General Description

The following sections briefly describe the contents of five downloadable Excel (Microsoft Inc.) files containing the soil data collected from sites near Delta Junction, Alaska. Unavailable or inapplicable data is indicated by a dash ("-"). Additional information on these sites as well as sampling and analyses procedures can be found in the main text of the U.S.G.S. Open File Report (2004-1271) that this file accompanies.

Delta_Field

This file contains the field descriptions of the sampled soils and includes the following columns:

Sample ID	Sample identification: The first two letters in the sample labels represent the region of study, Donnelly Flats (DF). The second two letters represent the study site. The number that follows these four characters indicates the plot. A decimal point separates the profile number from the basal depth of the sample (in cm). This labeling scheme varies slightly when samples were obtained from other institutions.
Depth	Indicates the basal depth, in cm, of sampling increment.
Field Horizon Code	Horizon type of the sample, as defined in the field. L = live moss, D = dead moss, F = fibric organic matter (OM), M = mesic OM, H = humic OM, A = A mineral soil horizon, C = C mineral soil horizon, LI = lichen, LT = litter. A lower case 'f' before horizon code indicates it was frozen at the time of sampling. A lower case 'b' before a horizon code indicates the sample

	showed evidence of burning (e.g. scorched, charred). A lower case 'g' indicates gravel was found in this horizon.
Sample Description	A brief description of the sample.
Roots	Root abundance and size using conventions of USDA-ARS (Staff 1998).
pH	The pH of the sample, either determined in the field or in the lab using a LaMotte pH kit.
Moist Munsell Color	Color of moist soil based on the Munsell soil color chart.
Structure	Grade, size, strength and type of soil structure following conventions of USDA-ARS (Staff 1998).
Von Post or Texture	If organic soil, the classification using the von Post scale of humification (Damman and French 1987). If mineral soil, the soil texture class as described in the field following conventions of USDA-ARS (Staff 1998). Note that some samples were submitted for particle size (see Delta_Physical) and may have more accurate texture descriptions based on these data.
Plasticity	Plasticity following conventions of USDA-ARS (Staff 1998).
Stickiness	Stickiness following conventions of USDA-ARS (Staff 1998).
Firmness	Moist consistence following conventions of USDA-ARS (Staff 1998).
Height above mineral	Height of each basal depth above the mineral soil boundary. Therefore, the bottom organic layer is at zero and all mineral horizons are negative numbers.

Delta_Physical

This file contains physical data such as bulk density, volumetric moisture content, and particle size analysis. Bulk density samples, which were usually also used for analytical purposes, were only air-dried to preserve chemical integrity. These data were converted to an oven-dry basis by correcting them by the amount of moisture remaining in air-dry samples. This correction value was obtained from corresponding separate moisture samples that were air-dried to constant weight and then oven-dried. The moisture content of air-dried samples, which was used for this correction, is provided. Errors from these moisture corrections are likely small. Column definitions are as follows:

Sample ID	Sample identification: The first two letters in the sample labels represent the region of study, Donnelly Flats (DF). The second two letters represent the study site. The number that follows these four characters indicates the plot. A decimal point separates the profile number from the basal depth of the sample (in cm). This labeling scheme varies slightly when samples were obtained from other institutions.
Depth	Indicates the basal depth, in cm, of sampling increment.
Field Horizon Code	Horizon type of the sample, as defined in the field. L = live moss, D = dead moss, F = fibric organic matter (OM), M = mesic OM, H = humic OM, A = A mineral soil horizon, C = C mineral soil horizon, LI = lichen, LT = litter. A lower case ‘f’ before horizon code indicates it was frozen at the time of sampling. A lower case ‘b’ before a horizon code indicates the sample showed evidence of burning (e.g. scorched, charred). A lower case ‘g’ indicates gravel

