SOUTHEAST ALASKA POWER AGENCY

Special Board Meeting
AGENDA

SEAPA Offices | Ketchikan, Alaska

Monday, April 22, 2019 | 3:00 p.m. AKDT

For Telephonic Participation:
Dial 1-800-315-6338 (Access Code: 73272#)

1. Call to Order
   A. Roll call

2. Approval of the Agenda

3. Review and Approve Minutes
   A. March 28, 2019 Minutes of Special Board Meeting

4. New Business:
   A. Consideration and Approval of Award of Audit Services

5. Old Business
   A. Consideration of a Revised CY2019 Operations Plan
   B. Consideration and Approval of Supplemental Diesel Costs for Reimbursement to Petersburg and Wrangell

6. Next Special Board Meeting Date

7. Adjourn

SOUTHEAST ALASKA POWER AGENCY

Minutes of Special Meeting

Monday, March 28, 2019

Southeast Alaska Power Agency Offices
via Teleconference | Ketchikan, Alaska

(An audio recording of this meeting is available on SEAPA's website at www.seapahydro.org)

1) Call to Order

A. *Roll Call*.

Chairman Sivertsen called the meeting to order at 3:00 p.m. AKDT on March 28, 2019. The following directors and alternates were present, thus establishing a quorum of the board:

Directors	Present *Telephonic (T) In Person (IP)*	Alternates	Present *Telephonic (T) In Person (IP)*	Representing	
Karl Amylon	IP	Andy Donato	IP	Swan Lake	Ketchikan
Bob Sivertsen	IP			Swan Lake	Ketchikan
Dick Coose*	IP			Swan Lake	Ketchikan
Bob Lynn	T	Robert Larson	T	Tyee Lake	Petersburg
Steve Prysunka	T	Lisa Von Bargen	T	Tyee Lake	Wrangell

*Mr. Coose arrived shortly after roll call at 3:03 p.m.

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

Staff	Present *Telephonic (T) In Person (IP)*	Staff/Counsel	Present *Telephonic (T) In Person (IP)*
Trey Acteson, CEO	IP	Kay Key, Controller	IP
Clay Hammer, Operations Manager	T	Sharon Thompson, Ex. Asst./CA	IP
Ed Schofield, Power Sys. Specialist	IP	Joel Paisner, Counsel	T

2) Approval of the Agenda

➢ ***Motion***	M/S (Prysunka/Lynn) to approve the agenda, as presented. Motion approved unanimously by polled vote.	Action 19-731

3) New Business:

A. *Consideration and Approval of Tyee Transmission Line Eagle Bay Crossing Marker Ball Replacement Project.*

➢ ***Motion***	M/S (Amylon/Lynn) to authorize staff to enter into a contract with Electric Power Constructors, Inc. for SEAPA's R&R Project 19309 for the Tyee Transmission Line Eagle River, a/k/a Eagle Bay Crossing Marker Ball Replacement Project for the lump-sum bid of $133,807. Motion approved unanimously by polled vote.	Action 19-732

B. *Discussion Re Activity following June 19-20, 2019 Board Meeting in Wrangell.*

Chairman Sivertsen canvassed the Board's interest in participating in jet boat tours that will be available in Wrangell during the time of the June board meeting noting it would be an out-of-pocket cost for those interested. Mr. Prysunka suggested tours could also be scheduled for those interested in visiting the Agency's Tyee Hydroelectric Project.

Following discussion, it was determined that those interested in either activity advise SEAPA staff so participant's schedules could be accommodated accordingly.

Although the next item in the Agenda was Item C for an Executive Session, the Board concurred that it would be prudent to advance the Agenda to Item 4 (Old Business) to accommodate the availability of Karl Hagerman, Petersburg's Utility Director's participation, and move Item 3C (New Business) forward accordingly.

4) Old Business

A. *Reservoir Management Discussions*

Mr. Acteson reported that Swan Lake's level is at 289.1, which is 11 feet over the approved draft limit of 278, and that Tyee is at 1264.5, approximately 7.5 feet above the current draft limit of 1257. He announced that when Tyee reached the 1265 level, the northern communities were no longer running diesels and that although snow melt inflow is currently consistent, strong snow melt has not yet occurred at either of the lakes. Mr. Amylon announced that Ketchikan is still on diesels and experiencing Title V permit issues and despite a petition to the EPA in December for relief, no response had been received. No action was taken to change the current status of the operations plan.

