Special Meeting
Monday, April 26, 2021
6:00 p.m.

Unalaska City Hall
Council Chambers
43 Raven Way

Council Members
Thomas D. Bell
Darin Nicholson
David M. Gregory

Council Members
Dennis M. Robinson
Alejandro R. Tungul
Shari Coleman

UNALASKA CITY COUNCIL

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Vincent M. Tutiakoff Sr., Mayor
Erin Reinders, City Manager
Roxanna Winters, Acting City Clerk rwinters@ci.unalaska.ak.us

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COUNCIL MEETING ATTENDANCE

The community is encouraged to attend meetings of the City Council:

- Attend in person (socially-distanced seating available; coverings over the nose and mouth are required to be worn upon entering City Hall until seated, and again when exiting)
- Participate online via ZOOM (link, meeting ID & password below)
- Participate by telephone (toll and toll free numbers, meeting ID & password below)
- Listen on KUCB TV Channel 8 or Radio Station 89.7

PUBLIC COMMENT

The Mayor and City Council value and encourage community input at meetings of the City Council. There is a time limit of 3 minutes per person, per topic. Options for public comment:

- In person at the meeting
- By telephone or ZOOM - notify the City Clerk if you'd like to provide comment using ZOOM features (chat message or raise your hand); or *9 by telephone; or during regular business hours in advance of the meeting
- Written comment is accepted up to one hour before the meeting begins by email, regular mail, fax or hand delivery to the City Clerk, which will be read during the meeting; include your name

ZOOM MEETING LINK: https://us02web.zoom.us/j/85203975430
Meeting ID: 852 0397 5430 / **Passcode:** 977526

TELEPHONE: Meeting ID: 852 0397 5430 / **Passcode:** 977526
Toll Free numbers: (833) 548-0276; or (833) 548-0282; or (877) 853-5247; or (888) 788-0099
Non Toll Free numbers: (253) 215-8782; or (346) 248-7799; or (669) 900-9128

SPECIAL MEETING AGENDA

1. **Call to order**
2. **Roll call**
3. **Pledge of allegiance**
4. **Adoption of agenda**
5. **Community Input & Announcements** *Members of the public may provide information to council and make announcements of interest to the community.*
6. **Public comment on agenda items** *Time for members of the public to provide information to Council regarding items on the agenda. Members of the public may also speak when the issue comes up on the regular agenda by notifying the City Clerk.*

7. **Regular agenda** *Persons wishing to speak on regular agenda items must notify the City Clerk*

    a. Resolution 2021- 23: A Resolution of the Unalaska City Council establishing the Sums to be made available for Community Support and Capital Grants from the City of Unalaska to the Applicants for Community Support for Fiscal Year 2022

    b. Resolution 2021- 24: A Resolution of the Unalaska City Council Adopting the FY22-31 Capital and Major Maintenance Plan

    c. Resolution 2021- 25: A Resolution of the City of Unalaska City Council Authorizing the City Manager to implement a one-time rate increase to the Electrical Proprietary Fund of 6.1%, a one-time rate increase to the Water Proprietary Fund of 3.6%, a Wastewater Proprietary Fund rate increase of 40%, phased in over a four year period, and a Solid Waste Proprietary Fund rate increase of 33%, phased in over a four year period.

8. **Council Directives to City Manager**

9. **Community Input & Announcements** *Members of the public may provide information to council; and make announcements of interest to the community.*

10. **Adjournment**

CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2021-23

A RESOLUTION OF THE UNALASKA CITY COUNCIL ESTABLISHING THE SUMS TO BE MADE AVAILABLE FOR COMMUNITY SUPPORT AND CAPITAL GRANTS FROM THE CITY OF UNALASKA TO THE APPLICANTS FOR COMMUNITY SUPPORT FOR FISCAL YEAR 2022

WHEREAS, the City of Unalaska acknowledges, appreciates and supports the services provided to the community by non-profit agencies; and

WHEREAS, the City of Unalaska wishes to provide financial aid to the qualifying non-profit organizations listed through its Community Support Program; and

WHEREAS, the City of Unalaska has received nine (9) Community Support Grant Requests and zero (0) Non-Profit Capital Grant Request totaling $1,489,539 for fiscal year 2022; and

WHEREAS, the target funding level for fiscal year 2022 community support, based on 3.5% of the average revenue for the General Fund for the five most recently completed fiscal years, plus the Bed Tax amount for the most recently completed fiscal year, is $1,344,368; and

WHEREAS, the City Council is recommending a total funding amount of $_____ for the Community Support Program, distributing accordingly per the next section.

NOW THEREFORE BE IT RESOLVED that the Unalaska City Council establishes the following amounts to be included in the fiscal year 2022 operating budget for community support and capital grants to non-profit organizations:

Community Grant Requestor	Amount
APIA	
Iliuliuk Family Health Services	
Museum of the Aleutians	
Unalaska Community Broadcasting	
Unalaska Senior Citizens	
Unalaska Visitors Bureau	
USAFV	
Q-Tribe Culture Camp	
Q-Tribe Food Bank	
Total	**$ 0**

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on April 26 2021.

_____
Vincent M. Tutiakoff, Sr.
Mayor

ATTEST:

_____
Roxanna Winters, CMC
Acting City Clerk

MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: Cameron Dean, Acting Planning Director
Through: Erin Reinders, City Manager
Date: April 26, 2021
Re: Community Support Grant & Capital Grant Program

SUMMARY: This year the formula amount of funding available is $ 1,344,368 for the City of Unalaska's Community Support Grant & Capital Grant Program (Community Support program). Nine (9) organizations submitted applications totaling $ 1,489,539 and exceeds the grants formula amount by $ 145,171. The formula is a guide and calculated using 3.5% of a five-year general fund revenue balance plus the bed tax amount collected the previous year.

All applications have been reviewed by Staff and are provided to Council for review. Staff does not make recommendations; City Council decides how to fund the requests. To aid in the decision making process the council packet includes a summary review sheet for each applicant and a spreadsheet that summarizes grant requests and awards for the last five years. This material should help communicate the Community Support program's financial impact on the FY22 budget.

Application summaries were provided to the City Council at the April 12, 2021 meeting, and complete applications were distributed following that meeting. City Council typically decides funding awards for the Community Support program at its second meeting in April each year to per the city budgeting process calendar. A resolution has been prepared and accompanies this report.

PREVIOUS COUNCIL ACTION: Each year from FY06 through FY17 Council established a special committee charged with reviewing and scoring the applications using the Council-approved evaluation tool. On December 27, 2016 Council passed Resolution 2016-78 eliminating the Grant Review Committee, allowing Staff to do a preliminary review of all applications and then pass the application reviews and other information documents to Council. In December 2019 Council passed Resolution 2019-64 to increase the funding percentage from 3.4642% to 3.5% of the city's general fund revenue average for the past five (5) years. The purpose of the increase was to round the percentage up to a simple decimal number. The award amounts have varied over the years from 3.03% to 3.91%.

BACKGROUND: The City of Unalaska received nine (9) Community Support Grant Requests and zero (0) capital requests. All submissions have been reviewed and summarized by staff. All requests were completed and submitted in a timely manner. All application summaries are included in the Council Packet.

DISCUSSION: The funding amount available to be awarded this year is $ 1,344,368 ($ 1,178,057) from the General Fund average of the past five years x 3.5% plus $ 166,311 collected from the city bed tax). The FY22 total funding request is $ 1,489,539 and exceeds the FY22 funding formula amount by $ 145,171. The applicant agencies are identified in the FY22 Community Grant Application Summary Table.

FY22 Community Grant Application Summary Table

Organization	Request
APIA	$142,000
IFHS	$180,000
Unalaska Visitors Bureau	$210,000
Museum of the Aleutians	$317,813
Q-Tribe Culture Camp	$86,062
Q-Tribe Food Bank	$129,857
UCB/KUCB	$106,350
Unalaska Senior Citizens	$65,000
USAFV	$252,457
TOTAL	**$1,489,539**

No Application This Year

Two organizations did not apply for funding. These are The University of Alaska Fairbanks and Aleutian Arts Council. Staff reached out to both agencies and they confirmed they did not intend to apply.

Additional Increase This Year

The Q-tribe Culture Camp made two applications for funding. Each year it submits a request for funds to support the Culture Camp. This year the Q-tribe Culture Camp program is requesting a funding increase to $86,062. The additional funding is due to a decrease in donations caused from economic hardships that many community and local tribal members are experiencing.

New Program This Year

The Q-tribe is also seeking funds in the amount of $ 129,857 to support a new Food Bank program. The Tribe's food bank will be associated with the Food Bank of Alaska as an official food bank. It will provide food staples such as dry and canned food, fresh produce, and packaged meats and dairy products. There will not be a charge for this assistance, but recipients will need to qualify. The emergency food support will be available to low income households, the general community, and tribal members. It's meant to be available for all who are experiencing food insecurity or a food emergency in our community.

The Emergency Food Assistance Program (TEFAP) income eligibility requirements. The Program hopes to be able to purchase food and have other food donated from local vendors and SeaShare that would support others who might need emergency food support, but whose income may be too high for the TEFAP eligible programs. The local need is estimated be 35 households or 100 people per month.

The present model for the food bank is based on pre-packaged portions ready for distribution. The Food Bank will be licensed as a food establishment. Applicable permits for handling food are in process. The Q Tribe is also in the process of developing a commercial kitchen to provide prep space for traditional foods to be available later this year. The space will be licensed to prepare traditional foods to support distribution by the food bank, especially to those tribal members or elders who don't have access to traditional foods.

Organization Participation
This year City Council meetings are being held in person and using ZOOM meeting software to respect COVID-19 social distancing measures. Staff requested applicants attend via ZOOM to the April 12, 2021 meeting, and Council had the opportunity to ask questions to each organization.

ALTERNATIVES: Council may choose to fund the requests as submitted or make changes where it deems necessary.

FINANCIAL IMPLICATIONS: Financial implications depend on the amount Council chooses to fund the grant requests.

LEGAL: N/A

STAFF RECOMMENDATION: No recommendation. This is a Council decision.

PROPOSED MOTION: I move to adopt Resolution 2021-23. After the main motion is made allowing for discussion, amendments will be required to insert funding amounts in Resolution 2021-23.

CITY MANAGER COMMENTS: I thank the Planning Department for their efforts in facilitating this program on behalf of City Council. The Draft FY22 Budget currently includes the funding amount as outlined in Council Budget goals. The target funding level for fiscal year 2022 community support, based on 3.5% of the average revenue for the General Fund for the five most recently completed fiscal years, plus the Bed Tax amount for the most recently completed fiscal year, is $1,344,368. The FY22 total funding request is $ 1,489,539 and exceeds the FY22 funding formula amount by $ 145,171. The details of this Council approved resolution will be worked into the final FY22 Budget.

ATTACHMENTS:
- Community Grant Requests and Awards – Spreadsheet of Last Five Years
- Community Support Grant Application Review Summary Sheets

COMMUNITY SUPPORT GRANT APPLICANTS

List of FY20 Achievements

(Note: Currently in FY21 Budget Year)

Aleutian Pribilof Islands Association (APIA):

1. Stable Behavioral Health services available with targeted programming such as the Men's Group focused on recovery services
2. Worked with the community to convene a Community Action Group. The group of Unalaskans met to generate ideas to support a healthy community
3. Partnered on a Safety Committee in Unalaska to address gaps in services and fostered strengthened collaboration with IFHS, USAFV, and Public Safety
4. Hosted the Emotional Trauma Life Support Training.

Iliuliuk Family Health Services (IFHS):

1. Implemented COVID testing with Cepheid and Abbott
2. Initiated COVID drive thru to accommodate residents, industry and travelers on island
3. Served and supported work by City of Unalaska's Emergency Operations Center
4. Provided 24/7 care, 356 after hours care visits between January 1 and June 30, 2020

Museum of the Aleutians (MOTA):

1. Hosted the Lost Villages exhibition which opened in June of 2019 in partnership with KUCB who premiered a video about the Lost Villages, and a reunion of people who were from the lost villages, related to people from these villages, and people who had visited the lost villages courtesy of NPS. We had overall about 100 people over the opening weekend. We also hosted the Community Art Show. We had 3,920 visitors throughout the exhibition
2. About 4,000 visitor attendance in FY20, predominantly cruise ship and ferry passengers
3. Hosted several events including the Choc-O-Lot competition. A chocolate tasting competition held on Valentine's Day, a language lab that we hosted monthly, and a bird club we started a few months prior to the onset of the pandemic. Took education programs to St Paul and Atka for Bering Sea Days.
4. We received a National Endowment for the Humanities Grant which helped us digitize a sizable portion of our photographic collection in FY21. This project is ongoing and we have uploaded roughly 1,000 images of our photographic collection to VILDA, hosted by the Alaska Digital Archives.

Qawalangin Tribe (Q-tribe):

1. Camp Qungaayuŝ was held in summer 2019 and brought Unangan Elders, mentors, and western scientists together with the youth of the region in order to teach cultural practices and natural resource management
2. Funding for camp is achieved by soliciting grants, local donations from other entities, and fundraisers. Every year we hold an auction on the last day of camp. In 2019, the auction raised a total of $2,655. Donated items consisted of things cultural art such as, drums, beadwork, and even smoked fish

Unalaskans Against Sexual Assault and Family Violence (USAFV):

1. Served 360 program participants; 118 unduplicated (unique)
2. Held “Teen Talks” and “Back to school” Bonfire for Unalaska students and faculty
3. Sent 2 staff to attend the “Emotional Trauma Life Support” workshop sponsored by APIA

Unalaska Community Broadcasting (KUCB):

1. FY20 was exceptionally successful where membership is concerned membership income goal, raising $55,000 over the $42,000 in FY19
2. Channel 8 Auction was cancelled due to COVID-19, but our Tundra Golf Classic was successful in FY20 and is on schedule for early August of 2020
3. KUCB was pleased to bring Unalaska basketball games from around the state when the Raider basketball teams traveled. This year, we were excited to share video feeds over Channel 8 from some of the tournaments
4. In the second half of FY20, we worked hard to bring increased programming to KUCB and Channel 8 during social distancing, including distance delivery education

Unalaska Senior Center (USC):

1. With the closing of our programs in the last quarter of FY20 our staff was able to change gears to still provide the vital services needed to our seniors and protect them from this pandemic
2. Switching from a congregate meal setting for daily lunches to home delivered meals
3. Seniors to still receive a daily nutritional meal without gathering and potentially exposing them to this virus
4. Changed our transportation program from taking seniors to stores, banks & post offices to our staff doing these errands for our seniors

Unalaska Visitors Bureau (UVB):

1. Facilitated 18 cruise ship visits with about 8,000 passengers/visitors to Unalaska
2. Nearly $ 230,000 in revenue recorded during 2019 for local organizations including MOTA, Holy Ascension Cathedral, WWII Visitor Center and local transportation
3. Initiated office move from Burma Road Chapel to new space in Safeway plaza
4. Distributed about 10,000 Unalaska Visitor Guides worldwide

FY21 COMMUNITY GRANT REQUESTS & AWARDS - LAST FIVE YEARS

AGENCY NAME	FY17 REQ	FY17 AWARD	FY18 REQ	FY18 Award	FY19 REQ	FY19 Award	FY20 REQ	FY20 Award	FY21 REQ	FY21 Award	FY22 REQ
APIA	$ 122,825	$ 122,825	$ 124,932	$ 124,932	$ 120,500	$ 120,500	$ 205,350	$ 205,350	$ 145,000	$ 145,000	$ 142,000
Iliuliuk Family Health Services	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 180,000	$ 180,000	$ 180,000	$ 180,000	$ 180,000	$ 161,260	$ 180,000
Museum of the Aleutians	$ 294,106	$ 294,106	$ 294,196	$ 294,196	$ 308,146	$ 308,146	$ 328,146	$ 317,813	$ 317,813	$ 317,813	$ 317,813
UCB/KUCB	$ 96,600	$ 96,600	$ 96,600	$ 96,600	$ 96,600	$ 96,600	$ 115,350	$ 108,642	$ 106,350	$ 106,350	$ 106,350
Unalaska Senior Citizens	$ 49,800	$ 49,800	$ 49,800	$ 49,800	$ 55,000	$ 55,000	$ 65,000	$ 57,467	$ 65,000	$ 65,000	$ 65,000
UVB	$ 190,000	$ 175,000	$ 175,000	$ 175,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 210,000	$ 210,000	$ 210,000
USAFV	$ 216,516	$ 216,516	$ 229,506	$ 229,506	$ 229,506	$ 229,506	$ 252,457	$ 252,457	$ 252,457	$ 252,457	$ 252,457
Aleutian Arts Council	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 15,000	$ 15,000	
Q-Tribe Culture Camp	$ 24,000	$ 24,000	$ 24,000	$ 24,000	$ 24,000	$ 24,000	$ 24,000	$ 24,000	$ 50,000	$ 24,000	$ 86,062
Q-Tribe Food Bank											$ 129,857
UAF - Alaska Sea Grant							$ 13,508	$ 13,508	$ 14,728	$ 14,728	
TOTALS	**$ 1,173,847**	**$ 1,158,847**	**$ 1,174,034**	**$ 1,174,034**	**$ 1,223,752**	**$ 1,223,752**	**$ 1,393,811**	**$ 1,369,237**	**$ 1,356,348**	**$ 1,311,608**	**$ 1,489,539**

**FY22 Funding Target	$ 1,344,368
Total FY22 Requests	$ 1,489,539
Difference	$ 145,171

**The Funding Target is based on 3.5% of the average revenue for the General Fund for the last five full fiscal years plus the last full year of Bed Tax revenue

FY22 City of Unalaska Community Support
Grant Application Review Summary Sheet

Organization Name: **Aleutian Pribilof Islands Association (APIA)**

APIA is requesting $3,000 less than FY21

FY21 Award	Amounts	FY22 Request	Amounts
Masters Level BH Provider (.60 FTE) Salary	$50,310	Behavioral Health Clinician (1FTE)	$86,000.00
Behavioral Health Aide (.75 FTE) Salary	$34,822	Behavioral Health Clinician	$34,000.00
Behavioral Health Clinician (.30 FTE) Fringe Benefits	$20,124	Program Costs/Supplies	$5,000.00
Behavioral Health Aide (.75 FTE) Fringe Benefits	$13,929	Commodities (food, cleaning products)	$4,500.00
Program Costs/Supplies	$5,000	Travel	$10,000.00
Commodities	$4,815	Training	$2,500.00
Travel	$12,000		
Training	$2,500		
Other/Misc.	$1,500		
Total FY21 Award	**$145,000**	**Total FY22 Request**	**$142,000.00**

Application Highlights

- **APIA is requesting a total of $142,000** to meet the staffing needs and targeted activities plan that will have a direct benefit to residents of Unalaska. This is a decrease of $3,000 from FY21.
- Aleutian Pribilof Islands Association, Inc. (APIA) Integrated Health Department, Community Health Services Division provides behavioral health care, community wellness activities, healthy relationship services, youth programs, and eldercare programs services in Unalaska. the most frequently requested services in Unalaska are around substance abuse prevention and treatment, diabetes awareness/access to healthy foods, and services for Elders.
- APIA offers these services at two locations in Unalaska: Oonalaska Wellness Center (OWC) and the APIA Biorka Clinic as well as collaborating with community partners to meet the behavioral health demands in the community.
- A vital part of services in Unalaska includes our behavioral health providers responding to unforeseen crisis situations.
- *Eldercare Program:* Provides an additional resource for local Unalaska Elder residents to remain in their community rather than relocating to a nursing home, thereby reducing psychological and physical distress.
- *Youth Services Program:* With youth-informed programming, we anticipate targeted, peer-driven youth services.
- *Healthy Relationships Program*: The Healthy Relationships Program aims to not duplicate services in Unalaska, rather we want to collaborate with USAFV and enhance outreach and educational efforts to Unalaskans.
- *Administration:* Provides support for and direction of development and expansion of services identified as needed in Unalaska. Blaine Shaishnikoff is the Qawalangin Tribe representative from Unalaska. Our CFO reviews all budget document associated with this award. Also, our Travel Coordinator assists with arranging travel for staff from Unalaska to attend trainings and travel for Anchorage based staff to travel to Unalaska.

- During the FY 2022 grant year, APIA plans to:
  1.) Offer well-rounded behavioral health services that align with needs of the entire community.
  2.) Enhance prevention and outreach efforts in topic areas that align with community request (e.g., anti-bullying, suicide prevention, and healthy lifestyle choices such as pro-social activities, nutrition/traditional foods, cultural values and safe partner relationships). These events will comply with local mandates related to COVID-19.
  3.) Network with community partners in Unalaska to prevent and decrease drug use in the community

Application Findings/Other Information:

- Application submitted on time;
- All application requirements were met. Letters of Support are optional;
- All FY21 has been timely and is current.

FY22 City of Unalaska Community Support
Grant Application Review Summary Sheet

Organization Name: **Iliuliuk Family Health Services (IFHS)**

IFHS is requesting same as FY20.

FY21 Award	Amounts	FY22 Request	Amounts
On Call Providers	$ 116,921.00	On Call Providers	$ 132,779.00
On Call Staff	$ 41,632.00	On Call Staff	$ 44,440.00
On Call Providers and Staff Benefits	$ 21,447.00	Supplies	$ 2,821.00
Total FY21 Award	**$ 180,000.00**	**Total FY21 Request**	**$ 180,000.00**

Application Highlights

"To Provide Quality Integrated Health Care and to Promote Health and Well-Being."

- IFHS is the only health care available for the island and surrounding area that provides 24/7 coverage, thus creating huge costs with little return.
- 24/7 staff roles are as follows:
  - Medical Provider (Physician, Nurse Practitioner, or Physician's Assistant) on-call daily
  - Registered Nurse (RN)/Paramedic/Emergency Medical Technician (EMT)- Level 3 providing assistance with patient care
  - Lab/Radiology Tech to perform lab and x-ray support
- From January through December 2020, IFHS provided 485 after-hours and emergency visits (not including after-hours COVID testing). We also coordinated 102 medivacs in CY2020. We are most proud of the fact that IFHS was able to treat 79% of emergent patients locally, which not only saved financial resources but also significantly reduced the stress and anxiety of patients and their loved ones.
- The target population of IFHS is anyone in need of medical care while visiting, working, or residing in Unalaska/Dutch Harbor, or working in the fishing fleets of the North Pacific Ocean and Bering Sea.
- In FY22, IFHS will respond to all appropriate (anticipating a minimum of 550 with COVID care) after hours/emergency calls.
- IFHS consistently seeks support from the local fishing and shipping industries, and while we have received donations through the wall of support, such contributions have decreased significantly in recent years. The facility also receives FQHC funding which does not include funds for after-hours care, as most communities have the support of an emergency room or hospital.
- This request for funding is to offset a portion of the expense incurred by IFHS to provide this access to urgent/emergent care on the island, and is consistent with the FY21 request.

Application Findings/Other Information:

- Application submitted on time;
- Letters of Support are optional;
- Midyear report was on time

FY22 City of Unalaska Community Support Grant Application Review Summary Sheet

Organization Name: **Museum of the Aleutians (MOTA)**

MOTA is requesting same as FY21.

City In kind Contributions: Museum building, building insurance, maintenance and repairs, inside and out

FY21 Award	Amounts	FY22 Request	Amounts
Executive Director (FT)	**$ 54,254.67**	**Executive Director (FT)**	**$ 54,255.00**
Collections Manager	**$ 46,100.00**	**Collections Manager**	**$ 46,100.00**
Education and Outreach Manager	**$ 48,262.00**	**Education and Outreach Manager**	**$ 48,262.00**
Store and Visitor Manager	$ 24,000.00	Store and Visitor Manager	$ 24,000.00
Benefits-Health Insurance	$ 30,000.00	Part time Assistant	$ 5,000.00
Payroll-Liabilities-IRS & State	$ 15,144.00	Health Insurance	$ 30,000.00
Communications	$ 11,000.00	Personnel Related Expenses	$ 15,144.00
Utilities (Electricity, Fuel, & Trash Disposal)	$ 45,000.00	Communications	$ 11,000.00
Facilities Maintenance	$ 1,000.00	Utilities (Electricity, Fuel, & Trash Disposal)	$ 40,000.00
Program Supplies	$ 2,000.00	Facilities Maintenance	$ 1,000.00
Dues, Fees, Subscriptions	$ 1,000.00	Program Supplies	$ 2,000.00
Equipment Purchase/Lease/Maintenance	$ 5,000.00	Dues, Fees, Subscriptions	$ 1,000.00
Office and Janitorial Supplies	$ 2,000.00	Equipment Purchase/Lease/Maintenance	$ 5,000.00
Travel-Staff	$ 5,500.00	Office and Janitorial Supplies	$ 2,000.00
Training - Staff	$ 4,552.00	Travel-Staff	$ 5,500.00
Audit	$ 5,000.00	Training - Staff	$ 4,552.00
Financial Manager	$ 15,000.00	Audit	$ 5,000.00
Insurance	$ 5,000.00	Financial Manager	$ 10,000.00
Janitor	$ 3,000.00	Insurance	$ 5,000.00
		Janitor	$ 3,000.00
Total FY21 Award	**$ 317,812.67**	**Total FY22 Request**	**$ 317,812.00**

Application Highlights

- In a *normal* year, the Museum curates an average of three exhibits, hosts a variety of in-person events, such as the Annual Membership Drive and Auction, as well as our chocolate tasting competition, talks by visiting researchers, community archaeology, and other events.
- The FY22 Community Support grant request is for $317,813, or 39.06% of our overall budget, and will cover a portion of personnel costs, utility expenses, travel and training for the Board and staff for professional development. Although the MOTA staff has been very successful in securing grants for educational projects, exhibits, collections work, and technological improvements, we rely heavily on the support of the City of Unalaska Community Support program funds for the majority of our operations, because granting agencies typically do not fund museum operational expenses. Without the Community Support Grant assistance, the Museum will have to close its doors. We are dedicated to providing professional care for our collections and improving the quality of life in our community by providing full access to the Aleutian Islands' history, culture, and art through exhibits, research, and

education programs. The services offered to the community by the Museum are unique and are not duplicated by any other organization in the community or region.

- Services offered to the community by MOTA are unique and are not duplicated by any other organization in the community or the region!
- The MOTA staff works in cooperation with the Unalaska City School District (USCD) to expand educational opportunities for students. The Museum offers USCD education programs such as internships, field trips, lectures, hands-on classes, exhibits, and special events. We also offer internship programs and volunteer opportunities in archaeology and museum studies for USCD high school students.
- MOTA collaborates with Unalaska City School District (USCD), Ounalashka Corporation, Qawalangin Tribe, University of Alaska, Fairbanks, US Fish and Wildlife, Alaska Volcano Observatory, Unalaska Community Broadcasting (UCB), Unalaska Visitor's Bureau, Grand Aleutian Hotel, Iliuliuk Family and Health Services, and Aleutian Islands Worlds War II National Monument-Visitor Center.

Application Findings/Other Information:

- Application was on time;
- All application requirements were met; Letters of Support are optional
- All FY21 reporting has been timely and is current;

FY22 City of Unalaska Community Support
Grant Application Review Summary Sheet

Organization Name: **Qawalangan Tribe (Q-Tribe)**

Q-Tribe is requesting $62,062 more than what was awarded in FY21 to facilitate the natural expansion of the camp due to increased demand by students.

City In kind Contributions: Road maintenance to Humpy Cove and waste removal from the sanitation facilities located at Humpy Cove campsite.

FY21 Award	Amounts	FY22 Request	Amounts
Executive Director FT	$ 5,400.00	Camp Coordinator	$ 7,280.00
Payroll Taxes	$ 467.10	Camp Mentors	$ 12,800.00
Workman's Comp	$ 162.00	Camp Staff	$ 8,000.00
Program Supplies	$ 14,058.90	Camp Laborers	$ 1,800.00
Travel- Mentors	$ 10,000.00	Camp Coordinator - Benefits	$ 1,092.00
Lodging & Food	$ 5,000.00	Camp Staff - Benefits	$ 1,200.00
Indirect Expenses (Administrative Expenses)	$ 14,912.00	Camp Laborers - Benefits	$ 270.00
		Payroll Expenses	$ 1,708.00
		Program Supplies	$ 12,000.00
		Equipment Purchase/Lease	$ 12,000.00
		Miscellaneous	$ 27,912.00
Total FY21 Award	**$ 24,000.00**	**Total FY22 Request**	**$ 86,062.00**

Application Highlights

- The Qawalangin Tribe of Unalaska (QTU, Tribe) is proud of our cultural values and history. There is a strong desire by adults and youth in our community to connect with Unangan cultural values and practices. One mechanism that supports this need is the annual culture camp, Camp Qungaayux (Camp Q), organized by the Tribe and available to the community. The focus of Camp Q is to sustain and share cultural values through education, celebration, and the sharing of Unangan culture.
- This year, like last, has been a challenging environment to offer an in-person culture camp experience. As a result of the global pandemic and challenging economic climate in 2020, the Tribe cancelled the inperson traditional program offered by Camp Q and adapted the cultural programming to include the documentation and production of culturally relevant videos, film, pictures, and narratives that were shared with the community virtually.
- Volunteers and office staff support Camp Q as the needs arise and can cover a variety of responsibilities from supporting activities, cleaning up after meals, or just making sure everything works out smoothly.
- Prior to training, all staff hired from Camp Q will meet general employment qualifications and will be screened (criminal background check) as part of the standard Tribe hiring policy. Individuals will be paired to jobs and responsibilities based on their qualifications and experience.
- The Qawalangin Tribal Council consists of seven members. Members hold three-year terms and elections are held each year at the Tribe's Annual Meeting, at which time they elect officers. The officer positions include President, Vice President, and a combined Secretary/Treasurer. The role of Tribal Council is to provide strategic leadership to Tribal Administration and tribal members.

- At the close of camp each year, the Camp Q Planning Committee, the Tribal Council, and tribal staff have an evaluation meeting to review and evaluate the effectiveness of camp.
- The focus of Camp Q is to sustain and share cultural values through education, celebration, and the sharing of Unangan culture. The QTU holds Camp Q among its highest priorities in serving the community and visitors of our island home. This program is typically a seven-day annual cultural event that opens up Unangan culture to the community and creates a special shared experience in maintaining our cultural heritage.
- Camp Q goals and objectives:
    - Goal 1: Continue to provide Camp Q programming –
        1. With consider changes in the world in 2020 and uncertainty in improvements for 2021, providing camp programming in a safe and supportive way is critical.
        2. An evaluation meeting will occur following the close of camp. This meeting will be organized and run by the camp coordinator and Tribal Administration. This meeting will cover reviewing evaluations from campers, mentors, and others.
    - Goal 2: Improve and expand Camp Q carrying capacity
        1. Supplies will need to be purchased early in the year and maintenance of equipment must happen prior to field deployment. A section of the Tribe's warehouse is dedicated to housing supplies and equipment to ensure that materials are easily accessible that supplies and quantities can be easily tracked and inventoried before and during camp to ensure no shortages.
- The goals and objectives set in previous year's grants have been met, with the exception of our programming for the summer of 2020. We were unable to hold a traditional in-person camp experience during the summer of 2020 due to the global pandemic. Our Camp Coordinator for 2020, Shayla Shaishnikoff, adapted Camp Q goals to respond to the difficulties resulting from a global pandemic

Application Findings/Other Information:

- Application was on time;
- All application requirements were met; Letters of Support are optional;

FY22 City of Unalaska Community Support
Grant Application Review Summary Sheet

Organization Name: **Qawalangin Tribe of Unalaska (QTU- Food Bank)**

Q-Tribe Food Bank is a new Non-profit for FY22.

FY21 Award	Amounts	FY22 Request	Amounts
		Personal – Salaries / Benefits	$ 36,710.00
		Facilities	$ 9,600.00
		Program Cost	$ 9,000.00
		Equipment	$ 2,225.00
		Commodities	$ 30,000.00
		Training	$ 200.00
		Miscellaneous	$ 42,116.07
Total FY21 Award		**Total FY22 Request**	$ 129,857.07

Application Highlights

The Qawalangin Tribe of Unalaska, a federally recognized sovereign nation, vows to exercise its powers to further the economic and social well-being of all its members, and in so doing, will safeguard and support the Unangan language, culture, customs, and traditions for generations to come.

- Research done in 2018 by the Council for Community and Economic Research revealed that grocery costs are highest in Unalaska, among the 267 participating communities. In addition to the cost of groceries, housing, transportation, and utilities costs were analyzed and the data concluded that Unalaska placed 7th for highest cost of living.
- The QTU Food Bank is the result of multi-agency collaboration. The initial funding was procured from a CARES grant from the Department of Housing and Urban Development, applied for by our Tribally Designated Housing Entity, Aleutian Housing Authority.
- QTU has developed partnerships with robust hunger-relief programs beyond Unalaska, including SeaShare and Food Bank of Alaska, and is a member of the Alaska Food Coalition.
- The number of people seeking food services from USAFV has increased this year over last. The QTU Food Bank will strive to meet these rising demands and eradicate hunger and nutritional gaps for adults and children in Unalaska by providing food, education, and advocacy to our clients.
- USAFV has been Unalaska's unofficial food bank. The QTU Food Bank will be different than the food services USAFV provides. For example: The main mission of the QTU Food Bank will be to serve clients who are experiencing food and/or nutrition insecurity, they will be an official food establishment licensed with the State of Alaska, they will deliver food directly to clients, and they will provide nutritious and culturally significant food to clients, including traditional and subsistence foods.
- QTU staff have been in contact with USAFV staff about the project. QTU staff remain in regular contact with USAFV regarding common goals and services and plan to work collaboratively to meet the needs of Unalaskans.
- This operation will be managed by Lands and Infrastructure and Operations and Finance Director, Elena Ramirez.
- Emergency Response and Community Safety Coordinator, Alysha Richardson, will oversee compliance, conduct record keeping, order food and supplies, communicate with partners, and supervise

operations. Alysha Richardson has received her Food Protection Manager certification. This training is an advanced food safety and handling course for managers of food establishments.

- all employees of the QTU food bank will receive training to obtain a Food Worker Card, as required by the State of Alaska for food establishments.
- QTU Food Bank volunteers will also receive food handling and safety training.
- QTU Food Bank staff and volunteers will conduct an annual evaluation questionnaire and have an evaluation meeting to review and evaluate the effectiveness of services. This meeting will provide a reflective opportunity to give and receive feedback, analyze programing and deployment success, determine areas for improvement, and develop strategies for improving future operations.

Application Findings/Other Information:

- Application submitted on time;
- Applicant has attended a recent city Grant Workshop;
- All application requirements were met. Letters of Support included, but these are optional;
- New Non-profit;

FY22 City of Unalaska Community Support
Grant Application Review Summary Sheet

Organization Name: **Unalaska Community Broadcasting (UCB)**

UCB is requesting the same amount as awarded in FY21.

City In kind Contributions: Studio and Office space in Burma Road Chapel

FY21 Award	Amounts	FY22 Request	Amounts
General Manager	**$ 35,380.00**	**General Manager**	**$ 35,380.00**
Arts & Culture - Producers	$ 5,800.00	Arts & Culture - Producers	$ 7,000.00
General Manager - Benefits	$ 7,047.00	General Manager - Benefits	$ 7,047.00
Payroll-FICA	$ 2,790.00	Payroll-FICA	$ 2,790.00
Facilities	$ 12,500.00	Facilities	$ 12,500.00
Development	$ 11,450.00	Development	$ 11,450.00
Administration	$ 32,798.00	Administration	$ 30,183.00
Total FY21 Award	**$ 106,350.00**	**Total FY22 Request**	**$ 106,350.00**

Application Highlights

- In FY22 Unalaska Community Broadcasting, with full support of the KUCB Board of Directors, requests $106,350 from the City of Unalaska. Funds will be used on administrative and fundraising expenses. Specifically, city funds will pay half of the general manager's salary, benefits, and payroll expenses; janitorial, telephone, and insurance for our office facility in the Burma Road Chapel; fundraising and development overhead; and administrative costs of bookkeeping, postage, and office supplies.
- There were so many changes to our community and our world in FY21. At KUCB, we focused much of our attention on increasing our services in order to service Unalaska during a pandemic. Highlights include:
    - Increased live coverage of municipal meetings to include School Board and City Council.
    - Live public meeting coverage including the DOT airport master plan updates and a USACE presentation on Chernofski Harbor and Unalaska FUDS
    - Virtual community events in collaboration with the Museum of the Aleutians, the Aleutian Arts Council, the piano students of Lynda Lybeck-Robinson, the City of Unalaska PCR Department, and the Unalaska Senior Parents.
    - Increased health programming to include weekly updates from the IFHS Clinic.
    - Increased public service announcements on the topic of COVID-19 precautions, vaccinations, and community alert level. This included messages from Unalaska's City Clerk, Mayor and City Manager.
    - Children's literacy programming with various teachers and librarians during distance education.
    - Collaboration with the Ounalashka Corporation and the National Park Service on virtual tours of the WWII visitor center and national historic area
    - Collaboration with the Qawalangin Tribe on a project documenting the construction of a traditional-style Iqyax (kayak) and banya.
- During the COVID-19 pandemic, KUCB exemplified our strong commitment to our mission. In the past year, our organization significantly increased services in order to serve Unalaska during a challenging time. Creative new programming included health updates, virtual arts and culture events, radio theatre, live public meetings, fundraisers, and distance delivery education. We also worked to keep community members connected through music, cooking, and interview programming.

Application Findings/Other Information:

- Application submitted on time;
- All application requirements were met. Letters of Support are optional;
- FY21 reporting has been timely and is current.

FY22 City of Unalaska Community Support
Grant Application Review Summary Sheet

Organization Name: **Unalaskans Against Sexual Abuse and Family Violence (USAFV)**

USAFV is requesting the same amount as FY21.

FY21 Award	Amounts	FY22 Request	Amounts
Personnel-Salaries	$ 120,792.00	Personnel-Salaries	$ 123,852.00
Personnel-Benefits	$ 30,531.00	Personnel-Benefits	$ 28,135.00
Payroll Expenses	$ 166,409.00	Payroll Expenses	$ 21,503.00
Facilities	$ 16,424.00	Facilities	$ 14,250.00
Program Costs/Supplies	$ 17,000.00	Program Costs/Supplies	$ 15,500.00
Equipment	$ 3,500.00	Equipment	$ 3,000.00
Commodities	$ 24,754.00	Commodities	$ 21,833.00
Travel	$ 6,475.00	Travel	$ 6,775.00
Training	$ 2,500.00	Training	$ 2,500.00
Personal Services	$ 11,895.00	Personal Services	$ 11,610.00
Other/Misc.	$ 3,500.00	Other/Misc.	$ 3,500.00
Total FY21 Award	**$ 252,457**	**Total FY22 Request**	**$ 252,457**

Application Highlights

- USAFV is requesting $252,457.00 from the City to fund salaries, benefits, facilities, program costs/supplies, equipment, commodities, travel, training, professional services and other/miscellaneous expenses.
- Documentation around the world has demonstrated that under the conditions provided by COVID-19 (isolation, financial insecurity, etc.) rates of domestic violence, including child and elder abuse, have been rising. Unlike some shelters USAVF has not experience an increase in peoples seeking immediate shelter. Over the last year USAVF has experienced increase in demand for food assistance and, especially, for homeless prevention services for those negatively impacted by COVID-19 shutdowns.
- USAFV has operated a 24-hour crisis line and a shelter for survivors of domestic violence, sexual assault, child or elder abuse, stalking, incest and others in crisis. USAV provides crisis intervention, shelters women and men due to abuse, homelessness, or being stranded, assist with safety planning, legal, criminal, medical and other systems advocacy, information, referrals, food assistance, emergency transportation, education, and outreach services.
- USAFV serves all members of the community. USAFV provides shelter and assistance for those in need either at the center or at facilities other than USAFV.
- Because of their long history in the community USAFV is viewed as a “catchall” for people in crisis. Because of this USAFV is often the first point of contact for people in crisis. No matter what the problem, when people call upon USAFV they do their best to support them in accessing the resources and services they need.
- USAVF has a full-tome staff of three people, including the Executive Director. All staff members answer the crisis line and rotate being on 24-hour call. Even with a small staff USAVF provides consistent and reliable services.
- USAFV works closely with other agencies in the community, such as APIA, IFHSBH, DPS, faith-based organizations, etc., to refer people to the appropriate agency for assistance. USAFV has a long history of collaboration with other local agencies and led the way in establishing the Unalaska Interagency Cooperative (UIC), an informal group that meets for the sole purpose of sharing information, resources and coordinating services to the community

- USAFV operates as Unalaska's food bank providing hundreds of food boxes to individuals and families every year. When boats or other entities donate large quantities of food, USAFV ensures it is distributed throughout the community to those groups and individuals who need it the most.
- USAFV recognizes that outreach and education are the keys to preventing future violence and creating a safer community and to that end focus on outreach and education whenever funding and staffing allows.

- **Application Findings/Other Information:**
- Application submitted on time;
- Applicant has attended a recent city grant workshop;
- All application requirements were met. Letters of Support are optional;

FY22 City of Unalaska Community Support
Grant Application Review Summary Sheet

Organization Name: **Unalaska Senior Citizens (USC) – Nutrition & Transportation Services**

USC is requesting the same amount awarded in FY21.

FY21 Award	Amounts	FY22 Request	Amounts
Program Director (FT)	$ 18,590.00	Program Director (FT)	$ 18,590.00
Program Director (FT)	$ 18,590.00	Program Director (FT)	$ 18,590.00
Homemaker (FT)	$ 1,140.00	Homemaker (FT)	$ 1,140.00
Payroll and Taxes (8.65%)	$ 3,314.68	Payroll and Taxes (9.28%)	$ 3,330.75
Workman's Comp (4%)	$ 1,532.80	Workman's Comp	$ 1,532.80
Phones	$ 800.00	Communications	$ 600.00
Congregate Meals	$ 9,250.00	Congregate Meals	$ 8,162.50
Congregate Food Services Supplies	$ 3,885.00	Congregate Food Services Supplies	$ 2,162.50
Transportation Cost	$ 1,500.00	Transportation Cost	$ 675.00
Office Supplies	$ 74.80	Office Supplies	$ 70.23
Bookkeeping	$ 5,771.00	Annual Audit	$ 4,000.00
Insurance (vehicle, General Liability, etc.)	$ 551.00	Bookkeeping	$ 5,771.22
		Insurance (vehicle, General Liability, etc.)	$ 375.00
Total FY21 Award		**Total FY22 Request**	**$ 65,000.00**

Application Highlights

- USC Requested the same amount as FY21.
- The Unalaska Senior Citizens (USC) mission is to provide Nutrition, Transportation and Support services; promote the health and well-being of the senior citizens of Unalaska; assist in their ability to live independently and remain active in the community.
- This request is for the nutrition and transportation program and will fund salaries, facilities, program costs, office supplies and professional services. The nutrition and transportation program is primarily funded through the City of Unalaska Community Support Grant funds and the State of Alaska, with minimal Federal dollars. USC also receives generous donations and contributions from local businesses, other non-profits and local residents.
- During the Covid-19 pandemic USC staff has worked with the Qawalangin Tribe to provide weekly groceries to residents of the Father Ishmael Gromoff Senior Center to mitigate the centers exposure to the virus. Another example is the help that the IFHS and APIA Clinics provide with health care presentations, free blood pressure checkups, blood sugar screenings and flu shots. USC assists other agencies in the community by offering accessible transportation to handicapped individuals younger than age 60 and has provided access to the van for large group transportation upon request.
- Unalaska Senior Citizens has a small but dedicated staff of two full-time Program Directors, a contracted Bookkeeper and a part-time Homemaker. Staff is evaluated annually by the program directors. Since the training in 2019 there have been changes to our program staffing and Board and we hope to seek out new training opportunities as soon as the pandemic is over.
- The Unalaska Senior Citizens serves all senior citizens age 60 and over, specifically targeting those socially and economically challenged.
- In addition to helping the qualifying members of our community, USC extends services to senior citizens visiting from other parts of Alaska and the US. The Congregate Lunch Program is also available to those

under the age of 60, at a cost of $8.00 per meal, to promote interactions with community members of all ages. The benefits of serving lunch five days a week have proven to be multiple, not only are our seniors receiving nutritional meals on a regular basis, but we have seen an increase in their level of participation in all events and improvements to their overall quality of life.

- Nutritional Services: Nutritional Services is the primary service that USC offers. The lunch program assists senior citizens in meeting nutritional needs by providing them with meals five days a week that meets 1/3 of their daily dietary allowance. Prior to the pandemic, meals were served at the Father Ishmael Gromoff Senior Center at a minimum of 240 days out of the year. Those meals are currently being home delivered but we are hopeful that our Congregate Meal program will be able to resume in the near future. The meals are prepared and purchased from UniSea Galley at a cost of $5.00 per meal.
- Unalaska Senior Citizens works closely with other community entities for volunteerism and donations including: **Ounalashka Corporation** provides financial support and promotes awareness of the organization and programs available among OC shareholders.

  IFHS provides yearly flu shots and speakers on nutrition, behavioral health and other educational workshops as well as monthly blood pressure and blood sugar checks.

  APIA provides speakers on nutrition, behavioral health and other educational workshops. They offer senior citizens yearly flu shots during the fall months in addition to blood pressure checks. APIA also hosts the Elder Tea event each month.

  Qawalangin Tribe refers Alaska Natives and American Indians to our organization as well as organizes cultural activities, donates food and other in-kind items for gatherings and provides volunteer help with the lunch program.

  USAFV often coordinates the receipt and distribution of food donations from fishing vessels. They refer people to our organization along with offering educational materials on senior citizen abuse and other issues faced by seniors and their families.

  Ballyhoo Lions Club provides financial assistance to senior citizens in need.

  Unalaska Senior Citizens FY22 Community Support Application 8

  Aleutian Housing Authority provides Unalaska Senior Citizens with in-kind rent for offices, use of a jointly owned kitchen and the common room for the congregate lunches, craft sessions, lecture/workshops and social gatherings. Donations of labor, free maintenance of the kitchen equipment, upkeep of the common area, electricity and heat are also provided.

  UniSea, a major seafood processing plant, provides meals at discounted cost of $5.00 per meal.

  Safeway grocery store donates bread, cakes and other food items several times during the year and offers a senior citizens' discount to seniors shopping at the store.

  Unalaska Community Broadcasting provides coverage of special events, as well as free advertising of upcoming events and programs taking place for seniors.

  PCR works with USC staff to create programs for senior citizens. The pool has been used by seniors for recreational and fitness activities. The PCR facilities are provided at no cost to the seniors.

Application Findings/Other Information:

- Application submitted on time;
- All application requirements were met. Letters of support are optional;
- All FY21 reporting has been timely and is current.

FY22 City of Unalaska Community Support
Grant Application Review Summary Sheet

Organization Name: **Unalaska Visitors Bureau (UVB)**

UVB is requesting the same amount as FY21.

FY21 Award	Amounts	FY22 Request	Amounts
Executive Director FT	$ 60,000.00	Executive Director FT	$ 60,000.00
Operations Assistant PT	$ 25,000.00	Operations Assistant PT	$ 30,000.00
Seasonal Employees	$ 6,000.00	Seasonal Employees	$ 6,000.00
Executive Director - Benefits	$ 4,000.00	Executive Director - Benefits	$ 4,000.00
Payroll Taxes	$ 10,000.00	Payroll Taxes	$ 10,500.00
Facilities-Rent, Communications, Utilities/Telephone/Internet, Insurance	$ 30,000.00	Facilities-Rent, Communications, Utilities/Telephone/Internet, Insurance	$ 30,000.00
Program/Supplies- Printing, Advertising, Dues, Fees, community Outreach	$ 21,700.00	Program/Supplies- Printing, Advertising, Dues, Fees, community Outreach	$ 23,700.00
Equipment purchase/Maintenance	$ 6,000.00	Equipment purchase/Maintenance	$ 4,000.00
Office Supplies	$ 2,000.00	Office Supplies	$ 2,000.00
Travel	$ 6,000.00	Travel	$ 4,500.00
Training	$ 2,000.00	Training	$ 4,000.00
Professional Svcs.-Audit, Bookkeeper, Brochures, Website	$ 30,000.00	Professional Svcs.-Audit, Bookkeeper, Brochures, Website	$ 30,000.00
Other/Misc. - Fundraising Overhead	$ 1,300.00	Other/Misc. - Fundraising Overhead	$ 1,300.00
Total FY21 Award	**$ 210,000.00**	**Total FY22 Request**	**$ 210,000.00**

Application Highlights

- The Unalaska/Port of Dutch Harbor Convention & Visitors Bureau (Unalaska Visitors Bureau) is established to promote and encourage tourism and to support the development and sustainability of tourism infrastructure in the Unalaska/Port of Dutch Harbor region.
- The UVB is the sole entity that promotes and encourages travel to Unalaska. UBV works closely with multiple businesses, as well as the City of Unalaska, to successfully draw attention to our island for future visitors as well as potential community members.
- Staff is trained through on-the-job training, and also attend conventions or conferences when able. The E. D. continues to mentor staff on policy, procedures and providing excellent customer service. The UVB Board and staff have yearly board training in addition to access for online training through The Foraker Group.
- We predominantly gauge our success through our ability to attain our goals: financial, partnerships (number of memberships, strength of business and industry relationships), event turnout, and variety of what we can offer visitors to the island. We further measure our success through community, business, partner, and visitor feedback or critique.
- UVB's main mission is to encourage tourism in Unalaska through promotion of our region. There is no other organization that works to market Unalaska nor provides the services that UVB provides for the community. UVB serves the residents of Unalaska, 5,000+ transient workers, business travelers, visiting friends and families, cruise ship and ferry passengers, scientific researchers, and other travelers who choose Unalaska as their destination.
- A majority of our marketing targets travelers, but the entire community is able to benefit from our various efforts to promote travel to Unalaska
- **Goal I:** UVB will maintain the organization's structure, programs, and partnerships in the midst of COVID-19 pandemic impacts

Objective 1.1: Work on COVID-19 guidelines and protocols for potential cruise ship visits that adhere to local COVID mandates
Timeline: Beginning of FY22
Objective 1.2: Work with an increasingly conservative and potentially limited budget to maintain the core of the organization
*Timeline***:** Year round
Objective 1.3: Review strategic plan with the Board of Directors with the assistance of the Foraker Group
Timeline: Mid-Year FY22
Objective 1.4: Seek possible COVID relief grants for 501(c)6 nonprofits
Timeline: Year round
Objective 1.5: Maintain memberships and partnerships with key tourism industry associations and other DMO organizations
Timeline: Year round

- **Goal II:** UVB will expand its presence online by adding to our website, advertising through more online media, and offering virtual experiences for visitors and the local community
  Objective 2.1: Continue updating UVB website and add virtual tourism features
  Timeline: Year round
  Objective 2.2: Create and update existing online media on third party tourism websites.
  Timeline: Year round
  Objective 2.3: Participate in virtual/online trainings related to tourism, destination marketing and nonprofit management
  Timeline: Year round
  Objective 2.4: Work on creating online revenue opportunities including virtual fundraising event(s) and adding an online store to our website
  Timeline: Year round
- There was no way to expect or predict the impact of this pandemic, and UVB is not exception to that. While we met our goal of acquiring a new office space and relocating our office, we haven't been able to work in the office consistently or host any in-person events at the new office location. Essentially, our biggest overall goal moving into FY22 is to do what we can to maintain the UVB as an operational organization while we move through the pandemic. This will include working on a stricter budget and reviewing our strategic plan to include a "minimal operations" aspect if we are unable to secure funds beyond the City Grant.
- The most significant change is our office location. Program changes will reflect in our move towards proving virtual and online events.

Application Findings/Other Information:

- Application submitted on time;
- All application requirements were met. Letters of Support are optional;

CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2021-24

A RESOLUTION OF THE UNALASKA CITY COUNCIL ADOPTING THE FY22-FY31 CAPITAL AND MAJOR MAINTENANCE PLAN

WHEREAS, the purpose of the Capital Major and Maintenance Plan (CMMP) is to formalize the process of identifying and completing capital projects and major maintenance projects; and

WHEREAS, the CMMP serves as a tool to help the City effectively and efficiently meet the needs of the community; and

WHEREAS, City Departments were invited to submit project nominations; and

WHEREAS, this planning document outlines anticipated or recommended projects and expenditures for the upcoming ten years; and

WHEREAS, City staff and City Council have had the opportunity to review and comment on the nominations and the FY22-FY31 CMMP.

NOW THEREFORE BE IT RESOLVED that the Unalaska City Council approves and adopts the ten-year CMMP, for FY22-FY31, as presented by the City Manager pursuant to Unalaska Code of Ordinances § 6.12.040.

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on April 26, 2021.

_____
Vincent M. Tutiakoff, Sr.
Mayor

ATTEST:

_____
Roxanna Winters, CMC
Acting City Clerk

MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: Cameron Dean, Acting Planning Director
Through: Erin Reinders, City Manager
Date: April 26, 2021
Re: FY22-31 Capital and Major Maintenance Plan (CMMP)

SUMMARY: Staff provided City Council draft 10 Year CMMP presentations at their meetings on January 11, March 23, March 30, and April 12 2021. After each meeting the administration and department directors used Council's input to further refine the CMMP project proposals and budgets. The administration and department directors employed Council's metrics including budget goals, project need, compliance requirements, and pressing maintenance needs.

Presently, sixty-nine (69) projects are in the FY22-31 CMMP for a total of $ 231,255,491. Twenty one (21) projects are proposed in FY22 seeking $ 41,898,546 using various funding sources including over $ 20 million in grants and $ 4 million from the City's 1% sales tax set aside for capital projects. The FY22 rolling stock accounts for $ 1,024,933 and is funded from general and proprietary funds.

This is the first time a 10 year CMMP is presented to City Council. Unalaska City Code requires only a five year plan. Staff decided the additional five years provide better project planning and budgeting. The City's growing financial concerns promise for more thorough project review and vetting in the coming years. The Planning Department has prepared a larger scale spreadsheet printed on a plotter. This should help see the phasing, budget sources and overall plan for the 10 year CMMP time period.

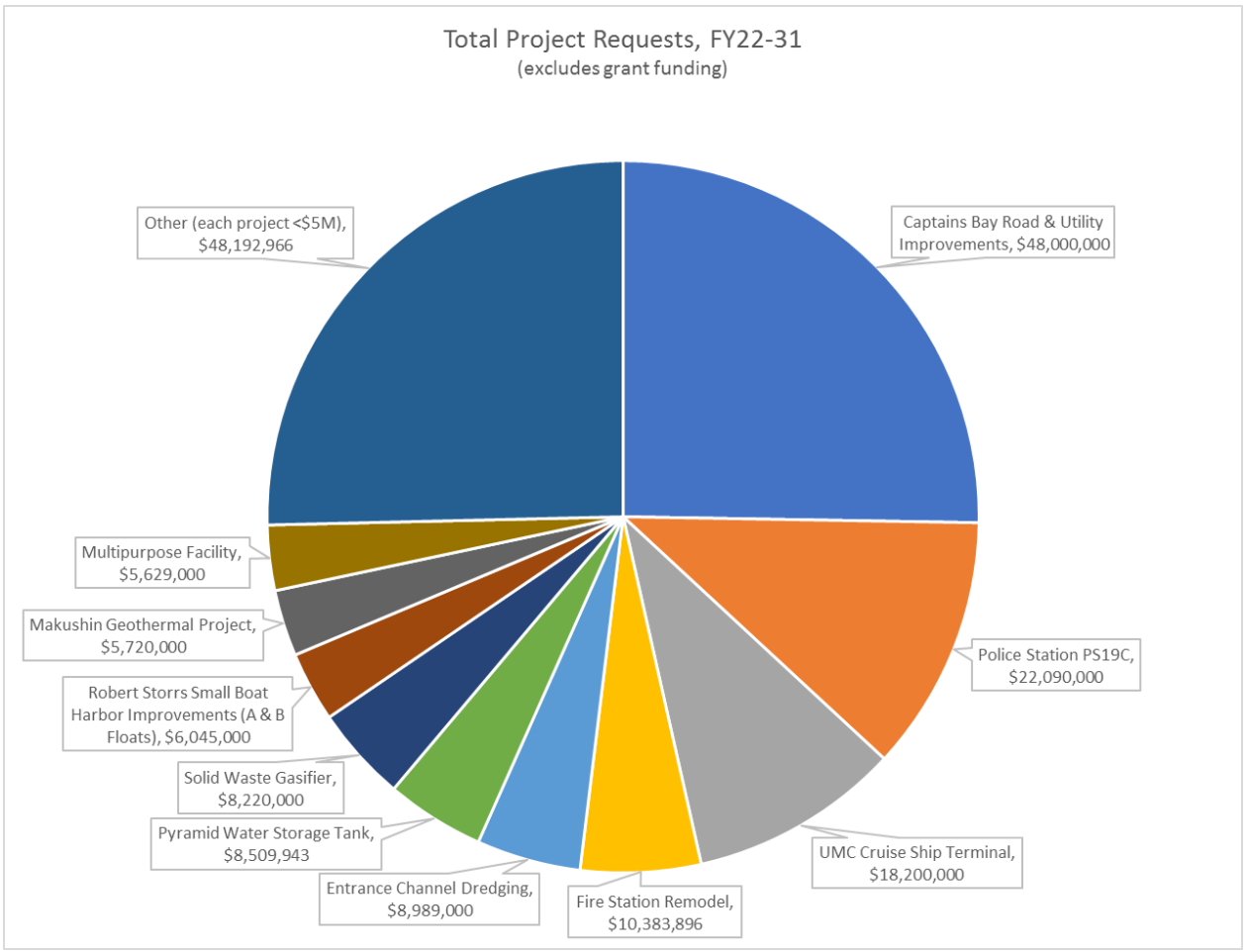
Staff recommends approval of Resolution 2021-24.

PREVIOUS COUNCIL ACTION: City Council reviews the CMMP several times each year for an opportunity to have input on projects, priorities and budgeting purposes. It subsequently adopts the CMMP as part of the City's annual budget.

BACKGROUND: Each year City Council is presented opportunities to review the draft CMMP in preparation for adopting the upcoming fiscal year budget. The process invites members to learn and ask questions about the plan's projects. The Planning Department presented Unalaska's first 10 Year Draft FY22-31 CMMP to Council on January 11, 2021. There was significant discussion about several projects, most notably rolling stock as well as the sustainability of Unalaska's annual capital needs and future plans. Council's general consensus was not to increase rolling stock and equipment purchases in FY22. Exceptions were a loader for the Ports Department and a small backup generator to assist the Waste Water Division.

Planning continued its work on the CMMP with department directors about the proposed and ongoing projects. The Technical Advisory Committee met to review proposed changes. One significant change is the timing and phasing for some projects. A 10 year plan presents opportunities to begin project planning farther in advance. In past CMMP documents some projects would 'hover' in the fourth and fifth year of the five year plan. The practice kept projects visible, but one unintended consequence was the appearance of a financially aggressive plan in terms of funding, timing and project management.

This year's CMMP also has two new line items to reflect the Rolling Stock and Major Maintenance plans. The line items summarize the amounts of each while individual tables can be reviewed for specific projects and expenses.



On March 8, 2021 the City Manager emailed Council's budget goals to departments to assist with project evaluation and budgeting. The reminder facilitated a review of CMMP projects using the goals, capacity for project management and project scheduling. The specific council goals used are:

General Fund Surplus/Deficit

1. *The General Fund operations will be budgeted without a deficit. The Council may appropriate additional funds from surplus to cover costs of capital projects.*

Proprietary Funding

2. *Staff will continue to seek ways to balance budgets in the proprietary funds.*

Operating Expenses

3. *City management shall continue to examine ways to reduce expenditures without significantly impacting the level and quality of services to the public.*

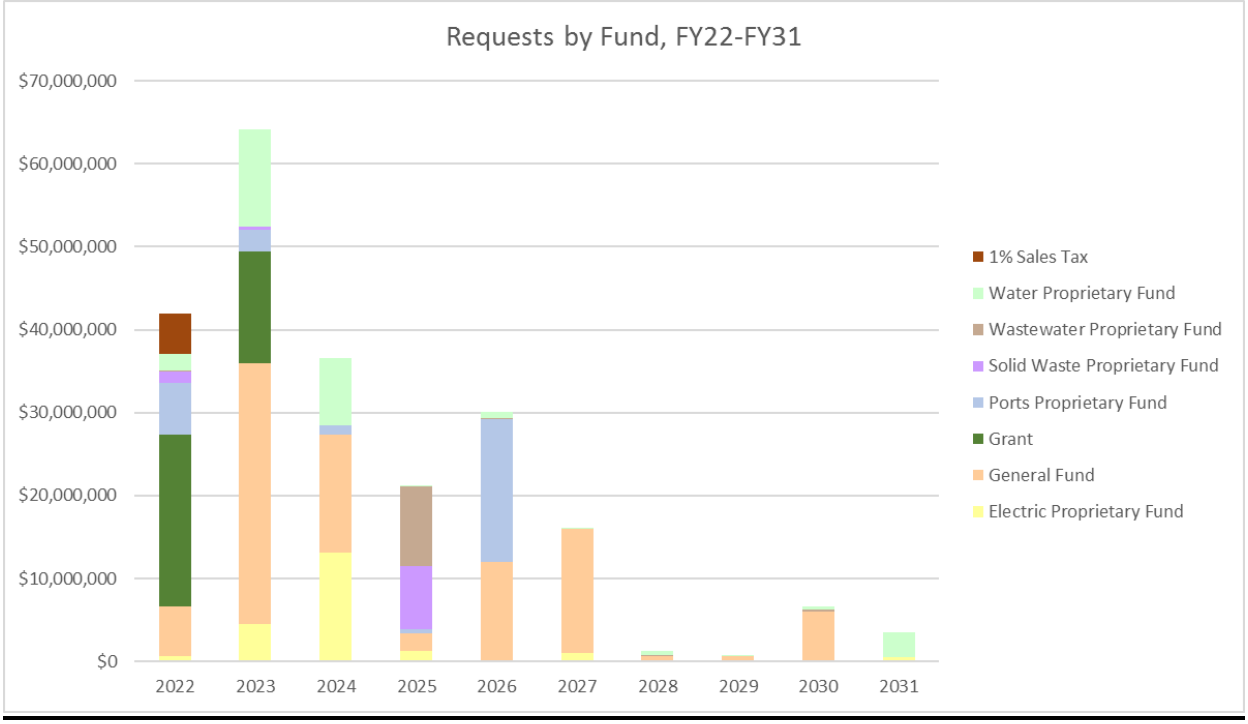
4. *City management shall continue to examine ways to reduce inventory without significantly impacting the level and quality of services to the public.*

Capital Projects

5. *New capital assets or maintenance of existing capital assets will be limited to projects approved by Council in the CMMP, which will include projects that are mandated or required by statute, projects that maintain our existing infrastructure, and projects that address life, safety, or health issues, and projects that support the economic development of Unalaska.*

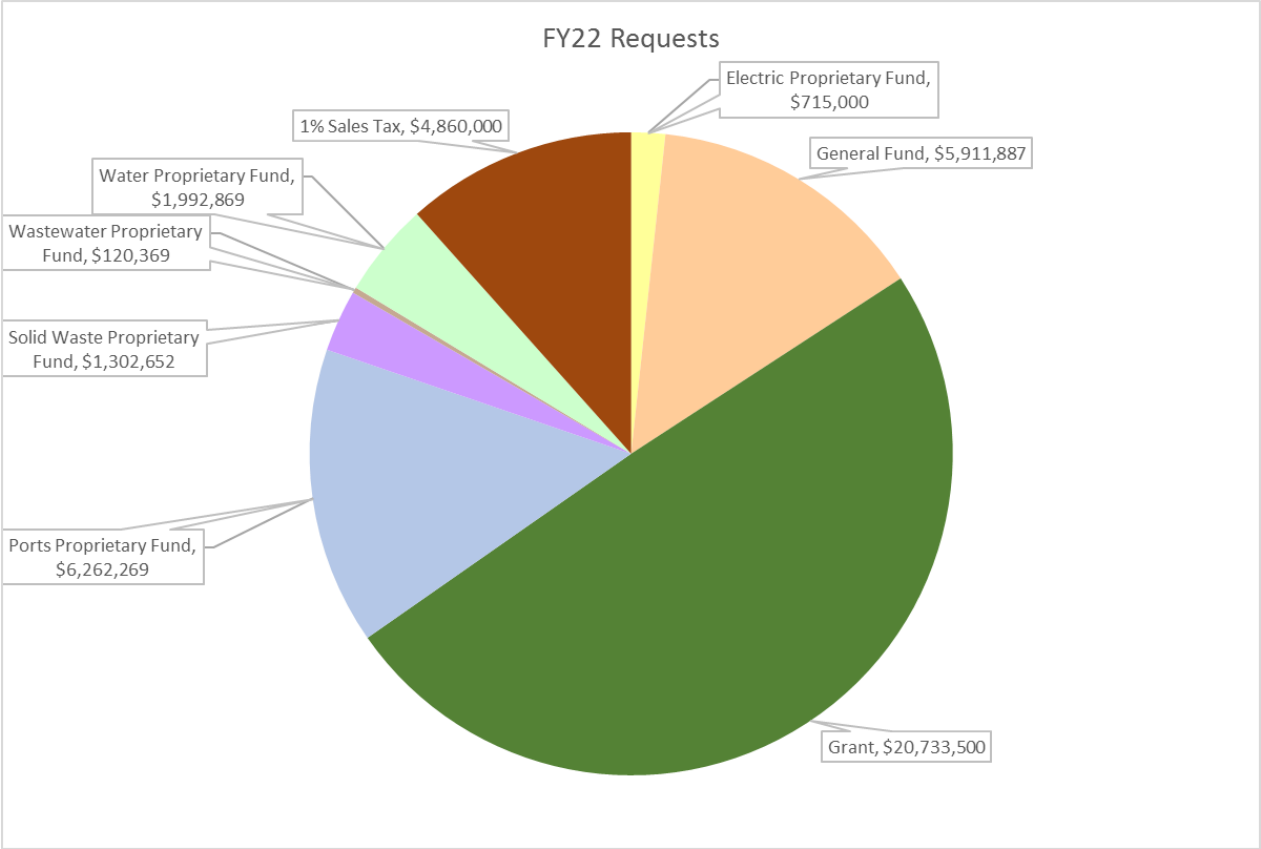
6. *The replacement and maintenance plans for all existing capital assets will be reviewed annually.*

7. *The vehicle and heavy equipment fleet requirements will be reviewed annually and reduced where appropriate without significantly impacting services provided to the public.*



DISCUSSION: The 10 year CMMP proposes sixty nine (69) projects and a budget of $ 231,255,491. Twenty one (21) projects are proposed in FY22 for $ 41,898,546 including $ 1,024,933 for rolling stock. This represents a $ 300,000 decrease since the April 12, 2021 City Council presentation. At that meeting the proposed FY22 budget was $ 42,198,546. A total of $ 20,733,500 is anticipated as grant funding. The following table provides more detail for FY22:

	CMMP	Rolling Stock	Total Requests
Electric Proprietary Fund	715,000	0	715,000
General Fund	5,390,513	521,374	5,911,887
Grant	20,733,500	0	20,733,500
Ports Proprietary Fund	6,045,000	217,269	6,262,269
Solid Waste Proprietary Fund	1,171,100	131,552	1,302,652
Wastewater Proprietary Fund	43,000	77,369	120,369
Water Proprietary Fund	1,915,500	77,369	1,992,869
1% Sales Tax	4,860,000	0	4,860,000
Grand Total	**40,873,613**	**1,024,933**	**41,898,546**



Grants

Grants contribute significantly to the FY22 and FY23 CMMP budget. The FY22 budget of $ 41,898,546 includes $ 20,733,500 in grant funding (49.5%). The long-planned Entrance Channel Dredging project is scheduled to begin this year at a cost of $ 38,456,000. Unalaska was awarded a $ 26,967,000 grant from the US Water Resources Development Act which pays for 75% of the dredging project. The City contribution of $ 8,989,000 from the General Fund completes the project funding. The project phasing and costs are divided across the FY22-23 fiscal years.

Another project with significant grant funding is the Robert Storrs Small Boat Harbor Improvements. The total project cost of $ 9,945,000 includes a grant of $ 3,250,000 from the Alaska Department of Transportation. Currently, this project is specifically mentioned on potential General Obligation Bond being considered by the State legislature. The Ports Proprietary Fund is the source for the project's remaining balance of $ 6,045,000. The project's grant/local fund ratio is about 35% / 65%.

1% Capital Project Fund

In 1988 City Council passed Ordinance 88-18 to increase the sales and use tax from two to three percent. Proposition 1 was presented the 1% tax increase as a ballot measure on the October, 1988 general election. It was approved by a majority of Unalaska's voters. The additional one percent generates revenues to fund capital improvement projects. The 1% Capital Project fund balance is currently about $11 million. This fund is available to fund projects in the CMMP.

> **Result:** Staff discussed the 1% fund in the context of FY22 projects and recommends using $ 4,860,000 to assist funding three projects and 11.5% of FY22. The Makushin Geothermal Project is identified to use $ 2,860,000 which is the full FY22 amount. The Entrance Channel Dredging project is recommended to offset the $ 4,494,500 local share cost using $1 million from the 1% fund. Staff recommends using $ 1 million from the 1% to fully fund the cost of the Pavement Preservation – Sealcoating project in FY22. This leaves approximately $ 6.2 million in the 1% fund. The Finance Department estimates the 1% fund accrues between $ 3 – 3.5 million annually.

Project Specifics

Several FY22 projects deserve some attention due to their timing, relationship to other projects, or ongoing efforts to secure grant funding. They include the 34.5 kV Submarine Cable Replacement, Electric Energy Storage System, Captains Bay Road and Utility Project, Makushin Geothermal, Communications Infrastructure and the Pavement Preservation and Sealcoating projects. Together the projects total $ 68,609,938 or 29.6% of the 10 year CMMP. Also for consideration is the Rolling Stock and Facilities Maintenance Plans.

Electric Upgrades and Makushin Geothermal

Together the 34.5kV Submarine Cable Replacement project ($ 2,340,000) and the Electric Energy Storage System ($ 3,000,000) sum to a total of $ 5,340,000 and are currently needed for safety and power resource reasons. These projects have been on the CMMP for several years in one form or another. However, the Makushin Geothermal project will likely incorporate Electric Energy Storage System as part of that overall project budget. The 34.5kV Submarine Cable Replacement will likely be included in the Integration Plan if it is able to come on line in the next two years, but the cable is becoming an increasing safety concern. In effect, the project is in the FY22 CMMP twice – initial plans were for the improvement to contribute toward the City's $ 5 million cost share for the Makushin project also budgeted.

> **Result:** On March 30, 2021 City Council approved OCCP's request to extend the City's $ 500 million power purchase agreement (PPA). The agreement is set to expire on June 30, 2021. OCCP needs one additional year to secure project financing, which has delayed the project timeline. City Council discussed the project timeline and projects feels should be undertaken/not in regard to the Geothermal project and decided to proceed with the 34.5 KV cable replacement

and to delay funding an electric energy storage system until FY23. City Council agreed the City should split its $ 5 million matching commitment to the geothermal project for capital improvements between FY22 and FY23 with $ 2.86 million budget each year.

Captains Bay Road

The Captains Bay Road Improvement and Utility Project remains on the CMMP again this year with hopes of earning grant funding from Alaska's Department of Transportation Plan or other sources. The City already approved $ 2 million toward the project which leaves $ 52 million to be secured/budgeted for the project. City staff applied to Alaska's CAPSIS (Online Capital Project System) after breaking the project up into smaller phases.

The State of Alaska FY21 budget was $ 42.5 million for transportation capital projects. Dividing the Captains Bay Road into smaller project phases may increase its chance for a funding award each year. Unalaska has five applications pending with the State of Alaska CAPSIS and are listed below in order of priority. The amount requested from the State is next to each project.

	Project		Request Amount
1.	Captains Bay Road and Utility Improvements	$	4,000,000
2.	Robert Storrs Small Boat Harbor Improvements	$	3,400,000
3.	General Hill Booster Pump	$	318,600
4.	Unalaska Marine Center Cruise Ship Terminal	$	13,000,000
5.	Pyramid Water Treatment Plant Micro Turbines	$	732,000
	TOTAL	**$**	**21,450,000**

Result: City Council discussed this project at its meeting on March 23 and again on March 30, 2021. Dialogue evolved around investigating other means to assist with funding the project. Examples included Local Improvement Districts (LID), Tax Increment Financing (TIF), property tax assessments, as well as approaching the land owners and businesses directly to inquire about their interest and support. City Council passed a City Manager Directive to prepare a Cost Benefit Analysis (CBA). Staff noted a CBA was prepared before seeking funding for the Entrance Channel Dredging project. The CBA was integral in obtaining over $ 20 million in grant money from the federal government. Staff is currently preparing a Scope of Work to show consultants interested in preparing the Captains Bay Road CBA.

Communications Infrastructure

This is a new CMMP project this year and is being considered because it partners with a private sector project. In FY17 City Council approved funding for a small fiber optic infrastructure development project. Two proprietary funds still have the money budgeted for this project and total $ 105,974. The funds are Wastewater and Water and they equally have $ 52,987 that can be transferred for use as part of this Communications and Infrastructure project.

GCI has applied to Unalaska for permits to begin a trenching project to install fiber optic cable throughout the City. This may be Unalaska's last significant opportunity to install conduit and fiber to all of its facilities and save significant cost. The underground infrastructure project offers immediate safety and security improvements, faster and more manageable connectivity between City facilities, will increase the City's ability to rely on large data uses such as GIS mapping and live stream security cameras, and improve some existing software platforms.

The Planning Department serves as project coordinator and is working with the Department of Public Works, Department of Public Utilities, Information Systems, and City Attorney and GCI representatives to prepare a Joint Trenching Agreement (JTA). The JTA is near completion. The initial cost estimate was $ 2.5 million but work on the JTA has helped to reduce the cost thus far and the city currently has about 15,000 of the 55,000 linear feet required for a City-wide system. Conduit is available on Captains Bay Road and for about 9,000 feet of Ballyhoo Road.

The JTA offers spare conduit to GCI as a fair exchange for the cost savings it receives by installing conduit simultaneously. If the City had to trench the project as a separate project it would cost over $ 2.5 million. At this time the cost for conduit installation quoted by GCI is $ 8/lf and $ 1,450 for each vault purchased and installed.

Staff has lowered the cost for this project to $ 2 million because the project still requires a separate contract to install fiber, switches, and other requirements to complete the network. The final cost should come down and might be phased into two years to match GCI's phasing.

> **Result:** On March 23 City Council asked staff to inquire with TelAlaska about leasing two strands of fiber. Council wanted to compare the lease cost to the installation cost for owning the infrastructure. On March 30, 2021 Jake Whitaker reported to Council his feedback from TelAlaska that the company would not lease fiber in an unlimited capacity. The unlimited bandwidth is the biggest benefit to Unalaska for owning its own infrastructure. Planning Director Bil Homka reported the same response from GCI. After some additional discussion it was determined to proceed with the Joint Trenching project with GCI at a budgeted amount of $ 2 million.

Pavement Preservation and Sealcoating

The City invested significant resources in paving its thoroughfares throughout the community. The pavement is aging and it needs to be sealed again to preserve the investment for future years. This project was originally going to coincide with the airport runway resurfacing/sealing project. The State of Alaska maintains the runway but Unalaska would save significantly by hiring the same contractor while it is already on island for the airport work. The original budget was estimated at $ 2 million.

In discussions with the Department of Public Works we learned about $ 1 million could be saved on this project by purchasing a street 'Zamboni' that would allow DPW to

complete the project. The machine is about $ 200,000 and it would be available for future uses and save money in the future. The additional $ 800,000 is for materials cost. Once the machine is purchased it will be added to the Rolling Stock Plan. Staff decided to highlight this as a CMMP because it explains a new DPU service and the cost savings that is driving the project.

> **Result:** Pursuant to a City Council inquiry at its March 23 meeting, the Public Works Director obtained a verbal quote from a contractor for resurfacing all 20 lane miles of paved road surface in the city. Council wanted to compare a contractor cost to the cost of purchasing equipment and materials. Staff had $ 1 million proposed to purchase a resurfacing 'Zamboni' and materials. Concern was raised about the capacity to treat all 20 lane miles before some began to show signs of aging, wear and tear.
>
> On March 30 Tom Cohenour reported Knik Construction estimated the cost to resurface Unalaska's paved roads at about $ 1 million. City Council preferred hiring a professional at this time to catch the roadways up on maintenance and said we can re-evaluate methods for future pavement preservation at a later time.

10 Year Rolling Stock and Major Maintenance Plans

In past years the Rolling Stock Plan was prepared separately and presented to City Council apart from the CMMP project summary sheets. The dual process often presented a redundant, unclear budget process. Beginning last year we combined the Rolling Stock Plan into one document as a project summary sheet and a 'line item' in the budget spreadsheets. This year we have begun to develop a 10 year Rolling Stock Plan, however it is not fully developed so is not included in the overall 10 year CMMP budget figure.

> **Result:** The Rolling Stock Plan was further refined and the cost reduced since the first presentation to City Council. The cost is now at $ 1,024,933 in FY22.

This year we also began preparing a 10 year Facilities Maintenance plan to include in the CMMP. We have several years prepared and entered into this CMMP, however the full 10 year outlook is incomplete. We plan to continue developing this section of the CMMP with the anticipation it will be fully developed for next year.

Pyramid Water Treatment Chlorine Upgrade

The chlorine upgrade and micro turbines projects at the Pyramid Water Treatment Plant were originally planned separately, but staff later identified an opportunity to coordinate construction and potentially save costs. An amendment to the FY21 budget would be necessary. At the April 12 meeting, Council favored using a budget amendment to partly fund the chlorine upgrade and allow both projects to work in tandem.

> **Result:** The FY22 request from the Water Proprietary Fund was reduced to $ 581,500 to account for $ 300,000 coming from the FY21 budget amendment under consideration as Ordinance 2021-09.

Changes

Other changes to the FY22 CMMP since March 30, 2019 include moving the General Hill Booster Pump project costs of $ 175,000 from the General Fund to the Water Proprietary Fund. We also recommend moving the Kelty Field Improvement Project forward, from FY24 to FY22. Standing water collects on the field and will pond instead of draining. It is unfit for use and often unsafe when used by the public. This $ 100,000 will support assessing and addressing some the field's drainage system with appropriate repairs. It is unknown at this time what the exact problem is, but there have been some lessons learned while constructing the new UCSD park project that can help solve this issue.

ALTERNATIVES: If Council chooses not to support the FY22-31 CMMP as presented, there are three main alternatives. Council could re-prioritize the projects currently in the plan, Council could recommend additional projects for inclusion and/or Council could recommend removing specific projects from the CMMP altogether. The revised CMMP would then be presented for Council's approval at a later date.

FINANCIAL IMPLICATIONS: This final draft presented to City Council contains a total of $ 41,898,546 in funding for FY22. Projects propose using $ 5,911,887 from the General Fund, $ 4,860,000 from the 1% fund, $ 20,733,500 from grant sources, and $ 10,393,159 from various proprietary funds.

LEGAL: N/A

STAFF RECOMMENDATION: Staff recommends approval of Resolution 2021-24 adopting the FY22-FY31 CMMP.

PROPOSED MOTION: I move to approve Resolution 2021-24.

CITY MANAGER COMMENTS: I would like to thank staff for taking a close look at these projects, and the Planning Department for their coordination efforts. The FY22 proposals focus on maintaining the city's existing infrastructure and systems, as do the following nine years' worth of projects. The majority of projects included were previously in the CMMP with the need remaining. Additionally, the utility projects are identified in associated Master Plans. Several PCR projects have been added because of the extended 10 year outlook. We will continue to look at how we can improve our planning efforts on capital improvements and will continue explore funding opportunities.

ATTACHMENTS:

CMMP Project Summary Sheets
Rolling Stock Plan
Major Maintenance Plan
CMMP 10 Year Spreadsheet Scroll (printed large format)
FY22 Budget Table

Row Labels	Electric Proprietary Fund	General Fund	Grant	Ports Proprietary Fund	Solid Waste Proprietary Fund	Wastewater Proprietary Fund	Water Proprietary Fund	1% Sales Tax	Grand Total
Electric Proprietary Fund	**715,000**								**715,000**
Electric	715,000								715,000
34.5 kV Submarine Cable Replacement	60,000								60,000
Electrical Distribution Equipment Replacement	115,000								115,000
Generator Sets Rebuild	500,000								500,000
Powerhouse Cooling Water Inlet Cleaning and Extension	40,000								40,000
General Fund		**5,911,887**	**17,483,500**	**217,269**	**131,552**	**120,369**	**83,369**	**4,860,000**	**28,807,946**
Electric								2,860,000	2,860,000
Makushin Geothermal Project								2,860,000	2,860,000
Other		947,013							947,013
Communications Infrastructure (Citywide)		947,013							947,013
PCR		100,000							100,000
Kelty Field Improvement Project		100,000							100,000
Ports		3,494,500	13,483,500					1,000,000	17,978,000
Entrance Channel Dredging		3,494,500	13,483,500					1,000,000	17,978,000
Public Works		1,370,374	4,000,000	217,269	131,552	120,369	83,369	1,000,000	6,922,933
Captains Bay Road & Utility Improvements			4,000,000						4,000,000
DPW Inventory Room - High Capacity Shelving		150,000							150,000
Facilities Maintenance Plan		699,000				43,000	6,000		748,000
Pavement Preservation - Sealcoating								1,000,000	1,000,000
Rolling Stock Replacement Plan		521,374		217,269	131,552	77,369	77,369		1,024,933
Ports Proprietary Fund			**3,250,000**	**6,045,000**					**9,295,000**
Ports			3,250,000	6,045,000					9,295,000
Robert Storrs Small Boat Harbor Improvements (A & B Floats)			3,250,000	6,045,000					9,295,000
Solid Waste Proprietary Fund					**1,171,100**				**1,171,100**
Solid Waste					1,171,100				1,171,100
Oil Separator and Lift Station Replacement					971,100				971,100
Solid Waste Gasifier					200,000				200,000
Water Proprietary Fund							**1,909,500**		**1,909,500**
Water							1,909,500		1,909,500
CT Tank Interior Maintenance and Painting							953,000		953,000
Generals Hill Water Booster Pump							175,000		175,000
Icy Lake Road Reconstruction							100,000		100,000
Mainline and Service Valve Maintenance Program							100,000		100,000
Pyramid Water Treatment Plant Chlorine Upgrade							581,500		581,500
Grand Total	**715,000**	**5,911,887**	**20,733,500**	**6,262,269**	**1,302,652**	**120,369**	**1,992,869**	**4,860,000**	**41,898,546**

FY22-31 CMMP

34.5 kV Submarine Cable Replacement

Electric

Project Description: The Electric Utility relies on the 34.5 kV sub-transmission system to deliver power to major Industrial loads and to the Town Substation. It uses two existing feeders: one crosses Iliuliuk Bay between East Point Road and Bay View Avenue and is near the end of its lifespan. Replacement is required.

