SOUTHEAST ALASKA POWER AGENCY

Regular Board Meeting

December 8, 2022 AGENDA

Best wishes for a Wonderful Holiday and Happy New Year!

Time	Event
8 AM	Breakfast
9 AM	Meeting Starts
10:30 AM	15-Minute Break
12 Noon	Lunch @ Shaa Hit Room A
1:00 PM	Meeting Resumes
3 PM	15-Minute Break
5:00 PM	Meeting Adjourns
6 PM	Christmas/CEO Retirement Party @ Cape Fox Shaa Hit Room B

Meeting held at:
Cape Fox Lodge, Shaa Hit Room A
Ketchikan, Alaska

❖ ❖ ❖ ❖ ❖ ❖

For telephonic participation dial:

1.800.315.6338 or 1.913.904.9376
Access Code: 73272#

1. Call to Order
- A. Roll Call
- B. Communications/Lay on the Table Items:
- C. Disclosure of Conflicts of Interest
  - i. TSS (Safety Training) Contract

2. Approval of the Agenda

3. Persons to be Heard
- A. Reserved for any members of the public calling in or attending in person

4. Review and Approve Minutes
- A. September 22, 2022 Minutes of Regular Meeting
- B. November 2, 2022 Minutes of Special Meeting
- C. November 17, 2022 Minutes of Special Meeting

5. Staff Reports (Reports are provided in Board packet. No presentations will be given by staff during the meeting due to time constraints. Any questions under this Agenda item may be directed to staff through the Chair during the meeting.)
- A. Power System Specialist *(Schofield)*
- B. Director of Engineering and Technical Services *(Siedman)*
- C. Operations Manager *(Hammer)*

6. CEO Report

7. Financial Reports

8. New Business

A.	Executive Session Re Union Negotiations, Hydrosite Analysis, CEO's Retirement & Potential Interim CEO, and Employee Performances
B.	Reserved for any action(s) to be taken following Executive Session ➢ *Consideration of Resolution 2022-088 Re IBEW Union Contract* ➢ *Consideration of Resolution 2022-089 Appointing Acting CEO & Providing Agency Authorizations*
C.	John Heberling Update Re Wholesale Power Rate Study
D.	Consideration of Wholesale Power Rate
E.	Consideration of Sole Source Re Energy Sector Load Growth Study
F.	Consideration of Award of Audit Services
G.	Presentation and Consideration of FY2023 SEAPA Budget
H.	Consideration of Sole Source Re SEAPA Office Furnishings
I.	Consideration of FY2023 Operations Plan

9. 2023 Meeting Dates

10. Director Comments

11. Adjourn

Southeast Alaska Power Agency
Regular Meeting Minutes

Location: Held Electronically Via Zoom

Date: September 22, 2022

Time: 9:00 a.m. AKDT

Agenda Items

1) Call to Order

A. *Roll Call.*

The Chair called the regular meeting to order at 9:00 a.m. AKDT on September 22, 2022. The following directors and alternates were present, thus establishing a quorum of the board:

Directors	Present *Electronically (E)* *In Person (IP)*	Alternates	Present *Electronically (E)* *In Person (IP)*	Representing	Community
Bob Sivertsen	E	Andy Donato		Swan Lake	Ketchikan
Abby Bradberry	E[1]	Janalee Gage		Swan Lake	Ketchikan
Steve Prysunka		Mason Villarma	E	Tyee Lake	Wrangell
Steve Henson		Mark Walker	E	Tyee Lake	Wrangell
Bob Lynn	E	Karl Hagerman		Tyee Lake	Petersburg

The following SEAPA staff and counsel were present for all or part of the meeting:

Staff	Present *Electronically (E)* *In Person (IP)*	Staff/Counsel	Present *Electronically (E)* *In Person (IP)*
Trey Acteson, CEO	E	Joel Paisner, SEAPA Counsel	E
Clay Hammer, Operations Mgr.	E	Kay Key, Controller	E
Ed Schofield, Power Sys. Sp.		Sharon Thompson, EA/CA	E
Robert Siedman, DE/TS	E	Marcy Hornecker, Admin. Asst.	E

B. *Communications/Lay on the Table Items* - None

C. *Disclosure of Conflicts of Interest* - None

2) Approval of the Agenda

➢ ***Motion***	M/S (Walker/Lynn) to approve the Agenda. The Chair requested those in favor to voice ayes approving the agenda, and hearing no objections, he announced the motion passed.	✓ **Action 22-977**

3) Persons to be Heard - None.

4) Review and Approve Minutes

A. *May 12, 2022 Minutes of Regular Meeting.*

➢ ***Motion***	M/S (Lynn/Walker) to approve the Minutes of the regular meeting of May 12, 2022. The motion was approved unanimously by polled vote.	✓ **Action 22-978**

[1] Ms. Bradberry joined the meeting electronically at approximately 9:07 a.m.

B. *August 12, 2022 Minutes of Special Meeting*

➢ ***Motion***	M/S (Lynn/Walker) to approve the Minutes of the special meeting of August 12, 2022. The motion was approved unanimously by polled vote.	✓ **Action 22-979**

5) Financial Reports

A-G. *CEO & Controller Memos, kWh Graph, Fund Graph, Grant Summary, Financial Statements, and Disbursements*

Mr. Acteson reported SEAPA's financial condition is stable, and reviewed revenue and expenses, renewal and replacement expenditures, and provided an update on bond pricing for SEAPA's Headquarters. The Chair requested a motion on the financial statements.

➢ ***Motion***	M/S (Lynn/Villarma) to accept year-to-date financial statements through July 2022, and disbursements for May, June, July, and August 2022 totaling $4,575,022.47, as presented. Following Mr. Acteson's review of the financial reports presented in the board packet, the motion was approved unanimously by polled vote.	✓ **Action 22-980**

H. *Review and Acceptance of Audited 2021 Financial Statements for Continuing Disclosure*

The Chair announced that Joy Merriner of BDO would be calling in to the meeting to discuss SEAPA's FY2021 Audited Financial Statements. He requested a motion for acceptance of the statements.

➢ ***Motion***	M/S (Lynn/Bradberry) to accept the Audited Financial Statements of the Southeast Alaska Power Agency for the year ended December 31, 2021, as presented at the September 22, 2022 board meeting.	✓ **Action 22-981**

6) CEO Report

The Chair requested that the CEO start his report pending Ms. Merriner's call. Mr. Acteson provided an update on safety, followed by federal infrastructure funding opportunities. He noted that SEAPA would be eligible for the benefit of a new direct payment in lieu of tax credits due to tax incentives that could shift the economics in generation projects, and that SEAPA is vetting projects that may be eligible for funding opportunities. He stressed the importance of dedicating resources to actively pursue grants.

The Chair announced that Ms. Merriner joined the meeting so the meeting will resume under Agenda Item 5H.

5) H) *Continued: Review and Acceptance of Audited 2021 Financial Statements for Continuing Disclosure*

Joy Merriner, BDO USA, LLP's Assurance Partner, auditor of SEAPA's financial statements, presented a summary of the Agency's audited financial statements ending December 31, 2021, and responded to director's questions and comments.

A vote was taken and unanimously approved on the motion to accept the Audited Financial Statements for the year ended December 31, 2021, as presented.

6) CEO Report continued

Mr. Acteson provided highlights of IBEW negotiations and reported on the 2021 Wrangell windstorm disaster recovery, status of the rewrite of SEAPA's Employee Leave Policy, and an update on personnel recruitment efforts.

The meeting recessed at 10:38 a.m. and resumed at 10:45 a.m.

7) Staff Reports

A. *Director of Engineering and Technical Services (Siedman)*

Mr. Siedman provided updates on the Petersburg Substation Refurbishment, Wrangell Circuit Switcher Replacement, Swan Lake Emergency Diesel Generator Governors-Exciters, Tyee Lake Station Service Switchgear and 15kV Switchgear, underfrequency load shedding, and cyber security.

B. *Operations Manager (Hammer)*

Mr. Hammer provided updates on the Wrangell Warehouse fire remediation, brushing work, Tyee airstrip resurfacing, crew house roof and siding, and waterline replacement for the Tyee crew housing.

C. *Power System Specialist (Schofield)*

Mr. Schofield provided updates on construction of the SEAPA Headquarters, Swan Lake reservoir debris removal, FERC activities, Swan Lake staffing, and safety training.

8) Old Business

A. *3rd Quarter Update Re SEAPA Operations Plan (Siedman)*

Mr. Siedman reported that both Swan and Tyee Lake levels were in a very healthy condition due to above average 2022 spring and summer snow-pack runoff. He presented charts demonstrating balancing of lake levels. He closed his report with current model predictions from the International Research Institute and Climate Prediction Centers advising that there is a high probability of SEAPA's reservoir levels maintaining full capacity until December.

9) New Business

A. *Consideration and Approval of Sole-Source Contract Re Swan Lake Inlet Valve Control Systems Upgrade*

➢ ***Motion***	M/S (Lynn/Bradberry) to authorize staff to enter into a sole-source contract with Basler Services, LLC for engineering & design, parts, and installation and commissioning services for SEAPA's Swan Lake Inlet Valve Control System Upgrade Project (RR22370) for $69,730. The motion was approved unanimously by polled vote.	✓ **Action 22-982**

B. *Consideration and Approval of Increase to SEAPA Operating Budget Re Load Growth Study*

➢ ***Motion***	M/S (Walker/Lynn) to increase SEAPA's FY2022 Operating Budget by $100,000 for a third-party regional Load Growth Forecast Study. The motion was approved unanimously by polled vote.	✓ **Action 22-983**

C. *Consideration and Approval of SEAPA 2023 Administrative Employee Group Benefits*

➢ ***Motion***	M/S (Lynn/Bradberry) to renew the NRECA 2023 employee group benefit plans and Administrative Employee Benefits as presented. The motion was approved unanimously by polled vote.	✓ **Action 22-984**

D. *Consideration and Approval of Resolution #2022-087 Re SEAPA's Deferred Compensation Plan.*

➢ ***Motion***	M/S (Lynn/Bradberry) to adopt Resolution 2022-087 which approves and adopts the Amended and Restated Deferred Compensation Plan of the Southeast Alaska Power Agency with an Effective Date of January 1, 2023. The motion was approved unanimously by polled vote.	✓ **Action 22-985**

E. *Review/Discuss CEO Evaluation Form and Schedule*

No modifications were suggested for the CEO Evaluation Form and Schedule presented in the board packet. A board member requested that their comments on the evaluation be shared with all board members for follow-up discussions.

The meeting recessed for the executive session at 10:17 a.m. and reconvened into regular session at 11:09 a.m.

F. *Executive Session Re Updates on Union Contract Negotiations, Hydrosite Investigations, and CEO Review*

➢ ***Motion***	M/S (Lynn/Bradberry) to recess into Executive Session to be conducted pursuant to SEAPA's Bylaws and Alaska Statute 44.62.310 for discussions related to SEAPA's union contract negotiations as the discussions may involve matters the immediate knowledge of which would clearly have an adverse effect upon the finances of the Agency, the Projects, or any of the Member Utilities represented on the Board. I move to recess into Executive Session to be conducted pursuant to SEAPA's Bylaws and Alaska Statute 44,62.310 for discussions related to a subject that could prejudice the reputation and character of any person, provided that the person may request a public discussion. I move to recess into Executive Session to be conducted pursuant to SEAPA's Bylaws and Alaska Statute 44,62.310 for discussions with the Agency's attorney present related to hydrosite investigations, the immediate knowledge of which could have an adverse effect on the legal position of the Agency. The motion was approved unanimously by polled vote.	✓ **Action 22-986**

The meeting recessed for the executive session at 11:57 a.m. and reconvened into regular session at 1:04 p.m.

10) Next Meeting Dates

The Chair noted that the next regular board meeting will be held on December 8th in Ketchikan. There were no objections.

11) Director Comments

Directors exchanged brief comments.

12) Adjourn

The Chair requested a motion to adjourn.

➢ ***Motion***	M/S (Lynn/Bradberry) to adjourn the meeting. Hearing no objections to the motion, the Chair announced the meeting adjourned.	✓ **Action 22-987**

The meeting adjourned at 1:20 p.m.

Signed: ***Attest:***

Secretary/Treasurer **Chair**

Southeast Alaska Power Agency
Special Meeting Minutes

Location: Held Electronically

Date: November 2, 2022

Time: 10:00 a.m. AKDT

Agenda Items

1) Call to Order

A. *Roll Call*

Chairperson Sivertsen called the special meeting to order at 10:00 a.m. AKDT on November 2, 2022. The following directors and alternates were present, thus establishing a quorum of the board:

Directors	Present *Electronically (E) In Person (IP)*	Alternates	Present *Electronically (E) In Person (IP)*	Representing	
Bob Sivertsen	E	Andy Donato	E	Swan Lake	Ketchikan
Abby Bradberry	E	Janalee Gage	E	Swan Lake	Ketchikan
Stephen Prysunka	E	Mason Villarma		Tyee Lake	Wrangell
Steve Henson	E[1]	Mark Walker	E	Tyee Lake	Wrangell
Bob Lynn	E	Karl Hagerman	E	Tyee Lake	Petersburg

The following SEAPA staff and counsel were present for all or part of the meeting:

Staff	Present *Electronically (E) In Person (IP)*	Staff/Counsel/Consultant	Present *Electronically (E) In Person (IP)*
Trey Acteson, CEO	E	Kay Key, Controller	E
Clay Hammer, Operations Mgr.	E	Sharon Thompson, EA/CA	E
Ed Schofield, Power Sys. Sp.		Marcy Hornecker, Admin. Asst.	E
Robert Siedman, Dir. Eng & TS	E	Joel Paisner, SEAPA Counsel	E

2) Approval of the Agenda

➢ ***Motion***	M//S (Prysunka/Lynn) to approve the agenda. The motion was approved unanimously by polled vote.	✓ **Action 22-988**

3) New Business

A. *Executive Session Re CEO Review/Contract*

➢ ***Motion***	M/S (Lynn/Henson) to recess into Executive Session to be conducted pursuant to SEAPA's Bylaws and Alaska Statute 44.62.310 for discussions related to a subject that could prejudice the reputation and character of any person, provided that the person may request a public discussion. The motion was approved unanimously by polled vote.	✓ **Action 22-989**

[1] Mr. Henson joined the meeting electronically during the executive session.

The meeting recessed at 10:05 a.m. for the executive session, and resumed into regular session at 11:25 a.m.

A roll call was taken following the executive session. All directors except for Mr. Villarma and Mr. Henson were present. The Chair announced that during the executive session staff was given direction, and that the board will accept the resignation of SEAPA's CEO, Trey Acteson. The Chair requested a motion formalizing the acceptance:

➢ ***Motion***	M/S (Prysunka/Bradberry) to accept the resignation of SEAPA's Chief Executive Officer, Trey Acteson. The motion was approved unanimously by polled vote.	✓ **Action 22-990**

The Chair invited comments from Mr. Acteson and the directors.

Mr. Acteson announced that he is retiring, is honored to have been able to serve the Agency for the past 10 years, and looks forward to a seamless transition.

Directors exchanged various comments of appreciation to Mr. Acteson for his service to SEAPA during his tenure.

4. Adjourn

The Chair requested a motion to adjourn.

➢ ***Motion***	M/S (Walker/Lynn) to adjourn the meeting. The Chair declared the meeting adjourned after no objections were heard.	✓ **Action 22-991**

The meeting adjourned at 11:52 a.m.

Signed: ***Attest:***

Secretary/Treasurer **Chairperson**

Southeast Alaska Power Agency
Special Meeting Minutes

Location: Held Electronically

Date: November 17, 2022

Time: 3:00 p.m. AKST

Agenda Items

1) Call to Order

A. *Roll Call*

Chairperson Sivertsen called the special meeting to order at 3:00 p.m. AKST on November 17, 2022. The following directors and alternates were present, thus establishing a quorum of the board:

Directors	Present *Electronically (E) In Person (IP)*	Alternates	Present *Electronically (E) In Person (IP)*	Representing	
Bob Sivertsen	E	Andy Donato		Swan Lake	Ketchikan
Abby Bradberry		Janalee Gage		Swan Lake	Ketchikan
Stephen Prysunka	E[1]	Mason Villarma		Tyee Lake	Wrangell
Steve Henson	E	Mark Walker	E	Tyee Lake	Wrangell
Bob Lynn	E	Karl Hagerman	E	Tyee Lake	Petersburg

The following SEAPA staff and counsel were present for all or part of the meeting:

Staff	Present *Electronically (E) In Person (IP)*	Staff/Counsel/Consultant	Present *Electronically (E) In Person (IP)*
Trey Acteson, CEO	E	Kay Key, Controller	
Clay Hammer, Operations Mgr.	E	Sharon Thompson, EA/CA	E
Ed Schofield, Power Sys. Sp.	E	Marcy Hornecker, Admin. Asst.	
Robert Siedman, Dir. Eng & TS	E	Joel Paisner, SEAPA Counsel	E
		Gary Griffin, SEAPA Consultant	E

2) Approval of the Agenda

➢ ***Motion***	M/S (Henson/Lynn) to approve the agenda. The motion was approved unanimously by polled vote.	✓ **Action 22-992**

3) New Business

A. *Executive Session Re Aviation Insurance Issue*

[1] Mr. Prysunka joined the meeting during the executive session.

➢ ***Motion***	M/S (Lynn/Henson) to recess into Executive Session to be conducted pursuant to SEAPA's Bylaws and Alaska Statute 44.62.310 for discussions related to matters the immediate knowledge of which would clearly have an adverse effect upon the finances of the Agency. The motion was approved unanimously by polled vote.	✓ **Action 22-993**

The meeting recessed at 3:03 p.m. for the executive session, and resumed into regular session at 4:10 p.m.

The Chair announced discussions took place during the executive session regarding the insurance gap issue and requested motions relating to the discussions:

➢ ***Motion***	M/S (Henson/Lynn) to authorize staff to allocate an appropriate reserve to account for the gap in insurance in charter services provided by SEAPA contractors. The motion was approved unanimously by polled vote.	✓ **Action 22-994**
➢ ***Motion***	M/S (Lynn/Henson) to limit passenger travel on SEAPA chartered flights to business purposes only. The motion was approved unanimously by polled vote.	✓ **Action 22-995**
➢ ***Motion***	M/S (Lynn/Henson) to direct staff to bring forward a budget request for a shallow draft jet boat to aid in access to SEAPA remote facilities. Prior to a vote, clarification was requested by a director whether the proposed jet boat would replace SEAPA's existing landing craft. The CEO advised the intent is to procure a new boat and if the new boat's sizing/functionality are satisfactory, the landing craft will be surplused. The motion was approved unanimously by polled vote.	✓ **Action 22-996**

4. Adjourn

The Chair requested a motion to adjourn.

➢ ***Motion***	M/S (Prysunka/Henson) to adjourn the meeting. The Chair declared the meeting adjourned after no objections were heard.	✓ **Action 22-997**

The meeting adjourned at 4:20 p.m.

Signed: ***Attest:***

Secretary/Treasurer **Chairperson**

SOUTHEAST ALASKA POWER AGENCY

Date: November 17, 2022

To: Trey Acteson, CEO

From: Ed Schofield, Power System Specialist

Subject: Report for December 8, 2022 Board Meeting

SEAPA Headquarters Project Update

The SEAPA Headquarters construction is progressing on schedule and on budget. The project is currently 55% complete. The exterior and roof underlayment are installed as is weather barrier sheeting, siding mounting channel and eave soffits. The windows are installed and temporary plywood entrance doors. The building is now weathered in and staying dry with temporary heat.

Metal siding and roofing material are scheduled to arrive November 26th with installation to start promptly upon arrival. The main entryway clearstory glass is scheduled to arrive in late February 2023; this item will be one the final phases of the project.

To weatherize the structure, a temporary plywood enclosure wall was constructed. All interior stud walls have been constructed. The rough-in plumbing, electrical, and air ducting are at 75% completion. Installation of sheetrock is scheduled to start November 28.

To date, eleven change orders have issued totaling 25% of the budgeted contingency funds. The change orders include:

- deletion of a breakroom wall on the second floor
- addition of four windows in the boardroom
- installation of a road frontage retaining wall
- installation of the satellite dish mounting pad
- material cost increases due to item availability

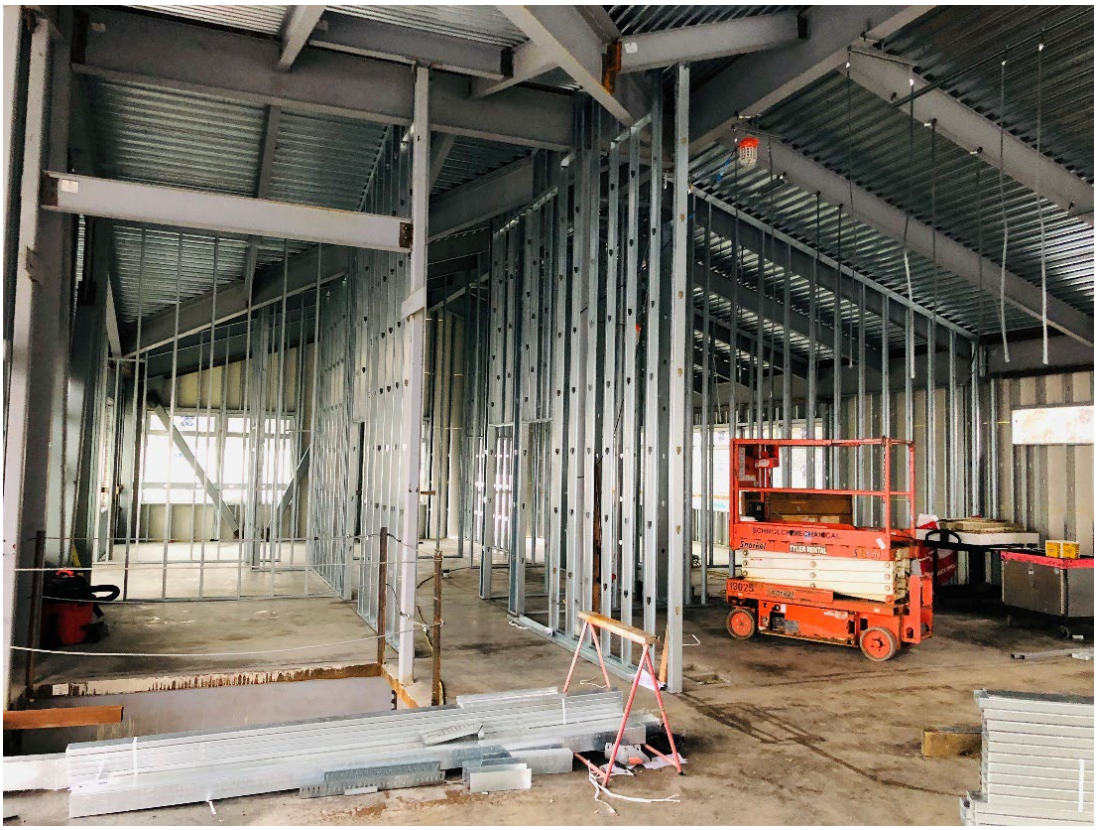
The Project completion date is still on schedule for March 2023.

Underlayment, Weather Barrier, and Windows Installed

First Floor Stud Wall Construction

Main Entryway Temporary Plywood Enclosure Wall

Frontage Retaining Wall Construction



Second Floor Stud Wall Construction

First Floor Warehouse

Swan Lake Operations and Maintenance

The primary work for the Swan Lake crew consists of preventative maintenance activities which are autogenerated and issued monthly through SEAPA's computerized maintenance management system (MAPCON).

Work other than that directed by MAPCON systems are referred to as special projects. Special projects performed during the last quarter include:

- marine dock power feed upgrades
- reservoir debris removal
- grounds drainage improvements

The dam vibration monitoring R&R project was completed with the assistance of the Swan Lake crew as well.

Debris Removed from Reservoir Staged for Burning

FERC License Requirements

SEAPA's 2021 Dam Safety Surveillance and Monitoring Report was completed and submitted to FERC for review.

Each year in November, an updated SEAPA Dam Safety Philosophy is issued and signed by both the Chief Dam Safety Officer and the CEO. The philosophy is distributed and posted in prominent locations at SEAPA's office and the Swan Lake Control Room, so SEAPA and applicable contract employees are aware of the dam safety policy. This year's Dam Safety Philosophy has been completed and posted as required by FERC.

SEAPA has been assigned a new FERC engineer by the Portland Branch Office. Historically FERC project engineers are reassigned every five years. The FERC project engineer is the licensee's primary contact and responsible for oversight within the FERC organization. The engineer typically performs an annual onsite inspection with a follow-up assessment report. This task has not occurred since 2018 due to COVID. Since 2018, FERC has required the licensee to provide a self-assessment report followed by a review conference call from the FERC project engineer. The 2022 Swan Lake self-assessment report was completed by SEAPA in August 2022. A follow-up conference is scheduled to occur on December 15th with the FERC project engineer and the Portland branch Chief Engineer.

Swan Lake Bunkhouse Replacement

Final design drawings and material specifications for this project are complete. We anticipate advertising the Request for Proposal documents in January 2023, and construction to start in July 2023. This project will replace the current modular bunkhouse and two single-occupancy modular homes constructed in 1983. The new Bunkhouse will be a two-story 2,400 square foot structure with a one-bedroom apartment occupying 600 square feet of the second story. The bunkhouse

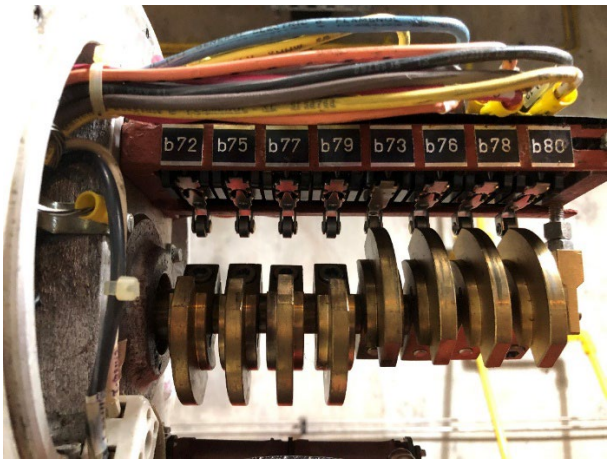
will have six double-occupancy bedrooms, a full kitchen, dining area, two bathrooms and a laundry room. The bunkhouse will be built adjacent to the Four-Plex housing unit constructed in 2020. With the completion of this replacement bunkhouse, Swan Lake will have increased the number of single occupancy units from 3 to 5, will have maintained the number of beds in the bunkhouse, and decreased the total square footage by 800 feet and number of structures to maintain by two.

Swan Lake 3-D Concept of Replacement Bunkhouse

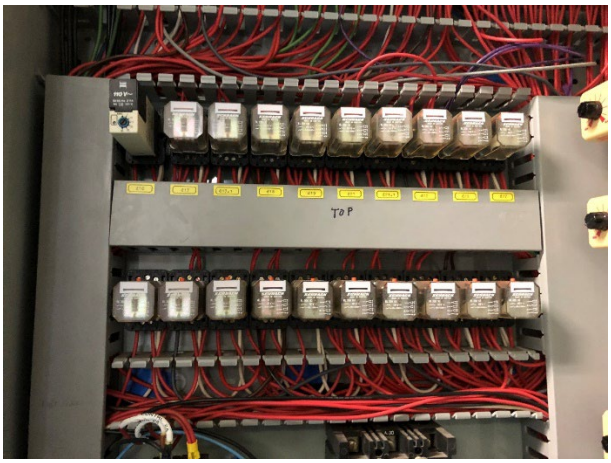
Swan Lake Four-Plex Constructed in 2020

Swan Lake Inlet Valve Control Upgrade

The Swan Lake Inlet Valve Control Upgrade Project was scheduled to occur in October of this year. Due to material back-order delays, the project is now tentatively scheduled to start in January 2023. The 2023 budget amount and scope of work will remain as presented in the 2022 budget.



Inlet Valve mechanical position indication switches that are to be removed and upgraded with a magnetic position switch having no moving components.



Inlet Valve mechanical relay control componets that will be upgraded to one programmable computer.

Safety

Safety Training occurs monthly and includes topics such as:

- Hearing Conservation
- CBD vs THC
- SEAPA Health & Safety Plan (HASP)
- Arc Flash
- Fire Extinguisher
- Confined Space
- Fentanyl CDC awareness

Personnel

The Swan Lake Electrician/Operator position was filled in October with a start date of November 16, 2022. We all welcome **Cody Johnson** to the SEAPA team and look forward to a long and successful working relationship. Cody brings a well-rounded electrical and instrumentation skillset to the team.

SOUTHEAST ALASKA POWER AGENCY

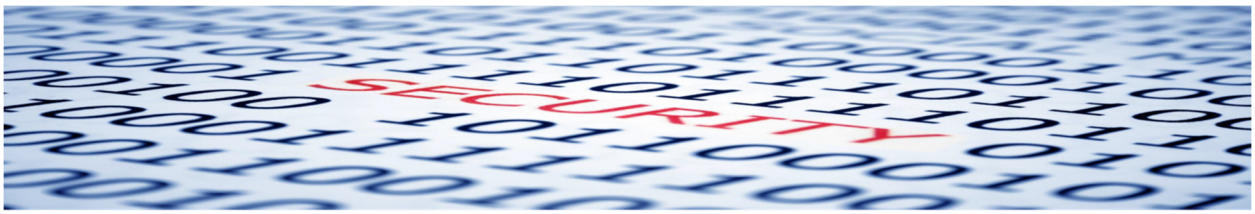
Date: December 1, 2022

To: Trey Acteson, CEO

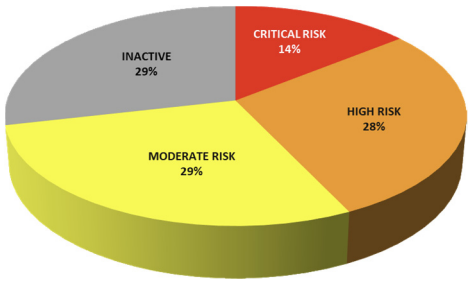
From: Robert Siedman, P.E., Director of Engineering & Technical Services

Subject: Report for December 8, 2022 Board Meeting

2022 Cybersecurity Audit:



In 2019 SEAPA contracted an information technology security expert company to perform cyber security testing on the SEAPA business and SCADA networks. The result of the study was that although SEAPA was found to be in an upper tier for security compared to its peers (other utilities), there were a few risks that were identified. As a result, SEAPA secured those areas of concern and increased cybersecurity on its critical networks.



