



CAPITAL IMPROVEMENT PLAN

2023-2042

Prepared for:

*Pagosa Area Water and Sanitation District
Board of Directors*

January 2, 2023

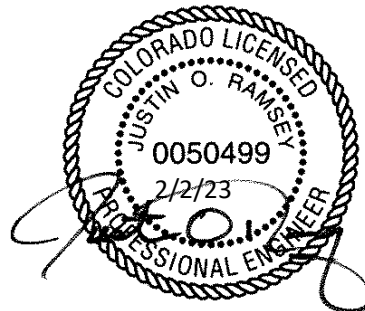


TABLE OF CONTENTS

1.	BOARD OF DIRECTORS.....	1
2.	KEY STAFF	1
3.	BACKGROUND.....	1
4.	CAPITAL IMPROVEMENT PLAN DISCLAIMER.....	2
5.	RAW WATER.....	3
	5.1. West Fork Diversion.....	3
	5.2. Four Mile Diversion.....	3
	5.3. San Juan Diversion.....	4
	5.4. Augmentation Plan.....	5
6.	DISTRIBUTION SYSTEM.....	5
	6.1. Water Mains.....	6
	6.2. Pump Stations and Pressure Reducing Valves (PRV'S).....	7
	6.3. Fill Stations	8
	6.4. Storage Tanks.....	8
	6.5. Communications.....	9
7.	WATER TREATMENT SYSTEM.....	10
	7.1. Hatcher Water Treatment Plant	10
	7.2. San Juan Water Treatment Plant	11
	7.2.1. Pre-Treatment.....	11
	7.2.2. Primary Treatment.....	12
	7.3. Snowball Water Treatment Plant	13
	7.3.1. Snowball Water Treatment Plant.....	13
8.	COLLECTION SYSTEM.....	14
	8.1. Dump Station.....	15
	8.2. Sewer Mains and Manholes.....	15
	8.3. Lift Stations	15
	8.4. Communications.....	16
9.	VISTA WASEWATER TREATMENT SYSTEM	16
	9.1. Oxygest.....	17
	9.2. Headwork's.....	17
	9.3. Blowers.....	17
	9.4. Clarifiers	17
	9.5. Digesters.....	18
	9.6. Ultra Violet Disinfection/Discharge	18
10.	VEHICLES AND EQUIPMENT.....	19
11.	CONCLUSION.....	19

TABLES

Table 1.	West Fork Diversion
Table 2.	Reservoir Ditch to Pipeline Replacement
Table 3.	San Juan Diversion
Table 4.	Augmentation Infrastructure
Table 5.	Distribution System
Table 6.	Water Mains
Table 7.	Pump Stations and PRVs
Table 8.	New Pump Stations
Table 9.	Storage Tanks
Table 10.	Distribution Communication
Table 11.	Water Treatment Plants
Table 12.	Hatcher Water Treatment Plant
Table 13.	San Juan Water Treatment Plant – Pre Treatment
Table 14.	San Juan Water Treatment Plant – Primary Treatment
Table 15.	Snowball Water Treatment Plant
Table 16.	Collection System
Table 17.	Sewer Main and Manholes
Table 18.	Collection System
Table 19.	Lift Station Communication
Table 20.	Vista Wastewater Treatment Plant
Table 21.	Vehicles and Equipment
Table 22.	Total 10 Year CIP Costs

APPENDICES

Appendix A.	Raw Water
Appendix B.	Distribution System
Appendix C.	Hatcher Water Treatment System
Appendix D.	San Juan Water Treatment System
Appendix E.	Snowball Water Treatment System
Appendix F.	Collection System
Appendix G.	Vista Wastewater Treatment Plant
Appendix H.	Vehicles and Equipment

1. BOARD OF DIRECTORS

- Jim Smith President/Chairman
- Glenn Walsh Vice President
- Bill Hudson Secretary
- Peter Hurley Treasurer
- Gene Tautges Director

2. KEY STAFF

- Aaron Burns Director of Business Services
- Andrew Connor Water Treatment ORC
- Art Holloman RAW Water Manager
- Craig Swick Electric/Instrumentation Manager
- Garret Funk Fleet Manager
- Harry Lynk Collections ORC
- Joe Hewett Wastewater Treatment ORC
- Justin Ramsey District Manager/Engineer
- Kyle Tjelmeland GIS/City Works Coordinator
- Shaun Wilkins Distribution ORC

3. BACKGROUND

The Pagosa Area Water and Sanitation District (District) provides safe, reliable, potable and non-potable water to its residential, commercial, and institutional customers located in and around the Town of Pagosa Springs Colorado. The District also provides safe and affordable wastewater collection and treatment.

The Pagosa Area Water and Sanitation District is the successor to the Pagosa Water and Sanitation which was formed in 1971. The original district was reorganized into the current district in 1977 to provide water and wastewater service to the Pagosa Springs, Colorado area, located in Archuleta County in the southwestern portion of the state. Through an inclusion election held in 1992, the Town of Pagosa Springs and areas served by the former Archuleta Water Company were included into the District's boundaries at that time for potable water service. In 2016 the District and Town of Pagosa Springs reached an agreement for the District to receive and treat the Town of Pagosa Springs wastewater. The town's collection system operation remains the responsibility of the Pagosa Springs Special Improvement District.

