I. Major Projects

A. Current Projects

San Juan River Headwaters Project

The District's primary focus since its inception in 1987 has been water storage. To this end, the main project has been what was formerly referred to as the Dry Gulch Reservoir Project and is now called the San Juan River Headwaters Project (SJRHPor the Project). This effort followed the historic drought years of 2001 - 2002 coupled with relatively rapid growth in Archuleta County from 1990 to 2010.

The proposed site for the Project was selected based on studies completed in 1989 and 2003 of potential reservoir sites in Archuleta County, of which, the 2003 study concluded the Dry Gulch site was the most favorable.[14] The SJRHP site is located approximately three miles northeast of downtown Pagosa Springs just east of U.S. Highway 160. See map of Dry Gulch/San Juan Headwaters Project site courtesy of Archuleta County attached as Appendix H. It includes approximately 660 acres of ranch property, but additional land would be needed to complete the Project. As planned to date, the SJRHP includes an 11,000 acre-feet storage facility that would be filled and refilled by siphon from the San Juan River. This method reduces the construction and operational costs of the Project. The proposed reservoir site is an "off channel" site in that it does not require the source water, the San Juan River, tobe dammed. For reference to size, 11,000 acre-feet is approximately 10% of the capacity of Vallecito Lake and 1% of the capacity of Navajo Lake.

The conditional water rights intended for Dry Gulch Reservoir were originally decreed in 1968 for 6,300 acre-feet of storage. In 2004, the District and PAWSD applied for a junior water right for a larger reservoir in Dry Gulch, a refill right, and specific filling sources and rates for it. Trout Unlimited opposed those claims,leading to protracted litigation and new standards from the Colorado Supreme Court for evaluating conditional water rights owned by municipal providers. The District, PAWSD, and Trout Unlimited eventually stipulated to a decree providingfor a maximum storage capacity of 11,000 acre-feet for Dry Gulch Reservoir and other limitations on its use.

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[14] *See* Harris Engineering, Inc., *Appraisal Report to Evaluate Future Raw WaterDemands and Water Supply Alternative Plans as of March 2003* (2003).

The District proposed a ballot issue in 2004 to increase the mill levy to fund the Project, but the voters rejected the proposed increase. SJWCD formally partnered with PAWSD on the SJRHP in 2006 through a Memorandum of Understanding (MOU). The MOU addressed the acquisition, permitting, design, and construction. Funding for the Project was initially provided through tax revenues collected by theDistrict and Capital Investment Fees collected by PAWSD.

In 2007, SJWCD received a $1 million grant from the Colorado Water ConservationBoard (CWCB) to use towards the purchase of the property for the Project, the Running Iron Ranch. PAWSD was authorized a loan of approximately $11 million from CWCB to provide the remaining funds necessary for the purchase of the property. PAWSD ultimately borrowed $9,219,363 against the loan authorization as no other property purchases were made and secured the loan with its revenues.

In addition to the Running Iron Ranch property, the proposed 11,000 acre-feet reservoir would require a small amount of additional land currently owned by the
U.S. Forest Service (USFS) and the Laverty Family, adjacent landowners to the proposed project property. The District contracted with the Western Land Group, land conservation specialists, to identify potential properties that might be acceptable to the USFS for a land exchange. A proposal for a land exchange was submitted to the USFS in August 2013. In addition, negotiations with the LavertyFamily were initiated. The District also contracted in 2017 with Rhea Environmental Consulting for an environmental baseline study and with La Plata Archeological Consultants for a cultural resources survey of the 11,000 acre-feet reservoir pool basin.

Following the purchase of the property described above, the PAWSD Board decidedto suspend the Project due to community concerns regarding need and cost.

Through a restructuring effort in 2016 titled Agreement to Restructure Colorado Water Conservation Board Dry Gulch Reservoir Loan Contract Number C150261, the recognized lead entity for the Project changed from PAWSD to SJWCD. PAWSD restructured its loan into two parts – Loan A and Loan B. Loan A is for $4,290,930.32 at 1.75% for 20 years. Loan B is for $4,565,000 at 3.5% and paymentsagainst the loan are deferred for 20 years.

This restructuring allowed for a 20-year planning period with an option for an additional 20 years, which provides the entities with greater opportunity for additional partners to join the Project. There are several options for PAWSD and SJWCD regarding how to utilize the property during the planning period, but at this time PAWSD is making the annual payments on Loan A, both entities are financially supporting the water rights associated with the Project, and SJWCD is actively seeking additional partners.