Project Need: The submarine cable crossing is approximately 30 years old and was originally installed by the City line-crew. At the East Point Road entrance point, the cable is no longer buried completely and is easily approachable at low tide. Furthermore, large rocks have been moved by waves over the years are now sitting directly on the cable. While undersea cable has a durable outer jacketing and is more protected by its construction than a typical 15 kV cable, the current condition does represent a safety problem.

Development Plan & Status : Once a preliminary design is completed, the Section 10 permit package can be developed and submitted to the Army Corps of Engineers. The project assumes the Corps will determine that the cable project will qualify for a Nationwide permit, a streamlined version of an individual permit. The Corps will coordinate reviews with federal and state resource agencies. The agencies will consider project impacts to endangered species, impaired waterbodies, and fish habitats. The Corps typically issues a Nationwide Section 10 permit within three months of receiving a completed application. It is assumed that the new submarine cable will be installed in the same location and with the same connection points as the existing line. However, the capacity of this line should be upgraded during the engineering planning phase to better serve the current and future loads. Engineering coordination with the express feeder project will be required. Additionally, a cable condition assessment and inspection should occur very soon. The results of this inspection may affect the replacement schedule of the submarine cable.This project will be funded by the Electrical Proprietary Fund.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY23

Purchase/Construction: FY24

Cost Assumptions	
Engineering, Design, Const Admin	180,000
Other Professional Services	40,000
Construction Services	1,000,000
Machinery & Equipment	580,000
Subtotal	**1,800,000**
Contingency (set at 30%)	540,000
TOTAL	**2,340,000**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	60,000	120,000	2,160,000	0	0	0	0	0	0	0	2,340,000
Total	0	60,000	120,000	2,160,000	0	0	0	0	0	0	0	2,340,000

FY22-31 CMMP

Electric Energy Storage System

Electric

Project Description: This project includes the final design, procurement, construction, integration and commissioning of one 1 MW energy storage system.

Project Need: Large equipment, such as ship to shore cranes, demand electrical supply loads that exceed the power supply system's intended loading profile. To smoothly provide a continuous, undiminished power supply under loads that can suddenly spike to 10 to 15% of the total load in seconds, the engines must constantly react to both the rapid increases and decreases of the system load. The engines' reactions decreases efficiency and create undue mechanical and electrical wear on the equipment and distribution system. Additionally, generation dispatch is often significantly affected due to the inability of the facilities to operate in the most efficient configuration possible. The proposed energy storage system system will arrest the rapid changes in the electrical load.

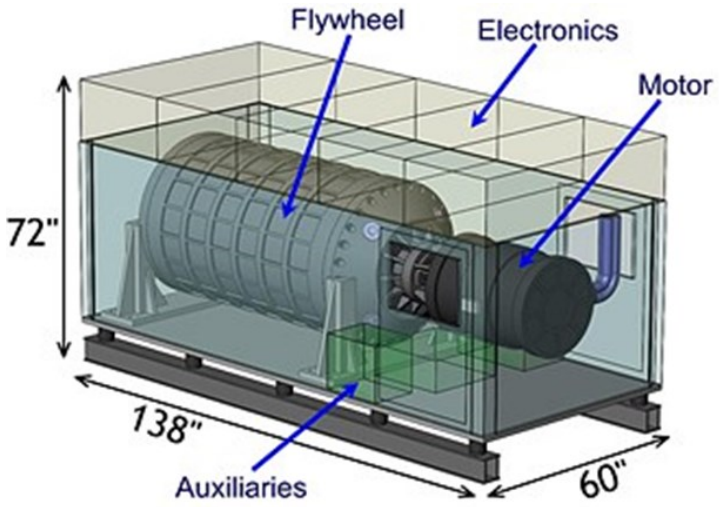
Development Plan & Status : Design will be accomplished in FY22. Installation of the energy storage system will be in FY23. Permitting is not anticipated for this project. This project will be funded by the Electrical Proprietary Fund.

Estimated Project & Purchase Timeline

Pre Design: FY19

Engineering/Design: FY22

Purchase/Construction: FY23



Cost Assumptions		
	Other Professional Services	$ 100,000.00
	Engineering, Design, Construction Admin	$ 271,312.00
	Construction Services	$ 1,300,000.00
	Machinery & Equipment	$ 1,370,406.33
	Subtotal	$ 3,041,718.33
	Contingency (20%)	$ 608,343.67
	Total Funding Request	$ 3,650,062.00

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	650,062	0	3,000,000	0	0	0	0	0	0	0	0	3,650,062
Total	650,062	0	3,000,000	0	0	0	0	0	0	0	0	3,650,062

FY22-31 CMMP

Electrical Breakers Maintenance and Service

Electric

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.

Estimated Project & Purchase Timeline

Pre Design: FY27

Engineering/Design: FY27

Purchase/Construction: FY27

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	0	0	0	0	0	234,000	0	0	0	0	234,000
Total	0	0	0	0	0	0	234,000	0	0	0	0	234,000

FY22-31 CMMP

Electrical Distribution Equipment Replacement

Electric

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.

Estimated Project & Purchase Timeline

Pre Design: NA

Engineering/Design: NA

Purchase/Construction: NA

FY22 Cost Assumptions	
Engineering, Design, Construction Admin	
Other Professional Services	
Construction Services	
Machinery & Equipment	$100,000
Subtotal	$100,000
Contingency (15%)	$15,000
Total Funding Request	$115,000

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	115,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,015,000
Total	0	115,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,015,000

FY22-31 CMMP

Electrical Intermediate Level Protection Installation

Electric

Estimated Project & Purchase Timeline

Pre Design: FY26

Engineering/Design: FY27

Purchase/Construction: FY28

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 re-closers 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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	0	0	0	0	0	650,000	0	0	0	0	650,000
Total	0	0	0	0	0	0	650,000	0	0	0	0	650,000

FY22-31 CMMP

Generator Sets Rebuild

Electric

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.

Estimated Project & Purchase Timeline

Pre Design: NA

Engineering/Design: NA

Purchase/Construction: NA

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	500,000	750,000	1,000,000	500,000	0	0	0	0	0	0	2,750,000
Total	0	500,000	750,000	1,000,000	500,000	0	0	0	0	0	0	2,750,000

FY22-31 CMMP

Installation of New 4 Way Switch at Town Substation

Electric

Project Description: This project adds a redundant switch for T12 at the substation. It will provide switching to allow transformer T-1 or T-2 to be taken out of service more readily and without causing an outage. The project also includes reworking of the 34.5 kV cable/conduit system within the substation to incorporate a new switch in this location. Switches with remote visibility and operation capabilities should be considered during the planning and engineering stages.

Project Need: The Electric Utility relies on the 34.5 kV sub-transmission system to deliver power to major industrial loads and to the Town Substation. Both feeders that end at Town Substation pass through a single 4 way switch, T12. All of Unalaska's 12 kV loads are fed from Town Substation. Switch T12 is the point where both 34.5 kV feeders can be joined to the substation and is a single point of failure for the sub-transmission system. The loss of this switch results in an outage for all facilities served by the Town Substation, including the school, clinic, and police station, and all residential loads on Unalaska Island.

Development Plan & Status : The Budget for this project was derived from the Electric Master Plan. A more accurate budget will be realized during the design phase of this project. Funding for this project will come from the Electric Proprietary Fund.

Estimated Project & Purchase Timeline

Pre Design: FY24

Engineering/Design: FY25

Purchase/Construction: FY26

Cost Assumptions	
Engineering, Design, Construction Admin	$50,000
Other Professional Services	$50,000
Construction Services	$150,000
Machinery & Equipment	$250,000
Subtotal	$500,000
Contingency (30%)	$150,000
Total Funding Request	$650,000

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric 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

FY22-31 CMMP

Large Transformer Maintenance and Service

Electric

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 12 years old, with the fourth only 3 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.

Estimated Project & Purchase Timeline

Pre Design: FY24

Engineering/Design: FY24

Purchase/Construction: FY24

Cost Assumptions	
Engineering, Design, Construction Admin	
Other Professional Services	$150,000
Construction Services	
Machinery & Equipment	
Subtotal	$150,000
Contingency (30%)	$45,000
Total Funding Request	$195,000

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	0	0	195,000	0	0	0	0	0	0	0	195,000
Total	0	0	0	195,000	0	0	0	0	0	0	0	195,000

FY22-31 CMMP

Powerhouse Cooling Water Inlet Cleaning and Extension

Electric

Project Description: This project consists of cleaning the Powerhouse seawater cooling line from the intake to the Powerhouse, and extends the intake into deeper water.

Project Need: The powerhouse seawater cooling line needs to be cleaned out every five years due to marine growth inside the line. Increasing seawater temperatures and congestion from local construction require the cooling water intake to be extended to deeper, colder water. The Electrical Master Plan recommends a depth of 20 feet.

Development Plan & Status : The existing line runs inside a square concrete utilidoor that terminates with a concrete gate support structure. The gate was actually a strainer grate that could be raised and lowered from the support structure for maintenance and cleaning. Only the concrete guides for the gate remain of this system. It is suggested that the gate be moved to the end of a new 200 linear foot pipe extension out into Unalaska Bay. The pipe would be 30 inch diameter and terminate at a -20 foot MLLW. The gate would be constructed of 316 stainless steel and the pipe extension would be constructed of SDR 32.5 (.923 inch wall) HDPE pipe to eliminate the need for corrosion maintenance. The extension would be attached to the gate with a 45° elbow to swing the direction of the pipeline to the north, away from the fuel dock and in the shortest direction to deeper water.

Estimated Project & Purchase Timeline

Pre Design: FY20

Engineering/Design: FY22

Purchase/Construction: FY23

Cost Assumptions	
Engineering, Design, Construction Admin	40,000
Other Professional Services	10,000
Construction Services	200,000
Machinery & Equipment	67,432
Subtotal	317,432
Contingency (30%)	95,230
Total Funding Request	412,662

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	40,000	372,662	0	0	0	0	0	0	0	0	412,662
Total	0	40,000	372,662	0	0	0	0	0	0	0	0	412,662

FY22-31 CMMP

Town Substation SCADA Upgrade

Electric

Project Description: This project updates the SCADA at Town Substation with the following:

- Addition of a station PLC to replace the Real Time Automation Controller (RTAC) and collect SCADA data from all meters and relays. The PLC will calculate metering data.
- Addition of a small server which includes VM Ware for development and interfacing with existing substation equipment controls such that substation operation would not rely on the existing wireless communication system. The server will also run the power plant SCADA system Wonderware Intouch application so the HMI will display data from the power plant.
- Addition of a thin client (HMI) for local connection and system overview. • Adding port servers and network switches for engineering access to relays and meters to reliably collect event reports and settings.

Project Need: This project will improve the Town Substation efficiency and reliability. In the past, the Utility has known there have been many issues with the substation communications and moving data, data resolution, lost commands to breakers, and lag in reported data between the powerhouse and the Town Substation. The existing SEL Embedded PC and RTAC at the Town substation are first generation and the PC is running a standalone HMI application displaying the substation breakers and transformer data along with control of the breakers. These components will soon be at the end of their useful life. The upgrade will maintain safe operations, to monitor the condition and status of the entire utility system for accurate reporting.

Development Plan & Status : Funding for this project will come from the electric proprietary fund.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY23

Cost Assumptions	
Engineering, Design, Construction Admin	
Other Professional Services	$90,000
Construction Services	
Machinery & Equipment	$10,000
Subtotal	$100,000
Contingency (30%)	$30,000
Total Funding Request	$130,000

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	0	130,000	0	0	0	0	0	0	0	0	130,000
Total	0	0	130,000	0	0	0	0	0	0	0	0	130,000

FY22-31 CMMP

Wartsila Modicon PLC Replacement

Electric

Project Description: The Wartsila Modicon PLC will be upgraded to the GE PACS RX3i controllers, which are the majority of the PLCs on the Utility's electrical SCADA system. Having all new PLCs will on the same platform will eliminate the need for new PLC software licenses and additional spare PLC hardware will no longer be necessary. When the PLCs are reprogrammed, all of the logic shall be unlocked and become the property of the Utility so that Utility personnel can make modifications. The SCADA system human machine interface (HMI) screens will be updated with the new screens and points for the generators. All of the drawings provided by Wartsila for the original controllers shall be updated with the new controllers and I/O modules. Wartsila did not provide AutoCAD files of the as-built drawings after the construction of the new power plant. All Wartsila drawings affecting the PLC's will be converted to AutoCAD.

Project Need: Schneider Electric's Modicon Quantum PLCs control the Wartsila generators (Units 10 and 11) at the NPH. The PLC models installed are no longer produced and difficult to find the same replacement parts. The Concept PLC software, used to program the Quantum PLCs, is not supported on newer operating systems and the logic in the PLC programs are proprietary and locked, which makes it very difficult to troubleshoot and modify.

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

Estimated Project & Purchase Timeline

Pre Design: FY

Engineering/Design: FY

Purchase/Construction: FY31

Cost Assumptions	
Engineering, Design, Construction Admin	$50,000
Other Professional Services	$100,000
Construction Services	
Machinery & Equipment	$200,000
Subtotal	$350,000
Contingency (30%)	$105,000
Total Funding Request	$455,000

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Electric Proprietary Fund	0	0	0	0	0	0	0	0	0	0	455,000	455,000
Total	0	0	0	0	0	0	0	0	0	0	455,000	455,000

FY22-31 CMMP

Makushin Geothermal Project

Electric

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 General Fund.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY23

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
1% Sales Tax	0	2,860,000	0	0	0	0	0	0	0	0	0	2,860,000
General Fund	0	0	2,860,000	0	0	0	0	0	0	0	0	2,860,000
Total	0	2,860,000	2,860,000	0	0	0	0	0	0	0	0	5,720,000

FY22-31 CMMP

Fire Station Remodel

Fire

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 and/or the 1% Capital Projects Fund.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY24

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	10,383,896	0	0	0	0	0	0	0	10,383,896
Total	0	0	0	10,383,896	0	0	0	0	0	0	0	10,383,896

FY22-31 CMMP

Fire Training Center

Fire

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 as a regional training center for other Aleutian Communities.

Development Plan & Status : Only a concept plan exists at the present time.. 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. The general fund will pay for the project. $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.

Estimated Project & Purchase Timeline

Pre Design: FY19

Engineering/Design: FY23

Purchase/Construction: FY24

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	12,000	0	0	1,501,500	0	0	0	0	0	0	0	1,513,500
Total	12,000	0	0	1,501,500	0	0	0	0	0	0	0	1,513,500

FY22-31 CMMP

Lear Road Duplexes Kitchen/Bathroom Renovations

Housing

Project Description: Full renovation of both kitchens in units 69 & 73 and 81 & 85 (4 kitchens and 6 bathrooms total), replacing all cabinets, countertops, and flooring in both units of both duplexes. This will include some electrical, plumbing, fixtures, and parts as necessary.

Project Need: Labor and maintenance costs of the Lear Road Duplexes are increasing due to their age and condition. Over time, some cabinet doors have been replaced with plywood, and some hinges don't hold well because the screw holes have been stripped. In addition, many drawers in all units do not function properly due to worn out or missing drawer guide parts and finding replacement parts has become quite difficult. The countertops have loose laminate as well as chips and burns, which are difficult to repair and nearly impossible to match. The flooring was replaced in all of the units in 2000; however, these floor coverings now have tears, holes, and stains as a result of twenty years of use since that installation was completed.

If left in their current condition, employee tenants will have countertops, cabinets, and flooring which will be difficult to operate, keep clean and are potentially hazardous. Drawers and doors that will not open or slide properly could cause injury, cracked countertops can harbor dangerous bacteria, and irregular flooring surfaces are a trip hazard. These current issues will remain and new issues will arise as the units age, requiring maintenance costs to increase.

The City will gain serviceable components while reducing maintenance costs. These kitchen renovations will retain the property's value for years to come and increase desirability, which can be important for employee recruiting and retention.

Estimated Project & Purchase Timeline

Pre Design: NA

Engineering/Design: NA

Purchase/Construction: FY24

Lear Road Duplexes

Development Plan & Status : ECI Architecture prepared final plans in July 2018. Regan Engineering assembled the bid package in October 2018 with bids being let on March 8, 2019 due on April 9, 2019. Industrial Resources, Inc (IRI) was the selected contractor. Project scope was reduced from 4 units to 2 units because IRI's bid exceeded available funding.

Cost Assumptions

Engineering, Design, Const Admin		60,000
Other Professional Services		10,000
Construction Services		357,846
Machinery & Equipment		0
	Subtotal	427,846
Contingency (set at 30%)		128,354
	TOTAL	**556,200**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	400,000	0	0	156,200	0	0	0	0	0	0	0	556,200
Total	400,000	0	0	156,200	0	0	0	0	0	0	0	556,200

FY22-31 CMMP

Communications Infrastructure (Citywide)

Other

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, RecTrac, 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.

Estimated Project & Purchase Timeline

Pre Design: FY21

Engineering/Design: FY22

Purchase/Construction: FY22

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	947,013	947,013	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	105,974	947,013	947,013	0	0	0	0	0	0	0	0	2,000,000

FY22-31 CMMP

Aquatics Center Mezzanine and Office Space Expansion

PCR

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.

Estimated Project & Purchase Timeline

Pre Design: FY

Engineering/Design: FY23

Purchase/Construction: FY24

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	80,000	850,000	0	0	0	0	0	930,000
Total	0	0	0	0	80,000	850,000	0	0	0	0	0	930,000

FY22-31 CMMP

Burma Road Chapel Kitchen Improvement

PCR

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. The space is frequently rented for patrons to host parties, and a commercial kitchen would also improve their experience in that space.

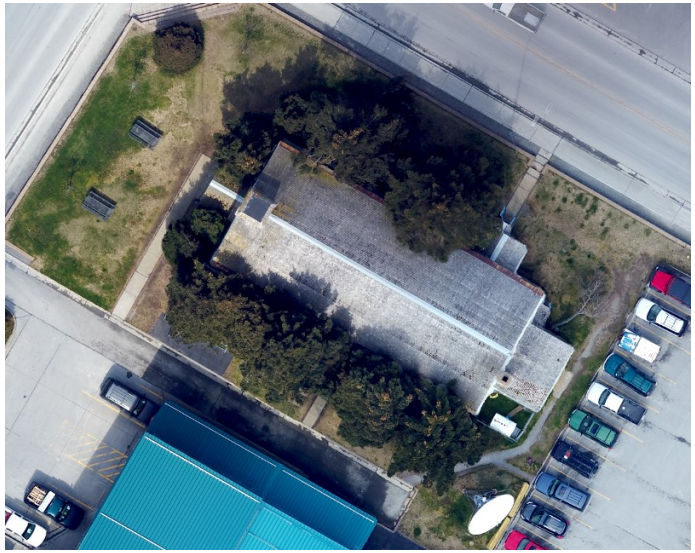
Development Plan & Status : Funding for this project will come from the General Fund.

Estimated Project & Purchase Timeline

Pre Design: FY24

Engineering/Design: FY24

Purchase/Construction: FY24



Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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

FY22-31 CMMP

Community Center Playground Replacement

PCR

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 : Planning for the play structure's replacement will be done while the Operations Manager is at the National Parks and Recreation Association Conference in the fall of 2021. The project will be funded in FY23.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY23

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	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	300,000	0	0	0	0	0	0	300,000
Total	0	0	0	0	300,000	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.

FY22-31 CMMP

Community Center Technology Upgrades

PCR

Estimated Project & Purchase Timeline

Pre Design: FY25

Engineering/Design: FY25

Purchase/Construction: FY26

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	80,000	0	0	0	0	0	80,000
Total	0	0	0	0	0	80,000	0	0	0	0	0	80,000

FY22-31 CMMP

Community Park Replacement Playground

PCR

Project Description: Replacing the playground at Community Park.

Project Need: Playgrounds are designed to last between 20 and 30 years. The 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.

Estimated Project & Purchase Timeline

Pre Design: FY27

Engineering/Design: FY27

Purchase/Construction: FY28

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General 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

FY22-31 CMMP

Cybex Room Replacement

PCR

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, Lifefitness no longer carries replacement parts. When something breaks now the maintenance department frequently has to create something from scratch to make the machine usable.

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

Estimated Project & Purchase Timeline

Pre Design: FY24

Engineering/Design: FY24

Purchase/Construction: FY24

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	75,000	0	0	0	0	0	0	0	75,000
Total	0	0	0	75,000	0	0	0	0	0	0	0	75,000

FY22-31 CMMP

Dog Park

PCR

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 it's a request PCR receives frequently.

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

Estimated Project & Purchase Timeline

Pre Design: FY25

Engineering/Design: FY25

Purchase/Construction: FY26

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	200,000	0	0	0	0	0	200,000
Total	0	0	0	0	0	200,000	0	0	0	0	0	200,000

FY22-31 CMMP

Gymnasium Floor

PCR

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 takes a lot of 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. These numbers are estimates and may change as FY24 approaches.

Estimated Project & Purchase Timeline

Pre Design: FY

Engineering/Design: FY24

Purchase/Construction: FY25

Cost 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	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	51,000	221,000	0	0	0	0	0	0	272,000
Total	0	0	0	51,000	221,000	0	0	0	0	0	0	272,000

FY22-31 CMMP

Kelty Field Improvement Project

PCR

Project Description: Improve the drainage and infield of the softball field. This project will assess and address the field's drainage system with appropriate repairs.

Project Need: The outfield no longer drains after a decent amount of rain. It is unfit and unsafe for use by the public. We frequently cancel softball events because the field needs the first summer months to dry as much as possible. Even as late as August and September the field is very damp and unplayable.

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

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY22

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	100,000	0	0	0	0	0	0	0	0	0	100,000
Total	0	100,000	0	0	0	0	0	0	0	0	0	100,000

FY22-31 CMMP

Kelty Field SW Access

PCR

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.

Estimated Project & Purchase Timeline

Pre Design: FY28

Engineering/Design: FY29

Purchase/Construction: FY28

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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

FY22-31 CMMP

Kiddie Pool/Splash Pad

PCR

Project Description: Turing 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. This also will be able to be utilized 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.

Estimated Project & Purchase Timeline

Pre Design: FY29

Engineering/Design: FY29

Purchase/Construction: FY30

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	0	0	0	0	500,000	0	500,000
Total	0	0	0	0	0	0	0	0	0	500,000	0	500,000

FY22-31 CMMP

Multipurpose Facility

PCR

Project Description: Ounalashka Park was built in 1999 and is located in Unalaska valley. 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.
- Raise Council awareness of the need to bring a facility that can offer more recreational activities such as hockey, tennis, indoor soccer, or an indoor playground.
- Provide a multipurpose covered facility.
- Serve as an emergency shelter for the island, which is very much needed.

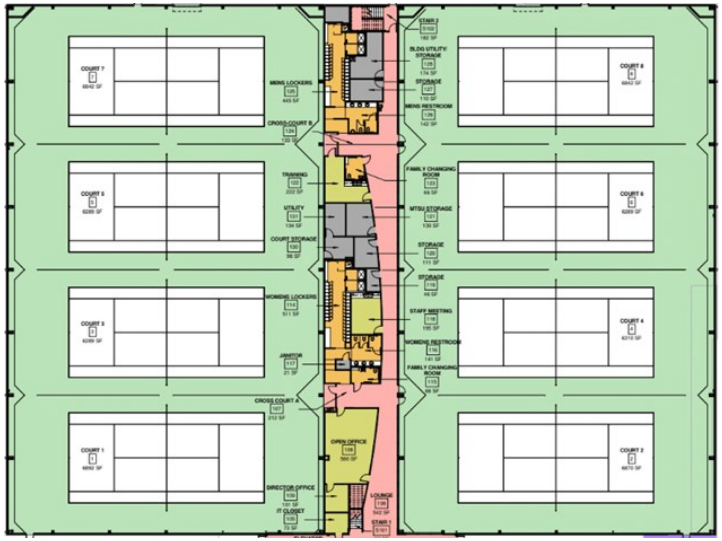
Development Plan & Status : PCR staff and the Advisory Board will gauge public interest in bringing a covered facility with two regulation tennis courts. The estimated cost is $5,629,000. $562,000 or 10% will be spent in FY26 for design and scoping. These numbers came from Lose Design. There is grant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

Estimated Project & Purchase Timeline

Pre Design: FY25

Engineering/Design: FY26

Purchase/Construction: FY27



Cost Assumptions	
Engineering, Design, Const Admin	950,000
Other Professional Services	130,000
Construction Services	3,250,000
Machinery & Equipment	
Subtotal	**4,330,000**
Contingency (set at 30%)	1,299,000
TOTAL	**5,629,000**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	562,900	5,066,100	0	0	0	0	5,629,000
Total	0	0	0	0	0	562,900	5,066,100	0	0	0	0	5,629,000

FY22-31 CMMP

Park Above the Westward Plant

PCR

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

Project Need: Park development on west/southwest area of the city above Westward, build a park on city property. 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.

Estimated Project & Purchase Timeline

Pre Design: FY29

Engineering/Design: FY29

Purchase/Construction: FY30

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	0	0	0	0	3,200,000	0	3,200,000
Total	0	0	0	0	0	0	0	0	0	3,200,000	0	3,200,000

FY22-31 CMMP

Parks and Recreation Study

PCR

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 spent a significant amount of time during the past year 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.

Estimated Project & Purchase Timeline

Pre Design: FY23

Engineering/Design: FY23

Purchase/Construction: FY23

Cost Assumptions

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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

FY22-31 CMMP

Pool Expansion

PCR

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

Project Need: Four years ago we purchased a Colorado Timing System so our 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.

Estimated Project & Purchase Timeline

Pre Design: FY29

Engineering/Design: FY29

Purchase/Construction: FY30

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	0	0	0	0	2,000,000	0	2,000,000
Total	0	0	0	0	0	0	0	0	0	2,000,000	0	2,000,000

FY22-31 CMMP

Pump Track

PCR

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

Project Need: The current Skate Park is old and needs to be replaced. It's 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 this property. If the site is designated for a new purpose, 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. The timing of this project depends on plans for the existing site's redevelopment.

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

Estimated Project & Purchase Timeline

Pre Design: FY24

Engineering/Design: FY24

Purchase/Construction: FY25

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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

FY22-31 CMMP

Project Description: Repairing and replacing the rebar that has rusted through the bottom of the pool. Then replacing the plaster in order to complete the project.

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.

Rebar Restoration and Re-plastering

PCR

Estimated Project & Purchase Timeline

Pre Design: FY25

Engineering/Design: FY25

Purchase/Construction: FY26

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	250,000	0	0	0	0	0	250,000
Total	0	0	0	0	0	250,000	0	0	0	0	0	250,000

FY22-31 CMMP

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 heh pool to create an overfill spa. The only additions that would be required is a wall and a separate heating unit. The pool needs rebar restoration and re-plastering, building a wall in the warming pool during that project would be easily done. This would provide heated hydrotherapy to our community members who need it.

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

Spa

PCR

Estimated Project & Purchase Timeline

Pre Design: FY29

Engineering/Design: FY29

Purchase/Construction: FY30

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	0	0	0	0	200,000	0	200,000
Total	0	0	0	0	0	0	0	0	0	200,000	0	200,000

FY22-31 CMMP

Unalaska Public Transportation Study

Planning

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.

Estimated Project & Purchase Timeline

Pre Design: FY25

Engineering/Design: NA

Purchase/Construction: NA

Cost Assumptions

Other Professional Services		$200,000
Engineering, Design, Construction Admin		
Construction Services		
Machinery & Equipment		
	Subtotal	$200,000
Contingency (30%)		$0
	Total Funding Request	$200,000

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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

FY22-31 CMMP

Entrance Channel Dredging

Ports

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.

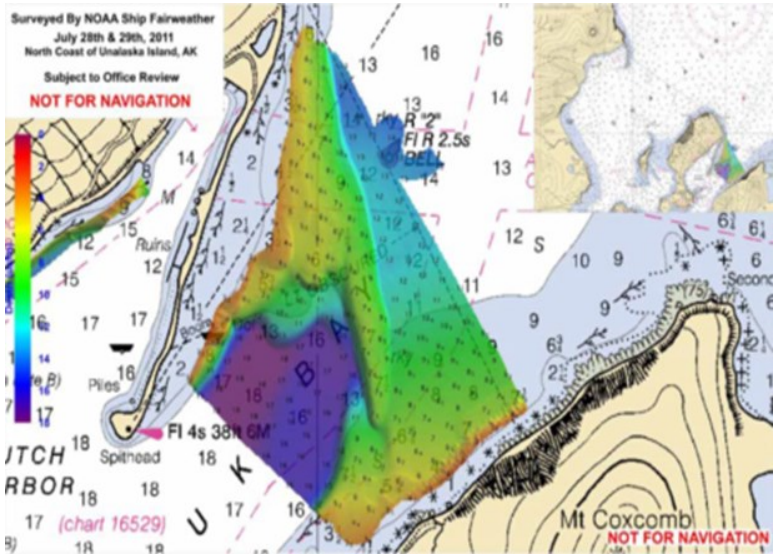
Development Plan & Status : The City conducted a Cost Benefit Analysis of the project to prove its benefit to the nation and that it is worthy of the USACE's and expenses. This project moved steadily forward to assimilate other key pieces, such as the biological assessment, impacts of dredging, and any 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.

Estimated Project & Purchase Timeline

Pre Design: FY19

Engineering/Design: FY20

Purchase/Construction: FY22



Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
1% Sales Tax	0	1,000,000	0	0	0	0	0	0	0	0	0	1,000,000
General Fund	2,500,000	3,494,500	4,494,500	0	0	0	0	0	0	0	0	10,489,000
Grant	0	13,483,500	13,483,500	0	0	0	0	0	0	0	0	26,967,000
Total	2,500,000	17,978,000	17,978,000	0	0	0	0	0	0	0	0	38,456,000

FY22-31 CMMP

Police Station PS19C

Public Safety

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 reqs
- Identify short-comings of the existing facility to meet those requirements
- Analyze building for building codes, conditions, and expansion opportunities
- Provide schematics for bldg expansion or new const that meets DPS program reqs 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 construction.

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.

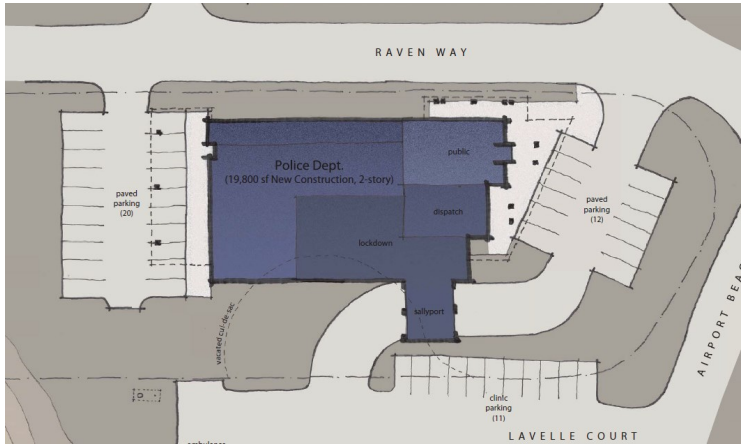
DPS Director King and DPW Director Cohenour evaluated 4 additional sites. Corey Wall reviewed findings at November 10, 2020 Council meeting and DPW Director lead discussion on 4 additional sites with input from Director King. No further direction from Council has been given.

Estimated Project & Purchase Timeline

Pre Design: FY20

Engineering/Design: FY21

Purchase/Construction: FY23



Cost Assumptions

Engineering, Design, Const Admin	2,548,250
Other Professional Services	278,250
Construction Services	17,761,000
Machinery & Equipment	1,502,500
Subtotal	22,090,000
Contingency (Incl in Architect's Estimate)	0
TOTAL	**22,090,000**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	22,090,000	0	0	0	0	0	0	0	0	22,090,000
Total	0	0	22,090,000	0	0	0	0	0	0	0	0	22,090,000

FY22-31 CMMP

Burma Road Chapel Upgrades

Public Works

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 the future, possibly as soon as FY24.

Estimated Project & Purchase Timeline

Pre Design: FY20

Engineering/Design: FY21

Purchase/Construction: 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**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	110,000	0	0	479,000	0	0	0	0	0	0	0	589,000
Total	110,000	0	0	479,000	0	0	0	0	0	0	0	589,000

FY22-31 CMMP

Captains Bay Road & Utility Improvements

Public Works

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. These are rough estimates that will be refined as the project commencement approaches. As of April 10, 2020, the State did not award grant funds via the STIP / CTP. Additional grant opportunities will be sought out. A $4,000,000 Legislative request was submitted via CAPSIS in February 2021.Preliminary Estimate by HDL Engineering for total project costs = $53,700,000

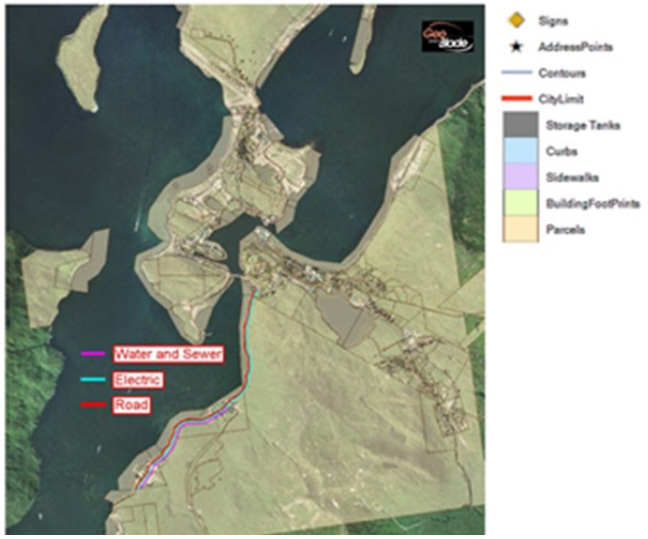
Estimated Project & Purchase Timeline

Pre Design: FY20

Engineering/Design: FY21

Purchase/Construction: FY23

Captains Bay Road and Utilities



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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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	0	9,600,000	9,600,000	0	0	0	0	21,200,000
Grant	0	4,000,000	0	0	0	0	0	0	0	0	0	4,000,000
Wastewater Proprietary Fund	0	0	0	0	9,600,000	0	0	0	0	0	0	9,600,000
Water Proprietary Fund	0	0	9,600,000	0	0	0	0	0	0	0	0	9,600,000
Total	2,000,000	4,000,000	9,600,000	9,600,000	9,600,000	9,600,000	9,600,000	0	0	0	0	54,000,000

FY22-31 CMMP

DPW Inventory Room - High Capacity Shelving

Public Works

Project Description: Rolling high capacity shelving in the DPW Supply Division will increase warehouse capacity by 50%. The carriage and rails system will enable shelves to move side to side and eliminate idle aisles.

Project Need: The DPW Supply Inventory Room is crowded and access to products, inventory, parts, and PPE is inefficient. Overflow is stored in the Warehouse or offsite which is subject to temperature variations and vermin contamination. The rolling bulk shelving will enable us to store double the existing capacity by eliminating static access isles.

Development Plan & Status : Price proposal includes materials and installation. Supplier will come here to install the units with some assistance from City staff.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY22

Cost Assumptions

Engineering, Design, Const Admin		1,385
Other Professional Services		4,000
Construction Services		0
Machinery & Equipment		110,000
	Subtotal	115,385
Contingency (set at 30%)		34,615
	TOTAL	**150,000**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	150,000	0	0	0	0	0	0	0	0	0	150,000
Total	0	150,000	0	0	0	0	0	0	0	0	0	150,000

FY22-31 CMMP

DPW Paint Booth / Body Shop

Public Works

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.

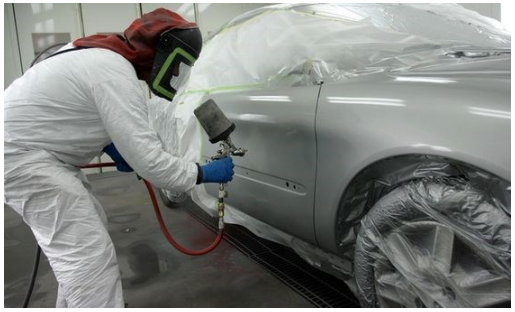
Development Plan & Status : General fund. Construct an add-on bay to the existing Wash Bay or construct the equipment storage building and include a body shop.

Estimated Project & Purchase Timeline

Pre Design: FY23

Engineering/Design: FY24

Purchase/Construction: FY25



Cost Assumptions

Engineering, Design, Const Admin		25,000
Other Professional Services		10,000
Construction Services		750,000
Machinery & Equipment		0
	Subtotal	785,000
Contingency (set at 30%)		235,500
	TOTAL	**1,020,500**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	25,000	995,500	0	0	0	0	0	0	1,020,500
Total	0	0	0	25,000	995,500	0	0	0	0	0	0	1,020,500

FY22-31 CMMP

Equipment Storage Building

Public Works

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.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY23

Purchase/Construction: FY24

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**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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

FY22-31 CMMP

HVAC Controls Upgrades - 11 City Buildings

Public Works

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.

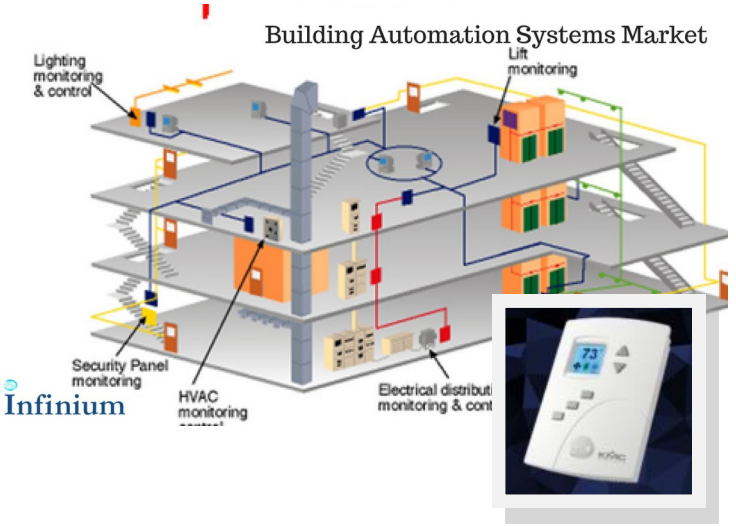
Development Plan & Status : In FY20, our HVAC controls contractor, Long Building Technologies, gave us an informal no cost quote. In FY22 we will work with Long to refine the scope and get a solid cost estimate. In FY22, Project implementation will occur.

Estimated Project & Purchase Timeline

Pre Design: FY23

Engineering/Design: FY23

Purchase/Construction: FY23



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	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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

FY22-31 CMMP

Pavement Preservation - Sealcoating

Public Works

Project Description: Preserve asphalt roads with the application of slurry coat, also known as sealcoat. This project would hire a contractor to resurface all of Unalaska's paved roads.

Project Need: City roads were paved in 2016 and have not been coated or protected since. The State DOT and AASHTO highly recommend seal coat applications such as slurry seal, chip seal, or some other means to preserve asphalt roads. This maintenance will extend pavement life and protect a major financial investment.

Development Plan & Status : There has not been a paving contractor in Unalaska / Dutch Harbor since 2016. Funding will come from the General Fund.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY22

Cost Assumptions	
Other Professional Services	
Engineering, Design, Construction Admin	15,000
General Supplies	554,231
Machinery & Equipment	200,000
Subtotal	769,231
Contingency (30%)	230,769
Total Funding Request	1,000,000

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
1% Sales Tax	0	1,000,000	0	0	0	0	0	0	0	0	0	1,000,000
Total	0	1,000,000	0	0	0	0	0	0	0	0	0	1,000,000

FY22-31 CMMP

Public Trails System

Public Works

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 brand 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.

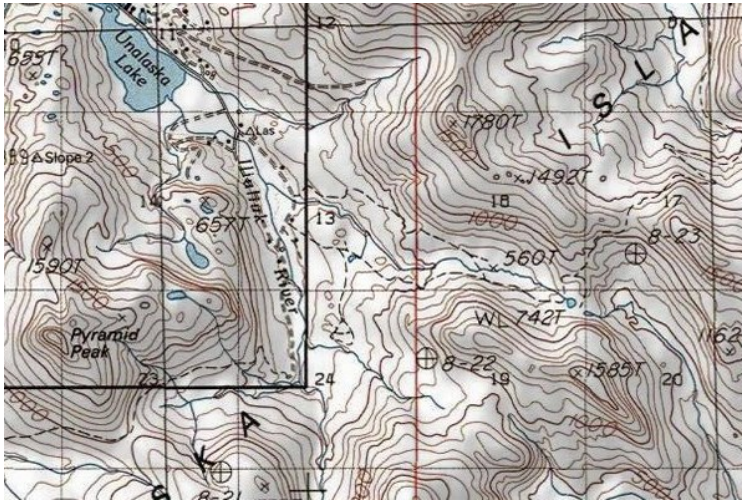
Development Plan & Status : The Planning Commission held a public meeting on September 19, 2019 in which they reviewed the City of Unalaska's existing Capital and Major Maintenance Plan projects, heard public testimony, and found that a Public Trails System is reasonable and in the public's interest. 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.

Estimated Project & Purchase Timeline

Pre Design: FY21

Engineering/Design: FY25

Purchase/Construction: FY



Cost Assumptions

Engineering, Design, Const Admin		100,000
Other Professional Services		0
Construction Services		0
Machinery & Equipment		0
	Subtotal	100,000
Contingency (set at 30%)		0
	TOTAL	**100,000**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	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

FY22-31 CMMP

Underground Fuel Tank Removal / Replacement

Public Works

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.

Estimated Project & Purchase Timeline

Pre Design: FY28

Engineering/Design: FY28

Purchase/Construction: FY28

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
General Fund	0	0	0	0	0	0	0	60,000	0	0	0	60,000
Total	0	0	0	0	0	0	0	60,000	0	0	0	60,000

FY22-31 CMMP

LCD & UMC Dredging

Ports

Project Description: This project includes the engineering, permitting, and dredging at the faces of the Light Cargo Dock and the Unalaska Marine Center positions 17. 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.

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

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Ports Proprietary Fund	109,650	0	2,544,495	0	0	0	0	0	0	0	0	2,654,145
Total	109,650	0	2,544,495	0	0	0	0	0	0	0	0	2,654,145

FY22-31 CMMP

Restroom Unalaska Marine Center

Ports

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 pre-designed and built options to lower the cost.

Estimated Project & Purchase Timeline

Pre Design: FY23

Engineering/Design: FY24

Purchase/Construction: FY25

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Ports Proprietary Fund	0	0	0	50,000	480,160	0	0	0	0	0	0	530,160
Total	0	0	0	50,000	480,160	0	0	0	0	0	0	530,160

FY22-31 CMMP

Robert Storrs Small Boat Harbor Improvements (A & B Floats)

Ports

Project Description: This project will remove the existing A and B Floats at the Harbor and reconfigure the Harbor to accommodate a new float system, ADA gangway and create uplands for parking and a public restroom. It will also include a fire suppression system, electricity and year-round water supply to users and new piling.

Project Need: This project would include replacing the deteriorated floats and reconfiguring the floats and fingers of A and B Floats to include updated electrical systems, lighting, fire suppression, year-round utilities, and an ADA-required gangway. Based on current engineer concepts, the reconfiguration of A and B Floats will create at least 30 additional slips plus linear tie options. This should alleviate some of the 30 vessel waiting list. The reconfiguration will also allow for development of the uplands for required parking and a public restroom. The existing dock arrangement was carried over from a previous location. In order to accommodate the vessel demand at the Robert Storrs Harbor, a new configuration of the floats would allow for better use of the basin based on bathymetry and navigational approaches and also allow for additional vessel slips, with minimal fill and no dredging. It will add a significant number of slips for vessels 60' and under. This is an extension of the Robert Storrs Float Replacement Project. C Float is was completed in FY16. As the Float Replacement Project for Robert Storrs is being constructed in phases it was logical to separate the phases into separate project tracking purposes.

Development Plan & Status : The current estimates place this project at approximately 9.5 million dollars, based on engineers estimates for in kind replacement. We are eligible to apply for a 50% grant through the Alaska Department of Transportation and Public Facilities. 50% of the funding for this is estimated to come out of the Port Net Assets.

Estimated Project & Purchase Timeline

Pre Design: FY19

Engineering/Design: FY20

Purchase/Construction: FY22

Existing Condition (left)
Side Tie: 643 feet
Slips: 6 - 42 foot & 6 - 60 foot

Proposed Concept (right)
Side Tie: 218 feet
Slips: 22—26 foot, 13 - 32 foot, & 20 - 42 foot

Cost Assumptions	
Other Professional Services	
Engineering, Design, Construction Admin	650,000
Construction Services	7,000,000
Machinery & Equipment	
Subtotal	7,650,000
Contingency (30%)	2,295,000
Total Funding Request	9,945,000

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Grant	0	3,250,000	0	0	0	0	0	0	0	0	0	3,250,000
Ports Proprietary Fund	650,000	6,045,000	0	0	0	0	0	0	0	0	0	6,695,000
Total	650,000	9,295,000	0	0	0	0	0	0	0	0	0	9,945,000

FY22-31 CMMP

UMC Cruise Ship Terminal

Ports

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.

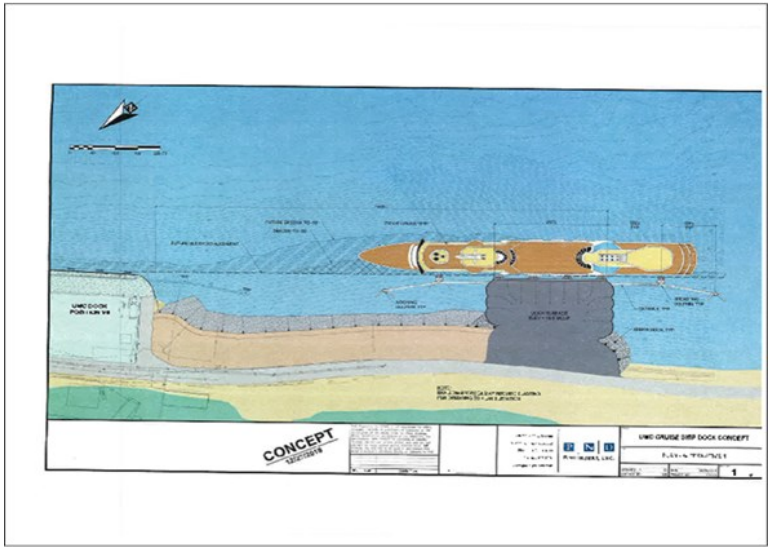
Development Plan & Status : ROM for geotechnical is about $300,000 and ROM for design is $600,000.

Estimated Project & Purchase Timeline

Pre Design: FY20

Engineering/Design: FY24

Purchase/Construction: FY26



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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Ports Proprietary Fund	390,000	0	0	910,000	0	17,290,000	0	0	0	0	0	18,590,000
Total	390,000	0	0	910,000	0	17,290,000	0	0	0	0	0	18,590,000

FY22-31 CMMP

Oil Separator and Lift Station Replacement

Solid Waste

Project Description: This project replaces and relocates the oil separator in the underground vault in the Baler Building, upgrades lift station 10.5, replaces associated piping, and upgrades electrical wiring.

Project Need: The Baler Building was constructed in 1997 and included an underground concrete vault to collect water and other liquids. The vault serves as a sump and houses an oil separator. The oil separator has worn and failed. Its underground location makes it exceptionally difficult and unsafe to service and maintain. Drain lines to the sump and oil separator require daily cleaning. The discharge line has failed requiring a temporary sump pump with bypass hose to empty the sump. The oil separator stopped functioning altogether and allows oil (petroleum) to enter the wastewater stream going to the Waste Water Treatment Plant. Petroleum at the WWTP disrupts the chemical and biological processes necessary to properly handle sewage. All catch basins and drainage piping in the Baler building, including the underground sump with oil separator, drain into Lift Station 10.5 located outside of the Baler Building near the Leachate Tank (big white tank at Landfill). Lift Station 10.5 pushes all sewage and leachate from the Landfill to the Waste Water Treatment Plant via a 4" HDPE force main. The lift station pumps are aging and worn requiring replacement. Controls and wiring for lift Station 10.5 are exposed to the weather and need an enclosure placed over them. The existing check valve in the 8" HDPE pipe connecting the Baler floor drain to the lift station has failed and needs to be replaced. High rain events overwhelm the lift station and water backs up past the check valve causing flooding in the Baler. Scope of work includes relocating the backflow preventer vault out of the roadway, replacement of the check valve, installation of a clean-out, concrete pad, and bollards for protection from snow plows.

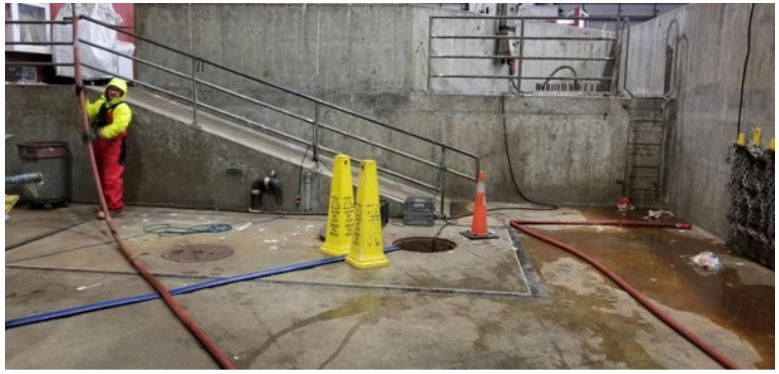
Development Plan & Status : These needs were identified several months ago and Landfill staff utilized time consuming work-arounds to keep the plant operational while repairs were sought out. In reviewing all the related issues of pumps, drains, wiring, and oil separator, it was deemed serious enough to seek a broader solution instead of individual temporary fixes. The money for this project will come from the Solid Waste Proprietary Fund.

Estimated Project & Purchase Timeline

Pre Design: FY20

Engineering/Design: FY20

Purchase/Construction: FY22



Cost Assumptions	
Engineering, Design, Const Admin	100,000
Other Professional Services	-
Construction Services	647,000
Machinery & Equipment	-
Subtotal	**747,000**
Contingency (set at 30%)	224,100
TOTAL	**971,100**
Less Other Funding Sources (Grants, etc.)	-
Total Funding Request $	**971,100**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Solid Waste Proprietary Fund	0	971,100	0	0	0	0	0	0	0	0	0	971,100
Total	0	971,100	0	0	0	0	0	0	0	0	0	971,100

FY22-31 CMMP

Solid Waste Gasifier

Solid Waste

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.

Estimated Project & Purchase Timeline

Pre Design: FY21

Engineering/Design: FY22

Purchase/Construction: FY25

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**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Solid Waste Proprietary Fund	100,000	200,000	400,000	0	7,620,000	0	0	0	0	0	0	8,320,000
Total	100,000	200,000	400,000	0	7,620,000	0	0	0	0	0	0	8,320,000

FY22-31 CMMP

Scum Decant Tank Wet Well Improvements

Wastewater

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.

Estimated Project & Purchase Timeline

Pre Design: FY26

Engineering/Design: FY27

Purchase/Construction: FY28

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Wastewater Proprietary Fund	0	0	0	0	0	0	50,000	145,500	0	0	0	195,500
Total	0	0	0	0	0	0	50,000	145,500	0	0	0	195,500

FY22-31 CMMP

Wastewater Clarifier Baffling Improvements

Wastewater

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.

Estimated Project & Purchase Timeline

Pre Design: FY28

Engineering/Design: FY29

Purchase/Construction: FY30

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Wastewater Proprietary Fund	0	0	0	0	0	0	0	0	50,000	275,000	0	325,000
Total	0	0	0	0	0	0	0	0	50,000	275,000	0	325,000

FY22-31 CMMP

Wastewater Sludge Pump Check Valve Replacement

Wastewater

Project Description: This project would include 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.

Estimated Project & Purchase Timeline

Pre Design: FY24

Engineering/Design: FY25

Purchase/Construction: FY26

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Wastewater Proprietary Fund	0	0	0	0	20,000	71,000	0	0	0	0	0	91,000
Total	0	0	0	0	20,000	71,000	0	0	0	0	0	91,000

FY22-31 CMMP

Biorka Drive Cast Iron Waterline Replacement

Water

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.

Estimated Project & Purchase Timeline

Pre Design: FY28

Engineering/Design: FY28

Purchase/Construction: FY29

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	0	0	0	0	0	0	0	396,500	0	0	0	396,500
Total	0	0	0	0	0	0	0	396,500	0	0	0	396,500

FY22-31 CMMP

CT Tank Interior Maintenance and Painting

Water

Project Description: This project will paint and perform other maintenance to the inside of the Pyramid CT Tank. Work will be performed in two phases. The coatings on the ceiling are deteriorating at a rate to meet its predicted life span of 20-25 years. Small sections of coatings are beginning to drop into the water in the tank. The floor has problems with pitting that needs to be dealt with immediately. In some locations the pitting is believed to exceed ½ of the thickness of the steel plate. If left in its current condition, the tank floor will likely be leaking in 2-3 years. In 5-7 years, large sections of the ceiling coatings will be dropping into the water and could plug the tank discharge holes or break up and travel through the distribution system and into customers' services. Shortly after, structural damage will begin to occur. This tank can be kept in good reasonable service for many years to come, with the proper maintenance including painting, for a fraction of the cost of a new tank. Adding a new CT Tank may however, be the best option to provide for the ability to maintain this existing CT Tank

Project Need: The Pyramid CT Tank was originally constructed in 1993. The tank has been drained every 3-5 years for cleaning and/or inspection over the past 10 years. It takes from 200-300 man hours over a 7-10 day period to drain, clean and inspect the tank. The tank has never been completely de-watered, because it is a lengthy process, tank configuration and the equipment available. Historically, water tanks in this area have exteriors re-coated every 15-25 years. In 2008 the CT Tank roof was painted with a finish coat after a failed attempt to replace the wind damaged foam insulation in 2000. In 2004 anodes were added to help slow the rate of corrosion to the inside of the tank. Total cost for maintenance has averaged about $25,000.00-$30,000.00 per year.

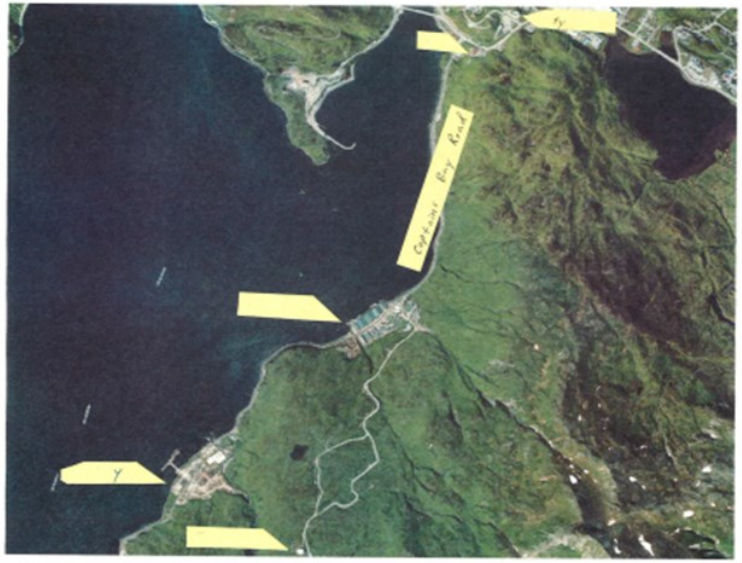
Development Plan & Status : Building a second CT Tank was the designed and intended path to take when the original CT Tank was built. It provides the redundancy required in the treatment process to maintain Filtration Avoidance status. It also directly addresses the operational function issues associated with maintaining each tank

Estimated Project & Purchase Timeline

Pre Design: FY20

Engineering/Design: FY20

Purchase/Construction: FY22



Cost Assumptions	
Engineering, Design, Const Admin	75,000
Other Professional Services	-
Construction Services	735,000
Machinery & Equipment	-
Subtotal	**810,000**
Contingency (set at 30%)	243,000
TOTAL	**1,053,000**
Less Other Funding Sources (Grants, etc.)	-
Total Funding Request $	**1,053,000**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	100,000	953,000	0	0	0	0	0	0	0	0	0	1,053,000
Total	100,000	953,000	0	0	0	0	0	0	0	0	0	1,053,000

FY22-31 CMMP

East Point Crossing Water Line Inspection

Water

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.

Estimated Project & Purchase Timeline

Pre Design: FY23

Engineering/Design: FY23

Purchase/Construction: FY23

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	0	0	162,500	0	0	0	0	0	0	0	0	162,500
Total	0	0	162,500	0	0	0	0	0	0	0	0	162,500

FY22-31 CMMP

Generals Hill Water Booster Pump

Water

Project Description: Install a water booster station on Generals Hill, including underground plumbing, a small building, two pumps with controls, and plumbing to connect a fire engine.

Project Need: This project will increase water service pressure in the upper elevations of the hill. It will greatly reduce the risk of contamination of the water system due to backflow for all utility customers, and decrease the potential for customers to lose water service due to low pressure. Water pressure at the top of Generals Hill does not currently meet the minimum industry standard and in the event of a fire is insufficient to supply a fire engine.

Development Plan & Status : The City has already acquired the land. A contractor will be needed for construction.

Estimated Project & Purchase Timeline

Pre Design: FY18

Engineering/Design: FY19

Purchase/Construction: FY22

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	1,066,000	175,000	0	0	0	0	0	0	0	0	0	1,241,000
Total	1,066,000	175,000	0	0	0	0	0	0	0	0	0	1,241,000

FY22-31 CMMP

Icy Lake Capacity Increase & Snow Basin Diversion

Water

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 thesouth end of the lake.
- Additional grading and riprap would be required for a larger spillway apron at the northdam.
- 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.

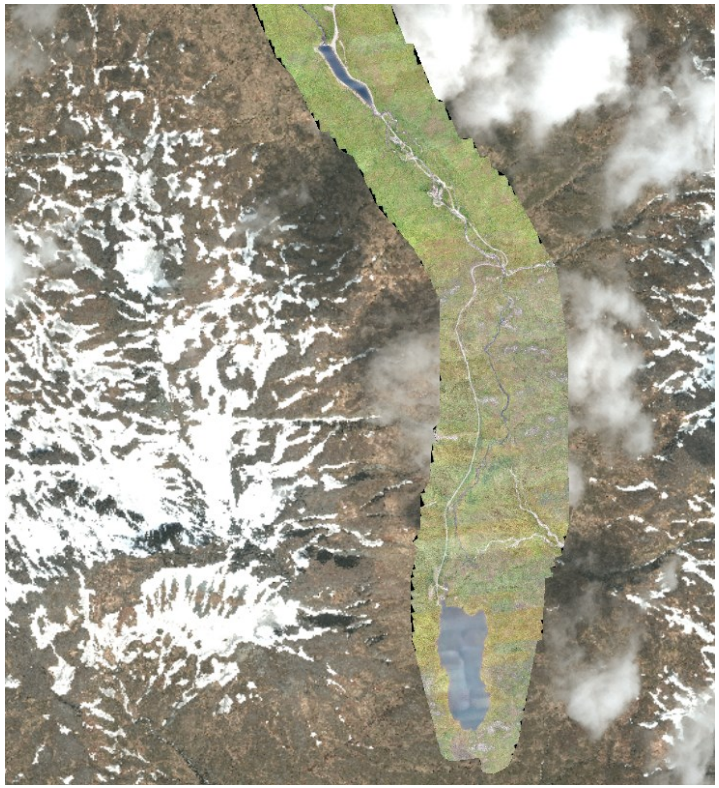
Development Plan & Status : The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. Funding for this project will come from the Proprietary Fund and State Grants.

Estimated Project & Purchase Timeline

Pre Design: FY31

Engineering/Design:

Purchase/Construction:



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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	0	0	0	0	0	0	0	0	0	0	2,860,000	2,860,000
Total	0	0	0	0	0	0	0	0	0	0	2,860,000	2,860,000

FY22-31 CMMP

Icy Lake Hydrographic Survey

Water

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 would 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.

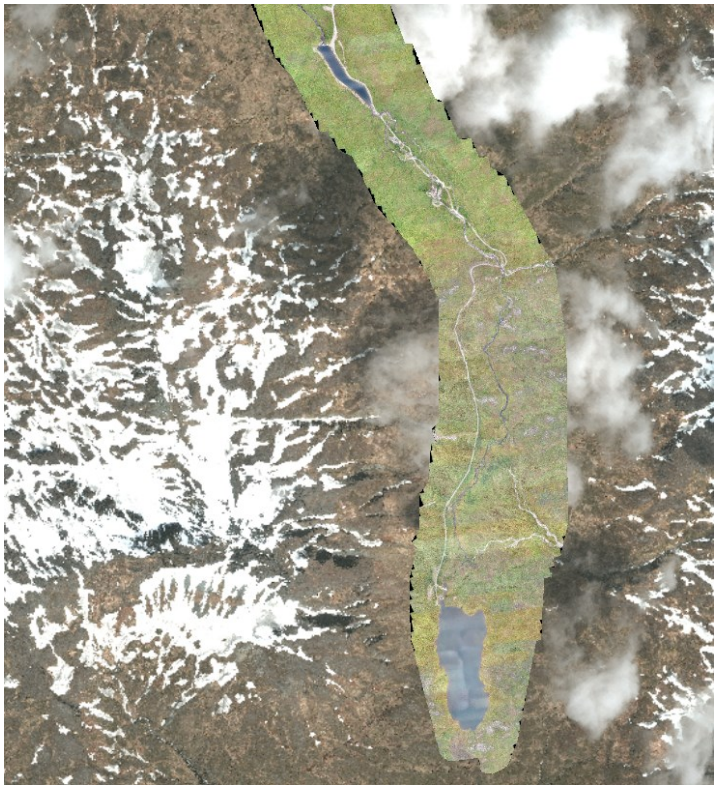
Development Plan & Status : The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. The funding for this project will come from the Proprietary Fund.

Estimated Project & Purchase Timeline

Pre Design: FY24

Engineering/Design: FY24

Purchase/Construction: FY24



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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	0	0	0	72,800	0	0	0	0	0	0	0	72,800
Total	0	0	0	72,800	0	0	0	0	0	0	0	72,800

FY22-31 CMMP

Icy Lake Road Reconstruction

Water

Project Description: Phase 1 Site Survey: This project will hire a land surveyor to conduct a site survey of the Icy Creek Valley from the existing Icy Creek Reservoir to Icy Lake & Dam. A civil engineer will be hired to put together plans and specifications to design a service road crossing over Icy Creek near Icy Creek Reservoir and going along the west side of Icy Creek. Permitting and land acquisition initiation are also part of this phase.Phase 2 Construction: This project will construct a new service road over Icy Creek going along the west side of Icy Creek joining the existing road. The existing road will also be improved.

Project Need: The existing road from the reservoir follows the Icy Creek and requires driving in the creek to cross it in 5 locations. The road frequently requires repairs due to wash outs and storm event damage. Driving in the creek to Icy Lake & Dam and back again causes siltation which creates water quality issues at the Pyramid Water Treatment Plant.

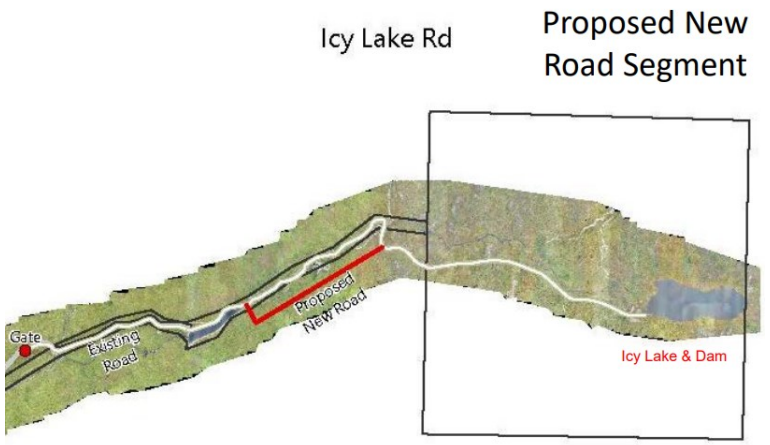
Development Plan & Status : This project has been discussed for several years. A site survey and engineered plans will determine the best course of a new road segment. Monies will come from the Water Proprietary Fund. Grant opportunities will be sought out once plans and specs are in place.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY23



Cost Assumptions

Engineering, Design, Const Admin	100,000
Other Professional Services	0
Construction Services	900,000
Machinery & Equipment	0
Subtotal	1,000,000
Contingency (set at 30%)	300,000
TOTAL	**1,300,000**
Total Funding Request	**1,300,000**

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	0	100,000	1,200,000	0	0	0	0	0	0	0	0	1,300,000
Total	0	100,000	1,200,000	0	0	0	0	0	0	0	0	1,300,000

FY22-31 CMMP

Installation of Meter and Booster Pump at Agnes Beach PRV Station

Water

Project Description: This recommended 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.

Estimated Project & Purchase Timeline

Pre Design: FY28

Engineering/Design: FY29

Purchase/Construction: FY30

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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	0	0	0	0	0	0	0	0	70,000	320,000	0	390,000
Total	0	0	0	0	0	0	0	0	70,000	320,000	0	390,000

FY22-31 CMMP

Mainline and Service Valve Maintenance Program

Water

Project Description: This project will include the location, repair and as-needed replacement of water Service Valves (SV's) and Mainline Valves (MLV'S) which are used to control water throughout the City's Water Distribution (WD) system.

Project Need: There are about 600 SV's and at least 240 MLV's in the City of Unalaska. These valves range in size from ¾" through 24". The valves are used to isolate structures, services and mainlines from the rest of the Water Distribution system due to leaks, to facilitate repairs, service installations, customer requests, mainline flushing and for non-payment. Although specifics vary, the general recommendation among SV and MLV manufacturers is that valves should be maintained once a year by turning (exercising) them. Since valves are usually buried out of sight underground and they require a certain amount of manpower to maintain, it is common for them to be done so with a frequency which is much less than recommended or none at all. Unfortunately this results in a percentage of valves that become inaccessible or inoperable as the years pass. Currently, we operate valves on an as-needed basis. This means that while some valves have been operated several times since they were installed, others have been exercised infrequently or not at all since they were installed over 30 years ago. We want to ensure that our valves remain both accessible and operable so that routine operations are feasible and so that emergency situations such as house flooding and road washouts due to broken lines can be addressed as quickly as possible. Based off our experience and those of other water operators from around Alaska, the consensus is that valves should at a minimum be operated once every few years to ensure they remain accessible and operational. We want to maintain one-fifth of the valves on an annually rotating basis so that the valves are accessed and exercised in an ongoing five year cycle. To accomplish this we are planning to work with a contractor. The contractor will coordinate the necessary utility locates, provide traffic control, ensure that the valves are accessible as well as perform excavating, repairs and replacements as needed. The Water Division would provide the water portion of the utility locates, assist with locating the valves, operate the valves, assist with some of the repairs as well as obtain data from each valve and valve location for our records. Any necessary materials would be sourced from either the City or the contractor depending on what is needed and the availability.

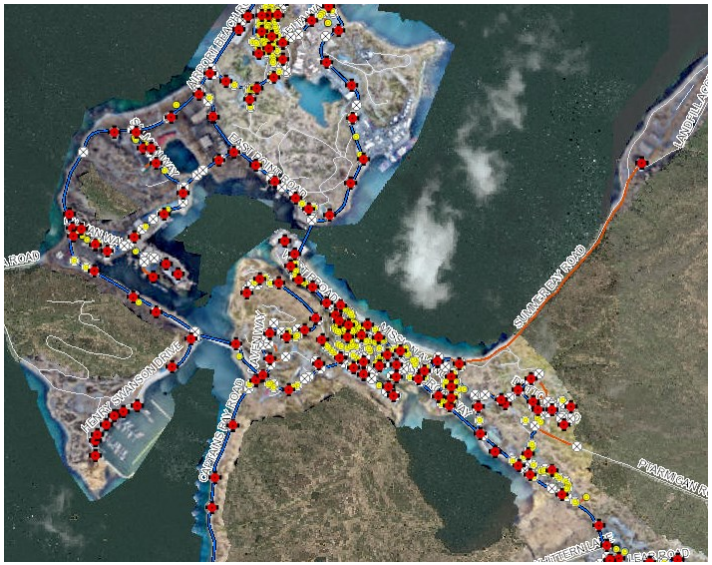
Development Plan & Status : The contractor will be required to submit an Excavation Permit with the associated Traffic Control Plan and utility locates per City of Unalaska policy. Cost & Financing Data: An annual ROM for this project would be $100,000 with a 10% contingency. We intend to re-submit this CMMP on an annually recurring basis so that we have adequate, ongoing funds with which to maintain the City's water valves.

Estimated Project & Purchase Timeline

Pre Design: FY22

Engineering/Design: FY22

Purchase/Construction: FY22



Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
Total	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000

FY22-31 CMMP

Pyramid Water Storage Tank

Water

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.

Estimated Project & Purchase Timeline

Pre Design: FY14

Engineering/Design: FY23

Purchase/Construction: FY24

Engineering, Design, Const Admin	647,000
Other Professional Services	-
Construction Services	6,379,879
Machinery & Equipment	-
Subtotal	**7,026,879**
Contingency (set at 30%)	2,108,064
TOTAL	**9,134,943**
Less Other Funding Sources (Grants, etc.)	-

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	625,000	0	603,750	7,906,193	0	0	0	0	0	0	0	9,134,943
Total	625,000	0	603,750	7,906,193	0	0	0	0	0	0	0	9,134,943

FY22-31 CMMP

Pyramid Water Treatment Plant Chlorine Upgrade

Water

Project Description: This project in the Pyramid Water Treatment Plant (PWTP) 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. We have experienced issues with their product. If we continue to have issues with Chlorine Gas from them or they quit carrying Chlorine Gas altogether, the remaining vendor is twice the price due to the extra cost involved in shipping the Chlorine Gas to the coast. In addition, 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 (ADEC) approval. A contractor will be needed for construction. A ROM for this project would be $500,000 – $750,000. This number could be reduced if the existing crane, Chlorine Gas Bay, etc. in the PWTP can be utilized with the new system. The existing PWTP Chlorine Gas Bay is believed to be of sufficient size to house the new Sodium Hypochlorite equipment. However, a heated area for salt storage will be required. It would be most efficient to have the salt storage area as part of the existing PWTP structure. Doing so would require an addition to the current building.

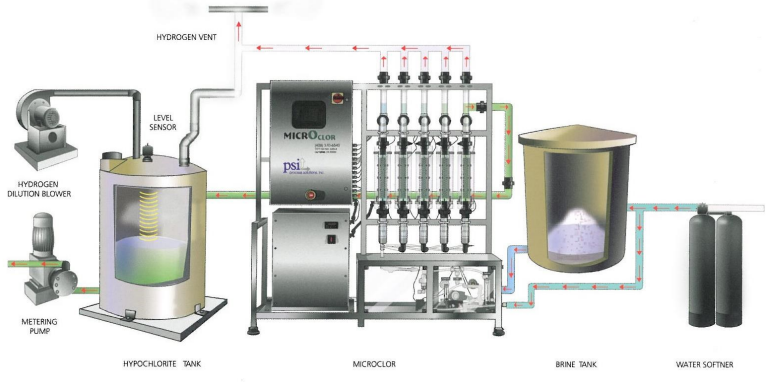
Estimated Project & Purchase Timeline

Pre Design: FY21

Engineering/Design: FY21

Purchase/Construction: FY22

Hypochlorite Generator



Cost Assumptions		
	Other Professional Services	$ 25,000
	Engineering, Design, Construction Admin	$ 80,000
	Construction Services	$ 250,000
	Machinery & Equipment	$ 169,231
	Subtotal	$ 524,231
	Contingency (30%)	$ 157,269
	Total Funding Request	$ 681,500

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	100,000	581,500	0	0	0	0	0	0	0	0	0	681,500
Total	100,000	581,500	0	0	0	0	0	0	0	0	0	681,500

FY22-31 CMMP

Sediment Traps Between Icy Lake and Icy Creek Reservoir

Water

Project Description: This project consists of constructing one or more sediment traps in Icy 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.

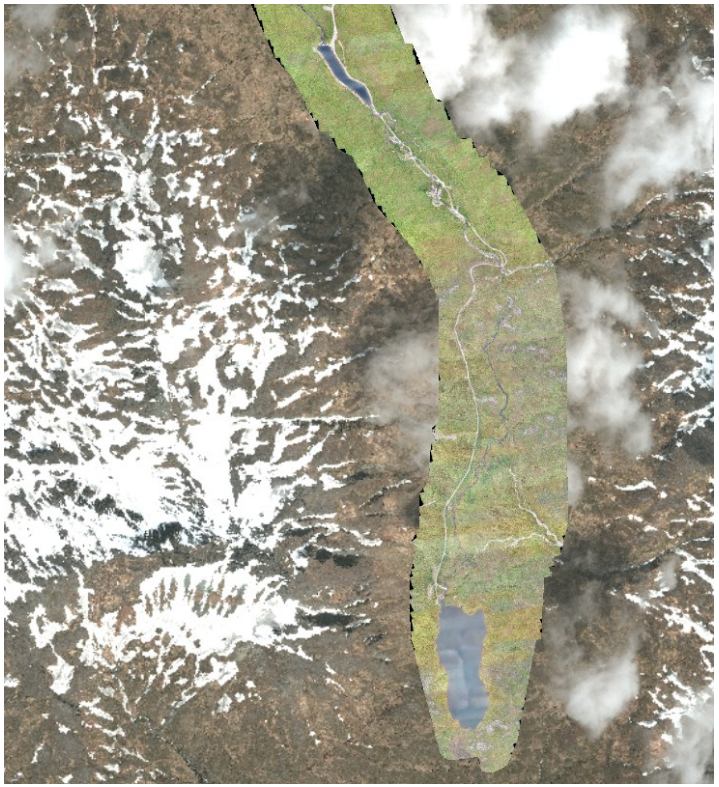
Development Plan & Status : The budget for this project was estimated from the Water Master Plan. A more accurate budget will be determined during the design phase of the project. Funding for this Project will come from the Water Proprietary Fund.

