

The Right Way to Vegetation Management

A review of selected pest management policies and programs on rights-of-way.

by Kagan Owens

Every year, millions of miles of roads, utility lines, railroad corridors and other types of rights-of-way (ROWs) are treated with herbicides to control the growth of unwanted plants. However, increasing public concern over the use of dangerous and inadequately tested pesticides has resulted in an increasing effort over the last decade to pass state laws and local policies requiring notification of pesticide use, restrictions on application types and implementation of least-toxic approaches to vegetation management.

The following review highlights pest management on ROWs in select states. It is not a review of all states. Listed are sixteen states, thirteen states that provide right-to-know provisions regarding ROW herbicide applications and six states that incorporate the principles of an integrated pest management (IPM) program into their ROW management.

Although definitions of IPM vary, while cultural, mechanical, biological methods are utilized in such programs, chemicals are always a part of the programs adopted for management of ROWs. This is a review of policy and does not evaluate the degree to which these policies are currently being enforced.

ROW management is governed by many different levels of government, including state laws or administrative procedures, state subdivisions' or local government entities' policies, and voluntary agreements. As a result, inconsistencies

exist in overall protection from pesticide exposure. Many states have separate policies for the different types of ROWs. Utility ROW requirements may be mandated by the state's department of agriculture, environment or other pesticide lead agency, while requirements for roadsides are under the review of the state's department of transportation. As a result, the level of protection varies considerably and tends to be deficient in protecting the public from the potential exposure to pesticide applications along ROWs.

Every year, millions of miles of roads, utility lines, railroad corridors and other types of rights-of-way (ROWs) are treated with herbicides to control the growth of unwanted plants.

The Case for Notification

Chemical control of ROWs pose hazards to human health and the environment. Although a number of chemicals are registered for use on ROWs to control grasses, brush and trees, picloram (Tordon™), 2,4-D (Weedone™), dicamba (Banvel™), trichlopyr (Garlon™), glyphosate

(Roundup™), fosamine ammonium (Krenite™), hexazinone (Velpar™) and diuron (Karmex™) are among the most commonly used. Some of these herbicides are known to cause cancer, birth defects, reproductive effects, neurotoxicity, kidney/liver damage and are toxic to wildlife. (See Table 1) New studies are continually finding serious problems associated with exposure to commonly used pesticides.

Many states have addressed the issue of ROW herbicide applications by notifying the public of the application, enabling



people to better protect themselves from pesticide exposure. Prior notification is commonly provided through newspapers and/or radio. However, the notification announcements tend to be in the newspaper's legal section and do not appear or are not heard frequently enough to impact a large population. Broadcast notification through such news media is intended to either notify the public of the application(s) or of a hearing on a proposed ROW application. Targeted prior notification, although less common, is provided in some states, like Connecticut, Iowa, Maine and New Hampshire, to every property that is abutting or within a specific distance to the treated ROW property. Other states provide prior notification if a property owner or resident has requested to be placed on a notification registry of ROW applications, including Maine, New Hampshire, Pennsylvania, Vermont, Washington and West Virginia. Some states require the posting of signs to notify the public at all entrances to the ROW. *Prior notification should be given to all property owners and tenants within one mile of the ROW application and should be complemented with the posting of signs. Posting of signs will provide notice to the general public that enter a treated ROW.*

The Case for Alternatives

Notification cannot curb the potential impacts of ROW herbicides on humans and wildlife, given their potential to contaminate wells, drainage ditches, lakes and air miles from the pesticide-treated area. Pesticide labels with instructions, such as Tordon's "Do not apply directly to water," are not strong enough given the proximity of many ROW spray routes to water and the potential for ground or aerial drift or runoff. Instructions, such as "Do not contaminate food or feed" or "Avoid drift," are commonly ignored by applicators spraying in high winds, which carry the spray past the intended application area. Some states have addressed the risk of using herbicides along ROWs by developing an IPM program for ROWs, restricting when and where pesticides can be applied on ROWs and/or providing no-spray agreements. *With the potential for contamination, chemical use and only least-toxic chemical use, should be resorted to only if all other means, including the use of mechanical, biological and cultural methods, of managing ROWs have been exhausted.*

