



Integrated Vegetation Management Program

PROGRAM RECAP

Purpose and Need

The Alaska Railroad Corporation (ARRC) spends millions of dollars each year on its infrastructure. Vegetation management protects this investment and ensures safe rail operations.

Operational and Employee Safety

- Vegetation on the track makes inspection of the track and trains difficult
- Plant growth hinders or prevents automated equipment operation (switch heaters, broken rail and other detection devices, for example)
- Overgrown weeds hide walking hazards and contribute to slips, trips and fall injuries.
- Roots create uneven, heaving surfaces, posing danger to employees working along the track.
- Vegetation accelerates rail and tie deterioration, contributing to derailment risk.

Public Safety

- Overgrown bushes block track line-of-sight, especially along curves
- Overgrown vegetation obscures signs and signals that warn the public
- Vegetation causes heaving and slippery conditions at road/rail crossings
- Dry vegetation can fuel brush fires

Background

- The railroad has always, and continues to use mechanical (ballast cleaning, brush cutting, mowing, chain saws, clippers) and manual



Overgrown vegetation poses many risks and dangers.

(pulling, cutting, grubbing) methods with limited and temporary success. Vegetation has become a steadily increasing problem.

- ARRC has tested numerous alternative methods (steam, hot water, radiant heat, abrasion, flaming and burning) with no lasting success. *(See separate fact sheet on "Alternative Methods")*
- To address part of the critical problem, ARRC applied for an herbicide use permit from the Alaska Department of Environmental Conservation (ADEC) on several occasions, most recently in 2006, 2009, 2010 and 2012.
- ADEC did not grant an herbicide permit in 2006. As a result, ARRC focused on addressing public and agency concerns, including choice of less toxic herbicides, larger water buffers, and Alaska-based herbicide research.
- In 2008, ARRC commissioned the University of Alaska Fairbanks (UAF) Alaska University Transportation Center (AUTC) to study herbicide behavior in Alaska's environment, using test sites on the railroad's south end (Seward area) and north end (Fairbanks area) Preliminary findings in spring 2009 indicate herbicides behave the same as in other climates, and show that glyphosate degrades rapidly and does not migrate significantly in Alaska soil. *(See separate fact sheet on "Research Project")*
- In 2009 and 2010, the railroad significantly increased mechanical control methods.
- In April 2009, the Alaska Railroad received a letter from the Federal Railroad Administration (FRA), the regulatory agency that governs national rail industry safety. Recognizing that ARRC's uncontrolled vegetation situation has grown worse over the past two decades, the FRA issued its strongest warning yet to clear vegetation or suffer increased fines, slower train speeds and even track closures.

- The FRA warning spurred ARRC to apply for an herbicide permit application to use AquaMaster® (glyphosate-based and water-approved herbicide) and AgriDex® (helps spread the herbicide) on the south end of the railroad. ADEC approved the two-year permit in spring 2010.
- Following an unsuccessful court challenge by herbicide opponents, ARRC was able to spray herbicides per strict permit stipulations in late July 2010. ARRC contracted with a licensed and experienced contractor to apply AquaMaster®/ AgriDex® within the Seward Rail Yard and along 30 miles of track between Seward and Indian.
- In December 2010, the Alaska Railroad applied for two additional permits. One was for AquaMaster® herbicide use within the Anchorage Rail Yard, and the other covers use on the railroad's north end, within the Fairbanks Rail Yard, Healy Rail Yard and along the Eielson Branch. The permit public process included a 60-day comment period and public hearings in affected communities. Permits were approved and a licensed and experienced contractor applied AquaMaster®/ AgriDex® mid-summer 2011.
- ARRC plans to use existing permits to reapply AquaMaster®/ AgriDex® on the south end; along the Eielson Branch; and within Seward, Anchorage, Healy and Fairbanks yards in early summer 2012. ARRC is applying for three new permits in 2012 covering 12 miles in the Palmer-Wasilla area, 38 miles along the mainline track between Gold Creek (34 miles north of Talkeetna) and Broad Pass, and 60 miles along the mainline between Clear and Fairbanks.
- The Alaska Railroad's goal is to control vegetation with a combination of mechanical and chemical methods, using chemical means in the most critical and difficult areas.

Cost and Funding

ARRC funds all vegetation control efforts with revenues from train operations (no federal or state funds). Vegetation control costs have been increased to address this critical issue. Expenditures/budgets between 2008 and 2011 exceeded \$750,000 annually, a significant portion of the overall track maintenance effort; most of which is mechanical control.



A ballast regulator is prepped to get to work on a stretch of track with significant vegetation coverage. The ballast regulator will turn over the track bed rock material (ballast), which hinders weed growth temporarily.



Ineffective mechanical/manual control in Seward yard prior to chemical application.



Post herbicide control near Seward. Note clear distinction at control area boundary at end of tie.