



ALASKA RAILROAD INTEGRATED VEGETATION MANAGEMENT

FREQUENTLY ASKED QUESTIONS (as of 7/09/2009)

What is the purpose and need for using chemical weed control products to manage vegetation on Alaska Railroad property?

Mechanical and manual methods of control alone do not adequately control vegetation on the track. Vegetation around railroads must be controlled for several primary safety reasons, including to:

- Ensure the track is visible, allowing inspectors to see the condition of ties, rail and fasteners and to correct any defects that could result in derailment;
- Clear walking areas around the track in order for train and track maintenance crews to work safely and avoid slip, trip, and fall injuries;
- Keep brush from blocking line-of-sight at crossings and to maintain visibility of signals and signs critical to safe train movement; and
- Eliminate plants and roots that hold moisture and impede drainage, which degrades the track structure. For example, ties rot faster in moist conditions and a soggy ballast (track bed) becomes unstable, offering decreased support to the track.

Secondary reasons for vegetation control include.

- Remove potential fuels that cause wild fires and threaten timber bridges and trestles;
- Protect capital investments recently completed on the Railroad's track and infrastructure; and
- Prevent the spread of invasive, noxious weeds.



Overgrown weeds on the track bed are nearly impossible to eliminate with non-chemical methods.

Why do we need to use weed control?

Methods we use now — mechanized rail-based brushcutters, off-rail hydroaxing, wayside manual cutting — are effective only within limited ranges. None of these methods gets to the key problem — vegetation growing between the rails and to the ends of the crossties. So-called “alternative methods” such as steam, infrared, hot water, and burning have been tested extensively but proven ineffective. The size of the problem is overwhelming... 500 miles of mainline and branch track, 100 miles of yard track, and weeds that continue to grow all summer long. The railroad needs effective, enduring area coverage.

Why do we need to use weed control now?

Manual and mechanical methods are not enough. These methods cannot adequately address the critical area between the rails and ties, as is clearly illustrated by photo on this page. Each year, the Federal Railroad Administration (FRA), the national regulatory agency for U.S. railroads, fines the Alaska Railroad for failing to meet federal safety mandates with regard to vegetation in and around the track. The FRA has formally notified ARRC that the situation is safety critical and must be corrected. In June 2008, the FRA identified 220 specific violations and defects along ARRC's tracks.

What is at risk?

Approximately 40% of ARRC freight is classified as hazardous material, and ARRC transports nearly 500,000 passengers a year. Maintaining the track and roadbed to the highest standards is critical to ensuring passenger safety and environmental integrity. Overgrown vegetation can prevent our track inspectors from recognizing potential track problems that could cause a derailment.

Employees working on or around the track are at risk of injury due to slip, trip and fall hazards. Unchecked vegetation presents a tripping risk by itself, but plant growth also obscures hazards hidden underneath.

Recognizing these dangers, the Federal Railroad Administration (FRA), the national regulatory agency for U.S. railroads, recently deemed the situation to be

critical in a letter sent in early 2009. FRA warns ARRC to expect more fines, slowed train speeds and possibly track closures during the busy summer season. At risk is a serious economic hit that will impact not only railroad passengers, but also businesses that rely on the railroad to bring customers to their door steps and to haul freight required to meet business and industry obligations along the railbelt. As noted in the permit application, some examples of fiscal impacts include:

- ***Slower Speeds.*** Requiring trains to run more slowly will cause delays ranging of 1-2 hours along the Seward-Anchorage stretch. In 2008, ARRC transported nearly 70,000 passengers between Portage and Seward, and many of these passengers traveled on to Anchorage for air travel connections. Slow trains could force passengers to choose buses instead, causing highway congestion. Passengers arriving late in Seward could miss scheduled tours and day cruises, negatively impacting businesses.
- ***Track Closures.*** ARRC hauls coal from Healy to Seward. Coal transport by highway is not feasible. Closure of the track between Anchorage and Seward will essentially halt this commerce. Based upon projected 2009 coal volume, the direct annual impact could be as much as \$30 million, along with job loss at the Usibelli Coal Mine in Healy, at the Alaska Railroad and at the Seward coal terminal.
- ***Fines and Penalties.*** The impact of increased FRA fines for non-compliance is difficult to estimate, however such fines are likely to exceed \$100,000.

