MEMORANDUM TO COUNCIL

To: Mayor and City Council Members

From: Cameron Dean, Acting Planning Director

Through: Erin Reinders, City Manager

Date: January 11, 2022

Re: First Draft of FY23-32 Capital and Major Maintenance Plan (CMMP)

SUMMARY: City Council reviews the Capital and Major Maintenance Plan (CMMP) every year. This is the first draft of the FY23-32 CMMP.

PREVIOUS COUNCIL ACTION: Council reviews drafts of the CMMP each year in January and March. In April 2021 Council approved the most recent FY22-31 CMMP, the first spanning ten years instead of five. No formal action is taken at this time.

BACKGROUND: Beginning in October, Planning worked with each department to update their capital projects. In response to City Council feedback, this year Staff revised the CMMP to minimize expenditures from the General Fund, particularly over the next several years. To that end, any General Fund projects that have not already commenced have been rescheduled to later years, employing the category rankings agreed upon by Council on November 9, 2021 (Resolution 2021-71) to prioritize them.

The Technical Advisory Committee (TAC), consisting of the City Manager, Finance Director, Public Works Director and the Planning Director, met on December 9, 2021 to review 11 projects submitted for funding in FY23. Department directors reviewed the TAC's comments on December 22, 2021.

This is not the final CMMP, but it is intended to provide Council the opportunity to view and comment on the work thus far. Comments and concerns will either be incorporated into the CMMP or discussed among the departments and administration to determine the best course of action. A second draft will be presented to Council in March. The final CMMP document will be presented for review and approval in April.

<u>DISCUSSION</u>: Last year, Council reviewed and approved the FY22-31 CMMP, with 69 projects and a total portfolio of \$231,255,491 over ten years. The first year of the CMMP is the most important because the financial figure represents what is approved to be budgeted. City Council approved \$41,898,546 to fund FY22 projects.

The FY23-32 Draft CMMP presented for your review and comment proposes 53 projects, including the Rolling Stock Replacement Plan and Facilities Maintenance Plan, at a cost of \$184,790,197 over the next ten years. The FY23 portion of the Draft CMMP proposes 11 projects for a total cost of \$30,095,019, with \$4,893,275 coming from the General Fund and \$15,983,500 from grants and other external funding. Staff proposes using the 1% Fund to offset some of what would otherwise be General Fund expenditures in FY23 by covering the remaining \$2,860,000 commitment for the Makushin Geothermal Project and \$1,000,000 for the Entrance Channel Dredging. After FY23, Staff proposes allowing the 1% Fund to grow until FY28, when it is expected to be sufficient to pay for the construction of the new Police Station at \$22,090,000.

Projects proposed for FY23 are focused on maintaining our current infrastructure and continuing currently funded projects. All three projects drawing from the General Fund or 1% Fund received funding in FY22 and are currently underway. The largest FY23 projects, the two dredging projects and Makushin Geothermal, are associated with City Council priorities. Additionally, both Makushin Geothermal and Entrance Channel Dredging will receive external funding, from OCCP and the Army Corps of Engineers respectively. External funding comprises 53% of the total FY23 requests.

Significant changes from the previous CMMP are as follows:

<u>Makushin Geothermal Project</u>: Multiple Electric projects, like the energy storage system, SCADA upgrades and submarine cable, have been removed. Where appropriate, they have been incorporated into this project, which represents all the reliability upgrades for the City electrical distribution system required to accept energy from the Makushin Geothermal Plant. The energy storage system is now being worked into the plant itself. Staff is not requesting any additional funding beyond what was planned in last year's CMMP, but OCCP's contribution of \$5,000,000 spread over FY23 and FY24 is now included. This is consistent with the current PPA as well as the associated amendments and MOA. However, OCCP has recently notified us that they may be requesting an amendment to the PPA, which if granted, would impact the contribution schedule. We will learn more later this month after meeting with OCCP.

<u>Police Station</u>: Construction for the new DPS station and fire station renovations have been delayed to FY28-29 with engineering in FY26.

<u>Captains Bay Road</u>: The Cost Benefit Analysis for Captains Bay Road is still in progress. Staff expects to revise the funding and phasing plan once it is complete later this month. For now, this project should be considered a placeholder.

<u>Facilities Maintenance Plan</u>: Staff is reviewing the criteria for including maintenance in the Facilities Maintenance Plan or other budgets. The numbers reported in the CMMP are based on the most recent draft, but should be expected to change.

<u>ALTERNATIVES</u>: This memo and presentation are for informational purposes only. Council is free to express concerns, recommendations or other comments and Staff will work to incorporate the changes into the CMMP. Staff will present the modified CMMP Draft at the scheduled meeting in March unless requested earlier.

FINANCIAL IMPLICATIONS: Council reviews the CMMP each year for an opportunity to have input and subsequently adopt the CMMP as part of the overall budgeting process. Title 6 of City Code requires the City Manager to submit a five-year capital improvement plan and budget of the proposed projects each year in conjunction with the City's operating budget. Each year, the City Council adopts the CMMP to help identify needs and set spending priorities for the coming five year period.

LEGAL: Not applicable.

STAFF RECOMMENDATION: No recommendation.

PROPOSED MOTION: No council action required.

<u>CITY MANAGER COMMENTS</u>: The Planning Department continues to do a wonderful job coordinating the CMMP Process. Staff looks forward to your feedback on this draft as we work to refine and develop the second draft.

ATTACHMENTS: FY23-32 Draft CMMP Summary Sheets and Budget Tables

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Project Description: All Generation and distribution/feeder breakers at the New and Old Powerhouse and Town Substation will be serviced by a qualified industry service company. Breakers will be assessed and serviced. A detailed report indicating condition of the specific breakers will be provided along with recommended service maintenance intervals per the relevant industry codes.

Project Need: The City operates two powerhouses and one substation. Each of these facilities has at least one primary electrical switchgear line-up. Electrical switchgear require maintenance and cleaning to ensure proper operation. Safe operation of switchgear reduces risks of arc-flash issues and improves operator safety. In the last five years, there has been very little major maintenance and testing performed at any of the powerhouses' or Town Substation's switchgear line-ups. Only general visual maintenance has been performed, except during the installation of the Unit 12 (CAT C280) project, when a modification at the Town Substation was made as part of that project. During the modification, the Contractor found that one of the substation breakers would not open/close properly. EPC onsite technicians working with EPC electrical maintenance leads in Anchorage were able to repair the breaker so that it will function properly. However, no other maintenance has been performed on this breaker or others. This project is part of the Electrical master Plan.

Development Plan & Status: This project will be funded by the Electric Proprietary Fund.

Cost Assumptions	
Engineering, Design, Construction Admin	\$150,000
Other Professional Services	
Construction Services	
Machinery & Equipment	\$30,000
Subtotal	\$180,000
Contingency (30%)	\$54,000
Total Funding Request	\$234,000

FY23-32 CMMP

Electrical Breakers Maintenance and Service

Estimated Project & Purchase Timeline

Pre Design: FY27
Engineering/Design: FY27
Purchase/Construction: FY27

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Electric Proprietary Fund	0	0	0	0	0	234,000	0	0	0	0	0	234,000
Total	0	0	0	0	0	234,000	0	0	0	0	0	234,000

Project Description: This project funds the purchase of ongoing replacement equipment for the electrical distribution system. It includes electrical switches, section cans, transformers, and cables. Electrical equipment will also be purchased for new customers and for existing customers who need to upgrade electrical service.

Project Need: Ongoing replacement of the distribution system equipment is necessary to maintain its reliability and protect the assets of the City and ensure the safe distribution of electricity. This project will correctly capture and capitalize the expenditures made to keep the system operational as well as in expand the system where necessary.

Development Plan & Status: Funding for this project will come from the Electrical Proprietary Fund retained earnings.

FY23 Cost Assumptions Engineering, Design, Construction Admin Other Professional Services Construction Services Machinery & Equipment \$100,000 Subtotal \$100,000 Contingency (0%) 0 Total Funding Request \$100,000

FY23-32 CMMP

Electrical Distribution Equipment Replacement Electric

Estimated Project & Purchase Timeline

Pre Design: NA
Engineering/Design: NA
Purchase/Construction: NA

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Electric Proprietary Fund	115,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,115,000
Total	115,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,115,000

Project Description: This project adds protective devices at the major industrial services, including APL and Horizon and at radial taps in the 35 kV system. Vacuum circuit reclosers will be installed to properly coordinate clearing times in the event of a system disturbance. This enables the rest of the system to stay on line and only remove the faulted service or radial feeder. Each location will require one recloser with dedicated relay control. The recloser will also require provisions for communications back to the NPH via radio link or fiber optic cable when available. An updated short circuit study and new protective relay settings will be required in order to properly complete the system coordination work. Engineering and installation of reclosers at five locations are assumed for this project.

Project Need: The 35 kV system does not have any intermediate level protective devices that would minimize power disruptions to customers. The system is only protected from faults via two main 35 kV re-closers at the powerhouse, two main 35 kV town substation breakers, Alyeska Seafoods recloser, Westward Seafoods recloser, Captains Bay Road tap recloser, and four main 12 kV town substation breakers. Other than primary fusing on customer transformers, the system lacks any coordinated protection scheme. Some under frequency and under voltage load shed schemes are currently employed in the system but still are limited in their ability to isolate the system in smaller manageable pieces that would minimize disturbances to as few customers as possible. The lack of adequate coordinated protection schemes and apparatus has caused system wide outages during to a fault or disturbance event most often induced by a single large industrial customer.

Development Plan & Status: Areas where intermediate level protection apparatus should be incorporated are as follows: 1. Ballyhoo Tap 2. APL 3. Horizon 4. Submarine Crossing 5. Bridge Crossing

Cost Assumptions	
Engineering, Design, Construction Admin	\$50,000
Other Professional Services	\$75,000
Construction Services	\$100,000
Machinery & Equipment	\$275,000
Subtotal	\$500,000
Contingency (30%)	\$150,000
Total Funding Request	\$650,000

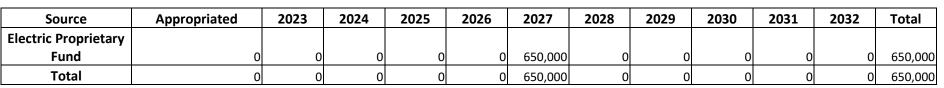
FY23-32 CMMP

Electrical Intermediate Level Protection Installation

Electric

Estimated Project & Purchase Timeline

Pre Design: FY26
Engineering/Design: FY27
Purchase/Construction: FY28



Project Description: This project consists of inspection, major maintenance, and rebuilds of the primary generator sets in the Unalaska Powerhouse. The maintenance schedule for the generator sets at the Unalaska Powerhouse is determined by engine hours. Engine inspections are also conducted by the manufacturer's mechanics to determine if engine rebuilds are needed or if they can be prolonged according to the hourly schedule.

