

**Kirkwood Meadows Public Utility District
Capital Plan Master 2019-2023
Narrative Description**

OVERVIEW

Capital Plan 2019-2023 is a 35-year plan that focuses on the next five fiscal years. The 35-Year total expenditures and 5-Year total expenditures are listed, along with a cycle column. The cycle column notes critical operational levels that prompt the installation of new infrastructure as indicated by the 2014 Services Capacity Analysis. This year, projects were assigned a 1 to 5 (1 being Critical) rating criteria, and all projects rating 2-5 were assigned a “Below the Line” designation, which indicates they are not included in the overall 2019-2023 Budget. The 5-Year total expenditure is \$6,318,300, which includes the construction of the Out-Valley Switch Station for a cost of \$5,400,000 or 85% of the total Capital Budget. Excluding the Switch Station, planned capital improvements average \$190,860 per year for the next five years.

WATER

Water Capacity Components:

Above the Line:

1. None

Below the Line:

2. Pressure Reducing Stations. This is an allocation to install two pressure reducing stations to service additional needs of the Valley.
3. Well Transmission Mains to Upper Zones. This is an allocation to install water mains from the sources to the upper zones to service additional needs of the Valley.
4. Tanks (1.4 Mgal). This project consists of construction of a new, welded-steel 1.4 Mgal water tank along with the necessary ancillary components and a booster system to supply needs at build-out.
5. Caples Lake. This allocation is to provide additional water to the District to meet the future development needs based on the Specific Plan. Specifically, this is an allocation for perfecting the water rights of the District from Caples Lake and exercising those rights during infrastructure improvements.
 - a. Engineering. Design and engineering of infrastructure improvements.
 - b. Legal. Review and filing of water rights application; determination of next steps.
 - c. Package Treatment Plan. This is a water filtering facility needed to provide safe water for public consumption.
 - d. Permitting/Environmental. FERC, CWRCB
 - e. Snowmaking Line Improvement. This allocation is to make improvements to the line so that it is adequate for domestic usage.

Water Replacement Components:

Above the Line:

1. Meter Interrogator. This allocation is for a handheld meter reading device for water meters not on the Flexnet platform.
2. Well Pumps. This allocation is for well pumps that either need to be rebuilt or replaced.
3. Well 2 Roof. This allocation is for re-shingling the Well 2 Roof.

Below the Line:

4. Distribution System Valve Replacement. This allocation is for annual replacement of damaged, malfunctioning valves.
5. Telemetry. To be used for electrical and ancillary equipment to provide information on water tank levels and water production.
6. Fire Hydrant Replacements. Bi-annual replacement of one fire hydrant.
7. Remote Read Meter Replacement. This is a project occurring every 20 years, to replace water meters at the end of useful life.
8. Vehicle Purchase. This allocation is for the replacement of older District vehicles.
9. Commercial Remote Read Water Meters. This allocation is to complete the remote read water meter project.
10. Mountain Club Water Meter Relocation. This allocation is for relocation of the Mountain Club water meters to an accessible location.

WASTEWATER

Wastewater Capacity Components:

Above the Line:

1. Feasibility Study. This allocation, split with Replacement, is for a Feasibility Study to review repair, rehabilitation and/or replacement options at the WWTF.

Below the Line:

2. Aeration Blowers (2). This allocation is for the installation of two new aeration blowers used in the process of wastewater treatment.
3. EQ Tanks (1). This is required to meet future emergency wastewater storage.
4. Membrane Upgrade. This allocation is for membrane replacement as modules fail.
5. Effluent Pumps. This is the cost of two new effluent pumps.

Wastewater Replacement Components:

Above the Line:

1. Collection System Infiltration/Inflow Repairs. This allocation is for repairs to the collection system to prevent inflow and infiltration in accordance with the Sanitary Sewer Management Plan (SSMP).
2. Hot Water Heater, Main Lift. This is an allocation to install a hot water source at the Main Lift.

3. Jetter Camera. This allocation is for purchase of a District trailer mounted, jetter with camera to address collection line blockages and to perform in-house camera investigations of collection mains.
4. Centrifuge Polymer Feed System. This allocation is for replacement of the existing polymer feed system.
5. Hycore Brush Replacement. This allocation is for replacement of the existing brush that has reached the end of useful life.
6. WWTP Roof Repair. This is for the repair of the WWTF roof.
7. Pumps/Controls, Absorption Beds. This is an allocation for replacement of the existing Absorption Bed supply pumps on a ten year cycle.

