

KPU



Your Community, Your Utility

General Manager
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5b(1)

TRANSMITTAL MEMORANDUM

TO: The Honorable Mayor and City Council

FROM: Karl R. Amylon, General Manager

DATE: August 16, 2019

RE: **Authorizing Budget Transfer – July 12, 2019 Schoenbar Water Main Repairs**

The motion detailed below was prepared at the request of Water Division Manager John Kleinegger, who asked that it be placed before the City Council for consideration at its meeting of September 5, 2019. If adopted, the motion provides for authorizing a budget transfer in the amount of \$125,240 from Appropriated Reserves of the Ketchikan Public Utilities Enterprise Fund to various accounts within the Water Division's 2019 Operating and Capital Budget to fund the cost of repairs that were incurred as a result of the July 12, 2019 Schoenbar water main break. The rationale for the budget transfer is detailed in Mr. Kleinegger's transmittal memorandum and requires no elaboration on the part of my office. I concur with the Water Division Manager's recommendation.

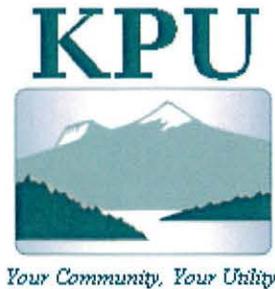
Mr. Kleinegger will be attending the City Council meeting of September 5, 2019, in order to address any questions and/or concerns that Councilmembers may have.

A motion has been prepared for City Council consideration.

RECOMMENDATION

It is recommended the City Council adopt the motion authorizing the General Manager to transfer \$125,240 from Appropriated Reserves of the Ketchikan Public Utilities Enterprise Fund to various accounts within the Water Division's 2019 General Operating and Capital Budget as detailed in the Water Division Manager's report of August 6, 2019 to fund the cost of the July 12, 2019 Schoenbar water main repairs.

Recommended Motion: I move the City Council authorize the General Manager to transfer \$125,240 from Appropriated Reserves of the Ketchikan Public Utilities Enterprise Fund to various accounts within the Water Division's 2019 General Operating and Capital Budget as detailed in the Water Division Manager's report of August 6, 2019 to fund the cost of the July 12, 2019 Schoenbar water main repairs.



Water
2930 Tongass Avenue
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Memorandum

TO: Karl R. Amylon, KPU General Manager

FROM: John C. Kleinegger, Water Division Manager/Project Engineer 

DATE: August 6, 2019

SUBJECT: **Request for 2019 Budget Transfer from KPU Appropriated Reserves -
for the July 12, 2019 Schoenbar Road Water Main Repairs**

On July 12th at 4:45 am, another major failure occurred to the 36-inch ductile iron water transmission main in Schoenbar Road between the Valley Forge intersection and the Ketchikan Charter School. This critical water transmission main transports water from the Chlorination Plant up to the UV Disinfection Facility and is the sole route supplying disinfected drinking water to the entire City.

Not only is this the third major failure that has happened since last October, only 19 days have elapsed since the last failure occurred on June 23rd. It is becoming readily apparent that this portion of the 36-inch ductile iron transmission main between the westerly edge of Norman Walker Field and the Ketchikan Charter School has reached the end of its useful life sooner than anyone expected. It is in dire need of replacement at least in this area of highly corrosive conditions existing beneath Schoenbar Road.

This time, it was not just a relatively small leak but a major rupture that flooded the street and hydraulically washed out the surrounding subsurface fill leaving a large crater. Before valves could be closed and the water main isolated at 5:30 am, the measured rate of flow was exceeding 14,500 gallons per minute (GPM). While the Bear Valley Reservoir had been quickly isolated, it was only about 2/3rd full leaving the community in a rather precarious situation with less than 3-million gallons stored and available between the Bear Valley and Jefferson Reservoirs.

Although necessary 36-inch repair parts had been ordered immediately in the aftermath of the June 23rd failure, they had only just arrived in Seattle. Being needed immediately, the only option was to air freight them to Ketchikan. This being Alaska Air Cargo's busy season, obtaining priority space on the aircraft required extensive efforts by the KPU Assistant General

Manager. Even so, the earliest the parts could arrive in Ketchikan was the afternoon of the following day. In the meantime, some repairs had to be attempted before the reservoirs were emptied and community was out of water.

The Alaska Department of Environmental Conservation (ADEC) had been advised at 9:30 am of the difficulty Ketchikan was in. Before the reservoirs went completely dry, the 16-inch emergency bypass at the Chlorination Plant would have to be opened. There would be sufficient water for everyone's daily needs, the water would still have chlorine added, but it would not have adequate contact time to disinfect and deactivate any pathogens that might be present. A "Boil Water" Notice was prepared that would be issued to advise everyone of the situation when the emergency bypass was opened. Fortunately, this wasn't needed and was confirmed with ADEC to conclude their formal notification process.

