June 12, 2014

La Plata Archuleta Water District

Water Management and Conservation Plan

Harris Water Engineering, Inc.

La Plata Archuleta Water District
2013 Water Management and Conservation Plan

Executive Summary

La Plata Archuleta Water District (District) was established under Title 32 of the Colorado Revised Statutes by decree of the District Court on August 19, 2008 to serve the southeast portion of La Plata County. The District was formed to establish a rural domestic water system within its service area. The voters of the District have approved a 5 mil property tax levy and debt authorization up to $25 million to assist in paying for the water system.

This Water Management and Conservation Plan (WMCP) will be a guiding document used by the District to develop best management practices for use by the District for the efficient management of its water resources. It will also be used by the District's customers for identifying practical means of conserving water. The WMCP will identify and discuss various options for the management of the District's water resources and for water conservation and select those that are appropriate for the District and its customers.

Developing the WMCP will aid the District and its customers in reducing water bills and developing a conservation ethic. The proposed conservation measures will result in minimizing the amount of water needed to meet demands.

The major goals described in the WMCP are to encourage per home water use (estimated 2.5 people per home) to be 200 gallons per day or less and to have 100% metering of all customers. Numerous potential water management and conservation measures were identified and evaluated for each goal. Many measures were selected to be implemented and have been appropriately prioritized according to their importance relative to the District's needs and the feasibility of implementing them.

The table found on page iii shows the high, medium and low priority measures. The time to implement each measure is also shown.

Once sufficient data of customers use is available it can be compared to data from similar domestic water providers to determine if the elements of the WMCP that have been adopted are successful

Background Data

The District currently encompasses an area that extends roughly from the Animas River east to the Archuleta County line and from the New Mexico border north roughly 22 miles. The towns of Bayfield, Ignacio and the City of Durango are not in the District. Additionally, areas outside of those town/city limits which are considered future service areas for the town/city were excluded from the District at its formation. Figure 1 is a map showing the extents of the District. There are also "Potential Service Areas" north and east (in Archuleta County) of the current District boundaries.

The District currently has a lease for 200 acre-feet (AF) of water from the Pine River Irrigation District (PRID) that operates Vallecito Reservoir, a U.S. Bureau of Reclamation (Reclamation) project on the Los Pinos River, in La Plata County, Colorado and expects to lease additional water from PRID in the future. PRID entered into Contract No. 06-WC-40-710 with Reclamation that provides for the lease of water for domestic purposes such as the District. The District is also currently negotiating with the Colorado Water Conservation Board to purchase up to 2,500 AF of the approximately 10,400 AF of water that the State of Colorado has acquired from Reclamation's Animas La Plata Project, in La Plata County, Colorado.

The water provided by the District will be used primarily for municipal uses. The District anticipates that its maximum raw water demand could be up to 1,411 AF of water per year while serving up to 3,600 connections (taps) by the year 2030 (assuming 350 gallons per day per tap with an average household size of 2.5 people; per La Plata County planning code). The conservation measures identified and implemented as part of the WMCP are expected to reduce this amount by as much as 40% based on a conservation goal of 200 gallons per day per tap.

Currently, most residents of the District rely on individual or community wells and water hauling for their domestic water supply. In some parts of the District, property owners have no viable well or the quality of the water is such that they have to haul their water. Water conservation measures by agricultural irrigators have also impacted some of these wells. As irrigation practices have changed from flood irrigation to sprinklers, the recharge to many aquifers has decreased resulting in a lowering of the water table and a subsequent loss of production at many domestic water wells.

The District will require customers to disconnect house hold water piping from their wells or cisterns prior to connecting to the District's facilities to eliminate the possibilities of cross contamination of the District's water. The Colorado Division of Water Resources has decided that customers of the District have the right to retain their wells and use it for outside uses such as irrigation, so long as it is consistent with their well permit. The District will not monitor these outside uses as part of the WMCP.

Prioritized Measures and Implementation Schedule

Priorities	Best Management Practices (BMP)	Implementation Date
High	Metering (sec. 4.1)	No later than 2014
High (completed)	Conservation Orientated Rate Structure & Tap Fees (sec. 4.2)	Completed 2012
High	Unaccounted Water Monitoring (sec. 4.4)	No later than 2014
High	Conservation Coordinator (sec. 4.5)	Begin immediately
High	Public Information & Education (sec. 4.7)	Begin immediately
Medium	Residential Water Audits (sec. 4.10)	Implement by 2015
Medium	Water Restriction Policy (sec. 4.6)	Establish and adopt Policy by 2020
Low	Billing System (sec 4.3)	TBD
Low	Replacement Programs for High Efficiency Fixtures & Appliances (sec. 4.9)	TBD
Low	Recommendations for New Construction (sec. 4.8)	TBD

Acknowledgments

The La Plata Archuleta Water District Board of Directors thanks all who participated in the 2013 La Plata Archuleta Water District's Water Management and Conservation Plan. This report was prepared in cooperation with the U.S. Bureau of Reclamation, the Colorado Division of Water Resources, and District staff. Harris Water Engineering would like to especially thank Edward Tolen and Board of Directors of the District for their cooperation, patience and assistance in preparation of the Water Management and Conservation Plan.

This plan was partially funded by the U.S. Bureau of Reclamation Water Conservation Field Services Program through Grant Agreement Number R12AP40038. Ruth Swickard acted as the Grants Officer's Technical Representative for the U.S. Bureau of Reclamation. The La Plata Archuleta Water District Master Plan was referenced for estimated demands, design capacities, etc…

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The La Plata Archuleta Water District welcomes any comments that may improve the utility of this report.

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Abbreviations and Definitions

AF – Acre-Feet
ALP – Animas La Plata Project
Avg – average
AWC – Animas Water Company
Board – La Plata Archuleta Water District Board of Directors
BMP – Best Management Practice
CCR – Consumer Confidence Report
cfs – Cubic Feet per Second
CDPHE – Colorado Department of Public Health and Environment
CDOT – Colorado Department of Transportation
C.R.S. – Colorado Revised Statutes
CWA – Clean Water Act
CWCB – Colorado Water Conservation Board
District – La Plata Archuleta Water District
EA – Environmental Assessment
EIS – Environmental Impact Study
gpd – Gallons per Day
LAPLAWD – La Plata Archuleta Water District
M&I – Municipal and Industrial
Master Plan – La Plata Archuleta Water District Master Plan November 2009
MCL – Maximum Contaminant Level
MGD – Million gallons per day
MWC – Montezuma Water Company
NEPA – National Environmental Protection Agency
OM&R – Operation, Maintenance and Replacement
PAWSD – Pagosa Area Water and Sanitation District
PRID – Pine River Irrigation District
PVC – polyvinyl chloride
Reclamation – United States Bureau of Reclamation
Service Plan – La Plata Archuleta Water District Service Plan September 2007
SMCL – Secondary Maximum Contaminant Level
SWCD – Southwestern Water Conservation District
SUIT – Southern Ute Indian Tribe
T&E Species – Threatened and Endangered Species
US FWS – U.S. Fish and Wild Service
USGS – United States Geological Survey
WIP – Water Information Program
WMCP – Water Management and Conservation Plan
WTP – Water Treatment Plant

1. Description of La Plata Archuleta Water District

1.1 Project History

The District is a special district organized pursuant to Article 1 of Title 32, Colorado Revised Statutes (C.R.S). The District was formed by election in August of 2008 to finance, construct, operate and maintain a public water system in the southeastern portion of La Plata County and potential areas in southwest Archuleta County. The District boundaries are shown on Figure One in Appendix A. The District will operate the water system to provide essential, reliable and safe potable water and fire protection facilities and services. The water system and its facilities are described in this Water Management and Conservation Plan (WMCP) which will act as a "foundation and road map" for further management and conservation.

The District will strive to be water conservation leaders for the area. The WMCP will assist the District with helping customers understand their water use and teach them how to use their water efficiency. This is done by setting a block rate structure to discourage excessive water use (inside the home or outside irrigation), having a goal of 200 gallons per tap per day for an average household of 2.5 people, and other means necessary as further outlined in the WMCP.

The water system will ultimately utilize two water sources and two treatment plants. The water will be treated to Colorado Department of Public Health and Environment (CDPHE) Drinking Water Standards and delivered through a pipe distribution system to District water users. The system will be pressurized by multiple water storage reservoirs (tanks) and pressure boosting stations (pumps), while pressure reducing valves will be used as necessary. The pipelines will generally be sized to deliver 1,000 gallons per minute at most locations to satisfy fire flow requirements or the estimated 2060 peak demand, whichever is greater. Fire hydrants will be installed throughout the system at locations determined in cooperation with the local fire districts. The distribution pipelines will primarily be 8 inch diameter with diameters up to 18 inches for major trunk lines from the treatment plants. Water system facilities will include treated water storage tanks, water diversions, transmission and distribution lines, valves, connections and meters for homes and businesses, water loading stations and all necessary and incidental facilities customary in any community water distribution system.

The District's voters passed a 5.0 mil levy in May of 2010 and further authorized the District to incur up to $25 million in debt in November of 2011. Proceeds from the sale of the bonds will be used to construct the treatment plants and other facilities. Property tax revenues not required for debt service payments on the bonds will be used to fund pipeline construction on a "pay as you go basis" as well as for the administration and operation of the District. As customers connect to the system, service fees (including tap fees) will be used to fund the operation and administration of the District.

