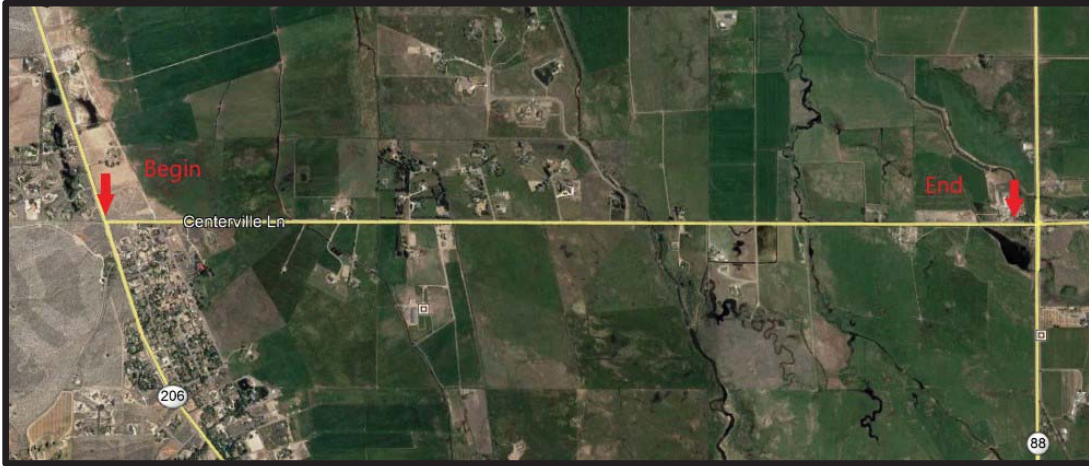




PUBLIC WORKS: ROADS  
CAPITAL IMPROVEMENT PROGRAM REQUESTS  
FISCAL YEAR 2019-20

**PUBLIC WORKS ROADS: CENTERVILLE LANE RECONSTRUCTION**



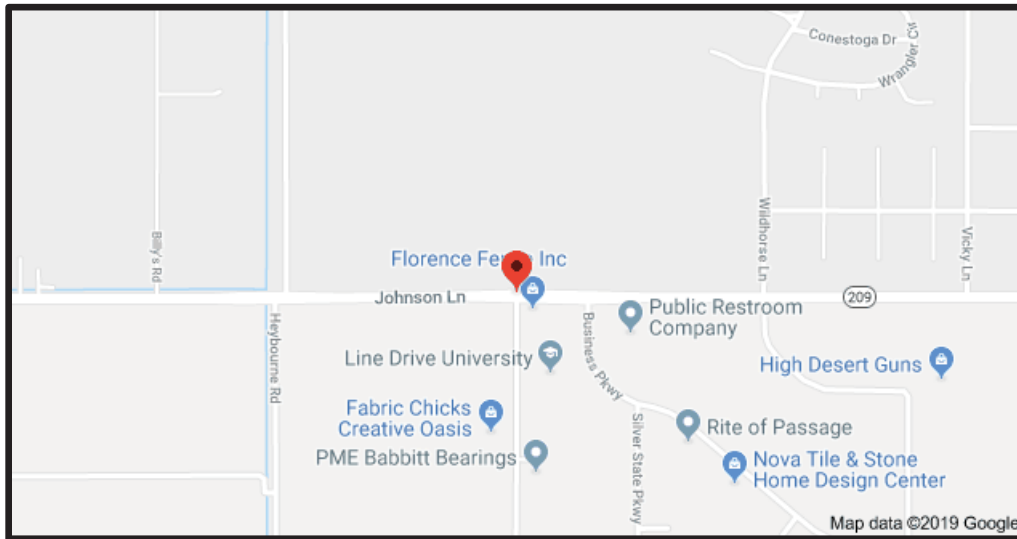
**Scope:** This major reconstruction maintenance project will replace failed pavement and base. Widen in where possible; lengthen pipes but not big bridges or culverts. The project will include full reconstruction of the base and surface to bring the existing facility from a failed condition up to a new condition.

**Justification:** This major reconstruction maintenance allows the County to replace the failed existing roadway infrastructure by replacing failing infrastructure and help ensure the integrity of the roadway network system.

<b>CENTERVILLE LANE RECONSTRUCTION</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
New box culverts	\$ 1,000,000					\$ 1,000,000
						-
						-
						-
						-
<b>Total:</b>	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
Bond proceeds	\$ 1,000,000					\$ 1,000,000
						-
						-
<b>Total:</b>	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS ROADS: JOHNSON LANE RECONSTRUCTION**



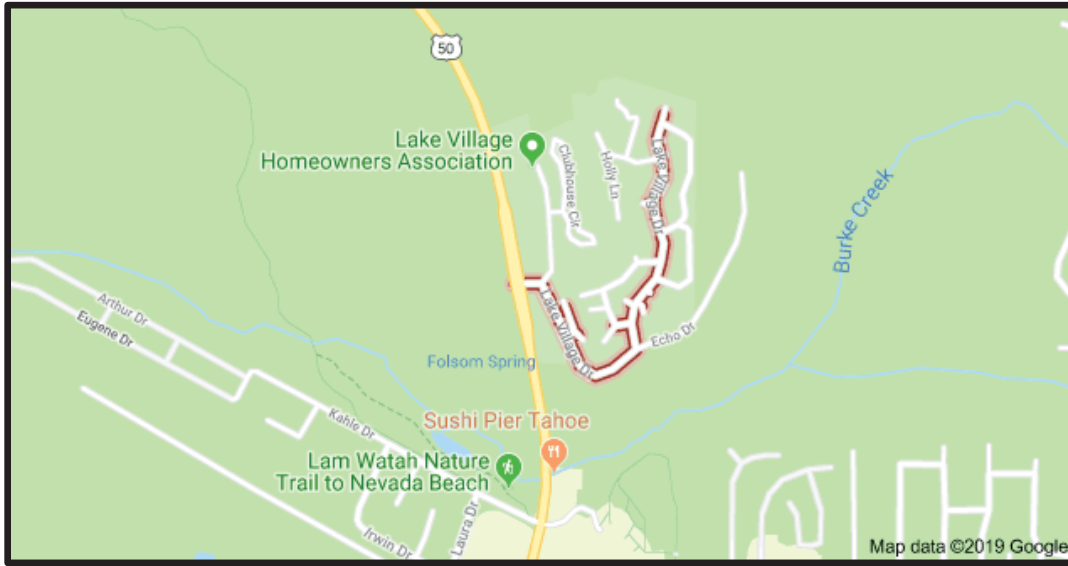
**Scope:** The project will include full reconstruction of the surface to bring the existing facility from a failed condition up to a new condition. Improvements to the existing drainage system to prevent flooding from ponding and or overtopping the roadway at Nowlin Road, Business Parkway, and Wildhorse Drive.