Where will the Alaska Railroad apply weed control?

Weed control products will be applied on Railroad operating property (rail yards, spurs, sidings, etc.) and along the Railroad mainline and branch line right-of-way approximately four feet out from either side of the track centerline.

The immediate area of focus is along the 90-mile stretch between Seward and Indian, where vegetation growth is the worst.

Why apply before the reserach project is completed?

The Alaska Railroad is regulated by the Federal Railroad Administration. On April 15, 2009, the FRA notified ARRC of the serious nature of the vegetation problem. The ARRC is taking immediate actions in response to this letter, including the application to ADEC to apply weed killers.

The ARRC in conjunction with the Alaska University Transportation Center (AUTC) began a two-year study (2008-2010) on herbicides in the Alaska environment. The ARRC had planed to wait until the study was complete before applying for another permit but recent FRA pressure has moved up the permit applcation.

The first year of AUTC research focused on the south end of the railroad, precisely in the area proposed in our 2009 application. Pre-liminary results from south end test plots are now available and data from this 2008-09 research activity indicates that the AquaMaster herbicide used in concert with the Agri-Dex surfactant behaves similarly to how they behave in other climates and regions. The second year (2009-2010) of the research will focus on test plots on ARRC's north end.

Who governs weed control products and uses?

Weed control product types and application methods are regulated by both federal and state governments. The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for regulating pesticides, including herbicides. EPA evaluates new pesticides/herbicides, reviews registered pesticides, regulates pesticide manufacturers, and enforces pesticide requirements. EPA and states register or license pesticides for use in the U.S. States may place more restrictive requirements than the EPA. Pesticides must be registered by EPA and the state before use and distribution. The Alaska Department of Environmental Conservation, Division of Environmental Health oversees the state Pesticides Program. The Railroad is accountable, through a state-issued permit, for the proper storage and use of EPA and State registered weed control products.



Optimally, the Alaska Railroad track would be free of weeds, providing an uncompromised platform for train movement.

Will I have a chance to review and comment on the permit?

Yes. The Alaska Department of Environmental Conservation (ADEC) is responsible for developing and issuing a permit. Public comment is actively solicited as part of the permit process. In addition to public comment periods, ADEC has the authority to require public hearings.

The Alaska Railroad anticipates a pro-active approach with public hearings scheduled during August in Seward, Whittier and Anchorage.

In addition to the public hearings, written comments can be submitted to ADEC at the address below. Comments must be received on or before September 15, 2009, to:

Stephanie Stewart, Administrative Assistant
Department of Environmental Conservation
Pesticide Program
555 Cordova Street • Anchorage, AK 99501
Phone: (907) 269-7644
Fax: (907) 269-7654
Email: Stephanie.Stewart@alaska.gov

Where and when will public hearings be scheduled?

Several public hearings have been arranged, as outlined below. Each of these public hearings will be held from 4:30 to 6:30 p.m. and will start with a brief presentation, followed by public comment. In addition, a question-and-answer session will precede each hearing from 4:00 to 4:30 p.m.

PUBLIC HEARING LOCATIONS:

- **WHITTIER:** Monday, August 10, 2009
City Council Chambers, P-12 Building
Intersection of Whittier Street and Glacier Avenue
- **SEWARD:** Tuesday, August 11, 2009
Seward Marine Center/RM Rae Education Bldg
125 3rd Avenue
- **ANCHORAGE:** Wednesday, August 12, 2009
Marriott Downtown Hotel
7th Avenue and "I" Street

What is the timeline for the permit process?

The 60-day public process start date is July 16, 2009. Public hearings are scheduled for August 10-12 in Anchorage, Seward and Whittier to accommodate residents along the corridor. The deadline for public comment is September 15, 2009. The Alaska Department of Environmental Conservation (ADEC) will review comments made during the hearings and submitted during the comment period, after which ADEC will issue a formal decision.