In March 2017, the District submitted a loan application to the CWCB for an additional $2,000,000 loan. This funding would allow for acquisition of the additional property necessary for the 11,000 acre-feet reservoir, as well as a road easement, fencing, additional environmental studies, and preliminary engineering.The loan was approved in May 2017. Included in the application was a detailed narrative description and cost estimate for the project, including the dam, river diversion, Park Ditch Inflow Siphon, and a pipeline drain back to the river. The estimated construction cost was $60,600,000, including contingencies. These construction cost estimates were based on the cost of the Long Hollow Dam, which was substantially completed in La Plata County, Colorado in 2014. Although LongHollow is smaller, the dam and embankment are similar to those required to construct the Project.

Amortization of a new CWCB loan would require an increase in the mill levy of theDistrict. Therefore, another ballot initiative was attempted in 2017 to raise the milllevy to 1.0 mills as was originally approved by the voters when the District was formed. However, this ballot initiative was also not successful as the voters again rejected the proposed increase by a 3-to-1 margin. The actual execution of the CWCB loan was on hold while the District continued to pursue various partners for the Project, but was ultimately deactivated in November 2020 at the request of CWCB due to lack of execution.

Upper San Juan Watershed Enhancement Partnership

SJWCD has provided financial support to the Upper San Juan Watershed Enhancement Partnership (WEP). WEP is an effort within Archuleta County to implement one aspect of the Colorado State Water Plan – development of a Stream Management Plan (SMP). SMPs are intended to identify, through a community driven process, the issues and needs present in a given watershed. Upon identification of the issues and needs, a scientifically based SMP will be developed and possibly implemented.

Envisioned as a three-phase process, the ultimate purpose of the WEP is to initiate,organize, and implement the Integrated Watershed Management Plan (IWMP) to seek opportunities to conserve the Upper San Juan Basin streams and their uses with wide-ranging community support and decisions based on current, relevant science and assessments. To this end, WEP is being led by a steering committee that is comprised of local agricultural, municipal, domestic, environmental, and recreational water users. The steering committee is working within the communityusing the IWMP process to identify representative stakeholders that will assist inimplementation of the projects described in the SMP to address the identified needsand issues. Phase I of the WEP IWMP was finalized in April 2020.

Funding for Phase II of the WEP IWMP was approved by the CWCB in May of 2020. Phase II directly addressed the information gap for water needs identified in the SW Basin Implementation Plan by tackling the next critical step in the process: identification of opportunities for multiple-use water projects from a combination of stakeholder input as well as technical expertise, analysis, and modeling.[15] Phase II was anticipated to last 12 months.

Development and implementation of the WEP Integrated Watershed Management Plan and ultimately the Stream Management Plan are supported by the CWCB. The District is participating as a stakeholder and financial contributor to the WEP IWMP process and SMP development. Continued participation in the development and is mutually beneficial as it allows the District to continue to represent its constituents while efficiently utilizing resources.

The goal of WEP Phase III was an Integrated Water Plan that identified demonstration projects ready for action before June 2022. WEP partnered with the Town of Pagosa Springs on two San Juan River enhancement projects. Planning, design work, and public contracts have begun for the Pagosa Gateway Project, upstream from the town limits, and the Yamaguchi South project, downstream from the existing Yamaguchi Park. Both WEP projects enhance Recreational and Environmental water use.

SJWCD funded WEP in 2022 with $2,500 to be used as matching funds. WEP plans to repeat their request in 2023 and 2024 for matching funds to continue their Integrated Water Plan implementation.

Snowpack Enhancement

The District has financially participated for a number of years in cloud seeding activities managed by the Southwestern Water Conservation District, and now by the Dolores Water Conservancy District. Cloud seeding is considered by some to enhance the amount of snowfall in the area being seeded by 5 percent with estimated results ranging from 3 to 15 percent in affected areas. A report was recently prepared by the Desert Research Institute for the Southwest Basin Roundtable that describes the effectiveness of such efforts in southwest Colorado. [15]

Water Education

The District has been an active participant in and financial contributor to the Water Information Program (WIP) that is managed by the Southwestern Water Conservation District. WIP provides and/or contributes to a wide variety of educational programs in southwest Colorado. These include, the annual Children's Water Festival, the Forests to Faucets program for teachers, and the annual Water 101 - 201 – Water Education Seminars, which focus on water law.[17]

In 2022, SJWCD participated with water education booths at the Earth Day gathering and the Pagosa Springs Environmental Film Festival. SJWCD produced three community outreach events focused on collecting public perception and water education. SJWCD interacted with Archuleta County residents at the County Fair, a public meeting at the Aragon Community Center, and a Chamber of Commerce Business After Hours. A public relations firm designed a one-page flyer, a multipage brochure titled "Securing our Sustainable Water Future," and an educational map titled "Where Does Your Water Come From?"