Thirty five full time District personnel manage and operate three water diversions, 21 miles of raw water line, approximately 300 miles of water line, 80 miles of sewer line, three water treatment plants

and one wastewater treatment plant. The District also manages seven reservoirs, five in conjunction with the Pagosa Lakes Property Owners Association (PLPOA) providing 4,070 acre-feet of usable raw water storage. The District encompasses approximately 76 square miles. The district provides over 1,225 acre-feet of potable water and an additional 300 acre feet of raw water for irrigation. It should be noted the District produces approximately 2,055 acre feet with the difference being water lost through leaks in the distribution system, process water, meter inaccuracies and water theft.

The District serves approximately 8,300 equivalent units (EU's) via 6,330 connections. The District predominantly serves residential and resort related commercial properties. The District water service includes all potable water delivered through the treatment and distribution system for domestic and commercial uses including residences, hotels, restaurants, shops and other commercial enterprises. The District also operates and maintains three fill stations allowing properties outside of the District boundaries the ability to purchase and use District potable water.

The District has 3,622 number of sewer connections (this does not include individual connections from the Pagosa Springs Sanitation General Improvement District (PSSGID) and treats approximately 460 million gallons (1,412 af) of wastewater through its Vista Wastewater Treatment Plant.

4. CAPITAL IMPROVEMENT PLAN DISCLAIMER

The Capital Improvement Plan (CIP) for the District is based on needs determined by the department heads. This group meets on a regular basis to prioritize capital needs of the District.

Analysis is done to determine future needs for replacing water and sewer mains in the system as well as expansion and/or replacement of water and wastewater treatment facilities. Replacement of aging water and sewer infrastructure is a national and local concern. Deterioration of existing water and sewer infrastructure, poor installation practices and inferior materials represent crucial challenges for the District.

Prioritization is based on asset life cycles, regulatory requirements, maintenance requirements and system deficiencies. Future important considerations are Board goals and objectives, Community development, service boundary growth potential, anticipated infill growth and funding availability.

Project costs are not engineered estimates. The figures shown are Rough Order-of-Magnitude (ROM) estimate of costs before all the project requirements have been specified. The ROM Estimate is based on preliminary scope of work that is subject to change.

Many items in this plan can be considered maintenance costs as opposed to Capital Improvement Costs. The maintenance items listed in this report are for replacement of existing capital items that exceed previous maintenance tasks and thus will not have been captured in past maintenance budgets.

5. RAW WATER

The current raw water system consists of three primary diversions and associated infrastructure along with seven reservoirs, two pump stations, and monitoring stations for a state required Augmentation Plan.

5.1. WEST FORK DIVERSION

The West Fork Diversion is located off Highway 160 near mile marker 155. West Fork of the San Juan water is diverted into a pipeline that travels only a short distance downstream where it exits into a small detention pond and then enters a second diversion. This diversion goes into an approximately eight mile gravity pipeline to a small reservoir at the Snowball Water Treatment Plant.

The diversions is in good condition but concrete deterioration infrastructure where will require capital expenditures over the next twenty years. The pipe line was installed in 1968 ongoing maintenance is required to keep water flowing dependably to the Snowball water treatment plant. Repair of pipeline will include short areas of replacement along with replacement of a combination air relief valves and valves.

Table I – West Fork Diversion

Construction Costs	Number	Total Cost	Water Fee	RWAF
Water Line	5 MI	\$1,080,000	80%	20%
Combination Air/Relief Valves	8 EA	\$5,250	80%	20%
Valves	8 EA	\$7,500	80%	20%

5.2. FOUR MILE DIVERSION

The Four Mile Diversion is located off County Road 400 along Four Mile Creek. The water is diverted into the Dutton pipeline that replaced the Dutton Ditch in 2004. The Dutton pipeline is a gravity pipeline that runs for approximately six miles and delivers water to Hatcher Reservoir or Stevens Reservoir.

Water from the Dutton pipeline can be diverted into Dutton Creek in order to fill Stevens Reservoir. PAWSD is negotiating with the new owners of the Dutton Creek Ranch to construct a new pipeline from the existing Dutton pipeline to Stevens Reservoir. In addition to the pipeline a pump station at Stevens Reservoir would allow water to be pumped from Stevens Reservoir back up the new pipeline where it could be used to fill Hatcher Reservoir during times that water is not being diverted from Four Mile Creek.

Stevens Reservoir is first in a string of reservoirs within the distribution system. Water can be transferred from Stevens Reservoir through a combination of valves, pipes, gates and ditches into Pagosa Lake, which then can feed Village Reservoir which can then feed Lake Forest. The San Juan Water Treatment Plant can then treat water out of Lake Forest. To reduce water losses in the system all ditches will be converted to pipes, this reduces evaporation losses but more importantly losses through percolation.

Table 2 – Reservoir Ditch to Pipeline Replacement

Construction Costs	Number	Total Cost	RWAF
Stevens Reservoir Pipeline	2.5 MI	\$1.5 M	100%
Stevens Reservoir Pump Station	1	\$800,000	100%
Pipe Line	5 MI	\$100,000	100%

5.3. SAN JUAN DIVERSION

The San Juan Diversion is located approximately three miles south of Pagosa Springs. Water from the main stem of the San Juan River is diverted into a sedimentation pond where it is pumped approximately 2 miles via the San Juan Pumping Station to the Trujillo Road Pumping Station. The Trujillo Road Pumping Station pumps the water an additional 5.5 miles where the water can be discharged directly to the San Juan Water Treatment Plant, Village Lake or Lake Forest. Lake Forest has a pumping station to pump water into the San Juan Treatment Plant.

