

Long-term maintenance of rights-of-way habitat projects



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www.PizzoGroup.com

What do you have?

- Existing planting
- New planting



Existing plantings

Assessment

Native species / Invasive species

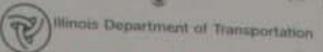
Original Plan / Intent

Current Plan / Goals









Illinois Department of Transportation

**ADOPT
A HIGHWAY**
OSWEGO EAST H.S.
STUDENT ECO ORG
NEXT 2 MILES

**KEEP
ILLINOIS
CLEAN**

30



New planting

Site assessment

Intent / Goals

Native / Invasive species





No Mowing
or Spraying



It all starts with good design
and specifications.

Establishing and Stewarding Roadside Plantings of Native Perennials

Prepared For:
**The Roadside Managers of The Illinois Department of
Transportation**

Prepared By:
Jack Pizzo, Senior Ecologist
Emily Lubeke, Ecologist





**Site choice, Species, Purchase Method, Quality,
Quantity,**





1 month after
seeding



**ecology**
ensuring success in nature

Rows of native plants are visible here germinating after being seeded with a Truax native seed drill



This first year seedling has grown 4" above the soil and 12" below the soil !

MANAGEMENT

- Mowing
- Herbicide
- Fire
- Rest



- Sanitation - Movement of seed and propagules from site to site.
- Timing is everything.



Mowing Mower Brush Cutter









Sweetclovers
(Melilotus spp.)





10 26 '00







- Herbicide



Herbicide Label

This information is for promotional purposes only. Space considerations may require information to be omitted. Always refer to the actual package for complete label verbiage. This product may not yet be available or approved for sale or use in your area.



FOR USE ON EMERGED AQUATIC WEEDS AND BRUSH
IN AQUATIC AND OTHER NONCROPPING SITES.

ACTIVE INGREDIENT:	Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	53.8%
OTHER INGREDIENTS:	46.2%
Total	100.0%

* Contains 46.2 grams per liter or 8.4 pounds per U.S. gallon of the active ingredient, glyphosate, in the form of its isopropylamine salt. Equivalent to 46.0 grams per liter or 4 pounds per U.S. gallon of the acid, glyphosate.

KEEP OUT OF REACH OF CHILDREN CAUTION - PRECAUTION

If used no entend la etiqueta, busque a alguien para que se le explique o saite en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See Inside Booklet for First Aid and Additional Precautionary Statements

For Chemical Spill, Leak, Fire, or Exposure Call CHEMTRIC (800) 424-9300.
For Medical Emergencies Only: Call 877-325-1846.

EPA Reg. No. 228-365

EPA Est. No. 228-IL-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION - PRECAUTION

HARMFUL IF INHALED. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse. Wash thoroughly with soap and water after handling.

FIRST AID

IF INHALED	•Move person to fresh air. If person is not breathing, call 911 or an emergency center, give first aid respiration, preferably mouth-to-mouth respiration. •Call a poison-control center or doctor for further treatment advice.
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HOOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1846 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwaters. Treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants. This oxygen loss can cause fish suffocation. In case of SPILL OR LEAK, soak up and remove to a landfill.

PHYSICAL OR CHEMICAL HAZARDS

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic and galvanized steel containers. DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product are extremely flammable. This product produces hydrogen which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its use as indicated on the RECOMMENDED LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

GENERAL INFORMATION

This product, a water-soluble liquid, mixes readily with water and nonionic surfactant. It can be applied as a foliar spray for the control or destruction of many herbaceous and woody plants.

This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days. But on more perennial brush species, may not occur for 7 days or more. Extreme care should be taken when applying around trees and shrubs since this product can delay visual effects of control. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Unless otherwise directed on this label, delay application until vegetation has emerged and reached its diagnostic stage of development such as indicated under the "WEEDS CONTROLLED" section of this label. Unsprayed plants arising from unattached underground rhizomes or root stocks of perennials or brush will not be affected by the spray and will continue to grow. For this reason basal control of most perennial weeds or brush is obtained when treatment is made at late growth stages.

Always use the higher rate of this product per acre within the recommended range when vegetation is healthy or dense.