In 2011, the District and the Town of Bayfield jointly funded a study to assist in determining the feasibility of designing, constructing, and operating a Joint Water Treatment Plant (WTP) to serve the treated water demands of both entities. This feasibility study evaluated the expansion of the existing Bayfield WTP to serve the needs of both entities as compared to the District constructing its own WTP and the Town expanding their existing plant. The

feasibility study was the basis for the development of an inter-governmental agreement completed in 2012 between the District and Bayfield to expand and jointly utilize the Bayfield treatment plant. The District issued $5 million in bonds in 2013 to enlarge the Town of Bayfield's water treatment plant, which will provide capacity to serve the District as well as provide additional capacity to the Town of Bayfield.

The District estimates its 2030 demand from the Bayfield WTP to be between 760,000 and 864,000 gallons per day (gpd). Bayfield estimates its increased demand in 2030 to vary between 136,000 and 280,000 gpd. The combined estimated total is about an additional capacity of 1 million gallons per day (MGD).

A cost comparison was made between constructing an enlargement of the existing Bayfield WTP by 1 MGD as compared to a new 1 MGD WTP and indicated a construction cost savings of approximately 50% with the joint WTP. This feasibility study recommended jointly expanding the existing Bayfield WTP. The recommended alternative will allow the District to focus on the construction of the distribution system while both the District and Bayfield to provide water to their customers in a more cost effective manner by reducing capital and operation, maintenance and replacement (OM&R) costs. The feasibility study is available on the LAPLAWD website (www.laplawd.org). Design of the treatment plant expansion began in late 2012 with construction expected to begin in early 2014. Construction should be complete by the end of 2014.

The District broke ground on the Phase 1A Pipeline in November of 2012. This first phase encompassed 740 linear feet of 8 inch diameter DR18 C-900 PVC pipe, 7,000 linear feet of 14 inch diameter DR18 C-905 PVC pipe and 900 linear feet of 12 inch diameter DR18 C-900 PVC pipe. Included in the distance is approximately 1,200 feet of boring and an open cut crossing of the Pine River. The pipeline crossing the river was installed adjacent to the Bayfield Parkway and County Roads 501 and 509. The work is located partially in La Plata County rights-of-way, but mostly within the Town of Bayfield's jurisdiction. This project was substantially completed in August 2013.

The District has also completed Phases 1B and 1C, which consisted of approximately 4.8 miles of 12-inch C-900 PVC pipe along county roads where District customers can be served. Phase 1D is currently under construction with completion expected by mid April 2014. This phase consists of approximately 2.8 miles of 12-inch C900 PVC pipe along County Road 510. The first connection for home service was made in January, 2014.

1.2 District Location and Physical Setting

The District is situated in the southeastern corner of La Plata County, to the south, southeast and east of Durango, Colorado. The eastern boundary of the District is the La Plata and Archuleta county line. The southern boundary is the Colorado state line. The western boundary is generally the Animas River. The northern boundary runs south of Durango's Potential Urbanizing Zone that includes Grandview, and then generally runs parallel to and north of the Highway 160 to the Archuleta County line. The District includes portions of the Southern Ute Indian Tribe's (SUIT) reservation within its boundaries.

The District has identified potential service areas in Archuleta County and plans to eventually extend into Archuleta County to serve properties along the Highway 160 corridor and near Arboles and Navajo Reservoir. The District has also identified potential service areas north of its current boundary and may eventually extend to serve properties along CR 240 or near Vallecito Reservoir. Please see Figure One in Appendix A.

The District is located within the Animas, Florida and Los Pinos (Pine) watersheds with the potential to expand into the Piedra River watershed. Lands within the District consist of hills, ridges, mesas and drainages, with elevations ranging from approximately 6,200 to 7,900 feet. The greatest portion of the land lies between elevations 6,300 and 6,800, with a slight slope to the south. Many rivers, creeks, and irrigation ditches (large and small) transect the area.

The current service area within the District encompasses land that has been agricultural ranches and farmland for over a century. The area has been gradually subdivided over the last three or four decades and is now a mixture of residential subdivisions, agricultural ranch and farm land, and some commercial properties which are mostly concentrated around the Durango/La Plata County Airport and the Gem Village area along Highway 160. Please see Figure 2 in Appendix A for the current land uses within the District boundaries. Although the area has been subdivided, it is still primarily an agricultural community with the subdivisions providing residences for persons working in Durango, Bayfield and Ignacio.

Agricultural uses occur on both private and tribal lands and include irrigated crop land and non-irrigated rangeland. Much of the non-irrigated lower elevation land is dryland with areas of pinion, sagebrush, other desert shrubs, and grasses used for grazing livestock. The higher elevation lands include Douglas fir, ponderosa pine, aspen and juniper oak woodlands. Irrigation is used primarily for grass hay, alfalfa and irrigated pasture, with a small amount of wheat, oats, and barley.

1.3 Enabling Legislation, Contractual Obligations & Organizational Structure

A set of decrees, contracts and agreements govern the District in addition to state statutes. The following is a summary of these documents. Document specifics have been summarized for the purposes of this report; however, full copies of the documents can be found in the Appendices.

The District is a quasi-municipal corporation and a political subdivision of the State of Colorado created pursuant to the Special District Act, Article 1 of Title 32, C.R.S., for the purpose of constructing, acquiring, installing, financing, operating and maintaining a public water system for an area consisting primarily of rural residential users within La Plata County. The District was organized on August 19, 2008, pursuant to an order and decree entered by the District Court in and for La Plata County, Colorado. Organization of the District was preceded by: 1) the adoption of a resolution by the La Plata County Commissioners approving a Service Plan for the formation of the District; and (2) approval of the District's formation by the eligible electors of the proposed District at an election held for that purpose in August 2008 and then by the decree of the District Court.

Following formation of the District in 2008, the District's property tax levy of 5 mills was approved by the voters of the District at an election held on May 4, 2010 (aka Tax Election).

The incurrence of debt in an aggregate principal amount not to exceed $25,000,000 was approved by the electors of the District at an election held on November 1, 2011 (aka Debt Election).

District operations and administration are controlled by the District's Board of Directors (Board). The rights, powers, privileges, authorities, functions, and duties of the District are established by the Constitution and laws of the State of Colorado in general and the Special District Act in particular. Under the authority granted by such statutes, the District has the power to conduct the following activities:

- Enter into contracts and agreements;
- Sue and be sued;
- Incur indebtedness and issue bonds;
- Refund any bonds of the District without an election;
- Fix rates, tolls, or charges for services, programs, or facilities furnished by the District, and to pledge such revenues for the payment of any indebtedness of the District;
- Adopt and enforce regulations promulgated by the Board;
- Cause the levy and collection of ad valorem property taxes;
- Acquire, dispose of, and encumber real and personal property, and any interest in real property, including leases and easements;
- Have the management, control, and supervision of all the business affairs of the District, and the construction, installation, operation, and maintenance of the District improvements;
- And exercise the power of eminent domain for the condemnation of private property for public use.

Additionally, the District has the authority to provide the planning, design, financing, acquisition, construction, relocation, installation, enter into agreements with other parties, and perform operation/maintenance/replacement of a complete potable water system for domestic, commercial, and other public or private purposes. The water system may include:

- Transmission pipelines
- Distribution pipelines
- Water meters
- Water rights
- Treatment facilities
- Wells
- Fire hydrants
- Pumping facilities
- Storage tanks
- Water loading stations
- Reservoirs
- Lands and easements
- And all necessary, incidental, and appurtenant facilities.

The District is governed by a Board which, pursuant to State law, consists of five members. Directors are elected from director districts to assure that the directors represent a geographical distribution within the Service Area, but in accordance with State law, each of the Directors is elected by all of the voters within the entire District. In order to be eligible for nomination to the Board, prospective Board members must be electors of the District as defined by State law. Directors are elected to staggered four year terms of office at successive biennial elections. Vacancies on the Board are filled by appointment of the remaining directors, the appointee to serve until the next regular election, at which time the vacancy is filled by election for any remaining unexpired portion of the term. The directors hold regular meetings on the second Thursday of each month and, as needed, special meetings. Each director is entitled to one vote on all questions before the Board when a quorum is present. Pursuant to the State constitution, directors are limited to two terms in office unless the District's voters have approved a waiver or modification of this limit. To date the District's voters have not approved such a waiver.

Table 1 – Current Board Members

Director District	Name and Office	Occupation	Length of Service	Current Term Expires (May)
1	Currently Vacant			2016
2	Mark Williams, Treasurer	Ranching	7 years	2014
3	Gregg Johnson	Agriculture & Transportation	8 years	2016
4	Dan Lynn III, Vice Chairman	Retired	8 years	2014
5	Dick Lunceford, Chairman	Farming	8 years	2016

The Board is responsible for the overall management and administration of the affairs of the District. The District currently employs a General Manager, a customer relations representative, and a construction inspector/system operator. The General Manager, Mr. Edward C. Tolen, is employed pursuant to the terms of an employment contract which is subject to annual appropriation and renewal.

Mr. Tolen was hired as the General Manager in September 2011. He has been involved in water resources for the past 23 years, primarily in the drinking water area. Prior to joining the District, Mr. Tolen worked for the Ute Water Conservancy District in Grand Junction from September 1995 to August 2011. The Ute Water Conservancy District is a domestic water provider that serves the rural and urbanizing areas of the Grand Valley, near Grand Junction, Colorado. Mr. Tolen was the District Engineer for eight years where he was responsible for a department of ten people involved in the surveying, design, construction contracting and inspection of new water mains and other related projects, as well as the District's Geographic Information System. He was also involved in permitting and coordinating projects with federal, state and local governmental entities. Prior to that, Mr. Tolen was a Project Engineer with the Ute Water Conservancy District responsible for the design, construction contracting and inspection of new water infrastructure projects.

Mr. Tolen is a registered Professional Engineer in Colorado, and earned his Bachelor of Science Degree in Civil Engineering from the University of Colorado in 1988 and a Masters of Business Administration from Mesa State College in 2005. He has been a member of American Water Works Association since 1988.