SEAPA continues to increase security however external penetration and vulnerability testing is important to maintain the highest security standards. As such, SEAPA recently completed a 2022 cyber security audit for the following on both SCADA and business networks:

Firewall
- Identify the ability to access services (open ports)
- Identify exposed services with increased risk of attack or exploitation.

Password Strength and Authentication
- Perform a password guessing attack to obtain unauthorized access
- Evaluate the length and complexity of passwords harvested

• Evaluate the efficacy of the discovered authentication mechanism(s), including identifying processes that disclose information useful to obtain access.

Host Security
• Identify missing security patches and out-of-date/unsupported software in use
• Identify default host and web server settings, and other system/service misconfigurations
• Attempt to discover hidden or protected content available on the in-scope host(s).

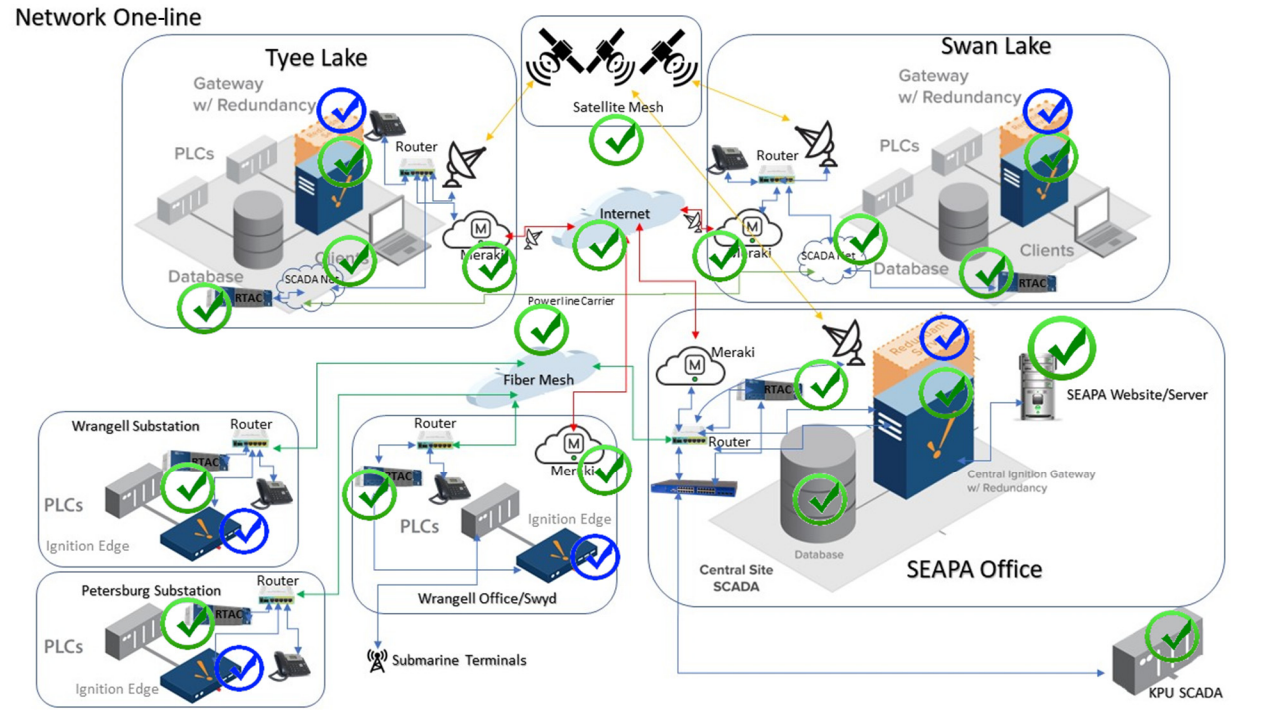
Exploitation (Penetration Testing)
Safely and systematically exploit security flaws and configuration weaknesses to demonstrate to what extent the system or network may be compromised.

Results:
Critical security risk vulnerabilities identified in 2019 have been addressed. New vulnerabilities were found that require further tech support include:

- Security Hardening
- Increased Vulnerability Scans
- Server Updates
- Numerous other multi-phase items to decrease future security risks

SEAPA has engaged its Information Technology (IT) contractor and received a quote to address the items that were found during the third-party cybersecurity audit. The work to be performed has been added to the 2023 budget for Board consideration.

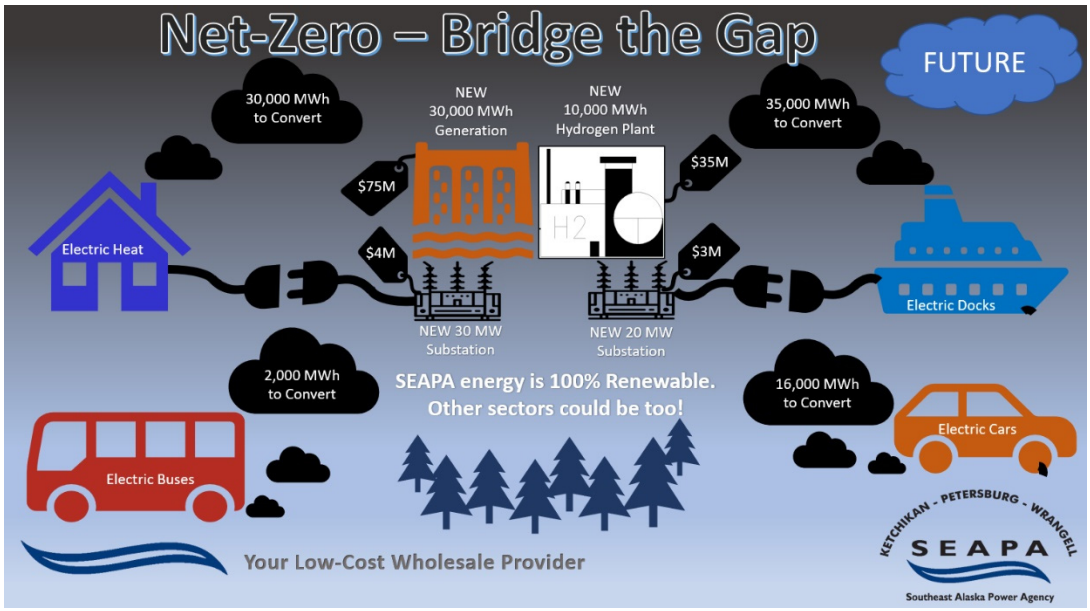
STCS HMI/Historian Modernization:



The STCS HMI/Historian modernization project has been a multi-phased, multi-year project with many moving parts. The STCS modernization phase (STCS II) was completed in 2020. After the 2019 cybersecurity audit and subsequent network changes in 2020, SEAPA began pursuing isolated mesh networks to isolate the SCADA systems from the internet without the need to use Virtual Private Network connections. In 2020 SEAPA completed a satellite mesh network between Swan Lake, Tyee Lake and the SEAPA headquarters in Ketchikan.

In 2021, SEAPA completed a fiber mesh network between Petersburg, Wrangell and the SEAPA headquarters in Ketchikan. The SEAPA headquarters, Swan Lake and Tyee Lake HMIs were completed in 2022. The final phase for this project is to complete backup servers at each location, transfer alarms from the old SCADA system to the new and deploy the Petersburg and Wrangell Ignition edge panels. The network diagram above illustrates what has been completed (green check marks) and what is remaining (blue check marks).

Load Growth Study



SEAPA is preparing for potential load growth that may have a major impact on the future of the Agency as it pertains to electrification in Southeast Alaska. A study funded by the Alaska Energy Authority in 2016 estimated that 72% of all residential space heating energy in Ketchikan, Petersburg and Wrangell was consumed as fuel oil. Rough estimates performed by SEAPA staff to convert residential space heating from fuel oil to electric could result in a potential increase in SEAPA outputs by as much as 30,000 MWh.

Studies are varied however many recent studies have concluded that as much as 80% of all vehicles sold by the year 2040 will be electric. Rough estimates performed by SEAPA staff to convert petroleum-based transportation to electric could result in a potential increase in SEAPA outputs by as much at 18,000 MWh.

While cruise ships are at port, they consume petroleum (diesel) to power station service. Converting cruise ships to electric shore power is a major factor in Green House Gas (GHG) emission reduction plans for the International Maritime Organization (IMO). Rough estimates performed in-house to provide cruise ship port electrification could result in a potential increase in SEAPA outputs by as much as 35,000 MWh.

SEAPA staff estimates are very rough however if they are close to accurate, converting the above three energy sectors from petroleum to electric would potentially require an increase of 83,000 MWh, which is an increase of approximately 50% to SEAPA's current yearly generation.

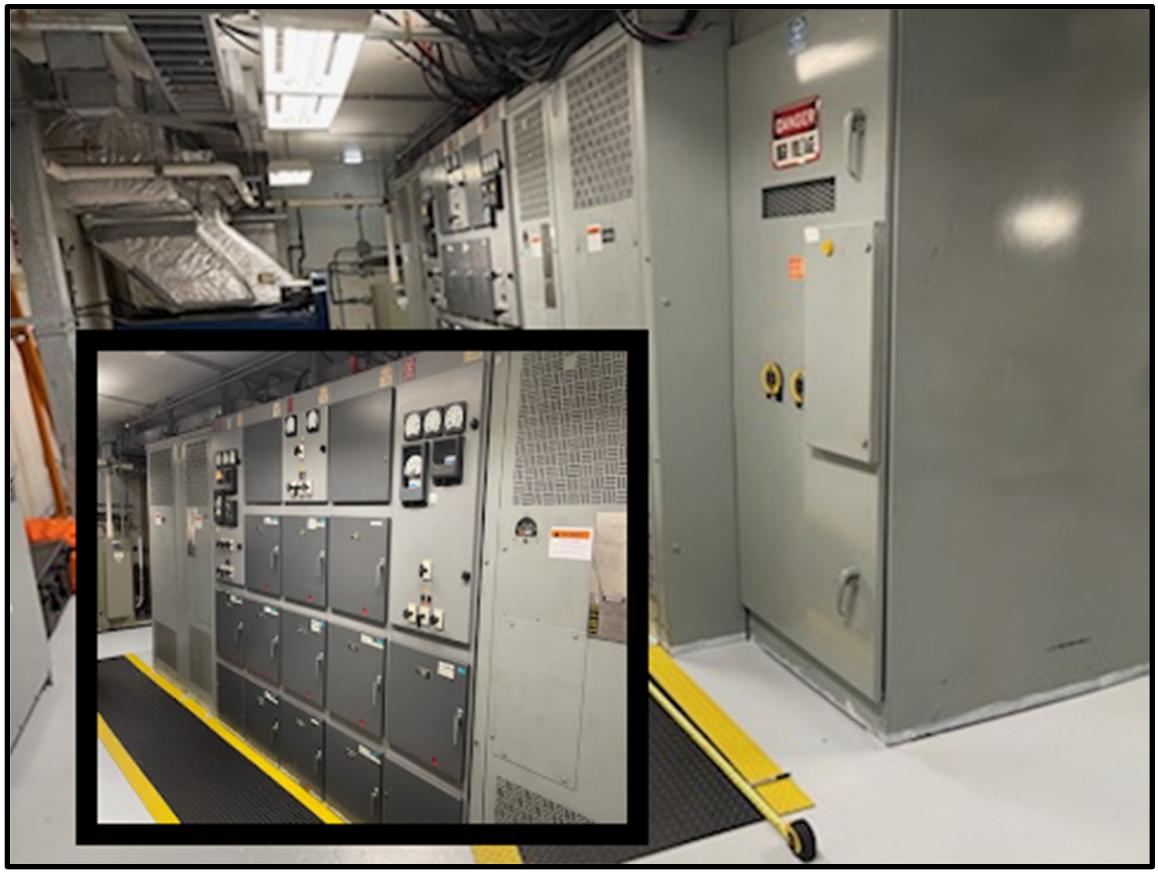
With the potential load growth(s) as discussed above, an accurate growth assessment for each sector is necessary. SEAPA has direct solicited quotes to perform an in-depth 3rd party Load Growth Study to further clarify what the future might hold.

Swan Lake Emergency Diesel Generator Governors-Exciters:

The Swan Lake diesel generators are emergency backup power for Swan Lake Station Service when the facility is islanded from the grid. The generators have relatively low hours of operation however the controls, governors and exciters are nearing the end of their useful life. Upgrading the governors and exciters will extend the life of the generators and will add the ability for Swan Lake to synchronize to the grid for extended periods of time for load testing. With the completion of the Swan Lake Station Service project, functionality to synchronize was added, however, because the existing governors are isochronous, they can only be on the grid for a few minutes.

All parts have been ordered to include Woodward ProAct ISC digital Actuators, Basler DGC-2020HD genset controllers and Basler AVC 125-10 voltage regulators. The parts were backordered and are anticipated to be delivered in December. A task order was awarded to Basler Services, LLC and the work is scheduled to be complete by July 2023.

Tyee Lake Station Service Switchgear



The Tyee Lake Station Service Switchgear is nearing 40 years of age and approaching the end of its useful life. The main station service transformers do not have differential protection or arc flash mitigation appurtenances (fiber optic sensors, ARMS switches, etc.) and were identified as "Extreme Danger" with an energy level of 65.3 Cal/cm^2 in the last Arc Flash hazard analysis. Auto-trip and transfer functionality, including emergency power transfers to diesel generators does not exist. All feeder and sub-feeder cables are also at the end of their useful life with increased probability of failures. This project would result in new 480V double-ended Station Service Switchgear, breakers, feeder and sub-feeder cables, fiber optic Arc Flash protected busbars, Arc Flash Reduction Maintenance Switches (ARMS), complete drawings sets, including updated powerhouse one-line and three-lines, Operations Manuals and Training. The new switchgear will be designed with redundancy and isolation in metal-clad rated gear to provide reliability, redundancy, and increased safety to onsite personnel with reduced incident energy levels (Arc Flash).

This project is currently in the design phase to develop drawings and specifications. SEAPA anticipates soliciting for bids to complete the design phase in 2023 (3-year project).

Tyee Lake 15kV Switchgear

The Tyee Lake main unit generator 15kV Switchgear is approaching 40 years in service and is nearing the end of its useful life. The Switchgear is the primary protective device for the main unit generators and is essential for operation of the Tyee Lake generators. SEAPA has experienced minor failures in recent years including ancillary connection failures for open/close commands and Potential Transformer (PT) signal connection failures. This project would include engineering design, procurement of new 15kV main generator switchgear and 15kV cables, and installation. The equipment is a long lead time item therefore this will be a 3-year project with engineering occurring in 2023, procurement in 2024 and installation in 2025.

SEAPA is currently researching synergies of combining this project with the Station Switchgear project, potentially saving the Agency on significant Mobilization and Demobilization costs. Additionally, results from the load growth study may suggest a third turbine at Tyee, which would impact the scope of both the Station Switchgear and 15kV Switchgear projects.

Underfrequency Load Shedding (UFLS)

Under frequency load shedding is a key component for transient stability of a system. In 2012, SEAPA performed a transient stability study however in 2014, the Whitman powerhouse was placed in service. Although the SEAPA system is very stable, stability has come at the expense of potential increased outages in Ketchikan due to sensitive load shedding on certain feeders. The purpose of this study is to increase reliability for power flow cases under certain contingencies and minimize outages based on probable cases while maintaining existing stability for the system.

A new model has been completed and the first draft of the UFLS study is currently under review. Considering KPU is the most affected by any changes, SEAPA has this study out for review and anticipates a finalized load shedding scheme in 2023. Below is a snapshot of the of the current and recommended UFLS settings (prior to KPU review) for this important stability study:

Substation	Feeder	Peak Load (MW)	Old		New	
			Rate-of-Change Setting	Underfrequency Setting	Rate-of-Change Setting	Underfrequency Setting
North Point Higgins	South	1.7	59.2 - 58.9 @ 18 cycles	58.5 @ 3 cycles	59.2 - 58.9 @ 12 cycles	None
	North	1.8	59.2 - 58.9 @ 18 cycles	58.5 @ 3 cycles	59.2 - 58.9 @ 12 cycles	None
Ward Cove	South	3.3	59.2 - 58.9 @ 18 cycles	58.5 @ 3 cycles	59.2 - 58.9 @ 12 cycles	None
	North	1.3		58.0 @ 3 cycles		58.0 @ 3 cycles
Mountain Point	South	1.0		57.5 @ 20 cycles	59.6 - 59.2 @ 6 cycles	57.5 @ 6 cycles
	North	1.3		57.5 @ 20 cycles	59.6 - 59.2 @ 6 cycles	57.5 @ 6 cycles
Port West	South	2.8		57.3 @ 20 cycles		57.2 @ 6 cycles
	North	1.7		57.3 @ 20 cycles		57.2 @ 6 cycles
	Port West	0.8		57.3 @ 20 cycles		57.2 @ 6 cycles
Bethe	Jackson	3.3		57.1 @ 20 cycles	59.6 - 59.2 @ 6 cycles	56.9 @ 6 cycles
	Tongass	1.3		57.1 @ 20 cycles	59.6 - 59.2 @ 6 cycles	56.9 @ 6 cycles
Ketchikan	1	1.5		57.0 @ 40 cycles		56.6 @ 6 cycles
	2	2.8		57.0 @ 40 cycles		56.6 @ 6 cycles
	3	2.0		58.0 @ 3 cycles		58.0 @ 3 cycles
	4	2.3		57.0 @ 40 cycles		56.6 @ 6 cycles
Wrangell	1	1.9		58.0 @ 3 cycles		58.0 @ 3 cycles
	2	1.9		57.0 @ 3 cycles		56.6 @ 6 cycles
	3	1.9		57.0 @ 3 cycles		56.6 @ 6 cycles
	4	1.9		None		None
Petersburg	T-60 Breaker	10.0		56.0 @ 3 cycles	59.6 - 59.2 @ 6 cycles	56.0 @ 3 cycles

SOUTHEAST ALASKA POWER AGENCY

Date: November 28, 2022

To: Trey Acteson, Chief Executive Officer

From: Clay Hammer, Operations Manager

Re: Report for December 8, 2022 Board Meeting

MAJOR CONTRACTS and PROJECTS

Wrangell Warehouse Fire Remediation Project

The Wrangell Warehouse Fire Remediation Project is complete except for a few minor long lead-time items. The building has been reskinned, reroofed, and all interior components cleaned, and/or replaced as required. This includes replacement of damaged girts and purlins, flooring, interior doors and all damaged electrical parts. A new Fire Service annunciation panel was also installed to guard against any future fire-related events.

There are just a few punchlist items that remain, which include the installation of two additional windows along the west wall to provide more ambient light, and replacement of the overhead hoist. Replacement of electrical service conductors and meter panel are also required to bring the electrical service up to NEC code. These items will be installed as soon as parts arrive, which will close out the project completely.

Staff is currently making arrangements to re-occupy the premises.

Upper Storage/Laundry room with storage loft.
Floor sheathing is replaced, walls cleaned, sealed, and repainted.

Point of orgin of fire now completely renovated

Operations Manager’s office - Wrangell Warehouse west view


Operations Manager’s office - Wrangell Warehouse north view

Warehouse Shop and Storage Bay

Outer office area - Wrangell Warehouse east view

Tyee Airstrip Resurfacing Project

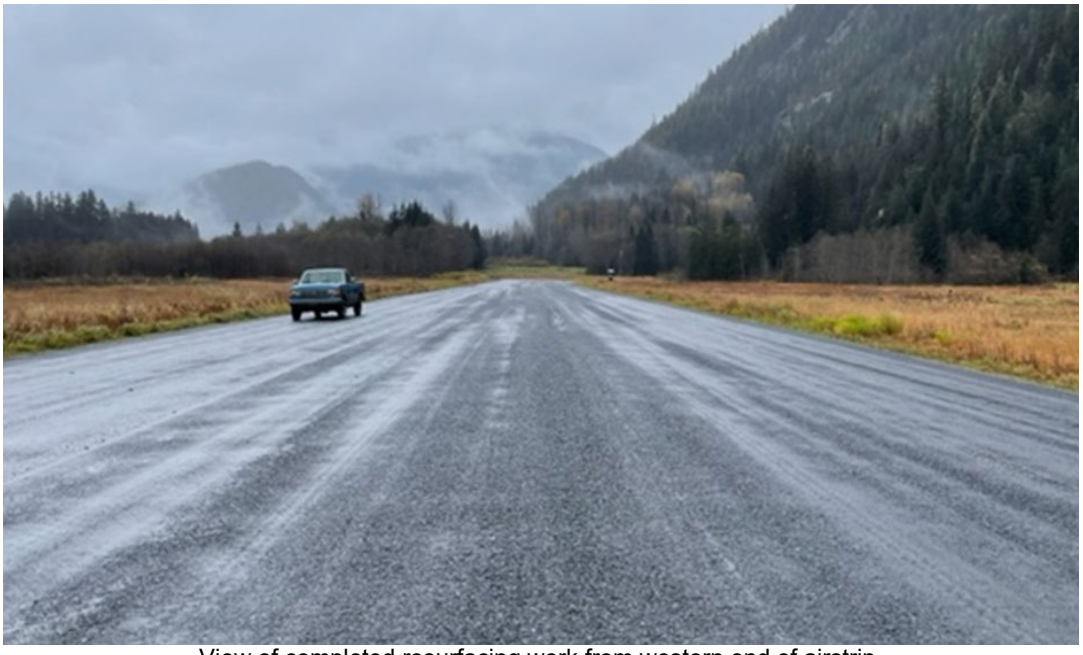
A contract was awarded in May of this year to Ketchikan Ready Mix to resurface the Tyee Lake airstrip. This was the first time in almost 30 years that resurfacing was done. The original capping of crushed material had worn away exposing road base aggregate not suitable for runway operations. Over 3,500 CY of airport spec material was delivered by barge to the site. The contractor gave the 2,400' long x 70' wide runway a 6-inch lift. The material was tested by a third-party engineering contractor to ensure it met the required volume and material specs as well as compaction standards for the application. An additional 250 CY was included in the contract to be stockpiled for future runway maintenance.

The contractor had to make 10 barge trips to deliver the equipment and material over a period of three weeks because a tide window of approximately 16.5' is needed for barge access. This limited the number of opportunities per month that deliveries could be made. Once everything was staged, the entire effort required four days to complete resulting in minimal disruption to air service to the facility. The project was completed in October and will ensure that the airstrip remains safe and serviceable for at least another 25 years or more.

Tyee Gravel Barge Delivery

Stockpile of approximately 3,500 CY of crushed resurfacing material at Tyee Airstrip

Sunrise Aviation's first landing on resurfaced strip. Sunrise is SEAPA's aircraft contractor for Tyee.



View of completed resurfacing work from western end of airstrip.

Large Brown Bear inspecting the newly resurfaced Tyee Airstrip

Tyee Crew House Roof and Siding Project

Phase 2 of a housing life extension project was completed in October for two of the Tyee Lake crew housing units. House #4 needed a sheet metal roof replacement, and House #5 (known as the Crew Quarters) had breaks and deterioration in the vinyl siding that also needed replacement.

The contract was awarded to H Construction of Palmer, Alaska. H Construction was already familiar with the site after award of the contract for Phase 1 for similar work a few years prior. The work included removal of roofing material and roofing felt on House #4, inspection of the roof base for rot or other deterioration, repair if required, then replace felt and roofing with new concealed fastener type modern metal roofing. For House #5, the original vinyl siding was removed, exterior paneling inspected for rot, then new vapor barrier and vinyl siding were installed. A two-man crew completed the project in just seven days.

One minor incident required additional attention. While replacing the roof on House #4 a rainstorm passed through causing rain to enter the bathroom vents and gabled interior portion of the mudroom entrance. The vinyl flooring in those locations was not water resistant resulting in damage to the planking. The contractor purchased new waterproof flooring and sent a crew down to replace it at no additional expense to the Agency. There was no other water damage noted and

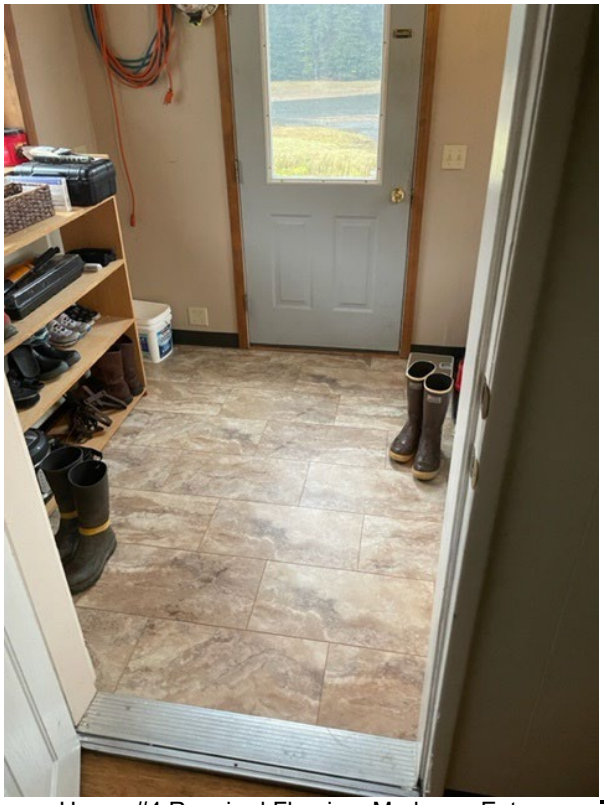
the final product is better than the original. Overall, the quality of work and finish detail exhibited by this contractor is to be commended.

View of House #5 after completion of vinyl siding replacement.

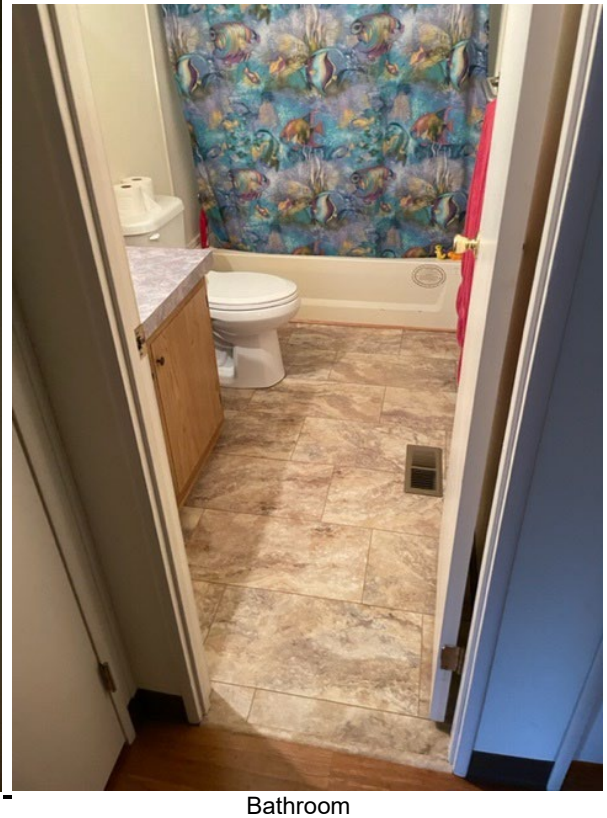
House #5 New vinyl siding.

House #4 with new metal roofing.


Sheet Metal Detail, House #4



House #4 Repaired Flooring: Mudroom Entry



Bathroom

Tyee Activities

Ditched, graded, and compacted Helicopter Landing Zone area adjacent to Power Plant:

Photos of Service Road blockage after severe flooding event on Thanksgiving Day:

Tyee Lake Report

It was a productive Fall this year with the Crew staying busy with the regularly scheduled PMs and plant work. In addition to the normal duties, they also accomplished the following:

- Installed new Tyee Lake Level Transducer at the Tyee Lake Gate House
- Installed underground water line to Green House
- Continued pothole repairs along roadways
- Evicted bats, cleaned and covered openings in the US Forest Service cabin power supply transformer
- Continued mowing brush along all camp roadways
- Cut trees and brush growing up along sides of Tyee Runway
- Installed new Star Link SAT dish and service
- Pressure washed dock and replaced non-skid material on all walkable surfaces
- Topped off Winter fuel supply using SEAPA's watercraft and newly acquired bulk transport tank
- Chained up snow removal equipment in preparation for winter
- Cleaned and serviced truck mounted road sander
- Replaced heater in breaker T-10 control cabinet
- Winterized Jet Skiff
- Winterized US Forest Service Buildings
- Replaced tires on road Grader
- Cleared flood debris from Tyee Service Road

Safety Training this quarter included:

- ✓ ***Stress Training***
- ✓ ***Review Agency Health & Safety Plan***
- ✓ ***Fire Extinguisher Training***
- ✓ ***Confined Space Review***
- ✓ ***Arc Flash Review***
- ✓ ***Hearing Conservation***
- ✓ ***Fentynal Awareness & Narcan Handout***

SOUTHEAST ALASKA POWER AGENCY
CEO REPORT

DATE: December 2, 2022

TO: SEAPA Board of Directors

FROM: Trey Acteson, Chief Executive Officer

SUBJECT: CEO Report

This is my final CEO Report for the Agency. Over the past decade SEAPA has matured as an organization, firmly establishing itself as a prominent leader at the regional, state, and federal levels. In partnership with our member communities, we have sustained the lowest power rates in the state, well below the national average. This is a significant achievement considering the cost of operating and maintaining SEAPA's dispersed remote infrastructure. We have accomplished this while also proactively reinvesting in our assets through a robust renewal and replacement program, ensuring high system reliability. Throughout the years we have intentionally maintained a lean organization and its success is a direct reflection of our highly productive, talented, and dedicated team of professional employees.

