy every ten years or more frequently as requested by the Authority Board.



## Policy B. Fully Utilize and Protect Existing Water Rights and Resources



The Authority shall protect its right to fully use its San Juan-Chama and Rio Grande surface water as a direct water supply and transition to other renewable supplies when available and appropriate. The Authority shall limit the use of groundwater except when exercising wells, providing supply during peak demand periods or when surface water supplies are not available (e.g., droughts).

Key Sub-Policies:

3. The Authority should utilize all available return flows as part of a reuse and recycling plan that consists of aquifer storage and recovery, indirect potable and non-potable reuse.



# Policy C. Establish and Maintain a Groundwater Reserve



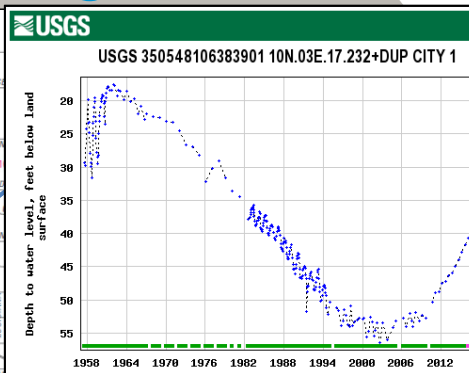
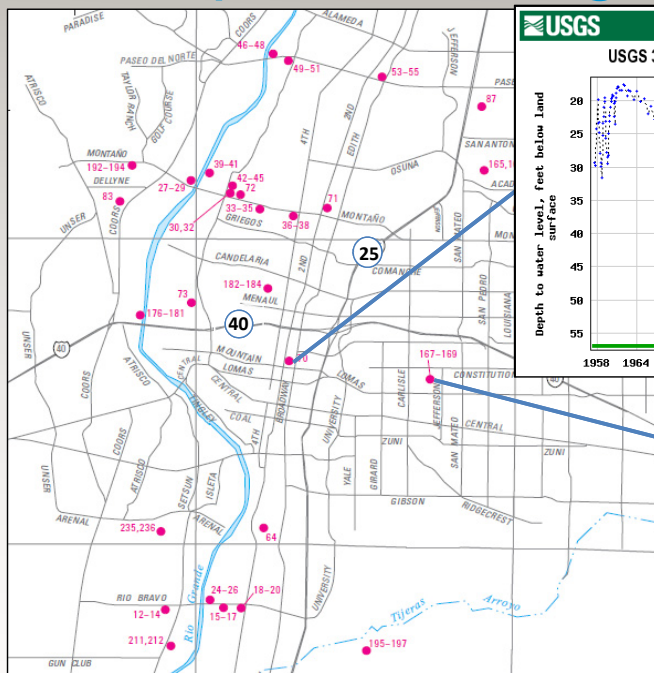
The Authority shall establish a groundwater reserve that maintains sufficient water in aquifer storage to provide water supply during catastrophic drought or other unforeseen, largely unquantifiable events. The groundwater reserve shall be partitioned into a safety reserve and a working reserve. The safety reserve is that portion of the groundwater reserve prudently maintained for emergency use only, while the working reserve is the balance of the groundwater reserve above the safety reserve. A management level goal of aquifer drawdown set within the working reserve shall be maintained so that the groundwater reserve shall be accessible without causing adverse, irreversible impacts to the aquifer. The management level provides explicit operational guidance to the implementation of Policy B in that it balances full utilization of the Authority's existing water rights with no long-term change in groundwater storage.

## Key Sub-Policies:

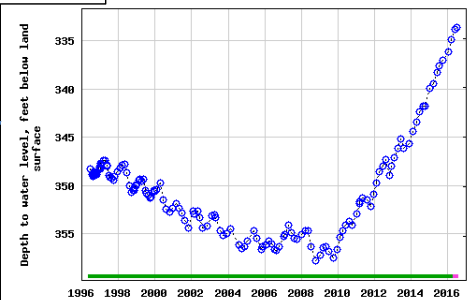
- 1a. Groundwater Reserve. This reserve extends from fifty feet of drawdown to three hundred feet of drawdown, the latter constituting the threshold of irreversible subsidence.
- 1b. Safety Reserve. That portion of the Groundwater Reserve extending from two hundred and fifty feet of drawdown to three hundred feet of drawdown.
- 1c. Working Reserve. The residual portion of the Groundwater Reserve extending from fifty feet of drawdown to two hundred and fifty feet of drawdown.
- 1d. Management Level. This is set at one hundred and ten feet of drawdown which would maintain seventy percent of the Working Reserve.



