

CITY OF KETCHIKAN, ALASKA  
2024 - 2028 KETCHIKAN PUBLIC UTILITIES  
CAPITAL IMPROVEMENT PROGRAM

CONTENTS

2024 Capital Budget .....A-1

Summary of Projects by Division - All Years.....A-4

Summary of Projects by Funding Source - All Years .....A-7

General Manager.....B-1

Electric .....C-1

Telecommunications ..... D-1

Water ..... E-1

**Ketchikan Public Utilities  
2024 - 2028 Capital Improvement Program  
2024 Capital Budget**

Department/Division/Project	Revenues/ Reserves	Grants	Other	Revenue Bonds	2023 Total
<b>Administration</b>					
Financial & Accounting Information System	20,000				20,000
<b>Administration Division Total</b>	<b>20,000</b>				<b>20,000</b>
<b>Sales, Marketing &amp; Customer Service</b>					
None					
<b>Electric Division</b>					
Silvis Road Repair	363,600				363,600
Ketchikan Lakes Project Relicensing	303,000				303,000
Ketchikan Tunnel Penstock Valves Replacement	303,000				303,000
Whitman Dam Crack Repair	80,000				80,000
Whitman Tailrace Modification	200,000				200,000
Whitman Incubation Pipe Flow Meter	50,000				50,000
Penstock Inspections	100,000				100,000
Ketchikan Lakes Utilities	195,000				195,000
Beaver Falls Powerhouse Exterior	757,500				757,500
Bailey Title V Renewal	40,000				40,000
Transmission & Distribution Line Maintenance	252,500				252,500
Ketchikan International Airport & Pennock Island Upgrade	429,250				429,250
Transformer Purchase	200,000				200,000
Beaver Falls Relicensing	30,000				30,000
Bailey Generator No. 4 Wartsilia PLC Upgrade	115,000				115,000
Battery Systems & Chargers	46,000				46,000
Feeder Protective Relay Upgrades	100,000				100,000
System Sectionalizers	100,000				100,000
Vehicles & Moving Equipment	115,000				115,000
Operating Equipment	344,410				344,410
AMI, Meters and Meter Replacement Parts	185,000				185,000
Spare Substation Class Transformer Refurbishment	50,000				50,000
Security Fencing and Gates	45,000				45,000
ESRI Trouble Ticket Solution	40,000				40,000
Bailey Generator Radiator Replacement	40,000				40,000
Bailey Fuel Tank Painting	100,000				100,000
Additional Projects	164,000				164,000
Reimbursable Projects	25,000				25,000
Bailey Exhaust Stack Re-Coating	90,000				90,000
<b>Electric Division Total</b>	<b>4,863,260</b>				<b>4,863,260</b>

**Ketchikan Public Utilities  
2024 - 2028 Capital Improvement Program  
2024 Capital Budget**

<b>Department/Division/Project</b>	<b>Revenues/ Reserves</b>	<b>Grants</b>	<b>Other</b>	<b>Revenue Bonds</b>	<b>2023 Total</b>
<b>Telecommunications Division</b>					
Normal Growth and Repair - Buildings	125,000				125,000
Normal Growth and Repair - CO Switching	100,000				100,000
Normal Growth and Repair - Copper Cable	160,000				160,000
Normal Growth and Repair - Fiber Cable	252,500				252,500
Normal Growth and Repair - CO Transmission	252,500				252,500
Normal Growth and Repair - Expansion	25,000				25,000
Normal Growth and Repair - Provisioning	15,000				15,000
Fiber to the Home	404,000				404,000
Remote Cabinets for Advanced Services	50,000				50,000
Core Network Upgrade	150,000				150,000
Server Environment	100,000				100,000
Multi-Dwelling Unit Project	150,000				150,000
Operating Equipment	100,000				100,000
PC Hardware & Software	75,000				75,000
Power Expansion/Reclamation	75,000				75,000
Visual Mapping Software	25,000				25,000
Network Monitoring	100,000				100,000
Vehicle Acquisition	303,000				303,000
Security	75,000				75,000
Headend Expansion	50,000				50,000
4G/LTE	200,000				200,000
Hosted	150,000				150,000
Wi-Fi	50,000				50,000
Internet Expansion	150,000				150,000
KetchCan1 Subsea Cable Repair	683,265				683,265
<b>Telecommunications Division Total</b>	<b>3,820,265</b>				<b>3,820,265</b>

**Ketchikan Public Utilities  
2024 - 2028 Capital Improvement Program  
2024 Capital Budget**

<b>Department/Division/Project</b>	<b>Revenues/ Reserves</b>	<b>Grants</b>	<b>Other</b>	<b>Revenue Bonds</b>	<b>2023 Total</b>
<b>Water Division</b>					
Filtration Facility - Preliminary Preparation Tasks	252,500				252,500
Water Meters - Business & Commercial Customers	8,515			851,520	860,035
Metered Water Rate Study				150,000	150,000
Pump Station Switchgear Improvements	28,500				28,500
Replace ClorTec Generating Cells	63,000				63,000
SCADA PLC Controllers	363,600				363,600
Valve Boxes - Repair of Surrounding Pavement	90,000				90,000
Water Service Upgrade Program	21,000				21,000
Peterson Street Water Main Rebuild	353,500				353,500
Utility Vehicles	85,000				85,000
Water Distribution Grid Improvements	30,000				30,000
Additional Projects	50,000				50,000
Backflow Prevention Program	15,000				15,000
Skyline Water Main Replacement	70,000				70,000
West Fairy Chasm Replacement	87,000				87,000
<b>Water Division Total</b>	<b>1,517,615</b>			<b>1,001,520</b>	<b>2,519,135</b>
<b>GRAND TOTAL</b>	<b>10,221,140</b>			<b>1,001,520</b>	<b>11,222,660</b>

<b>Ketchikan Public Utilities</b> <b>2024 - 2028 Capital Improvement Program</b> <b>Summary of Projects by Division - All Years</b>								
<b>Division/Project</b>	<b>Prior Years</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>Five Year Total</b>	<b>Project Total</b>
<b>Administration</b>								
Financial & Accounting Information System Implementation	453,992	20,000					20,000	473,992
<b>Administration Total</b>	453,992	20,000					20,000	473,992
<b>Sales, Marketing &amp; Customer Service</b>								
None								
<b>Electric Division</b>								
Silvis Road Repair	22,150	363,600					363,600	385,750
Ketchikan Lakes Project Relicensing		303,000	500,000	500,000	200,000	200,000	1,703,000	1,703,000
Ketchikan Tunnel Penstock Valves Replacement	100,000	303,000					303,000	403,000
Whitman Dam Crack Repair		80,000					80,000	80,000
Whitman Tailrace Modification	36,291	200,000					200,000	236,291
Whitman Incubation Pipe Flow Meter		50,000					50,000	50,000
Penstock Inspections		100,000					100,000	100,000
Ketchikan Lakes Utilities	25,350	195,000	250,000				445,000	470,350
Watershed LiDAR Survey			250,000				250,000	250,000
Beaver Falls Powerhouse Exterior	36,070	757,500					757,500	793,570
Bailey Title V Renewal		40,000					40,000	40,000
Beaver Falls Switch Gear Replacement	105,000		1,372,150				1,372,150	1,477,150
Transmission & Distribution Line Maintenance		252,500	150,000	500,000			902,500	902,500
Ketchikan International Airport & Pennock Island Upgrade	225,977	429,250	550,000				979,250	1,205,227
Transformer Purchase		200,000	250,000	250,000	250,000	250,000	1,200,000	1,200,000
Bailey Mooring Dolphin Replacement			200,000				200,000	200,000
Port West Substation Reconfiguration & Site Mod.			175,000	950,000			1,125,000	1,125,000
Beaver Falls Relicensing	670,000	30,000					30,000	700,000
Bailey Generator No. 4 Wartsilia PLC Upgrade		115,000					115,000	115,000
Battery Systems & Chargers	172,000	46,000	50,500	50,500	50,500	50,500	248,000	420,000
Feeder Protective Relay Upgrades	50,000	100,000	50,000	50,000	50,000	50,000	300,000	350,000
System Sectionalizers		100,000	100,000	100,000			300,000	300,000
Digital Radio Replacement	6,000		120,000				120,000	126,000
Vehicles & Moving Equipment		115,000	425,000	175,000		350,000	1,065,000	1,065,000
Operating Equipment		344,410	300,000	300,000	300,000	300,000	1,544,410	1,544,410
North Tongass Tree Removal			200,000				200,000	200,000
AMI, Meters and Meter Replacement Parts		185,000	125,000	125,000	125,000	125,000	685,000	685,000
Spare Substation Class Transformer Refurbishment		50,000					50,000	50,000
Security Fencing and Gates		45,000					45,000	45,000
ESRI Trouble Ticket Solution		40,000					40,000	40,000
Bailey Generator Radiator Replacement		40,000	300,000				340,000	340,000
Bailey Fuel Tank Painting		100,000					100,000	100,000
Additional Projects		164,000	164,000	164,000	164,000	164,000	820,000	820,000
Reimbursable Projects		25,000	25,000	25,000	25,000	25,000	125,000	125,000
Bailey Exhaust Stack Re-Coating		90,000					90,000	90,000

<b>Ketchikan Public Utilities</b> <b>2024 - 2028 Capital Improvement Program</b> <b>Summary of Projects by Division - All Years</b>								
<b>Division/Project</b>	<b>Prior Years</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>Five Year Total</b>	<b>Project Total</b>
<b>Electric Division (continued)</b>								
Electric Division Service Center			2,000,000	500,000	5,100,000		7,600,000	7,600,000
Silvis Tunnel Valve Replacement			40,000	400,000			440,000	440,000
Generator Rewind & Repair			650,000	700,000			1,350,000	1,350,000
34.5 kV Breaker and Relay Spares			105,000				105,000	105,000
Beaver Falls Governor Rehabilitation			250,000				250,000	250,000
Silvis Shaft & Turbine Overhaul			750,000				750,000	750,000
Bailey Unit No. 1 Rehabilitation	11,921				850,000		850,000	861,921
Clam Cove 3-Phase Upgrade				500,000	2,000,000		2,500,000	2,500,000
Mountain Point Substation Replacement			750,000	7,600,000			8,350,000	8,350,000
Bailey Substation Replacement					1,500,000	15,300,000	16,800,000	16,800,000
Ward Cove Substation						800,000	800,000	800,000
Diesel Generator Replacement					4,125,000	40,750,000	44,875,000	44,875,000
<b>Electric Division Total</b>	<b>1,460,759</b>	<b>4,863,260</b>	<b>10,101,650</b>	<b>12,889,500</b>	<b>14,739,500</b>	<b>58,364,500</b>	<b>100,958,410</b>	<b>102,419,169</b>
<b>Telecommunications Division</b>								
Normal Growth and Repair - Buildings		125,000	75,000	75,000	75,000	75,000	425,000	425,000
Normal Growth and Repair - CO Switching		100,000	100,000	100,000	100,000	100,000	500,000	500,000
Normal Growth and Repair - Copper Cable		160,000	25,000	25,000	25,000	25,000	260,000	260,000
Normal Growth and Repair - Fiber Cable		252,500	250,000	250,000	250,000	250,000	1,252,500	1,252,500
Normal Growth and Repair - CO Transmission		252,500	250,000	250,000	250,000	500,000	1,502,500	1,502,500
Normal Growth and Repair - Expansion		25,000	30,000	35,000	35,000	35,000	160,000	160,000
Normal Growth and Repair - Provisioning		15,000	200,000	100,000	100,000	100,000	515,000	515,000
Fiber to the Home		404,000	600,000	700,000	700,000	500,000	2,904,000	2,904,000
Remote Cabinets for Advanced Services		50,000	50,000	75,000	100,000	100,000	375,000	375,000
Core Network Upgrade		150,000	1,000,000	1,000,000	500,000	500,000	3,150,000	3,150,000
Server Environment		100,000	100,000	200,000	400,000	200,000	1,000,000	1,000,000
Multi-Dwelling Unit Project		150,000	125,000	125,000	125,000	125,000	650,000	650,000
Operating Equipment		100,000	50,000	50,000	75,000	100,000	375,000	375,000
PC Hardware & Software		75,000	75,000	75,000	75,000	75,000	375,000	375,000
Power Expansion/Reclamation		75,000	50,000	50,000	50,000	50,000	275,000	275,000
Visual Mapping Software		25,000	25,000	25,000	25,000	25,000	125,000	125,000
Network Monitoring		100,000	100,000	100,000	100,000	100,000	500,000	500,000
Vehicle Acquisition		303,000	150,000	150,000	150,000	150,000	903,000	903,000
Security		75,000	75,000	100,000	100,000	300,000	650,000	650,000
Headend Expansion		50,000	50,000				100,000	100,000
Video Set Top Boxes			25,000				25,000	25,000
4G/LTE		200,000	200,000	200,000	200,000	500,000	1,300,000	1,300,000
Hosted		150,000	125,000	125,000	125,000	125,000	650,000	650,000
Wi-Fi		50,000	50,000	50,000	65,000	75,000	290,000	290,000
Internet Expansion		150,000	100,000	150,000	150,000	600,000	1,150,000	1,150,000

<b>Ketchikan Public Utilities</b> <b>2024 - 2028 Capital Improvement Program</b> <b>Summary of Projects by Division - All Years</b>								
<b>Division/Project</b>	<b>Prior Years</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>Five Year Total</b>	<b>Project Total</b>
<b>Telecommunications Division (continued)</b>								
KetchCan1 Subsea Cable Repair		683,265					683,265	683,265
<b>Telecommunications Division Total</b>		3,820,265	3,880,000	4,010,000	3,775,000	4,610,000	20,095,265	20,095,265
<b>Water Division</b>								
Filtration Facility - Preliminary Preparation Tasks	795,166	252,500					252,500	1,047,666
Water Meters - Business & Commercial Customers	398,480	860,035					860,035	1,258,515
Metered Water Rate Study		150,000					150,000	150,000
Pump Station Switchgear Improvements	52,750	28,500					28,500	81,250
Replace ClorTec Generating Cells	62,000	63,000	43,000	44,000			150,000	212,000
SCADA PLC Controllers	596,500	363,600					363,600	960,100
Replace Tongass Ave Suspended Water Main			2,300,000				2,300,000	2,300,000
Replace Water St.Suspended Water Main			1,150,000				1,150,000	1,150,000
Valve Boxes - Repair of Surrounding Pavement		90,000	50,000	50,000	50,000	50,000	290,000	290,000
Water Service Upgrade Program		21,000	21,000	21,000	21,000	21,000	105,000	105,000
Peterson Street Water Main Rebuild		353,500					353,500	353,500
Harris Street Utility Improvements			104,000		750,000		854,000	854,000
Park Ave. Utility Improvements			150,000		1,950,000		2,100,000	2,100,000
Utility Vehicles		85,000	160,000	65,000	112,000		422,000	422,000
Water Distribution Grid Improvements		30,000	30,000	30,000	30,000	30,000	150,000	150,000
Additional Projects		50,000	50,000	50,000	50,000	50,000	250,000	250,000
Backflow Prevention Program		15,000	15,000	15,000	15,000	15,000	75,000	75,000
Skyline Water Main Replacement		70,000		390,000			460,000	460,000
West Fairy Chasm Replacement		87,000		593,000			680,000	680,000
Second Ave Main Replacement			160,000		990,000		1,150,000	1,150,000
Hillside Road Water Main Replacement			106,000		644,000		750,000	750,000
Highlands Reservoir Property Acquisition			400,000				400,000	400,000
Ktn. Lakes Alternative Raw Water Supply Piping			100,000			12,000,000	12,100,000	12,100,000
<b>Water Division Total</b>	1,904,896	2,519,135	4,839,000	1,258,000	4,612,000	12,166,000	25,394,135	27,299,031
<b>TOTAL</b>	3,819,647	11,222,660	18,820,650	18,157,500	23,126,500	75,140,500	146,467,810	150,287,457

