

Water Advisory Commission



La Plata County
Colorado

Date: June 11, 2015

Policy Bulletin # 1
Subject: Local Water Resources

Policy Question: Should La Plata County be concerned about our local water resources because of: (1) lack of water supplies, (2) lack of water infrastructure or (3) inefficiencies in the current water systems?

Background/Issue(s): The Commission undertook efforts to study La Plata County's current water resources to answer this question. They obtained information from the Colorado Division of Water Resources, Division 7 Engineer's Office about La Plata County's watersheds and water critical areas. They also spoke with representatives of Lake Durango Water Authority, La Plata West Water Authority and La Plata Archuleta Water District to learn about their current and planned development, as well as many of the issues these domestic water systems face in delivering water to La Plata County residents. In addition, the Commission reviewed information about the number of small water systems in the County, the number of permitted wells and the storage capacity of local reservoirs and lakes. Finally, the Commission considered various inefficiencies in the current water systems.

Based on this research, together with the Commission's own experience with water resources in La Plata County, the Commission believes that La Plata County should be concerned about all three of the issues identified in the policy question, as all three problems contribute to the water issues faced by La Plata County residents. However, to facilitate discussions on the greatest needs of La Plata County residents, the Commission believes the issues can be ranked in the following order of importance:

1. Lack of water infrastructure, particularly lack of interconnected water infrastructure;
2. Inefficiencies in the current water systems; and
3. Lack of water supplies.

Lack of Water Infrastructure

It is clear to the Commission that there is a lack of water infrastructure in La Plata County, thus the need for the creation and development of large domestic water systems such as La Plata Archuleta Water District and La Plata West Water Authority. The anticipated size of the service areas of these entities is a testament to the fact that there are very large areas of the County that do not have reliable water sources.

Instead, many residents must rely on unregulated community water systems and wells for their water supply or are forced to haul water. In the Commission's opinion, these unregulated systems and wells pose significant health risks to La Plata County residents, both because some

residents lack access to a clean, reliable source of water while others are at risk of running out of water due to lack of capacity and infrastructure in their systems.

According to the Colorado Division of Water Resources, as of 2014, there were over 8,900 completed water wells in the County. Anecdotally, the Division believes that approximately one-third of those wells are either dry or contaminated, although the Division has no authority over water quality issues related to the wells. Dry and/or contaminated wells, in turn, force residents to haul water. The WAC understands that water hauling is a current necessity for many residents, but believes that this is not a viable long-term solution for residents' needs and should be avoided when possible. Instead, the Commission recommends that, as part of obtaining a land use permit, the County continue to require residents to connect to domestic water systems whose lines are within 400 feet of their property boundaries. The Commission respects trepidations expressed by individuals over the cost of connecting to, and purchasing water from, such providers. However, in the Commission's judgment, the costs are outweighed by the need to ensure that residents have access to clean, safe drinking water from reliable sources.¹

Even when small water systems do exist, they face the greatest difficulties in providing safe drinking water to La Plata County residents. These systems are often designed to serve single developments or subdivisions and many lack long-term financial viability to maintain and upgrade their systems in a manner consistent with ever changing regulations. In addition, many of these systems were built with substandard materials, lack uniformity and cannot be easily repaired when problems occur.

The "cobbled" nature of their design also leads to lack of ability to have interconnected infrastructure in the County. As larger domestic water systems are asked to take over these failing smaller systems, problems frequently arise. For example, Lake Durango Water Authority is comprised of a conglomeration of several smaller water systems that have been "cobbled" together. When Lake Durango acquired responsibility for Rafter J's previous system, the structural components were not adequate for incorporating the system into Lake Durango's overall infrastructure and have created problems in delivering water. In addition, the Town of Bayfield has indicated that it may refuse requests to provide water to pre-existing smaller systems because the infrastructure and piping used in those systems is substandard, and Bayfield cannot afford to upgrade the infrastructure required to provide service.

This lack of interconnection and uniformity not only leads to lack of service when one system fails, but it is a prime example of inefficiencies in the use of small systems for each development or subdivision.

¹ The WAC considered whether or not the connection requirement should be expanded to include properties within 1,000 feet or more of existing water lines. Currently, the 400 foot requirement mirrors state law for sewer connections, and the WAC believes that a rational basis exists for establishing the corresponding parallel for water connections. However, the WAC was not able to articulate a legitimate basis for increasing the current connection requirement to any set distance (such as 1,000 feet).

Unless and until La Plata Archuleta Water District and La Plata West Water Authority are able to overcome the problems they face with regard to cost and critical mass, many residents in these areas will continue to rely on inferior water systems and supplies. Reports from La Plata West Water Authority and La Plata Archuleta Water District indicate that construction of their service systems will be phased and full build-out will likely take 25+ years due to the costs of construction.

