

### III. Physical features

A. Size: Some wildlife species are found only in wetlands and deepwater habitats of certain sizes; e.g., loons.

B. Depth: predictable by dominant plant community and surrounding wetland bands and widths

C. Physical connection with other bodies: e.g., river level river connection, flood level river connection

D. Origin (e.g., river formed waterbed - an oxbow or thaw lake): Water bodies with different origins have different shapes, and shoreline and bottom profiles - they may not be presently located within the hydrological system of their origin.

### 3. Forests

#### **Habitat Forests**

Upland plant community - fire fuels inventory

A helicopter was employed during July to visit 24 upland sites impractical to reach with conventional foot, boat, or float plane transportation. The purpose of these visits was to gather data for continued improvement of our fire fuels/plant community mapping effort. Many parts of our Refuge can be investigated only with helicopter support. The locations of the sites were recorded on color infrared photography, U.S.G.S. maps, and with a GPS for use as ground truth data for satellite imagery.

Vegetation data, photographs, and plant collections were made at each site. Most of the sites were early succession burns including one fire in progress. Three above tree line sites were also visited. All of these plant communities were much under represented in previous sampling efforts.

### 11. Water Rights

#### **Habitat Water Rights**

Latitude-longitude locations were captured at several points along the Innoko and Iditarod rivers with a Global Positioning System (GPS). The locations were taken on the river banks at the beginning points of permanent vegetation on both the deposition and cut bank sides of the rivers. We will be examining the differences between these locations and SAR imagery derived pixels of same riverbank spots. The purpose of this work is to determine the ability of SAR imagery to locate the lateral extent of navigability, an important water rights issue in Alaska.