Project Need: These generator set rebuilds are needed to maintain our equipment and the reliability of our electrical production. Our Certificate of Fitness from the Alaska Energy Authority states that we must keep all electrical generating equipment in good running condition.

Development Plan & Status: Due to the high cost of the engine rebuilds, it has been determined that the cost will be capitalized. Costs for the Generator Sets rebuilds can fluctuate greatly according to what is determined by the maintenance inspections. Costs for these rebuilds has been determined by the worst case scenario according to the history of the engines. Money that is not used for rebuilds by the end of the fiscal year, will be returned to the proprietary fund.

Cost Assumptions		
Repair & Maintenance	\$2,115,385	
Other Professional Services		
Construction Services		
Machinery & Equipment		
Subtotal	\$2,115,385	
Contingency (30%)	\$634,615	
Total Funding Request	\$2,750,000	

FY23-32 CMMP

Generator Sets Rebuild

Electric

Estimated Project & Purchase Timeline

Pre Design: NA
Engineering/Design: NA
Purchase/Construction: NA



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Electric Proprietary												
Fund	500,000	750,000	1,000,000	500,000	0	0	0	0	0	0	0	2,750,000
Total	500,000	750,000	1,000,000	500,000	0	0	0	0	0	0	0	2,750,000

Project Description: A qualified industry service company who specializes in in the maintenance of utility electrical equipment will service all power transformers at the New Power House and Town Substation. Transformers will be assessed and serviced, as required. Transformer assessment includes insulation testing, dissolved gas analysis, sweep frequency response analysis and other tests. After testing is completed, a detailed report indicating condition and test results would be provided along with recommended service maintenance intervals per the relevant industry codes. It is also understood that components on the transformers are failing due to long term exposure to the corrosive environment due to the marine atmosphere. This will necessitate a more thorough repair in order to ensure long term reliability of the power transformers.

Project Need: The City owns four power transformers at the NPH and two at the Town Substation. Three of the NPH transformers are approximately 13 years old, with the fourth only 4 years old. The transformers at the Town Substation are original from the substation construction approximately 20 years ago. While these transformers should have many more years of service, proper and timely maintenance will help prolong their lives. Testing transformers over a period of many years also allows a utility to develop a baseline for each unit, which in turn can identify a developing problem that may not otherwise be discovered until the transformer fails. Replacement of failing monitoring devices is also critical as these are often the utility's first indication of a problem. The devices can also operate to quickly deenergize a transformer should a more serious condition become present. Without operating protective devices, the utility experiences a higher risk of significant damage if a transformer fails.

Development Plan & Status : Funding for this project will come from the Electric Proprietary Fund.

\$150,000
\$150,000
\$45,000
\$195,000

FY23-32 CMMP

Large Transformer Maintenance and Service

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY24
Purchase/Construction: FY24

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Electric Proprietary												
Fund	0	0	195,000	0	0	0	0	0	0	0	0	195,000
Total	0	0	195,000	0	0	0	0	0	0	0	0	195,000

Project Description: This project is the City of Unalaska's estimated portion of reliability upgrades for the City electrical distribution system required to accept energy from the Makushin Geothermal Plant. It requires connecting multiple self-generating industrial customers to the current distribution system, installs more robust intermediate level protections, replaces the aging submarine cable at Illiuliuk Bay, upgrades numerous feeder connections and substations, and improvements to the current SCADA system and automated controls. Other funds will be set aside for legal and consulting fees associated with implementing the project.

Project Need: On August 31, 2020, the City entered into a Power Purchase Agreement (PPA) with OCCP. Section 11, Paragraph (c) of the PPA stipulates the City will be responsible for half of the next ten million dollars (\$5,000,000) after the first two million dollar cost of reliability upgrades and distribution additions needed to supply energy from the geothermal plant to Unalaska residents and businesses, and the entirety of the interconnection costs beyond 12 million dollars, if required. This project represents a community partnership to bring renewable energy to Unalaska.

Development Plan & Status: The budget for this project was estimated from required funding commitments outlined in the Power Purchase Agreement. A more accurate budget will be determined upon completion of the Intertie Study currently in progress, and based on Study findings there may be a Phase II project to accomplish the required upgrades. Funding for this project will come from the 1% and General funds.

FY23-32 CMMP

Makushin Geothermal Project Electric

Estimated Project & Purchase Timeline

Pre Design: FY22
Engineering/Design: FY22
Purchase/Construction: FY23



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
1% Sales Tax	2,860,000	2,860,000	0	0	0	0	0	0	0	0	0	5,720,000
Private Contribution	0	2,500,000	2,500,000	0	0	0	0	0	0	0	0	5,000,000
Total	2,860,000	5,360,000	2,500,000	0	0	0	0	0	0	0	0	10,720,000

Project Description: Remodel the existing DPS building after a new DPS building is constructed and the Police Department moves to the new facility.

Project Need: Constructed in 1987, the present structure is in need of HVAC, electrical and architectural upgrades. Due to lack of space, the garage for the fire apparatus also houses EMS supplies, turnout gear, the air compressor and gym. The cramped arrangement is unsafe and risks contamination from fumes.

Development Plan & Status: The existing structure will be extensively renovated for use by Fire / EMS. The department will relocate to another facility during the work. Architectural firm JYL produced an initial cost estimate of \$8,970,000 dated February 28, 2020. Funding will come from the General Fund.

FY23-32 CMMP

Fire Station Remodel

Fire

Estimated Project & Purchase Timeline

Pre Design: FY26
Engineering/Design: FY26
Purchase/Construction: FY29



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	0	0	0	10,383,896	0	0	0	10,383,896
Total	0	0	0	0	0	0	0	10,383,896	0	0	0	10,383,896

Project Description: Establish a live fire training facility in Unalaska. The structure will provide residential type response with a burn room, interior stairs leading to multiple stories, an interior fixed ladder, roof-mounted chop-out curbs, and a parapet roof guard with chain opening. The facility offers multiple training exercises including hose advancement, fire attack, search & rescue, rappelling, laddering, confined space maneuvers, and high-angle rescue operations. Currently there are no such facilities for training public or private sector organizations in Unalaska. This facility will also include a "dirty" classroom and a "clean" classroom that will allow personnel to stay out of the elements while they are instructed on the didactic portion of the lesson.

Project Need: Firefighter certification in Alaska requires a live fire training element to ensure experience fighting fires with significant heat and smoke in limited or zero visibility environments. Uncertified volunteers or paid firefighters can respond to fires, but live fire training and certification ensures that they are prepared and don't panic in real situations. No live fire facility exists in Unalaska, so firefighters travel off-island for training and certification at a cost of approximately \$30,000 per person. The training takes 10-12 weeks and volunteers must take time off from their jobs and live away from their families in order to attend. The proposed training facility can be modified for use by the police department to practice active shooter or other use-of-force situations, and also be used as a confined space rescue training facility by other City departments or private industry, and as a regional training center for other Aleutian communities.

Development Plan & Status: The proposed site is in the valley near the old chlorine building, or near the current public safety building pending action on the new proposed police station. \$12,000 was previously appropriated for a temporary training structure made from shipping containers. Cost quote for facility in 2018 dollars is \$350,000 plus \$85,000 shipping. Other costs include running electrical and water lines to the site and building construction costs for a total of \$1,513,500.

Cost Assumptions	
Other Professional Services	325,000
Engineering, Design, Construction Admin	0
Construction Services	439,231
Machinery & Equipment	400,000
Subtotal	1,164,231
Contingency (30%)	349,269
Total Funding Request	1,513,500

FY23-32 CMMP

Fire Training Center

Estimated Project & Purchase Timeline

Pre Design: FY19
Engineering/Design: FY23
Purchase/Construction: FY24



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	12,000	0	1,501,500	0	0	0	0	0	0	0	0	1,513,500
Total	12,000	0	1,501,500	0	0	0	0	0	0	0	0	1,513,500

Project Description: Build a citywide communications infrastructure to connect all City departments, facilities and systems. Currently the Information Systems department networks all facilities using outdoor wireless point to point equipment. The technology is subject to bandwidth limitations, interference, weather, and significant annual maintenance. The GCI fiber optic project presents a rare opportunity to install subsurface conduit alongside the company's trenching project throughout the island. Every facility could be interconnected over the next two years installing the City's own underground cable network while the ground is open. This will result in a significant increase of network quality (bandwidth, decreased latency, etc.), reliability, and reduced security risks. This infrastructure would also alleviate hours of internal labor costs associated with maintaining over 100 existing wireless devices throughout Unalaska. The underground network would serve all City departments, as well as SCADA, VoIP (phone system), Security Camera Systems, Disaster Recovery, Email, GIS, and Network Applications (e.g Munis, Sleuth, Rec-Trac, Cartegraph, Meter Reading Systems, RMS, WatchGuard, etc.).

Project Need: All cities are increasingly reliant on network services that require larger amounts of bandwidth. Unalaska needs a viable path forward that will serve its growing demands (e.g. GIS, Security Cameras, Disaster Recovery, etc.), greater reliability (e.g. SCADA monitoring/control systems), and future scalability (services growth). Most local governments have had high-speed underground cable networks for decades, but Unalaska has repeatedly missed opportunities to install its own underground, high-speed network. The GCI proposal will trench miles of underground cabling and could be the last feasible opportunity to install our own network, This project will upgrade city infrastructure and provide significant cost savings for installation and future operations.

Development Plan & Status: This project will be funded by the General Fund. An additional \$105,974 budgeted to the FY17 Fiber Optic Infrastructure Development Project from the Water and Wastewater proprietary funds will be moved to this project.

FY23-32 CMMP

Communications Infrastructure (Citywide)

Other

Estimated Project & Purchase Timeline

Pre Design: FY21
Engineering/Design: FY22
Purchase/Construction: FY23



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	947,013	947,013	0	0	0	0	0	0	0	0	0	1,894,026
Wastewater Proprietary												
Fund	52,987	0	0	0	0	0	0	0	0	0	0	52,987
Water Proprietary Fund	52,987	0	0	0	0	0	0	0	0	0	0	52,987
Total	1,052,987	947,013	0	0	0	0	0	0	0	0	0	2,000,000

Project Description: Expand the Aquatics Center Mezzanine and Office space to reach the walls over the loft area in the lobby. The Mezzanine consists of a multi-use open area, one office, a computer server room and janitors closet. The expansion will create about 500 sqft more usable space for use as offices. A bank of windows will improve natural light and air circulation in an otherwise very stuffy and hot room.

Project Need: PCR has added a new Coordinator and Head Lifeguard positions in 2020. The Aquatics Center lacks additional office space and the coordinator currently uses an office across the street at PCR. The head lifeguard uses the main admissions office downstairs during nonoperational hours. Programming has also increased with the new coordinator. The size of our upstairs facility constricts large events such as the Pumpkin Plunge and Youth Swim League's Award Ceremony. They become standing room only with people filtering down the stairs. Also, many requests for more free weights will take up even more space in the Mezzanine.