Programs that adopt the principles of IPM can be carefully designed for the specific vegetation management needs for each ROW situation and must include pest identification, population monitoring, determination of injury and action levels and selection of the most appropriate control tactics. Herbicides are just one of many available control tactics for unwanted ROWs vegetation. However, because of their high ecological and sociological costs, and because their short-term,

temporary effects promote unstable plant communities, they should be considered only after all other less-toxic, more permanent tactics have been exhausted. A long-term perspective is critical when developing a pest management strategy for ROWs. Ideally, an ecologically stable plant community that persists in a state that does not reach injury levels should be the goal for all ROWs. Intervention, when necessary to remove unwanted vegetation, should be highly selective and non-disruptive to other life forms of the community. ROW management can become worse if competitors and natural enemies of pest vegetation are inadvertently killed by herbicide applications.

Planting native vegetation, using mechanical, biological and nontoxic vegetation control methods are effective in reducing and eliminating pesticide applications. Creating and encouraging stable, low-maintenance vegetation is a more permanent vegetation management strategy. The establishment of desirable plant species that can out-compete undesirable species requires little maintenance and meets the requirements for ROW management. Although native vegetation may take more time to establish itself, native flower and grass species are better adapted to local climate and stress than those introduced from Europe and Asia. Native plant species are especially effective in providing increased erosion control, aesthetics, wildlife habitat and biodiversity. Numerous states have established roadside wildflower programs for these reasons. Cutting, girdling, mowing and grazing animals are successful

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mechanical means to eradicate unwanted vegetation on various ROWs. Mowing can be useful under certain circumstances, such as when the ROW must be maintained as turf or low vegetation. The schedule for mowing, if done, must adjust to plant life cycles in order for maximum effectiveness. The uses of fabric material and mulch under roadside signs and guardrails and on the edge of the shoulder are effective in suppressing weeds.

Other control methods include the use of corn-gluten and steam treatments. Steam treatments involve 800 degrees Fahrenheit temperatures and low pressure. Borax has also been effective in killing vegetation. A number of plant pests can be controlled with the introduction of natural insect enemies.

Integrated Roadside Vegetation Management

Several states have adopted an Integrated Roadside Vegetation Management (IRVM) Program. The program incorporates principles of IPM. The National Roadside Vegetation Management Association and the Integrated Roadside Vegetation Management Program Task Force have produced a manual, *How to Develop and Implement An Integrated Road-*

Table 1. Adverse Health and Environmental Effects of Commonly Used Herbicides on Rights-of-Ways

Herbicide	Cancer	Birth Defects	Reproductive Effects	Neuro-toxic	Kidney Liver Damage	Sensitizer / Irritant	Detected in Groundwater	Potential Leacher	Toxic to Birds	Toxic to Fish	Toxic to Bees
2,4-D	• ¹	•	•	•	•	•	•	•	•	•	•
Dicamba	• ²			•	•	•	•	•		•	
Diuron	• ³	•		•	•		•		•	•	
Fosamine ammonium					•				•	•	
Glyphosate			•		•	•	•	•	•	•	
Hexazinone	• ⁴				•	•	•	•	•	•	
Picloram					•	•	•	•		•	
Triclopyr	• ⁵				•	•	•	•	•	•	

1. Adverse health effect based on National Cancer Institute

2. Group D carcinogen, a chemical that is not classifiable as to human carcinogenic effect. EPA states that this assessment is because the "doses selected for the rat and mouse studies were not adequate."

3. EPA classifies as a "known/ likely" carcinogen.

4. Group D carcinogen. EPA states that this assessment is "based on evidence that was equivocal (not entirely negative, but yet not convincing) since only statistically significant increase was in Female mice."

5. Group D carcinogen. EPA states that this assessment is "based on increases in mammary tumors in both the female rat and mouse, and adrenal pheochromocytomas in the male rat, which were considered to be only a marginal response."


Source: Environmental Protection Agency, National Cancer Institute, California Department of Pesticide Regulation and Extension Toxicology Network and www.scorecard.org (Environmental Defense Fund).