B. *Review Supplemental Diesel Campaign*

Mr. Amylon summarized the importance of having a fundamental discussion on SEAPA's purpose and how the reservoirs tie the communities together, noting that if SEAPA is perpetually obligated to pay for diesel runs for any of its member communities under these circumstances, the resources won't be available to fulfill the larger mission of developing additional hydro resources. Mr. Prysunka noted a loss of SEAPA funds was also due in part to the lack of water to sell. Mr. Acteson recommended that a special board meeting be called if it's necessary for the northern communities to run their diesels again and advised that SEAPA will contact the northern communities to move forward with calculations for the reimbursement process. Following further discussions, it was determined that it would be prudent for the Agency to present the amount of the reimbursement to the board for approval at the next board meeting.

(3. New Business continued)

C. *Executive Session Re Possible Acquisition of Real Property*

➢ ***Motion***	M/S (Amylon/Lynn) to recess into an Executive Session to be conducted pursuant to SEAPA's Bylaws that are consistent with Alaska Statute 44.62.310 for discussions regarding the possible acquisition of real property and which could have an adverse effect on the finances of the Agency, the Projects, or any of the Member Utilities represented on the Board. Motion approved unanimously by polled vote.	Action 19-733

The meeting recessed at 4:10 p.m. for the Executive Session. The meeting reconvened into regular session at 4:35 p.m.

Chairman Sivertsen announced that the board met in executive session, discussed a proposal to acquire real property, and requested a motion on the discussions.

➢ ***Motion***	M/S (Coose/Amylon) to increase SEAPA's FY2019 R&R Budget by $500,000 for R&R19325 to purchase real property known as Lots 1 and 2, Bamville Industrial Park Subdivision of Lot 3, per Plat No. 2019-9 of the Ketchikan Recording District, First Judicial District, State of Alaska, and further move to authorize the Agency's CEO to enter into an Offer to Purchase Real Estate contract with BAM, LLC and execute all other documents as may be necessary for the cash purchase of Lots 1 and 2. Motion approved unanimously by polled vote.	Action 19-734

5) Next Special Board Meeting Date

There were no objections to the suggested date of April 15, 2019 at 3:00 p.m. for the next special board meeting.

6) Adjourn

Mr. Coose moved to adjourn the meeting. Chairman Sivertsen adjourned the meeting at 4:38 p.m.

Signed: Attest:

_____ _____

Secretary/Treasurer Chairman

SOUTHEAST ALASKA POWER AGENCY

AUDIT SERVICES MEMO

Date: March 25, 2019

To: Trey Acteson, CEO

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 February requested quotes for the fiscal years 2019, 2020 and 2021. Proposals were received from two of the three firms solicited, and a financial summary of their proposals is outlined below:

Audit Firm	FY2019	FY2020	FY2021	3-year total
BDO USA, LLP	$29,800	$31,000	$32,200	$93,000
Teuscher-Walpole, LLC	$27,000	$28,500	$30,000	$85,500

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. Teuscher's references include the City of Ketchikan and the Ketchikan Gateway Borough.

BDO's quote does not include the cost of state single (grant) audits, which would be an additional $2,500/year; however, there should be no need for a state single audit because remaining grant monies do not meet the required $750,000 single audit threshold.

Teuscher's discounted their fees for FY19 and FY20 and included a normalized audit fee beginning in 2021.

SUGGESTED MOTION
I move to authorize staff to engage with BDO USA, LLP for professional auditing services for Fiscal Year 2019 with options to renew for FY2020 and FY2021.

Teuscher-Walpole has the lower bid; however, staff recommends awarding the contract to BDO. SEAPA is looking at replacing Quickbooks with new accounting software and will budget for those changes in the FY2020 budget. The first year of switching to a new audit firm will also generate more work for SEAPA staff as the auditors gain familiarity with the organization. The recommendation is based upon the desire to maintain continuity during an anticipated accounting software migration.