Development Plan & Status: In October 2018 the City Engineer, Information Systems and Maintenance did a walk through of the Mezzanine and Offices with the Aquatics Manager. A plan was discussed to achieve expansion. There are no physical obstacles to this expansion project.

Cost Assumptions	
Engineering, Design, Construction Admin	80,000
Other Professional Services	
Construction Services	635,385
Machinery & Equipment	
Subtotal	715,385
Contingency (30%)	214,616
Total Funding Request	930,000

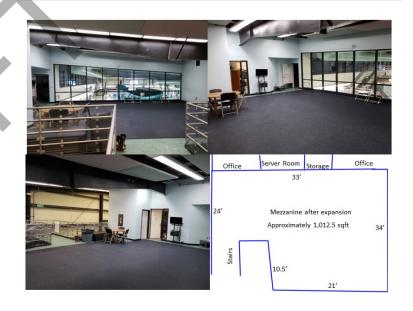
FY23-32 CMMP

Aquatics Center Mezzanine and Office Space Expansion

PCR

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY25
Purchase/Construction: FY26



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	80,000	850,000	0	0	0	0	0	0	930,000
Total	0	0	0	80,000	850,000	0	0	0	0	0	0	930,000

Project Description: Renovate Burma Road Chapel's kitchen into a commercial kitchen.

Project Need: PCR hosts numerous events in Burma Road Chapel. A commercial kitchen would greatly improve the quality and quantity of PCR's programming as well as generate revenue. The space is frequently rented for patrons to host parties, and a commercial kitchen would also improve their experience in that space.

Development Plan & Status: Funding for this project will come from the General Fund.

FY23-32 CMMP

Burma Road Chapel Kitchen Improvement

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY24
Purchase/Construction: FY24



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	150,000	0	0	0	0	0	0	0	0	150,000
Total	0	0	150,000	0	0	0	0	0	0	0	0	150,000

Project Description: New playground equipment is necessary to replace the outdated playground equipment in front of the Community Center.

Project Need: The current play structures are too close to the railing that encloses the playground from the parking lot and sidewalk.

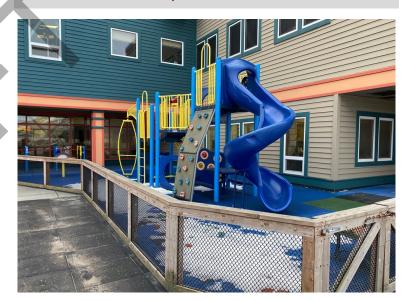
Development Plan & Status: This project will be funded by the General Fund

FY23-32 CMMP

Community Center Playground Replacement PCR

Estimated Project & Purchase Timeline

Pre Design: FY23
Engineering/Design: FY24
Purchase/Construction: FY25



Cost Assumptions	
Other Professional Services	
Engineering, Design, Construction Admin	50,000
Construction Services	180,769
Machinery & Equipment	
Subtotal	230,769
Contingency (30%)	69,231
Total Funding Request	300,000

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	300,000	0	0	0	0	0	0	0	300,000
Total	0	0	0	300,000	0	0	0	0	0	0	0	300,000

Project Description: Upgrading technology in the Community Center.

Project Need: Advances in technology offer more ways for Unalaska to be better connected via internet access. The Community Center will become a place where residents and visitors will seek to connect to these services. The meeting and exercise spaces need upgrades to meet current technology to accommodate the increasing demand. Examples include: Projectors and display monitors in the conference room and Multipurpose Room along with substantial audio/visual improvements, building-wide WIFI access and technological improvements in the Teen Room.

Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Community Center Technology Upgrades PCR

Estimated Project & Purchase Timeline

Pre Design: FY25
Engineering/Design: FY25
Purchase/Construction: FY26

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	80,000	0	0	0	0	0	0	80,000
Total	0	0	0	0	80,000	0	0	0	0	0	0	80,000

Project Description: Replacing the playground at Ounalashka Community Park (Kelty Field).

Project Need: Playgrounds are designed to last between 20 and 30 years. The Ounalash-ka Community Park playground was built in 1999 and reaches the end of its lifespan in FY28. Several structures have started to show age and the black rubber safety tiles now are easily moved out of place.

Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Community Park Replacement Playground PCR

Estimated Project & Purchase Timeline

Pre Design: FY27
Engineering/Design: FY27
Purchase/Construction: FY28



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	0	0	500,000	0	0	0	0	500,000
Total	0	0	0	0	0	0	500,000	0	0	0	0	500,000

Project Description: Replacing all the cable machines in the Cybex Room at the Community Center.

Project Need: The equipment in the Cybex Room at the Community Center is as old as the building and is starting to show it's age. In many cases, the vendor no longer carries replacement parts. When something breaks the maintenance department frequently has to fabricate parts from scratch to make the machine usable.

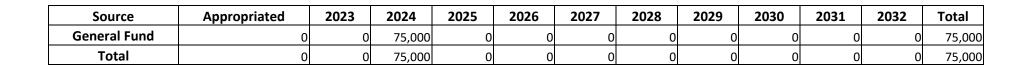
Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Cybex Room Replacement

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY24
Purchase/Construction: FY24



Project Description: With the new park at UCSD, Tutiakoff Park could be an ideal place for a dog park. Many community members already bring their dogs to the park for recreation, so including some obstacles for dogs to play and jump on would greatly benefit dog owners.

Project Need: There is no dog park on the island and PCR frequently receives requests from the public to build one.

Development Plan & Status : The park will be designed in FY25, with construction in FY26.

FY23-32 CMMP

Dog Park

Estimated Project & Purchase Timeline

Pre Design: FY25
Engineering/Design: FY25
Purchase/Construction: FY26



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	200,000	0	0	0	0	0	0	200,000
Total	0	0	0	0	200,000	0	0	0	0	0	0	200,000

Project Description: The gymnasium floor was installed when the building was built in 1996 and is lined for a full size basketball court, volleyball court and badminton court. A replacement floor would include lines for the same sports. The new floor would be made of a synthetic material so it would no longer need to be protected during special events.

Project Need: The current wooden floor recoated once a year to improve it's appearance and remove scratches. Over the past 20 years scratches have become more significant and the floor is beginning to show its age. A replacement floor will provide a better experience for patrons and greatly improve staff's ability to deliver quality programming. Special events held in the gym require PCR staff to roll out tarps to protect the wood floor. Afterward, they need to be cleaned and mopped which requires significant staff time. The planned replacement floor can be mopped and cared for much like the Multipurpose Room floor.

Development Plan & Status: During FY24 PCR staff will identify the flooring material that best meets the needs for the community. The estimated coast is \$221,000 which means that \$51,000 or 10% is planned to be spent in FY24 for design and scoping.

FY23-32 CMMP

Gymnasium Floor
PCR

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY24
Purchase/Construction: FY25



C	ost Assumptions	
	Engineering, Design, Const Admin	51,000
	Other Professional Services	
	Construction Services	158,231
	Machinery & Equipment	
	Subtotal	209,231
	Contingency (set at 30%)	62,769
	TOTAL	272,000

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	51,000	221,000	0	0	0	0	0	0	0	272,000
Total	0	0	51,000	221,000	0	0	0	0	0	0	0	272,000

Project Description: Providing access to Community Park from the southwest side.

Project Need: Many children in the neighborhood adjacent to the south side of Kelty Field cross the stream to access the park. This project would create walking access to the park in the southwest side to allow these children to safely cross the stream and gain access to the park.

Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Kelty Field SW Access

Estimated Project & Purchase Timeline

Pre Design: FY28
Engineering/Design: FY28
Purchase/Construction: FY29



	Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Ge	eneral Fund	0	0	0	0	0	0	0	500,000	0	0	0	500,000
	Total	0	0	0	0	0	0	0	500,000	0	0	0	500,000

Project Description: Turning the area in the Aquatic Center where the slide is into a Kiddie Pool/Splash Pad.

Project Need: The waterslide is the Aquatic Center's only attraction. It is not used often because it requires extra staffing and three swimming lanes are closed when running. Patrons are limited to one at a time and lifejackets are not allowed. If a child cannot reach the bottom of the pool where the slide comes out or they cannot swim to the side they are not able to use the slide. A kiddie pool with fountains and smaller slides will run continuously during open hours and with no additional staffing. Children who are not able to swim will be able to use this facility as a safe introduction to water. It will also be useable on its own. Multiple kids can use it simultaneously, and the new improvements can fit in the same space where the slide will be removed.

Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Kiddie Pool/Splash Pad

Estimated Project & Purchase Timeline

Pre Design: FY29
Engineering/Design: FY29
Purchase/Construction: FY30

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	0	0	0	0	500,000	0	0	500,000
Total	0	0	0	0	0	0	0	0	500,000	0	0	500,000

Project Description: Ounalashka Community Park was built in 1999 and is located in Unalaska Walley. It is the department's largest park and includes a softball field, outdoor basketball/tennis court, and a paved trail with some permanent exercise stations. In addition to the athletic equipment, it also has a playground, pavilion, and a snack shack which is occasionally used during PCR events. This project would build a covered multipurpose facility where the current tennis court is or somewhere close to it.

Project Need: In 2012, the court was resurfaced with plastic tiles in the hopes that they would be an improvement over the worn out court. However, they do not offer a realistic tennis surface and the court measures two feet too short. This project will:

- Improve the quality of the park's amenities.
- Evaluate the current and future facility in an effort to best accommodate Unalaska residents for the next 20 to 30 years.
- Provide a multipurpose covered facility, that can serve as an emergency shelter for the island outside the tsunami inundation zone.

Development Plan & Status: PCR staff and the Advisory Board will gauge public interest in bringing a covered facility with two regulation tennis courts. The estimated cost is \$5,629,000. \$562,000 or 10% will be spent in FY26 for design and scoping. These numbers came from Lose Design. There is grant funding available for emergency related services and the City will also seek a partnership with other island organizations to pursue available resources.

Subtotal	4,330,000
Contingency (set at 30%)	1,299,000
TOTAL	5,629,000
Less Other Funding Sources (Grants, etc.)	
Total Funding Request \$	5,629,000

FY23-32 CMMP

Multipurpose Facility PCR

Estimated Project & Purchase Timeline

Pre Design: FY25
Engineering/Design: FY26
Purchase/Construction: FY27



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	562,900	5,066,100	0	0	0	0	0	5,629,000
Total	0	0	0	0	562,900	5,066,100	0	0	0	0	0	5,629,000

Project Description: Creating a city park in the area above Westward Plant. This area of the community currently lacks any recreational amenities.

Project Need: Park development on west/southwest area of the city above Westward. The road system and utilities are already in place reducing the costs of construction. It is a natural place of a park serving an under-developed area of the city.

Development Plan & Status: Funding for this project would come from the General Fund.

FY23-32 CMMP

Park Above the Westward Plant

Estimated Project & Purchase Timeline

Pre Design: FY29
Engineering/Design: FY29
Purchase/Construction: FY30



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	0	0	0	0	3,200,000	0	0	3,200,000
Total	0	0	0	0	0	0	0	0	3,200,000	0	0	3,200,000

Project Description: Develop a comprehensive parks and recreation plan. We will hire an outside consulting firm to help us better assess the needs of our department for the next ten years and beyond.

