



## NATURAL AREA PRESERVATION HERBICIDE USE POLICY

### Who May Handle and Use Herbicides

- Commercial Applicators in the state of Michigan, or Registered Technicians (in Michigan) under the supervision of an Applicator.
- Licensing through the Michigan Department of Agriculture (MDA) is a reimbursable expense when obtained while an employee of NAP. MDA accepts *only check or money order*. They will supply a receipt that must be turned in to the NAP Clerk for reimbursement.
- Because non-licensed NAP crew often works in the field next to herbicide applicators, they are encouraged to wear personal protective equipment and educate themselves on herbicide safety. An information notebook on herbicide safety, with detailed information about the specific herbicides used at NAP can be found in the crew office.

### Application/Use

- Read and follow the label instructions of each product before using or handling.
- Glyphosate is the herbicide most used by NAP. This product was chosen because of its low toxicity rating and relatively short soil persistence time. Glyphosate is the active ingredient in *Rodeo* and *Roundup*. NAP uses Rodeo for most applications because its lower toxicity than Roundup. Rodeo **must** be used in all areas that might be delineated as wetlands (combination of water at or near surface, wetland soils, and/or vegetation adapted to wet conditions), within 15' of water, or when the water table is within 6" of the soil surface. Roundup is mainly used for foliar spray applications (away from wet areas) because it contains surfactants. The extra surfactant Nu Film IR can be added to Roundup for added 'sticking' capabilities.
- Fluasifop-p-butyl is the ingredient in *Fuselade II Turf and Ornamental Herbicide*, and should be used for control of cool-season grasses. Season of application is mid-April to early May, before the warm-season grasses have sprouted. Fuselade II is selective for *all* grasses, so timing of application is critical.
- Weather:
  - \**Wind speeds* for foliar applications must not exceed 5 mph at point of application.
  - \**High temperatures*, low humidity, and small droplet size will increase the volatility of the herbicide. As a general guideline, herbicides should not be applied at temperatures above 85° F. During hot summer days, the product should be applied in the morning before temperatures rise appreciably.
  - \*Do not apply if there is a *good* chance of *rain* within the next 6 hours or when earlier precipitation can be seen running down the stem. Use your best judgment and check the various weather websites and radar to make this decision. Rainfall within 6 hours of application may wash off some of the product and reduce effectiveness and spread the herbicide to non-target areas.
- Maintain a safe distance from heavily used areas of parks such as playgrounds.
- MSDS are located in the crew office on the crew bookshelf.
- The use of herbicide should be part of a well thought out integrated pest management plan.

### Mixing

- Mixing should be done in a well-ventilated area to avoid inhaling fumes.
- Mixing should be done at the pesticide storage shed at the Leslie Golf Course. Otherwise, it is best to mix on site where any contaminated equipment or rinse water may be disposed of on target vegetation in a



labeled site (for field mixing equipment). Mix over solvent resistant tray, especially when mixing in the field.

**Mixing Continued**

- Always be conservative in the amount of herbicide mixed. Take extra supplies in case mixing additional herbicide on-site is necessary.
- Containers for use with herbicides must be made of stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers. Do not use galvanized steel or unlined steel.
- Suggested mixing rates (product + water):

Target Species	Control Method	Herbicide Product	% Active Ingredient	Mixing Ratio: Herbicide/Water	Serving Suggestion
Woody (shrubs, trees, etc.)	Cut Stump	Rodeo (glyphosate, 53.8% AI)	26.9% A.I.	1:1	2oz Rodeo plus 2oz water/rinsate
Woody (larger trees, esp. near high visibility areas)	Drill and Fill	Rodeo (glyphosate, 53.8% AI)	26.9% A.I.	1:1	2oz Rodeo plus 2oz water/rinsate
Oriental bittersweet	Cut Stump	Rodeo (glyphosate, 53.8% AI)	48.4% A.I.	9:1	2.25oz Rodeo plus 0.25oz water/rinsate
Cool season grasses	Foliar Spray	Fuselade II (fluazifop, 24.5% AI)	0.5% A.I.	1:48	3oz Fusilade per 4 liter sprayer
Forbes (Spotted Knapweed, Garlic Mustard, Japanese Honeysuckle, Vinca, Celastrus)	Foliar Spray	Round-Up (glyphosate, 41% AI.	1.8% A.I. (Vinca: 3.6%)	1:21.5 (1:10 for Vinca)	6 oz per 4 liter sprayer (13.5 oz per 4 liters for Vinca)
P. Loosestrife, S. Knapweed, C. Thistle, Cattails	Wet Glove	Rodeo (glyphosate, 53.8% AI)	1.7% A.I.	1:31	1 oz Rodeo per quart (32 oz) spray bottle

**Public Notification**

- Prior to application, check the list of citizens who have requested to be notified of any pesticide applications near their home. Notify any person from the list who resides within 100 yards of the area of application
- Signs must be posted on the edges of the area of application during the application and for 48 hours afterwards. Be sure to place signs at all trail junctions adjacent to the treated area. The signs must contain the name of the herbicide, its toxicity rating, the reason for application and the date of application.
- Application records must be completed with each use of any herbicide.

