

Water-Quality Characteristics of the Kenai River and Selected Tributaries

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Abstract

We are reporting the preliminary results from a grassroots' effort to coordinate and sustain a baseline surface-water quality monitoring effort in the Kenai River Watershed. This work stems from an initial collaborative planning effort and subsequent document, *Framework for Water Quality Monitoring of the Kenai River (1998)*. A coalition of multiple partners comprised of representatives from local, state, federal agencies and non-governmental organizations have worked in partnership to strategically select and sample 20 locations across the 2,200 square mile Kenai River Watershed. To date, three sampling events have occurred at each of the 20 locations since July 2000 with two objectives in mind. 1) To provide an up-to-date "snap-shot" evaluation of surface-water quality for comparison to state and federal standards and, 2) To repeat these "snap-shot" evaluations throughout time to develop a baseline data set capable of detecting coarse, long-term trends in water quality. Surface-water samples are collected using a single grab sample from each location, delivered to Northern Testing Laboratory for analysis, using EPA approved standard methods. The grab samples are analyzed for hydrocarbons, dissolved metals, fecal coliform, and nutrients. This data is coupled with a standard suite of in-situ physical and chemical parameters. Initial results indicate several concerns with respect to state and federal surface-water quality standards. Total Aromatic Hydrocarbons in the main stem of the Kenai River increase in a systematic manner with an apparent exceedence of state water quality standards occurring in the lower 6.5 miles. Total Aromatic Hydrocarbons were detected in only one of the eight tributary streams monitored in this effort, Beaver Creek. Fecal coliform appears high in a number of tributaries and in the lower reaches of the Kenai River; however, our fecal coliform values represent a single grab sample and therefore are not calculated using the geometric mean of 5 samples as required for a comparison to state water quality standards. Total Phosphorous appears in high concentrations in Beaver Creek and the lower reaches of the Kenai River. Our information indicates there is a need for more detailed sampling and investigation of the processes potentially leading to these conditions.