The diversion itself along with the pipelines are in good condition and no large capital expenditures are expected over the next twenty years. The diversion pond will need to be dredged and new baffles installed. The pumps, controls and VFD’s at the San Juan and Trujillo Pump Stations will be at the end of their expected operational life before the end of this CIP thus replacement of these items is expected.

The Lake Forest Pumping Station has two pumps suspended via buoys directly in Lake Forest making maintenance of the pumps difficult and expensive. Relocating the pumps to a shore mounted system will reduce operational costs.

Table 3 – San Juan Diversion

Construction Costs	Number	Total Cost	Water Fee
San Juan Diversion Pond Dredging and baffle replacement	1 LS	\$200,000	100%
San Juan Pump Station Pumps Replacement	2 EA	\$200,000	100%

San Juan Controls and VFD Replacement	2 EA	\$100,000	100%
Trujillo Pump Station Pumps Replacement	3 EA	\$200,000	100%
Trujillo Controls and VFD Replacement	3 EA	\$100,000	100%
Relocation of Lake Forest Pump Station	1 EA	\$400,000	100%

5.4. AUGMENTATION PLAN

The state required augmentation plan consists of 5 monitoring stations located in the Stollsteimer Creek watershed. The augmentation plan is to provide assurances to the Ute Tribe that the construction of the reservoirs in the Stollsteimer watershed (Hatcher, Stevens, Pagosa, Village, Forest and Pinon) will not have a negative impact on the tribes Stollsteimer water rights.

Capital improvements on the augmentation plan infrastructure will be needed to maintain the wiers used to collect water data.

Currently data collected at the augmentation sites are uploaded to a satellite system for record keeping and reporting. This system has annual costs to a third party. Over the next two years these systems will be connected directly to the PAWSD SCADA System allowing to collect and record data without the third-party expenses.

Table 4 – Augmentation Infrastructure

Construction Costs	Number	Total Cost	RWAF
Monitoring Stations	1 LS	\$100,000M	100%
Data Collection and Reporting	1 LS	\$40,000	100%

6. DISTRIBUTION SYSTEM

The District’s distribution system is very complex due to its geographic size and terrain. The following table outlines the components of the distribution system.

The actual age of the distribution system varies significantly, as stated earlier the District began in 1971 meaning a portion of the distribution system is over fifty years old, however many of the water lines within the town limits may be substantially older than that. The age of the distribution system coupled with poor installation practices, inferior materials and harsh soil conditions has led to

significant unaccounted water losses throughout the system. Reducing water losses to reasonable levels will require significant replacement of the distribution system.

Table 5 – Distribution System

Item	Number	Units
Mains	310	Miles
Valves	2,786	Each
Hydrants	1,110	Each
Automatic Meter Readers	5,578	Each
Pump Stations	11	Each
PRV	24	EA
Storage Tanks	14	EA
Fill Stations	3	EA

6.1. WATER MAINS

The District has approximately 310 miles of waterline with many areas nearing or exceeding their design life. Many of the older lines were also installed using poor construction practices and/or substandard materials. Replacing the aging water infrastructure shall be prioritized by age, condition, material, failure rates and maintenance costs. Repair, replacement and inspection of fire hydrants in coordination with the Pagosa Fire District can increase the Insurance Services Office (ISO) rating which can reduce property insurance. Valves and hydrants shall be replaced in conjunction with replacement of mains with all three items, mains, valves and hydrants, undertaking a long term replacement program which will run throughout this Capital Improvement Plan timeline and into future plans.

The Automatic Meter Readers also known as Firefly’s have been completely changed out over the last three years thus there is little concern for the need to replace significant numbers of these units for several years. There is a likelihood that failures of the units will begin during the last half of this plan therefore we anticipate replacement of the units beginning in 2025 and increasing through the final years of this plan.

Table 6 – Water Mains

Construction Item	Number	Total Cost	Water Fee	CIF
Water Line	12 MI	\$6,000,000	95%	5%
Valves	110 EA	\$480,000	95%	5%
Hydrants	40 EA	\$1,000,000	95%	5%
Automatic Meter Readers	440	\$154,000	80%	20%

6.2. PUMP STATIONS AND PRESSURE REDUCING VALVES (PRV'S)

Pump stations and PRV's are mechanical devices that do wear out and eventually need replacement. Pumping stations will need updated controls and VFD's.

A significant number of PRV's have reached or exceeded their expected operational expectancy, thus all PRV's should be rebuilt or replaced within this plan.

Table 7 – Pump Stations and PRV's

Construction Costs	Total Cost	Water Fee
Elk Run	\$75,000	100%
Jenkins	\$50,000	100%
Reserve	\$50,000	100%
Mission	\$100,000	100%
Elk Park	\$75,000	100%
Terry Robinson	\$20,000	100%
Loma Linda	\$100,000	100%
Log Park Booster	\$125,000	100%
PRV	\$100,000	100%

A new pump station will be designed and installed at second street to allow water from uptown to be pumped to the Snowball water storage tank. This tank sets the pressure for downtown Pagosa Springs. This will allow the uptown treatment plants, Hatcher and San Juan to provide water to District 2 if needed. It will also aid in the startup of the new Snowball water treatment plant.

A new pump station will also be designed and installed near the Breakroom Bar to allow water from downtown to be moved uptown. This will allow water produced from the Snowball water treatment plant to provide water to District 1 if needed.