**Justification:** This major reconstruction maintenance allows the County to replace the failed existing roadway infrastructure by replacing failing infrastructure and help ensure the integrity of the roadway network system and improve drainage system.

<b>JOHNSON LANE RECONSTRUCTION</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Engineering	\$ 25,000					\$ 25,000
Design/Construction Mgmt	100,000					100,000
Construction	2,375,000					2,375,000
	-					-
						-
<b>Total:</b>	<b>\$ 2,500,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,500,000</b>
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Tax Revenue	\$ 2,145,456	\$ -	\$ -	\$ -	\$ -	\$ 2,145,456
Bond proceeds	354,544	-	-	-	-	354,544
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>Total:</b>	<b>\$ 2,500,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,500,000</b>

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS ROADS: LAKE VILLAGE PARKWAY RECONSTRUCTION**



**Scope:** This major reconstruction maintenance project will replace failed pavement and base. Widen in where possible, lengthen pipes but not big bridges or culverts. The project will include full reconstruction of the base and surface to bring the existing facility from a failed condition up to a new condition.

**Justification:** This major reconstruction maintenance allows the County to replace the failed existing roadway infrastructure by replacing failing infrastructure and help ensure the integrity of the roadway network system.

<b>LAKE VILLAGE PARKWAY RECONSTRUCTION</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Construction</b>	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>Total:</b>	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Room tax (construction)</b>	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000
	-	-	-	-	-	-
<b>Total:</b>	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS ROADS: VISTA GRANDE BOULEVARD EXTENSION**



**Scope:** Construction of new roadway per the Transportation Masterplan. Includes construction of roadway and intersection roundabout with Jacks Valley Road.

**Justification:** This is a vital link to the County road network in the north county. This extension has been approved in the 2007 Transportation Masterplan. Includes construction of roadway and intersection roundabout with Jacks Valley Road.

<b>VISTA GRANDE BOULEVARD EXTENSION</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Design/Construction Mgmt</b>	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000
<b>Construction</b>	2,300,000	-	-	-	-	2,300,000
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>Total:</b>	<b>\$ 2,500,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,500,000</b>
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Redevelopment #1</b>	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000
	-	-	-	-	-	-
<b>Total:</b>	<b>\$ 2,500,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,500,000</b>

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)



PUBLIC WORKS: SEWER UTILITIES  
CAPITAL IMPROVEMENT PROGRAM REQUESTS  
FISCAL YEAR 2019-20

**PUBLIC WORKS SEWER: BARLING SMITH & LOVELESS LIFT STATION REPLACEMENT**



**Scope:** Replace the existing Barling Smith & Loveless lift station with a more reliable lift station to ensure continued wastewater service in the Minden Tahoe Airport service area. The existing structures will be replaced and or rehabilitated and the vacuum primed pumps will be replaced.

**Schedule and Milestones:** Design and construction.

**Justification:** This project will replace aged high maintenance vacuum prime pumps. This project will reduce the risk health and safety events by reducing the risk of sewer service interruptions and sewer overflows.

<b>BARILING SMITH &amp; LOVELESS LIFT STATION REPLACEMENT</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000
	-	-	-	-	-	-
						-
<b>Total:</b>	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
User fees	\$ -	\$ -	\$ 500,000			\$ 500,000
						-
<b>Total:</b>	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000

**PUBLIC WORKS SEWER: FORCE MAIN CLEANING (ICE PIGGING, WALLEY'S LS, CLUBHOUSE LS)**



**Scope:** The Walley's force main and Clubhouse force main have never been cleaned. This project will clean the force mains and restore as-new flow conditions in the force mains.

**Justification:** This preventative maintenance project will clean and flush the force mains to restore as-new flow conditions in the force mains and potentially reduce pumping costs.

<b>FORCE MAIN CLEANING</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Design &amp; construction</b>	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ 250,000
	-					-
	-					-
	-					-
<b>Total:</b>	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ 250,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>User fees</b>	\$ -	\$ 250,000	\$ -			\$ 250,000
						-
						-
<b>Total:</b>	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ 250,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)



**PUBLIC WORKS SEWER: NORTH VALLEY WWTP EFFLUENT STORAGE POND OUTSIDE SLOPE REPAIR & BAFFLE WALL**



**Scope:** Repair damaged earthen embankment (outside) slope from erosion damage, and install baffle walls inside the pond to reduce wave energy to protect the earthen embankment and liner.

<b>NORTH VALLEY WWTP EFFLUENT STORAGE POND OUTSIDE SLOPE REPAIR &amp; BAFFLE WALL</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Construction	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000
	-					-
	-					-
	-					-
<b>Total:</b>	<b>\$ 500,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 500,000</b>
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
User fees	\$ 500,000	\$ -	\$ -			\$ 500,000
						-
						-
<b>Total:</b>	<b>\$ 500,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 500,000</b>

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS SEWER: NVWWTP INFLUENT LIFT STATION REPLACEMENT**

**Scope:** The NVWWTP Influent Lift Station that collects and pumps all sewer flows into the NVWWTP for treatment will be rehabilitated or replaced to restore the lift station structural and functional integrity to as-new condition, and to provide for future flow capacity.

**Justification:** This preventative maintenance project will improve the structural and functional integrity of the influent lift station at the NVWWTP, reduce the risk of catastrophic infrastructure failures, and allow for future increases in sewer flows.