Project Need: PCR's management team has spent a significant amount of time during the past several years developing a plan for future CMMP projects. Bringing in a consultant could help not only with prioritizing those projects, but also with programming, daily operations, and park maintenance.

Development Plan & Status: Funding will come from the General Fund. Studies do not require a contingency.

FY23-32 CMMP

Parks and Recreation Study PCR

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY24
Purchase/Construction: FY24



Cost Assumptions

Other Professional Services
Engineering, Design, Construction Admin
Construction Services
Machinery & Equipment

Subtotal \$100,000

\$100,000

\$0

Contingency (0%)

Total Funding Request \$100,000

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	100,000	0	0	0	0	0	0	0	0	100,000
Total	0	0	100,000	0	0	0	0	0	0	0	0	100,000

Project Description: Expanding the pool towards the road in order to provide space for bleachers.

Project Need: Four years ago PCR purchased a Colorado Timing System so the Aquatic Center can accommodate larger swim meets. However, the size of our Natatorium is barely able to hold two swim teams as well as spectators comfortably. This project will expand the Aquatic Center on the south side to allow for bleachers for both spectators and teams and expand on the east side to install a small warm-up cool-down, 2 lane, 15 yard, 3 foot deep pool. This will make our pool competition ready and even open up the possibilities to having Regionals.

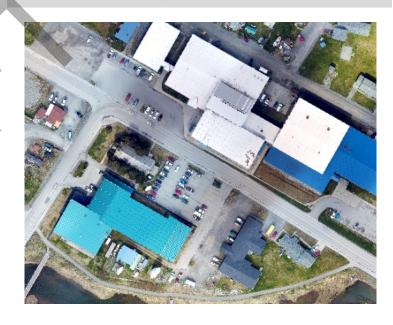
Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Pool Expansion PCR

Estimated Project & Purchase Timeline

Pre Design: FY29
Engineering/Design: FY29
Purchase/Construction: FY30



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	0	0	0	0	2,000,000	0	0	2,000,000
Total	0	0	0	0	0	0	0	0	2,000,000	0	0	2,000,000

Project Description: Installing a pump track next to Kelty Field.

Project Need: The current Skate Park is old and needs to be replaced. It has had many different paint jobs and rust has made certain areas dangerous. The current location of the Skate Park sits on real estate that can better serve the community, and discussions about various new facilities mention repurposing this property. If the site is designated for a new use, then the City needs to find a new location for wheeled recreation. Adding a pump track to Community Park would greatly increase what that park can offer and its use.

Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Pump Track

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY24
Purchase/Construction: FY25



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	100,000	0	0	0	0	0	0	0	100,000
Total	0	0	0	100,000	0	0	0	0	0	0	0	100,000

Project Description: Repairing and replacing the rebar that has rusted through the bottom of the pool, then replacing the plaster.

Project Need: A pool should be re-plastered every 10 years and even sooner with a salt water pool. Our pool has had the same plaster on it for over 20 years. Due to the life of our current plaster and Gunite corrosion the rebar underneath has become corroded and needs restoration.

Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Rebar Restoration and Re-plastering PCR

Estimated Project & Purchase Timeline

Pre Design: FY25
Engineering/Design: FY25
Purchase/Construction: FY26



Project Description: Repurpose the existing warming pool into a spa.

Project Need: The warming pool at the Aquatic Center currently has a jet system and filters that go through our filtration system. We could easily build a wall between the jets and the entrance of the pool to create an overfill spa. The only additions that would be required is a wall and a separate heating unit. This would provide heated hydrotherapy to our community members who need it.

Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Spa PCR

Estimated Project & Purchase Timeline

Pre Design: FY29
Engineering/Design: FY29
Purchase/Construction: FY30

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	0	0	0	0	200,000	0	0	200,000
Total	0	0	0	0	0	0	0	0	200,000	0	0	200,000

Project Description: In 2018 the Planning Department completed a study of the city's transportation and determined there is a need for public transit. The island population of about 4,000 residents increases to 11,000 during processing seasons. The study conducted two bus operation periods to simulate a transit system, surveys were available in multiple languages and the results indicated a high probability of ridership. This project seeks funding for a second study by professional transportation planners and engineers to conduct a more thorough analysis of how a public transportation system in Unalaska, funding sources, service areas and routes and capital equipment needed for the system.

Project Need: A large percentage of island residents and workers lack reliable and affordable transportation. Unalaska's harsh weather further hampers specific populations that would use the system including the elderly, youth, and processors, and the high cost of vehicle ownership and maintenance on the island is another consideration. The 2018 Transportation Study identified several transportation grants that could fund up to 80% of the cost annually. The project should also explore partnerships with the Q-Tribe, OC, and private island corporations to leverage investment and grant opportunities. Furthermore, the project will evaluate whether the system should be operated by a Transit Authority, a one of the major investors, city, tribal department, or otherwise.

Development Plan & Status: The FY25 expenditure is \$200,000 from the General Fund. Studies do not require a contingency budget. Based on the study, the expectation is to identify grants available to further lower the cost, potentially up to 80% with the correct partners taking the wheel.

Cost Assumptions

Other Professional Services
Engineering, Design, Construction Admin
Construction Services
Machinery & Equipment

Subtotal \$200,000

\$200,000

\$0

Contingency (30%)

Total Funding Request \$200,000

FY23-32 CMMP

Unalaska Public Transportation Study Planning

Estimated Project & Purchase Timeline

Pre Design: FY25
Engineering/Design: NA
Purchase/Construction: NA



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	200,000	0	0	0	0	0	0	0	200,000
Total	0	0	0	200,000	0	0	0	0	0	0	0	200,000

Project Description: This project will remove material from the channel bar that crosses the entrance of lliuliuk Bay before vessels can enter Dutch Harbor. The dredging will increase the depth of water to accommodate the draft of large vessels transiting the channel and utilizing the Unalaska Marine Center and facilities inside of Dutch Harbor. The City will work with the US Army Corps of Engineers to help fund, design, construct, and maintain this project. This project already completed the biological assessments to gauge the impact of dredging to beachfronts inside of the harbor. The USACE has secured a congressional authorization to fund the dredging. This will allow deeper draft vessels to enter into Dutch Harbor including tankers, container ships and break-bulk vessels. The project will reduce delays of current vessels entering and departing the harbor due to storm surge and swell in the channel. The project estimates removal of 23,400 CY of material.

Project Need: The bar that crosses the entrance channel limits vessels entering the port by their draft rather than need for services in the community. Many vessels passing the community cannot enter our port due to water depth. Depending upon sea conditions the keel depth for vessels currently utilizing the port can be as little as one meter to the bottom according to the Alaska Marine Pilots. Storm conditions, especially northerly wind, undulates the sea height and makes the situation worse by causing vessels to pitch resulting in contact with the sea floor where the bar is located. Dredging the entrance channel to a sufficient depth and width will alleviate the safety concerns and allow more vessel/cargo traffic into the port, increasing Unalaska's economic utility.

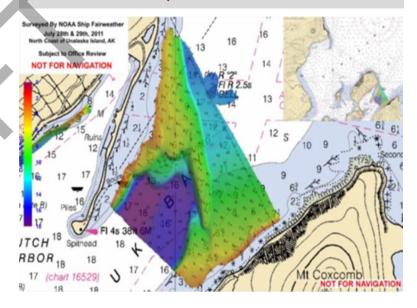
Development Plan & Status: The City conducted a Cost Benefit Analysis of the project to prove its benefit to the nation and that it is worthy of the USACE's and expenses. This project moved steadily forward to assimilate other key pieces, such as the biological assessment, impacts of dredging, and any impacts dredging may have on the inner harbor. In 2020 the US Congress authorized funding to the project with USACE and made available \$27M. The City needs a match of just \$9M, bringing the total cost to \$38.456M. It will be completed in phases over FY22 and FY23.

FY23-32 CMMP

Entrance Channel DredgingPorts

Estimated Project & Purchase Timeline

Pre Design: FY19
Engineering/Design: FY20
Purchase/Construction: FY22-23



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
1% Sales Tax	1,000,000	1,000,000	0	0	0	0	0	0	0	0	0	2,000,000
General Fund	5,994,500	3,494,500	0	0	0	0	0	0	0	0	0	9,489,000
Grant	13,483,500	13,483,500	0	0	0	0	0	0	0	0	0	26,967,000
Total	20,478,000	17,978,000	0	0	0	0	0	0	0	0	0	38,456,000

Project Description: Construct a new, state of the art Public Safety facility on the Skate Park site between the Clinic and City Hall.

Project Need: Presently, the Department of Public Safety (DPS) structure is outdated and presents safety and operational issues. It does not support all the needs of the department. Issues include:

- Inadequate staff support, office, interview and observation space; and no locker rooms for uniform changes, post-exposure decontamination, etc.
- Building access restrictions required for Police operations constrain volunteer firefighter use.
- Detainee entrance is a narrow passage to parking area that conflicts with emergency response.
 The undersized booking area is potentially hazardous for staff with unruly prisoners. The remote evidence drop-off/storage raises chain of custody and security issues.
- Crowded dispatch area provides little security from the public lobby, creating a safety and confidentiality issue.
- The fire apparatus garage houses EMS supplies, turnout gear, air compressor and gym. This creates potential contamination hazards from fumes.

Development Plan & Status: Architectural firm, Jensen Yorba Lott (JYL), was retained to conduct a functional assessment of the existing DPS facility with the following goals and objectives:

- Analyze comprehensive space needs for current/future program requirements
- Identify short-comings of the existing facility to meet those requirements

tion.

- Analyze building for building codes, conditions, and expansion opportunities
- Provide schematics for building expansion or new const that meets DPS program requirements and will serve the City of Unalaska for the next 50 years
- Identify potential sites suitable for consideration for a new DPS complex

 Based on Council input and budget amendment, pre-design scope increased to bring new proposed

 Police Station and renovation of the existing building to a high level pre-design including geotech,

 schematic drawings, and cost estimates. Results of pre-design will support full design and construc-

Discovery Drilling finished last boring 9-3-19 bringing total drilled length to 500'. Preliminary findings show fill on top of geotextile fabric underlain with soft lakebed material. Bedrock was found between 11.5' deep near Airport Beach Road and 49.5' deep on the opposite (north) side of the Skate Park. The Final Geotech Report for the Skate Park site was received on 12-23-19. Corey Wall with JYW (formerly JYL) presented findings to Council via teleconference during the July 14, 2020 Council meeting wherein Council requested additional sites be evaluated.

DPS Director King and DPW Director Cohenour evaluated 4 additional sites. Corey Wall reviewed findings at November 10, 2020 Council meeting and DPW Director lead discussion on 4 additional sites with input from Director King. No further direction from Council has been given.

