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Water, and what to do about it ... for the next 40 years By Carol Fuccillo Special to The SUN

As a recent transplant from the Midwest, I never really thought much about water. In fact, we always had more than enough - suffering through ringing wet precipitation, flooding, and the resulting mosquitoes and mold.

Then we moved west, where the story changed dramatically. Water is not only a political volleyball in Colorado, it is indeed life.

In Pagosa Springs, steadily increasing development and a projected population growth of more than 4 percent per year over the next 20-plus years has heightened efforts to plan for our water future.

The remnants of the 2002 drought are still with us. During that year, according to Carrie Campbell, manager of the Pagosa Area Water and Sanitation District - the main provider of treated water in Archuleta County - water flow was only 13 percent of average from April through November that year, and during the highest water demand, June through August, the flow was only 5 percent of historic average.

With this backdrop, local water agencies and providers are taking steps that look to the future. First, let's examine the water sources available to the Pagosa Springs area, other than the rights available to the district from the San Juan River.

Dutton Ditch, which is located near Fourmile Creek, flows through the National Forest and remote terrain to fill Lake Hatcher. Stevens Reservoir is filled by Dutton Ditch and basin runoff. Stevens Reservoir fills Lake Pagosa, and Lake Pagosa fills Village Lake. Lake Forest is filled by basin runoff and spills from Lake Pagosa.

Management of these water sources is essential. Pagosa Area Water and Sanitation District encompasses 76 square miles of Pagosa Country, into the San Juan Mountains, including the lakes in the Pagosa Lakes area, most of the subdivisions west of town and the town of Pagosa Springs. It serves a client base of approximately 6,000.

The district owns and operates four water treatment plants. The water is distributed through approximately 256 miles of water mains, booster pumps and nearly 1,000 fire hydrants. Eleven storage tanks provide storage of treated water with a combined capacity of more than 4 million gallons. There are 28 sewer lift stations.

Residents within PAWS boundaries presently use about 2,500 acre feet of water per year, which translates to approximately 215 gallons per day per person. It is estimated that by the year 2040, we will need more than 11,000 acre feet of water per year

According to Campbell, a recently awarded contract to build a six-mile pipeline for Dutton Ditch will allow for more water to be moved more efficiently and effectively, especially during the winter months, to fill Lake Hatcher and Stevens.

Currently, the Dutton Ditch is just that - a ditch - subject to various elements, such as evaporation losses and sedimentation buildup. Because of the sedimentation buildup, Campbell said the ditch is carrying just a fraction of the water the district is legally authorized to transport through the ditch.

Stevens Reservoir, which began as essentially a cow pond, provided the first source of municipal water for the Pagosa Lakes area. Efforts to triple the size of this reservoir, which currently has a capacity of 326,000 gallon/acre feet, are in progress. The water collected from the improved Dutton Ditch will be adequate to fill the enlarged Stevens Reservoir.

Other entities are working to secure adequate water supplies and storage.

The San Juan Water Conservancy District (SJWCD) encompasses approximately 96 square miles of Pagosa Country, including the area served by PAWS. The goal of this organization, according to Fred Schmidt, president, is the preservation of water rights and creation of raw water storage. SJWCD has recently finished a second phase of river restoration along the Lower Blanco River, is supporting the town of Pagosa Springs river restoration efforts, and is currently in discussions to buy land (approximately 450 acres) to build another reservoir near Dry Gulch, east of town.

The Pagosa Lakes Property Owner's Association, the town of Pagosa Springs, National Resource Conservation Service, United States Forest Service, and others are sponsoring the Stollsteimer Watershed Project. The watershed encompasses 82,000 acres, more than 120 miles of diverse terrain, including mountains, valleys and brush. Nearly 30,000 acres in the watershed are owned by the Forest Service, and more than 28,000 acres are privately owned.

The watershed project started about three years ago with the formation of a special ad hoc lake study committee in the Pagosa Lakes area whose mission it is to assess the management and protection of Lake Hatcher, Lake Pagosa, Village Lake and Lake Forest. The ultimate goal of the project is to create a long-range watershed master plan that will help mitigate efforts and potentially modify land-use regulations to help protect waterways and reservoirs. The main concern has been the impact of growth and development, and the committee is starting to collect storm water and drainage water from commercial and residential areas.

More than 15 sites along the watershed are currently being tested for flow data, sediment, petroleum and salinity. So far, it has been found that construction is the No. 1 cause of sediment problems in the watershed area.

Several weeks ago, the committee toured several locations along the watershed. According to Larry Lynch, property and environment manager for the Pagosa Lakes Property Owners Association, it went well. In Aspen Springs, members viewed deteriorating portions of Stollsteimer Creek and talked about possible solutions. There is some discussion of the possibility of a foot trail being created around the corridor. Along the lower portion of the watershed, there is degradation along the creek channel due to overgrazing. The committee is addressing restoration activities such as stream bank stabilization, rock work to control erosion factors, and fencing solutions.

Conservation is a major key to success, according to water authorities. Campbell commends the public for reducing water usage by nearly 40 percent in 2002. In addition, the recent PAWS toilet rebate program resulted in a water reduction of nearly 37 percent. More than 50 households participated by trading in old toilets, and buying more efficient toilets. Each household received a \$75 to \$100 rebate. Based on the savings and the

cost to treat and distribute the water, the program saved the district nearly \$5,000, which essentially paid for the effort.

Planting in xeriscape fashion (with plants that efficiently use water), and refraining from overfertilization are other conservation measures suggested by PAWSD.

Patience from the public and planning by water professionals is also essential in these efforts. It takes years of planning, mountains of paperwork and jumping through many federal and state governmental hoops to have these projects approved and implemented.

For example, PAWSD water bond issues were approved in 2002, before which much of the preliminary work on the current district projects had already been completed. Because the proposed 5.9 miles of pipeline crosses federal lands, a special use permit was required from the U.S. Forest Service. The permit was applied for in December 2002. It was received in June 2005.

In 2005, the Dutton Ditch pipeline project is finally becoming a reality, with Stevens Reservoir work on the horizon. A bid for construction was recently awarded to T. Lowell Construction, Inc., ground was broken last week for the project and work is set to begin. With dependable weather conditions, the work could be complete by late fall. If not, the work will be spread over two construction seasons.

While residents of Pagosa Country wait for projects to be completed, there is still a PAWSD moratorium in effect, under which the district will not accept petitions for inclusion of any new properties into the district. That moratorium on inclusions is unlikely to be lifted any time soon until further water efforts are well underway. According to Campbell, the position of the district board members is they will feel more comfortable lifting the moratorium once they are further along with finalizing the Dutton Ditch pipeline project and the Stevens Reservoir enlargement.