	was found in this horizon.
Sample Description	A brief description of the sample.
Date Sampled	Date during which the sample was taken (month/day/year).
Fraction >2 mm in Sample	Dry weight percent of soil particles not passing through a 2 mm sieve after gentle crushing.
Roots >1 cm in Sample	Dry weight percent of roots larger than 1 cm in diameter in the sample.
Bulk Density (<2 mm)	Grams of oven-dried soil per cubic centimeter, with soil particles greater than 2 mm and roots greater that 1 cm diameter removed. Calculated by multiplying the air-dry bulk density by (1 – fraction moisture in air-dry sample). No volume adjustment has been made for the fractions removed.
Total Bulk Density	Grams of oven-dried soil per cubic centimeter for the entire soil sample with no fractions excluded. Calculated similarly to Bulk Density (< 2 mm) except the weight of particles greater than 2 mm and roots greater than 1 cm diameter have been included.
Volumetric Field Moisture	The percent water in the sample, by volume, assuming similar moisture and bulk density samples.
Moisture in Air-dry Sample	Percent, by weight, of moisture remaining in a sample after air-drying to constant weight as determined by subsequently oven-drying the sample. These data were obtained from a separate moisture sample and were used to calculate the Bulk Density (<2 mm) and Total Bulk Density values listed above. They were also used to convert carbon and nitrogen content to an oven-dry basis.

Sand	Percent by weight of soil particles greater than 0.05 mm in the sample remaining after removal of particles greater than 2 mm and roots greater than 1 cm diameter.
Coarse Silt	Percent by weight of soil particles in the size range from 0.02 to 0.05 mm in the sample remaining after removal of particles greater than 2 mm and roots greater than 1 cm diameter.
Fine Silt	Percent by weight of soil particles in the size range from 0.002 to 0.020 mm in the sample remaining after removal of particles greater than 2 mm and roots greater than 1 cm diameter.
Clay	Percent by weight of soil particles less than 0.002 mm in the sample remaining after removal of particles greater than 2 mm and roots greater than 1 cm diameter.
Notes	OM++ indicates residual organic matter in sample may have skewed particle size results toward increased sand and/or coarse silt; OM indicates residual organic matter in sample, but likely not enough to skew particle size results.

Delta_ Chemistry

This file contains chemical data obtained from an elemental analyzer/mass spectrometer (EA/IRMS). Analytical samples, which were usually also used for bulk density purposes, were only air-dried to preserve chemical integrity. These data were converted to an oven-dry basis by correcting them by the amount of moisture remaining in the air-dry samples. This correction value was obtained from separate moisture samples that were air-dried to constant weight and then oven-

dried. The moisture content of air-dried samples, which was used for this correction, is provided in the file Delta_Physical. Errors from these moisture corrections are likely small. Column definitions are as follows:

Sample ID	Sample identification: The first two letters in the sample labels represent the region of study, Donnelly Flats (DF). The second two letters represent the study site. The number that follows these four characters indicates the plot. A decimal point separates the profile number from the basal depth of the sample (in cm). This labeling scheme varies slightly when samples were obtained from other institutions.
Depth	Indicates the basal depth, in cm, of sampling increment.
Field Horizon Code	Horizon type of the sample, as defined in the field. L = live moss, D = dead moss, F = fibric organic matter (OM), M = mesic OM, H = humic OM, A = A mineral soil horizon, C = C mineral soil horizon, LI = lichen, LT = litter. A lower case 'f' before horizon code indicates it was frozen at the time of sampling. A lower case 'b' before a horizon code indicates the sample showed evidence of burning (e.g. scorched, charred). A lower case 'g' indicates gravel was found in this horizon.
Sample Description	A brief description of the sample.
%C	Percent by weight of carbon in an oven-dried soil sample with material >2 mm or 1 cm diameter removed. Calculated by multiplying air-dry determinations of percent carbon by the reciprocal of (1 – fraction moisture in air-dry sample).

%N	Percent by weight of nitrogen in an oven-dried soil sample with material >2 mm or 1 cm diameter removed. Calculated by multiplying air-dry determinations of percent nitrogen by the reciprocal of (1 – fraction moisture in air-dry sample).
$\delta^{13}C$	Per mil (‰) value of $\delta^{13}C$ relative to Pee Dee Belemnite.

Delta_ Suppl_Chemistry

This file contains supplemental chemical data, such as ^{14}C and elemental content, for samples on which these values were measured. Analyses were run using ground, air-dried soil. The ^{14}C data, expressed in Delta notation ($\Delta^{14}C$), were measured at Lawrence Livermore National Laboratory, Center for Accelerator Mass Spectrometry. Elemental values were measured using the Inductively Coupled Plasma technique for forty elements simultaneously (ICP-40). Column definitions are as follows:

Sample ID	Sample identification: The first two letters in the sample labels represent the region of study, Donnelly Flats (DF). The second two letters represent the study site. The number that follows these four characters indicates the plot. A decimal point separates the profile number from the basal depth of the sample (in cm). This labeling scheme varies slightly when samples were obtained from other institutions.
Depth	Indicates the basal depth, in cm, of sampling increment.
Field Horizon Code	Horizon type of the sample, as defined in the field. L = live moss, D = dead moss, F = fibric organic matter (OM), M = mesic OM, H = humic