**Ketchikan Public Utilities**  
**2024 - 2028 Capital Improvement Program**  
**Summary of Projects by Funding Source - All Years**

Division/Project	Prior Years	Revenue Generating Fund	Grants	Other	Revenue Bonds	State Drinking Water Loan Fund	Total
<b>Administration</b>							
Financial & Accounting Information System Implementation	453,992	20,000					473,992
<b>Administration Total</b>	453,992	20,000					473,992
<b>Sales, Marketing &amp; Customer Service</b>							
None							
<b>Electric Division</b>							
Silvis Road Repair	22,150	363,600					385,750
Ketchikan Lakes Project Relicensing		1,703,000					1,703,000
Ketchikan Tunnel Penstock Valves Replacement	100,000	303,000					403,000
Whitman Dam Crack Repair		80,000					80,000
Whitman Tailrace Modification	36,291	200,000					236,291
Whitman Incubation Pipe Flow Meter		50,000					50,000
Penstock Inspections		100,000					100,000
Ketchikan Lakes Utilities	25,350	445,000					470,350
Watershed LiDAR Survey		250,000					250,000
Beaver Falls Powerhouse Exterior	36,070	757,500					793,570
Bailey Title V Renewal		40,000					40,000
Beaver Falls Switch Gear Replacement	105,000	1,372,150					1,477,150
Transmission & Distribution Line Maintenance		902,500					902,500
Ketchikan International Airport & Pennock Island Upgrade	225,977	979,250					1,205,227
Transformer Purchase		1,200,000					1,200,000
Bailey Mooring Dolphin Replacement		200,000					200,000
Port West Substation Reconfiguration & Site Mod.		1,125,000					1,125,000
Beaver Falls Relicensing	670,000	30,000					700,000
Bailey Generator No. 4 Wartsilia PLC Upgrade		115,000					115,000
Battery Systems & Chargers	172,000	248,000					420,000
Feeder Protective Relay Upgrades	50,000	300,000					350,000
System Sectionalizers		300,000					300,000
Digital Radio Replacement	6,000	120,000					126,000
Vehicles & Moving Equipment		1,065,000					1,065,000
Operating Equipment		1,544,410					1,544,410
North Tongass Tree Removal		200,000					200,000
AMI, Meters and Meter Replacement Parts		685,000					685,000
Spare Substation Class Transformer Refurbishment		50,000					50,000
Security Fencing and Gates		45,000					45,000



**Ketchikan Public Utilities**  
**2024 - 2028 Capital Improvement Program**  
**Summary of Projects by Funding Source - All Years**

Division/Project	Prior Years	Revenue Generating Fund	Grants	Other	Revenue Bonds	State Drinking Water Loan Fund	Total
<b>Electric Division (continued)</b>							
ESRI Trouble Ticket Solution		40,000					40,000
Bailey Generator Radiator Replacement		340,000					340,000
Bailey Fuel Tank Painting		100,000					100,000
Additional Projects		820,000					820,000
Reimbursable Projects		125,000					125,000
Bailey Exhaust Stack Re-Coating		90,000					90,000
Electric Division Service Center					7,600,000		7,600,000
Silvis Tunnel Valve Replacement		440,000					440,000
Generator Rewind & Repair		1,350,000					1,350,000
34.5 kV Breaker and Relay Spares		105,000					105,000
Beaver Falls Governor Rehabilitation		250,000					250,000
Silvis Shaft & Turbine Overhaul		750,000					750,000
Bailey Unit No. 1 Rehabilitation	11,921	850,000					861,921
Clam Cove 3-Phase Upgrade		2,500,000					2,500,000
Mountain Point Substation Replacement					8,350,000		8,350,000
Bailey Substation Replacement					16,800,000		16,800,000
Ward Cove Substation					800,000		800,000
Diesel Generator Replacement					44,875,000		44,875,000
<b>Electric Division Total</b>	<b>1,460,759</b>	<b>22,533,410</b>			<b>78,425,000</b>		<b>102,419,169</b>
<b>Telecommunications Division</b>							
Normal Growth and Repair - Buildings		425,000					425,000
Normal Growth and Repair - CO Switching		500,000					500,000
Normal Growth and Repair - Copper Cable		260,000					260,000
Normal Growth and Repair - Fiber Cable		1,252,500					1,252,500
Normal Growth and Repair - CO Transmission		1,502,500					1,502,500
Normal Growth and Repair - Expansion		160,000					160,000
Normal Growth and Repair - Provisioning		515,000					515,000
Fiber to the Home		2,904,000					2,904,000
Remote Cabinets for Advanced Services		375,000					375,000
Core Network Upgrade		3,150,000					3,150,000
Server Environment		1,000,000					1,000,000
Multi-Dwelling Unit Project		650,000					650,000
Operating Equipment		375,000					375,000
PC Hardware & Software		375,000					375,000
Power Expansion/Reclamation		275,000					275,000
Visual Mapping Software		125,000					125,000
Network Monitoring		500,000					500,000

**Ketchikan Public Utilities**  
**2024 - 2028 Capital Improvement Program**  
**Summary of Projects by Funding Source - All Years**

Division/Project	Prior Years	Revenue Generating Fund	Grants	Other	Revenue Bonds	State Drinking Water Loan Fund	Total
<b>Telecommunications Division (continued)</b>							
Vehicle Acquisition		903,000					903,000
Security		650,000					650,000
Headend Expansion		100,000					100,000
Video Set Top Boxes		25,000					25,000
4G/LTE		1,300,000					1,300,000
Hosted		650,000					650,000
Wi-Fi		290,000					290,000
Internet Expansion		1,150,000					1,150,000
KetchCan1 Subsea Cable Repair		683,265					683,265
<b>Telecommunications Division Total</b>		20,095,265					20,095,265
<b>Water Division</b>							
Filtration Facility - Preliminary Preparation Tasks	795,166	250,000					1,045,166
Water Meters - Business & Commercial Customers	398,480					851,520	1,250,000
Metered Water Rate Study						150,000	150,000
Pump Station Switchgear Improvements	52,750	28,500					81,250
Replace ClorTec Generating Cells	62,000	150,000					212,000
SCADA PLC Controllers	596,500	360,000					956,500
Replace Tongass Ave Suspended Water Main			2,300,000				2,300,000
Replace Water St.Suspended Water Main			1,150,000				1,150,000
Valve Boxes - Repair of Surrounding Pavement		290,000					290,000
Water Service Upgrade Program		105,000					105,000
Peterson Street Water Main Rebuild		350,000					350,000
Harris Street Utility Improvements		104,000	375,000			375,000	854,000
Park Ave. Utility Improvements		150,000	975,000			975,000	2,100,000
Utility Vehicles		422,000					422,000
Water Distribution Grid Improvements		150,000					150,000
Additional Projects		250,000					250,000
Backflow Prevention Program		75,000					75,000
Skyline Water Main Replacement		70,000	195,000			195,000	460,000
West Fairy Chasm Replacement		87,000	296,500			296,500	680,000
Second Ave Main Replacement		160,000	495,000			495,000	1,150,000
Hillside Road Water Main Replacement		106,000	322,000			322,000	750,000
Highlands Reservoir Property Acquisition			200,000			200,000	400,000
Ktn. Lakes Alternative Raw Water Supply Piping		100,000	6,000,000			6,000,000	12,100,000
<b>Water Division Total</b>	1,904,896	3,207,500	12,308,500			9,860,020	27,280,916
<b>TOTAL</b>	<b>3,819,647</b>	<b>45,856,175</b>	<b>12,308,500</b>		<b>78,425,000</b>	<b>9,860,020</b>	<b>150,269,342</b>

**Ketchikan Public Utilities  
2024 - 2028 Capital Improvement Program**

**Division: General Manager**

Project Title	Priority	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Financial & Accounting Information System Implementation	1	453,992	5,000	15,000	20,000					473,992
<b>Total</b>		453,992	5,000	15,000	20,000					473,992
Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		453,992	5,000	15,000	20,000					473,992
<b>Total</b>		453,992	5,000	15,000	20,000					473,992

**Department: KPU General Manager**

**Project Priority:** 1

**Project Title:** Financial & Accounting Information System  
Implementation

**Start Date:** 01/07

**End Date:** 12/24

**Description:**

The City awarded a contract to New World Systems for the acquisition of new financial and accounting information system and began implementation in September 2011. Finance is requesting that remaining funds that have been appropriated for this project be carried over to 2024. Funds will be used for hardware and software contingencies and New World resources to supplement the Finance Department's efforts during critical phases of the continuing implementation process. Scheduled for completion in 2024 is financial reporting, electronic personnel action forms and e-suites. The cost of this project is being funded equally by General Government and KPU.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Design									
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Consultation	51,975								51,975
Equip, Software & Implementation Service	386,517	5,000	15,000	20,000					406,517
Other - Training	15,500								15,500
<b>Total</b>	453,992	5,000	15,000	20,000					473,992

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		453,992	5,000	15,000	20,000					473,992
<b>Total</b>		453,992	5,000	15,000	20,000					473,992

Ketchikan Public Utilities 2024 - 2028 Capital Improvement Program Division: Electric										
Project Title	Priority	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Silvis Road Repair	1	22,150	60,000	303,600	363,600					385,750
Ketchikan Lakes Project Relicensing	2			303,000	303,000	500,000	500,000	200,000	200,000	1,703,000
Ketchikan Tunnel Penstock Valves Replacement	3	100,000	50,000	253,000	303,000					403,000
Whitman Dam Crack Repair	4		30,000	50,000	80,000					80,000
Whitman Tailrace Modification	5	36,291	200,000		200,000					236,291
Whitman Incubation Pipe Flow Meter	6		50,000		50,000					50,000
Penstock Inspections	7			100,000	100,000					100,000
Ketchikan Lakes Utilities	8	25,350	195,000		195,000	250,000				470,350
Watershed LiDAR Survey	9					250,000				250,000
Beaver Falls Powerhouse Exterior	10	36,070	750,000	7,500	757,500					793,570
Bailey Title V Renewal	11			40,000	40,000					40,000
Beaver Falls Switch Gear Replacement	12	105,000				1,372,150				1,477,150
Transmission & Distribution Line Maintenance	13		24,550	227,950	252,500	150,000	500,000			902,500
Ketchikan International Airport & Pennock Island Upgrade	14	225,977	360,000	69,250	429,250	550,000				1,205,227
Transformer Purchases	15			200,000	200,000	250,000	250,000	250,000	250,000	1,200,000
Bailey Mooring Dolphin Replacement	16					200,000				200,000
Port West Substation Reconfiguration & Site Mod.	17					175,000	950,000			1,125,000
Beaver Falls Relicensing	18	670,000		30,000	30,000					700,000
Bailey Generator No. 4 Wartsila PLC Upgrade	19		115,000		115,000					115,000
Battery Systems & Chargers	20	172,000		46,000	46,000	50,500	50,500	50,500	50,500	420,000
Feeder Protective Relay Upgrades	21	50,000	50,000	50,000	100,000	50,000	50,000	50,000	50,000	350,000
System Sectionalizers	22		100,000		100,000	100,000	100,000			300,000
Digital Radio Replacement	23	6,000				120,000				126,000
Vehicles & Moving Equipment	24			115,000	115,000	425,000	175,000		350,000	1,065,000
Operating Equipment	25			344,410	344,410	300,000	300,000	300,000	300,000	1,544,410
North Tongass Tree Removal	26					200,000				200,000
AMI, Meters and Meter Replacement Parts	27			185,000	185,000	125,000	125,000	125,000	125,000	685,000
Spare Substation Class Transformer Refurbishment	28			50,000	50,000					50,000
Security Fencing and Gates	29			45,000	45,000					45,000
ESRI Trouble Ticket Solution	30			40,000	40,000					40,000
Bailey Generator Radiator Replacement	31		40,000		40,000	300,000				340,000
Bailey Fuel Tank Painting	32			100,000	100,000					100,000
Additional Projects	33			164,000	164,000	164,000	164,000	164,000	164,000	820,000
Reimbursable Projects	34			25,000	25,000	25,000	25,000	25,000	25,000	125,000
Bailey Exhaust Stack Re-Coating	35		55,000	35,000	90,000					90,000
Electric Division Service Center	36					2,000,000	500,000	5,100,000		7,600,000
Silvis Tunnel Valve Replacement	37					40,000	400,000			440,000
Generator Rewind & Repair	38					650,000	700,000			1,350,000
34.5 kV Breaker and Relay Spares	39					105,000				105,000
Beaver Falls Governor Rehabilitation	40					250,000				250,000
Silvis Shaft & Turbine Overhaul	41					750,000				750,000
Bailey Unit No. 1 Rehabilitation	42	11,921						850,000		861,921
Clam Cove 3-Phase Upgrade	43						500,000	2,000,000		2,500,000
Mountain Point Substation Replacement*	44					750,000	7,600,000			8,350,000
Bailey Substation Replacement*	45							1,500,000	15,300,000	16,800,000
Ward Cove Substation*	46								800,000	800,000
Diesel Generator Replacement*	47							4,125,000	40,750,000	44,875,000
Total		1,460,759	2,079,550	2,783,710	4,863,260	10,101,650	12,889,500	14,739,500	58,364,500	102,419,169
Source of Funds	Prior Years	Adopted 2024			Projected Requirements				Total Project	
		Reappro- priated	New Funding	Total	2025	2026	2027	2028		
Revenue/Reserves - Public Art			27,260	27,260						27,260
Revenue Generating Fund	1,460,759	2,079,550	2,756,450	4,836,000	7,351,650	4,789,500	4,014,500	1,514,500		23,966,909
*Bond Funding					2,750,000	8,100,000	10,725,000	56,850,000		78,425,000
Total	1,460,759	2,079,550	2,783,710	4,863,260	10,101,650	12,889,500	14,739,500	58,364,500		102,419,169

Division: Electric

Project Title: Silvis Road Repair

Description:

Project Priority: 1

Start Date: 01/22

End Date: 12/24

The Silvis Access Road has suffered increasing erosion at the high-point along Lower Silvis Lake due to drainage challenges and avalanches. Initial project scoping and surveying were begun in 2022 when the erosion was only a minor issue, however after the snow melted in late-spring 2023, the roadway was found to be eroded to an extent that prevents highway vehicles from transiting through to Silvis Powerhouse. A geotechnical engineer conducted a field inspection during summer 2023, providing a report with conceptual solutions, orders of magnitude costs, as well as possible grant funding opportunities. KPU has hired the geotechnical engineer to complete a detailed design to be used in a bid document for construction during the summer of 2024. KPU will pursue grant funding options, but until awarded, this project must be funded out of KPU reserves.