Below the Line:

8. East Lift Controls. This allocation is to move the controls above grade.
9. Pumps, Main Lift. This allocation is for replacement of the Main Lift pumps that have reached the end of useful life.
10. Aluma Valve Replacement. This allocation is for replacement of the existing valve that has reached the end of useful life.
11. Hycore Upgrade. An allocation to replace or upgrade the Hycore to increase capacity of current screening system.
12. Motor Control Cabinet Refurbishment. This allocation cleans, refurbishes, and replaces failing components of the MCCs.
13. Pumps, Anoxic/EQ/Main Lift. This is for the repair/replacement of Anoxic, Equalization and Main Lift pumps.
14. WWTP UPS. This is for the purchase of a uninterruptible power supply for the WWTF to protect equipment during power outages.
15. Ventilation for WWTF. This replaces failed exhaust fans at the WWTF.
16. Emergency Storage Piping/Pumps. This allocation is for a permanent piped system between the WWTF and emergency storage.
17. Membranes. This is for ongoing maintenance and repairs to controls and systems to maintain the existing membrane system.
18. SCADA/PLC/Control System Replacement. Replaces outdated, non-functioning, or unsupported systems.
19. Centrifuge Rebuild. This allocation rebuild the centrifuge every five years to extend its longevity.
20. EQ Tanks (1). This is an allocation to replace the existing EQ tank when it reaches the end of useful life.
21. Heating at WWTF. Installs central HVAC at the WWTF.
22. Laboratory Rehabilitation. This allocation would rehabilitate the laboratory space and equipment.
23. Integrated SCADA System. This is the cost for upgrades and improvements to the existing SCADA System.
24. Variable Frequency Drive Replacement. This is a bi-annual allocation for VFD replacement.
25. Effluent Disposal Line. This is for ongoing maintenance and repair to the effluent disposal line and ancillary equipment.
26. Vehicle Purchase. This is for the replacement of older District vehicles.
27. Lift Equipment. This is for repair or replacement of Lift Pumps used at the East and Main Lifts.

EMPLOYEE HOUSING

Employee Housing Capacity Component:

Above the Line:

1. None

Below the Line:

2. Lava Rock II. Needed for District staff at build-out.

Employee Housing Replacement Component:

Above the Line:

1. Concrete Coring/Venting. This allocation would rectify an on-going issue of inadequate appliance venting that has led to repeated mold issues in housing and would properly vent all appliances through new penetrations in the exterior walls.
2. Dishwashers. Bi-annual replacement until all 8 replaced, then every 10 years or as equipment fails.
3. Roof Repairs. Repair/replace damaged roof panels, fascia, and leaks.

Below the Line:

4. Flooring. Bi-annual replacement until all 8 units flooring replaced, then every 10 years.
5. Hot Water Heaters. Bi-annual replacement until remaining 6 replaced, then every 10 years or as equipment fails.
6. Washers/Dryers. Bi-annual replacement until remaining 6 replaced, then every 10 years or as equipment fails.
7. Refrigerators. Bi-annual replacement until remaining 6 replaced, then every 10 years or as equipment fails.

FIRE DEPARTMENT

Fire Department Capacity Component:

Above the Line:

1. None

Below the Line:

2. 110' Ladder Truck. This Ladder Truck would aid the fire department with high rise building rescues. This capital expense will also assist the Fire Department by giving the department more credit with Insurance Service Organization (ISO) property insurance rating.
3. Light Rescue/Command Vehicle. This expense is to replace "Rescue-3" a 1993 Chevy Crew Cab 4x4 3500.
4. Personal Protective Gear (2). This allocation replaces existing Personal Protective Equipment and includes the purchase additional equipment needed for Build-Out.

Fire Department Replacement Component

Above the Line:

1. Hose Replacement. This is for ongoing replacement of equipment for Engine 93 and 193.
2. Radio Reprogramming. Annual cost to reprogram all KVFD radios.
3. Structure Gear / PPE x 2. This is for ongoing replacement of personal protective equipment for fire department members.

Below the Line:

4. Knox Box Key Management System. This allocation would provide a management system for all Kirkwood Valley knox box keys.
5. SCBA. Replaces 4 units per year over 3 years.
6. Extrication Equipment. This allocation would provide for new extrication equipment for vehicular emergencies.
7. Ladder Replacement. This allocation would replace all ladders on a 10 year basis.
8. Type 1 Fire Truck. This allocation would replace the existing truck when it reaches end of useful life.

ELECTRIC

Electric Capacity Component

Above the Line:

1. Switch Station. This project may be needed to comply with the PG&E Interconnection Agreement for the Out-Valley transmission line.