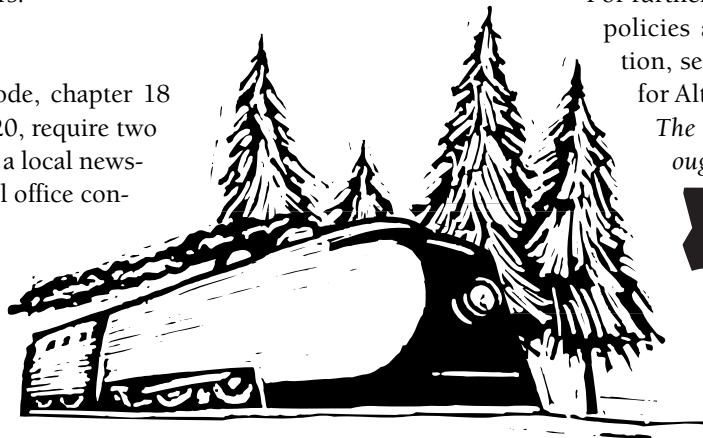
side Vegetation Management Program, which many states have used in their plan for roadside ROWs. This program serves a variety of purposes including erosion control, wildlife habitat, scenic qualities, weed control, utility easements and recreation uses. It incorporates integrated management practices, like burning, seeding, mowing, but also incorporates spraying in the control of weeds, damaging insects and invader plant species. Several states use this IPM or IRVM approach, including California, Illinois, Iowa, Minnesota, North Carolina, Texas, Utah, Washington and Wisconsin.


No-Spray Agreements

No-spray agreements are offered by many states. These agreements between the ROW managing entity and the landowner require that the landowners maintain the ROW that is adjacent to their property or the managing entity will agree to maintain the ROW without using herbicides, sometimes at the landowner's expense. Maine, North Carolina and Oregon are examples of states that have no-spray agreements. North Carolina's no-spray agreement is a private agreement, probably the only one of its kinds in the country, made between the utility companies and landowners.

State Review

 Alaska Administrative Code, chapter 18 sections 90.500 and 90.520, require two notices to be published in a local newspaper "and in other media the central office considers appropriate" (18 AK ADMIN. CODE 90.50 (a) (1998)) for all applications made by a government employee using funds, materials or equipment of that government entity on a state-owned ROW.



 California Food and Agricultural Code, section 12978, requires signs to be posted when a pesticide with a worker reentry interval of at least 24 hours is applied on school grounds, parks, or "other public rights-of-way where public exposure is foreseeable" (CA FOOD & AGRIC. CODE § 12978 (1998)). Barriers may be used instead of the warning signs. Applications made by the Department of Transportation (CalTrans) on public highway ROWs are exempt from the posting requirements.

CalTrans established an internal policy to develop strategies to reduce and eliminate the use of pesticides along roadsides through a roadside vegetation environmental impact report in 1992 which states that CalTrans is to decrease herbicide use by 50% by the year 2000 and 80% by the year 2012. This report also pledged to not apply chemicals within 100 feet of school bus stops. In response to local organizing by community activists, CalTrans adopted a policy to halt herbicide spraying on highways in District 1, northwest California where local governments request it in 1997. Del Norte, Humboldt, and Mendocino counties have voted for the elimination of all herbicides on roadsides.

For further information on CalTrans policies and lack of implementation, see review of the California for Alternatives to Toxics report, *The Poisoning of Public Thoroughfares*, on page 20.


 Connecticut General Statutes, section 22a-66k as amended by Public Act No. 98-229, requires that any electric, telephone or telecommunication

Table 2. Summary of selected pest management policies & programs for rights-of-way.

