

# KPU



*Your Community, Your Utility*

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TRANSMITTAL MEMORANDUM
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**TO:** The Honorable Mayor and City Council

**FROM:** Karl R. Amylon, General Manager

**DATE:** March 10, 2021

**RE:** **Project Status Reports of the KPU Division Managers – February 2021**

Attached for City Council review are the project status reports of the KPU division managers for the month of February 2021. Should the City Council have questions regarding the division managers' reports, staff can respond accordingly.

**MANAGER'S REPORT**  
**SALES, MARKETING & CUSTOMER SERVICE DIVISION**  
**February 2021**

Verizon wireless new phone sales in February rose by 4%. Most new customers to Verizon were customers who ported from AT&T and GCI, and who chose to keep their old devices, but there were a number of people who chose to upgrade their phones to the more expensive Samsung and iPhone devices, particularly the iPhone 12. There were a significant number of people who needed technical help. KPU staff assisted as much as possible, but with the pandemic, hours of trouble-shooting in-office is not always possible or safe for an in-store environment, so several were referred to Verizon technical help desk for virtual assistance.

KPU's combined active and vacation-hold internet accounts for February fell for the first time ever, as businesses and residents canceled services they could no longer afford. Standalone, no-phone internet subscribers increased by 2% over the prior month, as additional customers cut the phone line in an attempt to save money. TV accounts remained flat. Several people transferred services from GCI, but current customers canceled cable in order to save money.

Division Manager Kim Simpson continues as Deputy PIO for the EOC, and Media Manager Abigail Stevenson continues as media manager for the EOC. Work consists of daily media releases, social media posts, flyers, traveler handouts, and PSA videos for the EOC. Media for February focused on Mask wearing, Staying Vigilant, and information Covid Vaccine appointments, as well as information on increased testing availability.

The KPUtv Crew filmed the 2021 Wearable Arts pieces at the Ward Cove Dock Visitor's Center location. Thirteen artists and sixteen youth were filmed using multiple cameras and a drone. Four KPU staff assisted with the production as well as KAAHC staff, and Shauna Lee from Ward Cove Dock group. The hours of film will be compiled into a "virtual" Wearable Arts Show that the Arts Council will be able to sell through a paywall. KPU will also receive rights later to show the film. A new show on wellness "Wet Weather Wellness" was produced demonstrating how to stay mentally fit in SE Alaska, as was a Main Street Minute featuring mask artistry at KAAHC. Other events were Cape Fox proclamation signing, and Behind the Scenes with First City Players. KPU was able to successfully livestream the Kayhi Basketball games, working with only one staff person, since there are no student workers available this year from

Kayhi. Lastly all Local City Council meetings, including budget meetings were live streamed to KPUtv, Facebook, and YouTube.

Work for several national awards was completed in the month of February. KPU applied for awards from NTCA for the marketing staff's Covid-Response in the community, for Hometown Media Awards for Overall Excellence in video programming, and for Covid-Response. Winners for these will be announced later this year.

# **MANAGER'S REPORT**

## **ELECTRIC DIVISION**

**February 2021**

### **Electric Shop and Meters**

- Meters. During the month, there were one hundred eleven (111) meter exchanges/installs:
  - Ninety-three (93) changes from manual meters to RFN (Radio Frequency Node) meters.
  - Nine (9) changes from PLC (Power-Line Carrier) meters to RFN meters.
  - One (1) change from RR (Radio Read) meter to RFN meter.
  - Three (3) PLC meter exchanges.
  - No changes from PLC meters to RR meters.
  - No changes from manual meters to PLC meters.
  - Five (5) manual meter exchanges.
  - No RF meter exchanges.
- Operations. Investigated, performed troubleshooting, and made repairs at KPU facilities:
  - Beaver Falls Powerhouse battery charger, DC power systems, and speed switch circuit paths.
  - Beaver Falls No. 3 alarms and drainage issues.
  - Bailey Powerhouse exhaust fans.
  - Ketchikan Powerplant RTU power systems.
  - Ketchikan No. 4 governor oil pumps and excitation system.
  - Ketchikan Substation voltage regulator controller.
  - North Point Higgins Substation batteries and chargers.
  - North Point Higgins No. 1 water jacket heater.
  - Port West DC charging system.
  - Whitman No. 1 and No. 2 excitation system and brushes.
  - Portable substation power connector and DC systems.