Table 8 – New Pump Stations

Construction Costs	Total Cost	Water Fee	RWAF
2 nd Street	\$65,000	50%	50%
Breakroom	\$85,000	50%	50%

6.3. FILL STATIONS

Three fill stations are provided by the District to allow the purchase of potable water to individuals that may reside outside of the District boundaries. The fill stations are located strategically throughout the district to provide convenience to users of the fill stations. The fairgrounds fill station is located east of Pagosa Springs on the Archuleta County fairgrounds off Mill Creek Road. The Lyn Avenue fill station is located near the entrance of the Districts main campus on Lyn Avenue. The third fill station is located west of Pagosa Springs on Trails Boulevard. There has been discussion on relocating the Trails Boulevard fill station to Aspen Springs on County owned property located on the Corner of Hurd Drive and Highway 160.

All three fill stations are in good repair and there is no anticipated capital improvement requirements over the next ten years. If the fill station on Trials were to be moved a 12” waterline would have to be extended a distance of 2.5 miles from Elk Park to Hurt Drive at an estimated cost of \$1.5M.

6.4. STORAGE TANKS

The District operates and maintains fourteen finish water storage tanks. The state mandates that the exterior of each tank is inspected quarterly and a comprehensive inspection of the outside and inside of the tanks be completed every five years. The comprehensive inspections on all tanks was completed in 2022. The results of the comprehensive inspections were used to assess the condition and need for repair or replacement.

Seven of the fourteen tanks are in good repair and there are no anticipated capital improvement requirements over the next ten years.

Table 9 – Storage Tanks

Tank	Total Cost	Task	Water Fee	CIF
Cemetery	\$90,000	Paint	100%	
Eagle Peak	\$90,000	Paint	100%	
Elk Park	\$90,000	Paint	100%	
Elk Run	\$60,000	Paint	100%	
Hatcher	\$110,000	Paint, Ladder and Fence	100%	
Log Park	\$90,000	Paint	100%	
Loma Linda	\$90,000	Paint	100%	
Meadows	\$120,000	Paint	100%	
Reserve	\$85,000	Paint	100%	
Reservoir Hill	\$130,000	Paint	100%	
Stevens 1	\$85,000	Paint	100%	
Stevens 2	\$110,000	Paint	100%	

6.5. COMMUNICATIONS

Booster stations and storage tanks communicate operations and water levels through radios, plc's and transponder stations. The existing communication technology is no longer supported by vendors and thus must be replaced with modern infrastructure. This upgrade began in the 2018 budget year and will continue through this capital improvement planning period.

Table 10 – Distribution Communication

Construction Costs	Total Cost	Water Fee	CIF
Ace Motorola	\$180,000	80%	20%
900 MHz radios	\$115,000	80%	20%

7. WATER TREATMENT SYSTEM

The District owns and operates three water treatment plants, the Snowball, Hatcher and San Juan. All three treat surface waters derived from the San Juan River or tributaries of the San Juan. The Snowball plant provides water for downtown Pagosa Springs and communities south of town. The Hatcher and San Juan Plants primarily provide water for the Pagosa Lakes area. The District does have the capability of moving water from the Pagosa Lakes area to down town. The District will need to increase capacity and upgrade treatment capabilities to keep up with community growth, increased regulations and system lifespans.

The Hach model 1720 Turbidity meters used in all three WTP are obsolete. As units fail, we will replace with new HACH 5300 series meters. 13 meters in total between plants. Each plant has a Chlorine analyzer which are also obsolete and will be replaced.

Table 11 – Water Treatment Plants

Treatment Plant	Capability (MGD)
Snowball	2.0 (3.5*)
Hatcher	2.0
San Juan	1.0 from Lake Forest 3.0 from River

New Snowball WTP will have a 3.5 MGD capability.

7.1. HATCHER WATER TREATMENT PLANT

The Hatcher water treatment plant is going on eighteen years which is middle aged. There are no major capital improvements necessary for the Hatcher plant.

Table 12 – Hatcher Water Treatment Plant

Component	Cost	Water Fee
Structure	\$156,000	100%
Raw Water Pumps	\$138,000	100%
Pre-Treatment	\$54,000	100%
Microfiltration	\$411,000	100%
GAC System*	\$450,000	100%
Disinfection	\$80,000	100%
CIP	\$32,000	100%

The Hatcher plant structure is a concrete building with no major repairs expected. It is anticipated a new HVAC system will be needed within the next ten years.

There are three raw water pumps that pull water from Lake Hatcher into the plant. Both raw water pumps were replaced in 2021. A third critical spare will be purchased in 2023 and in 2024 one of the pumps will be rebuilt every year.

The pre-treatment for the system includes the mixing of coagulants. We anticipate minor costs during this CIP period for the inspection and upkeep of coagulant tanks.

The actual microfiltration system consists of two microfiltration racks with 48 filter modules in each rack. The modules have a life expectancy of eight to sixteen years. Approximately 1/3rd of the modules have been replaced to date. 10 to 15 modules will be purchased each year to assure adequate replacements. The existing air system was constructed with PVC plumbing. The plastic pipe is becoming brittle and failing. The entire air plumbing system is to be replaced with steel plumbing. This will be accomplished over a five year period.

The Granulated Activated Carbon system has been an on-going maintenance item. The GAC system is used to remove organics from the lake water used in the treatment plant. The carbon has a finite life and historically has been replaced on average every 18 months. There are three carbon vessels and the carbon is replaced in a single vessel every 8 to 10 months.

The clearwell shall be inspected every five years in conjunction with tank inspections by a third party using a Remote Operating Vehicle (ROV). This CIP also includes replacement of one of the three finish water pumps.