The District has retained Steven C. Harris of Harris Water Engineering, Inc., as its consulting engineer. Mr. Harris has been involved with the District for nearly 20 years, from the beginning when the plans for the District were just being conceived. He has been involved in all of the phases necessary to create the District. Harris Water Engineering prepared the District's Master Plan available on the District web site that is being used as the guide to develop the District facilities.

Mr. Harris is the President of Harris Water Engineering, Inc., which was formed in 1983 to provide general water resources consulting services in southwest Colorado. The firm provides services to a wide variety of governmental clients including: the District, the Southwestern Water Conservation District (SWCD), the Dolores Water Conservancy District, PRID, the San Juan Water Conservancy District, the Pagosa Area Water and Sanitation District (PAWSD), and the Town of Rico. The firm has been providing engineering services for 30 years regarding: domestic and irrigation water supplies, water rights, pipelines, reservoirs, and other water resources facilities and programs.

Mr. Harris has a Bachelor of Science in Civil Engineering and a Bachelor of Arts in Urban Studies from the University of Southern California. He has 41 years of experience in water resources engineering. He is presently on the Colorado Water Resources and Power Development Authority Board of Directors, the legislative appointee to the Southwest Roundtable, member of the Colorado Inter Basin Compact Commission (IBCC), and chair of the Club 20 Water Committee.

Accounting services to the District are provided by FredrickZink & Associates, Durango, Colorado. Legal services are provided by Collins Cockrel & Cole, P.C., Denver, Colorado.

2. Inventory of Water Resources

2.1 Climate

The Western Regional Climate Center maintains two weather stations within the District's boundaries (please see Figure One – District Boundaries). The period of record for temperature and precipitation is from 1948 to present. The precipitation data was used to prepare an average monthly precipitation and temperature graph shown as Figure 3 in Appendix A. The data shows the change in average temperature and precipitation over time has been minimal, however the changes to the extremes (maximum and minimum) of temperature and precipitation are more noticeable.

2.2 Conditional Water Rights

In addition to the stored water in Vallecito Reservoir and Lake Nighthorse, the District holds the following direct flow conditional water rights. Individually, or in combinations, these water rights can serve portions of the District or the entire District. The water rights may be used simultaneously, but cannot exceed a combined diversion of 15 cubic feet per second (cfs).

1. Animas River near Weasilskin Bridge, up to 15 cfs; case number 03CW102
2. Animas River and/or Florida River at Bondad, up to 15 cfs; case number 03CW102
3. Pine River near Pine River Canal, up to 7.5 cfs; case number 03CW119
4. Pine River 2 miles north of Ignacio, up to 7.5 cfs; case number 03CW119
5. Piedra River near Arboles, up to 5 cfs; case number 03CW103
6. The combined diversion at all locations cannot exceed 15 cfs

The District has evaluated alternative methods to provide water to meet the 2060 demand through a set of design parameters that includes: water supply/water availability; partnering opportunities, site locations and layouts; water quality and treatment issues; pumping heads; water costs; permitting; etc. The eight water source alternatives are summarized in the following sections followed by reasons for selection of the two alternatives as the preferred sources. For further detailed information for alternatives, including pros and cons for each, please reference the Master Plan attached in Appendix B; section IV *Alternative Sources of Water*. For a location map of the following water sources, please see Figure 4 in Appendix A.

2.2.1 Water Supply Options

1. Animas River Water Supply

   The District holds the following water rights and water supplies that utilize the Animas River in some manner.

   Alternative A - The Animas La-Plata Project (ALP) is the most upstream water source alternative the District considered when evaluating all potential water sources. The ALP source consists of utilizing water from Lake Nighthorse and building a treatment plant and storage tank on Reclamation property near Ridges Basin Dam. The District is also in discussion with the City of Durango to construct a joint treatment plant that utilizes Lake Nighthorse water. Due to the location of the treatment plant the Florida

Mesa would be served initially as the pipeline extends to the east.
The following two alternatives would utilize the District's conditional water rights on the Animas River for 15 cfs. There are two alternative diversion sites located along the Animas and Florida Rivers for this conditional water right (Animas River at Weasilskin Bridge, Animas River and/or Florida River at Bondad). By evaluating U.S. Geological Survey (USGS) daily stream flow data for the period of record, it was determined the Animas River has more than adequate flow from the physical and legal perspective to meet the District's 2060 water demands.

Alternative B – A direct diversion on property along the Animas River near Weaselskin Bridge would utilize the District's conditional water of 15 cfs. The water source consists of utilizing the District's water rights to obtain water from the Animas River from a direct river diversion, building a treatment plant and storage tank on private land, and initially serving the Florida Mesa.

Alternative C – The final Animas River alternative would be to utilize the Animas River and/or Florida River at Bondad. This water source consists of utilizing the District's water rights to obtain water from the Animas River and/or the Florida River, from a direct river diversion, building a treatment plant and storage tank on private land, and initially serving the Florida Mesa.

2. Los Pinos River Water Supply
The District holds conditional water rights on the Los Pinos (aka Pine) River of 7.5 cfs. There are two alternative diversion sites for this water right. By evaluating USGS daily stream flow data for the period of record, it was determined the Los Pinos River does not have adequate flow to satisfy the District's water demands. This water right would need to be used in conjunction with another supply to meet the District's water demands.

Alternative D – A joint treatment plant with the town of Bayfield would consist of utilizing water from Vallecito Reservoir, initially purchasing treated water and water storage from the Town of Bayfield, eventually building a joint treatment plant with the Town of Bayfield and extending pipelines from Gem Village south and west and/or south of Bayfield to Allison. This alternative has been implemented as the Los Pinos River water supply.

Alternative E – A group of collection gallery wells near the Pine River would be developed to utilize releases from Vallecito Reservoir, while a treatment plant and storage tank would be built on adjacent lands.

Alternative F – The final Pine River alternative would be to utilize a river diversion, with a treatment plant and storage tank built on private lands. The river diversion would be constructed in the Pine River about 3.5 miles south of the Highway 160 Bridge in Bayfield.

3. Piedra River Water Supply
   The District holds a conditional water right on the Piedra River of 5 cfs. There is one diversion site along the Piedra River just upstream from Navajo Reservoir. By evaluating USGS daily stream flow data for the period of record, it was determined from the physical and legal perspective that it would meet the District's water demands, however the entire river would be diverted in dry years.

   Alternative G – A direct diversion from the Piedra River, along with construction of a treatment plant and storage tank is the proposed alternative for the Piedra River water right. The river diversion would be constructed in the Piedra River at the Highway 151 Bridge at the north end of Navajo Reservoir near Arboles, in Archuleta County.

2.2.2 Preferred Water Sources

Project planning has indicated that obtaining water from the Animas and Pine River Basins would provide the best long-term secure supply. The Piedra River source will be considered when the water system is extended into Archuleta County. Approximately half of the water supply for the District would be provided from the Animas Basin and half from the Pine River Basin. The distribution system will be integrated so that either source can serve the entire system if necessary.

Although the District holds water rights on both the Animas and the Pine, the best sources of water are the ALP, Alternative A, and Bayfield, Alternative D, using water from Vallecito Reservoir. The District would either construct and operate a treatment plant at Ridges Basin Dam or construct a joint treatment plant with the City of Durango to treat water released through the dam to utilize water from Nighthorse Reservoir. The District will pay to expand the Town of Bayfield's water treatment plant by 1 MGD capacity to treat water released from Vallecito. Factors contributing to the selection of these two alternatives as the preferred water sources are summarized below.

1. Animas River Basin: The best source of water in the Animas River Basin is Lake Nighthorse by purchase from the Animas-La Plata Project (Alternative A). Contributing factors include:

   - Water is provided from a large reservoir,
   - The water quality is consistent from the reservoir,
   - The cost is not finalized but appears to be a onetime purchase cost in the range of $3,200 to $3,700 per acre-foot of diversion, plus annual OMR costs,
   - Releases from the reservoir are through a pipeline that should provide adequate pressure to operate the treatment plant,
   - The land for the treatment plant and water tank are owned by Reclamation not requiring private land,
   - The potential for a joint treatment plant with the City of Durango, similar to the arrangement with Bayfield, is possible because Durango will also utilize ALP water and construct a treatment plant to utilize the water,
   - The water is at the highest elevation of any Animas River option, requiring the least pumping,
   - Source is near the Florida Mesa which will have a large water demand,

- The endangered fish species clearances have already been obtained,
- The least amount of environmental permitting of any Animas River source,

The District will either pursue its own WTP at the base of Ridge's Basin Dam or a joint treatment plant with the City of Durango. An outlet works has already been constructed within the dam's structure. The outlet structure includes a 36 inch diameter steel pipe. City of Durango, SUIT and the Ute Mountain Ute Tribe paid the cost of construction for the outlet works and are members of the ALP Association. The District will make arrangements to use a portion of the outlet works with members of the ALP Association.

The District is in negotiations with Colorado Water Conservation Board (CWCB) to purchase a portion of the approximately 10,500 AF the CWCB Board has obtained. It is expected that the purchase price will be between $3,200 and $3,700 per AF. There will be annual O&M charges that are currently approximately $10 per AF as a base cost plus additional charges for water actually utilized.

