# Integrated Hydrologic Effects of Climate Change in the Chuitna Watershed, Alaska

## About the document

- The purpose of this study (full report and summary) is to assess the long-term impacts of climate change on the Chuitna watershed hydrologic system. To do this, available geology, soils, climate, surface and groundwater, and vegetation data were used to develop a 3-dimensional integrated conceptual flow model of the surface and subsurface flow system within the Chuitna watershed. The model was used to simulate surface and subsurface hydrologic conditions using spatially distributed air temperature, precipitation, and reference evapotranspiration for a historical base case period (1980 to 2000). This will help the Service and other interested parties to better understand potential climate change in the Chuitna River watershed and may help us to assess potential impacts of climate change on future development projects and fish and wildlife resources.

## About the peer review process

- The peer review process for this document was completed March 31, 2012.
- The Service provided the draft document "Development and Application of an Integrated Hydrologic Model to Study the Effects of Climate Change on the Chuitna Watershed, Alaska (Documentation Report and Summary Report)" to three experts in climatology, hydrology, hydro-climate analysis, river basin ecology, and watershed management for their professional review and comment (peer reviews and author responses).
- The Service also invited peer reviews of the document from the Alaska Department of Natural Resources and Alaska Department of Fish and Game. Both agencies declined to participate in the peer review process.

## Contact


- U. S. Fish and Wildlife Service, Anchorage Fish and Wildlife Field Office, 605 West 4th Avenue, Rm G-61, Anchorage, Alaska 99501 Ph: (907) 271-2888