7.2. SAN JUAN WATER TREATMENT PLANT

The San Juan water treatment plant can treat water directly from the San Juan River or from Lake Forest.

7.2.1. Pre-Treatment

Source water coming from Lake Forest goes through a pretreatment system consisting of powder activated carbon (PAC) and a Magnetic Ion Exchange (MIEX) process used to remove organic materials in the lake water which if not removed would cause taste, odor and color issues.

There are no anticipated capital improvements necessary for the PAC system. There are some component replacement on maintenance items expected on the MIEX system consisting of reconstruction of the Resin Regeneration Tank and inspections of the Salt Saturator Tank.

Table 13 – San Juan Water Treatment Plant –Pre-Treatment

Component	Cost	Water Fee
PAC System	\$20,000	100%
MIEX System	\$60,000	100%

7.2.2. Primary Treatment

Both sources of water at the San Juan plant (Lake Forest and San Juan River) are treated through a conventional filtration system and disinfected prior to delivery. Source water coming directly from the San Juan can by-pass the pretreatment facility described above.

The filtration system consists of three Trident package treatment filters manufactured by WesTech. The package system consists of a high rate settling, adsorption clarification, mixed media filtration system. The Trident treatment system is currently followed by chlorine disinfection and a clear well for chlorine detention time. This along with the pretreatment is an acceptable process for the water coming from Lake Forest. The installation of a UV system in 2019 allowed for the treatment of water directly from the San Juan river diversion.

The filters and ductile iron piping are being repainted in 2023.

South wall and west wall of exterior building will need replacing. South wall is failing and will need replacement before 2024. West wall is in good shape still, but will need addressed in 20 year CIP.

San Juan HVAC heaters are 15-20 years old. Parts are becoming hard to come by. Replacement of 4 heaters in filter room over 10 year.

There are anticipated costs associated with the replacement of two discharge pumps over the ten year planning period of this CIP along with ongoing inspections of the Clearwell.

Table 14 – San Juan Water Treatment Plant –Primary Treatment

Component	Cost	Water Fee
HVAC	23,000	100%
Structure	\$300,000	100%
Trident Filters	\$722,000	100%
Backflow	\$20,000	100%
Chemical Pumps	\$37,000	100%
Ponds	\$360,000	100%
UV System	\$90,000	100%
Clearwell	\$42,000	100%
Discharge	\$80,000	100%

7.3. SNOWBALL WATER TREATMENT PLANT

The Snowball water treatment plant is the districts oldest operating water plant. The Snowball Plant was taken over by the District in 1992 when the District annexed the Town of Pagosa Springs water system and the Archuleta Water Company. The Snowball plant in its current form was constructed in 1984 and consists of two Trident conventional filtrations system, similar to the Trident systems in the San Juan Plant but older models. The actual building was constructed in 1968. The building has significant structural problems and needs replacement. The filters have experienced significant rust over the 38 year operational life and the filtration media is due for replacement. Additionally the plant will not meet current regulatory discharge requirements without significant upgrades. Due to these issues it has been determined it would be in the best interest of the district to replace the facility with a new system.

7.3.1. Snowball Water Treatment Plant

A replacement for the Snowball Water Treatment Plant is currently under design and ready to go into construction. Construction is expected to take 28 months to complete. The new facility will implement dissolved air floatation for pretreatment followed by microfiltration similar to the Hatcher Water Treatment Plant.

The new facility will have a design capacity of 3.5 MGD.

Costs for the new facility have been estimated at \$44,000,000.

Table 15 – Snowball Water Treatment Plant –Primary Treatment

Component	Cost	Water Fee
HVAC	\$105,000	100%
Raw Water	\$10,000	100%
Pretreatment	\$16,000	100%
Microfiltration	\$15,000	100%
Clearwell	\$6,000	100%
Chemical Pumps	\$5,000	100%

8. COLLECTION SYSTEM

The District’s collection system is very complex due to its terrain. The following table outlines the components of the collection system.

Table 16 – Collection System

Item	Number	Units
Mains	80	Miles
Manholes	1,902	Each
Dump Station	1	Each
Lift Station	27	Each

The District has substantial spring-time infiltration and inflow (I&I). Infiltration is flow that enters our collection system primarily due to spring snowmelt. Inflow is illegal connections to the collection system usually from roof drains or basement sump pumps. In the spring of 2017 infiltration and inflow increased the hydraulic load to the Vista Wastewater Treatment Plant to excess of its permitted values. To assure we don’t unnecessarily expand the wastewater treatment capacity the I&I must be reduced. Inflow will be reduced by investigating suspect properties and disconnecting illegal connections. Infiltration can be reduced by replacing or lining manholes that leak (several are actually located within Village Lake) lining or replacing leaking sewer mains and lining lift stations.

8.1. DUMP STATION

The District has a single dump station located at the entrance of the PAWSD main campus. The dump station allows septic haulers to legally dump septic tank effluent or other approved wastewater into the system. Although the location of the dump station is not optimal there are no significant issues with the dump station.

8.2. SEWER MAINS AND MANHOLES

As stated above to reduce infiltration, repair or replacement of sewer mains and manholes will be necessary. As opposed to replacement of sewer mains, most infiltration problem areas can be resolved by “sleeving” the main. Cured in Place Pipe (CIPP) is a technology that can repair broken joints, cracks, root infiltration, fissures and missing sections of sewer pipeline without digging up and removing the line. This allows the line to be repaired without long term shutdowns of the sewer main.