What is timing for the chemical portion of the Integrated Vegetation Management Program?

It is possible that a permit could be issued in time to apply the chemical weed control in the 2010 growing season.

How will I know if there are weed control products used in a given location?

Before and after application, the Railroad will post notices at road crossings and other areas where the public could come close to the right-of-way. The railroad right-of-way (i.e., the tracks and the land within 100 feet of either side of the track centerline) is closed to the public for safety reasons.

What about streams, lakes, and other areas that are important to fish and wildlife?

When applying weed control near waterways, the Railroad will adhere to buffer distances specified by the product manufacturer and government agencies. Weed control products available for use today, along with contemporary application methods, are designed not to "carry" outside the target area.

In addition, as an extra precaution, the Railroad will not apply weed control within 100 feet of water bodies. The proposed program is designed to respect this 100-foot setback. The track will be patrolled ahead of the application and weed control will not be applied within 100 feet of any surface water. The patrol car will carefully mark the limits of the weed control areas.

While ARRC will take care to avoid water bodies, the herbicide AquaMaster is specifically designed for safe use in and around water.

How will subsistence users in the areas know their food is safe?

When used according to manufacturer directions and in the concentrations prescribed by the manufacturer, today's weed control products will break down rapidly after contacting soil, and do not pose any threat to fish, wildlife, or humans. (For details, visit web sites listed at the end of this fact sheet).

Are there health risks associated with coming into contact with these products and how long does that risk persist?

First, the weed control products won't be applied in areas normally visited by people: The application zone is primarily from one end of the ties to the other. But more important, when used according to the directions, the products have been determined by the federal government to pose little to no risk to

human health or the environment. To avoid any unwanted contact with the product, the manufacturers recommend that people not come into an area that has been treated until the product has dried, which can be anywhere from 5 to 30 minutes depending on the weather.

The selected weed killer, Glyphosate, targets a plant-specific mechanism that animals do not have, and therefore the effects are limited to plants.

The weed control product that the railroad plans to use will be heavily diluted; for example, in a 40-gallon batch, the weed control product makes up less than a gallon of the solution. The EPA and the State have determined that the dilutions prescribed by the manufacturers pose little to no risk.

For more information, consult the fact sheets, Material Safety Data Sheets (MSDS), and manufacturer product labels listed at the end of the fact sheet.

What type of weed control and other products will be used?

The general use herbicide AquaMaster®, (active ingredient Glyphosate) and nonionic surfactant Agri-Dex®. The active ingredient is commonly available over-the-counter in home and garden stores under various brand names including Round-up and Rodeo. Three quarts of AquaMaster® will be applied per acre of right-of-way. (Note: an acre is roughly equivalent to about a mile of the railroad track bed — i.e. minimum bed width is from one end of a tie to the other end). Agri-Dex® is not an herbicide, but rather is used to help spread the herbicide more effectively. The formulations, concentrations, application methods and handling requirements will be listed in the railroad's state issued permit.



How will the Railroad apply the weed control products?

A licensed contractor will use a special vehicle equipped to travel on the rails. Low-volume, low-pressure ground-directed attachments will be used to apply the weed control products. This method is designed to limit potential for wind to carry the chemicals away from the target area. There may be additional spot application by licensed contractors using hand-operated pump-spray tools.

Will an Alaska Railroad representative accompany the licensed contractor during the application process?

Absolutely. An Alaska Railroad representative, who is also a licensed applicator, will accompany the Railroad's contractor at all times during application activities. There will be additional ARRC supervision from the district in which the work is being done.

What about aerial spraying?

Aerial spraying will not be used.

Why doesn't the Alaska Railroad use other methods to control vegetation?

We will continue to use mechanized and manual methods in conjunction with chemicals for an integrated vegetation management (IMV) strategy.

What do other railroads do?

