

## Final Reflections

The land purchases, planning and studies currently being conducted are necessary in order to have any future water storage and delivery system options. No matter what the ultimate decision is on reservoir size, the current work will provide future water security.

Without this long term plan, the PAWSD community may:

- 1) have few, if any, options for adequate water supply,
- 2) have severe water restrictions,
- 3) experience vastly increased costs in meeting future water needs, and
- 4) experience limited economic growth.

**Growth, economic vitality and water go hand in hand.**

**Our water is our future.**

For more information, please visit [www.pawsd.org](http://www.pawsd.org)

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Pagosa Area Water and Sanitation District

*Dry Gulch  
Reservoir*



*Our Water,  
Our Future*

## The Case For Water Storage

In times of severe drought, the only water we can count on is the water we have stored.

2002 showed us what can happen in times of drought:

- Reservoirs were at drastically low levels
- Established water rights did not produce the same amount of water as in prior years
- It took extraordinary measures to draw water out of nearly dry rivers
- Severe water use restrictions were imposed

The 2002 drought was a ONE YEAR event – in a multi-year event, PAWSD would run out of water.

Severe multi-year droughts have occurred several times in the southwest throughout history. Climatologists predict that the southwest region will dry significantly in the 21st century.

PAWSD currently has storage adequate for one year of annual water demand, compared to Denver Water which has 2.4 years of storage.

There is a continuing threat of demand for more of our water by Nevada, Arizona, California and Colorado River Basin Indian Nations.

With current growth estimates, we will need more water as early as 2014.

The lead time to construct a new reservoir is typically 20 years.



## The Plan

Replace the 40-year old, obsolete, at-capacity Snowball water treatment plant:

- Build a new pump station and new larger treatment plant at the Dry Gulch site by the San Juan River.
- Abandon the Snowball pipeline along the Jackson Mountain slide area.

in 2020 or thereafter, construct a new reservoir at the Dry Gulch site in anticipation of meeting projected water needs in 2040 and beyond:

- Minimum size: 12,500 acre feet
- Maximum size: 35,000 acre feet

Planning for PAWSD water needs is done on the basis of projected water use requirements, not on the basis of permanent population:

- Includes needs of seasonal residents, tourists and commercial services.
- Water requirements are measured in Equivalent Units (EUs).
- One EU equals the level of water demand of a single family residence.
- The projected increase in water demand between now and 2040 is an average 3.6% per year.

All planning parameters and timelines are elastic – dam construction cannot happen earlier than 2020 but may happen later.

# FINANCING

## Sources of Revenue\*

\*Based on Stan Bernstein and Associates 2007 Report and 2040 Capital Improvement Plan

### Source One: Growth

In 2002 the PAWSD Board of Directors, with input from a Citizen's Advisory Committee, adopted the position that growth should pay a significant portion of the cost of meeting future increased water demands.

A Capital Investment Fee (CIF) was initiated in 2002.

- Current CIF is \$2,575 per new residential or commercial EU.
- CIF funds can be used for improvements and additions to the current treatment and distribution infrastructure.

A Water Resource Fee (WRF) component (currently \$7,210 per EU) of the CIF was initiated in 2006.

- The WRF is assessed on new homes or new commercial facilities, or enlarged water use at existing facilities.
- EUs are determined by the size of water meter installed.
- The PAWSD Board has pledged by policy to consider WRF mitigation proposals on a case by case basis by appeal.
- WRF funds can be used for future raw water facilities, water treatment facilities and water rights required by growth.

### Source Two: Existing Customers

If the WRF is not applied, the entire cost of meeting future water needs required by growth will be borne by a project bond issue repaid by increased monthly rates for all PAWSD customers.

Voters may approve a tax-supported project bond issue to fund the reservoir.

### Source Three: Teaming

Acknowledging that water security is a community issue, the San Juan Water Conservancy District and the Town of Pagosa Springs have teamed with PAWSD to explore and obtain alternate sources of funding.

SJWCD has secured over \$1 million in grants for the reservoir, and both PAWSD and SJWCD continue to pursue grant opportunities.

The Town of Pagosa Springs has implemented an impact fee for SJWCD raw water development that will be applied toward the reservoir project.

## The Money Flow

The total cost of the plan described herein is approximately \$150 million (in 2006 dollars).

Total costs for a 12,500 acre foot or larger reservoir will be recalculated within the next year.

Inflation has occurred since 2006 and will likely occur over the 20 year reservoir planning period.

The Water Resource Fee (\$7,210 per EU) was calculated by dividing \$150 million by the projected increase in EUs occurring by 2040.

Projects within the \$150 million plan include:

- Land acquisition and Forest Service Special Use permit (currently being paid for by WRF and grants).
- A new pump station and treatment plant at the Dry Gulch site (paid for by CIF, WRF and/or bond issue).
- Expansion of the San Juan Intake pump station, pipeline and treatment plant (paid for by CIF, WRF and/or bond issue).
- Multiple design and engineering contracts.
- Required environmental studies (federal/state).
- Permitting procedures and legal fees.
- Dam construction in 2020 or thereafter.

Given current projections, in 2020 the WRF will have collected 44% (\$66 million) of the \$150 million cost, much of which will have been used to pay for diversion and treatment facilities, designs and studies required prior to dam construction.

## MAJOR DECISIONS

**DECISION:** Should construction actually begin in 2020? All projections and timelines are elastic.

**DECISION:** How will the new treatment plant and pump station be funded? Regardless of projections, a new and enlarged treatment plant and pump station must be built at the Dry Gulch site to replace the 40-year old Snowball system. If CIF/WRF funds are not sufficient, a bond issue will be required to be repaid by a water rate increase or a voter-approved property tax increase.

**DECISION:** Reservoir size must be determined prior to 2020 or a later construction date.

- The decision will be based on future water need projections at that time.
- The fixed cost of the smallest dam will be substantial.
- The incremental cost of adding storage beyond the 12,500 acre foot minimum reservoir size will be relatively small.

**DECISION:** How will the reservoir dam be funded? If CIF/WRF funds are not sufficient, a bond issue will be required to be repaid by a water rate increase or a voter-approved property tax increase.

Cost-benefit analyses will be applied at each decision point.