Manholes can be replaced or relined. Several manholes are located in Village Lake. Even with small leaks these manholes can contribute a significant amount of water to the collection system. It is imperative these manholes as well as manholes located in areas subject to saturation be sealed from infiltration.

Table 17 – Sewer Mains and Manholes

Construction Costs	Number	Total Cost	WW Fee	CIF
Sewer Main	1.2 MI	\$900,000	95%	5%
Manholes	175 EA	\$900,000	95%	5%

8.3. LIFT STATIONS

Lift stations pump wastewater using either subsurface pumps, pumps and motors below the surface of the water in the lift station wet well, or above grade pumps, pumps and motors are above the water surface. The vast majority of lift station problems the District has is the above grade pump systems so these above grade systems are being replaced with subsurface pumps. Pump stations are mechanical systems that work within a very harsh environment thus need on going maintenance and ultimately replacement. With the number of lift stations the District operates replacement will be ongoing requirement.

Table 18 – Collection System

Item	Total Cost	WW Fee	CIF
Lift Stations	\$3,150,000	50%	50%
Manholes	\$200,000	50%	50%
Sewer Mains	\$1,820,000	50%	50%
Dump Station	\$200,000	50%	50%

8.4. COMMUNICATIONS

Lift stations communicate operations and water levels through radios, plc’s and transponder stations. The existing communication technology is no longer supported by vendors and thus must be replaced with modern infrastructure. This upgrade began in the 2018 budget year and will continue through this capital improvement planning period.

Table 19 – Lift Station Communication

Construction Costs	Total Cost	WW Fee	CIF
Ace Motorola	\$330,000	95%	5%
900 MHz radios	\$40,000	95%	5%

9. VISTA WASEWATER TREATMENT SYSTEM

The Vista Wastewater Treatment Plant has a hydraulic design capacity of 3.7 to 3.9 MGD and an organic capacity of 3,756 to 3,906 lbs./day BOD₅ depending on the time of the year. The District is required to initiate engineering and financial planning for expansion of the treatment plant whenever hydraulic or organic capacity reaches 80 percent of the design capacity. The District is required to commence expansion construction whenever treatment capacity reaches 95 percent of design capacity. The hydraulic capacity at this time, excluding I&I, is approximately 30 percent of design capacity, during I&I the hydraulic capacity is 81%. Organic loading is currently peaks at 72% percent of capacity.

The Vista Wastewater Treatment Plant is currently under a compliance schedule to reduce inorganic nitrogen and phosphorus. Costs for design and construction for the plant upgrades is estimated at approximately \$13M.

Regulation 31 will take effect in 2034 requiring additional nutrient removal requirements. The upgrade costs to meet compliance is estimated at approximately \$35M.

9.1. OXYGEST

Currently waste activated sludge is sent to the old Oxygest tanks. The Oxygest was a package plant for the Vista Treatment plant approximately twenty years ago. The Oxygest tanks located in a structure between the automotive shop and vehicle storage are now simply used for sludge storage. To minimize odor the stored sludge is aerated driving up energy costs. With minor plumbing changes the sludge storage could be eliminated, removal of the old Oxygest system would free up a large structure which could provide additional equipment and vehicle storage. I have included costs for the removal of the Oxygest system for that purpose. At this time I would also recommend upgrades to digester diffusers to assure a more efficient operation of sludge digestion. Cost of the Oxygest removal is estimated to be \$100,000.

9.2. HEADWORK'S

Most of the headwork's including the steps screen, compactor, and meters were replaced or rebuilt in 2017 thus there is no expected large capital costs associated with the headwork's.

9.3. BLOWERS

The facility currently employs three Hoffman blowers and two Nuros blowers. The Nuros blowers are significantly more energy efficient than the Hoffman blowers.

The three Hoffman blowers will need to be rebuilt during the CIP period.

Two oxidation ditches are used to provide the primary treatment for the facility. The oxidation ditches consist of deep concrete basins with fine air bubble diffusers. Effluent from the headworks travels through the oxidation ditches where aerobic bacteria treat the water. A large drum mixer is used to push the water through the basin. The drum mixer in both basins will need replacement along with diffusers.

9.4. CLARIFIERS

The Vista plant currently has two aging forty foot diameter clarifiers (clarifiers 1 and 2) and a sixty foot clarifier (clarifier 3). Clarifiers 1 and 2 will be abandoned and replaced with a new single 60 foot clarifier.

The existing sixty foot clarifier is also scheduled to have skim arm upgraded to enhance scum removal.

9.5. DIGESTERS

The two digesters are scheduled to have diffusers replaced during this Capital Improvement Planning period. Diffusers are a wearable item and the anticipated life expectancy will be exceeded by 2027.

9.6. ULTRA VIOLET DISINFECTION/DISCHARGE

The UV system is no longer supported by the manufacture making it increasingly difficult to find parts and maintain the system. The UV system will need to be replaced.

Table 20 – Vista Wastewater Treatment System

Item	Total Cost	WW Fee	CIF
Headwork's	\$4,489,000		
Aeration Basins 1 and 2	\$647,000	95%	5%
Blowers	\$395,000		
RAS/WAS	\$60,500		
Clarifier 1 and 2 Replacement	\$6,070,000	40%	60%
Centrifuge	\$724,000	95%	5%
Digesters	\$102,000	95%	5%
UV System	\$147,000		
Misc. equipment	\$34,000		

10. VEHICLES AND EQUIPMENT

The District has significant assets in vehicles and heavy equipment. The District currently has twenty-nine fleet vehicles, sixteen pieces of heavy equipment, multiple trailers and 12 generators. Due to age, mileage or hours and growth over this CIP we expect to replace existing fleet vehicles and increase the fleet. There are also anticipated replacement of heavy equipment.