2. Pine River Basin: The best source of water in the Pine River Basin is Vallecito Reservoir and a joint treatment plant with Bayfield (Alternative D). Contributing factors include:

    - Water is provided from a large reservoir,
    - Bayfield will need to enlarge its treatment plant at about the same time the District needs a treatment plant,
    - A joint plant saves money in both construction and operation for both entities,
    - The District and Bayfield can share trunk pipelines from the treatment plant to service areas east and west of the Town (e.g. Gem Village),
    - The District and Bayfield can share diversion facilities from the Pine River to the treatment plant, whether existing diversion facilities are adequate or new facilities are needed,
    - PRID water is available for use within the Pine and Piedra River basins,
    - Provides revenue to PRID; allowing PRID to offset some costs for irrigations;
    - The water is at the highest elevation of any Pine River option, requiring the least pumping,
    - The location is ideal for serving within the Pine River basin and the PRID area,
    - Bayfield may have a small amount of treatment capacity to lease water prior to the new treatment plant in order for the District to begin to serve taps as soon as pipelines can be installed,
    - Least environmental permitting of any Pine River source.

The District has entered into an Intergovernmental Agreement with the Town of Bayfield which provides that the District will pay all costs to expand the Town's WTP by 1 MGD of capacity and the Town will provide treated water to the District for at least twenty years, with the District paying the OM&R costs for that water. Together, water will be utilized from Vallecito Reservoir being delivered by PRID.

Water for District uses would be leased from PRID and diverted from the Pine River into a settling reservoir situated above and adjacent to the Town's treatment plant. The water

then gravity flows into the treatment plant where it undergoes treatment before being pressurized and delivered to District and Bayfield customers.

Currently, the treatment plant has a capacity of 1.5 MGD. The District will need 0.75 MGD to provide service to the District. The existing Bayfield treatment plant will be enlarged to a 2.5 MGD treatment plant (including an additional 0.25 MGD for the Town's needs). This will require a larger settling reservoir, additional treatment packages and additional storage tanks. Bayfield plans to serve Gem Village and surrounding areas. The District proposes to share the distribution line to these service areas, since the District's service area begins at these boundaries. By sharing the pipeline, the District has a means to deliver water outside of Bayfield's service area. The shared pipeline is 14 inches in diameter and constructed of polyvinyl chloride (PVC).

2.3 Water Quality

The Animas and Florida rivers serve as the current drinking water source for the City of Durango while the Pine River serves as the current drinking water sources for the Town of Bayfield and the SUIT. The water quality of the rivers is relatively good and the stream segments where the District diversions could occur meet the Colorado Water Quality Control Commission's Water Quality Standards for drinking water; however many contaminants do exist that require treatment to meet the State's Maximum Contaminant Levels (MCLs) and Secondary Maximum Contaminant Levels (SMCLs) for drinking water.

The Colorado Division of Wildlife and other agencies and volunteers collect data through the Riverwatch Program. This data is available through the Colorado Data Sharing Network. The data indicates that there are samples collected in the Animas, Florida and Pine Rivers that exceed the MCLs and SMCLs for various contaminants. The Animas has been found to have elevated levels of hardness as CaCO3, arsenic, iron, manganese and sulfate. The Florida has been found to have elevated levels of CaCO3, iron, and manganese. The Pine has been found to have elevated levels of CaCO3, aluminum, arsenic, iron and manganese.

Durango utilizes the Florida River as its primary source, with the Animas providing supplemental water during the summer season. Durango publishes a Consumer Confidence Report (CCR) as required by the CDPHE. The CCR lists the following contaminants found in the raw water, most of which were found in levels far below the MCL and SMCL and do not require treatment: coliform, radium, barium, fluoride, nitrate, turbidity, alkalinity, calcium hardness and total organic carbon. As the levels of these contaminants are below the MCLs and SMCLs, the only water quality parameter that Durango must address through treatment is the fluctuating sediment load and microscopic particulates that are found in all surface water sources. The Durango treatment plant filters the water and provides disinfection.

Bayfield utilizes direct flow water rights from the Pine River with a supplemental supply from Vallecito Reservoir. Bayfield published a CCR as required by CDPHE. The CCR lists the following contaminants found in the raw water, most of which were found in levels far below the MCLs and SMCLs and do not require treatment: barium, chromium, nitrate, nitrite, selenium, thallium, sodium, and total organic carbon. As the levels of these contaminants are

below the MCLs and SMCLs, the only water quality parameter that Bayfield must address through treatment is the fluctuating sediment load and microscopic particulates that are found in all surface water sources. The Bayfield treatment plant filters the water and provides disinfection.

A study conducted in 1988-1989 by the U.S. Department of the Interior, National Irrigation Water Quality Program, found elevated levels of harmful constituents in local area groundwater and surface water. The Pine River and its tributaries were sampled and concentrations of selenium (1 sample), manganese (25 samples) and mercury (1 sample) were found in excess of EPA drinking water regulations and 12 surface water samples contained levels of selenium in excess of EPA aquatic life regulations.

Seasonal fluctuations of sediment loads can provide challenges to surface WTPs. The Animas River has uncontrolled seasonal sediment fluctuations. The Pine and Florida Rivers have less seasonal variability due to on stream reservoirs (Lemon Reservoir on the Florida and Vallecito Reservoir on the Pine), but some tributaries to these rivers, below the reservoirs, do contribute seasonal sediment loads. Surface water from Lake Nighthorse will have reduced sediment loads because the sediment load from the Animas River is minimized by settling in the reservoir prior to release to the District's treatment plant.

2.4 Water Budget

The District's proposed water distribution system will be constructed using best management practices (BMPs) to minimize system losses and increase water use efficiency. All inflows and uses for the system will be measured. This information can be examined on a regular basis in order to properly detect losses and on a monthly basis to assess demands within the system. The water budget is a comparison of water inflows to water outflows and can serve as a tool for determining system operational efficiencies and identifying water demands.

To estimate future water usage within the District, surrounding areas with rural water systems were investigated. Three neighboring systems were identified to have similar customer basis, service area, and water supplies: Montezuma Water Company, Animas Water Company and PAWSD. The District's conservation goal of 200 gallons per tap per day will be compared to the surrounding systems day demands. This will provide the District with a better estimate of realistic demands. Please see Table 2 – Rural Water Systems Daily Demand for these comparisons.

Table 2 – Rural Water Systems Daily Demand

	Winter Estimate	Spring Estimate	Units
MWC	(Jan) 135	(Apr) 184	gal per tap per day
AWC	131 to 197	230 to 361	gal per tap per day
PAWSD	(Jan avg) 242	(Apr avg) 241	gal per tap per day

These comparisons indicate that water usage of 200 gallons per tap per day is achievable but will require additional measures than used by these neighboring water systems.

Montezuma Water Company (MWC) currently consists of about 5,141 service connections, providing service in three counties with over 200 hydrants, and 20 full-time employees. The

treatment plant has a capacity of 4 MGD. MWC serves mostly rural homes with only a few commercial taps (ie, a hotel, a campground and a Public Lands Building). Some customers' usage may include landscaping, supplemental irrigation water and supplemental winter stock water. MWC does not enforce a conservation orientated rate structure, but rather has a base rate (determined by meter size) of $15.00 for 5/8" meters ($36.00 for ¾" meter) with an associated rate of $3.85 per 1,000 gallons used. MWC supplied the District with the monthly delivery quantities for the month of January 2013 and April 2013. The average daily use per service connection is determined by the monthly quantities divided by days in a month and divided by number of service connections.

Animas Water Company (AWC) provides potable water from groundwater wells to their members in the Animas Valley north of Durango. AWC has been providing water for over 30 years and currently serves 1,106 customers. AWC serves mostly rural homes, with a portion of the homes using the water for irrigation too. AWC also serves the community of Dalton Ranch which consists of single family, estate homes and townhomes. AWC has a monthly service charge per equivalent unit of $17 with an increasing block rate structure. AWC provided the District with monthly water usage quantities for single family homes, single family homes coupled with irrigation, and Dalton Ranch estimates.

PAWSD encompasses approximately 76 square miles in the San Juan Mountains of southwestern Colorado, and includes within its boundaries the Town of Pagosa Springs and unincorporated areas of Archuleta County. PAWSD has a monthly service charge per equivalent unit of $23.50 with an increasing block rate structure.

Table 3 - Rate Structure Comparisons

	Base Rates	Tier 1 (per 1,000 gallons)	Tier 2 (per 1,000 gallons)	Tier 3 (per 1,000 gallons)
MWC (5/8" meter)	$15.00	$3.85 per 1,000 gallons flat rate		
AWC (per user)	$17.00	$2.50 (0 to 20,000)	$5.00 (20,001 to 30,000)	$7.50 (over 30,000)
PAWSD (per service tap)	$23.50 (includes first 2,000 gallons used)	$4.22 (2,001 to 8,000)	$8.43 (8,001 to 20,000)	$10.59 (over 20,000)
LAPLAWD (per tap)	$30.00 (includes first 2,000 gallons used)	$6.00 (2,001 to 5,000)	$10.00 (5,001 to 8,000)	$15.00 (over 8,000)

Table 3 compares the block rate structures for the surrounding areas rural water systems. Based on the Districts conservation goal of 200 gpd per tap a monthly water usage of about 6,000 gallons is expected. Table 4 displays the monthly water bills for each water system based on a set monthly usage to show bill comparisons. From this table, it is easy to see that LAPLAWD's rate structure is the most conservative.

Table 4- Monthly Water Bills

	Per 30 days, per tap		
	200 gpd	350 gpd	500 gpd
MWC	$38.10	$55.43	$72.75
AWC	$32.00	$43.25	$54.50
PAWSD	$40.38	$61.48	$99.41
LAPLAWD	$46.88	$115.50	$183.00

2.5 Legal, Institutional, & Environmental Considerations

District specific legal, institutional, and environmental factors could potentially affect the water sources and the associated water budget. The two water sources are Vallecito Reservoir through a contract with the PRID and Lake Nighthorse through purchase from the CWCB. A description of the legal, institutional, and environmental considerations associated with these sources is described in this section. Most components of the WMCP (majority of the management and conservation measures) can be implemented without legal or environmental compliance activities.