SAFETY:

An employee reported a minor condition resulting from work activities, was treated, and returned to work. This will be a recordable incident but should not register as an OSHA lost-time event. There has been no other work related recordable or lost time incidents since my last update.

FEDERAL INFRASTRUCTURE FUNDING OPPORTUNITIES:

The Agency is continuing to pursue infrastructure funding opportunities spurred by passage of the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA). There are several entities that are monitoring developments and I will provide contacts in my final turnover. National Rural Electric Cooperative Association (NRECA) is one of these resources and they also offer matchmaking with Federal grant writers which may be necessary to support the application process.

The IRA includes numerous tax incentives that could potentially shift the economics of new generation projects. Most notably is the new direct payment in lieu of tax credits which will be written into the IRS tax code. SEAPA and municipalities will now be eligible for this substantial benefit, whereas only taxable entities previously qualified. There are also production tax credits and several other renewable energy incentives/provisions embedded in the bills. A third turbine at Tyee or a solar/battery hybrid project may fit well within the parameters.

The Department of Energy is making progress in setting up new infrastructure offices and hiring required staff. Progress is also being made in the rulemaking process and competitive grant funding opportunities are starting to open.

The Denali Commission will likely receive Federal funding to disperse throughout Alaska. This funding conduit should be monitored and may offer a streamlined process.

STATE FUNDING OPPORTUNITIES:

SEAPA staff met with the State of Alaska's Broadband Office to ascertain opportunities for our Skywrap Project, which is essentially a broadband project. Unfortunately, our project does not appear to meet the criteria for their grant structure.

I have contacted Senator Stedman's office and have requested SEAPA be provided access to enter our capital funding requests directly into CAPSIS. The program is anticipated to open next week and we plan to pursue the following funding requests at the state level during the next legislative cycle. The CAPSIS application deadline is typically February 1st.

Priority	Legislative Requests	Amount
1	Fiber Optic Broadband "SkyWrap"	$11,152,830
2	Tyee Station Service Switchgear	$2,330,400
3	Tyee 15kV Switchgear	$1,211,000
4	Helipads	$1,480,553

Alaska Energy Authority has stated they will have additional monies to distribute over the next five years. The Renewable Energy Fund may also be capitalized at a higher level, increasing SEAPA's chance to receive grants.

I.B.E.W. COLLECTIVE BARGAINING AGREEMENT NEGOTIATIONS:

SEAPA and the I.B.E.W. have reached a tentative collective bargaining agreement for the Board's consideration. Significant time and effort were expended to clean-up the existing contract and clarify interpretations. This will make it much easier to administer the contract going forward. Details will be presented in Executive Session.

WRANGELL WAREHOUSE/OFFICE REMEDIATION AND INSURANCE REIMBURSEMENT:

Remediation of SEAPA's Wrangell warehouse and office has reached substantial completion and today I signed the final Proof of Loss Statement and wiring instructions have been provided. Final payment is expected on December 5th. The loss was valued at $761,093 minus $100K deductible. SEAPA covered the deductible and an additional $46,543 for miscellaneous minor improvements during renovations. The building interior and exterior look exceptionally good and should continue to serve the needs of the Agency for many decades.

WHOLESALE POWER RATE STUDY:

SEAPA contracted with John Heberling to conduct a Wholesale Power Rate Study and establish an industry best practices approach to rates. The model will help standardize the analysis process and guide the Board in future rate decisions. This topic will be discussed in detail under New Business, and we have arranged to have Mr. Heberling call into the meeting.

REGIONAL LOAD FORECAST:

It is important that SEAPA update previous regional load forecasts that were primarily based on population growth to include the impacts of decarbonization and beneficial electrification. This information will be essential for the Board to make well informed decisions regarding new generation and other major capital investments. Staff will provide an update on contractor selection under New Business.

INTERRUPTIBLE LOAD OPPORTUNITIES:

There has been considerable interest in cruise ship dock electrification over the past year. I have encouraged the Ward Cove Group to make a formal request to KPU to help kickstart engagement. An interruptible power sales agreement will need to be brokered between KPU and the cruise ship owners to help facilitate funding requests for the required infrastructure enhancements. This may also present an opportunity on the north end of SEAPA's system as cruise ship landings increase. Lead times for transformers are potentially three years so it is imperative that progress be made as soon as possible. SEAPA currently spills on average 50,000 MWhrs annually, which could be generating additional revenue to financially de-risk future development of additional renewable energy resources. Securing interruptible loads could also reduce the need for future rate increases. This is low hanging fruit that will benefit SEAPA and our member communities.

PERSONNEL:

SEAPA has successfully recruited and hired a new Swan Lake Operator/Electrician. Mr. Cody Johnson has a strong instrumentation and controls background that will compliment existing skillsets at SEAPA's facilities. Welcome to the team!

Recruitment for a Control Systems Engineer has seen very little interest. I recommend keeping this position open as additional candidates may emerge with other anticipated recruitment activities.

SOUTHEAST ALASKA POWER AGENCY
CEO FINANCIAL COVER MEMO

DATE: December 2, 2022

TO: SEAPA Board of Directors

FROM: Trey Acteson, Chief Executive Officer

SUBJECT: CEO Financial Cover Letter

SEAPA's financial position is stable. However, minor revenue adjustments will be required over time to offset increased costs associated with debt service, enhanced transmission line right of way clearing, infrastructure, and inflation.

Reservoirs are full heading into winter and are expected to support member utility demand beyond Q1 of 2023.

REVENUE & EXPENSES:

Revenue has been robust through the end of November, with colder temperatures boosting demand. Total revenue from sales through the end of October was $9,805,315 actual vs. $9,133,601 budget. Operating Expense through the end of October was $5,989,729 actual vs. $6,695,225 budget.

RENEWAL & REPLACEMENT PROJECTS:

R&R expenditures through the end of October were $4,479,764 actual vs. $10,194,973 total FY2022 Budget. The new HQ, SWL Bunkhouse, and Helipads represent some of the major gaps. Additionally, the Petersburg landslide repairs have been included in the 2022 budget total.

RENEWABLE ENERGY CERTIFICATES (REC's):

SEAPA has successfully marketed Renewable Energy Certificates for 274,119 MWhr's of past hydropower sales through our broker. This effort has generated additional income of $167,798. Although the REC market appears to ebb and flow throughout the year, it appears that SEAPA should continue to generate additional income from this program. We have included a new REC's summary sheet following Disbursements in the Board packet.

GRANTS: SEAPA has one open grant, the FY13 DCCED, with an open balance at the end of March totaling $132,696. The grant expires June 30, 2023, but we have submitted a request for a one year extension if needed.

SOUTHEAST ALASKA POWER AGENCY

CONTROLLER MEMO

Date:	November 23, 2022	From:	Kay Key
To:	Trey Acteson	Subject:	**FINANCIAL STATEMENTS**

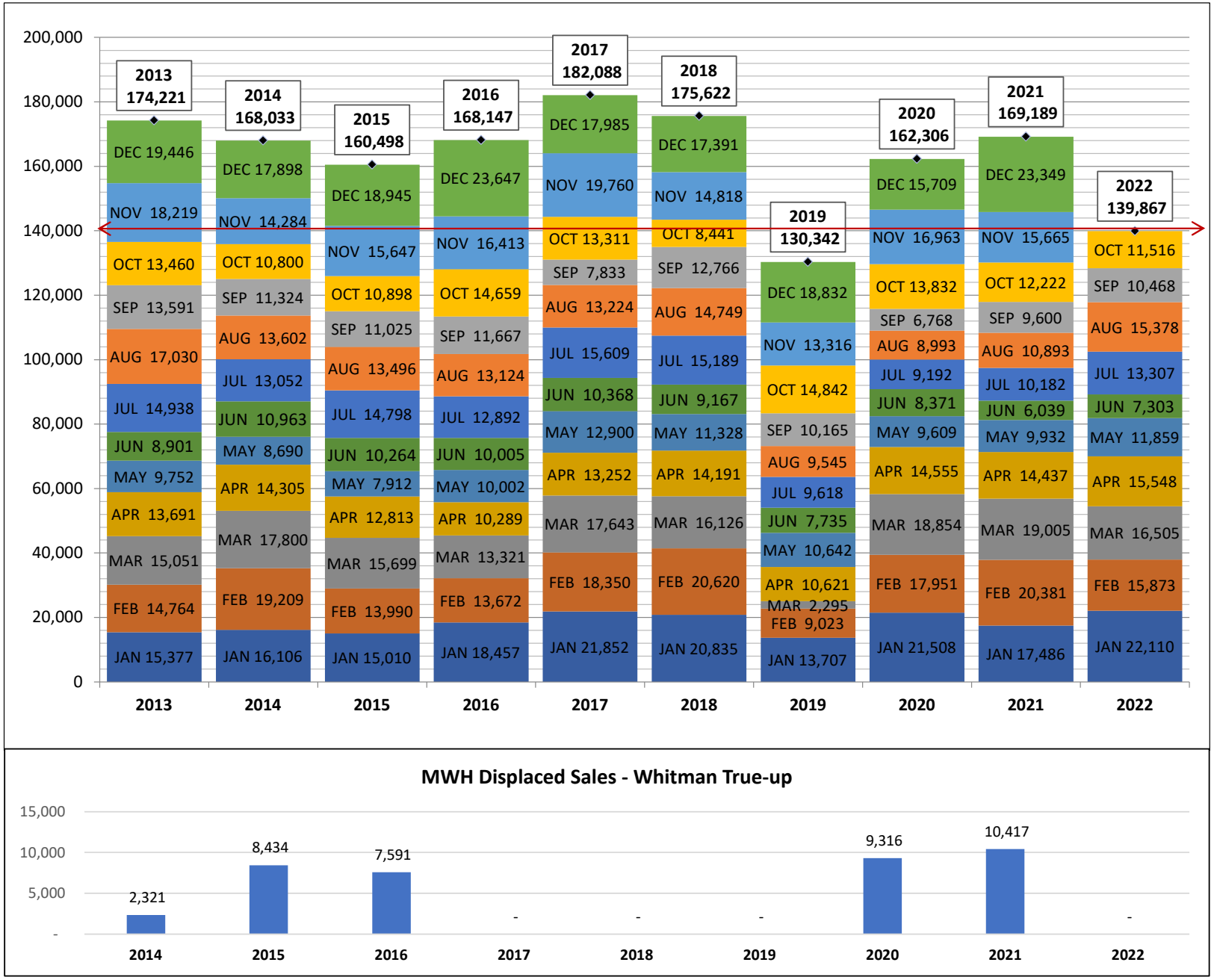
SUGGESTED MOTION
I move to accept year-to-date financial statements through October 2022, and disbursements for September, October, and November 2022 totaling $3,841,310.01, as presented.

Financial Statements in this board packet include:

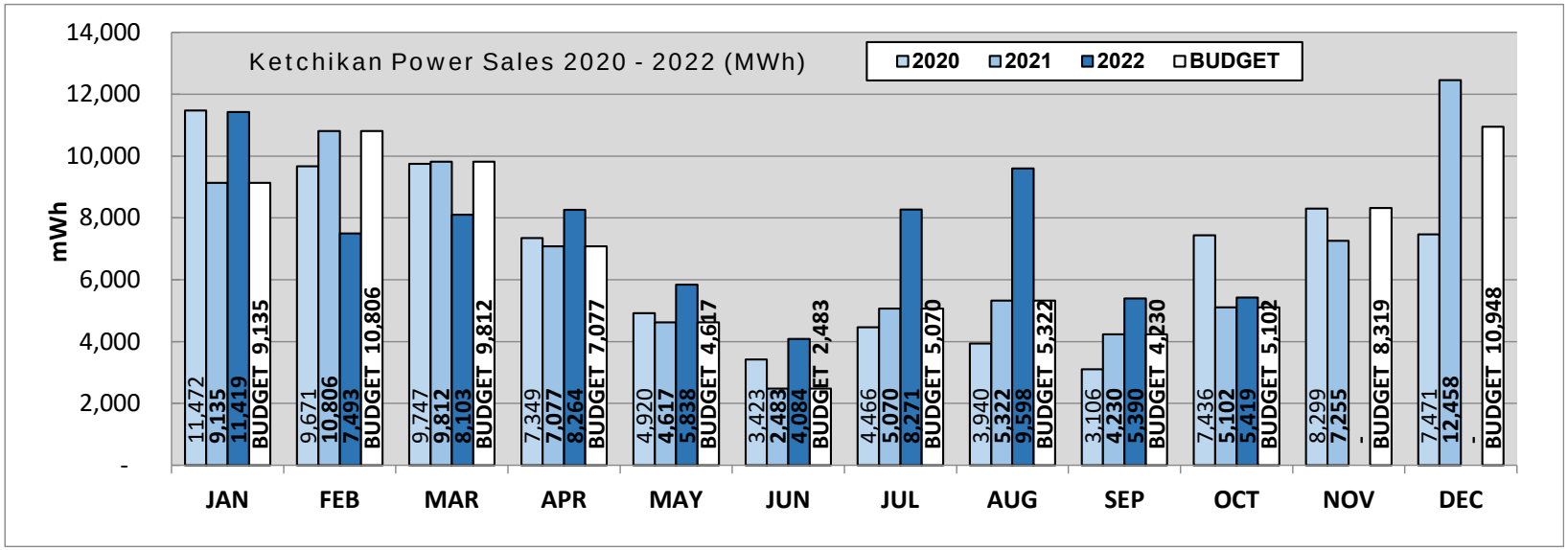
- **MWH-kWh Graphs** (October 2022)
- **Fund Allocation Graph** and **Self-Insured Benchmark Summary** (October 2022)
- **Grant Summary** (Quarterly through September 2022)
- **Year-to-Date Financial Statements through October 2022**
  - ✓ Financial Overview
  - ✓ Statement of Financial Position – Year-to-date with prior year comparison
  - ✓ Statement of Activities – Summary of year-to-date expenses by FERC code, compared to budget and prior year
  - ✓ Statement of Activities – Line-item detail of actual expenses compared to budget by location
  - ✓ R&R Summary
- **Disbursements for September, October, and November 2022**
- **Renewable Energy Certificates Summary**
- **Summary of 2022 Series Bonds issuance**
- **Suggested Motion** to approve RR22378 for Transmission Line Repair in Petersburg

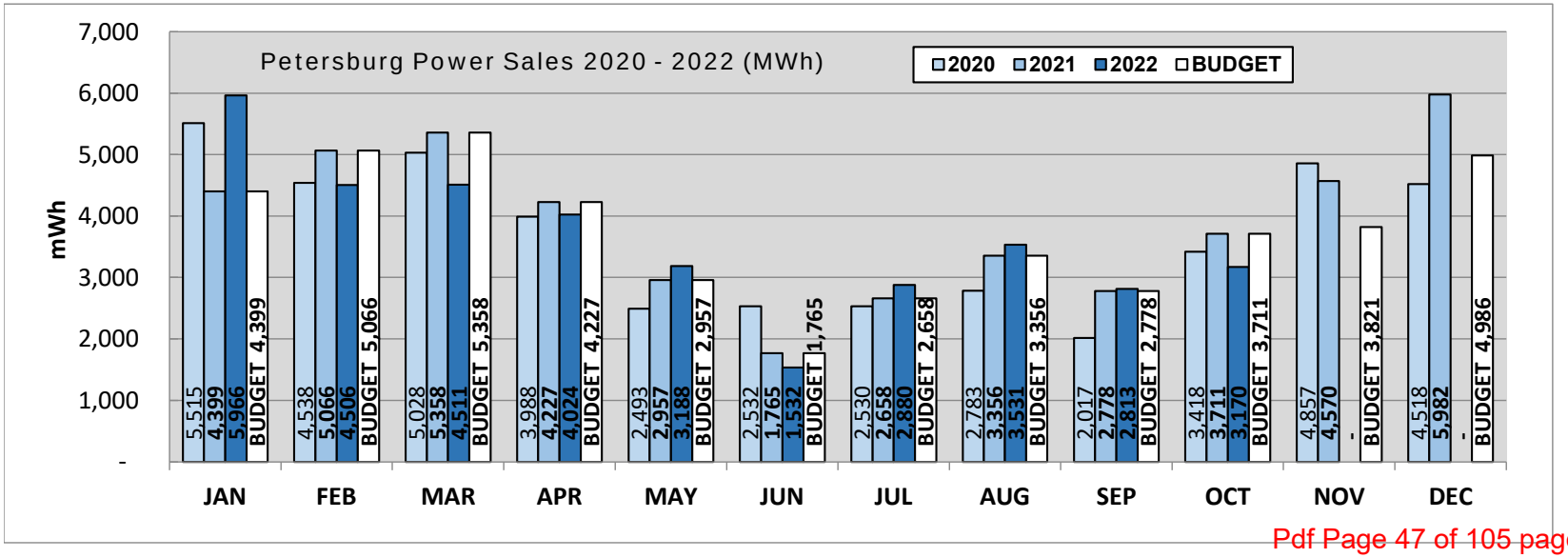
SOUTHEAST ALASKA POWER AGENCY

MWh Firm Power Sales YOY Comparison



OCT 2022	2022 kWh HYDROPOWER SALES	CURRENT MONTH		YTD	
		Actual	Budget	Actual	Budget
	Ketchikan Power Purchases	5,419,072	5,102,400	73,879,562	63,653,696
	Petersburg Power Purchases	3,169,558	3,710,584	36,119,396	36,274,859
	Wrangell Power Purchases	2,926,990	3,408,800	29,867,560	30,246,180
	Total Power Purchases	11,515,620	12,221,784	139,866,518	130,174,735





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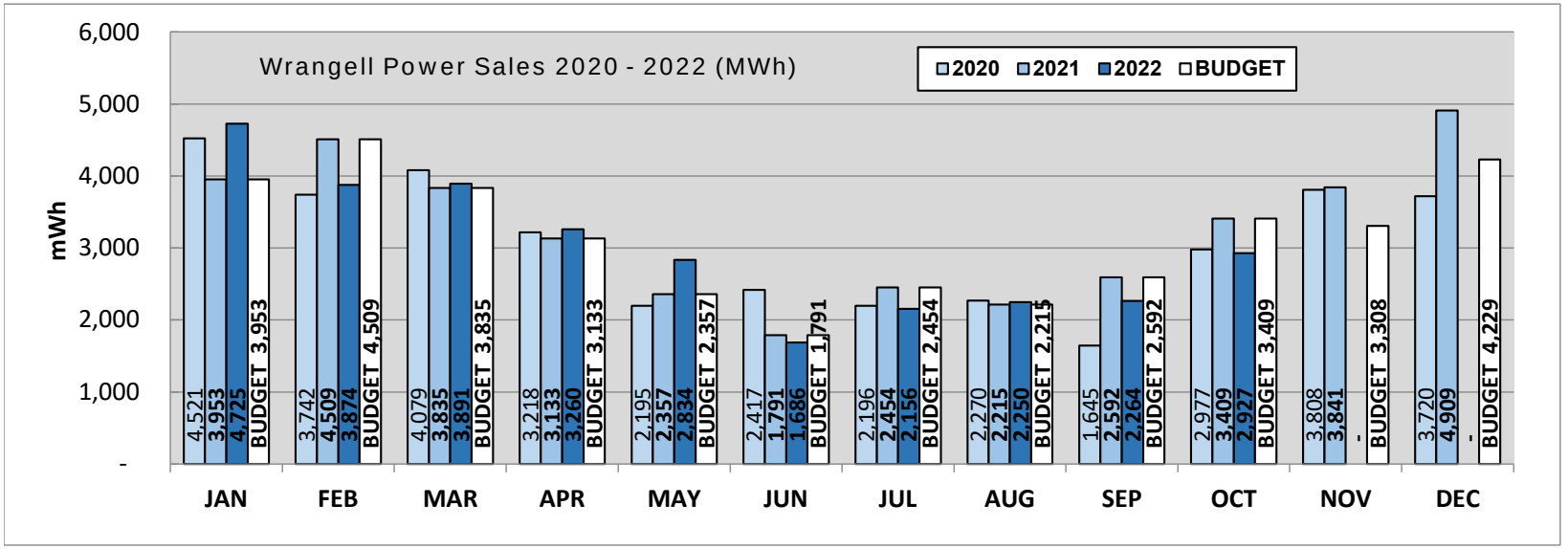

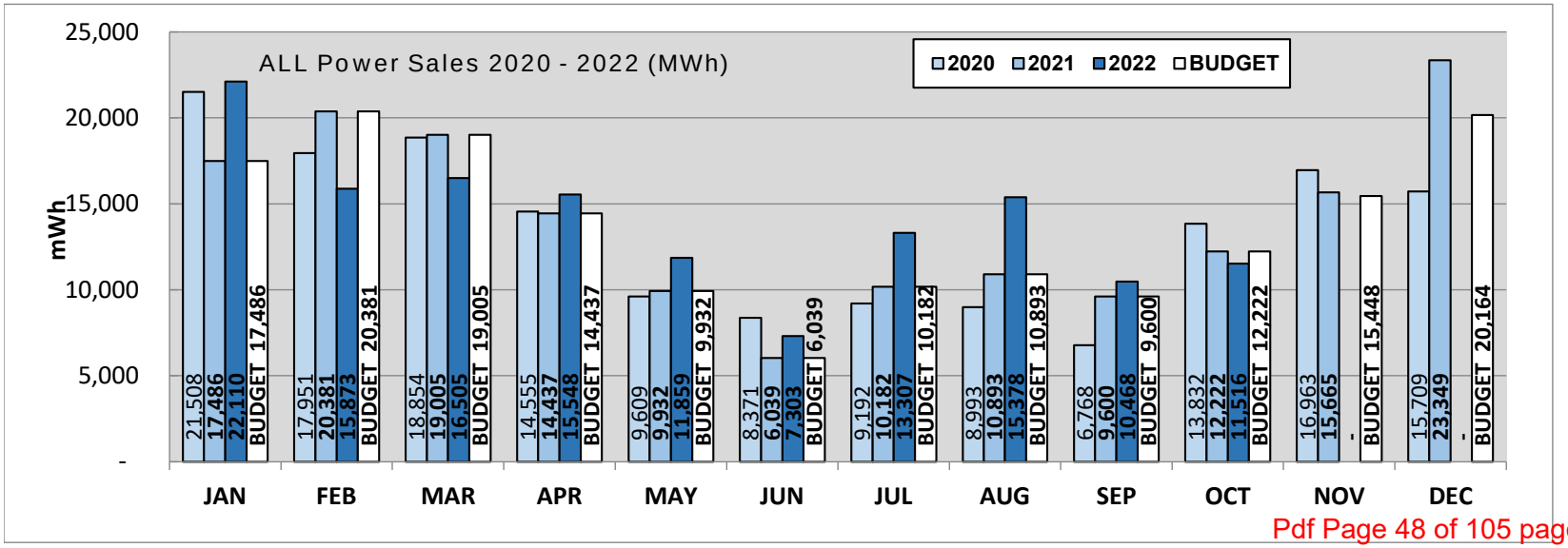

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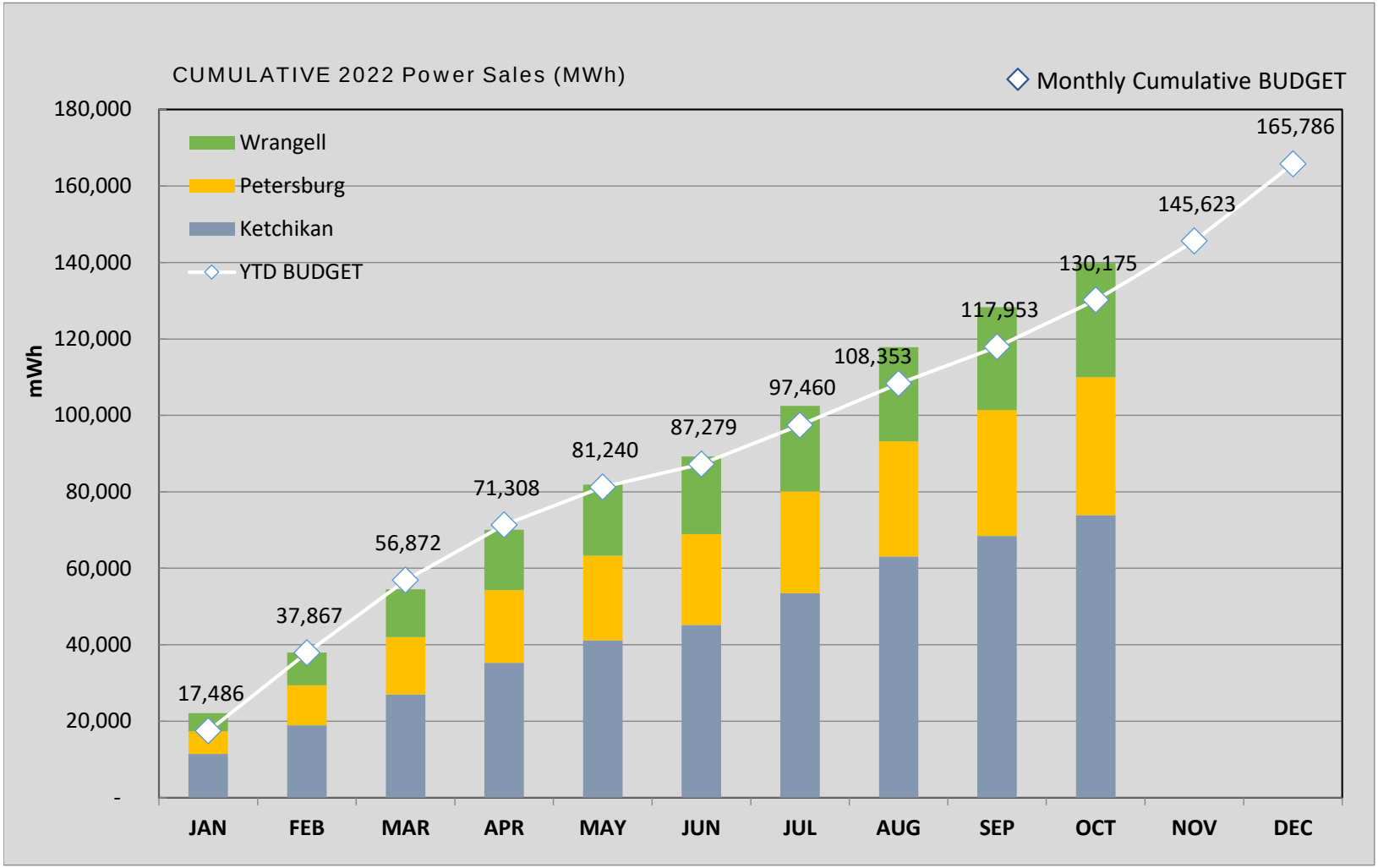
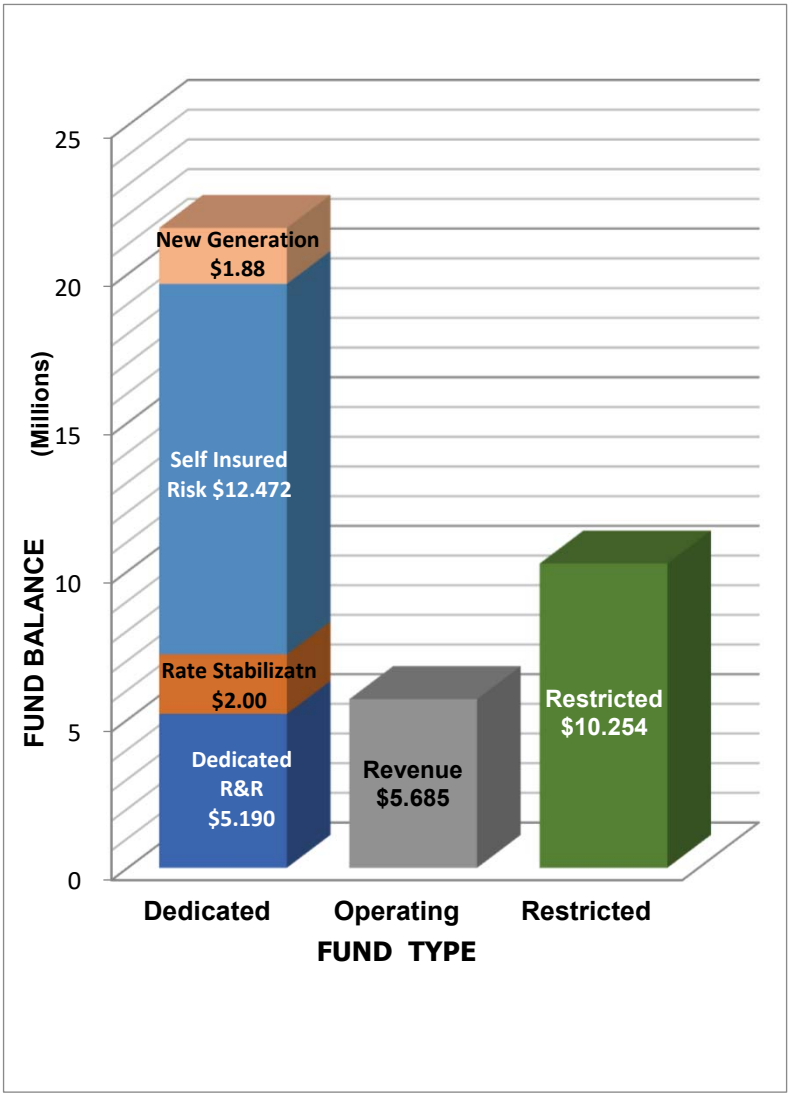


SOUTHEAST ALASKA POWER AGENCY

Fund Allocation Graph

OCT 2022

Operations, Capital and Self-Insured Funds		
Revenue Fund	$ 4,593,062	
Checking	1,092,230	[1]
Dedicated R&R Projects Fund	5,189,635	[2]
New Generation Fund	1,884,171	
Rate Stabilization Fund	2,004,424	
Self Insured Risk Fund	12,471,569	
Total Operations, Capital and Insurance Funds	**27,235,090**	
Trustee (Bond) Funds		
2015 Series Interest	$ 162,231	
2015 Series Reserve	206,109	
2019 Series Interest	159	
2019 Series Principal	81	
2019 Series Reserve	1,270,244	
2021 Series Interest	176,397	
2021 Series Reserve	785,530	
2022 Series Interest	46,710	[3]
2022 Series Costs of Issuance	4,219	[3]
2022 Series Capitalized Interest	266,752	[3]
Total Trustee Funds	**2,600,750**	
Other Restricted Funds		
STI - USFS CD	$ 21,641	
DNR Reclamation Fund	1,418,634	
Required R&R Fund	1,000,409	
2022 Construction Fund	5,213,039	[3]
Total Other Restricted Funds	**7,653,724**	
Total Agency Funds	**$ 37,489,564**	



[1] Funds transferred to checking in October for November 1 disbursements.