<b>NVWWTP INFLUENT LIFT STATION REPLACEMENT</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Design &amp; construction</b>	\$ -	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000
		-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
						-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>User fees</b>	\$ -	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000
	-	-	-	-	-	-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS SEWER: NVWWTP LARGE EQUIPMENT STORAGE**

**Scope:** The project will evaluate options and construct enclosed storage for large equipment at the NVWWTP.

**Justification:** The sewer utility has large equipment such as a backhoe, dump truck, water buffalo, and service trucks. A covered or enclosed structure will provide a suitable environment for storage and maintenance of this type of equipment.

<b>NVWWTP LARGE EQUIPMENT STORAGE</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000
		-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
						-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
User fees	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000
	-	-	-	-	-	-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS SEWER: REROUTE TOPSY LIFT STATION TO NVWWTP**



**Scope:** Flows from the Topsy Lift Station are currently conveyed to Carson City for treatment. With the completion of the NVWWTP expansion, these flows will be rerouted and conveyed to the NVWWTP. Work includes replacement of the sewage pumps and a section of force main under Highway 395.

**Justification:** With increasing costs to contract with Carson City for treatment, rerouting flows to the NVWWTP will result in a cost savings to the Wastewater Utility.

<b>REROUTE TOPSY LIFT STATION TO NVWWTP</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Design &amp; construction</b>	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ 175,000
		-	-	-	-	-
<b>Total:</b>	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ 175,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>User fees</b>	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ 175,000
	-	-	-	-	-	-
<b>Total:</b>	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ 175,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS SEWER: SEWER LIFT STATION REHABILITATION AND REPLACEMENT MAIN CLEANING**



**Scope:** Identified sewer lift stations will be rehabilitated or replaced to restore the lift station structural and functional integrity to as-new condition.

**Justification:** There are approximately 14 sewer lift stations in the sewer utility. This preventative maintenance project will improve the structural and functional integrity of the sewer lift stations, and reduce the risk of catastrophic infrastructure failures. The program allows for rehabilitation or replacement of one lift station per year.

<b>SEWER LIFT STATION REHABILITATION AND REPLACEMENT MAIN CLEANING</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ -	\$ 200,000	\$ 200,000	\$ 225,000	\$ 225,000	\$ 850,000
		-	-	-	-	-
<b>Total:</b>	\$ -	\$ 200,000	\$ 200,000	\$ 225,000	\$ 225,000	\$ 850,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
User fees	\$ -	\$ 200,000	\$ 200,000	\$ 225,000	\$ 225,000	\$ 850,000
		-	-	-	-	-
<b>Total:</b>	\$ -	\$ 200,000	\$ 200,000	\$ 225,000	\$ 225,000	\$ 850,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)



PUBLIC WORKS: WATER UTILITIES  
CAPITAL IMPROVEMENT PROGRAM REQUESTS  
FISCAL YEAR 2019-20

**PUBLIC WORKS WATER: CARSON VALLEY WELL**



**Scope:** Construct a new well, piping, and necessary appurtenances at a location within the Town of Minden to meet water system demand.

**Justification:** Additional source water supply is identified in the North County Specific Plan to meet growing water demands in the North County area, and provide source water redundancy. Project timing is dependent on system demand and the timing of proposed developments.

<b>CARSON VALLEY WELL</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ -	\$ 2,000,000
	-	-	-	-	-	-
<b>Total:</b>	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ -	\$ 2,000,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
SRF Loan (Debt Issuance)	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000		\$ 2,000,000
						-
<b>Total:</b>	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ -	\$ 2,000,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)



**PUBLIC WORKS WATER: REPLACE CAVE ROCK POWER SUPPLY**



**Scope:** Replace power supply for Cave Rock Intake Pump Station.

**Justification:** Existing underground power supply was compromised last March 2018. Investigation show several severed ground wires. Some of these ground wires are crossed with 480v main wires. This is a dangerous situation.

<b>REPLACE CAVE ROCK POWER SUPPLY</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Installation</b>	\$ 450,000	\$ -	\$ -	\$ -	\$ -	\$ 450,000
	-					-
	-					-
	-					-
<b>Total:</b>	\$ 450,000	\$ -	\$ -	\$ -	\$ -	\$ 450,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>User fees</b>	\$ 450,000	\$ -	\$ -			\$ 450,000
						-
						-
<b>Total:</b>	\$ 450,000	\$ -	\$ -	\$ -	\$ -	\$ 450,000