Do not treat weeds or brush under poor growing conditions such as drought stress, disease or insect damage, as reduced control may result. Reduced results may also occur when treating weeds or brush heavily covered with dust. Reduced control may result when applications are made to any weed or brush species which is severely stressed by environmental factors and have not been allowed to regrow to the recommended stage for treatment.

Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application may wash the product off the foliage and a repeat treatment may be required.

When this product comes in contact with soil ion the soil surface or as suspended soil or sediment in water it is bound to soil particles. Under normal conditions, this occurs rapidly and the bound particles are available for plant uptake and will not harm off-site vegetation where roots grow into the treatment area or if the soil is transported off-site. Under recommended use conditions, the strong affinity of this product to soil particles prevents this product from leaching out of the soil profile into underlying ground water. The affinity between the soil and the product remains until this product is degraded, which is primarily a biological degradation process carried out under aerobic and anaerobic conditions by soil microflora.

This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully consider all other precautionary statements and all other information appearing on the labels of all herbicides used.

Read "WARRANTY" before buying or using. If items are not acceptable, return at once unopened. Buyer and all users are responsible for all loss or damage in connection with the use of handling of mixtures of this product or other materials that are not expressly recommended in this label. Mixing this product with herbicides or other materials not recommended in this label may result in reduced performance.

For more production information, call toll-free 1-800-852-6234.

ATTENTION:
AVOID CONTACT WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS, OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES. SINCE SEVERE INJURY OR DESTRUCTION MAY RESULT, AVOID DRIFT, DUST, SPLASH, OR SPILL INTO THESE AREAS. WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drill or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended.

The likelihood of plant or crop injury occurring from the use of this product is greatest when spraying is done in direct sunlight or when wind velocity is high.

Wind velocity, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles [mist] which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. When not in use, keep container closed to prevent spills and contamination.

- Active Ingredient, other ingredients
- Toxicity information
- PPE requirements
- Emergency instructions
- Environmental hazards
- Directions for use
- Mixing
- Application equipment and techniques
- Weeds controlled