Continued the metering upgrade for the Yukon system with Eaton/Cooper. Removed holiday lighting, Service disconnects/reconnects, meter disconnects and reconnects, system print updates and station readings.

- SCADA. Operations. Investigated, performed troubleshooting, and made repairs at KPU facilities and equipment:
  - Lake level reporting for website.
  - NOAA system reporting.
  - System firewalls.
  - Ketchikan Lakes reporting system.
  - System and vehicle radios systems.

Installed new SCADA data points for the UV facility and security monitoring hardware.

SCADA file server maintenance, system password verifications, and NTP server configurations. Supported SCADA upgrade meetings. Coordinated and worked with the electric shop on SCADA networks. Continuing training in the SCADA system. Records management activities and SCADA upgrade planning.

- Water Department. Investigated, performed troubleshooting, and made repairs to UV systems, Highland Pump Station alarms, Carlanna Lake level system, Chlorinator No 2. Flow meter, and Water facility lights.
- Harbors. Cleared six (6) harbor trouble tickets and investigated, performed troubleshooting, and made repairs for harbor power systems.
- Telecommunications. Investigated, performed troubleshooting, and made repairs to facility lighting.

## **Outages and Events**

- On Sunday, January 31, 2021, at 9:24 PM, an outage affected electric services north of Ward Cove. The result of the outage was a 34.5kV insulator failure and pole fire near 9200 North Tongass. Due to the location of the failure, repairs were difficult; this event required an extended outage and rotating blackouts for customers serviced from the North Point Higgins Substation. Initially 1811 customers were affected by the outage. The system was fully restored on February 1, 2021 at 8:50 AM.
- On Wednesday, February 24, 2021, at 5:18 PM, an outage affected electric services in Forest Park and three KPU substation. The outage was caused by a failed power pole due to snow loading in Forest Park and a windblown tree into the 34.5kV line near Herring Cove. KPU operators and crews identified the issue and began repairs. Initially 2,228 customers were affected by the outage. Within three hours thirty-seven minutes (3:37), power was restored to all customers.

## **Powerhouse & Fleet Maintenance**

### **Ketchikan Hydro Project**

- Rebuilt Unit 4 governor gear box
- Inspected Unit 5 bearing clearances
- Repaired powerhouse exterior siding

### **Beaver Falls (Silvis) Hydro Project**

- Replaced Unit 1 felt oil seals
- Reset and restored power after facility blackout during system outage event

### **Whitman Hydro Project**

- Replaced Unit 2 bearing oil
- Troubleshoot Unit 2 bearing oil cooler
- Repaired facility floor drains
- Repaired pressure reducing & relief valve

### **Bailey Powerhouse**

- Posted Request for Proposals (RFP) to replace BAG3 pistons summer 2021
- Diesel generator support during outage events
- Performed cold weather service on generator radiators
- Pressure tested fuel transfer line
- Serviced facility air compressors
- USCG inspection of spill prevention plan / SPCC and response equipment
- Replaced louvers
- BAG2
  - Serviced air cleaners
- BAG4
  - Continued grinding/machining spare cylinder heads

#### North Point Higgins Substation

- Pressure tested Cat generators cooling systems

#### Facilities

- Provided snow plow assistance for Linecrew during outage events
- Snow & ice removal
- Test ran UV facility's generator
- Test ran chlorination building generator
- Repaired Transformer Shop roll-up door
- Relocated refurbished Mobile Substation from Bailey to covered storage facility on North Tongass
- Weekly hydro plant checks

#### Fleet

- Replaced boom hydraulic lines on Water Division's 780
- Repaired forklift
- Troubleshoot flatbed truck start issues
- Myriad of other vehicle maintenance tasks

### **Regulatory and Dam Safety**

#### Bailey Powerhouse

- Prepared and filed with ADEC/EPA: Annual Compliance Certification, Facility Operating Report, triennial Emissions Inventory

#### North Point Higgins Generating Station

- Prepared and filed with ADEC: Annual Operating Report

#### Beaver Falls FERC Relicensing

- Reviewed Draft Road Condition Assessment

#### Whitman Lake Hydroelectric Project

- Prepared and filed 2020 Biotic Monitoring Report with FERC and resource agencies.
- Prepared and filed WY2020 Whitman Creek Stream Gage Report with FERC and resource agencies.



