

## Vegetation Management Frequently Asked Questions

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

Mechanical and manual methods of control alone do not adequately control vegetation on the track. Vegetation around railroads must be controlled for several key 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:



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

- Removing potential fuels that cause wild fires and threaten timber bridges and trestles;
- Protecting capital investments recently completed on the railroad's track and infrastructure; and
- Preventing the spread of invasive, noxious weeds.

### *Why does ARRC need to use chemical weed control?*

Mechanical methods – 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 as is clearly illustrated by the photo on this page. The Federal Railroad Administration (FRA), the national regulatory agency for U.S. railroads, has fined the Alaska Railroad annually for failing to meet federal safety mandates with regard to vegetation in and around the track. In 2009, the FRA formally notified ARRC that the situation had become safety critical and must be corrected. During summer 2009, the FRA identified 130 vegetation-specific violations along ARRC's tracks. The FRA has continued to cite the Alaska Railroad for vegetation violations in more recent years, although the number of violations has decreased since the use of herbicides began on some parts of the rail system in 2010.

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 vegetation control throughout its rail system.

## **What is at risk?**

ARRC transports more than a half million passengers each year and approximately 40% of ARRC freight is classified as hazardous material. Maintaining the track and road-bed to the highest standards is critical to ensuring passenger safety and environmental integrity. Overgrown vegetation can prevent ARRC 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 FRA, as the national regulatory agency for U.S. railroad safety, deemed the situation to be critical in a letter sent in early 2009. FRA warned ARRC to expect more fines, slower approved train speeds and possibly track closures during the busy summer season. Such measures would result in a serious economic hit that would 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. Some examples of fiscal impacts include:

- **Delays.** Railroad passengers would be directly impacted by delays, which could easily stretch up to 1.5 hours. Many customers ride the train to the Anchorage airport for direct access to air travel. If buses are available, these customers could shift to the Seward Highway, causing additional congestion on the highway. Other passengers take part in afternoon tours and activities in Seward; late train arrivals would negatively impact these businesses.
- **Fines and Penalties.** In addition to economic and social impacts from delayed or interrupted train service, the Alaska Railroad will be subject to fines for non-compliance with federal regulations. It is difficult to estimate, but fines would be likely to exceed \$100,000 annually.

## **Where will the Alaska Railroad apply weed control?**

In general, weed control products are applied on Alaska Railroad operating property (rail yards, spurs, sidings, etc.) and along the railroad main line and branch line right-of-way within 15 to 24 feet of the track centerline. Periodically the railroad will also apply a brush control herbicide along the Tanana River levee constructed near Salcha. Completed in 2014, the levee and a bridge comprise phase one of the Northern Rail Extension project.

## **Who governs weed control products and uses?**

Weed control products 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 within the country. 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 Alaska Railroad is accountable for the proper storage and use of EPA- and state-registered weed control products.

## **What type of weed control and other products will be used by the Alaska Railroad?**

Herbicide products used in 2016 include:

- Alligare Glyphosate 4 Plus is the general use herbicide that kills weeds once they emerge. The active ingredient is glyphosate, commonly available in over-the-counter products found in home-and-garden stores under various brand names including Roundup and Rodeo.
- Alligare MSM 60, and Alligare Laramie 25DF and Alligare SFM Extra® are the pre-emergent herbicides, meaning they prevent seeds from sprouting. MSM 60 has the active ingredient Metsulfuron-Methyl. This is the “Extra” in Oust or SFM Extra). The active ingredient in Laramie 25DF is Rimsulfuron, which is in the same chemical family of herbicides and has the same mode of action as Sulfometuron methyl, the other active ingredient found in Oust or SFM Extra®.



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

- Alligare Triclopyr 3 is used primarily for brush control with an active ingredient Triclopyr Triethylamine Salt. This herbicide will be used along the Tanana River levee near Salcha. The levee and a bridge were completed in 2014 as phase one of the Northern Rail Extension project. At about 50 acres, the levee area has not been previously sprayed with herbicides. This year will test the effectiveness of Triclopyr 3 as a brush control tool.
- Alligare Imazapyr 4SL (active ingredient Imazapyr) is approved for use around aquatic environments.
- Alligare 90 and Alligare MSO 1 are not herbicides. They are surfactants used to help spread herbicides more effectively.
- Alligare Anti-Foamer is not an herbicide. It is used to suppress foam before it forms.
- Alligare Drift Control is not an herbicide. It is used to retard drift in spray operations.

### **Is the Railroad using more herbicides as time goes on?**

The amount of herbicides applied per acre has actually decreased since the use of herbicides resumed in 2010. We anticipate another drop in the amount of herbicides used per acre in 2016. As the amount of problem vegetation decreases with integrated control measures, less herbicide is needed to maintain a safe trackbed and right-of-way.

### **How will the ARRC 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.

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



*A ballast regulator is equipped to scrape weeds along the side of the track bed, which tempers weed growth temporarily.*

While Glyphosate, Imazapyr and Triclopyr all have aquatic labels (i.e. they are approved for use on and around water), the railroad does not intend to apply herbicides to water.

### **How will subsistence users know their food is safe?**

Herbicides will not be applied outside the rail yards or the railroad right-of-way (ROW – i.e., the tracks and the land within 100 feet of either side of the track centerline in most parts of ARRC's rail system). For safety reasons, it's never a good idea to be in the ROW and, in fact, the ROW is closed to the public. Impacts to plants outside the railroad ROW are not expected.

### **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 in the immediate track area. But more important, when used according to the label 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.

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

### **Does the railroad use other methods to control vegetation?**

Yes, we do. We have used mechanized and manual methods in the past and will continue to do so in conjunction with chemicals for an integrated vegetation management (IMV) strategy.



## **What do other railroads do?**

The same approach we pursue – 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.

## **What is the Federal Railroad Administration (FRA) 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 plants 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 Alaska Railroad plans to use as part of its vegetation management plan?**

Safety Data Sheets (SDS) 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. The following documents are available via links on ARRC’s web site – [www.AlaskaRailroad.com](http://www.AlaskaRailroad.com) > **Corporate** > **Safety** > **Vegetation Management**.

### **Alligare Glyphosate 4 Plus** (EPA Reg. No. 81927-9)

- Product Label and SDS

### **Alligare MSM 60** (EPA Reg. No. 81927-7)

- Product Label and SDS

### **Alligare Triclopyr 3** (EPA Reg. No. 81927-13)

- Product Label and SDS

### **Alligare Laramie 25DF** (EPA Reg. No. 81927-57)

- Product Label and SDS

### **Alligare SFM Extra** (EPA Reg. No. 81927-5)

- Product Label and SDS

### **Alligare Drift Control**

- Product Label and SDS

## **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/](http://www.weeds.iastate.edu/)
- U.S. Forest Service – [www.fs.fed.us/](http://www.fs.fed.us/)
- EPA RED Fact Sheet for Glyphosate – <http://www.epa.gov/oppsrrd1/reregistration/REDS/factsheets/O178fact.pdf>
- State of California Pesticide Management Agency – [www.cdpr.ca.gov/](http://www.cdpr.ca.gov/)
- Cornell University Institute for Comparative and Environmental Toxicology – [www.toxicology.cornell.edu/](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 – [www.wssa.net/](http://www.wssa.net/)

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

For questions pertaining to the ADEC pesticide regulations, contact:

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