The same thing we propose — a mix of mechanized and chemical control. To our knowledge, no North American railroad has adopted a completely or primarily non-chemical weed control program.

In Canada, the Canadian National (CN) Railway uses glyphosate, 2,4-D and diuron throughout the majority of their system except for the province of British Columbia (B.C.)



The DBI Company is an industry leader in railroad vegetation management nationwide. DBI's specially-equipped trucks direct weed control products directly at the track bed.

In B.C., the CN uses glyphosate only. CN has used chemical weed control products for a number of years, so that the track is fairly clear of weeds. At this point, only glyphosate is needed to maintain sufficient weed control. The CN buffer zones to water bodies is right to the edge of the water systems, except in the instances of salmon-bearing streams. For salmon-bearing streams, the buffer zone is 6 feet.

What is the Federal Railroad Administration's position on the use of weed killers?

The FRA requires railroads to keep their tracks free of weeds. The FRA has repeatedly fined the ARRC for excessive vegetation. In its April 2009 letter to ARRC, the FRA confirms that "the growth rate and location of vegetation along the 500 miles of ARRC track continue to get worse... FRA recognizes that ARRC's vegetation management difficulties have been complicated by its inability to spray herbicides."

What are invasive weeds and what do they have to do with the railroad?

Invasive weeds are non-native weeds that have become so widespread that they threaten local ecosystems. The invasion of exotic weeds is one of the greatest threats to natural ecosystems in the western United States and Alaska. The Alaska Railroad right-of-way is a major vector for the spread of some of these weeds. Keeping the right-of-way weed-free is paramount in controlling the spread of invasive weeds throughout Alaska.

Where can I find product-specific information about the weed control products the Railroad plans to use as part of its vegetation management plan?

Material Safety Data Sheets (MSDS) and Product Labels are available from the manufacturers' web sites. Additionally, Fact Sheets are available from the Environmental Protection Agency, as well as from other recognized and respected sources.

AquaMaster® (EPA Reg. No. 524-343)

- **Manufacturer (Monsanto) Product Label** — <http://http://www.cdms.net/LDat/l44BL013.pdf>
- **MSDS:** <http://www.cdms.net/LDat/mp44BL011.pdf>
- **EPA RED Fact Sheet for Glyphosate** — <http://www.epa.gov/oppsrrd1/REDS/factsheets/0178fact.pdf>

Agri-Dex®

- **Manufacturer (Helena Chemical) Label** — <http://www.cdms.net/LDat/l462E000.pdf>
- **MSDS:** <http://www.cdms.net/LDat/mp62E001.pdf>

What other information is available about the topic of vegetation management and weed control products?

Third-party information from public and private universities, professional weed management organizations, state and federal government agencies are easily found on the Internet. Some of the most complete information sites include:

- University of Iowa Department of Weed Sciences — www.weeds.iastate.edu/
- U.S. Forest Service — <http://www.fs.fed.us/>
- State of California Pesticide Management Agency — <http://www.cdpr.ca.gov/>
- Cornell University Institute for Comparative & Environmental Toxicology — <http://www.toxicology.cornell.edu/>
- University of California - Davis (UC Davis) Weed Research and Information Center — <http://wric.ucdavis.edu/>
- Weed Science Society of America — <http://www.wssa.net/>

Who should I contact for more information about the ADEC permitting process?

For questions pertaining to the Alaska Department of Environmental Conservation pesticide permitting process, contact:

Karin Hendrickson
Environmental Program Specialist
ADEC Pesticide Program
1700 E. Bogard Road, Building B, Suite 103
Wasilla, AK 99654
Phone: (907) 376-1856 or 1-(800) 478-2577
Karin.Hendrickson@alaska.gov

NOTE: PUBLIC COMMENT ON THE ALASKA RAILROAD'S PERMIT APPLICATION SHOULD **NOT** BE SENT TO KARIN HENDRICKSON. SEE PAGE 3 OF THIS DOCUMENT FOR INSTRUCTIONS ON SUBMITTING A PUBLIC COMMENT.