## SEAPA

- There was a regular board meeting on February 26, 2021 via videoconference. The meeting covered financial reports, Roadless Rule update, a brushing contract, R&R Capital improvement projects review and approvals, Operations Plan update, CEO report, and staff reports.
- The next regular board meeting is scheduled for May 13, 2021 via videoconference; due to current Covid-19 conditions, meetings are via videoconference.
- For additional information please visit SEAPA's web site at: <https://www.seapahydro.org/>

## Transmission & Distribution Work

- Replaced damaged double-circuit pole (12.47kV & 34.5kV) during an outage event on North Tongass Hwy
- Installed new three-phase service on North Tongass Highway
- Installed new pole and LED light over the cross-walk on Schoenbar Road at the Valley Park school building
- Installed spare Ketchikan Substation voltage regulator
- February saw four (4) days with winds of at least gale force, gusting as high as 54 mph. One (1) of those storm days caused events affecting the electrical system.



Pole Replacement on North Tongass Hwy



Three-phase service installation, North Tongass Hwy



Installation of new pole & LED light over cross-walk at Valley Park school building on Schoenbar Road



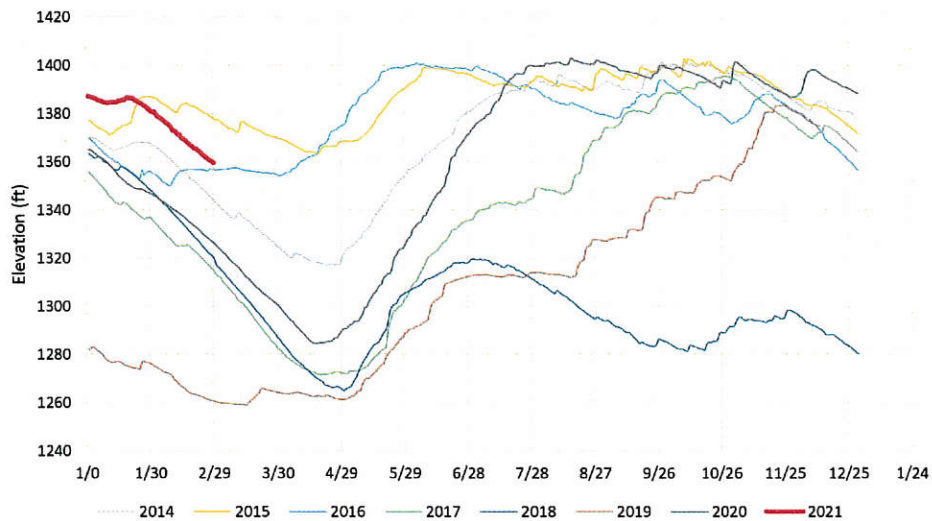
Spare 12.47kV voltage regulator, Ketchikan Substation



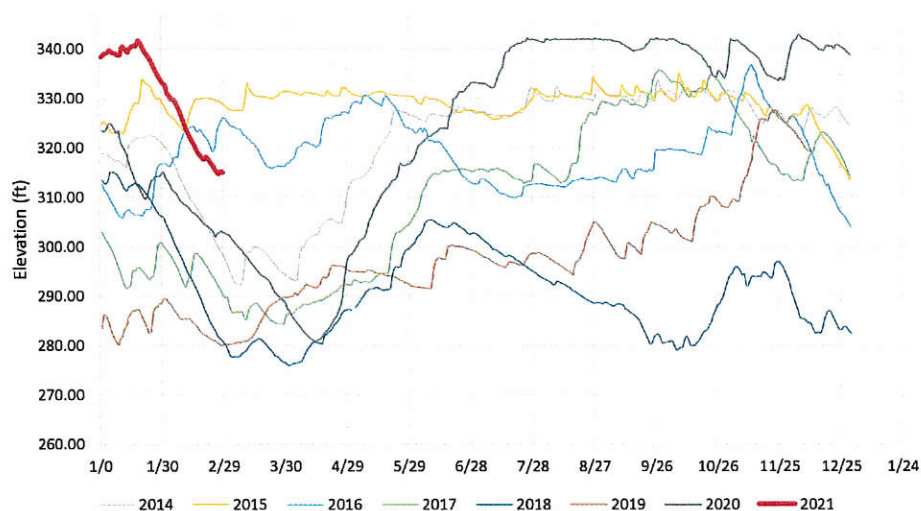
## Water Management/Diesel Supplement

- Load wise, February 2021 finished 2<sup>nd</sup> highest in 10 years. The average for a February is 16.2 GWh, with this February finishing at 17.3 GWh. Winter loads are very much dependent on temperature and temperatures this February were much colder than the norm of 36 degrees. Generation wise compared to last year, we are about 0.5 GWh above last year's record pace.
- Precipitation for the month was slightly less than average. An average February in Ketchikan, brings about 12 to 13 inches in precipitation. This February brought around 10 inches. Despite this, lake levels remain in great shape considering we're 2 months away from the annual thaw.
- Diesel generation for the month was small, limited to only short runs necessary to restore power from two outages. Diesel generation for February was only 42 MWh.
- Lake levels and "net" generation are shown in a separate report.