Agenda Item 5A

Consideration of Revised CY2019 Operations Plan

[A proposed revision of the CY2019 Operations Plan will be provided outside of the board packet pending receipt of information necessary for inclusion in the revision. Snow Survey Reports for Swan and Tyee Lakes, with data that will be included in the revision, are attached for board review.]

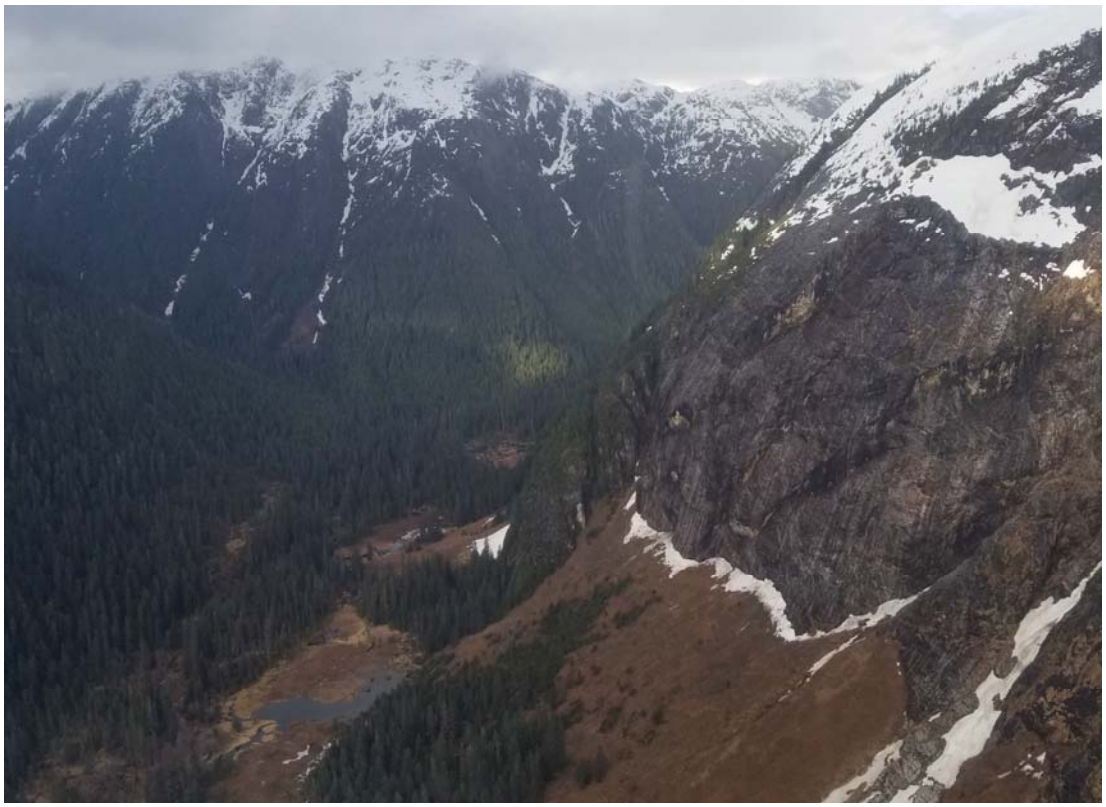
Southeast Alaska Power Agency
Snow Survey Report

2019 Spring Snow Survey

Date of Survey: 4/12/2019

Drainage Basin:

Swan Lake



Southeast Alaska Power Agency
Snow Survey Report

How Snow Surveys are Performed

SEAPA performs snow surveys typically at the beginning of every Spring during the month of April. There are 3 snow markers in the Swan Lake basin that are used to gauge the height of the snow when a snow survey is not possible due to weather conditions or other extenuating circumstances. Weather permitting, 3 to 5 measurements are taken at each snow marker location. Locations at Swan Lake include Swan Mountain, Mint Ridge and Lake Grace Pass.

Snow Depth is measured by pushing an aluminum tube though the snowpack to the ground surface and extracting a snow core. The depth of the snow and the length of the snow core are measured. The weight of the tube and core are also measured. With measurements of the empty tube known (and recorded), the weight of the snow core sample equates to 1 oz per 1 inch of water (calibrated). For example, 1 pound of measured snow is equal to 16 inches of water (rain equivalent). Dividing the snow water equivalent value by the measured snow depth results in a calculated density, which is used to determine variability across the snow course and quality control of the samples taken.