STATE	PRIOR NOTIFICATION	POSTING	PESTICIDES ALTERNATIVE / RESTRICTION
Alaska	State ROWs that require a permit, 2 notices in local newspapers & "in any other media the central office considers appropriate."		
California		"Public ROW where public exposure is foreseeable," pesticides with worker reentry interval of at least 24 hours, post sign or create barrier.	CalTrans pledged to decrease herbicide use 50% by 2000, not apply pesticides within 100 feet school bus stop & use IPM. CalTrans District 1 local governments can opt for no herbicide spraying.
Connecticut	Electric, telephone or telecommunication company, 48-hour prior notification to all abutting property.	Electric, telephone or telecommunication company, application to pole, post sign on each pole treated.	Prohibition of aerial broad-spectrum pesticide applications for non-agriculture purposes. Public highway, prohibition of aerial pesticidal dust applications within 100 feet.
Iowa		Highways, roads, streets, alleys, sidewalks & recreational trails within corporate limits of municipalities, post at each end of treated area.	IA DOT required to control noxious weeds along roadsides with herbicides only if mowing or other control not practical. 41 out of 99 counties participate in IRVM ¹ program.
Maine	Local, regular circulation newspapers between 3 & 60 days prior to treatment, if no such newspaper notice to all landowners within 500 feet of application area. Individual can contact ROW entity to be notified of any application within 500 feet. Notification registry, 6 hrs to 14 days prior notice for application made within 250 feet of property.	Sign posted prior to application, remain posted for 48 hours at point of entrance to area.	Utility & DOT offer "No spray agreements" for individual or municipality to adopt.
Massachusetts	Roadway, railroad, power lines, conduits, channels or communication lines, public meetings & 45-day comment period on 5-year Vegetation Management Plan & the annual Yearly Operational Plan (YOP) ROW proposal. Plans must look at alternative approaches.		Roadway, railroad, power lines, conduits, channels or communication lines, prohibition on aerial application to ROWs. Prohibition on handling, mixing or loading herbicide concentrate within 100 feet of sensitive area. Restrictions on pesticide applications in regards to distance to water supplies, surface water, wetlands, inhabited & agriculture areas. YOP must include IPM in the plan.
Michigan	Broadcast or foliar ROW applications, commercial application, personal contact, local, regular circulation newspaper or prior written notification, to residents of property within target area.		
Minnesota			State required to use IPM in management of roadside plans. IRVM program for local areas to adopt.

STATE	PRIOR NOTIFICATION	POSTING	PESTICIDES ALTERNATIVE / RESTRICTION
New Hampshire	Power transmission & distribution lines, gas pipelines, railroads, public road ROW, between June & October 15, directly to residences within 200 feet 10 days prior to treatment. Notification in newspapers once for 2 weeks at least 45 days prior to treatment & includes cut out coupon for all abutting owners to receive notice 30 days prior to treatment.		
New York	NY DOT set up toll free number to find out spraying plans.		Monroe County use welfare clients to mechanically cut weeds along roadsides.
North Carolina	Utilities provide prior notice of ROW herbicide applications in inserts of customer bills, adopted by private agreement between state utilities and landowners.		Prohibition on aerial application to public road ROW or within 25 feet of road. NC DOT internally adopted IPM program. Private, no-spray agreement available between landowner & utility company.
Oregon			State agencies required to use IPM. OR DOT district IPM plans available to public for review. OR DOT can provide no spray agreement.
Pennsylvania	Restricted use pesticide ground applications to ROW by commercial or public applicator, notice published in 2 newspapers or oral or certified mail notice to all abutting residences. Abutting residence can request additional information regarding application. 12 to 72 hour prior notification to anyone that works or lives within 500 feet of treatment site & on the medically verified hypersensitive registry.		
Vermont	Electric utility ROW, owner of property within 1,000 feet can request to be notified 30 to 60 days prior to treatment. Newspaper notification once a week for 4 weeks, include cut out coupon to be listed on notification registry. Any person making a pesticide application to ROW, 25 to 60 days prior to treatment, notice printed in 2 newspapers, once a week for 2 weeks, notice also by either radio, mail to abutting residents 2 weeks prior or personally delivered 10 days prior to treatment.		If ROW traverses property, can request electric utility not use any herbicides, such request costs \$30 to the Dept of Public Services for administrative costs.
Washington	Certified applicator treating ROW, notice at least 2 hours prior, to abutting residents on the medically verified pesticide hypersensitive registry.	Certified applicator treating ROW, post notice on each "power application apparatus."	State agencies required to use IPM. DOT offers no spray agreements.
West Virginia	Utility ROW, notice 60 to 120 days prior to treatment to all news media, to all persons on the hypersensitive registry & abutting residents who have made a written request to be notified.		Prohibition on aerial application of Picloram & Dicamba & all other herbicides within specific distance to recreation areas, residential structures & roads.

1 Integrated Roadside Vegetation Management Program

company that provides for the application of pesticides within a ROW maintained by such company must notify owners, occupants or tenants of buildings or dwellings abutting the ROW at least 48 hours in advance. If the company provides for the application of pesticides to any utility pole, after it has been installed, it is required to post a notification sign on each pole. If the company provides for the application of pesticides in connection with tree or brush removal from private property, the company must get consent from the occupant before proceeding. State, municipality, pesticide application business, public service company or railroad company ROW applications are exempt from the notification requirements. Section 22a-66-7 of the General Statutes prohibits the aerial application of pesticidal dusts within 100 feet of a public highway. And section 22a-54-1 prohibits the aerial application of broad-spectrum chemical pesticides for nonagricultural purposes.