KPU will need to begin a detailed design with an engineer in 2023 in the hopes everything lines up to affect a repair in 2024 before the fall snows fly.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Public Art	22,150		3,600	3,600					3,600
Design									22,150
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management		60,000	300,000	360,000					360,000
Construction									
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
Total	22,150	60,000	303,600	363,600					385,750

  

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				3,600	3,600					3,600
Revenue Generating Fund		22,150	60,000	300,000	360,000					382,150
Total		22,150	60,000	303,600	363,600					385,750

Division: Electric

Project Title: Ketchikan Lakes Project Relicensing

Description:

Project Priority: 2

Start Date: 01/24

End Date: 12/30

The Ketchikan Lakes Hydroelectric Project is licensed through the Federal Energy Regulatory Commission (FERC) for a term of 30 years. KPU's current license expires in 2030. To renew its FERC license, KPU must begin the process in 2024 with development of a Preliminary Application Document (PAD), and file Notice of Intent (NOI) in 2025. Following NEPA and tribal consultations, and completion of studies, a final license application is due in 2028. This process will require professional services for FERC regulatory work, studies and surveys. Relicensing costs are highly variable and are dependent upon issues that arise during the consultation process.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Public Art			3,000	3,000					3,000
Design									
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies			300,000	300,000	500,000	500,000	200,000	200,000	1,700,000
Other									
Total			303,000	303,000	500,000	500,000	200,000	200,000	1,703,000

  

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				3,000	3,000					3,000
Revenue Generating Fund				300,000	300,000	500,000	500,000	200,000	200,000	1,700,000
Total				303,000	303,000	500,000	500,000	200,000	200,000	1,703,000

**Division: Electric****Project Priority:** 3**Project Title:** Ketchikan Tunnel Penstock Valve**Start Date:** 01/13**End Date:** 12/24**Description:**

The three gate valves on the penstocks at the downstream end of the Ketchikan power tunnel are old and are nearing the end of their reliable service life. They must be capable of closing under flow and are critical to penstock safety. The valves are embedded in concrete and will be difficult to remove or to replace due to their location. As the tunnel provides the City's only potable water supply, it cannot be drained during the work. The assessment, design and replacement of the valves will be coordinated with the Water Division to ensure continuity of potable water service, slated for 2023.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Public Art			3,000	3,000					3,000
Design	100,000	50,000	50,000	100,000					200,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			100,000	100,000					100,000
Vehicles/Moving Equipment			100,000	100,000					100,000
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>	100,000	50,000	253,000	303,000					403,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				3,000	3,000					3,000
Revenue Generating Fund	100,000		50,000	250,000	300,000					400,000
<b>Total</b>	100,000		50,000	253,000	303,000					403,000



Division: Electric

Project Title: Whitman Dam Crack Repair

Description:

Project Priority: 4

Start Date: 01/23

End Date: 12/24

Whitman Dam has several significant leaks, cracks and spalled areas, which, though not an immediate dam safety concern, need to be repaired to prevent deterioration over time. Repairs should be designed by a Professional Engineer and submitted to FERC prior to implementation.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design		30,000		30,000					30,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			50,000	50,000					50,000
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
Total		30,000	50,000	80,000					80,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund			30,000	50,000	80,000					80,000
Total			30,000	50,000	80,000					80,000

**Division: Electric****Project Priority:** 5**Project Title:** Whitman Tailrace Modification**Start Date:** 01/20**End Date:** 12/24**Description:**

The Whitman Hydroelectric Project operates under a FERC license, which requires monitoring of the tailrace that has shown fish to be stranded during normal operations. Operational adjustments have not been adequate to eliminate fish stranding. In 2019, KPU made modifications to the tailrace channel and continues to monitor it. Additional structural modifications may be necessary, the nature of which are subject to consultation and approval by fisheries management agencies and FERC.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design	36,291								36,291
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction		200,000		200,000					200,000
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>	36,291	200,000		200,000					236,291

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		36,291	200,000		200,000					236,291
<b>Total</b>		36,291	200,000		200,000					236,291

**Division: Electric**

**Project Priority:** 6

**Project Title:** Whitman Incubation Pipe Flow Meter

**Start Date:** 01/24

**End Date:** 12/24

**Description:**

The FERC license for the Whitman Lake Hydroelectric project requires installation of a flow meter to measure the quantity of water delivered to the SSRAA fish hatchery. This project includes purchase and installation of the flow meter, excavation and earthwork, SCADA connection, coordination with the hatchery.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design		10,000		10,000					10,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment		40,000		40,000					40,000
Environmental/Other Studies									
Other									
<b>Total</b>		50,000		50,000					50,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund			50,000		50,000					50,000
<b>Total</b>			50,000		50,000					50,000

Division: Electric

Project Title: Penstock Inspections

Description:

Project Priority: 7

Start Date: 01/24

End Date: 12/24

Comprehensive exterior and interior inspections of the c. 1947 – 1957 Ketchikan Lakes and Beaver Falls steel penstocks.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			100,000	100,000					100,000
Total			100,000	100,000					100,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				100,000	100,000					100,000
Total				100,000	100,000					100,000

**Division: Electric****Project Priority:** 8**Project Title:** Ketchikan Lakes Utilities**Start Date:** 01/22**End Date:** 12/25**Description:**

This project provides funding to install power and communications to the Ketchikan Lakes hydro project, including Fawn Lake, Ketchikan Lakes and to the Granite Basin area. Power at these sites is currently provided by solar panels and small back-up generators, with communications limited to line of site antennas. Further work includes, but is not limited to, the installation of security cameras, emergency lighting, and fiber optic communications for lake level indications.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design	25,350	195,000		195,000					220,350
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment					250,000				250,000
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>	25,350	195,000		195,000	250,000				470,350

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		25,350	195,000		195,000	250,000				470,350
<b>Total</b>		25,350	195,000		195,000	250,000				470,350

**Division: Electric****Project Priority:** 9**Project Title:** Watershed LiDAR Survey**Start Date:** 01/24**End Date:** 12/24**Description:**

FERC is requiring KPU to collect LiDAR data of the Ketchikan Lakes watershed by early 2024, prior to the next Part 12D inspection (correspondence dated 8/24/2023). As we expect that LiDAR data of the Whitman Lake and Silvis Lakes watersheds will soon be required, it is more cost efficient to obtain data for all three watersheds concurrently.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other					250,000				250,000
<b>Total</b>					250,000				250,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						250,000				250,000
<b>Total</b>						250,000				250,000

Division: Electric

Project Title: Beaver Falls Powerhouse Exterior

Description:

Project Priority: 10

Start Date: 1/13

End Date: 12/24

The exterior of the Beaver Falls Powerhouse, which was built in 1954, contains asbestos coating that is failing. Signs of water intrusion into the concrete walls and structure are apparent. This project will entail an engineering evaluation of the building structure, an environmental evaluation, creation of plans and specifications for asbestos removal and disposal, concrete/structural repairs, a new coating system and required contractual work.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Public Art	36,070		7,500	7,500					7,500
Design									36,070
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management		750,000		750,000					750,000
Construction									
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
Total	36,070	750,000	7,500	757,500					793,570

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				7,500	7,500					7,500
Revenue Generating Fund		36,070	750,000		750,000					786,070
Total		36,070	750,000	7,500	757,500					793,570

**Project Priority:** 11

**Start Date:** 01/24

End Date: 12/24

Bailey Powerhouse's air quality permit through the Alaska Department of Environmental Conservation is due for renewal. Failure to renew the permit will result in KPU no longer being able to operate the emergency diesel generators.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design									
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other			40,000	40,000					40,000
<b>Total</b>			40,000	40,000					40,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				40,000	40,000					40,000
<b>Total</b>				40,000	40,000					40,000



**Division: Electric****Project Priority:** 12**Project Title:** Beaver Falls Switch Gear Replacement**Start Date:** 01/17**End Date:** 12/24**Description:**

The Beaver Falls powerhouse switchgear needs replacement and is an operating risk to the power plant. The existing equipment is 1940s vintage and beyond its reliable life. It has been identified as containing asbestos materials, which will need to be abated during the replacement of the equipment. This work requires the replacement/upgrade of the three (3) generator excitation systems, controls, breakers, protection relays, electrical panels, DC electrical equipment and modification of the control room. This is a major project requiring an established scope of work and detailed work schedule. This project will be completed in phases over multiple years and requires engineering services, planning, plans and specifications, the procurement of equipment, the demolition/installation of equipment and commissioning.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design	105,000				30,000				135,000
Land/Property Acquisition (ROW)									
Land/Property Improvements					7,000				7,000
Construction Management					237,150				237,150
Construction									
Vehicles/Moving Equipment					1,000,000				1,000,000
Operating Equipment					98,000				98,000
Environmental/Other Studies									
Other									
<b>Total</b>	105,000				1,372,150				1,477,150

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		105,000				1,372,150				1,477,150
<b>Total</b>		105,000				1,372,150				1,477,150

<b>Division: Electric</b>	<b>Project Priority:</b> 13
<b>Project Title:</b> Transmission & Distribution Line Maintenance	<b>Start Date:</b> 01/24
	<b>End Date:</b> 12/26
<b>Description:</b> <p>The Electric Division maintains over 4,600 utility poles throughout the transmission and distribution (T&amp;D) system. This project provides a means for engineering assessments of existing poles, engineering and design work for replacement of poles, and if needed to augment KPU crews to hire a contract linecrew or National Electrical Contractors Association (NECA) linemen to conduct pole replacement projects.</p>	

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Public Art			2,500	2,500					2,500
Design		24,550	450	25,000					25,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			225,000	225,000	150,000	500,000			875,000
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>		24,550	227,950	252,500	150,000	500,000			902,500

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				2,500	2,500					2,500
Revenue Generating Fund			24,550	225,450	250,000		500,000			750,000
<b>Total</b>			24,550	227,950	252,500		500,000			752,500

Division: Electric

Project Title: Ketchikan International Airport Upgrade

Description:

Project Priority: 14

Start Date: 01/20

End Date: 12/25

The existing armored submarine electrical cable that serves the airport is nearing the end of its useful life (installed mid-1970s). The armoring has also begun to corrode, leading to the installation of slip-on armoring on its Gravina beach landing. The cable originates behind the Bailey Powerhouse tank farm and runs through the area of the Ketchikan Shipyard, Taquan Air, Carlanna Creek and the Bailey fuel barge delivery point. Dredging in the early 1970s damaged the original KIA cable. Design and specifications have been developed, in conjunction with the State and the Borough, to install a new armored cable beginning at a location near the airport ferry terminal. Preliminary uplands work began in 2020. The submarine cable will be purchased in 2024, along with continued uplands work and material. The new cable is programmed for installation in 2025 after the State's airport ferry terminal project progresses.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Public Art			4,250	4,250					4,250
Design	46,426	50,000		50,000					96,426
Land/Property Acquisition (ROW)									
Land/Property Improvements					50,000				50,000
Construction Management					500,000				507,000
Construction	7,000								
Vehicles/Moving Equipment									
Operating Equipment	158,051	310,000	65,000	375,000					533,051
Environmental/Other Studies	14,500								14,500
Other									
Total	225,977	360,000	69,250	429,250	550,000				1,205,227

  

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				4,250	4,250					4,250
Revenue Generating Fund		225,977	360,000	65,000	425,000	550,000				1,200,977
Total		225,977	360,000	69,250	429,250	550,000				1,205,227

**Division: Electric****Project Priority:** 15**Project Title:** Transformer Purchase**Start Date:** 01/24**End Date:** 12/28**Description:**

This capital account funds the routine and preventative replacement and upgrades of both pole mounted and pad mounted transformers throughout the system. The transformer market has experienced extreme volatility since 2020. Lead times have historically been three (3) to six (6) months; now lead times are often twelve (12) to (24) months. Prices have also increased by a factor of 2-1/2 in some instances. The utility recovers the cost of transformers that are installed during customer projects, but does not recover costs for O&M replacement. It is critical that KPU strive to maintain an adequate inventory of transformers on-island.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			200,000	200,000	250,000	250,000	250,000	250,000	1,200,000
<b>Total</b>			200,000	200,000	250,000	250,000	250,000	250,000	1,200,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				200,000	200,000	250,000	250,000	250,000	250,000	1,200,000
<b>Total</b>				200,000	200,000	250,000	250,000	250,000	250,000	1,200,000

**Division: Electric**

**Project Priority:** 16

**Project Title:** Bailey Mooring Dolphin Replacement

**Start Date:** 01/22

**End Date:** 12/24

**Description:**

Fuel is delivered to the Bailey Power Plant by barge. One of the mooring dolphins used to secure the barge is of wood pile construction and at the end of its useful life. This project will replace it with a steel pile cluster. Project costs include installation of the new dolphin, removal of the old wood piles, design, permitting and other associated costs.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design					50,000				50,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction					150,000				150,000
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>					200,000				200,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						200,000				200,000
<b>Total</b>						200,000				200,000

**Division: Electric**

**Project Priority:** 17

**Project Title:** Port West Feeder Reconfiguration & Site Modification

**Start Date:** 01/23

**End Date:** 12/24

**Description:**

The Port West Substation reached end-of-life and has been partially removed from service. The substation will be reconfigured, loads sectionalized, and added to Bethe Substation as a new feeder, feeder No. 3.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design					20,000				20,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction					40,000	950,000			990,000
Vehicles/Moving Equipment					90,000				90,000
Operating Equipment					25,000				25,000
Environmental/Other Studies									
Other									
<b>Total</b>					175,000	950,000			1,125,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						175,000	950,000			1,125,000
<b>Total</b>						175,000	950,000			1,125,000

**Division: Electric****Project Priority:** 18**Project Title:** Beaver Falls Relicensing**Start Date:** 01/18**End Date:** 12/24**Description:**

The Beaver Falls Hydroelectric Project is licensed through the Federal Energy Regulatory Commission (FERC) for a term of 30 years. KPU's current license expires in 2024. To renew its FERC license, KPU began the process in 2018 with development of a Preliminary Application Document (PAD), with Notice of Intent (NOI) that was filed in 2019. Following NEPA and tribal consultations, and completion of studies, a final license application is due in 2022. The following process will require professional services for FERC regulatory work, studies and surveys to respond to FERC generated requests. Relicensing costs are highly variable and are dependent upon issues that arise during the consultation process.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other	670,000		30,000	30,000					700,000
<b>Total</b>	670,000		30,000	30,000					700,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		670,000		30,000	30,000					700,000
<b>Total</b>		670,000		30,000	30,000					700,000