Tyee Lake Levels



Swan Lake Levels



MANAGER'S REPORT  
TELECOMMUNICATIONS DIVISION  
February 2021  
Operational Issues

**TELECOMMUNICATIONS DIVISION MANAGER**

**KetchCan1:**

The undersea cable network continues to perform flawlessly.

**Personnel:**

Several 'outside plant' positions remain vacant, including the Plant Manager, OSP Foreman, and one Combination Technician. Because there has been no corresponding decrease in workload, we are mitigating the vacancies via overtime. Accordingly, our overtime hours are roughly double / compared to periods wherein we have been fully staffed. The Telecom Accounting Technician position remains vacant (and will remain so subject to COVID related budget issues). The Accounting Technician's duties have been spread over a variety of staff members – all of whom have accommodated the increased workload via a good deal of extra effort (due to the many time-sensitive / calendar-date issues associated with many of their duties). Their extra efforts are very much appreciated.

**Service Order Activity:**

As was the case in January – in February, despite COVID, service-order activity remained active and we once again experienced a net-gain of new customers – with positive net-growth in TV and Internet accounts.

In summary, service order activity has remained active, steady, with no apparent decrease in customer demand.

**REGULATORY UPDATE**

Summary

As discussed below, the Emergency Broadband Benefit Program will provide qualifying households discounts on their Internet Service bills in the amount of \$75.00 per month. Qualifying households include existing low-income lifeline customers including Medicaid and SNAP; households with children receiving free and reduced-price lunch or school breakfast; Pell grant recipients; and those who have lost jobs and seen their income reduced in the last year.

Other regulatory issues of interest are as follows:

On February 25, the FCC unanimously adopted a Report and Order that established the Emergency Broadband Benefit Program, a \$3.2 billion federal initiative to help lower the cost of high-speed internet for eligible households during the on-going COVID-19 pandemic. Congress, in the Consolidated Appropriations Act of 2021 created the Emergency Broadband Benefit Program. The program will continue until funds are exhausted or six months after HHS declares the end of the COVID-19 Health Emergency.

Reports and filing:

**Biannual FCC Form 477**

KPU filed the FCC Form 477 on February 11, 2021. This information is used to measure broadband deployment and telephone competition by census tract. Those who must file include

facilities based providers of broadband connections to end user locations; providers of wired or fixed wireless local exchange telephone service; providers of Voice over Internet Protocol (VoIP) Service; and facilities-based providers of mobile telephony service. The FCC Form 477 is filed directly with the FCC.

#### **Biannual SA 1-2 Short Form**

KPU filed the statement of account and submitted royalty fees for the license to provide secondary transmissions of copyrighted works through the KPUTV cable system. The SA 1-2 Short form is completed semi-annually and submitted to the Licensing Division of the Copyright office. Royalties are paid via wire transfer directly to the U.S. Treasury.

#### **Annual Broadband Geolocation Reporting**

KPU Telecommunications filed their Broadband Geolocation Reporting on February 24, 2021. This is required by the FCC for all companies who receive High Cost support. The Broadband Geolocation filing is made to the Universal Service Administrative Company (USAC).

#### **Annual Middle Mile Reporting**

KPU filed their initial reporting of geolocation points of specific links and nodes within the serving area on February 25, 2021. The middle mile Geolocation filing is made to the Universal Service Administrative Company (USAC).

### **TELECOMMUNICATIONS PLANT DEPARTMENT** Summary

#### **Outside Plant Construction and Splicing:**

Projects Completed in February 2021:

- Subsea fiber remediation complete. Final fiber testing to be completed March 8
- Evergreen Terrace fiber design completed
- ESRI software initial installation and design for Telecom
- Ward Cove cell site fiber design completed
- KIC Senior Housing and Pioneer Heights copper projects completed
- Two pole fixes and a very heavy month of drop repairs due to weather storms.