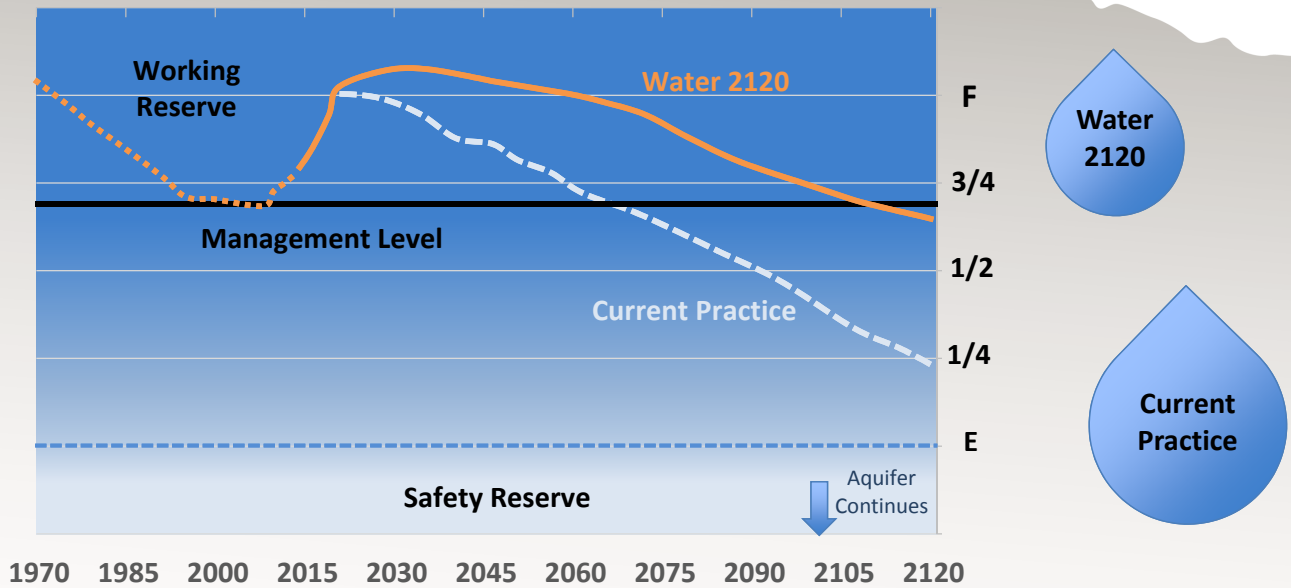
# The Aquifer is Rising



350534106354703 10N.03E.14.324B DEL SOL DIVIDER



# Groundwater Management is More Conservative



## Policy D. Update and Maintain the Water Conservation Strategy



Implementation of the Water Conservation Plan has been a key aspect of the success of the 2007 Water Resources Management Strategy. Continued progress in conservation to achieve a gallons per capita per day (GPCD) water usage of 110 will further extend our water supplies even in the face of climate change. The Authority shall utilize the conservation program to reduce GPCD to 110 by 2037.

Key Sub-Policies:

2. The Authority shall update the Water Conservation Plan consistent with the 110 GPCD goal.



## Policy E. Support Regional Water Resources Planning and Management



The Authority shall pursue efforts to enhance regional water resources planning and management activities within the Middle Rio Grande Valley. The Authority shall work cooperatively with its neighbors—the Pueblos, the Middle Rio Grande Conservancy District, Middle Rio Grande (MRG) Valley cities and counties, and involved state and federal agencies. The Authority shall continue to be involved in and monitor the progress of regional and interstate water management initiatives that may affect the Authority and the region.

### Key Sub-Policies:

3. When appropriate, the Authority should share their experience in groundwater management to assist other planning efforts in transitioning to renewable supplies and to limit long-term groundwater usage.
5. The Authority shall collaborate with the Middle Rio Grande Conservancy District (MRGCD) to develop and implement a plan to support and promote agriculture in the MRG.
6. The Authority shall promote and develop green infrastructure including storm water infrastructure to promote efficient water resources management and aquifer storage.

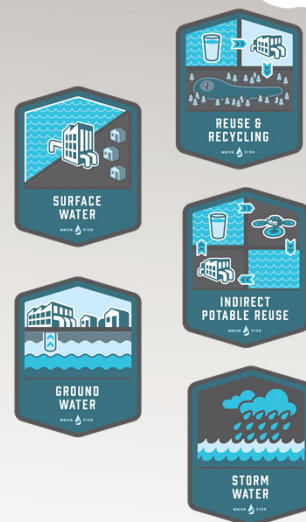
## Policy F. Utilize Conjunctive Management and Diversify Water Resources Portfolio



The Authority shall enhance the resiliency and sustainability of the water supply by effectively combining the use of surface water, recycled and reclaimed water, the shallow and deep aquifer, and other supplies as needed to meet current and future demand.