**Division: Electric****Project Priority:** 19**Project Title:** Bailey Generator No. 4 Wartsila PLC Upgrade**Start Date:** 01/22**End Date:** 12/24**Description:**

The BAG4 PLC and I/O hardware are past end of life and beyond legacy support. This project will update the generator to a modern PLC and I/O hardware platform. This project will be completed in phases and requires engineering services, planning, plans and specifications, the procurement of equipment, the demolition/installation of equipment, factory acceptance testing (FAT) and commissioning.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design		20,000		20,000					20,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management		10,000		10,000					10,000
Construction									
Vehicles/Moving Equipment									
Operating Equipment		75,000		75,000					75,000
Environmental/Other Studies		10,000		10,000					10,000
Other									
<b>Total</b>		115,000		115,000					115,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund			115,000		115,000					115,000
<b>Total</b>			115,000		115,000					115,000



**Division: Electric**

**Project Priority:** 20

**Project Title:** Battery Systems and Chargers

**Start Date:** 01/20

**End Date:** 12/28

**Description:**

There are ten battery systems and chargers throughout the KPU Electric system within powerhouses and substations. Eight will be approaching end of life over the next ten (10) years. A battery system and charger failure will compromise system reliability. This project will start systematically replacing these systems. 2023 funding will replace one of these systems.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other	172,000		46,000	46,000	50,500	50,500	50,500	50,500	420,000
<b>Total</b>	172,000		46,000	46,000	50,500	50,500	50,500	50,500	420,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		172,000		46,000	46,000	50,500	50,500	50,500	50,500	420,000
<b>Total</b>		172,000		46,000	46,000	50,500	50,500	50,500	50,500	420,000

**Division: Electric****Project Priority:** 21**Project Title:** Feeder Protective Relay Upgrades**Start Date:** 01/22**End Date:** 12/28**Description:**

Feeder protective relays are at end-of-life and are in need of upgrades. Feeder protective relays provide line protection, fault locating, event analysis, and other system protection. This project will include design, engineering, equipment, installation, and testing for twenty-two (22) relays.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Design	10,000	10,000	10,000	20,000	10,000	10,000	10,000	10,000	70,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment	40,000	40,000	40,000	80,000	40,000	40,000	40,000	40,000	280,000
Environmental/Other Studies									
Other									
<b>Total</b>	50,000	50,000	50,000	100,000	50,000	50,000	50,000	50,000	350,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		50,000	50,000	50,000	100,000	50,000	50,000	50,000	50,000	350,000
<b>Total</b>		50,000	50,000	50,000	100,000	50,000	50,000	50,000	50,000	350,000

**Division: Electric****Project Priority:** 22**Project Title:** System Sectionalizers**Start Date:** 01/24**End Date:** 12/25**Description:**

This project provides funding for the acquisition of single-phase and three-phase primary reclosers, ancillary equipment, and associated engineering studies. Installing reclosers throughout the system is a step toward modernizing KPU Electric's distribution system, allowing for reduced outages, greater restoration flexibility, more accurate system data.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design		10,000		10,000	10,000	10,000			30,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment		85,000		85,000	90,000	90,000			265,000
Environmental/Other Studies									
Other		5,000		5,000					5,000
<b>Total</b>		100,000		100,000	100,000	100,000			300,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund			100,000	100,000	200,000	100,000				300,000
<b>Total</b>			100,000	100,000	200,000	100,000				300,000

**Division: Electric****Project Priority:** 23**Project Title:** Digital Radio System Upgrades**Start Date:** 01/24**End Date:** 12/24**Description:**

KPU Electric utilizes an island-wide radio system; it is an important safety tool when maintaining utility equipment. This project will update the existing Motorola radio system. The existing system has coverage issues and uses multiple channels for communication. The upgraded system will improve island-wide coverage and migrate to a single use channel.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design	6,000				10,000				16,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment					100,000				100,000
Environmental/Other Studies					10,000				10,000
Other									
<b>Total</b>	6,000				120,000				126,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		6,000				120,000				126,000
<b>Total</b>		6,000				120,000				126,000

Division: Electric

Project Title: Vehicles & Moving Equipment

Description:

This project is the purchase of (1) large bucket truck critical to maintenance of the T&D system; (2) & (3) small SUV
Purchase
1) Large Bucket Truck - estimated \$425,000 (2025)
2) Small SUV (Ford Escape-style) - estimated \$40,000 (2024)
3) F-250 Truck with snow plow- estimated \$75,000 (2024)
Replaces:
1) GMC Hi-Ranger 55 OM bucket truck #185-59; critical truck with increasing maintenance needs for chassis and aerial device
2) 2005 Chevrolet Colorado #185-86; corroded frame
3) Maintenance Truck 185-62

Project Priority: 24

Start Date: 01/24

End Date: 12/28

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			115,000	115,000	425,000	175,000		350,000	1,065,000
Total			115,000	115,000	425,000	175,000		350,000	1,065,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				115,000	115,000	425,000	175,000		350,000	1,065,000
Total				115,000	115,000	425,000	175,000		350,000	1,065,000

**Division: Electric****Project Priority:** 25**Project Title:** Operating Equipment**Start Date:** 01/24**End Date:** 12/28**Description:**

This capital account provides for the purchase of new or replacement equipment used for the operation and maintenance of electrical service.

1) Substation and Powerhouse Electronic Meters, Relays and Control Equipment	\$ 25,000
2) New Test/Indication/Recording Equipment, Repair & Recalibration	\$ 50,000
3) Meters, Probes, Hand Tools, Radios	\$ 30,000
4) Customer Current & Potential Transformers	\$ 25,000
5) Generation and Powerhouse Spare Parts	\$ 80,000
6) Control Equipment, Capacitor Bank Upgrade/Spares	\$ 20,000
7) SCADA Critical Parts	\$ 15,000
8) Radio Replacement/Parts	\$ 20,000
9) Link-Belt Rail and Grousers (Track Pads) replacement	\$ 11,000
10) Oil Filtration Equipment: oil degassing, dehydration and fine filtration	\$ 65,000

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Public Art			3,410	3,410					3,410
Design									
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment			341,000	341,000	300,000	300,000	300,000	300,000	1,541,000
Environmental/Other Studies									
Other									
<b>Total</b>			344,410	344,410	300,000	300,000	300,000	300,000	1,544,410

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				3,410	3,410					3,410
Revenue Generating Fund				341,000	341,000	300,000	300,000	300,000	300,000	1,541,000
<b>Total</b>				344,410	344,410	300,000	300,000	300,000	300,000	1,544,410

**Division: Electric****Project Priority:** 26**Project Title:** North Tongass Tree Removal**Start Date:** 01/24**End Date:** 12/24**Description:**

Ten (10) double-circuit utility poles, between mile 13.1 and mile 13.7 of North Tongass Highway, need to be replaced with new poles closer to the highway where KPU equipment can more readily maintain the line. The existing pole line and high-voltage circuits are located behind a thick band of trees that impede inspection and maintenance, and prevent an engineered design, staking, and construction from occurring. All trees between the highway and the existing pole line will be cut and removed. The subsequent engineering for the new line will then occur under Contract No. 23-05 Transmission & Distribution Engineering Services. This is a separate body of work from the utility's annual O&M tree pruning contract efforts.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			200,000	200,000					200,000
<b>Total</b>			200,000	200,000					200,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				200,000	200,000					200,000
<b>Total</b>				200,000	200,000					200,000

**Division: Electric****Project Priority:** 27**Project Title:** AMI, Meters and Meter Replacement Parts**Start Date:** 01/23**End Date:** 12/28**Description:**

The division continues phasing in the AMI meters to make available advanced metering functions, including automated billing. This project funds replacement of the division's metering equipment and AMI software & hardware. This project also funds validating metering system accuracy and replacement of residential and commercial meters that are on a 20 year replacement schedule (or 5% per year).

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			185,000	185,000	125,000	125,000	125,000	125,000	685,000
<b>Total</b>			185,000	185,000	125,000	125,000	125,000	125,000	685,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				185,000	185,000	125,000	125,000	125,000	125,000	685,000
<b>Total</b>				185,000	185,000	125,000	125,000	125,000	125,000	685,000



**Division: Electric**

**Project Priority:** 28

**Project Title:** Spare Substation Class Transformer Refurbishment

**Start Date:** 01/24

**End Date:** 12/24

**Description:**

The 5 MVA 34.5kV - 12.47kV station-class transformer replaced during from Bethe Substation upgrade project in 2012 has been stored at Point Higgins Substation. A third-party conducted a physical inspection and completed electrical testing on the unit in 2023. The unit was found to be in good working order, but in need of paint and corrosion mitigation. Funding provides for this work to be completed in 2024, after which KPU will locate a suitable long-term storage option, keeping this transformer as a high-value critical spare and/or for use in a future substation upgrade project.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			50,000	50,000					50,000
<b>Total</b>			50,000	50,000					50,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				50,000	50,000					50,000
<b>Total</b>				50,000	50,000					50,000



**Division: Electric**

**Project Priority:** 30

**Project Title:** ESRI Trouble Ticket Solution

**Start Date:** 01/24

**End Date:** 12/24

**Description:**

The Division will implement an ESRI-based work order/trouble ticket management web application, integrating with the existing geographical information system (GIS) and utilizing both desktop work stations and mobile devices in the field. This will provide a clear transfer of information to work crews when trouble calls are logged by Bailey Operations, as well as a better tracking and prioritizing for service calls during high-volume events such as storms.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			40,000	40,000					40,000
<b>Total</b>			40,000	40,000					40,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				40,000	40,000					40,000
<b>Total</b>				40,000	40,000					40,000

**Division: Electric****Project Priority:** 31**Project Title:** Bailey Generator Radiator Replacement**Start Date:** 01/24**End Date:** 12/24**Description:**

The exterior radiators for Bailey Generator No. 3 (BAG3) and No. 4 (BAG4) continually develop leaks in the core, requiring cutting and removing parts of the radiator system. Increased generator usage and subsequent increased maintenance of the cooling system may result in the eventual need for complete replacement/upgrade of the radiators and cooling systems. It may be possible to design a more cost effective solution in lieu of complete replacement. 2024 funding allows for inspections, review of replacement options, and development of replacement specifications (if necessary).

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Design		40,000		40,000					40,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction					60,000				60,000
Vehicles/Moving Equipment					240,000				240,000
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>		40,000		40,000	300,000				340,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund			40,000		40,000	300,000				340,000
<b>Total</b>			40,000		40,000	300,000				340,000



**Division: Electric****Project Priority:** 33**Project Title:** Additional Projects**Start Date:** 01/24**End Date:** 12/28**Description:**

This project represents funds for materials and labor for unidentified jobs that the division will be called upon to perform in 2023. Examples of additional projects include the installation of new transformers and banks of transformers, upgrading existing transformers and banks and upgrading secondary lift poles. These non-reimbursable projects are O&M in nature but are capital since they represent new installations.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			164,000	164,000	164,000	164,000	164,000	164,000	820,000
<b>Total</b>			164,000	164,000	164,000	164,000	164,000	164,000	820,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				164,000	164,000	164,000	164,000	164,000	164,000	820,000
<b>Total</b>				164,000	164,000	164,000	164,000	164,000	164,000	820,000

**Division: Electric****Project Priority:** 34**Project Title:** Reimbursable Projects**Start Date:** 01/24**End Date:** 12/28**Description:**

This capital account represents funds for materials for work that the division will be called upon to perform at the request of outside agencies and customers. Examples of reimbursable projects are new line extensions and damage repairs to the electrical system resulting from accidents, negligence and vandalism. The division's expectation is that such work will be reimbursed 100%. This CIP provides a means for warehouse inventory and transformer accounts to be replenished due to customer projects.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			25,000	25,000	25,000	25,000	25,000	25,000	125,000
<b>Total</b>			25,000	25,000	25,000	25,000	25,000	25,000	125,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				25,000	25,000	25,000	25,000	25,000	25,000	125,000
<b>Total</b>				25,000	25,000	25,000	25,000	25,000	25,000	125,000

**Division: Electric**

**Project Priority:** 35

**Project Title:** Bailey Exhaust Stack Re-Coating

**Start Date:** 01/23

**End Date:** 12/24

**Description:**

This project is to sandblast and paint all four Bailey diesel generator exhaust stacks with a proper high-heat anti-corrosion coating. These efforts will mitigate further corrosion that may otherwise lead to eventual high cost repairs and/or replacement. Work in development of detailed scope, specifications, and a more refined estimate to undertake the work in 2024.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design		25,000		25,000					25,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction		30,000	35,000	65,000					65,000
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>		55,000	35,000	90,000					90,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund			55,000	35,000	90,000					90,000
<b>Total</b>			55,000	35,000	90,000					90,000



**Division: Electric**

**Project Priority:** 36

**Project Title:** Electric Division Service Center

**Start Date:** 01/24

**End Date:** 12/25

**Description:**

This project provides for the acquisition of property for future construction of an Electric Division Service Center. For a number of years, the present facility located at 1065 Fair Street has been inadequate for the needs of the Electric Division.

In 1996, a study was completed by an architecture firm which determined the size and proposed facility and possible sites with the conceptual plan for the Electric Division Service Center to occur in 2003. The project was deferred through 2005 and in 2006, removed from the budget. The need for moving forward and updating/expanding the Electric Division Service Center has become more critical in that we are currently renting multiple storage facilities and rental space to accommodate material and staff.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design						500,000			500,000
Land/Property Acquisition (ROW)					1,800,000				1,800,000
Land/Property Improvements					200,000				200,000
Construction Management							250,000		250,000
Construction							4,750,000		4,750,000
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies							100,000		100,000
Other									
<b>Total</b>					2,000,000	500,000	5,100,000		7,600,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund										
Bond Funding						2,000,000	500,000	5,100,000		7,600,000
<b>Total</b>						2,000,000	500,000	5,100,000		7,600,000

**Division: Electric**

**Project Priority:** 37

**Project Title:** Silvis Tunnel Valve

**Start Date:** 01/25

**End Date:** 12/26

**Description:**

The Silvis tunnel valve leaks badly and is no longer capable of shutting off water to the penstock and Silvis Powerhouse. This has implications for project safety and the ability to maintain the plant. Given the location of the valve in a tunnel at the top of a steep slope, this will be a challenging project.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design					40,000				40,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction						400,000			400,000
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>					40,000	400,000			440,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						40,000	400,000			440,000
<b>Total</b>						40,000	400,000			440,000

**Division: Electric****Project Priority:** 38**Project Title:** Generator Rewind & Repair**Start Date:** 01/25**End Date:** 12/26**Description:**

Typical life expectancy for generator windings is 30-40 years. Generators in service beyond 50 years become a major concern. They are at an elevated risk of failure causing loss of generation and/or potential powerhouse fires. This budget is to provide funding for two rewinds and other repairs as identified through testing and inspection.