#### **Installation and Repair:**

- The installation and repair crews completed:
  - 68 service orders
  - 93 trouble tickets
  - 12 fiber drops

2021	Jan	Feb
SO	62	68
TT	110	93
FD	29	12
Total	201	173

<b>OSP Installation &amp; Repair Scorecard:</b>	<b>SO</b>	<b>TT</b>	<b>FD</b>
Month of: February 2021			
Employee			
Brad C.	1	34	0
Ricky M.	2	0	0
Ryan J.	19	20	1
Roger M.	21	21	2
Alan M.	25	18	0
Line Crew	0	0	9
<b>Total</b>	<b>68</b>	<b>93</b>	<b>12</b>

### **Safety:**

Due to meeting restrictions and the ESCI safety instructor cancellation caused by the Covid-19 environment, the safety/staff meeting was canceled during February.

## **TELECOMMUNICATIONS ENGINEERING DEPARTMENT**

### Summary

### **Engineering:**

- 4G/LTE
  - Hospital Cell site revised completion date end of March
  - No KPI misses for month of February
- IP Engineering
  - Adtran Network Performance Testing solution VM's completed
  - Adtran SmartRG performance routers upgraded and registered to the cloud
  - Adtran FCC compliance cloud reporting software testing 50% completed
  - Vectra implementation project 70% complete
  - Extrahop advanced training
  - Woodside MDU project started
- Video Engineering
  - Minerva M10 migration goal estimate at mid-April
  - Minerva M10 DHCP servers completed and STB testing in-progress
  - Additional receiver installations due to realignment of satellite feeds to 5G
  - Rebuild of video monitoring channel completed
  - HITS channel network migration project started
- Voice Engineering
  - Oracle Communications Operations Monitor of ACME data project 50% complete
  - Broadworks Softswitch patch upgrade to all 12 servers completed
- Systems Engineering
  - Minerva M10 system support and configuration
  - DNS server rebuild with SCN Research in-progress
  - Technical setup and assistance for WebEx interviews

- Facility
  - Completed datacenter infrastructure migration to a new rack in the Main CO
  - Completed AFC migration at Forest Park to Adtran
  - Completed turn-up and provisioning of new fiber chassis at Forest Park
  - Replaced failed CER distribution router at Mountain Point

**Service Delivery & Network Operations:**

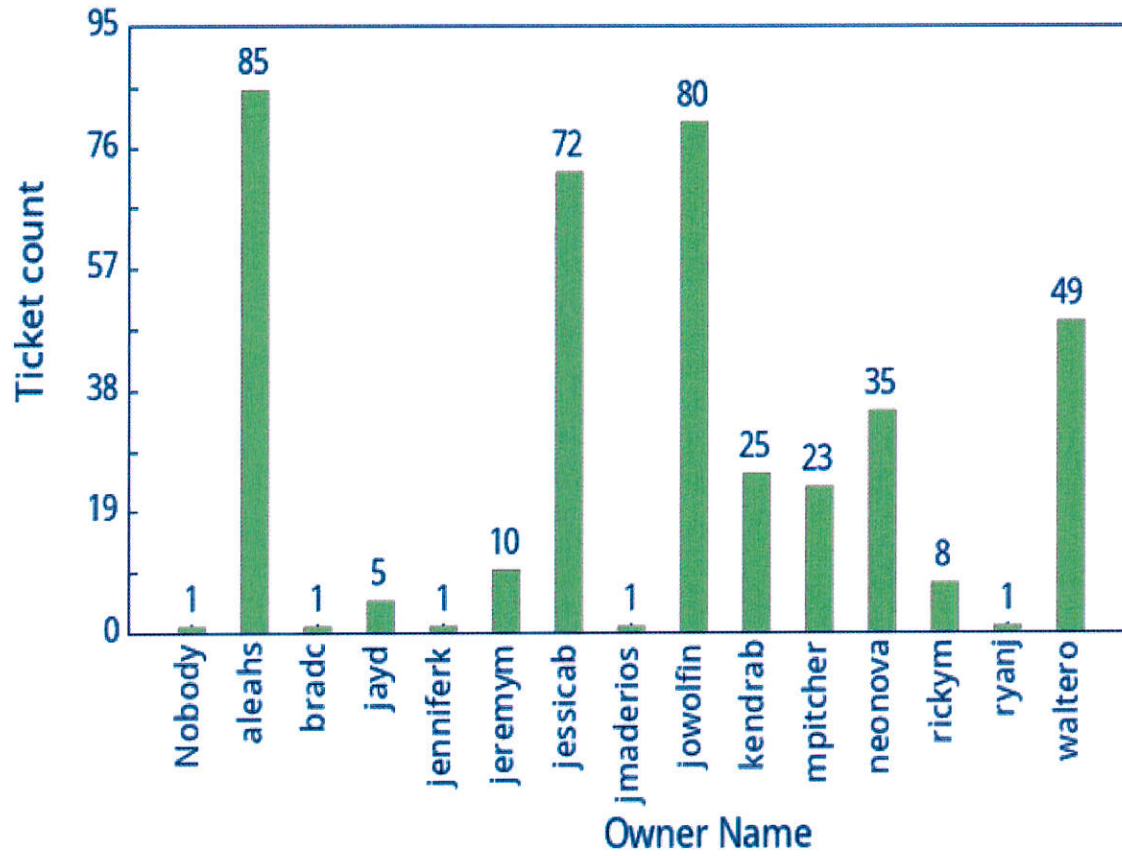
- 61 Resolved PBX tickets
- 28 installs total completed
- Cape Fox and Landing preliminary IPTV surveys
- 402 Madison MDU install (4-Plex Residential)
- Harbormaster Condos – 2 fiber installs
- DMV site survey
- SEAPA/Tyee hosted service install
- Eagles IPTV install
- Fire Station 1 switch upgrade