FY23-32 CMMP

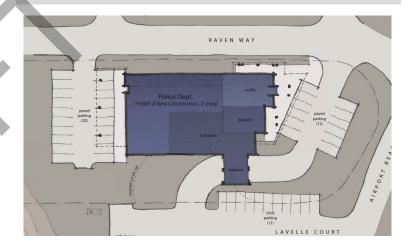
Police Station

Public Safety

Estimated Project & Purchase Timeline

Pre Design: FY20

Engineering/Design: FY21
Purchase/Construction: FY23



Cost Assumptions	
Other Professional Services	278,250
Engineering, Design, Construction Admin	3,000,000
Construction Services	20,309,250
Machinery & Equipment	1,502,500
Subtotal	25,090,000
Contingency (included in Architect's estimate)	
Total Funding Request	25,090,000

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
1% Sales Tax	0	0	0	0	0	0	22,090,000	0	0	0	0	22,090,000
General Fund	0	0	0	0	3,000,000	0	0	0	0	0	0	3,000,000
Total	0	0	0	0	3,000,000	0	22,090,000	0	0	0	0	25,090,000

Project Description: In 2019 the PCR side of the Burma Road Chapel showed signs of rotten siding along the lower portions of the exterior wall. Architect Corey Wall, JYL Architects, crawled under the structure and took photos of the rim joists. Evidence of rot was observed below the building. The original scope of this project included removing shingles, roof boards, and damaged insulation, and installing framing for eave soffit ventilation/increased depth for insulation, insulation to R-30, new roof boards, re-roofing the building, and painting the new eaves and trim. Additional roof repairs will be required in the future. An imminent need is the repair of the rotten sill plate, rim joists, and exterior siding on the PCR side of the Burma Rd Chapel.

Project Need: Exterior siding, structural sill plates and rim joists all show signs of rot and need replacement. Also, the facility lacks proper insulation and ventilation, which causes snow melt on the roof that runs down to the eave, freezes and causes ice dams to separate the walls and roof. As ice dams grow larger, the water from the melting snows backs up and leaks between wood shingles into the building causing water damage. In FY08, metal flashing was installed on the eaves over the electric cable system to heat the flashing. A new roof will protect the facility for at least another 30 years.

Development Plan & Status: DPW's Facilities Maintenance budget will replace the metal flashing and heat trace on the eave as an interim solution when the present system fails. The rotten siding along the lower portions of the exterior wall and sill plate repair work began in November 2020 and will be completed by the end of FY21. The major roof repairs will be conducted in FY24.

Cost Assumptions	
Engineering, Design, Const Admin	70,000
Other Professional Services	10,000
Construction Services	373,077
Machinery & Equipment	-
Subtotal	453,077
Contingency (set at 30%)	135,923
TOTAL	589,000

FY23-32 CMMP

Burma Road Chapel Upgrades

Public Works

Estimated Project & Purchase Timeline

Pre Design: FY20
Engineering/Design: FY21
Purchase/Construction: FY24



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	110,000	0	479,000	0	0	0	0	0	0	0	0	589,000
Total	110,000	0	479,000	0	0	0	0	0	0	0	0	589,000

Project Description: This major infrastructure improvement project constructs drainage, utilities, and pavement out Captains Bay Road to the entrance of Offshore Systems, Inc. (OSI). The work spans approximately 2 .5 miles of drainage improvements from Airport Beach Road to OSI, 2.5 miles of road realignment/paving/walkways/lighting from Airport Beach Road to OSI, and 1.3 miles of water/sewer/electric utility extensions from Westward to OSI.

Project Need: Captains Bay Road is a primary transportation route for Westward Seafoods, North Pacific Fuel, Northland Services, Offshore Systems Inc., and several small businesses as well as residential areas. The road facilitates high traffic for heavy vehicles used by the fishing and support industries vital to the community's economy. In 2011 the City held public meetings regarding the Road Improvement Master Plan. Residents and industry representatives discussed Captains Bay Road and hazards its high road crown creates. The crown is needed for adequate drainage. There was strong support for improvements to Captains Bay Road. Captains Bay Road also presents future growth opportunities for the community as identified in the City's Comprehensive Plan.

Development Plan & Status: This project is grant dependent. Drainage and paving estimates are based on the Ballyhoo Road Drainage & Electrical Upgrades Project. The utility expansion estimate is based on the Henry Swanson Drive Road & Utilities Project's utility construction costs, and other recent materials and equipment costs.

HDR Engineering is the consultant chosen to perform a Cost-Benefit Analysis (CBA) of the proposed Captains Bay Road Paving and Utilities Upgrade Project. The purpose of the CBA is to justify project costs to support funding requests to upgrade, pave, illuminate, provide pedestrian walkway, and extend utilities. The range of project benefits includes reduced road maintenance costs, reduced vehicle maintenance costs, reduced vehicle emissions, improved safety, travel time savings, avoided road closures (rock slides, avalanches, accidents). The project is at 65% design and broken into 3

segments over a yet to be determined number of phases. The CBA will compare project costs against project benefits by segment and by phase to enable decisions to be made regarding the best approach going forward.

Cost Assumptions	
Engineering, Design, Construction Admin	\$5,370,000
Other Professional Services	\$300,000
Construction Services	\$35,637,692
Machinery & Equipment	
Subtotal	\$41,307,692
Contingency (30%)	\$12,392,308
Total Funding Request	\$53,700,000

FY23-32 CMMP

Captains Bay Road & Utility Improvements

Public Works

Estimated Project & Purchase Timeline

Pre Design: FY20
Engineering/Design: FY21
Purchase/Construction: FY24

Captains Bay Road and Utilities



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Electric Proprietary Fund	0	0	0	9,600,000	0	0	0	0	0	0	0	9,600,000
General Fund	2,000,000	0	0	0	9,600,000	9,600,000	0	0	0	0	0	21,200,000
Grant	0	0	4,000,000	0	0	0	0	0	0	0	0	4,000,000
Wastewater Proprietary												
Fund	0	0	0	9,600,000	0	0	0	0	0	0	0	9,600,000
Water Proprietary Fund	0	0	0	9,600,000	0	0	0	0	0	0	0	9,600,000
Total	2,000,000	0	4,000,000	28,800,000	9,600,000	9,600,000	0	0	0	0	0	54,000,000

Project Description: Construct paint booth / body shop at DPW to facilitate appropriate repairs on City vehicles.

Project Need: Presently body work is accomplished inside the mechanic shop. Employees are exposed to toxic dust particles and hazardous paint spray. A stand alone bay or building is very much needed to protect the health and well-being of employees in the shop as well as in the rest of the building. Air gets circulated throughout the building exposing all employees and visitors to toxic paint fumes.

Development Plan & Status: General fund. Construct an add-on bay to the existing Wash Bay or construct the equipment storage building and include a body shop.

FY23-32 CMMP

DPW Paint Booth / Body Shop
Public Works

Estimated Project & Purchase Timeline

Pre Design: FY23
Engineering/Design: FY24
Purchase/Construction: FY25



Cost Assumptions

25,000
10,000
750,000
0
785,000
235,500
1,020,500



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	25,000	995,500	0	0	0	0	0	0	0	1,020,500
Total	0	0	25,000	995,500	0	0	0	0	0	0	0	1,020,500

Project Description: Continuous exposure to the elements shortens the useable life of the City's rolling stock (dozers, dump trucks, graders, snow plows) and increases maintenance costs. Winter rain & slush build-up freeze on the equipment and creates excessive morning prep time clearing hubs, hydraulics, windshields, lights, and back-up horns prior to equipment use. This building will maintain an interior temperature at approximately 45F using a heated slab and keep equipment from freezing overnight and ready.

Project Need: A heated building will improve winter emergency response time and increase the capabilities of Public Works. The new storage building will extend the life of trucks, trailers, graders, snow plows, and snow blowers. The building will also decrease maintenance expense.

Development Plan & Status: Land is available on the Public Works site. A building permit and State Fire Marshall approval will need to be obtained. The project will require a new 1.5 inch water service and a new 6 inch sewer drain along with a new electrical service. Funding will come from the General Fund. The project is estimated at \$200 per square feet. Building costs are then expected to be \$1,545,830.

Cost Assumptions	
Engineering, Design, Const Admin	195,000
Other Professional Services	34,000
Construction Services	960,000
Machinery & Equipment	100
Subtotal	1,189,100
Contingency (set at 30%)	356,730
TOTAL	1,545,830
Less Other Funding Sources (Grants, etc.)	-
Total Funding Request \$	1,545,830

FY23-32 CMMP

Equipment Storage Building

Public Works

Estimated Project & Purchase Timeline

Pre Design: FY23
Engineering/Design: FY24
Purchase/Construction: FY25





Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	195,000	1,350,830	0	0	0	0	0	0	0	1,545,830
Total	0	0	195,000	1,350,830	0	0	0	0	0	0	0	1,545,830

Project Description: Controls system upgrades to new N4 platform for 11 City owned buildings.

Project Need: New N4 upgrades necessary to stay current with technology.

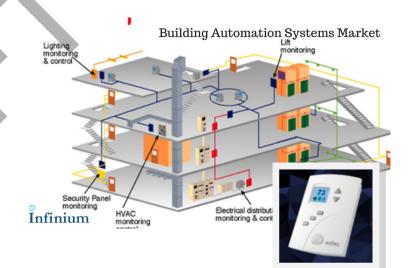
Development Plan & Status: In FY20, our HVAC controls contractor, Long Building Technologies, gave us an informal no cost quote. In FY23 we will work with Long to refine the scope and get a solid cost estimate. In FY24, Project implementation will occur.

FY23-32 CMMP

HVAC Controls Upgrades - 11 City Buildings
Public Works

Estimated Project & Purchase Timeline

Pre Design: FY23
Engineering/Design: FY23
Purchase/Construction: FY24



Cost Assumptions

Engineering, Design, Const Admin 2,000
Other Professional Services 500
Construction Services 331,213
Machinery & Equipment 0
Subtotal 333,713

Contingency (set at 30%) 100,114

TOTAL 433,827

Less Other Funding Sources (Grants, etc)

Total Funding Request 433,827

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	433,827	0	0	0	0	0	0	0	0	433,827
Total	0	0	433,827	0	0	0	0	0	0	0	0	433,827

Project Description: Phase 1 Master Plan: This project formally establishes an Unalaska Public Trails System Master Plan by identifying and mapping existing network of sidewalks, trails, paths, former Jeep trails, 17B Easements, and gravel walkways. Consistent signage with community branding can also be designed with project wide plans & specifications. Phase 2 Construction: Provides consistent signage design, wayfinding, improves existing trails network, and establishes trail system maintenance protocols.

Project Need: Unalaska's existing array of walking and biking pathways are haphazard, unmarked, lack maintenance, have no amenities, and could be used better for community activity and attracting tourists.