Silvis: Unit No. 1 (1968)

Beaver Falls: Unit No. 1 (2014), Unit No. 3 (2018), and Unit No. 4 (2018)

Ketchikan: Unit No. 3 (2015), Unit No. 4 (1951), and Unit No. 5 (1991)

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Design					25,000	25,000			50,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction					400,000	400,000			800,000
Vehicles/Moving Equipment									
Operating Equipment					200,000	250,000			450,000
Environmental/Other Studies					25,000	25,000			50,000
Other									
<b>Total</b>					650,000	700,000			1,350,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						650,000	700,000			1,350,000
<b>Total</b>						650,000	700,000			1,350,000



**Division: Electric**

**Project Priority:** 40

**Project Title:** Beaver Falls Governor Rehabilitation

**Start Date:** 01/25

**End Date:** 12/25

**Description:**

KPU Electric's hydro systems lack provision for isochronous operation (precise frequency control) if islanded, as sometimes occurs during outages and restoration. This proposed upgrade would provide SCADA selection for isoc/droop governor operation for Beaver Falls Nos. 3 & 4.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design					50,000				50,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment					175,000				175,000
Environmental/Other Studies					25,000				25,000
Other									
<b>Total</b>					250,000				250,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						250,000				250,000
<b>Total</b>						250,000				250,000

**Division: Electric**

**Project Priority:** 41

**Project Title:** Silvis Shaft & Turbine Overhaul

**Start Date:** 01/25

**End Date:** 12/25

**Description:**

The original turbine has had numerous repairs over its lifecycle; the seal rings are out-of-tolerance, the shaft bearing surfaces require machining, the wicket gate assembly is out-of-tolerance and other major components require upgrades. This work does not include the major electrical components.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design					50,000				50,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment					650,000				650,000
Environmental/Other Studies					50,000				50,000
Other									
<b>Total</b>					750,000				750,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						750,000				750,000
<b>Total</b>						750,000				750,000

**Division: Electric**

**Project Priority:** 42

**Project Title:** Bailey Unit No. 1 Rehabilitation

**Start Date:** 01/19

**End Date:** 12/27

**Description:**

Bailey Generator No. 1 (BAG1) was built in the 1970s. During operation in October 2018, BAG1 suffered a main bearing failure, which caused extensive damage to the powertrain. This project will fund the rehabilitation of the turbocharger, fuel delivery system and engine components including injectors, main journals, crankshaft, connecting rods, pistons, bearings and related components. The estimate assumes onsite work. The project may require additional funding if overhaul or repair of major components is not feasible or possible.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Design	11,921								
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction							300,000		311,921
Vehicles/Moving Equipment									
Operating Equipment							550,000		550,000
Environmental/Other Studies									
Other									
<b>Total</b>	11,921						850,000		861,921

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		11,921						850,000		861,921
<b>Total</b>		11,921						850,000		861,921

**Division: Electric****Project Priority:** 43**Project Title:** Clam Cove 3-Phase Upgrade**Start Date:** 01/26**End Date:** 12/27**Description:**

Future development plans in and around the Clam Cove area (Gravina Island), require a major upgrade to the electrical system in the area. Clam Cove is currently bottlenecked by the existing single-phase submarine cables, overhead single-phase line on Pennock Island, and transformer capacity on Revilla. Not only will overall system capacity need to be greatly increased on Gravina, but also three-phase will be needed for commercial loads and to properly balance amperage across the feeder's conductors. Design will be undertaken in 2026 for the construction of a three-phase line beginning from existing infrastructure at the Ketchikan International Airport. The route is approximately four (4) miles, and will be primarily overhead construction, but areas around the airport runway will require underground construction. 2027 funds show a projection for construction and material acquisition by an electrical contractor. In 2023 KPU was unsuccessful in obtaining grant funding for this line, with the driving force being a need to expand fiber infrastructure into the area.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Design						475,000			475,000
Land/Property Acquisition (ROW)									
Land/Property Improvements							100,000		100,000
Construction Management							1,900,000		1,900,000
Construction									
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies						25,000			25,000
Other									
<b>Total</b>						500,000	2,000,000		2,500,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund							500,000	2,000,000		2,500,000
<b>Total</b>							500,000	2,000,000		2,500,000



**Division: Electric**

**Project Priority:** 44

**Project Title:** Mountain Point Substation Replacement

**Start Date:** 01/25

**End Date:** 12/26

**Description:**

Mountain Point Substation, a five (5) MVA capacity station, was constructed in 1994 [Year??] and is approaching it's end of life. Scoping and design work will be required to develop construction and procurement plans in 2025. Work is anticipated to include replacement of the power transformer, voltage regulators, feeder breakers, conductors, bus work, grounding, 34.5kV circuit-switcher, control house, communications, oil containment, and fencing. The newly constructed substation, utilizing the same approximate footprint, must be constructed in a manner to allow for project load growth over a thirty (30) to forty (40) year life-span, and to also be capable of carrying some of Ketchikan Substation's feeder load in emergency situations.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design					750,000				750,000
Land/Property Acquisition (ROW)									
Land/Property Improvements						100,000			100,000
Construction Management						7,500,000			7,500,000
Construction									
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>					750,000	7,600,000			8,350,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						750,000	7,600,000			8,350,000
Bond Funding										
<b>Total</b>						750,000	7,600,000			8,350,000

**Division: Electric****Project Priority:** 45**Project Title:** Bailey Substation Replacement**Start Date:** 01/27**End Date:** 12/28**Description:**

Bailey Substation serves as both the SEAPA delivery point into the KPU system, and the main diesel generation delivery point. It last saw substation work in the late-1990's when Bailey Generator No. 4 (BAG4) was installed in the adjoining Bailey Powerhouse; prior to that was the early 1980's when the 115kV Swan Lake transmission line was brought into the station. Scoping and design work will be highly dependent on a second SEAPA delivery point being brought online, without which cost estimates will be significantly greater due to the challenges associated with maintaining hydro imports to KPU while conducting work within Bailey Substation. Work is anticipated to include replacement of diesel generator transformers, grounding transformer, 34.5kV breakers, bus work, gang-switches, grounding, conductors, communications, oil containment, and fencing.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design							1,500,000		1,500,000
Land/Property Acquisition (ROW)									
Land/Property Improvements								300,000	300,000
Construction Management								15,000,000	15,000,000
Construction									
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>							1,500,000	15,300,000	16,800,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund								1,500,000	15,300,000	16,800,000
Bond Funding										
<b>Total</b>								1,500,000	15,300,000	16,800,000

**Division: Electric****Project Priority:** 46**Project Title:** Ward Cove Substation Replacement**Start Date:** 01/28**End Date:** 12/29**Description:**

Ward Cove Substation, a five (5) MVA capacity station, was constructed in the early 1990's and is approaching it's end of life. Scoping and design work will be required to develop construction and procurement plans in 2025. Work is anticipated to include replacement of the power transformer, voltage regulators, feeder breakers, conductors, bus work, grounding, 34.5kV circuit-switcher, control house, communications, oil containment, and fencing. The newly constructed substation, utilizing the same approximate footprint, must be constructed in a manner to allow for project load growth over a thirty (30) to forty (40) year life-span, and to also be capable of carrying some of Bethe Substation and/or North Point Higgins Substation feeder loads in emergency situations. Current estimate is \$8.1M for construction, procurement, and construction management in 2029.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other								800,000	800,000
<b>Total</b>								800,000	800,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund Bond Funding									800,000	800,000
<b>Total</b>									800,000	800,000

Division: Electric

Project Title: Diesel Generator Replacement

Description:

Project Priority: 47

Start Date: 01/27

End Date: 12/28

Ketchikan does not currently have an adequate level of back-up/emergency generation to supply the community in the event of a loss of Southeast Alaska Power Agency's (SEAPA) 115kV transmission line, particularly during cold winter months. Future load growth projections will dramatically exacerbate the matter. KPU currently owns six (6) diesel generators: 4 (four) at Bailey Powerhouse, with one unit, one (1) of the two (2) 3.5MW 1964 Worthington units out of commission; and two (2) units at the North Point Higgins Substation. Conceptually, both of the Worthington generators at Bailey will be replaced by a large co-generation (co-gen) turbine unit with secondary steam generation, in the order of magnitude of 25MW. Extensive work to the powerhouse structure, fuel tank farm and delivery system, exhaust & cooling system, control & communication systems, and adjoining Bailey Substation electrical equipment (see Bailey Substation Replacement CIP), will be required.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design							4,000,000		4,000,000
Land/Property Acquisition (ROW)									
Land/Property Improvements								750,000	750,000
Construction Management								40,000,000	40,000,000
Construction									
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies							125,000		125,000
Other									
Total							4,125,000	40,750,000	44,875,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund								4,125,000	40,750,000	44,875,000
Bond Funding										
Total								4,125,000	40,750,000	44,875,000

Ketchikan Public Utilities 2024 - 2028 Capital Improvement Program										
Division: Telecommunications										
Project Title	Priority	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
<b>REGULATED</b>										
Normal Growth and Repair - Buildings	1			125,000	125,000	75,000	75,000	75,000	75,000	425,000
Normal Growth and Repair - CO Switching	2			100,000	100,000	100,000	100,000	100,000	100,000	500,000
Normal Growth and Repair - Copper Cable	3			160,000	160,000	25,000	25,000	25,000	25,000	260,000
Normal Growth and Repair - Fiber Cable	4			252,500	252,500	250,000	250,000	250,000	250,000	1,252,500
Normal Growth and Repair - CO Transmission	5			252,500	252,500	250,000	250,000	250,000	500,000	1,502,500
Normal Growth and Repair - Expansion	6			25,000	25,000	30,000	35,000	35,000	35,000	160,000
Normal Growth and Repair - Provisioning	7			15,000	15,000	200,000	100,000	100,000	100,000	515,000
Fiber to the Home	8			404,000	404,000	600,000	700,000	700,000	500,000	2,904,000
Remote Cabinets for Advanced Services	9			50,000	50,000	50,000	75,000	100,000	100,000	375,000
Core Network Upgrade	10			150,000	150,000	1,000,000	1,000,000	500,000	500,000	3,150,000
Server Environment	11			100,000	100,000	100,000	200,000	400,000	200,000	1,000,000
Multi-Dwelling Unit Projects	12			150,000	150,000	125,000	125,000	125,000	125,000	650,000
Operating Equipment	13			100,000	100,000	50,000	50,000	75,000	100,000	375,000
PC Hardware & Software	14			75,000	75,000	75,000	75,000	75,000	75,000	375,000
Power Expansion/Reclamation	15			75,000	75,000	50,000	50,000	50,000	50,000	275,000
Visual Mapping Software	16			25,000	25,000	25,000	25,000	25,000	25,000	125,000
Network Monitoring	17			100,000	100,000	100,000	100,000	100,000	100,000	500,000
Vehicle Acquisition	18			303,000	303,000	150,000	150,000	150,000	150,000	903,000
Security	19			75,000	75,000	75,000	100,000	100,000	300,000	650,000
<b>NON-REGULATED</b>										
Headend Expansion	20			50,000	50,000	50,000				100,000
Video Set Top Boxes	21					25,000				25,000
4G/LTE	22			200,000	200,000	200,000	200,000	200,000	500,000	1,300,000
Hosted	23			150,000	150,000	125,000	125,000	125,000	125,000	650,000
WiFi	24			50,000	50,000	50,000	50,000	65,000	75,000	290,000
Internet Expansion	25			150,000	150,000	100,000	150,000	150,000	600,000	1,150,000
KetchCan1 Subsea Cable Repair	26		676,500	6,765	683,265					683,265
Total			676,500	3,143,765	3,820,265	3,880,000	4,010,000	3,775,000	4,610,000	20,095,265
Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art Revenue Generating Fund			676,500	18,765 3,125,000	18,765 3,801,500	3,880,000	4,010,000	3,775,000	4,610,000	18,765 20,076,500
Total			676,500	3,143,765	3,820,265	3,880,000	4,010,000	3,775,000	4,610,000	20,095,265

**Division: Telecommunications**

**Project Priority:** 1

**Project Title:** Normal Growth and Repair - Buildings

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account provides funding for improvements to existing buildings including HVAC improvements, replacement of lighting fixtures and installation of building alarms or related security items. Additionally, the division will make significant repairs to the truck barn due to leaks in the roof and rusted and end of life siding.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other			125,000	125,000	75,000	75,000	75,000	75,000	425,000
<b>Total</b>			125,000	125,000	75,000	75,000	75,000	75,000	425,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				125,000	125,000	75,000	75,000	75,000	75,000	425,000
<b>Total</b>				125,000	125,000	75,000	75,000	75,000	75,000	425,000



**Division: Telecommunications**

**Project Priority:** 3

**Project Title:** Normal Growth and Repair - Copper Cable

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account provides funding for the replacement of deteriorated cables and construction of minor cable projects, including line extensions. This capital account also funds cable, cross arms and miscellaneous hardware required to reconnect to poles replaced by the Electric Division. The copper plant, while decreasing in importance, is aging and will need maintenance work to keep functioning optimally over the next 10 years.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			1,000	1,000	1,000	1,000	1,000	1,000	5,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			110,000	110,000	10,000	10,000	10,000	10,000	150,000
Vehicles/Moving Equipment									
Operating Equipment			49,000	49,000	14,000	14,000	14,000	14,000	105,000
Environmental/Other Studies									
Other									
<b>Total</b>			160,000	160,000	25,000	25,000	25,000	25,000	260,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				160,000	160,000	25,000	25,000	25,000	25,000	260,000
<b>Total</b>				160,000	160,000	25,000	25,000	25,000	25,000	260,000



**Division: Telecommunications****Project Priority:** 4**Project Title:** Normal Growth and Repair - Fiber Cable**Start Date:** 01/24**End Date:** 12/28**Description:**

This capital account provides funding for additional fiber optic network for business data circuits including smaller fiber projects necessary for the efficient operation of the Utility. This capital account also includes materials and labor for continued installation of fiber service drops for customers who order high bandwidth services. As circuits reach 1Gbps and beyond to 10Gbps copper circuits will no longer be a feasible option for internet customers.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Public Art			2,500	2,500					2,500
Design			5,000	5,000	5,000	5,000	5,000	5,000	25,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			137,500	137,500	137,500	137,500	137,500	137,500	687,500
Vehicles/Moving Equipment									
Operating Equipment			107,500	107,500	107,500	107,500	107,500	107,500	537,500
Environmental/Other Studies									
Other									
<b>Total</b>			252,500	252,500	250,000	250,000	250,000	250,000	1,252,500

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				2,500	2,500					2,500
Revenue Generating Fund				250,000	250,000					250,000
<b>Total</b>				252,500	252,500					252,500

Division: Telecommunications

Project Title: Normal Growth and Repair - CO Transmission

Description:

This capital account provides funding for the purchase and installation of additional intelligent Network Interface Devices (NIDS) and Optical Network Terminals (ONTs) required to deliver service to customers served via fiber optic cable; internal network fiber ports; network transmission electronics necessary to serve business customers with new private line services including digital data service, optical wide area network, T1s, etc.; finishing the migration off the division's legacy platforms, which are no longer supported, to the standard Adtran platforms for both Optical and VDSL services. In 2025 the Total Access Adtran platform will likely be end-of-life, so KPU will need to implement a new FTTH platform. Furthermore this account includes funding to maintain the cooling and power necessary to keep this network equipment running.