2.5.1 Legal Considerations of Water Sources

The District has a contract with the PRID for the lease of 200 AF of Pine River Project Water that was entered into on January 24, 2011. Pursuant to the Act of February 25, 1920 (41 Stat. 451) 6,700 AF of water stored in Vallecito Reservoir was deemed "Contract Water" under a contract between Reclamation and PRID (Contract No. 06-WC-40-710). Contract Water may be leased for purposes other than irrigation. The contract provides that "The District Contract authorizes the District (PRID) to lease up to 4,700 AF of Contract Water for municipal and industrial purposes… An initial 1,000 AF of Contract Water for use within the PRID Service Area has undergone compliance with National Environmental Policy Act (NEPA) and the 1920 Act for use in Third Party Contracts…" The 200 AF currently leased from PRID is part of the 1,000 AF that has had NEPA compliance. The PRID Service Area is defined in the contract as the "entire Pine River Basin, the lower Piedra River Basin, and portions of the Florida River Basin east of the Florida River"; water currently leased to the District from PRID will be used within the PRID Service Area. If the District uses PRID water outside of the Service Area or exceeds the initial 1,000 AF that has NEPA compliance, additional NEPA compliance will be necessary. The portion of the 1,000 AF that will be used by the District is expected to be adequate through at least 2030. The current plan is to utilize Lake Nighthorse water (described in this section) to serve areas in the District outside of the PRID Service Area.

PRID is in the process of obtaining a "refill decree" for Vallecito Reservoir to update the original decree from the 1930's. Administration of water rights in Colorado has undergone numerous changes in the past 80 years including how domestic water is accounted. When the refill decree is completed, it will clear up any potential issues there may be with continued use of domestic water from Vallecito Reservoir.

The District is in the final stages of negotiating a contract with CWCB to purchase 2,500 AF of municipal and industrial (M&I) water in annual increments over a 40 year period

from Reclamation's ALP which includes Lake Nighthorse. CWCB purchased 10,460 AF of Project Water from Reclamation to be used for M&I purposes and is in turn in negotiations to sell 2,500 AF to the District. This water is available on demand from Lake Nighthorse.

2.5.2 Institutional Considerations

The District has entered into an Intergovernmental Agreement with the Town of Bayfield which provides that the District will pay all of the costs to expand the Town's WTP by 1 MGD of capacity and the Town will provide treated water to the District for at least twenty years. The Town's WTP currently has a capacity of 1.5 MGD. The expansion will provide 0.25 MGD for the Town's future use and 0.75 MGD for the treated water needs of the District. The WTP expansion is scheduled to be completed in 2014. The District is also constructing pipelines within the Town of Bayfield that will be used to improve the distribution of water within the Town and to deliver treated water to its distribution system within the District's Service Area.

The District is in the process of initiating negotiations with the City of Durango to fund construction of a new joint WTP using water from ALP. The City has already acquired an allocation of water from ALP. The District has developed preliminary plans to construct its own WTP but it is possible the City and District could work out an arrangement for one WTP and mainline water pipelines that would serve both entities. As with the Town of Bayfield the joint facilities will significantly reduce the construction and operation costs to both entities.

The SUIT has property scattered throughout the District which could utilize water from the District water system. The District and SUIT have had initial discussions for the District to provide water to SUIT land.

2.5.3 Environmental Considerations – Pipeline Environmental Compliance

Each portion of the LAPLAWD construction project may require environmental permitting and/or regulatory agency clearance. Whether a phase of construction requires environmental permitting initially depends upon the land ownership of the lands to be disturbed by the construction activity. The following summarizes the various environmental compliance scenarios that the LAPLAWD construction efforts may (or have) encountered:

1. ***If construction were to occur on Federal Lands (i.e. Bureau of Land Management, Tribal or US Forest Service)***

   Any action on Federal lands requires compliance with the NEPA. The level of analysis (Environmental Impact Statement [EIS] vs Environmental Assessment [EA]) is dependent upon the magnitude of potential impact to resources of concern. There are upwards of 15 types of resources of concern that need to be evaluated to determine if construction impacts are 'significant' or not. These resources can include: air quality, surface water, groundwater, soils and geologic resources, land use, flood plains, historic and cultural resources, aquatic and terrestrial biology, threatened and endangered species (and others dependent upon the land owning agency's needs). The

NEPA process requires close coordination with the land owning Federal agency. The NEPA documentation process can involve and require public notice, review and comment analysis. The NEPA process differs by Federal Agency; and the potential agencies LAPLAWD will work with include the Bureau of Land Management, Corps of Engineers, USDA Forest Service, Bureau of Indian Affairs, and Bureau of Reclamation.

The NEPA process requires inter-agency coordination for professional 'clearances' on resources of concern being evaluated as part of the EIS or EA process. For instance, the US Fish and Wildlife Service (US FWS) is deemed the overseeing agency to determine project impacts to Federal level species and habitats of concern (threatened and endangered species and their critical habitats [T&E species]). In response, the presiding Federal agency (the land owning agency) requests a Section 7 consultation with US FWS to determine if the NEPA EIS or EA analysis of project impacts to T&E species and their habitats is correct. This same type of inter-agency coordination occurs with other resources as follows; for cultural and historic resources - the Colorado State Historic Preservation Office is consulted; for aquatic and terrestrial biological resources – the Colorado Parks and Wildlife and/or the Colorado Natural Heritage Program is consulted; for farmlands and soils - the Natural Resource Conservation Service is consulted etc. The consulted agencies often provide documentation of their agreement/disagreement with the NEPA EIS or EA analysis. If the project is determined to cause no significant impact, then the project receives a 'clearance' from the consulting agency.

The NEPA process assumes all appropriate permits through all other applicable resource agencies would be acquired as part of the process. The potential permits would include:

- Federal Level
  - Clean Water Act (CWA) – Section 404 compliance (dredge and fill operations in waters of the United States) – issued through the US Army Corps of Engineers
  - CWA – Section 401 compliance (Water quality compliance to lands of tribal and federal concern) – issued by the Environmental Protection Agency.
- State Level
  - CWA – National Pollution Discharge Elimination Permit – for the point of discharge of encountered waters as part of construction – issued through the CDPHE.
  - CWA – National Pollution Discharge Elimination Permit – for the point of discharge of stormwater captured and routed as part of construction – issued through the CDPHE.
- County and City/Town Level
  - Counties and even cities or towns have acquired the powers to enforce their own environmental permitting or compliance procedures. La Plata and Archuleta counties defer to the Federal

and State level permitting process. There are no compliance requirements beyond those overarching regulatory processes. Similarly, the Town of Bayfield and City of Durango have not enlisted any environmental procedures beyond the assumed Federal and State requirements.

2. ***If construction were to occur on State Right of Way Lands (i.e. Colorado Department of Transportation)***
   The Colorado Department of Transportation (CDOT) requires 'Utility Corridor Permits' for construction projects such as the LAPLAWD pipeline segments. The permit requires a comprehensive evaluation of construction project impacts to resources of concern that is synonymous to the NEPA EA process. CDOT has reviewing professionals in-house that review the documentation and provide an analysis of whether or not they agree with project impact findings. The CDOT Utility Corridor Permit requires that all other necessary permits (and inter-agency clearances as previously described) be acquired. These include the Federal level CWA permits where applicable, and the State level CWA permits as well.

3. ***If construction were to occur on County Right of Way Lands (i.e. La Plata County)***
   Since La Plata County does not require any environmental compliance above and beyond existing Federal and State regulations; the applicable compliance procedures are the same as the Federal and State level procedures previously described.

In summary, the LAPLAWD construction activities may include all or portions of the above environmental compliance procedures. These procedures assure that there would be minimal to no net adverse effect to resources of concern. The permit procedures often require on-site BMPs to control impacts and/or mitigation concurrent with construction to negate adverse effects real-time. It is LAPLAWD's policy to comply with all environmental compliance procedures to assure no environmental harm occurs as a result of the District's activities.

3. Water Demands

3.1 Forecasted Demands

The planning of the water system requires estimates and projections of water demands at various times in the future. Various types of water demand estimates are necessary including:

- Planning horizon
- Water accounting units
- Annual and Monthly distribution of water demand
- Facilities sizing criteria

The criteria for each of the various types of water demands are described and evaluated in the following subsections.

3.1.1 Planning Horizon

The criteria for each of the water demands is dependent upon how far into the future to plan which is referred to as the planning horizon.

1. Near term planning horizon of 2030. This date is based on construction commencing in the winter of 2012, with the majority of the system expected to be completed by 2030. During the period from 2012 to 2030, the number of connections each year will be dependent on the speed the pipelines are installed and the connection of homes. Generally, facilities that can be relatively easily increased in size (e.g treatment plant, pumps and water tanks) would be initially sized to meet the 2030 demand.
2. Long term planning horizon of 2060. The 2060 date was chosen to provide a 50-year planning horizon to size facilities that are not easily increased in size such as pipelines. 50 years is a common planning horizon and is often considered reasonable, such as in a recent Colorado Supreme Court decision indicating 50 years is a reasonable time frame to plan for water rights. From 2030 to 2060, the number of connections will largely depend on new growth in the area. New pipeline construction will be extensions from mainlines to new developments. The estimated water demand for the 2060 planning horizon will be used to determine how much raw water to secure and to size facilities that are not easily increased, such as trunk and distribution pipelines.

3.1.2 Water Accounting Units

An estimate of the water demand for each planning horizon is necessary to secure adequate water supply and properly size the facilities. The annual demand is determined based on the estimate of taps and water use per tap. The number of taps will increase over time as the water system is constructed, existing homes connect and new homes are built. There is significant variability (multiple demand scenarios) in estimating the number of taps that will connected to the District water system at each planning horizon. Currently there are less than 20 tap connections to the water system.