[2] Four quarterly payments of $750K were transferred from the Revenue Fund to the Dedicated R&R Fund as of October 31, 2022, for a total of $3M, the total budgeted for 2022.

[3] 2022 Series Bonds were issued September 29. Bond proceeds were deposited to the 2022 Construction Fund (Other Restricted). Expenditures related to construction of Don Finney Lane Headquarters (RR19326) are being drawn from this fund.

Excess reserves were deposited to the 2022 Series Capitalized Interest Fund and are sufficient to cover interest payments to bondholders through calendar year 2023.

Dedicated Funds

New Generation = Project feasibility funding (hydro, wind, geothermal)
Self-Insured Risk = Coverage for uninsured transmission lines, submarine cables and insurance deductibles.
Rate Stabilization Fund = Reserve Fund governed by the Rate Stabilization Fund Policy.
Dedicated R&R = Funds Renewal & Replacement projects approved by the SEAPA Board in the budget.

Operating Funds

Revenue Fund & Commercial Checking: All SEAPA income is deposited to the Revenue Fund as required by Bond Indentures and transferred to checking as needed to cover expenditures.

Restricted Funds (Legally or contractually restricted)

All Trustee Funds: Bond Interest, Principal, Reserve and Costs of Issuance accounts
R&R = $1,000,000 minimum balance required by bond indenture
DNR = Alaska DNR Reclamation Agreement (50% SEAPA and 50% held in trust for Copper Valley and Kodiak)
USFS = USFS Land Remediation Certificate of Deposit

SOUTHEAST ALASKA POWER AGENCY

Account Statement - Period Ending October 31, 2022

ALASKA PERMANENT CAPITAL MANAGEMENT
Registered Investment Adviser

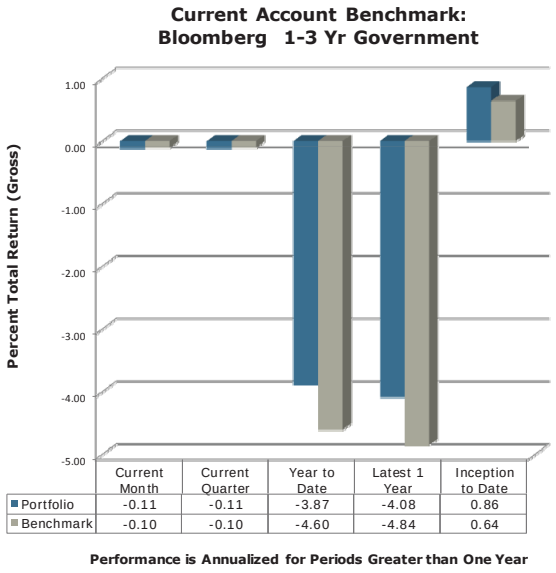
ACCOUNT ACTIVITY

Portfolio Value on 09-30-22	12,527,568
Contributions	0
Withdrawals	-364
Change in Market Value	-31,301
Interest	17,526
Dividends	0
Portfolio Value on 10-31-22	12,513,428

MANAGEMENT TEAM

Client Relationship Manager:	Blake Phillips, CFA® Blake@apcm.net
Your Portfolio Manager:	Bill Lierman, CFA®
Contact Phone Number:	(907) 272-7575

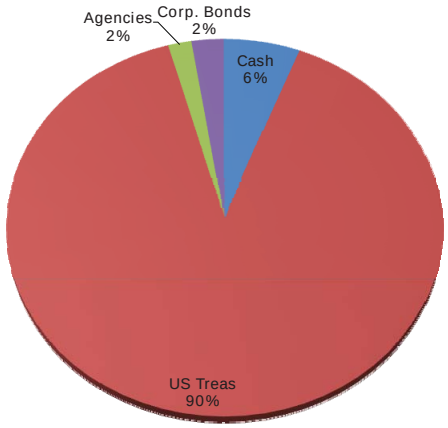
INVESTMENT PERFORMANCE



	Current Month	Current Quarter	Year to Date	Latest 1 Year	Inception to Date
Portfolio	-0.11	-0.11	-3.87	-4.08	0.86
Benchmark	-0.10	-0.10	-4.60	-4.84	0.64

Performance is Annualized for Periods Greater than One Year

PORTFOLIO COMPOSITION



Fixed Income Portfolio Statistics

Average Quality: AAA Yield to Maturity: 4.58% Average Maturity: 1.72 Yrs

Clients are encouraged to compare this report with the official statement from their custodian.

SOUTHEAST ALASKA POWER AGENCY

GRANT SUMMARY

SEP 2022

AK DCCED GRANT 13-DC-553

Grant Billing	Grant Budget	Billing thru 2022	Open Balance
1 - Hydro Storage	578,000	578,000	0
2 - G&T Site Evaluation	2,109,092	1,976,396	132,696
3 - Stability / Interconnecti	0	0	0
4 - Load Balance Model	9,181	9,181	0
5 - Project Mgmt	255,712	255,712	0
6 - Business Analysis / PSA	48,015	48,015	0
Total FY13 AK DCCED	3,000,000	2,867,304	132,696

QUARTERLY BILLING

Mar-22	Jun-22	Sep-22	Dec-22	FY22
-	-	-	-	-
24,641	-	258	-	24,899
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
24,641	-	258	-	24,899

TERM: JUL 2013 - JUN 2023

The grant term has been formally extended through June 2023.

OCTOBER 2022

YTD FINANCIAL OVERVIEW

OPERATING REVENUE

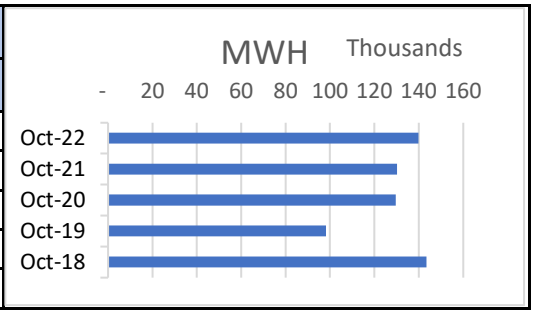
kWh SALES	JAN-OCT Actual	JAN-OCT Budget	JAN-OCT Prior Yr
Ketchikan	$5,179,962	$4,464,748	$4,328,451
Petersburg	2,531,503	2,546,379	2,466,690
Wrangell	2,093,851	2,122,474	2,056,740
Total Firm Sales	$9,805,315	$9,133,601	$8,851,882

OPERATING EXPENSES

	JAN-OCT Actual	JAN-OCT Budget	JAN-OCT Prior Yr
Hydro Facilities	$1,747,145	$2,105,815	$2,001,442
Transmission	1,536,560	1,620,890	1,146,072
G&A	2,706,024	2,968,520	2,399,242
Total Ops Exp	$5,989,729	$6,695,225	$5,546,756

FIRM MWH TREND

Year-to-Date MWH SALES	
Year	**MWH**
Oct-22	139,867
Oct-21	130,175
Oct-20	129,634
Oct-19	98,194
Oct-18	143,413



2019 drought.

STATEMENT OF FINANCIAL POSITION as of October 31, 2022	Year To Date 10/31/22	Prior Year To Date 10/31/21	Southeast Alaska Power Agency
Assets			
Current Assets			
Agency Funds			
Operating & Reserve Funds			
1110-001 - Revenue Fund	4,593,062	7,748,275	
1110-002 - Commercial Checking	1,092,230	14,650	
1110-003 - Dedicated R&R Fund	5,189,635	5,024,399	
1110-004 - New Generation Fund	1,884,171	1,888,766	
1110-101 - Rate Stabilization Fund	2,004,424	2,003,471	
1110-102 - Self Insured Risk Fund	12,471,569	8,299,382	1 Self-Insured Fund balance increased by Board in 2022
Total Operating & Reserve Funds	27,235,090	24,978,942	
Restricted Trustee Funds			
1120-004 - 2015 Series Bond Interest Fund	163,231	203,369	
1120-006 - 2015 Series Bond Reserve Fund	206,109	205,240	
1120-009 - 2019 Series Bond Interest Fund	159	40	
1120-010 - 2019 Series Bond Principal Fund	81	422,852	
1120-011 - 2019 Series Bond Reserve Fund	1,270,244	1,264,259	
1120-012 - 2021 Series Bond Interest Fund	176,397	208,020	
1120-014 - 2021 Series Bond Reserve Fund	785,530	781,873	
1120-017 - 2022 Series Bond Interest Fund	46,710	0	2 2022 Bonds (Sep 29 issuance)
1120-018 - 2022 Series Bond Principal Fund	-	-	
1120-019 - 2022 Series Bond Reserve Fund	-	-	
1120-021 - 2022 Series Bond COI Fund	4,219	-	
1120-022 - 2022 Series Capitalized Interest Fund	266,752	-	
Total Restricted Trustee Funds	2,919,432	3,085,652	
Restricted Other Funds			
1130-001 - USFS CD - STI	21,641	21,639	
1130-002 - DNR Reclamation Fund	1,418,634	1,343,472	
1130-003 - Required R&R Fund	1,000,409	1,000,866	
1130-004 - Construction Fund 2021	-	1,729,075	3 Proceeds from 2021 Bond Issuance for sub. Cable
1130-005 - 2022 Construction Fund	5,213,039	-	2 Proceeds from 2022 Bond Issuance for SEAPA HQ
Total Restricted Other Funds	7,653,724	4,095,052	
Total Agency Funds	37,808,246	32,159,647	
Accounts Receivable			
1100-001 - Accounts Receivable	1,196,294	1,295,120	
1100-002 - Grants Receivable	-	64,218	
1100-003 - Other Misc Receivable	5,800	5,800	
Total Accounts Receivable	1,202,093	1,365,138	
Other Current Assets			
Accrued Interest Receivable			
1200-102 - Accrued Interest Receivable	55,230	11,999	
Total Accrued Interest Receivable	55,230	11,999	
Prepaid Fees			
1200-204 - Prepaid USFS Land Use Fees	18,386	17,965	
1200-206 - Prepaid Admin Group Ben	11,994	10,223	
1200-207 - Prepaid Admin Retirement	15,448	15,143	
Total Prepaid Fees	45,829	43,331	
Inventory Assets			
1200-300 - Inventory Spares-Stores	425,480	235,991	4 Two Circuit Switchers added to inventory
1200-301 - Inventory SWL Winding Replace	890,405	890,405	
1200-302 - Inventory Flashboard Kickers	439,456	439,456	
1200-303 - Inventory Sub Cable Spare	768,484	768,484	
1210 - Accumulated Inventory Amortization	(252,329)	-	5 New account created in accordance with board-approved Inventory Policy
Total Inventory Assets	2,271,496	2,334,336	
Total Other Current Assets	2,372,555	2,389,666	
Total Current Assets	41,382,894	35,914,451	

STATEMENT OF FINANCIAL POSITION as of October 31, 2022	Year To Date 10/31/22	Prior Year To Date 10/31/21	Southeast Alaska Power Agency
Capital Assets			
Capital Assets			
1300-100 - Swan Lake Capital Assets	36,042,665	34,016,292	
1300-200 - Tyee Lake Capital Assets	44,304,269	43,753,900	
1300-300 - Swan-Tyee Intertie Capital Assets	115,328,466	115,183,752	
1300-400 - Ketchikan Capital Assets	1,411,793	1,411,793	
Total Capital Assets	197,087,194	194,365,737	
R&R WIP Capital Projects			
1320-100 - WIP Swan Lake	317,916	2,046,038	6 2021 Work in Progress - SWL Station Service Switchyd
1320-200 - WIP Tyee Lake	961,613	49,988	6 2022 Work in Progress - Airstrip, Warehs-Office,
1320-300 - WIP Swan-Tyee Intertie	-	-	XFMR Circuit Switcher
1320-400 - WIP Ketchikan	2,962,075	211,566	6 2022 Work in Progress - SEAPA HQ
Total R&R WIP Capital Projects	4,241,603	2,307,592	
Accumulated Depreciation	(64,827,850)	(59,954,383)	
Total Capital Assets	136,500,947	136,718,945	
Other Assets			
Deferred Assets			
1830-006 - New Generation Integration	12,514	7,021	
1830-007 - 2019 Bond Gain on 2009 Refund	35,942	58,642	
Total Deferred Assets	48,456	65,663	
Total Other Assets	48,456	65,663	
Total Assets	177,932,297	172,699,059	
Liabilities and Net Position			
Current Liabilities			
Accounts Payable			
2100-001 - Accounts Payable General	1,177,233	918,133	
Total Accounts Payable	1,177,233	918,133	
Other Current Liabilities			
2100-301 - Other Current Liabilities	59,112	65,585	
2100-304 - Reserve Interest Payable	369,419	404,722	
2100-340 - Wages Payable	134,887	122,907	
2100-341 - PTO Payable	177,789	201,445	
2100-350 - Other Payroll Liabilities	16,394	17,519	
Total Other Current Liabilities	757,601	812,178	
Total Current Liabilities	1,934,834	1,730,311	
Long Term Liabilities			
2200-001 - PERS Unfunded Liability WRG	562,603	634,379	
2200-002 - DNR Fund CVEA KEA Liability	709,317	671,736	
2200-202 - Series 2015 Bonds	10,295,000	10,295,000	
2200-203 - Series 2019 Bonds	1,825,000	2,670,000	
2200-204 - Series 2021 Bonds	11,330,000	11,330,000	
2200-205 - Series 2022 Bonds	5,990,000	-	2 2022 Bond Issuance
2200-302 - 2015 Bond Issuance Premium	582,700	637,759	
2200-303 - 2019 Bond Issuance Premium	126,307	206,079	
2200-304 - 2021 Bond Issuance Premium	2,760,141	2,884,507	
2200-305 - 2022 Bond Issuance Discount	(52,842)	-	2 2022 Bond Issuance
Total Long Term Liabilities	34,128,226	29,329,460	
Total Liabilities	36,063,060	31,059,771	
Net Position			
3100-001 - Net Investment Capital Assets	108,434,673	112,548,453	
3100-002 - Restricted for Debt Service	2,253,788	1,466,438	
3100-003 - Restricted by External Agreement	1,365,223	1,290,078	
3100-004 - Unrestricted	31,079,245	23,211,318	
Total Net Position	143,132,928	138,516,287	
Net Income	**(1,263,691)**	**3,123,001**	
Total Net Position	141,869,237	141,639,288	
Total Liabilities and Net Position	177,932,297	172,699,059	

STATEMENT OF ACTIVITIES - **Budget Comparison YTD**

Year To Date as of October 31, 2022

	YTD FY22	YTD BUDGET	VARIANCE % of Budget	YTD FY21	ANNUAL Budget
OPERATING REVENUE					
OPERATING REVENUE					
400 - Hydro Facility Revenues	9,805,315	9,133,601	7%	8,851,882	12,317,486
454 - Rent-Electric Property	10,334	6,800	52%	5,050	6,800
Total Operating Revenue	9,815,649	9,140,401	7%	8,856,932	12,324,286
Net Operating Revenue	**9,815,649**	**9,140,401**	**7%**	**8,856,932**	**12,324,286**
OPERATING EXPENSE					
HYDRO FACILITY O&M					
535 - Operations Supervision	8,254	9,930	-17%	53,237	10,980
537 - Hydraulic Expense	6,718	10,000	-33%	3,437	10,000
538 - Electric Expenses	5,428	73,000	-93%	21,794	77,000
539 - Operations Misc Expense	242,311	322,280	-25%	302,486	359,000
540 - Rents	152,636	152,710	0%	149,016	183,250
541 - Hydro Power Station Maintenance	27,499	40,100	-31%	42,664	46,000
543 - Dams Reservoirs Waterways	35,563	66,300	-46%	7,279	69,250
544 - Electric Plant Wages-Benefits	1,233,027	1,325,795	-7%	1,327,520	1,602,000
545 - Nonproduction Plant Maintenance	31,890	43,200	-26%	47,078	62,300
561 - Control System Maintenance	3,818	62,500	-94%	46,932	73,400
Total Hydro Facility Expense	1,747,145	2,105,815	-17%	2,001,442	2,493,180
TRANSMISSION O&M					
562 - Substation Expense	32,981	33,900	-3%	83,331	38,750
564 - XMSN Submarine Cable Expense	3,837	4,050	-5%	1,495	4,700
571 - XMSN Overhead Lines Expense	1,499,742	1,582,940	-5%	1,061,246	1,608,600
Total Transmission Expense	1,536,560	1,620,890	-5%	1,146,072	1,652,050
GENERAL & ADMIN EXPENSE					
920 - Admin Wages-Benefits	1,456,574	1,610,350	-10%	1,332,917	1,948,800
921 - Office Expenses	141,542	165,050	-14%	129,122	193,200
923 - Professional Services	157,487	267,350	-41%	210,450	315,150
924 - Insurance	660,660	612,500	8%	463,941	735,000
928 - Regulatory Commission Expense	86,272	77,870	11%	92,604	89,400
930 - General Expense	135,156	160,800	-16%	108,397	183,050
931 - Admin Rent	68,333	74,600	-8%	61,810	91,600
Total G&A Expense	2,706,024	2,968,520	-9%	2,399,242	3,556,200
Total Operating Expense	**5,989,729**	**6,695,225**	**-11%**	**5,546,756**	**7,701,430**
NET OPERATING REVENUE/(EXPENSE)	**3,825,920**	**2,445,176**	**56%**	**3,310,176**	**4,622,856**
Nonoperating Income					
941 - Grant Income	69,084			65,997	
942 - Interest Income Misc	217,624			84,321	
944 - Gain/(Loss) Investments	(615,823)			(55,640)	
946 - Misc Nonoperating Income	484,606			(210,059)	
Total Nonoperating Income	**155,491**			**(115,380)**	
Nonoperating Expense					
951 - Interest Expense	64,211			**15,706**	
952 - Bond Interest Expense	773,652			488,367	
953 - Depreciation-Amortization Expense	4,277,177			3,771,676	
954 - Grant Expense	37,168			69,302	
955 - Misc Nonoperating Expense	92,895			104,342	
Total Nonoperating Expense	**5,245,103**			**4,449,394**	
NET NONOPERATING INCOME/(EXPENSE)	**(5,089,612)**			**(4,564,774)**	
Change in Net Position	**(1,263,691)**			**(1,254,598)**	

Southeast Alaska Power Agency

Statement of Activities
YTD Budget
as of October 31, 2022

	All Locations 01/01/22 Through 10/31/22		0--No Location 01/01/22 Through 10/31/22		1--Swan Lake 01/01/22 Through 10/31/22		2--Tyee Lake 01/01/22 Through 10/31/22		3--Swan-Tyee Intertie 01/01/22 Through 10/31/22	
	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget
OPERATING REVENUE										
400 - Hydro Facility Revenues										
4000-401 Hydropower Sales Ketchikan	5,179,962	4,464,748	5,179,962	4,464,748	-	-	-	-	-	-
4000-402 Hydropower Sales Petersburg	2,531,503	2,546,379	2,531,503	2,546,379	-	-	-	-	-	-
4000-403 Hydropower Sales Wrangell	2,093,851	2,122,474	2,093,851	2,122,474	-	-	-	-	-	-
Total 400 - Hydro Facility Revenues	9,805,315	9,133,601	9,805,315	9,133,601	-	-	-	-	-	-
454 - Rent-Electric Property										
4540-451 Rent Electric Property	10,334	6,800	10,334	6,800	-	-	-	-	-	-
Total 454 - Rent-Electric Property	10,334	6,800	10,334	6,800	-	-	-	-	-	-
TOTAL OPERATING REVENUE	**9,815,649**	**9,140,401**	**9,815,649**	**9,140,401**	**-**	**-**	**-**	**-**	**-**	**-**
OPERATING EXPENSE										
535 - Operations Supervision										
0310 Contractor	242	-	-	-	30	-	212	-	-	-
0390 Software	2,856	4,080	-	-	1,428	2,040	1,428	2,040	-	-
0610 Office Equipment	3,592	3,300	-	-	2,731	2,000	860	1,300	-	-
0730 Office Supplies	1,565	2,550	-	-	599	850	966	1,700	-	-
Total 535 - Operations Supervision	8,254	9,930	-	-	4,788	4,890	3,466	5,040	-	-
537 - Hydraulic Expenses										
0330 Helicopters	6,718	8,000	-	-	3,528	4,000	3,190	4,000	-	-
0800 Materials-Minor Equip	-	2,000	-	-	-	1,000	-	1,000	-	-
Total 537 - Hydraulic Expenses	6,718	10,000	-	-	3,528	5,000	3,190	5,000	-	-
538 - Electric Expenses										
0310 Contractor	2,897	57,600	-	-	1,348	11,800	1,549	45,800	-	-
0740 Operating Supplies	365	9,100	-	-	365	7,000	-	2,100	-	-
0800 Materials-Minor Equip	2,166	6,300	-	-	2,166	4,200	-	2,100	-	-
Total 538 - Electric Expenses	5,428	73,000	-	-	3,879	23,000	1,549	50,000	-	-
539 - Operations Misc Expense										
0300 Communication Services	39,369	40,000	-	-	17,487	17,500	21,882	22,500	-	-
0310 Contractor	12,020	14,800	-	-	4,440	7,200	7,580	7,600	-	-
0320 Flights	60,713	92,600	-	-	13,793	32,600	46,920	60,000	-	-
0330 Helicopters	6,012	4,000	-	-	-	-	6,012	4,000	-	-
0360 Lodging	2,828	3,000	-	-	-	-	2,828	3,000	-	-
0373 Rent-Other	602	1,200	-	-	602	1,200	-	-	-	-
0390 Software	95	-	-	-	47	-	47	-	-	-
0401 Training-Pro-Tech	7,287	15,000	-	-	3,643	7,500	3,643	7,500	-	-
0402 Training-Safety	12,348	33,000	-	-	7,058	16,500	5,290	16,500	-	-
0410 Transport-Other	8,961	27,000	-	-	-	15,000	8,961	12,000	-	-
0420 Utilities	581	680	-	-	581	680	-	-	-	-
0600 Phones, Radios, Video	1,233	1,500	-	-	384	500	849	1,000	-	-
0620 Satellite Hardware	1,576	-	-	-	786	-	790	-	-	-

Southeast Alaska Power Agency

Statement of Activities
YTD Budget
as of October 31, 2022

	All Locations 01/01/22 Through 10/31/22		0--No Location 01/01/22 Through 10/31/22		1--Swan Lake 01/01/22 Through 10/31/22		2--Tyee Lake 01/01/22 Through 10/31/22		3--Swan-Tyee Intertie 01/01/22 Through 10/31/22	
	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget
0710 Food, Meals	4,347	2,550	-	-	386	900	3,961	1,650	-	-
0740 Operating Supplies	1,787	2,600	-	-	1,292	1,300	495	1,300	-	-
0750 Safety	4,696	8,400	-	-	3,515	4,200	1,181	4,200	-	-
0800 Materials-Minor Equip	5,564	5,500	-	-	-	-	5,564	5,500	-	-
0810 Rolling Stock Maint	16,371	13,000	-	-	9,143	4,200	7,228	8,800	-	-
0811 Marine Vessel Maint	1,643	2,100	-	-	1,643	2,100	-	-	-	-
0820 Fuels and Oils	40,083	42,000	-	-	22,138	27,000	17,945	15,000	-	-
0830 Fuels and Oils - Marine	13,758	11,250	-	-	6,773	5,000	6,985	6,250	-	-
0850 Tools	438	2,100	-	-	378	-	60	2,100	-	-
Total 539 - Operations Misc Expense	242,311	322,280	-	-	94,088	143,380	148,222	178,900	-	-
540 - Rents										
0030 FERC Land Use	60,225	60,500	-	-	12,940	13,000	47,284	47,500	-	-
0050 USFS Land Use	92,411	92,210	-	-	-	-	24,551	24,710	67,860	67,500
Total 540 - Rents	152,636	152,710	-	-	12,940	13,000	71,835	72,210	67,860	67,500
541 - Hydro Power Station Maintnce										
0310 Contractor	66	4,200	-	-	66	2,100	-	2,100	-	-
0740 Operating Supplies	18,464	9,200	-	-	9,125	4,600	9,339	4,600	-	-
0800 Materials-Minor Equip	7,019	21,500	-	-	7,005	12,500	15	9,000	-	-
0850 Tools	1,950	5,200	-	-	1,835	2,100	115	3,100	-	-
Total 541 - Hydro Power Station Maint.	27,499	40,100	-	-	18,030	21,300	9,469	18,800	-	-
543 - Dams Reservoirs Waterways										
0310 Contractor	13,646	53,000	-	-	11,805	53,000	1,841	-	-	-
0330 Helicopters	15,173	7,000	-	-	2,239	-	12,935	7,000	-	-
0740 Operating Supplies	2,557	2,900	-	-	2,062	1,250	494	1,650	-	-
0800 Materials-Minor Equip	4,167	1,750	-	-	4,167	1,250	-	500	-	-
0820 Fuels and Oils	-	250	-	-	-	-	-	250	-	-
0850 Tools	20	1,400	-	-	-	900	20	500	-	-
Total 543 - Dams Reservoirs Waterways	35,563	66,300	-	-	20,273	56,400	15,290	9,900	-	-
544 - Electric Plant Wages-Benefits										
0110 Wages / PTO	788,068	869,000	-	-	417,624	433,000	370,444	436,000	-	-
0120 OT	128,174	112,705	-	-	79,400	56,350	48,774	56,355	-	-
0140 Taxes	72,997	67,105	-	-	40,081	33,945	32,916	33,160	-	-
0150 H&W	156,726	172,305	-	-	84,410	86,105	72,316	86,200	-	-
0160 Retirement	103,099	112,680	-	-	56,146	56,300	46,954	56,380	-	-
0170 Capx-Grants	(16,038)	(8,000)	-	-	(11,770)	(8,000)	(4,268)	-	-	-
Total 544 - Electric Plant Wages-Benefits	1,233,027	1,325,795	-	-	665,891	657,700	567,136	668,095	-	-

Southeast Alaska Power Agency

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YTD Budget
as of October 31, 2022

	All Locations 01/01/22 Through 10/31/22		0--No Location 01/01/22 Through 10/31/22		1--Swan Lake 01/01/22 Through 10/31/22		2--Tyee Lake 01/01/22 Through 10/31/22		3--Swan-Tyee Intertie 01/01/22 Through 10/31/22	
	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget
545 - Nonproduction Plant Maintenance										
0310 Contractor	1,333	5,750	-	-	-	5,500	1,333	250	-	-
0373 Rent-Other	4,984	3,350	-	-	4,984	3,350	-	-	-	-
0740 Operating Supplies	12,963	12,150	-	-	2,845	1,650	10,119	10,500	-	-
0800 Materials-Minor Equip	8,450	9,150	-	-	2,313	4,150	6,137	5,000	-	-
0810 Rolling Stock Maint	859	200	-	-	-	-	859	200	-	-
0820 Fuels and Oils	371	-	-	-	-	-	371	-	-	-
0840 Furnishings	2,537	12,000	-	-	77	8,000	2,460	4,000	-	-
0850 Tools	393	600	-	-	-	225	393	375	-	-
Total 545 - Nonproduction Plant Maint.	31,890	43,200	-	-	10,218	22,875	21,672	20,325	-	-
561 - Control System Maintenance										
0310 Contractor	2,268	50,000	-	-	1,134	25,000	1,134	25,000	-	-
0390 Software	-	4,500	-	-	-	2,250	-	2,250	-	-
0740 Operating Supplies	60	-	-	-	-	-	60	-	-	-
0800 Materials-Minor Equip	1,490	8,000	-	-	989	4,000	501	4,000	-	-
Total 561 - Control System Maint.	3,818	62,500	-	-	2,123	31,250	1,695	31,250	-	-
562 - Substation Expense										
0300 Communication Services	3,277	1,250	-	-	-	-	3,277	1,250	-	-
0310 Contractor	2,155	7,500	-	-	-	-	2,155	7,500	-	-
0320 Flights	6,450	8,600	-	-	-	-	6,450	8,600	-	-
0360 Lodging	-	375	-	-	-	-	-	375	-	-
0373 Rent-Other	300	375	-	-	-	-	300	375	-	-
0420 Utilities	9,699	10,000	-	-	-	-	9,699	10,000	-	-
0600 Phones, Radios, Video	577	1,050	-	-	-	-	577	1,050	-	-
0710 Food, Meals	-	150	-	-	-	-	-	150	-	-
0740 Operating Supplies	4,584	2,525	-	-	386	425	4,197	2,100	-	-
0800 Materials-Minor Equip	5,760	1,675	-	-	-	850	5,760	825	-	-
0820 Fuels and Oils	-	200	-	-	-	-	-	200	-	-
0850 Tools	180	200	-	-	-	-	180	200	-	-
Total 562 - Substation Expense	32,981	33,900	-	-	386	1,275	32,595	32,625	-	-
564 - XMSN Submarine Cable Expense										
0310 Contractor	3,000	-	-	-	-	-	3,000	-	-	-
0360 Lodging	-	375	-	-	-	-	-	375	-	-
0740 Operating Supplies	277	825	-	-	-	-	277	825	-	-
0800 Materials-Minor Equip	-	1,850	-	-	-	-	-	1,850	-	-
0850 Tools	560	1,000	-	-	-	-	560	1,000	-	-
Total 564 - XMSN Submarine Cable Exp.	3,837	4,050	-	-	-	-	3,837	4,050	-	-