Below the Line:

2. Upgrades to the Powerhouse / future capacity. This allocation is for upgrades to existing Powerhouse generators and distribution system needed to meet future capacity needs of 8MW.

Electric Replacement Component

Above the Line:

1. CEMS Maintenance/Replacement. This project is to replace components of the emissions control systems in order to pass required emissions testing.
2. CT Testing/Replacement. This allocation is for testing and replacement of current transformers used in commercial electric meters.
3. Gate Replacement. Replace two severely damaged Out Valley gates.
4. OV Cabinet Replacement. This project will replace the damaged Out-Valley cabinet near Tragedy Springs.
5. OV Relay Programming. This allocation is to reprogram the Out-Valley relays to allow remote closure of the 34.5kV breaker at KM Green.
6. Powerhouse Relay Programming. This allocation is to reprogram the Powerhouse relays to prevent an outage when switching from generators to Out-Valley power during emergency operations.

7. Service Truck. This is split with Propane and replaces older District vehicles.
8. Switch Station. This project divided equally between Capacity and Replacement is needed to comply with the PG&E Interconnection Agreement for the Out-Valley transmission line.
9. Tugger. This tool will allow Staff to pull electric cable through conduit as needed for repair or expansion of the distribution system.
10. Powerhouse Breaker. This project may be needed to replace the main house breaker at the Powerhouse.
11. Commercial Meter Testing. This project is for third party testing and repair of commercial electric meters.

Below the Line:

12. Distribution System FCIs. This is an allocation to install Faulted Circuit Indicators into distribution system transformers and vaults to aid in the location and isolation of faulted cables.
13. Riser Vaults. This project will replace damaged above ground cabinets with vaults.
14. Service Lines. This is reserved for replacement of service lines for the electrical distribution system.
15. Transformer Retaining Walls. This allocation provides for retaining walls behind v transformers to prevent debris and snow intrusion.
16. Fremont/Dangburg Line Replacement. This project consists of replacing an existing electrical line which runs through a storm drain and does not meet current District standards.
17. Backside Meter Cabinet. This is reserved for the installation of a high voltage metering cabinet for all backside facilities to be installed near Chair 1.
18. Caples Lake Transformer Containment. This project provides secondary containment for the oil in the transformer near Caples Lake.
19. Meadow Line Replacement. This project re-routes a section of the distribution line in the meadow to eliminate submerged vaults.
20. Phase 3 Loop Road Project. This project would replace the direct bury line from the transformer across from the WWTP to the vault on Loop Road (next to the middle Chair 7 parking lot) to the oil switches at the Resort's Vehicle Maintenance Shop.
21. Snowcat (1/2 of cost). This allocation is for the purchase of a small snowcat for Out-Valley access.
22. Snowmobile. This allocation is for a "powder sled" as the existing equipment is inadequate to reach KM Green during severe weather.

PROPANE

Propane Capacity Component

Above the Line:

1. None

Below the Line:

1. Propane Tank – 30,000 gal (3/4 of cost). This is an additional tank to provide storage and needed volume for additional capacity.
2. Master Meter. This is an additional meter to measure the tank level and/or outflow from the new tank.
3. Regulators. This equipment is needed in conjunction with a new vaporizer to provide needed pressure for demand at buildout.

4. Tank Protection/Security (3/8 of cost). This line item is for upgrades to security at the propane tanks and delivery system, including the installation of secure fencing around facilities and tanks, replacement of the existing security camera system focused on the propane tanks across from the WWTP.
5. Vaporizer. This will provide needed pressure for demand at buildout.

Propane Replacement Component

Above the Line:

1. Install Curb Stops. This project would install curb-stops (shut off valves) at the distribution mains so service lines can be shut off at the property line instead of the meter.
2. Leak Survey. This is for the leak survey required every five years by Code.
3. Meter Replacement (Commercial). This project replaces 10% of existing commercial meters per year as required by CPUC.
4. Meter Replacement (Residential). This project replaces 10% of existing residential meters per year as required by CPUC.
5. Propane Tank Shed (Lava Rock & WWTF). This project replaces the deteriorated tank sheds.
6. Propane Tank Valve Replacement. This replaces the intermittently failing valve between the two main supply tanks.
7. Service Truck. This is split with Electric and replaces older District vehicles.