Coordination with other Organizations

The District is a participant in several organizations with an interest in water in the Pagosa Springs area. One of the most active groups in this area is the San JuanRiver Headwaters Forest Health Partnership, which is a public/private body concerned with the health of our forests and fire management that is managed by the Mountain Studies Institute.[18] Forest health has a direct bearing on water quality and quantity. The District also recently joined with the Town of Pagosa Springs, Archuleta County, the Pagosa Lakes Property Owners Association, the Pagosa Fire Protection District, and several private entities to support the Growing

Water Smart Working Group. The intent of the working group was to develop a community consensus on population projections for the future growth of our county.[19]

The District was pleased to participate in the development of the Colorado Water Plan, which was completed in 2015.[20] This was the culmination of strategy crafted over a decade that allowed for more grassroots participation in water development and conservation. Efforts preceding the Colorado Water Plan established regional basin roundtables and expanded financial opportunities to fund water infrastructure and policy planning across the state. The District has participated actively in the Southwest Basin Roundtable and continues to be represented. The San Juan River Headwaters Project is included in the Identified Important Projectsand Process list developed by the Southwest Basin Roundtable. The SW Basin Implementation Plan portion of the larger Colorado Water Plan is currently in the process of being reviewed and revised.

Lower Blanco River Restoration

Since 1971, the U.S Bureau of Reclamation's San Juan/Chama Project has annually diverted over 80,000 acre feet of water from the Rio Blanco, 70% of the historical flows of the river, into the Rio Grande River basin via a transmountain diversion.

The diversion point is about six miles upstream from the U.S. 84 bridge across the Rio Blanco. This diversion caused poor water quality conditions and reduced fish habitat in the river below the diversion because the original channel was too large for too little flow after the diversion. Beginning in 1996, SJWCD participated in a multi-agency public/private effort to improve and restore the streambed habitat in the lower Blanco. The District was gratified to obtain the services of Dave Rosgen,an internationally known river restoration expert, in the design of the project. Thefirst phase of the project was completed in 1999, extending from near the U.S. 84 bridge downstream about one mile. Based on the success of the first phase, a second phase was initiated in 2003, extending the project another 2.4 miles downstream. The second phase was completed in 2004.

The project had a number of objectives:

- Improve the natural stability of the lower Rio Blanco channel.
- Improve fish habitat to utilize the regulated low flow from the upstreamdiversion.
- Improve the visual values of the river.
- Maintain channel capacity during flood events.
- Improve the sediment transport capacity of the river channel.
- Raise water level elevation in shallow groundwater bodies hydraulicallyconnected to surface water.

After more than 15 years, the restoration features remain in place and have withstood several major floods. The project is just one example of the District's pro- active role in managing water resources for the benefit of its constituents.

B. Accomplished Projects

Colorado Water Plan

The District was pleased to participate in the development of the Colorado Water Plan, which was completed in 2015.[20] This was the culmination of strategy crafted over a decade that allowed for more grassroots participation in water development and conservation. Efforts preceding the Colorado Water Plan established regional basin roundtables and expanded financial opportunities to fund water infrastructure and policy planning across the state. The District has participated actively in the Southwest Basin Roundtable and continues to be represented. The San Juan River Headwaters Project is included in the Identified Important Projectsand Process list developed by the Southwest Basin Roundtable. The SW Basin Implementation Plan portion of the larger Colorado Water Plan is currently in the process of being reviewed and revised.

[15] *See* Ann Oliver and Carrie Lile, Harris Engineering Inc., *Basin ImplementationPlan: Southwest Basin Roundtable* (2015)

[16] McDonough, F. and J.F. *Mejia, Department of Atmospheric Sciences Desert Research Institute Division of Atmospheric Sciences, High-resolution WRF Simulations for Six Storms that Produced Seedable Clouds and Precipitation Overthe Western San Juan Mountains – Project Report* (2018).

[17] *See* Water Information Program website: https://waterinfo.org/about-wip/overview/.

[18] *See* Mountain Studies Institute website: http://www.mountainstudies.org/forest-health.

[19] *See* RPI Consulting, LLC, *Growth Trends and Projections: Archuleta CountyGrowing Water Smart* (2019).

[20] State of Colorado, *Colorado Water Plan* (2015), https://www.colorado.gov/cowaterplan.