Iowa Administrative Code, section 21-45.50(4), requires posting notification signs when a pesticide is applied to a public highway, road, street, alley, sidewalk or recreational trail ROW within the corporate limits of municipalities “in a manner that provides reasonable notice to the occupants of properties immediately adjacent to the area being treated” (IAC 21-45.50(4) (1998)). Signs are to be posted at the end of each area treated. If the area is within a developed residential zone, signs are to be posted at both ends of each block. Public ROW enclosed by a chain link fence, noise wall or other structures that eliminate pedestrian access are exempt. The public may request the pesticide application schedules and other right-to-know information from the licensed applicator.

Iowa Code, section 317.11, states that the county boards of supervisors and the state department of transportation are required to control noxious weeds along roadsides under their jurisdiction. The spraying of pesticides to control noxious weeds is only allowed “when it is not practical to mow or otherwise control noxious weeds.”

Iowa Code, section 314.21, establishes a state fund that helps counties in the state use and develop an Integrated Roadside Vegetation Management (IRVM) program. Iowa Code, section 314.22, establishes the development of an IRVM program for areas on or adjacent to roads, streets and highway ROWs through the state department of transportation. The program is available for any county to adopt and implement. Forty-one out of ninety-nine counties are currently participating in the IRVM program across the state.



Maine Board of Pesticides Control Regulations, section 01-026-51(IV), requires the licensed applicator to provide information regarding a planned aerial pesticide ROW application to the contracting entity. The contracting entity then prints the information in local newspapers. An “article/advertisement” of the ROW application must be published in a newspaper of general circulation between three and 60 days prior to the application. If there is no newspaper of regular circulation in the area, individual notices to all landowners within 500 feet of the application site is given

instead. Notice, whether in newspaper or individual notices, must include a description of the target area, how to contact the contracting entity, the intended purpose of the application, pesticide(s) to be used, date(s) of application, emergency telephone numbers and any public precautions that appear on the pesticide label. Maine also requires posting notification signs at any point where the public can enter the treated area. The signs are to remain posted for at least 48 hours. The signs must state similar information as required for written notification in English and French.

Maine Board of Pesticides Control Regulations, section 01-026-22(5), states that an occupant of a sensitive area can request to be notified of any pesticide application occurring within 500 feet of that sensitive area. Sensitive areas include public and private drinking water sources and all water bodies as well as areas within 100 feet of residential, school, commercial or developed recreational properties that are not the intended target. The individual wanting prior notification must contact the person responsible for the management of the land on which a pesticide application will take place. Notification can be given “in any fashion, provided that it is effective in informing the person” requesting such notification at least one day before the application commences. If the requesting individual is not satisfied with notification provided, a complaint may be filed with the Board which will then help resolve the agreement between the two parties. Maine Board of Pesticide Control recently adopted a new chapter to its regulations, chapter 28, which establishes a pesticide notification registry. Notification is given to any resident, upon request, by telephone, personal contact or mail six hours to 14 days prior to an application made within 250 feet of the registrant’s property.

Maine Pesticides Control Act, title 7 section 625 of the Maine Revised Statutes Annotated, states that any public utility or Department of Transportation ROW can offer a no-spray agreement for the municipality or individual to consider. Maine utility companies inform their customers of the no-spray agreement in bill-mailings. The Department of Transportation (DOT) provides signs to those that are adjacent to DOT ROWs requesting that the applicators do not spray the property adjacent to their property.