Herbicide Use: read the label
before using any herbicide



Herbicide: Spot Spray



 **ecology**
ecology + vision, llc.

BIRCHMEIER®

Stewardship techniques



Fire



Anatomy of a Prescribed Burn

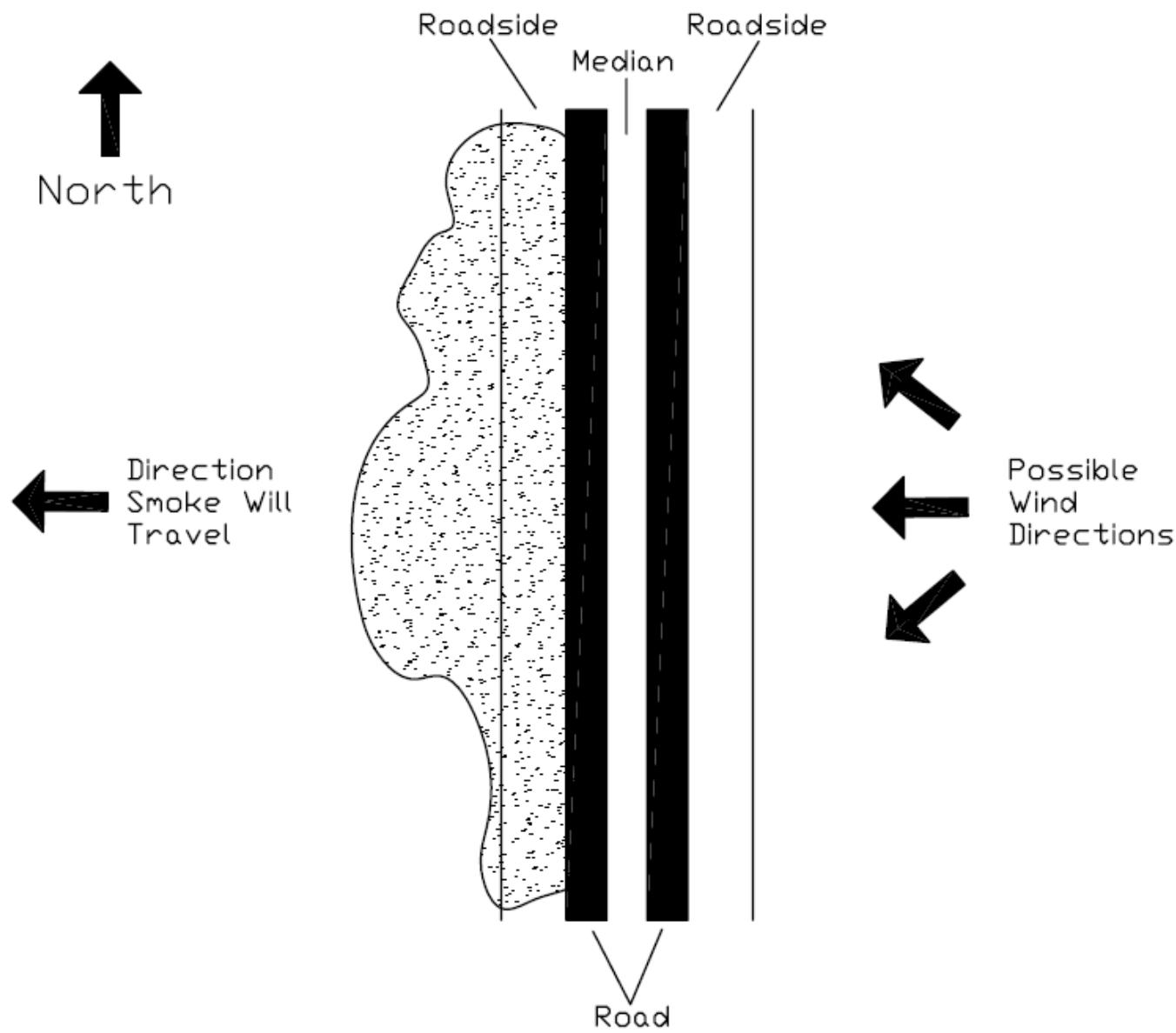
Prescribed burn managers try to find a natural firebreak, such as a creek (1), from which they set a down wind backfire (3). This creates the blackline (2) at which the spot-headfires (set in successive ignitions, 5, 6 and 7) will stop. Crew members patrol a handline (4) to ensure that the burn is contained.