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	All Locations 01/01/22 Through 10/31/22		0--No Location 01/01/22 Through 10/31/22		1--Swan Lake 01/01/22 Through 10/31/22		2--Tyee Lake 01/01/22 Through 10/31/22		3--Swan-Tyee Intertie 01/01/22 Through 10/31/22	
	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget
571 - XMSN Overhead Lines Expense										
0110 Wages / PTO	100,932	109,750	100,932	109,750	-	-	-	-	-	-
0120 OT	519	2,000	519	2,000	-	-	-	-	-	-
0140 Taxes	8,372	9,510	8,372	9,510	-	-	-	-	-	-
0150 H&W	18,868	20,740	18,868	20,740	-	-	-	-	-	-
0160 Retirement	11,482	12,970	11,482	12,970	-	-	-	-	-	-
0300 Communication Services	1,277	1,420	1,277	1,420	-	-	-	-	-	-
0310 Contractor	526,484	593,800	-	-	161,833	186,900	210,901	228,100	153,749	178,800
0320 Flights	11,110	6,000	11,110	6,000	-	-	-	-	-	-
0330 Helicopters	63,104	70,000	63,104	70,000	-	-	-	-	-	-
0360 Lodging	2,977	5,000	2,977	5,000	-	-	-	-	-	-
0373 Rent-Other	1,457	1,500	1,457	1,500	-	-	-	-	-	-
0380 ROW Clearing	726,500	725,500	-	-	249,000	280,500	477,500	445,000	-	-
0410 Transport-Other	112	2,500	112	2,500	-	-	-	-	-	-
0420 Utilities	902	950	902	950	-	-	-	-	-	-
0710 Food, Meals	5,399	3,000	5,399	3,000	-	-	-	-	-	-
0740 Operating Supplies	12,514	7,200	12,489	7,200	-	-	25	-	-	-
0750 Safety	2,571	1,500	2,571	1,500	-	-	-	-	-	-
0800 Materials-Minor Equip	-	500	-	500	-	-	-	-	-	-
0811 Marine Vessel Maint	3,389	4,500	3,389	4,500	-	-	-	-	-	-
0820 Fuels and Oils	1,751	1,600	1,751	1,600	-	-	-	-	-	-
0830 Fuels and Oils - Marine	-	2,000	-	2,000	-	-	-	-	-	-
0850 Tools	23	1,000	23	1,000	-	-	-	-	-	-
Total 571 - XMSN Overhead Lines Exp.	1,499,742	1,582,940	246,733	263,640	410,833	467,400	688,426	673,100	153,749	178,800

Southeast Alaska Power Agency

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	All Locations 01/01/22 Through 10/31/22		0--No Location 01/01/22 Through 10/31/22		1--Swan Lake 01/01/22 Through 10/31/22		2--Tyee Lake 01/01/22 Through 10/31/22		3--Swan-Tyee Intertie 01/01/22 Through 10/31/22	
	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget
920 - Admin Wages-Benefits										
0110 Wages / PTO	842,699	926,000	842,699	926,000	-	-	-	-	-	-
0120 OT	650	1,650	650	1,650	-	-	-	-	-	-
0140 Taxes	62,527	66,300	62,527	66,300	-	-	-	-	-	-
0150 H&W	216,998	250,700	216,998	250,700	-	-	-	-	-	-
0160 Retirement	333,725	365,700	333,725	365,700	-	-	-	-	-	-
0170 Capx-Grants	(25)	-	(25)	-	-	-	-	-	-	-
Total 920 - Admin Wages-Benefits	1,456,574	1,610,350	1,456,574	1,610,350	-	-	-	-	-	-
921 - Office Expenses										
0300 Communication Services	23,689	24,200	23,689	24,200	-	-	-	-	-	-
0310 Contractor	57,813	86,250	57,813	86,250	-	-	-	-	-	-
0350 Licenses-Permits	50	200	50	200	-	-	-	-	-	-
0373 Rent-Other	2,784	-	2,784	-	-	-	-	-	-	-
0390 Software	31,264	26,350	31,264	26,350	-	-	-	-	-	-
0420 Utilities	10,194	8,250	10,194	8,250	-	-	-	-	-	-
0600 Phones, Radios, Video	1,188	1,750	1,188	1,750	-	-	-	-	-	-
0610 Office Equipment	1,364	5,000	1,364	5,000	-	-	-	-	-	-
0710 Food, Meals	2,038	1,325	2,038	1,325	-	-	-	-	-	-
0730 Office Supplies	8,316	10,000	8,316	10,000	-	-	-	-	-	-
0740 Operating Supplies	495	-	495	-	-	-	-	-	-	-
0810 Rolling Stock Maint	1,196	825	1,196	825	-	-	-	-	-	-
0820 Fuels and Oils	1,150	900	1,150	900	-	-	-	-	-	-
Total 921 - Office Expenses	141,542	165,050	141,542	165,050	-	-	-	-	-	-
923 - Professional Services										
0910 Audit-Accounting	-	34,000	-	34,000	-	-	-	-	-	-
0920 Banking-Trustee-Investment	43,209	24,350	43,209	24,350	-	-	-	-	-	-
0930 Legal	39,379	90,000	39,379	90,000	-	-	-	-	-	-
0940 Legislative	40,000	40,000	40,000	40,000	-	-	-	-	-	-
0950 Other Professional Services	34,899	79,000	34,899	79,000	-	-	-	-	-	-
Total 923 - Professional Services	157,487	267,350	157,487	267,350	-	-	-	-	-	-
924 - Insurance										
0960 Insurance	660,660	612,500	660,660	612,500	-	-	-	-	-	-
Total 924 - Insurance	660,660	612,500	660,660	612,500	-	-	-	-	-	-
928 - Regulatory Commission Expense										
0010 Other Regulatory	17,000	17,000	-	-	-	-	17,000	17,000	-	-
0020 FERC Admin	50,980	47,670	-	-	26,667	23,500	24,313	24,170	-	-
0040 FERC Other	18,141	10,200	3,529	-	14,612	10,200	-	-	-	-
0060 AK Agency	150	500	-	-	50	50	100	150	-	300
0310 Contractor	-	2,500	-	-	-	2,500	-	-	-	-
Total 928 - Regulatory Commission Exp.	86,272	77,870	3,529	-	41,329	36,250	41,413	41,320	-	300

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	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget
930 - General Expense										
0200 Advertising-Public Relations	25,719	26,000	25,719	26,000	-	-	-	-	-	-
0210 Association Dues	40,197	40,850	40,197	40,850	-	-	-	-	-	-
0220 Board Meeting Expense	13,173	9,500	13,173	9,500	-	-	-	-	-	-
0230 Professional Development	21,165	20,700	21,165	20,700	-	-	-	-	-	-
0240 Travel Expense (Admin)	5,333	12,500	5,333	12,500	-	-	-	-	-	-
0250 Non-Travel Incidental	727	1,250	727	1,250	-	-	-	-	-	-
0260 Recruitment	28,685	50,000	28,685	50,000	-	-	-	-	-	-
0750 Safety	158	-	158	-	-	-	-	-	-	-
Total 930 - General Expense	135,156	160,800	135,156	160,800	-	-	-	-	-	-
931 - Admin Rent										
0371 Rent-Office Space	53,083	59,100	53,083	59,100	-	-	-	-	-	-
0372 Rent-Apartment	15,250	15,500	15,250	15,500	-	-	-	-	-	-
Total 931 - Admin Rent	68,333	74,600	68,333	74,600	-	-	-	-	-	-
TOTAL OPERATING EXPENSE	**5,989,729**	**6,695,225**	**2,870,015**	**3,154,290**	**1,288,309**	**1,483,720**	**1,609,796**	**1,810,615**	**221,609**	**246,600**
NET OPERATING REVENUE/(EXPENSE)	**3,825,920**	**2,445,176**								
NONOPERATING EXPENSE										
941 - Grant Income										
5410 Grant Income	69,084	-	69,084	-	-	-	-	-	-	-
Total 941 - Grant Income	69,084	-	69,084	-	-	-	-	-	-	-
942 - Interest Income Misc										
5010 Interest Earned Misc	18,604	-	5,741	-	-	-	-	-	-	-
5020 Interest DNR Liability	(23)	-	(24)	-	-	-	-	-	-	-
5030 Interest Investment Income	199,042	-	113,206	-	-	-	-	-	-	-
Total 942 - Interest Income Misc	217,624	-	217,624	-	-	-	-	-	-	-
944 - Gain/(Loss) Investments										
5200 Realized Gain/(Loss) on Invest	(88,225)	-	(45,534)	-	-	-	-	-	-	-
5210 Unrealized Gain/(Loss) Investmt	(527,598)	-	(296,525)	-	-	-	-	-	-	-
Total 944 - Gain/(Loss) Investments	(615,823)	-	(615,823)	-	-	-	-	-	-	-
946 - Misc Nonoperating Income										
4213 Renwable Energy Cert Revenue	43,266	-	43,266	-	-	-	-	-	-	-
5040 Other Misc Income	2,340	-	2,340	-	-	-	-	-	-	-
5042 Insurance Proceeds WRG Warehs-Off	448,000	-	448,000	-	-	-	-	-	-	-
5420 Gain/(Loss) Property Dispositn	(9,000)	-	(9,000)	-	-	-	-	-	-	-
Total 946 - Misc Nonoperating Income	484,606	-	484,606	-	-	-	-	-	-	-
TOTAL NONOPERATING INCOME	**155,491**	**-**	155,491	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Southeast Alaska Power Agency

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as of October 31, 2022

	All Locations 01/01/22 Through 10/31/22		0--No Location 01/01/22 Through 10/31/22		1--Swan Lake 01/01/22 Through 10/31/22		2--Tyee Lake 01/01/22 Through 10/31/22		3--Swan-Tyee Intertie 01/01/22 Through 10/31/22	
	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget	Actual	YTD Budget
NONOPERATING EXPENSE										
951 - Interest Expense										
6020 Interest Expense Investments	64,211	-	64,211	-	-	-	-	-	-	-
Total 953 - Depreciation-Amortization Expe	64,211	-	64,211	-	-	-	-	-	-	-
952 - Bond Interest Expense										
6120 Bond Interest Expense 2015 Series	360,528	-	252,370	-	-	-	-	-	-	-
6130 Bond Interest Expense 2019 Series	46,065	-	37,518	-	-	-	-	-	-	-
6131 Bond Interest Expense 2021 Series	335,775									
6132 Bond Interest Expense 2022 Series	31,285	-	235,002	-	-	-	-	-	-	-
Total 952 - Bond Interest Expense	773,652	-	773,652	-	-	-	-	-	-	-
953 - Depreciation-Amortization Expense										
6300 Depreciation Expense	4,222,197	-	2,951,967	-	-	-	-	-	-	-
6310 Inventory Amortization	54,980	-	38,486	-	-	-	-	-	-	-
Total 953 - Depreciation-Amortization Expe	4,277,177	-	4,277,177	-	-	-	-	-	-	-
954 - Grant Expense										
6520 Grant Contractual	30,166	-	30,166	-	-	-	-	-	-	-
6530 Grant Equipment	374	-	374	-	-	-	-	-	-	-
6570 Grant Other Expense	280	-	280	-	-	-	-	-	-	-
6580 Grant Travel	6,349	-	6,349	-	-	-	-	-	-	-
Total 955 - Misc Nonoperating Expense	37,168	-	37,168	-	-	-	-	-	-	-
955 - Misc Nonoperating Expense										
6020 Interest Expense Investments	1,992	-	1,992	-	-	-	-	-	-	-
6600 Other Misc Expense	919									
6601 Renewable Energy Cert Expense	16,805	-	16,805	-	-	-	-	-	-	-
6642 Issuance Costs 2022 Series	73,179	-	73,179	-	-	-	-	-	-	-
Total 955 - Misc Nonoperating Expense	92,895	-	92,895	-	-	-	-	-	-	-
TOTAL NONOPERATING EXPENSE	**5,245,103**	**-**	5,245,103	**-**	**-**	**-**	**-**	**-**	**-**	**-**
NET NONOPERATING INCOME/(EXPENSE)	**(5,089,612)**	**-**	(5,089,612)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Change in Net Position	**(1,263,691)**									

Southeast Alaska Power Agency

R&R Summary - Capital Expenditures

as of **October 31, 2022**

	2022 EXPENDITURES	2022 BUDGET	PRIOR YRS EXPENDITURES	OVERALL EXPENDITURES	Overall Budget through 2022
RR19307 - Helipads Cleveland	-	347,000	34,836	34,836	1,480,318
RR19326 - Don Finney Lane HQ	2,622,280	5,349,060	140,507	2,762,787	5,489,567
RR19331 - STCS-HMI-Historian	53,857	277,320	186,997	240,854	464,317
RR20339 - Guy Thimbles STI Phase II	144,207	151,418	209,290	353,497	360,708
RR20343 - Partial Discharge Monitors SWL	3,873	22,300	85,930	89,803	108,230
RR20345 - Stationary Winch SWL	39,472	32,455	11,044	50,516	43,499
RR21350 - Bunkhouse SWL	-	1,124,000	-	-	1,124,000
RR21356 - Office Unit SWL Four-Plex	20,570	10,940	4,060	24,630	15,000
RR21361 - XFMR Circuit Switcher WRG	198,474	401,300	989	199,463	402,289
RR22364 - 15kV Switchgear TYL	-	80,000	-	-	1,211,000
RR22365 - Airstrip Resurface TYL	305,242	332,720	-	305,242	332,720
RR22366 - Annunicators SWL	-	72,000	-	-	72,000
RR22367 - EDG Governors-Exciters SWL	-	119,200	-	-	119,200
RR22368 - Fire Service Panels SWL	-	67,000	-	-	67,000
RR22369 - Housing Roof-Siding TYL	118,976	123,375	-	118,976	123,375
RR22370 - Inlet Valve Ctrl System SWL	15,526	106,150	-	15,526	106,150
RR22371 - Intake Gate Refurbishment SWL	-	*18,400*	-	-	*18,400*
RR22372 - Reservoir Debris Site SWL	-	41,000	-	-	41,000
RR22373 - Standby Generator KTN HQ	-	15,000	-	-	15,000
RR22374 - Station Service Switchgear TYL	-	230,000	-	-	2,330,400
RR22375 - Substation Refurbishment PSG	265,580	271,635	-	265,580	271,635
RR22376 - Vibration Monitoring Equipment SW	70,280	64,100	-	70,280	64,100
RR22377 - Warehouse-Office WRG	621,427	863,600	5,861	627,288	869,461
RR22378 - XMSN Repair-Landslide PSG	-	75,000	-	-	75,000
Total All RR Projects	**4,479,764**	**10,194,973**	**679,514**	**5,159,278**	**15,204,369**

Overall Budget is through December 2022 and does not include future years.

R&R Projects completed in 2022

RR22371 Intake Gate completed inhouse; all costs were expensed as the total was beneath SEAPA's $10K capitalization threshold

RR22378 Transmission Repair-Landslide PSG; emergency work performed after Oct. 31 landslide in Petersburg.

SOUTHEAST ALASKA POWER AGENCY

Revenue Fund	1,768,193.31
Dedicated R&R Fund	1,225,628.95
Construction Fund	841,994.75
New Generation Fund . . .	5,493.00
Commercial Checking . . .	**$ 3,841,310.01**

DISBURSEMENTS
SEP 2022 - NOV 2022

VENDOR		REVENUE FUND	DEDICATED R&R FUND	CONSTRUC-TION	NEW GEN.
A&P		1,711.80	-	-	-
Aero Services - KTN		14.32	-	-	-
Alaska Airlines Cargo		68.53	-	-	-
Alaska Marine Lines		84.15	750.00	-	-
Alaska Permanent Capital Inc		9,640.68	-	-	-
Alaska Power Association		600.00	-	-	-
Amazon.com		2,817.74	-	-	-
Anixter Power Solutions LLC		4,546.32	-	-	-
Arrowhead LP Gas WRG		5.40	-	-	-
Ascent Law Partners LLP		11,065.00	-	-	-
BAM LLC	Right-of-way clearing, RR20345 Stationary winch	551,805.00	6,950.00	-	-
Bank of America - Aug		10,354.86	-	-	-
Bank of America - Oct		6,467.37	-	-	-
Bank of America - Sep		9,877.15	-	-	-
Bay Company		739.35	-	-	-
BDO USA LLP		34,000.00	-	-	-
Bernies		21.45	-	-	-
Buness Bros Inc		180.00	-	-	-
Cambria Properties LLC		4,575.00	-	-	-
Carlson Glass		312.90	-	-	-
City Market Inc		435.71	-	-	-
Computershare 2015 Interest	Transfers to bond funds (aka Wells Fargo)	161,658.00	-	-	-
Computershare 2019 Interest	Transfers to bond funds	22,815.00	-	-	-
Computershare 2021 Interest	Transfers to bond funds	175,901.00	-	-	-
Computershare 2021 Principal	Transfers to bond funds	260,000.00	-	-	-
Computershare 2022 Principal	Transfers to bond funds	90,000.00	-	-	-
Construction Machinery Industrial LLC		3,332.85	-	-	-
Copper River Fleece		113.95	-	-	-
*Dawson Construction LLC	RR19326 Don Finney Lane Headquarters	-	337,424.00	829,944.47	-
Dell		2,481.47	-	-	-
Eisenhower Carlson PLLC		4,488.00	-	-	-
Electric Power Constructors Inc		-	22,598.51	-	-
Employee Reimbursement - Aug		350.00	-	-	-
Employee Reimbursement - Oct		303.89	-	-	-
FedEx		101.03	2,631.90	-	-
First City Electric Inc		228.00	-	-	-
Full Circle Media Arts		471.25	-	-	-
Grainger		1,444.21	-	-	-
Great Falls Medical Services LLC		170.00	-	-	-
H Construction LLC	RR22369 Housing roof-siding TYL	-	94,000.00	-	-
H.D. Fowler Company Inc		528.25	-	-	-
HDR Alaska Inc		8,633.28	-	-	-
Heberling, John		4,620.00	-	-	-
Intandem, LLC		650.00	-	-	-
Johnson's Building Supply		114.97	-	-	-
Kelley Connect		1,344.76	-	-	-
Ketchikan City Port & Harbor		597.17	-	-	-
Ketchikan Daily News		1,590.67	-	-	-
Ketchikan Gateway Borough		16,833.03	-	-	-
Ketchikan Ready Mix & Quarry Inc	RR22365 Airstrip Surface TYL	1,500.00	330,000.00	-	-

SOUTHEAST ALASKA POWER AGENCY

Revenue Fund	1,768,193.31
Dedicated R&R Fund	1,225,628.95
Construction Fund	841,994.75
New Generation Fund . . .	5,493.00
Commercial Checking . . .	**$ 3,841,310.01**

DISBURSEMENTS
SEP 2022 - NOV 2022

VENDOR		REVENUE FUND	DEDICATED R&R FUND	CONSTRUC-TION	NEW GEN.
Landing Hotel		544.50	180.00	-	-
LNM Services		354.01	-	-	-
Madison Lumber & Hardware Inc		780.84	804.85	-	-
Marble Construction	RR22377 Warehouse-Officed WRG	2,027.40	334,117.00	-	-
McMaster-Carr Supply Company		726.88	-	-	-
McMillen Jacobs Associates		26,184.09	-	-	5,493.00
NRECA Group Ins	Administrative employees' group benefits	67,091.52	-	-	-
NRECA Group Ins Admin		4,867.77	-	-	-
NRECA RSP Admin		2,769.99	-	-	-
NRECA RSP Trust Contrib	Administrative employees' group benefits	89,921.10	-	-	-
Onlogic		-	7,301.72	-	-
Ottesens Ace Hardware		1,032.14	-	-	-
Pacific Printing LLC		7.00	-	-	-
Petro Fuel		(928.95)	-	-	-
Petro Marine Services-KTN		10,150.44	-	-	-
Petro Marine Services-WRG		8,589.13	-	-	-
Pilot Publishing Inc		712.00	-	-	-
Platt Electric Supply		2,466.12	-	-	-
Ray Matiashowski		16,000.00	-	-	-
Response Dynamics Vibration Enginee	RR22376 Vibrration Monitoring Equip SWL	-	64,100.00	-	-
Samson Tug & Barge		1,439.35	-	-	-
Satellite & Sound Inc		3,045.00	-	-	-
Schmolck Mechanical KTN		114.23	-	-	-
SE Business Machines		1,990.00	-	-	-
Sentry Hardware & Marine		1,311.69	-	-	-
Service Auto Parts		1,807.34	-	-	-
Shoreline Septic Services Inc		1,560.00	-	-	-
Sign Pro		421.25	-	-	-
Sockeye Business Solutions Inc		6,120.00	-	-	-
Southeast Auto & Marine Parts, Inc		1,378.22	-	-	-
Staples Inc		60.78	-	-	-
Sunrise Aviation Inc		15,685.00	990.00	-	-
Svendsen Marine LLC		742.42	-	-	-
Taquan Air		3,840.00	-	-	-
Temsco Helicopters Inc		23,290.50	-	-	-
TexRus LLC		8,529.34	4,411.25	-	-
Therm-Tec Inc		1,227.83	-	-	-
TMMI LLC		-	10,571.11	-	-
Tongass Indoor Storage		835.20	-	-	-
Tongass Trading Company Inc		443.85	-	-	-
TSS		5,342.50	-	-	-
Tyler Industrial Supply		984.09	-	-	-
Tyler Rental Inc		539.96	-	-	-
Uline, Inc		445.33	-	-	-
US Geological Survey		17,000.00	-	-	-
USDA Forest Service		258.24	-	-	-
Walker Industrial Products Inc		-	1,504.55	-	-
Walker, Mark		186.93	-	-	-
*Welsh Whiteley Architects, LLC		-	7,294.06	12,050.28	-

SOUTHEAST ALASKA POWER AGENCY

Revenue Fund	1,768,193.31
Dedicated R&R Fund	1,225,628.95
Construction Fund	841,994.75
New Generation Fund . . .	5,493.00
Commercial Checking . . .	**$ 3,841,310.01**

DISBURSEMENTS
SEP 2022 - NOV 2022

VENDOR	REVENUE FUND	DEDICATED R&R FUND	CONSTRUC-TION	NEW GEN.
Workforce Go	3,777.08	-	-	-
Wrangell City & Borough	14,523.81	-	-	-
Wrangell IGA Inc	974.13	-	-	-
Wrangell Sentinel	529.75	-	-	-
X2nSat	6,900.00	-	-	-
	1,768,193.31	**1,225,628.95**	**841,994.75**	**5,493.00**

*Remittance to Dawson Construction and Welsh Whiteley Architects are for RR19326 Don Finney Lane Headquarters. Payments were initially drawn from the Dedicated R&R Fund. After the 2022 Series Bonds were issued, payments were drawn from the Construction Fund. Any balance remaining in the Construction Fund at the end of the project will be transferred to the Dedicated R&R Fund.

SOUTHEAST ALASKA POWER AGENCY

RENEWABLE ENERGY CERTIFICATES

GREENLIGHT ENERGY GROUP LLC

MWh							
1,099,550	90,063	172,434	166,010	133,826	179,272	186,460	171,485
MWh	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**
SWL Total							
447,428	**36,838**	**81,273**	**73,182**	**54,724**	**59,144**	**70,647**	**71,620**
(28,844)	(28,844)						
(81,273)		(81,273)					
(35,931)			(35,931)				
301,380	7,994	-	37,251	54,724	59,144	70,647	71,620
TYL Total							
652,122	**53,225**	**91,161**	**92,828**	**79,102**	**120,128**	**115,813**	**99,865**
(91,161)	-	(91,161)					
(36,910)			(36,910)				
524,051	53,225	-	55,918	79,102	120,128	115,813	99,865
825,431	61,219	-	93,169	133,826	179,272	186,460	171,485

INVOICING

< SEAPA MWh on Market

DATE	PRICE	VALUE	FEES	NET	INVOICE
< SEAPA MWh on Market					
08/30/22	$ 1.50	$43,266.00	($16,805.47)	$26,460.53	INV1147
11/08/22	$ 0.75	$60,954.75	($12,190.95)	$48,763.80	**INV1158**
11/08/22	$ 0.65	$23,355.15	($4,671.03)	$18,684.12	**INV1158**
< Balance	-	$127,575.90	($33,667.45)	$93,908.45	
< SEAPA MWh on Market					
11/08/22	$ 0.75	$68,370.75	($13,674.15)	$54,696.60	**INV1158**
11/08/22	$ 0.65	$23,991.50	($4,798.30)	$19,193.20	**INV1158**
< Balance	-				
< Remaining MWh on Market					

INVOICE SUMMARY (SEAPA SALES)

28,844	28,844	-	-	-	-	-	-	08/30/22	$43,266.00	($16,805.47)	$26,460.53	INV1147
245,275	-	172,434	72,841	-	-	-	-	11/08/22	$176,672.15	($35,334.43)	$141,337.72	**INV1158**
274,119	28,844	172,434	72,841	-	-	-	-		$219,938.15	($52,139.90)	**$167,798.25**	

MWh for sale in 2022 only includes the first six months.
The rest of 2022 MWh will be certified and placed on the market in 2023.

Ledger Codes

946-0-4213 Renewable Energy Certificate Revenue

955-0-6601 Renewable Energy Certificate Expense Costs of certifying MWh, payment of commission

SOUTHEAST ALASKA POWER AGENCY

2022 Series Bonds

On September 29, SEAPA issued 2022 Series Electric Utility Revenue Bonds totaling $5,990,000.

- The bonds were issued at rates that vary between 4.25% - 5.00% at an overall discount of $52,842.15. The discount is amortized over the 30-year life of the bonds.
- SEAPA's cost of issuance was $73,179, which included the Underwriter's Discount, bond attorney and SEAPA's attorney costs. (GL code 955-0-6642)
- $5.5MM was deposited to the 2022 Construction Fund (1120-020) specifically for construction of headquarters at Don Finney Lane. If any funds remain after construction, they will be transferred to the Dedicated R&R Fund and may be used for any capital projects thereafter.
- $359,763 was earmarked for the Debt Service Reserve Fund; however, after the bonds were priced, it was determined that the aggregate Debt Service Reserve Requirements (for Series 2015, 2019, 2021, and 2022 collectively) were overfunded. $313,421 of this excess was deposited to a Capitalized Interest Fund (GL 1120-022) to cover the first three bondholder interest payments for the 2022 issuance, and the remaining $46,341 was deposited to the Construction Fund.
- The average Annual Debt Service for this issuance is $364,424, and bonds were issued at an all-in True Interest Cost of 4.775%.

