



Engineering and Public Works Department
155 Heritage Way
Juneau, Alaska 99801
Telephone: 586-0800

DATE: April 15, 2024
TO: Wade Bryson, Chair
Public Works and Facilities Committee
THROUGH: Denise Koch, Director of Engineering and Public Works
FROM: Brian McGuire, Utility Superintendent and Chad P. Gubala, Ph.D., Utilities Plant & Treatment Manager
SUBJECT: CBJ 2025-2027 Potable Water Contingency Plan

Prior to AEL&Ps planned interruptions of raw water supply at the Salmon Creek facility, the CBJ will:

- 1.) Inspect, review, and remedy any known existing physical defects in the existing CBJ water treatment and distribution systems;
- 2.) Procure and store spare parts and supplies necessary to rapidly repair water treatment and distribution systems;
- 3.) Identify, review, and enforce remedy of all potable water leaks known to be occurring on private properties, particularly ones west of Salmon Creek;
- 4.) Coordinate with Capital City Fire and Rescue (CCFR) to identify areas that may be affected by limited water supply for fire suppression during the outage period. Mitigate water production and distribution vulnerabilities to the degree possible and develop communications and coordination protocols for addressing water supply management during fire suppression events;
- 5.) Coordinate with CBJ General Engineering to restrict/reschedule all projects that may require potable water usage (e.g. new water main installations, street paving, etc....);
- 6.) Improve and harden the command, control, monitoring, and emergency response technologies, capacities and procedures necessary to maintain the CBJ water treatment and distribution systems under prolonged raw water shortage periods;
- 7.) Extend access to the secure potable water SCADA system to provide CCFR and other emergency response services with real-time access to Water Utility system status;
- 8.) Conduct hydrodynamic testing of the existing water distribution system to determine the extent to which alternate pumping and pressurization strategies may help mitigate water shortages during emergency events;
- 9.) Review and improve provisions for a community-wide Emergency Water Supply (EWS) in the event of prolonged water outages,
- 10.) Investigate and develop other capabilities of supplementing potable water during AEL&P outage periods, including establishing a separate CBJ raw water line feed from the lower Salmon Creek drainage area and/or developing or reanimating new and/or existing groundwater well sources in the Mendenhall Valley area.

Pending ADNR approval, this may also include the possible use of surface withdrawal from Salmon Creek closer to its discharge point adjacent to Twin Lakes.

To compensate for the loss of raw water supply at the Salmon Creek Facility during AEL&P's penstock replacement program period(s), the CBJ Utility will:

- 11.) Increase withdrawal and treatment of water from the Last Chance Basin (LCB) well field to make up for the loss of water production at Salmon Creek.
 - a. Increase water pressure and flow through the existing distribution system that routes LCB water from downtown to the Valley, and
 - b. Turn on and divert additional water from LCB to Salmon Creek via Pump 4 to be fed into distribution system below SC and/or stored in the SC reservoir for high-demand response use.
 - c. Increase monitoring capability for LCB to provide for long lead time for any climate/hydrologic anomalies that might affect water production capacity.
- 12.) Limit and/or halt supply of potable water for non-essential use within the CBJ that may excessively affect the groundwater supply at LCB and/or levels within reservoirs servicing the Mendenhall Valley and 'out the road.'
 - a. Potentially halt bulk water sale of potable water supply from LCB to visiting cruise ships,
 - b. Restrict all bulk water use from hydrants west of Salmon Creek Street (e.g. street cleaning, etc....),
- 13.) Use Public Service Announcements and other community awareness tools as necessary to mitigate water demand during outage periods. This has been a successful approach in the past during short periods of dry weather when the water usage was outpacing water supply.

Under emergency circumstances, access and use any acceptable raw water flowing out of the AELP lower penstock as feed water for the treatment plant.