Rainbow trout, Arctic char, Dolly Varden, and silver and red salmon live in, or migrate through, lakes and streams on the Swan Lake Route, with the exception of Birch, Teal, Mallard, Raven, Otter, and Big Mink Lakes.

The Swan Lake Canoe Route, except for a portion of the Moose River, is located entirely within the Dave Spencer Unit of the Kenai Wilderness, which was officially designated by Congress in 1980.

A trip on this canoe route is an adventure through a wild and scenic landscape, which provides opportunities to view wildlife in a primitive setting.