

Suction Dredging & the Environment

Suction dredging for gold is a relatively new mining method. Suction dredges are essentially underwater vacuum cleaners. They are commonly used to pull material up from a stream bottom, run it through a separation system to recover valuable minerals, and then redeposit the stream material back onto the bottom of the stream.

What makes suction dredging unique is that it takes place in a very dynamic environment... a natural stream or river. Natural variations in stream conditions, such as continual downstream movement of material through erosion and flooding, cause the effects of small scale suction dredging to be very local and short term. Suction dredging simply mimics natural erosion on a very small scale. Areas that have been subjected to years of suction dredging show little sign of the activity.

Information is presented here in the belief that education is the best answer to the problems of today. More reports and studies will be added here as time allows. If you know of any information in particular that you would like to see posted here, please contact us at webmaster@akmining.com

1999 EPA Study - Impact of suction dredging on water quality, benthic habitat, and biota in the Fortymile River, Resurrection Creek, and Chatanika River, Alaska

1998 USGS Press Release on Suction Dredging on the Fortymile River, Alaska

1997 USGS Studies of Suction Dredge Gold-Placer Mining Operations Along the Fortymile River, Eastern Alaska

1995 Siskiyou National Forest Estimate of Yardage Moved by Suction Dredging

1994 US Army Corps of Engineers Finding of "de minimis impact" by suction dredges with nozzle openings of 4" or less

Excerpts From Suction Dredge Studies

Most rivers and streams flood on a regular basis. During floods, impacts similar to those caused by suction dredges occur on a vastly wider scale. It is now believed that the regular movement of sediment in a stream is vital to it's health, much as forest fires have come to be seen as a vital part of the life-cycle of a forest. The life in and around a stream or river not only is not hurt by irregular turbidity and rechannelization effects, it has evolved to need these events to occur periodically for the environment to remain healthy. A major threat to the health of many streams is now seen to be the construction of dams. Many of these dams were originally built to help control flooding. Now it is seen that this has actually led to damage to the ecosystems of these streams. This new research sheds new light on suction dredging, and reveals that the movement of sediments in a stream not only does no harm, but is beneficial to the stream. The following websites explores this new area of investigation.

Grand Canyon Flood!

USGS Controlled Flood Report

I recently received notice of another website dedicated to information about mining and the environment. Much of it is about larger-scale mining methods, but it is informative nonetheless.

LearningAboutMining.com

The Official Minerals Policy of the United States of America

United States Code

TITLE 30

MINERAL LANDS AND MINING

CHAPTER 2 - MINERAL LANDS AND REGULATIONS IN GENERAL

Sec. 21a. National mining and minerals policy; "minerals" defined; execution of policy under other authorized programs

The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries, (2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security and environmental needs, (3) mining, mineral, and metallurgical research, including the use and recycling of scrap to promote the wise and efficient use of our natural and reclaimable mineral resources, and (4) the study and development of methods for the disposal, control, and reclamation of mineral waste products, and the reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities. For the purpose of this section "minerals" shall include all minerals and mineral fuels including oil, gas, coal, oil shale and uranium. It shall be the responsibility of the Secretary of the Interior to carry out this policy when exercising his authority under such programs as may be authorized by law other than this section.

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