Estimated Project & Purchase Timeline

Pre Design: FY26

Engineering/Design: FY26

Purchase/Construction: FY27



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

Source	Appropriated	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Water Proprietary Fund	0	0	0	0	0	650,000	0	0	0	0	0	650,000
Total	0	0	0	0	0	650,000	0	0	0	0	0	650,000

FY22 Rolling Stock Replacement Plan Summary

By Department

As of 03-25-21

Vehicle #	Dept	Primary Driver	Description	Year	Life Cycle	Replace Date	Replace With	Miles	Hours	Description of New Vehicle	Transfer Old Vehicle To	FY22 $$$	Est or Quote
UPD9826	DPS	Chief	4x4 Explorer	2012	7	2019	**New**	26,331		Replaced in FY21 waiting for new to arrive	Finance	-	n/a
CH7413	City Hall	Finance	Red 4x4 Ford Explorer	2003	15	2018	UPD9826	86,063		Ford Expedition - Police Chief	City Hall - Floater	-	n/a
CH3710	City Hall	Floater	Blue Ford Ranger PU	1996	15	2011	CH7413	49,694		Red Ford Explorer	Surplus Sale	-	n/a
UPD5563	DPS	Patrol	4x4 Ford Expedition	2014	7	2021	**New**	52,315		4x4 Chevy Tahoe	PCR Floater	$ 62,187	Quote
PW6372	DPW	Roads	4x4 F350 Flatbed w/plow	2003	15	2018	**New**	43,291		4x4 Chevy/GMC 1-Ton	Surplus Sale	$ 60,000	Est
DT7	DPW	Roads	Volvo 12 CY Dump Truck	1996	18	2014	**New**		17,714	Sterling 12 CY Dump Truck	Surplus Sale	$ 148,941	Quote
HS1	DPW	Roads	Hydro-Seeder/Mulcher	1997	20	2017	DNR		8,892	DNR - Hire Locally	Surplus Sale	-	n/a
L1	DPW	Roads	IT28G CAT Loader	2001	18	2019	**New**		13,652	CAT 930 Loader	Landfill	$ 250,246	Quote
L4	DPU	Landfill	IT28B CAT Loader	1991	18	2009	L1		19,889	IT28G CAT Loader	Surplus Sale	-	n/a
LF1	DPU	Landfill	L20B-P Volvo Loader	2007	18	2025	**New**	-	16,038	908 CAT Loader	Surplus Sale	$ 131,552	Quote
New	Ports	Ports	New to Fleet	-	-	-	**New**	-		920 CAT Loader w/forks, 2 buckets,broom	n/a	$ 217,269	Quote
New	DPU	WW	New to Fleet	-	-	-	**New**	-		100 KVA Backup Genset - Lift Stations	n/a	$ 77,369	Quote
GS13	DPU	W	Kato Genset	1994	20	2014	**New**	**-**	8,277	100 KVA Backup Genset - Water Wells	Surplus Sale	$ 77,369	Quote
										TOTAL		**$ 1,024,933**	

By Fund

GENERAL FUND	$ 521,374
ELECTRIC FUND	$ -
WATER FUND	$ 77,369
WASTEWATER FUND	$ 77,369
SOLID WASTE FUND	$ 131,552
PORTS / HARBOR FUND	$ 217,269
TOTAL	**$ 1,024,933**

FY22-31 Rolling Stock and Equipment Replacement Plan

Legend:

- Salmon = General Fund
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- White = FY22 Proposed New to Fleet
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Abbreviations:

Department of Public Works	DPW	Department of Public Utilities	DPU	City Hall	CH	Department of Public Safety	DPS
Engineering	E	Water	W	City Manager	CM	Police	UPD
Roads	Roads	Wastewater	WW	Assistant City Manage	ACM	Fire/EMS	UFD
Facilities Maintenance	FM	Line Crew	LC	Clerks	C	Animal Control Officer	ACO
Supply	S	Powerhouse	P	Planning	Plan	PCR	PCR
Vehicle/Equipment Maintenance	VM	Solid Waste/Landfill	LDF	Finance	Fin	Ports	Port
Director	DIR	Floater	Float	Information Systems	IS	Do Not Replace	DNR
Deputy Director	DEP						

As of 04-08-21

Vehicle #	Class	Primary User	Make	Function / Description	Year	Life Cycle	Replace Date	FY22 Replace Priority	Miles / Hours	Replace With	Transfer To	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
CH3710	GP	CH-Float	Ford	4x4, Blue Ranger w/ Topper	1996	15	2011	1	49,694	CH7413	Surplus Sale			$0									
HS1	EQ	Roads	Hydro-Mulcher	Hydro-seeder on wheels	1997	15	2012	2	8,892	DNR	Surplus Sale			$0									
L4	HE	LDF	CAT	Loader, IT28	1991	18	2009	3	19,889	L1	Surplus Sale			$0									
DT7	HE	Roads	Autocar/Volvo	Dump Truck	1996	18	2014	4	17,714	New	Surplus Sale			$148,941									
GS13	EQ	W	Kato/John Deeere	Gen Set - Well House #1 by DPW	2000	20	2020	5	8,277	New	Surplus Sale			$77,369									
PW6372	GP	Roads	Ford	F350 Flatbed plow-salt spreader	2008	15	2023	6	43,291	New	Surplus Sale			$60,000	Estimate								
LF1	HE	LDF	Volvo	Loader	2007	18	2025	7	16,038	New	Surplus Sale			$131,552									
CH7413	GP	Fin	Ford	4x4 Explorer - Red	2003	15	2018	8	86,063	UPD9826	CH Floater			$0									
L1	HE	Roads	CAT	Loader, IT28	2001	18	2019	9	13,652	New	LDF			$250,246									
UPD5563	GP	DPS	Ford	4x4 Expedition	2014	7	2021	10	52,315	New	PCR/Float			$62,187									
n/a	EQ	WW	Generac	Trailer mounted genset 100KVA	Proposed New to Fleet			11	-		n/a			$77,369									
n/a	EQ	Ports	CAT	920 Loader w/attachments	Proposed New to Fleet			12	-		n/a			$217,269									
PW1992	GP	Roads	Ford	F250 Flatbed 2WD Q-Tribe	1995	15	2010	13	53,097	New	Surplus Sale				$138,249								
PUMP5780	EQ	UFD	Darley	Fire Pump - Trailer Mounted	1992	15	2007	14	n/a						$50,000								
GW1	EQ	VM	Miller	Welder	1992	15	2007	15	n/a						$25,000								
FL2	EQ	VM	Hyster	Forklift - Electric	1988	20	2008	16	10,119						$80,000								
CL1	EQ	W	John Deere	Generator	1988	20	2008	17	7,020						$65,000								
BD5	HE	Roads	CAT	D7 Dozer	1989	20	2009	18	8,716												$400,000		
PW5954	HE	S	Ford	F700 4x4, Flatbed	1996	15	2011	19	7,143							$65,000							
AC2	EQ	Roads	Ingersol Rand	Air Compressor - Portable	1994	20	2014	20	201								$20,000						
PW8586	GP	VM	Ford	F350 4x4 Flatbed w/air compress	1996	15	2011	21	23,979	E5629	Surplus Sale				$60,000								
AC3	EQ	LC	Ingersol Rand	Air Compressor - Portable	1994	20	2014	22	579										$20,000				
TR2	EQ	FM	Trailmax	Trailer (Scissor lift)	1992	20	2012	23	7,817							$50,000							
AC4	EQ	VM	Ingersol Rand	Air Compressor	1994	20	2014	24	9,705							$35,000							
S3	EQ	Roads	Swenson	Gravel / Salt Spreader 12ft	1997	15	2012	25	8,450						$15,000								
BH1	HE	LC	Case	590 Backhoe 4X4	2000	15	2015	26	3,792									$250,000					
DT6	HE	Roads	GMC/Volvo	Dump Truck	1994	18	2012	27	12,547									$150,000					
UFD0592	HE	UFD	Pierce	Fire Engine #2	1997	18	2015	28	8,500											$1,000,000			
ST1	HE	Roads	Autocar/Volvo	Sand Truck Dump Truck	1998	15	2013	29	1,995								$160,000						
WT2	HE	Roads	Autocar/Volvo	Water Tanker 4000 gal	1996	20	2016	30	8,221									$100,000					
BH2	HE	WW	Case	580 Backhoe 4X4	1999	15	2014	31	3,449						$150,000								
HB1	EQ	Roads	United	Asphalt Hot Box	2001	15	2016	32	6,950							$150,000							
SS1	HE	Roads	International	Elgin Street Sweeper Crosswind J	2002	15	2017	33	1,619									$300,000					
PW9623	GP	Eng	Ford	4x4 Explorer	2002	15	2017	34	117,616							$50,000							
TR21	EQ	Roads	A-1 Welding	Shoring Trailer	1997	20	2017	35	8,754							$25,000							
E6	HE	LC	Autocar/Volvo	Boom Truck	1997	20	2017	36	3,923									$100,000					
LF6065	GP	LDF	Ford	F250 Pickup 4x4	2003	15	2018	37	50,297						$45,000								
TR8	EQ	UFD	Foster Rescue	Trailer - Rescue-SCBA Refill	2005	13	2018	38	5,833									$25,000					
VT2	HE	WW	Volvo	Vactor Truck	1998	20	2018	39	8,604	Replaced in FY21													
LF0750	HE	LDF	Ford	F-750 Flatbed with Lift	2003	15	2018	40	9,326							$80,000							
PS1	EQ	Roads	Graco	Road Lazer - Strip Painter	2003	15	2018	41	6,487									$35,000					
PW4751	HE	S	Ford	Flatbed F550 with Box	2004	15	2019	42	76,492							$80,000							

FY22-31 Rolling Stock and Equipment Replacement Plan

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Engineering	E	Water	W	City Manager	CM	Police	UPD
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Facilities Maintenance	FM	Line Crew	LC	Clerks	C	Animal Control Officer	ACO
Supply	S	Powerhouse	P	Planning	Plan	PCR	PCR
Vehicle/Equipment Maintenance	VM	Solid Waste/Landfill	LDF	Finance	Fin	Ports	Port
Director	DIR	Floater	Float	Information Systems	IS	Do Not Replace	DNR
Deputy Director	DEP						

As of 04-08-21

Vehicle #	Class	Primary User	Make	Function / Description	Year	Life Cycle	Replace Date	FY22 Replace Priority	Miles / Hours	Replace With	Transfer To	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
GM2	EQ	FM	Toro	Riding Lawn Mower	2009	10	2019	43	4,169						$20,000								
GS18	EQ	DPS	Generac	Stationary Backup Generator	1999	20	2019	44	7,717								$80,000						
PS2	EQ	Roads	Etnyre	Asphalt Distributor	2004	15	2019	45	5,744								$65,000						
BD6	HE	Roads	CAT	D4 Dozer	1992	20	2012	46	5,492										$350,000				
AC1	EQ	VM	Ingersol Rand	Air Compressor in DPW	1999	20	2019	47	23,622						$35,000								
BD7	HE	LC	CAT	D3 Dozer	1996	20	2016	48	6,196									$350,000					
TR17	EQ	LC	Trail King	Utility Trailer	1995	20	2015	49	9,277							$50,000							
BH3	HE	Roads	CAT	307C Mini Excavator	2005	15	2020	50	6,951												$200,000		
TR18	EQ	FM	Big Tex	Utility Trailer	1995	20	2015	51	5,804									$50,000					
CH4087	GP	ACM	Ford	4x4, Explorer	2005	15	2020	52	58,181						$35,000								
BD8	HE	LDF	CAT	D6 Dozer	1996	20	2016	53	4,118										$350,000				
CH7954	GP	C	Ford	4x4 Explorer - Red	2005	15	2020	54	55,573						$35,000								
T2	HE	Roads	Autocar/Volvo	Tractor, 5th Wheel	1998	20	2018	55	3,542							$100,000							
DT2	HE	Roads	GMC/Volvo	Dump Truck w/ Plow/Salt Spreader	2000	18	2018	56	13,450										$100,000				
GS15	EQ	WW	Northern Lights	Gen Set - Diesel - On Trailer	2000	20	2020	57	12,993										$90,000				
GS17	EQ	WW	Onan	Gen Set - Inside plant	2000	20	2020	58	7,553												$90,000		
SP1	EQ	WW	Pioneer Prime	Trailer Mounted Diesel Pump	2005	15	2020	59	5,726												$50,000		
UPD8407	GP	DPS/ACO	Ford	4x4, Explorer	2005	15	2020	60	47,322					$0									
PW4572	GP	FM	GMC	One Ton Service Truck	2006	15	2021	61	63,404						$60,000								
CC2	HE	Roads	CAT	Compactor	2001	20	2021	62	923												$250,000		
HM9290	GP	Ports-DIR	Ford	4x4, Explorer XLT	2007	15	2022	63	85,842						$40,000								
UPD5565	GP	DPS	Ford	4x4 Expedition	2015	7	2022	64	40,374						$45,000								
S2878	HE	VM	GMC	C5500 Service Truck	2007	15	2022	65	35,208										$85,000				
RG2	HE	Roads	CAT	Grader 14H	2004	18	2022	66	30,620													$600,000	
HML1	HE	Ports	CAT	908 Loader	2004	18	2022	67	7,504						$250,000								
CH9633	GP	Plan	Ford	4x4, Explorer	2008	15	2023	68	119,136						$35,000								
L3	HE	Roads	CAT	Loader, 902 small	2005	18	2023	69	3,919							$150,000							
UFD3535	HE	UFD	Kenworth	Pumper/Tender #3	2005	18	2023	70	5,927						$250,000								
DPU9546	GP	DPU-DEP	Ford	4x4 Explorer	2008	15	2023	71	50,942						$35,000								
UFD6859	GP	UFD	Ford	F350 Ambulance	2016	7	2023	72	5,314						$100,000								
UPD9114	GP	DPS	Ford	4x4, Expedition	2016	7	2023	73	53,542							$45,000							
W7587	GP	W	Ford	F150 4x4	2008	15	2023	74	37,736							$40,000							
FL4	HE	Ports	Manitou	Forklift	2003	20	2023	75	774							$75,000							
BH10	HE	Roads	Volvo	210 Excavator	2009	15	2024	76	3,460											$500,000			
FL5	EQ	S	Manitou	Forklift	2004	20	2024	77	1,195							$75,000							
ML4	EQ	P	Genie	JLG Electric Man Lift	2009	15	2024	78								$40,000							
TR4	EQ	Roads	Load King	Lowboy Equipment Trailer	2004	20	2024	79	6,208										$75,000				
TR7	EQ	UFD	Wells Fargo	Trailer - HAZMAT	2004	20	2024	80	5,956										$35,000				
UPD1438	GP	DPS	Ford	4x4 Expedition	2017	7	2024	81	20,569							$45,000							
UPD2891	GP	DPS	Ford	4x4 Expedition	2017	7	2024	82	50,537							$45,000							
UPD4552	GP	DPS	Ford	4x4 Explorer	2017	7	2024	83	5,075							$45,000							
UPD7430	GP	DPS	Ford	4x4, Expedition	2017	7	2024	84	47,444							$45,000							

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Supply	S	Powerhouse	P	Planning	Plan	PCR	PCR
Vehicle/Equipment Maintenance	VM	Solid Waste/Landfill	LDF	Finance	Fin	Ports	Port
Director	DIR	Floater	Float	Information Systems	IS	Do Not Replace	DNR
Deputy Director	DEP						

As of 04-08-21

Vehicle #	Class	Primary User	Make	Function / Description	Year	Life Cycle	Replace Date	FY22 Replace Priority	Miles / Hours	Replace With	Transfer To	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
UPD5150	GP	DPS	Ford	4x4 Expedition	2017	7	2024	85	39,497							$45,000							
UPD5153	GP	DPS	Ford	4x4 Expedition	2017	7	2024	86	51,879							$45,000							
PW4397	GP	FM	Ford	4x4, Pickup Super Cab	2009	15	2024	87	44,260							$50,000							
L9	HE	Roads	Volvo	Loader	2007	18	2025	88	21,910								$300,000						
PW1765	GP	FM	Ford	Flatbed, F350 salt bin	2010	15	2025	89	34,742								$50,000						
UFD3503	GP	UFD	Ford	Ambulance North Star Box	2012	13	2025	90	3,112								$250,000						
HM2	EQ	Ports	Almar	Rescue Boat 34.6'	2005	20	2025	91	5,659								$300,000						
TR9	EQ	Ports	EZLoad	Trailer (HM2 Rescue Boat)	2005	20	2025	92	5,622								$65,000						
HM3672	GP	Ports	Ford	4x4 Expedition XLT	2010	15	2025	93	84,720	COP							$0						
SB2	EQ	Roads	Snocrete	Snow Blower fits IT28	2000	25	2025	94	555									$45,000					
WSM3	EQ	W	Ski Doo	Snow Machine	2010	15	2025	95	3,790									$20,000					
TR19	EQ	W	Snow Sport	Trailer for Snow Machines	1995	20	2015	96	9,283										$10,000				
WSM4	EQ	W	Ski Doo	Snow Machine	2010	15	2025	97	3,790										$20,000				
HM8025	GP	Ports	Ford	4x4 Expedition XLT	2011	15	2026	98	105,282									$40,000					
DT4	HE	Roads	Volvo	Multifunction Rock/Water/Plow	2009	18	2027	99	6,686										$250,000				
EST1	EQ	PCR	Cargo Mate	Emergency Response Trailer	2012	15	2027	100	n/a										$35,000				
GS12	EQ	WW	Marathon	Kato Generator Lift Station #4	2007	20	2027	101	4,837											$50,000			
ML2	EQ	FM	Genie	Scissor Lift - Electric	2012	15	2027	102	3,004										$25,000				
PWATV	GP	FM	Honda	Honda ATV 4x4	2012	15	2027	103	3,364								$15,000						
RC5818	HE	PCR	Ford	14 Passenger Van	2012	15	2027	104	44,296										$45,000				
S7	EQ	Ports	Buyers	Salt Dogg Electric Plastic	2012	15	2027	105	2,918								$25,000						
TR11	EQ	Roads	Trailmax	Tilt-bed hauls D4, etc	2007	20	2027	106	5,852								$75,000						
RG8	HE	Roads	Volvo	Grader G990	2010	18	2028	107	12,734												$650,000		
CH5249	GP	CM	Ford	4x4 Expedition	2013	15	2028	108	31,999											$45,000			
AC6	EQ	UFD	Bauer	Air Compressor-SCBA	2015	13	2028	109	1,779											$50,000			
S5	EQ	Roads	Buyers	Salt Dogg Electric Stainless Steel	2013	15	2028	110	2,828											$25,000			
CC3	HE	Roads	Ingersol Rand	Compactor	2009	20	2029	111	2,248														$250,000
GM3	EQ	FM	Toro	Riding Lawn Mower	2019	10	2029	112	222												$25,000		
RC2682	GP	PCR-DIR	Ford	F250 4x4 Crewcab	2014	15	2029	113	26,921											$60,000			
FL6	HE	P	CAT	Forklift - Propane	2009	20	2029	114	4,132											$65,000			
PW2683	GP	Roads	Ford	F350 4x4 Super Cab salt spreader	2014	15	2029	115	13,910												$35,000		
PW3479	GP	FM	Ford	Transit Cargo Van - Carps	2015	15	2030	116	15,742														$50,000
PW7213	GP	FM	Ford	F250 4x4 Super Cab Lift Gate	2015	15	2030	117	22,409														$60,000
LF4839	GP	LDF	Ford	4x4 PU Crew Cab F250 XL	2015	15	2030	118	10,639														$60,000
CV1	GP	LDF	Madvac	Compact Vacuum	2015	15	2030	119	1,881												$30,000		
S4	EQ	Roads	Buyers	Salt Dogg Electric Stainless Steel	2015	15	2030	120	1,822												$35,000		
BH11	HE	W	JCB	4x4 Backhoe	2016	15	2031	121	1,049														$200,000
AR1	EQ	Roads	Bagela	Asphalt Recycler	2011	20	2031	122	3,452														$100,000
SD2920	GP	WW	Ford	F150 Pickup 4x4	2016	15	2031	123	11,659														$50,000
SD4363	HE	WW	Ford	F450 4x4 Flatbed	2016	15	2031	124	1,959														$65,000
BG1	EQ	DPW-E	Generac	Generator - LDF - Soil Aeration	2012	20	2032	125	2,697														
E3653	GP	LC	Ford	F250 4x4 Ext Cab w/Stahl box	2017	15	2032	126	18,392														

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As of 04-08-21

Vehicle #	Class	Primary User	Make	Function / Description	Year	Life Cycle	Replace Date	FY22 Replace Priority	Miles / Hours	Replace With	Transfer To	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
E8466	GP	LC	Ford	F150 4x4 Crew Cab	2017	15	2032	127	20,170														
E9076	GP	P	Ford	F250 4x4 Crew Cab w/Space Kap	2017	15	2032	128	9,538														
HM2309	GP	Ports	Ford	F250 Regular Cab XL	2017	15	2032	129	84,022														
HM2310	GP	Ports	Ford	F250 Regular Cab XL	2017	15	2032	130	45,902														
HM3659	GP	Ports	Ford	F350 Regular Cab Flatbed	2017	15	2032	131	41,084														
TR10	EQ	Roads	Gilson	Trailer (Cement Mixer)	1978	20	1998	132													$50,000		
PW2653	GP	Roads	Ford	F350 Flatbed 4x4	2017	15	2032	133	21,736														$200,000
PW3438	GP	Roads	Ford	F750 w/Dump Box	2017	15	2032	134	1,440														$200,000
PW3660	GP	Roads	Ford	F350 Regular Cab Flatbed	2017	15	2032	135	18,548														$150,000
S6	EQ	Roads	Buyers	Salt Dogg Electric	2017	15	2032	136	1,581														$25,000
UFD1436	GP	UFD	Ford	4x4 Expedition	2017	15	2032	137	9,275														
UFD5149	GP	UFD	Ford	4x4 Expedition	2017	15	2032	138	12,154														
TR40	EQ	FM	Interstate	Ramp Trailer - School Loan	2000	20	2020	139	6,358														
W2312	GP	W	Ford	F250 Ext Cab w/Utility Box	2017	15	2032	140	33,597														
W6000	GP	W	Ford	F250 Ext Cab w/Utility Box	2017	15	2032	141	11,400														
UFD8364	GP	UFD	Pierce	Pumper Truck	2018	15	2033	142	4,383														
FL8	HE	WW	Manitou	Forklift	2014	20	2034	143	2,254														
CH4098	GP	IS	Ford	F250 4x4 Crew Cab w/Space Kap	2019	15	2034	144	1,420														
CH4106	GP	IS	Ford	F250 4x4 Extended Cab	2019	15	2034	145	1,011														
DPU7380	GP	DPU-DIR	Ford	4x4 Explorer	2019	15	2034	146	17,922														
E4126	GP	P	Ford	F250 4x4 Ext Cab w/Flatbed	2019	15	2034	147	5,726														
PW0466	GP	FM	Ford	F250 4x4 Super Cab w/rack	2019	15	2034	148	2,628														
PW0467	GP	VM	Ford	F250 4x4 Super Cab Tommy Lift	2019	15	2034	149	2,661														
PW0533	GP	FM	Ford	F250	2019	15	2034	150	3,767														
PW7379	GP	Eng	Ford	4x4 Explorer	2019	15	2034	151	4,053														
S8	EQ	Roads	Buyers	Salt Dogg Electric	2019	15	2034	152															
S9	EQ	Roads	Buyers	Salt Dogg Electric Stainless Steel	2019	15	2034	153	717														
UFD0465	GP	UFD	Ford	F250 4x4 Supercab Snow Plow	2019	15	2034	154	6,604														
UFD5247	GP	UFD	Ford	F150 Vaults	2019	15	2034	155	6,040														
W9802	GP	W	Ford	F350 Crew Cab Flatbed	2019	15	2034	156	6,517														
FL7	HE	WW	Toyota	Forklift - Electric	2015	20	2035	157	2,267														
FL9	HE	WW	Toyota	Forklift - Electric - Stand Up	2015	20	2035	158	2,030														
FL10	HE	S	Toyota	Forklift - Electric	2015	20	2035	159	1,655														
RG9	HE	Roads	CAT	Grader 14M3	2017	18	2035	160	2,981														
SD6223	GP	WW	Ford	4x4 Explorer	2020	15	2035	161	1,901														
TR3	EQ	DPS	Mirage	Response / Evidence Trailer	2015	20	2035	162	2,106														
TB1	HE	LDF	International	Tire Baler	2016	20	2036	163	1,738														
DT9	HE	Roads	International	Dump Truck International	2020	18	2038	164	1,311														
LF2	HE	LDF	CAT	950M Cat Loader	2018	20	2038	165	2,144														
L10	HE	Roads	CAT	930M Loader	2019	20	2039	166	1,203														
E7257	GP	LC	Ford	F550 Bucket Truck	2020	20	2040	167	84														
WX1	HE	Roads	CAT	Wheeled Excavator M314F	2020	20	2040	168	31														

FY22-31 Rolling Stock and Equipment Replacement Plan

Legend:

- Salmon = General Fund
- Pink = Electric Fund
- Green = Solid Waste Fund
- Blue = Ports Fund
- Ivory = Wastewater Fund
- Purple = Water Fund
- White = FY22 Proposed New to Fleet
- Yellow = FY22 Replacements

Abbreviations:

Department of Public Works	DPW	Department of Public Utilities	DPU	City Hall	CH	Department of Public Safety	DPS
Engineering	E	Water	W	City Manager	CM	Police	UPD
Roads	Roads	Wastewater	WW	Assistant City Manage	ACM	Fire/EMS	UFD
Facilities Maintenance	FM	Line Crew	LC	Clerks	C	Animal Control Officer	ACO
Supply	S	Powerhouse	P	Planning	Plan	PCR	PCR
Vehicle/Equipment Maintenance	VM	Solid Waste/Landfill	LDF	Finance	Fin	Ports	Port
Director	DIR	Floater	Float	Information Systems	IS	Do Not Replace	DNR
Deputy Director	DEP						

As of 04-08-21

Vehicle #	Class	Primary User	Make	Function / Description	Year	Life Cycle	Replace Date	FY22 Replace Priority	Miles / Hours	Replace With	Transfer To	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
GS19	EQ	W	CAT	Generator - Pyramid WTP	2016	25	2041	169	2,012														
E1214	HE	P	Ford	Crane Truck	1986	20	2006	170	1,377		Surplus Sale												
BL1	HE	LDF	Mosley	Baler	1996	25	2021	DNR	9,051	Gasifier	Surplus Sale												
FL3	HE	P	Nissan	Forklift - Propane	1985	20	2005	DNR	8,979		Surplus Sale												
LF7211	GP	LDF	Ford	F250 Pickup 4x4	2002	15	2017	DNR	114,572		Surplus Sale												
PW0688	GP	VM	Ford	F150 4x4, Pickup Super Cab	2003	15	2018	DNR	65,722		Surplus Sale												
RH1	HE	LDF	Terex	Rock Hauler 33-05	1981	25	2006	DNR	3,657		Surplus Sale												
BH12	EQ	FM	Kubota	Tractor-Backhoe	2011	15	2026	New FY21	205				$12,500										
ML3	EQ	FM	Genie	Telescoping Man Lift	2020	15	2035	New FY21	8				$14,400										
Unknown	GP	W	Ford	F250 Ext Cab w/Utility Box	2020	15	2035	New FY21					$52,032										
RG3	HE	Roads	Volvo	Grader G976	2006	18	2024	Replaced FY18	10,117	RG9	Surplus Sale												
BH9	HE	WW	Case	580 Backhoe 4x4	1996	15	2011	Replaced FY20	8,703	BH2	Surplus Sale												
DT5	HE	Roads	GMC/Volvo	Dump Truck	1994	18	2012	Replaced FY20	19,420	New	Surplus Sale												
E4117	HE	LC	Ford	Bucket Truck	2001	20	2021	Replaced FY20	2,166	New	Surplus Sale	$185,000											
PW3448	GP	FM	Ford	F250 Supercab 4x4	2000	15	2015	Replaced FY20	97,028	New	Surplus Sale	$34,500											
SD5542	GP	WW	Ford	F150 4x4 Pickup	2004	15	2019	Replaced FY20	78,028		Surplus Sale												
UFD0118	GP	UFD	Ford	F350 4x4 Supercab	2003	13	2016	Replaced FY20	47,396		Surplus Sale	$40,000											
UFD5555	GP	UFD	Ford	F350 4x4 Equip Truck - Amaknak	1997	13	2010	Replaced FY20	8,520		VM												
CH7414	GP	CH/Float	Ford	4x4 Explorer	2003	15	2018	Replaced FY21	173,369	CH3710	Surplus Sale												
E5629	GP	LC	GMC	1 Ton Pickup w/Service Box	2008	15	2023	Replaced FY21	100,781	New	Surplus Sale		$65,145										
ML1	EQ	FM	Genie	Telescoping Man Lift	1992	15	2007	Replaced FY21	4,190	ML3	Surplus Sale												
PW4212	GP	Roads	Ford	F350 4x4, Flatbed w/snow plow	2003	15	2018	Replaced FY21	49,449	New	Surplus Sale		$34,543										
PW7449	GP	DPW-DIR	Ford	F150 4x4 Pickup	2000	15	2015	Replaced FY21	55,441	New	Surplus Sale		$37,047										
SD5275	GP	WW	Ford	F350 Flatbed	2004	15	2019	Replaced FY21	47,124		Surplus Sale		$42,017										
UPD0232	GP	DPS/ACO	Ford	4x4, Explorer	2005	15	2020	Replaced FY21	158,736	UPD8407	Surplus Sale		$0										
UPD9826	GP	DPS/DIR	Ford	4x4, Expedition - waiting for new	2012	7	2019	Replaced FY21	26,331				$34,307										
VT3	HE	Roads	Mack	Vactor Truck	2020	20	2040	Replaced FY21	362				$435,296										
												$1,259,000	$727,287	$1,024,933	$1,568,249	$1,430,000	$1,405,000	$1,465,000	$1,490,000	$1,500,000	$1,335,000	$1,375,000	$1,410,000

FY22 Facilities Maintenace Plan Summary

By Department

As of 03-07-21

Building	Address	Fund	SF	YR Built	Description of Proposed Maintenance Work	FY22 $$$	Est or Quote
City Hall	43 Raven Way	General			Paint Exterior Including Shingle Clean & Preserve	$ 220,000	Quote
Aquactics Center	55 East Broadway	General			Repair & Replace Roof	$ 445,000	Quote
Lear Rd Duplexes	69 & 73 Lear Road	General			Repairs & Paint Exterior	$ 17,000	Quote
Lear Rd Duplexes	81 & 85 Lear Road	General			Repairs & Paint Exterior	$ 17,000	Quote
Water Controls House	1057 E Broadway	Water			Repairs & Paint Exterior	$ 6,000	Quote
Wastewater Treatment Plant	19 Gilman Road	Wastewater			Install Air Intake Hoods / Touch-Up Painting	$ 43,000	Quote
						$ 748,000	

By Fund

GENERAL FUND	$ 699,000
ELECTRIC FUND	$ -
WATER FUND	$ 6,000
WASTEWATER FUND	$ 43,000
SOLID WASTE FUND	$ -
PORTS / HARBOR FUND	$ -
	$ 748,000

FY22-31 Rolling Stock and Equipment Replacement Plan

Facilities Maintenance Plan - 10 Year Look Ahead (Major Maintenance Only)

Building	Address	SF	Year Built	Description of Proposed Maintenance Work	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
GENERAL FUND														
Department of Public Safety	29 Safety Way	8,464		Repairs & Paint Exterior		$13,000								
Haystack Repeater Building	417 Trapper Dr	200		Repairs & Paint Exterior			$2,000							
Amaknak Fire Hall	2713 Airport beach Rd	3,600		Repairs & Paint Exterior		$22,000								
Isolation Center Cleaners Quarters	263 East Point Rd	3,888		Not City owned - Covid 19 use only										
Isolation Center Bunkhouse	256 East Point Rd	11,664		Not City owned - Covid 19 use only										
City Hall	43 Raven Way	14,448		Paint exterior incl roof shingles	$220,000									
Unalaska High School & Wood Shop	55 East Broadway	27,000		Repairs & Paint Exterior			$30,000							
Eagle View Elementary School	501 E. Broadway	27,505		Repairs & Paint Exterior			$17,000							
Fuel Island	1035 E. Broadway	48		Repairs & Paint Exterior										
DPW Main Building	1035 E. Broadway	25,040		Roof Replacement		$21,375								
DPW Wash Building	997 E. Broadway	2,821		Replace Boiler				$85,000						
DPW Supply Warehouse	995 E. Broadway	9,256		Replace Roof					$300,000					
DPW Salt/Sand Storage Building	1077 E. Broadway	1,815		Repair Rusted North Wall				$12,000						
DPW Hazmat Building	999 E. Broadway	183		Repairs & Paint Exterior										
Museum - Painting	314 Salmon Way	9,256		Repairs & Paint Exterior		$73,000								
Museum - Replace HVAC System	314 Salmon Way			Replace HVAC System			$100,000							
Library	64 Eleanor Dr	9,632		Repairs & Paint Exterior			$5,000							
Aquatics Center - Painting	55 East Broadway			Repairs & Paint Exterior			$1,040							
Aquatics Center - Roof Replacement	55 East Broadway			Replace Roof	$445,000									
Community Center - PCR	37 S. 5th	23,747		Repairs & Paint Exterior			$15,000							
Burma Road Chapel	28 East Broadway	5,521		Replace Roof		$26,000								
Ounalashka Park Concess Bldg	1588 East Broadway	863		Repairs & Paint Exterior			$4,224							
Ounalashka Park Equip Bldg	1588 East Broadway	480		Repairs & Paint Exterior				$3,500						
Memorial Park	1 Bayview	N/A		Misc Maintenance Painting			$2,112							
Sitka Spruce Park	180 Biorka Dr	216		Repairs & Paint Exterior			$1,500							
Skate Park	40 Raven Way	N/A		Repairs & Paint Equipment				$4,000						
Tanaadakuchax Park	Ptarmigan & Loop Rd	N/A		Repairs & Paint Equipment			$1,056							
Town Park	15 S. 3rd	100		Repairs & Paint Gazebo			$18,400							
Tutiakoff Field	33 King	778		Repairs & Paint Exterior		$1,056								
Expedition Park	75 S. Pacer Way	100		Paint Gazebo			$60,000							
Henry Swanson House	149 W. Broadway	576		Repairs & Paint Exterior				$18,000						
8-Plex Housing	18 Ptarmigan Rd	9,204		Repairs & Paint Exterior			$54,000							
4-Plex Housing - Painting	63 Loop Rd	4,548		Repairs & Paint Exterior		$37,000								
4-Plex Housing - Roof Replacement	63 Loop Rd			Replace Roof						$300,000				
69 & 73 Lear Rd Housing	69/73 Lear Rd	2,394		Repairs & Paint Exterior	$17,000									
81 & 85 Lear Rd Housing	81/85 Lear Rd	2,040		Repairs & Paint Exterior	$17,000									
				GENERAL FUND TOTALS	**$699,000**	**$193,431**	**$311,332**	**$122,500**	**$300,000**	**$300,000**	**$0**	**$0**	**$0**	**$0**

FY22-31 Rolling Stock and Equipment Replacement Plan

Building	Address	SF	Year Built	Description of Proposed Maintenance Work	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ELECTRIC FUND														
New Powerhouse	1700 East Point Rd	33,750		Repairs & Paint Touch-up Exterior			$13,375							
Old Powerhouse	1732 East Point Rd	14,833		Repair Roof Cracks		$43,530								
Power Substation	176 Airport Beach Rd	1,600		Repairs & Paint Touch-up Exterior			$8,000							
				ELECTRIC FUND TOTALS	**$0**	**$43,530**	**$21,375**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
WATER FUND														
Pyramid Water Treatment Plant	1200 Pyramid Creek Rd	4,519		Repairs & Paint Exterior				$4,000						
Icy Lake Building	3151 Icy Lake Rd	350		Repairs & Paint Exterior				$1,000						
Icy Dam Building	2500 Pyramid Creek Rd	350		Repairs & Paint Exterior										
Unalaska Control House	1057 E. Broadway	400		Repairs & Paint Exterior	$6,000		$339							
Well House 1	1062 E. Broadway	318		Repairs & Paint Exterior			$3,168							
Well House 2	1354 E. Broadway	288		Repairs & Paint Exterior			$2,112							
Well House 3	1352 E. Broadway	144		Repairs & Paint Exterior			$1,584							
E.O.D. Building	2642 Ballyhoo Rd	300		Repairs & Paint Exterior				$12,000						
Nirvana Building	346 Dutton Rd	132		Repairs & Paint Exterior			$2,112							
Agnes Beach Building	411 Airport Beach Rd	640		Repairs & Paint Exterior			$3,900							
Old Chorine Plant	2486 Upper E. Broadway	560		Repairs & Paint Exterior				$15,000						
Old Water Plant	1400 Pyramid Creek Rd	400		Repairs & Paint Exterior			$23,550							
				WATER FUND TOTALS	$6,000	$0	$36,765	$32,000	$0	$0	$0	$0	$0	$0
WASTEWATER FUND														
Wastewater Treatment Plant	19 Gillman Rd	9,072		Install Air Intake Hoods	$43,000									
Liquid Stream Building	17 Gilman Rd	9,000		Repairs & Paint Touch-Up Exterior				$5,000						
Unalaska PO Pumping Station	82 Airport Beach Rd	80		Repairs & Paint Touch-Up Exterior				$1,000						
				WASTEWATER FUND TOTALS	**$43,000**	**$0**	**$0**	**$6,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
SOLID WASTE FUND														
Baler Building	1156 Summer Bay Rd	12,240					$29,000							
Leachate Building	1156 Summer Bay Rd	590		Repairs & Paint Exterior				$3,000						
Leachage Tank	1156 Summer Bay Rd	N/A		Repairs & Paint Exterior										
				SOLID WASTE FUND TOTALS	**$0**	**$0**	**$29,000**	**$3,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

FY22-31 Rolling Stock and Equipment Replacement Plan

Building	Address	SF	Year Built	Description of Proposed Maintenance Work	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
PORTS FUND														
Carl E. Moses Harbor Office	570 Henry Swanson Dr	1,380		Repairs & Paint Exterior			$5,000							
Carl E. Moses Harbor Waste Oil Bldg	562 Henry Swanson Dr	680		Repairs & Paint Exterior			$5,000							
Robert Storrs Boat Harbor	22 Pacesetter Way	N/A					$30,000							
Expedition Boat Dock	75 S Pacesetter Way	N/A												
Unalaska Marine Center Warehouse	731 Ballyhoo Rd	6,000				$33,000								
USCG Dock Building	941 Ballyhoo Rd	450		Repairs & Paint Exterior			$15,000							
Spit Dock	2633 Ballyhoo Rd	N/A												
Airport	105 Terminal Dr	27,360		Repairs & Paint Exterior				$45,000						
					$0	**$33,000**	**$55,000**	**$45,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
	Total SF	**330,823**												
					$748,000	**$269,961**	**$453,472**	**$208,500**	**$300,000**	**$300,000**	**$0**	**$0**	**$0**	**$0**

FY Totals By Fund					FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
GENERAL FUND					$699,000	$193,431	$311,332	$122,500	$300,000	$300,000	$0	$0	$0	$0
ELECTRIC FUND					$0	$43,530	$21,375	$0	$0	$0	$0	$0	$0	$0
WATER FUND					$6,000	$0	$36,765	$32,000	$0	$0	$0	$0	$0	$0
WASTEWATER FUND					$43,000	$0	$0	$6,000	$0	$0	$0	$0	$0	$0
SOLID WASTE FUND					$0	$0	$29,000	$3,000	$0	$0	$0	$0	$0	$0
PORTS / HARBOR FUND					$0	$33,000	$55,000	$45,000	$0	$0	$0	$0	$0	$0
					$748,000	**$269,961**	**$453,472**	**$208,500**	**$300,000**	**$300,000**	**$0**	**$0**	**$0**	**$0**

CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2021-25

A RESOLUTION OF THE UNALASKA CITY COUNCIL AUTHORIZING THE CITY MANAGER TO IMPLEMENT A ONE-TIME RATE INCREASE TO THE ELECTRICAL PROPRIETARY FUND OF 6.1%; A ONE-TIME RATE INCREASE TO THE WATER PROPRIETARY FUND OF 3.6%; A WASTEWATER PROPRIETARY FUND RATE INCREASE OF 40%, PHASED IN OVER A FOUR-YEAR PERIOD; AND A SOLID WASTE PROPRIETARY FUND RATE INCREASE OF 33%, PHASED IN OVER A FOUR YEAR PERIOD

WHEREAS, the City of Unalaska has determined, through a detailed Rate Study for each Utility, that specific Utility rate increases to achieve a Debt Service Coverage Ratio beyond 1.25 for each Utility Proprietary Fund are necessary to continue operations at the current level of service; and

WHEREAS, a one-time rate increase necessary to the maintain the required Debt Service Coverage Ratio in the Electric Proprietary Fund, distributed equally among all customer classes, is 6.1%; and

WHEREAS, a one-time rate increase necessary to maintain the required Debt Service Coverage Ratio in the Water Proprietary Fund, distributed equally among all customer classes, is 3.6%; and

WHEREAS, phased rate increases necessary to the maintain the required Debt Service Coverage Ratio in the Wastewater Proprietary Fund, distributed equally among all customer classes over the next four fiscal years (FY22-FY25), is 40%; and

WHEREAS, phased rate increases necessary to the maintain the required Debt Service Coverage Ratio in the Solid Waste Proprietary Fund, distributed equally among all material classifications, tipping fees, and labor charges over the next four fiscal years (FY22-FY25), is 40%; and

NOW THEREFORE BE IT RESOLVED that the Unalaska City Council authorizes the City Manager to implement a one-time rate increase to the Electrical Proprietary Fund of 6.1%; a one-time rate increase to the Water Proprietary Fund of 3.6%; a Wastewater Proprietary Fund rate increase of 40%, phased in over a four-year period; and a Solid Waste Proprietary Fund rate increase of 33%, phased in over a four year period.

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on April 27, 2021.

_____
Vincent M. Tutiakoff
Mayor

ATTEST:

_____
Roxanna Winters, CMC
Acting City Clerk

MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: Dan Winters, Director of Public Utilities
Through: Erin Reinders, City Manager
Date: April 27, 2021
Re: RESOLUTION 2021-25. A resolution of the City of Unalaska City Council Authorizing the City Manager to implement a one-time rate increase to the Electrical Proprietary Fund of 6.1; a one-time rate increase to the Water Proprietary Fund of 3.6%; a Wastewater Proprietary Fund rate increase of 40%, phased in over a four-year period; and a Solid Waste Proprietary Fund rate increase of 33%, phased in over a four year period.

SUMMARY: Through Resolution 2021-25, Staff is requesting rate increases for all four utilities that would go into effect in July 2021. This will include:

- A one-time Electric Proprietary Fund rate increase 6.1%, equally distributed to all customer classes.
- A one-time Water Proprietary Fund rate increase of 3.6%, distributed equally to all customer classes.
- A 40% rate increase to the Wastewater Proprietary Fund, equally distributed across all customer classes, phased in over four years.
- A 33% rate increase to the Solid Waste Proprietary Fund, to all material classifications, tipping fees, and labor charges, phased in over four years.

Staff will incorporate these rate adjustments into the upcoming Schedule of Fees and Services Ordinance scheduled for the May 25, 2021 Council meeting.

Staff will also work up materials for Council to consider an increase to the sale tax by 1%. Doing so would create a Utility Infrastructure Tax fund that will supplement the Utility Proprietary Funds. An increase in the sales tax will require a vote of the residents of Unalaska and will be addressed in future Council Meetings.

PREVIOUS COUNCIL ACTION: At the February 23, 2021 Council Work Session, James Keen and Amber Miller of Aldrich LLP presented the FY2021 Rate Study to Council.

At the March 9, 2021 Council Work Session, conversations focused on the cost of service and rates for Electric and Water. Council's consensus was for a one-time 6.1% increase in Electrical rates to all customer classes, and a one-time 3.6% increase in Water rates to all customer classifications. Council had general consensus to proceed with an increase to the sales tax by 1%, which will create a Utility Infrastructure Fund, supplementing the Utility Proprietary Funds.

At the April 12, 2021 Council Meeting, Staff presented the FY2022 Departmental Operating Budgets. During the budget presentation, Staff reported an overall budget reduction of $2.8 million for the Department of Public Utilities (DPU). When only Personnel and Operating expenses are considered, the FY2022 DPU budget is $2.6 million less than FY2021, a decrease of 14.1%.

At the April 13, 2021 Council Work Session, Council discussed the cost of services and rates for the Wastewater and Solid Waste Proprietary Funds. Council's general consensus for the Wastewater utility rate increase was a 40% across the board increase, phased in over four years. Although there was some discussion of options to phase in the increase based on the cost of service instead. Council's general consensus for the Solid Waste utility was to increase the solid waste utility rates by 33%, phased in over four years. Again there was some discussion in support of focusing on cost of service rather than across the board increases. Just as with the Electric and Water discussion, Council had general consensus to proceed with an increase to the sales tax by 1%, which will create a Utility Infrastructure Fund, supplementing the Utility Proprietary Funds.

BACKGROUND: Department of Public Utilities Staff performs a rate study on each of the Utility Proprietary Funds approximately every three years. In 2012, Staff contracted Mike Hubbard of the Financial Engineering Company to perform a High-Level Rate Study, which depicted a rate increase of 29% for the Water Fund, 68% for the Wastewater Fund, and 75% for the Solid Waste Fund was needed by 2016. Rates increased consecutively for three years starting in FY2013. The sum of these rate increases was 21.3% for Water, 42.3% for Wastewater, and 32.1% for Solid Waste. These rate increases brought the difference between expenses and revenues closer to the budget before the new Water, and Wastewater Plants became operational. However, the rate increases did little to make up for the budget shortfall after the new plants were online.

Staff performed the last rate study in 2016. A rate increase of 15% for the Wastewater Proprietary Fund over four years, and a rate increase of 13.5% for the Solid Waste Proprietary Fund, over three years, was initiated on July 1, 2017. During Staff's discussion with Council, there was a clear consensus that another monetary source was necessary to reduce impacts on needed rate increases. Council decided that using a portion of the 1% Sales Tax Special Revenue Fund was the most logical approach. Council approved using an amount not to exceed $1,300,000 to supplement the Water, Wastewater, and Solid Waste Proprietary Funds. This supplement from the 1% Special Revenue Fund helped slow the timing of the inevitable rate increases. However, the lack of a rate increase to the full revenue requirements, increased costs of chemicals, personnel, and inflation, we are again looking at extreme rate increases for the Utility Proprietary Funds.

In July 2020, Staff contracted through Aldrich CPAs + Advisors LLP to conduct the FY2021 Utility Rate Study. As the background section review's this is the fourth meeting with City Council focused on this study and how utility rates might be impacted.

DISCUSSION: City of Unalaska Council and Staff have been discussing the Utilities rate increase since February of this year. During these rate discussions, Council's general consensus was to increase the electric, water, and the solid waste utility rates evenly to all customer classes that would achieve the Debt Service Coverage Ratio (DSC) beyond 1.25 for each utility. Maintaining a debt ratio above 1.25 will qualify the City to sell bonds and receive low interest loans for future projects.

It was also Council's consensus to increase the sales tax by 1%. Doing so would create a Utility Infrastructure Fund that will supplement the Utility Proprietary Funds. An increase in the sales tax will require a vote of the residents of Unalaska and will be addressed in future Council Meetings.

Electrical Proprietary Fund: The electrical utility has not experienced a rate increase in 18 years. Due to the loss of two industrial customers, industrial electrical sales declined by 17 million kilowatt-hours at a loss of $2.5 million in revenue since FY2018. These Industrial customers were buying electrical power from the City due to an EPA decree. When the EPA decree expired, they discontinued purchasing electrical power from the City. Earlier attempts to obtain purchase power agreements with the industrial customers were futile. The customers did not want a purchase power agreement. They knew the City would sell them electrical power without one, following City's fee schedule. Recent attempts to obtain industrial class as customers at one penny above electrical production cost, plus COPA, were unsuccessful.

The Electrical Proprietary Fund has a revenue deficit of ($2,514,450) and will require an increase in rates of 34.7% to satisfy the revenue requirement. On March 9, 2021, Council Meeting, Council's consensus was to increase the electrical utility rate by 6.1%, equally to all customer classes. The one-time rate increase of 6.1% will increase revenues by $444,436 and increase the DSC from 1.06 to 1.25.

Staff averaged the electric monthly utility electric bills for each customer class. A 6.1% electrical utility rate increase will increase the Residential electrical bill by $7.66, from $139.43 to $147.09. The Small Commercial customer will experience a $19.93 growth, from $493.90 to $513.83. The Large General customer will see an increase of $132.23 in their electrical bill, from $3,365.76 to $3,497.99. Industrial will see an increase in their monthly electrical utility bill of $1,733.10, from $47,074.47 to $48,807.67.

Customer's Monthly Electric Bill Impact Comparison

	Residential Bill		Small Commercial			Large General		Industrial	
	Current	After Increase	Current	After increase		Current	After Increase	Current	After Increase
Customer	$ 8.00	$ 8.49	$ 10.00	$ 10.61	Customer	$ 50.00	$ 53.07	$ 100.00	$ 106.13
Energy	$ 116.98	$ 124.15	$ 315.16	$ 334.48	Demand	$ 194.30	$ 206.21	$ 3,568.00	$ 3,786.77
COPA	$ 55.00	$ 55.00	$ 168.74	$ 168.74	Energy	$1,912.23	$2,029.48	$ 24,597.34	$26,105.54
PCE Credit	$ (40.55)	$ (40.55)	$ -	$ -	COPA	$1,209.23	$1,209.23	$ 18,809.23	$18,809.23
Total	$ 139.43	$ 147.09	$ 493.90	$ 513.83	Total	$3,365.76	$3,497.99	$ 47,074.57	$48,807.67

Water Proprietary Fund: The Water Proprietary Fund has not had a rate increase since FY2012, which was phased in over three years. Since FY2016, personnel expense has increased by 40%. A majority of the personnel cost increase is in personnel wage increases at an average of 3% per year, which equates to 15% of the 40% for personnel increase. In FY2019, Council approved adding two full-time employees to the Water Division, through Ordinance 2019-02, which also contributed to the personnel expense growth of approximately 25%. The addition of the two employees was due to the expansion of operations from the new water plant.

Operations expenses have increased by 54% in the Water Proprietary Fund since FY2016. Construction of the New Water Plant was completed in FY2015 and put in service, which caused the 54% increase in operational expenses.

The Water Proprietary Fund has a revenue shortfall of ($913,887). A rate increase of 34.9% will be necessary to meet the entire revenue requirement. On March 9, 2021, Council Meeting, it was Council's consensus to increase the water utility rate by 3.6%, equally to all customer classes. The one-time rate increase will increase water revenues by $94,532 and increase the DSC from 1.58 to a DSC of 2.00. However, it leaves a revenue shortfall of ($820,000). The higher DSC will provide more security and allow the utility to generate more cash towards capital expenditures.

Staff averaged the monthly water usage of residential customers at 14,000 gallons per month and industrial customers at 6,371,368 gallons per month. An increase of 3.6% in the water utility rates will increase the unmetered water customer average monthly bill by $1.29. The metered customer will see an average increase of $1.39 in their monthly bill. The averaged industrial customer will see an increase of $576.76 in their monthly bill.

Average Residential and Industrial Monthly Bill Impact Comparison

	Current Rate	3.6% Rate Increase	Monetary Increase Total
Unmetered Flat Rate	$ 35.59	$ 36.88	$ 1.29
Metered Flat Rate	$ 3.74	$ 3.87	$ 0.13
Metered/ 1000 gal	$ 2.51	$ 2.60	$ 0.09
Metered Monthly Bill	$ 38.88	$ 40.27	$ 1.39
Note: Water usage calculated at 14,000 gal/Month			

	Current Rate	3.6% Rate Increase	Monetary Increase Total
Metered Flat Rate	$ 34.34	$ 35.58	$ 1.24
Metered/1000 gal	$ 2.51	$ 2.60	$ 0.09
Metered Monthly Bill	$ 16,021.24	$ 16,598.00	$ 576.76
Note: Avaerage Industrial Usage 6,371,368 Gal/Month			

Wastewater Proprietary Fund: The completion of the New Wastewater Plant construction was in October 2015. The Wastewater Proprietary Fund experienced a 15% rate increase in FY2016 and were phased in over four years. The rate increase accomplished bringing the revenue closer to the projected expenses. However, the rate increases did little to make up for the budget shortfall after the new plant was fully operational. According to Mike Hubbard's September 2016 Rate Review presentation to Council, he stated *"future rate increases were necessary to balance the budgets".*

Since FY2016, personnel expenses have increased by 60%. An increase in personnel wages increased over the five years by 3% per year, which equates to 15% of the 60%

personnel increase. Planning for the added operational duties with the New Wastewater Plant, Council approved two new employees in 2019. The addition of the two employees and the lack of prior rate increases to meet the projected revenue shortfall contributed to the remaining 45% increase in personnel expenses.

Operation's expenses have increased by 102.1% since 2016 due to the installation of the larger plant. Maintaining the repair and maintenance of the enhanced plant's equipment increased by 1,200%. The new and more extensive process design takes more solids out of the wastewater through chemistry. Those chemical costs increased by 9,328%. After removing the solids from the wastewater, employees truck the sludge to the landfill for disposal. The disposal cost caused the solid waste line item to increase by 1,081%. Professional Services increased by 2,272% due to contracting a company with a Class 2 certification in wastewater to oversee our process. ADEC mandated us to do this until our supervisor has obtained his Class 3 certification and one operator has obtained their Class 2 certification.

The table below shows the comparison between the Wastewater FY2014 budget (before the completion of the New Wastewater Plant) and the FY2021 budget of those line items with significant increases.

Wastewater Major Operations Expense Increases			
	FY2014	FY2021	Total
Other Professional Service	$ 9,000	$ 213,500	$ 204,500
Solid Waste	$ 11,000	$ 130,000	$ 119,000
Repair and Maintenance	$ 5,000	$ 65,000	$ 60,000
Chemicals	$ 3,500	$ 330,000	$ 326,500
		Total	$ 710,000

At the April 13, 2021 Council Meeting, Council's decision concerning what method to increase the wastewater rate increases generally supported option 1B implementing a 40% rate increase equally distributed across all customer classes and phased in over four years. This is described below.

1B. Increase the Wastewater rates by 40%, evenly to all customer classes.

Class	Charge	Unit	Current	FY2022	FY2023	FY2024	FY2025
Unmetered Residential:	Customer	$/month	$ 114.04	$ 125.44	$ 136.85	$ 148.25	$ 159.66
	Volume	$/000 Gal	$ -	$ -	$ -	$ -	$ -
Annual Rate Increase:			0.0%	10.0%	9.1%	8.3%	7.7%
Rate Increase From FY2021			0.0%	10.0%	20.0%	30.0%	40.0%
Metered Commercial:	Customer	$/month	$ 20.87	$ 22.96	$ 25.04	$ 27.13	$ 29.22
	Volume	$/000 Gal	$ 17.79	$ 19.57	$ 21.35	$ 23.13	$ 24.91
Annual Rate Increase:			0.0%	10.0%	9.1%	8.3%	7.7%
Rate Increase From FY2021			0.0%	10.0%	20.0%	30.0%	40.0%
Metered Industrial:	Customer	$/month	$ 20.87	$ 22.96	$ 25.04	$ 27.13	$ 29.22
	Volume	$/000 Gal	$ 1.13	$ 1.24	$ 1.36	$ 1.47	$ 1.58
Annual Rate Increase:			0.0%	10.0%	9.1%	8.3%	7.7%
Rate Increase From FY2021			0.0%	10.0%	20.0%	30.0%	40.0%

There seemed to be some level of interest in an option that reflected more of a cost of service approach. Option 1C is a hybrid that works in this approach. This is described below.

1C. This option is only for the Wastewater proprietary Fund. Option 1C is a modified rate design that increases the Wastewater industrial rates more than the other classes. This option will reduce the increase needed from the other classes but short of the increase indicated by Option 1B. For example, the industrial class has an 80% increase phased in over four years. The other classes would have a minor increase, also phased in over four years. The table below shows each customer classes rate increase for each year, phased in over a four-year period.

Class	Charge	Unit	Current	FY2022	FY2023	FY2024	FY2025
Unmetered Residential:	Customer	$/month	$ 114.04	$ 125.02	$ 136.00	$ 146.98	$ 157.96
	Volume	$/000 Gal	$ -	$ -	$ -	$ -	$ -
Annual Rate Increase:			0.0%	9.6%	8.8%	8.1%	7.5%
Rate Increase From FY2021			0.0%	9.6%	19.3%	28.9%	38.5%
Metered Commercial:	Customer	$/month	$ 20.87	$ 22.88	$ 24.89	$ 26.90	$ 28.91
	Volume	$/000 Gal	$ 17.79	$ 19.50	$ 21.22	$ 22.93	$ 24.64
Annual Rate Increase:			0.0%	9.6%	8.8%	8.1%	7.5%
Rate Increase From FY2021			0.0%	9.6%	19.3%	28.9%	38.5%
Metered Industrial:	Customer	$/month	$ 20.87	$ 25.04	$ 29.22	$ 33.39	$ 37.57
	Volume	$/000 Gal	$ 1.13	$ 1.36	$ 1.58	$ 1.81	$ 2.03
Annual Rate Increase:			0.0%	20.0%	16.7%	14.3%	12.5%
Rate Increase From FY2021			0.0%	20.0%	40.0%	60.0%	80.0%

Solid Waste Proprietary Fund: The Solid Waste Proprietary Fund experienced a rate increase in FY2016. Since FY2016, personnel expenses have increased by 37.3%. An increase in personnel wages increased over the five-year period by 3% per year, which equates to 15% of the 37.3% personnel increase. In FY2019, Council approved adding two full-time employees to the Solid Waste Division through Ordinance 2018-10, contributing to the personnel expense growth of approximately 22.3%.

Solid Waste operations expenses have increased by 57.4% since FY2016. The increase in operational costs is attributed to a higher production of leachate from the new Cells and the influx of wastewater sludge. The rise in leachate also increases the cost of maintenance of the equipment in the Leachate Pump Building. The Wastewater Plant charges for the leachate it receives from the Solid Waste. Likewise, Solid Waste charges for the sludge it receives from Wastewater Plant, following Unalaska City Code of Ordinances.

Solid Waste proprietary Fund has a revenue shortfall of $1,540,289. A rate increase of 60.1% will be necessary to meet the total revenue requirement. On April 13, 2021, Council meeting, Council's consensus was to increase the solid waste utility rates by 33%, phased over four years.

Solid Waste is different from the other Proprietary Funds because Solid Waste charges customers for the types of material delivered to the Landfill and does not charge by

customer classes. An exception to this is the customer Maintenance Fee (LF01) that customers see on their monthly utility bill.

The table below shows the solid waste rate increases for each material class over four years to realize a 33% rate increase in the fourth year. At the April 13, 2021 Council Meeting, Council's decision seemed generally supportive of this approach. This is outlined below.

Class	Unit	Current	FY2022	FY2023	FY2024	FY2025
LF20 Gen Waste - Sch B Tipping Fees:	Per Ton	$ 251.20	$ 271.92	$ 292.65	$ 313.37	$ 334.10
Annual Rate Increase:		0.0%	8.3%	7.6%	7.1%	6.6%
Rate Increase From FY21:		0.0%	8.3%	16.5%	24.8%	33.0%
LF23 Equipment:	Per Hour	$ 166.43	$ 180.16	$ 193.89	$ 207.62	$ 221.35
Annual Rate Increase:		0.0%	8.3%	7.6%	7.1%	6.6%
Rate Increase From FY21:		0.0%	8.3%	16.5%	24.8%	33.0%
LF24 Scrap Metal HM:	Per Ton	$ 1,073.54	$ 1,162.11	$ 1,250.67	$ 1,339.24	$ 1,427.81
Annual Rate Increase:		0.0%	8.3%	7.6%	7.1%	6.6%
Rate Increase From FY21:		0.0%	8.3%	16.5%	24.8%	33.0%
LF51 Misc STL (Labor):	Per Hour	$ 87.40	$ 94.61	$ 101.82	$ 109.03	$ 116.24
Annual Rate Increase:		0.0%	8.3%	7.6%	7.1%	6.6%
Rate Increase From FY21:		0.0%	8.3%	16.5%	24.8%	33.0%

Class	Unit	Current	FY2022	FY2023	FY2024	FY2025
LF52 Trawl Nets:	Per Cubic Yard	$ 1,073.54	$ 1,162.11	$ 1,250.67	$ 1,339.24	$ 1,427.81
Annual Rate Increase:		0.0%	8.3%	7.6%	7.1%	6.6%
Rate Increase From FY21:		0.0%	8.3%	16.5%	24.8%	33.0%
LF53 Fish Waste:	Per Ton	$ 536.77	$ 581.05	$ 625.34	$ 669.62	$ 713.90
Annual Rate Increase:		0.0%	8.3%	7.6%	7.1%	6.6%
Rate Increase From FY21:		0.0%	8.3%	16.5%	24.8%	33.0%
LF54 Appliance with Refrigerant:	Each	$ 107.35	$ 116.21	$ 125.06	$ 133.92	$ 142.78
Annual Rate Increase:		0.0%	8.3%	7.6%	7.1%	6.6%
Rate Increase From FY21:		0.0%	8.3%	16.5%	24.8%	33.0%
LF01 Sch A Landfill Maintenance Fee:	Per Utility Bill	$ 27.97	$ 30.28	$ 32.59	$ 34.89	$ 37.20
Annual Rate Increase:		0.0%	8.3%	7.6%	7.1%	6.6%
Rate Increase From FY21:		0.0%	8.3%	16.5%	24.8%	33.0%

During April 13, 2021 Council Meeting, some discussion supported the cost of service approach, identified as option 1A. Option 1A will increase the rates for material classes that currently show a revenue deficit. The material classes that offer a current revenue surplus show a rate decrease. However, Staff does not recommend Option 1A. This option will decrease the rate for nets by 45.9% and reduce the rate for metal by 41%. Staff believes lowering the rates for the nets and metal will result in an influx of these materials at the Landfill. The City Staff have found it challenging to find companies that will take the nets, and when a company is located, the cost is astronomical. Keeping the net and metal rates higher will result in the fishing companies discarding these materials at locations that can handle the costs. Option 1A rate increase impact to the Solid Waste individual material classes are illustrated in the table below.

Class	Unit	Current	FY2022	FY2023	FY2024	FY2025
LF20 Gen Waste - Sch B Tipping Fees:	Per Ton	$ 251.20	$ 284.22	$ 317.25	$ 350.27	$ 383.30
Annual Rate Increase:		0.0%	13.1%	11.6%	10.4%	9.4%
Rate Increase From FY21:		0.0%	13.1%	26.3%	39.4%	52.6%
LF23 Equipment:	Per Hour	$ 166.43	$ 212.51	$ 258.59	$ 304.67	$ 350.75
Annual Rate Increase:		0.0%	27.7%	21.7%	17.8%	15.1%
Rate Increase From FY21:		0.0%	27.7%	55.4%	83.1%	110.7%
LF24 Scrap Metal HM:	Per Ton	$ 1,073.54	$ 963.57	$ 853.60	$ 743.63	$ 633.66
Annual Rate Increase:		0.0%	-10.2%	-11.4%	-12.9%	-14.8%
Rate Increase From FY21:		0.0%	-10.2%	-20.5%	-30.7%	-41.0%
LF51 Misc STL (Labor):	Per Hour	$ 87.40	$ 108.78	$ 130.17	$ 151.55	$ 172.93
Annual Rate Increase:		0.0%	24.5%	19.7%	16.4%	14.1%
Rate Increase From FY21:		0.0%	24.5%	48.9%	73.4%	97.9%

Class	Unit	Current	FY2022	FY2023	FY2024	FY2025
LF52 Trawl Nets:	Per Cubic Yard	$ 1,073.54	$ 950.34	$ 827.13	$ 703.93	$ 580.73
Annual Rate Increase:		0.0%	-11.5%	-13.0%	-14.9%	-17.5%
Rate Increase From FY21:		0.0%	-11.5%	-23.0%	-34.4%	-45.9%
LF53 Fish Waste:	Per Ton	$ 536.77	$ 644.63	$ 752.49	$ 860.35	$ 968.21
Annual Rate Increase:		0.0%	20.1%	16.7%	14.3%	12.5%
Rate Increase From FY21:		0.0%	20.1%	40.2%	60.3%	80.4%
LF54 Appliance with Refrigerant:	Each	$ 107.35	$ 103.09	$ 98.83	$ 94.57	$ 90.31
Annual Rate Increase:		0.0%	-4.0%	-4.1%	-4.3%	-4.5%
Rate Increase From FY21:		0.0%	-4.0%	-7.9%	-11.9%	-15.9%
LF01 Sch A Landfill Maintenance Fee:	Per Utility Bill	$ 27.97	$ 27.76	$ 27.55	$ 27.34	$ 27.13
Annual Rate Increase:		0.0%	-0.7%	-0.8%	-0.8%	-0.8%
Rate Increase From FY21:		0.0%	-0.7%	-1.5%	-2.2%	-3.0%

ALTERNATIVES: Staff and Aldrich LLP have researched alternatives concerning the needed rate increases and believe the options brought forward to Council are the most logical approach. However, the staff is always willing to research other options that Council may consider are viable. Council could decide to:

- Approve the Resolution as written.
- Amend the Resolution to only address certain funds at the point, and then continue discussion addressing the remaining funds at future meetings.
- Amend the Resolution to adjust the increase approach for one or more of the funds.

FINANCIAL IMPLICATIONS: The table below depicts the revenue gains and shortfall of the individual Utility Proprietary Funds, if Council adopts Resolution 2021-25. Even though there is a shortfall after the rate increases, a 1.25 DSC ratio will be realized for all Utility Proprietary Funds.

	Electric 6.1% Rate Inc.	Water 3.6% Rate Inc.	Wastewtaer 40% Rate Inc.	Solid Waste 33% Rate Inc.
Current Revenue Requirement	$ 9,762,823	$ 3,530,573	$ 4,319,505	$ 4,102,820
Current Revenue	$ 7,248,373	$ 2,616,686	$ 2,468,212	$ 2,562,531
Current Revenue Shortfall	$ (2,514,450)	$ (913,887)	$ (1,851,293)	$ (1,540,289)
Revenue from Rate Inc.	$ 444,436	$ 94,532	$ 987,284	$ 845,635
Revenue Shortfall After Rate Inc.	$ (2,070,014)	$ (819,355)	$ (864,009)	$ (694,654)

LEGAL: None

STAFF RECOMMENDATION: Staff recommends Council approve Resolution 2021-25**.** This would implement a one-time 6.1% rate increase to the Electric Proprietary Fund, equally distributed to all customer classes and a one-time Water Proprietary Fund rate increase of 3.6%, distributed equally to all customer classes. This would also approve a 33% rate increase to the Solid Waste Proprietary Fund, to all material classifications, tipping fees, and labor charges, phased in over four years. Additionally, this would approve a 40% rate increase to the Wastewater Proprietary Fund, equally distributed across all customer classes, phased in over four years.

PROPOSED MOTION: I move to adopt Resolution 2021-25.

CITY MANAGER COMMENTS: City Council budgetary goals have historically called for a rate study every three years. However, when Council implements rate increases over the course of four years, a new study is not conducted until the final year of implementation of the prior study. This rate study supports what previous rate studies indicated, that we would need to increase rates even further in the future. As outlined in the draft budget presentation earlier this month, staff is working hard to reduce operational expenditures.

ATTACHMENTS: Final Cost of Service Study for Electric, Water, Wastewater, and Solid Waste proprietary Funds.

City of Unalaska

Electric Utility

Cost of Service / Rate Design Study

April 21, 2021

Aldrich SM

List of Tables, Figures, and Appendices

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1. INTRODUCTION

Background and Purpose of Study

In November 2013, a review of the City of Unalaska's (the City) Electric Utility rates was completed and presented to the City Council. At the time the study was performed, the recommendation was that no rate adjustment be implemented and to revisit rates once the fourth unit was installed in the powerhouse and sales to a new Industrial customer could be better estimated.

In early 2016, a high-level review of the City's Electric Utility rates was completed and presented to the City Council. Based on the analysis conducted, existing rates were projected to recover revenues by approximately $200,000 in excess of operating costs. The existing General Service and Industrial rates were set higher than their respective allocated cost of service while Residential and Street Light rates were set lower than the allocated cost of service. One key assumption used in the analysis was that sales to the Industrial rate class would increase by 3 million kilowatt-hours from Fy2015 levels. This assumption was based on estimates of sales to a new industrial customer.

At that time, two options were presented for consideration by Council:

1) Maintain Existing Rates. Overall rates were set such that a surplus would be achieved in the near-term but would erode with time. However, cash margins were expected to remain relatively high.
2) Decrease Large General Service Rate by 5%. Recognizing that Large General Service rates were currently set higher than the allocated cost of service.

The City chose to maintain the existing rates. Since the 2016 study, the Electric Utility has experienced an overall decrease in revenues which, combined with increased expenses, has resulted in a net deficit in the electric fund over the past few years.[1] The 2021 fiscal year budget indicates that this trend is expected to continue. Accordingly, City staff felt it was prudent to review rates of the Electric Utility to ensure that it can meet operating expense requirements and capital improvement obligations in the near term while maintaining the utility's financial health. This report summarizes the analysis performed by Aldrich Advisors and the findings with respect to a cost of service study and review of rates for the City's Electric Utility.

[1] The City has lost two significant industrial customers in the past few years: Westward and Alyeska.

Methodology of Analysis

The analysis was conducted based on the following goals and considerations:

1. Rates should provide sufficient revenues to meet current cash-based revenue requirements for the FY2021 test year.
2. Rates should also provide cash flows sufficient to meet debt covenants and on-going capital expenditures, allowing the City to achieve at least a 1.25 Debt Service Coverage (DSC) ratio.
3. Capital improvements over the next five years should be considered so that large rate increases are minimized.
4. Recommendations should consider the current economic challenges of the community.
5. Rate design should consider the ability of larger industrial customers to self-generate.
6. Rates should be fair and equitable and take into account allocation of costs to each rate class.
7. Customer and demand charges should be reviewed for fairness and adequacy.

Annual operating expenses are developed based on the current budget (FY2021). Projected expenses were reviewed and adjusted as necessary to include any known updates to expenses and net operating margins and offsets for other revenues. Capital expenditures are based on the FY 2021-2025 Capital Major and Maintenance Plan (CMMP).

Based on the assumed sales and revenue requirements, costs are allocated to each rate class based on the methodologies developed by the National Association of Regulatory Utility Commissioners for electric utilities and published in their manual (the NARUC Manual). This ensures that the allocation process is performed in a fair and equitable manner. Although the City's rates are not subject to review by the Regulatory Commission of Alaska (RCA), the methodologies used herein are the same as that prescribed the RCA for regulated utilities.

Terms

Certain terms are used in this report that may not be familiar to those not closely associated with the power industry. These terms are described below.

Financial

Cash Basis

An entity's net cash flow over the course of a year. Depreciation is excluded and principal payments and debt and capital expenditures are included.

Debt Service Coverage ("DSC")

DSC = (Net Income before Depreciation and Interest) / Debt Service

Since depreciation is a non-cash expense and principal payments are not included in the calculation of net income, DSC provides an indication of an entity's ability to cover its cash requirements. The City must maintain a minimum DSC of 1.25, in accordance with Ordinance No. 2008-19.

Income Basis

The traditional method of measuring net income with depreciation included as an expense and principal payment and capital expenditures excluded.

Power

Energy

The total amount of power consumed over a given period. For example, a 100-watt light bulb, if left on continuously, uses 2,400 watt-hours of energy during the 24-hour period. During the entire year (8,760 hours), 876,000 watt-hours of energy are consumed.

Units: The unit of measurement is typically kilowatt-hours (kWh) or megawatt- hours (MWh).

1 MWh = 1,000 kWh = 1,000,000 watt-hours

Demand, or Peak Demand

The maximum rate of consumption of power. Usually, this is measured over a 15-minute period, but instantaneous demands are also used. If in the previous example a second light is turned on for one hour, the peak demand is 200 watts.

Units: The unit of measurement is typically kilowatts (kW) or megawatts (MW).

1 MW = 1,000 kW = 1,000,000 watts

System Peak

The combined peak demand of all utility customers placed on the utility.

Units: kW, MW

Coincident Peak

The usage of power of a particular rate group at the time of system peak.

Units: kW, MW

Non-Coincident Peak

The peak demand of a particular rate group. The non-coincident peak of a rate group does not necessarily happen at the time of the system peak. If the rate group's non-coincident peak occurs at the time of its coincident peak, then the two are equal, otherwise (as in usually the case) the non-coincident peak is greater than the coincident peak.

Units: kW, MW

Billing Determinants

The amount of energy sales, demand sales, and number of customers for each rate group during a year.

Units: kWh, kW-months, customer-months

2. SALES

The City's installed capacity is approximately 19.5 megawatts, and the firm capacity is 14.3 megawatts.[2] As of the end of FY2020, the City served 1,017 customers in five distinct customer classes, including Residential (766), Small General Service (178), Large General Service (39), Industrial (19), and Street Lights (15). Table 1 and Figure 1 summarize the energy sales for the past ten years. While energy usage by most rate classes has remained relatively constant, Industrial usage experienced an overall increase, that is until FY2017. Since FY2018, Industrial usage has decreased by approximately 8 percent.

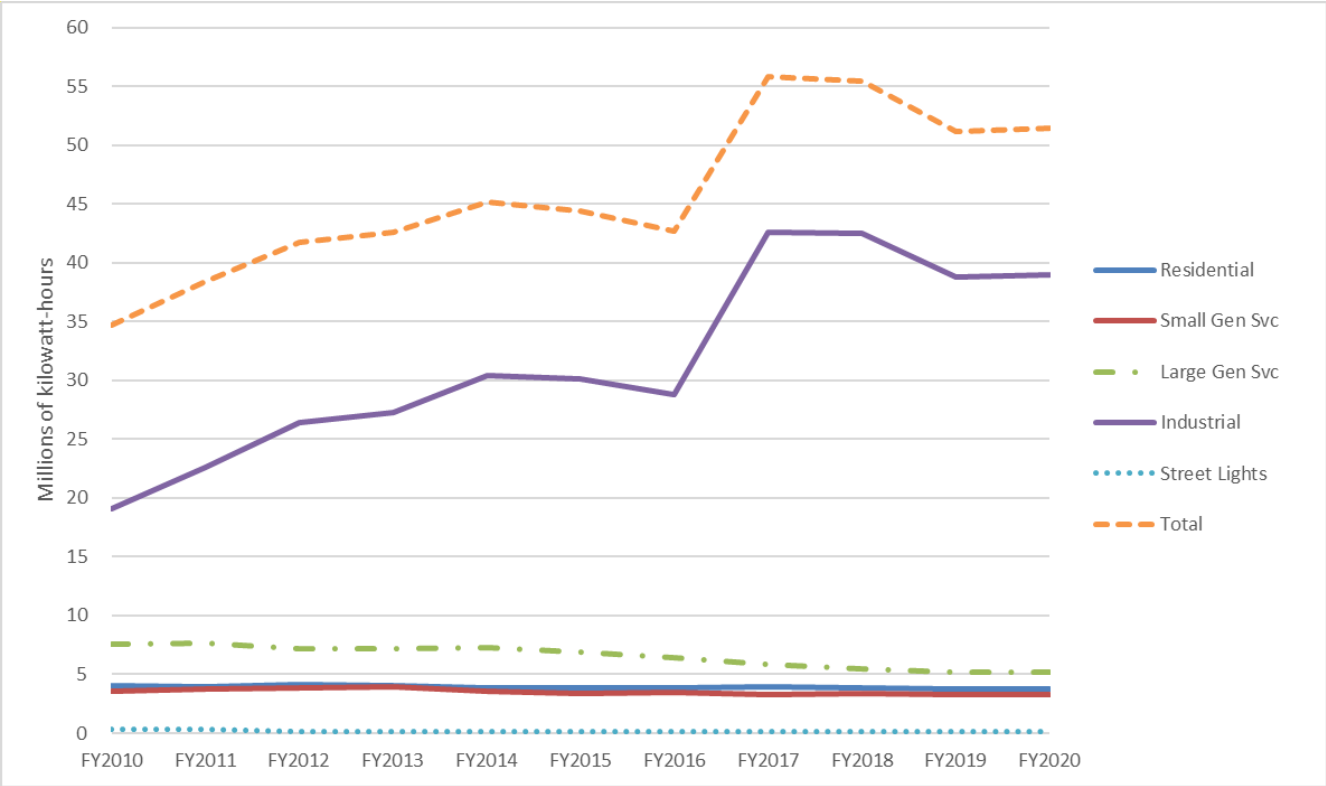
Prior to 2017, the overall increase in sales was due primarily to historically self-generating industrial customers beginning to purchase energy from the City. Most of the recent decrease in sales (post FY2018) is the result of the loss of two large industrial customers (Westward and Alyeska) which resumed self-generation for their facilities. Additionally, Large General Service has seen an almost 32% decrease in sales since FY2010. However, the significance of industrial sales has dominated the overall system load over the past 10 years.

Table 1 – Historical Sales

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020
Energy Sales (MWh)											
Residential	4,045	3,991	4,105	4,063	3,858	3,854	3,827	3,906	3,863	3,745	3,771
Small Gen Svc	3,613	3,779	3,831	3,913	3,540	3,400	3,426	3,292	3,366	3,265	3,287
Large Gen Svc	7,608	7,705	7,192	7,220	7,249	6,879	6,409	5,886	5,486	5,217	5,178
Industrial	19,069	22,579	26,410	27,229	30,409	30,113	28,833	42,562	42,523	38,758	38,986
Street Lights	327	309	160	147	147	155	169	173	174	182	184
Total	34,662	38,363	41,698	42,572	45,203	44,401	42,664	55,819	55,412	51,167	51,406
Peak Demand (kW)	7,220	7,850	7,700	8,840	8,720	8,878	9,409	11,013	12,471	12,305	12,489

[2] Ignores Unit 10, rated at 5.2 MW. Firm capacity is defined as the total installed capacity less the rating of the largest unit. Both Units 10 and 11 have a rated capacity of 5.2 MW.

Figure 1 – Historical Sales



3. REVENUE REQUIREMENTS

Introduction

In very general terms, the Electric Utility, like any other business enterprise, must set rates to maintain adequate cash flows. But the definition of adequate cash flow can lead to confusion and, if not properly defined, can lead to inequity to all ratepayers.

In the very broadest sense, cash flow is defined as revenues less:

1. Cash outflows for day-to-day operations and debt payments,
2. Cash transfers to capital reserves or to pay for capital assets (assets with service lives longer than one or two years) that are not debt funded.

Establishing rates to meet this type of cash flow can lead to two problems. First, capital expenditures can vary significantly from year to year and thereby lead to instability of rates. Second, and perhaps more important, capital expenditures may be quite large for a brief period of time. If these large assets have long service lives, then ratepayers of "today" are paying for assets used by ratepayers in later years.

Some municipal utilities smooth out the need to collect capital expenditures from ratepayers by including a capital reserve fund requirement in its revenue requirements. Amounts collected for this fund are then set aside and used to fund relatively small, on-going capital expenditures.

In order to both recognize and "smooth" the costs of capital assets, depreciation is used. This expense is a non-cash expense with the annual amount typically equal to the cost of the asset divided by the service life of the asset.

There are, therefore, two methodologies used to measure revenue requirements:

- *Income Basis.* This methodology uses the typical income statement that includes day-to-day expenses plus depreciation and interest on debt. It does not include principal payments on debt nor does it include capital expenditures. This is the traditional method of developing rates and is preferred or often required by regulatory agencies.

- *Cash Basis.* This differs from the Income Basis by excluding depreciation from the calculation of the revenue requirement but including principal payments on debt and capital reserve requirements, sometimes in the form of a DSC or similar mechanism.

Regulated utilities typically must set rates on an Income Basis while also ensuring cash flows are adequate. In order to recognize the inherent inaccuracies of precisely predicting sales and expenses, rates are set to allow the utility an opportunity to collect a defined margin.

Revenue requirements for this analysis are presented on both an Income Basis, as seen on the Electric Utility's Operating Budget, and a Cash Basis to ensure that bond covenants are adequately met. Within the Study, options are provided to allow the City to consider both options and determine a pathway that will meet its objectives and to accommodate community sensitivities.

Electric Utility Debt

When debt was used to partially fund the construction of the new powerhouse, Ordinance No. 2008-19 (adopted by the City on November 7, 2008 and referred to as the "Master Ordinance") included typical language for setting future rates. Section 7 of the Master Ordinance states in part:

> *a) Rate Covenant. At all times the City will establish, maintain and collect rentals, tariffs, rates, fees, and charges in the operation of all of the business of the Electric Utility that will produce Net Revenue in each Fiscal Year at least equal to the greater of:*
>
> *(1) 125% of the amount required in such Fiscal Year to be paid as Debt Service on Outstanding Bonds, or*
>
> *(2) an amount equal to the sum of Maximum Annual Debt Service on each Outstanding series of Bonds*
>
> *If the Net Revenue in any Fiscal Year is less than required to fulfill the Rate Covenant, then the City will retain a Consultant to make recommendations as to operations and the revision of schedules of rentals, tariffs, rates, fees and charges, and on the basis of such recommendations and other available information the City will establish such rentals, tariffs, rates, fees and charges for Electric Utility services and operations as are necessary to meet the Rate Covenant in the Fiscal Year during which such adjustments are made. If the City has taken the steps set forth in this paragraph and the Net Revenue in the Fiscal Year in which adjustments are made nevertheless is not sufficient to meet the Rate Covenant, there shall be no default under the Rate Covenant unless the City fails to meet the Rate Covenant in the Fiscal Year in which adjustments are made in the immediately succeeding Fiscal Year.*

Debt service (principal and interest) is relatively level over the life of the bonds, and therefore, the 125 percent coverage noted should be maintained. This is commonly referred to as the DSC Ratio.

Net Revenues, as defined in the Master Ordinance, are Gross Revenues less Operating Expenses. In very general terms, Gross Revenues is defined as income, receipts, and revenues of the Electric Utility. Operating Expenses are defined in general as the operating, maintenance, and administrative costs of the utility. Operating Expenses do not include debt service on the bonds, depreciation, payment in lieu of taxes, or capital expenditures.

Therefore, Net Revenues must be equal to or greater than 125 percent of:

Gross Revenues – Operating Expenses

Note that in the preceding equation, interest on debt (but not principal) is included in expenses and must be added back in for the derivation of Net Revenues.

There are currently three debt instruments outstanding for the Electric Utility, and these are summarized as follows.

- 2010B Taxable: Original amount $3,365,000 with interest subsidies
- 2015 Refunding Bonds: Original amount $20,415,000 used to pay off $19,265,000 of the Original Bonds
- Interest-free Loan from the City General Fund: Original amount $1,400,000 and paid off over 10 years.

Debt service is summarized in Table 2 for the next five years. The maximum annual debt service, based on the interest accrual method and prior to interest subsidies, of the three debt instruments occurs in 2022 in the amount of $2,316,719. The required DSC would therefore be 125 percent of this amount, or $2,895,898. This amount represents the net margins required excluding depreciation, interest on debt, and any payments in lieu of taxes.

Table 2 – Annual Debt Service

	Fiscal Year				
	2021	2022	2023	2024	2025
2015-1 GO/Refunding - Powerhouse					
Interest Accrual	$ 768,125	$ 744,844	$ 718,994	$ 691,138	$ 646,825
Principal	$1,085,000	$1,105,000	$ 1,130,000	$1,155,000	$1,195,000
Total	$1,853,125	$1,849,844	$ 1,848,994	$1,846,138	$1,841,825
AMBB GO 2010B III Taxable					
Interest Accrual	$ 118,400	$ 121,875	$ 111,375	$ 100,375	$ 88,875
Principal	$ 205,000	$ 205,000	$ 215,000	$ 225,000	$ 235,000
Total	$ 323,400	$ 326,875	$ 326,375	$ 325,375	$ 323,875
City of Unalaska - General Fund					
Interest Accrual	$ -	$ -	$ -	$ -	$ -
Principal	$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ -
Total	$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ -
Total					
Interest Accrual	$ 886,525	$ 866,719	$ 830,369	$ 791,513	$ 735,700
Principal	$1,430,000	$1,450,000	$ 1,485,000	$1,520,000	$1,430,000
Total	$2,316,525	$2,316,719	$ 2,315,369	$2,311,513	$2,165,700
Less Interest Rate Subsidy	(73,505)	(73,505)	(73,505)	(73,505)	(73,505)
Net Debt Service	$2,243,020	$2,243,214	$ 2,241,864	$2,238,008	$2,092,195

Operating Budget

The operating budget for FY 2021 is summarized in Table 3 and provided in more detail in Appendix A-1. Certain adjustments were made to the budget and described as follows.

1. *Fuel Costs.* All fuel costs (approximately $7.76M) are eliminated from revenue requirements since these are collected through the Cost of Power Adjustment.
2. *PERS Contribution.* Employee contributions to Public Employee Retirement System (PERS) benefits are removed from the aggregate amount shown in the FY2021 budget. This adjustment is found in the "Personnel" section within each category of employee in Table 3.
3. *Interest Expense.* Interest expenses are less than that budgeted due to the recent refunding of bonds. Expenses are adjusted to equal the unsubsidized amount shown in Table 2 for FY2021.
4. *Other Income.* Other Income includes desired margins of $300,000, federal payments for the interest rate subsidy on the bonds. The budgeted amount is adjusted to equal the amount shown in Table 2 for FY2021.

Table 3 – Adopted FY2021 Budget

	Budget	Adjustments	Net
Administrative			
Personnel	737,016	(20,246)	716,770
Operations	415,359		415,359
Depreciation	3,779,145		3,779,145
Admin Overhead	157,116		157,116
Interest	935,742	(49,217)	886,525
Subtotal	$6,024,378	($69,463)	$5,954,915
Power Production			
Personnel	1,443,506	(40,531)	1,402,975
Operations	8,552,184	(7,763,259)	788,925
Subtotal	$9,995,690	($7,803,790)	$2,191,900
Line Repair/Maintenance			
Personnel	1,031,059	(29,499)	1,001,560
Operations	252,450		252,450
Subtotal	$1,283,509	($29,499)	$1,254,010
Vehicles			
Personnel	46,893	(1,303)	45,590
Operations	17,500		17,500
Subtotal	$64,393	($1,303)	$63,090
Facilities			
Personnel	68,286	(1,894)	66,392
Operations	77,000		77,000
Subtotal	$145,286	($1,894)	$143,392
Total Before Other Revenues	$17,513,256	($7,905,949)	$9,607,307
Less Other Revenues			
Other	237,957	(393,473)	(155,516)
Total	**$17,275,299**	**($7,512,476)**	**$9,451,791**

Revenue Requirements

As previously described, the City must maintain a DSC of 1.25. Revenue requirements must, therefore, be tested for not only whether the budget can be met but also whether the debt covenants are adequately covered. Table 4 below shows that by setting rates to recover revenue requirements with no additional margins, the resulting DSC is below the 1.25 minimum DSC requirement. This indicates a revenue increase is needed, even when the sufficiency of revenues is analyzed on a Cash Basis.

Table 4 – Debt Service Coverage

	FY2021	FY2022	FY2023	FY2024	FY2025
Revenue Requirement (No Depreciation, Interest, Margins)	$ 4,797,153	$ 4,797,153	$ 4,797,153	$ 4,797,153	$ 4,797,153
Principal	1,430,000	1,450,000	1,485,000	1,520,000	1,430,000
Interest	886,525	866,719	830,369	791,513	735,700
Cash Flow Required	$ 7,113,678	$ 7,113,872	$ 7,112,522	$ 7,108,666	$ 6,962,853
Revenues from Current Rates	$ 7,248,373	$ 7,248,373	$ 7,248,373	$ 7,248,373	$ 7,248,373
Net Income	$ 134,695	$ 134,501	$ 135,851	$ 139,708	$ 285,520
Debt Service Coverage (DSC) Ratio	1.06	1.06	1.06	1.06	1.13

As part of the analysis, Aldrich developed a revenue requirement on both a Cash Basis (using a 1.25 DSC) and an Income Basis (full revenue requirement). The results are shown in Tables 5 and 6 below.

Table 5 – Income Basis Revenue Requirement

Income Basis Revenue Requirement	FY 2021 Adjusted
Personnel	$ 3,233,287
Operations	1,551,234
Depreciation Expense	3,779,145
Admin Overhead	157,116
Interest Expense	886,525
Other Revenues	144,484
Margin	300,000
Total Revenue Requirement	**$ 9,762,823**

Table 6 – Cash Basis Revenue Requirement

Cash Basis Revenue Requirement	FY 2021 Adjusted
Personnel	$ 3,233,287
Operations	1,551,234
Depreciation Expense	0
Admin Overhead	157,116
Interest Expense	0
Other Revenues	144,484
Net Income to meet 1.25 DSC	2,895,656
Total Revenue Requirement	**$ 7,692,809**

Sales (and therefore revenues) and expenses used in this analysis are all forecasts that will undoubtedly differ from actual amounts. As such, target margins are sometimes included in revenue requirements to account for these inherent risks. For purposes of this analysis, a $300,000 margin was included in the development of the Income-Basis revenue requirement, but the need for margins will be investigated when reviewing the overall adequacy of rates.

4. COST-OF-SERVICE ANALYSIS

Why are Cost of Service Studies Performed?

In the preceding section, total revenue requirements were developed. Why can't revenue requirements simply be divided by total energy sales to develop a rate? The answer is that distinct customer classes cause the utility to incur costs differently. Therefore, a single rate for all customers ignores cost-causation and would not be equitable. For example, assume a utility with all but one of its customers uses the same amount of power evenly throughout the year. The one customer, however, uses a large amount of power during a short period of time and very little energy for the remainder of the year. As such, the utility must install greater capacity for the one customer, and a single rate would shift the cost burden to those customers not responsible for causing the additional costs.

A cost-of-service study recognizes the differences among various customers and how they affect costs, and costs of the utility are allocated to each group so that the "cost causer" is the "cost payer." Performed properly, the study ensures that rates are set in a fair and equitable manner and that no group of customers (rate class) is discriminated against.