### Key Sub-Policies:

1. The Authority shall use various sources of supply (potable and contaminated groundwater, surface water, reuse water, etc.) to meet demand over the planning period. The quality of the water supplied will be matched to its use to reduce treatment costs and to optimize available excess supplies when available.
7. The Authority should develop and implement the use of storm water and native water flood flows when supplies are available considering permitting and environmental criteria along with Rio Grande Compact Compliance.



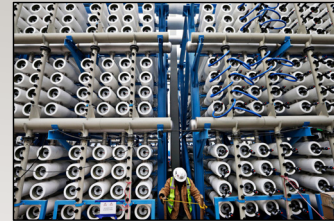


## Policy G. Develop and Implement Long-Term Water Resources Acquisition Plan

The Authority shall pursue a portfolio of potential additional sources of supply.

Key Sub-Policy:

1. The Authority should seek legislation to allow for water leasing and banking on a local, regional and interstate basis.
5. The Authority shall discontinue acquisition of native pre-1907 water rights.

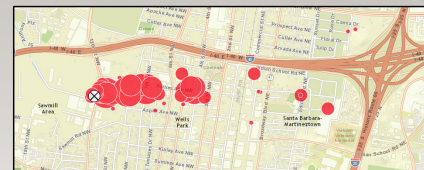


## Policy H. Implement the Water Quality Protection Policy and Action Plan

The Authority shall take steps to fully implement the Water Quality Protection Policy and Action Plan.

Key Sub-Policy:

1. The Authority should continue to be proactive in identifying potential water quality threats to surface and ground water resources and should implement programs to the extent possible to protect the water resources in the MRG.



## Policy I. Protect and Enhance Storage of Native, San Juan-Chama Water and Other Water Resources



The Authority shall protect the rights to store native, San Juan-Chama and other water resources including reuse and recycled water in a variety of storage facilities including Heron, Abiquiu and Elephant Butte Reservoirs. The Authority should seek additional off-channel storage capacity locally or within the Middle Rio Grande as needed to maximize the use of excess wastewater or other water resources in the future.

### Key Sub-Policies:

2. The Authority should examine the need for additional short and long-term off-channel storage locally and within the MRG to be prepared when excess San Juan-Chama water, native flood flows, or other water resources are available.
3. The Authority should consider the aquifer as a reservoir to be used conjunctively with above ground storage to optimize the use of current and future water supplies.
4. The Authority should develop and implement a Rio Grande Compact pool within the Authority storage space working with the Interstate Stream Commission (ISC) and the Office of the State Engineer (OSE).
5. The Authority should continue providing space in Abiquiu Reservoir for environmental purposes.

## Policy J. Protect Valued Environmental and Cultural Resources



The Authority shall identify and provide resources to preserve and protect valued environmental resources of the region. The Authority shall work independently and in partnerships to ensure that its activities do not irreparably harm the aquifer, river, Bosque, source watersheds and the cultural resources.

### Key Sub-Policies:

3. The Authority should consider the impacts on environmental and cultural resources when implementing new water resources projects and take appropriate steps to mitigate unavoidable effects.
4. The Authority should work collaboratively and provide funding to protect and restore watersheds of the San Juan-Chama and Rio Grande.



## Policy K. Preserve and Enhance the Quality of Life in the Region



The Authority seeks a Water Resources Management Strategy that will preserve and enhance the quality of life within the region. The implementation of the Authority's water resources strategy will take advantage of opportunities to enhance the quality of life in the region whenever possible.

### Key Sub-Policy:

2. The Authority should continue to reduce its carbon footprint by taking advantage of opportunities to reduce the energy usage of current infrastructure and by building new infrastructure with energy efficiency in mind.



## Policy L. Link Land Use Planning with Water Management



The Authority shall coordinate and cooperate with the City, County and all other entities with planning authority to integrate water management policies with land use decisions. The Authority recognizes that managing the use of groundwater while conserving and using existing water resources including maximizing the use of excess resources when available should significantly reduce acquisition of new supplies to serve future customers.

### Key Sub-Policy:

1. The Authority should work with the City and County to update the Albuquerque/Bernalillo County Comprehensive Plan and/or other plans to ensure that system expansion is concurrent with infrastructure service levels and that the extension of facilities and services be phased in an efficient and orderly manner.