**Customer Support:**

- Total Calls to Support Line 225-2111 = 435
- Calls forwarded to NeoNova 984-244-5721 = 186
- Calls Answered by Customer Support = 249



## CSS Overview:



Owner Name	Ticket count
Nobody	1
aleahs	85
bradc	1
jayd	5
jenniferk	1
jeremym	10
jessicab	72
jmaderios	1
jowolfin	80
kendrab	25
mpitcher	23
neonova	35
rickym	8
ryanj	1
waltero	49
Total	397

## Total CSS Calls:



USER	RECORDED CALLS	DURATION (HOURS)
Aleah Lorenson	294	11
Jessica	381	15
Jo Ann	660	51
Kendra	443	31
Walter	254	19

**MANAGER'S REPORT  
WATER DIVISION  
February 2021**

**FILTRATION AVOIDANCE**

On April 16, 2020 Ketchikan sent a proposal outline to the Alaska Department of Environmental Conservation (ADEC) that meets the Federal criteria for the submission of a Limited Alternative to Filtration (LAF) and has asked ADEC for their approval before making the LAF submission. As noted, the LAF must address two elements of the water supply; the disinfection treatment process, and the source raw water quality including the surrounding control of the watershed. In addition, the LAF requires that the disinfection treatment process provide greater removal and/or inactivation of regulated microbial contaminants and organisms including cryptosporidium oocysts, giardia lamblia cysts, and viruses than would be achieved by a combination of filtration with chlorine disinfection alone.

However, since the LAF only appears in the federal Safe Drinking Water Act, as reauthorized in 1996, and doesn't also appear in the Federal Regulations, Part 141 National Primary Drinking Water Regulations, the matter is complicated as there is no guidance on how to implement a LAF. Fortunately, the State of Washington Administrative Code does include the necessary language allowing implementation of this provision and a LAF was granted to the City of Seattle for their Cedar River project. The State of Alaska has already prepared a draft LAF implementation document with similar provisions although it has not been adopted.

As mentioned in January's report, ADEC submitted a query to the EPA asking if KPU's 2019 raw water fecal coliform exceedance could be considered an "unusual and unpredictable event". The thought being that if the exceedances could be identified as such, then ADEC's November 20, 2019 letter which notified Ketchikan that it had failed to meet the criteria for avoiding filtration regulations as specified in the Safe Drinking Water Act, would no longer be applicable. Unfortunately, raw water fecal coliform exceedances are not addressed in this manner in the Code of Federal Regulations (CFR) and the request was denied by the EPA.

Further progress towards negotiation of a LAF has been slow. As noted earlier, the final decision will be made by EPA Headquarters in Washington D.C., and their responses thus far have not been favorable towards the issuance of a LAF. However, the EPA has also informally confirmed that issuance of a variance is not an option to pursue further which leaves a LAF as the solution originally requested by KPU. Consequently, ADEC is beginning preparation of another Compliance Order by Consent (COBC) which will undoubtedly require new actions and expenditures by KPU.