**PUBLIC WORKS WATER: CAVE ROCK - WATER DISTRIBUTION SYSTEM IMPROVEMENTS**



Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

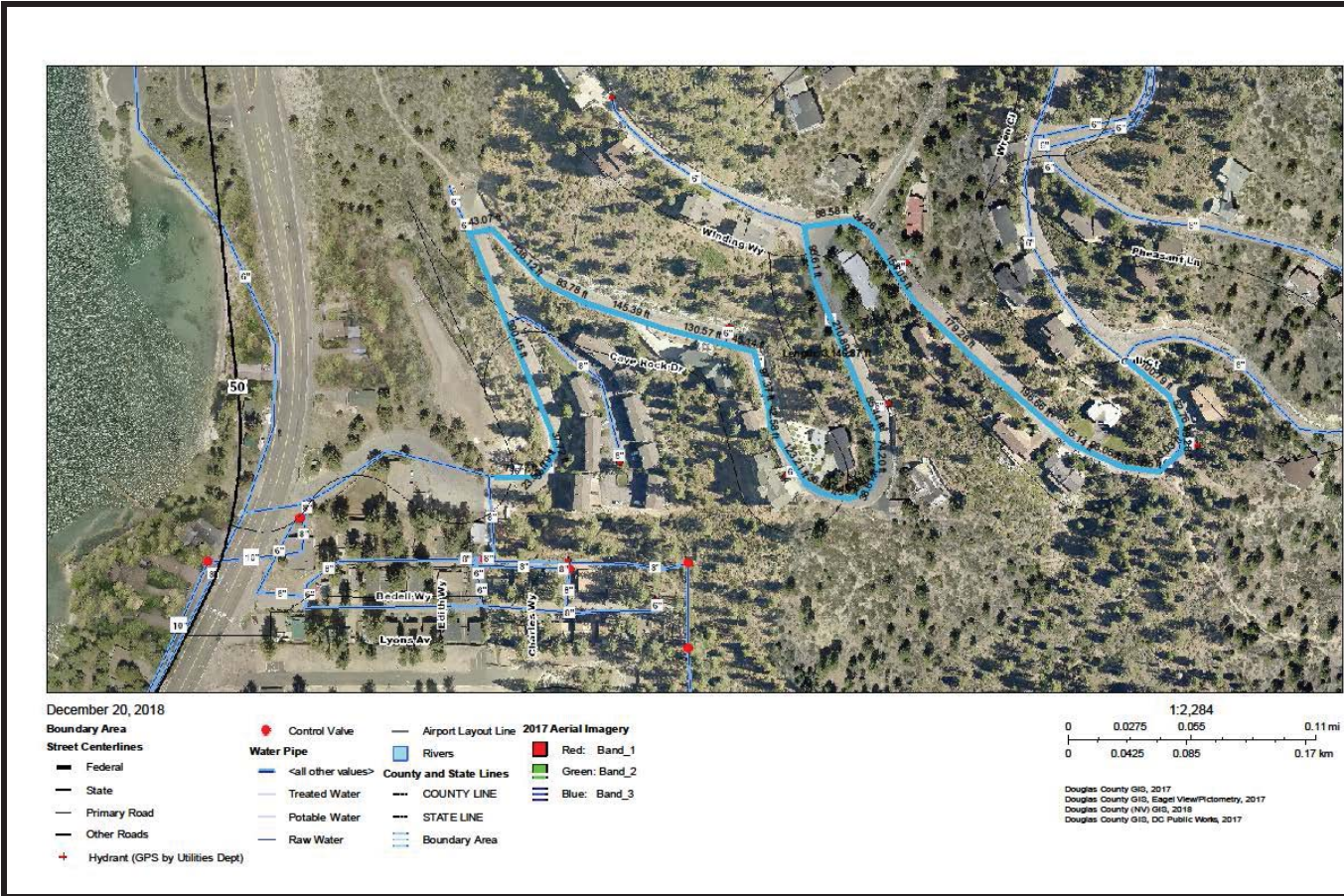
**Scope:** The project will replace undersized and deteriorated water lines, and provide a second redundant treatment skid in the Cave Rock Water Treatment Plant as recommended in the Preliminary Engineering Report. Additional capital improvements are identified in the PER beyond year five.

**Justification:** The project will improve system reliability and bring the system closer to compliance with fire supply requirements. The project aligns with the County Strategic Plan objective to provide for the maintenance and infrastructure necessary to meet current and future service levels.

<b>CAVE ROCK - WATER DISTRIBUTION SYSTEM IMPROVEMENTS</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ -	\$ 1,000,000	\$ 2,500,000	\$ 1,800,000	\$ 1,200,000	\$ 6,500,000
	-					-
	-					-
	-					-
<b>Total:</b>	\$ -	\$ 1,000,000	\$ 2,500,000	\$ 1,800,000	\$ 1,200,000	\$ 6,500,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Debt financing	\$ -	\$ 1,000,000	\$ 2,500,000	\$ 1,800,000	\$ 1,200,000	\$ 6,500,000
						-
						-
<b>Total:</b>	\$ -	\$ 1,000,000	\$ 2,500,000	\$ 1,800,000	\$ 1,200,000	\$ 6,500,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

### PUBLIC WORKS WATER: CAVE ROCK DRIVE WATER LINE REPLACEMENT



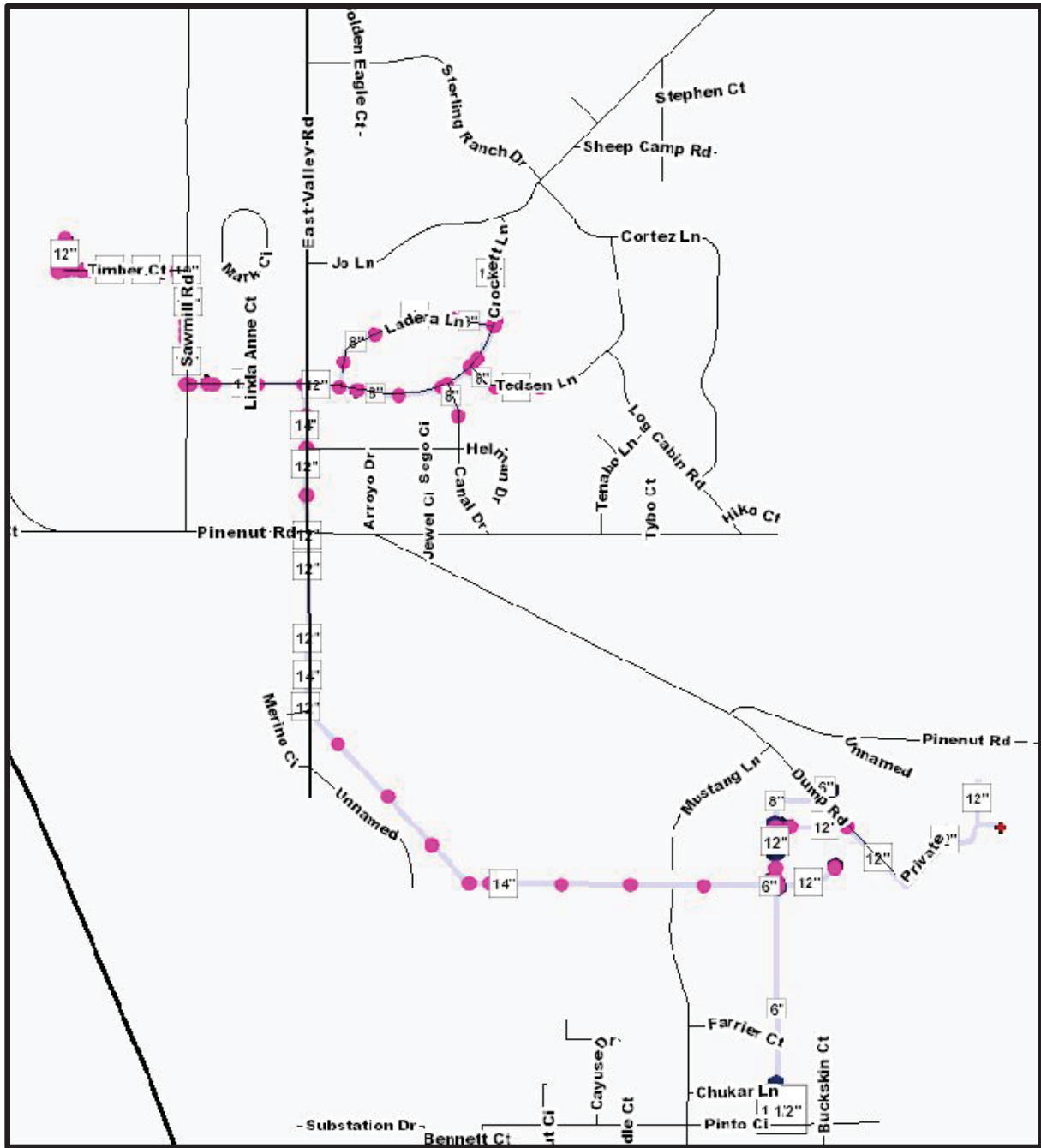
Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**Scope:** The project will replace undersized and deteriorated water lines on Cave Rock Drive to Winding Way and on Winding Way to Gull Court.