Below the Line:

8. 1.25" Poly Tools. This is for tools necessary to work on 1.25" poly tubing.
9. Air Line Replacement. This project replaces the underground air line that controls the propane emergency shutoffs and tank valves.
10. Propane Tank – 30,000 gal (1/4 of cost). This is an additional tank to provide storage and needed volume for additional capacity.
11. Tank Protection/Security (5/8 of cost). This line item is for upgrades to security at the propane tanks and delivery system, including the installation of secure fencing around facilities and tanks, replacement of the existing security camera system focused on the propane tanks across from the WWTP.

SNOW REMOVAL

Snow Removal Capacity Component

Above the Line:

1. None

Below the Line:

2. None.

Snow Removal Replacement Component

Above the Line:

1. 416C Tires. Replacement of tires that have reached end of useful life.
2. 950 16' Blade. This allocation is for the purchase of a blade for the 950GC, which would allow two blades to be run simultaneously.
3. Flammable Storage Cabinet. This allocation is for a storage cabinet which meets CalOSHA requirements for material storage.
4. Loader Chains. This allocation is for replacement of chains due to wear.
5. Trackless Chains. This allocation is for replacement of chains due to wear.

Below the Line:

6. 950 Motor Replacement/Service. This is reserved for the replacement and service of the motor in the 950 Loader.
7. Exhaust Fan/Ducting for Shop. This allocation is for installation of exhaust equipment in the Shop.
8. Loader Chain Rack. This allocation is for construction of a rack to eliminate chains being spread on the shop floor.
9. Material Handling Unit. This equipment would allow staff to move large or heavy items with the loader.
10. Vehicle Tires. This allocation is for replacement of unsafe tires for the fleet, as necessary.
11. Trackless. This new equipment will be required to replace aging equipment and enable the District to provide increased snow removal operations at build-out.
12. Gantry Crane. This is used to assist staff with removal of motors and other heavy equipment during maintenance and repair operations.
13. Snowcat (1/2 of cost). This allocation is for the purchase of a small snowcat for snow removal and ramping.
14. Tires for 950F. The original 950F tires have been in service since the purchase of the 950F, and it is estimated they will need replacing every five years.
15. RPM Rebuild. This is reserved for repair and replacement of the motor and drum of the RPM blower.

CABLE

Cable Capacity Component

Above the Line:

1. None

Below the Line:

2. None.

Cable Replacement Component

Above the Line:

1. Channel 19 Equipment/Education. Ongoing expense for equipment replacement and modifications.
2. Cable Equipment. Ongoing expense for equipment replacement and modifications.

Below the Line:

3. None

PARKS AND RECREATION

Parks and Recreation Capacity Component

Above the Line:

1. None

Below the Line:

2. None.

Parks and Recreation Replacement Component

Above the Line:

1. Playground Equipment. This item is reserved for the future purchase and repair of playground equipment.

Below the Line:

2. None

SOLID WASTE

Solid Waste Capacity Component

Above the Line:

1. None

Below the Line:

2. None.

Solid Waste Replacement Component

Above the Line:

1. Dumpsters. This is for replacement and/or repair of existing dumpsters and the purchase of new dumpsters to meet build-out demand.
2. Recycling. This is for replacement and/or repair of the existing recycle dumpsters and the purchase of new ones to meet build-out demand.

Below the Line:

3. None

OPERATES (SHARED)

Operations (Shared) Capacity Component

Above the Line:

1. None

Below the Line:

2. None.

Operations (Shared) Replacement Component

Above the Line:

1. Computers. This is for replacement of antiquated computers.
2. CSB Roof Repair. This allocation is for repair of the leaking CSB roof in the Board Room.
3. CSB Windows. This allocation is for repair of failing gaskets, latches, etc. of the CSB windows.
4. Fall Protection. This allocation is for installation of fall protection on all permanent ladders that require fall protection per CalOSHA.
5. Office Equipment. This allocation is for replacement of ergonomically incorrect chairs, workstations, etc.
6. Shoring. This allocation is for purchase of 6 “speed-shore” units to allow safe trench excavation, and as required per CalOSHA.

Below the Line:

7. CSB HVAC. This allocation is for reprogramming and possible duct re-routing for inefficient HVAC zoning.
8. Security. This allocation is for additional security cameras and equipment at District facilities
9. Scaffolding. This allocation is for purchase of scaffolding to replace regular rental of said equipment.
10. Facilities Network Connectivity. This allocation is to interconnect the WWTF with the CSB network.

11. 10,000 Vehicle Lift. This allocation is for purchase of a vehicle lift to improve efficiency of regular maintenance and repairs of equipment.
12. Tire Machine & Balancer. This equipment would allow staff to mount and repair tires.