**Personal Protective Equipment (PPE)**

- Inspect all PPE for rips or leaks before each use. If equipment is torn or unsafe, dispose of immediately.
- Chemical resistant gloves must be worn when handling any herbicide or any herbicide contaminated equipment. Recommended materials for gloves include: vinyl, PVC coated, nitrile or neoprene.
- Wear eye protection when mixing and at any other time when splashing or spraying may occur.
- Always have clean wash water available, one bucket for washing equipment and one bucket for washing yourself.
- If needed, wash gloves and protective suits before removing to avoid contact with skin.



- Be sure all PPE is clean before storing.
- Leather boots are permeable. Wear rubber over-boots when needed (especially for “wet-glove” and foliar spray).

### **PPE Continued**

- Wash hands and face thoroughly after doing any work with herbicides or herbicide equipment.
- Masks (for particulate matter) are available and recommended for foliar spray treatment and mixing.

### **Application Equipment**

- Keep all equipment clean, properly stored, and in working condition. Test equipment for leaks (with water) and proper operation before using.
- Follow manufacturers instructions for proper use of pressure sprayers.
- Make sure a number of new sponge tips are always on hand. Regularly check wands for cracks, broken tips, worn out parts, etc.
- Rinse all equipment after each use and BEFORE storing.

### **Storage**

- Original labels should be kept on the containers of herbicide.
- All equipment containing herbicide should be well labeled with contents and % formulation. The same information should also be on any container that is holding rinsate.
- Place all equipment and bottles containing herbicide and rinsate in a secondary containment unit (bucket) to aid in cleanup in the event of a spill or leak.
- Herbicide and herbicide-contaminated equipment should be stored in the herbicide storage facility at Leslie Golf Course.
- Use smaller measuring containers for transferring herbicide from 2.5-gallon containers. The smaller containers are easier to pour from when mixing on a day-to-day basis.

### **Transportation**

- Use secondary containment to aid in spill cleanup. (Keep the herbicide in the bucket and put any other equipment in a separate tub or a bucket).
- Secure all herbicide and equipment with bungees to avoid any tipping, sloshing or spills.
- Always bring spill cleanup equipment (Spill Kit) and applicator protection [clean PPE, absorbent pads and material (i.e. “Floor-Dry”), hand broom, dustpan, shovel, plastic bags, water, empty bucket and container, and radios.]

### **Disposal of Rinsate**

- Rinsate can be saved and used as the dilution water for future applications.
- Rinsate can also be disposed of on target plants at the site of application in the area that is labeled as having pesticides applied.
- When quantities of rinsate become unmanageable, they can be disposed of through the Washtenaw County Environmental Health Service; Jeff Krcmarik, 222-6865 is the contact. This should be done with them no more than two times a year and an appointment must be made.



### **Disposal of Containers and PPE**

- Save original containers to hold rinsate when appropriate. (Label with concentration.)

### **Disposal of Containers and PPE continued**

- Follow manufacturers directions for proper disposal. Glyphosate containers should be triple rinsed (at the pesticide storage shed at the Leslie Golf Course) and have holes punched in them prior to disposal.
- Triple rinse water should be saved as rinsate, especially rinse from Roundup containers.
- Triple rinsed containers (no caps or labels) can be taken to Royster-Clark, 426-8851, who will recycle them.
- Old Nitrile gloves, absorbent pads, paper towels, Tyvek and other PPE used during application can be sealed in a plastic bag and thrown into the regular garbage.

### **Spills/Cleanup**

- Always have equipment on hand for dealing with spills (Spill Kit). Such items include clean PPE, absorbent pads and material (i.e. "Floor-Dry"), hand broom, dustpan, shovel, plastic bags, water, and radios.
- Spill procedure:
  1. Protect personal safety first- don PPE!
  2. Control/stop the source
  3. Contain the spill
  4. Clean up the spill and all affected areas using absorbent materials. Scoop/dig up any contaminated soil and place in container or garbage bags. EQ hazardous waste landfill in Belleville has taken small amounts of hazardous waste from non-profits in the past; contact them to set up a time to drop off the contaminated soil. Ann Arbor's landfill is not capable of accepting soil whether it is contaminated or not.
  5. For major spills, notify proper authorities immediately. Call local Fire Department (911) to help contain spill and MDEQ Pollution Emergency Alerting System (PEAS) hotline 800-292-4706.