In order to standardize the allocation process, the NARUC Manual was developed as a guide throughout the industry. Since no two utilities are alike, the manual acknowledges that certain deviations from the methods prescribed may be warranted due to local conditions.

The Process

In very general terms, a cost-of-service study is performed through a multistep process. The four basic steps include the following:

1. Projecting the amount of customer months, energy sales, and demand sales. (*Billing Determinants)*
2. Projecting the utility's revenue requirements. (*Revenue Requirements Analysis)*
3. Allocating the revenue requirements to each rate group (*Cost of Service Analysis)*
4. Designing rates that will recover each rate group's allocated cost of service (*Rate Design)*

The first two steps, Billing Determinants and Revenue Requirements, were described in the previous two sections. The next step is to allocate these costs to each rate group, and this is accomplished through the processes of *Functionalization*, *Classification*, and *Allocation.*

FUNCTIONALIZATION

A utility's production, transmission, distribution and consumer accounts expenses are functionalized through the Uniform System of Accounts. Administrative and General expenses, interest expenses, and other items are functionalized as either production, transmission, distribution, or consumer accounts using the labor components of expenses already functionalized, functionalized plant in service, and other factors.

CLASSIFICATION

Once the revenue requirements are functionalized, they are then classified as either demand-, energy-, or customer-related. At the risk of over-simplification, the NARUC Manual prescribes the functionalized revenue requirements to be classified as shown in Table 7. Detailed classification methodologies for the various line-item expense codes are provided in the NARUC Manual with the goal of classifying in a fair and equitable manner. For example, fuel is classified as energy since it is directly proportional to the amount of energy required by the utility. The fixed costs associated with generators (*i.e.*, depreciation, interest on debt, etc.) are typically classified as coincident demand related since the utility must install generation to meet the system coincident peak.

Table 7 – Classification of Revenue Requirements

Functionalized Revenue Requirement	Classification			
	Demand		Energy	Customer
	Coincident	Non Coincident		
Production	x		x	
Transmission	x			
Distribution		x		x

ALLOCATION

The final step in the cost-of-service analysis is to allocate the classified revenue requirements to each customer class (or rate group) based on each class' respective use of the allocation. For example, energy is typically allocated based on sales. If a particular class accounted for 30 percent of the sales, then 30 percent of the costs classified as energy-related would be allocated to that class.

Energy- and customer-related expenses are fairly straightforward, but demand allocations become much more complex since there are a number of different methods that can be used. Some form of the

coincident and non-coincident peaks is typically used and may include the annual peak, average of the four peak months, average of the twelve months over the year, average of the three summer and three winter peak months, and so on.

Complicating the matter is that a great deal of load research must be conducted in order to estimate these class peaks with any precision. Such research can be expensive, and the benefits of obtaining the data can quickly be eroded by the associated costs. Load research of comparable utilities and an analysis of billing demands can be used in lieu of the expensive load research.

After the revenue requirements have been allocated to each class, the existing rates are applied to the billing determinants (number of customers, energy sales, demand sales) to determine if the rates recover less than or more than the allocated cost of service. Rates are then adjusted accordingly.

Cost Allocation

Both the Income Basis and Cash Basis revenue requirements were applied to the cost of service analysis described below.

FUNCTIONALIZATION

Most of the functionalization process is accomplished through the City's accounting codes. Administrative costs are not functionalized but classified directly in the next step.

CLASSIFICATION (APPENDIX A-2)

The functionalized revenue requirements were then classified as either demand-, energy-, and customer-related pursuant to the guidelines established in the NARUC Manual.

ALLOCATION (APPENDIX A-1)

As described earlier in this report, the allocation of energy- and customer-related revenue requirements is fairly straightforward. Energy sales and the number of customers are readily available for each customer class. Demand data, however, is much more complex, and estimates must be made of each class' contribution to the system coincident peak as well as estimates of each class' non-coincident peak.

In the Electric Utility's case, two classes, Large General Service and Industrial, include a demand component in their monthly bill, and billing demands for each customer in these two classes are

available. However, the sum of the billing demands for each month will most likely be greater than the actual non-coincident peak for the class as a whole due to diversity among the customers. This diversity will probably be greater among the Large General Service customers than the Industrial customers due to the greater number of customers and the differences in types of business operations.

The non-coincident peak and coincident peak were estimated for each customer class by first estimating the peaks for the non-demand metered classes. This was done by using load research conducted by other utilities in Alaska.[3] While not directly applicable to the Electric Utility, it serves as a reasonable proxy.

For the demand-metered customers, the billing demands were summed and then diversity factors applied such that the sum of the coincident peaks for all classes equal the projected system peak.

Results

Based on the analysis described above, the Income Basis revenue requirements were allocated to each customer class, and the results are summarized in Table 8 on the following page.[4] Details of the allocation and the steps leading to it are provided in Appendix A-1.

[3] Specifically, load research data from the Municipality of Anchorage d/b/a Municipal Light & Power was used for comparative purposes as well as more rural electric utilities, like those served by the Alaska Village Electric Cooperative.
[4] The Cash Basis revenue requirement was applied to the final allocation results to provide alternative options for the City. An allocation table for the Cash Basis was not separately generated.

Table 8 – Allocation of Revenue Requirements

	Total	Residential	Small Gen Svc	Large Gen Svc	Industrial	Street Lights
ENERGY						
Energy	$ 1,123,354	$ 107,064	$ 93,329	$ 146,997	$ 770,733	$ 5,231
CAPACITY						
Coincident Peak						
CP	$ 6,172,586	$ 503,376	$ 438,744	$ 796,659	$ 4,395,972	$ 37,835
CP No Street Lights	-	-	-	-	-	-
Subtotal - Coincident Peak	$ 6,172,586	$ 503,376	$ 438,744	$ 796,659	$ 4,395,972	$ 37,835
Non-Coincident Peak						
NCP	$ 1,297,884	$ 164,028	$ 115,989	$ 129,352	$ 881,770	$ 6,746
NCP No Street Lights	-	-	-	-	-	-
Subtotal - Non-Coincident Pea	$ 1,297,884	$ 164,028	$ 115,989	$ 129,352	$ 881,770	$ 6,746
Subtotal - Capacity	$ 7,470,470	$ 667,403	$ 554,733	$ 926,011	$ 5,277,743	$ 44,580
CUSTOMER / METER						
Meters	$ 1,060,868	$ 798,678	$ 186,669	$ 41,027	$ 18,815	$ 15,679
Meter Cost	1,682	896	210	395	181	-
Meter Reading	-	-	-	-	-	-
Billing	-	-	-	-	-	-
Subtotal - Customer / Meter	$ 1,062,550	$ 799,574	$ 186,878	$ 41,422	$ 18,996	$ 15,679
DIRECT						
Direct 1 (Credit Card Fees)	$ 25,000	$ 6,250	$ 6,250	$ 6,250	$ 6,250	$ -
Direct 2 (Hook-up/Late/Other)	-	$ -	$ -	$ -	$ -	$ -
Direct 3	81,448	$ -	$ -	$ -	$ 81,448	$ -
Subtotal - Direct	$ 106,448	$ 6,250	$ 6,250	$ 6,250	$ 87,698	$ -
TOTAL	$ 9,762,822	$ 1,580,292	$ 841,190	$ 1,120,680	$ 6,155,170	$ 65,490
Revenues from Existing Rates						
Customer		$ 73,352	$ 21,430	$ 23,550	$ 21,600	$ 1,800
Energy		882,254	675,378	900,658	3,905,174	37,852
FCA						
Demand		-	-	91,592	613,733	-
Total	$ 7,248,373	$ 955,606	$ 696,808	$ 1,015,800	$ 4,540,507	$ 39,652
Surplus (Deficiency)	$ (2,514,449)	$ (624,686)	$ (144,382)	$ (104,880)	$ (1,614,663)	$ (25,838)
Required Adjustment	34.7%	65.4%	20.7%	10.3%	35.6%	65.2%

Looking Forward

It is important to remember that the revenue requirements are based on the FY2021 budget, and this analysis was prepared nearly halfway through the budget cycle. Several cost components of the Electric Utility will remain relatively fixed (deprecation being the most notable), others may decrease (interest expenses), but inflation will influence other components.

While the increase in expenses and the loss of large customers indicates the need for a significant rate increase, regaining larger customers and connecting new loads is part of a viable plan for reducing customer rates again.

Furthermore, it is recommended that a new cost of service analysis be conducted within at least 4 years from the current Study (in FY25).

5. SUMMARY AND OPTIONS

Based on the analysis conducted and assumptions summarized in this report, the Income-Based revenue requirement indicates existing rates will result in an approximately $2.5 million deficit in operating costs or 34.7% of revenues. Alternatively, the Cash-Based revenue requirement indicates a deficit of $440 thousand or 6.1% of revenues. The rationale for the different methodologies and explanation of the analysis was provided in prior sections of the Report.

In order to address the deficiencies, three options are presented for consideration:

1. Utilize the Cash-Based revenue requirement to develop rates;
2. Utilize the Income-Based revenue requirement to develop rates; and
3. Assess a new sales tax to offset revenue deficits.

Within Options 1 and 2, the City could either implement an across-the-board rate increase or apply the results of the Cost of Service Study. Because the Cash-Based revenue requirement is significantly less than the Income-Based revenue requirement, Option 1 could be combined with Option 3 in some fashion. Each option is discussed separately below, followed by a comparative analysis of customer impacts.

Option 1: Cash-Based Revenue Requirement Achieving a 1.25 DSC

Because the City's municipal ordinance requires achieving a 1.25 DSC ratio, it is appropriate to establish rates accordingly. While the much larger rate increase which the Income-Based revenue requirement indicates is defensible, there is also a sensitivity, especially to the Industrial class, to maintain rates at a level that encourages interconnection rather than self-generation. Option 1 is responsive to that sensitivity, resulting in an overall 6.1% revenue increase. However, even with the rate increase required to meet the 1.25 DSC, the projected revenues remain almost $2.1 million below the Income-Based revenue requirement.

Two variations of Option 1 are provided below, a cost of service study-based approach and an across the board increase.

Option 1A: 1.25 DSC, Cost of Service Study Based Rates

As shown in Table 9, on the following page, the residential customer class would face the most significant rate increase if the cost of service study results were applied. The Residential class would see a 30.3% increase and the Industrial class would see a 6.8% increase. However, the Small General Service and Large General Service classes would realize a rate decrease. This indicates that the current configuration of rates doesn't adequately allocate cost to the Residential and Industrial classes but relies too heavily upon the Small and Large Generation Service classes.

However, it should be noted that apart from detailed demand metering data, several assumptions were used to determine demand for each class. These results should be interpreted as providing general guidance, not definitive results. Regarding the Street Lights class, the revenues from this class are small in comparison to the other classes, so large swings in the Street Lights class surplus/deficit are not unusual.

Table 9 – Option 1A: Cost of Service Study Results Applied to Cash-Based Revenue Requirement

	Total	Residential	Small General Service	Large General Service	Industrial	Street Lights
Current:	**$ 7,248,373**	$ 955,606	$ 696,808	$ 1,015,800	$ 4,540,507	$ 39,652
Proposed:	**$ 7,692,809**	$ 1,245,223	$ 662,832	$ 883,062	$ 4,850,088	$ 51,604
Surplus/Deficit:	**$ (444,436)**	$ (289,616)	$ 33,976	$ 132,738	$ (309,581)	$ (11,952)
% Increase/(Decrease):	**6.1%**	30.3%	-4.9%	-13.1%	6.8%	30.1%

Table 10 provides a comparison of the current rates and the rates that would be implemented under Option 1A.

Table 10 – Option 1A: Cost of Service Study Results Applied to Customer Rates

Current Rates						
Charge	**Unit**	**Residential**	**Small General Service**	**Large General Service**	**Industrial**	**Street Lights**
Customer	$/month	$ 8.00	$ 10.00	$ 50.00	$ 100.00	$ 10.00
Energy	$/kWh	0.2340	0.2055	0.1740	0.1439	0.2055
Demand	$/kW	-	-	6.70	8.00	-
Option 1A: 1.25 DSC, Cost of Service Study Based Rates						
Charge	**Unit**	**Residential**	**Small General Service**	**Large General Service**	**Industrial**	**Street Lights**
Customer	$/month	$ 69.25	$ 71.01	$ 79.75	$ 92.10	$ 68.64
Energy	$/kWh	0.1618	0.1553	0.0224	0.0224	0.2130
Demand	$/kW	-	-	53.38	55.05	-

Option 1B: 1.25 DSC, Across-the-Board Rate Increase

The across-the board application of the 6.1% rate increases would impact all customer classes equally, as shown in Table 11.

Table 11 – Option 1B: Across-the-Board Increase Applied to Cash-Based Revenue Requirement

	Total	Residential	Small General Service	Large General Service	Industrial	Street Lights
Current:	**$ 7,248,373**	$ 955,606	$ 696,808	$ 1,015,800	$ 4,540,507	$ 39,652
Proposed:	**$ 7,692,809**	$ 1,014,199	$ 739,533	$ 1,078,084	$ 4,818,909	$ 42,084
Surplus/Deficit:	**$ (444,436)**	$ (58,593)	$ (42,725)	$ (62,284)	$ (278,402)	$ (2,431)
% Increase/(Decrease):	**6.1%**	6.1%	6.1%	6.1%	6.1%	6.1%

Table 12 provides a comparison of the current rates and the rates that would be implemented under Option 1B.

Table 12 – Option 1B: Across-the-Board Increase Applied to Customer Rates

Current Rates						
Charge	**Unit**	**Residential**	**Small General Service**	**Large General Service**	**Industrial**	**Street Lights**
Customer	$/month	$ 8.00	$ 10.00	$ 50.00	$ 100.00	$ 10.00
Energy	$/kWh	0.2340	0.2055	0.1740	0.1439	0.2055
Demand	$/kW	-	-	6.70	8.00	-
Option 1B: 1.25 DSC, Across-the-Board Rate Increase						
Charge	**Unit**	**Residential**	**Small General Service**	**Large General Service**	**Industrial**	**Street Lights**
Customer	$/month	$ 8.49	$ 10.61	$ 53.07	$ 106.13	$ 10.61
Energy	$/kWh	0.2483	0.2180	0.1846	0.1527	0.2180
Demand	$/kW	-	-	7.11	8.49	-

Option 2: Income-Based Revenue Requirement

At the request of the City staff, only the cost-of-service based results are presented for Option 2. As shown in Table 13, all customer classes would see a rate increase if the Income-Based revenue requirement was implemented. However, the Residential customer class would face the most significant rate increase if the cost of service study results were applied. The Residential class would see a 65.4% increase and the Industrial class would see a 35.6% increase. The Small General Service and Large General Service classes would realize a 20.7% and 10.3% increase respectively. This indicates that the current configuration of rates doesn't adequately allocate cost to the Residential and Industrial classes but relies too heavily upon the Small and Large Generation Service classes.

However, it should be noted that apart from detailed demand metering data, several assumptions were used to determine demand for each class. These results should be interpreted as providing general guidance, not definitive results. Regarding the Street Lights class, the revenues from this class are small in comparison to the other classes, so large swings in the Street Lights class surplus/deficit are not unusual.

Table 13 – Option 2: Cost of Service Study Results Applied to Income-Based Revenue Requirement

	Total	**Residential**	**Small General Service**	**Large General Service**	**Industrial**	**Street Lights**
Current:	**$ 7,248,373**	$ 955,606	$ 696,808	$ 1,015,800	$ 4,540,507	$ 39,652
Proposed:	**$ 9,762,822**	$ 1,580,292	$ 841,190	$ 1,120,680	$ 6,155,170	$ 65,490
Surplus/Deficit:	**$ (2,514,449)**	$ (624,686)	$ (144,382)	$ (104,880)	$ (1,614,663)	$ (25,838)
% Increase/(Decrease):	**34.7%**	65.4%	20.7%	10.3%	35.6%	65.2%

Table 14 provides a comparison of the current rates and the rates that would be implemented until Option 2.

Table 14 – Option 2: Cost of Service Study Results Applied to Income-Based Revenue Requirement

Current Rates						
Charge	**Unit**	**Residential**	**Small General Service**	**Large General Service**	**Industrial**	**Street Lights**
Customer	$/month	$ 8.00	$ 10.00	$ 50.00	$ 100.00	$ 10.00
Energy	$/kWh	0.2340	0.2055	0.1740	0.1439	0.2055
Demand	$/kW	-	-	6.70	8.00	-
Option 2: Income-Based Revenue Requirement, Cost of Service Study Based Rates						
Charge	**Unit**	**Residential**	**Small General Service**	**Large General Service**	**Industrial**	**Street Lights**
Customer	$/month	$ 87.89	$ 90.12	$ 101.21	$ 116.88	$ 87.11
Energy	$/kWh	0.2054	0.1971	0.0284	0.0284	0.2704
Demand	$/kW	-	-	67.74	69.86	-

Option 3: Utility Infrastructure Tax

As an alternative to Options 1 and 2, or in addition to Option 1, the City could implement a sales tax with proceeds dedicated to utility infrastructure projects. This could offset some of the revenues that would need to be collected through rates and provide the City with a cash flow and broad discretion on the utility infrastructure projects to which it could be applied. Additionally, this allows the City to collect revenue more broadly from temporary community residents that are benefited by the utility infrastructure but are not directly charged for services.

For the sake of illustration, the historic and projected proceeds from the existing 1% Special Revenue sales tax are provided in Table 15.

Table 15 – Utility Infrastructure Tax Projection

	FY2017 Actual	**FY2018 Actual**	**FY2019 Actual**	**FY2020 Budget**	**FY2021 Budget**
1% Sales Tax Special Revenue	$ 3,705,737	$ 3,522,767	$ 3,629,169	$ 3,500,000	$ 2,666,667

Options 1 & 2: Customer Impact Projection

Options 1 and 2 propose specific changes to customer rates. In evaluating the options, it is helpful to understand the potential impact on each customer class. Tables 16 through 20 provide side-by-side comparisons of the monthly impact for each customer class based on average actual monthly energy consumption and demand (as applicable) for FY2020.

Table 16 – Residential Customer Impact Comparison

Residential Bill (500 kWh Energy)	Current Rates	Cash-Based (1.25 DSC) Option 1A: Cost-Based	Cash-Based (1.25 DSC) Options 1B: Across-the-Board	Income-Based Option 2: Cost-Based
Customer	$ 8.00	$ 69.25	$ 8.49	$ 87.89
Energy	116.98	80.91	124.15	102.68
COPA	55.00	55.00	55.00	55.00
PCE Credit	(40.55)	(40.55)	(40.55)	(40.55)
	$ 139.43	$ 164.61	$ 147.09	$ 205.02
	% Change:	**18.1%**	**5.5%**	**47.0%**

Table 17 – Small General Service Customer Impact Comparison

Small General Service (1,534 kWh Energy)	Current Rates	Cash-Based (1.25 DSC) Option 1a: Cost-Based Rates	Cash-Based (1.25 DSC) Options 1b Across-the-Board Increase	Income-Based Option 2: Cost-Based Rates
Customer	$ 10.00	$ 71.01	$ 10.61	$ 90.12
Energy	315.16	238.29	334.48	302.41
COPA	168.74	168.74	168.74	168.74
	$ 493.90	$ 478.04	$ 513.84	$ 561.27
	% Change:	**-3.2%**	**4.0%**	**13.6%**

Table 18 – Large General Service Customer Impact Comparison

Large General Service (10,993 kWh Energy & 29 kW Demand)	Current Rates	Cash-Based (1.25 DSC) Option 1a: Cost-Based Rates	Cash-Based (1.25 DSC) Options 1b Across-the-Board Increase	Income-Based Option 2: Cost-Based Rates
Customer	$ 50.00	$ 79.75	$ 53.07	$ 101.21
Demand	194.30	1,547.89	206.21	1,964.41
Energy	1,912.23	245.92	2,029.48	312.10
COPA	1,209.23	1,209.23	1,209.23	1,209.23
	$ 3,365.76	$ 3,082.80	$ 3,497.99	$ 3,586.95
	% Change:	**-8.4%**	**3.9%**	**6.6%**

Table 19 – Industrial Service Customer Impact Comparison

		Cash-Based (1.25 DSC)		Income-Based
Industrial (170,993 kWh Energy & 446 kW Demand)	**Current Rates**	**Option 1a: Cost-Based Rates**	**Options 1b Across-the-Board Increase**	**Option 2: Cost-Based Rates**
Customer	$ 100.00	$ 92.10	$ 106.13	$ 116.88
Demand	3,568.00	24,550.14	3,786.77	31,156.19
Energy	24,597.34	3,825.27	26,105.54	4,854.58
COPA	18,809.23	18,809.23	18,809.23	18,809.23
	$ 47,074.57	$ 47,276.73	$ 48,807.67	$ 54,936.88
	% Change:	**0.4%**	**3.7%**	**16.7%**

Table 20 – Street Light Service Customer Impact Comparison

		Cash-Based (1.25 DSC)		Income-Based
Streetlights (1,024 kWh Energy)	**Current Rates**	**Option 1a: Cost-Based Rates**	**Options 1b Across-the-Board Increase**	**Option 2: Cost-Based Rates**
Customer	$ 10.00	$ 68.64	$ 10.61	$ 87.11
Energy	210.38	218.15	223.28	276.85
COPA	112.64	112.64	112.64	112.64
	$ 333.02	$ 399.42	$ 346.53	$ 476.59
	% Change:	**19.9%**	**4.1%**	**43.1%**

6. RECOMMENDATIONS

The findings of the analysis herein are:

1. Although expenses have increased by almost 14% since the last cost of service study was performed based on FY2016, the loss of two large industrial customers has decreased sales, thereby producing a need for a rate increase to meet the utility's revenue requirement.
2. The cost of service analysis indicates that in order to meet the full Income-Based revenue requirement, all customer class rates should increase. However, comparatively:
   a. Rates for the Residential Class is most significantly set under the cost of service.
   b. Rates for the Industrial Class need to increase significantly.
   c. Rates for the Small and Large General Service classes are currently set closest to the actual cost of service.
3. The minimum rate increase must allow the revenue requirement to meet the 1.25 DSC threshold established by City ordinance. This would require an overall 6.1% rate increase, that could be enacted on a cost of service basis or via an across-the-board basis.

Based on the outcome of this study, it is recommended that electric rates be increased by at least 6.1% at this time. This increase will fund utility operations and meet debt covenants. However, it falls short of meeting the capital improvement expenditures projected in the CMMP. If the City does not raise rates to the level indicated by the Income-Based revenue requirement analysis, other methods such as the Utility Infrastructure Tax should be considered to allow capital improvement projects to be funded as necessary to maintain the integrity of the system.

Appendix A-1

Summary of Allocation

	Allocation Reference	Description	Total	Residential	Small Gen Svc	Large Gen Svc	Industrial	Street Lights
ENERGY								
Energy	A.01.01	Energy Sales	$ 1,123,354	$ 107,064	$ 93,329	$ 146,997	$ 770,733	$ 5,231
CAPACITY								
Coincident Peak								
CP	A.02.01	CP	$ 6,172,586	$ 503,376	$ 438,744	$ 796,659	$ 4,395,972	$ 37,835
CP No Street Lights	A.02.03	CP No SL	-	-	-	-	-	-
Subtotal - Coincident Peak			$ 6,172,586	$ 503,376	$ 438,744	$ 796,659	$ 4,395,972	$ 37,835
Non-Coincident Peak								
NCP	A.03.01	NCP	$ 1,297,884	$ 164,028	$ 115,989	$ 129,352	$ 881,770	$ 6,746
NCP No Street Lights	A.03.03	NCP No SL	-	-	-	-	-	-
Subtotal - Non-Coincident Peak			$ 1,297,884	$ 164,028	$ 115,989	$ 129,352	$ 881,770	$ 6,746
Subtotal - Capacity			$ 7,470,470	$ 667,403	$ 554,733	$ 926,011	$ 5,277,743	$ 44,580
CUSTOMER / METER								
Meters	A.04.01	Meters	$ 1,060,868	$ 798,678	$ 186,669	$ 41,027	$ 18,815	$ 15,679
Meter Cost	A.04.02	Meter Cost	1,682	896	210	395	181	-
Meter Reading	A.04.03	Meter Reading	-	-	-	-	-	-
Billing	A.04.04	Billing	-	-	-	-	-	-
Subtotal - Customer / Meter			$ 1,062,550	$ 799,574	$ 186,878	$ 41,422	$ 18,996	$ 15,679
DIRECT								
Direct 1 (Credit Card Fees)	A.10.01	Direct 1 - CC Fees	$ 25,000	$ 6,250	$ 6,250	$ 6,250	$ 6,250	$ -
Direct 2 (Hook-up/Late/Other)	A.10.02	Direct 2 - Not Utilized	-	$ -	$ -	$ -	$ -	$ -
Direct 3	A.10.03	Direct 3 - Industrial	81,448	$ -	$ -	$ -	$ 81,448	$ -
Subtotal - Direct			$ 106,448	$ 6,250	$ 6,250	$ 6,250	$ 87,698	$ -
TOTAL			$ 9,762,822	$ 1,580,292	$ 841,190	$ 1,120,680	$ 6,155,170	$ 65,490
Revenues from Existing Rates								
Customer				$ 73,352	$ 21,430	$ 23,550	$ 21,600	$ 1,800
Energy				882,254	675,378	900,658	3,905,174	37,852
FCA								
Demand				-	-	91,592	613,733	-
Total			$ 7,248,373	$ 955,606	$ 696,808	$ 1,015,800	$ 4,540,507	$ 39,652
Surplus (Deficiency)			$ (2,514,449)	$ (624,686)	$ (144,382)	$ (104,880)	$ (1,614,663)	$ (25,838)
Required Adjustment			34.7%	65.4%	20.7%	10.3%	35.6%	65.2%
FY20 Billing Determinants:								
Customers (meter-months)			12,179	9,169	2,143	471	216	180
Energy (kWh)			39,567,897	3,771,123	3,287,311	5,177,682	27,147,540	184,241
Demand (kW-months)				-	-	13,670	76,717	-
Existing Rates:								
Customer				$ 8.00	$ 10.00	$ 50.00	$ 100.00	$ 10.00
Energy				0.23395	0.20545	0.17395	0.14385	0.20545
Demand						6.70	8.00	

Appendix A-2

Classification of Expenses

Func	Labor		Classification	Description	FY 2021 Adopted Budget	Adjustment	Revenue Requirement	Energy	Demand		Customer		Other		
									CP	NCP	Meters	Meter Cost	Direct 1	Direct 2	Direct 3
		ADMINISTRATIVE AND GENERAL													
		Personnel													
A	L	Salaries and Wages	C.30.01	Labor - Non A&G	429,514		429,514	44,185	212,172	88,080	85,077	-	-	-	-
A	L	Temp Employees	C.30.01	Labor - Non A&G	3,891		3,891	400	1,922	798	771	-	-	-	-
A	L	Overtime	C.30.01	Labor - Non A&G	1,817		1,817	187	898	373	360	-	-	-	-
A	L	Health Insurance	C.30.01	Labor - Non A&G	140,849		140,849	14,489	69,577	28,884	27,899	-	-	-	-
A	L	FICA/MEDI	C.30.01	Labor - Non A&G	32,240		32,240	3,317	15,926	6,611	6,386	-	-	-	-
A	L	PERS	C.30.01	Labor - Non A&G	116,231	(20,246)	95,985	9,874	47,415	19,683	19,012	-	-	-	-
A	L	AK ESC	C.30.01	Labor - Non A&G	1,928		1,928	198	952	395	382	-	-	-	-
A	L	Workers Comp	C.30.01	Labor - Non A&G	9,740		9,740	1,002	4,811	1,997	1,929	-	-	-	-
A	L	Other Emp Benefits	C.30.01	Labor - Non A&G	806		806	83	398	165	160	-	-	-	-
		Subtotal - Personnel			737,016	(20,246)	716,770	73,735	354,072	146,987	141,976	-	-	-	-
		Operations													
A		Legal Services	C.30.01	Labor - Non A&G	2,000		2,000	206	988	410	396	-	-	-	-
A		Engineering	C.30.01	Labor - Non A&G	18,550		18,550	1,908	9,163	3,804	3,674	-	-	-	-
A		Training and Education	C.30.01	Labor - Non A&G	2,575		2,575	265	1,272	528	510	-	-	-	-
A		Other Professional Services	C.30.01	Labor - Non A&G	34,149		34,149	3,513	16,869	7,003	6,764	-	-	-	-
A		PCB Related Costs	C.30.01	Labor - Non A&G			-	-	-	-	-	-	-	-	-
A		Software / Hardware Support	C.50.03	Total Plant	38,450		38,450	4,418	27,286	4,037	2,129	4	-	-	575
A		Water / Sewer	C.30.01	Labor - Non A&G	510		510	52	252	105	101	-	-	-	-
A		Solid Waste	C.30.01	Labor - Non A&G	1,215		1,215	125	600	249	241	-	-	-	-
A		Custodial Services	C.30.01	Labor - Non A&G	4,508		4,508	464	2,227	924	893	-	-	-	-
A		Repair / Maintenance Svcs	C.30.01	Labor - Non A&G	700		700	72	346	144	139	-	-	-	-
A		Builidng Land Rental	C.30.01	Labor - Non A&G			-	-	-	-	-	-	-	-	-
A		Equipment Rental	C.30.01	Labor - Non A&G	-		-	-	-	-	-	-	-	-	-
A		Insurance	C.50.03	Total Plant	209,028		209,028	24,017	148,338	21,948	11,574	24	-	-	3,126
A		Telephone and Fax	C.30.01	Labor - Non A&G	1,321		1,321	136	653	271	262	-	-	-	-
A		Network/Internet	C.30.01	Labor - Non A&G	23,320		23,320	2,399	11,520	4,782	4,619	-	-	-	-
A		Advertising	C.05.01	Meters	530		530	-	-	-	530	-	-	-	-
A		Printing	C.30.01	Labor - Non A&G	-		-	-	-	-	-	-	-	-	-
A		Travel	C.30.01	Labor - Non A&G	2,000		2,000	206	988	410	396	-	-	-	-
A		Credit Card Fees	C.10.01	Direct 1: CC Fees	25,000		25,000	-	-	-	-	-	25,000	-	-
A		Postage	C.30.01	Labor - Non A&G	2,123		2,123	218	1,049	435	421	-	-	-	-
A		Dues and Subscriptions	C.30.01	Labor - Non A&G	10,000		10,000	1,029	4,940	2,051	1,981	-	-	-	-
A		Employee Mvoving Expenses	C.30.01	Labor - Non A&G	5,000		5,000	514	2,470	1,025	990	-	-	-	-
A		Miscellaneous Expenses	C.30.01	Labor - Non A&G			-	-	-	-	-	-	-	-	-
A		Supplies	C.30.01	Labor - Non A&G	800		800	82	395	164	158	-	-	-	-
A		Office Supplies and Equipment	C.30.01	Labor - Non A&G	2,186		2,186	225	1,080	448	433	-	-	-	-
A		Computer Hardware/Software	C.30.01	Labor - Non A&G	9,470		9,470	974	4,678	1,942	1,876	-	-	-	-
A		Electricity	C.50.04	Plant - Buildings	9,518		9,518	-	9,518	-	-	-	-	-	-
A		Heating Fuel	C.50.04	Plant - Buildings	8,102		8,102	-	8,102	-	-	-	-	-	-
A		Gas for Vehicles	C.40.02	Plant: Vehicles	1,963		1,963	300	19	956	542	-	-	-	147
A		Business Meals	C.30.01	Labor - Non A&G	318		318	33	157	65	63	-	-	-	-
A		Employee Appreciation	C.30.01	Labor - Non A&G	1,623		1,623	167	802	333	321	-	-	-	-
A		Radio Communiations	C.30.01	Labor - Non A&G			-	-	-	-	-	-	-	-	-
A		Books/Periodicals	C.30.01	Labor - Non A&G	400		400	41	198	82	79	-	-	-	-
A		Small Tools	C.30.01	Labor - Non A&G			-	-	-	-	-	-	-	-	-
		Subtotal - Operations			415,359	-	415,359	41,364	253,908	52,117	39,093	29	25,000	-	3,848
		Other													
A		Depreciation (Existing)	C.60.01	Depreciation	3,779,145	-	3,779,145	633,774	2,490,198	388,735	209,238	1,618	-	-	55,582
A		Depreciation (New)	C.99.99	Not Used	-		-	-	-	-	-	-	-	-	-
A		Payment in Lieu of Taxes	C.50.03	Total Plant			-	-	-	-	-	-	-	-	-
A		Administrative Overhead	C.30.01	Labor - Non A&G	157,116		157,116	16,163	77,613	32,219	31,121	-	-	-	-
A		Interest Expense	C.02.01	CP	935,742	(49,217)	886,525	-	886,525	-	-	-	-	-	-
A		Interest Expense (New)	C.02.01	CP			-	-	-	-	-	-	-	-	-
A		Issuance Costs	C.02.01	CP	-		-	-	-	-	-	-	-	-	-
A		Bad Debt Expense	C.10.01	Direct 1: CC Fees			-	-	-	-	-	-	-	-	-
		Subtotal - Other			4,872,003	(49,217)	4,822,786	649,937	3,454,336	420,954	240,360	1,618	-	-	55,582
		Total - Administrative and General			**$ 6,024,378**	**$ (69,463)**	**$ 5,954,915**	**$ 765,036**	**$ 4,062,316**	**$ 620,058**	**$ 421,428**	**$ 1,647**	**$ 25,000**	**$ -**	**$ 59,429**

Func	Labor		Classification	Description	FY 2021 Adopted Budget	Adjustment	Revenue Requirement		Demand		Customer		Other		
								Energy	CP	NCP	Meters	Meter Cost	Direct 1	Direct 2	Direct 3
		POWER PRODUCTION													
		Personnel													
G	L	Salaries and Wages	C.21.02	Other Power Production	783,859		783,859	128,800	652,747	1,344	762	-	-	-	206
G	L	Temp Employees	C.21.02	Other Power Production	-		-	-	-	-	-	-	-	-	-
G	L	Overtime	C.21.02	Other Power Production	47,320		47,320	7,775	39,405	81	46	-	-	-	12
G	L	Health Insurance	C.21.02	Other Power Production	270,934		270,934	44,518	225,616	465	263	-	-	-	71
G	L	FICA/MEDI	C.21.02	Other Power Production	63,583		63,583	10,448	52,948	109	62	-	-	-	17
G	L	PERS	C.21.02	Other Power Production	232,677	(40,531)	192,146	31,572	160,007	330	187	-	-	-	51
G	L	AK ESC	C.21.02	Other Power Production	3,630		3,630	596	3,023	6	4	-	-	-	1
G	L	Workers Comp	C.21.02	Other Power Production	35,935		35,935	5,905	29,924	62	35	-	-	-	9
G	L	Other Emp Benefits	C.21.02	Other Power Production	5,568		5,568	915	4,637	10	5	-	-	-	1
		Subtotal - Personnel			1,443,506	(40,531)	1,402,975	230,530	1,168,307	2,406	1,364	-	-	-	369
		Operations													
G		Engineering Services	C.04.01	50% Egy / 50% CP	5,000		5,000	2,500	2,500	-	-	-	-	-	-
G		Training and Education	C.21.02	Other Power Production	6,000		6,000	986	4,996	10	6	-	-	-	2
G		Education Reimbursement	C.21.02	Other Power Production	1,500		1,500	246	1,249	3	1	-	-	-	0
G		Other Professional Services	C.04.01	50% Egy / 50% CP	103,000		103,000	51,500	51,500	-	-	-	-	-	-
G		Sofware/Hardware Support	C.04.01	50% Egy / 50% CP	1,500		1,500	750	750	-	-	-	-	-	-
G		Sampling, Testing, Monitoring	C.21.02	Other Power Production	5,000		5,000	822	4,164	9	5	-	-	-	1
G		Other Technical	C.04.01	50% Egy / 50% CP	20,000		20,000	10,000	10,000	-	-	-	-	-	-
G		Water / Sewer	C.21.02	Other Power Production	1,300		1,300	214	1,083	2	1	-	-	-	0
G		Solid Waste	C.21.02	Other Power Production	5,000		5,000	822	4,164	9	5	-	-	-	1
G		Custodial	C.02.01	CP	9,600		9,600	-	9,600	-	-	-	-	-	-
G		R & M Services	C.02.01	CP	154,500	-	154,500	-	154,500	-	-	-	-	-	-
G		Equipment Rental	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		General Contractor	C.04.01	50% Egy / 50% CP	10,000		10,000	5,000	5,000	-	-	-	-	-	-
G		Telephone and Fax	C.21.02	Other Power Production	-		-	-	-	-	-	-	-	-	-
G		Network / Internet	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Radio Communications	C.21.02	Other Power Production	3,000		3,000	493	2,498	5	3	-	-	-	1
G		Advertising	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Travel	C.21.02	Other Power Production	15,250		15,250	2,506	12,699	26	15	-	-	-	4
G		Dues and Subscriptions	C.21.02	Other Power Production	500		500	82	416	1	0	-	-	-	0
G		Permit Fees	C.01.01	Energy	50,000		50,000	50,000	-	-	-	-	-	-	-
G		Employee Moving Expense	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Supplies	C.02.01	CP	375,000		375,000	-	375,000	-	-	-	-	-	-
G		Safety	C.21.02	Other Power Production	2,500		2,500	411	2,082	4	2	-	-	-	
G		Office Supplies and Equipment	C.21.02	Other Power Production	5,000		5,000	822	4,164	9	5	-	-	-	1
G		Computer Hardware/Software	C.21.02	Other Power Production	10,000		10,000	1,643	8,327	17	10	-	-	-	3
G		Electricity	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Uniforms	C.21.02	Other Power Production	1,000		1,000	164	833	2	1	-	-	-	
G		Propane	C.21.02	Other Power Production	1,200		1,200	197	999	2	1	-	-	-	0
G		Gas for Vehicles	C.40.02	Plant: Vehicles	2,500		2,500	381	24	1,217	690	-	-	-	187
G		Diesel for Equipment	C.40.02	Plant: Vehicles	75		75	11	1	37	21	-	-	-	6
G		Business Meals	C.99.99	Not Used	-		-	-	-	-	-	-	-	-	-
G		Employee Appreciation	C.21.02	Other Power Production	500		500	82	416	1	0	-	-	-	0
G		BksPrdcls	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Small Tools	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Service Contracts	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Miscellaneous Expenses	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Generator Fuel	C.01.01	Energy	7,763,259	(7,763,259)	-	-	-	-	-	-	-	-	-
G		Purchased Power	C.01.01	Energy			-	-	-	-	-	-	-	-	-
G		Purch Pwr - Consumer Generated	C.01.01	Energy			-	-	-	-	-	-	-	-	-
		Subtotal - Operations			8,552,184	(7,763,259)	788,925	129,632	656,966	1,353	767	-	-	-	206
		Total - Power Production			**$ 9,995,690**	**$ (7,803,790)**	**$ 2,191,900**	**$ 360,162**	**$ 1,825,272**	**$ 3,759**	**$ 2,131**	**$ -**	**$ -**	**$ -**	**$ 575**

Func	Labor		Classification	Description	FY 2021 Adopted Budget	Adjustment	Revenue Requirement	Energy	Demand		Customer		Other		
									CP	NCP	Meters	Meter Cost	Direct 1	Direct 2	Direct 3
		LINE REPAIR AND MAINTENANCE													
		Personnel													
D	L	Salaries and Wages	C.22.02	Other Line Repair	556,829		556,829	11,118	710	271,682	267,880	-	-	-	5,438
D	L	Temp Employees	C.22.02	Other Line Repair			-	-	-	-	-	-	-	-	-
D	L	Overtime	C.22.02	Other Line Repair	51,680		51,680	1,032	66	25,215	24,862	-	-	-	505
D	L	Health Insurance	C.22.02	Other Line Repair	175,661		175,661	3,507	224	85,707	84,507	-	-	-	1,716
D	L	FICA/MEDI	C.22.02	Other Line Repair	46,551		46,551	929	59	22,713	22,395	-	-	-	455
D	L	PERS	C.22.02	Other Line Repair	169,346	(29,499)	139,847	2,792	178	68,233	67,278	-	-	-	1,366
D	L	AK ESC	C.22.02	Other Line Repair	2,355		2,355	47	3	1,149	1,133	-	-	-	23
D	L	Workers Comp	C.22.02	Other Line Repair	25,100		25,100	501	32	12,247	12,075	-	-	-	245
D	L	Other Emp Benefits	C.22.02	Other Line Repair	3,537		3,537	71	5	1,726	1,702	-	-	-	35
		Subtotal - Personnel			1,031,059	(29,499)	1,001,560	19,997	1,278	488,671	481,832	-	-	-	9,782
		Operations													
D		Engineering Services	C.04.03	50% NCP / 50% Meters	6,000		6,000	-	-	3,000	3,000	-	-	-	-
D		Training and Education	C.22.02	Other Line Repair	4,100		4,100	82	5	2,000	1,972	-	-	-	40
D		Other Professional Services	C.04.03	50% NCP / 50% Meters	3,000		3,000	-	-	1,500	1,500	-	-	-	-
D		Software/Hardware Support	C.04.03	50% NCP / 50% Meters	1,150		1,150	-	-	575	575	-	-	-	-
D		Sampling, Testing, Monitoring	C.05.01	Meters	1,000		1,000	-	-	-	1,000	-	-	-	-
D		Survey Services	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
D		Other Technical	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
D		Solid Waste	C.22.02	Other Line Repair	3,000		3,000	60	4	1,464	1,443	-	-	-	29
D		Repairs and Maintenance	C.04.03	50% NCP / 50% Meters	5,000		5,000	-	-	2,500	2,500	-	-	-	-
D		Equipment Rental	C.04.03	50% NCP / 50% Meters	1,200		1,200	-	-	600	600	-	-	-	-
D		General Contractor	C.04.03	50% NCP / 50% Meters	10,000		10,000	-	-	5,000	5,000	-	-	-	-
D		Telephone and Fax	C.22.02	Other Line Repair	5,700		5,700	114	7	2,781	2,742	-	-	-	56
D		Radio Communications	C.04.03	50% NCP / 50% Meters	500		500	-	-	250	250	-	-	-	-
D		Advertising	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
D		Travel	C.22.02	Other Line Repair	11,000		11,000	220	14	5,367	5,292	-	-	-	107
D		Dues and Subscriptions	C.22.02	Other Line Repair	-		-	-	-	-	-	-	-	-	-
D		Permit Fees	C.04.03	50% NCP / 50% Meters	5,000		5,000	-	-	2,500	2,500	-	-	-	-
D		Employee Moving Exp	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
D		Miscellaneous Expenses	C.22.02	Other Line Repair	6,000		6,000	120	8	2,927	2,886	-	-	-	59
D		Supplies	C.22.02	Other Line Repair	170,000		170,000	3,394	217	82,945	81,784	-	-	-	1,660
D		Sand, Gravel, and Rock	C.04.03	50% NCP / 50% Meters	9,000		9,000	-	-	4,500	4,500	-	-	-	-
D		Office Supplies and Equipment	C.22.02	Other Line Repair	500		500	10	1	244	241	-	-	-	5
D		Machinery/Vehicle Parts	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
D		Computer Hardware/Software	C.22.02	Other Line Repair	1,700		1,700	34	2	829	818	-	-	-	17
D		Electricity	C.22.02	Other Line Repair	1,200		1,200	24	2	585	577	-	-	-	12
D		Propane	C.22.02	Other Line Repair	400		400	8	1	195	192	-	-	-	4
D		Gas for Vehicles	C.40.02	Plant: Vehicles	2,500		2,500	381	24	1,217	690	-	-	-	187
D		Diesel	C.40.02	Plant: Vehicles	3,800		3,800	580	37	1,850	1,049	-	-	-	284
D		Business Meals	C.99.99	Not Used	-		-	-	-	-	-	-	-	-	-
D		Books/Periodicals	C.22.02	Other Line Repair	500		500	10	1	244	241	-	-	-	5
D		Employee Appreciation	C.22.02	Other Line Repair	200		200	4	0	98	96	-	-	-	2
		Subtotal - Operations			252,450	-	252,450	5,040	322	123,173	121,449	-	-	-	2,466
		Total - Line Repair			**$ 1,283,509**	**$ (29,499)**	**$ 1,254,010**	**$ 25,038**	**$ 1,600**	**$ 611,844**	**$ 603,281**	**$ -**	**$ -**	**$ -**	**$ 12,247**

Func	Labor		Classification	Description	FY 2021 Adopted Budget	Adjustment	Revenue Requirement	Energy	Demand		Customer		Other		
									CP	NCP	Meters	Meter Cost	Direct 1	Direct 2	Direct 3
		VEHICLE AND EQUIPMENT R & M													
		Personnel													
A, G, D	L	Salaries and Wages	C.23.02	Other Vehicle R&M	$ 26,743		$ 26,743	4,081	261	13,023	7,382	-	-	-	1,996
A, G, D	L	Temp Employees	C.23.02	Other Vehicle R&M			-	-	-	-	-	-	-	-	-
A, G, D	L	Overtime	C.23.02	Other Vehicle R&M	800		800	122	8	390	221	-	-	-	60
A, G, D	L	Health Insurance	C.23.02	Other Vehicle R&M	8,515		8,515	1,299	83	4,146	2,351	-	-	-	636
A, G, D	L	FICA/MEDI	C.23.02	Other Vehicle R&M	2,106		2,106	321	21	1,026	581	-	-	-	157
A, G, D	L	PERS	C.23.02	Other Vehicle R&M	7,482	(1,303)	6,179	943	60	3,009	1,706	-	-	-	461
A, G, D	L	AK ESC	C.23.02	Other Vehicle R&M	117		117	18	1	57	32	-	-	-	9
A, G, D	L	Workers Comp	C.23.02	Other Vehicle R&M	969		969	148	9	472	267	-	-	-	72
A, G, D	L	Other Emp Benefits	C.23.02	Other Vehicle R&M	161		161	25	2	78	44	-	-	-	12
		Subtotal - Personnel			$ 46,893	$ (1,303)	$ 45,590	$ 6,957	$ 444	$ 22,201	$ 12,585	$ -	$ -	$ -	$ 3,403
		Operations													
A, G, D		Other Professional	C.40.02	Plant: Vehicles			-	-	-	-	-	-	-	-	-
A, G, D		Other Professional	C.40.02	Plant: Vehicles			-	-	-	-	-	-	-	-	-
A, G, D		Repairs Maint Services	C.40.02	Plant: Vehicles	2,000		2,000	305	19	974	552	-	-	-	149
A, G, D		Construction Services	C.40.02	Plant: Vehicles			-	-	-	-	-	-	-	-	-
A, G, D		Permit Fees	C.40.02	Plant: Vehicles			-	-	-	-	-	-	-	-	-
A, G, D		Supplies	C.40.02	Plant: Vehicles	500		500	76	5	243	138	-	-	-	37
A, G, D		Vehicle and Machinery Parts	C.40.02	Plant: Vehicles	15,000		15,000	2,289	146	7,304	4,141	-	-	-	1,120
A, G, D		Gasoline	C.40.02	Plant: Vehicles			-	-	-	-	-	-	-	-	-
A, G, D		Diesel Fuel	C.40.02	Plant: Vehicles			-	-	-	-	-	-	-	-	-
A, G, D		General Contractor	C.40.02	Plant: Vehicles			-	-	-	-	-	-	-	-	-
A, G, D		Miscellaneous Expenses	C.40.02	Plant: Vehicles			-	-	-	-	-	-	-	-	-
		Subtotal - Operations			17,500	-	17,500	2,670	171	8,522	4,831	-	-	-	1,306
		Total - Vehicle and Equipment R & M			**$ 64,393**	**$ (1,303)**	**$ 63,090**	**$ 9,627**	**$ 615**	**$ 30,722**	**$ 17,416**	**$ -**	**$ -**	**$ -**	**$ 4,709**
		FACILITIES MAINTENANCE													
		Personnel													
G	L	Salaries and Wages	C.24.02	Other Facilities R&M	39,282		39,282	-	39,282	-	-	-	-	-	-
G	L	Temp Employees	C.24.02	Other Facilities R&M	-		-	-	-	-	-	-	-	-	-
G	L	Overtime	C.24.02	Other Facilities R&M	532		532	-	532	-	-	-	-	-	-
G	L	Health Insurance	C.24.02	Other Facilities R&M	12,533		12,533	-	12,533	-	-	-	-	-	-
G	L	FICA/MEDI	C.24.02	Other Facilities R&M	3,046		3,046	-	3,046	-	-	-	-	-	-
G	L	PERS	C.24.02	Other Facilities R&M	10,875	(1,894)	8,981	-	8,981	-	-	-	-	-	-
G	L	AK ESC	C.24.02	Other Facilities R&M	166		166	-	166	-	-	-	-	-	-
G	L	Workers Comp	C.24.02	Other Facilities R&M	1,619		1,619	-	1,619	-	-	-	-	-	-
G	L	Other Emp Benefits	C.24.02	Other Facilities R&M	233		233	-	233	-	-	-	-	-	-
		Subtotal - Personnel			68,286	(1,894)	66,392	-	66,392	-	-	-	-	-	-
		Operations													
G		Sampling, Testing, Monitoring	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Other Professional	C.02.01	CP	5,000		5,000	-	5,000	-	-	-	-	-	
G		Repairs / Maintenance	C.02.01	CP	33,000		33,000	-	33,000	-	-	-	-	-	-
G		Construction Services	C.02.01	CP	5,000		5,000	-	5,000	-	-	-	-	-	-
G		Permit Fees	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
G		Supplies	C.02.01	CP	11,000		11,000	-	11,000	-	-	-	-	-	-
G		Safety	C.02.01	CP	10,000		10,000	-	10,000	-	-	-	-	-	
G		Facilitiy Supplies	C.02.01	CP	13,000		13,000	-	13,000	-	-	-	-	-	-
G		Service Contracts	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
		Subtotal - Operations			77,000	-	77,000	-	77,000	-	-	-	-	-	-
		Total - Facilities Maintenance			**$ 145,286**	**$ (1,894)**	**$ 143,392**	**$ -**	**$ 143,392**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		SUBTOTAL			**$ 17,513,256**	**$ (7,905,949)**	**$ 9,607,307**	**$ 1,159,863**	**$ 6,033,195**	**$ 1,266,384**	**$ 1,044,257**	**$ 1,647**	**$ 25,000**	**$ -**	**$ 76,961**

Func	Labor		Classification	Description	FY 2021 Adopted Budget	Adjustment	Revenue Requirement		Demand		Customer		Other		
								Energy	CP	NCP	Meters	Meter Cost	Direct 1	Direct 2	Direct 3
		OTHER REVENUES (EXPENSES)													
		Desired Margin	C.50.03	Total Plant		(300,000)	(300,000)	(34,470)	(212,896)	(31,501)	(16,612)	(35)	-	-	(4,487)
		Other Services	C.01.01	Energy	8,100		8,100	8,100	-	-	-	-	-	-	-
		Late Payment Fees	C.01.01	Energy	19,176		19,176	19,176	-	-	-	-	-	-	-
		Interest Income	C.99.99	Not Used			-	-	-	-	-	-	-	-	-
		PERS Nonemployer Contributions	C.99.99	Not Used	93,473	(93,473)	-	-	-	-	-	-	-	-	-
		LGS PFT	C.01.01	Energy	12,785		12,785	12,785	-	-	-	-	-	-	-
		Ind PFT	C.01.01	Energy	30,918		30,918	30,918	-	-	-	-	-	-	-
		Federal Interest Subsidy	C.02.01	CP	73,505	-	73,505	-	73,505	-	-	-	-	-	-
		Subtotal - Other			$ 237,957	$ (393,473)	$ (155,516)	$ 36,509	$ (139,391)	$ (31,501)	$ (16,612)	$ (35)	$ -	$ -	$ (4,487)
		TOTAL NET REVENUE REQUIREMENTS			**$ 17,275,299**	**$ (7,512,476)**	**$ 9,762,823**	**$ 1,123,354**	**$ 6,172,586**	**$ 1,297,884**	**$ 1,060,868**	**$ 1,682**	**$ 25,000**	**$ -**	**$ 81,448**

Appendix A-3

Classification of Plant

Item	Description	Depr Life	Classification	Description	Gross Plant				Demand		Customer		Other		
					Beg of Yr 6/30/2020	Add'ns	Revised	Energy	CP	NCP	Meters	Meter Cost	Direct 1	Direct 2	Direct 3
LAND															
	TOTALS LAND 31-161.00				212,598	-	212,598	-	147,225	65,373	-	-	-	-	-
BLDG															
86ELECTB01	POWERHOUSE IMPRVMTS 79-86	14.25	C.02.01	CP	1,189,469		1,189,469	-	1,189,469	-	-	-	-	-	-
89ELECTB01	POWERHOUSE	33.33	C.02.01	CP	33,289		33,289	-	33,289	-	-	-	-	-	-
98ELECTB01	POWERHOUSE RENOV. PHASE I	20.00	C.02.01	CP	82,484		82,484	-	82,484	-	-	-	-	-	-
98ELECTB02	POWERHOUSE COOLING PHASE I	20.00	C.02.01	CP	532,831		532,831	-	532,831	-	-	-	-	-	-
98ELECTB03	STACK EXTENSIONS	30.00	C.02.01	CP	399,087		399,087	-	399,087	-	-	-	-	-	-
99ELECTB01	POWERHOUSE COOLING PHASE II	20.00	C.02.01	CP	49,534		49,534	-	49,534	-	-	-	-	-	-
99ELECTB01	POWERHOUSE RENOV. PHASE II ROOFING	15.00	C.02.01	CP	84,796		84,796	-	84,796	-	-	-	-	-	-
01ELECTB01	New Powerhouse	40.00	C.02.01	CP	34,526,260		34,526,260	-	34,526,260	-	-	-	-	-	-
	TOTALS BLDG 31-162.00				36,897,751	-	36,897,751	-	36,897,751	-	-	-	-	-	-
IOTB															
86ELECTI01	CAPITALIZE CONSTRUCTION	20.00	C.50.01	Plant: Other IOTB	51,895		51,895	7,919	506	25,271	14,325	-	-	-	3,874
86ELECTI02	DISTRIBUTION LINE	20.00	C.04.03	50% NCP / 50% Meters	2,348,176		2,348,176	-	-	1,174,088	1,174,088	-	-	-	-
86ELECTI07	CAPITALIZE DISTRIBUTION	20.00	C.04.03	50% NCP / 50% Meters	229,875		229,875	-	-	114,938	114,938	-	-	-	-
88ELECTI01	CAPITALIZE LINE DISTRIBTUION	20.00	C.04.03	50% NCP / 50% Meters	68,129		68,129	-	-	34,065	34,065	-	-	-	-
88ELECTI02	CAPITALIZE DISTRIBUTION	20.00	C.04.03	50% NCP / 50% Meters	92,205		92,205	-	-	46,103	46,103	-	-	-	-
89ELECTI02	TRANSFORMERS	20.00	C.04.03	50% NCP / 50% Meters	30,716		30,716	-	-	15,358	15,358	-	-	-	-
89ELECTI03	TRANSFORMERS	20.00	C.04.03	50% NCP / 50% Meters	6,719		6,719	-	-	3,360	3,360	-	-	-	-
90ELECTI01	CAPITALIZE DISTRIBUTION	20.00	C.04.03	50% NCP / 50% Meters	214,089		214,089	-	-	107,045	107,045	-	-	-	-
90ELECTI02	SWITCH GEAR	20.00	C.03.01	NCP	20,834		20,834	-	-	20,834	-	-	-	-	-
91ELECTI01	CAPITALIZE DISTRIBUTION	20.00	C.04.03	50% NCP / 50% Meters	288,348		288,348	-	-	144,174	144,174	-	-	-	-
92ELECTI01	PRIMARY LINE	20.00	C.04.03	50% NCP / 50% Meters	142,932		142,932	-	-	71,466	71,466	-	-	-	-
93ELECTI01	PRIMARY LINE	20.00	C.04.03	50% NCP / 50% Meters	185,033		185,033	-	-	92,517	92,517	-	-	-	-
95ELECTI02	TOWN SUBSTATION	20.00	C.03.01	NCP	994,008		994,008	-	-	994,008	-	-	-	-	-
96ELECTI01	DOWNTOWN LOOP	20.00	C.04.03	50% NCP / 50% Meters	239,549		239,549	-	-	119,774	119,774	-	-	-	-
96ELECTI02	HUD HOUSING UPGRADE	20.00	C.04.03	50% NCP / 50% Meters	16,096		16,096	-	-	8,048	8,048	-	-	-	-
96ELECTI03	SPIT DOCK UPGRADE	20.00	C.04.03	50% NCP / 50% Meters	41,706		41,706	-	-	20,853	20,853	-	-	-	-
96ELECTI04	CHERNOFSKI DRIVE UPGRADE	20.00	C.04.03	50% NCP / 50% Meters	16,535		16,535	-	-	8,268	8,268	-	-	-	-
97ELECTI01	EAGLE VIEW UPGRADE	20.00	C.04.03	50% NCP / 50% Meters	36,621		36,621	-	-	18,310	18,310	-	-	-	-
98ELECTI01	SUMMER BAY RD PRIMARY LINE	20.00	C.03.01	NCP	155,000		155,000	-	-	155,000	-	-	-	-	-
99ELECTI01	UNDRWATER CABLE CROSSING	20.00	C.02.01	CP	136,345		136,345	-	136,345	-	-	-	-	-	-
00ELECTI02	LOOP/PTARMIGAN ROAD	20.00	C.04.03	50% NCP / 50% Meters	71,456		71,456	-	-	35,728	35,728	-	-	-	-
01ELECTI01	BALLYHOO SWITCH	20.00	C.03.01	NCP	40,850		40,850	-	-	40,850	-	-	-	-	-
01ELECTI02	TOWN SUBSTATION SWITCH	20.00	C.03.01	NCP	39,128		39,128	-	-	39,128	-	-	-	-	-
01ELECTIO3	HAYSTACK DRIVE UPGRADE	20.00	C.04.03	50% NCP / 50% Meters	79,278		79,278	-	-	39,639	39,639	-	-	-	-
01ELECTI04	STANDARD OIL HILL UPGRADE	20.00	C.04.03	50% NCP / 50% Meters	257,471		257,471	-	-	128,736	128,736	-	-	-	-
03ELECTI01	SWITCH CITY DOCK	20.00	C.03.01	NCP	31,037		31,037	-	-	31,037	-	-	-	-	-
03ELECTI02	E. BROADWAY/STEWARD RD SWITCH	20.00	C.03.01	NCP	13,030		13,030	-	-	13,030	-	-	-	-	-
05ELECTI01	NIRVANA POWER UPGRADES	20.00	C.04.03	50% NCP / 50% Meters	85,336		85,336	-	-	42,668	42,668	-	-	-	-
05ELECTI02	UNISEA TIE-IN UPGRADE	20.00	C.10.03	Direct 3: Industrial	365,934		365,934	-	-	-	-	-	-	-	365,934
05ELECTI03	APL ELECTRICAL SERVICE	20.00	C.03.01	NCP	106,511		106,511	-	-	106,511	-	-	-	-	-
06ELECTI01	DELTA WESTERN TIE IN	20.00	C.10.03	Direct 3: Industrial	61,369		61,369	-	-	-	-	-	-	-	61,369
07ELECTI01	CSX SWITCH	20.00	C.03.01	NCP	23,696		23,696	-	-	23,696	-	-	-	-	-
07ELECTI02	CAPTAINS BAY SWITCH	20.00	C.03.01	NCP	22,666		22,666	-	-	22,666	-	-	-	-	-
08ELECTI02	BIORKA/DELTA WAY SWITCH	20.00	C.03.01	NCP	17,393		17,393	-	-	17,393	-	-	-	-	-
08ELECTI03	TWON SUBSTATION RELAY IMPROVEMENTS	20.00	C.03.01	NCP	43,382		43,382	-	-	43,382	-	-	-	-	-
08ELECTI04	HARBOR CROWN ELECTRIC UPGRADE	20.00	C.04.03	50% NCP / 50% Meters	28,582		28,582	-	-	14,291	14,291	-	-	-	-
	SOUTH CHANNEL BRIDGE BETTERMENTS	20.00	C.04.03	50% NCP / 50% Meters	683,150		683,150	-	-	341,575	341,575	-	-	-	-
	POWERHOUSE COOLING PIPE CLEANOUT	10.00	C.04.03	50% NCP / 50% Meters	139,880		139,880	-	-	69,940	69,940	-	-	-	-
	LSA ELECTRIC EXTENSION	20.00	C.04.03	50% NCP / 50% Meters	2,505,530		2,505,530	-	-	1,252,765	1,252,765	-	-	-	-
	BALLYHOO RD DRAINAGE AND ELEC	20.00	C.04.03	50% NCP / 50% Meters	990,000		990,000	-	-	495,000	495,000	-	-	-	-
	WESTWARD SEAFOOD TIE	20.00	C.10.03	Direct 3: Industrial	123,630		123,630	-	-	-	-	-	-	-	123,630
	AIRPORT EXPANSION	20.00	C.04.03	50% NCP / 50% Meters	43,583		43,583	-	-	21,791	21,791	-	-	-	-
16ELECT104	APL ELECTRICAL UPGRADE	20.00	C.04.03	50% NCP / 50% Meters	265,789		265,789	-	-	132,895	132,895	-	-	-	-
	WASTE HEAT RECOVERY	20.00	C.01.01	Energy	2,517,095		2,517,095	2,517,095	-	-	-	-	-	-	-
	PRIMARY LINE RELOCATE	20.00	C.03.01	NCP	120,719		120,719	-	-	120,719	-	-	-	-	-
16ELECT104	STACK SILENCER INSULATION REPLACEMENT	20.00	C.02.01	CP	24,460		24,460	-	24,460	-	-	-	-	-	-
17ELECT101	ALYESKA ELECTRICAL TIE-IN	20.00	C.10.03	Direct 3: Industrial	680,340		680,340	-	-	-	-	-	-	-	680,340
17ELECT102	ELECTRICAL BACKFLOW PREVENTER INSTALL	20.00	C.03.01	NCP	36,335		36,335	-	-	36,335	-	-	-	-	-
18ELECT101	CAPTAINS BAY ELECTRICAL UPGRADE	20.00	C.03.01	NCP	1,814,475		1,814,475	-	-	1,814,475	-	-	-	-	-
	FLOOR REPAIR OLD POWERHOUSE	20.00	C.50.01	Plant: Other IOTB	-		-	-	-	-	-	-	-	-	-
	TOTALS IOTB 31-163.00				16,546,915	-	16,546,915	2,525,014	161,311	8,057,727	4,567,717	-	-	-	1,235,146

Item	Description	Depr Life	Classification	Description	Gross Plant				Demand		Customer		Other		
					Beg of Yr 6/30/2020	Add'ns	Revised	Energy	CP	NCP	Meters	Meter Cost	Direct 1	Direct 2	Direct 3
M & E															
89ELECTI04	GEN/SET #7 3512 24Z01469 / 6PA02429	14.25	C.02.01	CP	75,604		75,604	-	75,604	-	-	-	-	-	-
89ELECTI05	GEN/SET #7 3512 24Z01469 / 6PA02429	14.25	C.02.01	CP	50,000		50,000	-	50,000	-	-	-	-	-	-
90ELECTI03	GEN/SET #8 3516 73Z00272 / 96420	14.25	C.02.01	CP	241,903		241,903	-	241,903	-	-	-	-	-	-
93ELECTM02	ALPHA LAVA CENTRIFUGE	5.00	C.02.01	CP	18,265		18,265	-	18,265	-	-	-	-	-	-
93ELECTM04	1986 F800 BUCKET TRUCK	5.00	C.50.01	Plant: Other IOTB	40,856		40,856	6,235	398	19,895	11,278	-	-	-	3,050
96ELECTM02	1996 D3C III CRAWLER TRACTOR	10.00	C.50.01	Plant: Other IOTB	73,356		73,356	11,194	715	35,722	20,250	-	-	-	5,476
96ELECTM03	750KVA PAD MOUNT TRNSFRMR	10.00	C.02.01	CP	11,135		11,135	-	11,135	-	-	-	-	-	-
96ELECTM04	1996 FORD F350 4X4 TRUCK	5.00	C.50.01	Plant: Other IOTB	-		-	-	-	-	-	-	-	-	-
96ELECTM06	1996 FORD F250 4X4 TRUCK	5.00	C.50.01	Plant: Other IOTB	-		-	-	-	-	-	-	-	-	-
96GFDPWM05	1997 FORD F150 4X4 SPR CAB-Transf from DPW	5.00	C.50.01	Plant: Other IOTB	-		-	-	-	-	-	-	-	-	-
96ELECTM07	1995 TRAIL KING UTILITY TRLR TK18U	10.00	C.50.01	Plant: Other IOTB	9,382		9,382	1,432	91	4,569	2,590	-	-	-	700
96ELECTM08	TRANSFORMER/NEW TOWN SUBSTAT	10.00	C.02.01	CP	67,209		67,209	-	67,209	-	-	-	-	-	-
97ELECTM03	97 AUTOCAR VOLVO BOOM TRK #E6	10.00	C.50.01	Plant: Other IOTB	152,915		152,915	23,334	1,491	74,464	42,212	-	-	-	11,414
97ELECTM04	GEN/SET #9 3512B 2S19157/SFN01033	10.00	C.02.01	CP	184,200		184,200	-	184,200	-	-	-	-	-	-
98ELECTM01	S.C.A.D.A. PHASE I POWERHOUSE	15.00	C.02.01	CP	172,358		172,358	-	172,358	-	-	-	-	-	-
98ELECTM02	TRENCH SHORING EQUIP	10.00	C.50.01	Plant: Other IOTB	28,709		28,709	4,381	280	13,980	7,925	-	-	-	2,143
99ELECTM01	S.C.A.D.A. PHASE II SWITCH CONTROLS	15.00	C.02.01	CP	24,805		24,805	-	24,805	-	-	-	-	-	-
01ELECTM01	BUCKET TRUCK	10.00	C.50.01	Plant: Other IOTB	74,534		74,534	11,374	727	36,295	20,575	-	-	-	5,564
02ELECTM01	2001 FORD F250 4X4 TRUCK	5.00	C.50.01	Plant: Other IOTB	28,742	(28,742)	-	-	-	-	-	-	-	-	-
03ELECTM01	GENERATOR #9 COOLING	10.00	C.02.01	CP	23,904		23,904	-	23,904	-	-	-	-	-	-
04ELECTM01	CASE 590 BACKHOE	10.00	C.50.01	Plant: Other IOTB	92,347		92,347	14,092	900	44,969	25,492	-	-	-	6,893
04ELECTM03	2004 FORD F250 3/4 TON w/ SVC BOX	5.00	C.50.01	Plant: Other IOTB	-	-	-	-	-	-	-	-	-	-	-
05ELECTM01	ABB TRANSFORMER, HD15382-002	20.00	C.02.01	CP	129,245	-	129,245	-	129,245	-	-	-	-	-	-
07ELECTM03	3 PHSE TRANSFORMER 15-32130	20.00	C.02.01	CP	19,700	-	19,700	-	19,700	-	-	-	-	-	-
07ELECTM04	3 PHSE TRANSFORMER 15-21230	20.00	C.02.01	CP	19,983	-	19,983	-	19,983	-	-	-	-	-	-
08ELECTM01	E5629 ONE TON LINE CREW TRUCK	10.00	C.50.01	Plant: Other IOTB	70,366	-	70,366	10,738	686	34,266	19,424	-	-	-	5,252
09GFDPSM01	FORD EXPEDITION 4X4 UPD9546	10.00	C.50.01	Plant: Other IOTB	39,039		39,039	5,957	381	19,010	10,777	-	-	-	2,914
09ELECTM01	S-9 Transformer S/N 5361324907	20.00	C.02.01	CP	38,514	-	38,514	-	38,514	-	-	-	-	-	-
11ELECTM01	FORKLIFT	10.00	C.50.01	Plant: Other IOTB	32,569		32,569	4,970	318	15,860	8,991	-	-	-	2,431
11ELECTM02	Margsret's Bay 15 KV Switch Gear	20.00	C.03.01	NCP	29,000		29,000	-	-	29,000	-	-	-	-	-
11ELECTM03	Margsret's Bay 15 KV Switch Gear	20.00	C.03.01	NCP	22,400		22,400	-	-	22,400	-	-	-	-	-
11ELECTM04	Henry Swanson Dr. 35KVA Switch Gear	20.00	C.03.01	NCP	21,000		21,000	-	-	21,000	-	-	-	-	-
	APL 4-216 35KV Switch Gear	20.00	C.03.01	NCP	26,000		26,000	-	-	26,000	-	-	-	-	-
	Ballyhoo NPF 300 KVA Transformer	20.00	C.03.01	NCP	30,072		30,072	-	-	30,072	-	-	-	-	-
	kloosterboer Constr. 300KVA Transformer	20.00	C.03.01	NCP	30,072		30,072	-	-	30,072	-	-	-	-	-
	Salmon Way M3-T2 75KVA Transformer	20.00	C.03.01	NCP	10,556		10,556	-	-	10,556	-	-	-	-	-
	Ballyhoo Rd. 300KVA Transformer	20.00	C.03.01	NCP	35,700		35,700	-	-	35,700	-	-	-	-	-
	East Point 500KVA Transformer	20.00	C.03.01	NCP	18,400		18,400	-	-	18,400	-	-	-	-	-
	Ballyhoo 150KVA Transformer	20.00	C.03.01	NCP	18,850		18,850	-	-	18,850	-	-	-	-	-
	Ziggy's 150KVA Transformer	20.00	C.03.01	NCP	13,650		13,650	-	-	13,650	-	-	-	-	-
	WARTSILLA #1 GENERATOR	25.00	C.02.04	75% CP/25% Egy	4,041,182		4,041,182	1,010,295	3,030,886	-	-	-	-	-	-
	WARTSILLA #2 GENERATOR	25.00	C.02.04	75% CP/25% Egy	4,041,182		4,041,182	1,010,295	3,030,886	-	-	-	-	-	-
	POWERHOUSE THIRD ENGINE	20.00	C.02.04	75% CP/25% Egy	8,945,981		8,945,981	2,236,495	6,709,486	-	-	-	-	-	-
	COMPLIANCE MANAGEMENT SOFTWARE	7.00	C.01.01	Energy	14,511		14,511	14,511	-	-	-	-	-	-	-
15ELECTM01	FY14 OVERHAUL ENGINE REPAIR/MAINT		C.02.04	75% CP/25% Egy	273,558		273,558	68,390	205,169	-	-	-	-	-	-
15ELECTM02	POWERHOUSE 4TH ENGINE		C.02.04	75% CP/25% Egy	8,062,790		8,062,790	2,015,697	6,047,092	-	-	-	-	-	-
16ELECTM01	150 KVA TRANSFORMER		C.03.01	NCP	10,216		10,216	-	-	10,216	-	-	-	-	-
16ELECTM02	WARTSILA GEN #1 OVERHAUL S/N PAAE0210		C.02.04	75% CP/25% Egy	576,772		576,772	144,193	432,579	-	-	-	-	-	-
16ELECTM03	WARTSILA GEN #2 OVERHAUL S/N PAAE0210		C.02.04	75% CP/25% Egy	512,204		512,204	128,051	384,153	-	-	-	-	-	-
16ELECTM04	UTILITY VAULT-HORIZON LINES UPGRADE		C.03.01	NCP	12,791		12,791	-	-	12,791	-	-	-	-	-
16ELECTM05	300 KVA TRANSFORMER		C.03.01	NCP	14,950		14,950	-	-	14,950	-	-	-	-	-
16ELECTM06	300 KVA TRANSFORMER		C.03.01	NCP	14,950		14,950	-	-	14,950	-	-	-	-	-
16ELECTM07	500 KVA TRANSFORMER & SATELLITE SYNCH		C.03.01	NCP	17,405		17,405	-	-	17,405	-	-	-	-	-
16ELECTM08	300 KVA TRANSFORMER		C.03.01	NCP	18,115		18,115	-	-	18,115	-	-	-	-	-
16ELECTM09	300 KVA TRANSFORMER		C.03.01	NCP	16,263		16,263	-	-	16,263	-	-	-	-	-
16ELECTM10	VIPER PADMOUNT RECLOSURE		C.03.01	NCP	49,055		49,055	-	-	49,055	-	-	-	-	-
16ELECTM11	CONCRETE UTILITY VAULT		C.03.01	NCP	10,237		10,237	-	-	10,237	-	-	-	-	-
16ELECTM12	CONCRETE UTILITY VAULT		C.03.01	NCP	10,237		10,237	-	-	10,237	-	-	-	-	-
16ELECTM13	CONCRETE UTILITY VAULT		C.03.01	NCP	10,237		10,237	-	-	10,237	-	-	-	-	-
16ELECTM14	500 KVA TRANSFORMER & SATELLITE SYNCH		C.03.01	NCP	17,400		17,400	-	-	17,400	-	-	-	-	-
16ELECTM15	500 KVA TRANSFORMER & SATELLITE SYNCH		C.03.01	NCP	19,776		19,776	-	-	19,776	-	-	-	-	-
16ELECTM16	300 KVA TRANSFORMER		C.03.01	NCP	13,170		13,170	-	-	13,170	-	-	-	-	-
16ELECTM17	POWERHOUSE CONTROL SYSTEM UPGRADE		C.02.01	CP	558,100		558,100	-	558,100	-	-	-	-	-	-
17ELECTM01	E8466 FORD F150 CREW CAB 4X4 W/TOPPER		C.50.01	Plant: Other IOTB	44,632		44,632	6,811	435	21,734	12,320	-	-	-	3,332
17ELECTM02	E9076 FORD F250 CREW CAB 4X4 W/TOPPER		C.50.01	Plant: Other IOTB	33,034		33,034	5,041	322	16,086	9,119	-	-	-	2,466
17ELECTM03	75 KVA PAD MOUNT TRANSFOMER 3-PHASE		C.03.01	NCP	12,125		12,125	-	-	12,125	-	-	-	-	-
18ELECTM01	E3653 FOR F250 EXT CAB 4X4 W/SERV BOX		C.50.01	Plant: Other IOTB	47,608		47,608	7,265	464	23,183	13,142	-	-	-	3,554
18ELECTM02	WARTSILA GEN #1 TOP END OVERHAUL S/N P		C.02.04	75% CP/25% Egy	215,902		215,902	53,976	161,927	-	-	-	-	-	-

Item	Description	Depr Life	Classification	Description	Gross Plant: Beg of Yr 6/30/2020	Gross Plant: Add'ns	Gross Plant: Revised	Energy	Demand: CP	Demand: NCP	Customer: Meters	Customer: Meter Cost	Other: Direct 1	Other: Direct 2	Other: Direct 3
18ELECTM03	WARTSILA GEN #2 TOP END OVERHAUL S/N P		C.02.04	75% CP/25% Egy	215,902		215,902	53,976	161,927	-	-	-	-	-	-
18ELECTM04	CAT ENGINE #13 TOP END OVERHAUL		C.02.04	75% CP/25% Egy	318,367		318,367	79,592	238,775	-	-	-	-	-	-
18ELECTM05	38 KVA PAD MOUNTED SWITCH		C.03.01	NCP	35,000		35,000	-	-	35,000	-	-	-	-	-
18ELECTM06	VIPER 38KV RECLOSURE		C.03.01	NCP	34,775		34,775	-	-	34,775	-	-	-	-	-
19ELECTM01	DPU 7380 FOR EXPLORER (25%) DPU DIRECTOR		C.50.01	Plant: Other IOTB	8,140		8,140	1,242	79	3,964	2,247	-	-	-	608
19ELECTM02	E4126 FORD F250 EXTENDED CAB 8' FLATBED		C.50.01	Plant: Other IOTB	39,884		39,884	6,086	389	19,422	11,010	-	-	-	2,977
19ELECTM03	PROBEWELL PORTABLE METER TESTER		C.05.02	Meter Cost	10,095		10,095	-	-	-	-	10,095	-	-	-
20ELECTM01	OLD POWERHOUSE BATTERY REPLACEMENT		C.02.01	CP	-	705,100	705,100	-	705,100	-	-	-	-	-	-
20ELECTM02	WARTSILA UNIT 10 MAJOR OVERHAUL		C.02.04	75% CP/25% Egy	-	878,169	878,169	219,542	658,627	-	-	-	-	-	-
20ELECTM03	WARTSILA UNIT 11 MAJOR OVERHAUL		C.02.04	75% CP/25% Egy	-	902,026	902,026	225,507	676,520	-	-	-	-	-	-
20ELECTM04	VALLEY GENSET UNIT 7 IN FRAME OVERHAUL		C.02.04	75% CP/25% Egy	-	140,554	140,554	35,138	105,415	-	-	-	-	-	-
20ELECTM05	RADIODETECTION RD8100 LOCATOR		C.04.03	50% NCP / 50% Meters	-	11,096	11,096	-	-	5,548	5,548	-	-	-	-
	TOTALS M&E 31-164.00				30,251,887	2,608,205	32,860,092	7,415,809	24,191,144	961,372	222,899	10,095	-	-	58,773
					83,909,151	2,608,205	86,517,356	9,940,823	61,397,431	9,084,472	4,790,616	10,095	-	-	1,293,919

City of Unalaska

Water Utility

Cost of Service / Rate Design Study

April 21, 2021

Aldrich SM

Introduction

Background and Purpose of Study

In February 2009, a review of the City of Unalaska's (the "City") Water Utility rates was completed and presented to the City Council. The analysis was based on the actual number of customers and sales volumes during the fiscal year ending June 30, 2008 and focused on two issues. First, were the rates in effect at that time sufficient to provide adequate revenues for the whole system. Second, a cost of service analysis was performed to determine whether each rate class was paying close to its fair share of costs.

The study found that:

1) Rates for the metered class were less than cost of service
2) Rates for the unmetered class were higher than cost of service
3) An overall revenue shortfall was projected at current rates

Based on these findings, rates were increased.

In early 2016, a high-level review of the City's Water Utility rates was completed and presented to the City Council. This analysis showed that although the Water Utility's rates were not high enough to cover its full revenue requirement, they were adequate to provide net positive cash flow and set aside some amounts towards future capital expenditures.

Since the time of the last study, the Water Utility has experienced an overall decrease in un-metered customers (residential) and an increase in the number of metered commercial accounts but a decrease in consumption volume. This has led to a decrease in revenue which, combined with increases in expenses, has resulted in a net deficit in the water fund over the past few years. The 2021 fiscal year budget indicates that this trend is expected to continue. Accordingly, City staff felt it was prudent to review rates of the Water Utility to ensure that it can meet operating expense requirements and capital improvement obligations in the near term while maintaining the utility's financial health. This report summarizes the analysis performed by Aldrich Advisors and the findings with respect to a cost of service study and review of rates for the City's Water Utility.

Methodology of Analysis

In setting rates for the Water Utility, the City must ensure that 1) rates will recover adequate revenues to maintain the utility's fiscal health and 2) the rates are set in an equitable manner that does not favor one class over another. The American Water Works Association ("AWWA") has developed two manuals to provide a common framework from which to develop rates that recover cost from customer classes in proportion to the cost of serving those classes. These manuals, the M1 Manual, *Principles of Water Rates, Fees, and Charges*, and the M54 Manual, *Developing Rates for Small Systems*, are now used throughout the industry when performing rate studies for water and wastewater systems. The M1 Manual is used to allocate costs to specific rates classes while the M54 Manual is used to evaluate the overall adequacy of a system's rates with the use of the "across-the-board" adjustments.

The analysis conducted and summarized in this report uses the procedures developed and prescribed in the M1 Manual. The overall methodology of allocating costs to the various rate classes is described in the Process section of the report while the details of the analysis are provided in the Analysis and Adequacy of Rates / Rate Design sections.

The Process

General

The overall objective of a cost of service study is to allocate the utility's cost to each customer class in a fair and equitable manner. Once the costs are allocated to each class, rates are set to recover the allocated costs such that the "cost causer" is also the "cost payer".

The process of allocating cost and designing rates includes four basic steps:

1) Billing Determinants / Allocator Development: Estimating customer usage, peak demands, and number of customers,
2) Revenue Requirement Analysis: Projecting the utility's revenue requirements,
3) Cost of Service Analysis: Allocating the revenue requirements to each rate group, and
4) Rate Design: Designing rates that will recover the revenue requirement while balancing the results of the cost of service study, customer sensitivities, and utility objectives.

This section provides a general overview of each of these steps and a summary is provided in Figure 1 on page 5.

Billing Determinants / Allocator Development

Several cost components of a water utility depend on total usage or peak usage of the system. The number of customers and usage must first be projected prior to projecting the revenue requirements. The data used in projecting water usage is also used to develop allocation factors (described below). Thus, billing determinants and allocation factors are developed simultaneously.

Billing determinants include the number of customers for each customer class and volume of water consumed for each class. Billing determinants are typically based on a utility's billings incurred during the most recent fiscal year, or another recent 12-month period. However, historical trends are also reviewed, and any anticipated system expansions are also considered.

Allocation factors are based on class data which may or may not be readily available. For instance, total water usage for a metered class is readily available but total water usage for an unmetered class must be estimated. Daily peak demands and hourly peak demands must usually be estimated for all classes using sample research performed by the utility or other sources.

Revenue Requirements

Revenue requirements are also based on a utility's most recent 12-month financial results. The historical expenses are reviewed and "normalized" to account for abnormal amounts that occurred during the historical period and known changes that will occur in the future. Total revenue requirements for the utility should include not only normalized expenses but also net operating margins and offsets for other revenues. Net operating margins may be required to satisfy lender covenants or simply to address risks associated with actual sales and expenses differing from projections. Additionally, the utility may wish to build equity in anticipation of large capital additions that will be funded in the near future.

Cost of Service

Once the revenue requirements are projected, these costs must be allocated to each rate class. Customers are separated into rate classes, with each class having different usage characteristics. Since the cost of providing service varies for each class, the utility's costs are allocated among all classes using methods that are designed to be fair and equitable and to not favor one class over another.

The M1 Manual recommends two separate methods to be used in the cost of service process: the Base-Extra Capacity Method and the Commodity Demand Method. Both methods recognize that the cost of serving customers depends on the total volume of water used as well as the rate of use (peaking requirements). The Base-Extra Capacity Method recognizes that there are certain costs associated with meeting base (average) demands and other cost associated with meeting peak demands (excess capacity). The Commodity Demand

method takes a more general approach by distinguishing between variable-, fixed-, and customer-related cost. Both methods, if performed properly, will yield similar results, and both approaches are used in this analysis.