Snow Survey Sampling Tool

Southeast Alaska Power Agency
Snow Survey Report

Calculations for Snow Water Equivalent to Water in the Lake

The Swan Lake catchment basin is approximately 36 square miles or 23,040 acres. On average, Swan Lake has a surface area (top of the lake) of 1500 acres. The lake's surface area varies at different lake levels however this variance is considered nominal given the lake's small percentage of the total basin. Subtracting the lake's surface area from the total basin catchment area leaves approximately 21,540 acres of area for snow to accumulate.

Swan Lake Catchment Basin

Once the water snow equivalent has been calculated, the amount of water that will result as inflow into the lake and thereby increase the lake level is calculated. An average of the snow water equivalent is used from multiple sites on the snow course and calculated per the equations below:

Converting Acres to square feet:

$$acre = 43{,}560\ ft^2$$

Total area for snow to accumulate:

21,540 acres = **938,282,400 ft²**

Total area of lake:

1500 acres = **65,340,000 ft²**

Converting inches of Snow Water Equivalent (SWE) to cubic feet in basin:

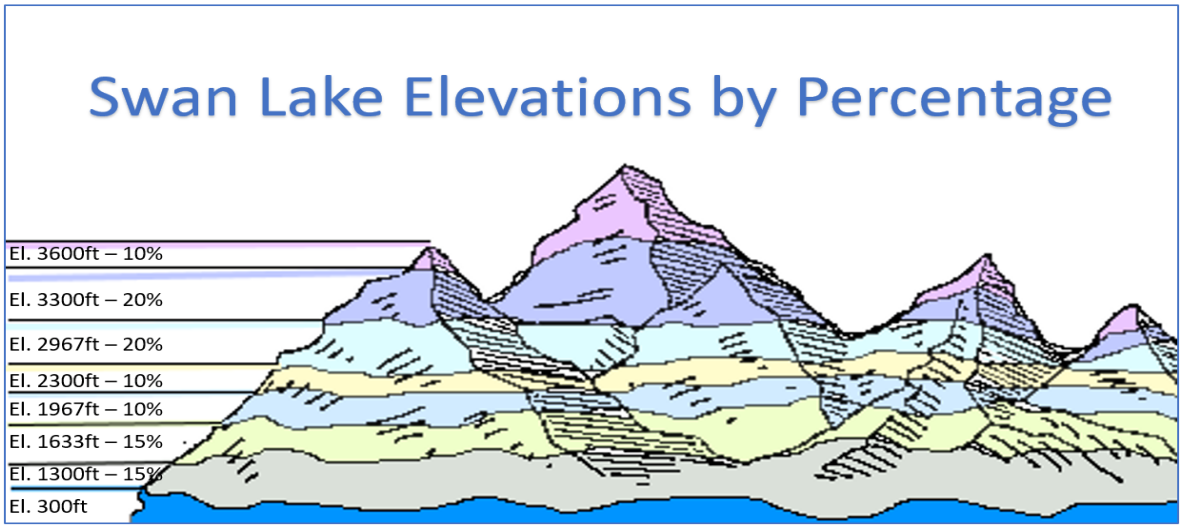
$$\text{1 inch SWE} = \frac{938{,}282{,}400\ ft2}{12in\ SWE} * 1ft\ SWE = \mathbf{78,190,200\ ft^3\ per\ inch\ of\ SWE}$$

Converting cubic feet in basin to feet of water in the lake:

$$\frac{78{,}190{,}200\ ft^3}{65{,}340{,}000\ ft^2} = \mathbf{1.2\ ft\ of\ lake\ elevation\ per\ inch\ of\ SWE}$$

Southeast Alaska Power Agency
Snow Survey Report

Snow surveys are performed at discreet elevations and do not represent the entire catchment basin. It is therefore prudent to consider the elevation profile of the basin and consider the elevation at which snow is present. Below is an elevation profile of the Swan Lake catchment basin, which divides elevation profiles into percentages of the total basin area.



