

# Community Update

## Kennecott Mill Site National Creek

National Park Service  
U.S. Department of the Interior

Wrangell-St. Elias National Park  
and Preserve

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### SITE BACKGROUND

Wrangell-St. Elias National Park and Preserve (WRST) encompasses nearly 13.2 million acres of land in southcentral Alaska and is part of a World Heritage Site. The Kennecott Mines National Historic Landmark (NHL) (Site) is located in WRST approximately five miles north of McCarthy, Alaska, and consists of a historic copper mill and associated mine facilities, buildings, and related historic features. Currently much of the Site is owned by the National Park Service (NPS) and is a popular tourist destination, where people come to visit the historic mill, mines and town. National Creek is a small perennial creek that flows through the center of the Site.

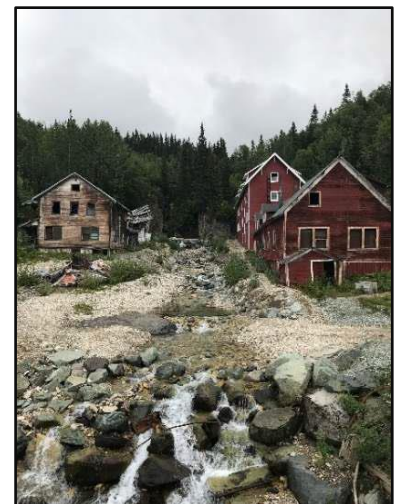


The Kennecott mines, mill, and related facilities were developed and operated by the Kennecott Copper Corporation between 1906 and 1938. The mill building, and later the leach plant, received and concentrated ore from the nearby mines. Today, the Kennecott Mines NHL primarily consists of historic buildings and other structures that were used to support the copper ore processing operations. These historic structures contained lead- and arsenic-based paint as well as asbestos used as insulation throughout the Site. The Site also was constructed over areas filled with mine and mill tailings from the operation. Since acquiring the Site in 1998, NPS has been stabilizing and rehabilitating the historic structures. While several of the historic buildings have been rehabilitated, others still have peeling lead-based paint. In addition, dust accumulation is an issue throughout the Site. NPS's rehabilitation work, as well as investigations previously conducted at the Site, indicate that these remaining sources of heavy metals could be released to National Creek via erosion and/or surface water run-off during storm events.

### NATIONAL CREEK PRELIMINARY WATER TESTING

NPS collected water samples from National Creek in 2018 to obtain preliminary, screening-level information regarding National Creek water quality. The samples were analyzed for heavy metals (arsenic, cadmium, chromium, copper, lead, and mercury) that are known or suspected to be present at the Site and could be released to National Creek via erosion and/or storm water runoff. Samples were not tested for any biological contamination. Water samples were collected over a four-month period (July through October) from four locations both upstream and downstream of the Site.

Several heavy metals were detected in the National Creek water samples during one or more of the monthly sampling events including arsenic, total chromium, copper, and zinc. Cadmium, lead, and mercury were not detected. All metal



concentrations detected were well below established Federal U.S. Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs) (arsenic, total chromium, copper) and EPA screening levels for drinking water (zinc). MCLs are established by EPA and are the maximum concentration of a chemical that is considered safe in public drinking water systems. Because no MCL has been established for zinc, zinc concentrations were compared to EPA screening levels for drinking water. Only total chromium and zinc were detected in the sample upstream of the mill structures: chromium was detected one time in August 2018 at a concentration two orders of magnitude below its MCL, while zinc was detected one time in July 2018 at a concentration one order of magnitude less than its EPA screening level for drinking water.

After evaluating these data, an environmental consulting firm under contract to NPS concluded that National Creek surface water currently appears to be a safe drinking water source in terms of metal concentrations; however, because the Site may continue to act as a source of contamination to National Creek, NPS recommends that park employees and the public refrain from obtaining water at locations that are adjacent to or downstream of historic structures until NPS has more fully evaluated the nature and extent of Site contamination and the associated potential human and ecological risks. Because of the potential for contaminant concentrations to be higher in stream sediment than in clear running water, users of water obtained from National Creek should avoid disturbing sediment or collecting water when turbid due to storm run-off or other causes. Users of creek water also should be aware of the potential for biological contaminants to be present.

Three drinking water samples were also collected from treated tap water that is used by NPS staff at the maintenance office. These samples were collected from August through October 2018. While copper, lead, and zinc were detected in samples from the treated tap water, all levels were also below their respective MCL (copper and lead) or EPA screening level (zinc).

Further, because rehabilitation/remediation of the mill buildings is incomplete, all NPS staff and the public should practice good personal hygiene when in the mill area by keeping hands away from the nose, eyes, and mouth until they can be washed with soap and water.

## **NEXT STEPS - ENVIRONMENTAL INVESTIGATIONS**

Because hazardous substances that may pose a threat to public health or welfare or the environment remain on Site, NPS, pursuant to its authority under the Comprehensive Environmental, Response, Compensation, and Liability Act (CERCLA) (commonly known as the Superfund), will be proceeding with a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS is a comprehensive investigation at the Site that will include sampling of various environmental media (e.g., soil, National Creek surface water and sediment, groundwater, air, etc.) and potential source areas (e.g., mill tailings, building materials) to fully characterize Site contamination; an assessment of potential human health and ecological risks associated with exposure to hazardous substances that may be present; and evaluation of remedial alternatives to address identified risks. NPS is currently in the planning stages of the RI/FS.

## **COMMUNITY INVOLVEMENT**

Community involvement is an important part of the NPS CERCLA process. Prior to implementation of field investigation activities, NPS will issue a Community Involvement Plan and establish the Administrative Record file for the Site. The Community Involvement Plan will guide public involvement during the RI/FS process. The Administrative Record file will contain all the documents and information relied upon during selection of the response action (e.g., planning documents, investigation reports, etc.). Information repositories will also be established at a location open to members of the general public where a collection of documents (including the Administrative Record file) relevant to the Site will be made available for public viewing and copying.

## **FOR MORE INFORMATION**

If you have questions concerning the information contained in this Community Update, please contact Mark Miller, Team Lead for Resource Stewardship and Science, via email at [memiller@nps.gov](mailto:memiller@nps.gov) or by phone at 907-822-7212.