Table 21 – Vehicles and Equipment

Item	Number	Total Cost
Fleet Vehicles replacement	32	\$1,425,000
Heavy Equipment Replacement	13	\$1,445,000
Trailers/Light duty equip.	10	\$445,000
Generators	10	\$80,000

*See Appendix H for breakdown

Vehicles and equipment will only be replaced if necessary, the costs associated with this CIP are anticipated costs for 2023.

11. CONCLUSION

Due to age of infrastructure, substandard materials, poor installation practices, community growth and regulatory changes an investment in all aspects of the Districts responsibility's is required to assure the District meets on-going community needs.

Table 22 –Total 20 Year CIP Costs

Item	Total Cost	Ave/Year	Fee	CIF	RWAF
Raw Water	\$7,215,950	\$360,798	\$3,660.760	\$915,190	\$2,640,000
Distribution	\$10,729,000	\$536,450	\$11,219,200	\$1,146,800	
Hatcher WTP	\$1,821,000	\$91,050	\$1,814,100	\$5,850	
San Juan WTP	\$1,431,000	\$71,550	\$1,425,150	\$5,850	
Snowball WTP	\$45,322,000	\$2,266,000	\$4,802,300	\$30,844,700	\$8,800,000
Collection	\$6,190,000	\$309,500	\$4,401,500	\$1,588,500	
Vista WWTP	\$57,948,500	\$2,897,425	\$12,669,650	\$14,018,940	
Vehicles and Equipment	\$3,825,000	\$191,250	\$3,600,000	\$225,000	

APPENDIX

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	WTE	%CT	TOTAL	
Hatchers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	\$156,000	50	\$156,000
Structure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HVAC	\$2,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Raw Water Pumps	\$50,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flow Meters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Meter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pre-Treatment	\$5,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity Meter	\$2,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coagulant Tanks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flocculation Tanks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Microfiltration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MF Pumps	\$15,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MF Backwash System	\$15,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aeration System	\$2,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GAC System	\$15,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GAC Contactors	\$30,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution	\$30,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UV System	\$5,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ozone	\$18,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elevated Storage	\$2,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fresh Water Pumps	\$1,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical Pumps	\$8,000	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Notes: High, Moderate, Low																								
Risk	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
Consequence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Regulatory	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Maintenance	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	

Appendix C - Hatcher Water Treatment Plant

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	NOTE	FCF	TOTAL	
San Juan																										
Structure	\$2,000																									\$23,000
HWC	\$2,000																									\$23,000
Structure	\$100,000																									\$80,000
Prevention																										\$20,000
M&E																										\$60,000
Contractor	\$15,000																									\$15,000
Air Purge Contractor																										\$15,000
Rain Regen																										\$0
Silt/Solids																										\$0
Sift/Separator																										\$0
Drying Beds																										\$0
Tidant Filters																										\$0
Peters																										\$0
Peters	\$222,000																									\$222,000
Peters																										\$0
Distillation																										\$222,000
Backflow																										\$0
Chemical Pumps	\$1,000																									\$1,000
UV System	\$4,000																									\$4,000
Clearwell	\$2,000																									\$2,000
Finish Water Pumps	\$2,000																									\$2,000
Total	\$142,190																									\$142,190

NOTE	High	Moderate	Low
Construction	1	2	3
Regulatory	4	5	6
Maintenance	M		

\$142,190

\$5,850

\$148,040

Appendix F - Collection System

Pagosa Area Water and Sanitation District
2023-2042 Capital Improvement Plan
Collections

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Year	% C/F	TOTAL	
1	Sub																					80%	\$120,000	\$30,000
2	Sub		\$150,000																			80%	\$120,000	\$30,000
3	Sub																					80%	\$120,000	\$30,000
4	Sub	\$125,000																				80%	\$100,000	\$25,000
5	Sub																					80%	\$100,000	\$25,000
6	Sub																					80%	\$100,000	\$25,000
7	Sub																					80%	\$100,000	\$25,000
8	Sub																					80%	\$100,000	\$25,000
9	Sub			\$150,000																		80%	\$100,000	\$25,000
10	Sub																					80%	\$100,000	\$25,000
11	Sub																					80%	\$100,000	\$25,000
12	Sub																					80%	\$100,000	\$25,000
13	Sub																					80%	\$100,000	\$25,000
14	Sub																					80%	\$100,000	\$25,000
15	Sub																					80%	\$100,000	\$25,000
16	Sub																					80%	\$100,000	\$25,000
17	Sub																					80%	\$100,000	\$25,000
18	Sub																					80%	\$100,000	\$25,000
19	Sub																					80%	\$100,000	\$25,000
20	Sub																					70%	\$87,500	\$37,500
21	Sub																					70%	\$87,500	\$37,500
22	Sub																					70%	\$87,500	\$37,500
23	Sub																					70%	\$87,500	\$37,500
24	Sub																					70%	\$87,500	\$37,500
25	Sub																					70%	\$87,500	\$37,500
26	Sub																					70%	\$87,500	\$37,500
27	Sub																					70%	\$87,500	\$37,500
28	Sub																					70%	\$87,500	\$37,500
29	Sub																					70%	\$87,500	\$37,500
Ace Motorola L.S.			\$30,000																			70%	\$127,500	\$37,500
900 MHR Reliefs			\$55,000																			70%	\$140,000	\$40,000
Dump Station																						70%	\$231,000	\$98,000
																						70%	\$28,000	\$12,000
1 EA																							\$4,400,500	\$1,588,500
																								\$65,300,000