## Policy M. Encourage and Facilitate Public Involvement

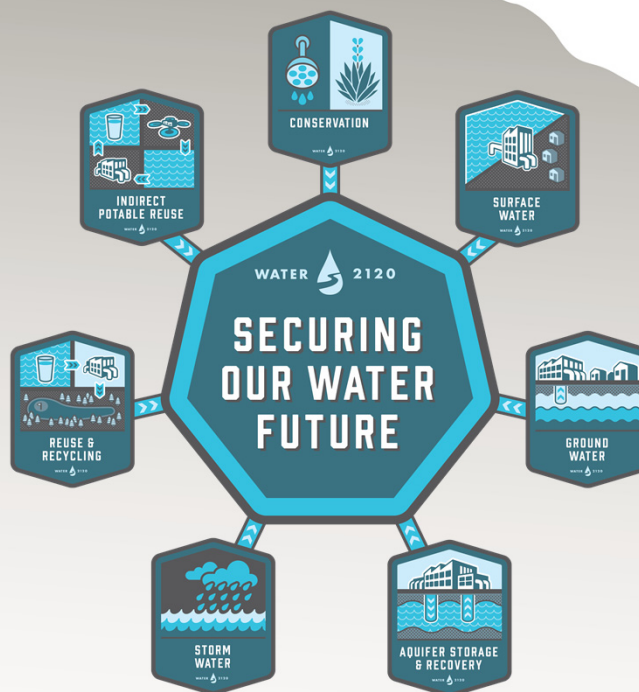
The Authority shall continue its education programs for both children and adults to keep the public informed about the choices and tradeoffs involved in making water management decisions and invite public comment and participation in implementation of these policies.

### Key Sub-Policies:

1. The Authority shall continue its water resource education programs and field trips to teach children the importance, value and appropriate use of water in the region.
6. The Authority shall continue its process of involving the public in updates to the Water Resources Management Strategy in all future updates to the strategy.



## Questions



## A. Water Budget Planning and Reporting

**POLICY A.** The Authority shall utilize an adaptive management approach to water resources planning and reporting. The water budget established shall be reported annually to the Authority Board and updated no less than every five years.

*RATIONALE: The Adaptive Management Strategy (AMS) adopted as part of the 2017 WRMS is intended to provide an iterative process by which supply and demand can be re-evaluated as needed in the future. The intent of AMS is to provide an iterative process for robust decision-making in the face of uncertainty, with the aim of reducing uncertainty over time via monitoring. Since both supply and demand projections are uncertain and may be revised in the future, AMS allows for re-evaluation of currently-identified predicted supply gaps, and subsequent revision of these gaps, if necessary. Future revisions to the supply and demand analyses may be made based on new technical understanding, availability of new technical tools, and/or revisions to current predictions of supply and/or demand. A key aspect of the Authority's AMS will be monitoring groundwater levels in the Groundwater Reserve.*

### SUB-POLICIES:

1. The Authority should update the Water Resources Management Strategy using the best available science following the Adaptive Management Strategy (AMS) every ten years or more frequently as requested by the Authority Board.
2. The Authority shall report on an annual basis to the Authority Board to provide a water budget for the upcoming year which includes estimated groundwater and surface water use along with estimated non-potable water reuse.
3. The Authority shall report to the Authority Board every five years regarding the aquifer level and the projected level for the next five years as compared to the groundwater management level established in Policy C.

## **B. Fully Utilize and Protect Existing Water Rights and Water Resources**

**POLICY B.** The Authority shall protect its right to fully use its San Juan-Chama and Rio Grande surface water as a direct water supply and transition to other renewable supplies when available and appropriate. The Authority shall limit the use of ground water except when exercising wells, providing supply during peak demand periods or when surface water supplies are not available (e.g., droughts).

*RATIONALE: The Water Authority holds the rights to about 26,396 acre-feet of vested and acquired Rio Grande water rights and 48,200 acre-feet of San Juan-Chama water. Meeting future water demands will require full utilization of these water rights and resources, including the increasing volume of excess wastewater which will be available for reuse. A safe and sustainable water supply for the Authority is based on using the existing water rights and resources which will reduce the long-term acquisition of additional water supplies. This involves using groundwater and limiting the long-term use of the aquifer to preserve a portion for future generations while preserving the right to fully utilize our groundwater permits during droughts and when surface water supplies are unavailable.*

### **SUB-POLICIES:**

1. The Authority shall take all the necessary steps to protect its existing water rights and water resources.
2. The Authority should utilize a combination of renewable supplies including the groundwater reserve, direct diversion of San Juan-Chama and native surface water, industrial and municipal effluent, impaired groundwater and recycled water.
3. The Authority should utilize all available excess return flows as part of a reuse and recycling plan that consists of aquifer storage and recovery, indirect potable and non-potable reuse.
4. The Authority should prepare for a basin adjudication or seek alternative legal strategies (negotiated settlements) in addition to the traditional adjudication process.