Development Plan & Status: The Planning Commission held a public meeting on September 19, 2019 in which they reviewed the City of Unalaska's existing Capital and Major Maintenance Plan projects, heard public testimony, and found that a Public Trails System is reasonable and in the public's interest. In conformance with the goals and objectives of the Comprehensive Plan, the Planning Commission recognized the need for a coordinated, well-defined trails system in Unalaska to support health, wellness, quality of life, and recreation and passed Resolution 2019-10. On November 12, 2019, the City Council was presented with the Planning Commission's Resolution 2019-10 and consented to including the Public Trails System Project on the FY21-25 CMMP for their consideration. Collaborative partnership with Ounalashka Corporation (OC), the Qawalangin Tribe (Q-Tribe), and the Bureau of Land Management (BLM) will be key to a successful Public Trails System. Grant opportunities exist through the Alaska Safe Routes to School program; preliminary discussions with the Q-Tribe indicates potential cost sharing opportunities. Additional monies will come from the General Fund.

Cost Assumptions

Engineering, Design, Const Adr	nin 100,000
Other Professional Services	0
Construction Services	0
Machinery & Equipment	0
Su	btotal 100,000
Contingency (set at 30%)	0
7	OTAL 100,000

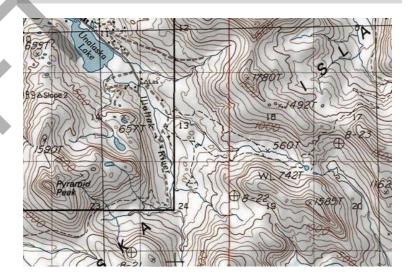
FY23-32 CMMP

Public Trails System

Public Works

Estimated Project & Purchase Timeline

Pre Design: FY21
Engineering/Design: FY26
Purchase/Construction: FY26



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	100,000	0	0	0	0	0	0	100,000
Total	0	0	0	0	100,000	0	0	0	0	0	0	100,000

Project Description: Remove the UST (underground storage tank) at City Hall and replace with an approved above ground fuel oil tank.

Project Need: UST's are known to rust and begin leaking. UST's are no longer approved and this tank needs to be replaced with an above ground tank with proper leak detection.

Development Plan & Status: This project will be funded by the General Fund.

FY23-32 CMMP

Underground Fuel Tank Removal / Replacement Public Works

Estimated Project & Purchase Timeline

Pre Design: FY28
Engineering/Design: FY28
Purchase/Construction: FY28



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
General Fund	0	0	0	0	0	0	60,000	0	0	0	0	60,000
Total	0	0	0	0	0	0	60,000	0	0	0	0	60,000

Project Description: This project includes the engineering, permitting, and dredging at the faces of the Light Cargo Dock and the Unalaska Marine Center positions 1-7. It will complement other capital projects in the Port, namely the dredging of the entrance channel. Larger vessels will be able to enter into Dutch Harbor, and now we need to ensure the depth of the dock face coincides with the new traffic. The depths at the Unalaska Marine Center vary from -32 and -45 at MLLW. Dredging at the face of the Unalaska Marine Center would create a constant -45 from Positions 1-7. This will accommodate deeper draft vessels throughout the facility. The existing sheet pile is driven to approximately -58. and dredging to -45 will not undermine the existing sheet pile. This project is primarily to accommodate large class vessels. Many of the vessels currently calling the Port must adjust ballast to cross the entrance channel and dock inside the harbor. This project timeline coincides with other dredging projects, including the Light Cargo Dock (LCD). Dredging in front of the Light Cargo Dock will also make this dock more accessible for current customers. Vessels using the Light Cargo Dock that draws more than 22'. must place another vessel between the dock face and their vessel in order to get enough water under the keel.

Project Need: The completion of this dredging will enhance current and future operations by creating usable industrial dock face that is designed for vessels in varying lengths and tonnage

Development Plan & Status: This dredging project supports the recently completed UMC position 3 and 4 Replacement project and the dredging of the entrance channel. The estimates for dredging of the Light Cargo Dock include 6000 CY of dredging and 3100 CY of shot rock slope protection. The dredging material will not be removed; however, it will be relocated on the sea floor. Dredging at UMC estimated to relocate 6000 CY of dredging material and will require approximately 1200 CY of shot rock slope protection.

Cost Assumptions	
Other Professional Services	
Engineering, Design, Construction Admin	109,650
Construction Services	1,932,000
Machinery & Equipment	
Subtotal	2,041,650
Contingency (30%)	612,495
Total Funding Request	2,654,145

FY23-32 CMMP

LCD & UMC Dredging
Ports

Estimated Project & Purchase Timeline

Pre Design: FY19
Engineering/Design: FY23
Purchase/Construction: FY23



LIGHT CARGO DOCK, BARGE, TRAMPER
BARGE IS BEING USED AS A "SPACER" TO PROVIDE DEPTH FOR
TRAMPER

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Ports Proprietary												
Fund	109,650	2,544,495	0	0	0	0	0	0	0	0	0	2,654,145
Total	109,650	2,544,495	0	0	0	0	0	0	0	0	0	2,654,145

Project Description: This project is the purchase and installation of a new restroom for the Unalaska Marine Center. Water and Sewer service has been stubbed in at UMC for the purpose of installation of public restrooms for dock workers and passengers. City of Unalaska Code requires connecting to City services where available. These services are available at UMC

Project Need: For many years dock workers have used portable toilets. These outhouses require service from the Wastewater Treatment Staff. This project will provide a minimum of four toilets bring the City into compliance with City Code and EPA regulations. The facilities will improve working conditions for employees and visitors.

Development Plan & Status: This project involves a preexisting design and the restroom will tie into a pre-poured foundation that connects into existing utility services. The current cost assumption is from Public Works, for approximately \$700 per square foot. This would be a from-scratch creation, a worst case scenario for funding. Ports is sourcing predesigned and built options to lower the cost.

Cost Assumptions	
Engineering, Design, Construction Admin	50,000.00
Other Professional Services	25,000.00
Construction Services	332,815.00
Machinery & Equipment	
Subtotal	407,815.00
Contingency (30%)	122,345.00
Total Funding Request	530,160.00

FY23-32 CMMP

Restroom Unalaska Marine Center Ports

Estimated Project & Purchase Timeline

Pre Design: FY23
Engineering/Design: FY24
Purchase/Construction: FY25



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Ports Proprietary												
Fund	0	0	50,000	480,160	0	0	0	0	0	0	0	530,160
Total	0	0	50,000	480,160	0	0	0	0	0	0	0	530,160

Project Description: This project will design the Unalaska Marine Center Cruise ship terminal. This Terminal will provide an open sheet pile design dock with mooring dolphins to the South of Unalaska Marine Center Position 7.

Project Need: Cruise ship activity is on the rise in Unalaska and is proving to be a benefit to local commerce. The cruise ships do not have a place to reserve with certainty as the Unalaska Marine Center is designated for industrial cargo and fishing operations. We have been fortunate to be able to accommodate most of the cruise ship activity, but the passenger count and number of vessel call s is on the rise. With this in mind, a cruise ship terminal would allow for dedicated cruise ship berthing. It would eliminate passengers walking through and around cargo operations. During the off season for cruise ships this facility could be used for fishing vessel offloads. This would allow additional revenue opportunity and still bolster commerce through committed berthing for the cruise ship industry.

Development Plan & Status: ROM for geotechnical is about \$300,000 and ROM for design is \$600,000.

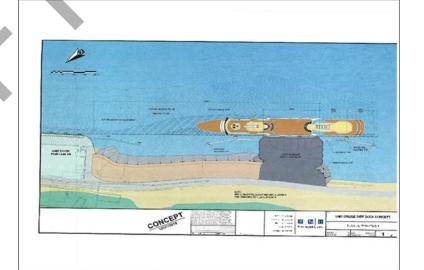
Cost Assumptions Other Professional Services Engineering, Design, Construction Admin 1,300,000 Construction Services 13,000,000 Machinery & Equipment Subtotal 14,300,000 Contingency (30%) 4,290,000 Total Funding Request 18,590,000

FY23-32 CMMP

UMC Cruise Ship Terminal

Estimated Project & Purchase Timeline

Pre Design: FY20
Engineering/Design: FY24
Purchase/Construction: FY26



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Ports Proprietary												
Fund	390,000	0	910,000	0	17,290,000	0	0	0	0	0	0	18,590,000
Total	390,000	0	910,000	0	17,290,000	0	0	0	0	0	0	18,590,000

Project Description: The pre-design, design, and construction of a Gasifier to incinerate garbage.

Project Need: The Landfill cells are reaching capacity. Unalaska has about five years to come up with alternatives for the City's garbage or must find a new place to build new cells. Thermal processing of solid waste is the future of Landfills. Gasification is a process that uses a feedstock, often municipal or industrial waste, for a thermo chemical conversion of waste in high heat. This is done in a low oxygen environment and causes material breakdown at the molecular level. Once the molecular breakdown occurs, the gasification process recombines them to form a syngas, a gas similar to natural gas.

Development Plan & Status: Combination of grant funds and Landfill proprietary funds. Future funding is to be determined at a later date.

Cost Assumptions

 Engineering, Design, Const

 Admin
 800,000

 Other Professional Services
 100,000

 Construction Services
 3,000,000

 Machinery & Equipment
 2,500,000

 Subtotal
 6,400,000

 Contingency (set at 30%)
 1,920,000

 TOTAL
 8,320,000

FY23-32 CMMP

Solid Waste Gasifier Solid Waste

Estimated Project & Purchase Timeline

Pre Design: FY21
Engineering/Design: FY22
Purchase/Construction: FY25



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Solid Waste Proprietary												
Fund	300,000	400,000	0	7,620,000	0	0	0	0	0	0	0	8,320,000
Total	300,000	400,000	0	7,620,000	0	0	0	0	0	0	0	8,320,000

Project Description: This project will evaluate solutions to prevent the grease from entering the scum decant tank. This CMMP item includes the costs for an engineering evaluation and implementation of the improvements.

Project Need: At times, there can be large mats of accumulated grease in the clarifier. While skimming, the water/grease mixture is directed down the clarifier drainpipe to the scum decant tank. The water/grease mixture enters the scum decant tank, and the grease re-suspends in the water, allowing the grease to flow under the baffle with the water into the tank drain to the lift station. The grease then congeals and becomes a maintenance challenge for the lift station.

Development Plan & Status: The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. Funding for this project will come from the Wastewater Proprietary Fund.

Cost Assumptions		
	Other Professional Services	
	Engineering, Design, Construction Admin	50,000
	Construction Services	60,000
	Machinery & Equipment	60,000
	Subtotal	170,000
	Contingency (15%)	25,500
_	Total Funding Request	195,500

FY23-32 CMMP

Scum Decant Tank Wet Well Improvements

Wastewater

Estimated Project & Purchase Timeline

Pre Design: FY26
Engineering/Design: FY27
Purchase/Construction: FY28



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Wastewater Proprie-												
tary Fund	0	0	0	0	0	50,000	145,500	0	0	0	0	195,500
Total	0	0	0	0	0	50,000	145,500	0	0	0	0	195,500

Project Description: This project involves the engineering to evaluate and installing potential improvements to the two WWTP clarifiers. The evaluation should include a review of the record drawings, a site tour of the plant, and an evaluation of alternatives to optimize the configuration of the clarifiers.