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Expense	35 Yr Total	5 Yr Total	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component							
Water	0	0	0	0	0	0	0
Wastewater	30,000	30,000	30,000	0	0	0	0
Employee Housing	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0
Electric	2,700,000	2,700,000	200,000	1,250,000	1,250,000	0	0
Propane	0	0	0	0	0	0	0
Snow Removal	0	0	0	0	0	0	0
Cable	0	0	0	0	0	0	0
Parks and Rec	0	0	0	0	0	0	0
Solid Waste	0	0	0	0	0	0	0
Operations Shared	0	0	0	0	0	0	0
Total Capacity Expense	2,730,000	2,730,000	230,000	1,250,000	1,250,000	0	0
Replacement Component							
Water	107,500	27,500	17,500	5,000	0	5,000	0
Wastewater	576,500	362,000	160,500	50,000	50,000	51,500	50,000
Employee Housing	35,500	30,000	29,000	0	500	0	500
Fire	95,500	16,000	3,200	3,200	3,200	3,200	3,200
Electric	3,118,500	2,862,000	344,500	1,267,500	1,250,000	0	0
Propane	793,000	136,000	70,000	16,500	16,500	16,500	16,500
Snow Removal	367,500	70,800	31,800	9,000	10,500	9,000	10,500
Cable	77,000	11,000	1,000	7,000	1,000	1,000	1,000
Parks and Rec	81,000	18,000	1,500	0	1,500	0	15,000
Solid Waste	175,000	25,000	5,000	5,000	5,000	5,000	5,000
Operations Shared	98,000	30,000	24,000	0	3,000	0	3,000
Total Replacement Expense	5,525,000	3,588,300	688,000	1,363,200	1,341,200	91,200	104,700
Total Capital Expense	8,255,000	6,318,300	918,000	2,613,200	2,591,200	91,200	104,700

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Water

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
<i>Distribution</i>									
<i>Storage</i>									
<i>Water Rights</i>									
Total Water Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
Meter Interrogator	15,000	15,000	One-Time	1	15,000				
Well Pumps	85,000	10,000	Two Years	1		5,000		5,000	
Well 2 Roof	7,500	2,500	Fifteen Years	1	2,500				
Total Water Replacement Expense	107,500	27,500			17,500	5,000	0	5,000	0
Total Water Capital Expense	107,500	27,500			17,500	5,000	0	5,000	0
BELOW THE LINE									
Pressure Reducing Stations (2)	80,000	0		2					
Well Transmission Mains to Upper Zones	250,000	0		2					
Tanks (1.4 Mgal additional)	3,500,000	0	When operational, emergency and fire storage requirements exceed 950,000 gallons	4					
Caples Lake Water Rights	880,000	0	When demand exceeds 324,000 gallons per day	5					
Distribution System Valve Replacement	220,000	70,000	Annual	2	15,000	25,000	10,000	10,000	10,000
Telemetry	35,000	5,000	Five Years	2	5,000				
Fire Hydrant Replacements	108,000	18,000	Two Years	3	6,000		6,000		6,000
Remote Read Meter Replacement	75,000	7,500	Twenty Years	4					7,500
Vehicle Purchase (Split with Wastewater)	120,000	30,000	Ten Years	4				30,000	
Commercial Remote Read Water Meters	30,000	15,000	Twenty Years	4					15,000
Mountain Club Water Meter Relocation	10,000	10,000	One-Time	5					10,000

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Wastewater

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component					Scale 1~5 1=Critical				
<i>Collection</i>									
<i>Treatment</i>									
Feasibility Study (50%)	30,000	30,000		1	30,000				
<i>Disposal</i>									
Total Wastewater Capacity Expense	30,000	30,000			30,000	0	0	0	0
Replacement Component									
<i>Collection</i>									
Collection System Infiltration/Inflow Repairs	370,000	280,000	Annual for 10 Years	1	80,000	50,000	50,000	50,000	50,000
Hot Water Heater, Main Lift	10,000	2,500	Ten Years	1	2,500				
Jetter Camera	36,000	9,000	Ten Years	1	9,000				
<i>Treatment</i>									
Feasibility Study (50%)	30,000	30,000	One Time	1	30,000				
Centrifuge Polymer Feed System	35,000	5,000	Five Years	1	5,000				
Hycore Brush Replacement	18,000	3,000	Three Years	1	1,500			1,500	
WWTP Roof Repair	25,000	25,000	One Time	1	25,000				
<i>Disposal</i>									
Pumps/Controls, Absorption Beds	52,500	7,500	Ten Years	1	7,500				
<i>General</i>									
Total Wastewater Replacement Expense	576,500	362,000			160,500	50,000	50,000	51,500	50,000
Total Wastewater Capital Expense	606,500	392,000			190,500	50,000	50,000	51,500	50,000
BELOW THE LINE									
Aeration Blower (2@ \$60,000)	120,000	60,000	When air-flow requirements exceed 1,130 SCFM	4					60,000
EQ Tanks (1 New)	337,500	0	When 3 days peak flow exceeds 290,000 gal	5					
Membranes Upgrade Koch (Option 4)	702,000	0	As Needed	5					
Effluent Pumps	20,000	0	When effluent flows exceed 288,000 gal/day	5					
East Lift Controls Moved from Vault	120,000	120,000	One Time	2			120,000		
Pumps, Main Lift	112,000	14,000	Two Years	2			7,000		7,000
Aluma Valve	31,500	10,500	Fifteen Years	2		10,500			
Hycore Upgrade	68,000	68,000	One Time	2			68,000		
Motor Control Cabinets Refurbished	60,000	60,000	One Time	2		60,000			