<b>CAVE ROCK DRIVE WATER LINE REPLACEMENT</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Design &amp; construction</b>	\$ 1,560,000	\$ -	\$ -	\$ -	\$ -	\$ 1,560,000
		-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
						-
<b>Total:</b>	\$ 1,560,000	\$ -	\$ -	\$ -	\$ -	\$ 1,560,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>User fees</b>	\$ 1,560,000	\$ -	\$ -	\$ -	\$ -	\$ 1,560,000
	-	-	-	-	-	-
<b>Total:</b>	\$ 1,560,000	\$ -	\$ -	\$ -	\$ -	\$ 1,560,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

### PUBLIC WORKS WATER: FAIRGROUNDS WATER SYSTEM EVALUATION



Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

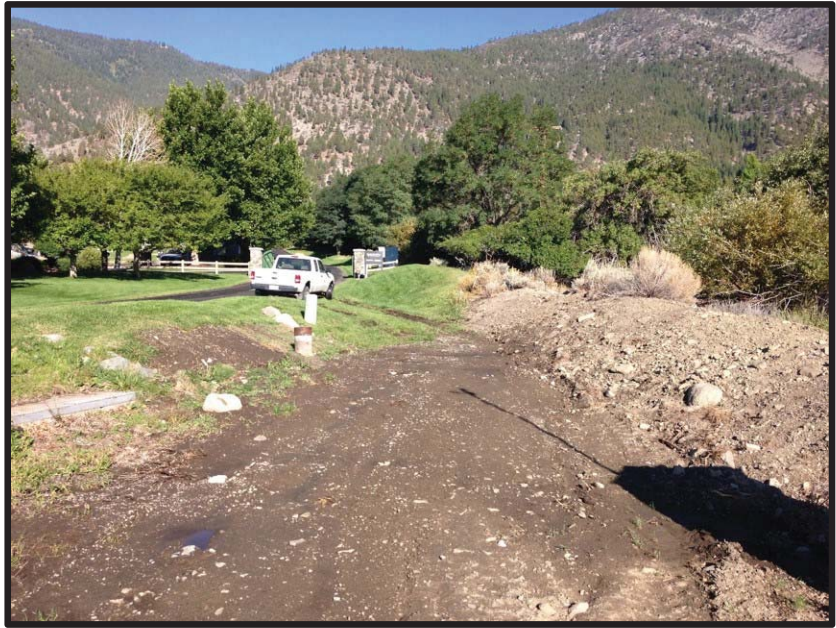
**Scope:** Evaluate the long-term sustainability of the Fairgrounds Water system as a stand-alone water system, and opportunities to consolidate the Fairgrounds water system into neighboring public water systems.

**Justification:** The Fairgrounds water system currently provides water service to the Douglas County Fairgrounds, Transfer Station, Sunrise Estates, and Timber Court areas. The system has three wells, one storage tank, and fire pumps to serve these areas. It is currently part of the Douglas County Water System, but is not physically connected to the larger East Valley area. This project will evaluate whether the system should continue to operate in its current configuration, or consolidated with neighboring public water systems.

<b>FAIRGROUNDS WATER SYSTEM EVALUATION</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Engineering evaluation	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000
		-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
						-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
User fees	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000
	-	-	-	-	-	-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS WATER: GENOA LAKES TANK AND WELL EVALUATION**



Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**Scope:** Evaluate the benefits and long-term sustainability of the Genoa Lakes water tank and well.



**Justification:** The Genoa Lakes’ water tank and wells were constructed before the West Valley and Carson Valley water systems were connected. With the addition of additional water tanks and water supply in the system, the long-term sustainability and efficiency of the Genoa Lakes water tank should be evaluated to determine if the facilities should remain in service or be decommissioned.

<b>GENOA LAKES TANK AND WELL EVALUATION</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
Engineering evaluation	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ 100,000
		-	-	-	-	-
						-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ 100,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
User fees	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ 100,000
		-	-	-	-	-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ 100,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS WATER: JACKS VALLEY ROAD TANK NO. 2**



**Scope:** Construct a 2.0 million gallon water tank, piping, and necessary appurtenances to meet water system demand.

**Justification:** A second water tank adjacent to the existing 2.0 million gallon water tank on Jacks Valley Road is identified in the North County Specific Plan to meet growing water demands in the North County area. Project timing is dependent on system demand and the timing of proposed developments..

