



AKMAP

ALASKA MONITORING AND ASSESSMENT PROGRAM

Freshwater Coastal



www.dec.alaska.gov/water/wqsar/monitoring/emap_Map.htm

AKMAP is about understanding the overall condition of Alaska's water quality...on a very large scale. Our interest is two fold:

- Reporting the overall condition of all Alaskan waters is DEC's responsibility through the Clean Water Act.
- DEC uses this information to make good decisions about our laws and regulations that protect the Nation's most pristine water sources.

The U.S. Environmental Protection Agency only provides partial funding for AKMAP implementation. Partnerships with the University of Alaska and the United States Geologic Survey (USGS) are vital to the success of this program. Other entities lend expertise and add to the holistic picture of water quality in Alaska.

Getting the BIG picture of Alaska's Water Quality...

The Environmental Protection Agency (EPA) created the Environmental Monitoring and Assessment Program (EMAP) in the mid 1990's to assess the environmental condition of the nation's water resources. This program is now called the National Resource Survey. ADEC's Alaska Monitoring and Assessment Program (AKMAP) is responsible for participating in these surveys. AKMAP surveys report on the status of Alaska's water resources with a known statistical confidence, allowing resource managers, elected officials, and the public to understand the "big picture" of Alaska's water resources.



DEC staff members Alex Edwards and Terri Lomax take depth measurements on the Yukon River

Alaskan Freshwater Survey

AKMAP uses protocols described by EPA's National Resource Surveys to obtain datasets comparable to the rest of the nation's freshwater resources. Alaska contains over 40 percent of the nation's freshwater resources, hundreds of glaciers, 20,000 navigable rivers, and more than 3 million lakes. To report on Alaska's vast freshwater resources probabilistic sampling strategies are employed. AKMAP began to participate in EPA's National Resource Surveys in 2004 with the Interior Wadeable Streams Survey. In 2006 AKMAP completed the Tanana River Survey, and is analyzing data for the 2007-2008 Cook Inlet Lakes and the 2009 Yukon River Surveys. A wetland survey is in the development stage for 2011.



A sediment core sampler is used to sample a lake bottom.



A technician performs periphyton sampling.

2004-2005 Interior Wadeable Streams

The Tanana River watershed, located in interior Alaska, was selected for the location of the EMAP wadeable streams demonstration project. This region was chosen because of the wide variety of land uses occurring within the watershed. Over two summers, 46 sites were sampled. University of Alaska Anchorage Environment and Natural Resource Institute (UAA ENRI) and USGS collaborated with ADEC on this project.



2006 Tanana River

Water-quality and biological data was collected from 84 sites in Tanana River basin during water years 2004 through 2006 (October 2003 through September 2006) as part of a cooperative study between the USGS and ADEC. A broad range of chemical analyses are presented for 93 sets of samples collected at 59 tributaries to the Tanana River and at 25 locations along the mainstem.



2007-2008 Cook Inlet Lakes

In Alaska, the main causes for water body pollution are urban runoff and agricultural activity. The Cook Inlet ecoregion located in southcentral Alaska is 39,325 square miles, slightly smaller than Kentucky. Although it supports more than half of Alaska's population, large portions of the region's natural environment remain intact. ADEC collaborated with UAA ENRI and USGS to complete a survey on 50 lakes in this region.



2009 Yukon River

In July 2009, the survey team completed a landmark water quality (49 sites) and physical habitat survey (550 sites) of the Yukon River from Fort Yukon to Kaltag, Alaska. Three teams made up of ADEC,



UAA ENRI, U.S. Fish & Wildlife Service, and the Yukon River Inter-Tribal Watershed Council personnel worked on this survey, spending almost two weeks on the river. Other partners include Council of Athabaskan Tribal Governments and National Park Service.

RESEARCH is an ORGANIZED & SYSTEMATIC WAY of FINDING ANSWERS to QUESTIONS.



ALASKA MONITORING AND ASSESSMENT PROGRAM IS ADMINISTERED BY
THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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