Inefficiencies in the Current Water Systems

The Commission has identified several types of inefficiencies in the current water systems operating in La Plata County. These include: (1) regulatory inefficiencies, (2) management inefficiencies, and (3) physical inefficiencies.

In the Commission's experience, regulatory, management and physical inefficiencies are interrelated issues that frustrate many "small" and "micro" water systems' operations. For purposes of the Commission's conversations, it considers water systems with less than 100 taps as "small" systems and systems exempt from the Safe Water Drinking Act as "micro" systems. Small systems often lack the economies of scale necessary to ensure compliance with state and federal regulations. Further, since the Safe Water Drinking Act does not regulate water systems that serve fewer than 25 people or that have less than 15 service connections, micro systems are exempt from all regulatory oversight and potential health issues from contaminants in the water are not necessarily addressed.

La Plata County currently does not regulate any domestic water systems.² In fact, there is no definition of a domestic water system in the La Plata County Code. Nonetheless, the Code incentivizes the proliferation of small and micro water systems by allowing subdivision developers to triple the density of their proposed projects when the development is served by a domestic water system regardless of the system's size.³

Lack of regulation means there is no operating or management structure for micro systems, and many small systems simply do not have the capital necessary to improve and sustain their systems in the long-term. Further, many micro and small systems' "operators" lack the tools and knowledge necessary to ensure that their water supplies are safe for their consumers to use. Poor management, in turn, leads to poor systems. Without proper management and oversight of these water systems, substandard infrastructure is installed and inadequate funds are set aside to maintain these systems as they age. When it comes to micro systems, there is currently no real information on the quality of water being produced despite the fact that a sizable amount of the

² Durango's 2007 Comprehensive Plan estimated that approximately 40% of La Plata County residents relied on some type of unregulated water system at that time.

³ Section 102-105(2) of the Code requires a minimum three-acre lot size for parcels served by individual water and sewage systems, but allows for a minimum one-acre lot size for parcels served by either a domestic water or sewer system.

County's population is served by such systems. The Commission has already discussed the consequences of physical inefficiencies in water systems in the County. Lack of infrastructure is a serious concern as these systems age and the County's population continues to grow.

Lack of Water Supplies – Municipal & Industrial Water

Based on its knowledge, the Commission is of the opinion that **if** proper infrastructure is built, La Plata County has enough water and storage capacity to supply its residents with municipal and industrial water in the near term. This opinion is based on the knowledge that “wet” water may currently be plentiful in La Plata County as a whole, but water providers lack the capability and infrastructure to supply water to water critical areas.⁴

However, this opinion is also made with the following caveat. In the long-term (in the next 50 to 100 years), the Commission is not able to predict if the County will have enough water to supply its residents. Factors such as population growth, climate change, interstate compacts, changes in state and federal law related to water use and barriers to using the current water supply for municipal and industrial uses could very well make lack of water supply the most critical issue in the future. Further, the Southwest SWSI 2010 Basin Report estimates that La Plata County's municipal and industrial water use consumption will nearly double between 2008 and 2050.⁵

The Commission believes that there are three ways to obtain water for a domestic water supply: (1) new appropriations of available “wet” water supply; (2) “buy and dry,” which generally requires court approval to change the water's intended use; and (3) dedication of existing stored water supplies, which have not already been devoted to a particular use, to municipal and industrial use. With respect to dedication of existing water supplies to municipal and industrial use, there are significant political and legal barriers which would need to be addressed.

⁴ Projections are that the municipal and industrial water allocations in Lake Nighthorse and other projects will be adequate to meet much, but not all, of La Plata County's M&I needs through 2050. See Southwest SWSI 2010 Basin Report, §§ 5.4.2.2 and 7.1 (“Part of the Southwest Basin's M&I gap [in 2050] can be addressed by growing into existing storage allocated to M&I such as Lake Nighthorse....”).

However, the infrastructure needed to deliver ALP water to users does not yet exist. According to the Report, “[t]his includes water system construction planned by the La Plata Archuleta Water District and the La Plata West Water Authority. This water treatment and delivery infrastructure will be very expensive to construct. It will likely not be financially feasible to serve some unincorporated areas not served by water districts and water hauling is anticipated unless financial assistance is provided to develop the supplies and infrastructure.” *Id.* This lack of infrastructure is a noted municipal and industrial (“M&I”) “gap” that effects the region's water plan. Southwest Basin Roundtable, 2014 Basin Implementation Plan (draft), § 2.2.2 (July 2014).