	OM, A = A mineral soil horizon, C = C mineral soil horizon, LI = lichen, LT = litter. A lower case 'f' before horizon code indicates it was frozen at the time of sampling. A lower case 'b' before a horizon code indicates the sample showed evidence of burning (e.g. scorched, charred). A lower case 'g' indicates gravel was found in this horizon.
Sample Description	A brief description of the sample.
$\Delta^{14}C$	Per mil (‰) value of $\Delta^{14}C$.
+/- $\Delta^{14}C$	Error associated with $\Delta^{14}C$ value.
Al	Percent by weight of aluminum in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Ca	Percent by weight of calcium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Fe	Percent by weight of iron in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
K	Percent by weight of potassium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Mg	Percent by weight of magnesium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Na	Percent by weight of sodium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
P	Percent by weight of phosphorus in an air-dried soil sample with material >2 mm or 1 cm diameter removed.

Ti	Percent by weight of titanium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Ag	Parts per million of silver in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
As	Parts per million of arsenic in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Au	Parts per million of gold in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Ba	Parts per million of barium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Bi	Parts per million of bismuth in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Cd	Parts per million of cadmium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Co	Parts per million of cobalt in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Cr	Parts per million of chromium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Cu	Parts per million of copper in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Eu	Parts per million of europium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Ga	Parts per million of gallium in an air-dried soil sample with material >2

	mm or 1 cm diameter removed.
Ho	Parts per million of holmium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
La	Parts per million of lanthanum in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Li	Parts per million of lithium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Mn	Parts per million of manganese in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Mo	Parts per million of molybdenum in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Nb	Parts per million of niobium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Nd	Parts per million of neodymium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Ni	Parts per million of nickel in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Pb	Parts per million of lead in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Sc	Parts per million of scandium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Sn	Parts per million of tin in an air-dried soil sample with material >2 mm or 1 cm diameter removed.

Sr	Parts per million of strontium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Ta	Parts per million of tantalum in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Th	Parts per million of thorium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
U	Parts per million of uranium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
V	Parts per million of vanadium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Y	Parts per million of yttrium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Yb	Parts per million of ytterbium in an air-dried soil sample with material >2 mm or 1 cm diameter removed.
Zn	Parts per million of zinc in an air-dried soil sample with material >2 mm or 1 cm diameter removed.

Delta_Transects

This file contains the field descriptions of soils at sites that were only described and not sampled. This file includes the following columns:

Sample ID	Sample identification: The first two letters in the sample labels represent the region of study, Donnelly Flats (DF). The second two letters represent the

	study site. The number that follows these four characters indicates the plot. A decimal point separates the profile number from the basal depth of the sample (in cm). This labeling scheme varies slightly when samples were obtained from other institutions.
Depth	Indicates the basal depth, in cm, of sampling increment.
Field Horizon Code	Horizon type of the sample, as defined in the field. L = live moss, D = dead moss, F = fibric organic matter (OM), M = mesic OM, H = humic OM, A = A mineral soil horizon, C = C mineral soil horizon, LI = lichen, LT = litter. A lower case 'f' before horizon code indicates it was frozen at the time of sampling. A lower case 'b' before a horizon code indicates the sample showed evidence of burning (e.g. scorched, charred). A lower case 'g' indicates gravel was found in this horizon.
Sample Description	A brief description of the sample.
Site Information	Where, by whom, and when the description occurred as well as the dominant tree and moss species. Depth to frozen layers, as determined by probing, are also noted if found.
Roots	Root abundance and size using conventions of USDA-NRCS (Staff 1998).
Field pH	The pH of the sample as determined in the field.
Moist Munsell Color	Color of moist soil based on the Munsell soil color chart.
Von Post or Texture	If organic soil, the classification using the von Post scale of humification (Damman and French 1987). If mineral soil, the soil texture class following

	conventions of USDA-NRCS (Staff 1998).

Literature Cited

Damman, A. W. H., and T. W. French. 1987. The ecology of peat bogs of the glaciated Northeastern United States: A community profile. Biological Report 85(7.16), U.S. Fish and Wildlife Service, Washington, D.C.

Staff, S. S. 1998. Keys to Soil Taxonomy, 8th edition. Pocahontas Press, Inc., Blacksburg, Virginia. 599 pp.