<b>JACKS VALLEY ROAD TANK NO. 2</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000
		-	-	-	-	-
						-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Debt financing	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000
	-	-	-	-	-	-
<b>Total:</b>	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS WATER: LOWER CAVE ROCK BOOSTER PUMP STATION**



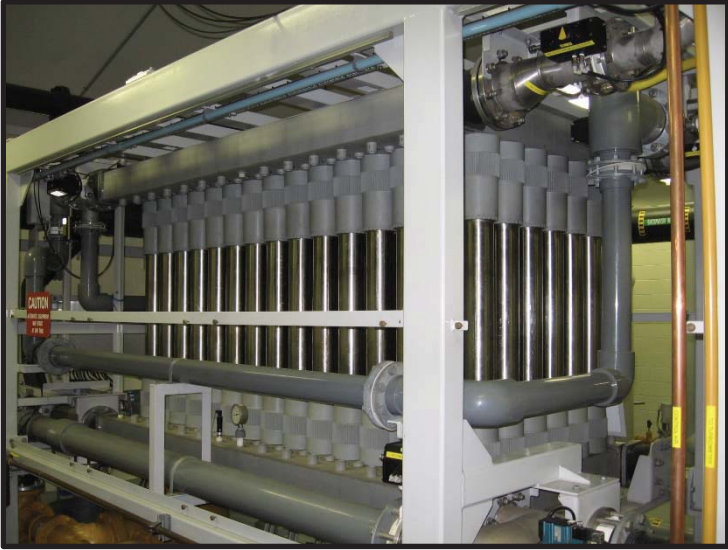
**Scope:** This project will replace the Lower Cave Rock Booster Pump Station that is located within the stretch of water line that is being replaced on Cave Rock Drive and Winding Way.

**Justification:** The Preliminary Engineering Report identified replacement of the Lower Cave Rock Booster Pump Station as a Priority 1 project - representing a public health and safety risk. The existing pump station is located on Cave Rock Drive under the roadway pavement and does not meet current regulations. A new pump station that complies with current codes could be located wither above or below ground. While an above ground site is desirable, availability of above ground sites might preclude this option.

The most recent failure of the pump station was a leak in November 2018. This has been addressed, but the repair continues to be problematic, and the long-term integrity of the pump station as a whole is marginal. This pump station is a critical facility and supplies areas served by the Lower Cave Rock water tank and the Upper Cave Rock water tank.

<b>LOWER CAVE ROCK BOOSTER PUMP STATION</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ 100,000	\$ 400,000	\$ -	\$ -	\$ -	\$ 500,000
		-	-	-	-	-
<b>Total:</b>	\$ 100,000	\$ 400,000	\$ -	\$ -	\$ -	\$ 500,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
User fees	\$ 100,000	\$ 400,000	\$ -	\$ -	\$ -	\$ 500,000
	-	-	-	-	-	-
<b>Total:</b>	\$ 100,000	\$ 400,000	\$ -	\$ -	\$ -	\$ 500,000

**PUBLIC WORKS WATER: SKYLAND - WATER DISTRIBUTION SYSTEM IMPROVEMENTS**



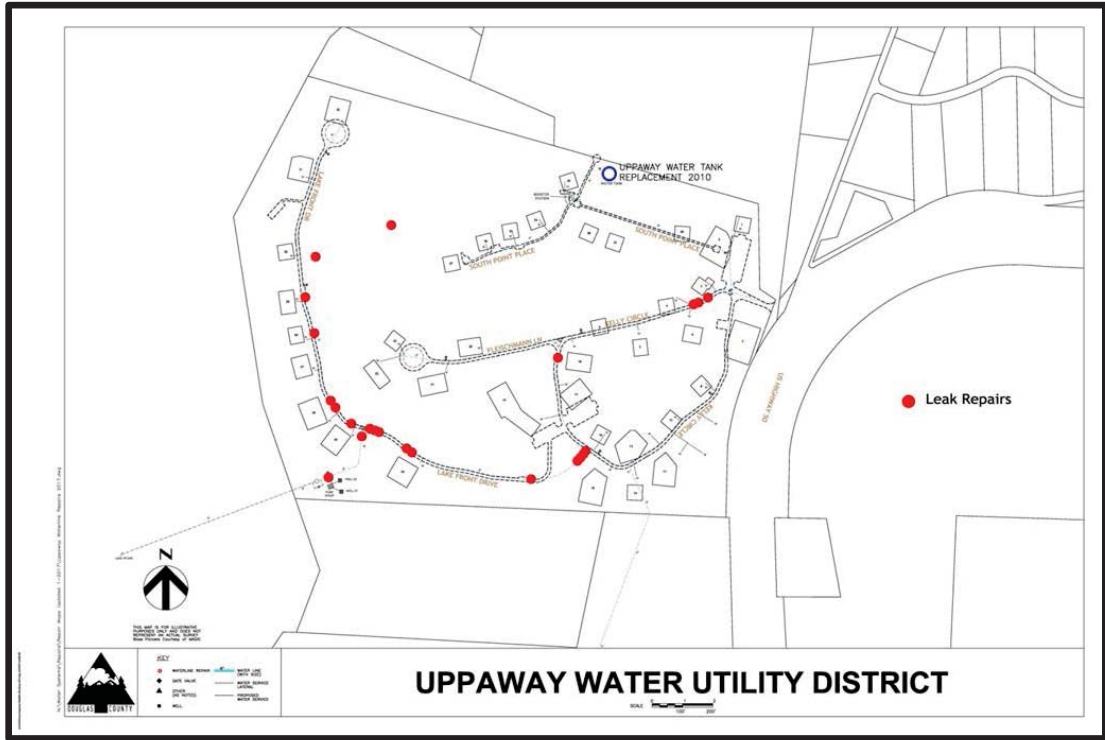
**Scope:** The project will provide a second redundant treatment skid in the Cave Rock Water Treatment Plant as recommended in the Preliminary Engineering Report. Additional capital improvements to replace undersized and deteriorated water lines and complete domestic fire supply loops are identified in the PER beyond year five.

**Justification:** The project will improve system reliability. The project is aligned with the County Strategic Plan objective to provide for the maintenance and infrastructure necessary to meet current and future service levels.