Whichever method is used, the M1 Manual prescribes the use of a multi-step process that includes *Functionalization, Classification,* and *Allocation*.

Functionalization

Part of the functionalization process is performed based on whether revenue requirements are production-, transmission-, or distribution-related. Much of this functionalization is accomplished through a utility's normal accounting and budgeting process utilizing the Uniform System of Accounts (USOA). The USOA was designed to segregate costs by function.

Classification

Once the revenue requirements are functionalized, they are then classified. For the Base-Extra Capacity Method, classifications include Base Costs, Extra Capacity Costs, and Customer Costs[1]. For the Commodity Demand method, classifications include Commodity (variable) Costs, Demand (Fixed) Costs, and Customer Costs.

Allocation

The final step in the cost of service analysis is to allocate the classified revenue requirements to each customer (or rate) class based on each class' respective contribution to the classifications.

Developing the allocation factors used for expenses classified as customer-related is fairly straightforward as they are based on the number of customers in each rate class or some derivative thereof. Developing the allocation factors for average use and commodity-related expenses is also relatively simple, although estimates of water usage for non-metered customers must be developed. Demand-related factors are more complex as they are based on peak flows of each customer class and this data is not measured on a customer-specific basis. Estimates developed herein are based on a review of peak flows of the entire system, monthly volumes for each class and individual customers, and industry data. Supporting studies used in sizing the system are also used in support of developing these demand-related allocation factors.

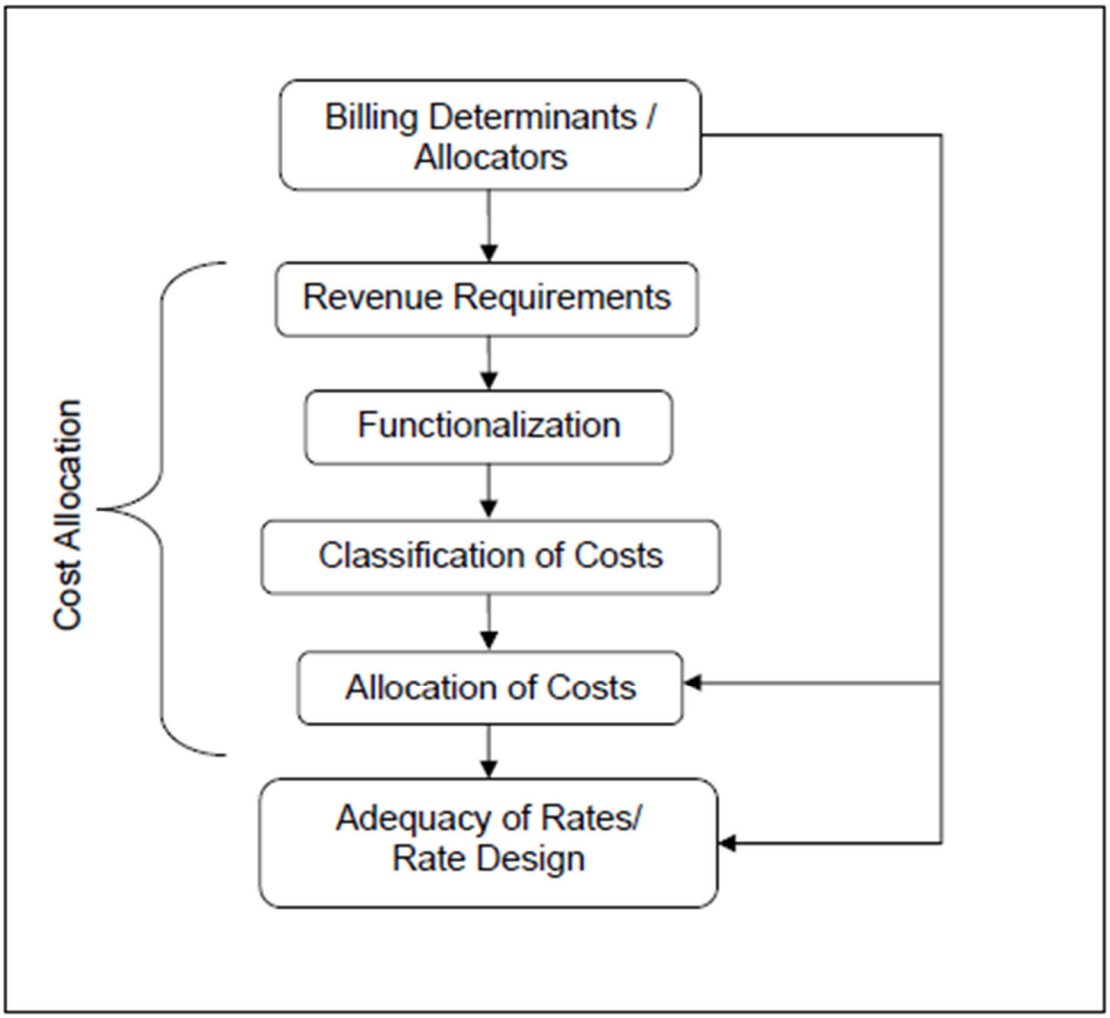
Rate Design

After the revenue requirements have been allocated to each class, the existing rates are applied to the billing determinants to determine if the rates recover less than or more than the allocated cost of service. Rates are then adjusted accordingly.

The overall process just described is summarized in Figure 1 on the following page. The next section discusses the specific analysis conducted for the City.

[1] Revenue requirements can also be classified as direct-fire related. Since the City does not impose direct assessments for fire-related services, the direct-fire classification is not used.

Figure 1
The Process



Analysis

Billing Determinants and Allocators

The Water Utility's billing determinants for the past four fiscal years are summarized in Table 1 below and provided in more detail in Appendix A. The number of customers has shown a slight increase, but sales decreased by almost 7 percent in the past four years. The maximum daily demand decreased by around 13.5 percent.

Table 1
Historical Billing Determinants

	Fiscal Year Ending June 30,			
	2017	2018	2019	2020
Number of Customers (Annual Average)				
Unmetered				
Residential	357	350	338	335
Multi-Family	5	5	5	5
Subtotal - Unmetered	362	355	343	340
Metered	270	278	281	296
Total	632	633	624	637
Volume (000 Gallons)				
Metered	1,048,269	965,216	1,003,470	975,416
Unmetered*	26,816	26,257	25,399	25,218
Hydrants	2,000	1,077	2,361	3,058
Water Truck	2,000	1,431	1,218	2,486
Subtotal	1,079,085	993,981	1,032,448	1,006,178
Unaccounted for Volume	205,062	160,645	133,999	147,121
Production (000 Gallons)	1,284,147	1,154,626	1,166,447	1,153,299
Maximum Daily Production Gallons (000 Gallons)	7,611	6,696	6,248	6,574
Losses (Pct Production)	16.0%	13.9%	11.5%	12.8%

* Unmetered use is based on 200 gallons per day per customer account

As described in the prior section, costs will be allocated to the various customer classes based on the number of customers or customer equivalents, total volume, and peak demand.[2] Customer and customer equivalents can be derived directly from the billing determinants in Appendix A. However, since one class of customers, Schedule A – Single Family or Duplex Water Service, is not metered, estimates must be made regarding that class' annual volume.

The City uses an estimate of 200 gallons per day for unmetered usage. The United States Environmental Protection Agency's website says the average American family uses more than 300 gallons of water per day at home and about 70 percent of this occurs indoors.

A 2016 study conducted by the Water Research Foundation reveals that the average usage for residential accounts is in the 120 to 480 gallon/day range, with an average of about 240 gallons/day. The upper range including residential customers with significant outside uses of water.

The City's estimate of 200 gallons per day per residential unit appears to be reasonable. As a further check, total system losses were calculated based on this assumed use, and the resulting loss factors appear within reason.

[2] Customer equivalents are calculated on the ratio of meter size to a base meter size of 5/8 inch. For example, one customer with a 1-inch meter would be equal to 1.60 customer equivalents (1 / 5/8).

Accordingly, 200 gallons per day for residential accounts and 400 gallons per day for duplex accounts are used in this analysis.

Peak daily and peak hourly flows used in allocating costs to each customer class are derived from a review of individual billing data for metered customers, peak flow data collected by the City for the system, and data from other utilities. Details of these allocation factors are presented in Appendix E of this report.

Revenue Requirements

The Water Utility's expenses for the past three years and the budget for the current fiscal year are summarized in Table 2, below. Details for fiscal year ending June 30, 2020 and the current year budget are provided in Appendix B.

Total expenses decreased about two percent from FY 2018 to FY 2019 but increased about 12 percent from FY 2019 to FY 2020. Budget expenses for FY 2021 are almost 12 percent higher than the previous year. Much of the increase is attributed to increased labor and benefits expense, general supplies expense, and professional services, which can be controlled to some extent by the City. Other expenses that cannot be as readily controlled, such as insurance, electricity and others, do not appear to be adding large increase to the overall revenue requirements. Increases in labor and benefits expense alone accounts for almost 94 percent of the total increase from FY 2019 to FY 2020 and for almost 48 percent of the total increase in budget expenses for FY 2021 from FY 2020 actuals.

Costs that vary with production levels form only a small part of the expense structure with most costs being considered fixed. Accordingly, the budget for FY 2021 forms the basis for the Test Year revenue requirement.

Table 2
Annual Operating Expenses

	Fiscal Year Ending June 30,			
	2018	2019	2020	2021
	Actual	Actual	Actual	Budget
Administrative				
Labor/Benefits	$ 364,483	$ 345,292	$ 355,573	$ 443,032
Administrative Operations	129,357	153,127	145,913	188,473
Depreciation	1,117,481	1,126,256	1,124,222	1,124,222
Administrative Overhead	21,335	23,484	22,200	22,212
Interest/Bad Debt	33,556	68,161	48,826	46,401
Subtotal	1,666,212	1,716,320	1,696,734	1,824,340
Water Operations				
Labor/Benefits	651,497	621,566	888,144	1,010,007
Operations	486,490	406,800	463,550	604,810
Vehicle				
Labor/Benefits	11,959	11,364	19,774	27,350
Operations	1,671	14,876	5,278	12,500
Facilities				
Labor/Benefits	33,510	26,523	61,494	22,085
Operations	25,663	31,810	34,010	38,550
Total	2,877,002	2,829,259	3,168,984	3,539,642
Target Margin				100,000
Capital Expenditures				45,000
Less Other Income	(29,720)	(13,868)	(56,612)	(1,102,127)
Net Revenue Requirement	$ 2,847,282	$ 2,815,391	$ 3,112,372	2,582,515
Millions Gallons Produced	1,155	1,166	1,153	
Cost ($/000 Gallon)	$ 2.47	$ 2.41	$ 2.70	

In addition to meeting its expected expenses, the utility should typically set rates that result in positive net margins. Margins serve three purposes for municipal utilities:

1. Debt covenants may require certain levels of net operating margins.
2. A net margin helps provide some security in maintaining a utility's financial health in the event sales or expenses differ significantly from that assumed.
3. The equity built up with net margins can be used to fund capital expenditures and therefore minimize debt.

A target net margin is typically based on a utility's rate base, which is equal to the net plant in service plus an amount for working capital and other miscellaneous items. Other factors are also considered including future cash flows after debt service, capital expenditures, and debt covenants. Based on the Water Utility's net plant in service, a minimal return on rate base of 4 percent yields a target margin of almost $750,000, which is considered excessive. The Water Utility's FY 2021 budget included a $100,000 transfer out for capital projects. This has been treated as the target margin, which is much more realistic.

Table 3 provides a summary of the adjusted Test Year revenue requirements used in performing the cost of service analysis. Details of these revenue requirements are provided in Appendix B. Three adjustments were made to the budgeted revenue requirements:

1. PERS Nonemployer Contributions were removed from Other Income and used to reduce labor/benefits expenses. Benefits expenses include both employer and employee PERS contributions, but the employee portions are not Utility expenses. Since the PERS Nonemployer Contributions represent the amount of employee contributions that are budgeted to be collected by the Utility, these amounts have been reclassified to reduce the related expense lines.
2. Budgeted capital expenditures of $45,000 were removed. Capital expenditures are not included in the revenue requirements. Instead, these investments are recovered over time through depreciation expense.
3. Budgeted Use of Unrestricted Net Assets of $993,058 was removed from Other Income. These are non-recurring revenues that are transferred to the Utility from the General Fund to help cover revenue shortfalls.

Table 3
Revenue Requirement Summary

	Fiscal Year Ending June 30,		
	2021 Budget	Adjustments	Adjusted Rev Requirements
Administrative			
Labor/Benefits	$ 443,032	$ (10,866)	$ 432,166
Administrative Operations	188,473		188,473
Depreciation	1,124,222		1,124,222
Administrative Overhead	22,212		22,212
Interest/Bad Debt	46,401		46,401
Subtotal	1,824,340	(10,866)	1,813,474
Water Operations			
Labor/Benefits	1,010,007	(23,664)	986,343
Operations	604,810		604,810
Vehicle			
Labor/Benefits	27,350	(679)	26,671
Operations	12,500		12,500
Facilities			
Labor/Benefits	22,085	(536)	21,549
Operations	38,550		38,550
Total	3,539,642	(35,745)	3,503,897
Target Margin	100,000		100,000
Capital Expenditures	45,000	(45,000)	-
Less Other Income	(1,102,127)	1,028,803	(73,324)
Net Revenue Requirement	$ 2,582,515	$ 948,058	$ 3,530,573

Cost Allocation

Functionalization

Revenue requirements are functionalized through the City's account coding process.

Classification (Appendix C and D)

The functionalized revenue requirements were then classified pursuant to the guidelines established in the M1 manual. Specifically, for the Base-Extra Capacity Method, revenue requirements were classified as Base related, Extra Capacity related, and Customer related. For the Commodity Demand Method, revenue requirements were classified as Commodity related, Demand related, and Customer related.

Allocation (Appendix C and D)

The classified revenue requirements were then allocated based on each customer class' respective share of the classification. Allocation factors for commodity related revenue requirements are based on each class' sales volume and allocation factors for customer related revenue requirements are based on customer equivalents. Allocation factors for demand related revenue requirements are based on estimates of each class' respective maximum day demand and maximum hour demand. These estimates were developed through reviews of previous studies for the City and industry data.

Based on the process described above, the revenue requirements were allocated to each customer class, and the allocation process is summarized in Table 4, on the next page. Additional details of the allocation, and the steps leading to it, are provided in Appendix C and D.

Table 4
Allocation of Revenue Requirements

	Total	Unmetered	Metered
Base Extra Capacity Method			
Base	$ 2,000,243	$ 50,411	$ 1,949,832
Extra Capacity	1,313,980	26,330	1,287,650
Customers	368	198	170
Piping	211,954	55,106	156,848
Direct	4,027	4,027	-
Total	$ 3,530,573	$ 136,072	$ 3,394,501
Commodity - Demand Method			
Commodity	$ 1,075,838	$ 27,113	$ 1,048,725
Demand	2,238,385	49,074	2,189,311
Customers	368	198	170
Piping	211,954	55,106	156,848
Direct	4,027	4,027	-
Total	$ 3,530,573	$ 135,519	$ 3,395,054

Adequacy of Rates / Rate Design

Existing Rate Structure

The Water Department's current rate structure is shown in Table 5, which has been in effect since 2015.

Table 5
Existing Rates

Rate Class	Customer Charge ($/month)	Volume ($/thousand gallons)
Unmetered	35.59	-
Metered:		
5/8" Service	3.53	2.51
3/4" Service	3.74	2.51
1" Service	4.15	2.51
1 1/2" Service	5.21	2.51
2" Service	6.47	2.51
3" Service	9.40	2.51
4" Service	13.18	2.51
6" Service	24.08	2.51
8" Service	36.67	2.51
10" Service	63.43	2.51
12" Service	100.12	2.51

Projected Revenues – Existing Rates

Table 6 provides a summary of the revenues projected to be collected based on the assumed billing determinants and existing rates. The projections summarized in the table indicate that existing rates must be increased an average of 34.9 percent to recover all revenue requirements. On a class basis, the unmetered class has rates set above its allocated cost of service, and the metered class has rates set less than its cost of service.

Table 6
Test Year Net Revenues – Existing Rates

	Total	Unmetered	Metered
Revenues			
Customer Charge	$ 168,390	$ 147,521	$ 20,870
Volume Charge	2,448,295	-	2,448,295
Total	$ 2,616,686	$ 147,521	$ 2,469,165
Base Extra Capacity Method			
Revenue Requirements	$ 3,530,573	$ 136,072	$ 3,394,501
Surplus (Deficiency)	$ (913,887)	$ 11,448	$ (925,336)
Percent	-34.9%	7.8%	-37.5%
Commodity - Demand Method			
Revenue Requirements	$ 3,530,573	$ 135,519	$ 3,395,054
Surplus (Deficiency)	$ (913,887)	$ 12,002	$ (925,889)
Percent	-34.9%	8.1%	-37.5%

Table 7 compares the revenue requirements developed in this study with those developed in the most recent cost of service study and Table 8 compares the customer counts and production data used in these studies. These tables provide some insight into the need for such a significant rate increase to recover all revenue requirements. Table 7 shows that the net revenue requirement increased between the prior study and this study by over $1 million and 40 percent. The largest increases were in the following categories: labor and benefits expense (almost $420,000), depreciation expense (over $225,000), water operations expense (almost $225,000), and an increase in target margin ($100,000). While the revenue requirements have increased over 40 percent, Table 8 shows that customer counts have increased only about two percent while water consumption has decreased by over nine percent. Without a significant increase in customers or water consumption, the Utility must raise rates to cover increases in costs or operate at a deficit.

Table 7
Historical Revenue Requirement Comparison

	Fiscal Year Ending June 30,			
	2016 Adj Rev Requirements	2020 Adj Rev Requirements	Dollar Change	Percentage Change
Administrative				
Labor/Benefits	$ 351,019	$ 432,166	$ 81,147	23.1%
Administrative Operations	148,734	188,473	39,739	26.7%
Depreciation	897,846	1,124,222	226,376	25.2%
Administrative Overhead	20,517	22,212	1,695	8.3%
Interest/Bad Debt	-	46,401	46,401	100.0%
Subtotal	1,418,116	1,813,474	395,358	27.9%
Water Operations				
Labor/Benefits	658,828	986,343	327,515	49.7%
Operations	381,445	604,810	223,365	58.6%
Vehicle				
Labor/Benefits	22,090	26,671	4,581	20.7%
Operations	10,000	12,500	2,500	25.0%
Facilities				
Labor/Benefits	15,396	21,549	6,153	40.0%
Operations	6,500	38,550	32,050	493.1%
Total	2,512,375	3,503,897	991,522	39.5%
Target Margin	-	100,000	100,000	100.0%
Less Other Income	(22,967)	(73,324)	(50,357)	219.3%
Net Revenue Requirement	$ 2,489,408	$ 3,530,573	$ 1,041,165	41.8%

Table 8
Historical Customer Count and Production Comparison

	Fiscal Year Ending June 30,			
	2016	2020	Change	Percent Change
Number of Customers (Annual Average)				
Unmetered				
Residential	360	335	(25)	-6.9%
Multi-Family	4	5	1	15.4%
Subtotal - Unmetered	365	340	(24)	-6.7%
Metered	261	296	35	13.5%
Total	626	637	11	1.8%
Volume (000 Gallons)				
Metered	1,070,535	975,416	(95,119)	-8.9%
Unmetered*	27,018	25,218	(1,800)	-6.7%
Hydrants	11,213	3,058	(8,155)	-72.7%
Water Truck	1,897	2,486	589	31.0%
Subtotal	1,110,663	1,006,178	(104,485)	-9.4%
Unaccounted for Volume	163,909	147,121	(16,788)	-10.2%
Production (000 Gallons)	1,274,572	1,153,299	(121,273)	-9.5%

* Unmetered use is based on 200 gallons per day per customer account

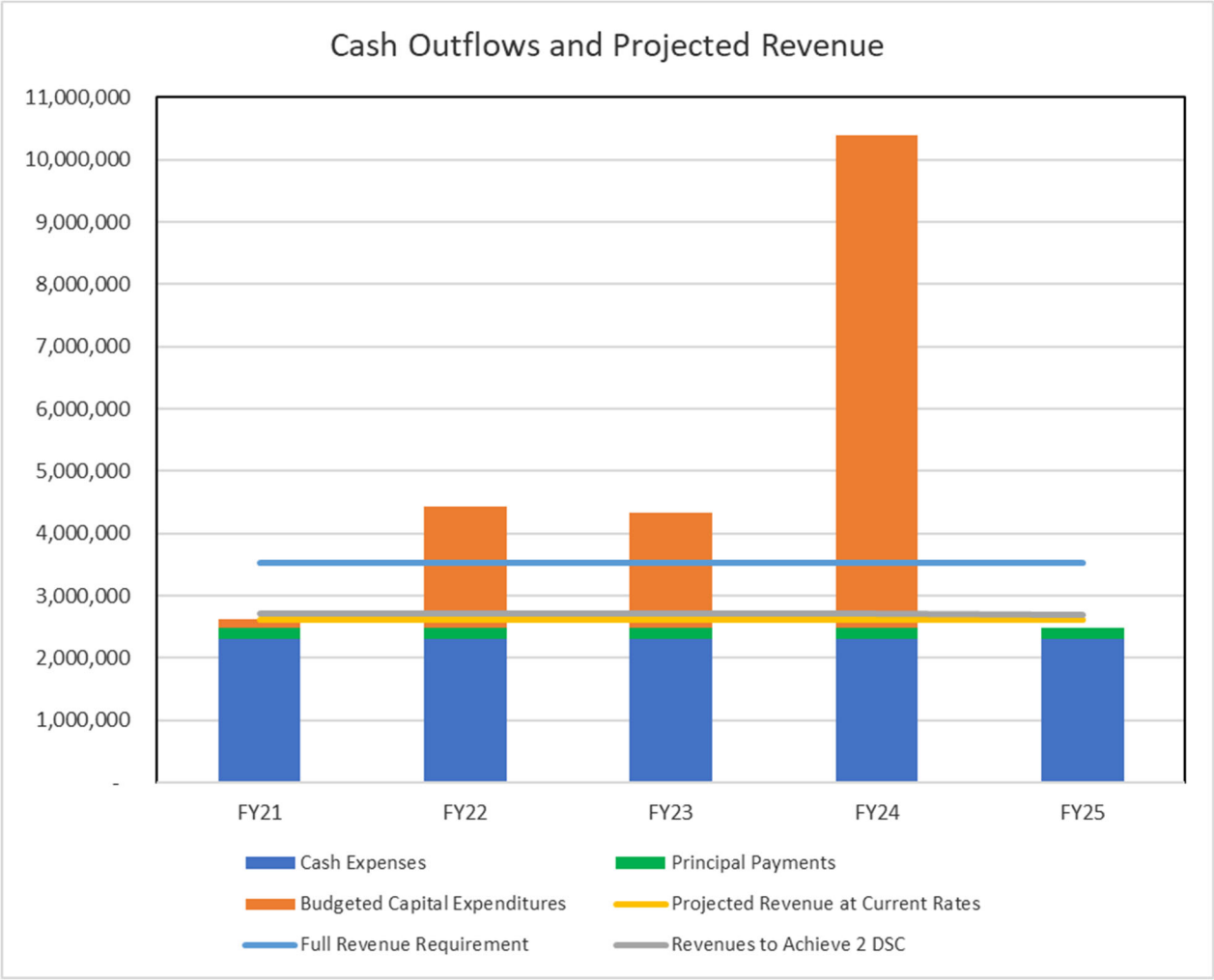
The budget for the fiscal year ending June 30, 2021 shows a budgeted net income of zero but after the adjustments described in the Analysis section above, the deficiency shown in Table 6 is over $900,000. The actual net loss in FY 2020 was almost $500,000. The reason for the difference between the calculated deficiency and the prior year actual results are:

1. The revenue requirements summarized in Table 6 include a target margin of $100,000. No corresponding amount is included in the actual margin.
2. FY 2021 budgeted other income includes a debt reimbursement grant of $45,000. No similar revenue was received in FY 2020.
3. FY 2021 budgeted expenses were approximately $370,000 higher than FY 2020 actual expenses. The primary drivers in this increase were:
    a. Labor/Benefits expense was budgeted approximately $175,000 higher than FY 2020 actual
    b. Administrative Operations expense was budgeted approximately $40,000 higher than FY 2020 actual
    c. Water Operations expense was budgeted approximately $140,000 higher than FY 2020 actual

Expenses in 2021 and thereafter are expected to increase due to inflationary effects on the utility's expense structure and an increase in depreciation as new assets are included in the system. Revenue deficits with the existing rates are, therefore, also expected to increase in the future absent load growth.

Figure 2, on the next page, shows that if sales volume and operating expenses remain at the level projected for FY 2021, with no rate increase, cash generated should be sufficient to cover cash expenses (including interest) and debt principle payments. However, there will be little, if any, cash left to pay for capital expenditures. The annual budgeted capital expenditures for FY 2021 through FY 2025 vary from none to almost $8 million. The graph also shows that if rates are increased and sales equal the revenue requirements, enough cash will be generated to cover some of the budgeted capital expenditures, but not all of them. The remaining amounts will need to be funded through either debt, retained earnings, transfers from the general fund, other revenues sources, or a combination of these.

Figure 2
Cash Outflows and Projected Revenues



Alternate Cash Basis Revenue Requirement

Traditional ratemaking typically calculates revenue requirements on an income basis (as described in the Revenue Requirements section above). This method includes all operating expenses, interest on debt, and depreciation (a non-cash expense) in the revenue requirement. However, another way to look at the revenue requirement concept is on a cash basis. This method includes all operating expenses and interest on debt but rather than including non-cash depreciation expense, it includes principal payments instead. When evaluating the revenue requirement using this method, the debt service coverage ratio (DSC) can be used to define the utility's cash requirements. DSC is equal to the utility's earnings before interest, taxes, and depreciation, divided by its required debt service payments (principle and interest). Table 9 shows that the Water Utility's DSC based on projected revenues from current rates and the budgeted debt service payments for FY 2021 is 1.58. To achieve a DSC of 2.0, rates would need to be increased by 3.6 percent. Figure 2 shows that if sales volume and operating expenses remain at the level projected for FY 2021, with a rate increase to achieve a 2.0 DSC, cash generated should be sufficient to cover cash expenses (including interest) and debt principle payments however there will be little extra cash left to pay for capital expenditures.

Table 9
Alternate Cash Basis Revenue Requirement

	Total	Unmetered	Metered
Revenues			
Customer Charge	$ 168,390	$ 147,521	$ 20,870
Volume Charge	2,448,295	-	2,448,295
Total	$ 2,616,686	$ 147,521	$ 2,469,165
Minimum Required Cash Flow			
Full Revenue Requirement	$ 3,530,573	$ 135,519	$ 3,395,054
Less:			
Depreciation	$ 1,124,222	$ 43,152	$ 1,081,070
Interest Expense	46,401	1,781	44,620
Target Margin	100,000	3,838	96,162
Operating Expenses	$ 2,259,950	$ 86,748	$ 2,173,202
FY 2021 Principal Payments	181,963	6,985	174,978
Interest on Long Term Debt	43,671	1,676	41,995
Minimum Required Cash Flow	$ 2,485,584	95,409	2,390,175
Achieved DSC	1.58		
Cash Basis Revenue Requirement			
Target DSC	2.00		
Target DSC Revenue Requirement	$ 2,711,218	$ 104,068	$ 2,607,151
Surplus (Deficiency)	$ (94,532)	$ 43,453	$ (137,986)
Percent	-3.6%	29.5%	-5.6%

Rate Options

While the analysis summarized above shows that unmetered rates are currently higher than cost of service, it is noted that cost of service studies are somewhat imprecise in nature, especially for water and wastewater services. Consequently, rate adjustments need not be set precisely at cost of service to be fair and equitable. Several rate options are discussed below for the City's consideration and are summarized on Table 10 and each option's effect on rates is summarized on Table 11.

Rate Option 1
Increase rates to meet a 2.0 target DSC, resulting in revenues approximately equal to the cash basis revenue requirement. This could be accomplished by:

Option 1a
Increase rates based on cost of service study results by keeping unmetered rates unchanged and increasing metered rates by 3.8 percent. The results indicate that unmetered rates should decrease however, keeping unmetered rates unchanged is more consistent with the City's goal to encourage customers to move to metered service.

Option 1b
Increase rates across-the-board by 3.6 percent.

Rate Option 2
Adjust rates to meet the full revenue requirement, based on the cost of service study results. Decrease unmetered rates by 8.1 percent and increase metered rates by 37.5 percent, resulting in revenues approximately equal to the full revenue requirement, by class.

Rate Option 3
Implement a one percent sales tax to fund utility infrastructure to help fund capital expenditures. The total estimated revenues from a one percent sales tax would be approximately $2.67 million, based on FY 2021 budget projections for the existing one percent Special Revenue sales tax. This revenue could be split between the City of Unalaska utilities to fund utility infrastructure needs and specific projects at the direction of the City Council.

Combine Rate Option 1 and 3
Options 1 and 3 could be combined with revenues from Option 1 providing cash to fund operating expenses and debt payments and revenues from Option 3 providing cash for capital projects.

Table 10
Rate Options

	Total	Unmetered	Metered Total	Avg Monthly Increase in Bill Unmetered	Avg Monthly Increase in Bill Metered
Revenues at Existing Rates	$ 2,616,686	$ 147,521	$ 2,469,165		
Full Revenue Requirement (Full RR)					
Allocated Costs (Commodity Demand)	$ 3,530,573	$ 135,519	$ 3,395,054		
Surplus (Deficiency)	$ (913,887)	$ 12,002	$ (925,889)		
Required Increase (Decrease)	34.9%	-8.1%	37.5%		
Percent of total	100%	3.84%	96.16%		
Cash Basis Revenue Requirement (Target DSC RR)					
Target DSC Revenue Requirement	$ 2,711,218	$ 104,068	$ 2,607,151		
Surplus (Deficiency)	$ (94,532)	$ 43,453	$ (137,986)		
Required Increase (Decrease)	3.6%	-29.5%	5.6%		
Percent of total	100%	3.84%	96.16%		
Option 1a: 2.0 DSC; No increase to Unmetered					
Proposed Adjustment		0.0%	3.8%		
After Proposed Adjustment:					
Revenues at Proposed Rates	$ 2,710,514	$ 147,521	$ 2,562,993	$ -	$ 26.39
Surplus (Deficiency) - Target DSC RR	(704)	43,453	(44,158)		
Percent of total	100%	5.44%	94.56%		
Option 1b: 2.0 DSC; Across the Board increase					
Proposed Adjustment		3.6%	3.6%		
After Proposed Adjustment:					
Revenues at Proposed Rates	$ 2,711,218	$ 152,850	$ 2,558,368	$ 1.30	$ 25.09
Surplus (Deficiency) - Target DSC RR	-	48,782	(48,783)		
Percent of total	100%	5.64%	94.36%		
Option 2: Full revenue requirement; Based on COSS results					
Proposed Adjustment		-8.1%	37.5%		
After Proposed Adjustment:					
Revenues at Proposed Rates	$ 3,530,573	$ 135,519	$ 3,395,054	$ (2.94)	$ 260.45
Surplus (Deficiency) - Full RR	-	-	-		
Percent of total	100%	3.84%	96.16%		

Table 11
Rate Effects

Rate Class	Customer Charge ($/month)				Volume ($/thousand gallons)			
	Current	Option 1a	Option 1b	Option 2	Current	Option 1a	Option 1b	Option 2
Unmetered	35.59	35.59	36.88	32.69	-	-	-	-
Metered:								
5/8" Service	3.53	3.66	3.66	4.85	2.51	2.61	2.60	3.45
3/4" Service	3.74	3.88	3.88	5.14	2.51	2.61	2.60	3.45
1" Service	4.15	4.31	4.30	5.71	2.51	2.61	2.60	3.45
1 1/2" Service	5.21	5.41	5.40	7.16	2.51	2.61	2.60	3.45
2" Service	6.47	6.72	6.70	8.90	2.51	2.61	2.60	3.45
3" Service	9.40	9.76	9.74	12.92	2.51	2.61	2.60	3.45
4" Service	13.18	13.68	13.66	18.12	2.51	2.61	2.60	3.45
6" Service	24.08	25.00	24.95	33.11	2.51	2.61	2.60	3.45
8" Service	36.67	38.06	37.99	50.42	2.51	2.61	2.60	3.45
10" Service	63.43	65.84	65.72	87.22	2.51	2.61	2.60	3.45
12" Service	100.12	103.92	103.74	137.66	2.51	2.61	2.60	3.45
		Change to Customer Charge				Change to Volume Charge		
		Option 1a	Option 1b	Option 2		Option 1a	Option 1b	Option 2
Unmetered		-	1.29	(2.90)		-	-	-
Metered:								
5/8" Service		0.13	0.13	1.32		0.10	0.09	0.94
3/4" Service		0.14	0.14	1.40		0.10	0.09	0.94
1" Service		0.16	0.15	1.56		0.10	0.09	0.94
1 1/2" Service		0.20	0.19	1.95		0.10	0.09	0.94
2" Service		0.25	0.23	2.43		0.10	0.09	0.94
3" Service		0.36	0.34	3.52		0.10	0.09	0.94
4" Service		0.50	0.48	4.94		0.10	0.09	0.94
6" Service		0.92	0.87	9.03		0.10	0.09	0.94
8" Service		1.39	1.32	13.75		0.10	0.09	0.94
10" Service		2.41	2.29	23.79		0.10	0.09	0.94
12" Service		3.80	3.62	37.54		0.10	0.09	0.94

Recommendations

The findings of the analysis herein are:

1. Although expenses have increased by over 40 percent since the last cost of service study was performed, the number of customers hasn't changed significantly, and the volume of sales has decreased by over nine percent.
2. Due to the decrease in sales to the metered class and the fixed-cost nature of utility operations:
    a. Rates for the metered class are set less than cost of service.
    b. Rates for the unmetered class are set higher than the cost of service.
3. Revenues from metered sales account for 94 percent of total revenues. Revenues from the nine largest customers with the three largest service meters account for 79 percent of total revenues. Since rates for that class are less than cost of service, an overall revenue shortfall is projected.
4. The minimum cash flow required by the utility, prior to capital expenditures, is estimated to be approximately $2.5 million per year and the projected sales revenues are $2.6 million per year.

Based on the outcome of this study, it is recommended that water rates be increased at this time. Although cash flow can be supported at existing rates, both near-term and long-term operations call for a rate increase. Capital improvements necessary to maintain the integrity of the system must be funded. Those that are smaller are probably best funded from cash generated through revenues, and while larger additions might be funded from debt or grants, the City's willingness to set appropriate rates will facilitate the ability to secure external funding.

Appendix A

Historical Billing Determinants

Billing Determinant Summary

Assumed Use per Unmetered (GPD)

Residental	200	
Duplex	200	/unit

	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20
Average Number of Customers						
Metered:						
5/8 inch	12	11	9	7	7	7
3/4 inch	70	87	99	112	114	132
1 inch	56	52	63	63	64	63
1 1/2 inch	23	22	14	10	10	10
2 inch	52	51	52	52	52	52
3 inch	18	18	14	14	14	14
4 inch	12	12	11	11	11	9
6 inch	5	5	5	5	5	5
8 inch	2	2	2	2	2	2
10 inch	2	2	2	2	2	2
12 inch		-	-			
Subtotal	251	261	270	278	281	296
Unmetered:						
Residential	365	360	357	350	338	335
Duplex	4	4	5	5	5	5
Total	620	626	632	633	624	637
Volume (gallons)						
Metered:						
5/8 inch	353,000	211,000	136,587	142,000	139,000	162,000
3/4 inch	4,397,478	7,117,629	9,342,576	7,238,757	6,793,123	7,596,984
1 inch	7,653,000	8,161,710	8,874,384	9,431,573	9,514,852	8,386,766
1 1/2 inch	5,403,000	5,004,869	4,349,726	3,247,000	3,115,308	3,006,692
2 inch	58,343,581	61,751,327	69,788,431	55,710,388	52,390,207	54,323,128
3 inch	74,541,000	69,288,000	45,295,000	63,993,000	56,151,038	45,143,962
4 inch	53,268,000	55,807,000	35,396,105	30,249,000	29,611,100	36,041,910
6 inch	389,835,000	359,028,000	314,281,000	322,328,000	373,381,000	336,041,000
8 inch	120,900,000	169,966,000	184,053,000	166,737,000	191,928,000	177,793,000
10 inch	300,277,000	334,199,000	376,752,000	306,139,000	280,446,000	306,921,000
12 inch						
Subtotal	1,014,971,059	1,070,534,535	1,048,268,809	965,215,718	1,003,469,628	975,416,442
Unmetered:						
Residential	26,614,400	26,383,400	26,086,000	25,526,600	24,669,400	24,486,200
Duplex	596,400	634,400	730,000	730,000	730,000	732,000
Subtotal	27,210,800	27,017,800	26,816,000	26,256,600	25,399,400	25,218,200
Hydrants	1,926,000	11,213,000	2,000,000	1,077,000	2,361,000	3,058,000
Water Truck	1,636,000	1,897,000	2,000,000	1,431,000	1,218,000	2,486,000
Total	1,045,743,859	1,110,662,335	1,079,084,809	993,980,318	1,032,448,028	1,006,178,642
Losses	116,704,141	163,908,665	205,062,191	160,644,682	133,998,972	147,121,358
Requirements	1,162,448,000	1,274,571,000	1,284,147,000	1,154,625,000	1,166,447,000	1,153,300,000
Production						
Surface Water	1,096,862,000	1,095,218,000	1,058,613,000	999,776,000	1,106,044,000	1,014,406,000
Well House 1	8,123,000	56,386,000	64,176,000	20,210,000	25,371,000	62,925,000
Well House 2	57,463,000	122,967,000	161,358,000	134,639,000	35,032,000	75,969,000
Total	1,162,448,000	1,274,571,000	1,284,147,000	1,154,625,000	1,166,447,000	1,153,300,000
Maximum Daily	6,898,000	7,465,000	7,611,000	6,696,000	6,248,000	6,574,000
Minimum Daily	1,043,000	1,020,000	1,109,000	881,000	697,000	695,000

Appendix B

Historical and Projected Revenue Requirements

Historic and Projected Revenue Requirements

	FY 2018 (Actual)	FY 2019 (Actual)	FY 2020 (Actual)	FY 2021 (Budget)	Normalized Budget
Administration					
Labor					
Salaries - Admin	$ 217,464	$ 231,775	$ 218,184	$ 257,931	$ 257,931
Temporary Employees	3,947	1,126	539	2,594	2,594
Overtime - Admin	1,305	385	594	928	928
Benefits and PR Taxes - Admin	141,767	112,006	156,338	181,579	170,713
Subtotal - Labor and Benefits	$ 364,483	$ 345,292	$ 375,655	$ 443,032	$ 432,166
Operations					
Legal Services	$ -	$ -	$ -	$ 1,000	$ 1,000
Engineering/Architectural Svs	2,713	4,611	5,209	1,100	1,100
Training Services	954	350	-	1,000	1,000
Education Reimbursement	-	-	-	2,500	2,500
Other Professional Svs	2,070	9,586	3,649	6,400	6,400
Software/Hardware Support	17,486	22,788	17,615	30,771	30,771
Water/Sewage	962	940	945	547	547
Solid Waste	5,048	1,403	1,585	1,215	1,215
Custodial Services/Supplies	3,487	3,639	3,793	4,509	4,509
Repairs/Maintenance Services	309	460	344	525	525
Building/Land Rental	-	-	-	-	-
General Insurance	31,308	43,036	50,137	73,447	73,447
Telephone / Fax / TV	1,654	2,693	3,540	1,321	1,321
Network/Internet	9,678	9,650	10,126	18,400	18,400
Advertising	-	-	-	332	332
Travel and Related Cost	2,562	735	603	1,500	1,500
Banking/Credit Card Fees	5,703	5,854	5,170	4,087	4,087
Postal Services	3,900	(3,972)	2,815	4,100	4,100
Membership Dues	-	208	214	250	250
Employee Moving Cost	-	-	-	5,000	5,000
General Supplies	855	290	258	660	660
Safety Related Items	-	785	611	-	-
Office Supplies	1,180	1,305	747	1,200	1,200
Computer Hardware/Software	9,891	19,144	15,374	7,576	7,576
Electricity	14,952	16,778	11,921	9,518	9,518
Heating Oil	11,936	10,688	9,455	8,102	8,102
Gasoline for Vehicles	695	674	409	1,963	1,963
Business Meals	-	-	-	200	200
Food/Beverage/Employee Appreciat	1,743	1,211	1,145	1,050	1,050
Books/Periodicals	272	272	247	200	200
Other		-	1	-	-
Subtotal - Administrative Ops	$ 129,358	$ 153,128	$ 145,913	$ 188,473	$ 188,473
Other					
Depreciation	1,117,481	1,126,256	1,124,222	1,124,222	1,124,222
PILOT	-	-	-	-	-
Bad Debt	-	298	6	-	-
Admin OH	21,335	23,484	22,200	22,212	22,212
Interest	33,556	67,863	48,820	46,401	46,401
Subtotal - Administrative Other	$ 1,172,372	$ 1,217,901	$ 1,195,248	$ 1,192,835	$ 1,192,835
Total Administrative	**$ 1,666,213**	**$ 1,716,321**	**$ 1,716,816**	**$ 1,824,340**	$ 1,813,474

Historic and Projected Revenue Requirements

	FY 2018 (Actual)	FY 2019 (Actual)	FY 2020 (Actual)	FY 2021 (Budget)	Normalized Budget
Water Operations					
Labor					
Salaries - Operations	$ 350,974	$ 316,721	$ 471,776	$ 515,566	$ 515,566
Temporary Employees	39,000	30,624	14,296	57,428	57,428
Overtime - Operations	25,392	114,140	68,971	33,603	33,603
Benefits and PR Taxes - Operations	236,131	160,081	129,150	403,410	379,746
Subtotal - Labor and Benefits	$ 651,497	$ 621,566	$ 684,193	$ 1,010,007	$ 986,343
Operations					
Engineering/Architectural Svs	$ -	$ -	$ -	$ 28,000	$ 28,000
Training Services	4,075	19,325	14,596	6,500	6,500
Other Professional Svs	145,007	59,138	70,077	104,700	104,700
Software/Hardware Support	549	5,676	4,565	4,500	4,500
Sampling/Testing	18,109	24,556	3,225	7,960	7,960
Other Technical Services	229	-	-	1,400	1,400
Solid Waste	3,621	3,277	3,649	3,700	3,700
Repairs/Maintenance Services	15,210	39,030	74,652	65,000	65,000
Construction Services	-	-	-	18,000	18,000
Telephone / Fax / TV	4,880	4,508	6,598	5,500	5,500
Network/Internet	46	-	-	500	500
Radio	-	7,731	-	16,900	16,900
Advertising	-	-	-	-	-
Travel and Related Cost	-	1,833	3,187	9,000	9,000
Postal Services	-	-	-	-	-
Membership Dues	1,077	976	1,233	900	900
Permit Fees	300	1,638	400	550	550
Other	-	-	-	-	-
General Supplies	89,739	55,714	76,329	106,100	106,100
Safety Related Items	1,020	7,365	11,347	12,000	12,000
Lab Supplies	8,395	6,988	3,961	11,000	11,000
Sand/Gravel/Rock	5,000	3,000	3,000	3,000	3,000
Chemicals	10,934	17,774	22,812	13,000	13,000
Office Supplies	1,236	506	-	1,200	1,200
Facility Maintenance Supplies	-	-	-	-	-
Computer Hardware/Software	6,930	2,245	7,014	1,500	1,500
Electricity	143,309	123,620	136,011	148,000	148,000
Propane	1,882	2,340	539	2,200	2,200
Heating Oil	17,651	11,903	11,848	24,000	24,000
Gasoline for Vehicles	5,787	5,862	5,723	6,000	6,000
Diesel for Equipment	615	822	1,114	800	800
Food/Beverage/Employee Appreciat	-	135	881	2,000	2,000
Books/Periodicals	888	841	790	900	900
Other	1	(2)	(1)	-	-
Subtotal - Operations Ops	$ 486,490	$ 406,801	$ 463,550	$ 604,810	$ 604,810
Total Water Operations	**$ 1,137,987**	**$ 1,028,367**	**$ 1,147,743**	**$ 1,614,817**	$ 1,591,153
Vehicle and Equipment					
Labor					
Salaries - Operations	$ 7,183	$ 7,284	$ 12,668	$ 15,601	$ 15,601
Overtime - Operations	14	-	-	465	465
Benefits and PR Taxes - Operations	4,762	4,080	8,281	11,284	10,605
Subtotal - Labor and Benefits	$ 11,959	$ 11,364	$ 20,949	$ 27,350	$ 26,671
Operations					
Repairs/Maintenance Services	$ -	$ 112	$ 1,651	$ -	$ -
Construction Services	-	-	-	-	-
General Supplies	-	-	40	-	-
Machinery / Vehicle Parts	1,671	14,764	3,586	12,500	12,500
Other	-	-	-	-	-
Subtotal - Vehicles/Equipment Ops	$ 1,671	$ 14,876	$ 5,277	$ 12,500	$ 12,500
Total Vehicle and Equipment	**$ 13,630**	**$ 26,240**	**$ 26,226**	**$ 39,850**	$ 39,171

Historic and Projected Revenue Requirements

	FY 2018 (Actual)	FY 2019 (Actual)	FY 2020 (Actual)	FY 2021 (Budget)	Normalized Budget
Building R & M					
Labor					
Salaries - Operations	$ 19,407	$ 16,488	$ 19,638	$ 12,747	$ 12,747
Templorary Employees - Operations	533	797	20	-	-
Overtime - Operations	511	252	72	133	133
Benefits and PR Taxes - Operations	13,059	8,986	13,556	9,205	8,669
Subtotal - Labor and Benefits	$ 33,510	$ 26,523	$ 33,286	$ 22,085	$ 21,549
Operations					
Other Professional	$ -	$ 125	$ 11,075	$ -	$ -
Repairs/Maintenance Services	17,884	26,854	8,646	28,550	28,550
Construction Services	-	-	-	1,000	1,000
General Supplies	1,234	290	524	1,500	1,500
Safety Related Items	-	895	22	-	-
Machinery / Vehicle Parts	-	-	-	-	-
Facility Maintenance Supplies	6,535	3,645	13,744	7,500	7,500
Other	-	-	-	-	-
Subtotal - Vehicles/Equipment Ops	$ 25,653	$ 31,809	$ 34,011	$ 38,550	$ 38,550
Total Building R & M	**$ 59,163**	**$ 58,332**	**$ 67,297**	**$ 60,635**	$ 60,099
Total Expenses	$ 2,876,993	$ 2,829,260	$ 2,958,082	$ 3,539,642	$ 3,503,897
Net Margin	(143,235)	200,000	2,947,031	100,000	100,000
Capital Expenditures	2,959	-	-	45,000	-
Less Other Revenues					
Debt Reimbursements Grants	-	-	-	(45,000)	(45,000)
PERS Nonemployer Contributions	(29,720)	(13,868)	(63,753)	(35,745)	-
System Development Chgs	-	-	-	(3,171)	(3,171)
Other Services	(2,942)	(13,881)	(5,563)	(23,513)	(23,513)
Late Fees	(1,436)	(602)	(1,726)	(1,640)	(1,640)
Gain-loss on Sale of Fixed Assets	-	-	(4,300)	-	-
Budgetd Use of Unrestricted Net As	-			(993,058)	-
Total Other Revenues	(34,098)	(28,351)	(75,342)	(1,102,127)	(73,324)
Net Revenue Requirements	**$ 2,702,619**	**$ 3,000,909**	**$ 5,829,771**	**$ 2,582,515**	**$ 3,530,573**

Appendix C

Cost of Service Model
(Base-Extra Capacity Method)

Allocation of Revenue Requirement
Base-Extra Capacity Method

Base-Extra Capacity (BEC) Method

	Allocation	Description	Total	Un-Metered	Metered Large	Metered Other
				3	4	5
Base	A.01.01	Avg Demand/Day	2,000,243	50,411	1,640,668	309,164
Excess Capacity						
Excess Max Day	A.02.01	Excess - Day	1,167,169	23,112	1,046,021	98,037
Excess Max Hr	A.02.02	Excess - Hour	146,811	3,219	127,190	16,403
Customers						
Number	A.05.01	Customers	368	198	5	165
Equivalents	A.05.02	Customer Equivalents	-	-	-	-
Piping	A.03.01	Piping Dist	211,954	55,106	92,203	64,645
Direct 1	A.10.01	Direct Un-Metered	4,027	4,027	-	-
			$ 3,530,573	$ 136,072	$ 2,906,087	$ 488,414
Revenues From Existing Rates						
Customer Charges				$ 147,521	$ 3,847	$ 17,023
Volume Charges				-	2,060,095	388,200
Total			$ 2,616,686	$ 147,521	$ 2,063,942	$ 405,223
Surplus (Deficiency)			$ (913,887)	$ 11,448	$ (842,145)	$ (83,191)
Percent of Revenues from Existing Rates			-34.9%	7.8%	-40.8%	-20.5%

Classification of Revenue Requirement
Base-Extra Capacity Method

Base-Extra Capacity (BEC) Method

						3	4	5	6	7	8	9
			FY 2021 Adopted Budget	Adjustment	Total	Base	Demand (Extra Capacity)		Customers		Piping	Direct 1
							Excess Max Day	Excess Max Hr	Number	Equivalents		
Administration												
Labor												
Salaries - Admin	C.10.07	Other Operating Labor	$ 257,931		$ 257,931	$ 173,392	$ 69,601	$ 14,938	$ -	$ -	$ -	$ -
Temporary Employees	C.10.07	Other Operating Labor	2,594		2,594	1,744	700	150	-	-	-	-
Overtime - Admin	C.10.07	Other Operating Labor	928		928	624	250	54	-	-	-	-
Benefits and PR Taxes - Admin	C.10.07	Other Operating Labor	181,579	(10,866)	170,713	114,761	46,066	9,887	-	-	-	-
Subtotal - Labor and Benefits			$ 443,032	$ (10,866)	$ 432,166	$ 290,521	$ 116,617	$ 25,028	$ -	$ -	$ -	$ -
Operations												
Legal Services	C.01.01	Base	$ 1,000		$ 1,000	$ 1,000	$ -	$ -	$ -	$ -	$ -	$ -
Engineering/Architectural Svs	C.01.01	Base	1,100		1,100	1,100	-	-	-	-	-	-
Training Services	C.01.01	Base	1,000		1,000	1,000	-	-	-	-	-	-
Education Reimbursement	C.01.01	Base	2,500		2,500	2,500	-	-	-	-	-	-
Other Professional Svs	C.01.01	Base	6,400		6,400	6,400	-	-	-	-	-	-
Software/Hardware Support	C.01.01	Base	30,771		30,771	30,771	-	-	-	-	-	-
Water/Sewage	C.01.01	Base	547		547	547	-	-	-	-	-	-
Solid Waste	C.01.01	Base	1,215		1,215	1,215	-	-	-	-	-	-
Custodial Services/Supplies	C.10.03	Buildings	4,509		4,509	1,870	2,609	30	-	-	-	-
Repairs/Maintenance Services	C.10.03	Buildings	525		525	218	304	3	-	-	-	-
Building/Land Rental	C.00.00	-	-		-	-	-	-	-	-	-	-
General Insurance	C.10.02	Net Plant in Service	73,447		73,447	28,070	32,956	1,007	124	-	11,290	-
Telephone / Fax / TV	C.01.01	Base	1,321		1,321	1,321	-	-	-	-	-	-
Network/Internet	C.01.01	Base	18,400		18,400	18,400	-	-	-	-	-	-
Advertising	C.01.01	Base	332		332	332	-	-	-	-	-	-
Travel and Related Cost	C.01.01	Base	1,500		1,500	1,500	-	-	-	-	-	-
Banking/Credit Card Fees	C.05.01	Direct 1	4,087		4,087	-	-	-	-	-	-	4,087
Postal Services	C.01.01	Base	4,100		4,100	4,100	-	-	-	-	-	-
Membership Dues	C.01.01	Base	250		250	250	-	-	-	-	-	-
Employee Moving Cost	C.01.01	Base	5,000		5,000	5,000	-	-	-	-	-	-
General Supplies	C.01.01	Base	660		660	660	-	-	-	-	-	-
Office Supplies	C.01.01	Base	1,200		1,200	1,200	-	-	-	-	-	-
Computer Hardware/Software	C.01.01	Base	7,576		7,576	7,576	-	-	-	-	-	-
Electricity	C.02.02	Base/Max Day/Max Hr	9,518		9,518	3,486	4,850	1,183	-	-	-	-
Heating Oil	C.10.03	Buildings	8,102		8,102	3,360	4,688	54	-	-	-	-
Gasoline for Vehicles	C.10.05	Vehicles/Equip - Non Labor	1,963		1,963	1,963	-	-	-	-	-	-
Business Meals	C.01.01	Base	200		200	200	-	-	-	-	-	-
Food/Beverage/Employee Apprecia	C.01.01	Base	1,050		1,050	1,050	-	-	-	-	-	-
Books/Periodicals	C.01.01	Base	200		200	200	-	-	-	-	-	-
Other	C.00.00	-	-		-	-	-	-	-	-	-	-
Subtotal - Administrative Ops			$ 188,473	$ -	$ 188,473	$ 125,289	$ 45,407	$ 2,276	$ 124	$ -	$ 11,290	$ 4,087
Other												
Depreciation	C.10.10	Depr Expense	1,124,222		1,124,222	429,126	491,162	22,846	-	-	181,089	-
PILOT	C.10.02	Net Plant in Service	-		-	-	-	-	-	-	-	-
Bad Debt	C.00.00	-	-		-	-	-	-	-	-	-	-
Admin OH	C.10.09	Total Exp Before Other Revenues	22,212		22,212	12,704	7,267	942	1	-	1,273	26
Interest	C.10.02	Net Plant in Service	46,401		46,401	17,734	20,820	636	78	-	7,133	-
Subtotal - Administrative Other			$ 1,192,835	$ -	$ 1,192,835	$ 459,563	$ 519,249	$ 24,423	$ 80	$ -	$ 189,494	$ 26
Total Administrative			**$ 1,824,340**	$ (10,866)	$ 1,813,474	$ 875,372	$ 681,273	$ 51,728	$ 204	$ -	$ 200,784	$ 4,113

Classification of Revenue Requirement
Base-Extra Capacity Method

Water Operations																			
Labor																			
Salaries - Operations	C.10.04	Water Ops - Non Labor		$ 515,566		$ 515,566	$ 344,917	$ 139,405	$ 31,243	$ -	$ -	$ -	$ -						
Temporary Employees	C.10.04	Water Ops - Non Labor		57,428		57,428	38,420	15,528	3,480	-	-	-	-						
Overtime - Operations	C.10.04	Water Ops - Non Labor		33,603		33,603	22,481	9,086	2,036	-	-	-	-						
Benefits and PR Taxes - Operations	C.10.04	Water Ops - Non Labor		403,410	(23,664)	379,746	254,053	102,681	23,013	-	-	-	-						
Subtotal - Labor and Benefits				$ 1,010,007	$ (23,664)	$ 986,343	$ 659,871	$ 266,700	$ 59,772	$ -	$ -	$ -	$ -						
Operations																			
Engineering/Architectural Svs	C.02.02	Base/Max Day/Max Hr		$ 28,000		$ 28,000	$ 10,254	$ 14,267	$ 3,479	$ -	$ -	$ -	$ -						
Training Services	C.01.01	Base		6,500		6,500	6,500	-	-	-	-	-	-						
Other Professional Svs	C.02.02	Base/Max Day/Max Hr		104,700		104,700	38,343	53,347	13,009	-	-	-	-						
Software/Hardware Support	C.01.01	Base		4,500		4,500	4,500	-	-	-	-	-	-						
Sampling/Testing	C.01.01	Base		7,960		7,960	7,960	-	-	-	-	-	-						
Other Technical Services	C.01.01	Base		1,400		1,400	1,400	-	-	-	-	-	-						
Solid Waste	C.01.01	Base		3,700		3,700	3,700	-	-	-	-	-	-						
Repairs/Maintenance Services	C.01.01	Base		65,000		65,000	65,000	-	-	-	-	-	-						
Construction Services	C.01.01	Base		18,000		18,000	18,000	-	-	-	-	-	-						
Telephone / Fax / TV	C.01.01	Base		5,500		5,500	5,500	-	-	-	-	-	-						
Network/Internet	C.01.01	Base		500		500	500	-	-	-	-	-	-						
Radio	C.01.01	Base		16,900		16,900	16,900	-	-	-	-	-	-						
Advertising	C.01.01	Base		-		-	-	-	-	-	-	-	-						
Travel and Related Cost	C.01.01	Base		9,000		9,000	9,000	-	-	-	-	-	-						
Postal Services	C.00.00		-	-		-	-	-	-	-	-	-	-						
Membership Dues	C.01.01	Base		900		900	900	-	-	-	-	-	-						
Permit Fees	C.01.01	Base		550		550	550	-	-	-	-	-	-						
Other	C.00.00		-	-		-	-	-	-	-	-	-	-						
General Supplies	C.01.01	Base		106,100		106,100	106,100	-	-	-	-	-	-						
Safety Related Items	C.01.01	Base		12,000		12,000	12,000	-	-	-	-	-	-						
Lab Supplies	C.01.01	Base		11,000		11,000	11,000	-	-	-	-	-	-						
Sand/Gravel/Rock	C.01.01	Base		3,000		3,000	3,000	-	-	-	-	-	-						
Chemicals	C.02.02	Base/Max Day/Max Hr		13,000		13,000	4,761	6,624	1,615	-	-	-	-						
Office Supplies	C.01.01	Base		1,200		1,200	1,200	-	-	-	-	-	-						
Facility Maintenance Supplies	C.00.00		-	-		-	-	-	-	-	-	-	-						
Computer Hardware/Software	C.01.01	Base		1,500		1,500	1,500	-	-	-	-	-	-						
Electricity	C.02.02	Base/Max Day/Max Hr		148,000		148,000	54,201	75,410	18,389	-	-	-	-						
Propane	C.01.01	Base		2,200		2,200	2,200	-	-	-	-	-	-						
Heating Oil	C.10.03	Buildings		24,000		24,000	9,953	13,888	159	-	-	-	-						
Gasoline for Vehicles	C.10.05	Vehicles/Equip - Non Labor		6,000		6,000	6,000	-	-	-	-	-	-						
Diesel for Equipment	C.10.05	Vehicles/Equip - Non Labor		800		800	800	-	-	-	-	-	-						
Food/Beverage/Employee Apprecia	C.01.01	Base		2,000		2,000	2,000	-	-	-	-	-	-						
Books/Periodicals	C.01.01	Base		900		900	900	-	-	-	-	-	-						
Other	C.00.00		-	-		-	-	-	-	-	-	-	-						
Subtotal - Operations Ops				$ 604,810	$ -	$ 604,810	$ 404,622	$ 163,536	$ 36,651	$ -	$ -	$ -	$ -						
Total Water Operations				**$ 1,614,817**	$ (23,664)	$ 1,591,153	$ 1,064,493	$ 430,237	$ 96,423	$ -	$ -	$ -	$ -						
Vehicle and Equipment																			
Labor																			
Salaries - Operations	C.10.05	Vehicles/Equip - Non Labor		$ 15,601		$ 15,601	$ 15,601	$ -	$ -	$ -	$ -	$ -	$ -						
Overtime - Operations	C.10.05	Vehicles/Equip - Non Labor		465		465	465	-	-	-	-	-	-						
Benefits and PR Taxes - Operations	C.10.05	Vehicles/Equip - Non Labor		11,284	(679)	10,605	10,605	-	-	-	-	-	-						
Subtotal - Labor and Benefits				$ 27,350	$ (679)	$ 26,671	$ 26,671	$ -	$ -	$ -	$ -	$ -	$ -						
Operations																			
Repairs/Maintenance Services	C.01.01	Base		$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -						
Construction Services	C.01.01	Base		-		-	-	-	-	-	-	-	-						
General Supplies	C.01.01	Base		-		-	-	-	-	-	-	-	-						
Machinery / Vehicle Parts	C.01.01	Base		12,500		12,500	12,500	-	-	-	-	-	-						
Other	C.01.01	Base		-		-	-	-	-	-	-	-	-						
Subtotal - Vehicles/Equipment Ops				$ 12,500	$ -	$ 12,500	$ 12,500	$ -	$ -	$ -	$ -	$ -	$ -						
Total Vehicle and Equipment				**$ 39,850**	$ (679)	$ 39,171	$ 39,171	$ -	$ -	$ -	$ -	$ -	$ -						

Classification of Revenue Requirement
Base-Extra Capacity Method

Building R & M																
Labor																
Salaries - Operations	C.10.06	Building R&M - Non Labor	$ 12,747		$ 12,747	$ 5,286	$ 7,376	$ 84	$ -	$ -	$ -	$ -	$ -			
Overtime - Operations	C.10.06	Building R&M - Non Labor	133		133	55	77	1	-	-	-	-	-			
Benefits and PR Taxes - Operations	C.10.06	Building R&M - Non Labor	9,205	(536)	8,669	3,595	5,017	57	-	-	-	-	-			
Subtotal - Labor and Benefits			$ 22,085	$ (536)	$ 21,549	$ 8,937	$ 12,470	$ 143	$ -	$ -	$ -	$ -	$ -			
Operations																
Repairs/Maintenance Services	C.10.03	Buildings	$ 28,550		$ 28,550	$ 11,840	$ 16,521	$ 189	$ -	$ -	$ -	$ -	$ -			
Construction Services	C.10.03	Buildings	1,000		1,000	415	579	7	-	-	-	-	-			
General Supplies	C.10.03	Buildings	1,500		1,500	622	868	10	-	-	-	-	-			
Machinery / Vehicle Parts	C.10.03	Buildings	-		-	-	-	-	-	-	-	-	-			
Facility Maintenance Supplies	C.10.03	Buildings	7,500		7,500	3,110	4,340	50	-	-	-	-	-			
Other	C.00.00	-	-		-	-	-	-	-	-	-	-	-			
Subtotal - Vehicles/Equipment Ops			$ 38,550	$ -	$ 38,550	$ 15,987	$ 22,308	$ 255	$ -	$ -	$ -	$ -	$ -			
Total Building R & M			**$ 60,635**	$ (536)	$ 60,099	$ 24,924	$ 34,778	$ 397	$ -	$ -	$ -	$ -	$ -			
Total Expenses			$ 3,539,642	$ (35,745)	$ 3,503,897	$ 2,003,960	$ 1,146,287	$ 148,549	$ 204	$ -	$ 200,784	$ 4,113				
Net Margin	C.10.02	Net Plant in Service	100,000		100,000	38,219	44,870	1,371	169	-	15,372	-				
Capital Expenditures	C.00.00	-	45,000	(45,000)	-	-	-	-	-	-	-	-				
Less Other Revenues																
Debt Reimbursements Grants	C.10.09	Total Exp Before Other Revenues	(45,000)		(45,000)	(25,737)	(14,722)	(1,908)	(3)	-	(2,579)	(53)				
PERS Nonemployer Contributions	C.10.09	Total Exp Before Other Revenues	(35,745)	35,745	-	-	-	-	-	-	-	-				
System Development Chgs	C.10.09	Total Exp Before Other Revenues	(3,171)		(3,171)	(1,814)	(1,037)	(134)	(0)	-	(182)	(4)				
Other Services	C.10.09	Total Exp Before Other Revenues	(23,513)		(23,513)	(13,448)	(7,692)	(997)	(1)	-	(1,347)	(28)				
Late Fees	C.10.09	Total Exp Before Other Revenues	(1,640)		(1,640)	(938)	(537)	(70)	(0)	-	(94)	(2)				
Budgetd Use of Unrestricted Net A:	C.10.09	Total Exp Before Other Revenues	(993,058)	993,058	-	-	-	-	-	-	-	-				
Total Other Revenues			(1,102,127)	1,028,803	(73,324)	(41,936)	(23,988)	(3,109)	(4)	-	(4,202)	(86)				
Net Revenue Requirements			**$ 2,582,515**	**$ 948,058**	**$ 3,530,573**	**$ 2,000,243**	**$ 1,167,169**	**$ 146,811**	**$ 368**	**$ -**	**$ 211,954**	**$ 4,027**				

Classification of Net Plant
Base-Extra Capacity Method

ACCT#	DESCRIPTION	FIXED ASSETS 6/30/2020	END YEAR ACC DEPR	Net Plant	Ref	Type	3 Base	4 Excess Max Day	5 Excess Max Hr	6 Customer	7 Customer Equivalents	8 Piping	9 Direct 1
							Classification BEC						
LAND	LOWER LOOP ROAD	46,500	-	46,500	C.01.01	Base	46,500	-	-	-	-	-	-
	ICY CREEK LAND BLM TRACT 41	7,300	-	7,300	C.01.01	Base	7,300	-	-	-	-	-	-
	EASEMENTS FROM OC LAND EXCNG	71,274	-	71,274	C.01.01	Base	71,274	-	-	-	-	-	-
	TOTALS LAND 5100-16100	125,074	-	125,074			125,074	-	-	-	-	-	-
BLDG	1978 FILTER HOUSE	21,400	21,400	-	C.02.01	Base/Max Day	-	-	-	-	-	-	-
	1989 TREATMENT PLANT	52,000	49,613	2,387	C.02.01	Base/Max Day	998	1,389	-	-	-	-	-
	1991 2 WELL HOUSES	170,700	152,458	18,242	C.06.02	20% Base/40% MD/40% MH	3,648	7,297	7,297	-	-	-	-
	EQUILIBRIUM TANK	643,850	535,908	107,942	C.02.02	Base/Max Day/Max Hr	39,531	54,999	13,412	-	-	-	-
	WELL HOUSE #2 ELECT. UPGRADE	116,972	74,082	42,890	C.06.02	20% Base/40% MD/40% MH	8,578	17,156	17,156	-	-	-	-
	WELL HOUSE #1 ELECT. UPGRADE	204,205	91,892	112,313	C.06.02	20% Base/40% MD/40% MH	22,463	44,925	44,925	-	-	-	-
	UPCH ELECTIC COMP. UPGRADE	103,869	46,308	57,560	C.02.01	Base/Max Day	24,071	33,490	-	-	-	-	-
	ICY LAKE ROOF/SIDING REPLACEMENT	41,616	8,323	33,293	C.02.01	Base/Max Day	13,922	19,370	-	-	-	-	-
	NEW WATER TREATMENT PLANT & LT2 UPGRADE	13,487,968	1,343,980	12,143,988	C.02.01	Base/Max Day	5,078,385	7,065,603	-	-	-	-	-
	TOTALS BLDG 5100-16200	14,842,579	2,323,965	12,518,614			5,191,596	7,244,228	82,790	-	-	-	-
IOTB	1978 WATER IMPROVEMENTS	1,997,596	1,997,596	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1979 WATER IMPROVEMENTS	63,380	63,380	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1980 WATER IMPROVEMENTS	79,266	79,266	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1981 WATER IMPROVEMENTS	167,256	167,256	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1982 WATER IMPROVEMENTS	84,482	84,482	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1983 WATER IMPROVEMENTS	660,357	660,357	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1984 WATER IMPROVEMENTS	120,263	120,263	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1985 WATER IMPROVEMENTS	171,521	171,521	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1986 WATER IMPROVEMENTS	308,693	308,693	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1987 WATER IMPROVEMENTS	502,731	502,731	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1988 WATER IMPROVEMENTS	1,113	1,096	17	C.04.01	Piping Dist	-	-	-	-	-	17	-
	1988/89 WATER IMPROVEMENTS	1,171,866	1,118,083	53,783	C.02.01	Base/Max Day	22,491	31,292	-	-	-	-	-
	1989 WATER IMPROVEMENTS	1,652,073	1,576,250	75,823	C.02.01	Base/Max Day	31,708	44,115	-	-	-	-	-
	1990 PYRAMID	109,726	101,342	8,384	C.02.01	Base/Max Day	3,506	4,878	-	-	-	-	-
	1990 WATER IMPROVEMENTS	80,605	74,446	6,159	C.02.01	Base/Max Day	2,576	3,583	-	-	-	-	-
	1991 PYRAMID	4,358,446	3,892,673	465,773	C.02.01	Base/Max Day	194,777	270,995	-	-	-	-	-
	1992 WATER IMPROVEMENTS	2,100	1,812	288	C.04.01	Piping Dist	-	-	-	-	-	288	-
	1992 PRIMARY LINE	50,951	43,957	6,994	C.04.01	Piping Dist	-	-	-	-	-	6,994	-
	1993 PRIMARY LINE	5,856	4,874	982	C.04.01	Piping Dist	-	-	-	-	-	982	-
	LEAR ROAD	103,127	85,838	17,289	C.02.02	Base/Max Day/Max Hr	6,332	8,809	2,148	-	-	-	-
	THOMPSON/SHAISHNIKOFF	19,176	15,961	3,215	C.04.01	Piping Dist	-	-	-	-	-	3,215	-
	HAYSTACK	20,021	16,664	3,356	C.04.01	Piping Dist	-	-	-	-	-	3,356	-
	BOOSTER PUMP	19,985	19,985	-	C.02.02	Base/Max Day/Max Hr	-	-	-	-	-	-	-
	HAYSTACK PIPELINE	160,001	160,001	-	C.00.00	0	-	-	-	-	-	-	-
	ILIULIUK VALLEY	26,168	26,168	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	WATER STORAGE	2,287,316	2,287,316	-	C.02.01	Base/Max Day	-	-	-	-	-	-	-
	IHS SANITATION	10,389	10,389	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	S.C.A.D.A.	138,971	138,971	-	C.00.00	0	-	-	-	-	-	-	-
	WATER LINE HOOK UP JESSE LEE	65,432	52,345	13,086	C.04.01	Piping Dist	-	-	-	-	-	13,086	-
	ICY CREEK LOWER	1,758,247	1,406,598	351,649	C.02.01	Base/Max Day	147,053	204,596	-	-	-	-	-
	PYRAMID WATER CAPITAL	2,830,156	2,264,125	566,031	C.02.01	Base/Max Day	236,704	329,328	-	-	-	-	-
	STWRD.RD.WOODSTAVE RPLCE	42,162	33,730	8,432	C.04.01	Piping Dist	-	-	-	-	-	8,432	-
	FLOW METER VAULT	20,813	15,957	4,856	C.02.02	Base/Max Day/Max Hr	1,779	2,474	603	-	-	-	-
	KING ST/BAYVIEW WA MAIN	103,500	75,900	27,600	C.04.01	Piping Dist	-	-	-	-	-	27,600	-
	ICY LAKE DAM AND ROAD	1,504,545	1,103,333	401,212	C.01.01	Base	401,212	-	-	-	-	-	-
	CHOATE LANE WA LID	90,435	66,319	24,116	C.04.01	Piping Dist	-	-	-	-	-	24,116	-

Classification of Net Plant
Base-Extra Capacity Method

ACCT#	DESCRIPTION	FIXED ASSETS 6/30/2020	END YEAR ACC DEPR	Net Plant	Classification BEC							
					Ref	Type	Base	Excess Max Day	Excess Max Hr	Customer	Customer Equivalents	Piping	Direct 1
	HAYSTACK LINE UPGRADE	377,942	264,559	113,382	C.04.01	Piping Dist	-	-	-	-	-	113,382	-
	ICY LAKE DAM & ROAD FINAL	208,272	145,790	62,482	C.01.01	Base	62,482	-	-	-	-	-	-
	SHAISHNIKOFF WATER EXTENSION	38,688	24,825	13,863	C.04.01	Piping Dist	-	-	-	-	-	13,863	-
	STEWARD ROAD WATER LOOP	69,212	44,411	24,801	C.04.01	Piping Dist	-	-	-	-	-	24,801	-
	STEWARD ROAD LID	87,403	56,084	31,319	C.04.01	Piping Dist	-	-	-	-	-	31,319	-
	SPRINKLER INSTALLATION	20,257	20,257	-	C.01.01	Base	-	-	-	-	-	-	-
	WELL #2A REPLACEMNT	344,391	218,114	126,277	C.06.02	20% Base/40% MD/40% MH	25,255	50,511	50,511	-	-	-	-
	NEWHALL WATER LID	123,200	73,920	49,280	C.04.01	Piping Dist	-	-	-	-	-	49,280	-
	WATER TANK MAINTENANCE	136,391	102,293	34,098	C.02.01	Base/Max Day	14,259	19,839	-	-	-	-	-
	AIRPORT WATER LINE	82,668	41,334	41,334	C.04.01	Piping Dist	-	-	-	-	-	41,334	-
	NIRVANA WATER LID	464,857	216,933	247,924	C.04.01	Piping Dist	-	-	-	-	-	247,924	-
	GENERAL SCADA INTERFACE & UPDATE FY08/09	46,395	23,197	23,198	C.01.01	Base	23,198	-	-	-	-	-	-
	LEAR ROAD TANK MAINTENANCE	486,690	239,289	247,401	C.02.02	Base/Max Day/Max Hr	90,603	126,057	30,740	-	-	-	-
	SOUTH CHANNEL BRIDGE WATER BETTERMENTS	1,592,330	504,238	1,088,092	C.04.01	Piping Dist	-	-	-	-	-	1,088,092	-
	ICY CREEK DAM IMPROVEMENTS	246,660	117,164	129,496	C.01.01	Base	129,496	-	-	-	-	-	-
	LSA WATER EXTENSION	786,672	216,335	570,337	C.04.01	Piping Dist	-	-	-	-	-	570,337	-
	WATER TRANSMISSION DIST FLUSHING	751,791	194,213	557,579	C.04.01	Piping Dist	-	-	-	-	-	557,579	-
	ICY LAKE POWER	85,134	14,425	70,709	C.01.01	Base	70,709	-	-	-	-	-	-
	CT TANK INTERIOR MAINTENANCE	106,167	26,984	79,183	C.02.02	Base/Max Day/Max Hr	28,999	40,346	9,839	-	-	-	-
	NIRVANA PUMP STATION SCADA	58,901	11,780	47,121	C.01.01	Base	47,121	-	-	-	-	-	-
	WATER BACKFLOW PREVENTER INSTALL & DESIGN	191,203	19,651	171,551	C.04.01	Piping Dist	-	-	-	-	-	171,551	-
	WELL HOUSE 1&2 SCADA UPGRADES	93,990	9,791	84,200	C.06.02	20% Base/40% MD/40% MH	16,840	33,680	33,680	-	-	-	-
	TOTALS IOTB 5100-16300	27,187,940	21,335,266	5,852,674			1,557,099	1,170,504	127,521	-	-	2,997,550	-
M & E	1997 FORD F250 P/U TRK XL # W0446	-	-	-	C.00.00	0	-	-	-	-	-	-	-
	2008 FORD F150 4X4 TRUCK	23,381	23,381	-	C.00.00	0	-	-	-	-	-	-	-
	FUJI LC-2500 SUBSURFACE LEAK DETECTOR	24,400	24,400	-	C.00.00	0	-	-	-	-	-	-	-
	BH11 JCB 4CXB BACKHOE	172,495	70,435	102,059	C.10.01	Land/Bldg/IOTB	37,928	46,431	1,160	-	-	16,540	-
	W2312 2017 FORD F250 EXT CAB 4X4 W/UTILITY BED	47,130	29,064	18,067	C.10.01	Land/Bldg/IOTB	6,714	8,219	205	-	-	2,928	-
	W6000 2017 FORD F250 EXT CAB 4X4 W/SERV BOX	47,286	19,703	27,584	C.10.01	Land/Bldg/IOTB	10,251	12,549	314	-	-	4,470	-
	SPECTROPHOTOMETER DR6000	12,184	5,077	7,107	C.10.01	Land/Bldg/IOTB	2,641	3,233	81	-	-	1,152	-
	W9802 FORD F-350 CREW CAB, 8' FLATBED	48,695	10,551	38,144	C.10.01	Land/Bldg/IOTB	14,175	17,353	434	-	-	6,182	-
	DPU7380 FORD EXPLORER (25%) DPU DIRECTOR	8,140	1,764	6,376	C.10.01	Land/Bldg/IOTB	2,370	2,901	73	-	-	1,033	-
	4x4 250 Extended/SuperCab, Stahl Utility bed w/Boxes	45,000	-	45,000	C.10.01	Land/Bldg/IOTB	16,723	20,472	512	-	-	7,293	-
	TOTALS M&E 5100-16400	428,710	184,373	244,337			90,803	111,159	2,778	-	-	39,598	-
CIP													
	FIBER OPTIC INFRASTRUCTURE DEVELOP	6,140	-	6,140	C.01.01	Base	6,140	-	-	-	-	-	-
	PYRAMID WTP MICRO TURBINES	363,284	-	363,284	C.02.02	Base/Max Day/Max Hr	133,042	185,103	45,139	-	-	-	-
	GENERAL HILL WATER BOOSTER PUMP	8,005	-	8,005	C.02.02	Base/Max Day/Max Hr	2,931	4,079	995	-	-	-	-
	WATER SUPPLY DEVELOP PHASE II	512,759	-	512,759	C.06.01	80% Base/20% Max Day	410,207	102,552	-	-	-	-	-
	PYRAMID WATER STORAGE TANK	93,662	-	93,662	C.02.02	Base/Max Day/Max Hr	34,301	47,723	11,638	-	-	-	-
	AUTOMATIC METER READING SYSTEM	33,384	-	33,384	C.03.01	Customers	-	-	-	33,384	-	-	-
	TOTALS CIP 5110-16500	1,017,234	-	1,017,234			586,622	339,457	57,771	33,384	-	-	-
	GRAND TOTALS WITH CIP	43,601,537	23,843,604	19,757,933			7,551,193	8,865,348	270,859	33,384	-	3,037,148	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	DeprExp	Classification BEC							
			Ref	Type	Base	Excess Max Day	Excess Max Hr	Customer	Customer Equivalents	Piping	Direct 1
LAND	LOWER LOOP ROAD	-	C.01.01	Base	-	-	-	-	-	-	-
	ICY CREEK LAND BLM TRACT 41	-	C.01.01	Base	-	-	-	-	-	-	-
	EASEMENTS FROM OC LAND EXCNG	-	C.01.01	Base	-	-	-	-	-	-	-
	TOTALS LAND 5100-16100	-			-	-	-	-	-	-	-
BLDG	1978 FILTER HOUSE	-	C.02.01	Base/Max Day	-	-	-	-	-	-	-
	1989 TREATMENT PLANT	1,591	C.02.01	Base/Max Day	665	926	-	-	-	-	-
	1991 2 WELL HOUSES	5,212	C.06.02	0% Base/40% MD/40% MI	1,042	2,085	2,085	-	-	-	-
	EQUILIBRIUM TANK	19,626	C.02.02	Base/Max Day/Max Hr	7,187	10,000	2,439	-	-	-	-
	WELL HOUSE #2 ELECT. UPGRADE	7,798	C.06.02	0% Base/40% MD/40% MI	1,560	3,119	3,119	-	-	-	-
	WELL HOUSE #1 ELECT. UPGRADE	10,210	C.06.02	0% Base/40% MD/40% MI	2,042	4,084	4,084	-	-	-	-
	UPCH ELECTIC COMP. UPGRADE	5,193	C.02.01	Base/Max Day	2,172	3,022	-	-	-	-	-
	ICY LAKE ROOF/SIDING REPLACEMENT	2,081	C.02.01	Base/Max Day	870	1,211	-	-	-	-	-
	NEW WATER TREATMENT PLANT & LT2 UPGRADE	337,333	C.02.01	Base/Max Day	141,066	196,267	-	-	-	-	-
	TOTALS BLDG 5100-16200	389,044			156,605	220,713	11,727	-	-	-	-
IOTB	1978 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1979 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1980 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1981 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1982 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1983 WATER IMPROVEMENTS	(0)	C.04.01	Piping Dist	-	-	-	-	-	(0)	-
	1984 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1985 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1986 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1987 WATER IMPROVEMENTS	7,711	C.04.01	Piping Dist	-	-	-	-	-	7,711	-
	1988 WATER IMPROVEMENTS	34	C.04.01	Piping Dist	-	-	-	-	-	34	-
	1988/89 WATER IMPROVEMENTS	35,856	C.02.01	Base/Max Day	14,994	20,861	-	-	-	-	-
	1989 WATER IMPROVEMENTS	50,549	C.02.01	Base/Max Day	21,138	29,410	-	-	-	-	-
	1990 PYRAMID	3,354	C.02.01	Base/Max Day	1,402	1,951	-	-	-	-	-
	1990 WATER IMPROVEMENTS	2,464	C.02.01	Base/Max Day	1,030	1,433	-	-	-	-	-
	1991 PYRAMID	133,078	C.02.01	Base/Max Day	55,651	77,427	-	-	-	-	-
	1992 WATER IMPROVEMENTS	64	C.04.01	Piping Dist	-	-	-	-	-	64	-
	1992 PRIMARY LINE	1,554	C.04.01	Piping Dist	-	-	-	-	-	1,554	-
	1993 PRIMARY LINE	179	C.04.01	Piping Dist	-	-	-	-	-	179	-
	LEAR ROAD	3,143	C.02.02	Base/Max Day/Max Hr	1,151	1,602	391	-	-	-	-
	THOMPSON/SHAISHNIKOFF	585	C.04.01	Piping Dist	-	-	-	-	-	585	-
	HAYSTACK	610	C.04.01	Piping Dist	-	-	-	-	-	610	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	DeprExp	Classification BEC								
			Ref	Type	Base	Excess Max Day	Excess Max Hr	Customer	Customer Equivalents	Piping	Direct 1
	BOOSTER PUMP	-	C.02.02	Base/Max Day/Max Hr	-	-	-	-	-	-	-
	HAYSTACK PIPELINE	-	C.00.00	0	-	-	-	-	-	-	-
	ILIULIUK VALLEY	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	WATER STORAGE	-	C.02.01	Base/Max Day	-	-	-	-	-	-	-
	IHS SANITATION	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	S.C.A.D.A.	-	C.00.00	0	-	-	-	-	-	-	-
	WATER LINE HOOK UP JESSE LEE	2,181	C.04.01	Piping Dist	-	-	-	-	-	2,181	-
	ICY CREEK LOWER	58,608	C.02.01	Base/Max Day	24,509	34,099	-	-	-	-	-
	PYRAMID WATER CAPITAL	94,339	C.02.01	Base/Max Day	39,451	54,888	-	-	-	-	-
	STWRD.RD.WOODSTAVE RPLCE	1,405	C.04.01	Piping Dist	-	-	-	-	-	1,405	-
	FLOW METER VAULT	694	C.02.02	Base/Max Day/Max Hr	254	353	86	-	-	-	-
	KING ST/BAYVIEW WA MAIN	3,450	C.04.01	Piping Dist	-	-	-	-	-	3,450	-
	ICY LAKE DAM AND ROAD	50,152	C.01.01	Base	50,152	-	-	-	-	-	-
	CHOATE LANE WA LID	3,015	C.04.01	Piping Dist	-	-	-	-	-	3,015	-
	HAYSTACK LINE UPGRADE	12,598	C.04.01	Piping Dist	-	-	-	-	-	12,598	-
	ICY LAKE DAM & ROAD FINAL	6,942	C.01.01	Base	6,942	-	-	-	-	-	-
	SHAISHNIKOFF WATER EXTENSION	1,290	C.04.01	Piping Dist	-	-	-	-	-	1,290	-
	STEWARD ROAD WATER LOOP	2,307	C.04.01	Piping Dist	-	-	-	-	-	2,307	-
	STEWARD ROAD LID	2,913	C.04.01	Piping Dist	-	-	-	-	-	2,913	-
	SPRINKLER INSTALLATION	-	C.01.01	Base	-	-	-	-	-	-	-
	WELL #2A REPLACEMNT	11,480	C.06.02	0% Base/40% MD/40% MI	2,296	4,592	4,592	-	-	-	-
	NEWHALL WATER LID	4,107	C.04.01	Piping Dist	-	-	-	-	-	4,107	-
	WATER TANK MAINTENANCE	6,820	C.02.01	Base/Max Day	2,852	3,968	-	-	-	-	-
	AIRPORT WATER LINE	2,756	C.04.01	Piping Dist	-	-	-	-	-	2,756	-
	NIRVANA WATER LID	15,495	C.04.01	Piping Dist	-	-	-	-	-	15,495	-
	GENERAL SCADA INTERFACE & UPDATE FY08/09	2,320	C.01.01	Base	2,320	-	-	-	-	-	-
	LEAR ROAD TANK MAINTENANCE	24,335	C.02.02	Base/Max Day/Max Hr	8,912	12,399	3,024	-	-	-	-
	SOUTH CHANNEL BRIDGE WATER BETTERMENTS	53,078	C.04.01	Piping Dist	-	-	-	-	-	53,078	-
	ICY CREEK DAM IMPROVEMENTS	12,333	C.01.01	Base	12,333	-	-	-	-	-	-
	LSA WATER EXTENSION	26,222	C.04.01	Piping Dist	-	-	-	-	-	26,222	-
	WATER TRANSMISSION DIST FLUSHING	25,060	C.04.01	Piping Dist	-	-	-	-	-	25,060	-
	ICY LAKE POWER	2,838	C.01.01	Base	2,838	-	-	-	-	-	-
	CT TANK INTERIOR MAINTENANCE	5,308	C.02.02	Base/Max Day/Max Hr	1,944	2,705	660	-	-	-	-
	NIRVANA PUMP STATION SCADA	2,945	C.01.01	Base	2,945	-	-	-	-	-	-
	WATER BACKFLOW PREVENTER INSTALL & DESIGN	6,373	C.04.01	Piping Dist	-	-	-	-	-	6,373	-
	WELL HOUSE 1&2 SCADA UPGRADES	4,700	C.06.02	0% Base/40% MD/40% MI	940	1,880	1,880	-	-	-	-
	TOTALS IOTB 5100-16300	685,241			254,054	247,569	10,632	-	-	172,987	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	DeprExp	Classification BEC								
			Ref	Type	Base	Excess Max Day	Excess Max Hr	Customer	Customer Equivalents	Piping	Direct 1
M & E	1997 FORD F250 P/U TRK XL # W0446	-	C.00.00	0	-	-	-	-	-	-	-
	2008 FORD F150 4X4 TRUCK	-	C.00.00	0	-	-	-	-	-	-	-
	FUJI LC-2500 SUBSURFACE LEAK DETECTOR	-	C.00.00	0	-	-	-	-	-	-	-
	BH11 JCB 4CXB BACKHOE	17,249	C.10.01	Land/Bldg/IOTB	6,410	7,847	196	-	-	2,795	-
	W2312 2017 FORD F250 EXT CAB 4X4 W/UTILITY BED	9,426	C.10.01	Land/Bldg/IOTB	3,503	4,288	107	-	-	1,528	-
	W6000 2017 FORD F250 EXT CAB 4X4 W/SERV BOX	9,457	C.10.01	Land/Bldg/IOTB	3,515	4,302	108	-	-	1,533	-
	SPECTROPHOTOMETER DR6000	2,437	C.10.01	Land/Bldg/IOTB	906	1,109	28	-	-	395	-
	W9802 FORD F-350 CREW CAB, 8' FLATBED	9,739	C.10.01	Land/Bldg/IOTB	3,619	4,431	111	-	-	1,578	-
	DPU7380 FORD EXPLORER (25%) DPU DIRECTOR	1,628	C.10.01	Land/Bldg/IOTB	605	741	19	-	-	264	-
	4x4 250 Extended/SuperCab, Stahl Utility bed w/Boxes	9,000	C.10.01	Land/Bldg/IOTB	3,345	4,094	102	-	-	1,459	-
	TOTALS M&E 5100-16400	58,936			21,902	26,813	670	-	-	9,551	-
CIP	FIBER OPTIC INFRASTRUCTURE DEVELOP	-	C.01.01	Base	-	-	-	-	-	-	-
	PYRAMID WTP MICRO TURBINES	-	C.02.02	Base/Max Day/Max Hr	-	-	-	-	-	-	-
	GENERAL HILL WATER BOOSTER PUMP	-	C.02.02	Base/Max Day/Max Hr	-	-	-	-	-	-	-
	WATER SUPPLY DEVELOP PHASE II	-	C.06.01	80% Base/20% Max Day	-	-	-	-	-	-	-
	PYRAMID WATER STORAGE TANK	-	C.02.02	Base/Max Day/Max Hr	-	-	-	-	-	-	-
	AUTOMATIC METER READING SYSTEM	-	C.03.01	Customers	-	-	-	-	-	-	-
	TOTALS CIP 5110-16500	-			-	-	-	-	-	-	-
	GRAND TOTALS WITH CIP	1,133,222			432,561	495,094	23,028	-	-	182,538	-
	Budget:	1,124,222									
	Difference:	9,000									