Since the EPA interprets the Federal Statutes to require that Ketchikan must have consolidated ownership of the watershed, legal arguments will be needed that include the 1939 Congressional Act setting aside the watershed as a municipal water-supply reserve for the citizens of Ketchikan as well as acknowledgement of this watershed by other Federal Agencies whose lands encompass Ketchikan's watershed including the Bureau of Land Management and the United States Forest

Service. The COBC will establish milestones for ADEC's granting a LAF including providing evidence of consolidated ownership and control of the watershed. In the meantime, work is continuing on a study requested by ADEC and the EPA to begin a desktop study documenting the potential causes and future developing trends of Ketchikan Lakes raw water fecal coliform colony levels. The study will also need to include any recommended changes to our Watershed Control Program to mitigate future exceedances of the permissible levels of raw water fecal coliform colonies.

## **DISINFECTION BYPRODUCTS SAMPLING**

When the EPA's Stage 2 Disinfection Byproducts Rule (Stage 2 DBP Rule) went into effect in October 2013, the required DBP sample points changed. The month that the samples must be collected is now specified and KPU can no longer average the results over the entire distribution system. Instead each sample point (identified as Sites 5 and 8 on the attached Table I) must stand on its own merits and when averaged over the mandatory February, May, August, & November samples, these become the official results that are measured for compliance and must unequivocally be below a 60 parts per billion (ppb) average for haloacetic acids (HAA5) and 80 ppb for total trihalomethanes (TTHM). Compliance with the Stage 2 DBP Rule is determined by the locational running annual average (LRAA) of the previous four quarterly samples from each site.

Beginning June 2016, by reducing the amount of chlorine at the Chlorination Plant, then adding just enough chlorine at the Two-Point Facility to form monochloramine after adding ammonia has had the effect of almost completely quenching further formation of haloacetic acids within the distribution system. In addition, after the higher than expected HAA5 results occurred last August, KPU has continued to take extra care to ensure the effect of a reduced initial chlorine residual set point was thoroughly distributed throughout the water system before collecting February's samples for HAA5 analysis. As a result, for the past 4 years Ketchikan has remained in compliance with the Stage 2 DBP Rule for both haloacetic acids and total trihalomethanes.

By keeping the chlorine residual set point as low as practical along with the month of February generally having the coldest water temperature with the least amount of dissolved organics present, the result was February's quarterly haloacetic acids (HAA5s) results for both Sites 5 & 8 are amongst the lowest ever measured for this month. As illustrated in Table I, the analytical results were 33 ppb and 33.3 ppb, respectively. The present LRAA for haloacetic acids at Site 5 is 46.3 ppb and for Site 8, 50.1 ppb and continue to maintain the LRAA within the same allowable range that it has been since May 2017. While not part of the EPA regulatory requirements, KPU also samples the disinfected water leaving the Bear Valley Reservoir before it enters the municipal distribution system for our own information. It too was quite low at 26 ppb

## **OPERATIONAL ISSUES**

### **Contract 19-45 - Schoenbar Raw Water Transmission Main Design**

DOWL Engineers, who have already completed the earlier design work for the replacement for Schoenbar Road's distribution water and wastewater mains are now designing a replacement for the failing portion of the 36-inch raw water transmission main in Schoenbar Road. It will be a single, permanent 42-inch HDPE pipeline to be located between the southwesterly edge of Norman Walker Field (adjacent to Park Avenue parking area), and the Ketchikan Charter School. Beginning at the westerly edge of Norman Walker Field, it will cross above Schoenbar Creek adjacent to where Schoenbar Creek's 96-inch multi-plate culvert begins, and then remain buried under Schoenbar Middle School's driveway, passing beneath the School District's Maintenance Shop parking area and the Ketchikan Charter School's playground before reconnecting to the remainder of the existing raw water transmission main.

Authorization has already been received from the City Council to seek property easements for the proposed alternative alignment from the Ketchikan Gateway Borough (KGB) and the School District. In early December DOWL completed the necessary easement drawings which have been discussed with KGB and School District representatives and the metes and bounds descriptions for these easements have been prepared by DOWL for transmittal to the property owners. If satisfactory, the easements will next be considered as action items for approval by the KGB Assembly and the School District.