The current La Plata County land use plans were used to develop a range of potential tap connections. How many taps will realistically be developed due to growth demand or changes in the land use plans is not known. The pattern of development within the District is also not known. The plans for the water system attempt to provide the infrastructure to

provide water no matter the amount needed or the development pattern. The demand scenarios were developed using the ArcMap software and La Plata County GIS coverages. The coverages used were the parcel coverage, Florida Mesa Planning District and Bayfield Planning District Land Use Classification. These coverages were used to find the number of existing parcels, and the minimum and maximum number of new parcels that could be expected to develop, as allowed by the planning district land use classifications. For a detailed explanation of the analysis used for the demand scenarios reference Appendix B – Master Plan; section II Water Demand. The various water demand criteria is determined based on a range of taps from 1,800 to 3,600 in 2030 and 4,000 to 10,000 in 2060.

The water usage per tap is also difficult to estimate because it varies based on the characteristics of each water system. Until the District has 5 to 10 years of actual usage records it is not possible to accurately estimate gallons per tap per day. Therefore a range of usage is used to provide a reasonable determination of the total amount of water needed to supply the system. La Plata County currently uses 350 gallons per home (assumed to be a tap) per day for planning purposes; further this is assumed to be at the raw water diversion. PAWSD has very accurate records for the past 14 years and when accounting for water conservation and drought reduction since 2002, indicates 260 gallons per tap per day measured at the treatment plant is reasonable for this area (this value also included some commercial usage and lawn irrigation). The District water system is primarily for domestic usage and not for outside lawns and gardens. For the planning horizon a range of water usage per tap of 200 to 350 gallons per tap per day measured at the raw water sources will be used, with a conservation goal being 200 gallons per tap per day.

3.1.3 Annual and Monthly Distribution of Water Demand

As indicated on Table 5 below, when combining the projected number of taps and the range of usage per tap, the 2030 annual water demand would range between approximately 400 and 1,400 AF. The 2060 annual water demand would range between 900 and 3,900 AF. This is an extremely wide range of potential annual water demand reflecting the difficulty in making estimates for a large, new water system.

Table 5 – Demand Scenarios

	Taps (tap)		Conservation Demand 200 gpd/tap (AF/YR)		La Plata County Planning Demand 350 gpd/tap (AF/YR)	
Year	Min	Max	Min	Max	Min	Max
2012	0	0	0	0	0	0
2030	1,800	3,600	403	807	706	1,411
2060	4,000	10,000	896	2,240	1,568	3,921

The District is planning on securing a minimum raw water supply of at least 2,750 AF to meet a 2060 demand, with approximately 1,060 AF needed by 2030. Table 6 shows the number of taps that could be served using the reasonable annual demand estimate for the conservation use and the La Plata County use as compared to the projected minimum and maximum taps. This table indicates that the reasonable annual demand, as estimated

herein, is sufficient water to supply the projected number of taps at each usage rate.

Table 6 – Reasonable Annual Demand

	Reasonable Annual Demand (AF)	Resulting taps Served @ 200 g/tap/d (tap)	Resulting taps Served @ 350 g/tap/d (tap)	Projected Tap Connections (tap)	
Year				Min	Max
2012	0	0	0	0	0
2030	1,060	4,732	2,704	1,800	3,600
2060	2,750	12,275	7,014	4,000	10,000

The District will secure about half of the water from each of the two water sources; however, the ALP option is a onetime only opportunity to obtain water so 2,500 AF, more than half of the 2060 reasonable demand is planned to be acquired from ALP due to future limitations.

The water supply from Vallecito Reservoir is likely to be more flexible and may be able to be increased in the future; therefore, an arrangement to secure water gradually over 50 years might be established to meet actual demands. For example, only approximately 530 AF would be requested from Vallecito by 2030, if half of the supply were secured from each source. Currently, the District has a contract for 200 AF from Vallecito with the potential to obtain more in the future. Please reference section 2.5 for further description of the contract and purchase amounts.

3.1.4 Facilities Sizing Criteria

An estimate of the peak month, peak week and peak day demands are necessary to size the facilities, primarily the treatment plant, storage tanks, pump stations, and pipe distribution system.

The annual water demand will not be evenly distributed each month but is expected to be highest in the summer months and lowest in the winter months. Though the District will attempt to minimize outside water usage, there still may be higher summer demand than winter. Typically the highest summer demand month is June and/or July and is estimated at approximately 1.5 to 2 times the winter demand.

The monthly demand pattern was generated from local, surrounding water systems historic records and is presented below in Table 7. The peak month is typically around 12% of the annual water usage, therefore, in 2030, 127 AF of the annual 1,060 AF (2,700 taps using La Plata County's 350 gpd, see table 2) is delivered in June or July; similarly in 2060, 330 AF of the 2,750 AF (7,000 taps using La Plata County's 350 gpd, see table 2) is delivered in June or July.

Table 7– Monthly Demand Pattern

	Percent of Demand per Month	AF Used per Month	Average cfs per Month
January	6.5%	69	1.12
February	6.5%	69	1.24
March	6.5%	69	1.12
April	8.0%	85	1.43
May	9.5%	101	1.64
June	12.0%	127	2.14
July	12.0%	127	2.07
August	10.0%	106	1.72
September	8.5%	90	1.51
October	7.5%	80	1.29
November	6.5%	69	1.16
December	6.5%	69	1.12

The minimum combined initial capacity for the two treatment plants is 1.73 MGD (1,200 gpm or 2.68 cfs). The peak hour demands are met by storage tanks. The peak week demand was estimated based on the following information: average day demand during June is 2.14 cfs; The peak week is approximately 25% greater than the average day during the peak month; and the peak week demand for treatment plant sizing would be 2.14 cfs times 125%which is 2.68 cfs.

The distribution system sizing is also based on providing adequate fire flow. The District has contacted local fire protection districts to determine necessary fire flow and to request cooperation with any other joint issues. The Upper Pine River Fire Protection District, the Los Pinos Fire Protection District and the Durango Fire and Rescue Authority all serve within the District boundaries. The District hopes to have the input of the fire districts, not just for fire flow requirements, but also for fire hydrant placement. Initial conversations indicate that 500 gpm would meet the fire district's needs, with a preferred amount of 1,000 gpm to allow for fire hydrants to be utilized as "fill points". The District will design the distribution system to supply from storage tanks a 1,000 gpm flow at most locations; however there are a few high elevation points in the distribution system where this may be difficult.

3.2 Management Activities

To determine the effectiveness of the District's WMCP, a monitoring program is essential. A monitoring program will assist in identifying measures/practices that are successfully implemented or measures that need additional investigation of effort, as well as further opportunities for water management and conservation.

The District's General Manager has the responsibilities of the WMCP Coordinator and will be charged with initiating measures/practices and monitoring the program. When necessary, District Board and staff will refine issues and goals, add or delete measures/practices, adjust schedules, or refine budgets. The entire plan will be updated every five years.

4. Best Management and Conservation Practices

Candidate management and conservation practices are presented within this section. Please reference Table 10 – Prioritized Measures in Section 5 for further detail on Board approved measures with associated implementation timeframes.

4.0.1 State Statutes

A number of proposed measures are necessary to satisfy Colorado Revised Statutes. While the District may not meet the thresholds of each statute at this time (due to lack of customers served at this time), by being proactive with initial development of the District this will ensure statutes are satisfied in the future.

A large portion of the best management and conservation practices are a requirement of [C.R.S. 37-60-126] which addresses the requirement for covered entities to develop a water conservation plan in order to be eligible for State grant programs and provide moneys to aid water conservation planning. Covered entities are those that deliver 2,000 AF of water per year for municipal purposes. For a complete copy of the State Statute please reference Appendix C.

Colorado State Statute [C.R.S. 37-97-103] *Water Metering Act* is another governing State Statute that is necessary to satisfy. The statute requires that all water providers provide a metered water delivery and billing service. For a complete copy of the State Statute please reference Appendix C.

House Bill 10-1051 requires that water providers' efficiency plans include specific elements and the water provider annually reports to CWCB describing the year's water demands, services, and any planning implementations. For a complete copy of the State Statute please reference Appendix C.

Presented in the following subsections are the proposed management and conservation practices for the District's review. After receiving input from the public on each measure, the District will make final recommendations on which measures to pursue in the upcoming years. Please reference Section 5 – Priorities and Goal Setting for a list of the recommended measures.

4.1 Metering

Metering is fundamental to all water conservation efforts. The meter measures the customers' usage which is then used to bill the customer. Customers who pay for their actual usage typically consume less water. Below the meter options are described along with potential cost estimates and saving estimates.

4.1.1 No Meters

Colorado State Statute [C.R.S. 37-97-103] requires that all public water systems meter customer's water usage.

4.1.2 Basic Meters

The District has the option to choose from a variety of meters on the market today. A basic meter consists of a meter, and a register to quantify usage. Basic meters are visually read and will record actual flow, with flow towards the customer being positive and reverse flow (away from the customer) as negative flow. This makes it possible for customers to tamper with the meter and reduce the reading by turning the meter around so that it thinks any usage is reverse flow. The reported data allows the District to bill customers, based on their monthly usage, while providing customers with direct feedback on their water usage and generate water demand forecasts based on actual usage. In accordance with EPA regulations all meters shall be constructed of lead free materials and be NSF/ANSI 61 certified.