Allocation Factors
Base-Extra Capacity Method

Base Extra Capacity Method

		Un-Metered	Metered Large	Metered Other	Hydrants	Truck	Total
A.00.00							
	Avg Annual Demand (MGD)	0.069	2.243	0.423	-	-	2.734
A.01.01	Avg Demand/Day	2.5%	82.0%	15.5%	0.0%	0.0%	100%
	Peak Day Demand (MGD)	0.153	6.027	0.777	-	-	
	Extra Capacity - Day (MGD)	0.084	3.785	0.355	-	-	4.223
A.02.01	Excess - Day	2.0%	89.6%	8.4%	0.0%	0.0%	100%
	Peak Hr Demand (MGD)	0.229	9.041	1.166	-	-	
	Extra Capacity - Day (MGD)	0.076	3.014	0.389	-	-	3.479
A.02.02	Excess - Hour	2.2%	86.6%	11.2%	0.0%	0.0%	100%
A.03.01	Piping Dist	26.0%	43.5%	30.5%	0.0%	0.0%	100%
		345	9	287	-	-	642
A.05.01	Customers	53.8%	1.4%	44.8%	0.0%	0.0%	100%
		345	106	581	-	-	1,032
A.05.02	Customer Equivalents	33.5%	10.2%	56.3%	0.0%	0.0%	100%
A.10.01	Direct Un-Metered	100%	0%	0%	0%	0%	100%
UNUSED:							
A.10.02	Nirvana	0%	0%	100%	0%	0%	100%

Classification Factors
Base-Extra Capacity Method

1	2	3	4	5	6	7	8	9	10
		Base	Excess Capacity		Customers		Piping	Direct 1	Total
			Excess Max Day	Excess Max Hr	Number	Equivalents			
C.00.00		0%	0%	0%	0%	0%	0%	0%	0%
		2.749	-	-	-	-	-	-	2.749
C.01.01	Base	100%	0%	0%	0%	0%	0%	0%	100%
		2.749	3.825	-	-	-	-	-	6.574
C.02.01	Base/Max Day	42%	58%	0%	0%	0%	0%	0%	100%
		2.749	3.825	0.933	-	-	-	-	7.507
C.02.02	Base/Max Day/Max Hr	37%	51%	12%	0%	0%	0%	0%	100%
		2.749	-	4.758					7.507
C.02.03	Base/Max Hr	37%	0%	63%	0%	0%	0%	0%	100%
C.02.04	Max Day / Max Hr	0%	50%	50%	0%	0%	0%	0%	100%
C.03.01	Customers	0%	0%	0%	100%	0%	0%	0%	100%
C.03.02	Customer Equivalents	0%	0%	0%	0%	100%	0%	0%	100%
C.04.01	Piping Dist	0%	0%	0%	0%	0%	100%	0%	100%
C.04.02		0%	0%	0%	0%	0%	0%	0%	0%
C.05.01	Direct 1	0%	0%	0%	0%	0%	0%	100%	100%
C.05.02		0%	0%	0%	0%	0%	0%	0%	0%
C.06.01	80% Base/20% Max Day	80%	20%	0%	0%	0%	0%	0%	100%
C.06.02	20% Base/40% MD/40% MH	20%	40%	40%	0%	0%	0%	0%	100%
		6,873,769	8,414,733	210,311	-	-	2,997,550	-	18,496,362
C.10.01	Land/Bldg/IOTB	37%	45%	1%	0%	0%	16%	0%	100%
		7,551,193	8,865,348	270,859	33,384	-	3,037,148	-	19,757,933
C.10.02	Net Plant in Service	38%	45%	1%	0%	0%	15%	0%	100%
		5,191,596	7,244,228	82,790	-	-	-	-	12,518,614
C.10.03	Buildings	41%	58%	1%	0%	0%	0%	0%	100%
		404,622	163,536	36,651	-	-	-	-	604,810
C.10.04	Water Ops - Non Labor	67%	27%	6%	0%	0%	0%	0%	100%
		12,500	-	-	-	-	-	-	12,500
C.10.05	Vehicles/Equip - Non Labor	100%	0%	0%	0%	0%	0%	0%	100%
		15,987	22,308	255	-	-	-	-	38,550
C.10.06	Building R&M - Non Labor	41%	58%	1%	0%	0%	0%	0%	100%
		695,478	279,170	59,915	-	-	-	-	1,034,563
C.10.07	Other Operating Labor	67%	27%	6%	0%	0%	0%	0%	100%
		1,991,256	1,139,021	147,607	203	-	199,511	4,087	3,481,685
C.10.09	Total Exp Before Other Revenues	57%	33%	4%	0%	0%	6%	0%	100%
		432,561	495,094	23,028	-	-	182,538	-	1,133,222
C.10.10	Depr Expense	38%	44%	2%	0%	0%	16%	0%	100%

Appendix D

Cost of Service Model
(Commodity Demand Method)

Allocation of Revenue Requirements
Commodity Demand Method

Commodity-Demand (CD) Method

	Allocation	Description	Total	3 Un-Metered	4 Metered Large	5 Metered Other	6 Other	7 Other
Commodity	A.01.01	Commodity (MGD)	1,075,838	27,113	882,440	166,285	-	-
Demand								
Dem - Max Day	A.02.01	Dem - Max Day (MGD)	1,687,334	36,993	1,461,823	188,519	-	-
Dem - Max Hr	A.02.02	Dem - Max Hr (MGD)	551,051	12,081	477,403	61,567	-	-
Customers								
Number	A.05.01	Customers - Number	368	198	5	165	-	-
Equivalents	A.05.02	Customers - Equivalents	-	-	-	-	-	-
Piping	A.03.01	Piping Dist	211,954	55,106	92,203	64,645	-	-
Direct 1	A.10.01	Direct	4,027	4,027	-	-	-	-
			$ 3,530,573	$ 135,519	$ 2,913,874	$ 481,181	$ -	$ -
Revenues From Existing Rates								
Customer Charges				$ 147,521	$ 3,847	$ 17,023		
Volume Charges				-	2,060,095	388,200		
Total			$ 2,616,686	$ 147,521	$ 2,063,942	$ 405,223	$ -	$ -
Surplus (Deficiency)			$ (913,887)	$ 12,002	$ (849,931)	$ (75,958)	$ -	$ -
Percent of Revenues from Existing Rates			-34.9%	8.1%	-41.2%	-18.7%	#DIV/0!	#DIV/0!

Classification of Expenses
Commodity Demand Method

Commodity-Demand (CD) Method

			Total	3 Commodity	4 Demand		5 Customers		6 Piping	7 Direct 1
					Dem - Max Day	Dem - Max Hr	Number	Equivalents		
Administration										
Labor										
Salaries - Admin	C.10.07	Other Operating Labor	$ 257,931	$ 123,385	$ 74,616	$ 59,930	$ -	$ -	$ -	$ -
Temporary Employees	C.10.07	Other Operating Labor	2,594	1,241	750	603	-	-	-	-
Overtime - Admin	C.10.07	Other Operating Labor	928	444	268	216	-	-	-	-
Benefits and PR Taxes - Admin	C.10.07	Other Operating Labor	170,713	81,663	49,385	39,665	-	-	-	-
Subtotal - Labor and Benefits			$ 432,166	$ 206,733	$ 125,019	$ 100,413	$ -	$ -	$ -	$ -
Operations										
Legal Services	C.01.01	Commodity	$ 1,000	$ 1,000	$ -	$ -	$ -	$ -	$ -	$ -
Engineering/Architectural Svs	C.01.01	Commodity	1,100	1,100	-	-	-	-	-	-
Training Services	C.01.01	Commodity	1,000	1,000	-	-	-	-	-	-
Education Reimbursement	C.01.01	Commodity	2,500	2,500	-	-	-	-	-	-
Other Professional Svs	C.01.01	Commodity	6,400	6,400	-	-	-	-	-	-
Software/Hardware Support	C.01.01	Commodity	30,771	30,771	-	-	-	-	-	-
Water/Sewage	C.01.01	Commodity	547	547	-	-	-	-	-	-
Solid Waste	C.01.01	Commodity	1,215	1,215	-	-	-	-	-	-
Custodial Services/Supplies	C.10.03	Buildings	4,509	-	4,443	66	-	-	-	-
Repairs/Maintenance Services	C.01.01	Commodity	525	525	-	-	-	-	-	-
Building/Land Rental	C.00.00		-	-	-	-	-	-	-	-
General Insurance	C.10.02	Net Plant in Service	73,447	471	58,753	2,809	124	-	11,290	-
Telephone / Fax / TV	C.01.01	Commodity	1,321	1,321	-	-	-	-	-	-
Network/Internet	C.01.01	Commodity	18,400	18,400	-	-	-	-	-	-
Advertising	C.01.01	Commodity	332	332	-	-	-	-	-	-
Travel and Related Cost	C.01.01	Commodity	1,500	1,500	-	-	-	-	-	-
Banking/Credit Card Fees	C.05.01	Direct 1	4,087	-	-	-	-	-	-	4,087
Postal Services	C.01.01	Commodity	4,100	4,100	-	-	-	-	-	-
Membership Dues	C.01.01	Commodity	250	250	-	-	-	-	-	-
Employee Moving Cost	C.01.01	Commodity	5,000	5,000	-	-	-	-	-	-
General Supplies	C.01.01	Commodity	660	660	-	-	-	-	-	-
Office Supplies	C.01.01	Commodity	1,200	1,200	-	-	-	-	-	-
Computer Hardware/Software	C.01.01	Commodity	7,576	7,576	-	-	-	-	-	-
Electricity	C.02.04	D-H Demand - 50/50	9,518	-	4,759	4,759	-	-	-	-
Heating Oil	C.10.03	Buildings	8,102	-	7,983	119	-	-	-	-
Gasoline for Vehicles	C.10.05	Vehicle - Non Labor	1,963	1,963	-	-	-	-	-	-
Business Meals	C.01.01	Commodity	200	200	-	-	-	-	-	-
Food/Beverage/Employee Apprecia	C.01.01	Commodity	1,050	1,050	-	-	-	-	-	-
Books/Periodicals	C.01.01	Commodity	200	200	-	-	-	-	-	-
Other	C.00.00		-	-	-	-	-	-	-	-
Subtotal - Administrative Ops			$ 188,473	$ 89,281	$ 75,938	$ 7,753	$ 124	$ -	$ 11,290	$ 4,087
Other										
Depreciation	C.10.10	Depr Expense	1,124,222	395	885,449	57,289	-	-	181,089	-
PILOT	C.10.02	Net Plant in Service	-	-	-	-	-	-	-	-
Bad Debt	C.00.00		-	-	-	-	-	-	-	-
Admin OH	C.10.09	Total Exp Before Other Rev	22,212	6,962	10,407	3,543	1	-	1,273	26
Interest	C.10.02	Net Plant in Service	46,401	298	37,118	1,774	78	-	7,133	-
Subtotal - Administrative Other			$ 1,192,835	$ 7,655	$ 932,974	$ 62,607	$ 80	$ -	$ 189,494	$ 26
Total Administrative			**$ 1,813,474**	**$ 303,669**	**$ 1,133,931**	**$ 170,773**	**$ 204**	**$ -**	**$ 200,784**	**$ 4,113**

Classification of Expenses
Commodity Demand Method

Water Operations																
Labor																
Salaries - Operations	C.10.04	Water Ops - Non Labor	$	515,566	$	244,745	$	145,339	$	125,482	$	-	$	-	$	-
Temporary Employees	C.10.04	Water Ops - Non Labor		57,428		27,262		16,189		13,977		-		-		-
Overtime - Operations	C.10.04	Water Ops - Non Labor		33,603		15,952		9,473		8,179		-		-		-
Benefits and PR Taxes - Operations	C.10.04	Water Ops - Non Labor		379,746		180,270		107,051		92,425		-		-		-
Subtotal - Labor and Benefits			$	986,343	$	468,228	$	278,052	$	240,063	$	-	$	-	$	-
Operations																
Engineering/Architectural Svs	C.02.04	D-H Demand - 50/50	$	28,000	$	-	$	14,000	$	14,000	$	-	$	-	$	-
Training Services	C.01.01	Commodity		6,500		6,500		-		-		-		-		-
Other Professional Svs	C.02.04	D-H Demand - 50/50		104,700		-		52,350		52,350		-		-		-
Software/Hardware Support	C.01.01	Commodity		4,500		4,500		-		-		-		-		-
Sampling/Testing	C.01.01	Commodity		7,960		7,960		-		-		-		-		-
Other Technical Services	C.01.01	Commodity		1,400		1,400		-		-		-		-		-
Solid Waste	C.01.01	Commodity		3,700		3,700		-		-		-		-		-
Repairs/Maintenance Services	C.01.01	Commodity		65,000		65,000		-		-		-		-		-
Construction Services	C.01.01	Commodity		18,000		18,000		-		-		-		-		-
Telephone / Fax / TV	C.01.01	Commodity		5,500		5,500		-		-		-		-		-
Network/Internet	C.01.01	Commodity		500		500		-		-		-		-		-
Radio	C.01.01	Commodity		16,900		16,900		-		-		-		-		-
Advertising	C.01.01	Commodity		-		-		-		-		-		-		-
Travel and Related Cost	C.01.01	Commodity		9,000		9,000		-		-		-		-		-
Postal Services	C.00.00		-	-		-		-		-		-		-		-
Membership Dues	C.01.01	Commodity		900		900		-		-		-		-		-
Permit Fees	C.01.01	Commodity		550		550		-		-		-		-		-
Other	C.00.00		-	-		-		-		-		-		-		-
General Supplies	C.01.01	Commodity		106,100		106,100		-		-		-		-		-
Safety Related Items	C.01.01	Commodity		12,000		12,000		-		-		-		-		-
Lab Supplies	C.01.01	Commodity		11,000		11,000		-		-		-		-		-
Sand/Gravel/Rock	C.01.01	Commodity		3,000		3,000		-		-		-		-		-
Chemicals	C.02.04	D-H Demand - 50/50		13,000		-		6,500		6,500		-		-		-
Office Supplies	C.01.01	Commodity		1,200		1,200		-		-		-		-		-
Facility Maintenance Supplies	C.00.00		-	-		-		-		-		-		-		-
Computer Hardware/Software	C.01.01	Commodity		1,500		1,500		-		-		-		-		-
Electricity	C.02.04	D-H Demand - 50/50		148,000		-		74,000		74,000		-		-		-
Propane	C.01.01	Commodity		2,200		2,200		-		-		-		-		-
Heating Oil	C.10.03	Buildings		24,000		-		23,647		353		-		-		-
Gasoline for Vehicles	C.10.05	Vehicle - Non Labor		6,000		6,000		-		-		-		-		-
Diesel for Equipment	C.10.05	Vehicle - Non Labor		800		800		-		-		-		-		-
Food/Beverage/Employee Apprecia	C.01.01	Commodity		2,000		2,000		-		-		-		-		-
Books/Periodicals	C.01.01	Commodity		900		900		-		-		-		-		-
Other	C.00.00		-	-		-		-		-		-		-		-
Subtotal - Operations Ops			$	604,810	$	287,110	$	170,497	$	147,203	$	-	$	-	$	-
Total Water Operations			**$**	**1,591,153**	$	755,338	$	448,549	$	387,266	$	-	$	-	$	-
Vehicle and Equipment																
Labor																
Salaries - Operations	C.10.05	Vehicle - Non Labor	$	15,601	$	15,601	$	-	$	-	$	-	$	-	$	-
Overtime - Operations	C.10.05	Vehicle - Non Labor		465		465		-		-		-		-		-
Benefits and PR Taxes - Operations	C.10.05	Vehicle - Non Labor		10,605		10,605		-		-		-		-		-
Subtotal - Labor and Benefits			$	26,671	$	26,671	$	-	$	-	$	-	$	-	$	-
Operations																
Repairs/Maintenance Services	C.01.01	Commodity	$	-	$	-	$	-	$	-	$	-	$	-	$	-
Construction Services	C.01.01	Commodity		-		-		-		-		-		-		-
General Supplies	C.01.01	Commodity		-		-		-		-		-		-		-
Machinery / Vehicle Parts	C.01.01	Commodity		12,500		12,500		-		-		-		-		-
Other	C.01.01	Commodity		-		-		-		-		-		-		-
Subtotal - Vehicles/Equipment Ops			$	12,500	$	12,500	$	-	$	-	$	-	$	-	$	-

Classification of Expenses
Commodity Demand Method

Total Vehicle and Equipment			**$ 39,171**	$ 39,171	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Building R & M												
Labor												
Salaries - Operations	C.10.06	Buildings R&M - Non Labor	$ 12,747	$ -	$ 12,560	$ 187	$ -	$ -	$ -	$ -	$ -	
Overtime - Operations	C.10.06	Buildings R&M - Non Labor	133	-	131	2	-	-	-	-	-	
Benefits and PR Taxes - Operations	C.10.06	Buildings R&M - Non Labor	8,669	-	8,542	127	-	-	-	-	-	
Subtotal - Labor and Benefits			$ 21,549	$ -	$ 21,232	$ 317	$ -	$ -	$ -	$ -	$ -	
Operations												
Repairs/Maintenance Services	C.10.03	Buildings	$ 28,550	$ -	$ 28,130	$ 420	$ -	$ -	$ -	$ -	$ -	
Construction Services	C.10.03	Buildings	1,000	-	985	15	-	-	-	-	-	
General Supplies	C.10.03	Buildings	1,500	-	1,478	22	-	-	-	-	-	
Machinery / Vehicle Parts	C.10.03	Buildings	-	-	-	-	-	-	-	-	-	
Facilty Maintenance Supplies	C.10.03	Buildings	7,500	-	7,390	110	-	-	-	-	-	
Other	C.10.03	Buildings	-	-	-	-	-	-	-	-	-	
Subtotal - Vehicles/Equipment Ops			$ 38,550	$ -	$ 37,983	$ 567	$ -	$ -	$ -	$ -	$ -	
Total Building R & M			**$ 60,099**	$ -	$ 59,215	$ 884	$ -	$ -	$ -	$ -	$ -	
Total Expenses			$ 3,503,897	$ 1,098,178	$ 1,641,695	$ 558,923	$ 204	$ -	$ 200,784	$ 4,113		
Net Margin	C.10.02	Net Plant in Service	100,000	641	79,994	3,824	169	-	15,372	-		
Capital Expenditures	C.00.00		-	-	-	-	-	-	-	-		
Less Other Revenues												
Debt Reimbursements Grants	C.10.09	Total Exp Before Other Rev	(45,000)	(14,104)	(21,084)	(7,178)	(3)	-	(2,579)	(53)		
PERS Nonemployer Contributions	C.10.09	Total Exp Before Other Rev	-	-	-	-	-	-	-	-		
System Development Chgs	C.10.09	Total Exp Before Other Rev	(3,171)	(994)	(1,486)	(506)	(0)	-	(182)	(4)		
Other Services	C.10.09	Total Exp Before Other Rev	(23,513)	(7,369)	(11,017)	(3,751)	(1)	-	(1,347)	(28)		
Late Fees	C.10.09	Total Exp Before Other Rev	(1,640)	(514)	(768)	(262)	(0)	-	(94)	(2)		
Budgetd Use of Unrestricted Net As	C.10.09	Total Exp Before Other Rev	-	-	-	-	-	-	-	-		
Total Other Revenues			(73,324)	(22,981)	(34,355)	(11,696)	(4)	-	(4,202)	(86)		
Net Revenue Requirements			**$ 3,530,573**	**$ 1,075,838**	**$ 1,687,334**	**$ 551,051**	**$ 368**	**$ -**	**$ 211,954**	**$ 4,027**		

Classification of Net Plant
Commodity Demand Method

ACCT#	DESCRIPTION	FIXED ASSETS 6/30/2020	END YEAR ACC DEPR	Net Plant	Ref	Type	3 Commodity	4 Dem - Max Day	5 Dem - Max Hr	6 Customer	7 Customer Equivalents	8 Piping	9 Direct 1
					Classification CD								
LAND	LOWER LOOP ROAD	46,500	-	46,500	C.01.01	Commodity	46,500	-	-	-	-	-	-
	ICY CREEK LAND BLM TRACT 41	7,300	-	7,300	C.01.01	Commodity	7,300	-	-	-	-	-	-
	EASEMENTS FROM OC LAND EXCNG	71,274	-	71,274	C.01.01	Commodity	71,274	-	-	-	-	-	-
	TOTALS LAND 5100-16100	125,074	-	125,074	-	-	125,074	-	-	-	-	-	-
BLDG	1978 FILTER HOUSE	21,400	21,400	-	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	1989 TREATMENT PLANT	52,000	49,613	2,387	C.02.01	Dem - Max Day	-	2,387	-	-	-	-	-
	1991 2 WELL HOUSES	170,700	152,458	18,242	C.02.06	D-H Demand - 25/75	-	4,561	13,682	-	-	-	-
	EQUILIBRIUM TANK	643,850	535,908	107,942	C.02.04	D-H Demand - 50/50	-	53,971	53,971	-	-	-	-
	WELL HOUSE #2 ELECT. UPGRADE	116,972	74,082	42,890	C.02.06	D-H Demand - 25/75	-	10,722	32,167	-	-	-	-
	WELL HOUSE #1 ELECT. UPGRADE	204,205	91,892	112,313	C.02.06	D-H Demand - 25/75	-	28,078	84,235	-	-	-	-
	UPCH ELECTIC COMP. UPGRADE	103,869	46,308	57,560	C.02.01	Dem - Max Day	-	57,560	-	-	-	-	-
	ICY LAKE ROOF/SIDING REPLACEMENT	41,616	8,323	33,293	C.02.01	Dem - Max Day	-	33,293	-	-	-	-	-
	NEW WATER TREATMENT PLANT & LT2 UPGRADE	13,487,968	1,343,980	12,143,988	C.02.01	Dem - Max Day	-	12,143,988	-	-	-	-	-
	TOTALS BLDG 5100-16200	14,842,579	2,323,965	12,518,614	-	-	-	12,334,559	184,054	-	-	-	-
IOTB	1978 WATER IMPROVEMENTS	1,997,596	1,997,596	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1979 WATER IMPROVEMENTS	63,380	63,380	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1980 WATER IMPROVEMENTS	79,266	79,266	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1981 WATER IMPROVEMENTS	167,256	167,256	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1982 WATER IMPROVEMENTS	84,482	84,482	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1983 WATER IMPROVEMENTS	660,357	660,357	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1984 WATER IMPROVEMENTS	120,263	120,263	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1985 WATER IMPROVEMENTS	171,521	171,521	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1986 WATER IMPROVEMENTS	308,693	308,693	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1987 WATER IMPROVEMENTS	502,731	502,731	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1988 WATER IMPROVEMENTS	1,113	1,096	17	C.04.01	Piping Dist	-	-	-	-	-	17	-
	1988/89 WATER IMPROVEMENTS	1,171,866	1,118,083	53,783	C.02.01	Dem - Max Day	-	53,783	-	-	-	-	-
	1989 WATER IMPROVEMENTS	1,652,073	1,576,250	75,823	C.02.01	Dem - Max Day	-	75,823	-	-	-	-	-
	1990 PYRAMID	109,726	101,342	8,384	C.02.01	Dem - Max Day	-	8,384	-	-	-	-	-
	1990 WATER IMPROVEMENTS	80,605	74,446	6,159	C.02.01	Dem - Max Day	-	6,159	-	-	-	-	-
	1991 PYRAMID	4,358,446	3,892,673	465,773	C.02.01	Dem - Max Day	-	465,773	-	-	-	-	-
	1992 WATER IMPROVEMENTS	2,100	1,812	288	C.04.01	Piping Dist	-	-	-	-	-	288	-
	1992 PRIMARY LINE	50,951	43,957	6,994	C.04.01	Piping Dist	-	-	-	-	-	6,994	-
	1993 PRIMARY LINE	5,856	4,874	982	C.04.01	Piping Dist	-	-	-	-	-	982	-
	LEAR ROAD	103,127	85,838	17,289	C.02.04	D-H Demand - 50/50	-	8,645	8,645	-	-	-	-
	THOMPSON/SHAISHNIKOFF	19,176	15,961	3,215	C.04.01	Piping Dist	-	-	-	-	-	3,215	-
	HAYSTACK	20,021	16,664	3,356	C.04.01	Piping Dist	-	-	-	-	-	3,356	-
	BOOSTER PUMP	19,985	19,985	-	C.02.04	D-H Demand - 50/50	-	-	-	-	-	-	-
	HAYSTACK PIPELINE	160,001	160,001	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	ILIULIUK VALLEY	26,168	26,168	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	WATER STORAGE	2,287,316	2,287,316	-	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	IHS SANITATION	10,389	10,389	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	S.C.A.D.A.	138,971	138,971	-	C.00.00	0	-	-	-	-	-	-	-
	WATER LINE HOOK UP JESSE LEE	65,432	52,345	13,086	C.04.01	Piping Dist	-	-	-	-	-	13,086	-
	ICY CREEK LOWER	1,758,247	1,406,598	351,649	C.02.01	Dem - Max Day	-	351,649	-	-	-	-	-
	PYRAMID WATER CAPITAL	2,830,156	2,264,125	566,031	C.02.01	Dem - Max Day	-	566,031	-	-	-	-	-
	STWRD.RD.WOODSTAVE RPLCE	42,162	33,730	8,432	C.04.01	Piping Dist	-	-	-	-	-	8,432	-
	FLOW METER VAULT	20,813	15,957	4,856	C.02.04	D-H Demand - 50/50	-	2,428	2,428	-	-	-	-
	KING ST/BAYVIEW WA MAIN	103,500	75,900	27,600	C.04.01	Piping Dist	-	-	-	-	-	27,600	-

Classification of Net Plant
Commodity Demand Method

ACCT#	DESCRIPTION	FIXED ASSETS 6/30/2020	END YEAR ACC DEPR	Net Plant	Classification CD								
					Ref	Type	Commodity	Dem - Max Day	Dem - Max Hr	Customer	Customer Equivalents	Piping	Direct 1
	ICY LAKE DAM AND ROAD	1,504,545	1,103,333	401,212	C.02.01	Dem - Max Day	-	401,212	-	-	-	-	-
	CHOATE LANE WA LID	90,435	66,319	24,116	C.04.01	Piping Dist	-	-	-	-	-	24,116	-
	HAYSTACK LINE UPGRADE	377,942	264,559	113,382	C.04.01	Piping Dist	-	-	-	-	-	113,382	-
	ICY LAKE DAM & ROAD FINAL	208,272	145,790	62,482	C.02.01	Dem - Max Day	-	62,482	-	-	-	-	-
	SHAISHNIKOFF WATER EXTENSION	38,688	24,825	13,863	C.04.01	Piping Dist	-	-	-	-	-	13,863	-
	STEWARD ROAD WATER LOOP	69,212	44,411	24,801	C.04.01	Piping Dist	-	-	-	-	-	24,801	-
	STEWARD ROAD LID	87,403	56,084	31,319	C.04.01	Piping Dist	-	-	-	-	-	31,319	-
	SPRINKLER INSTALLATION	20,257	20,257	-	C.01.01	Commodity	-	-	-	-	-	-	-
	WELL #2A REPLACEMNT	344,391	218,114	126,277	C.02.06	D-H Demand - 25/75	-	31,569	94,708	-	-	-	-
	NEWHALL WATER LID	123,200	73,920	49,280	C.04.01	Piping Dist	-	-	-	-	-	49,280	-
	WATER TANK MAINTENANCE	136,391	102,293	34,098	C.02.01	Dem - Max Day	-	34,098	-	-	-	-	-
	AIRPORT WATER LINE	82,668	41,334	41,334	C.04.01	Piping Dist	-	-	-	-	-	41,334	-
	NIRVANA WATER LID	464,857	216,933	247,924	C.04.01	Piping Dist	-	-	-	-	-	247,924	-
	GENERAL SCADA INTERFACE & UPDATE FY08/09	46,395	23,197	23,198	C.02.01	Dem - Max Day	-	23,198	-	-	-	-	-
	LEAR ROAD TANK MAINTENANCE	486,690	239,289	247,401	C.02.04	D-H Demand - 50/50	-	123,700	123,700	-	-	-	-
	SOUTH CHANNEL BRIDGE WATER BETTERMENTS	1,592,330	504,238	1,088,092	C.04.01	Piping Dist	-	-	-	-	-	1,088,092	-
	ICY CREEK DAM IMPROVEMENTS	246,660	117,164	129,496	C.02.01	Dem - Max Day	-	129,496	-	-	-	-	-
	LSA WATER EXTENSION	786,672	216,335	570,337	C.04.01	Piping Dist	-	-	-	-	-	570,337	-
	WATER TRANSMISSION DIST FLUSHING	751,791	194,213	557,579	C.04.01	Piping Dist	-	-	-	-	-	557,579	-
	ICY LAKE POWER	85,134	14,425	70,709	C.02.01	Dem - Max Day	-	70,709	-	-	-	-	-
	CT TANK INTERIOR MAINTENANCE	106,167	26,984	79,183	C.02.04	D-H Demand - 50/50	-	39,592	39,592	-	-	-	-
	NIRVANA PUMP STATION SCADA	58,901	11,780	47,121	C.02.01	Dem - Max Day	-	47,121	-	-	-	-	-
	WATER BACKFLOW PREVENTER INSTALL & DESIGN	191,203	19,651	171,551	C.04.01	Piping Dist	-	-	-	-	-	171,551	-
	WELL HOUSE 1&2 SCADA UPGRADES	93,990	9,791	84,200	C.02.06	D-H Demand - 25/75	-	21,050	63,150	-	-	-	-
	TOTALS IOTB 5100-16300	27,187,940	21,335,266	5,852,674	-	-	-	2,522,902	332,222	-	-	2,997,550	-
M & E	1997 FORD F250 P/U TRK XL # W0446	-	-	-	C.00.00	0	-	-	-	-	-	-	-
	2008 FORD F150 4X4 TRUCK	23,381	23,381	-	C.00.00	0	-	-	-	-	-	-	-
	FUJI LC-2500 SUBSURFACE LEAK DETECTOR	24,400	24,400	-	C.00.00	0	-	-	-	-	-	-	-
	BH11 JCB 4CXB BACKHOE	172,495	70,435	102,059	C.10.01	Land/Bldg/OTE	690	81,981	2,849	-	-	16,540	-
	W2312 2017 FORD F250 EXT CAB 4X4 W/UTILITY BED	47,130	29,064	18,067	C.10.01	Land/Bldg/OTE	122	14,512	504	-	-	2,928	-
	W6000 2017 FORD F250 EXT CAB 4X4 W/SERV BOX	47,286	19,703	27,584	C.10.01	Land/Bldg/OTE	187	22,157	770	-	-	4,470	-
	SPECTROPHOTOMETER DR6000	12,184	5,077	7,107	C.10.01	Land/Bldg/OTE	48	5,709	198	-	-	1,152	-
	W9802 FORD F-350 CREW CAB, 8' FLATBED	48,695	10,551	38,144	C.10.01	Land/Bldg/OTE	258	30,640	1,065	-	-	6,182	-
	DPU7380 FORD EXPLORER (25%) DPU DIRECTOR	8,140	1,764	6,376	C.10.01	Land/Bldg/OTE	43	5,122	178	-	-	1,033	-
	4x4 250 Extended/SuperCab, Stahl Utility bed w/Boxes	45,000	-	45,000	C.10.01	Land/Bldg/OTE	304	36,147	1,256	-	-	7,293	-
	TOTALS M&E 5100-16400	428,710	184,373	244,337	-	-	1,652	196,267	6,820	-	-	39,598	-
CIP													
	FIBER OPTIC INFRASTRUCTURE DEVELOP	6,140	-	6,140	C.02.01	Dem - Max Day	-	6,140	-	-	-	-	-
	PYRAMID WTP MICRO TURBINES	363,284	-	363,284	C.02.04	D-H Demand - 50/50	-	181,642	181,642	-	-	-	-
	GENERAL HILL WATER BOOSTER PUMP	8,005	-	8,005	C.02.04	D-H Demand - 50/50	-	4,002	4,002	-	-	-	-
	WATER SUPPLY DEVELOP PHASE II	512,759	-	512,759	C.02.01	Dem - Max Day	-	512,759	-	-	-	-	-
	PYRAMID WATER STORAGE TANK	93,662	-	93,662	C.02.04	D-H Demand - 50/50	-	46,831	46,831	-	-	-	-
	AUTOMATIC METER READING SYSTEM	33,384	-	33,384	C.03.01	Customers	-	-	-	33,384	-	-	-
	TOTALS CIP 5110-16500	1,017,234	-	1,017,234	-	-	-	751,374	232,475	33,384	-	-	-
	GRAND TOTALS WITH CIP	43,601,537	23,843,604	19,757,933			126,726	15,805,103	755,572	33,384	-	3,037,148	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	DeprExp	Classification CD							
			Ref	Type	Commodity	Dem - Max Day	Dem - Max Hr	Customer	Customer Equivalents	Piping	Direct 1
LAND	LOWER LOOP ROAD	-	C.01.01	Commodity	-	-	-	-	-	-	-
	ICY CREEK LAND BLM TRACT 41	-	C.01.01	Commodity	-	-	-	-	-	-	-
	EASEMENTS FROM OC LAND EXCNG	-	C.01.01	Commodity	-	-	-	-	-	-	-
	TOTALS LAND 5100-16100	-			-	-	-	-	-	-	-
					-	-	-	-	-	-	-
BLDG	1978 FILTER HOUSE	-	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	1989 TREATMENT PLANT	1,591	C.02.01	Dem - Max Day	-	1,591	-	-	-	-	-
	1991 2 WELL HOUSES	5,212	C.02.06	D-H Demand - 25/75	-	1,303	3,909	-	-	-	-
	EQUILIBRIUM TANK	19,626	C.02.04	D-H Demand - 50/50	-	9,813	9,813	-	-	-	-
	WELL HOUSE #2 ELECT. UPGRADE	7,798	C.02.06	D-H Demand - 25/75	-	1,950	5,849	-	-	-	-
	WELL HOUSE #1 ELECT. UPGRADE	10,210	C.02.06	D-H Demand - 25/75	-	2,553	7,658	-	-	-	-
	UPCH ELECTIC COMP. UPGRADE	5,193	C.02.01	Dem - Max Day	-	5,193	-	-	-	-	-
	ICY LAKE ROOF/SIDING REPLACEMENT	2,081	C.02.01	Dem - Max Day	-	2,081	-	-	-	-	-
	NEW WATER TREATMENT PLANT & LT2 UPGRADE	337,333	C.02.01	Dem - Max Day	-	337,333	-	-	-	-	-
	TOTALS BLDG 5100-16200	389,044			-	361,816	27,228	-	-	-	-
IOTB	1978 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1979 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1980 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1981 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1982 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1983 WATER IMPROVEMENTS	(0)	C.04.01	Piping Dist	-	-	-	-	-	(0)	-
	1984 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1985 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1986 WATER IMPROVEMENTS	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1987 WATER IMPROVEMENTS	7,711	C.04.01	Piping Dist	-	-	-	-	-	7,711	-
	1988 WATER IMPROVEMENTS	34	C.04.01	Piping Dist	-	-	-	-	-	34	-
	1988/89 WATER IMPROVEMENTS	35,856	C.02.01	Dem - Max Day	-	35,856	-	-	-	-	-
	1989 WATER IMPROVEMENTS	50,549	C.02.01	Dem - Max Day	-	50,549	-	-	-	-	-
	1990 PYRAMID	3,354	C.02.01	Dem - Max Day	-	3,354	-	-	-	-	-
	1990 WATER IMPROVEMENTS	2,464	C.02.01	Dem - Max Day	-	2,464	-	-	-	-	-
	1991 PYRAMID	133,078	C.02.01	Dem - Max Day	-	133,078	-	-	-	-	-
	1992 WATER IMPROVEMENTS	64	C.04.01	Piping Dist	-	-	-	-	-	64	-
	1992 PRIMARY LINE	1,554	C.04.01	Piping Dist	-	-	-	-	-	1,554	-
	1993 PRIMARY LINE	179	C.04.01	Piping Dist	-	-	-	-	-	179	-
	LEAR ROAD	3,143	C.02.04	D-H Demand - 50/50	-	1,572	1,572	-	-	-	-
	THOMPSON/SHAISHNIKOFF	585	C.04.01	Piping Dist	-	-	-	-	-	585	-
	HAYSTACK	610	C.04.01	Piping Dist	-	-	-	-	-	610	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	DeprExp	Classification CD								
			Ref	Type	Commodity	Dem - Max Day	Dem - Max Hr	Customer	Customer Equivalents	Piping	Direct 1
	BOOSTER PUMP	-	C.02.04	D-H Demand - 50/50	-	-	-	-	-	-	-
	HAYSTACK PIPELINE	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	ILIULIUK VALLEY	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	WATER STORAGE	-	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	IHS SANITATION	-	C.04.01	Piping Dist	-	-	-	-	-	-	-
	S.C.A.D.A.	-	C.00.00	0	-	-	-	-	-	-	-
	WATER LINE HOOK UP JESSE LEE	2,181	C.04.01	Piping Dist	-	-	-	-	-	2,181	-
	ICY CREEK LOWER	58,608	C.02.01	Dem - Max Day	-	58,608	-	-	-	-	-
	PYRAMID WATER CAPITAL	94,339	C.02.01	Dem - Max Day	-	94,339	-	-	-	-	-
	STWRD.RD.WOODSTAVE RPLCE	1,405	C.04.01	Piping Dist	-	-	-	-	-	1,405	-
	FLOW METER VAULT	694	C.02.04	D-H Demand - 50/50	-	347	347	-	-	-	-
	KING ST/BAYVIEW WA MAIN	3,450	C.04.01	Piping Dist	-	-	-	-	-	3,450	-
	ICY LAKE DAM AND ROAD	50,152	C.02.01	Dem - Max Day	-	50,152	-	-	-	-	-
	CHOATE LANE WA LID	3,015	C.04.01	Piping Dist	-	-	-	-	-	3,015	-
	HAYSTACK LINE UPGRADE	12,598	C.04.01	Piping Dist	-	-	-	-	-	12,598	-
	ICY LAKE DAM & ROAD FINAL	6,942	C.02.01	Dem - Max Day	-	6,942	-	-	-	-	-
	SHAISHNIKOFF WATER EXTENSION	1,290	C.04.01	Piping Dist	-	-	-	-	-	1,290	-
	STEWARD ROAD WATER LOOP	2,307	C.04.01	Piping Dist	-	-	-	-	-	2,307	-
	STEWARD ROAD LID	2,913	C.04.01	Piping Dist	-	-	-	-	-	2,913	-
	SPRINKLER INSTALLATION	-	C.01.01	Commodity	-	-	-	-	-	-	-
	WELL #2A REPLACEMNT	11,480	C.02.06	D-H Demand - 25/75	-	2,870	8,610	-	-	-	-
	NEWHALL WATER LID	4,107	C.04.01	Piping Dist	-	-	-	-	-	4,107	-
	WATER TANK MAINTENANCE	6,820	C.02.01	Dem - Max Day	-	6,820	-	-	-	-	-
	AIRPORT WATER LINE	2,756	C.04.01	Piping Dist	-	-	-	-	-	2,756	-
	NIRVANA WATER LID	15,495	C.04.01	Piping Dist	-	-	-	-	-	15,495	-
	GENERAL SCADA INTERFACE & UPDATE FY08/09	2,320	C.02.01	Dem - Max Day	-	2,320	-	-	-	-	-
	LEAR ROAD TANK MAINTENANCE	24,335	C.02.04	D-H Demand - 50/50	-	12,167	12,167	-	-	-	-
	SOUTH CHANNEL BRIDGE WATER BETTERMENTS	53,078	C.04.01	Piping Dist	-	-	-	-	-	53,078	-
	ICY CREEK DAM IMPROVEMENTS	12,333	C.02.01	Dem - Max Day	-	12,333	-	-	-	-	-
	LSA WATER EXTENSION	26,222	C.04.01	Piping Dist	-	-	-	-	-	26,222	-
	WATER TRANSMISSION DIST FLUSHING	25,060	C.04.01	Piping Dist	-	-	-	-	-	25,060	-
	ICY LAKE POWER	2,838	C.02.01	Dem - Max Day	-	2,838	-	-	-	-	-
	CT TANK INTERIOR MAINTENANCE	5,308	C.02.04	D-H Demand - 50/50	-	2,654	2,654	-	-	-	-
	NIRVANA PUMP STATION SCADA	2,945	C.02.01	Dem - Max Day	-	2,945	-	-	-	-	-
	WATER BACKFLOW PREVENTER INSTALL & DESIGN	6,373	C.04.01	Piping Dist	-	-	-	-	-	6,373	-
	WELL HOUSE 1&2 SCADA UPGRADES	4,700	C.02.06	D-H Demand - 25/75	-	1,175	3,525	-	-	-	-
	TOTALS IOTB 5100-16300	685,241			-	483,380	28,875	-	-	172,987	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	DeprExp	Classification CD								
			Ref	Type	Commodity	Dem - Max Day	Dem - Max Hr	Customer	Customer Equivalents	Piping	Direct 1
M & E	1997 FORD F250 P/U TRK XL # W0446	-	C.00.00	0	-	-	-	-	-	-	-
	2008 FORD F150 4X4 TRUCK	-	C.00.00	0	-	-	-	-	-	-	-
	FUJI LC-2500 SUBSURFACE LEAK DETECTOR	-	C.00.00	0	-	-	-	-	-	-	-
	BH11 JCB 4CXB BACKHOE	17,249	C.10.01	Land/Bldg/OTE	117	13,856	481	-	-	2,795	-
	W2312 2017 FORD F250 EXT CAB 4X4 W/UTILITY BED	9,426	C.10.01	Land/Bldg/OTE	64	7,572	263	-	-	1,528	-
	W6000 2017 FORD F250 EXT CAB 4X4 W/SERV BOX	9,457	C.10.01	Land/Bldg/OTE	64	7,597	264	-	-	1,533	-
	SPECTROPHOTOMETER DR6000	2,437	C.10.01	Land/Bldg/OTE	16	1,957	68	-	-	395	-
	W9802 FORD F-350 CREW CAB, 8' FLATBED	9,739	C.10.01	Land/Bldg/OTE	66	7,823	272	-	-	1,578	-
	DPU7380 FORD EXPLORER (25%) DPU DIRECTOR	1,628	C.10.01	Land/Bldg/OTE	11	1,308	45	-	-	264	-
	4x4 250 Extended/SuperCab, Stahl Utility bed w/Boxes	9,000	C.10.01	Land/Bldg/OTE	61	7,229	251	-	-	1,459	-
	TOTALS M&E 5100-16400	58,936			399	47,342	1,645	-	-	9,551	-
CIP	FIBER OPTIC INFRASTRUCTURE DEVELOP	-	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	PYRAMID WTP MICRO TURBINES	-	C.02.04	D-H Demand - 50/50	-	-	-	-	-	-	-
	GENERAL HILL WATER BOOSTER PUMP	-	C.02.04	D-H Demand - 50/50	-	-	-	-	-	-	-
	WATER SUPPLY DEVELOP PHASE II	-	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	PYRAMID WATER STORAGE TANK	-	C.02.04	D-H Demand - 50/50	-	-	-	-	-	-	-
	AUTOMATIC METER READING SYSTEM	-	C.03.01	Customers	-	-	-	-	-	-	-
	TOTALS CIP 5110-16500	-			-	-	-	-	-	-	-
	GRAND TOTALS WITH CIP	1,133,222	-	-	399	892,537	57,748	-	-	182,538	-
	Budget:	1,124,222									
	Difference:	9,000									

Allocation Factors
Commodity Demand Method

1	2	3	4	5	6	7	8
		Un-Metered	Metered Large	Metered Other	Hydrants	Truck	Total
		-	-	-	-	-	-
A.00.00		-	-	-	-	-	0%
A.01.01	Commodity (MGD)	0.069 2.5%	2.243 82.0%	0.423 15.5%	- 0.0%	- 0.0%	2.734 100%
A.02.01	Dem - Max Day (MGD)	0.153 2.2%	6.027 86.6%	0.777 11.2%	- 0.0%	- 0.0%	6.957 100%
A.02.02	Dem - Max Hr (MGD)	0.229 2.2%	9.041 86.6%	1.166 11.2%	- 0.0%	- 0.0%	10.436 100%
A.03.01	Piping Dist	26.0%	43.5%	30.5%			100.0%
A.05.01	Customers - Number	345 53.8%	9 1.4%	287 44.8%	0.0%	0.0%	642 100%
A.05.02	Customers - Equivalents	345 33.5%	106 10.2%	581 56.3%	- 0.0%	- 0.0%	1,032 100%
A.10.01	Direct	100%	0%	0%	0%	0%	100%
A.10.02	Not Used	0%	0%	100%	0%	0%	100%

Classification Factors
Commodity Demand Method

1	2	3	4	5	6	7	8	9	10
		Commodity			Customers		Piping	Direct 1	Total
			Dem - Max Day	Dem - Max Hr	Number	Equivalents			
C.00.00		0%	0%	0%	0%	0%	0%	0%	0%
C.01.01	Commodity	100%	0%	0%	0%	0%	0%	0%	100%
C.02.01	Dem - Max Day	0%	100%	0%	0%	0%	0%	0%	100%
C.02.02	Dem - Max Hr	0%	0%	100%	0%	0%	0%	0%	100%
C.02.03	Not Used	0%	0%	0%	0%	0%	0%	0%	0%
C.02.04	D-H Demand - 50/50	0%	50%	50%	0%	0%	0%	0%	100%
C.02.05	D-H Demand - 75/25	0%	75%	25%	0%	0%	0%	0%	100%
C.02.06	D-H Demand - 25/75	0%	25%	75%	0%	0%	0%	0%	100%
C.03.01	Customers	0%	0%	0%	100%	0%	0%	0%	100%
C.03.02	Customer Equivalents	0%	0%	0%	0%	100%	0%	0%	100%
C.04.01	Piping Dist	0%	0%	0%	0%	0%	100%	0%	100%
C.04.02	Not Used	0%	0%	0%	0%	0%	0%	0%	0%
C.05.01	Direct 1	0%	0%	0%	0%	0%	0%	100%	100%
C.05.02	Not Used	0%	0%	0%	0%	0%	0%	0%	0%
		125,074	14,857,461	516,277	-	-	2,997,550	-	18,496,362
C.10.01	Land/Bldg/OTE	1%	80%	3%	0%	0%	16%	0%	100%
		126,726	15,805,103	755,572	33,384	-	3,037,148	-	19,757,933
C.10.02	Net Plant in Service	1%	80%	4%	0%	0%	15%	0%	100%
		-	12,334,559	184,054	-	-	-	-	12,518,614
C.10.03	Buildings	0%	99%	1%	0%	0%	0%	0%	100%
		287,110	170,497	147,203	-	-	-	-	604,810
C.10.04	Water Ops - Non Labor	47%	28%	24%	0%	0%	0%	0%	100%
		12,500	-	-	-	-	-	-	12,500
C.10.05	Vehicle - Non Labor	100%	0%	0%	0%	0%	0%	0%	100%
		-	37,983	567	-	-	-	-	38,550
C.10.06	Buildings R&M - Non Labor	0%	99%	1%	0%	0%	0%	0%	100%
		494,899	299,284	240,380	-	-	-	-	1,034,563
C.10.07	Other Operating Labor	48%	29%	23%	0%	0%	0%	0%	100%
		1,091,216	1,631,288	555,380	203	-	199,511	4,087	3,481,685
C.10.09	Total Exp Before Other Rev	31%	47%	16%	0%	0%	6%	0%	100%
		399	892,537	57,748	-	-	182,538	-	1,133,222
C.10.10	Depr Expense	0%	79%	5%	0%	0%	16%	0%	100%

Appendix E

Peaking Factors

Peaking Factors

	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	Use
System (Million Gal/Day - MGD)							
Annual Avg Day	2.865	3.035	2.956	2.723	2.829	2.749	2.749
Maximum Day	6.898	7.465	7.611	6.696	6.248	6.574	6.574
Maximum System Day (Max Hour x 24 hrs)							7.507
Maximum Month Avg Day							
Amount	6.087	6.388	6.175	5.349	5.820	5.197	5.197
Month	Feb	Feb	Feb	Feb	Aug	Mar	
Annual Use (MG)							
Metered Large	811.01	863.19	875.09	795.20	845.76	820.76	820.76
Metered Other	203.96	207.34	173.18	170.01	157.71	154.66	154.66
Unmetered	27.21	27.02	26.82	26.26	25.40	25.22	25.22
Hydrants	1.93	11.21	2.00	1.08	2.36	3.06	3.06
Truck	1.64	1.90	2.00	1.43	1.22	2.49	2.49
Total	1,045.74	1,110.66	1,079.08	993.98	1,032.45	1,006.18	1,006.18

								Month (No.)
Peak Month Usage (MG)								
Metered Large	146.05	165.15	152.69	134.20	162.90	140.68	140.68	3
Metered Other	26.59	26.88	20.64	18.93	17.76	18.14	18.14	3
Unmetered	2.32	2.30	2.30	2.24	2.18	2.15	2.15	8
Hydrants	0.44	5.84	0.47	0.16	0.44	0.56	0.56	11
Truck	0.43	0.58	0.60	0.34	0.33	1.20	1.20	10
Total	170.44	185.24	173.96	153.94	180.42	161.10	161.10	3

Classification Factors
Base/Excess Capacity

Base	**2.749**
Maximum Day	**7**
Maximum Hour	**8**

Allocation Factors

Base/Excess Capacity	Metered - L Large	Metered - O Other	Unmetered	Hydrants	Truck	**Total**	
Base							
Annual Use (MG)	820.76	154.66	25.22	3.06	2.49	**1,006.18**	
Days/Year	366	366	366	366	366	**366**	
Base Use (MG/Day)	**2.243**	**0.423**	**0.069**	**0.008**	**0.007**	**2.749**	
Excess - Day							
Peak Day Demand							
Peak Month	Mar	Mar	Aug	Nov	Oct		
Monthly Usage	140.677	18.142	2.151	0.563	1.200		
Avg Daily Usage - Peak Month	4.538	0.585	0.069	0.019	0.039		
Peak Day / Avg Day	2.024	1.385	1.400	2.246	5.699		
Max Day / Max Month (Avg Day)						**1.265**	
Weekly Usage Adj Fctr (Assumed)	1.050	1.050	1.250	1.250	1.250		
Excess Day Capacity Factor (EDCF)	2.688	1.839	2.214	3.552	9.011		
Excess Day Demand (Base Use x EDCF)	**6.027**	**0.777**	**0.153**	**0.030**	**0.061**	**7.048**	1.072
Excess - Hour							
Peak Hour Demand							
EDCF	2.688	1.839	2.214	3.552	9.011		
MH / MD (Assumed)	1.500	1.500	1.500	1.500	1.500		
Excess Hour Capacity Factor (EHCF)	4.032	2.759	3.321	5.327	13.517		
Excess Hour Demand (Base Use x EHCF)	**9.041**	**1.166**	**0.229**	**0.045**	**0.092**	**10.572**	1.408
Commodity-Demand							
Commodity (Base Use)	2.243	0.423	0.069	0.008	0.007		
Excess Day	6.027	0.777	0.153	0.030	0.061		
Excess Hour	9.041	1.166	0.229	0.045	0.092		

Peaking Factors

Max Day / Max Month Ratio: 1.265
Max Hr / Max Day Ratio: 1.142

Class

	Pk Day	Pk Hr
Unmetered	0.153	0.229
Metered	6.805	10.207

Note: Since unmetered flows based on assumed 200 gpd flow per customer, Pk Mo Day / Avg Day will be 1.00. Therefore, must assume a factor.

AWWU - 2.07 for Res (U-06-045)
GHU - 1.61 for Res (U-19-070)

Max-Day Capacity (Peaking) Factors & System Diversity Calculations

	Annual Use		Peak Month			Pk Mo Day/ Avg Day	Max Day / Max Month (Avg Day)	Weekly Usage Adj	Max Day Capacity Factor (MDCF)	Avg Demand x CF	
	MG	MG/Day	Month	MG	MG/Day						
Residential/Duplex	25.22	**0.069**	Aug	2.15	0.069	1.400	1.265	1.250	2.214	0.153	
Metered	975.42	**2.665**	Mar	158.82	5.123	1.922	1.265	1.050	2.553	6.805	
	1,000.63	2.734		160.97	5.749	2.10				6.957	Noncoincident Peak (NCP) Day (MGD)
										6.574	Max Day (MGD)
										1.06	System Max Day Diversity (>1)

Note: Estimated factors.

AWWU - 3.32 for Res (U-06-045)
GHU - 1.95 for Res (U-19-070)

Peak Hour Factor & System Diversity Calculations

	Max Day Capacity Factor	Assumed MH / MD	Peak Hour Capacity Factor (PHCF)	Avg Dem x PHCF	
Residential/Duplex	2.214	1.500	3.321	0.229	
Metered	2.553	1.500	3.830	10.207	
				10.436	NCP Hour (MGD)
				7.507	Max Hour
				1.39	System Peak Hour Diversity (>1)

City of Unalaska

Wastewater Utility

Cost of Service / Rate Design Study

April 21, 2021

Aldrich SM

Introduction

Background and Purpose of Study

In February 2009, a review of the City of Unalaska's (the "City") Wastewater Utility rates was completed and presented to the City Council. The analysis was based on fiscal year ending June 30, 2009 and focused on two issues. First, were the rates in effect at that time sufficient to provide adequate revenues for the whole system. Second, a cost of service analysis was performed to determine whether each rate class was paying close to its fair share of costs.

The study found that:

1) Rates for the unmetered class were less than cost of service
2) Rates for the commercial class were slightly higher than cost of service
3) Rates for the industrial class were less than cost of service
4) An overall revenue shortfall was projected at current rates

Based on these findings, rates were increased.

In early 2016, a high-level review of the City's Wastewater Utility rates was completed and presented to the City Council. This analysis showed that the Wastewater Utility's rates would need to increase 16 to 26 percent just to meet cash flow requirements and would need to increase even more to provide net positive cash flow and set aside some amounts towards future capital expenditures. Based on these findings, an across-the-board rate increase of about 16 percent was phased in over four years.

Since the time of the last study, the Wastewater Utility has experienced an overall decrease in un-metered customers (residential) and an increase in the number of metered commercial and industrial accounts but a decrease in overall system consumption volume. Although the rate increase has resulted in an overall increase in revenue, increases in expenses have outpaced increases in revenue, resulting in a net deficit in the wastewater fund over the past few years. The 2021 fiscal year budget indicates that this trend is expected to continue. Accordingly, City staff felt it was prudent to review rates of the Wastewater Utility to ensure that it can meet operating expense requirements and capital improvement obligations in the near term while maintaining the utility's financial health.

Wastewater Utility customers are not directly metered. Instead, billing data from the Water Utility is used. However, not all Water Utility customers are metered (Residential), and not all Water Utility accounts are Wastewater Utility accounts. This lack of direct billing data adds a layer of imprecision in developing certain factors used for allocating costs to each rate class. Consequently, the results developed herein regarding whether existing rates for a particular class are above or below cost of service should be used for general guidance only. More precise allocations can be developed, but the cost of obtaining such data for all classes of customer that are metered for water service would far outweigh the benefits.

This report summarizes the analysis performed by Aldrich Advisors and the findings with respect to a cost of service study and review of rates for the City's Wastewater Utility.

Methodology of Analysis

In setting rates for the Wastewater Utility, the City must ensure that 1) rates will recover adequate revenues to maintain the utility's fiscal health and 2) the rates are set in an equitable manner that does not favor one class over another. Given the similarities between water and wastewater utilities and the use of water consumption as a proxy for wastewater discharge, the guidelines developed by the American Water Works Association ("AWWA") for water rate studies are also used in developing rates for wastewater utilities. AWWA has developed two manuals to provide a common framework from which to develop rates that recover cost from customer classes in proportion to the cost of serving those classes. These manuals, the M1 Manual, *Principles of Water Rates, Fees, and Charges*, and the M54 Manual, *Developing Rates for Small Systems*, are now used throughout the industry when performing rate studies for water and wastewater systems. The M1 Manual is used to allocate costs to specific rates classes while the M54 Manual is used to evaluate the overall adequacy of a system's rates with the use of the "across-the-board" adjustments.

The analysis conducted and summarized in this report uses the procedures developed and prescribed in the M1 Manual. The overall methodology of allocating costs to the various rate classes is described in the Process section of the report while the details of the analysis are provided in the Analysis and Adequacy of Rates / Rate Design sections.

The Process

General

The overall objective of a cost of service study is to allocate the utility's cost to each customer class in a fair and equitable manner. Once the costs are allocated to each class, rates are set to recover the allocated costs such that the "cost causer" is also the "cost payer".

The process of allocating cost and designing rates includes four basic steps:

1) Billing Determinants / Allocator Development: Estimating customer usage, peak demands, and number of customers,
2) Revenue Requirement Analysis: Projecting the utility's revenue requirements,
3) Cost of Service Analysis: Allocating the revenue requirements to each rate group, and
4) Rate Design: Designing rates that will recover the revenue requirement while balancing the results of the cost of service study, customer sensitivities, and utility objectives.

This section provides a general overview of each of these steps and a summary is provided in Figure 1 on page 5.

Billing Determinants / Allocator Development

Several cost components of a wastewater utility may depend on total usage or peak usage of the system. The number of customers and usage must first be projected prior to projecting the revenue requirements. The data used in projecting water usage is also used to develop allocation factors (described below). Thus, billing determinants and allocation factors are developed simultaneously.

Billing determinants include the number of customers for each customer class and volume discharge for each class. The number of customers is taken directly from billing records. Since wastewater discharge is not metered for many customers, an estimate of wastewater discharge must be developed. In most cases, metered water consumption is the most accurate means of measurement and, therefore, water consumption is used as a proxy for estimates of wastewater discharge.

Billing determinants are typically based on a utility's billings incurred during the most recent fiscal year, or another recent 12-month period. However, historical trends are also reviewed, and any anticipated system expansions are also considered.

Allocation factors are based on class data which may or may not be readily available. For instance, total water usage/wastewater discharge for a metered class is readily available but total consumption/discharge for an unmetered class must be estimated. Daily peak demands and hourly peak demands must usually be estimated for all classes using sample research performed by the utility or other sources.

Revenue Requirements

Revenue requirements are also based on a utility's most recent 12-month financial results. The historical expenses are reviewed and "normalized" to account for abnormal amounts that occurred during the historical period and known changes that will occur in the future. Total revenue requirements for the utility should include not only normalized expenses but also net operating margins and offsets for other revenues. Net operating margins may be required to satisfy lender covenants or simply to address risks associated with actual sales and expenses differing from projections. Additionally, the utility may wish to build equity in anticipation of large capital additions that will be funded in the near future.

Cost of Service

Once the revenue requirements are projected, these costs must be allocated to each rate class. Customers are separated into rate classes, with each class having different usage characteristics. Since the cost of providing service varies for each class, the utility's costs are allocated among all classes using methods that are designed to be fair and equitable and to not favor one class over another.

The M1 Manual recommends two separate methods to be used in the cost of service process: the Base-Extra Capacity Method and the Commodity Demand Method. Both methods recognize that the cost of serving customers depends on the total volume as well as the rate of use (peaking requirements). The Base-Extra Capacity Method recognizes that there are certain costs associated with meeting base (average) demands and other cost associated with meeting peak demands (excess capacity). The Commodity Demand method takes a more general approach by distinguishing between variable-, fixed-, and customer-related cost. Both methods, if performed properly, will yield similar results, and both approaches are used in this analysis.

Whichever method is used, the M1 Manual prescribes the use of a multi-step process that includes *Functionalization, Classification,* and *Allocation*.

Functionalization

Functionalization of a utility's revenue requirements is usually part of the normal accounting and budgeting process where expenses are tracked by a system of accounts.

Classification

Once the revenue requirements are functionalized, they are then classified. For the Base-Extra Capacity Method, classifications include Base Costs, Extra Capacity Costs, and Customer Costs. For the Commodity Demand method, classifications include Commodity (variable) Costs, Demand (Fixed) Costs, and Customer Costs.

Allocation

The final step in the cost-of service analysis is to allocate the classified revenue requirements to each customer (or rate) class based on each class' respective contribution to the classifications.

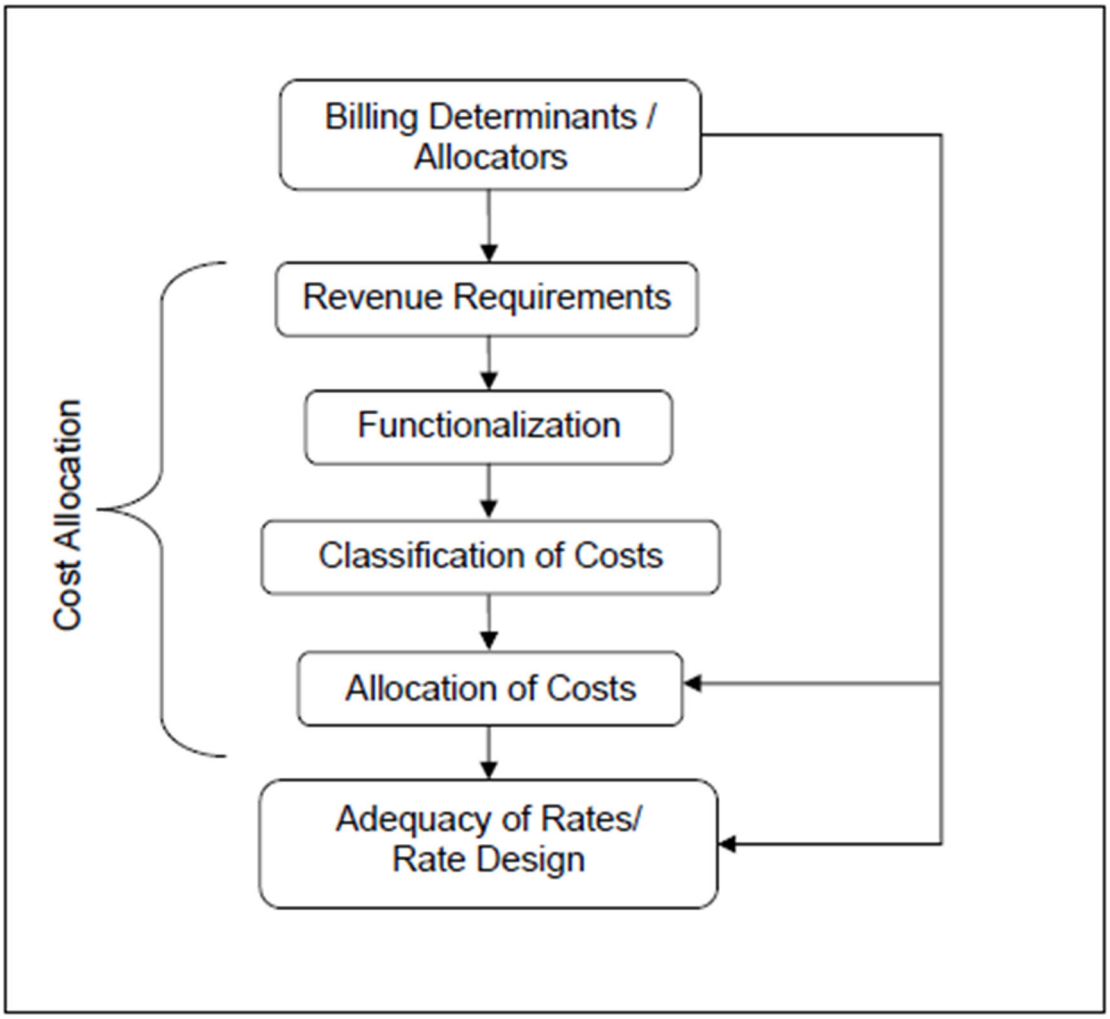
Developing the allocation factors used for expenses classified as customer-related is fairly straightforward as they are based on the number of customers in each rate class or some derivative thereof. Developing the allocation factors for average use and commodity-related expenses is also relatively simple, although estimates of water usage for non-metered customers must be developed. Demand-related factors are more complex as they are based on peak flows of each customer class and this data is not measured on a customer-specific basis. Estimates developed herein are based on a review of peak water consumption flows of the entire system, monthly consumption volumes for each class and individual customers, and industry data. Supporting studies used in sizing the system are also used in support of developing these demand-related allocation factors.

Rate Design

After the revenue requirements have been allocated to each class, the existing rates are applied to the billing determinants to determine if the rates recover less than or more than the allocated cost of service. Rates are then adjusted accordingly.

The overall process just described is summarized in Figure 1 on the following page. The next section discusses the specific analysis conducted for the City.

Figure 1
The Process



Analysis

Billing Determinants and Allocators

The Wastewater Utility's billing determinants form the basis for that of the Wastewater Utility. For the most part, metered and unmetered water volumes are used to calculate wastewater billing volume. However, not all water customers discharge into the City's wastewater system, and several commercial accounts discharge only a small portion of their water usage into the City system. The remaining water, used for processing, is discharged directly into the customer's own outfall system.

The Wastewater Utility's billing determinants for the past four fiscal years are summarized in Table 1 below and provided in more detail in Appendix A. In the past three years, although the number of residential customers has decreased, commercial and industrial customers have increased, and total sales increased by almost 6 percent. Both water and wastewater billing volumes have been relatively stead over the past three years but showing slight upward trends.

Table 1
Historical Billing Determinants

	Fiscal Year Ending June 30,		
	2018	2019	2020
Number of Customers (Annual Average)			
Unmetered			
Single-Family	348	336	334
Multi-Family	5	5	5
Subtotal - Unmetered	353	341	339
Metered			
Commercial	242	255	260
Industrial	4	5	5
Subtotal - Metered	246	260	265
Total	599	602	604
Volume (000 Gallons)			
Unmetered*	26,110	25,265	25,149
Metered			
Commercial**	110,524	103,118	103,669
Industrial	57,832	75,805	77,242
Total	194,466	204,188	206,060
Water Sales (000 Gallons)			
Unmetered	26,257	25,399	25,218
Metered	965,216	1,003,470	975,416
Other	2,508	3,579	5,544
Total	993,981	1,032,448	1,006,178

* Unmetered use is based on 200 gallons per day per customer account
** Commercial volume net of credit for metered volume not discharged into the wastewater system

Based on conversations with City staff, the billing determinants for 2020 were used for the analysis with no adjustments.

The City uses an estimate of 200 gallons per day for unmetered usage. This is consistent with the City's estimate of unmetered water usage and appears to be reasonable.

Peak daily and peak hourly flows used in allocating costs to each customer class are derived from a review of individual billing data for metered customers and the analysis conducted for the Water Rate Study. Details of these allocation factors are presented in Appendix E of this report.

Revenue Requirements

The Wastewater Utility's expenses for the past three years and the budget for the current fiscal year are summarized in Table 2. Details for fiscal year ending June 30, 2020 and the current year budget are provided in Appendix B.

Expenses increased about eight percent from FY 2018 to FY 2019 and another three percent from FY 2019 to FY 2020. Budget expenses for FY 2021 are over 14 percent higher than the previous year. Much of the increase is attributed to increased labor and benefits expense, general supplies expense, and professional services, which can be controlled to some extent by the City. Other expenses that cannot be as readily controlled, such as insurance, electricity and others, do not appear to be adding large increase to the overall revenue requirements. Increases in labor and benefits expense alone accounts for almost 60 percent of the total increase in budget expenses for FY 2021.

Costs that vary with production levels form only a small part of the expense structure with most costs being considered fixed. Accordingly, the budget for FY 2021 forms the basis for the Test Year revenue requirement.

Table 2
Annual Operating Expenses

	Fiscal Year Ending June 30,			
	2018	2019	2020	2021
	Actual	Actual	Actual	Budget
Administrative				
Labor/Benefits	$ 303,255	$ 289,214	$ 292,497	$ 368,540
Administrative Operations	124,638	131,733	152,048	176,105
Depreciation	1,341,928	1,375,845	1,314,265	1,361,872
Administrative Overhead	19,530	21,852	21,852	21,852
Interest/Bad Debt	118,255	112,577	109,950	102,799
Subtotal	1,907,606	1,931,221	1,890,612	2,031,168
Wastewater Operations				
Labor/Benefits	778,124	575,790	772,779	1,005,270
Operations	628,199	978,939	1,011,911	1,191,025
Vehicle				
Labor/Benefits	13,406	115,116	16,714	21,485
Operations	3,333	1,645	5,214	8,475
Facilities				
Labor/Benefits	34,526	41,809	34,811	33,115
Operations	14,544	17,259	48,209	28,080
Total	3,379,738	3,661,779	3,780,250	4,318,618
Target Margin				-
Capital Expenditures				430,000
Less Other Income	(29,720)	(13,868)	(56,612)	(2,199,319)
Net Revenue Requirement	$ 3,350,018	$ 3,647,911	$ 3,723,638	2,549,299

In addition to meeting its expected expenses, the utility should typically set rates that result in positive net margins. Margins serve three purposes for municipal utilities:

1. Debt covenants may require certain levels of net operating margins.
2. A net margin helps provide some security in maintaining a utility's financial health in the event sales or expenses differ significantly from that assumed.
3. The equity built up with net margins can be used to fund capital expenditures and therefore minimize debt.

A target net margin is typically based on a utility's rate base, which is equal to the net plant in service plus an amount for working capital and other miscellaneous items. Other factors are also considered including future cash flows after debt service, capital expenditures, and debt covenants. Based on the Wastewater Utility's net plant in service, a minimal return on rate base of 4 percent yields a target margin of over $1.4 million, which is considered excessive. The Wastewater Utility's revenue requirements includes a $100,000 target margin, which is much more realistic.

Table 3 provides a summary of the adjusted Test Year revenue requirements used in performing the cost of service analysis. Details of these revenue requirements are provided in Appendix B. Two adjustments were made to the budgeted revenue requirements:

1. PERS Nonemployer Contributions were removed from Other Income and used to reduce labor/benefits expenses. Benefits expenses include both employer and employee PERS contributions, but the employee portions are not Utility expenses. Since the PERS Nonemployer Contributions represent the amount of employee contributions that are budgeted to be collected by the Utility, these amounts have been reclassified to reduce the related expense lines.
2. Budgeted capital expenditures of $430,000 were removed. Capital expenditures are not included in the revenue requirements. Instead, these investments are recovered over time through depreciation expense.
3. Budgeted Use of Unrestricted Net Assets and Transfers from the Special Revenue Fund totaling $2,100,206 was removed from Other Income. These are non-recurring revenues that are transferred to the Utility from the General Fund and the Special Revenue Fund to help cover revenue shortfalls.

Table 3
Revenue Requirement Summary

	Fiscal Year Ending June 30,		
	2021 Budget	Adjustments	Adjusted Rev Requirements
Administrative			
Labor/Benefits	$ 368,540	$ (10,884)	$ 357,656
Administrative Operations	176,105		176,105
Depreciation	1,361,872		1,361,872
Administrative Overhead	21,852		21,852
Interest/Bad Debt	102,799		102,799
Subtotal	2,031,168	(10,884)	2,020,284
Water Operations			
Labor/Benefits	1,005,270	(27,960)	977,310
Operations	1,191,025		1,191,025
Vehicle			
Labor/Benefits	21,485	(647)	20,838
Operations	8,475		8,475
Facilities			
Labor/Benefits	33,115	(971)	32,144
Operations	28,080		28,080
Total	4,318,618	(40,462)	4,278,156
Target Margin	-	100,000	100,000
Capital Expenditures	430,000	(430,000)	-
Less Other Income	(2,199,319)	2,140,668	(58,651)
Net Revenue Requirement	$ 2,549,299	$ 1,770,206	$ 4,319,505

Cost Allocation

Functionalization

Revenue requirements are functionalized through the City's account coding process.

Classification (Appendix C and D)

The functionalized revenue requirements were then classified pursuant to the guidelines established in the M1 manual. Specifically, for the Base-Extra Capacity Method, revenue requirements were classified as Base related, Extra Capacity related, and Customer related. For the Commodity Demand Method, revenue requirements were classified as Commodity related, Demand related, and Customer related.

Allocation (Appendix C and D)

The classified revenue requirements were then allocated based on each customer class' respective share of the classification. Allocation factors for commodity related revenue requirements are based on each class' sales volume and allocation factors for customer related revenue requirements are based on customer equivalents. Allocation factors for demand related revenue requirements are based on estimates of each class' respective maximum day demand and maximum hour demand using the analysis and findings of the Water Rate Study.

Based on the process described above, the revenue requirements were allocated to each customer class, and the allocation process is summarized in Table 4. Additional details of the allocation, and the steps leading to it, are provided in Appendix C and D. The highest cost per gallon of discharge is with the unmetered class. The commercial and industrial classes have similar costs per gallon, with the commercial class being slightly lower than the industrial.

Table 4
Allocation of Revenue Requirements

	Total	Residential	Commercial	Industrial
Base Extra Capacity Method				
Base	$ 2,673,561	$ 428,550	$ 1,766,567	$ 478,444
Extra Capacity	1,346,098	258,734	727,904	359,461
Piping	297,863	128,011	161,940	7,912
Direct	1,983	1,983	-	-
Total	$ 4,319,505	$ 817,279	$ 2,656,411	$ 845,816
Annual Volume (Mil Gal)	206	25.15	103.67	77.24
Cost ($/000 Gallon)	$ 20.96	$ 32.50	$ 25.62	$ 10.95
Commodity - Demand Method				
Commodity	$ 1,014,782	$ 162,661	$ 670,522	$ 181,599
Demand	3,004,877	534,524	1,784,669	685,684
Piping	297,863	128,011	161,940	7,912
Direct	1,983	1,983	-	-
Total	$ 4,319,505	$ 827,179	$ 2,617,131	$ 875,195
Annual Volume (Mil Gal)	206	25.15	103.67	77.24
Cost ($/000 Gallon)	$ 20.96	$ 32.89	$ 25.24	$ 11.33

Adequacy of Rates / Rate Design

Existing Rate Structure

The Wastewater Utility's rate structure over the past several years is shown in Table 5. Rates have increased over the past four years to phase in the rate increase that resulted from the last rate study.

Table 5
Existing Rates

Rate Class	FY18	FY19	FY20	FY21
Unmetered Residential (per unit)				
Service Charge ($/month)	105.40	109.61	111.80	114.04
Metered				
Commercial				
Service Charge ($/month)	19.29	20.06	20.46	20.87
Volume Charge ($/1000 Gal)	16.44	17.10	17.44	17.79
Industrial				
Service Charge ($/month)	19.29	20.06	20.46	20.87
Volume Charge ($/1000 Gal)	1.05	1.09	1.11	1.13

Projected Revenues – Existing Rates

Table 6, on the following page, provides a summary of the revenues projected to be collected based on the assumed billing determinants and existing rates. The projections summarized in the table indicate that existing rates must be increased an average of 75 percent to recover all revenue requirements (including the target margin of $100,000). On a class basis, all classes have rates set below their allocated cost of service. The commercial class is the closest to its allocated cost of service while the industrial class is significantly below its cost of service, requiring 1,700-1,800 percent increase to cover cost of service.

One of the challenges of the analysis is that all customer classes do not have a one-to-one correlation between water consumption and wastewater usage. For example, industrial customers use water for both domestic and processing purposes but only the domestic usage flows into the wastewater system, while water used for processing has a separate discharge stream. In order to account for this distinction, an industrial customer equivalent factor was developed to provide a reduction in water consumption that would be used in the development of the wastewater cost of service analysis. The calculations indicated that only approximately 36 percent of the industrial water usage was returned to the wastewater stream. Despite this scaling of estimated industrial usage, the cost of service analysis continued to indicate the industrial customers are significantly under-paying for service.

However, the lack of metering data for the unmetered class and the use of Water Utility metering data leads to imprecision in allocating costs. Furthermore, refined allocations of system components to the larger customers and refinement of the wastewater billing credits would most likely result in a shift of the cost responsibilities from industrial customers to commercial customers. Such refinements would require large amounts of staff and consultant time as well as detailed mapping data. To provide better precision in the future, it is recommended that wastewater meters be installed on the industrial class customers so that their contribution to the wastewater stream can be known and measurable.