## C. Establish and Maintain a Groundwater Reserve

**POLICY C:** The Authority shall establish a groundwater reserve that maintains sufficient water in aquifer storage to provide water supply during catastrophic drought or other unforeseen, largely unquantifiable events. The groundwater reserve shall be accessible without causing adverse impacts to the aquifer and shall be partitioned into a safety reserve and a working reserve. The safety reserve is that portion of the groundwater reserve prudently maintained for emergency use only, while the working reserve is the balance of the groundwater reserve above the safety reserve. A management level goal of aquifer drawdown shall be set within the working reserve. The management level provides explicit operational guidance to the implementation of Policy B in that it balances full utilization of the Authority's existing water rights with no long-term change in groundwater storage.

*RATIONALE: The aquifer is generally rising throughout the Middle Rio Grande. This began in 2008 with the implementation of the Drinking Water Project. The water levels are expected to rise for more than a decade longer and it is important to develop and implement an explicit policy for managing the aquifer in the future to prevent a return to pre-1997 practice under which continuing drawdown was unsustainable. This augmented Policy C makes minimal nomenclature changes to the 2007 Policy C and adds specific language to guide management of the aquifer itself.*

### SUB-POLICIES:

1. The reserve terminology should be implemented by reference to average level of drawdown in Authority wells from pre-development conditions. Accordingly, the initial 2017 reserve settings should be:
  - a. Groundwater Reserve. This reserve extends from fifty feet of drawdown to three hundred feet of drawdown, the latter constituting the threshold of irreversible subsidence.
  - b. Safety Reserve. That portion of the Groundwater Reserve extending from two hundred and fifty feet of drawdown to three hundred feet of drawdown.
  - c. Working Reserve. The residual portion of the Groundwater Reserve extending from fifty feet of drawdown to two hundred and fifty feet of drawdown.
  - d. Management Level. This is set at one hundred and ten feet of drawdown which would maintain seventy percent of the Working Reserve.
2. If drawdown in the Working Reserve should fall below the Management Level, then projects shall be implemented to add supply to the Authority portfolio to restore it to the Management Level.

## **D. Update and Maintain the Water Conservation Strategy**

**POLICY D.** Implementation of the Water Conservation Plan has been a key aspect of the success of the 2007 Water Resources Management Strategy. Continued progress in conservation to achieve a gallons per capita per day (GPCD) water usage of 110 will further extend our water supplies even in the face of climate change. The Authority shall utilize the conservation program to reduce GPCD to 110 by 2037.

*RATIONALE: Water conservation has proven to be a powerful tool for managing water resources over the past twenty years. GPCD has been reduced from 250 in 1995 to 127 in 2015. This has led to an overall reduction in production from approximately 125,000 acre-feet in 1995 to approximately 98,000 acre-feet in 2015. Further water conservation efforts over the 100-year planning period are a key element to secure a resilient, affordable water supply for the Water Authority's service area. In addition to representing wise stewardship and management of our water resources, successful implementation of an effective conservation plan is required by the State for obtaining future permits and funding water projects.*

### **SUB-POLICIES:**

1. Conservation is the primary way in which customers participate in extending the need for additional water resources. The Authority shall continue its public outreach efforts to involve all customer classes in water conservation efforts.
2. The Authority shall update the Water Conservation Plan consistent with the 110 GPCD goal.
3. The Water Conservation Plan shall be updated at least every ten years and shall be reviewed annually so that updates to incentive, education and deterrent programs can be kept current with program needs.
4. The Authority shall work with the City and County to foster the efficient management and use of water in development and infrastructure.



## **E. Support Regional Water Resources Planning and Management**

**POLICY E.** The Authority shall pursue efforts to enhance regional water resources planning and management activities within the Middle Rio Grande Valley. The Authority shall work cooperatively with its neighbors—the Pueblos, the Middle Rio Grande Conservancy District, Middle Rio Grande Valley cities and counties, and involved state and federal agencies. The Authority shall continue to be involved in and monitor the progress of regional and interstate water management initiatives that may affect the Authority and the region.