Project Priority: 5

Start Date: 01/24

End Date: 12/28

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Public Art			2,500	2,500					2,500
Design									
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			20,000	20,000	20,000	20,000	20,000	40,000	120,000
Vehicles/Moving Equipment			230,000	230,000	230,000	230,000	230,000	460,000	1,380,000
Operating Equipment									
Environmental/Other Studies									
Other									
Total			252,500	252,500	250,000	250,000	250,000	500,000	1,502,500

  

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				2,500	2,500					2,500
Revenue Generating Fund				250,000	250,000	250,000	250,000	250,000	500,000	1,500,000
Total				252,500	252,500	250,000	250,000	250,000	500,000	1,502,500

**Division: Telecommunications**

**Project Priority:** 6

**Project Title:** Normal Growth and Repair - Expansion

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account provides funding to upgrade, maintain and expand the division's "off island" connections, ensuring reliable services are provided to underserved, outlying areas. This project utilizes both wireless and fiber technologies to provide services to remote areas.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design									
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			5,000	5,000	6,000	7,000	7,000	7,000	32,000
Vehicles/Moving Equipment									
Operating Equipment			20,000	20,000	24,000	28,000	28,000	28,000	128,000
Environmental/Other Studies									
Other									
<b>Total</b>			25,000	25,000	30,000	35,000	35,000	35,000	160,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				25,000	25,000	30,000	35,000	35,000	35,000	160,000
<b>Total</b>				25,000	25,000	30,000	35,000	35,000	35,000	160,000

**Division: Telecommunications**

**Project Priority:** 7

**Project Title:** Normal Growth and Repair - Provisioning

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account provides funding for the introduction, upgrade, automation and integration of systems necessary to promote the enhancement of the customer service and support experience. In 2025, efforts will begin to attempt to replace the division's trouble ticketing software with a new up-to-date system.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			4,050	4,050	54,000	27,000	27,000	27,000	139,050
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment			1,650	1,650	22,000	11,000	11,000	11,000	56,650
Environmental/Other Studies									
Other			9,300	9,300	124,000	62,000	62,000	62,000	319,300
<b>Total</b>			15,000	15,000	200,000	100,000	100,000	100,000	515,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				15,000	15,000	200,000	100,000	100,000	100,000	515,000
<b>Total</b>				15,000	15,000	200,000	100,000	100,000	100,000	515,000



**Division: Telecommunications****Project Priority:** 9**Project Title:** Remote Cabinets for Advanced Services**Start Date:** 01/24**End Date:** 12/28**Description:**

This capital account provides funding for the maintenance and/or replacement of remote switching cabinets (RSC). This project also equips RSC's with remote monitoring sensors, ensuring technicians can remotely detect proper operation prior to failure. This account also funds the out-of-band network back to the Central Office. Over the next few years several remote cabinets need to be replaced.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			1,250	1,250	1,250	1,875	2,500	2,500	9,375
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			3,750	3,750	3,750	5,625	7,500	7,500	28,125
Vehicles/Moving Equipment									
Operating Equipment			45,000	45,000	45,000	67,500	90,000	90,000	337,500
Environmental/Other Studies									
Other									
<b>Total</b>			50,000	50,000	50,000	75,000	100,000	100,000	375,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				50,000	50,000	50,000	75,000	100,000	100,000	375,000
<b>Total</b>				50,000	50,000	50,000	75,000	100,000	100,000	375,000



**Division: Telecommunications****Project Priority:** 11**Project Title:** Server Environment**Start Date:** 01/24**End Date:** 12/28**Description:**

This capital account provides funding for the growth, expansion and upgrade of the division's data storage and virtualized server environment. This allows the division to standardize its server infrastructure, while collapsing the physical footprint and reducing overall power consumption. Additionally, this project allows for the deployment of VM technology to supplement the division's hosted datacenter service offerings and offer cloud based services.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			2,500	2,500	2,500	5,000	10,000	5,000	25,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			2,500	2,500	2,500	5,000	10,000	5,000	25,000
Vehicles/Moving Equipment									
Operating Equipment			95,000	95,000	95,000	190,000	380,000	190,000	950,000
Environmental/Other Studies									
Other									
<b>Total</b>			100,000	100,000	100,000	200,000	400,000	200,000	1,000,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				100,000	100,000	100,000	200,000	400,000	200,000	1,000,000
<b>Total</b>				100,000	100,000	100,000	200,000	400,000	200,000	1,000,000



**Division: Telecommunications**

**Project Priority:** 12

**Project Title:** Multi-Dwelling Unit Project

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account provides funding for the purchase of multi-dwelling unit (MDU) electronics, enabling provision of triple-play services to the 40% of KPU customers residing in apartment buildings, via a single fiber (eliminating the need to run multiple fibers into multi-dwelling units). This project will eliminate the corresponding need to install and maintain the per each fiber electronics required for multiple fiber installations.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			3,750	3,750	3,125	3,125	3,125	3,125	16,250
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			3,750	3,750	3,125	3,125	3,125	3,125	16,250
Vehicles/Moving Equipment									
Operating Equipment			142,500	142,500	118,750	118,750	118,750	118,750	617,500
Environmental/Other Studies									
Other									
<b>Total</b>			150,000	150,000	125,000	125,000	125,000	125,000	650,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				150,000	150,000	125,000	125,000	125,000	125,000	650,000
<b>Total</b>				150,000	150,000	125,000	125,000	125,000	125,000	650,000





**Division: Telecommunications**

**Project Priority:** 15

**Project Title:** Power Expansion/Reclamation

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account provides funding for the expansion of power facilities via new AC/DC filtering or reclamation of existing usage via more efficient equipment.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design			1,875	1,875	1,250	1,250	1,250	1,250	6,875
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			1,875	1,875	1,250	1,250	1,250	1,250	6,875
Vehicles/Moving Equipment									
Operating Equipment			71,250	71,250	47,500	47,500	47,500	47,500	261,250
Environmental/Other Studies									
Other									
<b>Total</b>			75,000	75,000	50,000	50,000	50,000	50,000	275,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				75,000	75,000	50,000	50,000	50,000	50,000	275,000
<b>Total</b>				75,000	75,000	50,000	50,000	50,000	50,000	275,000

**Division: Telecommunications****Project Priority:** 16**Project Title:** Visual Mapping Software**Start Date:** 01/24**End Date:** 12/28**Description:**

This capital account provides funding to enhance the division's documentation and ability to automate and distribute inside and outside plant design at the physical and logical levels. Future funding procures enhancements and labor to ensure the system is properly audited and meeting the needs of division customers.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design									
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			3,000	3,000	3,000	3,000	3,000	3,000	15,000
Vehicles/Moving Equipment			9,250	9,250	9,250	9,250	9,250	9,250	46,250
Operating Equipment			12,750	12,750	12,750	12,750	12,750	12,750	63,750
Environmental/Other Studies									
Other									
<b>Total</b>			25,000	25,000	25,000	25,000	25,000	25,000	125,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				25,000	25,000	25,000	25,000	25,000	25,000	125,000
<b>Total</b>				25,000	25,000	25,000	25,000	25,000	25,000	125,000





**Division: Telecommunications**

**Project Priority:** 19

**Project Title:** Security

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account provides funding for the development of efforts to secure the network from internal and external threats in detecting and preventing the division and its customers from unauthorized intrusions or denial of service. Detecting and responding to cyberattacks in real-time requires a specialized set of analytical software to protect the network. Security is increasingly an issue in the network world and the division's costs will increase to protect the network when the division moves to a 100G backbone.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			8,250	8,250	8,250	11,000	11,000	33,000	71,500
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction									
Vehicles/Moving Equipment									
Operating Equipment			66,750	66,750	66,750	89,000	89,000	267,000	578,500
Environmental/Other Studies									
Other									
<b>Total</b>			75,000	75,000	75,000	100,000	100,000	300,000	650,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				75,000	75,000	75,000	100,000	100,000	300,000	650,000
<b>Total</b>				75,000	75,000	75,000	100,000	100,000	300,000	650,000



**Division: Telecommunications**

**Project Priority:** 20

**Project Title:** Headend Expansion

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account provides funding for the maintenance of the Video Distribution platform in the Headend as the division phases out delivering IPTV.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			250	250	250				500
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			2,500	2,500	2,500				5,000
Vehicles/Moving Equipment			47,250	47,250	47,250				94,500
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>			50,000	50,000	50,000				100,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				50,000	50,000	50,000				100,000
<b>Total</b>				50,000	50,000	50,000				100,000

Division: Telecommunications

Project Title: Video Set Top Boxes

Description:

Project Priority: 21

Start Date: 01/24

End Date: 12/28

This capital account funds the purchase of customer set top boxes (STBs) utilized in the provision of CommVision television service. This account also funds the purchase of Personal Video Recorders (PVRs) required to provide time shifted television. The future of video delivery of STBs is very uncertain in later years and the projected requirements are only based on the assumption that KPU continues to delivery IPTV in this fashion. Additionally, in 2024 nearly 75% of all current set top boxes in use will be at the end of their useful lives and will no longer be supported by the vendor. These boxes will all need to be replaced in 2024.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Land/Property Acquisition (ROW) Land/Property Improvements Construction Management Construction Vehicles/Moving Equipment Operating Equipment Environmental/Other Studies Other					25,000				25,000
Total					25,000				25,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						25,000				25,000
Total						25,000				25,000





**Division: Telecommunications**

**Project Priority:** 24

**Project Title:** WiFi

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This capital account funds the ability for KPU to deploy WiFi in strategic locations in town; to support free and paid WiFi services for local and transient customers. This account also funds efforts to make WiFi available to residential customers who are difficult to serve using wired connectivity. WiFi is a fast growing technology and to keep pace with the industry the division will need to respond with an increase in KPU's investment in these products to provide the best service including managed WiFi.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			1,250	1,250	1,250	1,250	1,625	1,875	7,250
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			10,000	10,000	10,000	10,000	13,000	15,000	58,000
Vehicles/Moving Equipment									
Operating Equipment			38,750	38,750	38,750	38,750	50,375	58,125	224,750
Environmental/Other Studies									
Other									
<b>Total</b>			50,000	50,000	50,000	50,000	65,000	75,000	290,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				50,000	50,000	50,000	50,000	65,000	75,000	290,000
<b>Total</b>				50,000	50,000	50,000	50,000	65,000	75,000	290,000

Division: Telecommunications

Project Title: Internet Expansion

Description:

This capital account provides funding for the growth and change of the Internet distribution systems and off-island transport networks providing broadband to the division's non-regulated customers. As the division sells subsea fiber circuits and capacity to migrate the internet links to 100G, subsea fiber optical equipment maintenance and growth will be necessary in the future. In 2028, we will likely need to upgrade our coherent optical switching platform at Mountain Point.

Project Priority: 25

Start Date: 01/24

End Date: 12/28

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design			14,000	14,000	9,000	14,000	14,000	56,000	107,000
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction			17,000	17,000	11,000	17,000	17,000	68,000	130,000
Vehicles/Moving Equipment									
Operating Equipment			119,000	119,000	80,000	119,000	119,000	476,000	913,000
Environmental/Other Studies									
Other									
Total			150,000	150,000	100,000	150,000	150,000	600,000	1,150,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				150,000	150,000	100,000	150,000	150,000	600,000	1,150,000
Total				150,000	150,000	100,000	150,000	150,000	600,000	1,150,000

<b>Division: Telecommunications</b>	<b>Project Priority:</b> 26
<b>Project Title:</b> KetchCan1 Subsea Cable Repair	<b>Start Date:</b> 01/24
	<b>End Date:</b> 12/28
<b>Description:</b> <p>This capital account provides funding for the emergency repair of the KetchCan1 Subsea Cable should the cable become damaged. The North America Zone Maintenance Authority Agreement was approved by the City Council in 2022 and authorizes this annual appropriation. Funds will be used only as needed during an emergency; unexpended funds will be reappropriated each budget year.</p>	

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Public Art			6,765	6,765					6,765
Design									
Land/Property Acquisition (ROW)									
Land/Property Improvements									
Construction Management									
Construction		676,500		676,500					676,500
Vehicles/Moving Equipment									
Operating Equipment									
Environmental/Other Studies									
Other									
<b>Total</b>		676,500	6,765	683,265					683,265

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
KPU Revenue/Reserves - Public Art				6,765	6,765					6,765
Revenue Generating Fund			676,500		676,500					676,500
<b>Total</b>			676,500	6,765	683,265					683,265

<b>Ketchikan Public Utilities</b> <b>2024 - 2028 Capital Improvement Program</b>  <b>Division: Water</b>										
Project Title	Priority	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Filtration Facility - Preliminary Preparation Tasks	1	795,166	130,000	122,500	252,500					1,047,666
Water Meters - Business & Commercial Customers	2	398,480	851,520	8,515	860,035					1,258,515
Metered Water Rate Study	3			150,000	150,000					150,000
Pump Station Switchgear Improvements	4	52,750		28,500	28,500					81,250
Replace ClorTec Generating Cells	5	62,000		63,000	63,000	43,000	44,000			212,000
SCADA PLC Controllers	6	596,500		363,600	363,600					960,100
Replace Tongass Ave. Suspended Water Main	7					2,300,000				2,300,000
Replace Water St. Suspended Water Main	8					1,150,000				1,150,000
Valve Boxes - Repair of Surrounding Pavement	9			90,000	90,000	50,000	50,000	50,000	50,000	290,000
Water Service Upgrade Program	10			21,000	21,000	21,000	21,000	21,000	21,000	105,000
Peterson Street Utility Improvements	11		286,530	66,970	353,500					353,500
Harris St. Utility Improvements	12					104,000		750,000		854,000
Park Ave. Utility Improvements	13					150,000		1,950,000		2,100,000
Utility Vehicles	14			85,000	85,000	160,000	65,000	112,000		422,000
Water Distribution Grid Improvements	15			30,000	30,000	30,000	30,000	30,000	30,000	150,000
Additional Projects	16			50,000	50,000	50,000	50,000	50,000	50,000	250,000
Backflow Prevention Program	17			15,000	15,000	15,000	15,000	15,000	15,000	75,000
Skyline Water Main Replacement	18		30,000	40,000	70,000		390,000			460,000
West Fairy Chasm Replacement	19		35,000	52,000	87,000		593,000			680,000
Second Avenue Main Replacement	20					160,000		990,000		1,150,000
Hillside Road Water Main Replacement	21					106,000		644,000		750,000
Highlands Reservoir Property Acquisition	22					400,000				400,000
Ktn. Lakes Alternative Raw Water Supply Piping	23					100,000			12,000,000	12,100,000
<b>Total</b>		1,904,896	1,333,050	1,186,085	2,519,135	4,839,000	1,258,000	4,612,000	12,166,000	27,299,031
Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
KPU Reserves - Public Art				18,115	18,115					18,115
Revenue Generating Funds		1,506,416	481,530	1,017,970	1,499,500	989,000	275,000	278,000	166,000	4,713,916
SFY 2025 Funding Request						3,450,000				3,450,000
Revenue Bonds - ADWF Loan		398,480	851,520	150,000	1,001,520	200,000	491,500	2,167,000	6,000,000	10,258,500
Proposed 50% State Municipal Assistance Funding						200,000	491,500	2,167,000		2,858,500
Proposed Dam Safety Hydropower Grant									6,000,000	6,000,000
<b>Total</b>		1,904,896	1,333,050	1,186,085	2,519,135	4,839,000	1,258,000	4,612,000	12,166,000	27,280,916