Table 6
Test Year Net Revenues – Existing Rates

	Total	Residential	Commercial	Industrial
Revenues				
Customer Charge	$ 536,658	$ 470,187	$ 65,219	$ 1,252
Volume Charge	1,931,555	-	1,844,271	87,283
Total	$ 2,468,212	$ 470,187	$ 1,909,490	$ 88,536
Base Extra Capacity Method				
Revenue Requirements	$ 4,319,505	$ 817,279	$ 2,656,411	$ 845,816
Surplus (Deficiency)	$ (1,851,293)	$ (347,092)	$ (746,921)	$ (757,280)
Percent	-75.0%	-73.8%	-39.1%	-855.3%
Commodity - Demand Method				
Revenue Requirements	$ 4,319,505	$ 827,179	$ 2,617,131	$ 875,195
Surplus (Deficiency)	$ (1,851,293)	$ (356,992)	$ (707,641)	$ (786,659)
Percent	-75.0%	-75.9%	-37.1%	-888.5%

Table 7 compares the revenue requirements developed in this study with those developed in the most recent cost of service study and Table 8, on the following page, compares the customer counts and production data used in these studies. These tables provide some insight into the need for such a significant rate increase to recover all revenue requirements. Table 7 shows that the net revenue requirement increased between the prior study and this study by about $2.3 million and 110 percent. The largest increases were in the following categories: labor and benefits expense (over $520,000), depreciation expense (over $800,000), interest expense (over $100,000), wastewater operations expense (almost $680,000), and an increase in target margin ($100,000). While the revenue requirements have increased over 110 percent, Table 8 shows that customer counts have only increased by three percent and volume has decreased by one percent. Without a significant increase in customers or volume, the Utility must raise rates to cover increases in costs or operate at a deficit.

Table 7
Historical Revenue Requirement Comparison

	Fiscal Year Ending June 30,			
	2016 Adj Rev Requirements	2020 Adj Rev Requirements	Dollar Change	Percentage Change
Administrative				
Labor/Benefits	$ 280,970	$ 357,656	$ 76,686	27.3%
Administrative Operations	166,038	176,105	10,067	6.1%
Depreciation	559,527	1,361,872	802,345	143.4%
Administrative Overhead	16,379	21,852	5,473	33.4%
Interest/Bad Debt	2,676	102,799	100,123	100.0%
Subtotal	1,025,590	2,020,284	994,694	97.0%
Water Operations				
Labor/Benefits	547,212	977,310	430,098	78.6%
Operations	512,300	1,191,025	678,725	132.5%
Vehicle				
Labor/Benefits	17,363	20,838	3,475	20.0%
Operations	5,975	8,475	2,500	41.8%
Facilities				
Labor/Benefits	20,959	32,144	11,185	53.4%
Operations	10,377	28,080	17,703	170.6%
Total	2,139,776	4,278,156	2,138,380	99.9%
Target Margin	-	100,000	100,000	100.0%
Less Other Income	(78,374)	(58,651)	19,723	-25.2%
Net Revenue Requirement	$ 2,061,402	$ 4,319,505	$ 2,258,103	109.5%

Table 8
Historical Customer Count and Production Comparison

	Fiscal Year Ending June 30,			
	2016	2020	Change	Percent Change
Number of Customers (Annual Average)				
Unmetered				
Single-Family	356	334	(22)	-6.3%
Multi-Family	4	5	1	25.0%
Subtotal - Unmetered	360	339	(21)	-5.9%
Metered				
Commercial	223	260	37	16.8%
Industrial	4	5	1	25.0%
Subtotal - Metered	227	265	38	16.9%
Total	587	604	17	2.9%
Volume (000 Gallons)				
Unmetered	26,725	25,149	(1,576)	-5.9%
Metered				
Commercial	116,876	103,669	(13,207)	-11.3%
Industrial	66,798	77,242	10,444	15.6%
Subtotal - Metered	183,674	180,911	(2,763)	-1.5%
Total	367,348	206,060	(4,339)	-1.2%

* Unmetered use is based on 200 gallons per day per customer account

The budget for the fiscal year ending June 30, 2021 shows a budgeted net income of zero but after the adjustments described in the Analysis section above, the deficiency shown in Table 7 is over $1.85 million. The actual net loss in FY 2020 was over $1.3 million. The reason for the difference between the calculated deficiency and the prior year actual results are:

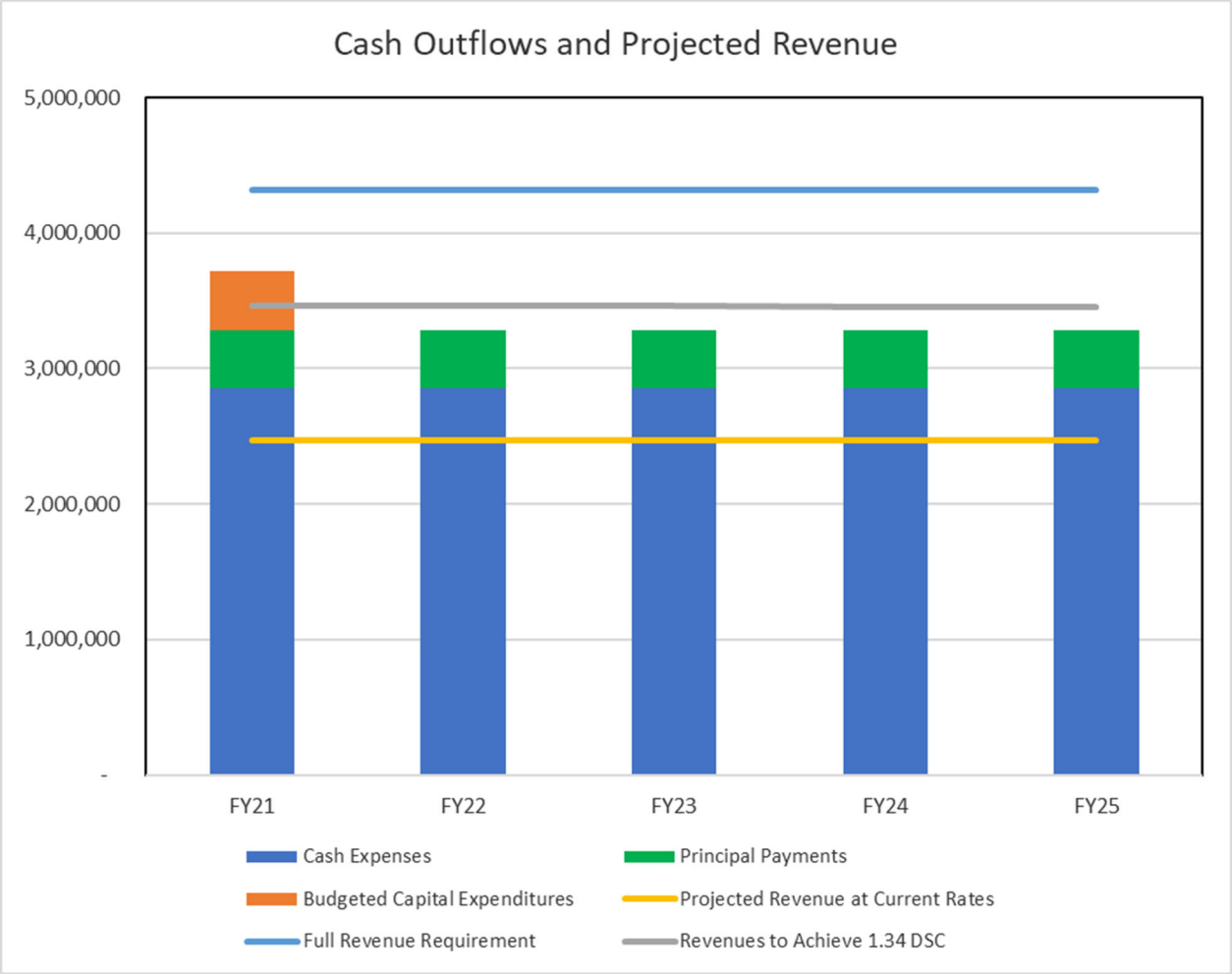
1. The revenue requirements summarized in Table 7 include a target margin of $100,000. No corresponding amount is included in the actual margin.
2. FY 2021 budgeted expenses were approximately $540,000 higher than FY 2020 actual expenses. The primary drivers in this increase were:
    a. Labor/Benefits expense was budgeted approximately $310,000 higher than FY 2020 actual
    b. Depreciation expense was budgeted approximately $45,000 higher than FY 2020 actual
    c. Wastewater Operations expense was budgeted approximately $180,000 higher than FY 2020 actual
3. Revenues at existing rates are about $55,000 higher than FY 2020 actual due to rate increases

Expenses in 2021 and thereafter are expected to increase due to inflationary effects on the utility's expense structure and an increase in depreciation as new assets are included in the system. Revenue deficits with the existing rates are, therefore, also expected to increase in the future absent load growth.

Figure 2, on the next page, shows that if sales volume and operating expenses remain at the level projected for FY 2021, with no rate increase, cash generated will not be sufficient to cover cash expenses (including interest) and debt principle payments. Additionally, no cash will be generated to pay for capital expenditures. The budgeted capital expenditures for FY 2021 are $430,000 and then none are budgeted through FY 2025. The graph also shows that if rates are increased to achieve a 1.34 DSC, enough cash will be generated to cover cash expenses, debt principle payments, and some of the budgeted capital expenditures, but not all of them. If rates are increased and sales equal the revenue requirements, enough cash will be generated to cover all projected cash outflows and allow the utility to set aside funds for additional future projects. The remaining amounts will need to be funded

through either debt, retained earnings, transfers from the general fund or special revenue fund, or a combination of these.

Figure 2
Cash Outflows and Projected Revenues



Alternate Cash Basis Revenue Requirement

Traditional ratemaking typically calculates revenue requirements on an income basis (as described in the Revenue Requirements section above). This method includes all operating expenses, interest on debt, and depreciation (a non-cash expense) in the revenue requirement. However, another way to look at the revenue requirement concept is on a cash basis. This method includes all operating expenses and interest on debt but rather than including non-cash depreciation expense, it includes principal payments instead. When evaluating the revenue requirement using this method, the debt service coverage ratio (DSC) can be used to define the utility's cash requirements. DSC is equal to the utility's earnings before interest, taxes, and depreciation, divided by its required debt service payments (principle and interest). Table 9 shows that the Water Utility's DSC based on projected revenues from current rates and the budgeted debt service payments for FY 2021 is (0.55). To achieve a DSC of 1.34, rates would need to be increased by 40 percent. Figure 2 shows that if sales volume and operating expenses remain at the level projected for FY 2021, with a rate increase to achieve a 1.34 DSC, cash generated should be sufficient to cover cash expenses (including interest) and debt principle payments however there will be little extra cash left to pay for capital expenditures.

Table 9
Alternate Cash Basis Revenue Requirement

	Total	Residential	Commercial	Industrial
Revenues				
Customer Charge	$ 536,658	$ 470,187	$ 65,219	$ 1,252
Volume Charge	1,931,555	-	1,844,271	87,283
Total	$ 2,468,212	$ 470,187	$ 1,909,490	$ 88,536
Minimum Required Cash Flow				
Full Revenue Requirement	$ 4,319,505	$ 827,179	$ 2,617,131	$ 875,195
Less:				
Depreciation	$ 1,361,872	$ 260,797	$ 825,140	$ 275,935
Interest Expense	102,799	19,686	62,284	20,829
Target Margin	100,000	19,150	60,589	20,261
Operating Expenses	$ 2,754,834	$ 527,546	$ 1,669,118	$ 558,170
FY 2021 Principal Payments	428,330	82,025	259,519	86,786
Interest on Long Term Debt	96,374	18,455	58,392	19,527
Minimum Required Cash Flow	$ 3,279,538	628,026	1,987,029	664,483
Achieved DSC	(0.55)			
Cash Basis Revenue Requirement				
Target DSC	1.34			
Target DSC Revenue Requirement	$ 3,455,497	$ 661,723	$ 2,093,640	$ 700,134
Surplus (Deficiency)	$ (987,285)	$ (191,536)	$ (184,150)	$ (611,598)
Percent	-40.0%	-40.7%	-9.6%	-690.8%

Rate Options

As mentioned before, it is noted that cost of service studies are somewhat imprecise in nature, especially for water and wastewater services. Consequently, rate adjustments need not be set precisely at cost of service to be fair and equitable. Several rate options are discussed below for the City's consideration and are summarized on Table 10. The average monthly customer impact is presented on Table 11 and each option's effect on rates is summarized on Table 12. With each option, the Utility could choose to phase the rate increases in over a number of years to ease the transition. During the interim years, the deficiency in the revenue requirements would need to be covered with cash reserves, transfers from the general fund, or some other source of cash.

Rate Option 1
Increase rates to meet a 1.34 target DSC, resulting in revenues approximately equal to the cash basis revenue requirement. This could be accomplished by:

Option 1a
Increase residential unmetered rates by 40.7 percent, commercial metered rates by 9.6 percent, and industrial metered rates by 690.8 percent based on cost of service study results.

Option 1b
Increase rates across-the-board by 40.0 percent.

Option 1c
Increase residential unmetered and commercial metered rates by 38.5 percent and industrial metered rates by 80 percent. This option is a hybrid of Option 1a and 1b and recognizes that the industrial metered class is contributing significantly less revenue than its share of expenses but attempts to balance this with concerns about price sensitivity among this customer class.

Rate Option 2
Adjust rates to meet the full revenue requirement, based on the cost of service study results. Increase unmetered residential rates by 75.9 percent, metered commercial rates by 37.1 percent, and increase metered industrial rates by 888.5 percent, resulting in revenues approximately equal to the full revenue requirement, by class.

Rate Option 3
Implement a one percent sales tax to fund utility infrastructure to help fund capital expenditures. The total estimated revenues from a one percent sales tax would be approximately $2.67 million, based on FY 2021 budget projections for the existing one percent Special Revenue sales tax. This revenue could be split between the City of Unalaska utilities to fund utility infrastructure needs and specific projects at the direction of the City Council.

Combine Rate Option 1 and 3
Options 1 and 3 could be combined with revenues from Option 1 providing cash to fund operating expenses and debt payments and revenues from Option 3 providing cash for capital projects.

Table 10
Rate Options

	Total	Residential	Commercial	Industrial
Revenues at Existing Rates	$ 2,468,212	$ 470,187	$ 1,909,490	$ 88,536
Full Revenue Requirement (Full RR)				
Allocated Costs (Commodity Demand)	$ 4,319,505	$ 827,179	$ 2,617,131	$ 875,195
Surplus (Deficiency)	$ (1,851,293)	$ (356,992)	$ (707,641)	$ (786,659)
Required Increase (Decrease)	75.0%	75.9%	37.1%	888.5%
Percent of Total	100%	19.15%	60.59%	20.26%
Cash Basis Revenue Requirement (Target DSC RR)				
Allocated Costs (Commodity Demand)	$ 3,455,497	$ 661,723	$ 2,093,640	$ 700,134
Surplus (Deficiency)	$ (987,285)	$ (191,536)	$ (184,150)	$ (611,598)
Required Increase (Decrease)	40.0%	40.7%	9.6%	690.8%
Percent of Total	100%	19.15%	60.59%	20.26%
Option 1a: 1.34 DSC; Based on COSS				
Proposed Adjustment		40.7%	9.6%	690.8%
After Proposed Adjustment:				
Revenues at Proposed Rates	$ 3,455,497	$ 661,723	$ 2,093,640	$ 700,134
Surplus (Deficiency)	$ 0	$ 0	$ 0	$ (0)
Percent of Total	0.0%	19.15%	60.59%	20.26%
Option 1b: 1.34 DSC; Across the Board increase				
Proposed Adjustment		40.0%	40.0%	40.0%
After Proposed Adjustment:				
Revenues at Proposed Rates	$ 3,455,497	$ 658,262	$ 2,673,286	$ 123,950
Surplus (Deficiency)	$ 0	$ (3,461)	$ 579,646	$ (576,184)
Percent of Total	0.0%	19.05%	77.36%	3.59%
Option 1c: 1.34 DSC; 80% Industrial increase, Equal increase for Residential and Commercial				
Proposed Adjustment		38.5%	38.5%	80.0%
After Proposed Adjustment:				
Revenues at Proposed Rates	$ 3,455,497	$ 651,264	$ 2,644,869	$ 159,364
Surplus (Deficiency)	$ 0	$ (10,459)	$ 551,229	$ (540,770)
Percent of Total	0.0%	18.85%	76.54%	4.61%
Option 2:No Deficiency; Based on COSS results				
Proposed Adjustment		75.9%	37.1%	888.5%
After Proposed Adjustment:				
Revenues at Proposed Rates	$ 4,319,505	$ 827,179	$ 2,617,131	$ 875,195
Surplus (Deficiency)	$ (0)	$ (0)	$ 0	$ 0
Percent Above (Below) Cost of Service	0.0%	0.0%	0.0%	0.0%

Table 11
Average Monthly Bill Impacts

	Average Monthly Increase in Bill		
	Residential	Commercial	Industrial
Option 1a: 1.34 DSC; Based on COSS			
Proposed Adjustment	$ 46.46	$ 58.93	$ 10,193.31
After Proposed Adjustment:			
Revenues at Proposed Rates			
Surplus (Deficiency)			
Percent of Total			
Option 1b: 1.34 DSC; Across the Board increase			
Proposed Adjustment	$ 45.62	$ 244.41	$ 590.24
After Proposed Adjustment:			
Revenues at Proposed Rates			
Surplus (Deficiency)			
Percent of Total			
Option 1c: 1.34 DSC; 80% Industrial increase, Equal increase for Residential and Commercial			
Proposed Adjustment	$ 43.92	$ 235.32	$ 1,180.48
After Proposed Adjustment:			
Revenues at Proposed Rates			
Surplus (Deficiency)			
Percent of Total			
Option 2:No Deficiency; Based on COSS results			
Proposed Adjustment	$ 86.59	$ 226.45	$ 13,110.99
After Proposed Adjustment:			
Revenues at Proposed Rates			
Surplus (Deficiency)			
Percent Above (Below) Cost of Service			

Table 12
Rate Effects

	Customer Charge ($/month)					Volume ($/thousand gallons)				
Rate Class	Current	Option 1a	Option 1b	Option 1c	Option 2	Current	Option 1a	Option 1b	Option 1c	Option 2
Unmetered Residential	114.04	160.50	159.66	157.96	200.63	-	-	-	-	-
Metered:										
Commercial	20.87	22.88	29.22	28.91	28.60	17.79	19.51	24.91	24.64	24.38
Industrial - Method 1	20.87	165.04	29.22	37.57	206.30	1.13	8.94	1.58	2.03	11.17
		Change to Customer Charge					Change to Volume Charge			
		Option 1a	Option 1b	Option 1b	Option 2		Option 1a	Option 1b	Option 1a	Option 2
Unmetered Residential		46.46	45.62	43.92	86.59		-	-	-	-
Metered:										
Commercial		2.01	8.35	8.04	7.73		1.72	7.12	6.85	6.59
Industrial - Method 1		144.17	8.35	16.70	185.43		7.81	0.45	0.90	10.04

Recommendations

The findings of the analysis herein are:

1. Although expenses have increased by almost 100 percent since the last cost of service study was performed, the number of customers hasn't changed significantly, and the volume of sales has decreased slightly.
2. Due to the significant increase in expenses without significant changes in sales, rates for all customer classes are set less than cost of service.
3. Revenues from commercial sales account for 77 percent of total revenues. Since rates for that class are less than cost of service, an overall revenue shortfall is projected.
4. The minimum cash flow required by the utility, prior to capital expenditures, is estimated to be approximately $3.8 million per year and the projected sales revenues are $2.5 million per year.

Based on the outcome of this study, it is recommended that wastewater rates be increased at this time. Cash flow cannot be supported at existing rates at this point and both near-term and long-term operations call for a rate increase. Capital improvements necessary to maintain the integrity of the system must be funded. Those that are smaller are probably best funded from cash generated through revenues, and while larger additions might be funded from debt or grants, the City's willingness to set appropriate rates will facilitate the ability to secure external funding.

It is also recommended the City install wastewater flow meters on industrial class customers so that their contribution to the wastewater stream can be known and measurable. Indications are that the industrial class is significantly undercharged and greater precision in data can allow for a better decision regarding rates in future studies.

Appendix A

Historical Billing Determinants

Billing Determinant Summary

Assumed Use per Unmetered (GPD)		
Residental	200	
Duplex	200	/unit

	Customers			Volume		
	FY 2018	FY 2019	FY 2020	FY 2018	FY 2019	FY 2020
Average Number of Customers						
Residential						
Single Family	348	336	334	25,380,200	24,535,400	24,419,000
Duplex	5	5	5	730,000	730,000	730,000
Subtotal - Residential	353	341	339	26,110,200	25,265,400	25,149,000
Commercial (Volume net of Credit)	242	255	260	110,524,018	103,118,237	103,668,975
Industrial	4	5	5	57,832,000	75,805,000	77,242,000
Total	599	602	604	194,466,218	204,188,637	206,059,975

	Existing Rates				Revenue		
	Customer	Volume	Cust - Months	Volume	Customer	Demand	Total
Residential							
Single Family	114.04		4,003	24,419,000	$ 456,502	$ -	$ 456,502
Duplex	114.04		60	730,000	13,685	-	13,685
Subtotal - Res							
Commercial	20.87	17.79	3,125	103,668,975	65,219	1,844,271	1,909,490
Industrial	20.87	1.13	60	77,242,000	1,252	87,283	88,536
					$ 536,658	$ 1,931,555	$ 2,468,212

Commercial/Industrial Customer Equivalents

					Commercial		Industrial	
Meter (in)	Meter / 5/8 (relative to 5/8)	Water Customers	WW Industrial	Remove Customers	Customers	Equiv x Cust	Customers	Equiv x Cust
0.625	1.000	7			7	7.0	-	-
0.750	1.200	132			132	158.4	-	-
1.000	1.600	63			63	100.8	-	-
1.500	2.400	10			10	24.0	-	-
2.000	3.200	52			52	166.4	-	-
3.000	4.800	14			14	67.2	-	-
4.000	6.400	9			9	57.6	-	-
6.000	9.600	5			5	48.0	-	-
8.000	12.800	2			2	25.6	-	-
10.000	16.000	2	2		-	-	2	32.0
12.000	19.200	-			-	-	-	-
		296				655.0		32.0

Appendix B

Historical and Projected Revenue Requirements

Historic and Projected Revenue Requirements

	FY 2018 (Actual)	FY 2019 (Actual)	FY 2020 (Actual)	FY 2021 (Budget)	Normalized Budget
Administration					
Labor					
Salaries and Wages - Admin	$ 181,701	$ 194,794	$ 179,268	$ 214,003	$ 214,003
Temporary Employees	2,479	1,023	539	2,594	2,594
Overtime - Admin	929	258	424	749	749
Benefits and PR Taxes - Admin	118,146	93,137	128,881	151,194	140,310
Subtotal - Labor and Benefits	303,255	289,212	309,112	368,540	357,656
Operations					
Legal Services	9,698	653	28,281	10,000	10,000
Engineering/Architectural Svs	2,035	2,596	4,382	6,200	6,200
Training Services	954	350	-	1,000	1,000
Education Reimbursement	2,796	-	-	5,656	5,656
Other Professional Svs	1,934	936	3,195	3,600	3,600
Software/Hardware Support	15,281	19,939	15,413	26,905	26,905
Water/Sewage	481	470	472	455	455
Solid Waste	2,572	730	879	1,215	1,215
Custodial Services/Supplies	2,326	2,426	2,524	4,509	4,509
Repairs/Maintenance Services	309	460	344	1,000	1,000
Building/Land Rental	-	-	-	-	-
General Insurance	34,375	39,995	46,496	62,336	62,336
Telephone / Fax / TV	1,951	3,089	3,486	1,321	1,321
Network/Internet	8,468	8,444	8,442	16,100	16,100
Travel and Related Costs	2,562	2,976	603	1,500	1,500
Banking / Credit Card Fees	4,420	5,322	4,700	2,000	2,000
Postal Services	1,668	(2,043)	950	1,710	1,710
Employee Moving Costs	-	4,766	-	-	-
General Supplies	850	250	251	500	500
Safety Related Items	-	785	611	-	-
Office Supplies	1,212	1,255	747	2,186	2,186
Computer Hardware / Software	8,655	16,751	12,756	6,629	6,629
Electricity	7,476	8,389	5,961	9,518	9,518
Heating Oil	11,936	10,688	9,455	8,102	8,102
Gasoline for Vehicles	668	674	409	1,963	1,963
Business Meals	-	48	-	200	200
Food/Beverage/Employee Appreciat	1,490	1,513	1,441	1,000	1,000
Books/Periodicals	522	272	247	500	500
Other	(1)	-	2	-	-
Subtotal - Administrative Ops	124,638	131,734	152,047	176,105	176,105
Other					
Depreciation	1,341,928	1,375,845	1,314,265	1,361,872	1,361,872
PILOT	-	-	-	-	-
Bad Debt	-	907	18	-	-
Admin OH	19,530	21,852	21,852	21,852	21,852
Interest	118,255	111,670	109,932	102,799	102,799
Subtotal - Administrative Other	1,479,713	1,510,274	1,446,067	1,486,523	1,486,523
Total Administrative	1,907,606	1,931,220	1,907,226	2,031,168	2,020,284

Historic and Projected Revenue Requirements

	FY 2018 (Actual)	FY 2019 (Actual)	FY 2020 (Actual)	FY 2021 (Budget)	Normalized Budget
Wastewater Operations					
Labor					
Salaries - Operations	435,462	342,749	436,951	505,140	505,140
Temporary Employees	30,336	26,714	16,021	57,428	57,428
Overtime - Operations	6,444	24,923	22,704	40,000	40,000
Benefits - Operations	305,882	181,103	124,916	402,702	374,742
Subtotal - Labor and Benefits	778,124	575,489	600,592	1,005,270	977,310
Operations					
Engineering	-	-	-	2,000	2,000
Training	5,239	3,624	4,976	5,500	5,500
Other Professional	52,238	135,917	178,832	213,500	213,500
Computer	9,704	1,790	1,930	12,000	12,000
Sampling	13,653	13,760	6,173	14,400	14,400
Other Technical Services	229	125	-	250	250
Water/Sewage	11,548	11,787	15,413	13,000	13,000
Solid Waste	96,647	138,255	166,034	130,000	130,000
Repairs/Maintenance	1,585	28,255	6,939	65,000	65,000
Construction Services	-	-	-	6,500	6,500
Telephone / Fax	6,865	6,799	7,923	8,000	8,000
Network/Internet	-	-	-	-	-
Radio	-	7,731	-	1,500	1,500
Advertising	-	75	-	250	250
Travel	2,003	8,667	-	7,200	7,200
Postage	-	-	-	-	-
Dues	100	-	-	600	600
Permit Fees	5,420	9,606	8,763	9,000	9,000
Employee Moving Costs	-	1,513	-	-	-
Other	-	-	-	-	-
General Supplies	71,440	64,775	76,631	111,225	111,225
Safety Related Items	666	7,366	32,886	9,500	9,500
Lab Supplies	17,297	7,654	16,914	14,200	14,200
Sand/Gravel/Rock	-	-	-	-	-
Chemicals	120,056	245,583	272,551	330,000	330,000
Office Supplies	-	342	233	450	450
Facility Maintenance Supplies	-	-	-	-	-
Computer	552	283	2,053	1,000	1,000
Electricity	111,357	134,581	100,675	122,500	122,500
Propane	985	991	735	4,500	4,500
Heating Fuel	97,320	96,658	75,010	103,000	103,000
Fuel - Vehicles	2,211	1,837	1,372	3,500	3,500
Fuel - Equipment	961	883	1,367	1,400	1,400
Food/Beverage/Employee Appreciat	-	-	96	800	800
Books/Periodicals	121	414	-	250	250
Other	2	(1)	(1)	-	-
Subtotal - Operations Ops	628,199	929,270	977,505	1,191,025	1,191,025
Total Wastewater Operations	1,406,323	1,504,759	1,578,097	2,196,295	2,168,335

Historic and Projected Revenue Requirements

	FY 2018 (Actual)	FY 2019 (Actual)	FY 2020 (Actual)	FY 2021 (Budget)	Normalized Budget
Vehicle and Equipment					
Labor					
Salaries - Operations	8,119	10,023	10,451	12,255	12,255
Overtime - Operations	11	-	34	365	365
Benefits - Operations	5,276	5,093	7,179	8,865	8,218
Subtotal - Labor and Benefits	13,406	15,116	17,664	21,485	20,838
Operations					
Repairs/Maintenance	-	112	190	300	300
Construction Services	-	-	-	-	-
General Supplies	-	-	30	675	675
Machinery / Vehicle Parts	3,333	1,533	4,993	7,500	7,500
Other	-	(1)	1	-	-
Subtotal - Vehicles/Equipment Ops	3,333	1,644	5,214	8,475	8,475
Total Vehicle and Equipment	16,739	16,760	22,878	29,960	29,313
Building R & M					
Labor					
Salaries - Operations	16,002	22,799	18,543	13,913	13,913
Temporary Employees - Operations	571	368	77	-	-
Overtime - Operations	3,545	3,547	2,850	5,264	5,264
Benefits - Operations	14,408	15,095	15,249	13,938	12,967
Subtotal - Labor and Benefits	34,526	41,809	36,719	33,115	32,144
Operations					
Other Professional	-	610	11,290	-	-
Repairs/Maintenance	8,755	5,788	14,455	15,780	15,780
Construction Services	-	-	16,050	5,000	5,000
General Supplies	579	166	138	2,500	2,500
Safety Related Items	-	1,041	22	-	-
Facility Maint Supplies	5,209	9,654	6,255	4,800	4,800
Other	-	-	-	-	-
Subtotal - Building R&M Ops	14,543	17,259	48,210	28,080	28,080
Total Building R & M	$ 49,069	$ 59,068	$ 84,929	$ 61,195	$ 60,224
Total Expenses	3,379,737	3,511,807	3,593,130	4,318,618	4,278,156
Net Margin	388,061	669,477	-	-	100,000
Capital Expenditures	2,959	6,097	-	430,000	-
Less Other Revenues					
PERS Nonemployer Contributions	(33,012)	(12,080)	(53,818)	(40,462)	-
Vactor Services	(43,126)	(8,113)	(17,208)	(49,053)	(49,053)
Other Services	(35,500)	(57,563)	(28,761)	(7,935)	(7,935)
Late Fees	(1,364)	(1,225)	(2,104)	(1,663)	(1,663)
Special Assess Pen & Int	(246)	(63)	-	-	-
Transfers from Spec Rev Fund	(1,072,156)	(1,032,021)	(998,248)	(1,009,265)	-
Budgeted Use of Unrestricted Net A	-	-	-	(1,090,941)	-
Less Total Other Revenues	(1,185,404)	(1,111,065)	(1,100,139)	(2,199,319)	(58,651)
Net Revenue Requirements	**$ 2,585,353**	**$ 3,076,316**	**$ 2,492,991**	**$ 2,549,299**	**$ 4,319,505**

Appendix C

Cost of Service Model
(Base-Extra Capacity Method)

Allocation of Revenue Requirement
Base-Extra Capacity Method

Base-Extra Capacity (BEC) Method

	Allocation	Description	Total	3 Un-Metered	4 Metered Large	5 Metered Other	6 Other	7 Other
Base	A.01.01	Avg Demand/Day	2,673,561	428,550	1,766,567	478,444	-	-
Excess Capacity								
Excess Max Day	A.02.01	Excess - Day	1,156,888	208,629	611,981	336,278	-	-
Excess Max Hr	A.02.02	Excess - Hour	189,210	50,105	115,922	23,183	-	-
Customers								
Number	A.05.01	Customers	-	-	-	-	-	-
Equivalents	A.05.02	Customer Equivalents	-	-	-	-	-	-
Piping	A.03.01	Piping Dist	297,863	128,011	161,940	7,912	-	-
Direct 1	A.10.01	Direct Un-Metered	1,983	1,983	-	-	-	-
			$ 4,319,505	$ 817,279	$ 2,656,411	$ 845,816	$ -	$ -
Revenues From Existing Rates								
Customer Charges				$ 470,187	$ 65,219	$ 1,252		
Volume Charges				-	1,844,271	87,283		
Total			$ 2,468,212	$ 470,187	$ 1,909,490	$ 88,536	$ -	$ -
Surplus (Deficiency)			$ (1,851,293)	$ (347,092)	$ (746,921)	$ (757,280)	$ -	$ -
Percent of Revenues from Existing Rates			-75.0%	-73.8%	-39.1%	-855.3%	N/A	N/A
Volume (million gallons/year)				25.1	103.7	28.1		
				0.0325	0.0256	0.0301		

Classification of Revenue Requirement
Base-Extra Capacity Method

Base-Extra Capacity (BEC) Method			BY 2021 Adopted Budget	Adjustment	Revenue Requirement	3 Base	4 Demand	5 Demand	6 Customers	7 Customers	8 Piping	9 Direct 1
							Excess Max Day	Excess Max Hr	Number	Equivalents		
Administration												
Labor												
Salaries and Wages - Admin	C.10.07	Other Operating Labor	$ 214,003		$ 214,003	148,945	50,912	14,146	-	-	-	-
Temporary Employees	C.10.07	Other Operating Labor	2,594		2,594	1,805	617	171	-	-	-	-
Overtime - Admin	C.10.07	Other Operating Labor	749		749	521	178	50	-	-	-	-
Benefits and PR Taxes - Admin	C.10.07	Other Operating Labor	151,194	(10,884)	140,310	97,655	33,380	9,275	-	-	-	-
Subtotal - Labor and Benefits			368,540	(10,884)	357,656	248,926	85,087	23,643	-	-	-	-
Operations												
Legal Services	C.01.01	Base	10,000		10,000	10,000	-	-	-	-	-	-
Engineering/Architectural Svs	C.01.01	Base	6,200		6,200	6,200	-	-	-	-	-	-
Training Services	C.01.01	Base	1,000		1,000	1,000	-	-	-	-	-	-
Education Reimbursement	C.01.01	Base	5,656		5,656	5,656	-	-	-	-	-	-
Other Professional Svs	C.01.01	Base	3,600		3,600	3,600	-	-	-	-	-	-
Software/Hardware Support	C.01.01	Base	26,905		26,905	26,905	-	-	-	-	-	-
Water/Sewage	C.01.01	Base	455		455	455	-	-	-	-	-	-
Solid Waste	C.01.01	Base	1,215		1,215	1,215	-	-	-	-	-	-
Custodial Services/Supplies	C.10.03	Buildings	4,509		4,509	2,657	1,852	-	-	-	-	-
Repairs/Maintenance Services	C.10.03	Buildings	1,000		1,000	589	411	-	-	-	-	-
Building/Land Rental	C.00.00	-	-		-	-	-	-	-	-	-	-
General Insurance	C.10.02	Net Plant in Service	62,336		62,336	32,627	22,554	475	-	-	6,680	-
Telephone / Fax / TV	C.01.01	Base	1,321		1,321	1,321	-	-	-	-	-	-
Network/Internet	C.01.01	Base	16,100		16,100	16,100	-	-	-	-	-	-
Travel and Related Costs	C.01.01	Base	1,500		1,500	1,500	-	-	-	-	-	-
Banking / Credit Card Fees	C.05.01	Direct 1	2,000		2,000	-	-	-	-	-	-	2,000
Postal Services	C.01.01	Base	1,710		1,710	1,710	-	-	-	-	-	-
General Supplies	C.01.01	Base	500		500	500	-	-	-	-	-	-
Office Supplies	C.01.01	Base	2,186		2,186	2,186	-	-	-	-	-	-
Computer Hardware / Software	C.01.01	Base	6,629		6,629	6,629	-	-	-	-	-	-
Electricity	C.02.02	Base/Max Day/Max Hr	9,518		9,518	4,911	3,424	1,183	-	-	-	-
Heating Oil	C.10.03	Buildings	8,102		8,102	4,774	3,328	-	-	-	-	-
Gasoline for Vehicles	C.10.05	Vehicles Equip - Non Labor	1,963		1,963	1,963	-	-	-	-	-	-
Business Meals	C.01.01	Base	200		200	200	-	-	-	-	-	-
Food/Beverage/Employee Appreciat	C.01.01	Base	1,000		1,000	1,000	-	-	-	-	-	-
Books/Periodicals	C.01.01	Base	500		500	500	-	-	-	-	-	-
Other	C.00.00	-	-		-	-	-	-	-	-	-	-
Subtotal - Administrative Ops			176,105	-	176,105	134,198	31,570	1,657	-	-	6,680	2,000
Other												
Depreciation	C.10.10	Depr Expense	1,361,872		1,361,872	639,647	437,367	12,903	-	-	271,955	-
PILOT	C.10.02	Net Plant in Service	-		-	-	-	-	-	-	-	-
Bad Debt	C.00.00	-	-		-	-	-	-	-	-	-	-
Admin OH	C.10.09	Total Exp Before Other Revenues	21,852		21,852	13,575	5,804	976	-	-	1,487	10
Interest	C.10.02	Net Plant in Service	102,799		102,799	53,805	37,195	783	-	-	11,016	-
Subtotal - Administrative Other			1,486,523	-	1,486,523	707,027	480,366	14,662	-	-	284,458	10
Total Administrative			2,031,168	(10,884)	2,020,284	1,090,151	597,023	39,962	-	-	291,138	2,010

Classification of Revenue Requirement
Base-Extra Capacity Method

Base-Extra Capacity (BEC) Method			BY 2021 Adopted Budget	Adjustment	Revenue Requirement	3 Base	4 Demand	5 Demand	6 Customers	7 Customers	8 Piping	9 Direct 1
							Excess Max Day	Excess Max Hr	Number	Equivalents		
Wastewater Operations												
Labor												
Salaries - Operations	C.10.04	WW Ops - Non Labor	505,140		505,140	350,074	119,864	35,202	-	-	-	-
Temporary Employees	C.10.04	WW Ops - Non Labor	57,428		57,428	39,799	13,627	4,002	-	-	-	-
Overtime - Operations	C.10.04	WW Ops - Non Labor	40,000		40,000	27,721	9,492	2,788	-	-	-	-
Benefits - Operations	C.10.04	WW Ops - Non Labor	402,702	(27,960)	374,742	259,705	88,922	26,115	-	-	-	-
Subtotal - Labor and Benefits			1,005,270	(27,960)	977,310	677,298	231,905	68,107	-	-	-	-
Operations												
Engineering	C.02.02	Base/Max Day/Max Hr	2,000		2,000	1,032	719	249	-	-	-	-
Training	C.01.01	Base	5,500		5,500	5,500	-	-	-	-	-	-
Other Professional	C.02.02	Base/Max Day/Max Hr	213,500		213,500	110,168	76,805	26,528	-	-	-	-
Computer	C.01.01	Base	12,000		12,000	12,000	-	-	-	-	-	-
Sampling	C.01.01	Base	14,400		14,400	14,400	-	-	-	-	-	-
Other Technical Services	C.01.01	Base	250		250	250	-	-	-	-	-	-
Water/Sewage	C.01.01	Base	13,000		13,000	13,000	-	-	-	-	-	-
Solid Waste	C.01.01	Base	130,000		130,000	130,000	-	-	-	-	-	-
Repairs/Maintenance	C.01.01	Base	65,000		65,000	65,000	-	-	-	-	-	-
Construction Services	C.01.01	Base	6,500		6,500	6,500	-	-	-	-	-	-
Telephone / Fax	C.01.01	Base	8,000		8,000	8,000	-	-	-	-	-	-
Network/Internet	C.01.01	Base	-		-	-	-	-	-	-	-	-
Radio	C.01.01	Base	1,500		1,500	1,500	-	-	-	-	-	-
Advertising	C.01.01	Base	250		250	250	-	-	-	-	-	-
Travel	C.01.01	Base	7,200		7,200	7,200	-	-	-	-	-	-
Postage	C.01.01	Base	-		-	-	-	-	-	-	-	-
Dues	C.01.01	Base	600		600	600	-	-	-	-	-	-
Permit Fees	C.01.01	Base	9,000		9,000	9,000	-	-	-	-	-	-
Other	C.00.00	-	-		-	-	-	-	-	-	-	-
General Supplies	C.01.01	Base	111,225		111,225	111,225	-	-	-	-	-	-
Safety Related Items	C.01.01	Base	9,500		9,500	9,500	-	-	-	-	-	-
Lab Supplies	C.01.01	Base	14,200		14,200	14,200	-	-	-	-	-	-
Sand/Gravel/Rock	C.01.01	Base	-		-	-	-	-	-	-	-	-
Chemicals	C.02.02	Base/Max Day/Max Hr	330,000		330,000	170,283	118,715	41,003	-	-	-	-
Office Supplies	C.01.01	Base	450		450	450	-	-	-	-	-	-
Facility Maintenance Supplies	C.00.00	-	-		-	-	-	-	-	-	-	-
Computer	C.01.01	Base	1,000		1,000	1,000	-	-	-	-	-	-
Electricity	C.02.02	Base/Max Day/Max Hr	122,500		122,500	63,211	44,068	15,221	-	-	-	-
Propane	C.01.01	Base	4,500		4,500	4,500	-	-	-	-	-	-
Heating Fuel	C.10.03	Buildings	103,000		103,000	60,690	42,310	-	-	-	-	-
Fuel - Vehicles	C.10.05	Vehicles Equip - Non Labor	3,500		3,500	3,500	-	-	-	-	-	-
Fuel - Equipment	C.10.05	Vehicles Equip - Non Labor	1,400		1,400	1,400	-	-	-	-	-	-
Food/Beverage/Employee Appreciat	C.01.01	Base	800		800	800	-	-	-	-	-	-
Books/Periodicals	C.01.01	Base	250		250	250	-	-	-	-	-	-
Other	C.00.00	-	-		-	-	-	-	-	-	-	-
Subtotal - Operations Ops			1,191,025	-	1,191,025	825,408	282,617	83,000	-	-	-	-
Total Wastewater Operations			2,196,295	(27,960)	2,168,335	1,502,706	514,523	151,106	-	-	-	-

Classification of Revenue Requirement
Base-Extra Capacity Method

Base-Extra Capacity (BEC) Method			BY 2021 Adopted Budget	Adjustment	Revenue Requirement	3 Base	4 Demand Excess Max Day	5 Demand Excess Max Hr	6 Customers Number	7 Customers Equivalents	8 Piping	9 Direct 1
Vehicle and Equipment												
Labor												
Salaries - Operations	C.10.05	Vehicles Equip - Non Labor	12,255		12,255	12,255	-	-	-	-	-	-
Overtime - Operations	C.10.05	Vehicles Equip - Non Labor	365		365	365	-	-	-	-	-	-
Benefits - Operations	C.10.05	Vehicles Equip - Non Labor	8,865	(647)	8,218	8,218	-	-	-	-	-	-
Subtotal - Labor and Benefits			21,485	(647)	20,838	20,838	-	-	-	-	-	-
Operations												
Repairs/Maintenance	C.01.01	Base	300		300	300	-	-	-	-	-	-
Construction Services	C.01.01	Base	-		-	-	-	-	-	-	-	-
General Supplies	C.01.01	Base	675		675	675	-	-	-	-	-	-
Machinery / Vehicle Parts	C.01.01	Base	7,500		7,500	7,500	-	-	-	-	-	-
Other	C.01.01	Base			-	-	-	-	-	-	-	-
Subtotal - Vehicles/Equipment Ops			8,475	-	8,475	8,475	-	-	-	-	-	-
Total Vehicle and Equipment			29,960	(647)	29,313	29,313	-	-	-	-	-	-
Building R & M												
Labor												
Salaries - Operations	C.10.06	Bldg R&M - Non Labor	13,913		13,913	8,198	5,715	-	-	-	-	-
Overtime - Operations	C.10.06	Bldg R&M - Non Labor	5,264		5,264	3,102	2,162	-	-	-	-	-
Benefits - Operations	C.10.06	Bldg R&M - Non Labor	13,938	(971)	12,967	7,640	5,327	-	-	-	-	-
Subtotal - Labor and Benefits			33,115	(971)	32,144	18,940	13,204	-	-	-	-	-
Operations												
Repairs/Maintenance	C.10.03	Buildings	15,780		15,780	9,298	6,482	-	-	-	-	-
Construction Services	C.10.03	Buildings	5,000		5,000	2,946	2,054	-	-	-	-	-
General Supplies	C.10.03	Buildings	2,500		2,500	1,473	1,027	-	-	-	-	-
Facility Maint Supplies	C.10.03	Buildings	4,800		4,800	2,828	1,972	-	-	-	-	-
Other	C.00.00	-	-		-	-	-	-	-	-	-	-
Subtotal - Building R&M Ops			28,080	-	28,080	16,545	11,535	-	-	-	-	-
Total Building R & M			$ 61,195	$ (971)	$ 60,224	$ 35,485	$ 24,739	$ -	$ -	$ -	$ -	$ -
Total Expenses			4,318,618		4,278,156	2,657,655	1,136,284	191,068	-	-	291,138	2,010
Net Margin	C.10.02	Net Plant in Service	-	100,000	100,000	52,340	36,182	761	-	-	10,716	-
Capital Expenditures	C.00.00	-	430,000	(430,000)	-	-	-	-	-	-	-	-
Less Other Revenues												
PERS Nonemployer Contributions	C.10.09	Total Exp Before Other Revenues	(40,462)	40,462	-	-	-	-	-	-	-	-
Vactor Services	C.10.09	Total Exp Before Other Revenues	(49,053)		(49,053)	(30,472)	(13,029)	(2,191)	-	-	(3,338)	(23)
Other Services	C.10.09	Total Exp Before Other Revenues	(7,935)		(7,935)	(4,929)	(2,108)	(354)	-	-	(540)	(4)
Late Fees	C.10.09	Total Exp Before Other Revenues	(1,663)		(1,663)	(1,033)	(442)	(74)	-	-	(113)	(1)
Transfers from Spec Rev Fund	C.10.09	Total Exp Before Other Revenues	(1,009,265)	1,009,265	-	-	-	-	-	-	-	-
Budgeted Use of Unrestricted Net A	C.10.09	Total Exp Before Other Revenues	(1,090,941)	1,090,941	-	-	-	-	-	-	-	-
Less Total Other Revenues			(2,199,319)	2,140,668	(58,651)	(36,435)	(15,578)	(2,619)	-	-	(3,991)	(28)
Net Revenue Requirements			**$ 2,549,299**	**$ 1,810,668**	**$ 4,319,505**	**$ 2,673,561**	**$ 1,156,888**	**$ 189,210**	**$ -**	**$ -**	**$ 297,863**	**$ 1,983**

Classification of Net Plant
Base-Extra Capacity Method

ACCT#	DESCRIPTION	FIXED ASSETS 6/30/2020	END YEAR ACC DEPR	Net Plant	Classification BEC								
					Ref	Type	Base	Excess Max Day	Excess Max Hr	Customer	Customer Equivalents	Piping	Direct 1
WASTEWATER													
LAND	EASEMENTS FROM OC LAND EXCNG	12,883.00	0.00	12,883.00	C.01.01	Base	12,883	-	-	-	-	-	-
	TOTALS LAND 5200-16100	12,883.00	0.00	12,883.00			12,883	-	-	-	-	-	-
BLDG	WASTEWATER TREATMENT PLANT	2,991,887.87	1,894,862.40	1,097,025.47	C.02.01	Base/Max Day	646,388	450,637	-	-	-	-	-
	WASTEWATER T.P. UPGRADE FINAL	86,170.69	51,702.13	34,468.56	C.02.01	Base/Max Day	20,310	14,159	-	-	-	-	-
	WASTEWATER T.P. UPGRADE	187,279.70	74,412.14	112,867.56	C.02.01	Base/Max Day	66,504	46,364	-	-	-	-	-
	NEW WASTEWATER TREATMENT PLANT	24,099,118.43	2,167,104.83	21,932,013.60	C.02.01	Base/Max Day	12,922,758	9,009,256	-	-	-	-	-
	EXISTING WWTP UPGRADE & LAB ADDITION	6,267,246.67	626,724.48	5,640,522.19	C.02.01	Base/Max Day	3,323,502	2,317,020	-	-	-	-	-
	TOTALS BLDG 5200-16200	33,631,703.36	4,814,805.98	28,816,897.38			16,979,462	11,837,436	-	-	-	-	-
IOTB	1987 SEWER COLLECT/TREAT	6,371,534.00	6,371,534.00	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1988 SEWER COLLECT/TREAT	225,923.00	222,462.47	3,460.53	C.04.01	Piping Dist	-	-	-	-	-	3,461	-
	1989 SEWER COLLECT/TREAT	116,903.25	111,537.90	5,365.35	C.04.01	Piping Dist	-	-	-	-	-	5,365	-
	1990 SEWER COLLECT/TREAT	640,467.68	591,530.63	48,937.05	C.04.01	Piping Dist	-	-	-	-	-	48,937	-
	1991 SEWER COLLECT/TREAT	1,127,419.02	1,006,935.51	120,483.51	C.04.01	Piping Dist	-	-	-	-	-	120,484	-
	LEAR ROAD	116,851.45	97,261.00	19,590.45	C.01.01	Base	19,590	-	-	-	-	-	-
	THOMPSON/SHAISHNIKOFF	19,176.27	15,961.24	3,215.03	C.02.03	Base/Max Hr	1,659	-	1,556	-	-	-	-
	I.H.S. SANITATION	10,388.60	10,388.60	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	ILIULAK VALLEY	186,778.14	186,778.14	0.00	C.01.01	Base	-	-	-	-	-	-	-
	JESSE LEE SUBDIVISION LINE HOOKUP	56,794.94	45,435.86	11,359.08	C.04.01	Piping Dist	-	-	-	-	-	11,359	-
	CHOATE LANE SEWER	77,185.49	61,748.33	15,437.16	C.04.01	Piping Dist	-	-	-	-	-	15,437	-
	UPPER HAYSTACK SWR LID	778,951.04	545,265.50	233,685.54	C.04.01	Piping Dist	-	-	-	-	-	233,686	-
	SHAISHNIKOFF SEWER EXT	43,840.00	28,131.03	15,708.97	C.04.01	Piping Dist	-	-	-	-	-	15,709	-
	NEWHALL SEWR MAIN	109,504.00	65,702.80	43,801.20	C.04.01	Piping Dist	-	-	-	-	-	43,801	-
	EASTBROADWAY SEWER	423,289.61	253,973.69	169,315.92	C.04.01	Piping Dist	-	-	-	-	-	169,316	-
	WETWELL CORRISION REPAIR	11,213.25	11,213.25	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	NIRVANA WASTEWATER LID	365,050.58	170,357.04	194,693.54	C.04.01	Piping Dist	-	-	-	-	-	194,694	-
	LIFT STATION #4 IMPROVEMENTS	403,402.00	100,850.40	302,551.60	C.02.02	Base/Max Day/Max Hr	156,119	108,840	37,592	-	-	-	-
	SCB WASTEWATER BETTERMENTS	436,145.93	130,844.15	305,301.78	C.04.01	Piping Dist	-	-	-	-	-	305,302	-
	LIFT STATION 6 PANEL/CONTROL REPLACE	94,668.82	42,600.76	52,068.06	C.02.02	Base/Max Day/Max Hr	26,868	18,731	6,470	-	-	-	-
	LIFT STATION 7 PANEL/CONTROL REPLACE	94,668.83	42,600.77	52,068.06	C.02.02	Base/Max Day/Max Hr	26,868	18,731	6,470	-	-	-	-
	LSA WASTEWATER EXTENSION	891,829.29	245,252.71	646,576.58	C.04.01	Piping Dist	-	-	-	-	-	646,577	-
	WWTP SCADA COMPUTER-RADIO SURVEY	37,690.00	37,690.00	0.00	C.01.01	Base	-	-	-	-	-	-	-
	SEWER LIFT STAION PANEL REPLACE 2&3	188,247.68	31,897.51	156,350.17	C.02.02	Base/Max Day/Max Hr	80,678	56,246	19,427	-	-	-	-
	PUMP STATION #3 FORCE MAIN UPGRADE	441,149.15	74,750.07	366,399.08	C.02.02	Base/Max Day/Max Hr	189,065	131,809	45,526	-	-	-	-
	CONNECT LIFT STATION #4 TO SCADA	68,021.59	17,288.62	50,732.97	C.01.01	Base	50,733	-	-	-	-	-	-
	WWTP LIFT STATION IMPROVEMENTS	507,657.51	67,687.68	439,969.83	C.02.02	Base/Max Day/Max Hr	227,028	158,275	54,667	-	-	-	-
	WWTP SLUDGE TANK & PUMPS	867,195.86	115,626.24	751,569.62	C.02.02	Base/Max Day/Max Hr	387,816	270,370	93,384	-	-	-	-
	WWTP STORM DRAINAGE IMPROVEMENTS	892,052.30	118,940.16	773,112.14	C.04.01	Piping Dist	-	-	-	-	-	773,112	-
	WW BACKFLOW PREVENTER INSTALL	22,787.09	2,342.10	20,444.99	C.04.01	Piping Dist	-	-	-	-	-	20,445	-
	WWTP SCADA & PUMP CONTROL UPGRADES	70,091.32	7,301.25	62,790.07	C.01.01	Base	62,790	-	-	-	-	-	-
	DELTA WAY EMERGENCY SEWER LINE REPAI	388,061.26	26,948.75	361,112.51	C.04.01	Piping Dist	-	-	-	-	-	361,113	-
	LIFT STATIONS 2&5 DISCHARGE PIPE	352,359.60	12,724.14	339,635.46	C.04.01	Piping Dist	-	-	-	-	-	339,635	-
	EAST POINT SEWER REPAIR	439,367.50	15,866.11	423,501.39	C.04.01	Piping Dist	-	-	-	-	-	423,501	-
	TOTALS IOTB 5200-16300	16,876,666.05	10,887,428.41	5,989,237.64			1,229,213	763,002	265,090	-	-	3,731,933	-

Classification of Net Plant
Base-Extra Capacity Method

ACCT#	DESCRIPTION	FIXED ASSETS 6/30/2020	END YEAR ACC DEPR	Net Plant	Classification BEC							
					Ref	Type	Base	Excess Max Day	Excess Max Hr	Customer	Customer Equivalents	Piping	Direct 1
WASTEWATER													
M & E	1996 BACKHOE/LOADER BH9	78,850.00	78,850.00	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	CYCLOPS INSPECTION TV SYSTEM	32,646.52	32,646.52	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	FLATBED TRUCK, F350 W/ CRANE	40,366.10	40,366.10	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	DRI-PRIME PUMP SP-1	24,999.85	24,999.85	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	PU 4X4 F150 TRUCK SD5542	21,462.60	21,462.60	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	FL9 TOYOTA 8BNCU18 FORKLIFT SN 55294	39,085.00	39,085.00	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	TOYOTA 7FBEU20 FORKLIFT	37,564.05	37,564.05	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	MANI MH254T RT FORKLIFT S/N 942552	73,500.00	73,500.00	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	SD2920 FORD F150 4X4 PICKUP	25,628.00	20,929.52	4,698.48	C.10.01	Land/Bldg/IOTB	2,459	1,700	36	-	-	504	-
	SD4363 2016 FORD F450 FLATBED	44,387.00	36,249.37	8,137.63	C.10.01	Land/Bldg/IOTB	4,259	2,945	62	-	-	872	-
	IRIS CRAWLER MAINLINE CAMERA	32,533.81	7,048.99	25,484.82	C.10.01	Land/Bldg/IOTB	13,337	9,223	194	-	-	2,731	-
	LIFTMORE HOIST CRANE	11,038.58	2,391.74	8,646.84	C.10.01	Land/Bldg/IOTB	4,525	3,129	66	-	-	927	-
	DPU7380 FORD EXPLORER (25%) DPU DIRECTC	8,140.00	1,763.71	6,376.29	C.10.01	Land/Bldg/IOTB	3,337	2,307	49	-	-	683	-
	SD6223 FORD EXPLORER '20	34,407.00	573.45	33,833.55	C.10.01	Land/Bldg/IOTB	17,706	12,244	258	-	-	3,626	-
	Volvo Vactor Tractor	380,000.00	0.00	380,000.00	C.10.01	Land/Bldg/IOTB	198,862	137,516	2,893	-	-	40,729	-
	Flatbed F-350	50,000.00	0.00	50,000.00	C.10.01	Land/Bldg/IOTB	26,166	18,094	381	-	-	5,359	-
	TOTALS M&E 5200-16400	934,608.51	417,430.90	517,177.61			270,650	187,158	3,937	-	-	55,432	-
CWIP	FIBER OPTIC INFRASTRUCTURE DEVLOP	6,139.88	0.00	6,139.88	C.01.01	Base	6,140	-	-	-	-	-	-
	TOTALS CIP 5210-16500	6,139.88	0.00	6,139.88			6,140	-	-	-	-	-	-
	Total	51,462,001	16,119,665	35,342,336			18,498,348	12,787,596	269,028	-	-	3,787,364	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	Depr Exp	Classification BEC								
			Ref	Type	Base	Excess Max Day	Excess Max Hr	Customer	Customer Equivalents	Piping	Direct 1
WASTEWATER											
LAND	EASEMENTS FROM OC LAND EXCNG	0.00	C.01.01	Base	-	-	-	-	-	-	-
	TOTALS LAND 5200-16100	0.00			-	-	-	-	-	-	-
BLDG	WASTEWATER TREATMENT PLANT	99,729.60	C.02.01	Base/Max Day	58,763	40,967	-	-	-	-	-
	WASTEWATER T.P. UPGRADE FINAL	2,872.36	C.02.01	Base/Max Day	1,692	1,180	-	-	-	-	-
	WASTEWATER T.P. UPGRADE	6,242.66	C.02.01	Base/Max Day	3,678	2,564	-	-	-	-	-
	NEW WASTEWATER TREATMENT PLANT	548,768.28	C.02.01	Base/Max Day	323,345	225,424	-	-	-	-	-
	EXISTING WWTP UPGRADE & LAB ADDITION	156,681.17	C.02.01	Base/Max Day	92,320	64,362	-	-	-	-	-
	TOTALS BLDG 5200-16200	814,294.06			479,797	334,497	-	-	-	-	-
IOTB	1987 SEWER COLLECT/TREAT	(0.00)	C.04.01	Piping Dist	-	-	-	-	-	(0)	-
	1988 SEWER COLLECT/TREAT	3,460.53	C.04.01	Piping Dist	-	-	-	-	-	3,461	-
	1989 SEWER COLLECT/TREAT	3,507.45	C.04.01	Piping Dist	-	-	-	-	-	3,507	-
	1990 SEWER COLLECT/TREAT	19,215.95	C.04.01	Piping Dist	-	-	-	-	-	19,216	-
	1991 SEWER COLLECT/TREAT	33,825.95	C.04.01	Piping Dist	-	-	-	-	-	33,826	-
	LEAR ROAD	3,505.89	C.01.01	Base	3,506	-	-	-	-	-	-
	THOMPSON/SHAISHNIKOFF	575.35	C.02.03	Base/Max Hr	297	-	278	-	-	-	-
	I.H.S. SANITATION	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	ILIULAK VALLEY	0.00	C.01.01	Base	-	-	-	-	-	-	-
	JESSE LEE SUBDIVISION LINE HOOKUP	1,893.16	C.04.01	Piping Dist	-	-	-	-	-	1,893	-
	CHOATE LANE SEWER	2,572.85	C.04.01	Piping Dist	-	-	-	-	-	2,573	-
	UPPER HAYSTACK SWR LID	25,965.03	C.04.01	Piping Dist	-	-	-	-	-	25,965	-
	SHAISHNIKOFF SEWER EXT	1,461.33	C.04.01	Piping Dist	-	-	-	-	-	1,461	-
	NEWHALL SEWR MAIN	3,650.13	C.04.01	Piping Dist	-	-	-	-	-	3,650	-
	EASTBROADWAY SEWER	14,109.65	C.04.01	Piping Dist	-	-	-	-	-	14,110	-
	WETWELL CORRISION REPAIR	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	NIRVANA WASTEWATER LID	12,168.35	C.04.01	Piping Dist	-	-	-	-	-	12,168	-
	LIFT STATION #4 IMPROVEMENTS	10,085.05	C.02.02	Base/Max Day/Max Hr	5,204	3,628	1,253	-	-	-	-
	SCB WASTEWATER BETTERMENTS	14,538.20	C.04.01	Piping Dist	-	-	-	-	-	14,538	-
	LIFT STATION 6 PANEL/CONTROL REPLACE	4,733.44	C.02.02	Base/Max Day/Max Hr	2,442	1,703	588	-	-	-	-
	LIFT STATION 7 PANEL/CONTROL REPLACE	4,733.44	C.02.02	Base/Max Day/Max Hr	2,442	1,703	588	-	-	-	-
	LSA WASTEWATER EXTENSION	29,727.64	C.04.01	Piping Dist	-	-	-	-	-	29,728	-
	WWTP SCADA COMPUTER-RADIO SURVEY	0.00	C.01.01	Base	-	-	-	-	-	-	-
	SEWER LIFT STAION PANEL REPLACE 2&3	6,274.92	C.02.02	Base/Max Day/Max Hr	3,238	2,257	780	-	-	-	-
	PUMP STATION #3 FORCE MAIN UPGRADE	14,704.97	C.02.02	Base/Max Day/Max Hr	7,588	5,290	1,827	-	-	-	-
	CONNECT LIFT STATION #4 TO SCADA	3,401.08	C.01.01	Base	3,401	-	-	-	-	-	-
	WWTP LIFT STATION IMPROVEMENTS	16,921.92	C.02.02	Base/Max Day/Max Hr	8,732	6,088	2,103	-	-	-	-
	WWTP SLUDGE TANK & PUMPS	28,906.53	C.02.02	Base/Max Day/Max Hr	14,916	10,399	3,592	-	-	-	-
	WWTP STORM DRAINAGE IMPROVEMENTS	29,735.08	C.04.01	Piping Dist	-	-	-	-	-	29,735	-
	WW BACKFLOW PREVENTER INSTALL	759.57	C.04.01	Piping Dist	-	-	-	-	-	760	-
	WWTP SCADA & PUMP CONTROL UPGRADES	3,504.57	C.01.01	Base	3,505	-	-	-	-	-	-
	DELTA WAY EMERGENCY SEWER LINE REPAII	12,935.38	C.04.01	Piping Dist	-	-	-	-	-	12,935	-
	LIFT STATIONS 2&5 DISCHARGE PIPE	11,745.32	C.04.01	Piping Dist	-	-	-	-	-	11,745	-
	EAST POINT SEWER REPAIR	14,645.58	C.04.01	Piping Dist	-	-	-	-	-	14,646	-
	TOTALS IOTB 5200-16300	333,264.32			55,271	31,067	11,009	-	-	235,917	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	Depr Exp	Classification BEC								
			Ref	Type	Base	Excess Max Day	Excess Max Hr	Customer	Customer Equivalents	Piping	Direct 1
WASTEWATER											
M & E	1996 BACKHOE/LOADER BH9	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	CYCLOPS INSPECTION TV SYSTEM	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	FLATBED TRUCK, F350 W/ CRANE	(0.00)	C.10.01	Land/Bldg/IOTB	(0)	(0)	(0)	-	-	(0)	-
	DRI-PRIME PUMP SP-1	(0.00)	C.10.01	Land/Bldg/IOTB	(0)	(0)	(0)	-	-	(0)	-
	PU 4X4 F150 TRUCK SD5542	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	FL9 TOYOTA 8BNCU18 FORKLIFT SN 55294	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	TOYOTA 7FBEU20 FORKLIFT	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	MANI MH254T RT FORKLIFT S/N 942552	0.00	C.10.01	Land/Bldg/IOTB	-	-	-	-	-	-	-
	SD2920 FORD F150 4X4 PICKUP	4,698.48	C.10.01	Land/Bldg/IOTB	2,459	1,700	36	-	-	504	-
	SD4363 2016 FORD F450 FLATBED	8,137.63	C.10.01	Land/Bldg/IOTB	4,259	2,945	62	-	-	872	-
	IRIS CRAWLER MAINLINE CAMERA	6,506.76	C.10.01	Land/Bldg/IOTB	3,405	2,355	50	-	-	697	-
	LIFTMORE HOIST CRANE	2,207.72	C.10.01	Land/Bldg/IOTB	1,155	799	17	-	-	237	-
	DPU7380 FORD EXPLORER (25%) DPU DIRECTO	1,628.00	C.10.01	Land/Bldg/IOTB	852	589	12	-	-	174	-
	SD6223 FORD EXPLORER '20	6,881.40	C.10.01	Land/Bldg/IOTB	3,601	2,490	52	-	-	738	-
	Volvo Vactor Tractor	38,000.00	C.10.01	Land/Bldg/IOTB	19,886	13,752	289	-	-	4,073	-
	Flatbed F-350	5,000.00	C.10.01	Land/Bldg/IOTB	2,617	1,809	38	-	-	536	-
	TOTALS M&E 5200-16400	73,059.99			38,234	26,439	556	-	-	7,831	-
	FIBER OPTIC INFRASTRUCTURE DEVLOP	0.00	C.01.01	Base	-	-	-	-	-	-	-
	TOTALS CIP 5210-16500	0.00			-	-	-	-	-	-	-
	Total	1,220,618			573,302	392,003	11,565	-	-	243,748	-

Allocation Factors
Base-Extra Capacity Method

Base Extra Capacity Method

		Un-Metered	Commercial	Industrial	Other	Other	Total
		-	-	-	-	-	-
A.00.00		-	-	-	-	-	0%
	Avg Annual Demand (MGD)	0.069	0.284	0.077	-	-	0.430
A.01.01	Avg Demand/Day	16.0%	66.1%	17.9%	0.0%	0.0%	100%
	Peak Day Demand (MGD)	0.153	0.529	0.212	-	-	
	Extra Capacity - Day (MGD)	0.084	0.245	0.135	-	-	0.464
A.02.01	Excess - Day	18.0%	52.9%	29.1%	0.0%	0.0%	100%
	Peak Hr Demand (MGD)	0.244	0.741	0.254			
	Extra Capacity - Day (MGD)	0.092	0.212	0.042	-	-	0.346
A.02.02	Excess - Hour	26.5%	61.3%	12.3%	0.0%	0.0%	100%
A.03.01	Piping Dist	43.0%	54.4%	2.7%	0.0%	0.0%	100%
		344	260	5	-	-	609
A.05.01	Customers	56.4%	42.8%	0.8%	0.0%	0.0%	100%
		344	655	32	-	-	1,031
A.05.02	Customer Equivalents	33.3%	63.6%	3.1%	0.0%	0.0%	100%
A.10.01	Direct Un-Metered	100%	0%	0%	0%	0%	100%

Classification Factors
Base-Extra Capacity Method

		Base	Excess Capacity		Customers		Piping	Direct 1	Total
			Excess Max Day	Excess Max Hr	Number	Equivalents			
C.00.00		0%	0%	0%	0%	0%	0%	0%	0%
		0.430	-	-	-	-	-	-	0.430
C.01.01	Base	100%	0%	0%	0%	0%	0%	0%	100%
		0.430	0.300	-	-	-	-	-	0.730
C.02.01	Base/Max Day	59%	41%	0%	0%	0%	0%	0%	100%
		0.430	0.300	0.104	-	-	-	-	0.833
C.02.02	Base/Max Day/Max Hr	52%	36%	12%	0%	0%	0%	0%	100%
		0.430	-	0.403					0.833
C.02.03	Base/Max Hr	52%	0%	48%	0%	0%	0%	0%	100%
C.02.04	Max Day / Max Hr	0%	50%	50%	0%	0%	0%	0%	100%
C.03.01	Customers	0%	0%	0%	100%	0%	0%	0%	100%
C.03.02	Customer Equivalents	0%	0%	0%	0%	100%	0%	0%	100%
C.04.01	Piping Dist	0%	0%	0%	0%	0%	100%	0%	100%
C.04.02		0%	0%	0%	0%	0%	0%	0%	0%
C.05.01	Direct 1	0%	0%	0%	0%	0%	0%	100%	100%
C.05.02		0%	0%	0%	0%	0%	0%	0%	0%
		18,221,557	12,600,438	265,090	-	-	3,731,933	-	34,819,018
C.10.01	Land/Bldg/IOTB	52%	36%	1%	0%	0%	11%	0%	100%
		18,498,348	12,787,596	269,028	-	-	3,787,364	-	35,342,336
C.10.02	Net Plant in Service	52%	36%	1%	0%	0%	11%	0%	100%
		16,979,462	11,837,436	-	-	-	-	-	28,816,897
C.10.03	Buildings	59%	41%	0%	0%	0%	0%	0%	100%
		825,408	282,617	83,000	-	-	-	-	1,191,025
C.10.04	WW Ops - Non Labor	69%	24%	7%	0%	0%	0%	0%	100%
		8,475	-	-	-	-	-	-	8,475
C.10.05	Vehicles Equip - Non Labor	100%	0%	0%	0%	0%	0%	0%	100%
		16,545	11,535	-	-	-	-	-	28,080
C.10.06	Bldg R&M - Non Labor	59%	41%	0%	0%	0%	0%	0%	100%
		717,076	245,109	68,107	-	-	-	-	1,030,292
C.10.07	Other Operating Labor	70%	24%	7%	0%	0%	0%	0%	100%
C.10.08									
		2,644,081	1,130,480	190,092	-	-	289,651	2,000	4,256,304
C.10.09	Total Exp Before Other Revenues	62%	27%	4%	0%	0%	7%	0%	100%
		573,302	392,003	11,565	-	-	243,748	-	1,220,618
C.10.10	Depr Expense	47%	32%	1%	0%	0%	20%	0%	100%

Appendix D

Cost of Service Model
(Commodity Demand Method)

Allocation of Revenue Requirements
Commodity Demand Method

Commodity-Demand (CD) Method

	Allocation	Description	Total	3 Un-Metered	4 Metered Large	5 Metered Other	6 Other	7 Other
Commodity	A.01.01	Commodity (MGD)	1,014,782	162,661	670,522	181,599	-	-
Demand								
Dem - Max Day	A.02.01	Dem - Max Day (MGD)	2,181,642	372,394	1,292,348	516,901	-	-
Dem - Max Hr	A.02.02	Dem - Max Hr (MGD)	823,235	162,130	492,322	168,783	-	-
Customers								
Number	A.05.01	Customers - Number	-	-	-	-	-	-
Equivalents	A.05.02	Customers - Equivalents	-	-	-	-	-	-
Piping	A.03.01	Piping Dist	297,863	128,011	161,940	7,912	-	-
Direct 1	A.10.01	Unmetered	1,983	1,983	-	-	-	-
			$ 4,319,505	$ 827,179	$ 2,617,131	$ 875,195	$ -	$ -
Revenues From Existing Rates								
Customer Charges				$ 470,187	$ 65,219	$ 1,252		
Volume Charges				-	1,844,271	87,283		
Total			$ 2,468,212	$ 470,187	$ 1,909,490	$ 88,536	$ -	$ -
Surplus (Deficiency)			$ (1,851,293)	$ (356,992)	$ (707,641)	$ (786,659)	$ -	$ -
Percent of Revenues from Existing Rates			-75.0%	-75.9%	-37.1%	-888.5%	N/A	N/A

Classification of Expenses
Commodity Demand Method

Commodity Demand (CD) Method			Revenue Requirement	Commodity	Demand		Customers		Piping	Direct 1
					Dem - Max Day	Dem - Max Hr	Number	Equivalents		
Administration										
Labor										
Salaries and Wages - Admin	C.10.07	Other Operating Labor	$ 214,003	$ 75,917	$ 81,159	$ 56,927	$ -	$ -	$ -	$ -
Temporary Employees	C.10.07	Other Operating Labor	2,594	920	984	690	-	-	-	-
Overtime - Admin	C.10.07	Other Operating Labor	749	266	284	199	-	-	-	-
Benefits and PR Taxes - Admin	C.10.07	Other Operating Labor	140,310	49,775	53,211	37,324	-	-	-	-
Subtotal - Labor and Benefits			357,656	126,878	135,638	95,140	-	-	-	-
Operations										
Legal Services	C.01.01	Commodity	$ 10,000	10,000	-	-	-	-	-	-
Engineering	C.01.01	Commodity	6,200	6,200	-	-	-	-	-	-
Training Services	C.01.01	Commodity	1,000	1,000	-	-	-	-	-	-
Education Reimbursement	C.01.01	Commodity	5,656	5,656	-	-	-	-	-	-
Other Professional Svs	C.01.01	Commodity	3,600	3,600	-	-	-	-	-	-
Software/Hardware Support	C.01.01	Commodity	26,905	26,905	-	-	-	-	-	-
Water/Sewage	C.01.01	Commodity	455	455	-	-	-	-	-	-
Solid Waste	C.01.01	Commodity	1,215	1,215	-	-	-	-	-	-
Custodial Services/Supplies	C.10.03	Buildings	4,509	-	4,509	-	-	-	-	-
Repairs/Maintenance Services	C.01.01	Commodity	1,000	1,000	-	-	-	-	-	-
Building/Land Rental	C.00.00	-	-	-	-	-	-	-	-	-
General Insurance	C.10.02	Net Plant in Service	62,336	272	51,586	3,798	-	-	6,680	-
Telephone / Fax / TV	C.01.01	Commodity	1,321	1,321	-	-	-	-	-	-
Network/Internet	C.01.01	Commodity	16,100	16,100	-	-	-	-	-	-
Travel and Related Costs	C.01.01	Commodity	1,500	1,500	-	-	-	-	-	-
Banking / Credit Card Fees	C.05.01	Direct 1	2,000	-	-	-	-	-	-	2,000
Postal Services	C.01.01	Commodity	1,710	1,710	-	-	-	-	-	-
General Supplies	C.01.01	Commodity	500	500	-	-	-	-	-	-
Office Supplies	C.01.01	Commodity	2,186	2,186	-	-	-	-	-	-
Computer Hardware / Software	C.01.01	Commodity	6,629	6,629	-	-	-	-	-	-
Electricity	C.02.02	Dem - Max Hr	9,518	-	-	9,518	-	-	-	-
Heating Oil	C.10.03	Buildings	8,102	-	8,102	-	-	-	-	-
Gasoline for Vehicles	C.10.05	Vehicles - Non Labor	1,963	1,963	-	-	-	-	-	-
Business Meals	C.01.01	Commodity	200	200	-	-	-	-	-	-
Food/Beverage/Employee Appreciat	C.01.01	Commodity	1,000	1,000	-	-	-	-	-	-
Books/Periodicals	C.01.01	Commodity	500	500	-	-	-	-	-	-
Other	C.00.00	-	-	-	-	-	-	-	-	-
Subtotal - Administrative Ops			176,105	89,912	64,197	13,316	-	-	6,680	2,000
Other										
Depreciation	C.10.10	Depr Expense	1,361,872	11,958	976,477	101,482	-	-	271,955	-
PILOT	C.10.02	Net Plant in Service	-	-	-	-	-	-	-	-
Bad Debt	C.00.00	-	-	-	-	-	-	-	-	-
Admin OH	C.10.09	Total Exp Before Other Revenues	21,852	5,253	10,870	4,232	-	-	1,487	10
Interest	C.10.02	Net Plant in Service	102,799	449	85,071	6,263	-	-	11,016	-
Subtotal - Administrative Other			1,486,523	17,660	1,072,417	111,977	-	-	284,458	10
Total Administrative			2,020,284	234,450	1,272,252	220,433	-	-	291,138	2,010

Classification of Expenses
Commodity Demand Method

Commodity Demand (CD) Method			Revenue Requirement	Commodity	Demand		Customers		Piping	Direct 1
					Dem - Max Day	Dem - Max Hr	Number	Equivalents		
Water Operations										
Labor										
Salaries - Operations	C.10.04	Ops - Non Labor	505,140	178,142	185,341	141,657	-	-	-	-
Temporary Employees	C.10.04	Ops - Non Labor	57,428	20,252	21,071	16,105	-	-	-	-
Overtime - Operations	C.10.04	Ops - Non Labor	40,000	14,106	14,676	11,217	-	-	-	-
Benefits - Operations	C.10.04	Ops - Non Labor	374,742	132,156	137,497	105,089	-	-	-	-
Subtotal - Labor and Benefits			977,310	344,657	358,586	274,068	-	-	-	-
Operations										
Engineering	C.02.04	Demand - 50/50	2,000	-	1,000	1,000	-	-	-	-
Training	C.01.01	Commodity	5,500	5,500	-	-	-	-	-	-
Other Professional	C.02.04	Demand - 50/50	213,500	-	106,750	106,750	-	-	-	-
Computer	C.01.01	Commodity	12,000	12,000	-	-	-	-	-	-
Sampling	C.01.01	Commodity	14,400	14,400	-	-	-	-	-	-
Other Technical Services	C.01.01	Commodity	250	250	-	-	-	-	-	-
Water/Sewage	C.01.01	Commodity	13,000	13,000	-	-	-	-	-	-
Solid Waste	C.01.01	Commodity	130,000	130,000	-	-	-	-	-	-
Repairs/Maintenance	C.01.01	Commodity	65,000	65,000	-	-	-	-	-	-
Construction Services	C.01.01	Commodity	6,500	6,500	-	-	-	-	-	-
Telephone / Fax	C.01.01	Commodity	8,000	8,000	-	-	-	-	-	-
Network/Internet	C.01.01	Commodity	-	-	-	-	-	-	-	-
Radio	C.01.01	Commodity	1,500	1,500	-	-	-	-	-	-
Advertising	C.01.01	Commodity	250	250	-	-	-	-	-	-
Travel	C.01.01	Commodity	7,200	7,200	-	-	-	-	-	-
Postage	C.01.01	Commodity	-	-	-	-	-	-	-	-
Dues	C.01.01	Commodity	600	600	-	-	-	-	-	-
Permit Fees	C.01.01	Commodity	9,000	9,000	-	-	-	-	-	-
Other	C.00.00		-	-	-	-	-	-	-	-
General Supplies	C.01.01	Commodity	111,225	111,225	-	-	-	-	-	-
Safety Related Items	C.01.01	Commodity	9,500	9,500	-	-	-	-	-	-
Lab Supplies	C.01.01	Commodity	14,200	14,200	-	-	-	-	-	-
Sand/Gravel/Rock	C.01.01	Commodity	-	-	-	-	-	-	-	-
Chemicals	C.02.04	Demand - 50/50	330,000	-	165,000	165,000	-	-	-	-
Office Supplies	C.01.01	Commodity	450	450	-	-	-	-	-	-
Facility Maintenance Supplies	C.00.00		-	-	-	-	-	-	-	-
Computer	C.01.01	Commodity	1,000	1,000	-	-	-	-	-	-
Electricity	C.02.04	Demand - 50/50	122,500	-	61,250	61,250	-	-	-	-
Propane	C.01.01	Commodity	4,500	4,500	-	-	-	-	-	-
Heating Fuel	C.10.03	Buildings	103,000	-	103,000	-	-	-	-	-
Fuel - Vehicles	C.10.05	Vehicles - Non Labor	3,500	3,500	-	-	-	-	-	-
Fuel - Equipment	C.10.05	Vehicles - Non Labor	1,400	1,400	-	-	-	-	-	-
Food/Beverage/Employee Appreciat	C.01.01	Commodity	800	800	-	-	-	-	-	-
Books/Periodicals	C.01.01	Commodity	250	250	-	-	-	-	-	-
Other	C.00.00		-	-	-	-	-	-	-	-
Subtotal - Operations Ops			1,191,025	420,025	437,000	334,000	-	-	-	-
Total Water Operations			2,168,335	764,682	795,586	608,068	-	-	-	-

Classification of Expenses
Commodity Demand Method

Commodity Demand (CD) Method			Revenue Requirement	Commodity	Demand		Customers		Piping	Direct 1
					Dem - Max Day	Dem - Max Hr	Number	Equivalents		
Vehicle and Equipment										
Labor										
Salaries - Operations	C.10.05	Vehicles - Non Labor	12,255	12,255	-	-	-	-	-	-
Overtime - Operations	C.10.05	Vehicles - Non Labor	365	365	-	-	-	-	-	-
Benefits - Operations	C.10.05	Vehicles - Non Labor	8,218	8,218	-	-	-	-	-	-
Subtotal - Labor and Benefits			20,838	20,838	-	-	-	-	-	-
Operations										
Repairs/Maintenance	C.01.01	Commodity	$ 300	300	-	-	-	-	-	-
Construction Services	C.01.01	Commodity	-	-	-	-	-	-	-	-
General Supplies	C.01.01	Commodity	675	675	-	-	-	-	-	-
Machinery / Vehicle Parts	C.01.01	Commodity	7,500	7,500	-	-	-	-	-	-
Other	C.01.01	Commodity	-	-	-	-	-	-	-	-
Subtotal - Vehicles/Equipment Ops			8,475	8,475	-	-	-	-	-	-
Total Vehicle and Equipment			29,313	29,313	-	-	-	-	-	-
Building R & M										
Labor										
Salaries - Operations	C.10.06	Buildings - Non Labor	13,913	-	13,913	-	-	-	-	-
Overtime - Operations	C.10.06	Buildings - Non Labor	5,264	-	5,264	-	-	-	-	-
Benefits - Operations	C.10.06	Buildings - Non Labor	12,967	-	12,967	-	-	-	-	-
Subtotal - Labor and Benefits			32,144	-	32,144	-	-	-	-	-
Operations										
Repairs/Maintenance	C.10.03	Buildings	15,780	-	15,780	-	-	-	-	-
Construction Services	C.10.03	Buildings	5,000	-	5,000	-	-	-	-	-
General Supplies	C.10.03	Buildings	2,500	-	2,500	-	-	-	-	-
Facility Maint Supplies	C.10.03	Buildings	4,800	-	4,800	-	-	-	-	-
Other	C.00.00	-	-	-	-	-	-	-	-	-
Subtotal - Building R&M Ops			28,080	-	28,080	-	-	-	-	-
Total Building R & M			$ 60,224	$ -	$ 60,224	$ -	$ -	$ -	$ -	$ -
Total Expensses			4,278,156	1,028,445	2,128,062	828,501	-	-	291,138	2,010
Net Margin	C.10.02	Net Plant in Service	100,000	437	82,754	6,093	-	-	10,716	-
Capital Expenditures	C.10.02	Net Plant in Service	-	-	-	-	-	-	-	-
Less Other Revenues										
PERS Nonemployer Contributions	C.10.09	Total Exp Before Other Revenues	-	-	-	-	-	-	-	-
Vactor Services	C.10.09	Total Exp Before Other Revenues	(49,053)	(11,792)	(24,400)	(9,500)	-	-	(3,338)	(23)
Other Services	C.10.09	Total Exp Before Other Revenues	(7,935)	(1,908)	(3,947)	(1,537)	-	-	(540)	(4)
Late Fees	C.10.09	Total Exp Before Other Revenues	(1,663)	(400)	(827)	(322)	-	-	(113)	(1)
Transfers from Spec Rev Fund	C.10.09	Total Exp Before Other Revenues	-	-	-	-	-	-	-	-
Budgeted Use of Unrestricted Net A	C.10.09	Total Exp Before Other Revenues	-	-	-	-	-	-	-	-
Less Total Other Revenues			(58,651)	(14,099)	(29,174)	(11,358)	-	-	(3,991)	(28)
Net Revenue Requirements			**$ 4,319,505**	**$ 1,014,782**	**$ 2,181,642**	**$ 823,235**	**$ -**	**$ -**	**$ 297,863**	**$ 1,983**