SOURCES AND USES OF FUNDS

Alaska Municipal Bond Bank
SEAPA - 2022 Electric Utility Revenue Bonds

Final Cash Flows
Priced on 9/12/2022

Dated Date	09/29/2022
Delivery Date	09/29/2022

Sources:	
Bond Proceeds:	
Par Amount	5,990,000.00
Net Original Issue Discount	-52,842.15
	5,937,157.85
Other Sources of Funds:	
Bond Bank Grant for COI	72,856.19
	6,010,014.04
Uses:	
Project Fund Deposits:	
Project Fund	5,500,000.00
Other Fund Deposits:	
Debt Service Reserve Fund	359,762.50
Delivery Date Expenses:	
Cost of Issuance	72,856.19
Underwriter's Discount	36,169.08
Local COI	36,920.00
	145,945.27
Other Uses of Funds:	
Additional Proceeds	4,306.27
	6,010,014.04

BOND PRICING

Alaska Municipal Bond Bank
SEAPA - 2022 Electric Utility Revenue Bonds

Final Cash Flows
Priced on 9/12/2022

Bond Component	Maturity Date	Amount	Rate	Yield	Price	Premium (-Discount)	Takedown
Non-Callable Serial Bonds:							
	12/01/2022	90,000	5.000%	2.580%	100.407	366.30	1.500
	12/01/2023	95,000	5.000%	2.640%	102.702	2,566.90	1.500
	12/01/2024	100,000	5.000%	2.710%	104.795	4,795.00	2.750
	12/01/2025	105,000	5.000%	2.770%	106.723	7,059.15	2.750
	12/01/2026	110,000	5.000%	2.860%	108.356	9,191.60	2.750
	12/01/2027	115,000	5.000%	2.940%	109.813	11,284.95	2.750
	12/01/2028	120,000	5.000%	3.050%	110.891	13,069.20	2.750
	12/01/2029	125,000	5.000%	3.130%	111.925	14,906.25	2.750
	12/01/2030	130,000	5.000%	3.200%	112.849	16,703.70	3.250
	12/01/2031	140,000	5.000%	3.340%	113.017	18,223.80	3.250
	12/01/2032	145,000	5.000%	3.400%	113.657	19,802.65	3.250
		1,275,000				117,969.50	
Term Bond due 2037:							
	12/01/2033	155,000	4.000%	4.300%	96.677	-5,150.65	3.250
	12/01/2034	160,000	4.000%	4.300%	96.677	-5,316.80	3.250
	12/01/2035	165,000	4.000%	4.300%	96.677	-5,482.95	3.250
	12/01/2036	175,000	4.000%	4.300%	96.677	-5,815.25	3.250
	12/01/2037	180,000	4.000%	4.300%	96.677	-5,981.40	3.250
		835,000				-27,747.05	
Term Bond due 2042:							
	12/01/2038	185,000	4.250%	4.550%	96.061	-7,287.15	3.750
	12/01/2039	195,000	4.250%	4.550%	96.061	-7,681.05	3.750
	12/01/2040	205,000	4.250%	4.550%	96.061	-8,074.95	3.750
	12/01/2041	210,000	4.250%	4.550%	96.061	-8,271.90	3.750
	12/01/2042	220,000	4.250%	4.550%	96.061	-8,665.80	3.750
		1,015,000				-39,980.85	
Term Bond due 2047:							
	12/01/2043	230,000	4.500%	4.750%	96.345	-8,406.50	3.750
	12/01/2044	240,000	4.500%	4.750%	96.345	-8,772.00	3.750
	12/01/2045	255,000	4.500%	4.750%	96.345	-9,320.25	3.750
	12/01/2046	265,000	4.500%	4.750%	96.345	-9,685.75	3.750
	12/01/2047	275,000	4.500%	4.750%	96.345	-10,051.25	3.750
		1,265,000				-46,235.75	
Term Bond due 2052:							
	12/01/2048	290,000	4.625%	4.850%	96.447	-10,303.70	3.750
	12/01/2049	305,000	4.625%	4.850%	96.447	-10,836.65	3.750
	12/01/2050	320,000	4.625%	4.850%	96.447	-11,369.60	3.750
	12/01/2051	335,000	4.625%	4.850%	96.447	-11,902.55	3.750
	12/01/2052	350,000	4.625%	4.850%	96.447	-12,435.50	3.750
		1,600,000				-56,848.00	
		5,990,000				-52,842.15	

Dated Date	09/29/2022	
Delivery Date	09/29/2022	
First Coupon	12/01/2022	
Par Amount	5,990,000.00	
Original Issue Discount	-52,842.15	
Production	5,937,157.85	99.117827%
Underwriter's Discount	-36,169.08	-0.603824%
Purchase Price	5,900,988.77	98.514003%
Accrued Interest		
Net Proceeds	5,900,988.77	

BOND SUMMARY STATISTICS

Alaska Municipal Bond Bank
SEAPA - 2022 Electric Utility Revenue Bonds

Final Cash Flows
Priced on 9/12/2022

Dated Date	09/29/2022
Delivery Date	09/29/2022
First Coupon	12/01/2022
Last Maturity	12/01/2052
Arbitrage Yield	4.487738%
True Interest Cost (TIC)	4.613390%
Net Interest Cost (NIC)	4.571653%
All-In TIC	4.775010%
Average Coupon	4.491777%
Average Life (years)	18.604
Duration of Issue (years)	11.947
Par Amount	5,990,000.00
Bond Proceeds	5,937,157.85
Total Interest	5,005,483.84
Net Interest	5,094,495.07
Total Debt Service	10,995,483.84
Maximum Annual Debt Service	359,762.50
Average Annual Debt Service	364,424.06
Underwriter's Fees (per $1000)	
Average Takedown	3.463481
Other Fee	2.574763
Total Underwriter's Discount	6.038244
Bid Price	98.514003

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Non-Callable Serial Bonds	1,275,000.00	109.253	5.000%	5.639	678.90
Term Bond due 2037	835,000.00	96.677	4.000%	13.250	910.15
Term Bond due 2042	1,015,000.00	96.061	4.250%	18.256	1,289.05
Term Bond due 2047	1,265,000.00	96.345	4.500%	23.263	1,796.30
Term Bond due 2052	1,600,000.00	96.447	4.625%	28.266	2,464.00
	5,990,000.00			18.604	7,138.40

	TIC	All-In TIC	Arbitrage Yield
Par Value	5,990,000.00	5,990,000.00	5,990,000.00
+ Accrued Interest			
+ Premium (Discount)	-52,842.15	-52,842.15	-52,842.15
- Underwriter's Discount	-36,169.08	-36,169.08	
- Cost of Issuance Expense		-72,856.19	
- Other Amounts		-36,920.00	
Target Value	5,900,988.77	5,791,212.58	5,937,157.85
Target Date	09/29/2022	09/29/2022	09/29/2022
Yield	4.613390%	4.775010%	4.487738%

SOUTHEAST ALASKA POWER AGENCY

RR22378 Transmission Line Repair

SUGGESTED MOTION
I move to approve RR22378 Transmission Repair-Landslide Petersburg in the amount of $75,000 and to increase the FY2022 R&R Budget by the same amount.

On October 31, a landslide took place in Petersburg that took out one of SEAPA's power poles and disrupted power to a section of Petersburg customers. SEAPA responded immediately to restore power, and the cost of those efforts exceeded our capitalization threshold of $10,000. Details of the event, repairs, and costs are on the following page.

$75,000 was included in the 2022 budget for critical, unforeseen events related to transmission line maintenance. Since the Board approves all capital projects, this motion is brought forward to approve the project even though the repair is complete.

RR22378
XMSN Repair-Landslide PSG

Description:	**Repair Petersburg transmission line damage caused by landslide.**		
Cost Estimate:	**$75,000**	Sched. Complete: NOV 2022	Project Mgmt: **Siedman**

PROJECT DISCUSSION

At 4:28PM on October 31, 2022, a landslide in Petersburg caused a disruption to SEAPA deliveries to Petersburg Municipal Power & Light. The slide damaged a single SEAPA transmission power pole, with no damage to the transmission line itself. SEAPA responded immediately, safely isolating the transmission line so the Department of Transportation could clear the road from debris. SEAPA's transmission line contractor arrived in Petersburg on the November 1 afternoon jet and worked into the early hours of the morning to complete repairs. Switching to restore the SEAPA system was completed at 02:28, with a total outage duration of 34 hours. The location of the damage was approximately 5 miles from Petersburg's city center with road access.

PROJECT COST ESTIMATE

BREAKDOWN	ESTIMATE	BUDGET – EXPENDITURES	
Contractor	$70,300	FY22 BUDGET	$75,000
70' wood pole	3,375		
Flights	1,200		
Total Estimate	$74,875	Total Budget	$75,000

Project Cost Estimate Discussion

SEAPA has not yet been invoiced, however, transmission line contractor Electric Power Constructors provided an estimate of $70,255 for their work on this repair. The replacement transmission power pole was in inventory on the ground in Petersburg. Since the cost of this emergency work exceeds SEAPA's capitalization threshold, associated costs were recorded to this R&R project. Although this specific project had not been approved by the Board, $75K was included in the 2022 Operating Budget for critical unforeseen events related to overhead transmission lines with only $3,400 spent.

MEMORANDUM
ATTORNEY-CLIENT COMMUNICATIONS

TO: Chairperson
Southeast Alaska Power Agency

FROM: Joel R. Paisner, Ascent Law Partners, LLP

DATE: November 28, 2022

RE: Suggested Motions for Executive Session

The Board of Directors may conduct an executive session during a Regular Board Meeting to be held on December 8, 2022, for discussions relating to the Agency's union contract negotiations, hydrosite analysis, CEO's retirement and potential interim CEO, and Employee's performances.

If it is determined during the meeting that an executive session is necessary, I recommend the following motions be made:

> I move to recess into Executive Session to be conducted pursuant to SEAPA's Bylaws and Alaska Statute 44.62.310 for discussions related to SEAPA's union contract negotiations as the discussions may involve matters the immediate knowledge of which would clearly have an adverse effect upon the finances of the Agency, the Projects, or any of the Member Utilities represented on the Board.
>
> I move to recess into Executive Session to be conducted pursuant to SEAPA's Bylaws and Alaska Statute 44,62.310 for discussions with the Agency's attorney present related to hydrosite investigations, the immediate knowledge of which could have an adverse effect on the legal position of the Agency.
>
> I move to recess into Executive Session to be conducted pursuant to SEAPA's Bylaws and Alaska Statute 44,62.310 for discussions related to a subject that could prejudice the reputation and character of any person, provided that the persons may request a public discussion.

AGENDA ITEM 8B

(Reserved as placeholder for any actions that may be taken following the Executive Session)

Agenda Item 8C

Update Re Wholesale Power Rate Study

(Consultant, John Heberling will call in to the meeting to present an update)

SOUTHEAST ALASKA POWER AGENCY

Date: November 30, 2022

To: SEAPA Board of Directors

From: Trey Acteson, Chief Executive Officer

Subject: Wholesale Power Rate

The fiscal year 2023 budget presented for the Board's consideration is premised on a Wholesale Power Rate of $0.073 (7.3¢) per kWh, which is an increase of a quarter-cent ($0.0025) over the current rate of $0.0705 (7.05¢). If approved, the new rate will be effective on January 1, 2023.

Please consider the following suggested motion:

SUGGESTED MOTION
I move to approve setting SEAPA's wholesale power rate at 7.3 cents per kWh for the period January 1, 2023 through December 31, 2023.

SOUTHEAST ALASKA POWER AGENCY

FISCAL NOTE:
Funded by Operating Budget: 923 0 0950
Engineering Professional Services

Date: November 21, 2022

To: SEAPA Board of Directors

From: Trey Acteson, Chief Executive Officer

Subject: Request for Sole Source Re Energy Sector Load Growth Study

SEAPA's Board tasked staff with conducting an energy sector load growth study with particular focus on heating, transportation, and tourism. Staff prepared a Request for Proposals and direct solicited an Alaska engineering firm for an estimate. Their estimate fell within our procurement requirements that quotes between $75K to $100K require submitting an RFP to at least three qualified vendors, which shall generate at least three responses from such vendors. Staff direct solicited five other engineering firms for written quotes, including HDR, Black & Veatch, Commonwealth, Stantec, and Burns & McDonnell. Written proposals were due by October 31st. Despite follow-up emails and phone calls, no other engineering firms submitted a verbal or written quote for the project.

At the September board meeting, the board authorized an increase of $100,000 to the FY2022 Operating Budget for this study. Although I have approval authority for $100,000 or less for items budgeted, I am seeking the board's sole-source approval to award a contract to RESPEC of Juneau, Alaska, since we only received the one written quote.

RESPEC's professional engineering services qualifies them for this project. They cite extensive experience analyzing SE Alaska's communities, major industries, energy systems, and economy. I recommend the Board authorize staff to enter into a sole source contract with RESPEC of Juneau, Alaska for the not-to-exceed value of $82,000 plus a twenty percent (20%) contingency of $16,400 for unforeseen change orders.

Please consider the following suggested motion:

SUGGESTED MOTION

I move to authorize staff to enter into a sole source Contract with RESPEC Company LLC to conduct an energy sector load growth study for $82,000, plus a 20% contingency of $16,400 for the not-to-exceed value of $98,400.

SOUTHEAST ALASKA POWER AGENCY

AUDIT SERVICES MEMO

Date: November 30, 2022

To: Trey Acteson

From: Kay Key, Controller

Subject: Award of Audit Services

SEAPA issues Request for Proposals (RFPs) for professional financial auditing services every three years. The RFP issued in October requested quotes for the fiscal years 2022, 2023 and 2024 from three audit firms. Blodgett, Mickelsen & Adamson did not submit a proposal. The table below displays a financial summary of the proposals received:

Audit Services	FY2022	FY2023	FY2024	3-year total
BDO USA, LLP	$41,250	$45,400	$49,000	$135,650
*Teuscher Walpole, LLC	$40,000	$42,000	$44,100	$126,100
Blodgett Mickelsen & Adamson	No Proposal			

*Teuscher Walpole fees increase annually by the greater of 5% or the Consumer Price Index. The table shows increases of 5% for FY23-24; however, future annual CPIs are unknown (7.7% as of October).

Both firms' proposals were responsive, and they are qualified to perform the annual financial audit. BDO's references include the municipalities of Petersburg and Wrangell, as well as several Alaska utilities. BDO, and its predecessor, Mikunda Cottrell, have always performed the annual financial audits for SEAPA. Teuscher's references include the City of Ketchikan and the Ketchikan Gateway Borough. There would be additional time involved in the initial year of switching to a new auditor as the two businesses familiarize themselves with one another.

SEAPA's audits are conducted remotely, using secure drop boxes to share data and meeting via teleconference, so no travel expense is anticipated with either firm.

Another consideration is that SEAPA may have to rewrite financial statements to comply with Rural Utilities Service (RUS) standards. We began this effort (and dropped it) in 2020 when we initiated a grant application with RUS to pay for the submarine cable replacement. At that time, we reached out to BDO for guidance, and if we apply for a grant through RUS again in the future, their extensive experience in this area and familiarity with our books would be advantageous.

SUGGESTED MOTION
I move to authorize staff to engage with BDO USA, LLP for professional auditing services for the fiscal year 2022 with options to renew for FY2023 and FY2024.

Agenda Item 8G

New Business

Presentation and Consideration of

FY2023 SEAPA Budget

(Draft Budget distributed to Directors under separate cover)

SOUTHEAST ALASKA POWER AGENCY

FISCAL NOTE:
RR23XXX Office Furnishings Don Finney Lane included in the FY2023 R&R Budget and 921-0-0840 FY2023 Operating Budget

Date: December 1, 2022

To: SEAPA Board of Directors

From: Trey Acteson, Chief Executive Officer

Subject: Sole Source Request Re SEAPA Headquarters Office Furnishings

SEAPA's Headquarters is tentatively scheduled for completion by mid-year 2023. Staff diligently researched vendors that could provide furnishings and installation services for the new offices. Three vendors were direct solicited for quotes: Kelley Connect (formerly Tongass Business Center) of Ketchikan, Arctic Office Supply of Anchorage, and Staples, a nationwide furniture company with an Alaska representative in Anchorage.

Arctic and Staples both provided written quotes. Kelley Connect declined the opportunity. Arctic's quote which includes installation but excludes lounge furnishings, exceeded $100,000. Staples Contract & Commercial LLC, provided the lowest quote, which includes all furnishings, shipping, and installation for $98,508.

Local vendors submitted separate quotes for SEAPA's Board Room and Library conference tables.

The budget for office furniture is included in the FY2023 budget.

Section 8.12 of SEAPA's Procurement Policy provides that competitive bidding is not required:

> Any other time the Board elects to except from the competitive bidding process any particular improvement or purchase from competitive bidding or other requirements by majority vote.

I recommend the Board authorize staff to enter into a sole source contract with Staples having submitted the lowest price for the most value.

Please consider the following suggested motion:

SUGGESTED MOTION

I move to authorize staff to enter into a sole source Contract with Staples Contract and Commercial LLC in the amount of $98,508 for SEAPA Headquarters furnishings, shipping, and installation.

Date: December 1, 2022

To: Trey Acteson, Chief Executive Officer

From: Robert Siedman, P.E., Director of Engineering & Technical Services

SEAPA 2023 Operations Plan Report

Every year SEAPA presents the Operations Plan (Ops Plan) for Board approval in accordance with Section 5 of the Power Sales Agreement[1] (PSA). The annual plan forecasts expected reservoir levels for Tyee Lake and Swan Lake for the upcoming year by maximizing output from SEAPA facilities and optimizing water resources. Pursuant to the PSA, the Ops Plan gives first priority to the dedicated Firm Power Requirements of each Utility and optimizes Additional Dedicated Output as a second priority for additional power requirements. Optimization of water resources is achieved by an algorithmic math model as represented in Figure 1.

1.0 Water Resource Algorithmic Math Model Process

Step 1: Current lake levels

Step 2: Inflow Forecasts
1. NOAA
2. USGS
3. NINO3.4

Step 3: Load Forecast
1. Temperature Forecasts
2. Scheduled Maintenance
3. STICS/Historic Loads

Step 4: Iterative Math Model
1. Case Reservoir Plots
2. Optimized Water Resources

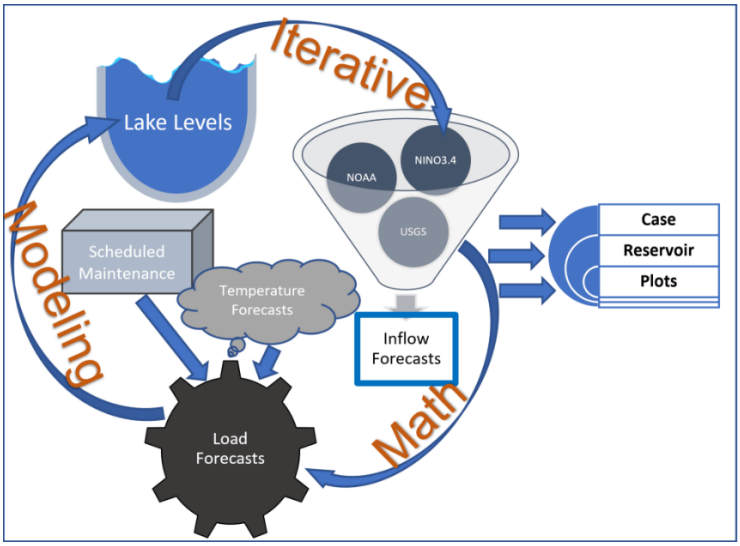

Figure 1: Math Modeling: Optimizing Water Resources

[1] Section 5 of the Power Sales Agreement states that SEAPA shall prepare annually an Operations Plan to estimate the Firm Power Requirements of the Purchasing Utilities and identify Dedicated Output to maximize utilization and optimize output at each facility.

The iterative process utilized in the algorithm to optimize water resources was applied to a variety of cases. Each case was further analyzed, and curves were developed. Special consideration was made to ensure optimization of water resources without risking dedicated Firm Power Requirements of the Purchasing Utilities. The process, assumptions, and results are discussed below.

2.0 Current Lake Levels

The lake levels as of December 1, 2022 were above average at 1393.4 feet for Tyee and 340.5 feet for Swan. This is contributed by well above average precipitation for 2021 resulting in a both lakes completely full before the winter and subsequent 2022 draft season.

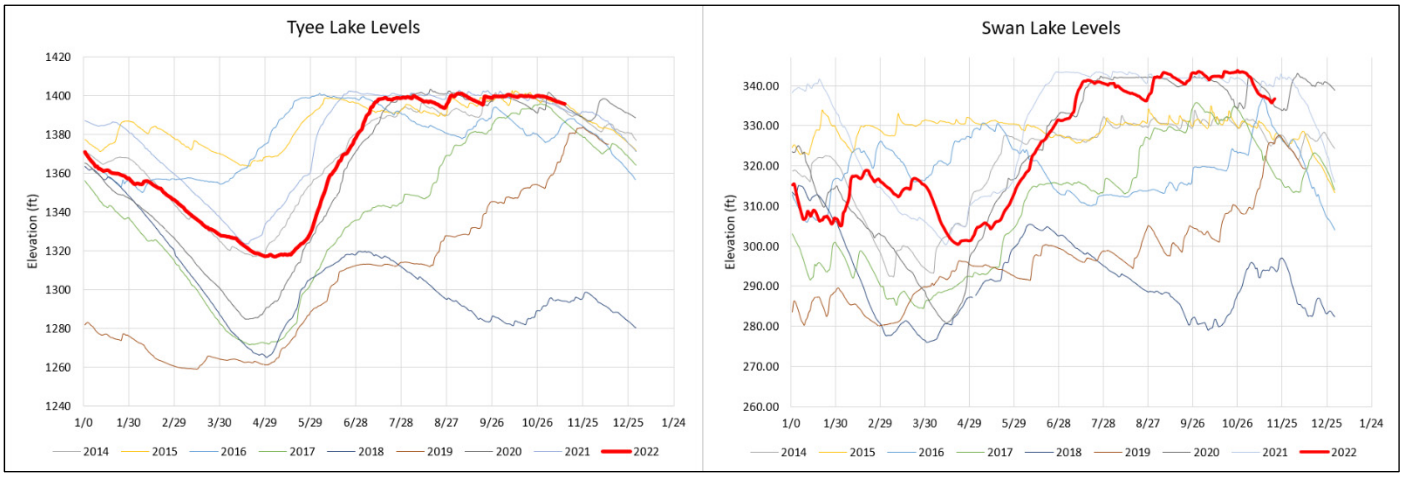

Figure 2: SEAPA lake levels 2022

January-March of 2022 had above-average precipitation with average temperatures which created a significant snowpack at Tyee. Snow surveys performed by SEAPA in April revealed a snowpack that had a year-to-year average of 87% for the Swan Lake drainage basin and 120% for the Tyee Lake drainage basin. Precipitation for that period was 43.7% above the previous 10-year average with 57.16 inches of Snow Water Equivalent (SWE) at Tyee and 28.18 inches at Swan. Considering that both lakes began the draft segment of the water cycle (December-April) at full capacity, neither lake drafted past half capacity.

With the lakes half full and a significant snowpack by April, both Tyee and Swan filled rapidly in April, May, and June. In July, both lakes were at full pool and began spilling. Between July and October, Swan Lake spilled 2,592 MWh and Tyee Spilled 8,318 MWh.

3.0 Rainfall – Inflows for 2022

As discussed in the preceding section, precipitation for the first quarter of 2022 was well above the 10-year average (143.7% of average). Precipitation between April and December was 101.8% of the 10-year average. The Swan Lake weather station recorded approximately 152.8 inches of rain from January-November.

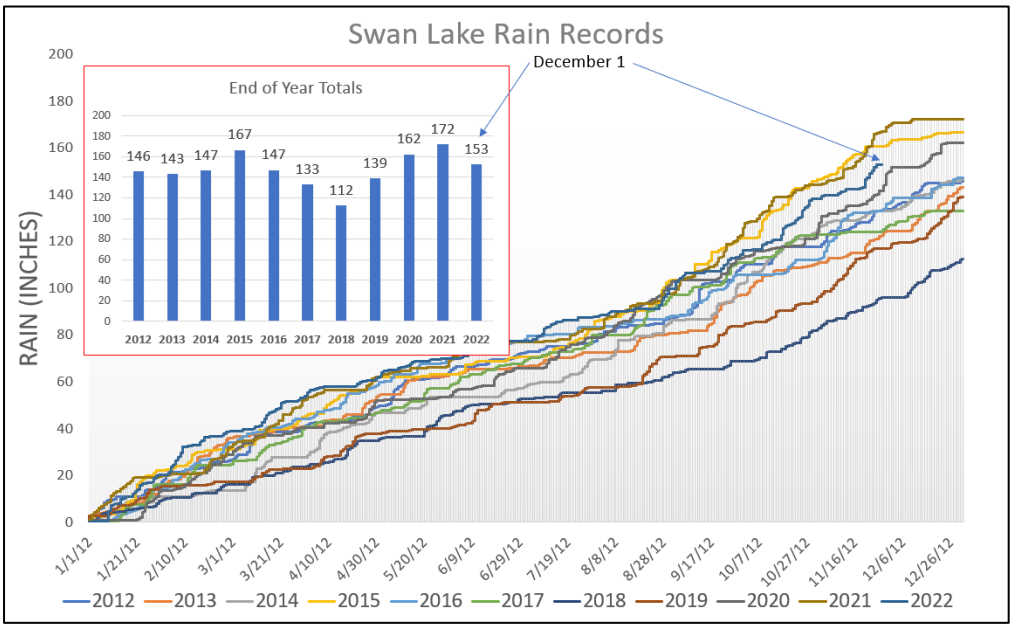

Figure 3: 10-Year Historical Rainfall: Swan Lake

The chart on the left (Figure 3) illustrates a 10-year graph of precipitation recorded at Swan Lake. As evidenced in this chart, precipitation in 2022 was above average nearly the entire year. With a sum of 152.8 inches of rain to date, this year was the third highest in ten years for total precipitation, with the month of December not yet account for.

4.0 Inflow Forecasts

Inflow predictions for calendar year 2023 were performed by utilizing NOAA, NINO3.4, Pacific Decadal Oscillation charts and historic USGS inflow data. NOAA 3-month forecasts for the months of December-January-February are predicting a higher chance of below-normal temperatures with equal chance of average precipitation. Figure 4 (below) illustrates NOAA's three-month outlook.

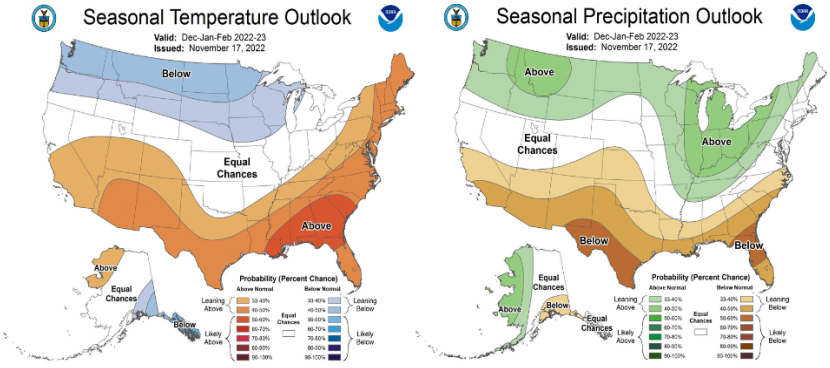

Figure 4: NOAA Dec-Jan-Feb Outlook

NOAA is also predicting a La-Nina for the first half of 2023. The models demonstrate a climate pattern like 2022 which would indicate a higher chance of an above-average snowpack.

There are dozens of institutions that have developed El Nino Southern Oscillation models (ENSO). Oceanographic temperature models such as ENSO's are used by NOAA to predict weather patterns.

The latest ENSO models show that we are currently in La-Nina conditions with Ocean temperatures currently below historically average levels. Cooler Southern Ocean temperatures typically correlate to cooler weather and lower precipitation rates in the Northwest hemisphere.

Figure 5 illustrates the International Research Institute (IRI) and Climate Prediction Centers (CPC) ENSO model. Apparent to all participating institute forecasts is a continued below-average ocean temperature. The models indicate that Ocean Temperatures should begin to rise through 2023 reaching an ENSO-Neutral status by August.

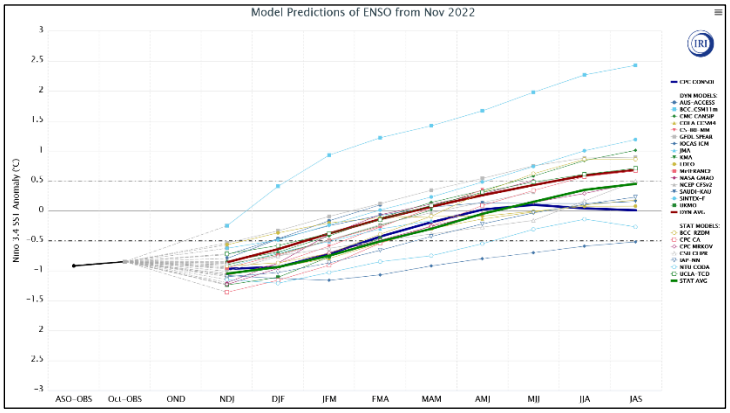

Figure 5: 2023 ENSO Model

Inflow seasons are cyclical and have a close correlation with ocean temperatures. El Nino and La Nina conditions impact precipitation in Southeast Alaska, however, a second oscillation discovered by scientist Steven Hare in 1996 called the Pacific Decadal Oscillation (PDO) also has an impact. In general, an El Nino will cause an increase in precipitation and a La Nina will cause a decrease in precipitation for Southeast Alaska. ENSOs (El Nino's and La Nina's) appear to impact the standard deviation of precipitation from average, and the PDO appears to shift the precipitation average up and down. As shown in Figure 6 below, in a Cold Phase (PDO), the average precipitation is approximately 160 inches whereas in a Warm Phase (PDO), the average precipitation is 125 inches. After superimposing Ketchikan rain data onto PDO and ENSO charts, data suggests that we are entering a Warm Pacific Decadal Oscillation Phase although Ketchikan has been oscillating above and below average recently.