Another measurement taken during the snow survey is the elevation where snow is visually present. Using the elevation profile for the Swan Lake basin, a weighted percentage of total basin snow coverage is calculated. For example, if snow is not present below 1300 feet in elevation, only 85% of the basin is covered in snow (see elevation profile above). In addition, snow gradient as a function of elevation is also considered. On average, temperature decreases by 3-degrees per thousand feet in elevation. As a result, there is generally more snow at higher elevations and less at lower elevations. Snow surveys are therefore performed at approximately an elevation that is 50% of the total peak and near 50% of the elevation area profile. An average of the SWE at the snow survey locations results in an accurate average of the entire basin (minus elevations with no snow).

A final calculation is performed to forecast total sublimation of the existing snow over the snow melt season. Sublimation is a chemical process where a solid turns into a gas without going through a liquid stage. Anywhere from 10% to 40% of the drainage basins SWE can be lost to the atmosphere, and not end up in the lake. Forecasting sublimation is extremely challenging. Humidity, temperature, precipitation and direct sunlight all are contributing factors. As a conservative approach to forecasting sublimation, SEAPA uses the following percentage factors based on NOAA 3-month outlooks:

3-Month Forecast	Percent Sublimation
Warmer & Wetter	10.0%
Colder & Dryer	15.0%
Warmer & Dryer	20.0%

Southeast Alaska Power Agency
Snow Survey Report

General Information

Surveyor Name(s)	Weather	Water in streams	Evidence of Avalanche	Start of Snow Elevation
Siedman-Hammer	Overcast	Running	No	1800ft

Data Recorded

Date	Site	Sample #	Depth of Snow (Inches)	Length of Core (Inches)	Weight of Tube (lbs)	Weight of Empty Tubes	Water Content (Inches)	Density Percent
4/12/2019	Mint Ridge	1	29	25	5.5	4.8	11.3	39.0%
4/12/2019	Mint Ridge	2	36	25	5.5	4.8	11.2	31.0%
4/12/2019	Mint Ridge	3	37	25	5.5	4.8	11.1	30.0%
4/12/2019	Grace Pass	1	52	31	7.8	7.2	9.4	18.0%
4/12/2019	Grace Pass	2	50	45	8.3	7.2	17.5	35.0%
4/12/2019	Grace Pass	3	50	46	8.5	7.2	21	42.0%

Forecasted Water In Lake Equivalent

Average Snow Water Equivalent (SWE)	Sublimation & Snow Level Correction %	Total Water in Lake (Feet)	Year-to-Year Percent of Average
13.58 in	**80%**	**13.04 ft**	**43%**

Southeast Alaska Power Agency
Snow Survey Report

2019 Spring Snow Survey

Date of Survey: 4/12/2019

Drainage Basin:

Tyee Lake

Southeast Alaska Power Agency
Snow Survey Report

How Snow Surveys are Performed

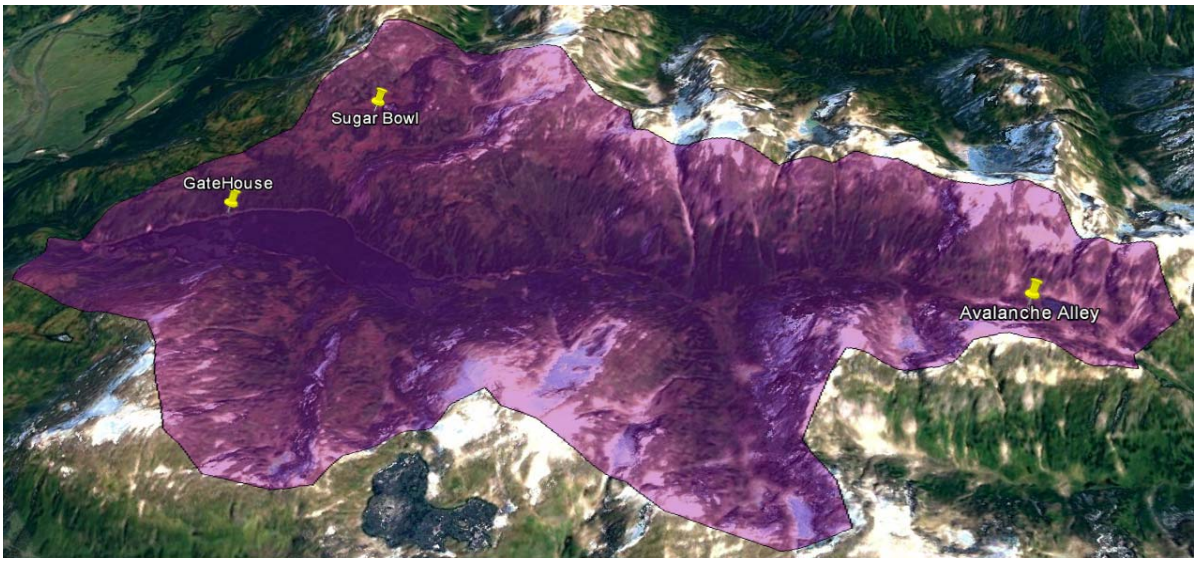
SEAPA performs snow surveys typically at the beginning of every Spring during the month of April. There are 2 snow markers in the Tyee Lake basin that are used to gauge the height of the snow when a snow survey is not possible due to weather conditions or other extenuating circumstances. Weather permitting, 3 to 5 measurements are taken at each snow marker location. Locations at Tyee Lake include the Sugar Bowl and Avalanche Alley.