*RATIONALE: The Authority recognizes the need to work in cooperation with other entities that share use of the Middle Rio Grande Valley's water resources. Regional water resources planning needs to address uses for public and domestic water supply, irrigated agriculture, livestock, commerce, industry, fish, wildlife and recreation. The Authority, neighboring jurisdictions, and other water users need to work with State, regional, and federal agencies with water management responsibilities.*

### **SUB-POLICIES:**

1. The Authority shall continue its proactive role to ensure that the necessary technical investigations with U.S. Geologic Survey and others are completed efficiently and expeditiously and that they result in an improved understanding of surface and ground water.
2. The Authority is committed to seek common solutions within a regional context. The Authority shall work with others in the Middle Rio Grande Valley on updates and implementation of the Regional Water Plan.
3. When appropriate, the Authority should share their experience in groundwater management to assist other planning efforts in transitioning to renewable supplies and to limit long-term groundwater usage.
4. The Authority shall work with federal and state agencies including the Bureau of Reclamation, Corps of Engineers and Bureau of Land Management, the State Engineer and the Interstate Stream Commission to continue to find common solutions for water management on the Rio Chama and the Rio Grande.
5. The Authority shall collaborate with the Middle Rio Grande Conservancy District (MRGCD) to develop and implement a plan to support and promote agriculture in the Middle Rio Grande.
6. The Authority shall promote and develop green infrastructure including storm water infrastructure to promote efficient water resources management and aquifer storage.

## **F. Utilize Conjunctive Management and Diversify Water Resources Portfolio**

**POLICY F.** The Authority shall enhance the resiliency and sustainability of the water supply by effectively combining the use of surface water, recycled and reclaimed water, the shallow and deep aquifer, and other supplies as needed to meet current and future demand.

*RATIONALE: Enhancing the efficiency of the Authority's water use, requires conjunctive management and use of all available resources: surface water for municipal and industrial supply and for irrigation, groundwater for exercising wells, peaking, and when surface water supplies are not available (e.g. , drought), ASR for municipal and industrial supply, and other supplies as available.*

*Reclamation and reuse of existing water supplies, where economically feasible and protective of human health and the environment, represents a method of maximizing and increasing the usefulness of a limited water supply. Consideration must also be given to satisfying the return flow needs of the Rio Grande from water-rights-permitting, Rio Grande Compact Compliance and environmental standpoints.*

*The use of groundwater will always be a key component of the Authority's supply portfolio. Following a conservative Groundwater Management Plan that limits long-term groundwater production and establishes a Safety Reserve positions the Authority for indefinite use of the aquifer while maintaining a significant volume of water for unforeseen events. Using the Authority's surface water and other sources for municipal and industrial supply will protect the aquifer so that it is available to meet seasonal peak demands and when surface water is not available (e.g. , drought). Without a groundwater component of supply, the Authority would need to abandon use of significant investment in groundwater assets and transition to expensive additional surface water storage facilities and larger and more costly treatment facilities to meet seasonal peak demands.*

*Aquifer storage and recovery is a key component of balancing groundwater use during times when surface water is not available (e.g. ., droughts). Using stored surface water during these times will reduce overall long-term use of groundwater during the planning period. In Albuquerque, this requires artificial recharge of the aquifer with deep recharge wells. It is essential that this capability be expanded. Stored surface water will not increase overall groundwater use because there will always be a need to utilize groundwater to exercise wells or to meet seasonal peak demands which will provide the native water component needed to facilitate use of imported San Juan-Chama water.*

*In addition, the Authority should be opportunistic in utilizing other sources to extend supply that may not always be available. These sources could include relinquishment credit water, contaminated groundwater, excess San Juan-Chama water and native flood flows in addition to leased San Juan-Chama water. Each of these sources has been available for use in the Middle Rio Grande in the past and may be available for limited use in the future. Utilizing these sources extends supply by saving other resources for future use.*

## **SUB-POLICIES:**

- 1.** The Authority shall use various sources of supply (potable and contaminated groundwater, surface water, reuse water, etc.) to meet demand over the planning period. The quality of the water supplied will be matched to its use to reduce treatment costs and to optimize available excess supplies when available.
- 2.** The Authority shall prepare and implement plans to utilize water sources that are typically only available sporadically (excess San Juan-Chama water, relinquishment credit water, etc.).
- 3.** The Authority should investigate and enter into agreements for short-term leases in times when wet water is available to be stored and used during times of drought and for aquifer recharge.
- 4.** The Authority shall develop a reuse and recycling master plan to address current and future reuse demand, excess available wastewater supplies and the associated infrastructure needs over the planning period.
- 5.** The Authority shall use pumping from the aquifer to meet seasonal demands, well exercising and when surface water is not available (e.g., droughts).
- 6.** The Authority shall continue to develop and implement methods to store available surface water and other reuse supplies in the aquifer and to recover it from storage as needed to meet current and future demands.
- 7.** The Authority should develop and implement the use of storm water and native water flood flows when supplies are available considering permitting and environmental criteria along with Rio Grande Compact Compliance.