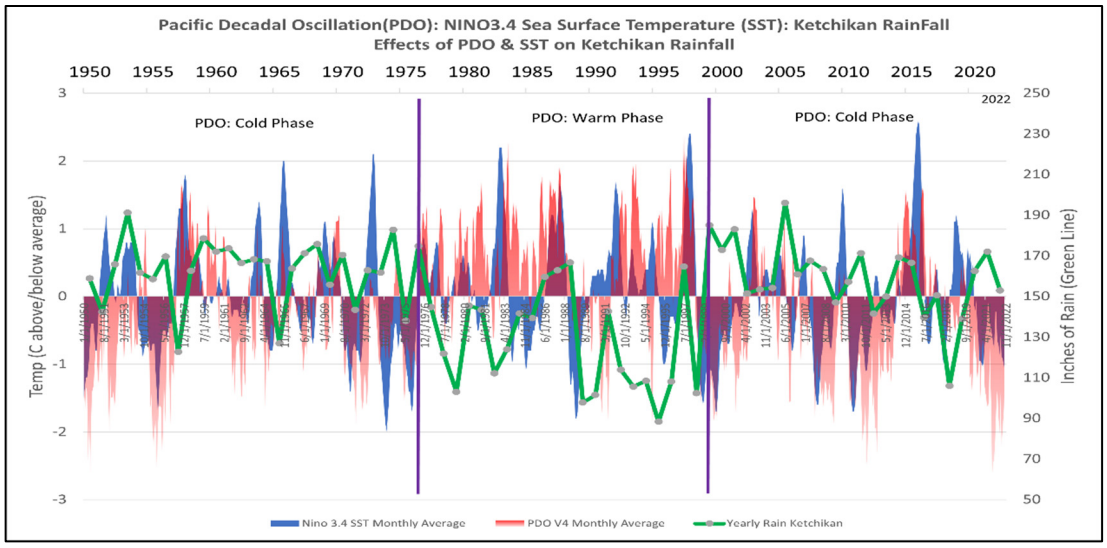

Figure 6: PDO Shifting of Average Rainfalls on 20-Year Cycle

If predictions from the PDO/ENSO models and historical trends hold true, inflows will fluctuate up and down approximately 22% below the previous 20-year averages. Figure 6 in the PDO/ENSO records also explain with a certain degree of confidence the reason for the 2018 and first half of 2019 low inflows (drought conditions). Although 2022 had average inflows and 2021 had above-average inflows, it is prudent for SEAPA to consider inflow cases that are reflective of a Warm PDO phase (below-average inflows) for developing sales and curtailment curves.

Case / Month	(2018) SWL Low Inflow (avg day cfs)	(2013-2017) SWL Avg Inflow (avg day cfs)	(2018) TYL Low Inflow (avg day cfs)	(2013-2017) TYL Avg Inflow (avg day cfs)
jan	256.3	316.5	38.8	95.6
feb	12.5	157.5	26.7	65.2
mar	156.4	133.0	20.4	53.3
apr	462.8	427.3	72.1	117.1
may	702.3	670.3	308.4	277.3
jun	358.9	560.8	160.0	266.3
jul	98.2	367.0	99.3	195.5
aug	99.2	295.9	74.1	162.8
sep	176.3	473.9	79.4	191.4
oct	440.8	410.9	132.0	186.0
nov	650.1	446.4	146.3	83.9
dec	364.8	387.8	120.3	76.1
Average Annual	314.9	387.3	106.5	147.5

Table 1: SEAPA Inflow Cases for 2023

4.1 Average Inflow (2013-2017) Cases

Table 1 illustrates SEAPA's predicted inflow cases that were used for the Swan and Tyee Lake reservoir level models, which were selected based on NOAA and PDO predictions for 2023. The average annual cfs for this inflow case at Swan Lake was 387.3 cfs and the average annual cfs for Tyee Lake was 147.5 cfs.

4.2 Low Inflow (2018) Cases

The low (2018) inflow case for Swan Lake was inserted into the model with an average annual cfs value of 314.9 cfs. Low inflows were based on 2018 inflows. The low (2018) inflow case used in the model for Tyee Lake was 106.5 cfs. These inflow cases were selected based on possible reoccurrence of 2018 (low probability) and developing sales/curtailment curves.

5.0 Load Forecasts

Load forecasts and subsequent SEAPA deliveries were estimated for the 2023 calendar year with consideration to NOAAs December-January-February outlook (cooler average temperatures) and the 2021-2022 SEAPA delivery schedules. The 2023 budget for January 1 through December 31 was developed by using 2021-2022 average Ketchikan, Petersburg & Wrangell loads, with a 15% bias (above average) increase in SEAPA outputs for December and January to account for increased cold weather loads and SEAPA weather forecasts. Considering current lake levels, SEAPA does not anticipate curtailment of Tyee in 2023. Firm Power Requirements are well known and documented by historical load profiles. Firm Power Requirements for all three communities are anticipated to be met by SEAPA generation in 2023.

The forecasted Firm Power Requirements for the respective utilities, based on average loads, are as follows:

Swan Lake Expected Generation: **59,014.3 MWh (Dedicated Output)**

Ketchikan Loads: **85,295.2 MWh (Firm Power Requirements)**

Tyee Lake Expected Generation: **119,668.3 MWh**

PTG & WRG Loads: **84,996.4 MWh (Firm Power Requirements and Dedicated Output)**

Table 2 illustrates the Load Forecast for 2023 (starting in January) which demonstrates the anticipated transfer of energy across the STI. Section 5 of the PSA discusses development of the Operations Plan on an annual basis with a caveat for the plan to be reviewed periodically as needed. SEAPA will continue to review lake levels weekly and discuss the Operations Plan every Tuesday during Operation Meetings.

	KTN			Swan Lake		STI		WRG-PSG			Tyee Lake	
	Expected Delivery	Required Generation	Required Generation	Expected Gen from Inflow	Expected Gen from Inflow	STI Expected (balance)	STI Expected (balance)	Expected Delivery	Required Generation	Required Generation	Tyee Expect Generation	Tyee Expected Generation
	MWh	MWh	Avg MW	Avg MW	MWh	MWh	Avg MW	MWh	MWh	Avg MW	Avg MW	MWh
JAN	10961.5	11509.6	15.5	9.5	7045.6	4464.0	6.0	10022.0	10422.9	14.0	20.0	14886.9
FEB	10806.1	11346.5	16.9	10.9	7314.5	4032.0	6.0	9574.6	9957.6	14.8	20.8	13989.6
MAR	9812.2	10302.8	13.8	10.8	8070.8	2232.0	3.0	9192.4	9560.1	12.8	15.8	11792.1
APR	7077.2	7431.0	10.3	7.3	5271.0	2160.0	3.0	7359.4	7653.8	10.6	13.6	9813.8
MAY	4617.3	4848.2	6.5	4.5	3360.2	1488.0	2.0	5314.3	5526.9	7.4	9.4	7014.9
JUN	2482.6	2606.7	3.6	1.6	1166.7	1440.0	2.0	3556.2	3698.4	5.1	7.1	5138.4
JUL	5070.0	5323.4	7.2	5.2	3835.4	1488.0	2.0	5111.7	5316.2	7.1	9.1	6804.2
AUG	5321.8	5587.9	7.5	3.5	2611.9	2976.0	4.0	5570.8	5793.6	7.8	11.8	8769.6
SEP	4229.6	4441.0	6.2	1.2	841.0	3600.0	5.0	5370.5	5585.3	7.8	12.8	9185.3
OCT	5102.4	5357.5	7.2	5.2	3869.5	1488.0	2.0	7119.4	7404.2	10.0	12.0	8892.2
NOV	8318.9	8734.9	12.1	10.1	7294.9	1440.0	2.0	7129.0	7414.1	10.3	12.3	8854.1
DEC	11495.7	12070.5	16.2	10.2	8332.8	4464.0	6.0	9676.1	10063.2	13.5	19.5	14527.2
Tota	**85295.2**	**89560.0**	-	-	**59014.3**	**31272.0**	-	**84996.4**	**88396.3**	-	-	**119668.3**

Table 2: SEAPA 2023 Load Forecast

5.1 Scheduled Maintenance

SEAPA does not anticipate any extended outages during the calendar year 2023. Typical line maintenance, generator unit annual maintenance, and substation maintenance were considered when developing the load forecasts. Tyee's main unit transformer circuit switchers will be removed and replaced in 2023. However, both circuit switcher replacements will occur during the regularly scheduled outage with short durations. We do not anticipate the replacements will influence load profiles.

6.0 Iterative Math Model

The Tyee and Swan Lake models used to predict lake levels involve iterating through inflow scenarios and generation load sequences. Lake levels were inputted at Tyee (less 15ft) and Swan (less 10ft) of actual lake levels on the day the models ran. Once the inflow predictions were developed, adjustments to generation inputs were performed to maximize utilization of the outputs for Tyee and Swan. Adjusting the amount of Additional Dedicated Output across the STI as illustrated in Table 2 changes draft rates and subsequent maximum drafts at each lake. The curves illustrated below demonstrate a band of operation that SEAPA predicts for Swan lake levels, utilizing Additional Dedicated Output from Tyee.

6.1 Swan Lake Reservoir Plot (Low & Average Inflows)

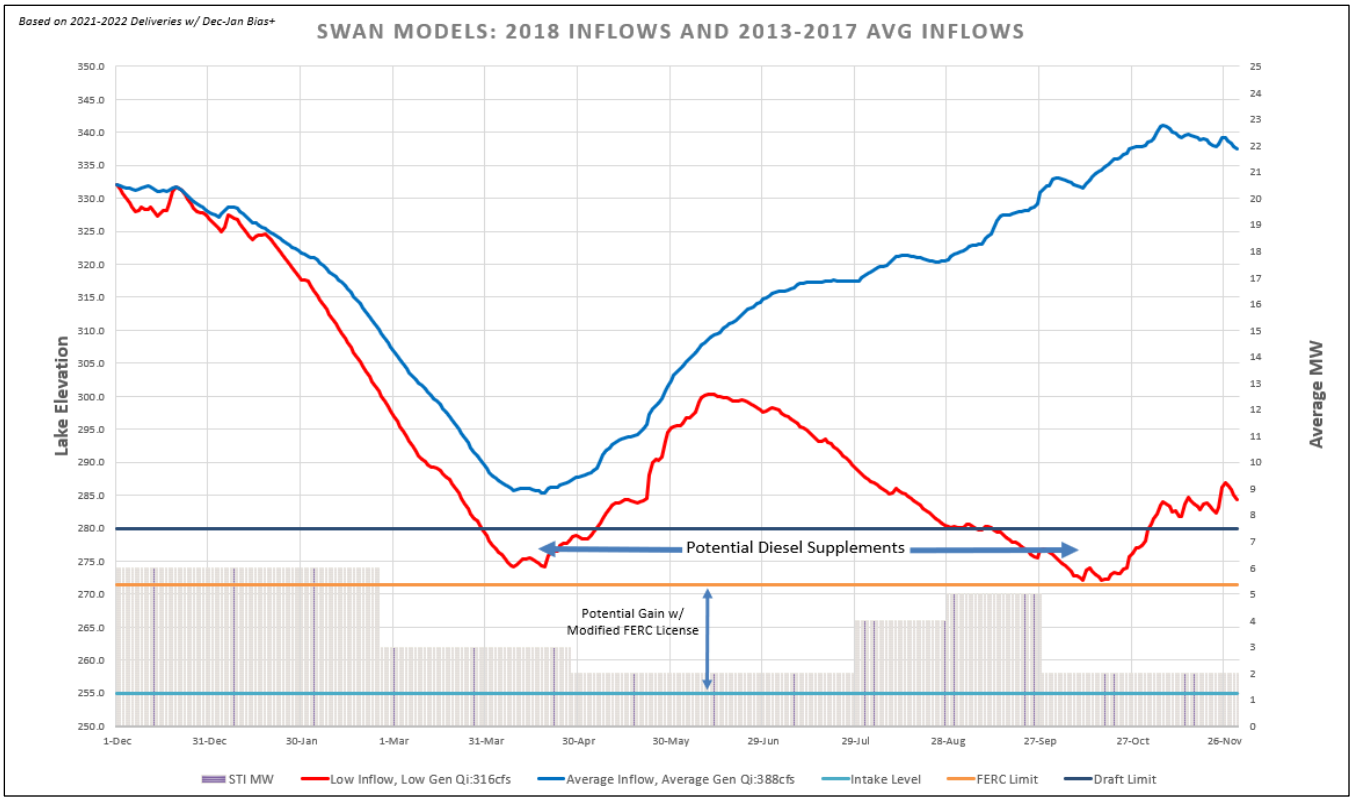

Figure 7: Swan Lake Reservoir Plot

The 2023 Swan Lake reservoir model in Figure 7 above illustrates the two case scenarios discussed in preceding sections. Both scenarios illustrate recovery scenarios, draft rates and maximum drafts for Swan Lake utilizing Additional Dedicated Output from Tyee Lake across the STI. Modeling inflows using average inflows (2013-2017 averages) (blue line) illustrate that Swan Lake will moderately draft and fully recover towards the end of 2023. In the case of using 2018 average inflows (worst case scenario), Swan Lake could potentially drop below the draft limit of 280ft in 2023. Additional Dedicated Output from Tyee is illustrated in the bar graphs.

6.2 Coordination of KPU Supplemental Diesel Generation

Ketchikan's Firm Power Requirements are typically provided by SEAPA in accordance with the PSA by utilizing Swan Lake's Dedicated Output and Tyee Lake's Additional Dedicated Output. However, considering the 2018-2019 drought, Tyee may not have Additional Dedicated Output available if the drought returns. It is therefore prudent to formalize integration of KPU Supplemental Diesel Generation to ensure compliance with the Power Sales Agreement.

It is well known from historical lake levels and Ketchikan load profiles, prior to the installation of the STI transmission line, that Swan Lake does not have the capacity to meet the Firm Power Requirements of Ketchikan without Additional Dedicated Output from Tyee. On a typical year, Tyee Lake has the capacity to provide Additional Dedicated Output. Pursuant to the PSA and with consideration of possible drought conditions, SEAPA coordinated with KPU to minimize overall use of diesel, maximize utilization of Swan Lake's output, and avoid future spill in lower water years. The outcome of coordinating KPU Supplemental Diesel Generation is discussed below with reference to the figure below.

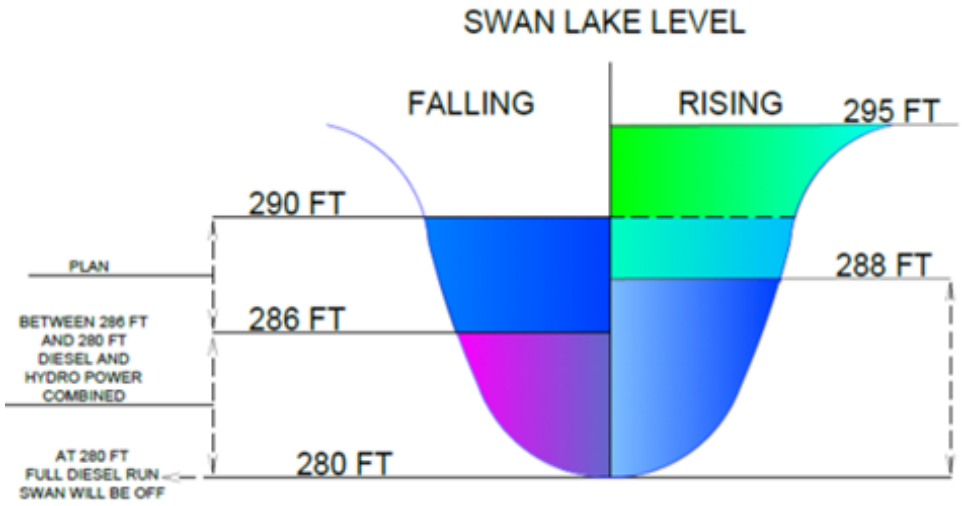

Figure 8: KPU Swan Diesel Ops Plan

During a drafting period of Swan Lake (typically early Spring), at an elevation of 286ft, KPU may utilize supplemental diesel generation to slow the draft rate at Swan Lake until the Draft Limit of 280ft is reached. Once the Draft Limit of 280ft has been reached, Swan Lake generators may remain off and KPU may utilize full diesel generation to meet Ketchikan's Full Power Requirements until an elevation of 288ft is reached. During a rising recovery period, KPU diesel generation should be terminated at elevation 288ft and Swan Lake should be utilized to meet the Firm Power Requirements of Ketchikan if Swan Lake has the generating capacity to do so.

6.3 Tyee Lake Reservoir Plot (Operations Plan)

The 2023 Tyee Lake reservoir model (Figure 9) demonstrates two case scenarios, a Guide/Curtailment Curve, and a Sales Curve. All models represent Petersburg/Wrangell loads and Additional Dedicated Output as illustrated in Table 2, with two inflow cases. The Tyee 2018 inflow case (minus 5ft) with average loads represents the Guide Curve and will be considered as a Curtailment Curve (red line). If Tyee Lake elevations fall below this curve, Additional Dedicated Output will be considered unavailable and net sales from Tyee to Ketchikan will be curtailed. Tyee will remain curtailed until Tyee Lake levels have reached the Sales Curve (green line). The area between the Sales curve and Curtailment curve is considered the Tyee Operations Band. Once the elevation of Tyee Lake has reached the Sales Curve (green line), Additional Dedicated Output will be made available to Ketchikan for as long as Tyee Lake levels remain above the Curtailment Curve (red line). The Balancing Lakes section discusses optimizing Swan Lake efficiencies during curtailment periods, where Tyee may be used to provide frequency support under certain conditions. This Operations Plan is conservative, using 2018 low inflow data minus 5ft and will maintain 13 feet in Tyee Lake (to the Draft Limit) for the Sales and Curtailment curves.

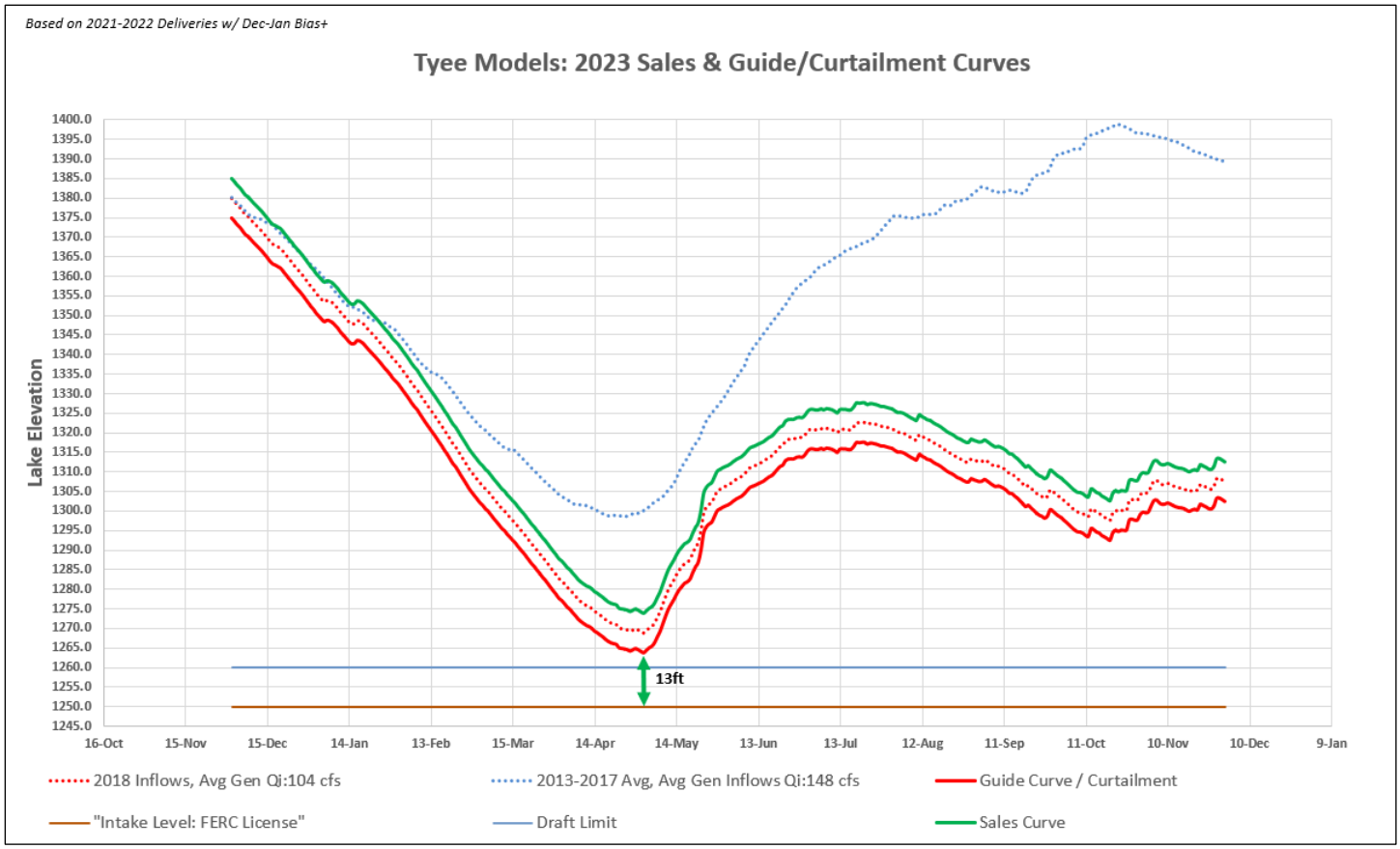

Figure 9: Tyee Lake Reservoir Plots

6.4 Coordination of Petersburg & Wrangell Supplemental Diesel Generation

Petersburg and Wrangell's Firm Power Requirements are typically provided by SEAPA in accordance with the PSA by utilizing Tyee Lake's Dedicated Output. However, with consideration of the 2018-2019 drought, Tyee could possibly exhaust Additional Dedicated Output and all available Dedicated Output if the drought returns. It is therefore prudent to formalize integration of Petersburg and Wrangell Supplemental Diesel Generation to ensure compliance with the Power Sales Agreement.

It is well known from historical lake levels and Petersburg/Wrangell load profiles prior to the installation of the STI transmission line that Tyee typically has the capacity to meet the Firm Power Requirements of Petersburg and Wrangell. On a typical year, Tyee Lake has capacity to provide Dedicated Output plus Additional Dedicated Output. If however, inflows are significantly less than the 2018 inflow season, Tyee could draft to the Draft Limit, without any sales to Ketchikan (even under curtailment). Coordination of Petersburg and Wrangell Supplemental Diesel Generation is discussed below with reference to the figure below.

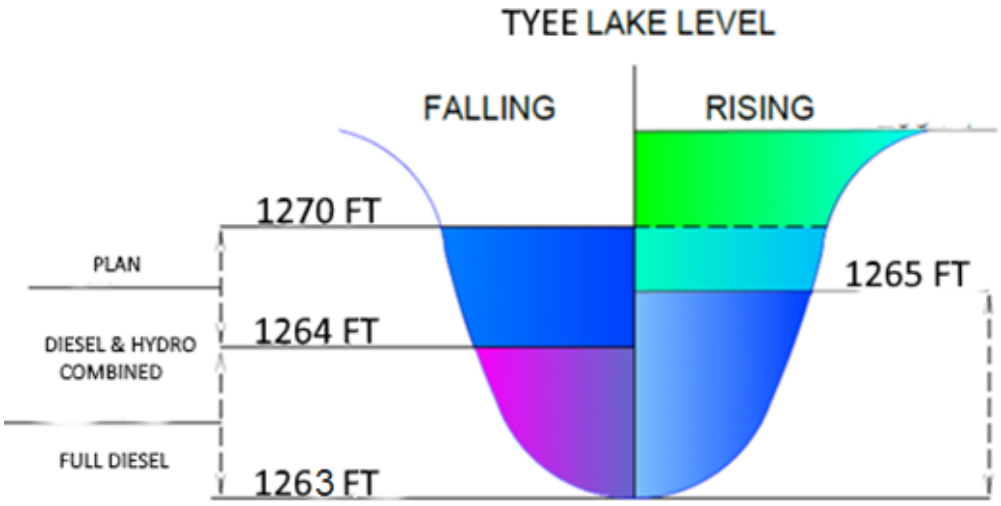

Figure 10: PTG & WRG Tyee Diesel Ops Plan

During a drafting period of Tyee Lake (typically early Spring), at an elevation of 1264ft, Petersburg and Wrangell may utilize supplemental diesel generation to slow the draft rate at Tyee Lake until the Draft Limit of 1263ft is reached. Once the Draft Limit of 1263ft has been reached, Tyee Lake generators may remain off and Petersburg and Wrangell may utilize full diesel generation to meet Petersburg and Wrangell's Full Power Requirements until an elevation of 1265ft is reached. During a rising recovery period, Petersburg and Wrangell diesel generation should be terminated at elevation 1265ft and Tyee Lake should be utilized to meet the Firm Power Requirements of Petersburg and Wrangell if Tyee Lake has generating capacity to do so. At elevations above the curtailment curve (once the sales curve is reached) in Figure 9 (red line), SEAPA may utilize Tyee Lake for Additional Dedicated Output to maximize utilization by sending power from Tyee Lake, across the STI, to Ketchikan (see Balancing Lakes section for further details).

7.0 Balancing Lakes

The Power Sales Agreement requires SEAPA to maximize utilization and optimize output of Tyee Lake and Swan Lake facilities through the use of water management and other efficient dispatch procedures adopted by the Agency. Water management and efficient dispatch is referred to by the Agency as balancing lakes. The following sections discuss how the Agency uses load tables, efficient dispatch and generation plans for balancing lakes to maximize utilization and optimize output of Tyee and Swan.

7.1 Load Tables

Operations Table

	STCS MW	S1	S2	T1	T2
1	4.00	0.00	0.00	2.00	2.00
2	10.00	0.00	0.00	5.00	5.00
3	12.00	5.00	0.00	3.50	3.50
4	14.00	6.00	0.00	4.00	4.00
5	15.00	7.00	0.00	4.00	4.00
6	16.00	8.00	0.00	4.00	4.00
7	17.00	9.00	0.00	4.00	4.00
8	18.00	9.00	0.00	4.50	4.50
9	19.00	9.00	0.00	5.00	5.00
10	20.00	9.00	0.00	5.50	5.50
11	22.00	9.00	0.00	6.50	6.50
12	24.00	9.00	0.00	7.50	7.50
13	26.00	9.00	0.00	8.50	8.50
14	28.00	10.00	0.00	9.00	9.00
15	29.00	10.00	0.00	9.50	9.50
16	30.00	10.00	0.00	10.00	10.00
17	31.00	11.00	0.00	10.00	10.00
18	32.00	11.00	0.00	10.50	10.50
19	33.00	11.00	0.00	11.00	11.00
20	34.00	11.00	0.00	11.50	11.50

Figure 11: STCS Load Table

(STCS) is used by the Agency to automate Swan Lake generators for maximizing efficiency, delivering Firm Power Requirements and balancing lake levels. STCS is an automated Real Time Automation Controller (RTAC) that utilizes Load Tables (Figure 11) to input Swan Lake generation setpoints into the governors at specific total SEAPA system loads. Load tables are developed on a weekly basis. Changing Swan Lake generator setpoints in the load tables allows SEAPA to draft Swan and Tyee lakes at increased or decreased rates, to follow guide/sales curves and stay above curtailment curves if possible.

Load Tables are developed weekly based on lake levels, draft rates, load forecasts, weather forecasts and efficiency curves (Figure 12 and Figure 13). SEAPA forecasts total system loads weekly by using historical data from the previous week and adjusting according to new loads (fish loads etc.) to include temperature corrections for the upcoming week. On average, SEAPA total system loads change in the winter months as a function of temperature at a rate of 0.67% per degree-day Fahrenheit. Adjusting load tables change the draft rates however if load table adjustments do not slow the draft rate at Tyee and the curtailment curve is reached, net sales from Tyee to Ketchikan will be curtailed. To maximize efficiency at Swan and Tyee during a curtailment period, transfer of energy across the STI will be balanced daily, with zero net sales. The overall sum of energy transferred across the STI (continuously summed and recorded weekly) will be maintained at zero total megawatts. During a curtailment period, Tyee will be used exclusively for Petersburg and Wrangell Firm Power Requirements and for maximizing efficiencies.

7.2 Efficiency Curves

The Swan-Tyee Control System

Swan Lake generators have Francis, reaction type turbines designed specifically for full load operation in a range from approximately 270 feet to 350 feet of net head. Figure 12 (below) illustrates the efficiency curves for the Swan Lake turbines at various lake elevations. As seen from the figure below, efficiency of the Swan Lake turbines drops off significantly as loads are reduced below 9.5MW. If for example Swan Lake was operated at 5MW at elevation 290 feet, the efficiency of the turbine would be at 83%. The turbine efficiency curves below do not include penstock losses, generator windage losses, I^2R losses and all other stray losses that can reduce the efficiency by another 5-10%. By operating the Swan Lake generators in the efficiency zone, 92-94% turbine efficiencies can be achieved, thereby saving over 10% of wasted water (for a 5MW target). For SEAPA to operate Swan Lake turbines in their efficiency zones, cycling the units on-and-off (once a day or every few days) may be required to meet target MW and manage lake levels.