4.1.3 Advanced Meters

Although similar to a basic meter, the advance meter consists of a meter, electronic register and radio module transmitter. The transmitter allows the meter to be read from a handheld device, send to mobile radio receivers or to a fixed network system of radio receivers. The transmitter has an antenna that is typically mounted in the lid of a meter pit. Advanced meters have a variety of options when it comes to field data collection hardware: 1) walk by automatic meter reading; 2) mobile automatic meter reading with up to 72-channels receivable of data as the collector drives by meters; 3) fixed network automatic meter infrastructure which allows for remote read of all meters. In addition to all the basic meter characteristics, advance meters can also provide leak, tamper and reverse flow detection. The tamper and reverse flow detection makes it more difficult for customers to reduce their actual usage.

4.1.4 Smart Meters

Smart meters build off the foundation of basic and advanced meters, while incorporating additional features. In addition to basic meter reading, leak detection, tamper detection, and reverse flow detection, the meter also provides data logging. Smart meters are able to record usage data on a frequency basis down to minutes and can help detect leaks and enhance customer's' ability to manage their water use. Smart meters have the same three options for field data collection as previously described. Smart meters typically are used in systems with a combination of automatic meter reading and automatic meter infrastructure.

4.1.5 Applicability/Implementation/Monitoring

The District will install a meter for every customer who purchases a tap. The District will read and maintain the meters on a regular schedule to ensure accuracy. The District will use a combination of automatic meter reading and automatic meter infrastructure. A meter replacement program is recommended to be initiated 10 years after the first meter installation to maintain, calibrate, and replace meters.

4.2 Conservation Orientated Rate Structure and Tap Fees

The District has implemented an increasing block rate structure. The District conducted a five part public input process to develop the rate structure and tap fees. The rate structure will discourage outside water use and is a major component of reaching the conservation goal of 200 gallons per tap per day. The tap fees are based on a onetime capital investment fee that

will be used not only to install a meter, but to recapture the costs for distribution system construction, treatment plant construction, raw water purchases, etc.

4.2.1 Adopted Policy

The District adopted a rate structure and tap fee on March 8, 2012. Please see Appendix D for the Board Policy.

4.2.2 Rate Structure

To develop a rate structure a series of public workshops were held. To determine the water sales charges for potential customers, District staff developed an excel workbook. The workbook provided a comparison of annual OM&R fund costs to potential annual income based on a set number of taps. The workshop allowed participants to input data for a number of customers, minimum monthly charge with associated gallons, and monthly usage costs as usage increases. Multiple iterations were conducted until the group came to a consensus on monthly rates that allowed the District to generate sufficient revenue to provide for the operation and maintenance of the District. The following water rates have been approved by the Board and are presented in Exhibit I of the District's Rules and Regulations.

Table 8 – Water Rates

	Water Usage (gallons)		
	From	To	
Minimum Charge	0	2,000	$30.00
	2,001	5,000	$6.00 per 1,000 gallons
	5,001	8,000	$10.00 per 1,000 gallons
	8,001 and greater		$15.00 per 1,000 gallons

4.2.3 Tap Fees

Tap Fees were developed in a similar manner as the conservation orientated rate structure. To determine the tap fee (aka capital investment fee) for potential customers, District staff developed an excel workbook. The workbook displayed multiple data inputs (i.e., mill levy estimate, monthly water surcharges, capital expenditures, sources of District income, etc…) and how each input was dependent upon one another and their relationships with each other. The workshop group evaluated which data inputs were most important to them and conducted multiple iterations. The following tap fees have been approved by the District's Board and are presented in Exhibit I of the District's Rules and Regulations.

Table 9 – Tap Fees

Meter Size	Fee
3/4" x 5/8"	$5,550
1"	$13,875
1-1/2"	$27,750
2"	$44,400
Taps larger than 2" require Board approval	

4.2.4 Applicability/Implementation/Monitoring

The rate structure has direct impacts on both the customer and District. Customers' fees are determined by the rate structure which provides the District with revenues. The District's most direct way to communicate with its customers is by regular billing service. The rate structure will be evaluated periodically to ensure the District is generating adequate revenues to cover OM&R costs.

4.3 Billing System

A billing system is an integral part of implementing a metering system. The billing system is a database that allows for the collection of meter reads and the automatic development of bills based on the adopted rate structure. The billing system stores the usage records of each individual customer so that a history of their usage can be developed. The billing system will also allow for the categorization of customers which provides for effective planning, implementation and evaluation of conservation measures. Customers will be categorized by single family residential, multi-family residential (with number of units per tap), or commercial water users. This will allow the District to target customers who have the greatest potential to save.

4.3.1 Applicability/Implementation/Monitoring

The District may request the customer to provide a brief description of their current water use at the time of connection to the system. Customer categorization will allow for analysis of long term trends between customer types, establish benchmarks for targeting conservation efforts and a better understanding of what their customers' needs are. The District will know who their customers are and understand what volume of water use constitutes "reasonable" or "typical" consumption for that type of customer. Customer categorization information will be maintained and updated on a regular basis.

4.4 Unaccounted Water Monitoring

Unaccounted water monitoring is the process of auditing a distribution system for unaccounted for water that includes real and apparent losses and evaluating the costs of those losses. Real losses, water treated but not paid for, are physical losses of water due to leaks, firefighting, unauthorized uses or other problems within the system. Apparent losses include meter inaccuracies, and data handling errors.

4.4.1 Applicability/Implementation/Monitoring

A water monitoring plan will be implemented immediately after the first costumer connects to the system. The monitoring plan will use fundamental resources to conduct a utility water system audit. Because the District will be an efficient system and the water delivered to it will be metered, a comparison between the water purchased and the water sold can be made on a monthly, relatively real-time basis. Additionally, monitoring of storage tank levels and any sudden changes may be indicators of leaks in the system. The specifics of the plan will be outlined and defined by the District.

4.5 Conservation Coordinator

The general manager of the District will have the responsibilities and duties of the conservation coordinator. This includes responsibilities for planning and implementing water conservation efforts.

4.5.1 Fundamental Responsibilities

The fundamental responsibilities are to develop (or supervise) the District's WMCP; organize and direct implementation of the WMCP; track, monitor, and evaluate water conservation measures and practices.

4.5.2 Applicability/Implementation/Monitoring

The conservation coordinator role is to be in charge of water conservation planning and implementation.

4.6 Water Restriction Policy

The purpose of the policy would be used as a regulatory tool by the District. By adopting a Water Restriction Policy, the District could establish its intent to put its water resources to maximum beneficial use and demonstrate the importance of wise water stewardship in the community. The policy defines penalties for the deliberate waste of water. The Board and District staff would provide hands-on assistance and education on the importance of conservation. The staff would issue warnings and fines. The policy would be implemented in drought conditions to enforce District wide restrictions and protect the water supply.

4.6.1 Applicability/Implementation/Monitoring

The Board has already adopted the conservation orientated rate structure, a policy that intends to put the District in "drought mode" most of the time. The District is already curtailing outside water use, which is the most frequently used responses to drought. The restrictions are applied all the time by use of the rate structure but provisions could be developed to include ramp up conservation during times of prolonged or severe drought. The District will monitor and compare the customers' uses during the winter and summer months. If an extreme increased use is seen in the summer months, the District staff will work with the Board to implement a Water Restriction Policy to target these uses in times of prolonged or severe drought.

4.7 Public Information and Education

The primary elements are to communicate effectively the value of water by delivering consistent and timely messages. Measures to provide customers with timely information on their water consumption and alerts if irregular usage or leakage is detected will be utilized. It is in the District's best interest to raise awareness about conservation and water use. One means of making customers aware of irregular usage or potential leaks is by providing them a note on their individual bill.

One source of education and outreach is the Water Information Program (WIP). WIP is "a public information program sponsored by the water districts, organizations and agencies in the San Juan and Dolores watersheds of Southwestern Colorado. The purpose of the WIP is to provide information to the public and community on water topics and water related issues. (www.waterinfo.org)."

4.7.1 Applicability/Implementation/Monitoring

The District staff will coordinate with WIP to provide water conservation information and education programs. The programs will encompass social marketing, school education, public outreach and education, and other informational efforts aimed at water conservation.

4.8 Recommendations for New Construction (applicable to single-family and multi-family residences)

Water conservation measures can be built into new buildings which in turn can help slow the growth of new water demands. This measure describes water efficiency specifications that can be made voluntary for new residential development within the District's boundaries.

4.8.1 Indoor Efficiency Criteria

The District could request that all new homes joining the water system meet or exceed the EPA WaterSense specifications. The EPA WaterSense new home specifications include the following criteria.

- Leaks – No detectable leaks from any fixtures, appliances or equipment.
- Service Pressure – Maximum of 60 psi, pressure reducing valves may be necessary.
- Hot Water Delivery System – No more than 0.6 gallons of water shall be collected from a hot water fixture before hot water is delivered.
- Toilets – WaterSense labeled 1.28 gallons per flush.
- Bathroom faucets – WaterSense labeled 1.0 gallons per minute aerations.
- Kitchen sink faucets – Per 1992 EPAct Standard faucets will have 2.2 gallons per minute maximum flow.
- Showerheads – WaterSense labeled 1.0 gallons per minute shower heads.
- Dishwashers – ENERGY STAR qualified.
- Clothes washers – ENERGY STAR qualified with water factor less than or equal to 6.0 gallons per cycle per cubic foot of capacity.
- Evaporative cooling systems – Maximum of 3.5 gallons per ton-hour of cooling. Blowdown based on time of operation. No once through/single pass systems.
- Water softeners – Self-regenerating water softeners shall meet NSF/ANSI 44 standard.
- Drinking water treatment systems – Must meet applicable NSF/ANSI standards.

4.8.2 Applicability/Implementation/Monitoring

This best practice allows for "built-in" indoor water efficiency in all new construction. New customers will benefit from reduced water bills, the water system benefits from reduced growth in demand, and scarce conservation program funds can be used towards existing customers' needs. The District lacks authority to promulgate these recommendations as rules and regulations.

