

The Hydrologic Cycle and its Role in Arctic and Global Environmental Change

A Rationale and Strategy for Synthesis Study

An aerial photograph of a wide, braided river system flowing through a lush green valley. The river is composed of multiple channels and oxbow-like curves, with sandy and gravelly bars visible between the water channels. In the background, a range of rugged, brownish mountains stretches across the horizon under a clear blue sky. The overall scene depicts a natural hydrologic cycle in a high-altitude or tundra environment.

**A Report from the Scientific Community to the
National Science Foundation Arctic System Science Program**