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Wastewater

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Pumps, Anoxic / EQ / Filtrate	119,000	14,000	Two Years	2		7,000		7,000	
WWTP UPS	15,000	15,000	One Time	2		15,000			
Ventilation for WWTP	105,000	35,000	Fifteen Years	2		35,000			
Emergency Storage Piping/Pumps	50,000	50,000	One Time	3			50,000		
Membranes	540,000	0	Five Years	3					
SCADA/PLC/Controls System Replacement	500,000	500,000	One Time	3				250,000	250,000
Centrifuge Rebuild	245,000	35,000	Five Years	4				35,000	
EQ Tanks (1 Replacement)	600,000	0	One Time	5					
Heating at WWTP	75,000	25,000	Twenty Years	5					25,000
Lab Rehab	50,000	50,000	One Time	5					50,000
VFD Replacement	170,000	20,000	Two Years	3			10,000		10,000
Effluent Disposal Line	25,000	0	One Time	5					
Vehicle Purchase (Split with Water)	135,000	30,000	Ten Years	4				30,000	
Lift Equipment	30,000	0	Ten Years	5					

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Employee Housing

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
Total Employee Housing Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
Concrete Coring/Venting	25,000	25,000	One Time	1	25,000				
Dishwashers	7,000	1,500	Two Years (Until all 8 Replaced, then 10 Years)	1	500		500		500
Roof Repairs	3,500	3,500	One Time	1	3,500				
Total Employee Housing Replacement Expens	35,500	30,000			29,000	0	500	0	500
Total Employee Housing Capital Expense	35,500	30,000			29,000	0	500	0	500
BELOW THE LINE									
Lava Rock II	2,100,000	0	When Staff needs exceed available housing	5					
Flooring	22,400	4,800	Two Years (Until all 8 Replaced, then 10 Years)	2	1,600		1,600		1,600
Hot Water Heater	84,000	18,000	Two Years (Until Remaining 6 Replaced, then 10 Years)	2	6,000		6,000		6,000
Washers/ Dryers	21,000	3,000	Two Years (Until Remaining 6 Replaced, then 10 Years)	2		1,500		1,500	
Refrigerators	13,000	2,000	Two Years (Until Remaining 6 Replaced, then 10 Years)	3			1,000		1,000

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Fire

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
Total Fire Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
Hose Replacement	52,500	7,500	Annual	1	1,500	1,500	1,500	1,500	1,500
Radio Reprogramming	13,000	2,500	Annual	1	500	500	500	500	500
Structure Gear / PPE	30,000	6,000	Annual	1	1,200	1,200	1,200	1,200	1,200
Total Fire Replacement Expense	95,500	16,000			3,200	3,200	3,200	3,200	3,200
Total Fire Capital Expense	95,500	16,000			3,200	3,200	3,200	3,200	3,200
BELOW THE LINE									
110" Ladder Truck	1,500,000	0	20 years	5					
Light Rescue/ Command Vehicle	62,500	62,500	15 years	5					62,500
Personal Protective Gear (2)	12,000	0	5 years	5					
Knox box key management system	3,000	1,000	One Time	2		1,000			
SCBA's (7,000 per unit + spare cylinder)	336,000	84,000	10 years	2	28,000	28,000	28,000		
Extrication Equipment	10,000	10,000	15 years	3			10,000		
Ladder Replacement	30,000	0	10 years	5					
Light Rescue/ Command Vehicle	192,500	62,500	15 years	5					62,500
Type 1 Fire Truck	1,900,000	0	20 years	5					