⁵ As previously noted, water groups predict that the County's M&I needs through 2050 can be addressed through the use of existing storage facilities if water distribution infrastructure is developed. Southwest Basin Roundtable, 2014 Basin Implementation Plan (draft), § 2 (July 2014); Colorado's Water Plan: Southwest Basin Implementation Plan Fact Sheet (April 2014).

Below are a few examples of the issues to be faced in dedicating water to municipal and industrial use. First, although Lake Nighthorse is located in La Plata County, most of the ALP water is not committed for use in La Plata County. For example, the State's allocated share of ALP could potentially be used to satisfy compact calls in the future. In addition, both political and legal factors will influence the use of this water. Further, only limited portions of the water supplies in Lemon Reservoir and Vallecito Reservoir have been allocated for municipal and industrial uses.

Lack of Water Supplies – Agricultural Water

The Commission is aware that increasing municipal and industrial demands for water, both on the Western Slope and the Front Range, and continued growth and development are increasingly in conflict with agricultural uses for water in La Plata County. However, the Commission believes that it is crucial for the County to work towards balancing agricultural land use with growth and development to ensure that adequate water supplies will exist for agricultural purposes in the County. Alternatives to “buy and dry” transfers of water uses should be explored and the County should adopt regulations to oversee proposed large-scale agricultural dry-ups.

Conclusion(s)/Recommendation(s): Based on the Commission's belief that all three issues are important, and recognizing the current priorities they place on those issues, the subsequent policy memos will focus on recommendations for addressing these issues, given limited resources. For now, the Commission makes the following recommendations:

1. The County needs to adopt construction standards applicable to all new and modified domestic water systems. The standards should require uniformity/redundancy to decrease many of the infrastructure and interconnectivity problems faced by small water systems. Standards, such as those adopted by the American Water Works Association (“AWWA”), which regulate issues such as, but not limited to, backfill, restraints, pipes, and tracer wire, should be adopted. These standards should be tailored to the community's needs. Further, the Commission recommends that these standards be applied to all new water systems, as well as new additions, extensions, major repairs or upgrades to existing water systems.⁶
2. Understanding that a lack of infrastructure is the largest hurdle the County currently faces, the WAC has received and reviewed information from County staff regarding various public funding options available to increase infrastructure development. Based on this information, the WAC endorses the County's creation of voter-approved public improvement districts (“PIDs”), special districts and other financial incentives as the primary means for County support of water infrastructure development in the County. PIDs offer several advantages for

⁶ The WAC is aware that non-conforming systems will exist, which will be insulated and “grandfathered” from having to make the required upgrades until they expand and/or perform upgrades above and beyond a certain threshold. In the WAC's view, this threshold should define a “major” upgrade. This recommendation comes, in part, from the recognition that emergency repairs to systems will be required by many systems at some future point. These repairs should not be delayed or hampered based on the systems' inability to comply with the new rules.

development including: (1) the citizens' ability to prioritize the importance of water systems in their locations, by choosing to tax themselves or not; (2) reliable streams of revenue created through property taxes; and (3) the increased ability to apply for and obtain grants only available to governmental entities. The WAC recommends that the County use these mechanisms to assist La Plata West Water Authority and La Plata Archuleta Water District, as necessary, in meeting their infrastructure needs.

3. The Commission believes that conservation measures, community outreach and ongoing dialogue with, and periodic reporting by, current water systems are needed to solve La Plata County's water issues. While issues of securing water supply will be considered in more detail in other policy bulletins, the Commission is aware that many members of the community believe that water supply is the most crucial issue facing La Plata County. Commission members are confident that current water supplies are sufficient to meet existing needs, if infrastructure is made available. However, to address future population growth, possible compact calls and trans-basin diversions, the Commission believes that the County should review available water resources once every five (5) years and should explore potential new water sources any time such resources are made available.
4. It is the Commission's understanding that other Colorado counties have utilized 1041 powers to address impacts of agricultural dry-up and to regulate projects where irrigation water is permanently removed from land that has been historically irrigated. The WAC recommends that the Board of County Commissioners consider whether similar regulations could be useful in La Plata County. This issue is an important question that should be subject to further investigation and study, as the Board of County Commissioners directs.
5. Finally, although the Commission has not been asked to review sewer and septic issues in the County, the WAC firmly believes that the County needs to address these issues in the near future and consider regulations for uniformity in these systems; provided, that any such regulations are not duplicative of existing state regulations or those imposed by the San Juan Basin Health Department. Without question, wastewater treatment, infrastructure and cross-contamination issues are vitally linked to providing safe drinking water to residents of La Plata County.