Classification of Net Plant
Commodity Demand Method

ACCT#	DESCRIPTION	FIXED ASSETS 6/30/2020	END YEAR ACC DEPR	Net Plant	Classification CD								
					Ref	Type	Commodity	Dem - Max Day	Dem - Max Hr	Customer	Customer Equivalents	Piping	Direct 1
WASTEWATER													
LAND	EASEMENTS FROM OC LAND EXCNG	12,883.00	0.00	12,883.00	C.01.01	Commodity	12,883	-	-	-	-	-	-
	TOTALS LAND 5200-16100	12,883.00	0.00	12,883.00	-	-	12,883	-	-	-	-	-	-
BLDG	WASTEWATER TREATMENT PLANT	2,991,887.87	1,894,862.40	1,097,025.47	C.02.01	Dem - Max Day	-	1,097,025	-	-	-	-	-
	WASTEWATER T.P. UPGRADE FINAL	86,170.69	51,702.13	34,468.56	C.02.01	Dem - Max Day	-	34,469	-	-	-	-	-
	WASTEWATER T.P. UPGRADE	187,279.70	74,412.14	112,867.56	C.02.01	Dem - Max Day	-	112,868	-	-	-	-	-
	NEW WASTEWATER TREATMENT PLANT	24,099,118.43	2,167,104.83	21,932,013.60	C.02.01	Dem - Max Day	-	21,932,014	-	-	-	-	-
	EXISTING WWTP UPGRADE & LAB ADDITION	6,267,246.67	626,724.48	5,640,522.19	C.02.01	Dem - Max Day	-	5,640,522	-	-	-	-	-
	TOTALS BLDG 5200-16200	33,631,703.36	4,814,805.98	28,816,897.38	-	-	-	28,816,897	-	-	-	-	-
IOTB	1987 SEWER COLLECT/TREAT	6,371,534.00	6,371,534.00	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	1988 SEWER COLLECT/TREAT	225,923.00	222,462.47	3,460.53	C.04.01	Piping Dist	-	-	-	-	-	3,461	-
	1989 SEWER COLLECT/TREAT	116,903.25	111,537.90	5,365.35	C.04.01	Piping Dist	-	-	-	-	-	5,365	-
	1990 SEWER COLLECT/TREAT	640,467.68	591,530.63	48,937.05	C.04.01	Piping Dist	-	-	-	-	-	48,937	-
	1991 SEWER COLLECT/TREAT	1,127,419.02	1,006,935.51	120,483.51	C.04.01	Piping Dist	-	-	-	-	-	120,484	-
	LEAR ROAD	116,851.45	97,261.00	19,590.45	C.02.01	Dem - Max Day	19,590	-	-	-	-	-	-
	THOMPSON/SHAISHNIKOFF	19,176.27	15,961.24	3,215.03	C.02.02	Dem - Max Hr	-	2,411	804	-	-	-	-
	I.H.S. SANITATION	10,388.60	10,388.60	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	ILIULAK VALLEY	186,778.14	186,778.14	0.00	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	JESSE LEE SUBDIVISION LINE HOOKUP	56,794.94	45,435.86	11,359.08	C.04.01	Piping Dist	-	-	-	-	-	11,359	-
	CHOATE LANE SEWER	77,185.49	61,748.33	15,437.16	C.04.01	Piping Dist	-	-	-	-	-	15,437	-
	UPPER HAYSTACK SWR LID	778,951.04	545,265.50	233,685.54	C.04.01	Piping Dist	-	-	-	-	-	233,686	-
	SHAISHNIKOFF SEWER EXT	43,840.00	28,131.03	15,708.97	C.04.01	Piping Dist	-	-	-	-	-	15,709	-
	NEWHALL SEWR MAIN	109,504.00	65,702.80	43,801.20	C.04.01	Piping Dist	-	-	-	-	-	43,801	-
	EASTBROADWAY SEWER	423,289.61	253,973.69	169,315.92	C.04.01	Piping Dist	-	-	-	-	-	169,316	-
	WETWELL CORRISION REPAIR	11,213.25	11,213.25	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	NIRVANA WASTEWATER LID	365,050.58	170,357.04	194,693.54	C.04.01	Piping Dist	-	-	-	-	-	194,694	-
	LIFT STATION #4 IMPROVEMENTS	403,402.00	100,850.40	302,551.60	C.02.02	Dem - Max Hr	-	-	302,552	-	-	-	-
	SCB WASTEWATER BETTERMENTS	436,145.93	130,844.15	305,301.78	C.04.01	Piping Dist	-	-	-	-	-	305,302	-
	LIFT STATION 6 PANEL/CONTROL REPLACE	94,668.82	42,600.76	52,068.06	C.02.02	Dem - Max Hr	-	-	52,068	-	-	-	-
	LIFT STATION 7 PANEL/CONTROL REPLACE	94,668.83	42,600.77	52,068.06	C.02.02	Dem - Max Hr	-	-	52,068	-	-	-	-
	LSA WASTEWATER EXTENSION	891,829.29	245,252.71	646,576.58	C.04.01	Piping Dist	-	-	-	-	-	646,577	-
	WWTP SCADA COMPUTER-RADIO SURVEY	37,690.00	37,690.00	0.00	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	SEWER LIFT STAION PANEL REPLACE 2&3	188,247.68	31,897.51	156,350.17	C.02.02	Dem - Max Hr	-	-	156,350	-	-	-	-
	PUMP STATION #3 FORCE MAIN UPGRADE	441,149.15	74,750.07	366,399.08	C.02.02	Dem - Max Hr	-	-	366,399	-	-	-	-
	CONNECT LIFT STATION #4 TO SCADA	68,021.59	17,288.62	50,732.97	C.02.01	Dem - Max Day	50,733	-	-	-	-	-	-
	WWTP LIFT STATION IMPROVEMENTS	507,657.51	67,687.68	439,969.83	C.02.02	Dem - Max Hr	-	-	439,970	-	-	-	-
	WWTP SLUDGE TANK & PUMPS	867,195.86	115,626.24	751,569.62	C.02.02	Dem - Max Hr	-	-	751,570	-	-	-	-
	WWTP STORM DRAINAGE IMPROVEMENTS	892,052.30	118,940.16	773,112.14	C.04.01	Piping Dist	-	-	-	-	-	773,112	-
	WW BACKFLOW PREVENTER INSTALL	22,787.09	2,342.10	20,444.99	C.04.01	Piping Dist	-	-	-	-	-	20,445	-
	WWTP SCADA & PUMP CONTROL UPGRADES	70,091.32	7,301.25	62,790.07	C.02.01	Dem - Max Day	62,790	-	-	-	-	-	-
	DELTA WAY EMERGENCY SEWER LINE REPAI	388,061.26	26,948.75	361,112.51	C.04.01	Piping Dist	-	-	-	-	-	361,113	-
	LIFT STATIONS 2&5 DISCHARGE PIPE	352,359.60	12,724.14	339,635.46	C.04.01	Piping Dist	-	-	-	-	-	339,635	-
	EAST POINT SEWER REPAIR	439,367.50	15,866.11	423,501.39	C.04.01	Piping Dist	-	-	-	-	-	423,501	-
	TOTALS IOTB 5200-16300	16,876,666.05	10,887,428.41	5,989,237.64	-	-	133,113	2,411	2,121,780	-	-	3,731,933	-

Classification of Net Plant
Commodity Demand Method

ACCT#	DESCRIPTION	FIXED ASSETS 6/30/2020	END YEAR ACC DEPR	Net Plant	Classification CD								
					Ref	Type	Commodity	Dem - Max Day	Dem - Max Hr	Customer	Customer Equivalents	Piping	Direct 1
WASTEWATER													
M & E	1996 BACKHOE/LOADER BH9	78,850.00	78,850.00	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	CYCLOPS INSPECTION TV SYSTEM	32,646.52	32,646.52	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	FLATBED TRUCK, F350 W/ CRANE	40,366.10	40,366.10	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	DRI-PRIME PUMP SP-1	24,999.85	24,999.85	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	PU 4X4 F150 TRUCK SD5542	21,462.60	21,462.60	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	FL9 TOYOTA 8BNCU18 FORKLIFT SN 55294	39,085.00	39,085.00	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	TOYOTA 7FBEU20 FORKLIFT	37,564.05	37,564.05	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	MANI MH254T RT FORKLIFT S/N 942552	73,500.00	73,500.00	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	SD2920 FORD F150 4X4 PICKUP	25,628.00	20,929.52	4,698.48	C.10.01	Land/Bldg/OTE	20	3,889	286	-	-	504	-
	SD4363 2016 FORD F450 FLATBED	44,387.00	36,249.37	8,137.63	C.10.01	Land/Bldg/OTE	34	6,735	496	-	-	872	-
	IRIS CRAWLER MAINLINE CAMERA	32,533.81	7,048.99	25,484.82	C.10.01	Land/Bldg/OTE	107	21,093	1,553	-	-	2,731	-
	LIFTMORE HOIST CRANE	11,038.58	2,391.74	8,646.84	C.10.01	Land/Bldg/OTE	36	7,157	527	-	-	927	-
	DPU7380 FORD EXPLORER (25%) DPU DIRECTC	8,140.00	1,763.71	6,376.29	C.10.01	Land/Bldg/OTE	27	5,278	389	-	-	683	-
	SD6223 FORD EXPLORER '20	34,407.00	573.45	33,833.55	C.10.01	Land/Bldg/OTE	142	28,004	2,062	-	-	3,626	-
	Volvo Vactor Tractor	380,000.00	0.00	380,000.00	C.10.01	Land/Bldg/OTE	1,593	314,522	23,156	-	-	40,729	-
	Flatbed F-350	50,000.00	0.00	50,000.00	C.10.01	Land/Bldg/OTE	210	41,384	3,047	-	-	5,359	-
	TOTALS M&E 5200-16400	934,608.51	417,430.90	517,177.61	-	-	2,169	428,062	31,515	-	-	55,432	-
CWIP	FIBER OPTIC INFRASTRUCTURE DEVLOP	6,139.88	0.00	6,139.88	C.10.01	Land/Bldg/OTE	6,140	-	-	-	-	-	-
	TOTALS CIP 5210-16500	6,139.88	0.00	6,139.88	-	-	6,140	-	-	-	-	-	-
	Total	51,462,001	16,119,665	35,342,336	-	-	154,305	29,247,371	2,153,296	-	-	3,787,364	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	Depr Exp	Classification CD								
			Ref	Type	Commodity	Dem - Max Day	Dem - Max Hr	Customer	Customer Equivalents	Piping	Direct 1
WASTEWATER											
LAND	EASEMENTS FROM OC LAND EXCNG	0.00	C.01.01	Commodity	-	-	-	-	-	-	-
	TOTALS LAND 5200-16100	0.00	-	-	-	-	-	-	-	-	-
BLDG	WASTEWATER TREATMENT PLANT	99,729.60	C.02.01	Dem - Max Day	-	99,730	-	-	-	-	-
	WASTEWATER T.P. UPGRADE FINAL	2,872.36	C.02.01	Dem - Max Day	-	2,872	-	-	-	-	-
	WASTEWATER T.P. UPGRADE	6,242.66	C.02.01	Dem - Max Day	-	6,243	-	-	-	-	-
	NEW WASTEWATER TREATMENT PLANT	548,768.28	C.02.01	Dem - Max Day	-	548,768	-	-	-	-	-
	EXISTING WWTP UPGRADE & LAB ADDITION	156,681.17	C.02.01	Dem - Max Day	-	156,681	-	-	-	-	-
	TOTALS BLDG 5200-16200	814,294.06	-	-	-	814,294	-	-	-	-	-
IOTB	1987 SEWER COLLECT/TREAT	(0.00)	C.04.01	Piping Dist	-	-	-	-	-	(0)	-
	1988 SEWER COLLECT/TREAT	3,460.53	C.04.01	Piping Dist	-	-	-	-	-	3,461	-
	1989 SEWER COLLECT/TREAT	3,507.45	C.04.01	Piping Dist	-	-	-	-	-	3,507	-
	1990 SEWER COLLECT/TREAT	19,215.95	C.04.01	Piping Dist	-	-	-	-	-	19,216	-
	1991 SEWER COLLECT/TREAT	33,825.95	C.04.01	Piping Dist	-	-	-	-	-	33,826	-
	LEAR ROAD	3,505.89	C.02.01	Dem - Max Day	3,506	-	-	-	-	-	-
	THOMPSON/SHAISHNIKOFF	575.35	C.02.02	Dem - Max Hr	-	432	144	-	-	-	-
	I.H.S. SANITATION	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	ILIULAK VALLEY	0.00	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	JESSE LEE SUBDIVISION LINE HOOKUP	1,893.16	C.04.01	Piping Dist	-	-	-	-	-	1,893	-
	CHOATE LANE SEWER	2,572.85	C.04.01	Piping Dist	-	-	-	-	-	2,573	-
	UPPER HAYSTACK SWR LID	25,965.03	C.04.01	Piping Dist	-	-	-	-	-	25,965	-
	SHAISHNIKOFF SEWER EXT	1,461.33	C.04.01	Piping Dist	-	-	-	-	-	1,461	-
	NEWHALL SEWR MAIN	3,650.13	C.04.01	Piping Dist	-	-	-	-	-	3,650	-
	EASTBROADWAY SEWER	14,109.65	C.04.01	Piping Dist	-	-	-	-	-	14,110	-
	WETWELL CORRISION REPAIR	0.00	C.04.01	Piping Dist	-	-	-	-	-	-	-
	NIRVANA WASTEWATER LID	12,168.35	C.04.01	Piping Dist	-	-	-	-	-	12,168	-
	LIFT STATION #4 IMPROVEMENTS	10,085.05	C.02.02	Dem - Max Hr	-	-	10,085	-	-	-	-
	SCB WASTEWATER BETTERMENTS	14,538.20	C.04.01	Piping Dist	-	-	-	-	-	14,538	-
	LIFT STATION 6 PANEL/CONTROL REPLACE	4,733.44	C.02.02	Dem - Max Hr	-	-	4,733	-	-	-	-
	LIFT STATION 7 PANEL/CONTROL REPLACE	4,733.44	C.02.02	Dem - Max Hr	-	-	4,733	-	-	-	-
	LSA WASTEWATER EXTENSION	29,727.64	C.04.01	Piping Dist	-	-	-	-	-	29,728	-
	WWTP SCADA COMPUTER-RADIO SURVEY	0.00	C.02.01	Dem - Max Day	-	-	-	-	-	-	-
	SEWER LIFT STAION PANEL REPLACE 2&3	6,274.92	C.02.02	Dem - Max Hr	-	-	6,275	-	-	-	-
	PUMP STATION #3 FORCE MAIN UPGRADE	14,704.97	C.02.02	Dem - Max Hr	-	-	14,705	-	-	-	-
	CONNECT LIFT STATION #4 TO SCADA	3,401.08	C.02.01	Dem - Max Day	3,401	-	-	-	-	-	-
	WWTP LIFT STATION IMPROVEMENTS	16,921.92	C.02.02	Dem - Max Hr	-	-	16,922	-	-	-	-
	WWTP SLUDGE TANK & PUMPS	28,906.53	C.02.02	Dem - Max Hr	-	-	28,907	-	-	-	-
	WWTP STORM DRAINAGE IMPROVEMENTS	29,735.08	C.04.01	Piping Dist	-	-	-	-	-	29,735	-
	WW BACKFLOW PREVENTER INSTALL	759.57	C.04.01	Piping Dist	-	-	-	-	-	760	-
	WWTP SCADA & PUMP CONTROL UPGRADES	3,504.57	C.02.01	Dem - Max Day	3,505	-	-	-	-	-	-
	DELTA WAY EMERGENCY SEWER LINE REPAII	12,935.38	C.04.01	Piping Dist	-	-	-	-	-	12,935	-
	LIFT STATIONS 2&5 DISCHARGE PIPE	11,745.32	C.04.01	Piping Dist	-	-	-	-	-	11,745	-
	EAST POINT SEWER REPAIR	14,645.58	C.04.01	Piping Dist	-	-	-	-	-	14,646	-
	TOTALS IOTB 5200-16300	333,264.32	-	-	10,412	432	86,504	-	-	235,917	-

Classification of Depreciation Expenses
Base-Extra Capacity Method

ACCT#	DESCRIPTION	Depr Exp	Classification CD							
			Ref	Type	Commodity	Dem - Max Day	Dem - Max Hr	Customer	Customer Equivalents	Piping	Direct 1
WASTEWATER											
M & E	1996 BACKHOE/LOADER BH9	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	CYCLOPS INSPECTION TV SYSTEM	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	FLATBED TRUCK, F350 W/ CRANE	(0.00)	C.10.01	Land/Bldg/OTE	(0)	(0)	(0)	-	-	(0)	-
	DRI-PRIME PUMP SP-1	(0.00)	C.10.01	Land/Bldg/OTE	(0)	(0)	(0)	-	-	(0)	-
	PU 4X4 F150 TRUCK SD5542	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	FL9 TOYOTA 8BNCU18 FORKLIFT SN 55294	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	TOYOTA 7FBEU20 FORKLIFT	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	MANI MH254T RT FORKLIFT S/N 942552	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	SD2920 FORD F150 4X4 PICKUP	4,698.48	C.10.01	Land/Bldg/OTE	20	3,889	286	-	-	504	-
	SD4363 2016 FORD F450 FLATBED	8,137.63	C.10.01	Land/Bldg/OTE	34	6,735	496	-	-	872	-
	IRIS CRAWLER MAINLINE CAMERA	6,506.76	C.10.01	Land/Bldg/OTE	27	5,386	397	-	-	697	-
	LIFTMORE HOIST CRANE	2,207.72	C.10.01	Land/Bldg/OTE	9	1,827	135	-	-	237	-
	DPU7380 FORD EXPLORER (25%) DPU DIRECTO	1,628.00	C.10.01	Land/Bldg/OTE	7	1,347	99	-	-	174	-
	SD6223 FORD EXPLORER '20	6,881.40	C.10.01	Land/Bldg/OTE	29	5,696	419	-	-	738	-
	Volvo Vactor Tractor	38,000.00	C.10.01	Land/Bldg/OTE	159	31,452	2,316	-	-	4,073	-
	Flatbed F-350	5,000.00	C.10.01	Land/Bldg/OTE	21	4,138	305	-	-	536	-
	TOTALS M&E 5200-16400	73,059.99	-	-	306	60,471	4,452	-	-	7,831	-
	FIBER OPTIC INFRASTRUCTURE DEVLOP	0.00	C.10.01	Land/Bldg/OTE	-	-	-	-	-	-	-
	TOTALS CIP 5210-16500	0.00	-	-	-	-	-	-	-	-	-
	Total	1,220,618	-	-	10,718	875,196	90,956	-	-	243,748	-

Allocation Factors
Commodity Demand Method

Commodity - Demand Method

		Un-Metered	Commercial	Industrial	Other	Other	Total
		-	-	-	-	-	-
A.00.00		-	-	-	-	-	0%
		0.0689	0.2840	0.0769			0.4298
A.01.01	Commodity (MGD)	16.0%	66.1%	17.9%	0.0%	0.0%	100%
		0.153	0.529	0.212			0.894
A.02.01	Dem - Max Day (MGD)	17.1%	59.2%	23.7%	0.0%	0.0%	100%
		0.244	0.741	0.254			1.239
A.02.02	Dem - Max Hr (MGD)	19.7%	59.8%	20.5%	0.0%	0.0%	100%
A.03.01	Piping Dist	43.0%	54.4%	2.7%			100.0%
		344	260	5			609
A.05.01	Customers - Number	56.4%	42.8%	0.8%	0.0%	0.0%	100%
		344	655	32	-	-	1,031
A.05.02	Customers - Equivalents	33.3%	63.6%	3.1%	0.0%	0.0%	100%
	Direct						
A.10.01	Unmetered	100%	0%	0%	0%	0%	100%
A.10.02	Commercial	0%	100%	0%	0%	0%	100%
A.10.03	Industrial	0%	0%	100%	0%	0%	100%

Classification Factors
Commodity Demand Method

1	2	3	4	5	6	7	8	9	10
		Commodity	Dem - Max Day	Dem - Max Hr	Customers Number	Customers Equivalents	Piping	Direct 1	Total
C.00.00		0%	0%	0%	0%	0%	0%	0%	0%
C.01.01	Commodity	100%	0%	0%	0%	0%	0%	0%	100%
C.02.01	Dem - Max Day	0%	100%	0%	0%	0%	0%	0%	100%
C.02.02	Dem - Max Hr	0%	0%	100%	0%	0%	0%	0%	100%
C.02.03	Dem - Max Day/Max Hr	0%	75%	25%	0%	0%	0%	0%	100%
C.02.04	Demand - 50/50	0%	50%	50%	0%	0%	0%	0%	100%
C.02.05	Demand - 75/25	0%	75%	25%	0%	0%	0%	0%	100%
C.02.06	Demand - 25/75	0%	25%	75%	0%	0%	0%	0%	100%
C.03.01	Customers	0%	0%	0%	100%	0%	0%	0%	100%
C.03.02	Customer Equivalents	0%	0%	0%	0%	100%	0%	0%	100%
C.04.01	Piping Dist	0%	0%	0%	0%	0%	100%	0%	100%
C.04.02	Not Used	0%	0%	0%	0%	0%	0%	0%	0%
C.05.01	Direct 1	0%	0%	0%	0%	0%	0%	100%	100%
C.05.02	Not Used	0%	0%	0%	0%	0%	0%	0%	0%
		145,996	28,819,309	2,121,780	-	-	3,731,933	-	34,819,018
C.10.01	Land/Bldg/OTE	0%	83%	6%	0%	0%	11%	0%	100%
		154,305	29,247,371	2,153,296	-	-	3,787,364	-	35,342,336
C.10.02	Net Plant in Service	0%	83%	6%	0%	0%	11%	0%	100%
		-	28,816,897	-	-	-	-	-	28,816,897
C.10.03	Buildings	0%	100%	0%	0%	0%	0%	0%	100%
		420,025	437,000	334,000	-	-	-	-	1,191,025
C.10.04	Ops - Non Labor	35%	37%	28%	0%	0%	0%	0%	100%
		8,475	-	-	-	-	-	-	8,475
C.10.05	Vehicles - Non Labor	100%	0%	0%	0%	0%	0%	0%	100%
		-	28,080	-	-	-	-	-	28,080
C.10.06	Buildings - Non Labor	0%	100%	0%	0%	0%	0%	0%	100%
		365,495	390,730	274,068	-	-	-	-	1,030,292
C.10.07	Other Operating Labor	35%	38%	27%	0%	0%	0%	0%	100%
C.10.08									
		1,023,192	2,117,192	824,269	-	-	289,651	2,000	4,256,304
C.10.09	Total Exp Before Other Revenues	24%	50%	19%	0%	0%	7%	0%	100%
		10,718	875,196	90,956	-	-	243,748	-	1,220,618
C.10.10	Depr Expense	1%	72%	7%	0%	0%	20%	0%	100%

Appendix E

Peaking Factors

Peaking Factors

System

Annual Avg Day	0.430
Maximum Day	
Water Max Day/Max Month	1.26
WW Max Day	0.730
Maximum Hour	
Water Max Hour/Max Day	1.14
WW Max Hour	0.833
Maximum Month Avg Day - Mar	0.577

Class

	Pk Day	Pk Hr
Unmetered	0.153	0.244
Commerical	0.529	0.741
Industrial	0.212	0.254

Max Day / Max Mon	1.265
Max Hr / Max Day	1.142

Water Statistics

Annual Avg Day	2.749
Max Day	6.574
Max Hour	7.507
Max Month	5.197

Note: Since unmetered flows based on assumed 200 gpd flow per customer, Pk Mo Day / Avg Day will be 1.00. Therefore, must assume a factor.

AWWU - 2.07 for Res (U-06-045)
GHU - 1.61 for Res (U-19-070)

Peak Day Factor

	Annual Use		Peak Month			Pk Mo Day/ Avg Day	Max Day / Max Month (Avg Day)	Weekly Usage Adj	Max Day Capacity Factor (MDCF)	Avg Demand x CF	
	MG	MG/Day	Month	MG	MG/Day						
Residential/Duplex	25.15	**0.069**	Jul	2.15	0.069	1.40	1.265	1.250	2.214	0.153	
Commercial	103.67	**0.284**	Mar	10.81	0.349	1.23	1.265	1.200	1.864	0.529	
Industrial	28.08	**0.077**	Mar	4.94	0.159	2.07	1.265	1.050	2.752	0.212	
	156.89	0.430			0.577	1.34				0.894	NCP Day
										0.730	Max Day
										1.22	System Diversity (>1)

Note: Estimated factors.

AWWU - 3.32 for Res (U-06-045)
GHU - 1.95 for Res (U-19-070)

Peak Hour Factor

	Max Day Capacity Factor	Assumed MH / MD	Peak Hour Capacity Factor (PHCF)	Avg Dem x PHCF	
Residential/Duplex	2.214	1.600	3.542	0.244	
Commercial	1.864	1.400	2.609	0.741	
Industrial	2.752	1.200	3.303	0.254	
				1.239	NCP Hour (MGD)
				0.833	Max Hour
				1.49	System Peak Hour Diversity (>1)

Industrial Customer Equivalent Factor

	Unit			Calculation	Source
Water Use	(gal)	77,242,000	(A)	Data	Metering Data
Average Pc	(#)	1,500	(B)	Data	
Per Househ	(#)	3.90	(C)	Data	Censusreporter.org
Equiv. Hou	(#)	385	(D)	=(B)/(D)	Calculation
Equiv. Hou	(gal/day)	200	(E)	Data	Model Assumption
Days/Year	(#)	365	(F)	Data	Known
Est. Water	(gal)	28,076,923	(G)	=(D)x(E)x(F)	Calculation
Estimated % of Meterec		36.35%	(H)	=(G)/(A)	Calculation

City of Unalaska

Solid Waste Utility

Cost of Service / Rate Design Study

April 21, 2021

Aldrich SM

List of Tables, Figures, and Appendices

Tables

Figures

Appendixes

1. INTRODUCTION

Background and Purpose of Study

In 2012, a review of the City of Unalaska's (the City) Solid Waste Utility rates was completed and presented to the City Council. This analysis showed that a rate increase of 75% for the Solid Waste Utility was needed by 2016. Rates were increased consecutively for three years starting in FY2013. The sum of the rate increases was 32.1%.

In early 2016, a high-level review of the City's Solid Waste Utility's cash flows was prepared and presented to the City Council. The analysis indicated that the Solid Waste Utility's revenues would need to increase 9 to 16% just to meet cash flow requirements. Revenues would need to increase even more to provide net positive cash flow in order to set aside funds to be used towards future capital expenditures. Based on these findings, rates were increased. Between 2017 and 2019 rates were increased annually on an across the board basis by 4.5%. The exceptions to the increase were labor and equipment hourly rates which have not increased since 2017. Other exceptions were appliances with refrigerant which increased between 2017 and 2018 by 4.04% and in 2019 by 4.97%. Mud Gear rates were added to the Fiscal Year 2021 Fee Schedule.

It is not clear when the last cost of service study to determine cost causation by rate class was prepared for the City. Since the 2016 review, the Solid Waste Utility has experienced an overall 5% increase in customers, with a decrease in LF52 Nets of about 33%. Although the rate increases have resulted in an overall increase in revenue, increases in expenses have outpaced increases in revenue, resulting in a net deficit in the solid waste fund over the past few years. The 2021 fiscal year budget indicates that this trend is expected to continue. Accordingly, City staff felt it was prudent to review rates of the Solid Waste Utility to ensure that it can meet operating expense requirements and capital improvement obligations in the near term while maintaining the utility's financial health.

This report summarizes the analysis performed by Aldrich CPAs and Advisors, LLP (Aldrich) and the findings with respect to a cost of service study and review of rates for the City's Solid Waste Utility.

Methodology of Analysis

In setting rates for the Solid Waste Utility, the City must ensure that 1) rates will recover adequate revenues to maintain the utility's fiscal health, and 2) the rates are set in an equitable manner that does not favor one class over another.

Based on the assumed sales and revenue requirements, costs are allocated to each rate class. This ensures that the allocation process is performed in a fair and equitable manner. Although the City's rates are not subject to review by the Regulatory Commission of Alaska (RCA), the methodologies used herein are the same as that prescribed by the RCA for regulated utilities.

The overall methodology of allocating costs to the various rate classes is described below in the Process section of the report while the details of the analysis are provided in the Analysis and Adequacy of Rates / Rate Design sections.

Recommendations

Aldrich provides the following recommendations that will assist with cost causation analysis in future studies. During the next Study year that will be analyzed:

1. If possible, on a monthly basis, track and record the number of times the Landfill Maintenance Fee customers bring refuse to the Landfill.

2. If possible, on a monthly basis, track and record the tons of refuse the Landfill Maintenance Fee customers deliver to the Landfill.

3. For hourly labor charges, separate the number of hours spent sorting refuse brought to the Landfill versus the number of hours spent on a special project or job site.

4. Track and record the number of customers that are charged the Minimum Fee for bringing refuse to the Landfill.

5. If there are instances where costs could be assigned directly to a customer class or rate, track and record those costs.

The Process

General

The overall objective of a cost of service study is to allocate the utility's cost to each customer class in a fair and equitable manner. Once the costs are allocated to each class, rates are set to recover the allocated costs such that the "cost causer" is also the "cost payer".

The process of allocating cost and designing rates includes four basic steps:

1) Billing Determinants/Allocator Development: Estimating number of customers and usage;
2) Revenue Requirement Analysis: Projecting the utility's revenue requirement;

3) Cost of Service Analysis: Allocating the revenue requirements to each rate class; and
4) Rate Design: Designing rates that will recover the rate class allocated cost of service.

Billing Determinants / Allocator Development

The number of customers and usage must first be projected prior to projecting the revenue requirements. The estimated tons or cubic yards of solid waste delivered to the landfill is used to develop allocation factors (described below). In addition, revenues by customer class were used to develop an allocation factor. Thus, billing determinants and allocation factors are developed simultaneously.

Billing determinants include the number of customers for each customer class and the volume of waste delivered to the Landfill. The number of customers and volume of waste delivered to the Landfill is taken directly from billing records. Billing determinants are typically based on a utility's billings incurred during the most recent fiscal year, or another recent 12-month period. However, historical trends are also reviewed, and any anticipated system expansions are also considered.

Allocation factors are based on class data which may or may not be readily available. Assumptions were made to allocate a share of the Landfill operating costs to the Maintenance customer class.

Revenue Requirements

Revenue requirements are also based on a utility's most recent 12-month financial results. The historical expenses are reviewed and "normalized" to account for abnormal amounts that occurred during the historical period and known changes that will occur in the future. Total revenue requirements for the utility should include not only normalized expenses but also net operating margins and offsets for other revenues. Net operating margins may be required to satisfy lender covenants or simply to address risks associated with actual sales and expenses differing from projections. Additionally, the utility may wish to build equity in anticipation of large capital additions that will be funded in the near future.

Cost of Service

Once the revenue requirements are projected, these costs must be allocated to each rate class. Customers are separated into rate classes, with each class having different usage characteristics. Since the cost of providing service varies for each class, the utility's costs are allocated among classes that contribute revenue for the Utility. There are approximately 22 classes of service that are described in the City's Fee Schedule. Only eight of the 22

rate classes have revenue associated with them. This cost of service study focuses only on the eight revenue-generating rate classes. It is recommended that the other 14 existing rates be maintained at the current levels. If revenue is realized for the other rate classes in the future, it is not expected to be enough to shift the revenue requirement significantly. The cost of service study allocation methods applied to the eight classes of service are designed to be fair and equitable and to not favor one class over another.

Allocation

In the case of the Solid Waste Utility, the cost-of service analysis allocates the revenue requirement to each customer (or rate) class based on each classes' respective contribution to the expense groupings.

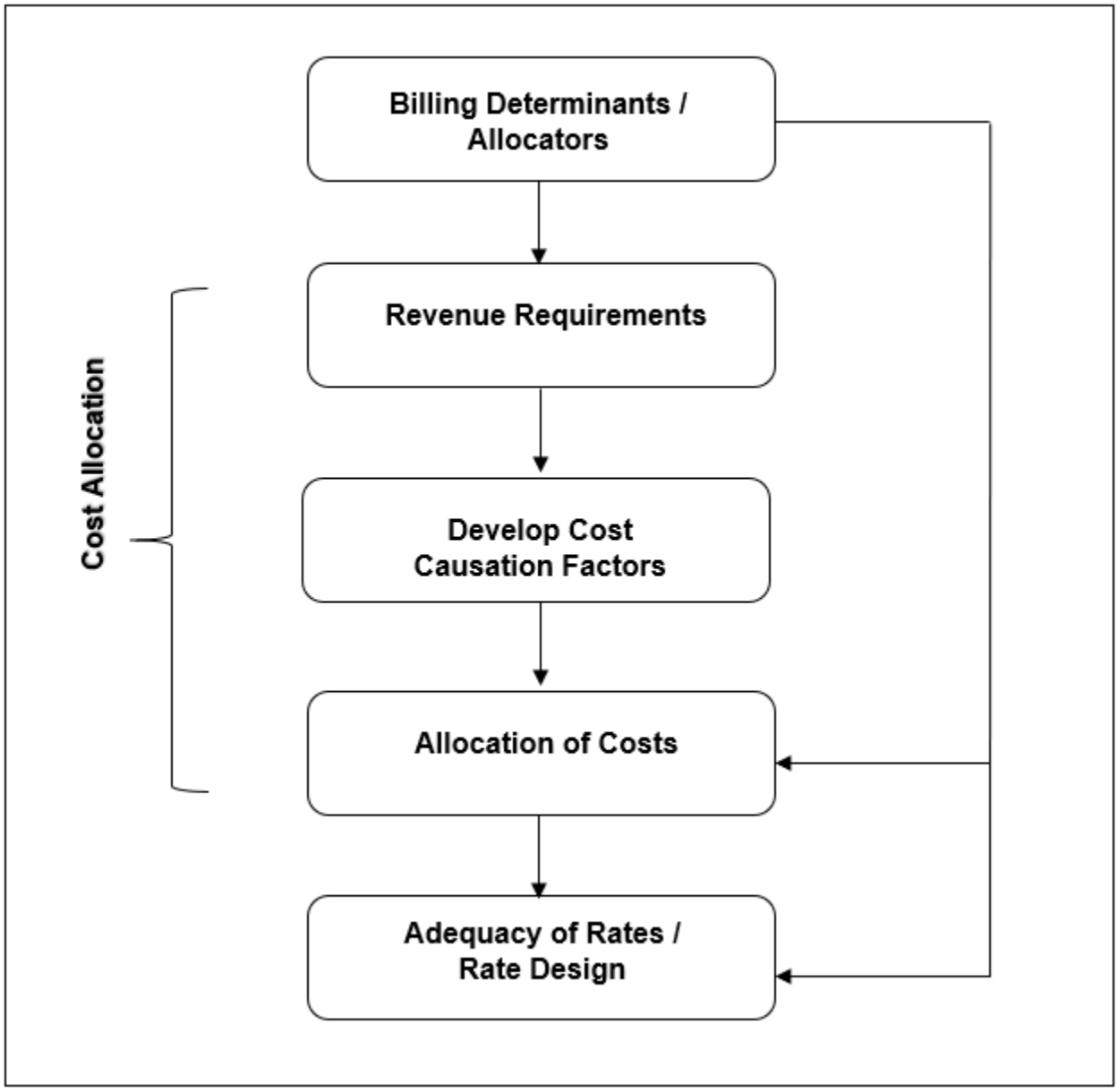
Developing the allocation factors used for expenses is fairly straightforward. Direct cost causation, if any, is recognized. Cost drivers are determined for other categories of expenses and a factor based on the cost driver is calculated. Assumptions are made to allocate a fair share of expense for categories of costs without known direct cost causation. In this way, the allocation factors distribute a fair share of expenses to the all the rate classes.

Rate Design

After the revenue requirements have been allocated to each class, the existing revenues received for each rate class are compared to determine if the rates recover less than or more than the allocated cost of service. Rates are then adjusted accordingly.

The overall process just described is summarized in Figure 1 on the following page. The next section discusses the specific analysis conducted for the City.

Figure 1
The Process



2. ANALYSIS

Billing Determinants and Allocations

The Solid Waste Utility billing determinants for the past three fiscal years are summarized in Table 1 below and provided in more detail in Appendix A. The number of customers in the rate classes shown below have been relatively steady over the past three years but show slight upward trends.

Table 1
Historical Billing Determinants

	Fiscal Year Ending June 30,		
	2018	2019	2020
Number of Customers (Annual Average)			
LF20 Gen Waste	43	41	44
LF23 Equipment	10	13	16
LF24 Scrap Metal HM	14	15	17
LF51 Misc STL (Labor)	9	11	14
LF52 Nets	7	6	6
LF53 Fish Waste	3	4	3
LF54 Refrigerant	3	4	5
LF01 Maintenance	1,035	1,036	1,047
Total	1,124	1,129	1,151

Revenue Requirements

The Solid Waste Utility's expenses for the past three years and the budget for the current fiscal year are summarized in Table 2. Financial details for the fiscal year ending June 30,2020, and the current year budget are provided in Appendix B.

Expenses increased approximately 14% from FY 2018 to FY 2019 and another 12% from FY 2019 to FY 2020. Budget expenses for FY 2021 are over 14% higher than the previous year. Much of the increase is attributed to increased labor and benefits expense, general supplies expense, and professional services, which can be controlled to some extent by the City. Other expenses that cannot be as readily controlled, such as insurance, electricity and others, do not appear to be adding large increases to the overall revenue requirements. Increases in labor and benefits expense alone accounts for almost 78% of the total increase in budget expenses for FY 2021.

Costs that vary with production levels form only a small part of the expense structure with most costs being considered fixed. Accordingly, the budget for FY 2021 forms the basis for the Test Year revenue requirement.

Table 2
Annual Operating Expenses

	Fiscal Year Ending June 30,			
	2018	2019	2020	2021
	Actual	Actual	Actual	Budget
Administrative				
Labor/Benefits	$ 244,094	$ 222,516	$ 233,615	$ 295,967
Administrative Operations	87,181	79,074	80,166	110,615
Depreciation plus Closure	845,288	1,162,270	1,525,228	1,217,996
Administrative Overhead	20,267	21,456	21,456	21,456
Interest/Bad Debt	72,456	67,686	65,110	61,016
Subtotal	1,269,286	1,553,002	1,925,575	1,707,050
Solid Waste Operations				
Labor/Benefits	663,995	653,114	718,593	943,980
Operations	708,610	805,304	805,304	1,159,000
Vehicle				
Labor/Benefits	42,693	41,028	29,968	86,935
Operations	19,507	13,860	21,819	56,000
Facilities				
Labor/Benefits	62,217	62,148	33,927	74,324
Operations	12,523	28,353	11,010	13,500
Total	2,778,831	3,156,809	3,546,196	4,040,789
Target Margin				100,000
Capital Expenditures				-
Less Other Income	(46,509)	(13,272)	(32,592)	(1,578,257)
Net Revenue Requirement	$ 2,732,322	$ 3,143,537	$ 3,513,604	2,562,532

In addition to meeting its expected expenses, the utility should typically set rates that result in positive net margins. Margins serve three purposes for municipal utilities:

1. Debt covenants may require certain levels of net operating margins.
2. A net margin helps provide some security in maintaining a utility's financial health in the event sales or expenses differ significantly from that assumed.
3. The equity built up with net margins can be used to fund capital expenditures and therefore minimize debt.

A target net margin is typically based on a utility's rate base, which is equal to the net plant in service plus an amount for working capital and other miscellaneous items. Other factors are also considered including future cash flows after debt service, capital expenditures, and debt covenants. Based on the Solid Waste Utility's net plant in service, a minimal return on rate base of 4% yields a target margin of approximately $669,000. The Solid Waste Utility's revenue requirements includes a more conservative $100,000 target margin.

Table 3 provides a summary of the adjusted Test Year revenue requirements used in performing the cost of service analysis. Details of these revenue requirements are provided in Appendix B. Two adjustments were made to the budgeted revenue requirements:

1. PERS Nonemployer Contributions were removed from Other Income and used to reduce labor/benefits expenses. Benefits expenses include both employer and employee PERS contributions, but the employee portions are not Utility expenses. Since the PERS Nonemployer Contributions represent the amount of employee contributions that are budgeted to be collected by the Utility, these amounts have been reclassified to reduce the related expense lines.
2. Budgeted Use of Unrestricted Net Assets and Transfers from the Special Revenue Fund totaling $1,578,257 was removed from Other Income. These are non-recurring revenues that are transferred to the Utility from Retained Earnings or other sources to help cover revenue shortfalls.

Table 3
Revenue Requirement Summary

	Fiscal Year Ending June 30,		
	2021 Budget	Adjustments	Adjusted Rev Requirement
Administrative			
Labor/Benefits	$ 295,967	$ (37,969)	$ 257,998
Administrative Operations	110,615		110,615
Depreciation plus Closure	1,217,996		1,217,996
Administrative Overhead	21,456		21,456
Interest/Bad Debt	61,016		61,016
Subtotal	1,707,050	(37,969)	1,669,081
Solid Waste Operations			
Labor/Benefits	943,980		943,980
Operations	1,159,000		1,159,000
Vehicle			
Labor/Benefits	86,935		86,935
Operations	56,000		56,000
Facilities			
Labor/Benefits	74,324		74,324
Operations	13,500		13,500
Total	4,040,789	(37,969)	4,002,820
Target Margin	100,000	-	100,000
Capital Expenditures	-		-
Less Other Income	(1,578,257)	1,578,257	-
Net Revenue Requirement	$ 2,562,532	$ 1,540,288	$ 4,102,820

Cost Allocation

Allocation (Appendix C)

The revenue requirements were allocated based on each customer class' respective share of certain factors. For instance, total tons or cubic yards of solid waste delivered to the Landfill by General Waste, Scrap Metal, Nets and Fish Waste customer classes is readily available. The total tons delivered to the Landfill is not available for the Maintenance Fee rate class which represents residential and commercial customer classes that receive a monthly utility bill for other City services. In addition, it is unclear what the frequency of delivery of waste to the Landfill may be for the Maintenance Fee rate class. The Landfill Factor is based on the known number of tons or cubic yards of waste delivered to the Landfill in each rate class. The Revenue Factor is based on the known total revenues received for each rate class. Each category of expense was analyzed to determine the best way to distribute the cost to each rate class. Assumptions are made to allocate a fair share of expense for categories of costs without known direct cost causation. In this way, the allocation factors distribute a fair share of expenses to the all the rate classes.

Based on the process described above, the revenue requirements were allocated to each customer class, and the allocation process results are shown below in Table 4. Additional details of the allocation are provided in Appendix C.

Table 4
Allocation of Revenue Requirements

	Total	LF20 Gen Waste	LF23 Equipment	LF24 Scrap Metal HM	LF51 Misc STL (Labor)	LF52 Nets	LF53 Fish Waste	LF54 Refrigerant	LF01 Maintenance
Total Revenue Requirement by Rate Class	$ 4,102,820	$ 3,015,319	$ 107,783	$ 194,723	$ 53,142	$ 71,382	$ 238,022	$ 8,881	$ 413,568
Percent	100.00%	73.49%	2.63%	4.75%	1.30%	1.74%	5.80%	0.22%	10.08%

3. ADEQUACY OF RATES/RATE DESIGN

Existing Rate Structure

The Solid Waste Utility's rate structure over the past several years is shown in Table 5. The last time rates were increased was FY 2019. Since then, the rates have remained unchanged.

Table 5
Existing Rates

Rate Class	FY18	FY19	FY20	FY21
LF20 Gen Waste				
Volume Charge ($/Tons)	$ 240.38	$ 251.20	$ 251.20	$ 251.20
LF23 Equipment				
Volume Charge ($/Tons)	$ 166.43	$ 166.43	$ 166.43	$ 166.43
LF24 Scrap Metal HM				
Volume Charge ($/Tons)	$ 1,027.31	$ 1,073.54	$ 1,073.54	$ 1,073.54
LF 51 Misc STL (Labor)				
Volume Charge ($/Tons)	$ 87.40	$ 87.40	$ 87.40	$ 87.40
LF 52 Nets				
Volume Charge ($/Cubic Yard)	$ 1,027.31	$ 1,073.54	$ 1,073.54	$ 1,073.54
LF53 Fish Waste				
Volume Charge ($/Tons)	$ 513.66	$ 536.77	$ 536.77	$ 536.77
LF54 Refrigerant				
Volume Charge ($/Pieces)	$ 102.27	$ 107.35	$ 107.35	$ 107.35
LF01 Maintenance				
Service Charge ($/Month)	$ 26.76	$ 27.97	$ 27.97	$ 27.97

Projected Revenues – Existing Rates

Table 6 provides a summary of the revenues projected to be collected based on the assumed billing determinants and existing rates. The projections summarized in the table indicate that existing rates must be increased an average of 60% to recover all revenue requirements (including the target margin of $100,000). On a class basis, most classes have rates set below their allocated cost of service except for LF24 Sharp Metal and LF52 Nets. The LF54 Refrigerant class is the closest to its allocated cost of service while the LF23 Equipment is significantly below its cost of service, requiring a 154% increase to cover the cost of service. The LF20 General Waste class of service is responsible for the largest portion of the revenue deficiency.

Table 6
Test Year Net Revenues – Existing Rates

	Total	LF20 Gen Waste	LF23 Equipment	LF24 Scrap Metal HM	LF51 Misc STL (Labor)	LF52 Nets	LF53 Fish Waste	LF54 Refrigerant	LF01 Maintenance
Revenues at Existing Rates	$ 2,562,531	$ 1,641,558	$ 42,484	$ 274,041	$ 22,310	$ 109,616	$ 109,616	$ 8,769	$ 354,137
Full Revenue Requirement									
Allocated Costs	$ 4,102,820	$ 3,015,319	$ 107,783	$ 194,723	$ 53,142	$ 71,382	$ 238,022	$ 8,881	$ 413,568
Surplus (Deficiency)	$ (1,540,289)	$ (1,373,762)	$ (65,299)	$ 79,318	$ (30,832)	$ 38,234	$ (128,405)	$ (112)	$ (59,432)
Required Increase (Decrease)	60.11%	83.69%	153.70%	-28.94%	138.19%	-34.88%	117.14%	1.27%	16.78%

Table 7 compares the revenue requirements developed in this study with the current rates and Table 8 compares the customer counts and production data used in these studies. These tables provide some insight into the need for such a significant rate increase to recover all revenue requirements. Table 7 shows that the net revenue requirement increased between the prior revenue analysis and this study by about $1.3 million, or 49%. The largest expense increases were in: labor and benefits ($370,000), depreciation ($299,000), solid waste operations ($482,000), and an increase in target margin ($100,000). While the revenue requirements have increased over 49%, Table 8 shows that customer counts have only increased by 5%. Without a significant increase in customers, the Utility must raise rates to cover increases in costs or operate at a deficit.

Table 7
Historical Revenue Requirement Comparison

	Fiscal Year Ending June 30,			
	2016 Adj Rev Requirements	2020 Adj Rev Requirements	Dollar Change	Percentage Change
Administrative				
Labor/Benefits	$ 225,552	$ 257,998	$ 32,446	14.4%
Administrative Operations	106,664	110,615	3,951	3.7%
Depreciation plus Closure	918,979	1,217,996	299,017	32.5%
Administrative Overhead	13,822	21,456	7,634	55.2%
Interest/Bad Debt	-	61,016	61,016	N/A
Subtotal	1,265,017	1,669,081	404,064	31.9%
Solid Waste Operations				
Labor/Benefits	632,864	943,980	311,116	49.2%
Operations	676,300	1,159,000	482,700	71.4%
Vehicle				
Labor/Benefits	70,253	86,935	16,682	23.7%
Operations	56,000	56,000	-	0.0%
Facilities				
Labor/Benefits	64,429	74,324	9,895	15.4%
Operations	11,576	13,500	1,924	16.6%
Total	2,776,439	4,002,820	1,226,381	44.2%
Target Margin	-	100,000	100,000	N/A
Capital Expenditures	-	-		N/A
Less Other Income	(16,692)	-	16,692	-100.0%
Net Revenue Requirement	$ 2,759,747	$ 4,102,820	$ 1,343,073	48.7%

Table 8
Historical Customer Count

	Fiscal Year Ending June 30,			
	2016	2020	Change	Percent Change
Number of Customers (Annual Average)				
LF20 Gen Waste	45	44	(1)	-1.9%
LF23 Equipment	12	16	4	30.1%
LF24 Scrap Metal Hl	15	17	2	12.8%
LF51 Misc STL (Lab	9	14	5	54.1%
LF52 Nets	9	6	(3)	-33.0%
LF53 Fish Waste	3	3	0	10.0%
LF54 Refrigerant	4	5	0	11.3%
LF01 Maintenance	997	1,047	50	5.0%
Total	1,094	1,151	57	5.2%

The budget for the fiscal year ending June 30, 2021 shows a budgeted net income of zero but after the adjustments described in the Analysis section above, the deficiency is over $1.5 million, as shown in Table 7. The actual net loss in FY 2020 was over $1.1 million. The reason for the difference between the calculated deficiency and the prior year actual results are:

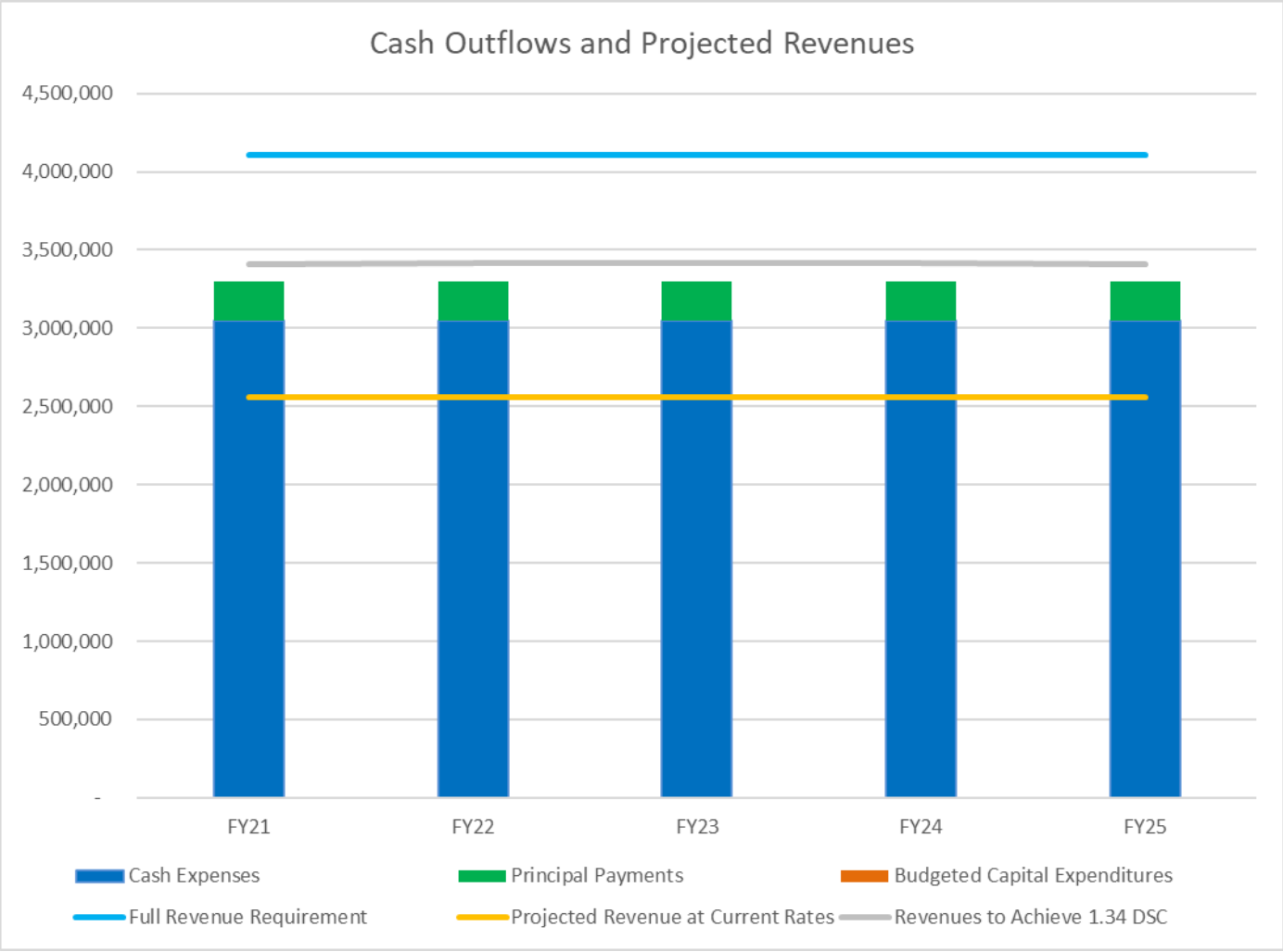
1. The revenue requirements summarized in Table 7 include a target margin of $100,000. No corresponding amount is included in the actual margin.
2. FY 2021 budgeted expenses were approximately $495,000 higher than FY 2020 actual expenses. The primary drivers in this increase were:
    a. Labor/Benefits expense was budgeted approximately $385,000 higher than FY 2020 actual expense;
    b. Solid Waste Operations expense was budgeted approximately $420,000 higher than FY 2020 actual expense; and
    c. Depreciation expense is budgeted to be $307,000 lower than FY 2020 actual expense.

Expenses in 2021 and thereafter are expected to increase due to inflationary effects on the utility's expense structure and an increase in depreciation as new assets are included in the system. Revenue deficits with the existing rates are, therefore, also expected to increase in the future absent increased landfill usage.

Figure 2, on the next page, illustrates that if sales volume and operating expenses remain at the level projected for FY 2021, with no rate increase, cash generated will not be sufficient to cover cash expenses (including

interest) and debt principle payments. Additionally, no cash will be generated to pay for capital expenditures. There are no budgeted capital expenditures for FY 2021 through FY 2025. The graph also shows that if rates are increased to achieve a 1.34 DSC, enough cash will be generated to cover cash expenses, and debt principle payments. Note that budgeted capital expenditures were not accounted for. If rates are increased and sales equal the revenue requirements, enough cash will be generated to cover all projected cash outflows and allow the utility to set aside funds for additional future projects. The remaining amounts will need to be funded through either debt, retained earnings, transfers from the general fund or special revenue fund, or a combination thereof.

Figure 2
Cash Outflows and Projected Revenues



Alternate Cash Basis Revenue Requirement

Traditional ratemaking typically calculates revenue requirements on an income basis (as described in the Revenue Requirements section above). This method includes all operating expenses, interest on debt, and depreciation (a non-cash expense) in the revenue requirement. However, another way to look at the revenue requirement concept is on a cash basis. This method includes all operating expenses and interest on debt but rather than including non-cash depreciation expense, it includes principal payments instead. When evaluating the revenue requirement using this method, the debt service coverage ratio (DSC) can be used to define the utility's cash requirements. DSC is equal to the utility's earnings before interest, taxes, and depreciation, divided by its required debt service payments (principle and interest). Table 9 shows that the Solid Waste Utility's DSC based on projected revenues from current rates and the budgeted debt service payments for FY 2021 is -1.36. To achieve a DSC of +1.36, rates would need to be increased by 33%. Figure 2 shows that if sales volume and operating expenses remain at the level projected for FY 2021, with a rate increase to achieve a 1.36 DSC, cash generated should be sufficient to cover cash expenses (including interest) and debt principle payments however there will be little extra cash left to pay for capital expenditures.

Table 9
Alternate Cash Basis Revenue Requirement

	Total	LF20 Gen Waste	LF23 Equipment	LF24 Scrap Metal HM	LF51 Misc STL (Labor)	LF52 Nets	LF53 Fish Waste	LF54 Refrigerant	LF01 Maintenance
Revenues	$ 2,562,531	$ 1,641,558	$ 42,484	$ 274,041	$ 22,310	$ 109,616	$ 109,616	$ 8,769	$ 354,137
Minimum Required Cash Flow									
Full Revenue Requirement	$ 4,102,820	$ 3,015,319	$ 107,783	$ 194,723	$ 53,142	$ 71,382	$ 238,022	$ 8,881	$ 413,568
Percent	100.00%	73.49%	2.63%	4.75%	1.30%	1.74%	5.80%	0.22%	10.08%
Less:									
Depreciation	$ 955,996	$ 702,598	$ 25,114	$ 45,372	$ 12,383	$ 16,633	$ 55,461	$ 2,069	$ 96,365
Interest Expense	61,016	44,843	1,603	2,896	790	1,062	3,540	132	6,150
Target Margin	100,000	73,494	2,627	4,746	1,295	1,740	5,801	216	10,080
Operating Expenses	$ 2,985,808	$ 2,194,385	$ 78,439	$ 141,709	$ 38,674	$ 51,948	$ 173,219	$ 6,463	$ 300,972
FY 2021 Principal Payments	254,232	186,844	6,679	12,066	3,293	4,423	14,749	550	25,627
Interest Expense	57,202	42,040	1,503	2,715	741	995	3,319	124	5,766
Minimum Required Cash Flow	$ 3,297,242	$ 2,423,269	$ 86,620	$ 156,490	$ 42,708	$ 57,366	$ 191,287	$ 7,137	$ 332,365
Achieved DSC	(1.36)								
Cash Basis Revenue Requirement									
Target DSC	1.36								
Target DSC Revenue Requirement	$ 3,408,168	$ 2,504,793	$ 89,534	$ 161,754	$ 44,145	$ 59,296	$ 197,722	$ 7,377	$ 343,547
Surplus (Deficiency)	$ (845,637)	$ (863,235)	$ (47,050)	$ 112,286	$ (21,834)	$ 50,320	$ (88,106)	$ 1,392	$ 10,590
Percent	-33%	-53%	-111%	41%	-98%	46%	-80%	16%	3%

Rate Options

As mentioned before, it is noted that cost of service studies are somewhat imprecise in nature, consequently, rate adjustments need not be set precisely at cost of service to be fair and equitable. Several rate options are discussed below for the City's consideration and are summarized on Table 10. The average monthly customer impact is presented on Table 11 and each option's effect on rates is summarized on Table 12. With each option,

the Utility could choose to phase the rate increases in over several years to ease the transition. During the interim years, the deficiency in the revenue requirements would need to be covered with cash reserves, transfers from the general fund, or some other source of cash.

Rate Option 1 Increase rates to meet a 1.25 target DSC. This could be accomplished by:

Option 1a
Increase rates by:

- 52.6 % for LF20 Gen Waste;
- 110.7 % for LF23 Equipment;
- 97.9 % for LF51 Misc STL (Labor); and
- 80.4 % for LF53 Fish Waste.

and decrease rates by:

- 41 % for LF24 Scrap Metal;
- 45.9 % for LF52 Nets;
- 15.9 % for LF54 Refrigerant;
- and 3 % for LF01 Maintenance.

Option 1b
Increase rates across-the-board by 33.0%.

Rate Option 2

Adjust rates to meet the full revenue requirement, based on the cost of service study results. This would result in increasing rates by:

- 83.7 % for LF20 Gen Waste;
- 153.7 % for LF23 Equipment;
- 138.2 % for LF51 Misc STL (Labor);
- 117.1 % for LF53 Fish Waste.

and decrease rates by:

- 28.9 % for LF24 Scrap Metal;
- 34.9 % for LF52 Nets;
- 1.3 % for LF54 Refrigerant; and
- 16.8 % for LF01 Maintenance.

Rate Option 3
Implement a 1 % sales tax to fund utility infrastructure to help fund capital expenditures. The total estimated revenues from a 1 % sales tax would be approximately $2.67 million. This revenue could be split between the City of Unalaska utilities to fund utility infrastructure needs and specific projects at the direction of the City Council.

Combine Rate Option 1 and 3
Options 1 and 3 could be combined with revenues from Option 1 providing cash to fund operating expenses and debt payments and revenues from Option 3 providing cash for capital projects.

Table 10
Rate Options

		Total	LF20 Gen Waste	LF23 Equipment	LF24 Scrap Metal HM	LF51 Misc STL (Labor)	LF52 Nets	LF53 Fish Waste	LF54 Refrigerant	LF01 Maintenance
Revenues at Existing Rates		$ 2,562,531	$ 1,641,558	$ 42,484	$ 274,041	$ 22,310	$ 109,616	$ 109,616	$ 8,769	$ 354,137
Full Revenue Requirement										
Allocated Costs		$ 4,102,820	$ 3,015,319	$ 107,783	$ 194,723	$ 53,142	$ 71,382	$ 238,022	$ 8,881	$ 413,568
Surplus (Deficiency)		$ (1,540,289)	$ (1,373,762)	$ (65,299)	$ 79,318	$ (30,832)	$ 38,234	$ (128,405)	$ (112)	$ (59,432)
Required Increase (Decrease)		60.11%	83.69%	153.70%	-28.94%	138.19%	-34.88%	117.14%	1.27%	16.78%
Percent of Total		100.00%	64.06%	1.66%	10.69%	0.87%	4.28%	4.28%	0.34%	13.82%
Cash Basis Revenue Requirement (Target DSC RR)										
Allocated Costs	DSC: 1.36	$ 3,408,168	$ 2,504,793	$ 89,534	$ 161,754	$ 44,145	$ 59,296	$ 197,722	$ 7,377	$ 343,547
Surplus (Deficiency)		$ (845,637)	$ (863,235)	$ (47,050)	$ 112,286	$ (21,834)	$ 50,320	$ (88,106)	$ 1,392	$ 10,590
Required Increase (Decrease)		33.00%	52.59%	110.75%	-40.97%	97.87%	-45.91%	80.38%	-15.87%	-2.99%
Percent of Total		100.00%	73.49%	2.63%	4.75%	1.30%	1.74%	5.80%	0.22%	10.08%
Option 1a: DSC: Based on COSS										
Proposed Adjustment	DSC: 1.36	33.00%	52.59%	110.75%	-40.97%	97.87%	-45.91%	80.38%	-15.87%	-2.99%
After Proposed Adjustment:										
Revenues at Proposed Rates		$ 3,408,168	$ 2,504,793	$ 89,534	$ 161,754	$ 44,145	$ 59,296	$ 197,722	$ 7,377	$ 343,547
Surplus (Deficiency)		$ (845,637)	$ (863,235)	$ (47,050)	$ 112,286	$ (21,834)	$ 50,320	$ (88,106)	$ 1,392	$ 10,590
Percent of Total		100.00%	73.49%	2.63%	4.75%	1.30%	1.74%	5.80%	0.22%	10.08%
Required Increase (Decrease)										
Rates at DSC Based on COSS			$ 383.30	$ 350.75	$ 633.66	$ 172.93	$ 580.73	$ 968.21	$ 90.31	$ 27.13
Option 1b: DSC; Across the Board Increase										
Proposed Adjustment	DSC: 1.36	33.00%	33.00%	33.00%	33.00%	33.00%	33.00%	33.00%	33.00%	33.00%
Revenues at Proposed Rates		$ 3,408,168	$ 2,183,272	$ 56,504	$ 364,474	$ 29,673	$ 145,790	$ 145,790	$ 11,663	$ 471,002
Surplus (Deficiency)		$ (845,637)	$ (541,714)	$ (14,020)	$ (90,433)	$ (7,362)	$ (36,173)	$ (36,173)	$ (2,894)	$ (116,865)
Rates Based on DSC Across the Board			$ 334.10	$ 221.35	$ 1,427.81	$ 116.24	$ 1,427.81	$ 713.90	$ 142.78	$ 37.20
Option 2 No Deficiency; Based on COSS Results										
Proposed Adjustment			83.69%	153.70%	-28.94%	138.19%	-34.88%	117.14%	1.27%	16.78%
After Proposed Adjustment:										
Current Revenues		$ 2,562,531	$ 1,641,558	$ 42,484	$ 274,041	$ 22,310	$ 109,616	$ 109,616	$ 8,769	$ 354,137
Revenues at Proposed Rates		$ 4,102,820	$ 3,015,319	$ 107,783	$ 194,723	$ 53,142	$ 71,382	$ 238,022	$ 8,881	$ 413,568
Surplus (Deficiency)		$ (1,540,289)	$ (1,373,762)	$ (65,299)	$ 79,318	$ (30,832)	$ 38,234	$ (128,405)	$ (112)	$ (59,432)
% Increase/(Decrease)		60.11%	83.69%	153.70%	-28.94%	138.19%	-34.88%	117.14%	1.27%	16.78%
Rates Based on COSS			$ 461.42	$ 422.23	$ 762.82	$ 208.18	$ 699.09	$ 1,165.55	$ 108.72	$ 32.66

Table 11
Average Monthly Bill Impacts

	Current Rates	Option 1a: Cost-Based Rates	Options 1b: Across-the-Board Increase	Option 2: Cost-Based Rates
LF01 Sch A Landfill Maintenance Fee	$ 27.97	$ 27.13	$ 37.20	$ 32.66
% Change:	0.0%	-3.0%	33.0%	16.8%

Table 12
Rate Effects

		Across the Board Increase		Option 1a: DSC		Option 1b: DSC		Option 2	
Rate Class	Current Rates	Full Rev Req	Percent Change	Based on COSS	Percent Change	Across the Board	Percent Change	COSS Full Rev Req	Percent Change
LF20 Gen Waste	$ 251.20	$ 402.19	60.11%	$ 383.30	52.59%	$ 334.10	33.00%	$ 461.42	83.69%
LF23 Equipment	166.43	266.47	60.11%	350.75	110.75%	221.35	33.00%	422.23	153.70%
LF24 Scrap Metal HM	1,073.54	1,718.82	60.11%	633.66	-40.97%	1,427.81	33.00%	762.82	-28.94%
LF51 Misc STL (Labor)	87.40	139.93	60.11%	172.93	97.87%	116.24	33.00%	208.18	138.19%
LF52 Nets	1,073.54	1,718.82	60.11%	580.73	-45.91%	1,427.81	33.00%	699.09	-34.88%
LF53 Fish Waste	536.77	859.41	60.11%	968.21	80.38%	713.90	33.00%	1,165.55	117.14%
LF54 Refrigerant	107.35	171.88	60.11%	90.31	-15.87%	142.78	33.00%	108.72	1.27%
LF01 Maintenance	27.97	44.78	60.11%	27.13	-2.99%	37.20	33.00%	32.66	16.78%

Summary

The findings of the analysis herein are:

1. Expenses have increased since the last rate review was performed, and the number of customers and the resulting revenue has not changed increased commensurately to keep up with expenses.
2. Due to the significant increase in expenses without significant changes in sales, rates for most customer classes are set less than cost of service.
3. Revenues from the LF20 Gen Waste (tipping fees) account for 76 % of total revenues. Since rates for that class are less than cost of service, an overall revenue shortfall is projected.
4. The minimum cash flow required by the utility, prior to capital expenditures, is estimated to be approximately $4 million per year and the projected sales revenues are $2.5 million per year.

Based on the outcome of this study, it is recommended that solid waste rates be increased at this time. Cash flow cannot be supported at existing rates at this point and both near-term and long-term operations call for a rate increase. Capital improvements necessary to maintain the integrity of the system must be funded. Those additions that are smaller are probably best funded from cash generated through revenues, and while larger additions might be funded from debt or grants, the City's willingness to set appropriate rates will facilitate the ability to secure external funding.

Appendix A – Historical Billing Determinants
Solid Waste Utility

	Fiscal Year Ending June 30,		
	2018	2019	2020
Number of Customers (Annual Average)			
LF20 Gen Waste	43	41	44
LF23 Equipment	10	13	16
LF24 Scrap Metal HM	14	15	17
LF51 Misc STL (Labor)	9	11	14
LF52 Nets	7	6	6
LF53 Fish Waste	3	4	3
LF54 Refrigerant	3	4	5
LF01 Maintenance	1,035	1,036	1,047
Total	1,124	1,129	1,151

Existing Rates

Rate Class	FY18	FY19	FY20	FY21
LF20 Gen Waste				
Volume Charge ($/Tons)	$ 240.38	$ 251.20	$ 251.20	$ 251.20
LF23 Equipment				
Volume Charge ($/Tons)	$ 166.43	$ 166.43	$ 166.43	$ 166.43
LF24 Scrap Metal HM				
Volume Charge ($/Tons)	$ 1,027.31	$ 1,073.54	$ 1,073.54	$ 1,073.54
LF 51 Misc STL (Labor)				
Volume Charge ($/Tons)	$ 87.40	$ 87.40	$ 87.40	$ 87.40
LF 52 Nets				
Volume Charge ($/Cubic Yard)	$ 1,027.31	$ 1,073.54	$ 1,073.54	$ 1,073.54
LF53 Fish Waste				
Volume Charge ($/Tons)	$ 513.66	$ 536.77	$ 536.77	$ 536.77
LF54 Refrigerant				
Volume Charge ($/Pieces)	$ 102.27	$ 107.35	$ 107.35	$ 107.35
LF01 Maintenance				
Service Charge ($/Month)	$ 26.76	$ 27.97	$ 27.97	$ 27.97

Appendix B – Historical and Projected Revenue Requirements
Solid Waste Utility

	FY 2018 (Actual)	FY 2019 (Actual)	FY 2020 (Actual)	FY 2021 (Budget)	Normalized Budget
Administration					
Labor					
Salaries and Wages - Admin	$ 147,728	$ 159,218	$ 144,669	$ 174,711	$ 174,711
Temporary Employees	2,002	545	269	1,297	1,297
Overtime - Admin	841	243	381	494	494
Benefits and PR Taxes - Admin	93,523	62,510	101,714	119,465	81,496
Subtotal - Labor and Benefits	244,094	222,516	247,033	295,967	257,998
Operations					
Legal Services	-	-	-	1,000	1,000
Engineering/Architectural Svs	2,035	2,596	4,382	2,500	2,500
Training Services	1,695	62	-	1,000	1,000
Education Reimbursement	-	-	-	1,450	1,450
Other Professional Svs	994	401	1,379	1,900	1,900
Software/Hardware Support	6,564	8,545	6,606	11,546	11,546
Water/Sewage	481	470	472	456	456
Solid Waste	2,476	674	879	1,215	1,215
Custodial Services/Supplies	1,165	1,213	1,304	4,509	4,509
Repairs/Maintenance Services	309	460	344	500	500
Building/Land Rental	-	-	-	-	42,712
General Insurance	26,890	22,641	25,459	42,712	1,321
Telephone / Fax / TV	1,654	2,387	2,788	1,321	6,900
Network/Internet	3,629	3,619	3,618	6,900	1,000
Travel and Related Costs	4,092	487	603	1,000	1,800
Banking / Credit Card Fees	4,635	5,854	5,170	1,800	2,565
Postal Services	2,753	(1,758)	1,905	2,565	-
Employee Moving Costs	-	-	-	5,000	5,000
General Supplies	840	250	138	200	200
Safety Related Items	-	785	611	-	-
Office Supplies	1,169	1,354	747	2,186	2,186
Computer Hardware / Software	3,709	7,179	5,475	2,841	2,841
Electricity	7,476	8,389	5,961	7,000	7,000
Heating Oil	11,937	10,687	9,455	8,102	8,102
Gasoline for Vehicles	668	674	409	1,962	1,962
Business Meals	37	-	-	200	200
Food/Beverage/Employee Appreciation	1,702	1,833	1,422	750	750
Books/Periodicals	272	272	247	-	-
Other	-	-	791	-	-
Subtotal - Administrative Ops	87,182	79,074	80,165	110,615	110,615
Other					
Depreciation	884,251	907,244	911,102	955,996	955,996
Landfill Closure/Post Closure	(38,963)	255,026	501,774	262,000	262,000
Bad Debt	-	120	417	-	-
Admin OH	20,267	21,456	21,456	21,456	21,456
Interest	72,456	67,566	43,338	61,016	61,016
Subtotal - Administrative Other	938,011	1,251,412	1,478,087	1,300,468	1,300,468
Total Administrative	1,269,287	1,553,002	1,805,285	1,707,050	1,669,081

Appendix B – Historical and Projected Revenue Requirements
Solid Waste Utility

Solid Waste Operations					
Labor					
Salaries - Operations	338,455	380,808	404,900	474,730	474,730
Temporary Employees	38,533	24,774	8,357	27,903	27,903
Overtime - Operations	44,187	45,931	21,966	46,000	46,000
Benefits - Operations	242,820	201,601	128,410	395,347	395,347
Subtotal - Labor and Benefits	663,995	653,114	563,633	943,980	943,980
Operations					
Engineering	4,175	-	-	2,000	2,000
Training	3,256	1,020	1,190	4,000	4,000
Other Professional	66,976	98,191	35,819	46,500	46,500
Computer	54	-	-	2,000	1,200
Sampling	28,567	23,138	6,543	48,000	48,000
Other Technical Services	965	210	1,540	36,500	36,500
Water/Sewage	68,410	192,263	109,269	150,000	150,000
Solid Waste	261,303	26,834	336,580	572,000	572,000
Repairs/Maintenance	10,500	125,088	69,462	11,000	11,000
Construction Services	-	-	-	-	-
Telephone / Fax	4,120	4,001	4,045	4,600	4,600
Network/Internet	-	-	-	-	-
Radio	-	6,325	-	2,750	2,750
Advertising	-	650	450	500	500
Travel	1,882	5,458	(1,067)	8,000	8,000
Postage	-	-	-	-	-
Dues	1,510	418	223	1,000	1,000
Permit Fees	9,945	9,735	10,155	10,000	10,000
Employee Moving Costs	-	1,067	-	-	-
Other	-	-	12,600	-	-
General Supplies	79,305	102,592	118,415	53,500	53,500
Safety Related Items	728	6,518	5,874	16,500	16,500
Lab Supplies	3,075	3,858	-	5,000	5,000
Sand/Gravel/Rock	49,995	50,040	49,994	50,000	50,000
Chemicals	158	-	-	250	250
Office Supplies	988	-	1,018	700	700
Facility Maintenance Supplies	-	-	-	-	-
Computer	3,380	-	843	1,700	1,700
Electricity	61,476	82,584	84,081	70,000	70,000
Propane	1,756	1,618	1,405	2,000	2,000
Heating Fuel	35,321	52,887	42,784	50,000	50,000
Fuel - Vehicles	735	1,162	1,276	800	800
Fuel - Equipment	9,755	9,196	5,892	10,000	10,000
Food/Beverage/Employee Appreciation	275	397	448	400	400
Books/Periodicals	-	55	-	100	100
Other		-	-	-	
Subtotal - Operations Ops	708,610	805,305	898,839	1,159,800	1,159,000
Total Solid Waste Operations	1,372,605	1,458,419	1,462,472	2,103,780	2,102,980
Vehicle and Equipment					
Labor					
Salaries - Operations	22,150	23,235	18,919	49,583	49,583
Overtime - Operations	3,735	2,289	287	1,485	1,485
Benefits - Operations	16,808	15,504	12,416	35,867	35,867
Subtotal - Labor and Benefits	42,693	41,028	31,622	86,935	86,935
Operations					
Repairs/Maintenance	-	112	1,666	2,500	2,500
Construction Services	-	-	-	-	-
General Supplies	119	-	61	2,000	2,000
Machinery / Vehicle Parts	15,925	13,748	20,092	51,500	51,500
Other	3,463	-	-	-	-
Subtotal - Vehicles/Equipment Ops	19,507	13,860	21,819	56,000	56,000
Total Vehicle and Equipment	62,200	54,888	53,441	142,935	142,935

Appendix B – Historical and Projected Revenue Requirements
Solid Waste Utility

Facilities Maintenance					
Labor					
Salaries - Operations	36,829	34,295	20,064	42,764	42,764
Temporary Employees - Operations	401	196	-	-	-
Overtime - Operations	707	2,378	446	574	574
Benefits - Operations	24,280	25,279	15,091	30,986	30,986
Subtotal - Labor and Benefits	62,217	62,148	35,601	74,324	74,324
Operations					
Other Professional	-	5,125	716	-	-
Repairs/Maintenance	4,595	14,876	3,409	5,500	5,500
Construction Services	-	-	-	1,000	1,000
General Supplies	1,075	152	60	1,500	1,500
Safety Related Items	-	2,018	22	-	-
Facility Maint Supplies	6,853	6,182	6,803	5,500	5,500
Other	-	-	-	-	-
Subtotal - Building R&M Ops	12,523	28,353	11,010	13,500	13,500
Total Facilities Maintenance	$ 74,740	$ 90,501	$ 46,611	$ 87,824	$ 87,824
Total Expenses	2,778,832	3,156,810	3,367,809	4,041,589	4,002,820
Net Margin	-	-	-	-	100,000
Capital Expenditures	-	-	-	-	-
Less Other Revenues					
PERS Nonemployer Contributions	(28,010)	(13,072)	(48,708)	(37,969)	-
Vactor Services	-	-	-	-	-
Other Services	(264,992)	(299,425)	(384,051)	(270,450)	-
Late Fees	(860)	(996)	(1,566)	(2,071)	-
Special Assess Pen & Int	-	-	-	-	-
Transfers from Spec Rev Fund	(184,704)	(116,612)	(44,622)	-	-
Budgeted Use of Unrestricted Net Assets	-	-	-	(1,540,288)	-
Less Total Other Revenues	(478,566)	(430,105)	(478,947)	(1,850,778)	-
Net Revenue Requirements	**$ 2,300,266**	**$ 2,726,705**	**$ 2,888,862**	**$ 2,190,811**	**$ 4,102,820**

Appendix C – Allocations
Solid Waste Utility

Line No.	Description	Total	Allocation Basis	LF20 Gen Waste	LF23 Equipment	LF24 Scrap Metal HM	LF51 Misc STL (Labor)	LF52 Nets	LF53 Fish Waste	LF54 Refrigerant	LF01 Maintenance	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
1	**Revenue Requirement Study**											
2	**Operating Expenses**	$ 2,102,980										
3			Landfill Factor	92.90%	0.00%	2.01%	0.00%	0.74%	4.35%	0.00%	0.00%	100.00%
4	Allocated 50% on Landfill Factor	$ 1,051,490		$ 976,873	$ -	$ 21,167	$ -	$ 7,759	$ 45,690	$ -	$ -	$ 1,051,490
5			Revenue Factor	64.67%	3.82%	5.99%	1.88%	2.20%	6.46%	0.31%	14.66%	100%
6	Allocated 50% on Revenue Factor	$ 1,051,490		$ 679,998	$ 40,181	$ 62,969	$ 19,811	$ 23,083	$ 67,962	$ 3,311	$ 154,175	$ 1,051,490
7	**Administrative Expenses**	$ 1,669,081										
8			Revenue Factor	64.67%	3.82%	5.99%	1.88%	2.20%	6.46%	0.31%	14.66%	100.00%
9	Allocated Total			$ 1,079,394	$ 63,781	$ 99,953	$ 31,447	$ 36,641	$ 107,879	$ 5,255	$ 244,730	$ 1,669,081
10	**Vehicle and Equipment Maintenance**	$ 142,935										
11			Landfill Factor	92.90%	0.00%	2.01%	0.00%	0.74%	4.35%	0.00%	0.00%	100.00%
12	Allocated Total			$ 132,792	$ -	$ 2,877	$ -	$ 1,055	$ 6,211	$ -	$ -	$ 142,935
13	**Facilities Maintenance**	$ 87,824										
14			Landfill Factor	92.90%	0.00%	2.01%	0.00%	0.74%	4.35%	0.00%	0.00%	100.00%
15	Allocated Total			$ 81,592	$ -	$ 1,768	$ -	$ 648	$ 3,816	$ -	$ -	$ 87,824
16	**Transfers Out**	$ 100,000										
17			Revenue Factor	64.67%	3.82%	5.99%	1.88%	2.20%	6.46%	0.31%	14.66%	100.00%
18	Allocated Total			$ 64,670	$ 3,821	$ 5,989	$ 1,884	$ 2,195	$ 6,463	$ 315	$ 14,663	$ 100,000
19	**Total Revenue Requirement by Rate Class**	**$ 4,102,820**		**$ 3,015,319**	**$ 107,783**	**$ 194,723**	**$ 53,142**	**$ 71,382**	**$ 238,022**	**$ 8,881**	**$ 413,568**	**$ 4,102,820**
20	Percent of Revenue Requirement			73.49%	2.63%	4.75%	1.30%	1.74%	5.80%	0.22%	10.08%	100.00%
21	Budgeted Revenues Per Rate Class	$ 2,509,647		$ 1,607,680	$ 41,608	$ 268,385	$ 21,850	$ 107,354	$ 107,354	$ 8,588	$ 346,828	$ 2,509,647
22	Percent of Budgeted Revenues			64.06%	1.66%	10.69%	0.87%	4.28%	4.28%	0.34%	13.82%	100.00%
23	Allocate Vehicle Tax and Late Fees Across All Rate Classes	$ 52,885	Ln 22	$ 33,878	$ 877	$ 5,656	$ 460	$ 2,262	$ 2,262	$ 181	$ 7,309	$ 52,885
24	**Total Budgeted Revenues By Rate Class**	**$ 2,562,531**		**$ 1,641,558**	**$ 42,484**	**$ 274,041**	**$ 22,310**	**$ 109,616**	**$ 109,616**	**$ 8,769**	**$ 354,137**	**$ 2,562,531**
25	Over/(Under) Earning Per Rate Class	$ (1,540,289)		$ (1,373,762)	$ (65,299)	$ 79,318	$ (30,832)	$ 38,234	$ (128,405)	$ (112)	$ (59,432)	$ (1,540,289)
26	Percent of Total Underearning			89%	4.24%	-5.15%	2.00%	-2.48%	8.34%	0.01%	3.86%	-100.00%
27	Percent Revenue Increase Required			83.69%	153.70%	-28.94%	138.19%	-34.88%	117.14%	1.27%	16.78%	