<i>SKYLAND - WATER DISTRIBUTION IMPROVEMENTS</i>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ 1,500,000
		-	-	-	-	-
						-
<b>Total:</b>	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ 1,500,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Debt financing	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ 1,500,000
	-	-	-	-	-	-
<b>Total:</b>	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ 1,500,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

### PUBLIC WORKS WATER: UPPAWAY WATER SYSTEM IMPROVEMENTS



Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

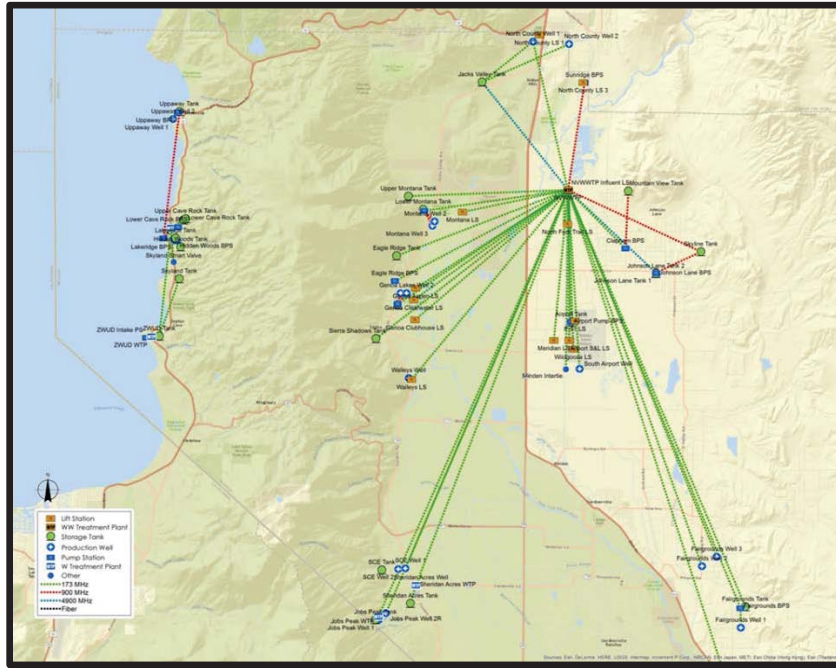
**Scope:** The project will replace undersized and deteriorated water lines as identified in the Preliminary Engineering Report. Additional capital improvements are identified in the PER beyond year five.

**Justification:** The project will improve system reliability and bring the system closer to compliance with fire supply requirements. The project is aligned with the County Strategic Plan objective to provide for the maintenance and infrastructure necessary to meet current and future service levels.

<b>UPPAWAY - WATER DISTRIBUTION IMPROVEMENTS</b>						
Project Budget						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ -	\$ 500,000	\$ 700,000	\$ 100,000	\$ 1,000,000	\$ 2,300,000
		-	-	-	-	-
						-
<b>Total:</b>	\$ -	\$ 500,000	\$ 700,000	\$ 100,000	\$ 1,000,000	\$ 2,300,000
Project Funding						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Debt financing	\$ -	\$ 500,000	\$ 700,000	\$ 100,000	\$ 1,000,000	\$ 2,300,000
	-	-	-	-	-	-
<b>Total:</b>	\$ -	\$ 500,000	\$ 700,000	\$ 100,000	\$ 1,000,000	\$ 2,300,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS WATER: WATER SCADA UPGRADES**



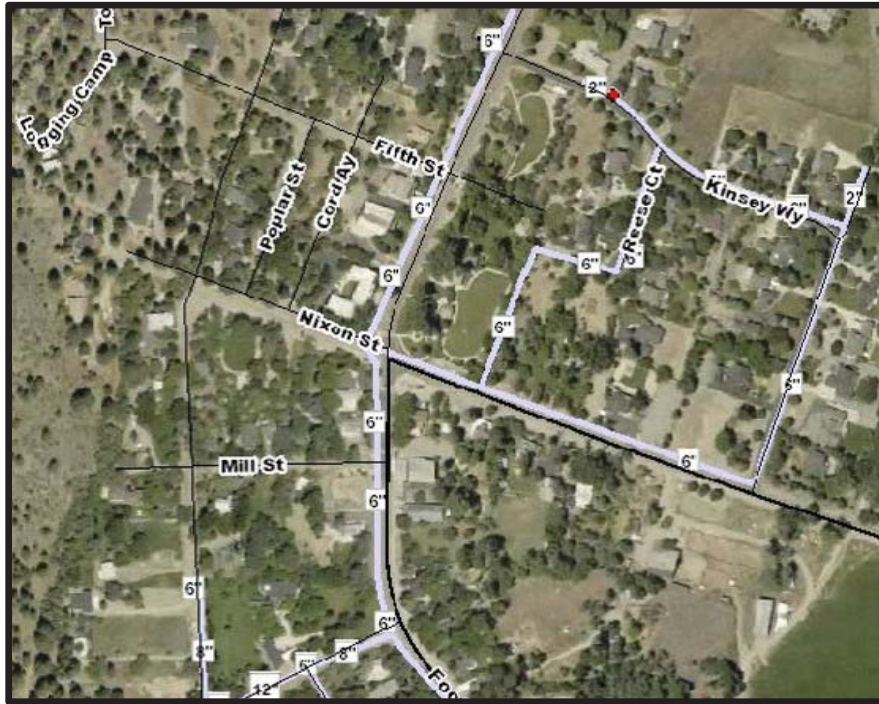
**Scope:** Replace outdated PLCs , radios, and appurtenances at water sites. Construct a high-speed telemetry network to connect remote sites to the Supervisory Control And Data Acquisition (SCADA) network. Upgrade the Lake and Valley SCADA networks and combine them into a single network per the recommendations found in the SCADA Master Plan.

**Justification:** Improve the reliability and operability of water infrastructure. The typical lifespan of this equipment is 5 to 15 years. Some of the equipment being replace is over 20 years old. The SCADA system is necessary to operate the water infrastructure.