4.9 Replacement Program for High-efficiency Fixtures and Appliances

The goal of this best practice is to increase installation rate of water efficient fixtures and appliances and remove inefficient and wasteful devices. Various means could be used to assist customers into replacing devices.

4.9.1 Programs

Some programs simply provided the water efficient hardware to the customer. A faucet and shower replacement program could be an example of this type of program. Rebates

and vouchers are another type of program that could encourage customers to replace inefficient devices.

4.9.2 Applicability/Implementation/Monitoring

The replacement program should initially target customers with homes most likely not to have efficient fixtures (homes built prior to 1994). The District's customers whose homes were built prior to 1994 could be targeted initially and this in turn could be useful in curbing demand.

4.10 Residential Water Audits

Residential water audits would identify water savings opportunities and educate customers on their water use. Audits could be offered to all customers but initially high volume customers should be targeted. Water audits could potentially reveal leaks and unintended water usage that customers are not aware of. These audits are an excellent way for the District to develop relationships with the customer beyond metering and billing.

4.10.1 Applicability/Implementation/Monitoring

This best practice is implemented with customers having high demands or experiencing unexpected spikes in usage. Typically customers' uses are compared based on customer class (i.e. similar meter size), if a customer's use is higher than expected for its class then they will be targeted. District staff may recommend to the Board the frequency of implementing water audits and determine which customers to target initially.

5. Priorities and Goal Setting

The management and conservation strategies discussed in the previous section (see section 4 – Best Management and Conservation Practices) will address the following goals of the District. To identify these goals, District staff presented an initial list to the Board. Further examination of the issues allowed the District to formulate goals. The District presented the complete list of issues and goals to the public for revision and input. The final goals were selected as priorities for the District.

5.1 Goal #1: Encourage per home water demand of 200 gpd per tap

Reducing per home (i.e. tap) water demand from La Plata County's current estimate of 350 gpd to 200 gpd will require implementation of water saving measures. All of the BMPs are aimed at meeting the 200 gpd conservation goal. Future annual updates and comprehensive revision of the WMCP will quantitatively determine the District's achievement of this long term goal.

5.2 Goal #2: 100% Metering

As a newly formed public water system, the District's goal is to meter every customer and monitor their uses. As each individual customer purchases a tap a meter pit shall be installed for said customer. The District will meter every tap purchased regardless of customer type.

5.3 Priority of Best Practices

The best practices are separated into three priority categories: high, medium, and low. The high priority best practices will be pursued with diligence to be completed based upon the noted schedules. The medium priority best practices will be scheduled after the high priorities. The low priority best practices will only be pursued after completion of the high and medium priority practices. Table 10 – Prioritized Measures can be found at the end of this section.

Table 10 – Prioritized Measures

Priority	BMP	Description/Implementation
High	Metering (sec. 4.1)	The District will install smart meters meeting the criteria of 4.1.4 for every customer who purchases a tap. The District will read and maintain the meters on a regular schedule to ensure accuracy. The District will use automatic meter reading to ensure the accuracy of the reads. A meter replacement program is recommended to be initiated 10 years after the first meter installation to maintain, calibrate, and replace meters.
High (completed)	Conservation Orientated Rate Structure & Tap Fees (sec. 4.2)	The Board held a five part public input process to develop rates and fees in the winter of 2011 to 2012. The Board adopted the policy on March 8, 2012; see Appendix D for policy.
High	Unaccounted Water Monitoring (sec. 4.4)	The monitoring plan will be the process of auditing the distribution system for unaccounted water including real and apparent loses and the evaluation of costs of these loses.
High	Conservation Coordinator (sec. 4.5)	The role of the Conservation Coordinator is the responsibility of the General Manager. Responsibilities include but are not limited to: water conservation planning and implementation.
High	Public Information & Education (sec. 4.7)	The District staff will utilize information developed by the Water Information Program in areas concerning water conservation information and education programs. The programs will encompass social marketing, school education, public outreach and education, and other informational efforts aimed at water conservation. The District will conduct public outreach and education as directed by the Board.
High	Billing System (sec. 4.3)	The billing system would store customer usage data, create bills based on the adopted rate structure and categorize customers to allow for effective planning, implementation and evaluation of conservation measures.

Medium	Residential Water Audits (sec. 4.10)	Residential water audits will identify water savings opportunities, educate customers on their water use, identify potential leaks and unintended water usages, and allow for relationships to develop between customers and District staff. The District staff will undergo training to conduct Water Audits based on EPA's watersense program.
Medium	Water Restriction Policy (sec. 4.6)	The Water Restriction Policy will be a policy specifically implemented as required by the Resolution Authorizing Joint Action Intergovernmental Agreement with the Town of Bayfield Water Enterprise. Which states "The District agrees to implement water use restrictions if the Town has implemented water use restrictions." The Board has already adopted a conservation orientated rate structure (see Appendix D – Rate Structure Board Policy) that is intended to put the District in "drought mode" most of the time. The District will monitor and compare the customers' uses during the winter and summer months. If an increased use is seen in the summer months, the District staff will work with the Board to implement a Water Restriction Policy to target these uses in times of prolonged or severe drought.
Low	Replacement Programs for High Efficiency Fixtures & Appliances (sec. 4.9)	The proposed program would allow for the District to provide rebates to the customer to be used towards purchases of the water efficient hardware. The rebate program goal would be to encourage installation of water efficient fixtures and appliances. At this time, no action will be taken to develop a rebate program.
Low	Recommendations for New Construction (applicable to single-family and multi-family residences) (sec. 4.8)	Water conservation measures can be built into new buildings which can help slow growth of new water demands. Regulations could either be mandatory (i.e. enforced by La Plata) or recommendations (i.e. suggestions made by the District to builders). At this time, no action will be taken to develop enforcement rules or recommendations.

6. Implementation Schedule

The high priority BMPs will be pursed with diligence to be completed based upon the noted schedules. The medium priority measures will be scheduled after the high priority BMPs. The low priority BMPS may be pursued only after completion of the high and mediums BMPs. Table 11 – Implementation Schedule presents this timeline along with the anticipated budget allocations per practice.

Table 11 – Implementation Schedule

BMP	Implementation Date	Anticipated Budget Allocation
Metering (sec. 4.1)	No later than 2014	paid by customers' tap fees
Conservation Orientated Rate Structure & Tap Fees (sec. 4.2)	Completed 2012	No additional costs
Unaccounted Water Monitoring (sec. 4.4)	No later than 2014	Currently incurred
Conservation Coordinator (sec. 4.5)	Begin immediately	Currently incurred
Public Information & Education (sec. 4.7)	Begin immediately	Currently incurred
Billing System (sec 4.3)	Begin immediately	Managed by existing staff
Residential Water Audits (sec. 4.10)	Implement by 2015	Conducted by existing staff
Water Restriction Policy (sec. 4.6)	Establish and adopt Policy by 2020	Not applicable
Replacement Programs for High Efficiency Fixtures & Appliances (sec. 4.9)	TBD	Not applicable
Recommendations for New Construction (sec. 4.8)	TBD	Not applicable

7. Environmental Review

The selected BMPs differ in the amount of impact they will have on the environment, if any. Most components of the WMCP can be implemented without environmental compliance activities. Moreover, environmental permitting will be addressed for each adopted BMP deemed necessary prior to commencement of such action. Following, in Table 12 – Environmental Review is a summary of general environmental effects expected of various BMPs.

Table 12 – Environmental Review

BMP	General Effects
Metering (sec. 4.1)	Minimal impacts during meter pit installation; permitting requirements during pipeline construction
Conservation Orientated Rate Structure & Tap Fees (sec. 4.2)	No Environmental Impact or permitting required.
Unaccounted Water Monitoring (sec. 4.4)	No Environmental Impact or permitting required.
Conservation Coordinator (sec. 4.5)	No Environmental Impact or permitting required.
Public Information & Education (sec. 4.7)	No Environmental Impact or permitting required.
Billing System (sec. 4.3)	No Environmental Impact or permitting required.
Residential Water Audits (sec. 4.10)	No Environmental Impact or permitting required.
Water Restriction Policy (sec. 4.6)	No Environmental Impact or permitting required.
Replacement Programs for High Efficiency Fixtures & Appliances (sec. 4.9)	No Environmental Impact or permitting required.
Recommendations for New Construction (applicable to single-family and multi-family residences) (sec. 4.8)	No Environmental Impacts and permitting is required by La Plata County.

8. Adoption, Public Review and Approval of WMCP

7.1 WMCP Adoption

The District held a 30 day public comment period starting May 1, 2014 for the draft WMCP, as well as two public workshops during the development stages of the WMCP. The Board approved the WMCP on June 12, 2014. Appendix E contains the relevant public notices, meeting agendas and distributed materials.

7.1.1 Bureau of Reclamation Approval

The WMCP was submitted to prior to the June 30, 204 due date. A 30 day comment period was held prior to submittal. Comments were incorporated as appropriate.

7.2 Public Review Process

The District held two public workshops to gather input from potential customers. The workshops were held on October 8, 2013 and November 12, 2013 at the District's office.

7.3 WMCP Review and Update

The conservation coordinator (a responsibility of the General Manager) is the designated point of contact for the WMCP. The General Manager will lead an annual review process of the District's activities as they pertain to the priorities of the WMCP. Results of the annual review process will be provided to the Board of Directors of the District. The annual review will outline the implementation of priorities, budget requirements to finance future year's priorities, and recommendations on additional actions necessary to further the District's water conservation goals.

The District plans to review and update this WMCP every five years. The next update is scheduled for 2019. The update will be guided by the annual reviews and public involvement by means of workshops and a 30 day comment period. The updated WMCP will be prepared by District Staff while working closely with the Board and allowing input by the public.