**Kirkwood Meadows Public Utility District
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Electric

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
Switch Station	2,700,000	2,700,000	Contingent on PG&E Negotiations	1	200,000	1,250,000	1,250,000		
Total Electric Capacity Expense	2,700,000	2,700,000			200,000	1,250,000	1,250,000	0	0
Replacement Component									
CEMS Maintenance/Replacement	105,000	15,000	5 years	1	15,000				
CT Testing/Replacement	30,000	7,500	10 years	1	7,500				
Gate Replacement	12,000	12,000	One Time	1	12,000				
OV Cabinet Replacement	60,000	30,000	15 years	1	15,000	15,000			
OV Relay Programming	12,000	12,000	One Time	1	12,000				
Powerhouse Relay Programming	25,000	25,000	One Time	1	25,000				
Service Truck (Split with Propane)	120,000	30,000	Ten Years	1	30,000				
Switch Station (Replacement Component)	2,700,000	2,700,000	Contingent on PG&E Negotiations	1	200,000	1,250,000	1,250,000		
Tugger	34,000	10,000	10 years	1	10,000				
Powerhouse Breaker	2,500	2,500	One Time	1		2,500			
Commercial Meter Testing	18,000	18,000	One Time	1	18,000				
Total Electric Replacement Expense	3,118,500	2,862,000			344,500	1,267,500	1,250,000	0	0
Total Electric Capital Expense	5,818,500	5,562,000			544,500	2,517,500	2,500,000	0	0
BELOW THE LINE									
Fremont Dangburg Line Relocation	30,000	30,000	Contingent on PG&E Negotiations	2		30,000			
Upgrades the PH/ future capacity (8MW)	1,500,000	0	When peak demand reaches 5MW	5					
Distribution System FCIs	12,500	12,500	One Time	2		12,500			
Riser Vaults (8)	24,000	24,000	Annual for 4 years	2		6,000	6,000	6,000	6,000
Service Lines	68,000	8,000	Two Years	2		4,000		4,000	
Transformer Retaining Walls	6,000	6,000	One Time	2	6,000				
Fremont / Dangburg Line Replacement	7,500	7,500	One Time	3			7,500		
Backside meter cabinet	68,000	0	One Time	5					
Caples Lake Transformer Containment	10,000	10,000	One Time	5					10,000
Meadow line replacement	74,000	74,000	One Time	5					74,000
Phase 3 Loop Road Project	95,000	0	One Time	5					

**Kirkwood Meadows Public Utility District
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Electric

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Snowcat (1/2 of cost)	75,000	0	One Time	5					
Snowmaking Transformer	16,000	16,000	One Time	5					16,000
Snowmobile	45,000	0	10 years	5					

**Kirkwood Meadows Public Utility District
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Propane

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
Total Propane Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
Install Curbstops	87,500	12,500	Annual	1	2,500	2,500	2,500	2,500	2,500
Leak Survey	70,000	10,000	Five Years	1	10,000				
Meter Replacment (Commercial)	245,000	35,000	10% a year	1	7,000	7,000	7,000	7,000	7,000
Meter Replacment (Residential)	245,000	35,000	10% a year	1	7,000	7,000	7,000	7,000	7,000
Propane Tank Shed - Lava Rock and WWTP	3,500	3,500	One Time	1	3,500				
Propane Tank, Valve Replacement	10,000	10,000	One Time	1	10,000				
Service Truck (Split with Electric)	132,000	30,000	Ten Years	1	30,000				
Total Propane Replacement Expense	793,000	136,000			70,000	16,500	16,500	16,500	16,500
Total Propane Capital Expense	793,000	136,000			70,000	16,500	16,500	16,500	16,500
BELOW THE LINE									
Propane Tank, 30,000 gallon (3/4 of cost)	225,000	225,000	When peak use is ≥ 7,500 gal/day	3			225,000		
Master Meter	25,000	0		5					
Regulators	15,000	0	When current vaporizers cannot maintain system pressure	5					
Tank Protection/ Security (3/8 of cost)	11,250	11,250	One Time	5					11,250
Vaporizer	72,000	0	When current vaporizers cannot maintain system pressure	5					
1.25" Poly tools	1,200	1,200	Ten Years	2		1,200			
Air Line Replacement	3,000	3,000	One Time	3			3,000		
Propane Tank, 30,000 gallon (1/4 of cost)	75,000	75,000	One Time	3			75,000		
Tank Protection/ Security (5/8 of cost)	18,750	18,750	One Time	5					18,750