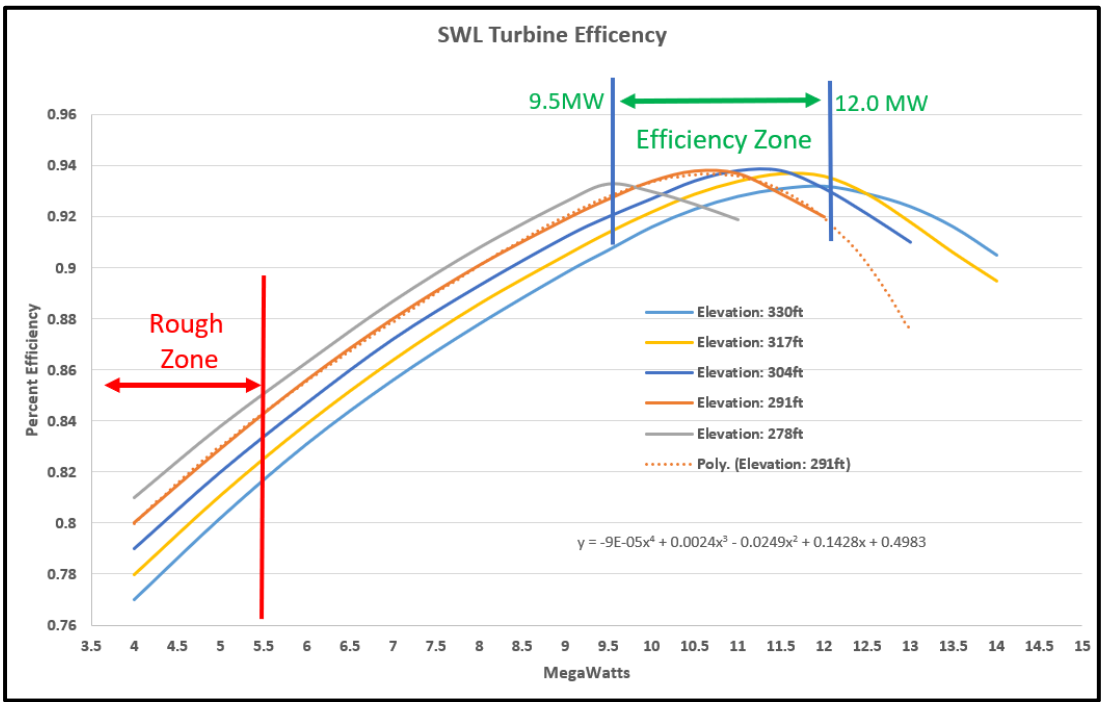

Figure 12: Swan Lake Turbine Efficiency Curves

Swan Lake generators begin to vibrate significantly as the turbines cavitate in the rough zone. The rough zone for Swan Lake generators is approximately between 2.5MW and 5.5MW. Rough zone operation causes abnormal wear and tear due to vibration and cavitation. Maintenance costs are greatly increased by operation in this zone to include increased cavitation repair, bearing damage, fatigue cracking, electrical generator winding damage and much more. Due to increased maintenance, operation in the rough zone will also reduce availability while making repairs. For reasons as stated above, SEAPA will not operate Swan Lake generators in the rough zone for extended periods of time.

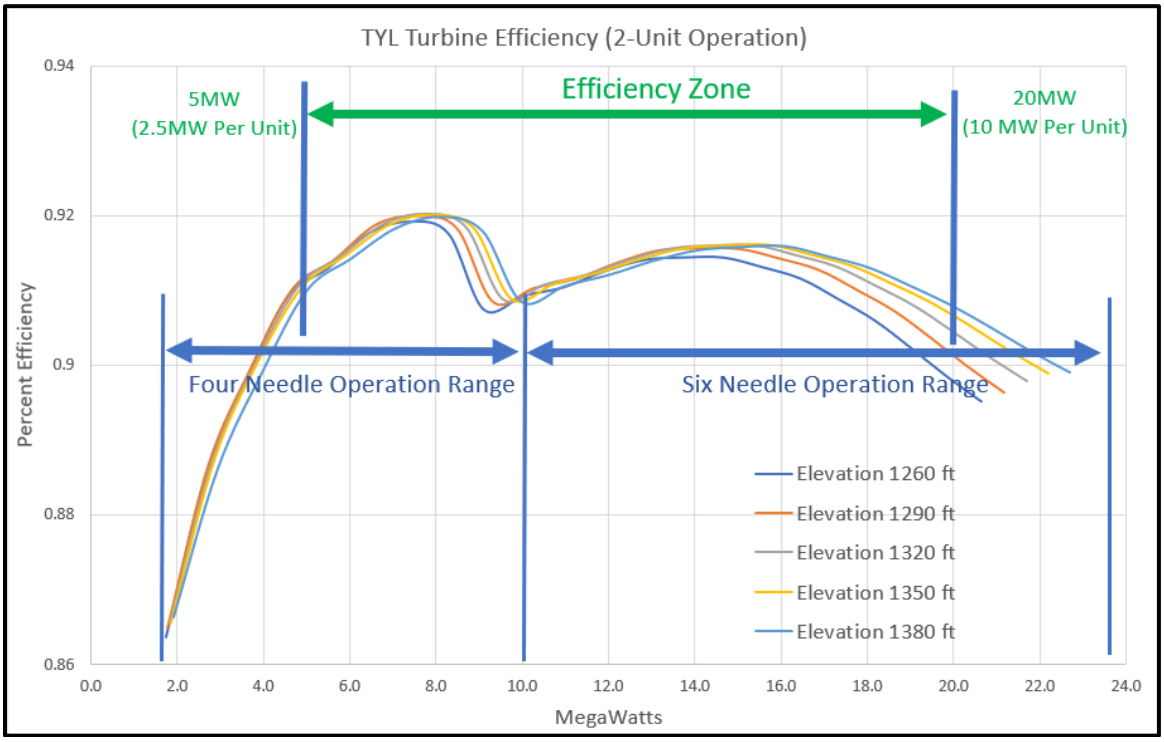

Figure 13: Tyee Lake Turbine Efficiency Curves'

Tyee lake generators have Pelton, impulse type turbines designed specifically to operate in a range from 1250 feet to 1398 feet net head. Figure 13 (above) illustrates the efficiency curves for the Tyee Lake turbines at various lake elevations. As shown in the figure above, operation of the Tyee Lake turbines has a very broad efficiency range. Impulse machines generally have a much flatter/broader range for efficiency compared to reaction machines, which allow them to operate at lower MW and remain in their efficiency zone. What is also evident is the efficiency gains achieved in the governors at Tyee by sequencing the needle valves from 6-valves to 4-valves at specific cfs ranges.

7.3 Optimizing Output

The Swan Lake Load Forecast (Table 2) illustrates that for the lake to maintain levels above the Draft Limit (in Figure 7), an average of 3.7MW to 10.4MW will likely be required throughout the year. Operating Swan Lake below 8MW will cause the machine(s) to run extremely inefficient (upwards of 20% of the water could be wasted in turbine efficiency losses at 2MW loads). To maximize Swan Lake efficiency, the generators will be operated using load tables or fixed generation points inside the efficiency zone as much as practicable. When isochronous support is requested by KPU during curtailment periods, Tyee will be used for isochronous support only. Megawatt-hours sent to the South for isochronous frequency support from Tyee during a curtailment period will be summed up daily and returned to the North from Swan on a daily or multi-day basis. The net transfer of energy during curtailment periods will be zero (recorded at the Tyee ST-11 breaker) and reported weekly during the Tuesday Operations meetings.

7.3.1 Example: Optimizing Output by Increasing Efficiency

Start Date of Operations Plan: January 1

Swan Lake Elevation (on start date): 290ft

Average Inflows: 288cfs

Average MW to match Inflows: 5MW

For the above numbers, where Swan Lake is at elevation 290 feet and the inflows due to precipitation are an average of 288 cfs, Swan Lake can be operated at an average of 5MW to maintain a lake elevation of 290 feet. If Swan Lake is operated continuously at this rate for 10-months as an example, the total number of megawatt-hours produced would be approximately 36,000MWh.

Operating Swan Lake generators at 5MW continuously would cause the average turbine efficiency of the Swan Lake generator(s) to be 83% (see Figure 12). To maximize efficiency of the generators, the unit(s) could be operated 50% of the time at 10MW (at a turbine efficiency of 93%), thereby gaining over 10% in efficiency. Over the same 10-month period, the 10% gains in efficiency (for this example) would equate to 3,600 MWh or 1 more month of operations for the same amount of water.

Under normal operating circumstances for this example, KPU would operate isochronous diesel generators 50% of the time when the Swan Lake unit is off to provide for the frequency support that the Swan Lake generator(s) provide when in service. Under circumstances whereas isochronous diesel generator support is not available from KPU due to mechanical or ADEC time/fuel limitations, the STI would be utilized and Tyee generators would provide isochronous frequency support. Operating Swan Lake at 10MW greatly increases efficiency in this case. For Tyee isochronous support periods, 5MW of the 10MW total generation from Swan Lake would be sent to the North 50% of the time (half-day), When Swan Lake is turned off (the other 50% or half-day), 5MW would then be sent from Tyee to the South. The result would be a net of zero megawatt-hours transferred across the STI (or used from Tyee for support) and an increase of 3,600 MWh of Swan Lake outputs due to efficiency gains for the 10-month period. This example is a way SEAPA may operate facilities by balancing lakes through the use of water management and efficient dispatch to optimize outputs.

7.4 Maximizing Utilization

Precipitation in Southeast Alaska has historically had large swings from year-to-year. For example, in 1996, the precipitation was recorded at 108 inches. The next year, in 1997, precipitation increased to 165 inches. The third year, in 1998, precipitation was recorded at a record low of 102 inches, 63-inches less than 1997. Year-over-year, precipitation swings of as much as 60-inches have been recorded. On average (depending on saturation and lake levels), an inch of rain is equal to over two feet of water in Tyee lake and approximately one foot of water in Swan lake. To equate that to lake levels, Tyee would have had nearly 120 more feet of water in 1997 than in 1996.

To maximize utilization of both Tyee and Swan, as an example for this three-year period, would require drafting Tyee and Swan as much as possible in 1996 to capture the high inflows in 1997 and use the stored energy from 1997 to make it through the drought in 1998. On average, Petersburg and Wrangell use approximately 200 feet of lake from Tyee per year as Dedicated Output to meet Firm Power Requirements. In 1997, the amount of inflows (160 inches) would have equated to approximately 320 feet of water in Tyee lake. Without the STI, Tyee would have spilled approximately 120 feet of water from the lake under 2018 load requirements. For reference, 120 feet of water in Tyee lake is approximately 51,600 MWh.

Drafting Tyee great enough to capture potential spilled energy requires dispatch of Additional Dedicated Output from Tyee to Ketchikan. Without Additional Dedicated Output, Tyee would spill excessively. However, maximizing utilization has inherent risk as it pertains to Dedicated Output.

7.4.1 Draft Limits

A Swan Lake Draft Limit was informally adopted by KPU prior to the installation of the STI to maintain contingency for diesel generators when lake levels were low. If a KPU diesel generator failed, water in Swan Lake could have been used for a limited number of contingency days until necessary repairs could be made. A Tyee Draft Limit was not taken into consideration prior to the STI because Tyee at the time was a stranded asset, with more than twice the lake capacity required to meet the Firm Power Requirements of Petersburg and Wrangell.

The Power Sales Agreement signed in 2009 did not take into consideration Draft Limits because it would have been contradictory to the term “maximum utilization.” For example, when a Draft Limit is reached and hydro generation is displaced by diesel generation, maximum utilization is reduced by the lesser of the amount of energy available from water in the lake below the Draft Limit (to the FERC limit) or the amount of energy from diesel generation that displaced hydro generation.

SEAPA's member communities have a direct financial interest in ensuring the maximum practicable sales of capacity and energy from SEAPA's hydropower facilities. This direct financial interest was recently realized when a submarine cable was replaced by SEAPA after it failed. Maximizing utilization of outputs can be more fully achieved by lowering or removing draft limits. While understanding its member utilities generation and operational constraints, SEAPA maintains its recommendation to lower or remove draft limits to facilitate this overall objective.

Since the installation of the STI, contingency for diesel generation has continued to be a concern. In 2019, prominent members of all three communities began discussing utilizing diesel generators from other communities (dispatched through SEAPA transmission lines) as contingency. Using diesel generators for diesel contingency (instead of SEAPA hydro) would be prudent and would improve SEAPA utilization of both Tyee and Swan Lake reservoirs. SEAPA encourages its Member Utilities to engage in discussions on diesel-for-diesel contingency solutions and research methods to maximize SEAPA hydro.

Additional utilization at Swan Lake can be achieved by revisiting the licensed FERC limit. Swan Lake has a FERC draft limit of 271.5 feet. The top of the intake at Swan Lake is 251 feet. Swan Lake has a potential to provide upwards of 20 additional feet of capacity.

7.4.2 Tyee Lake Draft

Optimizing water resources is important for maximizing resource outputs as required by the Power Sales Agreement (Section 5: Operations Plan) and insuring FERC licensed limits are retained. It is however also SEAPA's mission to ensure Dedicated Outputs are delivered to meet the Firm Power Requirements of the Purchasing Utilities. In February and March of 2019, continued drought conditions in conjunction with a cold front (Polar Vortex) caused increased loads and reduced inflows at Tyee. As a result, Tyee Lake approached the Draft Limit constituting a diesel campaign in Petersburg and Wrangell.

The curtailment curve in Figure 9 illustrates utilizing a worst-case scenario (a repeat of 2018). For this inflow case, Tyee will have 13 feet of water in the lake at maximum draft. 13 feet in Tyee lakes is approximately equivalent to 5,395 MWh of available capacity.

7.4.3 Swan Lake Spill

The maximum Swan Lake reservoir height was raised from elevation 330 ft to elevation 345 ft at the end of 2016. Calendar year 2017 was the first year that the benefits of this effort were realized. In July 2022, Swan Lake reached an elevation of 343.3 ft. This added 5,320 MWh of energy captured, that would have otherwise been lost to spill. With recent water conditions, the energy captured in 2022 has already and will in the future continue to displace Diesel Generation (up to the maximum energy captured). SEAPA plans to operate Swan Lake above elevation 330 ft. in the following manner:

- Elevations 330 ft. to 341 ft. - Both generating units will be fully available and the vertical gate will be operable. Water will be stored for future use.
- Elevations 341 ft. to 343 ft. – SEAPA Operations will monitor lake levels and alarms. The gate should automatically open at elevation 343 to begin spill.
- At elevation 345 ft. both generating units at Swan Lake will be at maximum capacity with the gate 100% open until elevation 343 ft is reached.

7.4.4 Tyee Dedicated Output

As stated in preceding sections, Petersburg and Wrangell typically require approximately 200 feet of water from Tyee Lake a year to meet their Firm Power Requirements for that respective year. Tyee Lake has a capacity to only hold 148.3 feet of water (Elevation 1250ft to 1398.3ft) before it spills. Because Petersburg and Wrangel require more water from Tyee lake to meet their Firm Power Requirements than the lake has capacity for, any sales to Ketchikan could potentially be Dedicated Output. For example, consider the following scenario:

> *Tyee has a lake level elevation of 1398.3 feet. The lake is completely full whereas a single inch of rain would cause it to spill. If SEAPA dispatches one MWh from Tyee to Ketchikan and there is no rain for the rest of the year, that one MWh would have been dispatched as Dedicated Output and not Additional Dedicated Output.*

On an average year, Tyee Lake receives between 250 feet and 350 feet of water from precipitation in a water cycle (year). Without dispatch of Tyee to Ketchikan, all inflows (water) in the lake greater than 200 feet would be spilled (lost energy). As a result, SEAPA sales could be greatly reduced and reinvestment in SEAPA infrastructure such as generators, transformers, transmission lines and submarine cables would be reduced. Maximum utilization is required for reinvestment to maintain reliable power.

Dispatch of Tyee Additional Dedicated Output benefits all three Member Utilities and allows the Agency (in part) to maintain the lowest Wholesale Rate possible. For reasons as stated above, there are risks associated with dispatch of Tyee to the South on both ends of the spectrum. Under-dispatch of Tyee could cause the lake to spill. Over-dispatch of Tyee could cause the Northern Communities to burn diesel that would have been avoided by use of Tyee's Dedicated Output that was dispatched to the South. In theory, ideal dispatch of Tyee Lake's Additional Dedicated Output occurs if Tyee Lake reaches the Draft Limit at maximum draft and Petersburg and Wrangell are not required to burn diesel unnecessarily.

When Additional Dedicated Output from Tyee is dispatched to the South, it either reduces the draft rate or increases the recovery rate of Swan Lake. In either case, water levels in Swan Lake (over a discreet time interval) are directly impacted (increased) by the amount of Additional Dedicated Output sent South from Tyee.

8.0 Emergency Operations Plan Deviation

Deviation from this Operations Plan by SEAPA or a Member Utility shall not be permitted except under the following circumstances:

- Safety concerns whereas any human life is at risk of injury or death
- Declaration of an emergency by a Member Utility whereas immediate action is required to prevent rolling blackouts
- Equipment damage concerns whereas immediate action is required to prevent damage to SEAPA or Member Utility equipment or assets
- Supermajority vote of the Board of Directors dictates otherwise

In the event of a deviation, a Special Board Meeting shall be held as soon as practicable to discuss necessary actions. If a non-emergency deviation is requested by SEAPA or Member Utility, a Special Board Meeting shall be held for approval prior to any deviation.

9.0 Communication

SEAPA's Operations Manager is the primary point of contact for SEAPA operations. In the event that the Operations Manager is not available, a designee will be assigned. For the purposes of Tuesday Operations Calls and disseminating information with regard to SEAPA operations to respective Member Utility communities and prominent leaders, each respective Member Utility shall assign a primary point of contact. The primary point of contact or designee shall be provided to SEAPA. All SEAPA communications regarding Operations shall be routed through each Member Utility's established point of contact or designee. The Member Utilities primary contact will be responsible for disseminating information to the Tuesday Operations Call group and any other respective community leader as each Member Utility deems appropriate.

10.0 SEAPA Peak Load Limits

SEAPA peak winter loads have been increasing by nearly 5% every year for the past 5 years. This is likely due to conversions from oil-furnace heat to electric heat. In 2021 & 2022, SEAPA reached maximum capacity and had to curtail outputs, which caused the member utilities to perform peak load shaving with local generation.

Load limits at Swan and Tyee directly correlate to lake levels. For hydrogenators, MWs are a function of head (pressure) and flow (cfs). With fixed sized penstocks, maximum flow (cfs) is constrained. Therefore, when head pressure decreases (lake levels drop), maximum outputs (MW) decrease.

Tyee generators are less impacted by lake levels than Swan because Tyee lake is nearly 5 times higher in elevation. Table 3 (below) represents SEAPA's Peak Load Limits as a function of lake levels. The table illustrates 5 Swan Lake level conditions based on whether Tyee is above or below 1300ft.

Petersburg & Wrangell:

The table illustrates Load Limits for Petersburg & Wrangell based on MWs across circuit switcher ST10. When SEAPA loads reach the MW threshold in the Start Load Limit column, SEAPA will curtail additional outputs above that threshold until loads reach the MW threshold in the End Load Limit column.

Ketchikan

The table illustrates Load Limits for Ketchikan based on SEAPA's total MWs. When SEAPA total loads reach the MW threshold in the Start Load Limit column, SEAPA will curtail additional outputs above that threshold until SEAPA total loads reach the MW threshold in the End Load Limit column.

SEAPA Peak Load Limits

Tyee Lake > 1300 feet						
Swan Lake Level (Greater than ft)	Tyee Units (MW each)	PTG & WRG Start Load Limit (MW @ ST10)	PTG & WRG End Load Limit (MW @ ST10)	Swan Units (MW each)	KTN Start Load Limit MW Total SEAPA Load	KTN End Load Limit Total SEAPA Load
330	**11**	23.5	21.5	**12.5**	47	45
320	**11**	23.5	21.5	**12.5**	47	45
310	**11**	23	21	**11.5**	45	43
300	**11**	23	21	**11.5**	45	43
290	**11**	22.5	20.5	**11**	44	42
280	**11**	22	20	**11**	44	42
270	**11**	21.5	19.5	**10**	42	40
Tyee Lake < 1300 feet						
Swan Lake Level (Greater than ft)	Tyee Units (MW each)	PTG & WRG Start Load Limit (MW @ ST10)	PTG & WRG End Load Limit (MW @ ST10)	Swan Units (MW each)	KTN Start Load Limit MW Total SEAPA Load	KTN End Load Limit Total SEAPA Load
330	**10**	23	21	**12.5**	45	43
320	**10**	23	21	**12.5**	45	43
310	**10**	22.5	20.5	**11.5**	43	41
300	**10**	22.5	20.5	**11.5**	43	41
290	**10**	22	20	**11**	42	40
280	**10**	21.5	19.5	**11**	42	40
270	**10**	21	19	**10**	40	38

Table 3: SEAPA Load Limits

11.0 2023 Operations Plan Summary

Section 5 of the Long-Term Power Sales Agreement provides the following:

> **Operations Plan Development.** … The objectives of the Operating Plan shall include maximizing the utilization of the output of the Agency Facilities and optimizing the output of the Agency Facilities in order to serve the Purchasing Utilities' Firm Power Requirements as set forth pursuant to this Agreement, through the use of water management and other efficient dispatch procedures adopted by the Agency, subject to Dedicated Parties' priority access to Dedicated Output. … [Emphasis added]

For the reasons demonstrated in the proposed Operations Plan and pursuant to the Power Sales Agreement, SEAPA staff proposes Guide/Curtailment Curve elevations be used by the scheduling group as guides. If lake levels fall below the Guide/Curtailment curves, SEAPA will manage water resources, in consideration of current conditions, with an overall objective of restoring lake levels to their respective Guide/Curtailment curves. As lake levels approach the annual minimum Board approved draft limits (Tyee: 1260 ft. and Swan: 280 ft.), SEAPA and the dedicated resource holder(s) will enter into discussions as to whether draft limits should be adjusted. Guide/Curtailment Curve elevations and minimum draft limits for Swan Lake and Tyee Lake are listed in Figure 7 and Figure 9 and correspond with the table below.

SEAPA 2023 Operations Plan Guide Curve Values

Mth/Day	12/5	1/5	2/5	3/5	4/5	5/5	6/5	7/5	8/5	9/5	10/5	11/5	12/5
SWL Guide Curve Elevation (ft)	332.0	325.5	316.0	295.4	276.4	278.4	295.9	298.2	287.0	280.5	275.1	281.5	284.3
TYL Guide/Curtailment Curve Elevation (ft)	1372.7	1348.5	1328.8	1300.7	1275.0	1263.0	1303.2	1315.9	1315.1	1307.8	1296.6	1302.8	1302.6

For reference, past Operations Plan minimum draft limits are listed below. With the predicted inflows for CY2023, the 2023 Operations Plan proposes that Swan Lake and Tyee Lake draft limits be 280ft and 1260ft respectively.

	SEAPA Historical Draft Limits							
	2016	2017	2018	2019	2020	2021	2022	2023
Swan Lake	275 ft	273 ft	273 ft	280 ft	280 ft	280 ft	280 ft	280 ft
Tyee Lake	1270 ft	1261 ft	1261 ft	1260 ft	1260 ft	1260 ft	1260 ft	1260 ft

Please consider the following suggested motion:

SUGGESTED MOTION
I move to approve the 2023 SEAPA Operations Plan as presented in the December 8, 2022 Board packet.

KETCHIKAN - PETERSBURG - WRANGELL
SEAPA
Southeast Alaska Power Agency

SEAPA 2023 BOARD MEETING DATES

Date(s)		Weekday(s)	Location	Comments
January	26	(Thurs)	Electronic via Zoom	Annual Meeting to Elect Officers and other Miscellaneous Business (2 - 5 p.m.)
March	9-10	(Thurs-Fri)	Wrangell	Regular Board Meeting March 9 (1 - 5 p.m.) March 10 (9 a.m. - 1 p.m.)
June	22	(Thurs)	Ketchikan	Regular Board Meeting (9 a.m. - 5 p.m.)
September	28-29	(Thurs-Fri)	Petersburg	Regular Board Meeting September 28 (1 - 5 p.m.) September 29 (9 a.m. - 1 p.m.)
December	14	(Thurs)	Ketchikan	Regular Board Meeting (9 a.m. - 5 p.m.)

(See attached for additional information on 2023 meeting dates and events)

2023 Calendar

Calendarpedia
Your source for calendars

January

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

February

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

March

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

April

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

May

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

June

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

July

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

November

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Federal Holidays 2023

Jan 1	New Year's Day	Feb 20	Presidents' Day	Sep 4	Labor Day	Nov 11	Veterans Day
Jan 2	New Year's Day (observed)	May 29	Memorial Day	Oct 9	Columbus Day	Nov 23	Thanksgiving Day
Jan 16	Martin Luther King Day	Jul 4	Independence Day	Nov 10	Veterans Day (observed)	Dec 25	Christmas Day

SEAPA Regular Board Meeting dates are highlighted in yellow.

2023 MEETING DATES / EVENTS

(Updated 12/02/2022)

JANUARY

Date	Organization / Event	Location
2	SEAPA Holiday (New Year's Day)	N/A
3	PSG Assembly Mtg	PSG
5	KTN Council Mtg	KTN
10	WRG Assembly Mtg	WRG
17	PSG Assembly Mtg	PSG
19	KTN Council Mtg	KTN
24	WRG Assembly Mtg	WRG
26 (Th)	SEAPA Annual Board Mtg 2-5PM	Electronic via Zoom
31	APA Manager's Forum/Director Training	Juneau
31	SE Conf Mid-Session Summit (Day 1)	Juneau

FEBRUARY

Date	Organization / Event	Location
1-2	SE Conf Mid-Session Summit (Day 2) Transportation Workshop Feb 2nd	Juneau
1-2	APA State Legislative Conference	Juneau
2	KTN Council Mtg	KTN
6	PSG Assembly Mtg	PSG
7	WRG Assembly Mtg	WRG
16	KTN Council Mtg	KTN
20	SEAPA Holiday (President's Day)	N/A
21	PSG Assembly Mtg	PSG
21	WRG Assembly Mtg	WRG
22-24	NWHA Annual Conf	Portland

MARCH

Date	Organization / Event	Location
2	KTN City Council Mtg	KTN
6	PSG Assembly Mtg	PSG
9 (Th)	SEAPA Regular Board Mtg 1-5PM	WRG
10 (Fr)	SEAPA Regular Board Mtg 9AM-1PM	WRG
14	WRG Assembly Mtg	WRG
16	KTN Council Mtg	KTN
20	PSG Assembly Mtg	PSG
28	WRG Assembly Mtg	WRG

APRIL

Date	Organization / Event	Location
3	PSG Assembly Mtg	PSG
6	KTN Council Mtg	KTN
11	WRG Assembly Mtg	WRG
17	PSG Assembly Mtg	PSG
20	KTN Council Mtg	KTN
20-21	NWHA Strategic Mtg	Stevenson WA via PTLD
25	WRG Assembly Mtg	WRG

MAY

Date	Organization / Event	Location
1	PSG Assembly Mtg	PSG
1-3	NWHA Technical Workshop	Spokane
4	KTN Council Mtg	KTN
8-10	NHA Water Power Week	Wash DC
9	WRG Assembly Mtg	WRG
15	PSG Assembly Mtg	PSG
18	KTN Council Mtg	KTN
23	WRG Assembly Mtg	WRG
29	SEAPA Holiday (Memorial Day)	N/A

JUNE

Date	Organization / Event	Location
1-10	SEAPA Hydro Plants Shutdown	SWL-TYL
1	KTN Council Mtg	KTN
5	PSG Assembly Mtg	PSG
6-8	APA Federal Legislative Conf	Wash DC
13	WRG Assembly Mtg	WRG
15	KTN Council Mtg	KTN
19	PSG Assembly Mtg	PSG
22 (Th)	SEAPA Regular Board Mtg 9AM-5PM	KTN
27	WRG Assembly Mtg	WRG

JULY

Date	Organization / Event	Location
3	PSG Assembly Meeting	PSG
4	SEAPA Holiday (Independence Day)	N/A
6	KTN Council Mtg	KTN
10-13	AEGIS Policy Holders Conf	San Diego
17	PSG Assembly Mtg	PSG
20	KTN Council Mtg	KTN
25	WRG Assembly Mtg	WRG

AUGUST

Date	Organization / Event	Location
3	KTN Council Mtg	KTN
7	PSG Assembly Mtg	PSG
17	KTN Council Mtg	KTN
21	PSG Assembly Mtg	PSG
22	WRG Assembly Mtg	WRG
22-25	APA Annual Meeting	Valdez

2023 MEETING DATES / EVENTS

SEPTEMBER

Date	Organization / Event	Location
4	SEAPA Holiday (Labor Day)	N/A
5	PSG Assembly Mtg	PSG
7	KTN Council Mtg	KTN
12	WRG Assembly Mtg	WRG
18	PSG Assembly Mtg	PSG
19-21	Southeast Conference Annual Mtg	Sitka
21	KTN Council Mtg	KTN
26	WRG Assembly Mtg	WRG
28 (Th)	SEAPA Regular Board Mtg 1-5PM	PSG
29 (Fr)	SEAPA Regular Board Mtg 9AM-1PM	PSG

OCTOBER

Date	Organization / Event	Location
2	PSG Assembly Mtg	PSG
5	KTN Council Mtg	KTN
10	WRG Assembly Mtg	WRG
16	PSG Assembly Mtg	PSG
19	KTN Council Mtg	KTN
24	WRG Assembly Mtg	WRG

NOVEMBER

Date	Organization / Event	Location
2	KTN Council Mtg	KTN
6	PSG Assembly Mtg	PSG
10	SEAPA Holiday (Veteran's Day)	N/A
14	WRG Assembly Mtg	WRG
16	KTN Council Mtg	KTN
20	PSG Assembly Mtg	PSG
23	SEAPA Holiday (Thanksgiving)	N/A
24	SEAPA Holiday (Day After)	N/A
28	WRG Assembly Mtg	WRG

DECEMBER

Date	Organization / Event	Location
4	PSG Assembly Mtg	PSG
7	KTN Council Mtg	KTN
12	WRG Assembly Mtg	WRG
14 (Th)	SEAPA Regular Board Mtg 9AM-5PM	KTN
18	PSG Assembly Mtg	PSG
21	KTN Council Mtg	KTN
22	SEAPA Holiday (Christmas Eve)	N/A
25	SEAPA Holiday (Christmas Day)	N/A

SEAPA Board Meetings noted on the above calendar are scheduled around the following:

Petersburg Borough Assembly Meetings	1st & 3rd Monday every month
Ketchikan Gateway Borough Meetings	Same as Petersburg every month
City and Borough of Wrangell Meetings	2nd & 4th Tuesday every month
Ketchikan City Council Meetings	1st & 3rd Thursday every month