Massachusetts Code of Regulations, section 11, prohibits the handling, mixing or loading of herbicide concentrate on a ROW within 100 feet of a sensitive area and the application of herbicides by aircraft for the purpose of clearing or maintaining a ROW. Sensitive areas within a ROW area “in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects” (333 CMR § 11.02 (1996)) and include an area within the primary recharge of a public well, within 400 feet of any surface public water supply, and areas within 100 feet of a private water well, standing or flowing water, wetland or any agricultural or inhabited area. Section 11.03(9) requires the department to maintain a mailing list of individuals and groups who want to receive notice “on various aspects of the Pro-

gram.” A Vegetation Management Plan (VMP) is required of all applicants before treating ROWs. The VMP describes the intended program for vegetation control over a five-year period and must include “a description of Integrated Pest Management Programs or other techniques/programs to minimize the amount and frequency of herbicide application. Description of alternative land use provisions or agreements that may be established with individuals, state, federal or municipal agencies that would minimize the need for herbicide” (333 CMR § 11.05(h), (i) (1996)). The department, once the VMP is received, will schedule and hold regional public hearings for all interested parties to comment on the proposed plan. Notice of the hearing is printed in regional newspapers and the *Environmental Monitor* and includes where a copy of the VMP can be reviewed. There is a 45-day comment period starting when notice of the proposed plan is published. A Yearly Operational Plan (YOP) describes the detailed vegetation management operation for the year and is consistent with the terms of the VMP. A YOP notice is published in the *Environmental Monitor* and is distributed “to the appropriate mailing list.” The YOP also has a 45-day comment period. ROWs include “any roadway, or thoroughfare on which public passage is made and any corridor of land over which facilities such as railroads, power lines, pipelines, conduits, channels or communication lines are located” (333 CMR § 11.02 (1996)).



Michigan Pesticide Use Regulation No. 637, section 285.637.11(5) of the Michigan Administrative Code, requires the commercial applicator making a broadcast or foliar application to ROWs to provide

prior notification to occupants of property within the application target area. Property owners, their agents, or persons residing within the application area are notified either by personal contact, through an advertisement in the legal section of at least one local, general circulation newspaper or prior written notification. Written notification includes detailed information on the application with supplemental information available upon request.



Minnesota Statute, section 18B.063, requires the state to “use integrated pest management techniques in its management of public lands, including roadside rights-of-way, parks, and forests; and shall use planting regimes that minimize the need for pesticides and added nutrients” (MINN. STAT. § 18B.063 (1998)). Department of Transportation (Mn/DOT) has developed an “Integrated Roadside Vegetation Management Program” (IRVM) which fosters the development of local IRVM programs and annual plans at the local, district or maintenance area level within Mn/DOT.




New Hampshire Code of Administrative Rules, section 505.06, require applicators making a herbicide application to ROWs for power transmission and distribution lines, gas pipelines, railroads and public roads applied between June and October 15 to give prior notification to the public. Notification is in newspapers and given directly to residences within 200 feet of the ROW. Notification in newspapers must be once a week for two weeks in one newspaper of statewide circulation and in all local circulation papers. The second or last notice must be at least 45 days before the application begins. Notice includes information on the proposed application as well as how to receive more informa-


Striking a Deal with Utility Companies

In the summer of 1998, utility companies in North Carolina reached a private agreement with landowners regarding management of their 75,000 miles of rights-of-way. The agreement, which does not have the force of state rules, was sparked by complaints to the state pesticide board regarding North Carolina utility companies decision to begin broadcast spraying of their ROWs. Organic farmers and chemically sensitive people demanded the state pesticide board require the utilities to ask permission from landowners to spray herbicides on adjacent ROWs. The state pesticide board asked the utilities and complainants to sit down together and come up with an agreement amongst themselves. The final agreement accepted by all parties, with petitioners represented by the Agricultural Resources Center (ARC) [Carrboro, NC], requires utilities to include inserts about their herbicide use in customer bills. The inserts include the names and descriptions of the chemicals, how they are applied and sources for additional information about the applications. The inserts do not disclose spray schedules. The agreement also gives state residents the right to refuse herbicide use on their property and people can post their property with no spraying signs provided by the utilities. For those opting for no-spray agreements, the utilities will still maintain the ROW by mechanical means without extra charge to the individual landowner. Carolina Power & Light voluntarily sent notices to its customers in South Carolina regarding ROW herbicide applications as well, reports ARC. Although this shows that such an agreement can be reached without government involvement, the agreement is limited because it can not be enforced by state regulators. *For more information contact Allen Spalt, Director, Agricultural Resources Center, 115 West Main Street, Corrboro, NC 27510, (919) 967-1886, (919) 933-4465 fax, aspalt@mindspring.com.*


tion. The newspaper notice must also include a cutout coupon for all abutting property owners to mail in to receive an individual written notice 30 days before the treatment is to begin. These companies will compile a permanent list for prior notification, to be maintained by the utilities. Mail-in coupon notification requests must be received 35 days prior to the application, otherwise it become effective the following year. Direct notification of the residences within 200 feet of the right-of way treatment area is by certified mail or personally delivered and made at least 10 days before the application begins. Applications made to control poison ivy, in conjunction with landscape plantings on roadsides, upon roadway pavement, curbing and guardrails are exempt from the above requirements.