Since the correct repair fittings were in Seattle and wouldn't arrive until tomorrow, an improvised temporary solution had to be tried. After the new section of 36-inch pipe was installed in place, each connection was sealed by tightening a wide stainless band with an inner rubber liner around it. Refilling the 36-inch main began at 2:40 pm and although leaks developed, they were manageable, only 500 - 700 GPM. The UV Disinfection Facility was restarted and the Bear Valley Reservoir began being slowly refilled and by 7:35pm contained about 1.2-million gallons. The crisis had been averted.

KPU employees worked split shifts throughout the night into the morning to monitor the operating situation, ensuring that the temporary repairs didn't fail or the leaks worsen, and to keep the de-watering pumps fueled and operating. By 3:40 am, the Bear Valley Reservoir contained about 2.5-million gallons and was refilled by 9:00 am the following morning.

Crews began making preparations Saturday at noon for the arrival of the Alaska Air Cargo flight with the permanent repair parts. While one crew went to the Airport to pick up the parts, the second crew secured the UV Disinfection Facility, isolated the 36-inch main and drained it again. At 4:15 pm, they began removal of the temporary stainless steel repair bands and then lifted the new pipe section out to install the repair sleeves with their mechanical fasteners.

By 7:00 pm, the permanent repairs were complete and the 36-inch main began refilling. At 9:20 pm, the UV Disinfection Facility started and began refilling the reservoir. Although there was a minor leak at one repair sleeve, it wasn't significant. It was corrected the following Sunday morning by moving the repair sleeve slightly further onto the existing pipe and away from an irregular area that wouldn't seal.

Also on Sunday, after the pipeline was refilled and the newly installed pipe segment inspected for leaks before backfilling, the water meter at the Chlorination Plant was also checked. It showed zero flow indicating that there were no more active leaks within the portion of the 36-inch main between the Chlorination Plant and the UV Facility.

DOWL Engineers, who have completed the earlier design work for the Schoenbar water & sewer replacements, are now designing a replacement of the portion of the 36-inch ductile iron main in Schoenbar Road between the westerly edge of Norman Walker Field and the Ketchikan Charter

School. It would include a temporary 24-inch HDPE water transmission main to be built alongside the existing sidewalk from Walker Field to the Ketchikan Charter School along with a design for the replacement or slip lining of the failing 36-inch ductile iron main with HDPE pipe to be installed in the existing trench. The purpose of the temporary 24-inch HDPE main is to have a temporary alternate water route that will supply the water requirements of the entire community while the new 36-inch HDPE transmission main is being installed.

Right now, KPU has funding in place for the Schoenbar Road Water Main Replacement Project Schoenbar – Phase I (Drinking Water Loan 481151) at a project cost of \$1,591,967 that was ranked 2 on the ADWF SFY 2018 list with a subsidy of \$662,400. Although it was originally intended to replace a 12-inch cast iron main, replacing the 36-inch main is critically important as this is the sole water supply for the entire community. Discussions are ongoing with ADEC representatives to amend the terms of the Schoenbar Drinking Water Loan and fund the replacement HDPE main construction. However, the current repairs that were made to the 36-inch ductile iron main are considered by ADEC as a maintenance issue and are not loan eligible.

The total cost of the July 12th repairs amounts to \$125,240 and is detailed on the attached Budget Transfer Request. With five months still remaining in this fiscal year, the Water Division's 2019 Operating Budget doesn't have that amount available to provide the necessary funds and requests instead that it is provided from the KPU Appropriated Reserves.

Recommendation:

That the City Council authorize the KPU General Manager to transfer from KPU Appropriated Reserves the amounts of: \$26,120 to the division's Overtime Labor (Account 501.01); \$2,000 to Payroll Taxes (Account 505.00); \$4,220 to Pension (Account 506.00); \$530 to Workers Comp (Account 507.30) and \$92,370 to Infrastructure Maintenance Materials (Account 515.05).

CITY of KETCHIKAN
Budget Transfer Request

TO: General Accounting
City of Ketchikan Finance Department

DATE: August 05, 2019

FROM: Water Division

	<u>From Account Number</u>	<u>To Account Number</u>	<u>Amount (Omit Cents)</u>
A	520-999.00	520-5400-501.01	26,120
B	520-999.00	520-5400-505.00	2,000
C	520-999.00	520-5400-506.00	4,220
D	520-999.00	520-5400-507.30	530
E	520-999.00	520-5400-515.05	92,370

Purpose(s):

- A To cover Overtime Labor for the 7/12/19 Schoenbar Rd water main break
 - B To cover Payroll Taxes for the 7/12/19 Schoenbar Rd water main break
 - C To cover Pension for the 7/12/19 Schoenbar Rd water main break
 - D To cover Workers Comp for the 7/12/19 Schoenbar Rd water main break
 - E To cover Infrastructure Maint Materials for the 7/12/19 Schoenbar Rd water main break
- To cover costs of the 7/12/19 Schoenbar Road water main break, declared as a public emergency at the 7/18/19 City Council meeting.

Requested by: John Kleinegger

Approved by: _____
Department Head

Prepared by: Stan Aegerter

Approved by: _____
Finance Director

Approved by: _____
City Manager

Is Council Approval needed :
(check appropriate box)

NO

YES If yes, record date approved by Council