**Division: Water****Project Priority:** 1**Project Title:** Filtration Facility - Preliminary Preparation Tasks**Start Date:** 01/20**End Date:** 12/25**Description:**

After reviewing the COBC reports already submitted by Ketchikan, EPA Region 10 representatives visited Ketchikan on May 18<sup>th</sup> to view KPU's disinfection process and to become familiar with our municipal watershed. During their visit, they acknowledged that significant effort has already been made to demonstrate why Ketchikan's request for a LAF is appropriate. However, they also cautioned that the EPA must have full documentation of how Ketchikan's system will be in full compliance with all LAF requirements and that the EPA will need a couple of months before completing their initial LAF evaluation. Their technical staff must also be fully prepared to discuss any challenges that might arise before issuing a favorable decision for a LAF. Since the EPA Region 10's visit, there have been no questions or comments received. However, in preparation for what will undoubtedly be the EPA's requests for supplementary information, Jacobs Engineering has been investigating the capability of KPU's existing UV and chlorination disinfection process to determine if KPU's disinfection systems could also provide the same amount of disinfection as Seattle does which is greater than is required by the Safe Water Drinking Act (SWDA). After analysis of 8 - 1/2 years of Ketchikan's disinfection data, Jacobs determined that Ketchikan provides the same amount of cryptosporidium and virus and only slightly less giardia inactivation than Seattle does 100 % of the time. Even so, Ketchikan's giardia inactivation is significantly more than is required by the SWDA.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Public Art			2,500	2,500					2,500
Environmental/Other Studies	795,166	130,000	120,000	250,000					1,045,166
<b>Total</b>	795,166	130,000	122,500	252,500					1,047,666

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
KPU Reserves - Public Art				2,500	2,500					2,500
KPU Revenues/Reserves		795,166	130,000	120,000	250,000					1,045,166
<b>Total</b>		795,166	130,000	122,500	252,500					1,047,666

Division: Water

Project Title: Water Meters - Business & Commercial Customers

Description:

Project Priority: 2

Start Date: 01/24

End Date: 12/24

As it stands now, achieving the original goal of having all of the remaining approximately 225 unmetered businesses, commercial buildings, and large residential apartment complexes fully metered before the end of 2023 is simply no longer feasible and as a result, completion of this project is now very likely delayed into late 2024. Progress has been slow during 2023 as material deliveries were delayed for both water meters as well as the radio-frequency nodes that allow them to electronically communicate and transmit information to KPU's electric meters. A total of 210 meters are now fully functional and reporting. The final water meter installation contract is planned for late 2023 that will install meters in the remainder of Ketchikan's approximately 225 unmetered businesses, commercial buildings, and large residential apartment complexes during 2024.

In addition, before this entire project becomes fully operational in 2024, the 2016 Water/ Wastewater Rate Study will need to be updated or a new study commissioned as well as amendments made to the Ketchikan Municipal Code.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Public Art			8,515	8,515					8,515
Construction	398,480	851,520		851,520					1,250,000
Total	398,480	851,520	8,515	860,035					1,258,515

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
KPU Reserves - Public Art				8,515	8,515					8,515
Revenue Bonds - ADWF Loan		398,480	851,520		851,520					1,250,000
Total		398,480	851,520	8,515	860,035					1,258,515

**Division: Water**

**Project Priority:** 3

**Project Title:** Water & Wastewater - Rate Study

**Start Date:** 01/24

**End Date:** 12/24

**Description:**

After the City Council has deliberated and established policies for amending future utility rates, the 2016 Water/ Wastewater Rate Study will need to be updated and amendments to the Ketchikan Municipal Code adopted.

The funding for this project is dependent on remaining ADWF loan funds from the Water Meters project, when complete.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Other			150,000	150,000					150,000
<b>Total</b>			150,000	150,000					150,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Bonds - ADWF Loan				150,000	150,000					150,000
<b>Total</b>				150,000	150,000					150,000

**Division: Water**

**Project Priority:** 4

**Project Title:** Pump Station Switchgear Improvements

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

Each pump station will be upgraded individually in order of highest concern to lowest concern which began in 2022 with the Baranof Zone, the Confidence Zone in 2023, and the Highlands Zone in 2024. All of the mechanical motor starters in each of KPU's pump stations have been in service between 25 to 34 years and are well overdue for an upgrade. Mechanical motor starters rely on moving contactors to supply electricity to the pump motor and the sudden in-rush of starting electric current encounters some resistance which causes some heat. Over time, starting the pumps to refill the reservoir slowly but continually degrades the contactor mechanisms. Considering the age of our existing motor contactors, direct replacement contactors are becoming very difficult to find and may become impossible. Instead, each pump station is proposed to have both mechanical motor starters replaced with modern, solid-state soft starters. Solid-state soft motor starters have a smooth acceleration to full speed, have no moving components, minimal reactive power losses, and cost about half as much as a mechanical motor starter.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Construction	52,750		28,500	28,500					81,250
<b>Total</b>	52,750		28,500	28,500					81,250

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		52,750		28,500	28,500					81,250
<b>Total</b>		52,750		28,500	28,500					81,250

**Division: Water**

**Project Priority:** 5

**Project Title:** Replace ClorTec Generating Cells

**Start Date:** 01/24

**End Date:** 12/26

**Description:**

Since September 16, 2002, KPU has been using proprietary ClorTec titanium generating cells to manufacture a 0.8% sodium hypochlorite disinfection solution. This process involves electrolytic separation by impressing a controlled amount of direct current (DC) electricity onto the titanium electrodes submerged in a saturated salt brine solution. A certain amount of degradation also occurs to the titanium generating cells themselves during their operation and they have an expected service life of about 7 years. Fortunately, Ketchikan's water is very soft with minimal hardness and buffering with the result in initial cells serving for 12 years, much longer than expected before being replaced in 2015. The Two-Point Chlorination Facility, which also uses the same design ClorTec generating cells, began service in 2016. These two facilities with 4 machines have a total of 10 cells in service that will be due for replacement soon. Beginning in 2023 with the two older 3-cell machines, start building sufficient cell inventory that will allow one ClorTech machine to be re-equipped every year followed by the 2-cell machines. Each cell is estimated to cost about \$20,000 in 2023 with a 2.5% inflation allowance for purchases made during the subsequent years.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Construction	62,000		63,000	63,000	43,000	44,000			212,000
<b>Total</b>	62,000		63,000	63,000	43,000	44,000			212,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund		62,000		63,000	63,000	43,000	44,000			212,000
<b>Total</b>		62,000		63,000	63,000	43,000	44,000			212,000

**Division: Water****Project Priority:** 6**Project Title:** SCADA PLC Controllers**Start Date:** 01/24**End Date:** 12/25**Description:**

Collectively, KPU has three Allen-Bradley Programmable Logic Controllers (PLCs) installed at the UV Facility, the Chlorination Plant, and the Ammonia Addition Facility. They are each providing continuous supervisory control over specific critical components within KPU's complex, computer-controlled, disinfection process. As identified in Contract 21-03 - Cyber Security Evaluation, this version of Allen Bradley PLCs, which were introduced in 2005, have ceased receiving any further factory support. This includes no longer maintaining any inventory of spare parts or the necessary input/output (I/O) modules. All of these critical PLC's must quickly migrate to the modern Allen-Bradley ControlLogix PLC platform before KPU's supply of replacement modules and spare parts is exhausted. Due to the world-wide effect of the coronavirus pandemic on material deliveries, the upgrade to the Water Treatment UV Facility's (CP-100) PLC wasn't completed until the summer of 2023. A contract has also been approved in 2023 to upgrade the PLC located in the Old Chlorination Building (CP-300) that will be installed in 2024. The third and final contract to upgrade PLC in the Ammonia Building (CP-400) will be issued in 2024 with its installation in 2025.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Public Art			3,600	3,600					3,600
Construction	596,500		360,000	360,000					956,500
<b>Total</b>	596,500		363,600	363,600					960,100

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
KPU Reserves - Public Art				3,600	3,600					3,600
KPU Revenues/Reserves		596,500		360,000	360,000					956,500
<b>Total</b>		596,500		363,600	363,600					960,100

**Division: Water**

**Project Priority:** 7

**Project Title:** Replace Tongass Avenue Suspended Water Main

**Start Date:** 01/24

**End Date:** 12/26

**Description:**

A Greater Ketchikan Community Request for Fiscal Year 2025 State Funding has been submitted in the amount of \$2.3-million for the replacement of 1700 feet of failing ductile iron water main hanging beneath the DOT's Tongass Avenue viaduct between 1101 Tongass (Kennedy St.) and extending to near 1638 Tongass (intersection with Tremont St.). This water main serves as the primary water transmission main for Ketchikan's West End area of the community by supplying potable water and fire protection. Installed in 1993, it has been submerged in salt water twice a day for over 30 years and is severely corroded. The mechanical fastenings are failing and the entire main and services need replacement with new 24-inch non-corrodable high density, polyethylene (HDPE) pipe.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Construction					2,300,000				2,300,000
<b>Total</b>					2,300,000				2,300,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
SFY 2025 Funding Request						2,300,000				2,300,000
<b>Total</b>						2,300,000				2,300,000

**Division: Water**

**Project Priority:** 8

**Project Title:** Replace Water Street Suspended Water Main

**Start Date:** 01/24

**End Date:** 12/26

**Description:**

A Greater Ketchikan Community Request for Fiscal Year 2025 State Funding has been submitted in the amount of \$1.15-million for the replacement of 1450 feet of failing ductile iron water main hanging beneath the DOT's Water Street viaduct between 425 Water Street and extending to 1010 Water Street (intersection with Schoenbar Road). This water main serves as the primary water transmission main for Ketchikan's West End area of the community by supplying potable water and fire protection. Installed in 1993, it has been submerged in salt water twice a day for over 30 years and is severely corroded. The mechanical fastenings are failing and the entire main and services need replacement with new 16-inch non-corrodable high density, polyethylene (HDPE) pipe.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Construction					1,150,000				1,150,000
<b>Total</b>					1,150,000				1,150,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
SFY 2025 Funding Request						1,150,000				1,150,000
<b>Total</b>						1,150,000				1,150,000



**Division: Water****Project Priority:** 9**Project Title:** Valve Boxes - Repair of Surrounding Pavement**Start Date:** 01/24**End Date:** 12/28**Description:**

In order for the Water Division to respond immediately to water main failures that occur beneath Ketchikan's streets, it must have ready access through the valve boxes to its in-line water main valves and hydrant valves in the street. In the 7-year period before 2020, when repavement of an asphalt street occurred, all cast-iron valve boxes were first lowered below the finished grade. After repavement was completed, a diamond shape was cut in the new asphalt, the valve box raised to the surface, and the surrounding diamond then refilled with warm asphalt. Unfortunately, the resultant compaction was minimal which allowed water to penetrate the new asphalt diamond. During the next subfreezing winter season, this became ice which expanded and caused the asphalt diamond to crack and fail. Since 2020, Ketchikan has ceased cutting these diamonds and brings critical valve boxes to the surface during the asphalt repaving process. This project continues the repairs made to the remaining failed asphalt diamonds until the street can be repaved correctly.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Construction			90,000	90,000	50,000	50,000	50,000	50,000	290,000
<b>Total</b>			90,000	90,000	50,000	50,000	50,000	50,000	290,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				90,000	90,000	50,000	50,000	50,000	50,000	290,000
<b>Total</b>				90,000	90,000	50,000	50,000	50,000	50,000	290,000

**Division: Water**

**Project Priority:** 10

**Project Title:** Water Service Upgrade Program

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

The water service upgrade program was initiated in 1997, and has been an ongoing division initiative to allow a number of residents to upgrade their individual water services. The division proposes to continue offering this program in 2024. Numerous water services, from the main to the residence, are in need of replacement to KPU standards. After completion of the work and inspection by the division, this program allows the customer to provide cost documentation and receive a grant-in-aid. In addition, as a result of homeowners participating in this program, KPU will assume full responsibility for future repairs within the right-of-way as long as they are not caused by negligence on the part of the property owner. The \$500 is available for work undertaken on private property and up to \$4,000 is available for work undertaken within the right-of-way has remained unchanged for 26 years while the costs of materials, particularly copper and asphalt have increased significantly.