 **New York** State Department of Transportation (DOT) set up a toll-free number for residents to find out about roadside spraying plans for their areas. The state DOT started a demonstration project in the summer of 1998 which tested the effectiveness of planting low-lying native flowers and grasses near highway guardrails.

Monroe County, New York opted in the summer of 1998 to use welfare clients who are enrolled in the Work Experience Program (WEP) to use mechanical methods to cut weeds along county roads instead of using herbicides.


 **North Carolina** Administrative Code, title 2, subchapter 9L, section .1005, states that no pesticides can be applied by aircraft to public road ROW or within 25 feet of the road. The state Department of Transportation, although not legislated to do so, has developed an IPM policy which the department recommends to people across the state for roadside pest management

In a private agreement North Carolina utility companies, including Duke Power, Carolina Power & Light, North Carolina Power, and Nantahala Power, agreed to provide private landowners the right to be informed about pesticides used on their ROWs, opt out of the spray program and flag their property as a no-spray area. *See side bar insert for additional information.*

 **Oregon** State Pesticide Control Act, section 634.655 of the Oregon Revised Statutes, requires state agencies that have pest control responsibilities to follow the principles of IPM, including the State Department of Agriculture, State Department of Fish and Wildlife, Department of Transportation, State Parks and Recreation Department, State Forestry Department, Department of Corrections, Oregon Division of Administrative Services and each Oregon institution of higher education, for the institution's own building and grounds maintenance. A person is designated from each agency to coordinate the IPM program for that agency. Each person responsible for pest management in each agency is trained in IPM. The Department of Transportation district IPM plans are open to the public for review. The Department of Transportation also provides no-spray agreements to landowners that are adjacent to the road ROW.

 **Pennsylvania** Pesticides Rules and Regulations, title 7 section 128.81 of the Pennsylvania Code, require prior notification for restricted use, ground pesticide applications to ROWs. Notice must be published in two local newspapers of general circulation. An alternate to newspaper notices, the commercial or public applicator may give notice orally or by certified mail to all abutting residents. An abutting resident may request, at least seven days before the application is to begin, additional information, such as date and time of application, pesticide(s) to be applied and a copy of the label(s), which will be provided at least 12 hours before the application. Internal injections to utility poles and trees and ground line applications to utility poles are exempt from the notification requirement.

Pennsylvania Pesticides Rules and Regulations, title 7 subchapter F, provide a registry for people who have medical proof of their sensitivity to pesticides. People listed on the registry are notified between 12 and 72 hours before any application within 500 feet of their residence, place of employment, or school.

 **Vermont** Regulations for Control of Pesticides, section IV(4), requires any person applying a pesticide to a ROW to obtain a permit from the department and provide notification to the public. Twenty-five to 60 days prior to the application, information regarding the application must be printed once a week for two consecutive weeks in two local newspapers. Notice must also be made by one of the following: a) three spot messages per day on two radio stations in the area for two consecutive days during the two week period prior to the application; b) mail notification to abutting residents at least two weeks prior to application; or c) personally delivered notification at least ten days prior to application. All permits require buffer zones around the waters of the state, each distance determined on a case by case basis. ROW includes property owned or leased by utilities for the purpose of carrying, transmitting or transporting liquids, gases, electricity, communications, vehicles or people.

Vermont Public Service Board Rules, sections 3.620 to 3.641, state the notification requirements for electric utility ROW's pesticide applications and alternatives to such applications. An owner or occupant within 1,000 feet of a utility ROW can request to be notified by mail between 30 and 60 days before the commencement of the application. To do so, the owner or occupant must contact the utility company in writing before May 15 of each year to request to be placed on a notification mailing list. If the utility company chooses, it can place all residents of a town on its mailing list. Section 3.621(F) of the Vermont Public Service Board Rules states that, "inadvertent failure to comply with [the above stated requirements] shall not raise any presumption of negligence." Every year the Vermont Electric Power Company, Inc (VELCO) is to develop an information sheet stating general information on herbicide spraying of utility ROWs, how to contact utilities for more information and how to be placed on a notification mailing list. These information sheets are then distributed by the

utilities to their customers by May 1 of each year. This same information is placed in newspapers once a week for four weeks in April. Both the information sheet mailer and the newspaper advertisement include a cutout coupon for persons to return to the utility requesting prior notification of the ROW application. If a utility ROW crosses a landowner's property, the landowner can send a written request to the utility to not use herbicides to clear the traversed ROW. A \$30 administrative fee is charged for such herbicide-free requests.