Snow Depth is measured by pushing an aluminum tube though the snowpack to the ground surface and extracting a snow core. The depth of the snow and the length of the snow core are measured. The weight of the tube and core are also measured. With measurements of the empty tube known (and recorded), the weight of the snow core sample equates to 1 oz per 1 inch of water (calibrated). For example, 1 pound of measured snow is equal to 16 inches of water (rain equivalent). Dividing the snow-water equivalent (SWE) value by the measured snow depth results in a calculated density, which is used to determine variability across the snow course and quality control of the samples taken.

Snow Survey Sampling Tool

Calculations for Snow Water Equivalent to Water in the Lake

The Tyee Lake catchment basin is approximately 15 square miles or 9,600 acres. On average, Tyee Lake has a surface area (top of the lake) of 359 acres. The lake's surface area varies at different lake levels however this variance is considered nominal given the lake's small percentage of the total basin. Subtracting the lake's surface area from the total basin catchment area leaves approximately 9,241 acres of area for snow to accumulate.



Tyee Lake Catchment Basin

Once the water snow equivalent has been calculated, the amount of water that will result as inflow into the lake and thereby increase the lake level is calculated. An average of the snow water equivalent is used from multiple sites on the snow course and calculated per the equations below:

Converting Acres to square feet:

$$acre = 43{,}560\ ft^2$$

Total area for snow to accumulate:

9,241 acres = **402,537,960 ft²**

Total area of lake:

359 acres = **15,638,040 ft²**

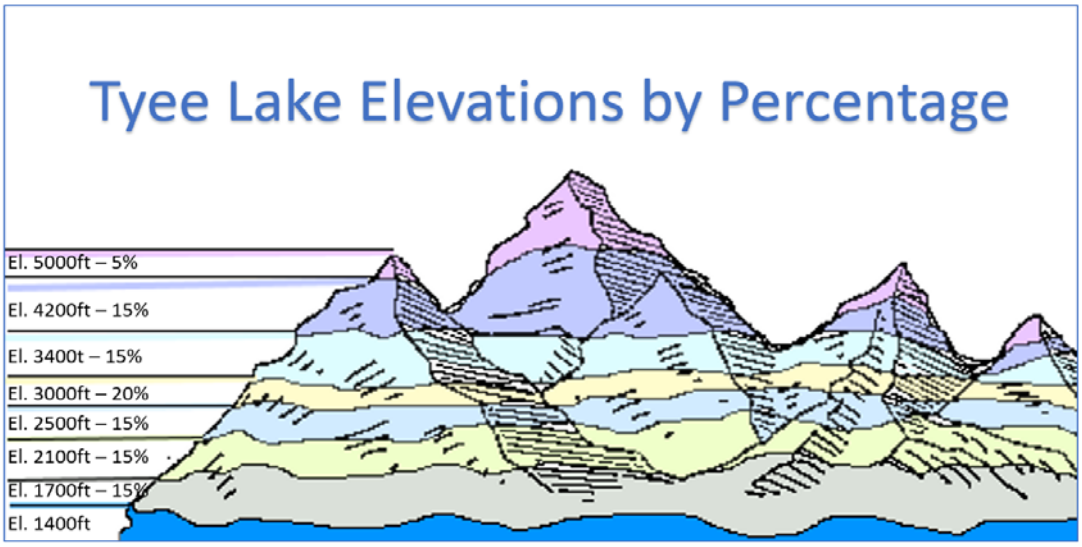
Converting inches of Snow Water Equivalent (SWE) to cubic feet in basin:

$$1 \text{ inch SWE} = \frac{402{,}537{,}960\ ft2}{12in\ SWE} * 1ft\ SWE = \mathbf{33{,}544{,}830\ ft^3\ per\ inch\ of\ SWE}$$

Converting cubic feet in basin to feet of water in the lake:

$$\frac{33{,}544{,}830\ ft^3}{15{,}638{,}040\ ft^2} = \mathbf{2.15ft\ of\ lake\ elevation\ per\ inch\ of\ SWE}$$

Snow surveys are performed at discreet elevations and do not represent the entire catchment basin. It is therefore prudent to consider the elevation profile of the basin and consider the elevation at which snow is present. Below is an elevation profile of the Tyee Lake catchment basin, which divides elevation profiles into percentages of the total basin area.



Another measurement taken during the snow survey is the elevation where snow is visually present. Using the elevation profile for the Tyee Lake basin, a weighted percentage of total basin snow coverage is calculated. For example, if snow is not present below 1700 feet in elevation, only 85% of the basin is covered in snow (see elevation profile above). In addition, snow gradient as a function of elevation is also considered. On average, temperature decreases by 3-degrees per thousand feet in elevation. As a result, there is generally more snow at higher elevations and less at lower elevations. Snow surveys are therefore performed at approximately an elevation that is 50% of the total peak and near 50% of the elevation area profile. An average of the SWE at the snow survey locations results in an accurate average of the entire basin (minus elevations with no snow).

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Warmer & Dryer	20.0%

Southeast Alaska Power Agency

Snow Survey Report

General Information

Surveyor Name(s)	Weather	Water in streams	Evidence of Avalanche	Start of Snow Elevation
Siedman-Hammer	P. Cloudy	Partial Frozen	No	1800ft

Data Recorded

Date	Site	Sample #	Depth of Snow (Inches)	Length of Core (Inches)	Weight of Tube (lbs)	Weight of Empty Tubes	Water Content (Inches)	Density Percent
4/12/2019	Sugar Bowl	1	46	37	9.5	8.3	19.3	0.42
4/12/2019	Sugar Bowl	2	51	41	9.5	8.3	19.4	0.38
4/12/2019	Sugar Bowl	3	45	37	9.5	8.3	19.4	0.43
4/12/2019	Avalanche Alley	1	74	70	12.25	10.25	31.8	0.43
4/12/2019	Avalanche Alley	2	56	44	11.5	10.25	20.2	0.36
4/12/2019	Avalanche Alley	3	66	56	12	10.25	27.7	0.42
4/12/2019	Avalanche Alley	4	60	44	11.75	10.25	24	0.4

Forecasted Water In Lake Equivalent

Average Snow Water Equivalent (SWE)	Sublimation & Snow Level Correction %	Total Water in Lake (Feet)	Year-to-Year Percent of Average
23.11 in	**80%**	**39.76 ft**	**47%**

Agenda Item 5B

Consideration and Approval of Supplemental Diesel Costs for Reimbursement to Petersburg and Wrangell

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[Pending receipt of complete reimbursement requests, a summary of the diesel and overtime costs less kWh, will be provided outside of the board packet.]

Agenda Item 6
Next Special Board Meeting Date

This calendar is provided for the Board's convenience in selecting future special board meeting dates:

2019

January

S	M	T	W	T	F	S
		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

S	M	T	W	T	F	S
					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

S	M	T	W	T	F	S
					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

S	M	T	W	T	F	S
	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

S	M	T	W	T	F	S
			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

S	M	T	W	T	F	S
						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

S	M	T	W	T	F	S
	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

S	M	T	W	T	F	S
				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

S	M	T	W	T	F	S
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

S	M	T	W	T	F	S
		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

S	M	T	W	T	F	S
					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

S	M	T	W	T	F	S
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				