WIND DIRECTION
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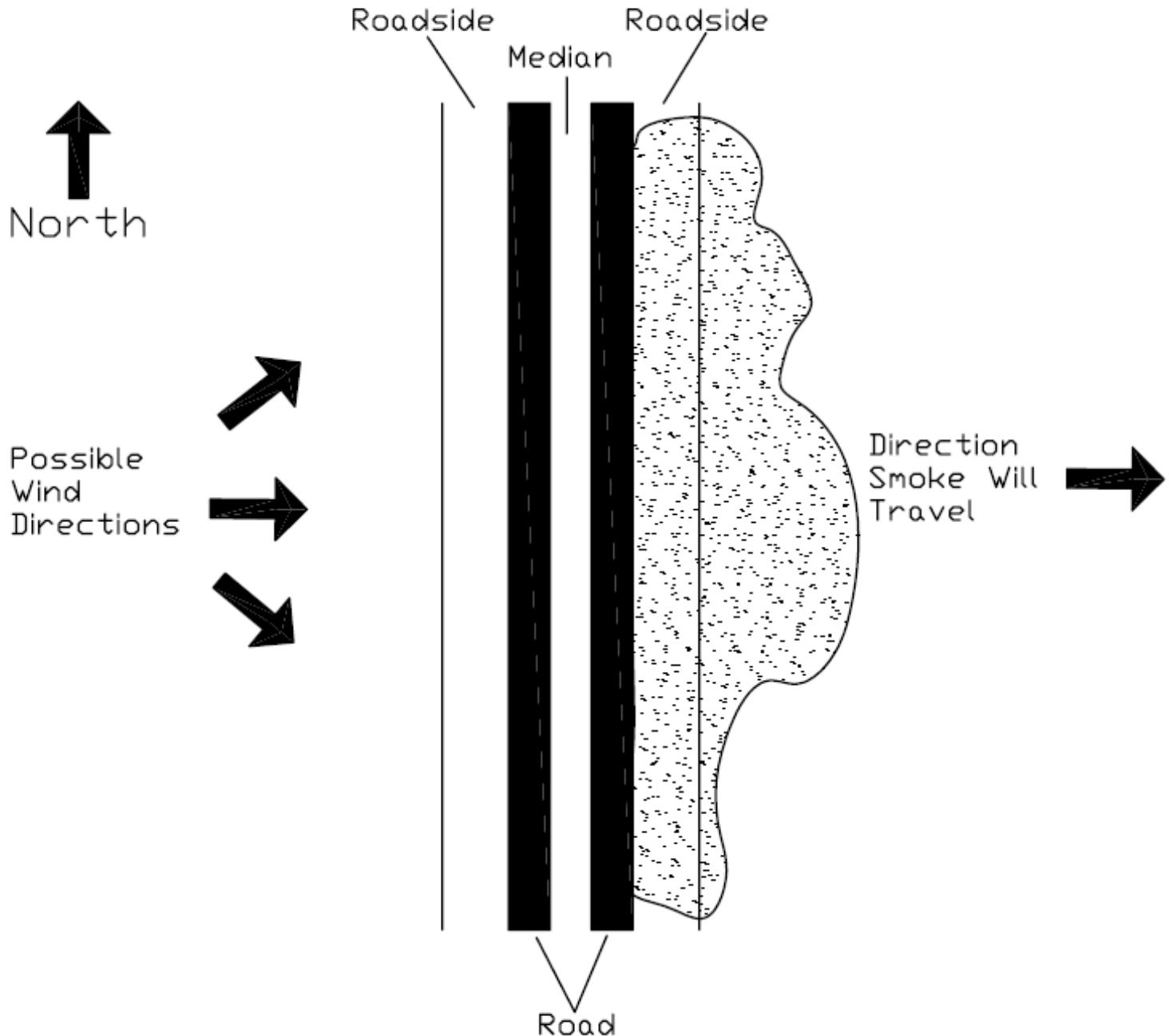




22 11:32 AM



For optimal smoke control when conducting a burn on North-South roadsides make sure wind is blowing from the East when burning the western roadside (above) and that wind is blowing from the West when burning the eastern roadside (below).











NOV 22 2005





Blackberry Crossings, Montgomery, IL
Photo May 2011 (Left Un-Burned)

In very public settings a prescribed fire may be desired for aesthetic purposes, rather than just ecological outcomes.



Blackberry Crossings, Montgomery, IL
Photo May 2010 (Burned Fall 2009)

In very public settings a prescribed fire may be desired for aesthetic purposes, rather than just ecological outcomes.

- Rest





Success!

10 159 fm











Peck Farm Park
Geneva, IL

Two years after seeding and the black-eyed Susan are visible from space! Date of aerial: June 30th, 2010



Peck Farm Park
Geneva, IL

Black Eyed Susan in full bloom just 2 years
after planting (July 2010, seeded spring
2008)



Peck Farm Park
Geneva, IL

Monarda & Ratibida in full bloom just 3
years after planting (July 2011, seeded
spring 2009)



Peck Farm Park
Geneva, IL

Monarda & Ratibida in full bloom just 3
years after planting (July 2011, seeded
spring 2009)



AMCOL
Hoffman Estates, IL

LEED Platinum facility:
Parking lot bio-swales 2 years later



AMCOL
Hoffman Estates, IL

LEED Platinum facility:
Parking lot bio-swales 2 years later



AMCOL
Hoffman Estates, IL

LEED Platinum facility:
Parking lot bio-swales after installation



AMCOL
Hoffman Estates, IL

LEED Platinum facility:
Parking lot bio-swales 2 years later







July 10, 2012

July 10, 2012 + 4hours



Questions?

Need a speaker?

Email me : Jack@Pizzo.info



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