Washington Revised Code, chapter 17.21,

section 400, requires a certified applicator applying a pesticide to a ROW to post notice on each "power application apparatus" and have a copy of the pesticide's MSDS. If the certified applicator receives a written request for information regarding the ROW treatment, the applicator must provide the requestor with the name of the pesticide(s) and the MSDS, or the applicator may provide a department approved fact sheet on the pesticide. Sections 13.21.420 and 13.21.430 establish prior notification to anyone on abutting property who is on the department's pesticide-sensitive registry. Enlistees must have documented medical proof of a person's sensitivity in order to be listed. For highway or road ROWs, this includes "that portion of the property within one-half mile of the principal place of residence" (RCW 17.21.420(2) (1998)). The list expires at the end of every year and thus renewal is necessary annually to be included. Notification to the abutting pesticide-sensitive registers must be made at least two hours prior to the application or if for an immediate service call, at the time of the application. Notification can be made by telephone, in writing or in person, with the date and time of the application.

Washington Revised Code, section 17.15, requires state agencies, including the Department of Agriculture, the State Noxious weed Control Board, the Department of Ecology, the Department of Fish and Wildlife, the Department of Transportation, the Parks and Recreation Commission, the Department of Natural Resources, the Department of Corrections, the Department of General Administration, and each state institution of higher education, for the institution's own building and grounds maintenance, to follow the principles of IPM. Each state agency listed is required to have an IPM coordinator. In response to the findings of the state's Environmental Impact Statement for roadside vegetation management in 1993, the Department of Transportation has developed an *Integrated Vegetation Management for Roadside* guidebook which is intended to provide the individual crew maintenance employees with a reference and guidelines for the application

of IPM in the day to day work of highway maintenance. The Department of Transportation offers no-spray agreements through their local district offices.



West Virginia Legislative Rule, title 61 section 12D, requires prior notification for aerial herbicide applications made to utility ROWs. Notifi-

cation, made in writing between 60 and 120 days prior to the application, is given to "all news media" in the area to be treated, all persons in the spray area on the department's hypersensitivity registry and all property owners and tenants abutting the property who have made a written request to the utility to be notified. Notification includes general information regarding the application. Herbicides

In order to avoid exposure to the herbicides applied on ROWs, policies must require prior notification to nearby property, posting of signs, access to information regarding the herbicides used, and the use of a strong IPM program in the management of ROWs.

containing Picloram or Dicamba must not be applied by aircraft closer than 100 feet of public recreation areas, 150 feet of residential structures, 150 feet of barns and other outbuildings in use and 50 feet of roads. All other herbicides must not be applied closer than 150 feet of public recreation areas, 100 feet of residential structures, 150 feet of barns and other outbuildings in use and 50 feet from roads. Utility ROWs include "those rights-of-way maintained by persons providing public service to the citizens of the state and may include but is not limited to electric companies, gas companies, communication companies and railroads" (WVCSR tit 61 § 12D-2.1 (effective 1992)).

Conclusion

People have a right to be informed and protected from the unnecessary use of herbicides to which they are potentially exposed on nearby rights-of-way. In order to avoid exposure to the herbicides applied on ROWs, policies must require prior notification to nearby property, posting of signs, access to information regarding the herbicides used, and the use of a strong IPM program in the management of ROWs.

This review is intended as an overview of states and localities that are moving forward in their efforts to protect people from unintended exposure. Implementation and enforcement are absolutely critical. Although the many states listed in this review are exemplary in notification or in requiring integrated pest management, the states listed may be ineffective in protecting the people near the ROWs. *For more information on the above discussed herbicide ROW policies and tools on how to organize for the adoption of such policies at the state or local level, please contact Beyond Pesticides/NCAMP.*

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