<b>WATER SCADA UPGRADES</b>						
<b>Project Budget</b>						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
<b>Construction-Phase 2B &amp; 2</b>	\$ 243,103	\$ 183,167	\$ 100,000	\$ -	\$ -	\$ 526,270
		-	-	-	-	-
<b>Total:</b>	\$ 243,103	\$ 183,167	\$ 100,000	\$ -	\$ -	\$ 526,270
<b>Project Funding</b>						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
<b>User fees</b>	\$ 243,103	\$ 183,167	\$ 100,000	\$ -	\$ -	\$ 526,270
	-	-	-	-	-	-
<b>Total:</b>	\$ 243,103	\$ 183,167	\$ 100,000	\$ -	\$ -	\$ 526,270

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS WATER: WEST VALLEY WATER SYSTEMS IMPROVEMENTS**



**Scope:** Provide expanded fire protection in the Town of Genoa and improve system hydraulic performance.

**Justification:** The water system improvements will improve system hydraulics and provide fire flow to a larger portion of the Town of Genoa, and includes looping the existing water line in Kinsey Way water to improve water quality and fire flow to customers on Kinsey Way. The project expands fire flow capabilities in the Town of Genoa and improves system hydraulic performance.

<b>WEST VALLEY WATER SYSTEM IMPROVEMENTS</b>						
<b>Project Budget</b>						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ 600,000
		-	-	-	-	-
						-
<b>Total:</b>	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ 600,000
<b>Project Funding</b>						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
User fees	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ 600,000
	-	-	-	-	-	-
<b>Total:</b>	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ 600,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)



**PUBLIC WORKS WATER: WEST VALLEY WELL**



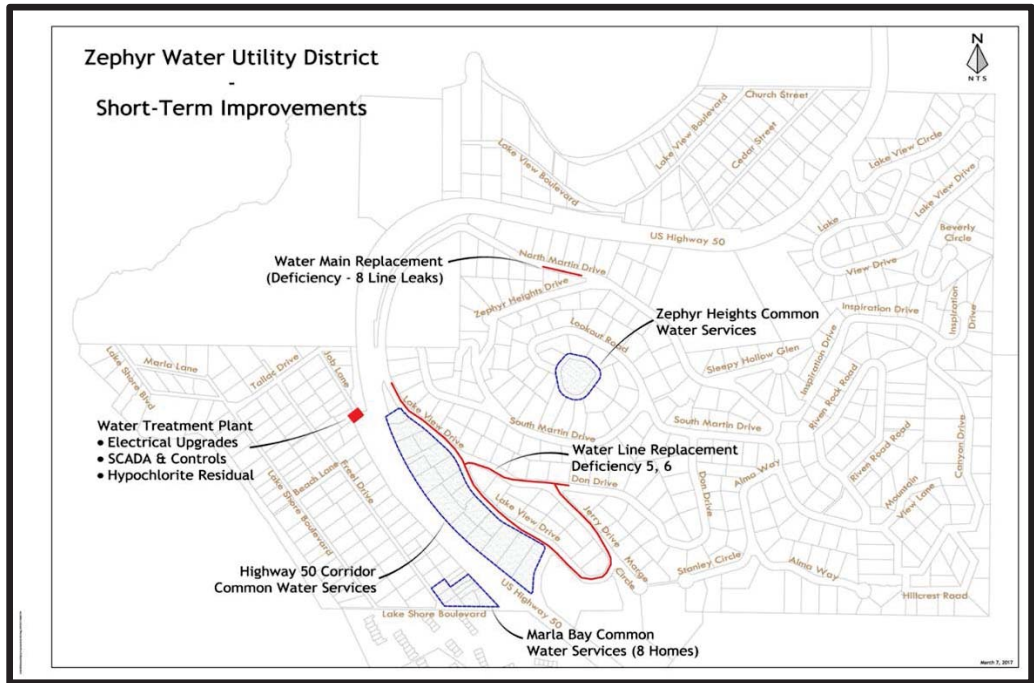
**Scope:** Construct a new well, piping, and necessary appurtenances at a preferred location identified in the West Valley Hydrogeologic Study to meet water system demand.

**Justification:** The new production well is needed to meet growing water demands in the West Valley/Montana water systems, and provide source water redundancy. Project timing is dependent on system demand and the timing of proposed development.

<b>WEST VALLEY WELL</b>						
<b>Project Budget</b>						
<b>Project Phase</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Design</b>	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000
<b>Construction</b>		2,950,000	-	-	-	2,950,000
						-
<b>Total:</b>	\$ 300,000	\$ 2,950,000	\$ -	\$ -	\$ -	\$ 3,250,000
<b>Project Funding</b>						
	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Total</b>
<b>Debt financing</b>	\$ 300,000	\$ 2,950,000	\$ -	\$ -	\$ -	\$ 3,250,000
	-	-	-	-	-	-
<b>Total:</b>	\$ 300,000	\$ 2,950,000	\$ -	\$ -	\$ -	\$ 3,250,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)

**PUBLIC WORKS WATER: ZWUD WATER SYSTEM IMPROVEMENTS**



**Scope:** The project includes replacement of undersized water lines, and electrical and SCADA upgrades at the water treatment plant as identified in the preliminary Engineering Report. Additional capital projects are identified in the PER beyond year five.

**Justification:** The project will improve system reliability and bring the system closer to compliance with fire supply requirements. The project aligns with the County Strategic Plan objective to provide for the maintenance and infrastructure necessary to meet current and future service levels.

<b>ZWUD WATER SYSTEM IMPROVEMENTS</b>						
<b>Project Budget</b>						
Project Phase	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Design & construction	\$ 350,000	\$ 1,000,000	\$ 952,000	\$ -	\$ -	\$ 2,302,000
			-	-	-	-
<b>Total:</b>	\$ 350,000	\$ 1,000,000	\$ 952,000	\$ -	\$ -	\$ 2,302,000
<b>Project Funding</b>						
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Debt financing	\$ 350,000	\$ 1,000,000	\$ 952,000	\$ -	\$ -	\$ 2,302,000
	-	-	-	-	-	-
<b>Total:</b>	\$ 350,000	\$ 1,000,000	\$ 952,000	\$ -	\$ -	\$ 2,302,000

Attachment: CIP Document\_043019 (4038 : Capital Improvement Plan)