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September 24, 2012

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Subject: Effect of Proposed Alaska Railroad Extension from Houston to Point McKenzie on Fish and Wildlife and Habitat

Dear Bob:

I looked at the route that the Alaska Railroad (ARR) has proposed to extend the railroad approximately 32 miles from Houston Alaska to Port McKenzie. This route traverses substantial portions of both the Little Susitna River and Meadow Creek drainages. Both of these streams are important salmon producing systems. Historically these systems have produced substantial numbers of red, Chinook, coho, pink, and chum salmon which are harvested in the Cook Inlet commercial, sport and subsistence fisheries. The route is also in close proximity to the Little Susitna Recreational River corridor, the Susitna Flats State Game Refuge, and the Goose Bay State Game Refuge which have been legislatively reserved because of their extraordinary value as fish and wildlife habitat. Of primary concern is that the solid fill roadbed would fill hundreds of acres of wetlands and more importantly act as a dike bisecting thousands of acres of wetlands.

Wetlands are very important habitats with a variety of functions. One of the most is the prevention of flooding due to wetlands ability to absorb and hold large volumes of water. Wetlands also recharge ground water, improve water quality and provide important habitat for fish, water birds and mammals such as moose. For example the most productive Coho streams are located in drainages with extensive wetlands. Wetlands also provide essential summer and winter surface and ground water flow and nutrients to the lakes and streams which produce salmon in this area.

The proposed railroad extension would affect existing wetlands in at least four ways:

1. **The Physical Environment Along the Rail Road Corridor Will be Altered:** It is assumed that the road bed would be a linear solid fill structure up to 8 foot high and approximately 32 miles long. It is assumed that adequate stream crossing structures would be constructed. However, in my experience simply installing large enough culverts will not mitigate the effects of constructing a linear solid fill structure through large wetlands. When the road bed is constructed across the

wetlands it will act as a dam which can affect areas some distance away. The road bed can cause the wetlands on the upstream side to flood and by blocking sheet flow of water across the wetlands cause wetlands on the downstream side to dry up. The section of the Glenn Highway crossing the Palmer Hay Flats State Game Refuge is a good example of where this has occurred. The construction of culverts and bridges will also funnel upstream sheet flows into channels and dry up downstream wetlands. The road bed can also impact the subsurface flow through wetlands, depressing the water table and reducing critical ground water input into salmon streams. It is also be important to know if the Railroad incorporated the effects of climate change and potentially higher rain and snowfall into their design and assessment of impacts on the environment and property.

2. **Habitat Fragmentation:** The road bed will be a physical barrier that will fragment habitat with both short and long term effects on fish and wildlife. Hundreds of acres of wetlands habitat will likely be lost due to wetlands fill and construction activities. Much larger areas of habitat will be altered as the result of altered water flow through wetlands. Substantial numbers of moose and other species of wildlife will be struck and killed trying to cross the railroad. The number of moose in the MatSu valley available for harvest is already limited due to the large number of moose killed in highway and railroad collisions. Additional train moose collisions in the Houston Port McKenzie corridor will further reduce opportunities for hunters
3. **Introduction of Invasive Species:** Roads and railroads in Alaska provide a corridor for invasive species to disperse into previously inaccessible areas. Several invasive species such as bird vetch, white sweet clover, and common toad flax are commonly found all along the Alaska Railroad bed in South Central Alaska. Another common invasive, Reed Canary Grass, is a serious threat to wetland in South Central Alaska.
4. **Introduction of pollutants:** Rail traffic would introduce pollutants into previously pristine wetlands. Common pollutants from railroads include diesel exhaust and dust from cargo such as coal, gravel and sulfide minerals proposed to be carried to Port McKenzie. Diesel exhaust has been implicated in increased levels of cancer in people living near railroads. Dust from gravel and coal will smother wetlands vegetation adjacent to the tracks and sulfide minerals release sulfuric acid and heavy metals in water. For example, dust blowing from trucks transporting mineral concentrate from the Red Dog Mine contaminated thousands of acres of National Park lands with toxic levels of lead and zinc. Dust from the Seward Coal loading facility often blows across Seward. Oil and chemical spills also occur such as the ARR derailment and oil spill which occurred near Talkeetna a number of years ago. Oil is toxic to both wildlife and wetlands vegetation. The ARR also sprays its tracks with herbicides to control vegetation and this will wash into wetlands.

Summary: The construction of a rail corridor through an area with extensive wetlands is the least desirable alternative from a fish and wildlife perspective. The Houston to Port McKenzie rail extension will alter the physical and chemical environment, alter and fragment fish and wildlife habitat, introduce invasive species, and pollute the currently pristine environment along within the transportation corridor. It is difficult to quantify the magnitude of the likely impact without a great deal of additional information.