## **G. Develop and Implement Long-Term Water Resources Acquisition Plan**

**POLICY G.** The Authority shall pursue a portfolio of potential additional sources of supply.

*RATIONALE: Establishing and maintaining a groundwater reserve (Policy C) will require the Water Authority to rely less on the local aquifer and to secure additional sources of supply to meet future demands. A more diversified water supply portfolio that includes more renewable sources is essential to provide a resilient and sustainable water supply that can meet customer demands in perpetuity.*

*While this Water Resources Management Strategy does not contemplate the need for acquisition of additional supplies, the Authority should continue to pursue these additional supply sources over the long-term which will allow the Authority to be ready when those supplies become available. Full consideration will be given to the financial implications in addition to the regional context including agricultural and environmental issues.*

### **SUB-POLICIES:**

1. The Authority should seek legislation to allow for water leasing and banking on a local, regional and interstate basis.
2. The Authority should continue to develop the potential for use of brackish ground water as a future supply considering financial, environmental and carbon footprint criteria.
3. The Authority should stay active in evaluating other water rights transfers in the Middle Rio Grande and should take proactive stances when necessary.
4. The Authority should investigate the opportunity to import water supplies outside of the Middle Rio Grande when available considering financial, environmental and other criteria.
5. The Authority shall discontinue acquisition of native pre-1907 water rights.

## **H. Implement the Water Quality Protection Policy and Action Plan**

### **POLICY H. The Authority shall take steps to fully implement the Water Quality Protection Policy and Action Plan.**

*RATIONALE: The Albuquerque/Bernalillo County Water Quality Protection Policy and Action Plan (County Resolution No. AR 121-93 and City Enactment No. 81-1994) is another cornerstone of this Water Resources Management Strategy. The Authority revised the Groundwater Protection Policy and Action Plan in 2009 to add surface water protection measures, recognizing the use of San Juan-Chama water as a primary drinking water source. Protection of both groundwater and surface resources from known or potential sources of contamination is essential for maintaining a safe drinking water supply and aquifer storage and recovery program. Their protection from contamination is of paramount importance.*

#### **SUB-POLICIES:**

1. The Authority should continue to be proactive in identifying potential water quality threats to surface and ground water resources and should implement programs to the extent possible to protect the water resources in the MRG.
2. The Water Protection Advisory Board (WPAB) shall provide annual updates on the implementation of the Water Quality Protection Policy and Action Plan (WQPPAP) to the Authority Board through submission of the Annual WPAB Reports and presentations at regular WPAB meetings.
3. The Authority shall provide pertinent information regarding updates to the water resource management strategy activities to the WPAB during its triennial review of the WQPPAP implementation activities.
4. The Authority should consider the occurrence, fate and potential treatment of emerging contaminants in current and future water supplies and should actively participate in research which will become more important as the availability of water resources becomes more constrained.
5. The Authority should coordinate with the City, County and State to maintain the quality of groundwater and surface waters.

## **I. Protect and Enhance Storage of Native, San Juan-Chama Water and other water resources**

**POLICY I.** The Authority shall protect the rights to store native, San Juan-Chama and other water resources including reuse and recycled water in a variety of storage facilities including Heron, Abiquiu and Elephant Butte Reservoirs. The Authority should seek additional off-channel storage capacity locally or within the Middle Rio Grande as needed to maximize the use of excess wastewater or other water resources in the future.

### **SUB-POLICIES:**

1. The Authority should protect and enhance its storage rights in Abiquiu Reservoir for native and San Juan-Chama water which will provide opportunities to continue to cooperate with environmental, local, state and federal entities to maximize the benefit for the MRG.
2. The Authority should examine the need for additional short and long-term off-channel storage locally and within the MRG to be prepared when excess San Juan-Chama water, native flood flows, or other water resources are available.
3. The Authority should consider the aquifer as a reservoir to be used conjunctively with above ground storage to optimize the use of current and future water supplies.
4. The Authority should develop and implement a Rio Grande Compact pool within the Authority storage space working with the Interstate Stream Commission (ISC) and the Office of the State Engineer (OSE).
5. The Authority should continue providing space in Abiquiu Reservoir for environmental purposes.
6. The Authority should seek long-term storage of San Juan-Chama water in Elephant Butte Reservoir.

## **J. Protect Valued Environmental and Cultural Resources**

**POLICY J.** The Authority shall identify and provide resources to preserve and protect valued environmental resources of the region. The Authority shall work independently and in partnerships to ensure that its activities do not irreparably harm the aquifer, river, Bosque, source watersheds and the cultural resources.