### **Contract No. 20-24 - Materials Procurement – Schoenbar Road HDPE Raw Water Connection Points**

The ADEC Drinking Water Loan that is providing the financing for this project includes the Buy American requirement for all iron and steel products. Now that DOWL has completed the final details for their design of the upstream and downstream 42-inch HDPE connection points, KPU began discussions with potential vendors for the materials that are needed to construct these two connection points and comply with the Buy American requirement. From their responses, it has become apparent that there are a number of long-delivery items needed. Their estimated deliveries in Ketchikan are all between 20 – 26 weeks after receipt of order which is equivalent to arrival in mid-2021.

Besides the six 42-inch butterfly valves, there are also twelve heavy 42-inch ductile iron fittings needed with a combined weight of almost 22 tons. Most of these fittings will be used in assembly of the two connection points although four fittings will be assembled later as the 42-inch HDPE raw water main is constructed. These fittings are necessary to construct an above-grade, self-supporting, 36-inch ductile iron crossing of Schoenbar Creek adjacent to the Schoenbar Middle School driveway. The reason for using ductile iron here is any driver who is attempting to safely



turn left and enter Schoenbar Road from Schoenbar Middle School's driveway needs to have a clear view of any on-coming traffic. Had HDPE pipe been chosen instead for the crossing, it would have also required a large overhead steel support structure and obstructed the driver's view.

Contract 20-24 for these items was awarded to the firm of Core and Main in the amount of \$537,117 by affirmative action by the City Council at their December 3<sup>rd</sup> Council Meeting. Submittals for the valves and fittings have been received and all are now approved for construction.

### **Contract 20-25 – Continuation of Water Meter Design / Build - Business & Commercial Customers**

Ketchikan Mechanical Inc. (KMI) was awarded Contract 20-25, the installation of another 50 water meters using the same design-build contract method as before, by the City Council on February 4<sup>th</sup>. KMI will conduct individual audits of each of the businesses that were identified in the Bid Documents and from these audits, the contractor then prepares a simplified design for each individual meter installation for review and approval by KPU. After KPU's approval is issued, the contractor begins installation of the new meter. This step-by-step method of installing water meters has proven to be entirely satisfactory for everyone involved.

As before, this contract was limited in size to allow everyone involved to both gain further experience and to obtain better knowledge of the difficulties that are encountered while installing individual meters. These meters will be installed primarily within the downtown core, the oldest part of the City. These hundred-year-old buildings on pilings have been remodeled, partitioned, and subdivided many times without a great deal of planning. Consequently, individual water services now likely are serving multiple owners and installing appropriate meters will be challenging. As an example, the entire Heckman block from Dock Street to Mission Street only has one water service and is subdivided into two separately owned parcels. Fortunately, we've already metered that building but the owners will have to decide how to apportion the water and sewer bills to their individual renters in the future.

Achieving the goal of having all of these business and commercial buildings and large residential apartment complexes fully metered before the end of 2022 will still require continued significant effort as there are still approximately 225 unmetered businesses and large apartment buildings remaining. In addition, the 2016 Water/ Wastewater Rate Study will need to be updated as well as amendments made to the Ketchikan Municipal Code.

TABLE I

HALOACETIC ACID & TOTAL TRIHALOMETHANE ANALYSIS  
STAGE 2 DISINFECTION & DISINFECTION BYPRODUCTS RULE

DATE	No. 2 Fire Station 3352 Tongass Ave. (Site 8 - High TTHM)		Buren & Bailey Boulevard (Site 5 - High HAA5)		Bear Valley Reservoir Special Purpose Samples	
	HAA5 formation, ppb	TTHM formation, ppb	HAA5 formation, ppb	TTHM formation, ppb	HAA5 formation, ppb	TTHM formation, ppb
8 April 2014	Chloramination Disinfection Begins Two-Point Chlorination Begins Chlorine Residual Setpoint Reduced from 0.7 to 0.4 mg/L					
14 June 2016						
January 2020						
6 May 2020	39.0	23.9	32.4	19.8	24.8	15.8
18 Aug. 2020	84.5	49.2	78.8	52.2	77.9	37.1
9 Nov. 2020	43.6	29.9	41.1	24.8	33.6	18.8
1 Feb. 2021	33.3	21.0	33	22.0	26	15.9
Four Quarter Running Annual Average at Individual Sites	50.1	31.0	46.3	29.7	40.6	21.9

Second Quarter Sample

Third Quarter Sample

Fourth Quarter Sample

First Quarter Sample