Notes	High	Moderate	Low
Risk	1	2	3
Consequence	A	B	C
Maintenance	M	M	M

Poplar Area Water and Sanitation District
2022 - 2043 Capital Improvement Plan
Wastewater

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	WFE	%CF	TOTAL	
Headworks																									
Habitat Stepscreen																									
3x Vertical Turbines																									
3x Mag Meter																									
3x PLC																									
A basin 1																									
Vertical Drum Muler																									
Vertical Inlet VFD																									
A basin 2																									
Drum Muler																									
Drum Muler VFD																									
DO and ORP probes																									
Submersible Wilo Muler																									
Blower																									
3x Hoffman Blowers																									
PLC																									
NCC																									
Headworks																									
3x BAS/WAS pumps																									
3x VFD																									
Influent system																									
3 Clarifiers																									
Misc Equipment																									
sump pt																									
snow blower																									
Centrifuge building																									
12x centrifuges																									
3x KAI																									
2x Neutral Blowers																									
11x VFDs																									
2x Blowers																									
2x Blowers																									
Disinfect																									
Onight																									
UV																									
Modules																									
Replacement																									
Reg 85 Upgrades for Nutrient Removal																									
Reg 31 Upgrades for Nutrient Removal and expansion																									

Notes:	High	Med	Low
Risk	1	2	3
Competition	A	B	C
Maintenance	M		

Appendix H - Vehicles and Equipment

Pages Area Water and Sanitation District
2023 - 2042 Capital Improvement Plan
Vehicle and Equipment

Unit #	Description	Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Water	Waste	GenFund	TOTAL
001	Jeep Cherokee	2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$40,000	\$0
002	Jeep Cherokee	2000	-	-	\$40,000	-	-	-	-	\$40,000	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$40,000	\$40,000
003	Dodge w250	1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$5,000	\$5,000
005	Nissan Frontier	2015	-	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$40,000	\$40,000	
006	ChevK-1500	2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
007	ChevK-2500	2003	-	-	\$50,000	-	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
010	Ford F-250	2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
011	ChevK-2500	2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$0	\$0	
012	ChevK-2500	2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$0	\$0	
013	ChevK-2500	2008	-	-	-	\$180,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$180,000	\$180,000	
015	Ford F-550	2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
016	ChevK-2500	2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
017	ChevK-2500	2009	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$0	\$0	
018	Chev K-3500	2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$0	\$0	
019	Chev K-2500	2012	-	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
020	Chev K-2500	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33%	33%	\$50,000	\$50,000	
021	Chev K-2500	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33%	33%	\$75,000	\$75,000	
022	Chev K-2500	2012	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
023	Chev K-2500	2008	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
024	Ford F-150	2014	-	-	-	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
025	Ford F-150	2014	-	-	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
026	Ford F-150	2014	-	-	-	-	\$50,000	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
027	Ford F-150	2014	-	-	-	-	-	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
028	Ford F-150	2014	-	-	-	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
029	Ford F-250	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$0	\$0	
030	Ford F-250	2021	-	-	-	-	-	-	-	\$50,000	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$50,000	\$50,000	
031	Nissan Frontier	2018	-	-	-	-	-	-	-	-	-	-	\$50,000	-	-	-	-	-	-	-	-	68%	32%	\$40,000	\$40,000	
032	Nissan Frontier	2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$40,000	-	-	-	68%	32%	\$40,000	\$40,000	
034	Nissan Frontier	2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$40,000	-	-	68%	32%	\$40,000	\$40,000	
	Additional Vehicles	2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$40,000	\$75,000	\$75,000	68%	32%	\$40,000	\$225,000	
P1	Peterbilt Dump Truck	1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$400,000	\$400,000	
K1	Kenworth Vac Truck	1993	-	-	-	-	-	-	\$400,000	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$0	\$0	
B1	CASE 580SN	2018	-	-	-	-	-	-	-	-	-	-	-	\$150,000	-	-	-	-	-	-	-	68%	32%	\$150,000	\$150,000	
B2	CASE 580 SUPER M	2004	-	-	\$150,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$150,000	\$150,000	
D1	Case 1150G Bulldozer	1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$200,000	\$200,000	
E1	Case CX 130C Excavator	2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$30,000	\$30,000	
F1	Case Fork Lift	1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$95,000	\$95,000	
F2	Toyota Fork Lift	2008	-	\$40,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$40,000	\$40,000	
F3	HC Fork Lift	2011	-	-	-	\$40,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$40,000	\$40,000	
F4	GEHL Sky Lift	2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$30,000	\$30,000	
L1	Case 621E Loader	2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$40,000	\$40,000	
L2	Case 85-XT Skid Steer	2003	-	-	-	-	-	-	-	\$200,000	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$40,000	\$40,000	
MG1	Caterpillar 12-E Motor Grader	1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$95,000	\$95,000	
U1	Kubota Tractor	1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$200,000	\$200,000	
U2	YAMAHA YFM 700	2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$85,000	\$85,000	
U3	John Deere Gator	2017	-	-	-	-	-	\$15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	68%	32%	\$15,000	\$15,000	