Project Need: After screening, the wastewater is rapidly mixed with a coagulant and polymer to improve the settling process in the clarifier. The wastewater in the first clarifier portion is clear and settles well. As the wastewater effluent passes under the clarifier baffle wall at the discharge end, the water quality degrades by becoming turbid. It is presumed that the settled sludge is carried downstream to the chlorine contact tanks, where it settles. This is very inefficient and requires the operators to clean the tank at least twice a month to prevent excessive sludge buildup. The stirred sludge also requires more chlorine for disinfection and, as a result, more sodium bisulfate for dechlorinating. Significant benefit will be realized in both labor and chemical costs if the clarifier's performance is improved.

Development Plan & Status: The budget for this project was estimated from the Wastewater Master Plan and is an estimate at this point in the process. A more accurate budget will be determined during the design phase of the project. Funding for this project will come from the Wastewater Proprietary Fund.

Cost Assumptions	
Engineering, Design, Construction Admin	\$50,000
Other Professional Services	
Construction Services	\$100,000
Machinery & Equipment	\$100,000
Subtotal	\$250,000
Contingency (30%)	\$75,000
Total Funding Request	\$325,000

FY23-32 CMMP

Wastewater Clarifier Baffling Improvements Wastewater

Estimated Project & Purchase Timeline

Pre Design: FY28
Engineering/Design: FY29
Purchase/Construction: FY30



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Wastewater Proprie-												
tary Fund	0	0	0	0	0	0	0	50,000	275,000	0	0	325,000
Total	0	0	0	0	0	0	0	50,000	275,000	0	0	325,000

Project Description: This project includes the purchase and installation of back-pressure valves to replace the existing check valves in the system.

Project Need: When the sludge flocculator starts, the discharge valve positions are opened and closed several times, and plant staff verifies that the valve position is closed upon operation. If the valves are left open, the contents of the solids storage tank can drain to the influent pump station. The WWTP staff are careful to set the valves to the appropriate position. Several options were evaluated by the City's WWTP design consultant and it was determined that replacing the sludge pump check valves with backpressure valves was the best option. This would prevent the sludge from getting past the Penn Valley sludge pumps and exiting the plant if the valve is accidently left open. Proposed for FY25 – FY26

Development Plan & Status: The budget for this project was estimated from the Wastewater Master Plan and is an estimate at this point in the process. A more accurate budget will be determined during the design phase of the project. Funding for this project will come from the Wastewater Proprietary Fund.

Cost Assumptions		
	Engineering, Design, Construction Admin	\$20,000
	Other Professional Services	
	Construction Services	\$30,000
	Machinery & Equipment	\$20,000
	Subtotal	\$70,000
	Contingency (30%)	\$21,000
	Total Funding Request	\$91,000

FY23-32 CMMP

Wastewater Sludge Pump Check Valve Replacement

Wastewater

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY25
Purchase/Construction: FY26



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Wastewater Proprie-												
tary Fund	0	0	0	20,000	71,000	0	0	0	0	0	0	91,000
Total	0	0	0	20,000	71,000	0	0	0	0	0	0	91,000

Project Description: This project will replace approximately 600 linear feet of cast iron pipe segment under Biorka Drive with ductile iron. The replacement of this pipe was designed already by Regan Engineering, but the project was dropped when paving of Biorka Drive, which was the driving factor, was shelved.

Project Need: This section of water pipe was installed in the 1940's with cast iron pipe, the last section of cast iron pipe in Unalaska's water system. This line has been repaired in the past and has been is service longer than its life expectancy. Cast iron is a brittle material that is also susceptible to corrosion. Cast iron pipe often fails catastrophically when subjected to excessive pressure surge or ground movement. Pipe failure becomes more frequent with a cast iron pipe as it ages and loses wall thickness to corrosion. Emergency repairs after an unexpected catastrophic pipe failure are usually many times more expensive than proactive pipe replacement due to incidental damage, overtime, lack of in-stock repair materials, and general disruption of utility operations. Preventative replacement of pipes with high failure risks is a good practice in order to avoid the more costly emergency repair situation brought by a pipe failure.

Development Plan & Status: The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. Funding for this project will come from the Water Proprietary Fund. Total cost for this project is estimated at \$396,500.

Cost Assumptions	Engineering, Design,	
	Construction Admin	\$30,000
	Other Professional Services	
	Construction Services	
	Machinery & Equipment	\$275,000
	Subtotal	\$305,000
	Contingency (30%)	\$91,000
	Total Funding Request	\$396,500

FY23-32 CMMP

Biorka Drive Cast Iron Waterline Replacement Water

Estimated Project & Purchase Timeline

Pre Design: FY27
Engineering/Design: FY28
Purchase/Construction: FY28



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Water Proprietary												
Fund	0	0	0	0	0	0	396,500	0	0	0	0	396,500
Total	0	0	0	0	0	0	396,500	0	0	0	0	396,500

Project Description: This project consists of the inspection of the water line crossing from East Point Road to West Broadway Avenue. This underwater pipe crossing to Amaknak Island at East Point is a 12-inch ductile iron pipe installed in 1977. HDR recommends conducting a "See Snake" system inspection for this water line due to its invasive approach to pipe inspections. PICA Corporation's See Snake system is the only insertion type tool that HDR was able to identify that offers pipe wall condition assessment capability in a 12-inch pipe application. See Snake is a device that uses an electromagnetic Remote Field Technology to measure wall thickness and detect internal and external flaws as it moves through a pipe. See Snake can also detect and locate external stress on a pipe due to soil movement, bridging, inadequate support, rippling, or denting.

Project Need: The East Point Crossing pipe is one of only two water system connections to Amaknak Island. Should this pipe ever fail, the consequences could be a shutdown of all water service to Amaknak Island until the break can be located and isolated. This would be especially devastating during processing season. Flow of water to Amaknak Island could be restricted for a period of at least several weeks while waiting for the pipe to be repaired by divers or a new pipe installed. If the break occurs under the Alyeska Seafoods facility the washout from the flow could cause structural damage to buildings. Given the criticality, age, and seawater exposure of this pipe, action is recommended to perform condition assessment and/or replace the pipe.

Development Plan & Status: The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. Funding will come from the Water proprietary Fund.

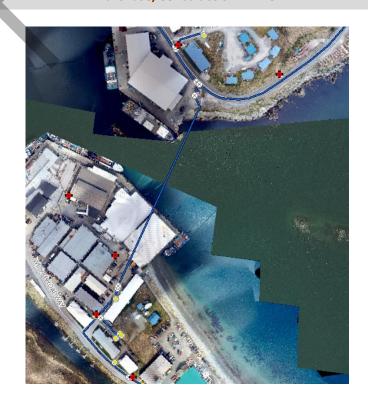
Cost Assumptions		
	Engineering, Design, Construction Admin	
	Other Professional Services	\$50,000
	Construction Services	\$75,000
	Machinery & Equipment	
	Subtotal	\$125,000
	Contingency (30%)	\$37,500
	Total Funding Request	\$162,500

FY23-32 CMMP

East Point Crossing Water Line InspectionWater

Estimated Project & Purchase Timeline

Pre Design: FY23
Engineering/Design: FY23
Purchase/Construction: FY23



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Water Proprietary												
Fund	0	162,500	0	0	0	0	0	0	0	0	0	162,500
Total	0	162,500	0	0	0	0	0	0	0	0	0	162,500

Project Description: This project will increase the height of the existing dam on the north side of Icy Lake and construct a new dam on the south end of Icy Lake. The 2006 Golder-letter describes the project as follows:

- The existing sheet pile dam at the north end of the lake would be raised 5 feet and the dam length increased from 67 to 98 feet.
- A new sheet pile dam, approximately 6 feet tall by 193 feet long would be built at the south end of the lake.
- Additional grading and riprap would be required for a larger spillway apron at the north dam.
- Riprap would be required for wave erosion protection of the south dam.
- Grouting at the north and south dams would be required to seal fractured bedrock.

Project Need: Additional capacity for raw water storage at Icy Lake would be beneficial to help span processing seasons that occur during the more prolonged and frequent dry weather periods. Water system operators use the lake to "bank" surplus water between processing seasons when demand is low, so that by the beginning of a processing season the utility is starting out with a full lake. During heavy processing the lake level gradually drops as demands exceed the combined capacity of Icy Creek and the wells, and operators release lake water into Icy Creek. This operational strategy has been stressed in recent years when dry weather coincides with processing seasons and the lake is drawn nearly empty. If the lake is run empty and the water system is not able to meet demands, water rationing and reducing fish processing throughput or diverting fish to processors in other communities would be required.

Development Plan & Status: The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. Funding for this project will come from the Proprietary Fund and State Grants.

Cost Assumptions	
Engineering, Design, Construction Admin	\$150,000
Other Professional Services	\$30,000
Construction Services	\$2,020,000
Machinery & Equipment	
Subtotal	2,200,000
Contingency (30%)	\$660,000
Total Funding Request	2,860,000

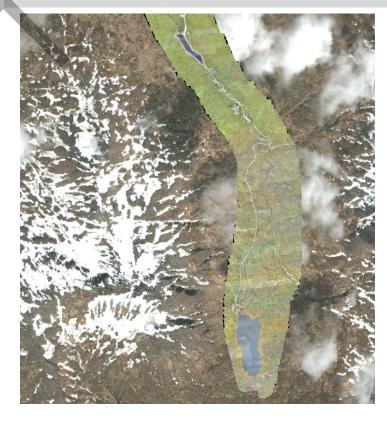
FY23-32 CMMP

Icy Lake Capacity Increase & Snow Basin
Diversion

Water

Estimated Project & Purchase Timeline

Pre Design: FY31
Engineering/Design: FY32
Purchase/Construction: FY32



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Water Proprietary												
Fund	0	0	0	0	0	0	0	0	0	2,860,000	0	2,860,000
Total	0	0	0	0	0	0	0	0	0	2,860,000	0	2,860,000

Project Description: This project will survey Icy Lake reservoir consisting of a topographic survey of the shoreline and shallow areas around the lake. A water resources engineer will determine the precise stage-storage (Depth and Volume) relationship and curve and analyze the hydrographic and topographic survey results. The stage-storage curve should allow operators to quickly determine the exact volume of available water at various water surface elevations. The stage-storage relationship could also be added to the utility SCADA system so the SCADA system automatically calculates and displays the lake's volume of available water in real-time.

Project Need: Icy Lake provides impounded raw water storage for Unalaska and is used during periods of low water and/or significant demand. The Lake is impounded behind a sheet pile dam at its outlet. Water from the lake is released using a remote controlled valve at the sheet pile dam to fill the Icy Creek Reservoir. The exact volume of the lake is unknown but estimates range from between 52 MG and 61 MG, with a volume of 57 MG at the spillway elevation. Without accurate bathymetry of the lake bottom, the Utility must estimate stage-storage of the lake in order to know how much available water remains in the lake at any given water surface elevation. If the Utility's estimate of remaining water is overly conservative, the result could be premature water rationing, impacting utility customers, especially the fish processors. If the Utility overestimates the remaining water, then it could run out of water faster than expected. An accurate hydrographic survey of the lake would enable precise determinations of the available water and more effectively manage water supplies.