**Kirkwood Meadows Public Utility District
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Snow Removal

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
[No Capital Capacity Improvements]									
Total Snow Removal Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
416C Tires	5,600	1,400	Nine Years	1	1,400				
950 16' Blade	18,500	18,500	One Time		18,500				
Flammable Storage Cabinet	1,400	1,400	One Time	1	1,400				
Loader Chains	175,000	25,000	Annual	1	5,000	5,000	5,000	5,000	5,000
Trackless Chains	140,000	20,000	Annual	1	4,000	4,000	4,000	4,000	4,000
Trackless Tires	27,000	4,500	Two Years	1	1,500		1,500		1,500
Total Snow Removal Replacement Expense	367,500	70,800			31,800	9,000	10,500	9,000	10,500
Total Snow Removal Capital Expense	367,500	70,800			31,800	9,000	10,500	9,000	10,500
BELOW THE LINE									
950F Motor Replacement / Svc	120,000	20,000	Three Years	2		10,000			10,000
Exhaust Fan/Ducting for Shop	10,000	10,000	One Time	2		10,000			
Loader Chain Rack	8,000	8,000	One Time	2	8,000				
Material Handling Unit	5,000	5,000	One Time	2		5,000			
Vehicle Tires	24,000	6,000	Five Years	3	3,000		3,000		
Trackless	750,000	150,000	As Equipment is Retired	4				150,000	
Gantry Crane	5,000	0	One Time	5					
Snowcat (1/2 of cost)	75,000	0	One Time	5					
Tires for 950	90,000	0	Five Years	5					
RPM Rebuild	102,600	17,100	Five Years	5					17,100

**Kirkwood Meadows Public Utility District
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Cable

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
[No Capital Capacity Improvements]									
Total Cable Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
Channel 19 Equipment/ Education	35,000	5,000	Annual	1	1,000	1,000	1,000	1,000	1,000
Cable Equipment	42,000	6,000	Five Years	2		6,000			
Total Cable Replacement Expense	77,000	11,000			1,000	7,000	1,000	1,000	1,000
Total Cable Capital Expense	77,000	11,000	0		1,000	7,000	1,000	1,000	1,000

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
[No Capital Capacity Improvements]									
Total Parks and Rec Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
Playground Equipment	81,000	18,000	Two Years Repair/Ten Years Replace	5	1,500		1,500		15,000
Total Parks and Rec Replacement Expense	81,000	18,000			1,500	0	1,500	0	15,000
Total Parks and Rec Capital Expense	81,000	18,000			1,500	0	1,500	0	15,000

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Solid Waste

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
[No Capital Capacity Improvements]									
Total Solid Waste Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
Dumpsters	90,000	15,000	Two Years	1	5,000		5,000		5,000
Recycling	85,000	10,000	Two Years	2		5,000		5,000	
Total Solid Waste Replacement Expense	175,000	25,000			5,000	5,000	5,000	5,000	5,000
Total Solid Waste Capital Expense	175,000	25,000			5,000	5,000	5,000	5,000	5,000

**Kirkwood Meadows Public Utility District
FY 18/19 Capital Improvement Projects**

Operations_Shared

Expense	35 Yr Total	5 Yr Total	Cycle	Priority	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Capacity Component				Scale 1~5 1=Critical					
[No Capital Capacity Improvements]									
Total Operations_Shared Capacity Expense	0	0			0	0	0	0	0
Replacement Component									
Computer (2)	22,500	4,500	Two Years	1	1,500		1,500		1,500
CSB Roof Repair	6,500	6,500	One Time	1	6,500				
CSB Windows	15,000	5,000	Ten Years	1	5,000				
Fall Protection	12,000	2,000	Five Years	1	2,000				
Office Equipment	19,500	4,500	Two Years	1	1,500		1,500		1,500
Shoring	22,500	7,500	Fifteen Years	1	7,500				
Total Operations_Shared Replacement Expens	98,000	30,000			24,000	0	3,000	0	3,000
Total Operations_Shared Capital Expense	98,000	30,000			24,000	0	3,000	0	3,000
BELOW THE LINE									
CSB HVAC	10,000	10,000	One Time	2	10,000				
Security	30,000	15,000	Ten Years	2		5,000	5,000	5,000	
Scaffolding	5,000	2,000	Ten Years	3			2,000		
Facilities Network Connectivity	25,000	25,000	One Time	4				25,000	
10,000lb Truck/Trackless Lift	8,000	8,000	One Time	5					8,000
Tire Machine and Balancer	13,500	0	Fifteen Years	5					