*RATIONALE: The regional aquifer, Bosque and Rio Grande are exceptional resources of great economic, ecological, aesthetic and cultural value. The Authority should cooperate to develop and implement environmentally conscious water resource development activities that protect the environmental and cultural values of our community.*

### **SUB-POLICIES:**

1. The Authority should continue to participate in the Endangered Species Collaborative Program and Recovery Implementation Efforts for multiple species in the MRG.
2. The Authority should encourage the State to recognize instream flows as a beneficial use.
3. The Authority should consider the impacts on environmental and cultural resources when implementing new water resources projects and take appropriate steps to mitigate unavoidable effects.
4. The Authority should work collaboratively and provide funding to protect and restore watersheds of the San Juan-Chama and Rio Grande.
5. The Authority should work with the City, Middle Rio Grande Conservancy District and others to protect and enhance the Rio Grande State Park and the Bosque.
6. The Authority should work with the City and County to provide incentives to increase beneficial tree canopy coverage within Bernalillo County and the MRG.

## **K. Preserve and Enhance the Quality of Life in the Region**

**POLICY K.** The Authority seeks a Water Resources Management Strategy that will preserve and enhance the quality of life within the region. The implementation of the Authority's water resources strategy will take advantage of opportunities to enhance the quality of life in the region whenever possible.

*RATIONALE: As the largest water utility in New Mexico, the Water Authority recognizes its obligation to protect and enhance the quality of life within the region. Factors influencing quality of life include continued socioeconomic growth and development, support of public amenities and green spaces, and minimizing environmental impacts. The Water Authority will provide sustainable water services to meet indoor demands, optimize efficiency of outdoor demands by utilizing recycled, reused and non-potable supplies, and return quality water to the Rio Grande for downstream users in the region.*

### **SUB-POLICIES:**

1. The Authority shall work with the City of Albuquerque, Albuquerque Public Schools, Bernalillo County and others to ensure that green spaces (parks, golf courses, athletic fields, etc.) are water efficient and provide incentives where appropriate.
2. The Authority should continue to reduce its carbon footprint by taking advantage of opportunities to reduce the energy usage of current infrastructure and by building new infrastructure with energy efficiency in mind.
3. The Authority shall expand its current green energy projects (solar and biogas) and implement additional green energy projects to reduce its water and energy footprints.



## **L. Link Land Use Planning with Water Management**

**POLICY L.** The Authority shall coordinate and cooperate with the City, County and all other entities with planning authority to integrate water management policies with land use decisions. The Authority recognizes that managing the use of groundwater while conserving and using existing water resources including maximizing the use of excess resources when available should significantly reduce acquisition of new supplies to serve future customers.

*RATIONALE: With the membership of the Water Authority consisting of elected officials from the City of Albuquerque, Bernalillo County and Village of Los Ranchos, future growth and development in the region requires coordination to integrate land use, transportation, infrastructure, economic improvement, urban infill and planning efforts with water resources management.*

### **SUB-POLICIES:**

1. The Authority should work with the City and County to update the Albuquerque/Bernalillo County Comprehensive Plan and/or other plans to ensure that system expansion is concurrent with infrastructure service levels and that the extension of facilities and services be phased in an efficient and orderly manner.
2. The Water Authority should ensure that its capital planning process is based on the City and County growth and development master plans so that land use and infrastructure policies are consistent.
3. The Water Authority should support the increase of urban building densities and infill development consistent with adopted land use plans as higher density development uses less water.
4. The Water Authority should encourage the City, County and State to adopt low-water-use Building Codes and low-water-use landscaping standards for all new construction.
5. The Water Authority should continue its review process so that each new residential, commercial, industrial and institutional development will have a resilient, sustainable water supply.

## **M. Encourage and Facilitate Public Involvement**

**POLICY M.** The Authority shall continue its education programs for both children and adults to keep the public informed about the choices and tradeoffs involved in making water management decisions and invite public comment and participation in implementation of these policies.

*RATIONALE: When the Water Authority partners with the public, the educated public can help shape the policies that are the foundation of the Water Resources Management Strategy. The public then contributes to the successful implementation of water resource management solutions, because they have been part of their design. Children who attend Water Authority field trips will know the value of water and be wise stewards of our resources for many years to come.*

### **SUB-POLICIES:**

1. The Authority shall continue its water resource education programs and field trips to teach children the importance, value and appropriate use of water in the region.
2. The Authority shall continue its interactive public meeting process to give customers information and get their input on upcoming programs, policies and projects.
3. The Authority shall continue its adult education programs so that all customers can participate in a resilient and sustainable water supply.
4. The Authority shall continue to partner with real estate, design, building and construction groups, building managers, etc. to educate their membership concerning water resources.
5. The Authority shall continue its current marketing and public relations campaigns to keep everyone in the service area informed about effective water resource management.
6. The Authority shall continue its process of involving the public in updates to the Water Resources Management Strategy in all future updates to the strategy.