Development Plan & Status: The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. The funding for this project will come from the Proprietary Fund.

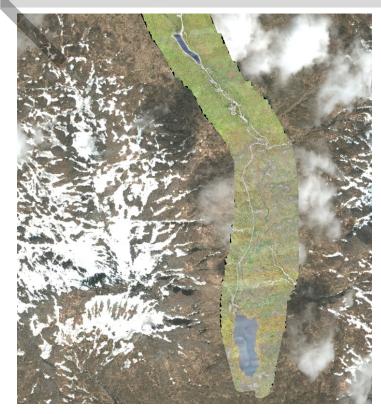
Cost Assumptions		
	Engineering, Design, Construction Admin	\$5,000
	Other Professional Services	\$41,000
	Construction Services	
	Machinery & Equipment	\$10,000
	Subtotal	\$56,000
	Contingency (30%)	\$16,800
	Total Funding Request	\$72,800

FY23-32 CMMP

Icy Lake Hydrographic Survey
Water

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY24
Purchase/Construction: FY24



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Water Proprietary												
Fund	0	0	72,800	0	0	0	0	0	0	0	0	72,800
Total	0	0	72,800	0	0	0	0	0	0	0	0	72,800

Project Description: This project would add water metering and a booster pump system at the Agnes Beach PRV station. The water metering will aid in leak detection, and utility management and understanding of where water is being used and when. The booster pump will provide water supply redundancy to Westward Seafoods, one of the largest customers in the water system, as well as redundancy to any further development along Captain's Bay Road.

Project Need: The Agnes Beach PRV station drops the pressure of water from Pressure Zone 2 (Captains Bay Road) to Pressure Zone 3 (Town) hydraulic grade. The station also allows for water to flow to the higher elevation areas of Haystack Hill with an option to allow external boosting in the event of a fire demand on Haystack Hill. The current PRV set up does not allow any method of measuring water flow through the station and severely limits the ability to reverse flow from the wells in the lower pressure Zone 3 to higher pressure Zone 2 (Westward Seafoods). A booster pump will allow for the pumping of water from the lower pressure zone to the higher pressure zone in the event of a shutdown of the Pyramid Water Treatment Plant due to, for example, high turbidity.

Development Plan & Status: The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. Funding for the project will come from the Water proprietary Fund.

Cost Assumptions		
	Engineering, Design, Construction Admin	\$50,000
	Other Professional Services	\$20,000
	Construction Services	\$160,000
	Machinery & Equipment	\$70,000
	Subtotal	\$300,000
	Contingency (30%)	\$90,000
	Total Funding Request	\$390,000

FY23-32 CMMP

Water

Installation of Meter and Booster Pump at Agnes Beach PRV Station

Estimated Project & Purchase Timeline

Pre Design: FY28
Engineering/Design: FY29
Purchase/Construction: FY30

	Total Fullullig Key	uest	75.	90,000								
Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Water Proprietary												
Fund	0	0	0	0	0	0	0	70,000	320,000	0	0	390,000
Total	0	0	0	0	0	0	0	70,000	320,000	0	0	390,000

Project Description: This project will construct a second 2.6 million gallon Chlorine Contact Tank (CT Tank) next to the existing CT Tank. It will provide much needed clear water storage and enable maintenance to be done on the interior of either tank regardless of process seasons or weather. The project will require the installation of approximately 200 ft. of 16" DI water main, 200 ft. of 8" DI drain line, and 100 ft. each of 1" sample line and control wiring

Project Need: Additional storage provided by this tank will help to meet many of the issues mentioned in the 2004 Water Master Plan. Even in the Water Distribution System's current configuration, this new tank will provide an additional 960,000 gallons of the additional 4 MG of finished water storage recommended in the Master Plan. When planned future development is completed on Captain's Bay Road, over 2.2 MG of water storage will be available at the maximum Pyramid Water Treatment Plant capacity of 9 MGD. The additional storage will provide a much needed buffer, allowing time to troubleshoot and repair problems in the event of an equipment failure or system malfunction. It will reduce the likelihood of water shortages and/or outages during the Pollock Processing seasons. Additional benefits include:

- Reduce service interruption, boil water notices, and risk of system contamination during maintenance.
- Allow routine maintenance to be done on the interior or exterior of either tank during any season, prolonging the life of these tanks.
- Expand and upgrade both the water treatment and distribution systems, using the full 9 MGD design capacity of the new water treatment plant will be possible.
- Improve the flow characteristics of the new Pyramid Water Treatment Plant. Plant
 operators will be able to allow the tanks to absorb the high and low flows, maintaining a more stabilized treatment process and allowing the new Ultra Violate treatment
 process to operate more efficiently.

Development Plan & Status: A "Certificate to Construct" and a "Certificate to Operate"

are required from ADEC, obtained through application by the designing engineer.

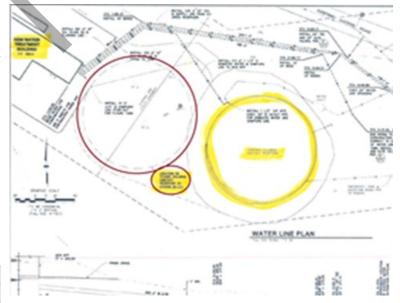
647,000
-
6,379,879
-
7,026,879
2,108,064
9,134,943
-

FY23-32 CMMP

Pyramid Water Storage Tank Water

Estimated Project & Purchase Timeline

Pre Design: FY14
Engineering/Design: FY23
Purchase/Construction: FY24



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Water Proprietary												
Fund	625,000	603,750	7,906,193	0	0	0	0	0	0	0	0	9,134,943
Total	625,000	603,750	7,906,193	0	0	0	0	0	0	0	0	9,134,943

Project Description: This project consists of constructing one or more sediment traps in lcy Creek upstream of the reservoir. The sediment trap system should essentially be a series of deep, wide step pools with rock check dams along the creek that decrease the flow velocity and allow rocks and sediment to settle out. The sediment traps should also create a location for rocks and sediment to accumulate that would be easier for heavy equipment to access, easier to clean out, and potentially allow the reservoir and Pyramid WTP to remain in service while the upstream sediment traps are being cleaned. Although the sediment traps will not eliminate shutdown of the Pyramid WTP due to turbidity spikes during high flow events, it could reduce the occurrence and duration of shutdowns.

Project Need: Large amounts of rock and sediment move downstream along Icy Creek during high flow events. The rocks accumulate at the inlet end of the Icy Creek Reservoir as seen in Figure 30 and heavier sediment accumulates behind the dam. The rocks and sediment reduce the capacity of the reservoir. Draining of the reservoir and removal of rocks and sediment is a challenging exercise that is required periodically and also requires a lengthy shutdown of the Pyramid WTP. Turbidity issues due to suspended fine-grained sediments during high flow events also regularly cause shutdown of the Pyramid Water Treatment Plant.

Development Plan & Status: The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. Funding for this Project will come from the Water Proprietary Fund.

Cost Assumptions	
Engineering, Design, Construction Admin	\$50,000
Other Professional Services	\$50,000
Construction Services	\$400,000
Machinery & Equipment	
Subtotal	\$500,000
Contingency (30%)	\$150,000
Total Funding Request	\$650,000

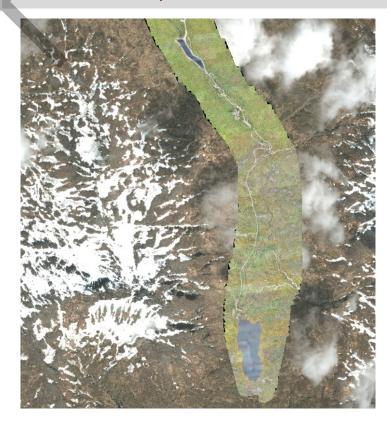
FY23-32 CMMP

Sediment Traps Between Icy Lake and Icy Creek Reservoir

Water

Estimated Project & Purchase Timeline

Pre Design: FY26
Engineering/Design: FY26
Purchase/Construction: FY27



Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Water Proprietary												
Fund	0	0	0	0	650,000	0	0	0	0	0	0	650,000
Total	0	0	0	0	650,000	0	0	0	0	0	0	650,000

Project Description: This project in both Well House 1 and Well House 2 will include the removal of the existing Chlorine Gas system and the installation of an on-site system which generates liquid Chlorine (Sodium Hypochlorite) using salt and electricity.

Project Need: Using stringent regulations, the EPA is doing away with Chlorine Gas as the primary method of disinfecting potable water.

Vendors for Chlorine Gas are becoming scarce as most Water Treatment Plants and other users have already changed over to an alternative. There are only two remaining Chlorine Gas vendors located on or near the west coast which will ship to Alaska. We are currently using the vendor who is located on the coast. If they cease to carry Chlorine Gas, the remaining vendor is twice the price due to the extra cost involved in shipping the Chlorine Gas to the west coast from Nevada. In June of 2021, Chlorine Gas manufacturers across the US declared a "Force Majeure" due to production issues. The price for Chlorine Gas increased in mid-August 2021.

Since both well houses are located in residential areas, using Chlorine Gas at these locations is a clear safety concern due to the possibility of a Chlorine Gas leak. This hazard continues to increase as more housing is developed and constructed. On-site generation at the well houses will eliminate this safety issue.

Also, potable water treated with Chlorine Gas is more acidic than Sodium Hypochlorite. Combined with the rise in EPA's standards, there is a very high possibility that we will be required to perform a corrosion control study and begin adding a corrosion control inhibitor to our potable water. Switching to Sodium Hypochlorite will help lower the acid index of our drinking water. This will lessen the possibility of having to perform the study or add an inhibitor.

In addition, the multiple safety items associated with Chlorine Gas that we are required to own are very expensive, highly regulated and take a significant amount of time to maintain.

Development Plan & Status: This project will require a consultant for design and engineering to obtain Alaska Department of Environmental Conservation approval. A contractor will be needed for construction.

FY23-32 CMMP

WH1 and WH2 On-site Generation of Chlorine Water

Estimated Project & Purchase Timeline

Pre Design: FY24
Engineering/Design: FY24
Purchase/Construction: FY24



Cost Assumptions	
Engineering, Design, Construction Admin	\$60,000
Other Professional Services	
Construction Services	\$185,000
Machinery & Equipment	\$100,000
Subtotal	\$345,000
Contingency (30%)	\$103,500
Total Funding Request	\$448,500

Source	Appropriated	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Water Proprietary												
Fund	0	0	448,500	0	0	0	0	0	0	0	0	448,500
Total	0	0	448,500	0	0	0	0	0	0	0	0	448,500