An increase of up to \$1,000 for work undertaken on private property and up to \$6,000 for work undertaken within the right-of-way is proposed.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Construction			21,000	21,000	21,000	21,000	21,000	21,000	105,000
<b>Total</b>			21,000	21,000	21,000	21,000	21,000	21,000	105,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				21,000	21,000	21,000	21,000	21,000	21,000	105,000
<b>Total</b>				21,000	21,000	21,000	21,000	21,000	21,000	105,000

**Division: Water****Project Priority:** 11**Project Title:** Peterson St. Water Main Rebuild**Start Date:** 01/24**End Date:** 12/24**Description:**

During January 2022, Peterson Street's flawed cast-iron water main froze and broke. Installed in 1962 in a substandard manner with only 2-feet depth of cover, it depended on the adjacent residences using bleeders during the winter to not only keep their water services unfrozen but to also protect the cast-iron main. Two of these residences had been destroyed earlier due to fire and when another frozen service occurred at the end of the street, the Peterson Street main also froze. Public Works has completed a design of the Peterson Street Utility Improvement Project for both water and sewer replacement with non-corrodible plastic pipe for the entire 280-foot length.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Public Art			3,500	3,500					3,500
Construction		286,530	63,470	350,000					350,000
<b>Total</b>		286,530	66,970	353,500					353,500

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
KPU Reserves - Public Art				3,500	3,500					3,500
KPU Revenues/Reserves			286,530	63,470	350,000					350,000
<b>Total</b>			286,530	66,970	353,500					353,500

**Division: Water**

**Project Priority:** 12

**Project Title:** Harris Street Utility Improvements

**Start Date:** 01/25

**End Date:** 12/28

**Description:**

Harris Street's 855 feet of cast-iron water mains extending from Park Avenue to the end at 833 Harris were originally installed in 1956 and 1969. Since then, there has been no further progress replacing this fragile, old 6-inch cast-iron water main. Including the corrugated metal pipe sewer, both are long overdue for replacement with non-corrodible plastic pipe. There is no present funding available for its replacement but if there were, it would also be a joint venture between Public Works and the Water Division. Although Public Works' Streets Division may propose in 2024 to replace the Harris Street stacked rock retaining wall alongside Ketchikan Creek with a concrete structure, there are no plans at the present time to begin design of the Harris Street Utility Improvement Project. However, should Municipal Assistance Funding ever become available again, this would be a prime project to have already designed, submitted for ADEC approval, and gain maximum points. A preliminary cost estimate of construction is included.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design					104,000				104,000
Construction							750,000		750,000
<b>Total</b>					104,000		750,000		854,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						104,000				104,000
Proposed 50% State Municipal Assistance Funding								375,000		375,000
Proposed Revenue Bonds - ADWF Loan								375,000		375,000
<b>Total</b>						104,000		750,000		854,000

**Division: Water**

**Project Priority:** 13

**Project Title:** Park Avenue Utility improvements

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

Park Avenue's 1170 feet of ductile-iron water main extending from Freeman Street to the intersection of Bawden Street was originally installed in 1988. Although it has remained trouble-free for the past 35 years, not so the wastewater main which Public Works may propose in 2024 to replace. There is no present funding available for its replacement but if there were, it would also be a joint venture between Public Works and the Water Division to replace the ductile iron water main and services with 12-inch non-corrodible HDPE polyethylene pipe. There are no plans at the present time to begin design of the Park Avenue Utility Improvement Project. However, should Municipal Assistance Funding ever become available again, this would be a prime project to have already designed, submitted for ADEC approval, and gain maximum points. A preliminary cost estimate of construction is included.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design					150,000				150,000
Construction							1,950,000		1,950,000
<b>Total</b>					150,000		1,950,000		2,100,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						150,000				150,000
Proposed 50% State Municipal Assistance Funding								975,000		975,000
Proposed Revenue Bonds - ADWF Loan								975,000		975,000
<b>Total</b>						150,000		1,950,000		2,100,000

**Division: Water****Project Priority:** 14**Project Title:** Utility Vehicles**Start Date:** 01/24**End Date:** 12/28**Description:**

The division requests approval of funds for the purchase of a replacement Service Truck. Purchased in 2003, Service Truck 64 is worn out, has already been driven 139,336 miles, and its frame is badly rusted. This would be replaced in 2024. Vehicle 66, the single axle dump truck jointly shared by the Electric and Water Divisions was purchased in 2003. Already 20 years old, it is reaching the end of its useful service life with substantial mechanical issues. Replacement of this dump truck will be about \$160,000 and be replaced in 2025. Vehicle 46 is a 2000 Chevy Blazer that has reached the end of its useful life and would be replaced in 2026. Similarly, the oldest of the two small Kubota rubber tracked backhoes that are also jointly shared by the divisions was purchased in 2007. Supremely useful in tight situations where a large, rubber-tired backhoe won't fit, it too is reaching the end of its useful service life. A replacement small backhoe from a local vendor was estimated to cost \$98,500 in 2023. With an allowance of 2.5% annual inflation until 2027, this would be equivalent to \$112,000 in 2027.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Vehicles/Moving Equipment			85,000	85,000	160,000	65,000	112,000		422,000
<b>Total</b>			85,000	85,000	160,000	65,000	112,000		422,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				85,000	85,000	160,000	65,000	112,000		422,000
<b>Total</b>				85,000	85,000	160,000	65,000	112,000		422,000

**Division: Water**

**Project Priority:** 15

**Project Title:** Water Distribution Grid Improvements

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

Each year in conjunction with the work of other agencies, the Water Division is presented with opportunities to undertake repairs to improve the municipal water system. This account provides the funding for such improvements.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Construction			30,000	30,000	30,000	30,000	30,000	30,000	150,000
<b>Total</b>			30,000	30,000	30,000	30,000	30,000	30,000	150,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				30,000	30,000	30,000	30,000	30,000	30,000	150,000
<b>Total</b>				30,000	30,000	30,000	30,000	30,000	30,000	150,000

**Division: Water**

**Project Priority:** 16

**Project Title:** Additional Projects

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

This account provides for the cost of fire hydrants and other related materials, which are provided by the Utility in water line extensions and are then incorporated into the municipal water system. This account also provides a source of funds for repair or installing new valve boxes in City streets when Public Works' annual repaving projects occur. Although specific streets have not yet been selected for asphalt paving in 2024, there will be paving scheduled for next year. This project has been an ongoing initiative of the division to make incremental improvements in cooperation with Public Works Department projects and other community projects.

Asphalt paving costs and the associated work performed by the contractor increased significantly during 2023. An increase of \$10,000 to \$50,000 annually is proposed.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappropriated	New Funding	Total	2025	2026	2027	2028	
Construction			50,000	50,000	50,000	50,000	50,000	50,000	250,000
<b>Total</b>			50,000	50,000	50,000	50,000	50,000	50,000	250,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappropriated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				50,000	50,000	50,000	50,000	50,000	50,000	250,000
<b>Total</b>				50,000	50,000	50,000	50,000	50,000	50,000	250,000



**Division: Water****Project Priority:** 17**Project Title:** Backflow Prevention Program**Start Date:** 01/24**End Date:** 12/28**Description:**

This grant-in-aid program was established in 1995, and has been an ongoing division initiative to encourage businesses to install backflow preventers to help protect the municipal water system. This program is part of ADEC's mandated cross-connection control regulations which require the Utility to be responsible for system-wide protection. Until 2001, Ketchikan's lack of adoption and enforcement of the Uniform Plumbing Code allowed many substandard installations to be constructed within the City. Older sprinkler systems with just a single check are a particular problem. They cannot be tested and they leak contaminated water into the municipal system any time the adjacent water main is isolated and drained for repairs. Currently at least 19 systems, all installed before Ketchikan adopted the 2012 Uniform Plumbing Code which made backflow protection mandatory, are in need of backflow preventers. Participation is voluntary and the last time any business took advantage of the program was 2017. To encourage business owners to become compliant and protect the City's water system, reimbursement to the property owner is 50% of the installed cost of the backflow preventer, or \$3,000, whichever is the lesser.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Construction			15,000	15,000	15,000	15,000	15,000	15,000	75,000
<b>Total</b>			15,000	15,000	15,000	15,000	15,000	15,000	75,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- riated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund				15,000	15,000	15,000	15,000	15,000	15,000	75,000
<b>Total</b>				15,000	15,000	15,000	15,000	15,000	15,000	75,000

**Division: Water****Project Priority:** 18**Project Title:** Skyline Water Main Replacement**Start Date:** 01/24**End Date:** 12/28**Description:**

The 560-foot ductile-iron 8-inch water line serving Skyline Condominiums is an unusual proposition. It is not installed in a dedicated right-of-way but rather through a series of easements that begin by passing through the side yard of 1111 Jackson, then across Skyline Condominium's property, and finally connecting to Carlanna Lake Road. Installed in 1983, it too is continuing to fail due to electrolytic corrosion, most recently in August 2021, and is overdue for replacement with non-corrodible 10-inch HDPE polyethylene pipe. If the Proposition to issue KPU Revenue Obligations in a principal amount of \$5-million is approved in the forthcoming October's General Election, funding will be available for its replacement. Designs for this, West Fairy Chasm, Hillside and Second Avenue would be issued as a combined design contract with a single firm. Should Municipal Assistance Funding ever become available again, this would be a prime project that is already designed and has received ADEC approval for maximum points.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Construction		30,000	40,000	70,000		390,000			460,000
<b>Total</b>		30,000	40,000	70,000		390,000			460,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund			30,000	40,000	70,000					70,000
Proposed 50% State Municipal Assistance Funding							195,000			195,000
Proposed Revenue Bonds - ADWF Loan							195,000			195,000
<b>Total</b>			30,000	40,000	70,000		390,000			460,000

**Division: Water****Project Priority:** 19**Project Title:** West Fairy Chasm Main Replacement**Start Date:** 01/24**End Date:** 12/28**Description:**

This 8-inch ductile iron main was installed in 1981. The portion replaced in 2007 failed in a different manner than usually occurs. Unlike electrolytic corrosion that usually creates fairly small pits along the bottom of the pipe where the soils are moist and most conductive; in this case, the entire surface of the pipe was badly pitted. There is a possibility that the ductile iron pipe was bedded using rock that contains quite a bit of iron pyrite (fools gold) which is actually iron disulfide. Pyrites reacting with oxygen and water will form *Thiobacillus* bacteria which generate their energy through oxidizing the iron with a side effect of producing sulfuric acid, which chemically corrodes the iron pipe. Subsequent repairs made in 2017 and 2022 near the Black Bear intersection have shown similar pitting and the ductile iron sewer mains are very likely in the same condition. If the Proposition to issue KPU Revenue Obligations in a principal amount of \$5-million is approved in the forthcoming October's General Election, funding will be available for its replacement. The entire 720 foot section should be replaced with non-corrodible HDPE plastic pipe. Should Municipal Assistance Funding ever become available again, this would be another prime project that is already designed along with Skyline, Second Avenue, and Hillside projects and would have received ADEC approval for maximum points.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design Construction		35,000	52,000	87,000		593,000			87,000 593,000
<b>Total</b>		35,000	52,000	87,000		593,000			680,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund			35,000	52,000	87,000					87,000
Proposed 50% State Municipal Assistance Funding							296,500			296,500
Proposed Revenue Bonds - ADWF Loan							296,500			296,500
<b>Total</b>			35,000	52,000	87,000		593,000			680,000

**Division: Water****Project Priority:** 20**Project Title:** Second Avenue Main Replacement**Start Date:** 01/24**End Date:** 12/28**Description:**

Second Avenue's cast-iron water mains were originally installed in a number of segments between 1956 and 1958. Only the failing water and sewer portions between Madison and Adams Streets were replaced in 2001. There have been four further failures in the 1275-foot portion between Adams and White Cliff of this fragile, old 6-inch cast-iron water main which is long overdue for replacement with non-corrodible 8-inch HDPE polyethylene pipe. Should Municipal Assistance Funding ever become available again, this would be another prime project that is already designed along with the Skyline, West Fairy Chasm, and Hillside projects and would have received ADEC approval for maximum points.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Design					160,000				160,000
Construction							990,000		990,000
<b>Total</b>					160,000		990,000		1,150,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro-priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						160,000				160,000
Proposed 50% State Municipal Assistance Funding								495,000		495,000
Proposed Revenue Bonds - ADWF Loan								495,000		495,000
<b>Total</b>						160,000		990,000		1,150,000

**Division: Water**

**Project Priority:** 21

**Project Title:** Hillside Road Water Main Replacement

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

Installed in 1973, this 50-year old ductile iron main water main has reached the end of its reliable service life and is overdue for replacement with non-corrodible 8-inch HDPE polyethylene pipe. In just this single 32-foot segment of its entire 847-foot length, numerous pitting failures were discovered this March that have been caused by severe electrolytic corrosion along the bottom of the pipe. Ductile iron pipe with a 6-inch diameter only has a wall thickness of 5/16-inch and some of the pits are already over 1/8-inch deep in this 50-year old pipe which indicates further failures are likely to occur in the near future. Overall, Hillside Road's water main is another example of the need to replace our old and failing infrastructure before it reaches the failure point. Should Municipal Assistance Funding ever become available again, this would be another prime project that is already designed along with the Skyline, West Fairy Chasm, and Second Avenue projects and would have received ADEC approval for maximum points.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design Construction					106,000		644,000		106,000 644,000
<b>Total</b>					106,000		644,000		750,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund						106,000				106,000
Proposed 50% State Municipal Assistance Funding								322,000		322,000
Proposed Revenue Bonds - ADWF Loan								322,000		322,000
<b>Total</b>						106,000		644,000		750,000

**Division: Water**

**Project Priority:** 22

**Project Title:** Highlands Reservoir Property Acquisition

**Start Date:** 01/24

**End Date:** 12/28

**Description:**

Ketchikan is located in Earthquake Seismic Zone 3 (major damage). The Highlands Reservoir provides modest fire protection for the surrounding residential area including the State Jail, the Library, and other commercial buildings on Copper Ridge Lane. Ketchikan's last remaining wood-stave reservoir built in 1982 will not survive a significant earthquake, nor can it be economically retrofitted with additional shear protection. **If damaged, there are no remaining sources of wood-stave repair parts to be found anywhere.** The individual wooden staves are only held together by friction, and when they collapse during a severe earthquake, they will suddenly release 300,000 gallons of water causing significant damage downstream. Although discussions began in 2015 to acquire the necessary adjacent property at the same elevation needed to construct a modern, much larger reservoir, the sale was never completed at the proposed price of \$270,000. Once purchased, site investigations should begin in 2025 before beginning the construction of a large, modern 650,000 gallon reservoir. The design and construction funding will take at least another 8-10 years before the project is complete, and construction would begin around 2028 with an expected cost of about \$5 - 8 million.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Land/Property Acquisition (ROW)					400,000				400,000
<b>Total</b>					400,000				400,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Proposed 50% State Municipal Assistance Funding						200,000				200,000
Proposed Revenue Bonds - ADWF Loan						200,000				200,000
<b>Total</b>						400,000				400,000

**Division: Water**

**Project Priority:** 23

**Project Title:** Ketchikan Lakes Alternative Raw Water Supply Piping

**Start Date:** 01/25

**End Date:** 12/28

**Description:**

Currently, raw water from Ketchikan Lakes travels via tunnels and penstocks downhill to the existing hydro-electric power plant and water treatment plant. This project will construct new raw water supply piping along an alternative route separate from the existing system. This will allow for a long overdue inspection of the existing tunnel system (constructed in the 1920s), and much needed repair or replacement of the three existing 36" penstock gate valves without impacting the water supply for the city. The new water supply route would allow for improved raw water quality, increased hydro-electric production, and critical infrastructure redundancy. The existing tunnel system could still be utilized as a back-up water supply route as needed once inspected and repaired. The design work will occur in 2025, followed by procurement of construction funding via applying for an Alaska Drinking Water Fund loan and for Dam Safety Hydropower grants starting in 2026. Construction would occur in 2028 with an estimated cost of \$12 million.

Project Cost Category	Prior Years	Adopted 2024			Projected Requirements				Total Project
		Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Design					100,000				100,000
Construction								12,000,000	12,000,000
<b>Total</b>					100,000			12,000,000	12,100,000

Source of Funds	Fund No.	Prior Years	Adopted 2024			Projected Requirements				Total Project
			Reappro- priated	New Funding	Total	2025	2026	2027	2028	
Revenue Generating Fund - Water						100,000				100,000
Proposed Revenue Bonds - ADWF Loan									6,000,000	6,000,000
Proposed Dam Safety Hydropower Grant									6,000,000	6,000,000
<b>Total</b>						100,000			12,000,000	12,100,000